Appendix K-2: Air Quality Local Significant Thresholds

Estimated Emissions within South Coast Air Basin, Substation Construction

2015

Capistrano Substation Building Removal - Lower Yard	**CO lbs/day**	**NOX lbs/day**	**PM10 lbs/day**	**PM2.5 lbs/day**
Emissions, lbs/day				
Heavy Construction Equipment	11.45	25.35	0.95	0.85
Fugitive Dust			39.00	8.19
Total On-site Emissions	**11.45**	**25.35**	**39.95**	**9.04**
Localized Significance Threshold	1,804	197	12	8
Above LST?	No	No	Yes	Yes

Capistrano Substation Site Development - Lower Yard	**CO lbs/day**	**NOX lbs/day**	**PM10 lbs/day**	**PM2.5 lbs/day**
Emissions, lbs/day				
Heavy Construction Equipment	121.38	283.94	10.01	8.91
Fugitive Dust			72.85	20.51
Total On-site Emissions	**121.38**	**283.94**	**82.86**	**29.42**
Localized Significance Threshold	1,804	197	12	8
Above LST?	No	Yes	Yes	Yes

2016

Talega Substation Below Grade	**CO lbs/day**	**NOX lbs/day**	**PM10 lbs/day**	**PM2.5 lbs/day**
Emissions, lbs/day				
Heavy Construction Equipment	10.10	14.32	0.61	0.54
Fugitive Dust			16.87	5.30
Total On-site Emissions	**10.10**	**14.32**	**17.84**	**5.84**
Localized Significance Threshold	1,804	197	12	8
Above LST?	No	No	Yes	No

Capistrano Substation Below Grade - Lower Yard	**CO lbs/day**	**NOX lbs/day**	**PM10 lbs/day**	**PM2.5 lbs/day**
Emissions, lbs/day				
Heavy Construction Equipment	41.36	72.97	2.71	2.41
Fugitive Dust			26.36	8.29

Total On-site Emissions	**41.36**	**72.97**	**29.07**	**10.7**
Localized Significance Threshold	1,804	197	12	8
Above LST?	No	No	Yes	Yes

Capistrano Substation Construction - Lower Yard	**CO lbs/day**	**NOX lbs/day**	**PM10 lbs/day**	**PM2.5 lbs/day**
Emissions, lbs/day				
Heavy Construction Equipment	38.97	80.56	2.89	2.57
Total On-site Emissions	**38.97**	**80.65**	**2.89**	**2.57**
Localized Significance Threshold	1,804	197	12	8
Above LST?	No	No	No	No

2017

Capistrano Substation Construction - Lower Yard	**CO lbs/day**	**NOX lbs/day**	**PM10 lbs/day**	**PM2.5 lbs/day**
Emissions, lbs/day				
Heavy Construction Equipment	38.97	80.56	2.89	2.57
Total On-site Emissions	**38.97**	**80.56**	**2.89**	**2.57**
Localized Significance Threshold	1,804	197	12	8
Above LST?	No	No	No	No

Capistrano Substation Relay Testing - Lower Yard	**CO lbs/day**	**NOX lbs/day**	**PM10 lbs/day**	**PM2.5 lbs/day**
Emissions, lbs/day				
Heavy Construction Equipment	0.71	1.24	0.04	0.04
Total On-site Emissions	**0.71**	**1.24**	**0.04**	**0.04**
Localized Significance Threshold	1,804	197	12	8
Above LST?	No	No	No	No

Capistrano Substation Energization - Lower Yard	**CO lbs/day**	**NOX lbs/day**	**PM10 lbs/day**	**PM2.5 lbs/day**
Emissions, lbs/day				
Heavy Construction Equipment	1.41	2.48	0.08	0.07
Total On-site Emissions	**1.41**	**2.48**	**0.08**	**0.07**
Localized Significance Threshold	1,804	197	12	8
Above LST?	No	No	No	No

Capistrano Substation Energize Temporary TL 13835 - Lower Yard	**CO lbs/day**	**NOX lbs/day**	**PM10 lbs/day**	**PM2.5 lbs/day**
Emissions, lbs/day				
Heavy Construction Equipment	5.01	6.09	0.33	0.30
Total On-site Emissions	**5.01**	**6.09**	**0.33**	**0.30**
Localized Significance Threshold	1,804	197	12	8
Above LST?	No	No	No	No

Capistrano Substation Remove RFS 138/12kV Equipment - 230 kV	**CO lbs/day**	**NOX lbs/day**	**PM10 lbs/day**	**PM2.5 lbs/day**
Emissions, lbs/day				
Heavy Construction Equipment	13.82	21.48	0.84	0.75
Total On-site Emissions	**13.82**	**21.48**	**0.84**	**0.75**
Localized Significance Threshold	1,804	197	12	8
Above LST?	No	No	No	No

Capistrano Substation Site Development - 230 kV	**CO lbs/day**	**NOX lbs/day**	**PM10 lbs/day**	**PM2.5 lbs/day**
Emissions, lbs/day				
Heavy Construction Equipment	55.39	92.61	3.61	3.21
Fugitive Dust			61.93	18.22
Total On-site Emissions	**55.39**	**92.61**	**65.54**	**21.43**
Localized Significance Threshold	1,804	197	12	8
Above LST?	No	No	Yes	Yes

2018

Capistrano Substation Site Development - 230 kV	**CO lbs/day**	**NOX lbs/day**	**PM10 lbs/day**	**PM2.5 lbs/day**
Emissions, lbs/day				
Heavy Construction Equipment	55.39	92.61	3.61	3.21
Fugitive Dust	0.00	0.00	61.93	18.22
Total On-site Emissions	**55.39**	**92.61**	**65.54**	**21.43**
Localized Significance Threshold	1,804	197	12	8
Above LST?	No	No	Yes	Yes

Capistrano Substation Below Grade - 230 kV	**CO lbs/day**	**NOX lbs/day**	**PM10 lbs/day**	**PM2.5 lbs/day**
Emissions, lbs/day				

Heavy Construction Equipment	43.50	49.21	1.82	1.62
Fugitive Dust			32.68	10.27
Total On-site Emissions	**43.5**	**49.21**	**34.5**	**13.94**
Localized Significance Threshold	1,804	197	12	8
Above LST?	No	No	Yes	Yes

Capistrano Substation Construction - 230 kV	**CO lbs/day**	**NOX lbs/day**	**PM10 lbs/day**	**PM2.5 lbs/day**
Emissions, lbs/day				
Heavy Construction Equipment	43.76	53.88	1.95	1.74
Total On-site Emissions	**43.76**	**53.88**	**1.95**	**1.74**
Localized Significance Threshold	1,804	197	12	8
Above LST?	No	No	No	No

Talega Substation Construction	**CO lbs/day**	**NOX lbs/day**	**PM10 lbs/day**	**PM2.5 lbs/day**
Emissions, lbs/day				
Heavy Construction Equipment	5.27	5.76	0.23	0.21
Total On-site Emissions	**5.27**	**5.76**	**0.23**	**0.21**
Localized Significance Threshold	1,804	197	12	8
Above LST?	No	No	No	No

2019

Capistrano Substation Relay Testing - 230 kV	**CO lbs/day**	**NOX lbs/day**	**PM10 lbs/day**	**PM2.5 lbs/day**
Emissions, lbs/day				
Heavy Construction Equipment	0.68	0.73	0.03	0.02
Total On-site Emissions	**0.68**	**0.73**	**0.03**	**0.02**
Localized Significance Threshold	1,804	197	12	8
Above LST?	No	No	No	No

Capistrano Substation DeEnergize Temporary TL 13835 - 230 kV	**CO lbs/day**	**NOX lbs/day**	**PM10 lbs/day**	**PM2.5 lbs/day**
Emissions, lbs/day				
Heavy Construction Equipment	8.89	9.18	0.32	0.29
Total On-site Emissions	**8.89**	**9.18**	**0.32**	**0.29**
Localized Significance Threshold	1,804	197	12	8
Above LST?	No	No	No	No

2020

Capistrano Substation Energization - 230 kV	**CO lbs/day**	**NOX lbs/day**	**PM10 lbs/day**	**PM2.5 lbs/day**
Emissions, lbs/day				
Heavy Construction Equipment	1.35	1.10	0.04	0.03
Total On-site Emissions	**1.35**	**1.10**	**0.04**	**0.03**
Localized Significance Threshold	1,804	197	12	8
Above LST?	No	No	No	No

Estimated Emissions within South Coast Air Basin, Transmission Line Construction

Segment 1a: Underground 138-kV Getaways from San Juan Capistrano Substation	**CO lbs/day**	**NOX lbs/day**	**PM10 lbs/day**	**PM2.5 lbs/day**
Emissions, lbs/day				
Heavy Construction Equipment	47.79	94.90	3.90	3.47
Fugitive Dust			89.77	26.79
Total On-site Emissions	**47.79**	**94.90**	**93.67**	**34.04**
Localized Significance Threshold	696	91	4	3
Above LST?	No	Yes	Yes	Yes

Segment 3: Overhead Double-Circuit 230-kV Transmission Line South of Vista Montana Road to structure 42	**CO lbs/day**	**NOX lbs/day**	**PM10 lbs/day**	**PM2.5 lbs/day**
Emissions, lbs/day				
Heavy Construction Equipment	58.55	118.26	4.61	4.11
Fugitive Dust			89.77	26.79
Total On-site Emissions	**58.55**	**118.26**	**93.67**	**34.04**
Localized Significance Threshold	696	91	4	3
Above LST?	No	Yes	Yes	Yes

Segment 1b: Overhead Double-Circuit 230-kV Transmission Line from Capistrano Substation to Vista Montana Rd. and 138-kV Getaways East of San Juan Capistrano Substation to Vista Montana Road	**CO lbs/day**	**NOX lbs/day**	**PM10 lbs/day**	**PM2.5 lbs/day**
Emissions, lbs/day				
Heavy Construction Equipment	50.93	105.25	4.03	3.58
Fugitive Dust			89.77	26.79

Total On-site Emissions	**50.93**	**105.25**	**93.8**	**30.37**
Localized Significance Threshold	696	91	4	3
Above LST?	No	Yes	Yes	Yes

Segment 4: Talega Hub/Corridor 230-kV from structure 42 to Talega Substation	**CO lbs/day**	**NOX lbs/day**	**PM10 lbs/day**	**PM2.5 lbs/day**
Emissions, lbs/day				
Heavy Construction Equipment	27.65	53.59	2.08	1.85
Fugitive Dust			56.11	16.74
Total On-site Emissions	**27.65**	**53.59**	**58.19**	**18.59**
Localized Significance Threshold	696	91	4	3
Above LST?	No	No	Yes	Yes

2016

Segment 1a: Underground 138-kV Getaways from San Juan Capistrano Substation	**CO lbs/day**	**NOX lbs/day**	**PM10 lbs/day**	**PM2.5 lbs/day**
Emissions, lbs/day				
Heavy Construction Equipment	29.85	46.93	2.29	2.03
Fugitive Dust			89.77	26.79
Total On-site Emissions	**29.85**	**46.93**	**92.06**	**28.82**
Localized Significance Threshold	696	91	4	3
Above LST?	No	No	Yes	Yes

Segment 3: Overhead Double-Circuit 230-kV Transmission Line South of Vista Montana Road to structure 42	**CO lbs/day**	**NOX lbs/day**	**PM10 lbs/day**	**PM2.5 lbs/day**
Emissions, lbs/day				
Heavy Construction Equipment	13.82	18.47	0.99	0.89
Fugitive Dust			89.77	26.79
Total On-site Emissions	**13.82**	**18.47**	**90.76**	**27.68**
Localized Significance Threshold	696	91	4	3
Above LST?	No	No	Yes	Yes

Segment 1b: Overhead Double-Circuit 230-kV Transmission Line from Capistrano Substation to Vista Montana Rd. and 138-kV Getaways East of San Juan Capistrano Substation to Vista Montana Road	**CO lbs/day**	**NOX lbs/day**	**PM10 lbs/day**	**PM2.5 lbs/day**
Emissions, lbs/day				

Heavy Construction Equipment	13.82	18.47	0.99	0.89
Fugitive Dust			89.77	26.79
Total On-site Emissions	**13.82**	**18.47**	**90.76**	**27.68**
Localized Significance Threshold	696	91	4	3
Above LST?	No	No	Yes	Yes

Segment 4: Talega Hub/Corridor 230-kV from structure 42 to Talega Substation	**CO lbs/day**	**NOX lbs/day**	**PM10 lbs/day**	**PM2.5 lbs/day**
Emissions, lbs/day				
Heavy Construction Equipment	6.74	8.06	0.47	0.42
Fugitive Dust			56.11	16.74
Total On-site Emissions	**6.74**	**8.06**	**56.58**	**17.16**
Localized Significance Threshold	696	91	4	3
Above LST?	No	No	Yes	Yes

2017

Segment 2: Underground 230-kV Transmission Lines Along Vista Montana Road (South)	**CO lbs/day**	**NOX lbs/day**	**PM10 lbs/day**	**PM2.5 lbs/day**
Emissions, lbs/day				
Heavy Construction Equipment	43.33	59.55	2.65	2.36
Fugitive Dust			89.77	26.79
Total On-site Emissions	**43.33**	**59.55**	**92.42**	**29.15**
Localized Significance Threshold	696	91	4	3
Above LST?	No	No	Yes	Yes

Segment 2: Underground 230-kV Transmission Lines Along Vista Montana Road (North w/138kV)	**CO lbs/day**	**NOX lbs/day**	**PM10 lbs/day**	**PM2.5 lbs/day**
Emissions, lbs/day				
Heavy Construction Equipment	49.33	71.28	2.98	2.65
Fugitive Dust			89.77	26.79
Total On-site Emissions	**49.33**	**71.28**	**92.75**	**29.44**
Localized Significance Threshold	696	91	4	3
Above LST?	No	No	Yes	Yes

2018

Segment 3: Overhead Double-Circuit 230-kV Transmission Line South of Vista Montana Road to structure 42	**CO lbs/day**	**NOX lbs/day**	**PM10 lbs/day**	**PM2.5 lbs/day**
Emissions, lbs/day				

Heavy Construction Equipment	24.86	27.14	1.16	1.03
Fugitive Dust			89.77	26.79
Total On-site Emissions	**24.86**	**27.14**	**90.93**	**29.11**
Localized Significance Threshold	696	91	4	3
Above LST?	No	No	Yes	Yes

Segment 2: Underground 230-kV Transmission Lines Along Vista Montana Road (South)	**CO lbs/day**	**NOX lbs/day**	**PM10 lbs/day**	**PM2.5 lbs/day**
Emissions, lbs/day				
Heavy Construction Equipment	27.57	29.43	1.24	1.11
Fugitive Dust			89.77	26.79
Total On-site Emissions	**27.57**	**29.43**	**91.01**	**27.87**
Localized Significance Threshold	696	91	4	3
Above LST?	No	No	Yes	Yes

Segment 1b: Overhead Double-Circuit 230-kV Transmission Line from Capistrano Substation to Vista Montana Rd. and 138-kV Getaways East of San Juan Capistrano Substation to Vista Montana Road	**CO lbs/day**	**NOX lbs/day**	**PM10 lbs/day**	**PM2.5 lbs/day**
Emissions, lbs/day				
Heavy Construction Equipment	21.82	24.24	0.98	0.87
Fugitive Dust			89.77	26.79
Total On-site Emissions	**21.82**	**24.24**	**90.75**	**27.66**
Localized Significance Threshold	696	91	4	3
Above LST?	No	No	Yes	Yes

Segment 4: Talega Hub/Corridor 230-kV from structure 42 to Talega Substation	**CO lbs/day**	**NOX lbs/day**	**PM10 lbs/day**	**PM2.5 lbs/day**
Emissions, lbs/day				
Heavy Construction Equipment	11.79	13.05	0.52	0.46
Fugitive Dust			56.11	16.74
Total On-site Emissions	**8.31**	**0.75**	**56.63**	**17.2**
Localized Significance Threshold	696	91	4	3
Above LST?	No	No	Yes	Yes

Segment 2: Underground 230-kV Transmission Lines Along Vista Montana Road (North w/138kV)	**CO lbs/day**	**NOX lbs/day**	**PM10 lbs/day**	**PM2.5 lbs/day**

Emissions, lbs/day				
Heavy Construction Equipment	27.57	29.43	1.24	1.11
Fugitive Dust			89.77	26.79
Total On-site Emissions	**27.57**	**29.43**	**91.01**	**27.90**
Localized Significance Threshold	696	91	4	3
Above LST?	No	No	Yes	Yes

2019

Segment 4: Talega Hub 138-kV and 69-kV Transmission Lines	**CO lbs/day**	**NOX lbs/day**	**PM10 lbs/day**	**PM2.5 lbs/day**
Emissions, lbs/day				
Heavy Construction Equipment	36.00	35.20	1.37	1.22
Fugitive Dust			56.11	16.74
Total On-site Emissions	**36.00**	**35.20**	**59.74**	**17.96**
Localized Significance Threshold	696	91	4	3
Above LST?	No	No	Yes	Yes

Estimated Emissions within South Coast Air Basin Distribution Line Construction

2020

Segment 4: Talega Hub 138-kV and 69-kV Transmission Lines	**CO lbs/day**	**NOX lbs/day**	**PM10 lbs/day**	**PM2.5 lbs/day**
Emissions, lbs/day				
Heavy Construction Equipment	31.04	20.21	0.76	0.68
Fugitive Dust			55.84	16.66
Total On-site Emissions	**31.04**	**20.21**	**56.60**	**17.34**
Localized Significance Threshold	696	91	4	3
Above LST?	No	No	Yes	Yes

Undergrounding 1: Construction 800' of UG	**CO lbs/day**	**NOX lbs/day**	**PM10 lbs/day**	**PM2.5 lbs/day**
Emissions, lbs/day				
Heavy Construction Equipment	31.09	58.47	2.83	2.52
Total On-site Emissions	**31.09**	**58.47**	**2.83**	**2.52**
Localized Significance Threshold	696	91	4	3
Above LST?	No	No	No	No

Conductor Pulling	**CO lbs/day**	**NOX lbs/day**	**PM10 lbs/day**	**PM2.5 lbs/day**
Emissions, lbs/day				
Heavy Construction Equipment	7.08	16.76	0.55	0.49
Total On-site Emissions	**7.08**	**16.76**	**0.55**	**0.49**
Localized Significance Threshold	696	91	4	3

Above LST?	No	No	No	No

Cable Poles Foundation	**CO lbs/day**	**NOX lbs/day**	**PM10 lbs/day**	**PM2.5 lbs/day**
Emissions, lbs/day				
Heavy Construction Equipment	8.02	12.46	0.51	0.45
Total On-site Emissions	**8.02**	**12.46**	**0.51**	**0.45**
Localized Significance Threshold	696	91	4	3
Above LST?	No	No	No	No

Construct Foundations	**CO lbs/day**	**NOX lbs/day**	**PM10 lbs/day**	**PM2.5 lbs/day**
Emissions, lbs/day				
Construction Trucks	0.31	1.19	0.07	0.04
Total On-site Emissions	**10.10**	**16.38**	**0.65**	**0.58**
Localized Significance Threshold	696	91	4	3
Above LST?	No	No	No	No

Set Poles	**CO lbs/day**	**NOX lbs/day**	**PM10 lbs/day**	**PM2.5 lbs/day**
Emissions, lbs/day				
Heavy Construction Equipment	2.93	7.53	0.25	0.22
Total On-site Emissions	**2.93**	**7.53**	**0.25**	**0.22**
Localized Significance Threshold	696	91	4	3
Above LST?	No	No	No	No

Stringing Conductor	**CO lbs/day**	**NOX lbs/day**	**PM10 lbs/day**	**PM2.5 lbs/day**
Emissions, lbs/day				
Heavy Construction Equipment	5.16	12.49	0.41	0.37
Total On-site Emissions	**5.16**	**12.49**	**0.41**	**0.37**
Localized Significance Threshold	696	91	4	3
Above LST?	No	No	No	No

Undergrounding 2	**CO lbs/day**	**NOX lbs/day**	**PM10 lbs/day**	**PM2.5 lbs/day**
Emissions, lbs/day				
Heavy Construction Equipment	23.57	39.54	2.20	1.96
Total On-site Emissions	**23.57**	**39.54**	**2.20**	**1.63**
Localized Significance Threshold	696	91	4	3
Above LST?	No	No	No	No

Conductor Pulling - UG2	CO lbs/day	NOX lbs/day	PM10 lbs/day	PM2.5 lbs/day
Emissions, lbs/day				
Heavy Construction Equipment	5.48	12.37	0.41	0.36
Total On-site Emissions	**5.48**	**12.37**	**0.41**	**0.36**
Localized Significance Threshold	696	91	4	3
Above LST?	No	No	No	No

Conductor Pulling - Rancho Viejo	CO lbs/day	NOX lbs/day	PM10 lbs/day	PM2.5 lbs/day
Emissions, lbs/day				
Heavy Construction Equipment	5.48	12.37	0.41	0.36
Total On-site Emissions	**5.48**	**12.37**	**0.41**	**0.36**
Localized Significance Threshold	696	91	4	3
Above LST?	No	No	No	No

Conductor Pulling - La Pata	CO lbs/day	NOX lbs/day	PM10 lbs/day	PM2.5 lbs/day
Emissions, lbs/day				
Heavy Construction Equipment	5.48	12.37	0.41	0.36
Total On-site Emissions	**5.48**	**12.37**	**0.41**	**0.36**
Localized Significance Threshold	696	91	4	3
Above LST?	No	No	No	No

Construct New Poles	CO lbs/day	NOX lbs/day	PM10 lbs/day	PM2.5 lbs/day
Emissions, lbs/day				
Heavy Construction Equipment	8.93	15.29	0.60	0.53
Total On-site Emissions	**8.93**	**15.29**	**0.60**	**0.53**
Localized Significance Threshold	696	91	4	3
Above LST?	No	No	No	No

Stringing (OH)	CO lbs/day	NOX lbs/day	PM10 lbs/day	PM2.5 lbs/day
Emissions, lbs/day				
Heavy Construction Equipment	6.23	14.81	0.49	0.43
Total On-site Emissions	**6.23**	**14.81**	**0.49**	**0.43**
Localized Significance Threshold	696	91	4	3
Above LST?	No	No	No	No

Conductor Pulling (UG) - La Pata & Montana	CO lbs/day	NOX lbs/day	PM10 lbs/day	PM2.5 lbs/day

Emissions, lbs/day				
Heavy Construction Equipment	5.48	12.37	0.41	0.36
Total On-site Emissions	**5.48**	**12.37**	**0.41**	**0.36**
Localized Significance Threshold	696	91	4	3
Above LST?	No	No	No	No

Remove Poles and Conductor - La Pata	**CO lbs/day**	**NOX lbs/day**	**PM10 lbs/day**	**PM2.5 lbs/day**
Emissions, lbs/day				
Heavy Construction Equipment	9.64	23.83	0.79	0.70
Total On-site Emissions	**9.64**	**23.83**	**0.79**	**0.70**
Localized Significance Threshold	696	91	4	3
Above LST?	No	No	No	No

Undergrounding Talega	**CO lbs/day**	**NOX lbs/day**	**PM10 lbs/day**	**PM2.5 lbs/day**
Emissions, lbs/day				
Heavy Construction Equipment	23.57	39.54	2.20	1.96
Total On-site Emissions	**23.57**	**39.54**	**2.20**	**1.96**
Localized Significance Threshold	696	91	4	3
Above LST?	No	No	No	No

Conductor Pulling (UG) - Talega	**CO lbs/day**	**NOX lbs/day**	**PM10 lbs/day**	**PM2.5 lbs/day**
Emissions, lbs/day				
Heavy Construction Equipment	5.48	12.37	0.41	0.36
Total On-site Emissions	**5.48**	**12.37**	**0.41**	**0.36**
Localized Significance Threshold	696	91	4	3
Above LST?	No	No	No	No

Appendix L

Biological Resources Assessments and Special Status Species Tables

L-1: Biological Resources Assessment

L-2: Addendum to Biological Resources Assessment and Jurisdictional Delineation

L-3: Special Status Species Tables

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Biological Resources Assessment

San Diego Gas & Electric Company

South Orange County Reliability Enhancement Project

Orange County, California

USGS Cañada Gobernadora, San Juan Capistrano,

San Clemente, and Dana Point Quadrangles

May 2012

Prepared For:
San Diego Gas & Electric
8315 Century Park Court
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Acronyms List

APMs	Applicant Proposed Measures
ACOE	United States Army Corps of Engineers
BCC	Birds of Conservation Concern
Camp Pendleton	United States Marine Corps Base Camp Pendleton
CDFG	California Department of Fish and Game
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFG	California Fish and Game
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CPUC	California Public Utilities Commission
CSS	coastal sage scrub
CWA	Clean Water Act
FE	federally endangered
FESA	Federal Endangered Species Act
FT	federally threatened
FP	fully protected
FWCA	Fish and Wildlife Conservation Act of 1980
GIS	Geographic Information Systems
GPS	Global Positioning System
HCP	Habitat Conservation Plan
kV	kilovolt
LSAA	Lake or Streambed Alteration Agreement
Manual	1987 Wetland Delineation Manual
MBTA	Migratory Bird Treaty Act
msl	Mean Sea Level
NCCP	Natural Community Conservation Plan
NMFS	National Marine Fisheries Service
NRCS	Natural Resources Conservation Service
NWI	National Wetlands Inventory
OHWM	ordinary high water mark
PEA	Proponent's Environmental Assessment
Proposed Project	South Orange County Reliability Enhancement Project
ROW	right-of-way
RWQCB	Regional Water Quality Control Board
SDG&E	San Diego Gas & Electric
SE	state endangered
SSC	Species of Special Concern
ST	state threatened
SWS	southern willow scrub
TRC	TRC Solutions, Inc.
USDA	United States Department of Agriculture

USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
WL	watch listed
WUS	Waters of the United States

1.0 INTRODUCTION

The San Diego Gas & Electric Company (SDG&E) is a regulated public utility that provides electric service to three and a half million customers within a 4,100 square mile service area, covering parts of southern Orange County and San Diego County. The South Orange County Reliability Enhancement Project (Proposed Project) is intended to meet the area load growth and service reliability for approximately 118,000 customers (462 megawatts) within southern Orange County.

The purpose of this Biological Resources Assessment report is to document the findings of reconnaissance-level focused and biological surveys, analyze Proposed Project impacts, and outline mitigation measures to compensate for unavoidable impacts. This report will be included as a supplement to SDG&E's Proponent's Environmental Assessment (PEA) for the Proposed Project, and filed as part of its application for a Certificate of Public Convenience and Necessity submitted to the California Public Utilities Commission (CPUC). TRC Solutions, Inc. (TRC) prepared this report on behalf of SDG&E.

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2.0 PROPOSED PROJECT DESCRIPTION

The Proposed Project will involve rebuilding the existing 138/12 kilovolt (kV) Capistrano Substation with a new 230/138/12kV substation, conducting minor alterations to the existing Talega Substation, and bringing two new 230kV transmission lines into the southern Orange County area by replacing an existing 138kV transmission line between the Talega and Capistrano Substations. The transmission line portion of the Proposed Project is approximately eight miles in length. As shown in Figure 1, Project Overview Map, the Proposed Project components are primarily located in portions of the cities of San Juan Capistrano and San Clemente, as well as unincorporated Orange County, and the United States Marine Corps Base Camp Pendleton (Camp Pendleton). This Proposed Project has an anticipated in-service date of November 2017. The following sections describe each segment in more detail.

2.1 CAPISTRANO SUBSTATION

The existing Capistrano Substation site is 6.4 acres and is located within an urbanized area in the City of San Juan Capistrano. The Proposed Project entails rebuilding the existing Capistrano Substation to a new combined bulk power transmission and distribution substation (230/138/12kV). The new substation will be named the San Juan Capistrano Substation.

This segment of the Proposed Project will involve:

- Replacement of the aging and obsolete 138/12kV substation that currently exists on the Capistrano Substation site;
- Addition of a new 230kV gas insulated substation; and
- Rebuilding and expanding the existing 12kV distribution substation and the 138kV transmission substation, utilizing gas insulated technology (138kV only).

2.2 TALEGA SUBSTATION

The existing facilities at the Talega Substation are located on a 6.1 acre property located on Camp Pendleton. The existing facility is a 230/138/69kV bulk transmission substation. This segment of the Proposed Project will involve:

- Connection of one new 138kV and two new 230kV transmission line to the existing substation;
- Rearranging the 138kV and 230kV transmission line configurations and eliminating two 230/138kV transformer banks; and
- Disconnection of one 230kV transmission line.

2.3 TRANSMISSION LINES

The Proposed Project will involve the installation of new 69kV, 138kV, and 230kV structures, overhead conductor and underground cable, and removal of existing transmission structures. All transmission line work will be completed within SDG&E's existing right-of-way (ROW) between the Capistrano Substation and the Talega Substation, as well as within small portions of acquired additional ROW near the Talega Substation and Rancho San Juan development. For the

purposes of this discussion, the transmission line work associated with the Proposed Project has been divided into four segments which are discussed in more detail below.

2.3.1 Segment 1 – San Juan Capistrano Substation to Rancho San Juan

The San Juan Capistrano Substation to Rancho San Juan segment of the Proposed Project will involve:

- Installation of 2.66 miles of new 230kV double circuit overhead transmission line;
- Removal of 20 138kV wood transmission structures, and 11 steel 138kV structures;
- Installation of 16 new 230 kV steel structures; and
- Installation of approximately 1,400 feet of 138kV underground transmission line.

2.3.2 Segment 2 – Rancho San Juan

The Rancho San Juan segment of the Proposed Project will involve:

- Installation of approximately 0.4 mile of two separate 230kV underground cable system in conduit packages;
- Installation of four new 230kV steel cable riser structure;
- Removal of two existing 138kV steel cable riser structures; and
- Replacement of one existing 138kV double-circuit steel cable riser structure.

2.3.3 Segment 3 – Rancho San Juan to Talega Hub

The Rancho San Juan to Talega Hub segment of the Proposed Project will involve:

- Installation of approximately 4.2 miles of new 230kV overhead transmission line;
- Removal of approximately 32 138kV wood structures; and
- Installation of 22 new 230kV double-circuit steel structures.

2.3.4 Segment 4 – Talega Hub to Talega Substation

The Talega Hub to Talega Substation segment of the Proposed Project will involve:

- Installation of approximately 3,230 feet of new 230kV overhead transmission lines;
- Relocation of 138kV and 69kV lines;
- Removal of 13 69kV wood structures and replaced with nine steel structures;
- Removal of 21 138kV wood structures, and two 138kV steel structures;
- Installation of 15 new 138kV steel structures; and
- Removal of one 230kV steel structure, and installation of eight 230kV steel structures.

2.4 CONSTRUCTION AREAS AND TEMPORARY IMPACT AREAS

2.4.1 Access Roads

Some new spur roads may be required to access the new structure sites. These roads would be graded and will generally be 14 feet wide for straight sections and up to 20 feet wide at curves. Since the Proposed Project will follow an existing transmission corridor, construction access to most new structure sites will be available by way of existing access roads.

2.4.2 Temporary Impact Areas

Temporarily disturbed areas include materials storage and staging areas, as well as pull and tension sites, and splice sites. SDG&E will make attempts to locate previously disturbed areas along the route to temporarily store materials and stage equipment. The staging areas will generally be approximately two acres in size and will only be used temporarily during construction. SDG&E will also utilize existing substations and other properties to store materials and equipment. Some of these areas may be outside of the SDG&E ROW.

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3.0 REGULATORY BACKGROUND

3.1 FEDERAL REGULATIONS

3.1.1 Federal Endangered Species Act

The United States Congress passed the Federal Endangered Species Act (FESA) in 1973. FESA protects plants and wildlife that are listed as "endangered" or "threatened" by the United States Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS). It also requires the evaluation of effects to "proposed" and "candidate" species. Section 9 of FESA prohibits the "take" of endangered wildlife, where take is defined as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in such conduct" (50 CFR Section 17.3). For plants, this statute governs removing, possessing, maliciously damaging, or destroying any endangered plant on federal land and removing, cutting, digging-up, damaging, or destroying any endangered plant on non-federal land in knowing violation of state law (16 USC 1538). Under Section 7 of FESA, federal agencies are required to consult with the USFWS and/or NMFS if their actions, including permit approvals or funding, could adversely affect an endangered plant or wildlife species or its habitat, or could adversely affect designated critical habitat. Through consultation and the issuance of a biological opinion, the USFWS and/or NMFS may issue an "incidental take statement" allowing take of the species, provided the action will not jeopardize the continued existence of any federally listed species or result in the destruction or adverse modification of habitat of such species. Section 10 of FESA provides for issuance of incidental take permits to private parties without a federal nexus provided a Habitat Conservation Plan (HCP) is developed.

3.1.2 Federal Clean Water Act

The purpose of the Clean Water Act (CWA) is to "restore and maintain the chemical, physical, and biological integrity of the nation's waters." Section 404 of the CWA prohibits the discharge of dredged or fill material into Waters of the United States (WUS) without a permit from the United States Army Corps of Engineers (ACOE). In addition, Section 401 of the CWA (33 USC 1341) requires any applicant for a federal license or permit to conduct any activity that may result in a discharge of a pollutant into WUS, to obtain a certification that the discharge will comply with the applicable effluent limitations and water quality standards. A Water Quality Certification or waiver pursuant to Section 401 is required for Section 404 permit actions, and is issued by the Regional Water Quality Control Board (RWQCB).

"Discharges of fill material" are defined as the addition of fill material into WUS including, but not limited to, the following: placement of fill that is necessary for the construction of any structure, or impoundment requiring rock, sand, dirt, or other material for its construction; site-development fills for recreational, industrial, commercial, residential, and other uses; causeways or road fills; or fill for intake and outfall pipes and subaqueous utility lines (33 CFR Section 328.2[f]). The definition of WUS includes rivers, streams, estuaries, the territorial seas, ponds, lakes, mudflats, sandflats, sloughs, wet meadows, and wetlands. Boundaries between jurisdictional waters and uplands are determined in a variety of ways depending on which type of water is present. A brief overview of methods for delineating wetlands and non-tidal waters are described below.

Wetlands are defined as "those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (33 CFR Section 328.3[b]). The methodology set forth in the 1987 Wetlands Delineation Manual (Manual) (ACOE, 1987) and the Arid West Supplement (ACOE, 2006, 2008) generally require that, in order to be considered a wetland, the vegetation, soils, and hydrology of an area exhibit at least minimal hydric characteristics, often referred to as a 'three-parameter wetland.'

The lateral extent of non-tidal waters is determined by delineating the ordinary high water mark (OHWM) (33 CFR Section 328.4(c) (1)). The OHWM is defined by the ACOE as "that line on shore established by the fluctuations of water and indicated by physical character of the soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas" (33 CFR Section 328.3[e]).

3.1.3 Migratory Bird Treaty Act

The federal Migratory Bird Treaty Act (MBTA), first enacted in 1916, prohibits any person, unless permitted by regulation, to:

> *…pursue, hunt, take, capture, kill, attempt to take, capture or kill, possess, offer for sale, sell, offer to purchase, purchase, deliver for shipment, ship, cause to be shipped, deliver for transportation, transport, cause to be transported, carry, or cause to be carried by any means whatsoever, receive for shipment, transportation or carriage, or export, at any time, or in any manner, any migratory bird, included in the terms of this Convention . . . for the protection of migratory birds . . . or any part, nest, or egg of any such bird (16 USC 703).*

As authorized by the MBTA, the USFWS issues permits to qualified applicants for the following types of activities: falconry, raptor propagation, scientific collecting, special purposes (rehabilitation, education, migratory game bird propagation, and salvage), take of depredating birds, taxidermy, and waterfowl sale and disposal.

The list of migratory birds includes nearly all bird species native to the United States. The Migratory Bird Treaty Reform Act of 2004 further defined species protected under the act and excluded all non-native species. The statute was extended in 1974 to include parts of birds, as well as eggs and nests. Thus, it is illegal under the MBTA to directly kill, or destroy a nest of, nearly any bird species, not just endangered species. Activities that result in removal or destruction of an active nest (a nest with eggs or young being attended by one or more adults) would violate the MBTA.

3.1.4 Birds of Conservation Concern

Birds of Conservation Concern (BCC) is a USFWS list of bird species identified to have the highest conservation priority, and with the potential for becoming candidates for listing as federally threatened or endangered. The chief legal authority for BCC is the Fish and Wildlife Conservation Act of 1980 (FWCA). Other authorities include the FESA, the Fish and Wildlife Act of 1956, and the Department of the Interior U.S Code (16 U.S.C. § 701). The 1988 amendment to the FWCA (Public Law 100-653, Title VIII) requires the Secretary of the Interior,

through the USFWS, to "identify species, subspecies, and populations of all migratory nongame birds that, without additional conservation actions, are likely to become candidates for listing under the Endangered Species Act of 1973" (USFWS, 2008a).

3.2 STATE REGULATIONS

3.2.1 California Environmental Quality Act Significance Criteria

Section 15064.7 of the *California Environmental Quality Act (CEQA) Guidelines* encourages local agencies to develop and publish the thresholds that the agency uses in determining the significance of environmental effects caused by projects under its review. However, agencies may also rely upon the guidance provided by the Initial Study checklist contained in Appendix G of the *CEQA Guidelines*. Appendix G provides examples of impacts that would normally be considered significant. Based on these examples, impacts to biological resources would normally be considered significant if a project would result in any of the following:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game (CDFG) or USFWS;
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by CDFG or USFWS;
- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the CWA (including, but not limited to, marsh, vernal pool, coastal wetlands, etc.) through direct removal, filling, hydrological interruption, or other means;
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species, or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or
- Conflict with the provisions of an adopted HCP, Natural Community Conservation Plan (NCCP), or other approved local, regional or state HCP.

An evaluation of whether or not an impact on biological resources would be significant must consider both the resource itself and how that resource fits into a regional or local context. Significant impacts would be those that would diminish, or result in the loss of, an important biological resource, or those that would obviously conflict with local, state, or federal resource conservation plans, goals, or regulations. Impacts are sometimes locally important but not significant according to CEQA. This is necessary because although the impacts would result in an adverse alteration of existing conditions, they would not substantially diminish, or result in the permanent loss of, an important resource on a population-wide or region-wide basis.

3.2.2 California Endangered Species Act

The State of California enacted the California Endangered Species Act (CESA) in 1984. CESA directs agencies to consult with CDFG on projects or actions that could affect listed species, directs CDFG to determine whether jeopardy would occur, and allows CDFG to identify "reasonable and prudent alternatives" to the project consistent with conserving the species. CESA generally parallels the main provisions of FESA, but unlike its federal counterpart, CESA applies the "take" prohibitions to species proposed for listing (called "candidates" by the State). "Take" is defined in Section 86 of the California Fish and Game (CFG) Code as to "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." Section 2080 of the CFG Code prohibits the taking, possession, purchase, sale, and import or export of endangered, threatened, or candidate species, unless otherwise authorized by permit or in the regulations. Under CFG Code Section 2081, CESA allows CDFG to authorize exceptions to the state's prohibition against "take" of a listed species (except for designated "fully protected species") if the "take" of a listed species is incidental to carrying out an otherwise lawful project that has been approved under CEQA. Section 2080.1 of the CFG Code allows for "take" once an applicant obtains a Federal Incidental Take Statement, submits it to the CDFG Director in writing, and receives a confirmed determination that the federal statement is "consistent" with CESA (a Consistency Determination letter). There is a 30-day window for issuance of a Consistency Determination letter. If, however, the Federal Incidental Take Statement is not determined to be consistent with CESA, then a State Incidental Take Permit under Section 2081(b) of the CFG Code must be applied for. Both sections 2081 and 2080.1 require that take be minimized and fully mitigated.

3.2.3 California Fully Protected Species

The State of California first began to designate "fully protected" (FP) species prior to the creation of CESA and FESA. Lists of FP species were initially developed to provide protection to those animals that were rare or faced possible extinction, and included fish, amphibians and reptiles, birds, and mammals. Most FP species have since been listed as threatened or endangered under CESA and/or FESA. The regulations that implement the Fully Protected Species Statute (CFG Code Section 4700) state that FP species may not be taken or possessed at any time. Furthermore, CDFG prohibits any state agency from issuing incidental take permits for fully protected species, except for necessary scientific research.

In September 2011, the California Legislature sent the Governor legislation authorizing CDFG to permit the incidental take of 36 fully protected species pursuant to an NCCP approved by CDFG (Senate Bill 618 [Wolk]). The legislation gives FP species the same level of protection as is provided under the NCCP Act for endangered and threatened species (CFC Code § 2835). The NCCP Act, enacted in the 1990s, authorizes the incidental take of species "whose conservation and management" is provided for in a conservation plan approved by CDFG.

3.2.4 California Species of Special Concern

In addition to formal listing under FESA and CESA, species receive additional consideration by CDFG and lead agencies during the CEQA process. Species that may be considered for review are included on a list of "Species of Special Concern" (SSC) developed by CDFG. The list tracks species in California whose numbers, reproductive success, or habitat may be in decline.

3.2.5 California Fish and Game Code for Birds of Prey

Section 3503.5 of the CFG Code states that it is:

> *…unlawful to take, possess, or destroy any birds in the order Falconiformes or Strigiformes (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto.*

Disturbance activities that result in abandonment of an active bird-of-prey nest in areas adjacent to the disturbance may also be considered a violation of the CFG Code.

3.2.6 California Native Plant Protection Act and California Native Plant Society

The California Native Plant Protection Act of 1977 (CFG Code Sections 1900-1913) affords the CFG Commission the authority to designate native plants as endangered or rare and protects such endangered or rare plants from take. In addition, plants that are not state-listed, but meet the standards for listing, are also protected under CEQA (*CEQA Guidelines, Section 15380*). The California Native Plant Society (CNPS) maintains a list of plant species native to California with low population numbers, limited distribution, or that are otherwise threatened with extinction. Potential impacts to populations of CNPS listed plants receive consideration under CEQA review. Typically, special status plants are considered those on lists 1A, 1B, and 2. The definitions for each of the CNPS listings are below:

- List 1A: Plants presumed Extinct in California
- List 1B: Plants Rare, Threatened, or Endangered in California and elsewhere
- List 2: Plants Rare, Threatened, or Endangered in California, but more numerous elsewhere
- List 3: Plants about which we need more information — A Review List
- List 4: Plants of limited distribution — A Watch List

3.2.7 California Lake and Streambed Alteration Program

Sections 1600 through 1616 of the CFG Code require that a Lake and Streambed Alteration Agreement (LSAA) Program Notification Package be submitted to CDFG for "any activity that may substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake." CDFG reviews the proposed actions and, if necessary, provides the applicant with a proposal for measures to protect affected fish and wildlife resources. The final proposal on which CDFG and the applicant agree is an LSAA signed by both parties. Often, projects that require an LSAA also require a permit from the ACOE under Section 404 of the CWA and the RWQCB under Section 401 of the CWA. In these instances, the conditions of the Section 404/401 permits and the LSAA may overlap.

3.3 LOCAL REGULATIONS

3.3.1 SDG&E Subregional Natural Community Conservation Plan

In December 1995, the USFWS and the CDFG approved *SDG&E's Subregional Natural Community Conservation Plan* (*SDG&E Subregional NCCP*), developed in coordination with such agencies, that addresses potential impacts to sensitive resources associated with SDG&E's ongoing installation, use, maintenance, and repair of its gas and electric systems, and typical expansion to those systems throughout much of SDG&E's existing service territory (SDG&E Subregional NCCP, 1995a). As a part of the *SDG&E Subregional NCCP*, SDG&E has been issued incidental take permits (Permit PRT-809637) by the USFWS and the CDFG for 110 Covered Species. The *SDG&E Subregional NCCP* was developed by following the multiple species and habitat conservation planning approach. Even with the *SDG&E Subregional NCCP*, SDG&E's goal is to avoid "take" of Covered Species whenever possible and to implement measures to minimize and mitigate any take to the maximum extent possible. The *SDG&E Subregional NCCP* includes mitigation measures and operational protocols designed to avoid potential impacts and to provide appropriate mitigation where such impacts are unavoidable, to ensure the protection and conservation of federal and state listed species and Covered Species. The Proposed Project falls within the area in which SDG&E's utility operations are governed by *SDG&E's Subregional NCCP*. For this Proposed Project, SDG&E has adopted the mitigation measures and operational protocols contained in the *SDG&E Subregional NCCP* and project-specific Applicant Proposed Measures (APMs).

SDG&E is a public utility whose public activities are regulated by the CPUC. As described in the *SDG&E Subregional NCCP Memorandum of Understanding*, local governments are precluded from regulating public utilities through their zoning laws, land use laws, ordinances and other police powers (including other NCCPs or HCPs) by the exclusive jurisdiction of the CPUC. Therefore, the *SDG&E Subregional NCCP* is independent of other NCCP/HCPs and the Covered Species for which Incidental Take is authorized under the Take Authorizations is not dependent upon the implementation of such plans (SDG&E, 1995b)."

3.3.2 Southern Orange County Subregional Natural Community Conservation Plan

The Southern Orange County Subregional Natural Community Conservation Plan *(Southern Orange County Subregional NCCP*) is a comprehensive, long-term HCP developed to provide conservation for multiple species and the preservation of natural vegetation communities in

southern Orange County (County of Orange, 2006). The *Southern Orange County Subregional NCCP* serves as an NCCP under the NCCP Act of 2001, a Master Services Alteration Agreement under Sections 1600 through 1616 of the CFG Code, and as well as a HCP pursuant to Section 10(a)(1)(B) of the FESA of 1973. The *Southern Orange County Subregional NCCP* involves three Participating Landowners: the County of Orange, Rancho Mission Viejo, and Santa Margarita Water District. The *Southern Orange County Subregional NCCP* area encompasses approximately 132,000 acres, including Rancho Mission Viejo land, as well as the Orange County property in the vicinity of Cleveland National Forest, the cities of Mission Viejo, San Juan Capistrano, and San Clemente.

The *Southern Orange County Subregional NCCP* creates a preservation area totaling 32,818 acres, including 16,536 acres of newly dedicated conservation lands. The entire preservation area will be managed to promote wildlife species. In exchange for the creation and management of the preserve area, USFWS and CDFG granted "Take Authorization" for otherwise lawful actions, such as public and private development, that may incidentally take or harm individual species or their habitat inside of the preservation area. The *Southern Orange County Subregional NCCP* covers 32 special status animal species and 10 vegetation communities, including seven federally listed species. In addition, the *Southern Orange County Subregional NCCP* has negotiated with CDFG for the permanent impacts of approximately 186 acres and temporary impacts of 80 acres of CDFG Jurisdiction.

The Proposed Project traverses through areas within the *Southern Orange County Subregional NCCP*, as shown in Figure 2, Local Habitat Conservation Plan. The Proposed Project is will occur within and follow the requirements of the *SDG&E Subregional NCCP*; therefore, no conflicts are expected with the *Southern Orange County Subregional NCCP*. If potential conflicts occur with the *Southern Orange County Subregional NCCP*, the Proposed Project will follow the requirements of the *SDG&E Subregional NCCP*. The *SDG&E Subregional NCCP* is independent of other NCCP/HCPs; and therefore is not dependent upon the implementation of such plans and is not superseded by other plans (SDG&E, 1995b). SDG&E will coordinate with the appropriate authorities during the Proposed Project approval process to ensure that the impacts, mitigation measures, and operational protocols are implemented for the Proposed Project under the *SDG&E Subregional NCCP*.

3.3.3 Other Conservation Plans

The Proposed Project traverses through areas with other adopted conservation plans and associated mitigation or preservation areas, including the Talega and Rancho San Juan developments. The Proposed Project is anticipated to occur within SDG&E's ROW; therefore no conflicts should occur with any other conservation plans or mitigation/preservation areas. . If potential conflicts occur with mitigation or preservation areas, the *SDG&E Subregional NCCP* is independent of other NCCP/HCPs; and therefore is not dependent upon the implementation of such plans and is not superseded by theirs (SDG&E, 1995b). SDG&E will coordinate with the appropriate authorities during the Proposed Project approval process to ensure that the impacts, mitigation measures, and operational protocols are implemented for the Proposed Project under the *SDG&E Subregional NCCP*.

3.3.4 City of San Juan Capistrano Tree Ordinance

The city of San Juan Capistrano's Municipal Code (Section 9-2.349) establishes regulations for removal of trees within their boundaries. The ordinance regulates the removal of trees over six inches in diameter measured three feet above grade. Tree removal permits are required for new development projects, utility easements, common landscape areas, nonresidential projects, city of San Juan Capistrano facilities and ROW, individual residential lots, and heritage trees.

Tree removals requiring city of San Juan Capistrano Community Development Department review and action take approximately one to three weeks. Trees requiring Planning Commission review will require one to three months for final action. Approved tree removal permits expire six months from the date of approval. If the permit expires and trees covered by the permit have not been removed, a new tree removal permit application is required

3.3.5 City of San Clemente Tree Ordinance

The city of San Clemente ordinance, City Owned Trees: Protection and Administration (Policy 301-2-1), provides the mechanism for protecting the community's urban forest and establishes a policy for managing trees owned by the city of San Clemente. The ordinance protects street trees and all trees planted on city of San Clemente land. This includes all trees at beaches, parks, golf courses, and conditionally those along public streets. This definition extends to trees that exist on any developed or undeveloped property owned and maintained by the city of San Clemente. Replacement of any trees removed will be considered and is at the discretion of the San Clemente Director of Beaches, Parks and Recreation.

4.0 METHODS

4.1 LITERATURE REVIEW

Prior to performing the biological field surveys, documentation relevant to the Proposed Project and surrounding area was reviewed, and a special status species list was prepared for the Proposed Project.

4.1.1 Special Status Species

A special status species list was prepared from record searches for the United States Geological Survey (USGS) 7.5-minute Cañada Gobernadora, San Juan Capistrano, San Clemente, and Dana Point quadrangles within three miles of the Proposed Project. Special status species include all federally and state listed endangered and threatened species, candidates for listing, species proposed for listing, FP species, SSC species), species listed as rare or endangered by CNPS, and special status species that are identified under the *SDG&E Subregional NCCP* that had ranges within Orange County and suitable habitat was present along the Proposed Project alignment, including Covered Species. A sensitive species was considered a potential inhabitant of the Proposed Project, if its known geographical distribution either encompassed part of the Proposed Project or was within the vicinity of the Proposed Project (within approximately three miles), and its general habitat requirements (e.g., roosting, nesting, or foraging habitat, specific soil type, permanent water source) were within the boundaries of the Proposed Project. Sources of information that were used to compile the species list included the CDFG California Natural Diversity Data Base (CNDDB, 2011), the CNPS online inventory (CNPS, 2011), and the *SDG&E Subregional NCCP Covered Species List* (SDG&E, 1995; Pages 43-45 and Table 3.1). A complete list of species assessed in included as Appendix A, CNDDB and CNPS Special Status Species Table.

4.1.2 Critical Habitat

The USFWS critical habitat areas for listed species were searched using Geographic Information Systems (GIS) shapefiles provided by the USFWS within three miles of the Proposed Project alignment.

4.1.3 Drainages and Other Water Features

The potential presence of drainages and other water resources was assessed by reviewing USGS topographic maps to identify any blue line streams (USGS, 1975,1981,1995, 1997), searching the USFWS National Wetlands Inventory (NWI) (USFWS, 2011), and by reviewing recent aerial images of the Proposed Project (Google, 2011).

4.1.4 Soils

The United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) online Soil Survey (NRCS, 2011) was used to assess soils mapped along the Proposed Project alignment, and GIS data was used to create a map.

4.2 FIELD SURVEYS

Field surveys were conducted in appropriate habitat within a 500-foot corridor, including approximately 250 feet on either side of the proposed transmission line alignment and substation boundaries (herein referred to as the Proposed Project survey area). The Proposed Project alignment will follow an existing SDG&E ROW, and substation activities will take place within the existing Capistrano and Talega Substation facilities. Some Proposed Project activities, such as staging areas or pull/tension sites, may occur outside of the existing ROW or facilities. The following sections describe the methods used for reconnaissance-level and habitat assessment surveys, rare plant surveys, and focused species surveys. In all instances, resources were mapped in the field using a Trimble handheld Global Positioning System (GPS) and/or drawn on a 200 scale color aerial photograph.

4.2.1 Reconnaissance-level and Habitat Assessment Surveys

Reconnaissance-level surveys and a general habitat assessment were conducted within the Proposed Project survey area by TRC Biologists Matthew Willis and Paula Potenza on February 26 through February 28, 2008 and March 25, 2008 to map existing vegetation communities and assess the potential for sensitive or listed plant and wildlife species, including species covered under the *SDG&E's Subregional NCCP*. Additional habitat assessments were conducted By TRC Biologist Ceri Williams-Dodd on September 28 through 30, October 11 through 12, and November 2, 2011. In addition TRC Biologist Travis Kegel conducted surveys on December 28 and 29, 2011, and February 16 and 28, 2012. Surveys were conducted using vehicles and on foot along access roads and around proposed tower locations. Meandering transects were also conducted on foot through the surrounding habitat within the 500-foot survey corridor. A meandering transect is a type of survey search pattern that minimizes overlap and maximizes survey coverage in a given area.

Suitable habitat for special status species was determined by the presence of diagnostic habitat elements, including but not limited to appropriate vegetation communities. The habitat assessment surveys were conducted along the Proposed Project in areas supporting vegetation. Therefore, in some case, the survey corridor was less than 500 feet (and sometime more due to staging areas outside) wide due to the presence of residential and commercial development. The assessment surveys determined which wildlife or plant species were present, had the potential to occur, or would require USFWS or CDFG protocol-level surveys. Animal species were either observed directly, with the aid of binoculars, or detected from calls, tracks, scat, or other sign.

Vegetation communities were recorded on aerial photographs and GPS, and were further refined during rare plant surveys. Mapped data was then digitized or downloaded in GIS. The vegetation mapping was based upon descriptions provided by Sawyer and Keeler-Wolf (1995 and 2009), *SDG&E's Subregional NCCP* Section 3.1 and Holland (1986).

4.2.2 Sensitive Status Plant Species and Vegetation Communities

Field surveys for sensitive plants were conducted in accordance with the standardized guidelines issued by the USFWS (2000), CDFG (2009), and the CNPS (2001). The surveys were intended to determine the presence/absence of listed and special status plant species within the Proposed Project survey area. Surveys for sensitive plant species were conducted on April 15, 17, and 18,

2008 by TRC biologist Marc Doalson and on April 19, 20, 21, 24, and 25, 2010 by TRC Biologists Darren Burton and Ken McDonald. The Proposed Project survey area was walked on foot, except in developed or residential areas. Meandering transects were performed, and all plants encountered were identified to a level necessary to ensure detection of sensitive species. The plant nomenclature used follows *The Jepson Manual: Higher Plants of California* (Hickman, 1993). A complete list of plant species observed during the surveys is provided as Appendix B.

4.2.3 Drainages and Other Water Features

Suspected jurisdictional areas identified during the literature review from aerial and USGS topographic maps were field checked for the presence of definable channels and/or wetland vegetation, soils and hydrology. Field checks were not limited to suspected jurisdictional areas identified during the literature review; the entire Proposed Project survey area was assessed for the presence of drainages, wetlands, and vernal pools. This involved physically identifying hydrologic, vegetative, and geomorphic characteristics within the Proposed Project survey area in order to delineate potentially jurisdictional waters and wetlands.

WUS were identified pursuant to criteria outlined in Section 401 and Section 404 of the CWA, including but not limited to the presence of an OHWM and connection to a downstream jurisdictional water body. The OHWM was determined by observing signs of flow including but not limited to shelving, drift lines, and disturbed vegetation. "Waters of the State" regulated by CDFG were identified pursuant to criteria outlined in Section 1600 of the CFG Code, including the presence of a defined bed and bank and any associated vegetation. Drainages that appeared to meet the criteria for "Waters of the State" were considered potentially jurisdictional, as any determination is subject to verification by the regulatory agencies.

Potential wetland habitats on the site were evaluated using the methodology set forth in the ACOE Manual (ACOE, 1987) and the *Regional Supplement to the Wetland Delineation Manual for the Arid West Region* (ACOE, 2006 and 2008). This involved digging pits to inspect soils in suspected wetland areas. Soil pits were generally at locations where hydrophytic vegetation was observed, or if other wetland indicators were observed or suspected. Soils were assessed for hydric indicators, texture, consistency, and color. The color was assessed using a Munsell chart and then cross-referenced with hydric soil lists. The locations of the soil pits were recorded using a handheld GPS unit. Hydrological and vegetation conditions were recorded for each soil pit using ACOE wetland delineation data forms. The wetland indicator status of the plants was determined using *The National List of Plant Species that Occur in Wetlands* (USFWS, 1998a).

Fieldwork for the delineation was conducted in May and July 2010 and December 2011 by TRC biologists Darren Burton, Ken McDonald, Travis Kegel, and Lauralyn K. Jensen. While in the field, the jurisdictional areas (lengths and widths) were recorded onto a 200-scale color aerial photograph using visible landmarks and/or were mapped with a Garmin e-trex GPS hand-held unit. Field data was then digitized using GIS to determine acreages. Additional details on the methodology are provided in the Jurisdictional Waters and Wetlands Delineation prepared for the Proposed Project included as Appendix C of this report.

4.2.4 Wildlife Surveys

Some of the vegetation communities within the Proposed Project survey area provide habitat for one or more of the special status species known to occur or with the potential to occur in the Proposed Project area. The region provides habitat for a number of federally endangered (FE), federally threatened (FT), state endangered (SE), and state threatened (ST) species. Appropriate habitat for the coastal California gnatcatcher (FT, SSC), least Bell's vireo (*Vireo bellii pusillus*, FE, SE) and southwestern willow flycatcher (*Empidonax traillii extimus*, FE, SE) was identified within the Proposed Project survey area. USFWS protocol-level surveys were therefore conducted in 2008 and 2010. Focused surveys for the Arroyo toad (*Bufo californicus*) (FE, SSC) were also conducted in 2010 to determine whether suitable breeding or upland habitat for the species was present in the Proposed Project survey area. Additional details on these surveys are provided below.

4.2.4.1 Coastal California Gnatcatcher

TRC conducted surveys for the coastal California gnatcatcher in 2008 and 2010. Permitted TRC biologists Paula Potenza (Permit No. TE-037508-1) and Vanessa Tisdale (Permit No. TE-163994-0) conducted surveys in 2008 with the aid of additional biologists under the direct supervision of an authorized biologist. The additional biologists are also listed under Permit No. TE-037508-1. Paula Potenza and supervised biologists repeated the surveys in 2010. Surveys for the coastal California gnatcatcher were conducted according to the *USFWS Coastal California Gnatcatcher Presence/Absence Survey Guidelines* for NCCPs (USFWS, 1997). Following this protocol, a minimum of three surveys were conducted at least one week apart. Only suitable coastal California gnatcatcher habitat, consisting of coastal sage scrub (CSS) and disturbed CSS, was surveyed. All focused surveys occurred within the coastal California gnatcatcher breeding season (March 15 through June 30). Surveys were often spread over more than one day to cover all suitable habitats, and each area surveyed had a different survey window due to staggered start times.

All surveys were conducted between approximately 6:00 a.m. and 12:35 p.m. Weather conditions during the surveys consisted of temperatures from 43 to 74 degrees Fahrenheit, winds from 0 to 10 miles per hour, and cloud cover from 0 to 100 percent. During periods of excessive heat, wind, rain, fog, or other inclement weather, surveys were either halted or postponed. Taped vocalizations and "pishing" sounds were used to initially locate gnatcatchers. Taped calls were not used to elicit or prompt further behaviors from birds once identified. Surveys were conducted by slowly walking survey routes and no more than 100 acres of suitable coastal California gnatcatcher habitat were surveyed per biologist per day. A detailed description of the methodology is included in the 2008 and 2010 survey reports provided as Appendices D (2008 Coastal California Gnatcatcher Survey Report) and E (2010 Coastal California Gnatcatcher Survey Report).

4.2.4.2 Least Bell's Vireo

TRC conducted protocol surveys for the least Bell's vireo in 2008 and 2010. TRC biologists Paula Potenza and Vanessa Tisdale conducted surveys in 2008, and Paula Potenza conducted surveys in 2010. The surveys were conducted according to the USFWS *Least Bell's Vireo Presence/Absence Survey Protocol* (USFWS, 1992) with modifications pursuant to the *SDG&E*

Subregional NCCP. The *SDG&E Subregional NCCP* states that "in situations where more than one visit may be necessary to identify a given species, such as certain birds, no more than three site visits shall be required" (*SDG&E's Subregional NCCP*, Section 7.1.3). As such, three surveys for least Bell's vireo occurred per habitat area. The surveys occurred within the least Bell's vireo breeding season (April 10 through July 31). Surveys were conducted in appropriate habitat for the species which included all riparian habitats within the Proposed Project survey area. Least bell's vireos were identified by calls/songs and by sight, and were watched and followed only if identification and location needed to be confirmed.

All surveys were conducted between approximately 6:45 a.m. and 11:35 a.m. Weather conditions during the surveys consisted of temperatures from 48 to 86 degrees Fahrenheit, winds from 0 to 6 miles per hour, and cloud cover from 0 to 100 percent. During periods of excessive heat, wind, rain, fog, or other inclement weather, surveys were halted or postponed. Surveys were conducted by slowly walking survey routes along the edges and through riparian vegetation. No more than 3 linear kilometers or 125 acres of least Bell's vireo habitat were surveyed per biologist per day. A detailed description of the methodology is included in the survey report provided as Appendix F, 2010 Least Bell's Vireo (*Vireo bellii pusillus*) Survey Result.

4.2.4.3 Southwestern Willow Flycatcher

Protocol surveys for southwestern willow flycatcher were conducted by TRC biologist Paula Potenza in 2008, and by Peter Bloom (Bloom Biological, Inc., Permit No. TE787376) in 2010. The most recent surveys were conducted on May 15 and June 5, 11, 17, and 25, 2010 in three locations (see Appendix G, Results of Protocol Surveys for Federally-Endangered Arroyo Toad and Southwestern Willow Flycatcher) that contained potential breeding habitat. The surveys were conducted according to the USFWS standard protocol as outlined within Sogge, *et. al.* (2010). Surveys included the use of taped southwestern willow flycatcher songs to simulate a territorial intrusion by another southwestern willow flycatcher, which generally will elicit a defensive response by the territorial bird, increasing its detectability. Taped calls were not used to elicit or prompt further behaviors from birds once individuals were identified. A detailed description of the methodology is included in the survey report provided as Appendix G.

4.2.4.4 Arroyo Toad

Protocol surveys for Arroyo toad were conducted by Peter Bloom on April 30, May 7, 15, 23, and 29, and June 5, 2010 in three locations that contained potential breeding habitat. The surveys were conducted according to the USFWS standard protocol as outlined within the USFWS *Survey Protocol for the Arroyo Toad* (USFWS, 1999a) and included both daytime and nighttime surveys. Daytime surveys were conducted by walking slowly along stream margins and in adjacent riparian habitat, visually searching for eggs, larvae, and juveniles. Nighttime surveys were conducted by walking slowly and carefully on stream banks. Surveyors would stop periodically and remain still and silent for approximately 15 minutes at appropriate sites to wait for Arroyo toads to begin calling. A detailed description of the methodology is included in the survey report provided as Appendix G.

5.0 RESULTS

5.1 LITERATURE REVIEW

5.1.1 Special Status Species

Special status species were identified as having a potential to occur in the Proposed Project survey area based on the database searches and known occurrences of species in the area. CNDDB maps within three miles of the Proposed Project are provided for flora, as Figure 3, CNDDB Special Status Flora Species and for fauna as Figure 4, CNDDB Special Status Fauna Species. A list of potential special status wildlife and plant species is also provided as a table in Appendix A of this report. The map and table were used during the field surveys to consider the presence, or potential presence, of the identified species.

5.1.2 Critical Habitat

The Proposed Project survey area covers areas of USFWS critical habitat for the coastal California gnatcatcher, Arroyo toad, San Diego fairy shrimp (*Branchinecta sandiegonensis*) and thread-leaved brodiaea (*Brodiaea filifolia*). Habitat for the coastal California gnatcatcher owned by SDG&E and covered under the *SDG&E Subregional NCCP* is specifically excluded the designation of critical habitat (Federal Register, 2007). A critical habitat map within three miles of the Proposed Project is provided as Figure 5, Critical Habitat Map.

5.1.3 Drainages and Other Water Features

Potential drainages were identified based on the review of aerial and USGS maps. These maps were considered during the field surveys to ensure the identified drainages were studied, in addition to any drainage not mapped by USGS or visible on aerials. Five named blue-line drainages were identified on USGS topographic maps. The named drainages include Horno Creek, San Juan Creek, Prima Deshecha Cañada, Segunda Deshecha Cañada, and Christianitos Creek.

5.1.4 Soils

Fourteen soil series are mapped within the Proposed Project survey area: Alo Clay, Bosanko Clay, Botella Clay Loam, Callegus Clay Loam, Cieneba Sandy Loam, Corralitos Loamy Sand, Cropley Clay, Huerhuero Loam, Myford Sandy Loam, Riverwash, Soboba Cobbly Loamy Sand, Sorrento Loam, and Yorba Gravelly Sandy Loam. A map is provided as Figure 6, Soils Map, and a summary of each soil series is provided below.

5.1.4.1 Alo Clay

The Alo Clay series are well drained and composed of clay and weathered bedrock. The parent materials consist of residuum weathered from sedimentary rock. At 25 to 29 inches in depth, weathered bedrock is found. These soils occur on hills at 200 to 3,250 feet above mean sea level (msl).

5.1.4.2 Bosanko Clay

The Bosanko Clay series are well drained and composed of clay, clay loam, silty clay and weathered bedrock. The parent material consists of residuum weathered from granite. At 22 to 36 inches in depth, weathered paralithic bedrock is found. These soils occur on the back slopes of hills at 300 to 2,500 feet msl.

5.1.4.3 Botella Clay Loam

Botella Clay Loam is well drained and composed of clay loam, silty and sandy clay loam. The parent material is alluvium derived from sedimentary rock. At more than 80 inches in depth a restrictive feature is found. These soils occur at alluvial fans at 500 to 800 feet msl.

5.1.4.4 Callegus Clay Loam

Callegus Clay Loam is well drained and composed of clay loam and weathered bedrock. The parent material is residuum weathered from calcareous shale. At 15 to 19 inches in depth, paralithic bedrock is found. These soils occur on the back slopes of hills at 200 to 2,500 feet msl.

5.1.4.5 Cieneba Sandy Loam

The Cieneba Sandy Loam series are somewhat excessively drained and are composed of coarse sandy loam and weathered bedrock. The parent material is a residuum of weathered granite. At 4 to 20 inches in depth, paralithic bedrock is found. These soils occur on hillsides at 500 to 4,000 feet msl.

5.1.4.6 Corralitos Loamy Sand

The Corralitos Loamy Sand series are somewhat excessively well drained and are composed of loamy sand and stratified sand. The parent material is alluvium derived from mixed sources. At more than 80 inches in depth a restrictive feature is found. These soils occur on alluvial fans at 30 to 1,000 feet msl.

5.1.4.7 Cropley Clay

Cropley Clay is well drained and composed of clay, silty clay and clay loam. At more than 80 inches depth a restrictive feature is found. These soils occur on alluvial fans at 50 to 1,500 feet msl.

5.1.4.8 Huerhuero Loam

Huerhuero Loam is moderately well drained and composed of loam, clay loam, clay, stratified sand, and sandy loam. The parent material is calcareous alluvium derived from sedimentary rock. At more than 80 inches depth a restrictive feature is found. These soils occur on marine terraces at 1,000 feet msl.

5.1.4.9 Myford Sandy Loam

The Myford Sandy Loam series are moderately well drained and composed of sandy loam, sandy clay and sandy clay loam. The parent material is alluvium derived from mix sources. At more than 80 inches in depth a restrictive feature is found. These soils occur on landform terraces at 1,500 feet msl.

5.1.4.10 Riverwash

Riverwash is not well drained and composed of sand and stratified course sand to sandy loam. The parent material is sandy and gravelly alluvium. These soils occur on fans at diverse elevations.

5.1.4.11 Soboba Cobbly Loamy Sand

Soboba Cobbly Loamy Sand is excessively drained and composed of very cobbly loamy sand. The parent material is sandy and gravelly alluvium derived from mixed sources. At more than 80 inches depth a restrictive feature is found. These soils occur on alluvial fans at 30 to 4,200 feet msl.

5.1.4.12 Sorrento Loam

The Sorrento Loam series are well drained and composed of loam, silty clay loam, clay loam, and stratified loamy fine sand to silt loam. The parent material is alluvium derived from sedimentary rock. At more than 80 inches depth a restrictive feature is found. These soils occur on alluvial fans at 80 to 1,800 feet msl.

5.1.4.13 Yorba Gravelly Sandy Loam

The Yorba Gravelly Sandy Loam series are well drained and composed of gravelly sandy loam, very gravelly sandy clay loam, and very gravelly sandy loam. The parent material is sandy and gravelly alluvium derived from mixed sources. At more than 80 inches depth a restrictive feature is found. These soils occur on landform terraces at 100 to 2,500 feet. Both Yorba Gravelly Sandy Loam 15 to 30 percent slope and Yorba Gravelly Sandy Loam 30 to 65 percent slope is mapped within the Proposed Project survey area msl.

5.2 VEGETATION

Eleven vegetation communities were observed in the Proposed Project survey area as mapped on the figures provided in Appendix H, Vegetation and Sensitive Species Maps, of this report, including CSS habitats, willow and riparian habitats, disturbed areas, ornamental, dirt roads, and developed areas with ornamental landscaping. Representative photographs depicting general conditions are included as Appendix I of this report. Table 1 below summarizes acreages of each vegetation community found within the Proposed Project survey area.

Table 1

Vegetation Communities in Proposed Project Survey Area

Vegetation Community	Acres
Coastal Sage Scrub	121.16
Disturbed Coastal Sage Scrub	61.19
Coastal Freshwater Marsh	0.20
Southern Willow Scrub	9.18
Disturbed Southern Willow Scrub	0.78
Riparian Scrub	2.65
Ruderal	139.55
Disturbed	28.89
Ornamental	63.34
Dirt Roads	20.42
Developed	121.13
Total	**568.49**

5.2.1 Coastal Sage Scrub (Holland Code 32000)

CSS is comprised of low, soft-woody subshrubs approximately one meter in height, many of which are facultatively drought-deciduous. This association is typically found on dry sites, such as steep, south-facing slopes or clay-rich soils that are slow to release stored water (Holland, 1986). Dominant shrub species in this vegetation type may vary, depending on local site factors and levels of disturbance. Plant species commonly observed within this community include coyote bush (*Baccharis pilularis*), California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), white sage (*Salvia apiana*), and laurel sumac (*Malosma laurina*).

CSS is the dominant native vegetation community within the Proposed Project survey area, comprising a total of 121.16 acres of CSS (see Appendix H). Plant species commonly observed within this community in the Proposed Project survey area included coyote bush, California sagebrush, California buckwheat, white sage, black sage (*Salvia mellifera*), California encelia

(*Encelia californica*), toyon (*Heteromeles arbutifolia*), prickly pear cactus (*Opuntia littoralis*), goldenbush (*Isocoma menziesii*), Mexican elderberry (*Sambucus mexicana*), lemonade berry (*Rhus integrifolia*), laurel sumac, coyote gourd (*Cucurbita palmata*), ragweed (*Ambrosia psilostachya*), giant wild rye (*Leymus condensatus*), orange bush monkeyflower (*Mimulus aurantiacus*), deerweed (*Lotus scoparius*), and oaks (*Quercus* spp., including coast live oak/*Q. agrifolia*). Much of the CSS along the Proposed Project's survey area is found in scattered patches surrounded by disturbed and ruderal habitats, and often in close proximity to residential areas. Several patches are located in the vicinity of the Prima Deshecha Landfill and one moderate-sized patch is located approximately 0.5 mile south of the landfill. The largest area of this vegetation community is found along the easternmost 1.5 miles of the Proposed Project where the transmission line connects to the Talega Substation. Most of this area is comprised of CSS, bordered by a commercial area to the north and a golf course to the south. Small areas of CSS located in the vicinity of the golf course near the Talega substation are dominated by broom baccharis (*Baccharis sarothroides*). Some areas of CSS also appear to have been planted based on the presence of surface irrigation lines, possibly as mitigation, primarily in the Rancho San Juan and Talega areas.

5.2.2 Disturbed CSS (Holland Code 32000)

Disturbed CSS has similar characteristics to CSS with more areas of human disturbance and/or invasion of non-native plant species. This vegetation community tends to have a lower amount of native species cover and a higher amount of non-native plant species. Non-native species prevalent in disturbed CSS include black mustard (*Brassica nigra*), thistle (*Silybum* spp.), and non-native grasses (e.g., *Bromus* spp.).

A total of 61.19 acres of disturbed CSS occur in the Proposed Project survey area (refer to Appendix H), most often bordering or adjacent to intact areas of CSS. The disturbed CSS is similar in species composition and structure to intact CSS; however, the disturbed CSS has a higher cover of non-native plant species. Non-native species observed in the disturbed CSS include black mustard, artichoke thistle (*Cynara cardunculus*), brome grasses, fennel (*Foeniculum vulgare*), and other species also observed in adjacent ruderal areas.

5.2.3 Coastal Freshwater Marsh (Holland 52410)

Freshwater marsh plant communities are dominated by perennial, emergent monocots, up to three meters tall. Bulrush (*Scirpus* spp.) and cattails (*Typha* spp.) are often dominant, typically forming completely closed canopies. Freshwater marsh plant communities are found in sites lacking significant flow, that are permanently flooded by fresh water, and in areas where there is prolonged saturation with the accumulation of deep, peaty soils (Holland, 1986).

A total of 0.20 acre of Coastal Freshwater Marsh areas occur within the Proposed Project survey area (refer to Appendix H, Sheets 14 and 16). These areas are found in association with drainage systems in the south of the Proposed Project survey area, namely in Tributary to Segunda Deshecha Cañada 3, and Tributary to Christianitos Creek 1. These areas are monocultures of cattails and bulrushes within permanently saturated areas fed by urban run-off. Both areas of Coastal Freshwater Marsh were determined to be ACOE wetlands and are described further in Appendix C. Additionally, in both areas of Coastal Freshwater Marsh, it appears as if the area has been revegetated to create this vegetation community.

5.2.4 Southern Willow Scrub (Holland Code 63320)

Southern willow scrub (SWS) communities are generally composed of dense, winter-deciduous broadleaf species, dominated by a variety of willow species (*Salix* spp.). Often present are occasional Fremont cottonwood (*Populus freemontii*) and California sycamore (*Platanus racemosa*). Tree stands are generally too dense for development of an understory. These communities are found on loose, fine or sandy gravelly alluvium near stream channels and experience repeated flooding (Holland, 1986).

A total of 9.18 acres of SWS occur in the Proposed Project survey area (refer to Appendix H), just east of the I-5 freeway at San Juan Creek, Segunda Deshecha Cañada, and near the southern terminus of the alignment in Tributary to Christianitos Creek 1. Smaller patches of SWS are also found where the Proposed Project survey area crosses smaller creeks and tributaries. Dominant species observed in this vegetation community included various willows (*Salix* sp.), mulefat (*Baccharis salicifolia*), giant reed (*Arundo donax*), and cattails (*Typha latifolia*).

5.2.5 Disturbed Southern Willow Scrub (Holland Code 63320)

Disturbed SWS has similar characteristics to SWS with more areas of human disturbance and/or invasion of non-native plant species. This vegetation community tends to have a lower amount of native species cover and a higher amount of non-native plant species.

A total of 0.78 acre of disturbed SWS occur in the Proposed Project survey area (refer to Appendix H), generally bordering intact areas of SWS. The disturbed SWS are similar in species composition and structure to intact SWS; however, the disturbed SWS have a higher cover of non-native plant species. Examples of non-native species observed in disturbed SWS include black mustard, artichoke thistle, brome grasses, and giant reed (*Arundo donax*).

5.2.6 Riparian Scrub (Holland Code 63000)

Riparian scrub is found on or adjacent to the banks of rivers or streams, typically in drier areas that experience flooding. Riparian plants can include a variety of species such as mulefat, cottonwood trees, coast live oak, and willows.

A total of 2.65 acres of Riparian scrub occur in the Proposed Project survey area (refer to Appendix H), predominately within and adjacent to Tributary to Prima Deshecha Cañada and Tributary to Christianitos Creek 1. Prevalent species in the Proposed Project's survey area included mulefat, willow species (including arroyo willow/*Salix lasiolepis*), coast live oak, horseweed (*Conyza canadiensis*), stinging nettle (*Urtica dioica*), ragweed, and a few scattered CSS species such as California sagebush, prickly pear cactus, lemonadeberry, poison oak (*Toxicodendron diversilobum*), and California buckwheat.

5.2.7 Ruderal (No Holland Code)

Ruderal vegetation is dominated by non-native weedy species in areas that have been significantly disturbed by agriculture, construction, or other land-clearing activities. Ruderal communities generally occupy waste areas, often on roadsides with heavily compacted soils with little available oxygen. These areas may be maintained but not typically on a regular basis,

therefore allowing the establishment of a more dense cover of vegetation. Typical species can vary depending on the site and level of disturbance, but are often dominated by herbaceous annuals and grasses. Species can include black mustard, radish (*Raphinus sativus*), wild oat (*Avena* spp.), ripgut grass (*Bromus diandrus*), foxtail chess (*Bromus madritensis* ssp. *rubens*), Australian saltbush (*Atriplex semibaccata*), tocalote (*Centaurea melitensis*), fennel, telegraph weed (*Heterotheca grandiflora*), crown daisy (*Chrysanthemum coronarium*), castor bean (*Ricinus communis*), pineapple-weed (*Chamomilla suaveloens*), common knotweed (*Polygonum arenastrum*), sowthistle (*Sonchus oleraceus*), horseweed, common fiddleneck (*Amsinckia menziesii*), Russian thistle (*Salsola tragus*), tree tobacco (*Nicotiana glauca*), bristly ox-tongue (*Lactuca serriola*), and goosefoot (*Chenopodium* spp.). Ornamental species may also colonize and proliferate in ruderal communities (Holland and Keil, 1995).

A total of 139.55acres of Ruderal vegetation occur throughout the Proposed Project survey area in areas of historical disturbance (refer to Appendix H). Weedy and disturbance-loving plants were identified in these areas included species such as artichoke thistle, brome grasses, short pod mustard, wild oats, curly dock (*Rumex crispus*), telegraph weed, Russian thistle, tree tobacco, bristly ox-tongue, doveweed (*Croton setigerus*), castor bean (*Ricinus communis*), red-stem filaree (*Erodium cicutarium*), fennel, various thistle and sunflower species (these species were dead at the time of the survey and could not be positively identified), and cheeseweed (*Malva parviflora*). Some scattered native species were also observed including, but not limited to, species such as coyote bush, goldenbush, common fiddleneck, and coast live oak. Only one ruderal area, directly north of San Juan Creek, contained coast live oak and appeared associated with a revegetation project.

5.2.8 Disturbed (Holland Code 11300)

Disturbed areas are composed entirely, or predominately, of unvegetated ground due to ongoing maintenance, and may support only a few isolated individuals of non-native and/or native species. These species are generally composed of the same plants found in ruderal vegetation communities.

A total of 28.89 acres of Disturbed areas occur in the Proposed Project survey area, primarily comprised of regularly maintained sites around the transmission poles (refer to Appendix H). The areas were predominately bare, with a few weedy and disturbance-loving species such as mustard, doveweed (*Croton setigerus*), red-stem filaree, and cheeseweed, in addition to scattered individuals of CSS species.

5.2.9 Ornamental (Holland Code 11100)

Ornamental consists of landscaped areas most commonly associated with developments (residential or commercial) and open areas such as parks, which have been planted with either a variety of non-native trees and shrubs, or monocultures of one species. These non-native plants can include many different species including, but not limited to, pines (*Pinus* sp.) and eucalyptus (*Eucalyptus* sp.). Whilst ornamental more typically comprises non-native plants it may also include native species such as oaks (*Quercus* spp.), sycamores (*Platanus racemosa*), and cottonwoods (*Populus fremontii*). Generally ornamental areas are planted as a windbreak, or for aesthetic and horticultural purposes around houses and other developed areas. The understory of ornamental areas are typically lacking due to maintenance or, in the case of eucalyptus trees,

chemicals in the leaves. These chemicals build up in the soil from debris and leaf-litter and prevent the establishment of most other plants. Eucalyptus trees are not native, but many species of eucalyptus have become naturalized and have invaded natural riparian areas. Ornamental vegetation can provide nesting habitat for several bird and raptor species.

A total of 63.34 acres of Ornamental vegetation occur throughout the Proposed Project survey area (refer to Appendix H). These areas comprise predominately non-native species, including a small eucalyptus grove that borders the Proposed Project survey area just west of the San Juan Creek crossing that is dominated by several species of eucalyptus. Native ornamental areas were also observed, including coast live oaks and sycamores within Arroyo Park in San Juan Capistrano, and areas of CSS associated with the Talega development appeared to have been planted as landscaping. Some Ornamental areas were observed to include a mix of native and non-native species, including a park west of the Capistrano Substation that was planted with non-native pines and both native cottonwoods and sycamores. Additional species observed in Serra Park and Marbella Golf and Country Club in San Juan Capistrano included alder (*Alnus rhombifolia*), pepper trees (*Schinus terebinthifolius* and *S. molle*), bougainvillea (*Bougainvillea spectabilis*), bottlebrush (*Callistemon* spp.), and palm trees (*Washingtonia robusta* and *Phoenix* sp.).

5.2.10 Dirt Roads (No Holland Code)

Dirt roads are unpaved roads that are typically used for access only.

A total of 20.42 acres of Dirt roads occur throughout the Proposed Project survey area (refer to Appendix H), consisting of cleared, maintained access roads to the structure sites.

5.2.11 Developed (Holland Code 12000)

Developed areas typically include paved roads, structures, and associated infrastructure, and may also include ornamental landscaping.

A total of 121.13 acres of Developed areas occur throughout the Proposed Project survey area (refer to Appendix H), primarily including paved roads, and commercial or residential structures with associated landscaping.

5.3 WILDLIFE

During the field surveys, numerous common and special status wildlife species, both native and non-native, were observed within the Proposed Project survey area. A complete list of species observed is included as Appendix B of this report. Species commonly observed include the following (for special status wildlife see Section 5.6 of this report):

- Avifauna commonly observed included red-tailed hawk (*Buteo jamaicensis*), house finch (*Carpodacus cassinii*), lesser goldfinch (*Carduelis psaltria*), common raven (*Corvus corax*), house sparrow (*Passer domesticus*), northern mockingbird (*Mimus polyglottos*), California towhee (*Pipilo crissalis*), spotted towhee (*Pipilo maculatus*), European starling (*Sturnus vulgaris*), California thrasher (*Toxostoma redivivum*), Bewick's wren (*Thryomanes bewickii*), and western kingbird (*Tyrannus verticalis*).
- Reptiles commonly observed included side-blotched lizard (*Uta stansburiana*) and western fence lizard (*Sceloporus occidentalis*).
- Mammals commonly observed or deduced through diagnostic sign, included coyote (*Canis latrans*), California ground squirrel (*Spermophilus beecheyi*), and Audubon's cottontail (*Sylvilagus audubonii*).

5.4 SPECIAL STATUS VEGETATION COMMUNITIES

Some of the vegetation communities occurring within the Proposed Project's survey area are considered sensitive or have special status due to their natural rarity and their decline as a result of development, and/or due to the number of sensitive plant or animal species dependent upon them. Sensitive habitats also include those regulated by the federal government under the CWA (i.e., jurisdictional wetlands) or the FESA (i.e., site-specific designated critical habitat areas for federally listed wildlife species). Special status vegetation communities in the survey area include CSS, disturbed CSS, and riparian communities (SWS, Emergent Freshwater Marsh, and Riparian Scrub) which include jurisdictional areas (see Section 5.8 of the report).

CSS is considered a sensitive habitat type by both federal and state resource agencies, local jurisdictions, and conservation organizations throughout southern California. Losses of up to 85

percent have been estimated for CSS in southern California, largely attributable to residential development and agricultural activities. The trend for continued losses has resulted in the selection of this community as the focus of the state of California's first habitat-based conservation planning program, the NCCP Act. CSS provides habitat for the coastal California gnatcatcher, a federally threatened species, as well as a variety of other animal and plant species which are candidates for federal listing, state species of special concern, or considered sensitive by local jurisdictions.

All riparian communities in southern California, including SWS, are considered sensitive by federal and state resource agencies. Estimated losses of riparian habitat in southern California range as high as 95 to 97 percent. Habitat destruction and degradation has resulted from wetland conversion for agricultural purposes, urban development, and flood control projects. Riparian vegetation provides shelter, food, and breeding habitat for numerous plant and wildlife species.

5.5 SPECIAL STATUS PLANTS

Seventy four sensitive plant species were identified from the literature review as having the potential to occur within three miles of the Proposed Project survey area. Appendix A provides a list of these species, as well as their status and potential to occur in the Proposed Project area. This list was derived from CNDDB and CNPS records searches, *SDG&E Subregional NCCP* species, and suitable habitat identified during the rare plant and habitat assessment surveys (see Section 4.2.1 and 4.2.2 of this report). With the exception of three species, cliff spurge (*Euphorbia misera*), white rabbit-tobacco (*Pseudognaphalium leucocephalum*), and chaparral ragwort (*Senecio aphanactis*), all plant species were surveyed for during the appropriate blooming season. Of the three species surveyed outside their blooming period, one is an obvious shrub and the other two are unlikely to occur within or adjacent to the ROW due to habitat requirements that do not exist within the Proposed Project survey area. No special status plants were observed during the focused plant surveys. A complete list of all plant species observed during the focused surveys can be found in Appendix B.

Five of the plant species: big-leaved crownbeard (*Verbesina dissita*), Encinitas baccharis (*Baccharis vanessae*), Laguna Beach dudleya (*Dudleya stolonifera*), Santa Monica dudleya (*Dudleya cymosa* ssp. *ovatifolia*), and thread-leaved brodiaea (*Brodiaea filifolia*) are federal or state-listed species. These species are discussed in more detail below.

5.5.1 Big-leaved crownbeard (*Verbesina dissita*; FT, ST)

Big-leaved crownbeard occurs in maritime chaparral and coastal scrub habitats at an elevation range of 45 and 205 meters. The blooming period is April to July. There are only four known occurrences which are near southern Laguna Beach (CNPS, 2011). CNDDB records indicate that there are no documented occurrences within a three-mile radius of the Proposed Project survey area. This species were not observed during the focused plant surveys or any other surveys conducted for the Proposed Project. Therefore, this species is unlikely to occur in the Proposed Project survey area.

5.5.2 Encinitas baccharis (*Baccharis vanessae*; FT, SE)

Encinitas baccharis occurs in maritime chaparral and cismontane woodland at an elevation range of 60 and 720 meters. This species is commonly found in sandstone substrate. The blooming period is August to November. CNDDB records indicate that there are documented occurrences within a three-mile radius of the Proposed Project survey area. This species was not observed during the focused plant surveys or any other surveys conducted for the Proposed Project. Therefore, this species is unlikely to occur in the Proposed Project survey area.

5.5.3 Laguna Beach dudleya (*Dudleya stolonifera*; FT, ST)

Laguna Beach dudleya occurs in chaparral cistmontane woodland, coastal scrub, valley and foothill grasslands at an elevation range of 10 and 260 meters. This species is commonly found in rocky substrate. The blooming period is May to July. Threats to Laguna Beach dudleya include development, recreation, and non-native plants, and possibly by horticultural collecting (CNPS, 2011). CNDDB records indicate that there are no documented occurrences within a three-mile radius of the Proposed Project survey area. No species were observed during the focused plant surveys or any other surveys conducted for the Proposed Project. Therefore, this species is unlikely to occur in the Proposed Project survey area.

5.5.4 Santa Monica dudleya (*Dudleya cymosa* ssp. *ovatifolia*; FT)

Santa Monica dudleya occurs in chaparral and coastal scrub at an elevation range of 150 and 1,675 meters. This species is commonly found in volcanic or sedimentary, rocky substrate. The blooming period is May to July. CNDDB records indicate that there are no documented occurrences within a three-mile radius of the Proposed Project survey area. This species was not observed during the focused plant surveys or any other surveys conducted for the Proposed Project. Therefore, this species is unlikely to occur in the Proposed Project survey area.

5.5.5 Thread-leaved brodiaea (*Brodiaea filifolia*; FT, SE, Covered Species)

Thread-leaved brodiaea occurs in chaparral, cismontane woodland, CSS, playas, valley and foothill grasslands, and vernal pools and at an elevation range between 25 to 1,219 meters. This species is commonly found in clay substrate. The blooming period is from March to June. Threats to thread-leaved brodiaea include residential development, agriculture, foot traffic, grazing, illegal dumping, non-native plants, and vehicles. The species is known to hybridize with Orcutt's brodiaea (*B. orcuttii*) and dwarf brodiaea (*B. terrestris* ssp. *kernensis*), which is facilitated by European honeybees (CNPS, 2011).

Ten CNDDB records dated from 1995 to 2007 exist for the species within three miles of the Proposed Project area. Some of these records indicate hundreds to thousands of plants observed, with the nearest CNDDB record for this species occurring within 0.5 mile of the Proposed Project alignment. Although suitable habitat is present this species was not observed during the focused plant surveys or any other surveys conducted for the Proposed Project. Therefore, this species is unlikely to occur in the Proposed Project survey area.

5.6 SPECIAL STATUS WILDLIFE

Some of the vegetation communities and waterways within the Proposed Project survey area provide habitat for one or more sensitive or *SDG&E Subregional NCCP* Covered Species known to occur or with potential to occur in the Proposed Project survey area. Based on the literature search, reconnaissance and habitat assessment surveys, and additional focused biological surveys, 36 special status wildlife species are known to occur or have the potential to occur in the Proposed Project survey area. These species, their status, documented occurrence, and the potential for their presence within the Proposed Project survey area are summarized in Appendix A. A list of common and scientific names of wildlife species observed during the surveys can be found in Appendix B. The locations of any sensitive wildlife species that were seen during the field surveys were noted and are mapped in Appendix H.

In addition to the species identified in Appendix A, raptor species such as the red-tailed hawk (*Buteo jamaicensis*), red-shouldered hawk (*Buteo lineatus*), and American kestrel (*Falco sparverius*) have the potential to nest within the Proposed Project survey area. During habitat assessment and focused surveys conducted for this Proposed Project between February and June 2008, several stick nests, including two active red-tailed hawk nests, were identified on various tower structures within the Proposed Project survey area. Locations of these nests can also be found in Appendix H.

Of the 36 wildlife outlined in Appendix A, 20 species are discussed in more detail in the following sections because of their state, federal and/or local status, presence in the survey area, presence of critical habitat, and/or a moderate or high potential to occur within the Proposed Project survey area due to presence of suitable habitat.

5.6.1 Special Status Wildlife Found Onsite

Six special status wildlife species were observed in the Proposed Project survey area, including the following:

- American peregrine falcon (*Falco peregrinus anatum*, FP)
- coastal California gnatcatcher (FT, SSC)
- Cooper's hawk (*Accipiter cooperii*, watch listed [WL])
- least Bell's vireo (FE , SE, SSC)
- southwestern willow flycatcher (FE, SE)
- white tailed kite (*Elanus leucurus*, FP)

5.6.1.1 American peregrine falcon (*Falco peregrinus anatum*; BCC, FP, Covered Species)

The American peregrine falcon is widespread throughout California but prefers open habitat, coastlines, lake edges and mountain chains. This species nests on cliff sides or uses abandoned nests made from large birds, it is not known to build its own nest (Harlow, 1978).

One American peregrine falcon nest was observed within the Proposed Project survey area in 2008 near the southernmost portion of the alignment, approximately 2,500 feet west of the Talega Substation (Appendix H, Sheet 14). This nest was not found again during the December 2011 surveys; therefore, it is presumed that the nest location has changed since the initial observation. No peregrine falcons or peregrine falcon nests were identified in the most recent round of surveys in 2011. This species is FP under the CFG Code, prohibiting "take" of the species even when the activities have received take permits under the CESA and FESA.

5.6.1.2 Coastal California Gnatcatcher (*Polioptila californica californica*; FT, SSC, Covered Species)

This species is a local, uncommon, obligate resident of arid coastal scrub below sea level to approximately 500 meters from eastern Orange and southwestern Riverside counties south through the coastal foothills. Like other species that rely on CSS, the decline of the California gnatcatcher has been instigated by cumulative loss of CSS vegetation to urban and agricultural development (Atwood, 1992). The California gnatcatcher requires California sagebrush (*Artemisia californica*) and CSS for feeding; this species is known to glean insects from the foliage of shrubs in these habitat types (Atwood, 1993).

The designation of critical habitat for the coastal California gnatcatcher specifically excluded areas within functioning HCPs, such as SDG&E's *SDG&E Subregional NCCP*. Specifically, essential coastal California gnatcatcher habitat owned by SDG&E and covered under the *SDG&E Subregional NCCP* was determined to have greater benefits to coastal California gnatcatcher than from lands designated as critical habitat (Federal Register, 2007). Habitat for the coastal California gnatcatcher is located in several locations along the Proposed Project route as well as designated critical habitat. The CNDDB documents numerous sightings of coastal California gnatcatcher along the Proposed Project survey area.

Coastal California gnatcatchers were observed during protocol-level surveys in 2008 and 2010 in suitable habitat within the Proposed Project survey area. Sightings included breeding pairs, family groups, and individuals, and were observed in CSS from the Talega Substation on the south end of the survey area to south of San Juan Creek Road (refer to Appendices D and E).

In 2008, biologists made 19 coastal California gnatcatcher observations, totaling a minimum of 14 different individuals in the Proposed Project survey area. Separate individuals were determined by simultaneous sightings, proximity to previous sightings, and time lapse between consecutive sightings. Observations made in close temporal and spatial proximity were considered the same individual; therefore, the total minimum number of coastal California gnatcatchers is conservative. Four nesting pairs of coastal California gnatcatchers were confirmed. In addition, a minimum of five single males were identified. For further details refer to the survey report in Appendix D.

In 2010, biologists made 21 coastal California gnatcatcher observations, for a minimum estimation of 20 individuals (including adults and juveniles) in the survey area. Similarly to the 2008 surveys, the total minimum number of coastal California gnatcatchers may be conservative. Six pairs were confirmed with two of the pairs observed as part of a family group. Both of the family groups had at least two juveniles with the pair. In addition, a minimum of three single males were identified. For further details refer to the survey report in Appendices D and E.

5.6.1.3 Cooper's hawk (*Accipiter cooperii*, WL)

Cooper's hawk is an uncommon resident within the wooded portion of the state. Its general distribution ranges from sea level to above 2,700 meters (0 to 9,000 feet). Dense stands of live oak, riparian deciduous or other forest habitats near water are used most frequently by this species (Zeiner, *et. al.*1990).

This species was observed in riparian habitat and eucalyptus trees in the Proposed Project survey area where suitable nesting habitat is present, particularly in the vicinity of San Juan Creek.

5.6.1.4 Least Bell's Vireo (*Vireo bellii pusillus*; FE, SE, Covered Species)

Least Bell's vireo is a subspecies of the North American song bird Bell's vireo (*Vireo bellii*). Least Bell's vireo is a migratory species that spends its winters in Mexico and returns to southern California as a summer resident. Least Bell's vireo can be found in the region during breeding season which is from March to August. The decline of this species is predominately due to brood parasitism by brown-headed cowbirds (*Molothrus ater*) (Kus, 2002). They breed locally in willow riparian thickets with good over and understory vegetation.

Riparian vegetation suitable for Least Bell's vireo occupation can be found in many of the creeks and drainages scattered along the Proposed Project survey area. No portion of the Proposed Project survey area falls within critical habitat for the species. The CNDDB documents several occurrences of the species within three miles of the Proposed Project, including the nearest record which is within the Proposed Project survey area west of the Talega Substation.

Least bell's vireo was observed in numerous small, unnamed drainages crossed by the Proposed Project survey area during protocol-level surveys in 2008 and 2010. Refer to Appendix F for locations of least Bell's vireo sightings during project surveys.

5.6.1.5 Southwestern Willow Flycatcher (*Empidonax traillii extimus*; FE, SE, Covered Species)

Southwestern willow flycatcher is a migratory species which breeds in North America and winters in South and Central America. The species can be typically found in the region from early May to early to mid-September, individuals migrating further north may be seen earlier or later in the year. Southwestern willow flycatchers nest in dense riparian areas. Threats to the species include loss, fragmentation and modification of riparian habitat required for breeding, as well as brood parasitism by brown-headed cowbirds. The CNDDB documents two occurrences of southwestern willow flycatcher approximately two miles northeast of the Rancho San Juan Segment of the Proposed Project survey area, in riparian habitat along San Juan Creek.

Surveys for the southwestern willow flycatcher were conducted in 2008 and 2010 by Peter Bloom (Bloom, 2008 and 2010). In the 2008 focused surveys, this species was observed at two separate locations, approximately 0.5 mile southwest and one mile west of the Talega Substation. In both instances southwestern willow flycatcher was observed during only one survey within the bird's migratory period. Due to the timing and number of observations it is assumed that these birds were migratory and were only briefly within the Proposed Project survey area. No

southwestern willow flycatchers were identified during the 2010 surveys. The 2010 survey report is included as Appendix G.

5.6.1.6 White-tailed kite (*Elanus leucurus*, FP)

White-tailed kites are annual residents of lowland terrestrial habitats, particularly, riparian woodland and oak or sycamore groves near grasslands and are uncommonly found away from agricultural fields (Eisenmann, 1971). This species makes nests out of sticks and can be found near the tops of dense trees such as dense willow or oak approximately 20 to 100 feet above ground (Dixon, *et. al*., 1957).

The white-tailed kite was observed uncommonly throughout the Proposed Project survey area foraging over CSS and ruderal vegetation, particularly in the areas between San Juan Creek and the Talega community. The white tailed kite is a fully protected species, meaning that no take of this species can occur.

5.6.2 Special Status Wildlife with Potential to Be On-Site

5.6.2.1 Arroyo Chub (*Gila orcuttii*; SSC)

The Arroyo chub is a small fish species native to coastal streams of southern California. The species is now scarce within its native range due to the disappearance of low-gradient streams (Moyle, *et. al.*, 1995). The species prefers slow-moving or backwater sections of warm to cool streams with sandy or muddy substrates. Spawning typically occurs in pools or quiet edge water. The species is omnivorous and feeds heavily on aquatic vegetation and associated invertebrates such as insects and small crustaceans.

The Arroyo chub is native to San Juan Creek (Moyle, *et. al*., 1995) and CNDDB records document the species upstream, downstream, and directly within the portion of the creek spanned by the Proposed Project. Suitable habitat exists in the Proposed Project survey area and occurrences have been documented by CNDDB within the northern Proposed Project survey area in San Juan Capistrano. Specifically, species may occur in San Juan Creek where the survey area crosses the creek, as well as upstream and downstream of the area and in nearby tributaries. There is a high potential for occurrence of this species within San Juan Creek.

5.6.2.2 Arroyo Toad (*Bufo californicus*; FE, SSC, Covered Species)

The Arroyo toad is a small, light greenish-gray or tan toad restricted to rivers with shallow, gravelly pools with adjacent sand bars or terraces. During the breeding season, from late March to mid-June, they can be found in large streams or rivers containing shallow pools with minimal current and sand or pea-gravel bottom. The Arroyo toad is of particular concern because it is difficult to detect during certain times in its life cycle. The Arroyo toad breeds in stream habitats, but migrates through and hibernates in upland habitats up to 1 kilometer (0.6 mile) from known breeding sites, where it remains underground for much of the winter (Stebbins, 1954; 1972; 1985). Records from the CNDDB document the species within San Juan Creek, San Mateo Creek and Canyon, Cristianitos Creek, Talega Canyon, and Gabino Canyon. Suitable upland foraging habitat exists in the Proposed Project survey area.

Protocol surveys for the Arroyo toad were conducted during the summer of 2010. The Arroyo toad was absent from all the survey areas. It was determined that areas within 0.9 mile of Cristianitos and Gabino Creeks would be considered suitable upland habitat for the species, but not suitable for breeding. No individuals or sign were found during focused surveys, although potential suitable upland foraging habitat was identified within the Proposed Project survey area. For further details refer to Appendix G.

5.6.2.3 Burrowing Owl (*Athene cunicularia*; SSC, Covered Species)

Burrowing owls are crepuscular small ground-dwelling owls with a round head and no ear tufts. Typical habitat for this species includes open, dry grasslands, agricultural fields, sparse shrub lands, as well as developed areas with sufficient food sources. Common burrowing mammals that are associated with burrowing owls are ground squirrels, prairie dogs and badgers.

This species was not observed during habitat assessment surveys; however suitable grassland habitat was noted to be present in the vicinity of the Prima Deshecha Landfill. Recent CNDDB records document the presence of the species in the immediate vicinity of the Proposed Project survey area in the Prima Deshecha Landfill. Thus, the potential for this species to be within the Proposed Project survey area is high.

5.6.2.4 Coast horned lizard (*Phrynosoma coronatum blainvillei*; SSC, Covered Species)

The coast horned lizard inhabits valley-foothill hardwood, conifer, riparian and annual grasslands (Pianka and Parker, 1975). This species occurs from the Sierra Nevada foothills, throughout central California and the southern California coast. This species prefers open terrain, sandy substrates and washes often found near ant mounds (Stebbins, 1954).

Suitable habitat exists in the Proposed Project survey area and occurrences have been documented within 0.2 mile of the Proposed Project survey area by CNDDB. The species may be present in CSS habitat within the Proposed Project survey area. There is a moderate potential for occurrence of this species based on its habitat requirements.

5.6.2.5 Mountain lion (*Felis concolor*; Covered Species)

Mountain lions inhabit many different types of habitat throughout a large range. This carnivorous species requires extensive riparian vegetation, bushy stages of various habitats along with irregular terrain such as rocky outcrops and tree edges. Typically habitats remote mountainous areas near reliable water sources but are capable of abstaining from drinking water for long periods (Williams, 1986). 60 to 80 percent of this species diet comprises of mule deer (Currier, 1983). The home range of a male is usually a minimum of 15 square miles and a female is between three and 12 square miles (Russell, 1978) while young adult cougars establish home ranges as vacancies as occur (Seidensticker *et al*., 1973).

Marginal habitat exists in the less disturbed areas of the Proposed Project survey area and in the vicinity of Camp Pendleton. There is a high potential for occurrence based on its habitat requirements.

5.6.2.6 Northern red-diamond rattlesnake (*Crotalus ruber ruber*; SSC, Covered Species)

The red-diamond rattlesnake is found in chaparral, woodland, grassland, and desert habitat areas from coastal San Diego County to the eastern slopes of the mountains. Prefers rocky areas and dense vegetation and requires rodent burrows, cracks in rocks or other surface cover objects (Klauber, 1972).

This species may be present in CSS habitats within the Proposed Project survey area; although it's preferred habitat of rocky areas and dense habitat is not present. The nearest CNDDB record is 1.3 miles northeast of the Rancho San Juan segment, in CSS. There is a moderate potential for occurrence of this species based on its habitat requirements.

5.6.2.7 Orange-throated whiptail (*Aspidoscelis hyperythra*; SSC, Covered Species)

Orange-throated whiptail lizards are uncommon to fairly common over much of its range in Orange, Riverside, and San Diego counties, especially in areas with summer morning fog. It inhabits low-elevation coastal scrub, chamise-redshank chaparral, mixed chaparral, and valley-foothill hardwood habitats (Bostic, 1965).

Suitable habitat exists in the Proposed Project survey area in CSS habitats, and occurrences have been documented within 0.3 mile by CNDDB. Therefore, there is a moderate potential for occurrence of this species based on its habitat requirements and CNDDB observations.

5.6.2.8 Riverside Fairy Shrimp (*Streptocephalus woottoni*; FE, Covered Species)

The Riverside Fairy Shrimp is a small freshwater crustacean typically found in deep, cool vernal pools that retain water through late spring. Their range extends from southwestern Riverside County, to northwestern Baja California. Threats to the Riverside fairy shrimp include habitat loss and degradation due to urban and agricultural development, off-road vehicle use, cattle trampling, human trampling, livestock grazing, trash dumping, invasion from weedy non-native plants, drainage or watershed alterations, road development, military activities, fire and fire suppression activities, and drought. Two CNDDB occurrences document the species in vernal pools located approximately 1.5 miles northeast of the Rancho San Juan segment and one mile south the Talega Substation.

No suitable habitat (vernal pools, ponded areas, or road ruts) were identified within the Proposed Project survey area, therefore there is no potential for this species to occur.

5.6.2.9 San Diego Fairy Shrimp (*Branchinecta sandiegonensis*; FE, Covered Species)

The San Diego fairy shrimp is a small freshwater crustacean found in small, shallow vernal pools. They may also occur in ditches and road ruts that can support suitable conditions (USFWS, 1994). The species is primarily found in vernal pools within San Diego County, however small populations also occur in Orange County. The San Diego fairy shrimp is known to occur on Camp Pendleton. Two recent CNDDB occurrences document the species in vernal pools located approximately one and 1.2 mile northeast of the Rancho San Juan segment of the Proposed Project.

No suitable habitat (vernal pools, ponded areas, or road ruts) was identified within the Proposed Project survey area; therefore, there is no potential for this species to occur.

5.6.2.10 Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*, WL, Covered Species)

The Southern California rufous-crowned sparrow exhibits a distinct preference for rocky hillsides and steep slopes in open grass and CSS in areas ranging from roughly 200 to 4,500 feet in elevation. They also thrive in areas that have recently been burned and sometimes remain in these grassy, successional habitats for a number of years. In general, pairs nest on the ground in rock hollows or under clumps of grass or low brush (Pemberton, 1910). This species is tolerant of edge effects, small habitat patches, low shrub volume, and short-term habitat disturbance.

Due to the suitable CSS habitat within the Proposed Project survey area and CNDDB records within the Proposed Project survey area near Talega, there is a moderate potential for occurrence.

5.6.2.11 Stephen's kangaroo rat (*Dipodomys stephensi*; FE. ST)

Stephen's kangaroo rats inhabit annual and perennial grasslands, coastal scrub and sagebrush with sparse canopy cover (Thomas, 1973). Stephens' kangaroo rat will burrow into firm soil and has been observed to occupy gopher burrows. This moderate-sized granivore species prefers buckwheat, chamise, brome grass and filaree vegetation (Thomas, 1975). Suitable habitat exists in the Proposed Project survey area and occurrences have been documented 2.5 miles west of the Proposed Project survey area within San Diego County by CNDDB.

There is a moderate potential for occurrence based on its habitat requirements, however there are no CNDDB records for Stephen's kangaroo rats within three miles of the Proposed Project in Orange County. The *SDG&E Subregional NCCP* does not cover impacts to this species in Orange County; take is only authorized in northern San Diego County.

5.6.2.12 Tidewater Goby (*Eucyclogobius newberryi*; FE, SSC)

The tidewater goby is a small fish species which is endemic to California and found primarily in the brackish waters of coastal lagoons, estuaries, and marshes. The historic range of the species is from Tillas Slough in Del Norte County, near the Oregon border, south to Agua Hedionda Lagoon in northern San Diego County (USFWS, 2008b). The species is currently found throughout this historic range, but resides in fewer localities than historically occurred, having been extirpated from some sites as a result of drainage, water quality changes, introduced predators, and drought. It is uncertain if the species still occurs at approximately 50 percent of its 134 documented localities (USFWS, 2005). Threats to the tidewater goby include loss and modification of habitat, water diversions, introduction of non-native predators and fish species, habitat channelization, and degraded water quality (Eschmeyer and Herald, 1983).

The tidewater goby often migrates up to 0.5 mile upstream into tributaries; however the species has been documented up to five miles upstream at locations in Mendocino and Santa Barbara Counties (USFWS, 2005). Tidewater gobies were last seen in San Juan Creek in 1968, up to 2.5 miles upstream from the coast, and were not found during a sampling conducted in 1992

(CNDDB, 2011; USFWS, 2005). Therefore, there is low potential for the species to occur in the Proposed Project survey area.

5.6.2.13 Two-striped garter snake (*Thamnphis hammondii*; SSC, Covered Species)

Two-striped garter snake inhabits the coastal region of southern California to 2,135 meters elevation. This species can be found in or near permanent fresh water. Prefers streams with rocky beds and riparian growth (Jennings and Hayes, 1994).

There is suitable habitat for this species and CNDDB records have been found within San Juan Creek. Therefore is a moderate potential for occurrence of this species within the perennially wet creeks and drainages crossing the Proposed Project survey area, specifically in Horno Creek, San Juan Creek, Segunda Deshecha Cañada, Tributary to Segunda Deshecha Cañada 3, and Tributary to Christianitos Creek 1.

5.6.2.14 Western pond turtle (*Emys marmorata*; SSC)

Western pond turtles inhabit ponds, lakes, rivers, streams, creeks, marshes and irrigation ditches, with abundant vegetation, and either rocky or muddy bottoms, in woodland, forest, and grassland. Inside streams this species prefers pools to shallower areas. Logs, rocks, cattail mats, and exposed banks are required for sun basking. This species is known to enter brackish water and even seawater.

There is suitable foraging habitat for this species and CNDDB records have been found within San Clemente Creek. Therefore is a moderate potential for occurrence of this species within the perennially wet creeks and drainages crossing the Proposed Project survey area, specifically in Horno Creek, San Juan Creek, Segunda Deshecha Cañada, Tributary to Segunda Deshecha Cañada 3, and Tributary to Christianitos Creek 1.

5.6.2.15 Western spadefoot (*Spea hammondii*; SSC, Covered Species)

Western spadefoot toad occurs primarily in grassland habitats, although can be found in valley-foothill hardwood woodlands. Vernal pools are essential for breeding and egg-laying.

Suitable habitat exists in the Proposed Project survey area and occurrences have been documented within 2.25 miles by CNDDB. Species may forage in CSS within the Proposed Project survey area. There is a moderate potential for occurrence of this species based on its habitat requirements.

5.7 WILDLIFE CORRIDORS

It is not anticipated that the Proposed Project will have a significant effect on wildlife movement corridors. The Proposed Project will be located within an existing ROW, primarily within urbanized areas, where transmission lines are already present. The Proposed Project would not significantly impact or restrict general wildlife movement due to the intermittent locations of construction activity and its temporary nature. Wildlife would not be physically prevented from moving around project equipment in the transmission corridor. During operation of the Proposed

Project, the widely spaced towers and/or poles would not physically obstruct wildlife movement; wildlife could move under and around the towers and poles.

5.8 JURISDICTIONAL DELINEATION OF WATERS AND WETLANDS

The Proposed Project survey area supports twelve different drainages. These drainages include eight relatively permanent waters, known as Horno Creek, San Juan Creek, Segunda Deshecha Cañada, Tributary to Segunda Deshecha Cañada 1, 2, and 3, and Tributary to Christianitos Creek 1 and 3. The remaining four drainages are non-relatively permanent waters known as the Tributary to Prima Deshecha Cañada, Tributary to San Juan Creek, the Rancho San Juan Drainage, and Tributary to Christianitos Creek 2. All drainages within the Proposed Project survey area total approximately 6.69 acres of WUS of which 3.43 acres are wetland, and 13.83 acres of "Waters of the State," of which 13.52 acres are riparian. The locations and boundaries of these jurisdictional waters are depicted in the attached Appendix C, Figures 2-7. A summary of jurisdiction by acreage is provided below in Table 2: Potentially Jurisdictional Waters in Proposed Project Survey Area.

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Table 2: Potentially Jurisdictional Waters in Proposed Project Survey Area

Drainage Name	ACOE Wetland	Total ACOE[1]	CDFG Riparian	Total CDFG[2]	Linear Feet
Horno Creek	0.05	**0.19**	1.08	**1.08**	540
San Juan Creek	2.00	**3.86**	4.86	**4.86**	665
Tributary to San Juan Creek	0.00	**0.05**	0.00	**0.05**	1,630
Whispering Hills Drainage	0.00	**0.94**	2.55	**2.55**	960
Tributary to Prima Deshecha Cañada	0.00	**0.22**	0.59	**0.72**	3,880
Segunda Deshecha Cañada	0.68	**0.68**	1.38	**1.38**	1,040
Tributary to Segunda Deshecha Cañada 1	0.01	**0.04**	0.01	**0.04**	155
Tributary to Segunda Deshecha Cañada 2	0.00	**0.03**	0.00	**0.03**	715
Tributary to Segunda Deshecha Cañada 3	0.26	**0.28**	0.55	**0.56**	515
Tributary to Christianitos Creek 1	0.26	**0.34**	2.24	**2.25**	1,040
Tributary to Christianitos Creek 2	0.00	**0.04**	0.00	**0.04**	610
Tributary to Christianitos Creek 3	0.00	**0.02**	0.26	**0.27**	630
Totals	***3.26***	***6.69***	***13.52***	***13.83***	***12,380***

[1] Includes all wetlands and waters (RPW and non-RPW).
[2] Includes bed and bank and associated riparian habitat, where present.

6.0 IMPACTS

The following section discusses the potential impacts to biological resources as a result of construction, operation and maintenance of the Proposed Project, and analyses the significance of those impacts. Impacts, whether or not they are significant, can be direct or indirect, and permanent or temporary. Direct permanent impacts are those effects that take a biological resource which cannot be replaced on-site, such as removing native vegetation to construct a building. Direct, temporary impacts include effects, such as those from construction staging, that are only temporary and can be restored to similar conditions prior to the impact. Indirect permanent impacts result from permanent surrounding influence, such as noise, light, or invasive species from a permanent source, such as a road, an airport, or a lighted sports facility. Indirect temporary effects are surrounding effects such as construction noise that will only last temporarily during construction activities of a project.

The operational protocols, habitat enhancement measures and mitigation set forth in Sections 7.1, 7.2 and 7.4, respectively, of the *SDG&E Subregional NCCP* were determined sufficient to reduce any impacts to special status species from the Proposed Project (including those species not covered under the *SDG&E Subregional NCCP*) to a less-than-significant level. Therefore, no additional APMs were determined required to avoid or minimize potential impacts to biological resources. Maps displaying the location of temporary and permanent construction impacts are provided in Appendix J. Details on the potential impacts and avoidance, minimization and mitigation measures are provided below.

6.1 CONSTRUCTION IMPACTS

The following discussion describes the Proposed Project's potential to impact sensitive species and habitats during construction of the Proposed Project. SDG&E would be operating under *SDG&E Subregional NCCP* which was established according to the FESA and CESA and the state's NCCP Act. This would include compliance with Section 7.1, *Operation Protocols* and Section 7.2, *Habitat Enhancement Measures* of the *SDG&E Subregional NCCP*.

Construction of the Proposed Project could result in temporary disturbance to and/or permanent loss of sensitive vegetation communities, rare plant communities, and sensitive plant species. Temporary disturbance includes short-term impacts during construction for new pole structures and removal of existing towers and work at staging/laydown areas. Permanent loss involves long-term impacts associated with permanent Proposed Project features such as new transmission towers and substation modifications, or any new access roads or improvements to existing access roads.

6.1.1 Impacts to Vegetation Communities

Impacts to vegetation communities could result in impacts to habitats for special status species, including Covered Species. Impacts could result from blading, scraping, excavation, and erosion, along with fragmentation and human access to restricted areas. Modification of habitat may reduce the prey base or other biological resources for special status species and thereby affect their ability to survive. The *SDG&E Subregional NCCP* allows for impacts to habitats when incidental to otherwise lawful activities and when conducted in full compliance with the *SDG&E Subregional* NCCP. Compliance with the *SDG&E Subregional NCCP* intends to avoid impacts

whenever possible and to implement measures to minimize and mitigate any take to the maximum extent possible.

The Proposed Project would permanently impact approximately 0.85 acre of CSS, 0.72 acre of Disturbed CSS, 2.38 acres of Ruderal vegetation, 2.83 acres of Disturbed habitat, 2.34 acres of Ornamental vegetation, 1.23 acres of existing Dirt roads and 10.05 acres of Developed land. The Proposed Project would also temporarily impact 0.44 acre of CSS, 0.86 acre of Disturbed CSS, 8.69 acres of Ruderal vegetation, 5.3 acres of Disturbed habitat, 1.16 acres of Ornamental vegetation, 1.41 acres of Dirt roads, and 4.84 acres of Developed areas. There would be no permanent or temporary impacts to Coastal Freshwater Marsh, SWS, Disturbed SWS, or Riparian Scrub habitat. Minimal impacts to sensitive habitats are expected due to the Proposed Project and are limited to CSS and Disturbed CSS. A map of temporary and permanent construction impacts to vegetation communities is provided in Appendix J. These impacts are also summarized in Table 3: Vegetation Community Impacts.

Consistent with the *SDG&E Subregional NCCP*, the Proposed Project has been designed to avoid sensitive habitat areas when possible, including not placing poles in drainage areas, using existing access roads to the greatest extent possible, and placing any new facilities, staging areas, or access roads outside habitats when feasible. Where avoidance of sensitive habitat areas (CSS and Disturbed CSS) is not possible, or where sensitive habitat areas exist adjacent to Proposed Project work areas, implementation of the measures in Section 7.1 and 7.2 of the *SDG&E Subregional NCCP* will reduce these impacts to less-than-significant, including but not limited to those listed below. The relevant *SDG&E Subregional NCCP* section is provided in brackets and can be used to reference the *SDG&E Subregional NCCP* for additional details.

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Table 3: Vegetation Community Impacts

Vegetation Community	Permanent Impacts (Acres)	Temporary Impacts (Acres)
Sensitive Habitats		
Coastal Sage Scrub	0.85	0.44
Disturbed Coastal Sage Scrub	0.72	0.86
Coastal Freshwater Marsh	0	0
Southern Willow Scrub	0	0
Disturbed Southern Willow Scrub	0	0
Riparian Scrub	0	0
Subtotal	*1.57*	*1.30*
Non-sensitive Habitats		
Ruderal	2.38	8.69
Disturbed	2.83	5.30
Ornamental	2.34	1.16
Dirt Roads	1.23	1.41
Developed	10.05	4.84
Subtotal	*18.83*	*21.4*
Total	***20.4***	***22.7***

***SDG&E Subregional NCCP* Operation Protocols, Habitat Enhancement Measures and Mitigation**

- Vehicles will be kept on access roads and limited to 15 miles per hour (Section 7.1.1, 1.).
- No plants will be collected (Section 7.1.1, 2.).
- Measures to prevent or minimize wild fires will be implemented, including exercising care when driving and not parking vehicles where catalytic converters can ignite dry vegetation (Section 7.1.1, 9.).
- Field crews will refer all environmental issues, including questions regarding environmental impacts, to the Environmental Surveyor (Section 7.1.1, 10.).
- All SDG&E personnel will participate in an environmental training program conducted by SDG&E, with annual updates (Section 7.1.2, 11.).
- The Environmental Surveyor will conduct pre-activity studies for all activities occurring in natural areas, and will complete a pre-activity study form including recommendations for review by a biologist and construction monitoring, if appropriate. The form will be provided to CDFG and USFWS but does not require their approval (Section 7.1.3, 13.).
- The Environmental Surveyor will flag boundaries of habitats to be avoided and, if necessary, the construction work boundaries (Section 7.1.3, 14.).
- The Environmental Surveyor will conduct monitoring as recommended in the pre-activity study form (Section 7.1.4, 35.).
- Fugitive dust will be controlled by regular watering and speed limits (Section 7.1.4, 39.).
- New access roads will be designed and constructed according to the SDG&E *Guide for Encroachment on Transmission Rights-of-Way (4/91)* (Section 7.1.6, 46.)
- Impacts to CSS and Disturbed CSS habitat for new facilities will be mitigated for permanent impacts at a 2:1 ratio in preserve areas and at a 1:1 ratio outside preserve areas (Section 7.2). SDG&E Mitigation Credits will be used for the Proposed Project.
- Impacts to CSS and Disturbed CSS habitat for new facilities will be mitigated for temporary impacts through basic site remediation, including hydro seeding for erosion control, if necessary. For areas greater than 500 square feet, any acreage not meeting the success criteria shall be deducted from SDG&E Mitigation Credits at a 1:1 ratio. For areas of less than 500 square feet, success criteria will not be required to be met (Sections 7.2 and 7.4). Vegetation restoration methods and success criteria are outlined in Section 7.2.1. Habitat reclamation, involving the removal of exotic vegetation, will be considered when re-seeding would be an ineffective habitat enhancement method (Section 7.2.2).

6.1.2 Impacts to Sensitive Plant Species

The *SDG&E Subregional NCCP* allows for the take of Covered Species and impacts to their habitats when incidental to otherwise lawful activities and when conducted in full compliance with the *SDG&E Subregional* NCCP. Compliance with the *SDG&E Subregional NCCP* intends to avoid take of Covered Species whenever possible and to implement measures to minimize and

mitigate any take to the maximum extent possible. Take of Narrow Endemic Covered Species, including certain plant species, is to be avoided except for emergencies and unavoidable impacts from repairs to existing facilities.

All sensitive plant species identified in the literature search are unlikely to occur within the Proposed Project survey area based on focused field surveys and observations. Based on the results of the field survey, the potential for occurrence was determined for each plant species and is included as Appendix A of this report. No sensitive plant species were found during habitat assessments or rare plant surveys conducted in 2008 and 2010.

Since special status plant species were not observed in the Proposed Project survey area and determined to have an unlikely potential to occur, no impacts to these species are expected. Pre-activity surveys required pursuant to the *SDG&E Subregional NCCP* will confirm absence of special status plants. If any are found, compliance with Sections 7.1 and 7.2 of the *SDG&E Subregional NCCP* will reduce any impacts to a less-than-significant level. These include measures outlined in Section 6.1.1 of this report.

6.1.3 Impacts to Sensitive Wildlife Species

Take can occur from impacts to individual animals, such as harassment, death or displacement, or impacts to habitats (see discussion in Section 6.1.1 of this report). Harassment is the most common impact to individual animals and can occur as an unavoidable and unintentional consequence of factors such as human activity, operation of machinery or equipment, and associated noise. Harassment can also result in the disruption of normal behaviors and abandonment of nests. Direct killing or injury to individuals may result from being struck by vehicles or equipment, or being crushed or trapped in their burrows. Displacement may occur when individual animals move away from the work area to surrounding areas, either temporarily or permanently, either due to noise or removal of nests or nesting/foraging habitat. Some wildlife may be temporarily displaced during construction of the Proposed Project, at least during daylight hours. However, once the work ends, no lasting effects are anticipated that would preclude wildlife from returning to their normal routines. Permanent displacement results in animals being forced to compete with other animals in new areas for food and living space. The Proposed Project will result in a temporary loss of approximately 10.01 acres of suitable foraging and cover habitat, and the permanent loss of approximately 3.95 acres of suitable foraging and cover habitat. Suitable habitat within the Proposed Project area includes native and non-native vegetation classified as CSS, Disturbed CSS, or Ruderal areas. Other potential impacts include wildlife falling into and becoming trapped within transmission pole excavation areas or inside equipment/supplies.

The *SDG&E Subregional NCCP* allows for the take of Covered Species and impacts to their habitats when incidental to otherwise lawful activities and when conducted in full compliance with the *SDG&E Subregional* NCCP. Compliance with the *SDG&E Subregional NCCP* intends to avoid take of Covered Species whenever possible and to implement measures to minimize and mitigate any take to the maximum extent possible. Take of Narrow Endemic Covered Species, including certain animal species, is to be avoided except for emergencies and unavoidable impacts from repairs to existing facilities.

As summarized in Section 5.6 of this document, 34 sensitive wildlife species have a potential to occur (30 of which are Covered Species) and six are found within and in the vicinity of the Proposed Project survey area (of which only one, white-tailed kite, is not a Covered Species). The potential presence of species is based on their known or recorded occurrence within the region, and/or appropriate habitat being present in the project area.

While no impacts to riparian vegetation communities are included within the Proposed Project, impacts to areas adjacent to riparian habitat may indirectly affect special status riparian species. Specifically, potential impacts to arroyo toad, least Bell's vireo, and southwestern willow flycatcher will be assessed through pre-construction and clearance surveys pursuant to the *SDG&E Subregional NCCP*.

Consistent with the *SDG&E Subregional NCCP*, the Proposed Project has been designed to avoid sensitive habitat areas that may support special status wildlife species when possible, including not placing poles in drainage areas, using existing access roads to the greatest extent possible, and placing any new facilities, staging areas, or access roads outside habitats when feasible. Due to the small permanent footprint of the Proposed Project, and the presence of potential foraging adjacent to the Proposed Project, wildlife habitat is not expected to be adversely affected. Where avoidance of sensitive habitat areas supporting special status wildlife is not possible, or where sensitive habitat areas exist adjacent to Proposed Project work areas, implementation of the measures in Section 7.1 and 7.2 of the *SDG&E Subregional NCCP* will reduce these impacts to less-than-significant, including but not limited to those listed in Section 6.1.1 and additional measures below. The applicable *SDG&E Subregional NCCP* section is provided in brackets and can be used to reference the *SDG&E Subregional NCCP* for additional details. Compliance with the *SDG&E Subregional NCCP* would reduce impacts to Covered Species to a less-than-significant level, including mitigation for loss of habitat. Pre-activity surveys required pursuant to the *SDG&E Subregional NCCP* will also confirm the absence of any other special status species not covered under the *SDG&E Subregional NCCP*. If any non-Covered Species special status species are found or suspected, compliance with Sections 7.1 and 7.2 of the *SDG&E Subregional NCCP* will allow avoidance, minimization and mitigation of impacts, as applicable. CDFG and/or USFWS will be consulted if impacts to non-Covered Species cannot be avoided. Based on Section 5.6.2 of this report, presence or potential presence of non-Covered Species is expected to be limited to white-tailed kite, arroyo chub, and Stephen's kangaroo rat. No impacts will occur to arroyo chub habitat as result of the Proposed Project, and avoidance of any impacts to white tailed kite and Stephen's kangaroo rat (if present) is expected through compliance measures in the *SDG&E Subregional NCCP*.

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- No wildlife, including rattlesnakes, will be collected or harmed, except to protect life and limb (Section 7.1.1, 2. and 7.).
- Feeding of wildlife is not allowed (Section 7.1.1, 4.).
- No pets are allowed within the right-of-way (Section 7.1.1, 5.).
- Littering is not allowed, and no food or waste will be left on the right-of-way or adjacent properties (Section 7.1.1, 8.).

- Field crews will refer all environmental issues, including wildlife relocation, dead or sick wildlife, or questions regarding environmental impacts to the Environmental Surveyor. Biologists or experts in wildlife handling may be necessary to assist with wildlife relocations (Section 7.1.1, 10.).
- Supplies, equipment, or construction excavations where wildlife could hide (e.g., pipes, culverts, pole holes, trenches) will be inspected prior to moving or working on/in them (Section 7.1.4, 37. and 38.).
- During the nesting season, the presence or absence of nesting species shall be determined by a biologist who will recommend appropriate avoidance and minimization measures (Section 7.1.6, 50.).

6.1.4 Raptors and Other Nesting Bird Species

Construction activities could potentially impact nesting raptors, passerines, and other sensitive bird species such as migratory birds protected under the MBTA. Impacts may include the removal of potential nesting habitat and the disruption of nesting behavior due to a temporary increase in noise from construction equipment and vehicles. SDG&E would comply with Sections 7.1 and 7.2 of the *SDG&E Subregional NCCP*, including pre-activity surveys (see Section 6.1.1 of this report), determining the presence or absence of nesting species (see Section 6.1.3 of this report), and implementing avoidance and minimization measures (see Section 6.1.3 of this report). These measures will also comply with the MBTA. Through compliance with the *SDG&E Subregional NCCP*, impacts to breeding and nesting birds are expected to be less-than-significant.

Transmission lines and other structures provide potential perching opportunities for raptor species, which can increase the potential for predation of wildlife by raptors. Since the Proposed Project is within an existing transmission ROW, the extent of predation on sensitive and common wildlife species is not anticipated to change from existing conditions.

Concerns regarding potential electrocution impacts from transmission lines to wildlife species are primarily focused on avian species. Electrocution with avian species can occur from wing contact as avian species perch, land, or take off from a utility pole by contact with two conductors to complete the electrical circuit, simultaneous contact with energized phase conductors and other equipment, and simultaneous contact with energized wire and a grounded wire. Electrocution of avian species is more of a potential hazard to larger birds, such as raptors, because their body size and wing span are large enough to span the distance between the conductor wires and, thus, complete the electrical circuit. As part of the Proposed Project, SDG&E will be utilizing underground transmission lines in certain portions of the alignment in place of existing overhead transmission lines, which will reduce the possibility of avian electrocution. Where overhead transmission lines are required, design and construction will occur in compliance with the Avian Power Line Interaction Committee's Suggested Practices for Avian Protection on Power Lines. As outlined in Section 2.0, VIII of the *SDG&E Subregional NCCP*, SDG&E may also coordinate with wildlife agencies and consider the installation of bird guards on the poles and towers to prevent perching/nesting activities. The type of bird guards will be considered on a case by case basis. The *SDG&E Subregional NCCP* also requires that if nests interfere with the safe operation of a transmission system, that removal of the nest be

avoided during the months of January through June. With compliance of the *SDG&E Subregional NCCP*, impacts to birds as a result of electrocution are expected to be less-than-significant.

6.1.5 Wildlife Movement Corridors

It is not anticipated that the Proposed Project will have a significant effect on wildlife movement corridors. The Proposed Project will be located within an existing ROW where transmission lines are currently present. Placement of pole and tower structures for the new overhead transmission line will occur in the vicinity of existing structures within the ROW, and due to their small footprint will maintain wide natural areas to allow the continued movement of wildlife species. The Proposed Project will also avoid or span existing drainages that often serve as wildlife movement corridors. Some local wildlife movement may be temporarily disrupted during construction, at least during daylight hours. However, once construction is completed, no lasting effects are expected that would preclude wildlife from returning. Therefore, impacts to wildlife movement corridors are anticipated to be less-than-significant.

Since the Proposed Project will be located in an existing utility ROW, currently occupied by numerous structures and circuits, the addition of new circuits and structures will not significantly impact migrating birds. Furthermore, the measures outlined in Section 6.1.3 of this report will avoid or minimize impacts associated with construction. Therefore, impacts to migrating birds are anticipated to be less-than-significant.

Based on the above and Sections 6.1.1 and 6.1.3 of this report, it is expected that regional wildlife movement will not be significantly impacted by the Proposed Project due to minimal loss of protective cover (vegetation), roosts, forage habitat, or movement corridors. Therefore, the potential impacts to wildlife movement corridors are anticipated to be less-than-significant.

6.1.6 Impacts to Jurisdictional Waters

Construction of the Proposed Project would result in no permanent impacts to waters under the jurisdiction of the ACOE, RWQCB, and CDFG. A total of approximately 0.0006 acre of ephemeral jurisdictional waters would be temporarily impacted. The temporary impacts are to a 25-foot linear ephemeral drainage with a one-foot width located within Tributary to Prima Deshecha Cañada. This water has a low biological value and has no associated riparian vegetation. Nevertheless, SDG&E would avoid this drainage to the greatest extent possible, obtain permits from the regulatory agencies, and mitigate for impacts as described in the *SDG&E Subregional NCCP* (Sections 7.1 and 7.2) and as required by the permitting process. Through compliance of the *SDG&E Subregional NCCP* and permits to be obtained from the regulatory agencies, direct impacts to jurisdictional waters will be less-than-significant. Indirect impacts to jurisdictional drainages will be avoided through the use of state-of-the art technical design and construction techniques to minimize avoid erosion and siltation into any creeks, streams, rivers, or bodies of water by use of BMPs (*SDG&E Subregional NCCP* Section 7.1.4, 20.).

6.2 OPERATIONS AND MAINTENANCE IMPACTS

Standard operational and maintenance activities, such as road grading, tree trimming, structure installation, and replacement and repairs, could potentially impact special status species,

including *SDG&E Subregional NCCP* Covered Species, if present in the Proposed Project area. Potential impacts from SDG&E's standard operations and maintenance activities are already accounted for in the *SDG&E Subregional NCCP*. Through compliance of measures outlined in the *SDG&E Subregional NCCP*, the potential impacts to special status species as a result of operation and maintenance of the Proposed Project is expected to be less-than-significant.

6.2.1 Wildlife Electrocution

Concerns regarding potential electrocution impacts to wildlife are primarily focused on avian species. An electric circuit (and resultant electrocution) is created when a bird simultaneously touches an energized conductor and the neutral wire or grounded hardware. Most bird electrocutions occur on distribution systems at the relatively lower voltages. This is due primarily to the spacing of the electrical conductors. On transmission towers the wires are separated by seven to 30 feet. In distribution systems the spacing is two to six feet. The closer spacing is more of a potential hazard to raptors and other large birds because their body size and wingspan are big enough to span the distance between the conductor wires, completing an electrical circuit. A second shock hazard exists from a neutral wire and metal hardware that is connected to a ground wire. Through implementation of the Avian Power Line Interaction Committee's Suggested Practices for Avian Protection on Power Lines, and Section 2.0, VIII of the *SDG&E Subregional NCCP* (also discussion in Section 6.1.3 of this report), impacts from avian electrocution is considered less-than-significant.

Electrocution of non-avian species is rare. When it occurs, it is generally caused by climbing animals that come into contact with energized components at substations rather than on transmission lines. Typical non-avian electrocution impacts could occur to non-sensitive wildlife species such as squirrels (*Spermophilus* sp.), raccoons (*Procyon lotor*), and domestic cats (*Felis domesticus*). Infrequent electrocution of non-sensitive wildlife species is not considered a significant impact.

6.2.2 Collision

Collision impacts of avian species with existing transmission facilities can be a significant impact. Collision impacts typically occur to migratory bird species and are generally due to poor visibility of electrical lines. Factors leading to avian collisions with existing transmission lines include a lack of visual cues that make the lines stand out against the surrounding environment. Disorientation of avian species can be caused by "light dazzle" from city/industrial light sources during evening hours, by spatial configuration of the electrical lines, and proximity to heavily used major avian flyways.

The Proposed Project's overhead transmission line crosses open fields that provide foraging habitat for generally solitary raptors, as well as riparian areas, which could be utilized by migratory birds. Since the Proposed Project's overhead facilities are within an existing SDG&E ROW, these added facilities are not expected to result in a significant increase in avian collision. Therefore, the potential impacts of increased avian collisions are anticipated to be less-than-significant.

6.3 SUMMARY OF IMPACTS

Direct and indirect impacts to special status habitats, plant and wildlife species, including Covered Species, will be avoided, minimized, or mitigated through compliance with measures outlined in the *SDG&E Subregional NCCP*, implementation of the Avian Power Line Interaction Committee's Suggested Practices for Avian Protection on Power Lines, and regulatory permitting for jurisdictional waters, thereby reducing impacts to a less-than-significant level. Details on those compliance measures are provided in Section 6.1 and 6.2 of this report. Since compliance with the existing *SDG&E Subregional NCCP* and regulatory permitting is considered adequate to address impacts to sensitive biological resources, no additional APMs are necessary.

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Appendix A
CNDDB and CNPS Special Status Species Table

APPENDIX A CNDDB and CNPS Special Status Species Table

COMMON NAME	SCIENTIFIC NAME	LISTING STATUS	HABITAT REQUIREMENTS	FLOWERING/ PHENOLOGY	POTENTIAL FOR OCCURRENCE
Plants					
Allen's daisy	*Pentachaeta aurea* ssp. *allesnii*	Federal: None State: None CNPS:1B.1 NCCP: None	Coastal scrub, valley and foothill grasslands. Prefers sandy substrate and openings. Occurs between 75 and 520 m.	March to June Perennial	**Unlikely.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during focused surveys. No CNDDB records within 3.0 miles of survey area.
Aphanisma	*Aphanisma blitoides*	Federal: None State: None CNPS: 1B.2 NCCP: CS	Coastal bluff scrub, Coastal dunes, Coastal scrub. Prefers sandy substrate. Occurs between 1 and 305 m.	March to June Annual	**Unlikely.** No suitable habitat identified in the Proposed Project survey area also, no occurrences were identified during focused surveys. No CNDDB records within 3.0 miles of survey area.
Big-leaved crownbeard	*Verbesina dissita*	Federal:FT State: ST CNPS: 1B.1 NCCP: None	Chaparral (maritime) and coastal scrub. Occurs at 45 and 205 m.	April to July Perennial	**Unlikely.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during focused surveys. No CNDDB records within 3.0 miles of survey area.
Blochman's dudleya	*Dudleya blochmaniae* ssp. *blochmaniae*	Federal: None State: None CNPS:1B.1 NCCP: None	Coastal bluff scrub, Chaparral, Coastal scrub, Valley and foothill grassland. Perfers rocky, often clay or serpentinite soils. Occurs between 5 and 450 m.	April to June Perennial	**Unlikely.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during focused surveys. The nearest CNDDB record for this species is within 3.0 miles of the survey area.

COMMON NAME	SCIENTIFIC NAME	LISTING STATUS	HABITAT REQUIREMENTS	FLOWERING/ PHENOLOGY	POTENTIAL FOR OCCURRENCE
California satintail	*Imperata brevifolia*	Federal: None State: None CNPS: 2.1 NCCP: None	Chaparral, Coastal scrub, Mojavean desert scrub, Meadows and seeps often alkali, Riparian scrub. Prefers mesic soils. Occurs between 0 and 500 m.	September to May Perennial	**Unlikely.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during focused surveys. The nearest CNDDB record is within 2.5 miles of the survey area.
Chaparral nolina	*Nolina cismontana*	Federal: None State: None CNPS: 1B.2 NCCP: None	Chaparral, coastal scrub. Prefers sandstone or gabbro soils. Occurs between 140 and 1,275 m.	May to July Perennial	**Unlikely.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during focused surveys. No CNDDB records within 3.0 miles of survey area.
Chaparral ragwort	*Senecio aphanactis*	Federal: None State: None CNPS: 2.2 NCCP: None	Chaparral, cismontane woodland, coastal scrub. Occurs between 15 and 800 m.	January to April Perennial	**Unlikely.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during focused surveys. No CNDDB records within 3.0 miles of survey area.
Chaparral sand-verbena	*Abronia villosa* var. *aurita*	Federal: None State: None CNPS: 1B.1 NCCP: None	Chaparral, coastal scrub, desert dunes/sandy soils. Occurs between 80 and 1,600 m.	January to September Perennial	**Unlikely.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during field surveys. No CNDDB records within 3.0 miles of survey area.
Cliff spurge	*Euphorbia misera*	Federal: None State: None CNPS: 2.2 NCCP: None	Coastal bluff scrub, coastal scrub, and mojavean desert scrub. Occurs between 10 and 500 m.	December to August Evergreen	**Unlikely.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during focused surveys. No CNDDB records within 3.0 miles of survey area.

COMMON NAME	SCIENTIFIC NAME	LISTING STATUS	HABITAT REQUIREMENTS	FLOWERING/ PHENOLOGY	POTENTIAL FOR OCCURRENCE
Coulter's matilija poppy	*Romneya coulteri*	Federal: None State: None CNPS: 4.2 NCCP: None	Chaparral and coastal scrub. Occurs between 20 and 1,200 m.	March to July Perennial	**Unlikely.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during focused surveys. No CNDDB records within 3.0 miles of survey area.
Coulter's saltbush	*Atriplex coulteri*	Federal: None State: None CNPS: 1B.2 NCCP: None	Coastal bluff scrub, coastal dunes, coastal scrub, valley and foothill grassland. Occurs between 3 and 460 m.	March to October Perennial	**Unlikely.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during focused surveys. The nearest CNDDB record for this species is within 0.1 mile of the survey area.
Engelmann oak	*Quercus engelmannii*	Federal: None State: None CNPS: 4.2 NCCP: None	Chaparral, cismontane woodland, riparian woodland, valley and foothill grassland. Occurs between 120 and 1,300 m.	March to May Evergreen	**Unlikely.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during focused surveys. No CNDDB records within 3.0 miles of survey area.
Estuary seablite	*Suaeda esteroa*	Federal: None State: None CNPS: 1B.2 NCCP: None	Marshes and swamps (coastal salt) Occurs between 0 and 5 m.	May to January Perennial	**Unlikely.** No **s**uitable habitat identified in the Proposed Project survey area also, no occurrences were identified during focused surveys. No CNDDB records within 3.0 miles of survey area.
Felt-leaved monardella	*Monardella hypoleuca* ssp. *lanata*	Federal: None State: None CNPS: 1B.2 NCCP: CS	Chaparral, cismontane woodland. Occurs between 300 and 1,190 m.	June to August Perennial	**Unlikely.** No suitable habitat identified in the Proposed Project survey area also, no occurrences were identified during focused surveys and outside of known elevation range. No CNDDB records within 3.0 miles of survey area.

COMMON NAME	SCIENTIFIC NAME	LISTING STATUS	HABITAT REQUIREMENTS	FLOWERING/ PHENOLOGY	POTENTIAL FOR OCCURRENCE
Hall's monardella	*Monardella macrantha* ssp. *hallii*	Federal: None State: None CNPS: 1B.3 NCCP: None	Broadleaved upland forest, chaparral, cismontane woodland, lower montane coniferous forest, valley and foothill grassland. Occurs between 730 and 2,195 m elevation.	June to October Perennial	**Unlikely.** No suitable habitat identified in the Proposed Project survey area also, no occurrences were identified during focused surveys and outside of known elevation range. No CNDDB records within 3.0 miles of survey area.
Intermediate mariposa lily	*Calochortus weedii* var. *intermedius*	Federal: None State: None CNPS: 1B.2 NCCP: None	Rocky and calcareous substrate. Chaparral, coastal scrub, valley and foothill grassland. Occurs between 105 and 855 m.	May to July Perennial	**Unlikely.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during focused surveys. The nearest CNDDB record for this species is within 0.75 mile of the survey area.
Laguna beach dudleya	*Dudleya stolonifera*	Federal: FT State: ST CNPS: 1B.1 NCCP: None	Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland. Prefers rocky substrate. Occurs between 10 and 260 m.	May to July Perennial	**Unlikely.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during focused surveys. No CNDDB records within 3.0 miles of survey area.
Little mousetail	*Myosurus minimus* ssp. *apus*	Federal: None State: None CNPS: 3.1 NCCP: CS	Valley and foothill grassland, vernal pools (alkaline). Occurs between 20 and 640 m.	March to June Perennial	**Unlikely.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during focused surveys. No CNDDB records within 3.0 miles of survey area.
Long-spined spineflower	*Chorizanthe polygonoides* var. *longispina*	Federal: None State: None CNPS: 1B.2 NCCP: None	Chaparral, coastal scrub, meadows and seeps, valley and foothill grassland. Often prefers clay soils. Occurs between 30 and 1,530 m.	April to July Perennial	**Unlikely.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during focused surveys. No CNDDB records within 3.0 miles of survey area.

COMMON NAME	SCIENTIFIC NAME	LISTING STATUS	HABITAT REQUIREMENTS	FLOWERING/ PHENOLOGY	POTENTIAL FOR OCCURRENCE
Many-stemmed dudleya	*Dudleya multicaulis*	Federal: None State: None CNPS: 1B.2 NCCP: CS	Chaparral, coastal scrub, valley and foothill grassland. Prefers clay soils. Occurs between 15 and 790 m.	April to July Perennial	**Unlikely**. Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during focused surveys. The nearest CNDDB record for this species is within 0.43 mile of the survey area..
Mesa horkelia	*Horkelia cuneata* ssp. *puberula*	Federal: None State: None CNPS: 1B.1 NCCP: None	Chaparral, cismontane woodland, coastal scrub. Prefers sandy or gravelly soil. Occurs between 70 and 810 m.	February to September Perennial	**Unlikely.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during focused surveys. No CNDDB records within 3.0 miles of survey area.
Mud nama	*Nama stenocarpum*	Federal: None State: None CNPS: 2.2 NCCP: None	Marshes and swamps (lake margins, riverbanks). Occurs between 5 and 500 m.	January to July Perennial	**Unlikely.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during focused surveys. No CNDDB records within 3.0 miles of survey area.
Nuttall's scrub oak	*Quercus dumosa*	Federal: None State: None CNPS: 1B.1 NCCP: None	Closed-con coniferous forest, chaparral, and coastal scrub. Prefers sandy, clay loam substrate. Occurs between 15 and 400 m.	February to August Evergreen	**Unlikely.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during focused surveys. The nearest CNDDB record for this species is within 0.75 mile of the survey area.
Orcutt's pincushion	*Chaenactis glabriuscula* var. *orcuttiana*	Federal: None State: None CNPS: 1B.1 NCCP: None	Coastal bluff scrub (sandy), coastal dunes. Occurs between 3 and 100 m.	January to August Annual	**Unlikely.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during focused surveys. No CNDDB records within 3.0 miles of survey area.

COMMON NAME	SCIENTIFIC NAME	LISTING STATUS	HABITAT REQUIREMENTS	FLOWERING/ PHENOLOGY	POTENTIAL FOR OCCURRENCE
Palmer's grapplinghook	*Harpagonella palmeri*	Federal: None State: None CNPS: 4.2 NCCP: CS	Chaparral, coastal scrub, valley and foothill grassland. Occurs between 20 and 955 m.	March to May Annual	**Unlikely.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during focused surveys. The nearest CNDDB record for this species is within 1.0 mile of the survey area.
Parry's tetracoccus	*Tetracoccus dioicus*	Federal: None State: None CNPS: 1B.2 NCCP: CS	Chaparral, coastal scrub. Occurs between 165 and 1,000 m.	April to May Perennial	**Unlikely.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during focused surveys. The nearest CNDDB record for this species is within 1.0 mile of the survey area.
Peninsular nolina	*Nolina cismontana*	Federal: None State: None CNPS: 1B.2 NCCP: None	Chaparral, coastal scrub. Prefers sandstone or gabbro soils. Occurs between 140 and 1,275 m.	May to July Evergreen	**Unlikely.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during focused surveys. No CNDDB records within 3.0 miles of survey area.
Plummer's mariposa lily	*Calochortus plummerae*	Federal: None State: None CNPS: 1B.2 NCCP: None	Chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, valley and foothill grassland. Prefers granitic or rocky substrate. Occurs between 100 and 1,700 m.	May to July Evergreen	**Unlikely.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during focused surveys. No CNDDB records within 3.0 miles of survey area.
Prostrate vernal pool navarretia	*Navarretia prostrata*	Federal: None State :None CNPS:1B.1 NCCP: None	Coastal scrub, meadows and seeps, valley and foothill grassland (alkaline), vernal pools. Prefers mesic soils. Occurs between 15 and 1,210 m.	April to July Annual	**Unlikely.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during focused surveys. No CNDDB records within 3.0 miles of survey area.

COMMON NAME	SCIENTIFIC NAME	LISTING STATUS	HABITAT REQUIREMENTS	FLOWERING/ PHENOLOGY	POTENTIAL FOR OCCURRENCE
Robinson's pepper-grass	*Lepidium virginicum* var. *robinsonii*	Federal :None State: None CNPS: 1B.2 NCCP: None	Chaparral and coastal scrub. Occurs between 1 and 885 m elevation.	January to July Annual	**Unlikely.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during focused surveys. No CNDDB records within 3.0 miles of survey area.
Salt spring checkered bloom	*Sidalcea neomexicana*	Federal: None State: None CNPS: 2.2 NCCP: None	Chaparral, coastal scrub, lower montane coniferous forest, mojavean desert scrub, playas. Prefers alkaline and mesic soils. Occurs between 15 and 1,530 m.	March to June Perennial	**Unlikely.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during focused surveys. The nearest CNDDB record for this species is within 2.5 miles of the survey area.
San Bernardino aster	*Symphyotrichum defoliatum*	Federal :None State: None CNPS: 1B.2 NCCP: None	Cismontane woodland, coastal scrub, lower montane coniferous forest, meadows and seeps, marshes and swamps, valley and foothill grassland (vernally mesic). Prefers ditches, streams and springs. Occurs between 2 and 2,040 m.	July to November Perennial	**Unlikely.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during focused surveys. No CNDDB records within 3.0 miles of survey area.
San Miguel savory	*Satureja chandleri*	Federal: None State: None CNPS: 1B.2 NCCP: CS	Chaparral, cismontane woodland, coastal scrub, riparian woodland, valley and foothill grassland. Prefers rocky, gabbroic or metavolcanic soils. Occurs between 120 and 1,075 m elevation.	March to July	**Unlikely.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during focused surveys. No CNDDB records within 3.0 miles of survey area.
Santa Catalina Island desert-thorn	*Lycium brevipes* var. *hassei*	Federal: None State: None CNPS: 1B.1 NCCP: None	Coastal bluff scrub, coastal scrub. Occurs between 10 to 300 m.	June	**Unlikely.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during focused surveys. No CNDDB records within 3.0 miles of survey area.

COMMON NAME	SCIENTIFIC NAME	LISTING STATUS	HABITAT REQUIREMENTS	FLOWERING/ PHENOLOGY	POTENTIAL FOR OCCURRENCE
Santa Monica dudleya	*Dudleya cymosa* ssp. *ovatifolia*	Federal: FT State: None CNPS: 1B.2 NCCP: None	Chaparral, coastal scrub. Prefers volcanic or sedimentary, rocky substrate. Occurs between 150 and 1,675 m.	March to June	**Unlikely.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during focused surveys. No CNDDB records within 3.0 miles of survey area.
Smooth tarplant	*Centromadia pungens*	Federal: None State: None CNPS: 1B.1 NCCP: None	Chenopod scrub, meadows and seeps, playas, riparian woodland and valley and foothill grassland. Prefers alkaline soils. Occurs between 0 and 640 m.	April to September	**Unlikely.** No suitable habitat identified in the Proposed Project survey area also, no occurrences were identified during focused surveys. No CNDDB records within 3.0 miles of survey area.
South coast saltscale	*Artiplex pacifica*	Federal: None State: None CNPS: 1B.2 NCCP: None	Coastal bluff scrub, coastal dunes, coastal scrub, playas. Occurs between 0 and 140 m.	March to August	**Unlikely.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during focused surveys. No CNDDB records within 3.0 miles of survey area.
Southern tarplant	*Centromadia parryi* ssp. *australis*	Federal: None State: None CNPS: 1B.1 NCCP: None	Marshes, swamps, valley and foothill grassland (vernally mesic), vernal pools. Occurs between 0 and 425 m.	March to August	**Unlikely.** No suitable habitat identified in the Proposed Project survey area, also no occurrences were identified during focused surveys. No CNDDB records within 3.0 miles of survey area.
Sticky dudleya	*Dudleya viscida*	Federal: None State: None CNPS: 1B.2 NCCP: CS	Coastal bluff scrub, chaparral, coastal scrub. Occurs between 10 and 550 m.	April to June Evergreen shrub	**Unlikely.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during focused surveys. No CNDDB records within 3.0 miles of survey area.

COMMON NAME	SCIENTIFIC NAME	LISTING STATUS	HABITAT REQUIREMENTS	FLOWERING/ PHENOLOGY	POTENTIAL FOR OCCURRENCE
Summer holly	*Comarostaphylis diversifolia* ssp. *diversifolia*	Federal: None State: None CNPS: 1B.2 NCCP: None	Chaparral, cismontane woodland. Occurs between 30 and 550 m.	May to June Evergreen shrub	**Unlikely.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during focused surveys. No CNDDB records within 3.0 miles of survey area.
Tecate cypress	*Hesperocyparis forbesii*	Federal: None State: None CNPS: 1B.1 NCCP: CS	Clay, gabbroic or metavolcanic, closed-cone coniferous forest, chaparral. Occurs 80 to 1500 m.	April to June Evergreen shrub	**Unlikely.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during focused surveys. No CNDDB records within 3.0 miles of survey area.
Thread-leaved brodiaea	*Brodiaea filifolia*	Federal: FT State: SE CNPS: 1B.1 NCCP: CS	Chaparral (openings), cismontane woodland, coastal scrub, playas, valley and foothill grassland, vernal pools. Prefers clay substrate. Occurs between 25 to 1,219 m.	March to June Perennial herb	**Unlikely.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during focused surveys. The nearest CNDDB record for this species is within 0.5 mile of the survey area.
White rabbit-tobacco	*Pseudognaphalium leucocephalum*	Federal: None State: None CNPS: 2.2 NCCP: None	Chaparral, cismontane woodland, coastal scrub, riparian woodland. Prefers sandy or gravelly. Occurs between 0 to 2,100 m.	July to December Perennial herb	**Unlikely.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during focused surveys. No CNDDB records within 3.0 miles of survey area.

COMMON NAME	SCIENTIFIC NAME	LISTING STATUS	HABITAT REQUIREMENTS	FLOWERING/ PHENOLOGY	POTENTIAL FOR OCCURRENCE
Invertebrates					
Riverside fairy shrimp	*Streptocephalus woottoni*	Federal: FE State: None NCCP: CS	Coastal scrub, valley and foothill grassland, vernal pool, wetland.		**None.** No suitable habitat identified in the Proposed Project survey area. The nearest CNDDB record for this species is within 1.25 miles of the survey area.
San Diego fairy shrimp	*Branchinecta sandiegonensis*	Federal: FE State: None NCCP: CS	Found in small, shallow vernal pools, and occasionally in ditches and road cuts with suitable conditions.		**None.** No suitable habitat identified in the Proposed Project survey area. The nearest CNDDB record for this species is within 1.25 miles of the survey area.
Amphibians/Fish					
Arroyo chub	*Gila orcuttii*	Federal: None State: SSC NCCP: None	Found in slow-moving or backwater sections of southern California coastal streams with muddy or sandy substrates.		**High.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during field surveys. CNDDB records document the species occurring in San Juan Creek where the Proposed Project survey area crosses the creek, as well as upstream and downstream of the area and in nearby tributaries.

COMMON NAME	SCIENTIFIC NAME	LISTING STATUS	HABITAT REQUIREMENTS	FLOWERING/ PHENOLOGY	POTENTIAL FOR OCCURRENCE
Arroyo toad	*Bufo californicus*	Federal: FE State: SSC NCCP: CS	Occurs in washes or intermittent streams, including valley-foothill and desert washes. Prefers rivers with sandy banks, willows, cottonwoods, and sycamores and loose, gravelly areas of streams in the drier parts of its range. Breeds in open sandy and gravelly streams.		**Moderate.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during focused field surveys. The nearest CNDDB record for this species is within 0.1 mile of the survey area. Specifically, along San Juan Creek, as well as along Cristianitos Canyon and Gabino Creeks.
Southern steelhead southern California DPS	*Oncorhynchus mykiss irideus*	Federal: FE State: SSC NCCP: None	Historically found in major southern California coastal streams.		**Low.** The species is not documented to occur along creeks within the Proposed Project survey area. The nearest CNDDB record for this species is within 1.5 miles of the survey area in San Mateo Creek; the stream will not be crossed by the Proposed Project.
Tidewater goby	*Eucyclogobius newberryi*	Federal: FE State: SSC NCCP: None	Found primarily in brackish waters of coastal lagoons, estuaries, and marshes.		**None.** No suitable habitat identified in the Proposed Project survey area. The nearest CNDDB record for this species is within 1.5 miles of the survey area in Aliso Creek;
Western spadefoot	*Spea hammondii*	Federal: None State: SSC NCCP: CS	Occurs in grasslands, scrub, chaparral, and oak woodlands where soil is suitable for burrowing. Vernal pools are required for breeding and egg-laying. Species is nocturnal and spends most of the year underground.		**Moderate.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during focused surveys. The nearest CNDDB record for this species is within 2.25 miles of the survey area in Horno Creek.

COMMON NAME	SCIENTIFIC NAME	LISTING STATUS	HABITAT REQUIREMENTS	FLOWERING/ PHENOLOGY	POTENTIAL FOR OCCURRENCE
Reptiles					
Coast horned lizard	*Phrynosoma coronatum blainvillei*	Federal: None State: SSC NCCP: CS	Low Occurs in a variety of habitats including grasslands, coastal sage scrub, chaparral, oak woodland, riparian woodland, pinyon-juniper woodland, and coniferous forest. Prefers friable, rocky, or shallow sandy soils.		**Moderate.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during field surveys. The nearest CNDDB record for this species is within 0.2 mile of the survey area. Species may be present in coastal sage scrub habitat along Proposed Project survey area.
Coastal rosy boa	*Lichanura trivirgata*	Federal: None State: None NCCP: CS	Occurs in desert and chaparral habitats from the coast of southern California to the Mojave and Colorado deserts. Prefers moderate to dense vegetation and rocky cover. Has been observed in diverse locations such as hillsides, desert canyons, washes and mountains. Little is known of seasonality, but most commonly found in late spring/early summer.		**Low.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during field surveys. No CNDDB records are present within 3.0 miles of the survey area.
Belding's orange-throated whiptail	*Aspidoscelis hyperythra*	Federal: None State: SSC NCCP: CS	Coastal sage scrub, chaparral, and valley-foothill hardwood habitats. Prefers sandy areas with patches of brush and rocks.		**Moderate.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during field surveys. The nearest CNDDB record for this species is within 0.3 mile of the survey area. species

COMMON NAME	SCIENTIFIC NAME	LISTING STATUS	HABITAT REQUIREMENTS	FLOWERING/ PHENOLOGY	POTENTIAL FOR OCCURRENCE
Northern red-diamond rattlesnake	*Crotalus ruber ruber*	Federal: None State: SSC NCCP: CS	Chaparral, woodland, grassland, and desert areas from coastal San Diego County to the eastern slopes of the mountains. Prefers rocky areas and dense vegetation and requires rodent burrows, cracks in rocks or other surface cover objects.		**Moderate.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during field surveys. The nearest CNDDB record for this species within 1.25 miles of the survey area.
Two-striped garter snake	*Thamnophis hammondii*	Federal: None State: SSC NCCP: CS	Found in permanent or semi-permanent waterways, prefers streams with rocky beds and riparian growth.		**Moderate.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during field surveys. The nearest CNDDB record for this species within 1.25 miles of the survey area. Specifically, species there is potential for this species within the perennially wet creeks and drainages crossing the Proposed Project survey area.
Western pond turtle	*Emys marmorata*	Federal: None State: SSC NCCP: CS	Ponds, lakes, rivers, streams, creeks, marshes, and irrigation ditches, with abundant vegetation, and either rocky or muddy bottoms, in woodland, forest, and grassland. In streams, prefers pools to shallower areas. Logs, rocks, cattail mats, and exposed banks are required for basking. May enter brackish water and even seawater.		**Moderate.** Suitable habitat identified in the Proposed Project survey area, also no occurrences were identified during field surveys. The nearest CNDDB record for this species within 0.3 mile of the survey area. Specifically, there is potential for this species within the perennially wet creeks and drainages crossing the Proposed Project survey area.

COMMON NAME	SCIENTIFIC NAME	LISTING STATUS	HABITAT REQUIREMENTS	FLOWERING/ PHENOLOGY	POTENTIAL FOR OCCURRENCE
Birds					
American peregrine falcon	*Falco peregrinus anatum*	Federal: BCC State: FP NCCP: CS	Widespread throughout California, prefers open habitat, coastlines, lake edges and mountain chains. Nests on cliff sides or utilized abandoned nests made by large birds but does not build its own nest.		**Present.** Suitable nesting and foraging habitat identified in the Proposed Project survey area; occurrences were identified during field surveys. No CNDDB records within 3.0 miles of survey area.
Burrowing owl	*Athene cunicularia*	Federal: BCC State: SSC NCCP: CS	Habitat includes arid and semi-arid environments with mammal burrows and low vegetation, such as grasslands, pasturelands, scrublands, and agricultural fields.		**High.** Suitable nesting and foraging habitat identified in the Proposed Project survey area; no occurrences were identified during field surveys. The nearest CNDDB record for this species is located within the Proposed Project survey area near the Prima Desecha Landfill. species
Coastal (San Diego) cactus wren	*Campylorhynchus brunneicapillus sandiegensis*	Federal: None State: SSC NCCP: CS	Foraging and breeding habitat is coastal sage scrub with patches of tall prickly pear and coastal cholla (*Opuntia littoralis* and *O. oricola*). Nests almost exclusively in prickly pear and coastal cholla.		**Low.** Suitable foraging habitat identified in the Proposed Project survey area; however, Proposed Project survey area lacks cacti and succulents typically associated with this species and required for nesting. No occurrences were identified during field surveys. The nearest CNDDB record for this species is within 0.10 mile of the survey area.

COMMON NAME	SCIENTIFIC NAME	LISTING STATUS	HABITAT REQUIREMENTS	FLOWERING/ PHENOLOGY	POTENTIAL FOR OCCURRENCE
Coastal California gnatcatcher	*Polioptila californica californica*	Federal: FT State: SSC NCCP: CS	Obligate, permanent resident of coastal sage scrub below 2,500 feet in southern California. This species is known to occur in low, coastal sage scrub in arid washes, on mesas and slopes. Suitable coastal sage scrub vegetation exists throughout the Proposed Project's Proposed Project survey area.		**Present.** Suitable nesting and foraging habitat identified in the Proposed Project survey area; numerous occurrences were identified during focused surveys. Observed and documented in both 2008 and 2010 during habitat assessment and focused surveys..
Cooper's hawk	*Accipiter cooperii*	Federal: None State: WL NCCP: CS	Inhabits broken woodlands, woodland edges and streamside groves. Nests in open woodlands or in deciduous trees in riparian areas. The riparian habitat and eucalyptus grove located along the Proposed Project survey area provides suitable nesting habitat.		**Present.** Suitable nesting and foraging habitat identified in the Proposed Project survey area. This species was observed in riparian habitat and eucalyptus trees along the Proposed Project survey area.
Golden eagle	*Aquila chrysaetos*	Federal: BCC State: FP NCCP: CS	Usually in mountainous areas, rare in grasslands, desert and open country. Nests on cliffs or tall trees.		**Low.** Low quality foraging habitat identified in the Proposed Project survey area; no occurrences were identified during field surveys. Marginally suitable nesting habitat present on towers or tall trees. No CNDDB records within 3.0 miles of survey area.
Grasshopper sparrow	*Ammodramus savannarum*	Federal: None State: None NCCP: CS	Grassland habitat - ground-nesting species.		**Low.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during field surveys. No CNDDB records within 3.0 miles of survey area.

COMMON NAME	SCIENTIFIC NAME	LISTING STATUS	HABITAT REQUIREMENTS	FLOWERING/ PHENOLOGY	POTENTIAL FOR OCCURRENCE
Least Bell's vireo	*Vireo bellii pusillus*	Federal: FE State: SE NCCP: CS	Typically found foraging and nesting in low riparian areas in the vicinity of water or in dry river bottoms. Nests often found in willow, baccharis or mesquite. Occurs below 610 meters elevation.		**Present.** Suitable nesting and foraging habitat identified in the Proposed Project survey area. The species was observed and documented during focused surveys at four drainage locations spanned or paralleled by the Proposed Project survey area.
Northern harrier	*Circus cyaneus hudsonius*	Federal: None State: SSC NCCP: CS	Coastal salt and freshwater marsh. Will nest and forage in grasslands, from salt grass in desert sinks to mountain cienegas. Nests on ground in shrubby vegetation, usually at marsh edge.		**Low.** Suitable nesting and foraging habitat identified in the Proposed Project survey area; no occurrences were identified during field surveys. Appropriate foraging habitat is present in the more open grassland and sage scrub habitat within the Proposed Project survey area. No CNDDB records within 3.0 miles of survey area.
Southern California rufous-crowned sparrow	*Aimophila ruficeps canescens*	Federal: None State: WL NCCP: CS	Coastal sage scrub and sparse mixed chaparral, often on rocky hillsides with patches of grass and herbaceous vegetation.		**Moderate.** Suitable nesting and foraging habitat identified in the Proposed Project survey area; no occurrences were identified during field surveys. The nearest CNDDB record for this species is within 2.5 miles of the survey area

COMMON NAME	SCIENTIFIC NAME	LISTING STATUS	HABITAT REQUIREMENTS	FLOWERING/ PHENOLOGY	POTENTIAL FOR OCCURRENCE
Southwestern willow flycatcher	*Empidonax traillii extimus*	Federal: FE State: SE NCCP: CS	Cottonwood-willow and tamarisk riparian forest.		**Present.** Suitable habitat identified in the Proposed Project survey area. Focused surveys conducted in 2008 observed species migratory individuals in the riparian habitat west of the Talega Substation. No observations during the 2010 focused surveys for the species. The nearest CNDDB record for this species is within 0.25 mile of the survey area. species
Tricolored blackbird	*Agelaius tricolor*	Federal: BCC State: SSC NCCP: CS	Occurs in grassland, riparian, and marsh habitats. Requires thick vegetation for nesting purposes and often nests near water sources. They require a relatively small foraging area that includes surrounding agricultural fields and grasslands.		**Low.** Small patches of suitable habitat identified in the Proposed Project survey area; no occurrences were identified during field surveys. The nearest CNDDB record for this species is within 2.4 miles of the survey area.
White-tailed kite	*Elanus leucurus*	Federal: None State: FP NCCP: None	Lowland terrestrial habitats, in particular, riparian woodlands, and oak or sycamore groves near grasslands.		**Present.** Suitable nesting and foraging habitat identified in the Proposed Project survey area; occurrences were identified during field surveys. The nearest CNDDB record for this species is within 0.25 mile of the survey area.

COMMON NAME	SCIENTIFIC NAME	LISTING STATUS	HABITAT REQUIREMENTS	FLOWERING/ PHENOLOGY	POTENTIAL FOR OCCURRENCE
Mammals					
Dulzura pocket mouse	*Chaetodipus californicus femoralis*	Federal: None State: SSC NCCP: CS	Coastal sage scrub, chaparral, and grassland and is attracted to grass/chaparral edges.		**Low.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during field surveys. The nearest CNDDB record for this species is within 2.5 miles of the survey area.
Mexican long-tongued bat	*Choeronycteris mexicana*	Federal: None State: SSC NCCP: None	Desert, montane, riparian, to pinyon-juniper habitats. Most frequently found roosting in desert canyons, deep caves, mines, or rock crevices. In urban environments, use abandoned buildings for day roosts.		**Low.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during field surveys. The nearest CNDDB record for this species is within 2.0 miles of the survey area.
Mountain lion	*Puma concolor browni*	Federal: None State: SSC NCCP: CS	Many different habitats within a large range. It typically inhabits remote mountainous areas near reliable water sources.		**High.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during field surveys. Marginal habitat exists in the less disturbed areas of the Proposed Project Proposed Project survey area and in the vicinity of Camp Pendleton. No CNDDB records within 3.0 miles of survey area.

COMMON NAME	SCIENTIFIC NAME	LISTING STATUS	HABITAT REQUIREMENTS	FLOWERING/ PHENOLOGY	POTENTIAL FOR OCCURRENCE
Pallid bat	*Antrozous pallidus*	Federal: None State: SSC NCCP: None	Occurs in low elevations throughout California. Deserts, grasslands, shrublands, woodlands, and forests. Most commonly found in open, dry habitats with rocky areas for roosting.		**Low.** Low quality habitat identified in the Proposed Project survey area; no occurrences were identified during field surveys. The nearest CNDDB record for this species is within 1.75 miles of the survey area.
San Diego black-tailed jackrabbit	*Lepus californicus bennettii*	Federal: None State: None NCCP: CS	Intermediate canopy stages of shrub habitats and in open shrub/herbaceous and tree/herbaceous edges in Southern California west of the .		**Moderate.** Suitable habitat identified in the Proposed Project survey area also, no occurrences were identified during field surveys. Suitable habitat within areas of disturbed and intact coastal sage scrub vegetation found within Proposed Project survey area. No CNDDB records within 3.0 miles of survey area.
San Diego desert woodrat	*Neotoma lepida intermedia*	Federal: None State: SSC NCCP: CS	Occurs in Joshua tree woodlands, pinyon-juniper woodlands, mixed chaparral, sagebrush, and desert habitats. Particularly abundant in areas of rocky outcrops, cliffs, and slopes.		**Low.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during field surveys. No CNDDB records within 3.0 miles of survey area.
Southern mule deer	*Odocoileus hemionus*	Federal: None State: None NCCP: CS	Coniferous forest, desert shrubs, chaparral, and grassland with shrubs.		**High.** Suitable habitat identified in the Proposed Project survey area in the vicinity of Camp Pendleton; no occurrences were identified during field surveys. No CNDDB records within 3.0 miles of survey area.

COMMON NAME	SCIENTIFIC NAME	LISTING STATUS	HABITAT REQUIREMENTS	FLOWERING/ PHENOLOGY	POTENTIAL FOR OCCURRENCE
Stephen's kangaroo rat	*Dipodomys stephensi*	Federal: FE State: None NCCP: CS	Annual and perennial grasslands, coastal scrub and sagebrush with sparse canopy cover. Prefers buckwheat, chamise, brome grass, and filaree. This species will burrow into firm soil.		**Moderate.** Suitable habitat identified in the Proposed Project survey area, also no occurrences were identified during field surveys. The nearest CNDDB record for this species is within 2.5 miles of the survey area within highly disturbed non-native grassland habitat on Camp Pendleton. .
Western mastiff bat	*Eumops perotis californicus*	Federal: None State: SSC NCCP: CS	Open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, grasslands, and chaparral. Roosts in crevices, cliff faces, high buildings, trees, and tunnels.		**Low.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during field surveys. The nearest CNDDB record for this species is within 3.0 miles of the Site.
Yuma myotis	*Myotis yumanensis*	Federal: None State: None NCCP: CS	Woodland and grassland habitats; require caves or other undisturbed areas to roost.		**Low.** Foraging habitat may be present but the Proposed Project survey area lacks suitable roosting areas; no occurrences were identified during field surveys. The nearest CNDDB record for this species is within 1.5 miles of the survey area.

Legend

Federal (U.S. Fish and Wildlife Service)

FE Federally listed, endangered: species in danger of extinction throughout a significant portion of its range

FT Federally listed, threatened: species likely to become endangered within the foreseeable future

State (California Department of Fish and Game)

SE State listed, endangered

ST State listed, threatened

FP Fully Protected

SSC California Species of Special Concern: administrative designation for vertebrate species that appear vulnerable to extinction because of declining populations, limited ranges, and/or continuing threats

WL Watch List

CNPS (California Native Plant Society)

1B Rare, threatened, or endangered in California and elsewhere

2 Rare, threatened, or endangered in California, but more common elsewhere

3 Need more information - a review list

4 Limited distribution - a watch list

.1 Seriously threatened in California

.2 Fairly threatened in California

.3 Not very threatened in California

Appendix B:
Plants and Wildlife Observed On-site

PLANTS

Aceraceae - Maple Family
**Acer* sp. - maple

Adoxaceae - Elderberry Family
Sambucus mexicana - Mexican elderberry

Aizoaceae - Ice Plant Family
**Aptenia cordifolia* - baby sun rose
**Carpobrotus edulis* - hottentot-fig
**Lampranthus spectabilis* - trailing iceplant
**Mesembryanthemum crystallinum* - crystalline iceplant

Alliaceae - Onion Family
Dichelostemma capitatum - blue dicks/wild hyacinth

Amaranthaceae - Amaranth family
**Amaranthus albus* - tumbling pigweed

Anacardiaceae - Sumac Family
Malosma laurina - laurel sumac
Rhus integrifolia - lemonade berry
Rhus ovata - sugar bush
**Schinus molle* - Peruvian pepper tree/California pepper tree
**Schinus terebinthifolius* - Brazilian pepper tree
Toxicodendron diversilobum - poison oak

Apiaceae - Carrot Family
Apiastrum angustifolium - mock-parsley
**Apium graveolens* - celery
Bowlesia incana - bowlesia
Conium maculatum - poison hemlock
Daucus pusillus - wild carrot/ rattlesnake weed
**Foeniculum vulgare* - fennel
Sanicula bipinnata - poison sanicle
**Sanicula crassicaulis* - Pacific sanicle

Apocynaceae - Dogbane Family
** Nerium oleander* - oleander

Asclepiadaceae - Dogbane Family
Asclepias fascicularis - narrow-leaf milkweed

Araliaceae - Ginseng Family
***Hedera helix* - English ivy**

Arecaceae - Palm Tree Family
**Washingtonia robusta* - Mexican fan palm*
**Phoenix dactylifera* - date palm

Asteraceae - Sunflower Family
Achyrachaena mollis - blow-wives
Achillea millefoliu - common yarrow
Artemisia californica - California sagebrush
Artemisia douglasiana - mugwort
Ambrosia psilostachya - western ragweed
Baccharis pilularis - coyote bush
Baccharis salicifolia - mulefat
Baccharis sarothroides - broom baccharis
**Carduus pycnocephalus* - Italian thistle
**Centaurea melitensis* - tocalote/malta star thistle
**Cirsium vulgare* - bull thistle
**Chamomilla suaveolens* - pineapple weed
**Chrysanthemum coronarium* - garland chrysanthemum
Conyza sp. - horseweed
Corethrogyne filaginifolia - common sandaster
**Cynara cardunculus* - artichoke thistle
**Dimorphotheca sinuate* - African daisy
Encelia farinose - brittlebush
Encelia californica - California encelia
Eriophyllum confertiflorum - golden yarrow
Eriophyllum confertiflorum var. *confertiflorum* - Long-stem golden yarrow
**Filago gallica* - narrow-leaved filago
**Gazania linearis* - treasure flower
Gnaphalium bicolor - bicolored cudweed
Gnaphalium californicum - California everlasting
Grindelia camporum var. *bracteosa* - rayless gumplant
Gutierrezia californica – matchweed
Gutierrezia sarothrae – common snakeweed
Hazardia squarrosa – saw toothed goldenbush
**Hedypnois cretica* – Crete weed
Helianthus annuus - common sunflower
Heterotheca grandiflora - telegraph weed
**Hypochaeris glabra* - smooth cat's ear
Isocoma menziesii - white flowered goldenbush
Isocoma menziesii var. *menziesii* - Menzies' goldenbush
**Lactuca serriola* - prickly-lettuce

Malacothrix saxatilis - cliff malacothrix
Picris echioides - bristly ox-tongue
Pseudognaphalium bicolor – twocolor cudweed
Pseudognaphalium canescens - Wright's cudweed
Rafinesquia californica - California chicory
**Senecio vulgaris* - old man of spring
**Silybum marianum* - milk thistle
Stephanomeria exigua ssp. *exigua* - small wreath plant
**Sonchus asper* ssp. *asper* - prickly sow-thistle
**Sonchus oleraceus* - sow thistle
**Taraxacum officinale* - common dandelion
**Uropappus lindleyi* - silver puffs
Xanthium spinosum - spiny cocklebur
Xanthium strumarium - cocklebur

Berberidaceae - Barberry Family
**Nandima domestica* - sacred bamboo

Betulaceae - Birch Family
Alnus rhombifolia - white alder

Bignoniaceae - Bignonia Family
**Jacaranda mimosifolia* - jacaranda

Boraginaceae - Borage Family
**Echium candicans* - pride of Madeira

Brassicaceae - Mustard Family
**Brassica nigra* - black mustard
**Capsella bursa-pastoris* - Shepherd's purse
**Coronopus didymus* - lesser wart-cress
**Hirschfeldia incana* - shortpod mustard
**Raphanus sativus* - wild radish

Boraginaceae - Borage Family
Amsinckia menziesii var. *intermedia* - common fiddleneck
Amsinckia menziesii var. *menziesii* - rigid fiddleneck
Cryptantha intermedia - popcorn flower

Cactaceae - Cactus Family
Opuntia littoralis - coast prickly-pear
**Opuntia ficus-indica* - Indian fig

Capparaceae - Caper Family
Isomeris arborea - bladderpod

Caryophyllaceae - Pink Family
**Cerastium glomeratum* - mouse-ear chickweed
**Silene gallica* - common catchfly
**Spergularia rubra* - ruby sand-spurry

Chenopodiaceae - Goosefoot Family
**Atriplex lentiformis* - quail brush
**Atriplex semibaccata* - Australian saltbush
**Chenopodium album* - lamb's quarters
**Chenopodium* sp. - goosefoot
**Salsola tragus* - Russian thistle

Convolvulaceae - Morning-glory family
**Convolvulus arvensis* - bindweed
***** *Convolvulus* sp. - bindweed
***** *Ipomoea purpurea* - common morning-glory

Crassulaceae – Orpine Family
Dudleya pulverulenta - chalk dudleya

Cucurbitaceae - Gourd Family
Cucurbita foetissima - coyote gourd/melon
Cucurbita foetidissima - calabazilla
Marah fabaceus - manroot/wild cucumber

Cupressaceae - Cypress Family
**Cupressus sempervirens* - Italian cypress

Ericaceae - Heath Family
Xylococcus bicolor - mission manzanita

Euphorbiaceae - Spurge Family
**Chamaesyce maculate* - spotted spurge
** Chamaesyce prostrata* - prostrate spurge
Croton setigerus - doveweed
**Ricinus communis* - castor bean

Fabaceae - Legume Family
Astragalus trichopodus - southern California locoweed
**Medicago lupulina* - black medick
**Medicago polymorpha* - bur-clover
**Melilotus alba* - white sweetclover
**Melilotus indica* - sourclover

**Melilotus officinalis* - yellow sweetclover
**Lathyrus* sp. - sweet pea
Lupinus biocolor - miniature lupine
Lupinus sp. - lupine
**Lupinus succulentus* - arroyo lupine
**Lotus hamatus* - grab lotus
Lotus scoparius - deerweed
**Spartium* sp. - broom
**Trifolium repens* - white clover
Trifolium willdenovii - tomcat clover

Fagaceae - Beech Family
Quercus agrifolia - coast live oak/ interior live oak
Quercus berberidifolia - scrub oak

Geraniaceae - Geranium Family
**Erodium cicutarium* - red-stem filaree/stork's bill
*Erodium botrys - long-beak filaree
**Geranium carolinianum* - Carolina geranium
**Geranium dissectum* - cut-leaf geranium

Grossulariaceae - Currant Family
Ribes speciosum - fushsia-flower gooseberry

Hydrophyllaceae - Waterleaf Family
Nemophila menziesii - baby blue-eyes
Phacelia cicutarium - caterpillar phacelia
Phacelia minor - California bluebells
Phacelia ramosissima - branching phacelia
Pholistoma auritum var. *auritum* - fiesta flower

Iridaceae - Iris Family
Sisyrinchium bellum - blue-eyed grass

Juncaceae - Rush Family
Juncus bufonius var. *bufonius* - common toad rush

Lamiaceae - Mint Family
**Lavandula stoechas* - French lavender
**Marrubium vulgare* - common horehound
Salvia apiana - white sage
Salvia columbariae - chia
Salvia mellifera - black sage

Stachys ajugoides var. *rigida* - hedge-nettle

Liliaceae - Lily Family
Bloomeria crocea var. *crocea*- Common goldenstar
Yucca schidigera - Mojave yucca
Yucca whipplei - our Lord's candle/chaparral yucca

Malvaceae - Mallow Family
Malacothamnus densiflorus - many-flowered mallow
Malacothamnus fasciculatus - Mendocino bushmallow
**Malva parviflora* - cheeseweed
Malva sp. - mallow
**Malva sylvestris* - high mallow

Moraceae - Mulberry Family
**Ficus carica* - edible fig
**Ficus macrophylla* - bay fig
**Ficus pumila* - creeping fig

Myoporaceae - Emu Bush Family
**Myoporum laetum* - ngaio tree/ lollypop tree

Myrtaceae - Myrtle family
**Callistemon* sp. - bottlebrush tree
**Eucalyptus globulus* - blue gum
**Eucalyptus polyanthemos* - silver dollar gum
**Medlaeuca* sp. - paperbark

Nyctaginaceae - Four-O'Clock Family
Mirabilis laevis var. *crassifolia* - California four o'clock
Mirabilis lavis – desert wishbone bush
Bougainvillea spectabilis - bougainvillea

Oleaceae - Olive Family
**Ligustrum* sp. - privet
**Olea europaea* - olive tree

Onagraceae - Evening Primrose Family
Camissonia bistorta - suncups
Camissonia californica - California evening primrose
Epilobium ciliatum ssp. *ciliatum* - willow herb
Oenothera elata ssp. *hirsutissima* – great marsh evening primrose

Orobanchaceae - Broomrape Family
Castilleja sp. - Indian paintbrush

Papaveraceae - Poppy Family
Eschscholzia californica - California poppy

Pinaceae - Pine Family
**Pinus* sp. - pine

Plantaginaceae - Plantain Family
Plantago erecta - California plantain
Plantago ovata - woolly plantain

Platanaceae - Plane-tree Family
Platanus racemosa - western sycamore

Plumbaginaceae - Leadwort Family
**Limonium perezii* - Perez's marsh-rosemary/Canarian sea lavender
**Limonium* sp. - statice

Poaceae - Grass Family
**Arundo donax* - giant reed
**Avena barbata* - slender wild oat
**Avena fatua* - wild oat
**Bromus diandrus* - ripgut
**Bromus hordeaceus* - soft chess
**Bromus madritensis* ssp. *rubens* - red brome/foxtail chess
**Bromus carinatus* var. *carinatus* - California brome
**Cortaderia* sp. - pampas grass
**Cortaderia selloana* - pampas grass
**Cynodon dactylon* - Bermuda grass
Distichlis spicata - saltgrass
**Hordeum murinum* - glaucous foxtail barely
**Hordeum murinum* ssp. *leporinum* - farmer's foxtail
Leymus condensatus - giant wildrye
**Lamarckia aurea* - goldentop
**Lolium multiflorum* - Italian rye grass
**Lolium perenne* - perennial ryegrass
**Lolium* sp. - ryegrass
Nassella pulchra - purple needle grass
**Pennisetum setaceum* - fountain grass

**Phalaris aquatica* - harding grass
Phalaris sp. - Canary grass
Poa secunda ssp. *secunda* - one-sided bluegrass
**Schismus barbatus* - common Mediterranean grass
Vulpia microstachys var. *pauciflora* – Pacific fescue
**Vulpia* sp. - fescue

Polemoniaceae - Phlox Family
Navarreita hamata - hooked navarretia

Polygonaceae - Buckwheat Family
Eriogonum fasciculatum var. *fasciculatum* - California buckwheat
**Polygonum arenastrum* - common knotweed
**Polypogon monspeliensis* - annual beard grass/ rabbits foot grass
**Rumex crispus* - curly dock

Portulacaceae - Purslane Family
Calandrinia ciliata - red maids
Calyptridium monandrum - common calyptridium
Claytonia parviflora ssp. *parviflora* - Utah miner's lettuce
Claytonia perfoliata ssp. *perfoliata* - miner's lettuce

Primulaceae - Primrose Family
**Anagallis arvensis* - scarlet pimpernel

Pteridaeae - Brake Family
Pentagramma triangularis ssp. *triangularis* - gold back fern

Ranunculaceae - Buttercup or Crowfoot family
Ranunculus californica - California buttercup

Rhamnaceae - Buckthorn Family
Rhamnus crocea - spiny redberry
Ceanothus spp. - ceanothus

Rosaceae - Family
Adenostoma fasciculatum - chamise
Adenostoma sparsifolium - redshank
**Eriobotrya japonica* - loquat
Heteromeles arbutifolia - toyon
Potentilla glandulosa ssp. *glandulosa* - sticky cinquefoil
Rosa californica - California wild rose

Rosa sp. - ornamental rose

Rubiaceae - Coffee or Madder Family
Galium angustifolium var. *angustifolium* - narrowleaf bedstraw
Galium aparine - common bedstraw

Salicaceae - Willow Family
Populus fremontii ssp. *fremontii* - Fremont's cottonwood
Salix exigua - Narrow-leaved willow
Salix gooddingii - Goodding's black willow
Salix lasiolepis - arroyo willow
Salix laevigata - red willow

Sapinoaceae - Soapberry Family
*Cupaniopsis anacardioides - carrotwood

Saururaceae - Lizard Tail Family
Anemopsis californica - yerba mansa

Scrophulariaceae - Figwort Family
Antirrhinum coulterianum - white snapdragon
**Kickxia elatine* - fluellin
Mimulus aurantiacus - bush monkey flower

Solanaceae-Night Shade Family
Datura wrightii - sacred datura
**Datura stramonium* - annual jimson weed
Nicotiana quadrivalvis - coyote tobacco
**Nicotiana glauca* - tree tobacco
Solanum douglasii - Douglas's nightshade

Tamaricaceae - Tamarisk
**Tamarix ramosissima* - tamarisk

Tropaeolaceae - Nasturtium Family
**Tropaeolum majus* - garden nasturtium

Typhaceae - Cattail Family
**Typha latifolia* - common cattail
**Typha* sp. - cattail

Urticaceae - Nettle Family
Urtica dioica ssp. *holosericea* - hoary nettle
**Urtica urens* - dwarf nettle

Verbenaceae - Verbena Family
Verbena lasiostachys - western verbena
Verbena sp. - verbena

Vitaceae - Grape Family
Vitis girdiana - desert wild grape

WILDLIFE

Invertebrates
Anthocharis sara - sara orangetip
Erynnis funeralis - funereal duskywing
Nymphalis antiopa - mourning cloak
Pieris rapae - cabbage white
Vanessa annabella - west coast lady
Vanessa cardui - painted lady

Amphibians
Hyla regilla - Pacific treefrog
Hyla cadaverina - California tree frog
Bufo boreas - western toad
Rana catesbeiana - bullfrogs

Reptiles
Crotalus viridis helleri - southern pacific rattlesnake
Lampropeltis getula - common kingsnake
Pituophis catenifer - gopher snake
Sceloporus occidentalis - western fence lizard
Uta stansburiana- side-blotched lizard

Birds
Accipiter cooperii - Cooper's hawk (WL)
Agelaius phoeniceus - red-winged blackbird
Aphelocoma californica - western scrub-jay
Ardea alba - great egret
Buteo jamaicensis - red-tailed hawk
Buteo lineatus - red-shouldered hawk

Callipepla californica - California quail
Calypte anna - Anna's hummingbird
Carduelis psaltria - lesser goldfinch
Carduelis tristis - American goldfinch
Carpodacus mexicanus - house finch
Cathartes aura - turkey vulture
Chamaea fasciata - wrentit
Charadrius vociferous - killdeer
Columba livia - rock dove
Corvus brachyrhynchos - American crow
Corvus corax - common raven
Dendroica cornata - yellow-rumped warbler
Elanus leucurus - white-tailed kite (FP)
Empidonax traillii extimus - southwestern willow flycatcher (FE, SE)
Falco peregrines - peregrine falcon (FP)
Falco sparverius - American kestrel
Geococcyx californianus - greater roadrunner
Geothlypis trichas - common yellowthroat
Icterus bullockii - Bullock's oriole
Icterus cucullatus - hooded oriole
Melanerpes formicivorus - acorn woodpecker
Melospiza melodia - song sparrow
Mimus polyglottos - northern mockingbird
Molothrus ater - brown-headed cowbirds
Passerina caerulea - blue grosbeak
Petrochelidon pyrrhonota - cliff swallow
Phainopepla nitens - phainopepla
Picoides nuttallii - Nuttall's woodpecker
Pipilo crissalis - California towhee
Pipilo maculates - spotted towhee
Polioptila californica californica - California gnatcatcher (FT, SSC)
Psaltriparus minimus - bushtit
Sayornis nigricans - Black phoebe
Sayornis saya - Say's phoebe
Selasphorus sasin - Allen's hummingbbird
Sialia mexicana - western bluebird
Stelgidopteryx serripennis - northern rough-winged swallow
Sturnella neglecta - western meadowlark
Sturnus vulgaris - European starling
Thryomanes bewickii - Bewick's wren

Toxostoma redivivum - California thrasher
Troglodytes aedon - house wren
Tyrannus verticalis - western kingbird
Vireo bellii pusillus - least Bell's vireo (FE, SE)
Zenaida macroura - mourning dove
Zonotrichia leucophrys - white-crowned sparrow

Mammals
Canis latrans - coyote
Lynx rufus - bobcat
Spermophilus beecheyi nudipes - California ground squirrel
Sylvilagus audubonii - Audubon's cottontail
Thomomys bottae - botta pocket gopher
Odocoileus hemionus - mule deer

Legend
* = Non-native species
FP - California Department of Fish and Game, Fully Protected Species
FT - California Department of Fish and Game, Federally Threatened
FE - California Department of Fish and Game, Federally Endangered
SE - State Endangered
SCC - California Department of Fish and Game, Species of Special Concern
WL - California Department of Fish and Game, Watch List

Appendix C: Jurisdictional Waters and Wetland Delineation

Jurisdictional Waters and Wetlands Delineation

South Orange County Reliability Enhancement Project

Orange County, California

May 2012

Prepared For:
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Acronyms List

ACOE	United States Army Corps of Engineers
CDFG	California Department of Fish and Game
CEQA	California Environmental Quality Act
CFG	California Fish and Game Code
CFR	Code of Federal Register
CWA	Clean Water Act
FAC	Facultative
FACU	Facultative upland
FACW	Facultative wetland
GIS	Geographic Information Systems
GPS	Global Positioning System
kV	kilovolt
Manual	1987 Wetland Delineation Manual
msl	Mean Sea Level
NRCS	National Resource Conservation Service
NWI	National Wetlands Inventory
OBL	Obligate wetland vegetation
OHWM	Ordinary High Water Mark
Proposed Project	South Orange County Reliability Enhancement Project
Rapanos	*Rapanos v. United States and Carabell v. United States*
RPW	Relatively Permanent Waters
RWQCB	Regional Water Quality Control Board
SDG&E	San Diego Gas & Electric

SWANCC	*Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers, et. al.*
SWRCB	State Water Resources Control Board
TNW	Traditional Navigable Waters
TRC	TRC Solutions, Inc.
UPL	Upland vegetation
U.S.	United States
U.S. EPA	United States Environmental Protection Agency
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
WDR	Waste Discharge Requirements

1.0 INTRODUCTION

On behalf of San Diego Gas & Electric (SDG&E), a delineation of jurisdictional waters and wetlands was conducted by TRC Solutions, Inc. (TRC) for the South Orange County Reliability Enhancement Project (Proposed Project), located in Orange County, California (Figure 1, *Vicinity and Overview Map*). The delineation included a review of United States Geological Survey (USGS) topographic maps, aerial imagery (Google, 2012), and the National Wetlands Inventory (NWI), in addition to field surveys.

This report summarizes our methodology and findings of jurisdictional waters and wetlands as regulated by the United States Army Corps of Engineers (ACOE), Regional Water Quality Board (RWQCB), and California Department of Fish and Game (CDFG) for the above-referenced Proposed Project. These findings are subject to confirmation by the regulatory agencies. [1]

1.1 PROJECT OVERVIEW

SDG&E is a regulated public utility that provides electric service to three and a half million customers within a 4,100 square mile service area, covering parts of southern Orange County and San Diego County. The Proposed Project is intended to meet the area load growth and service reliability for approximately 118,000 customers (462 megawatts) within southern Orange County.

The Proposed Project will involve upgrading the existing 138/12 kilovolt (kV) Capistrano Substation with a new 230/138/12kV gas insulated substation, conducting minor alterations to the existing Talega Substation, and bringing two new 230kV transmission lines into the southern Orange County area by rebuilding an existing 138kV line between Talega and Capistrano Substations. The Proposed Project is approximately 8 miles in length. The Proposed Project is primarily located in portions of the cities of San Juan Capistrano and San Clemente, as well as unincorporated Orange and San Diego Counties, and the United States Marine Corps Base Camp Pendleton. This Proposed Project has an anticipated in-service date of 2017.

1.2 REGULATORY BACKGROUND

Jurisdictional limits between the agencies (ACOE, RWQCB, and CDFG) vary due to the different governing documents that define the limits of jurisdiction. The following is a summary of the governing documents as they pertain to the limits of jurisdiction.

1.2.1 United States Army Corps of Engineers

The ACOE administers and enforces Section 404 of the Clean Water Act (CWA). Pursuant to Section 404 of the CWA, the ACOE regulates the discharge of dredged and/or fill material into

[1]Only the regulatory agencies can make a final determination of jurisdictional boundaries. If a final jurisdictional determination is required, TRC can assist in getting written confirmation of jurisdictional boundaries from the agencies. Typically, only the ACOE will provide written confirmation.

waters of the United States (U.S.). The term "waters of the U.S." is defined in ACOE regulations at 33 Code of Federal Register (CFR) Part 328.3(a) as:

> *(1) All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;*
>
> *(2) All interstate waters including interstate wetlands;*
>
> *(3) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect foreign commerce including any such waters:*
>
> > *(i) Which are or could be used by interstate or foreign travelers for recreational or other purposes; or*
> >
> > *(ii) From which fish or shell fish are or could be taken and sold in interstate or foreign commerce; or*
> >
> > *(iii) Which are used or could be used for industrial purpose by industries in interstate commerce...*
>
> *(4) All impoundments of waters otherwise defined as waters of the United States under the definition;*
>
> *(5) Tributaries of waters identified in paragraphs (a) (1)-(4) of this section;*
>
> *(6) The territorial seas;*
>
> *(7) Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a) (1)-(6) of this section.*
>
> *(8) Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA (other than cooling ponds as defined in 40 CFR 123.11(m) which also meet the criteria of this definition) are not waters of the United States.*
>
> (9) *Waters of the United States do not include prior converted cropland.*[2] *Notwithstanding, the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with the Environmental Protection Agency (U.S. EPA).*

[2] The term "prior converted cropland" is defined in the ACOE Regulatory Guidance Letter 90-7 (dated September 26, 1990) as "wetlands which were both manipulated (drained or otherwise physically altered to remove excess water from the land) and cropped before 23 December 1985, to the extent that they no longer exhibit important wetland values. Specifically, prior converted cropland is inundated for no more than 14 consecutive days during the growing season…." [Emphasis added.]

In the absence of wetlands, the limits of ACOE jurisdiction in non-tidal waters, such as intermittent streams, extend to the Ordinary High Water Mark (OHWM) which is defined at 33 CFR 328.3(e) as:

> *...that line on the shore established by the fluctuation of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.*

Non-wetland waters are classified as either ephemeral, intermittent, or perennial waters as defined in the January 15, 2002 Federal Register notice:

Ephemeral Stream – An ephemeral stream has flowing water only during, and for a short duration after, precipitation events in a typical year. Ephemeral streambeds are located above the water table year-round. Groundwater is not a source of water for the stream. Runoff from rainfall is the primary source of water for stream flow.

Intermittent Stream – An intermittent stream has flowing water during certain times of the year, when groundwater provides water for stream flow. During dry periods, intermittent streams may not have flowing water. Runoff from rainfall is a supplemental source of water for stream flow.

Perennial Stream – A perennial stream has flowing water year-round during a typical year. The water table is located above the streambed for most of the year. Groundwater is the primary source of water for stream flow. Runoff from rainfall is a supplemental source of water for stream flow.

1.2.1.1 Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers, et. al.

The definition of "waters of the U.S." was altered by the January 9, 2001 U.S. Supreme Court Decision, *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers, et. al.* (SWANCC). In the SWANCC decision, the Supreme Court held that the ACOE exceeded its authority by asserting CWA jurisdiction over an abandoned sand and gravel pit, solely because it provided habitat for migratory birds. The SWANCC rule is limited to waters that are non-navigable, isolated and intrastate and clarified that the ACOE staff should no longer rely on the use of waters by migratory birds as the sole basis for asserting jurisdiction.

Pursuant to Article I, Section 8 of the U.S. Constitution, federal regulatory authority extends only to activities that affect interstate commerce. In the early 1980s the ACOE interpreted the interstate commerce requirement in a manner that restricted ACOE jurisdiction on isolated (intrastate) waters. On September 12, 1985, the U.S. EPA asserted that ACOE jurisdiction extended to isolated waters that are used or could be used by migratory birds or endangered species, and the definition of "waters of the U.S." in ACOE regulations was modified as quoted above from 33 CFR 328.3(a).

In the SWANCC case the Court was asked whether use of an isolated, intrastate pond by migratory birds is a sufficient interstate commerce connection to bring the pond into federal

jurisdiction of Section 404 of the CWA. The written opinion notes that the Court's previous support of the ACOE's expansion of jurisdiction beyond navigable waters (*United States v. Riverside Bayview Homes, Inc*.) was for a wetland that abutted a navigable water and that the Court did not express any opinion on the question of the authority of the ACOE to regulate wetlands that are not adjacent to bodies of open water. The current opinion goes on to state:

> *In order to rule for the respondents here, we would have to hold that the jurisdiction of the ACOE extends to ponds that are not adjacent to open water. We conclude that the text of the statute will not allow this.*

Therefore, the Court's opinion may go beyond the migratory bird issue and says that no isolated, intrastate water is subject to the provisions of Section 404(a) of the CWA (regardless of any interstate commerce connection). However, the ACOE and U.S. EPA have issued a joint memorandum which states that they are interpreting the ruling to address only the migratory bird issue and leaving the other interstate commerce clause nexuses intact.

1.2.1.2 Rapanos v. United States and Carabell v. United States

On June 5, 2007, the U.S. EPA and ACOE issued joint guidance (U.S. EPA, 2008) that addresses the scope of jurisdiction pursuant to the CWA in light of the Supreme Court's decision in the consolidated cases *Rapanos v. United States* and *Carabell v. United States* (Rapanos). For project sites that include waters other than Traditional Navigable Waters (TNW) and/or their adjacent wetlands, or Relatively Permanent Waters (RPW) tributary to TNW and/or their adjacent wetlands, the ACOE must apply the significant nexus standard that is outlined in the *Approved Jurisdictional Determination Form* (ACOE, 2006). For "isolated" waters or wetlands, the joint guidance also requires an evaluation by the ACOE and U.S. EPA to determine whether other interstate commerce clause nexuses, not addressed in the SWANCC decision, are associated with isolated features on project sites for which a jurisdictional determination is being sought from the ACOE.

The agencies will assert jurisdiction over the following waters (U.S. EPA, 2008):

- TNWs;
- Wetlands adjacent to TNWs;
- Non-navigable tributaries of TNWs that are relatively permanent where the tributaries typically flow year-round or have continuous flow at least seasonally (e.g., typically three months); and
- Wetlands that directly abut such tributaries.

The agencies will decide jurisdiction over the following waters based on a fact-specific analysis to determine whether they have a significant nexus with a TNW:

- Non-navigable tributaries that are not RPW;
- Wetlands adjacent to non-navigable tributaries that are not RPW; and
- Wetlands adjacent to but that does not directly abut a RPW non-navigable tributary.

The agencies generally will not assert jurisdiction over the following features:

- Swales or erosional features (e.g., gullies, small washes characterized by low volume, infrequent or short duration flow); and

- Ditches (including roadside ditches) excavated wholly in and draining only uplands and that do not carry a relatively permanent flow of water.

The agencies will apply the significant nexus standard as follows:

- A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by all wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical and biological integrity of downstream TNWs; and
- Significant nexus includes consideration of hydrologic and ecologic factors.

1.2.1.3 Wetland Definition Pursuant to Section 404 of the Clean Water Act

The term “wetlands” (a subset of “waters of the U.S.”) is defined at 33 CFR 328.3(b) as "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support a prevalence of vegetation typically adapted for life in saturated soil conditions." In 1987 the ACOE published a manual to guide its field personnel in determining jurisdictional wetland boundaries. The methodology set forth in the 1987 Wetland Delineation Manual (Manual) (ACOE, 1987) and the Arid West Supplement (ACOE, 2006 and 2008) generally require that, in order to be considered a wetland, the vegetation, soils, and hydrology of an area exhibit at least minimal hydric characteristics, often referred to as a ‘three-parameter wetland.’ While the Manual and Arid West Supplement provide great detail in methodology and allow for varying special conditions, a wetland should normally meet each of the following three criteria:

- More than 50 percent of the dominant plant species at the site must be typical of wetlands (i.e., rated as facultative or wetter in the National List of Plant Species that Occur in Wetlands (Reed, 1988);
- Soils must exhibit physical and/or chemical characteristics indicative of permanent or periodic saturation (e.g., a gleyed color, or mottles with a matrix of low chroma indicating a relatively consistent fluctuation between aerobic and anaerobic conditions); and
- Indicators of wetland hydrology must be present, such as soil saturation. Whereas the Manual requires that hydrologic characteristics indicate that the ground is saturated to within 12 inches of the surface for at least five percent of the growing season during a normal rainfall year, the Arid West Supplement does not include a quantitative criteria with the exception for areas with “problematic hydrophytic vegetation,” which require a minimum of 14 days of ponding to be considered a wetland.

1.2.2 Regional Water Quality Control Board

Pursuant to Section 401 of the CWA, the RWQCB regulates "waters of the U.S." with similar jurisdiction as the ACOE. The RWQCB focuses on the effects of a project on downstream water quality conditions and beneficial uses. In contrast to the ACOE, the RWQCB may assess jurisdiction over isolated features pursuant to the Porter-Cologne Water Quality Act. To obtain a Section 401 Water Quality Certification, the project must be in compliance with the California Environmental Quality Act (CEQA).

Subsequent to the SWANCC decision, the Chief Counsel for the State Water Resources Control Board (SWRCB) issued a memorandum that addressed the effects of the SWANCC decision on the Section 401 Water Quality Certification Program (Wilson, 2001). The memorandum states:

> *California's right and duty to evaluate certification requests under section 401 is pendant to (or dependent upon) a valid application for a section 404 permit from the ACOE, or another application for a federal license or permit. Thus if the ACOE determines that the water body in question is not subject to regulation under the ACOE's 404 program, for instance, no application for 401 certification will be required…*
>
> *The SWANCC decision does not affect the Porter Cologne authorities to regulate discharges to isolated, non-navigable waters of the states….*
>
> *Water Code section 13260 requires "any person discharging waste, or proposing to discharge waste, within any region that could affect the waters of the state to file a report of discharge (an application for waste discharge requirements)." (Water Code § 13260(a)(1) (emphasis added).) The term "waters of the state" is defined as "any surface water or groundwater, including saline waters, within the boundaries of the state." (Water Code § 13050(e).) The U.S. Supreme Court's ruling in SWANCC has no bearing on the Porter-Cologne definition. While all waters of the United States that are within the borders of California are also waters of the state, the converse is not true—waters of the United States is a subset of waters of the state. Thus, since Porter-Cologne was enacted California always had and retains authority to regulate discharges of waste into any waters of the state, regardless of whether the ACOE has concurrent jurisdiction under section 404. The fact that often Regional Boards opted to regulate discharges to, e.g., vernal pools, through the 401 program in lieu of or in addition to issuing waste discharge requirements (or waivers thereof) does not preclude the regions from issuing waste discharge requirements (WDRs) in the absence of a request for 401 certification….*

In this memorandum the SWRCB's Chief Counsel has made the clear assumption that fill material to be discharged into isolated "waters of the U.S." is to be considered equivalent to "waste" and therefore subject to the authority of the Porter-Cologne Water Quality Act. However, while providing a recounting of the Act's definition of "waters of the U.S.", this memorandum fails to also reference the Act's own definition of waste:

> *"Waste" includes sewage and any and all other waste substances, liquid, solid, gaseous, or radioactive, associated with human habitation, or of human or animal origin, or from any producing, manufacturing, or processing operation, including waste placed within containers of whatever nature prior to, and for purposes of, disposal.* (California Resources Agency, 1969)

The lack of inclusion of a reference to "fill material," "dirt," "earth" or other similar terms in the Act's definition of "waste," or elsewhere in the Act, suggests that no such association was intended. Thus, the Chief Counsel's memorandum signals that the SWRCB is attempting to retain jurisdiction over discharge of fill material into isolated "waters of the U.S." by administratively expanding the definition of "waste" to include "fill material" without actually seeking amendment of the Act's definition of waste (an amendment would require action by the state legislature). Consequently, discharge of fill material into "waters of the State" not subject to the jurisdiction of the ACOE pursuant to Section 404 of the CWA may require authorization pursuant to the Porter Cologne Water Quality Act through application for WDRs or through waiver of WDRs, despite the lack of a clear regulatory imperative.

1.2.3 California Department of Fish and Game

Pursuant to Division 2, Chapter 6, Sections 1600-1603 of the California Fish and Game (CFG) Code, the CDFG regulates all diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake, which supports fish or wildlife.

CDFG defines a "stream" (including creeks and rivers) as "a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having surface or subsurface flow that supports or has supported riparian vegetation." CDFG's definition of "lake" includes "natural lakes or man-made reservoirs."

CDFG jurisdiction within altered or artificial waterways is based upon the value of those waterways to fish and wildlife. CDFG's Legal Advisor has prepared the following opinion:

- Natural waterways that have been subsequently modified and which have the potential to contain fish, aquatic insects and riparian vegetation will be treated like natural waterways.
- Artificial waterways that have acquired the physical attributes of natural stream courses and which have been viewed by the community as natural stream courses, should be treated by (CDFG) as natural waterways.
- Artificial waterways without the attributes of natural waterways should generally not be subject to CFG Code provisions.

Thus, the types of water features that CDFG asserts jurisdiction on closely mirror those of the ACOE. Exceptions are CDFG's exclusion of isolated wetlands (those not associated with a river, stream, or lake), the addition of artificial stock ponds and irrigation ditches constructed on uplands, and the addition of riparian habitat supported by a river, stream, or lake regardless of the riparian area's federal wetland status. However, the limits of jurisdiction can differ between

the ACOE and CDFG in non-tidal waters depending on the physical characteristics. While the ACOE asserts jurisdiction over the OHWM, which is typically limited to the bed and lower banks of a drainage feature for example, CDFG asserts jurisdiction over the bed and bank and any associated vegetation. This includes to the top of bank and can also extend outside the top of bank to the drip line of associated riparian vegetation.

2.0 METHODS

Prior to beginning the field delineation, a 200-scale color aerial photograph, the U.S. Fish and Wildlife Service (USFWS) NWI (USFWS, 2011), U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) soil mapping data (NRCS, 2011a), historic aerials (Google, 2012), and USGS topographic maps (USGS, 1974a, 1974b, 1974c and 1997) were examined to determine the locations of potential areas of jurisdiction.

Fieldwork for the delineation was conducted in May 2010, July 2010, December 2011, and February 2012 by TRC biologists Darren Burton, Ken McDonald, Travis Kegel, and Lauralyn K. Jensen. The delineation field work involved walking the entire survey corridor, focusing on (but not limited to) potential areas identified during the literature search, and physically identifying any hydrologic, vegetative, and geomorphic characteristics in order to delineate potentially jurisdictional waters and wetlands. The Proposed Project survey area was approximately 8 miles long and width ranged in size from between 500 feet along the transmission corridors to 1,100 feet in areas buffering the substation locations. While in the field, notes were taken documenting the characteristics of the jurisdictional areas, and jurisdictional areas and widths were recorded onto a 200-scale color aerial photograph using visible landmarks and/or were mapped with a Trimble Global Positioning System (GPS) hand-held unit. Field data was then digitized using Geographic Information Systems (GIS) to determine acreages. A detailed delineation map was prepared illustrating the features that intersect the Proposed Project.

A field survey was conducted according to the technical guidelines provided in the Manual and the Arid West Supplement to identify and delineate wetlands that may be subject to regulatory jurisdiction under Section 404 of the CWA. Wetlands were identified by the "three-factor" approach, in which criteria for wetland hydrology, hydrophytic vegetation, and hydric soils must all be met to conclude that an area is a wetland, as described in the Manual and summarized below. Wetlands that appeared to meet the ACOE criteria were considered potentially jurisdictional as any determination is subject to verification by the regulatory agencies.

- Vegetation: Plant species were identified in the field and the indicator status of dominant plants was determined using The National List of Plant Species that Occur in Wetlands: Region 0 – California (Reed, 1988). Plant species were classified as obligate wetland vegetation (OBL) with greater than 99% probability of occurring in wetlands; facultative wetland (FACW) with 67% to 99% probability of occurring in wetlands; facultative (FAC) with 33% to 67% probability of occurring in wetlands; facultative upland (FACU) with 1% to 33% probability of occurring in wetlands; or upland vegetation (UPL) with less than 1% probability of occurring in wetlands.
- Hydrology: The presence of primary wetland hydrology indicators was determined by observing inundation, saturation, water marks, sediment deposits, drainage patterns,

and/or drift lines. Soil pits were dug to a depth of 18 inches, or until refusal, using a sharpshooter shovel, and allowed to stand undisturbed for at least 10 minutes. Observations were then recorded as to depth of free water in the pit, and depth of saturated soil.

- Soil: Soil profiles were examined for color and texture. Soil color was determined using a Munsell Soil Color Chart and hydric soil characteristics were identified (i.e., sulfidic odor, low chroma colors, mottling, etc.). All soil profile data were recorded onto the required data forms.

"Waters of the U.S." were identified pursuant to criteria outlined in Section 401 and Section 404 of the CWA, including but not limited to the presence of an OHWM and connection to a downstream jurisdictional water body. The OHWM was determined by observing signs of flow including but not limited to shelving, drift lines, and disturbed vegetation. "Waters of the State" were identified pursuant to criteria outlined in Section 1600 of the CFG Code, including the presence of a defined bed and bank and any associated vegetation. Drainages that appeared to meet the criteria for "waters of the U.S." or "waters of the State" were considered potentially jurisdictional as any determination is subject to verification by the regulatory agencies.

3.0 RESULTS

3.1 TOPOGRAPHY AND HYDROLOGY

The Proposed Project survey area comprises approximately 659 acres and contains named blue-line drainages (five in total), as depicted on the USGS topographic maps (Figure 1). The named drainages include Horno Creek, San Juan Creek, Prima Deshecha Cañada, Segunda Deshecha Cañada, and Christianitos Creek. Elevation within the Proposed Project survey area ranged from approximately 110 to 740 feet above mean sea level (msl).

The Proposed Project survey area transects a mixture of habitats and land uses including urbanized areas where local hydrology and drainage patterns have been significantly altered, along with undeveloped land comprised of rough foothills with steep valleys and ravines. The undeveloped areas are comprised primarily of coastal sage scrub and ruderal vegetation bordered by residential and commercial land uses. Surface water runoff within the Proposed Project survey area appears to be captured by perennial creeks and underground storm water systems associated with the urban developments.

3.2 LAND USE

Land use within the Proposed Project survey area consists primarily of undeveloped land, residential communities, and natural preserve areas. Outside of developed areas, non-native grassland and coastal sage scrub dominate the terrain.

3.3 SOILS

The NRCS has mapped the following soil types as occurring within the Proposed Project survey area. Only two soil types, Myford Sandy Loam series and Riverwash soil types, are identified as

hydric in the NRCS's publication, *Hydric Soils of the United States* (NRCS, 2011b), however, per the Arid West Supplement, all hydric soils must be confirmed in the field.

- Alo Clay - The Alo Clay series are well drained and composed of clay and weathered bedrock. The parent materials consist of residuum weathered from sedimentary rock. At 25 to 29 inches in depth, weathered bedrock is found. These soils occur on hills at 200 to 3,250 feet above msl.
- Bosanko Clay - The Bosanko Clay series are well drained and composed of clay, clay loam, silty clay and weathered bedrock. The parent material consists of residuum weathered from granite. At 22 to 36 inches in depth, weathered paralithic bedrock is found. These soils occur on the back slopes of hills at 300 to 2,500 feet above msl.
- Botella Clay Loam - Botella Clay Loam is well drained and composed of clay loam, silty and sandy clay loam. The parent material is alluvium derived from sedimentary rock. At more than 80 inches in depth a restrictive feature is found. These soils occur on alluvial fans at 500 to 800 feet above msl.
- Callegus Clay Loam - Callegus Clay Loam is well drained and composed of clay loam and weathered bedrock. The parent material is residuum weathered from calcareous shale. At 15 to 19 inches in depth, paralithic bedrock is found. These soils occur on the back slopes of hills at 200 to 2,500 feet above msl.
- Cieneba Sandy Loam - The Cieneba Sandy Loam series are somewhat excessively drained and are composed of coarse sandy loam and weathered bedrock. The parent material is a residuum of weathered granite. At four to 20 inches in depth, paralithic bedrock is found. These soils occur on hillsides at 500 to 4,000 feet above msl.
- Corralitos Loamy Sand - The Corralitos Loamy Sand series are somewhat excessively well drained and are composed of loamy sand and stratified sand. The parent material is alluvium derived from mixed sources. At more than 80 inches in depth a restrictive feature is found. These soils occur on alluvial fans at 30 to 1,000 feet above msl.
- Cropley Clay - Cropley Clay is well drained and composed of clay, silty clay and clay loam. At more than 80 inches depth a restrictive feature is found. These soils occur on alluvial fans at 50 to 1,500 feet above msl.
- Huerhuero Loam - Huerhuero Loam is moderately well drained and composed of loam, clay loam, clay, stratified sand and sandy loam. The parent material is calcareous alluvium derived from sedimentary rock. At more than 80 inches depth a restrictive feature is found. These soils occur on marine terraces at 1,000 feet above msl.
- Myford Sandy Loam - The Myford Sandy Loam series are moderately well drained and composed of sandy loam, sandy clay and sandy clay loam. The parent material is alluvium derived from mix sources. At more than 80 inches in depth a restrictive feature is found. These soils occur on landform terraces at 1,500 feet above msl.
- Riverwash - Riverwash is not well drained and composed of sand and stratified course sand to sandy loam. The parent material is sandy and gravelly alluvium. These soils occur on fans at diverse elevations above msl.

- Soboba Cobbly Loamy Sand - Soboba Cobbly Loamy Sand is excessively drained and composed of very cobbly loamy sand. The parent material is sandy and gravelly alluvium derived from mixed sources. At more than 80 inches depth a restrictive feature is found. These soils occur on alluvial fans at 30 to 4,200 feet above msl.
- Sorrento Loam - The Sorrento Loam series are well drained and composed of loam, silty clay loam, clay loam, and stratified loamy fine sand to silt loam. The parent material is alluvium derived from sedimentary rock. At more than 80 inches depth a restrictive feature is found. These soils occur on alluvial fans at 80 to 1,800 feet above msl.
- Sorrento Clay Loam series - These Sorrento clay loam soils occur on alluvial fans in relatively flat areas and are composed of loam, silty clay loam, stratified loamy fine sand, and silt loam. The soils are well drained and occur at elevations of 80 to 1,800 feet above msl.
- Yorba Gravelly Sandy Loam - The Yorba Gravelly Sandy Loam series are well drained and composed of gravelly sandy loam, very gravelly sandy clay loam and very gravelly sandy loam. The parent material is sandy and gravelly alluvium derived from mixed sources. At more than 80 inches depth a restrictive feature is found. These soils occur on landform terraces at 100 to 2,500 feet above msl.
- Yorba Cobbly Sandy Loam series - These Sorrento loam soils are composed of very cobbly sandy loam, very gravelly clay loam and very gravelly sandy loam. The soils are well drained and occur at elevations of 100 to 2,500 feet above msl.

3.4 UNITED STATES ARMY CORPS OF ENGINEERS JURISDICTION

The potential ACOE jurisdiction within the Proposed Project survey area totals approximately 6.65 acres, of which 3.35 acres is wetland. The location and limits of these ACOE jurisdictional areas are depicted on Figure 2, *Delineation Map Sheets 1-11*. Representative site photographs are provided as Appendix A, *Site Photographs*, and data forms are provided as Appendix B, *Wetland Determination Data Forms*.

The Proposed Project survey area supports twelve drainage systems. Of the drainage systems within the Proposed Project survey area, eight are RPWs and four are ephemeral systems. The eight RPWs are known as Horno Creek, San Juan Creek, Segunda Deshecha Cañada, and Tributary to Segunda Deshecha Cañada 1, 2, 3, and Tributary to Christianitos Creek 1 and 3. The Proposed Project's four ephemeral waters are known as the Tributary to San Juan Creek, Rancho San Juan Drainage, Tributary to Prima Deshecha Cañada, and the Tributary to Christianitos Creek 2. The acreage of all drainages broken out by ACOE waters and wetlands is listed in Table 1. A description of the drainages is also provided below.

Table 1: Summary of ACOE Jurisdiction

Drainage Name/ Types of Waters	ACOE Waters (Acres)	ACOE Wetland (Acres)	Total ACOE Jurisdiction (Acres)	Approximate Linear Feet
Horno Creek (RPW)	0.14	0.05	**0.19**	540
San Juan Creek (RPW)	1.86	2.00	**3.86**	665
Tributary to San Juan Creek (Ephemeral)	0.05	-	**0.05**	1,630
Rancho San Juan Drainage (Ephemeral)	0.94	-	**0.94**	960
Tributary to Prima Deshecha Cañada (Ephemeral)	0.22	-	**0.22**	3,880
Segunda Deshecha Cañada (RPW)	-	0.68	**0.68**	1,040
Tributary to Segunda Deshecha Cañada 1 (RPW)	0.03	0.01	**0.04**	515
Tributary to Segunda Deshecha Cañada 2 (RPW)	0.03	-	**0.03**	155
Tributary to Segunda Deshecha Cañada 3 (RPW)	0.02	0.26	**0.28**	715
Tributary to Christianitos Creek 1 (RPW)	0.08	0.26	**0.34**	1,040
Tributary to Christianitos Creek 2 (Ephemeral)	0.04	-	**0.04**	610
Tributary to Christianitos Creek 3 (RPW)	0.02	-	**0.02**	630
Totals	**3.43**	**3.26**	**6.69**	**12,380**

3.4.1 Horno Creek

The ACOE jurisdiction associated with Horno Creek within the Proposed Project survey area totals 0.19 acre, of which 0.05 acre is wetland. Horno Creek is a RPW that traverses the Proposed Project survey area from northeast to southwest and ultimately connects to San Juan Creek, which is tributary to the Pacific Ocean, the closest TNW. Horno Creek is a relatively narrow creek on the southeast side of Marbella Golf Course in San Juan Capistrano, in a densely wooded area east of Golf Club Drive between the golf course and a development off of Rancho Viejo Road. Flowing water was observed in this feature during the field surveys, and based on these observations the feature is expected to experience year-round hydrology. Results of the survey have been mapped on Figure 2, Sheet 1.

Vegetation associated with Horno Creek is composed mainly of non-native, ornamental, and disturbance-associated species including Mexican fan palms (*Washingtonia robusta*), ornamental ficus trees (*Ficus* sp.), eucalyptus (*Eucalyptus* sp.), ash (*Fraxinus* sp.) various weedy annual plants (e.g., rabbits foot grass (*Polypogon monspeliensis*), Johnson grass (*Sorghum halepense*), and relatively few native wetland species (e.g., willowherb (*Epilobium ciliatum*), mulefat (*Baccharis salicifolia*)). Intermittently along the creek, small areas dominated by ash and/or arroyo willow (*Salix lasiolepis*) meet the vegetation requirements for wetlands. A photograph of Horno Creek is included in Appendix A, Photo 1.

Soil pits were excavated in Horno Creek indicating wetland soils in one area. The area (approximately 100 feet in length) had soils with wetland characteristics and also met hydrology and vegetation requirements for wetland. Results of the data pits are recorded in Appendix B (Sampling Points 8-11).

3.4.2 San Juan Creek

The ACOE jurisdiction associated with San Juan Creek within the Proposed Project survey area totals 3.86 acres, of which 2.00 acres are wetland. San Juan Creek is a RPW that traverses the Proposed Project survey area from northeast to southwest and ultimately connects to the Pacific Ocean, the closest TNW. The nearest cross streets are Via Parra and Calle Del Campo on the western bank, and San Juan Creek Road and Avenida La Mancha on the eastern bank. The creek consists of wide, braided features that experience year-round hydrology and heavy scouring. An OHWM as well as flowing water was observed during the field survey. Results of the survey have been mapped on Figure 2, Sheet 2.

Vegetation associated with San Juan Creek is composed of dense riparian vegetation including various willows (*Salix* sp.), mulefat (*Baccharis salicifolia*), giant reed (*Arundo donax*) and cattails (*Typha latifolia*). Other areas of the creek were devoid of vegetation or had small patches of scattered riparian vegetation. Photographs of San Juan Creek are included as Appendix A, Photos 2 and 3.

Soil pits were excavated in San Juan Creek indicating wetland soils in some areas. Wetland soils were generally limited to areas without scour, where high velocity storm flows would not wash soils away. Results of the data pits are recorded in Appendix B (Sampling Points 1-7).

3.4.2.1 Adjacent Wetland to San Juan Creek

There is a two-foot outfall pipe approximately 280 feet northwest of San Juan Creek. Approximately one inch of standing water was present near the outfall. Hydric soils and hydrophytic vegetation were also present in the area of standing water. Results of the data pits are recorded in Appendix B (Sampling Points 16-17). The area meeting wetland characteristics was less than 14 feet in length. At the limit of the wetland, the water appeared to be absorbed into the groundwater and there is no sign of surface flow between the outfall pipe and San Juan Creek. However, due to the proximity to a RPW (San Juan Creek), the ACOE will likely assert jurisdiction over this adjacent wetland. The wetland totals 0.0006 acre, and for the purposes of this delineation will be added to the wetland totals of San Juan Creek. A photograph of this wetland is included as Appendix A, Photo 4. The location of the wetland is mapped on Figure 2, Sheet 2.

3.4.3 Tributary to San Juan Creek

The ACOE jurisdiction associated with the tributary to San Juan Creek within the Proposed Project survey area totals 0.05 acre. There are no wetlands associated with this tributary. The tributary is located approximately 1,250 feet southeast of the southern end of Paseo Riobo Road in San Juan Capistrano. The tributary is comprised of two drainages that begin within the Proposed Project survey area and flow south to north until leaving the Proposed Project survey area and eventually confluencing with San Juan Creek. The tributary can be characterized as ephemeral, flowing only during and directly following storm events. Results of the survey have been mapped on Figure 2, Sheet 3.

Vegetation associated with the tributary consists entirely of upland plants including California sagebrush (*Artemisia californica*), deer weed (*Lotus scoparius*), coyote bush (*Baccharis pilularis*), black mustard (*Brassica nigra*), artichoke thistle (*Cynara cardunculus*), and various non-native bromes (*Bromus* ssp.). A photograph of this tributary is included as Appendix A, Photo 5.

No soil pits were excavated due to a lack of wetland vegetation. Wetland soils are not expected in the tributary.

3.4.4 Rancho San Juan Drainage

The ACOE jurisdiction associated with the Rancho San Juan drainage totals 0.94 acre within the Proposed Project survey area. There are no wetlands associated with this drainage. The Rancho San Juan drainage is located approximately 300 feet southwest of the intersection of Vista Montana and Via Granada in San Juan Capistrano. The drainage begins within the Proposed Project survey area in a vegetated containment basin and continues east within a vegetated channel. The surrounding area is in the process of development; currently the feature receives water from surrounding uplands but it is expected to receive nuisance flows from the new development. The Rancho San Juan drainage flows generally east to west within the Proposed Project survey area, eventually meeting with San Juan Creek which ultimately connects to the Pacific Ocean, the closest TNW. Results of the survey have been mapped on Figure 2, Sheet 4.

The entire drainage has been revegetated with native species and appears to be maintained, as there were very few weedy or non-native species. Vegetation associated with the feature

included: arroyo willow (*Salix lasiolepis*), sandbar willow (*Salix exigua*), alkali bulrush (*Scirpus maritimus*), mulefat, California sycamore (*Platanus racemosa*), deer weed, and coyote bush. Photographs of this drainage are included as Appendix A, Photos 6 and 7.

No wetland soils were identified within the Rancho San Juan drainage. While no soil pits were excavated, based on observations and prior knowledge of the site, the drainage was recently constructed. Soils were comprised of hard clays consistent with recent excavation.

3.4.5 Tributary to Prima Deshecha Cañada

The ACOE jurisdiction associated with the Tributary to Prima Deshecha Cañada totals 0.22 acre within the Proposed Project survey area. There are no wetlands associated with the tributary. The tributary is located approximately 2,000 feet directly south of the southern end of La Pata road in the City of San Juan Capistrano. Tributary to Prima Deshecha Cañada is comprised of several ephemeral features that cross the Proposed Project survey area at multiple points in a northeast to southwest direction, continuing into downstream reaches of Prima Deshecha Cañada, and ultimately the Pacific Ocean. This ephemeral tributary can generally be described as incised with a distinct OHWM. Results of the survey have been mapped on Figure 2, Sheets 5 and 6.

Vegetation associated with the tributary is composed of annual weedy species such as black mustard, various non-native bromes, tocalote (*Centaurea melitensis*), as well as native upland species such as Mexican elderberry (*Sambucus mexicana*), California sagebrush, deer weed, and coyote bush. In addition, lower reaches contained riparian vegetation such as mulefat, arroyo willow, Himalayan blackberry (*Rubus discolor*), and stinging nettle (*Urtica dioica*). Photographs of this tributary are included as Appendix A, Photos 8 and 9.

No wetland soils were identified within the tributary. No soil pits were excavated, however, soils consisted primarily of hard clay and cobbles associated with high water velocities and consistent with the feature's deep incisions.

3.4.6 Segunda Deshecha Cañada

The ACOE jurisdiction associated with Segunda Deshecha Cañada within the Proposed Project survey area totals 0.68 acre, all of which is wetland. Segunda Deshecha Cañada is a RPW that traverses the Proposed Project survey area at two points. Segunda Deshecha Cañada generally travels northeast to southwest, exiting the Proposed Project survey area into an underground culvert that ultimately connects to the Pacific Ocean, the closest TNW. This drainage is located at the bottom of the canyon running generally parallel to Avenida La Plata road in the City of San Clemente. It contained flowing water during the field survey and is a RPW fed by nuisance flow from the surrounding residential communities. Results of the survey have been mapped on Figure 2, Sheets 7 and 8.

Vegetation on either bank consists of dense stands of Mexican elderberry, arroyo willow, and mulefat, as well as large swaths of cattails within the creek channel. A photograph of Segunda Deshecha Cañada is included as Appendix A, Photo 11.

Soil pits were excavated in Segunda Deshecha Cañada indicating wetland soils. Wetland soils were consistently identified within the OHWM of the drainage. Results of the data pits are recorded in Appendix B (Sampling Points 12-13).

3.4.7 Tributary to Segunda Deshecha Cañada 1

The ACOE jurisdiction associated with Tributary to Segunda Deshecha Cañada 1 totals 0.04 acre, of which 0.01 acre is wetland. It is located approximately 730 feet northeast of the intersection of La Pata and Vista Hermosa in the City of San Clemente. The tributary begins as it exits a box culvert and travels in a west-east direction, continuing into Segunda Deshecha Cañada. The tributary was flowing at the time of surveys and therefore is considered to be a RPW. Tributary to Segunda Deshecha 1 carries nuisance flows from surrounding developed areas. Results of the survey have been mapped on Figure 2, Sheet 7.

Vegetation associated with Tributary to Segunda Deshecha 1 includes coyote bush, black mustard, artichoke thistle, arroyo willow, cattails, and mulefat. A photograph of this tributary is included as Appendix A, Photo 10.

A soil pit was excavated in Tributary to Segunda Deshecha 1 indicating wetland soils in one small area located abutting the box culvert. Results of the data pit are recorded in Appendix B (Sampling Point 14).

3.4.8 Tributary to Segunda Deshecha Cañada 2

The ACOE jurisdiction associated with Tributary to Segunda Deshecha Cañada 2 within the Project survey area totals 0.03 acre. There are no wetlands associated with the tributary. The tributary is located approximately 850 feet southwest of the intersection of Vista Hermosa and Avenida Pico in the City of San Clemente. The tributary is contained within a 10 feet wide concrete box channel and appears to be part of a larger flood control facility. It continues into an underground box culvert that is expected to connect to downstream reaches of Segunda Deshecha Cañada and ultimately the Pacific Ocean. The feature was flowing during field investigations and is a RPW. Results of the survey have been mapped on Figure 2, Sheet 9.

Scattered weedy wetland vegetation was present in small pocket areas where sediment had collected within the box-culvert. Observed vegetation included rabbit's foot grass (*Polypogon monspeliensis*) and curly dock (*Rumex crispus*). A photograph of this tributary is included as Appendix A, Photo 12.

There were no soils associated with the tributary. Since it is contained within a concrete box channel, only shallow pockets of sediment were present within the tributary.

3.4.9 Tributary to Segunda Deshecha Cañada 3

The ACOE jurisdiction associated with Tributary to Segunda Deshecha Cañada 3 totals 0.28 acre, of which 0.26 acre is wetland. It is located approximately 750 feet southeast of the intersection of Calle Batido and Calle Alicante in the City of San Clemente. The feature transverses part of the Proposed Project survey area and travels in an east west direction, continuing into an underground box culvert that is expected to connect to downstream reaches of

Segunda Deshecha Cañada. Tributary to Segunda Deshecha 3 has two reaches associated with it. Reach 1 consists of an ephemeral two-foot feature that appears to convey flows from the surrounding upland areas. Reach 2 begins where a v-ditch confluences and supplies additional nuisance flows to the tributary creating dense riparian habitat. No surface water was identified at the time of the surveys. However, Reach 2 had saturation within 6 inches of the surface and is expected to have had flows lasting three months, and is therefore considered a RPW. Results of the survey have been mapped on Figure 2, Sheet 10.

Vegetation associated with the upland Reach 1 of the Tributary to Segunda Deshecha 3 includes California sagebrush, coyote bush, black mustard, and artichoke thistle. Vegetation associated with the riparian Reach 2 appears to have been revegetated with native species. In addition, Reach 2 appears to be maintained, as there were very few weedy or non-native species. The Reach 2 vegetation includes arroyo willow, sandbar willow, cattails, alkali bulrush, mulefat, and Mexican rush (*Juncus mexicanus*). A photograph of this tributary is included as Appendix A, Photo 13.

Soil pits were excavated in Tributary to Segunda Deshecha 3 indicating wetland soils. Wetland soils were only identified within Reach 2. Results of the data pits are recorded in Appendix B (Sampling Point 15).

3.4.10 Tributary to Christianitos Creek 1

The ACOE jurisdiction associated with tributary to Christianitos Creek 1 totals approximately 0.34 acre, of which 0.26 is wetland. The tributary is located north of the Talega Substation and south of Avenida Pico, in the City of San Clemente. The tributary generally travels west to east continuing out of the Proposed Project survey area and into Christianitos Creek. It begins in a flood control basin supporting wetlands. The feature then travels east through an outfall structure and under the access road to the Talega Substation. When the feature emerges there is a small area that has wetland characteristics. Surface water was present at the time of the surveys, presumably from urban runoff. Results of the survey have been mapped on Figure 2, Sheet 11.

Vegetation associated with the wetland portions of tributary to Christianitos Creek 1 were dominated by cattails, bulrushes, and arroyo willow. In the areas outside of the wetlands, dominant vegetation included poison oak (*Toxicodendron diversilobum*), stinging nettle and coast live oak (*Quercus agrifolia*). Photographs of this tributary are included as Appendix A, Photos 14 and 15.

Soil pits were excavated in tributary to Christianitos Creek 1 indicating wetland soils in most areas. The wetland soils were located in the flood control basin and surrounding the outfall structure south of the access road. Results of the data pits are recorded in Appendix B (Sampling Points 18-20).

3.4.11 Tributary to Christianitos Creek 2

The ACOE jurisdiction associated with tributary to Christianitos Creek 2 totals approximately 0.04 acre, none of which is wetland. The tributary begins west of the Talega Substation, is channelized underground through the Substation, and emerges on the east side of the Substation. Approximately 300 feet east of the substation the concrete channel stops and the drainage

becomes deeply incised. The drainage then continues east outside of the Proposed Project survey area and eventually to Christianitos Creek. The tributary is ephemeral in nature and had no surface water at the time of the survey. Results of the survey have been mapped on Figure 2, Sheet 11.

Vegetation associated with the unchannelized portion of the feature consists predominantly of upland plants dominated by deer weed, coyote bush, black mustard, and various non-native bromes. Few instances of poison oak and mulefat were also present. The channelized portion was free of vegetation. A photograph of this tributary is included as Appendix A, Photo 16.

No wetland soils were identified within the feature. No soil pits were excavated due to a lack of hydric vegetation. Soils consisted primarily of hard clay and cobbles associated with high water velocities and consistent with the feature's deep incisions.

3.4.12 Tributary to Christianitos Creek 3

The ACOE jurisdiction associated with tributary to Christianitos Creek 3 totals approximately 0.02 acre, none of which is wetland. The RPW tributary begins west of the Proposed Project survey area within the Pacific Golf Club. It flows southeast through the Proposed Project area, continues east outside of the Proposed Project survey area and eventually to Christianitos Creek. The tributary was wet at the time of survey primarily from nuisance flows from the golf course. The tributary was incised with the tributary bottom four to eight feet below the surrounding uplands. From the east boundary of the Project Survey area for approximately 480 feet, the tributary was vegetated with riparian species. Results of the survey have been mapped on Figure 2, Sheet 12.

Vegetation associated with the riparian portion of the feature was dominated by mulefat, tamarisk (*Tamarisk* sp.), coyote bush, ragweed, and various non-native bromes. Few instances of poison oak and ragweed were also present. Areas southeast of the riparian area were dominated by upland plants including black mustard, artichoke thistle, and coyote bush. A photograph of this tributary is included as Appendix A, Photo 17.

No wetland soils were identified within the feature. Soils consisted primarily of hard clay and cobbles associated with high water velocities and consistent with the feature's deep incisions.

3.5 REGIONAL WATER QUALITY CONTROL BOARD JURISDICTION

All waters identified as ACOE jurisdictional were also identified as RWQCB jurisdictional. RWQCB jurisdiction within the Proposed Project survey area therefore totals the same as the ACOE jurisdiction at approximately 6.65 acres. The locations of this jurisdiction are depicted on the enclosed maps (Figure 2) and photographs (Appendix A), and described in Section 3.4 of this report.

3.6 CALIFORNIA DEPARTMENT OF FISH AND GAME JURISDICTION

CDFG jurisdiction associated with the Proposed Project survey area totals approximately 13.82 acres of which 13.52 acres consists of vegetated riparian habitat and 0.31 acre consists of unvegetated streambed. This includes all areas within ACOE jurisdiction in addition to adjacent

associated riparian vegetation. Below is a brief description of the drainage characteristics; for a more detailed description of the drainages please refer to Section 3.4 of this report. The acreage of all drainages mapped during the field survey is listed in Table 2.

Table 2: Summary of CDFG Jurisdiction

Drainage Name	Unvegetated Streambed (Acres)	Riparian (Acres)	Total CDFG Jurisdiction (Acres)	Approximate Linear Feet
Horno Creek	-	1.08	**1.08**	540
San Juan Creek	-	4.86	**4.86**	665
Tributary to San Juan Creek	0.05	-	**0.05**	1,630
Rancho San Juan Drainage	-	2.55	**2.55**	960
Tributary to Prima Deshecha Cañada	0.13	0.59	**0.72**	3,880
Segunda Deshecha Cañada	-	1.38	**1.38**	1,040
Tributary to Segunda Deshecha Cañada 1	0.03	0.01	**0.04**	155
Tributary to Segunda Deshecha Cañada 2	0.03	-	**0.03**	715
Tributary to Segunda Deshecha Cañada 3	0.01	0.55	**0.56**	515
Tributary to Christianitos Creek 1	0.01	2.24	**2.25**	1,040
Tributary to Christianitos Creek 2	0.04	-	**0.04**	610
Tributary to Christianitos Creek 3	0.01	0.26	**0.27**	630
Totals	**0.31**	**13.52**	**13.83**	**12,380**

3.6.1 Horno Creek

The CDFG jurisdiction associated with Horno Creek totals 1.08 acres, all of which is vegetated riparian habitat. As previously discussed, vegetation associated with the drainage area is composed mainly of non-native, ornamental and disturbance-associated species, and relatively few native wetland species. Riparian areas for this drainage include those species within the bank and their associated drip lines.

3.6.2 San Juan Creek

The CDFG jurisdiction associated with San Juan Creek totals 4.86 acres, all of which is vegetated riparian habitat. As previously discussed, the associated vegetation was dense and included willows, mulefat, and cattails with instances of non-natives such as giant reed.

3.6.3 Tributary to San Juan Creek

The CDFG jurisdiction associated with Tributary to San Juan Creek totals 0.05 acre, all of which is unvegetated streambed. Vegetation associated with the drainage was composed of native and non-native upland species

3.6.4 Rancho San Juan Drainage

The CDFG jurisdiction associated with the Rancho San Juan drainage totals 2.55 acres, all of which is vegetated riparian habitat. The associated riparian habitat is dominated primarily by native riparian species including mulefat and arroyo willow.

3.6.5 Tributary to Prima Deshecha Cañada

The CDFG jurisdiction associated with the Tributary to Prima Deshecha Cañada totals 0.72 acre, including 0.13 acre of unvegetated streambed and 0.59 acre of riparian habitat. The associated riparian habitat is dominated primarily by mulefat and arroyo willow.

3.6.6 Segunda Deshecha Cañada

The CDFG jurisdiction associated with the Segunda Deshecha Cañada totals 1.38 acres, all of which is riparian habitat. The associated riparian habitat is dominated primarily by arroyo willow and mulefat, as well as large swaths of cattails within the channel.

3.6.7 Tributary to Segunda Deshecha Cañada 1

The CDFG jurisdiction associated with the Tributary to Segunda Deshecha Cañada 1 totals 0.04 acre, of which 0.03 acre is vegetated riparian habitat. The associated riparian habitat is dominated by cattails.

3.6.8 Tributary to Segunda Deshecha Cañada 2

The CDFG jurisdiction associated with the Tributary to Segunda Deshecha Cañada 2 totals 0.03 acre, all of which is unvegetated streambed. The channel consists of a maintained box concrete flood control channel that is relatively free of vegetation.

3.6.9 Tributary to Segunda Deshecha Cañada 3

The CDFG jurisdiction associated with the Tributary to Segunda Deshecha Cañada 3 totals 0.56 acre, of which 0.01 acre is unvegetated streambed and 0.55 acre is riparian habitat. The associated riparian habitat is dominated by arroyo willow and cattails.

3.6.10 Tributary to Christianitos Creek 1

The CDFG jurisdiction associated with the Tributary to Christianitos Creek 1 totals 2.25 acres, of which 0.01 acre is unvegetated streambed and 2.24 acres is vegetated riparian habitat. The drainage includes a detention basin dominated by cattails and bulrushes and a drainage dominated by willows, poison oak, and coast live oak. These associated riparian habitats are dominated by primarily native riparian species with few instances of non-natives.

3.6.11 Tributary to Christianitos Creek 2

The CDFG jurisdiction associated with the Tributary to Christianitos Creek 2 totals 0.04 acre, all of which is unvegetated streambed. The vegetation associated with the drainage is dominated coastal sage scrub and weedy non-native species.

3.6.12 Tributary to Christianitos Creek 3

The CDFG jurisdiction associated with the Tributary to Christianitos Creek 3 totals 0.27 acre, of which 0.01 acre is unvegetated streambed and 0.26 acre is vegetated riparian habitat. The associated riparian habitats are dominated by both native and non-native species.

3.7 NON JURISDICTIONAL SWALES

There are a number of non-jurisdictional swales located throughout the Proposed Project survey area. The swales are located primarily around the Talega substation and between the landfill and Talega residential community in the vicinity of San Clemente. Typically, the swales are low gradient vegetated areas located at the foot of hillsides or other minor changes in topography. The swales are not considered jurisdictional due to low volume, infrequent or short duration flow, and a lack of an OHWM.

4.0 POTENTIAL PERMTIT REQUIREMENTS FROM PROJECT IMPACTS TO JURISDICTIONAL FEATURES

Any permanent or temporary impacts to the drainages identified in this report would likely require permits from the regulatory agencies (ACOE, RWQCB, and CDFG). Impacts should be considered from Proposed Project activities including the removal and installation of structures, temporary work spaces, pull and tension sites, erosion and sediment controls, and project access

requirements. The jurisdictional limits identified in this report are subject to verification by the regulatory agencies. A Jurisdictional Determination letter confirming jurisdiction can be requested from ACOE by submitting an Approved Jurisdictional Determination Form, which involves a significant nexus analysis pursuant to Rapanos, in addition to supporting documentation. A Jurisdictional Determination letter is not a requirement, but can assist with the permitting process. The alternative to obtaining a Jurisdictional Determination is to ask the ACOE to take jurisdiction based on our delineation and assessment of jurisdiction. An analysis of impacts will be performed and potential permitting strategies developed, based upon the delineation in this report and the Proposed Project design. The results of the analysis will be presented in the Biological Resources Assessment for the Proposed Project. The impacts analysis, and ACOE Jurisdictional Determination letter (if obtained), would be used to prepare the permit applications pursuant to Sections 401 and 404 of the CWA (RWQCB and ACOE, respectively), and Section 1602 of the CFG Code (CDFG).

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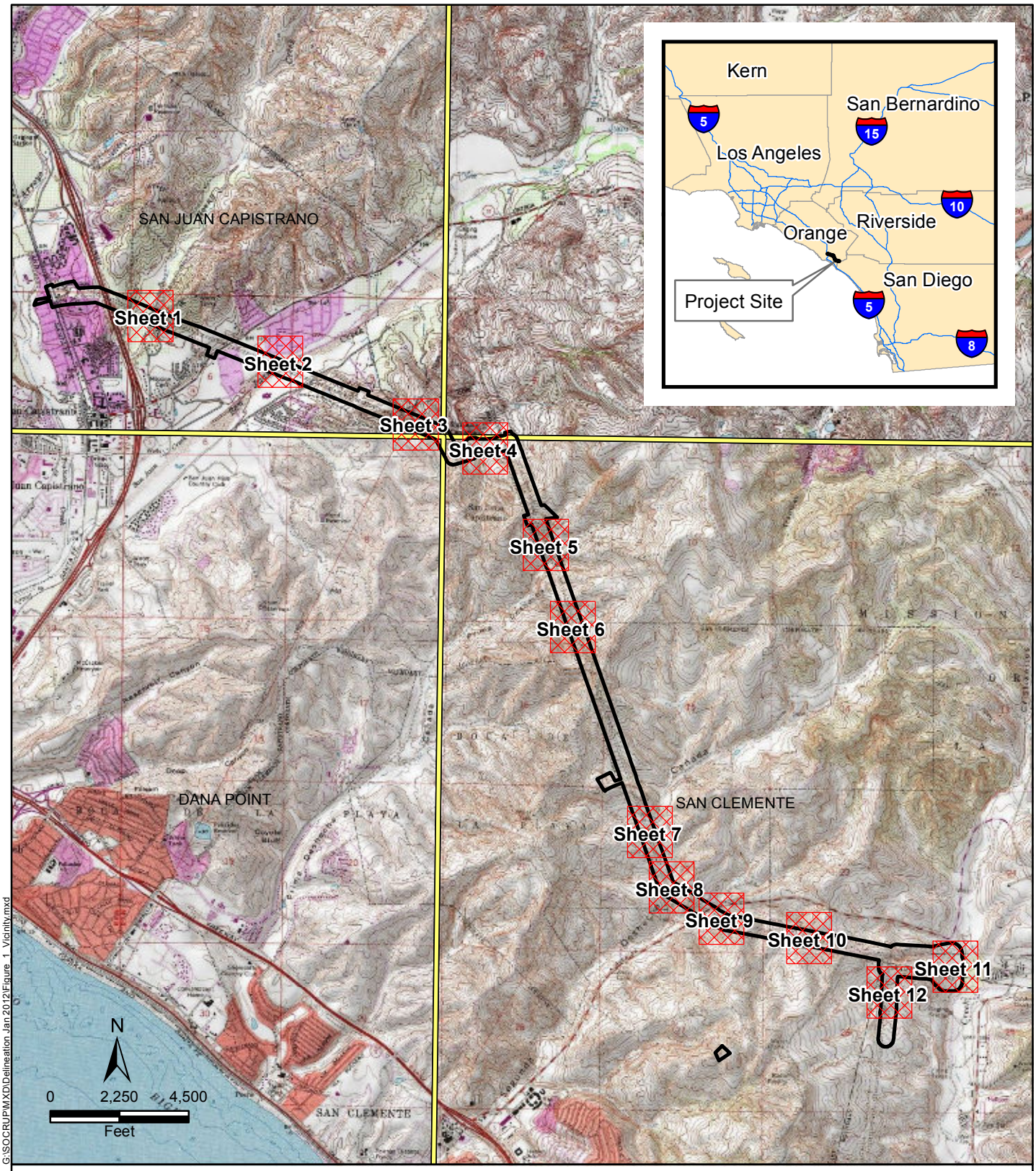

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South Orange County Reliability Enhancement Project

Vicinity and Overview Map

Figure 1

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Mary Turley	TRC
Date: 4/25/2012	

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Legend

- Proposed Project Survey Area
- Delineation Sheet Number
- USGS Quadrangle Boundary

Source: USGS Topo Maps

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South Orange County Reliability Enhancement Project

Delineation Map

Figure 2

Sheet 1 of 12

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Mary Turley	TRC

Date: 4/25/2012

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Legend

- Proposed Project Survey Area
- ACOE Waters
- ACOE Wetland
- CDFG Jurisdiction
- # Photo Location
- # Wetland Soil Pit Location

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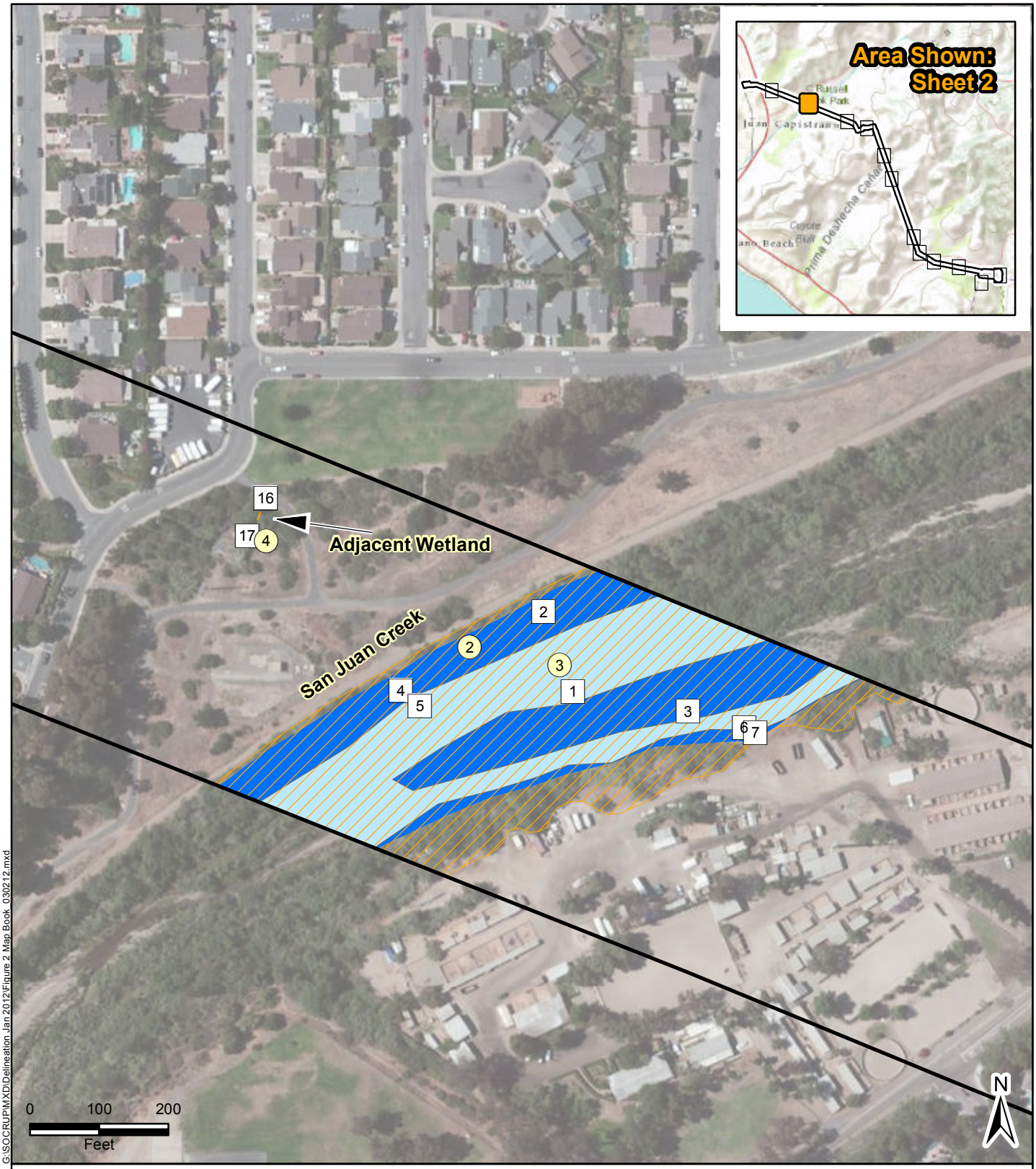

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Delineation Map

Figure 2

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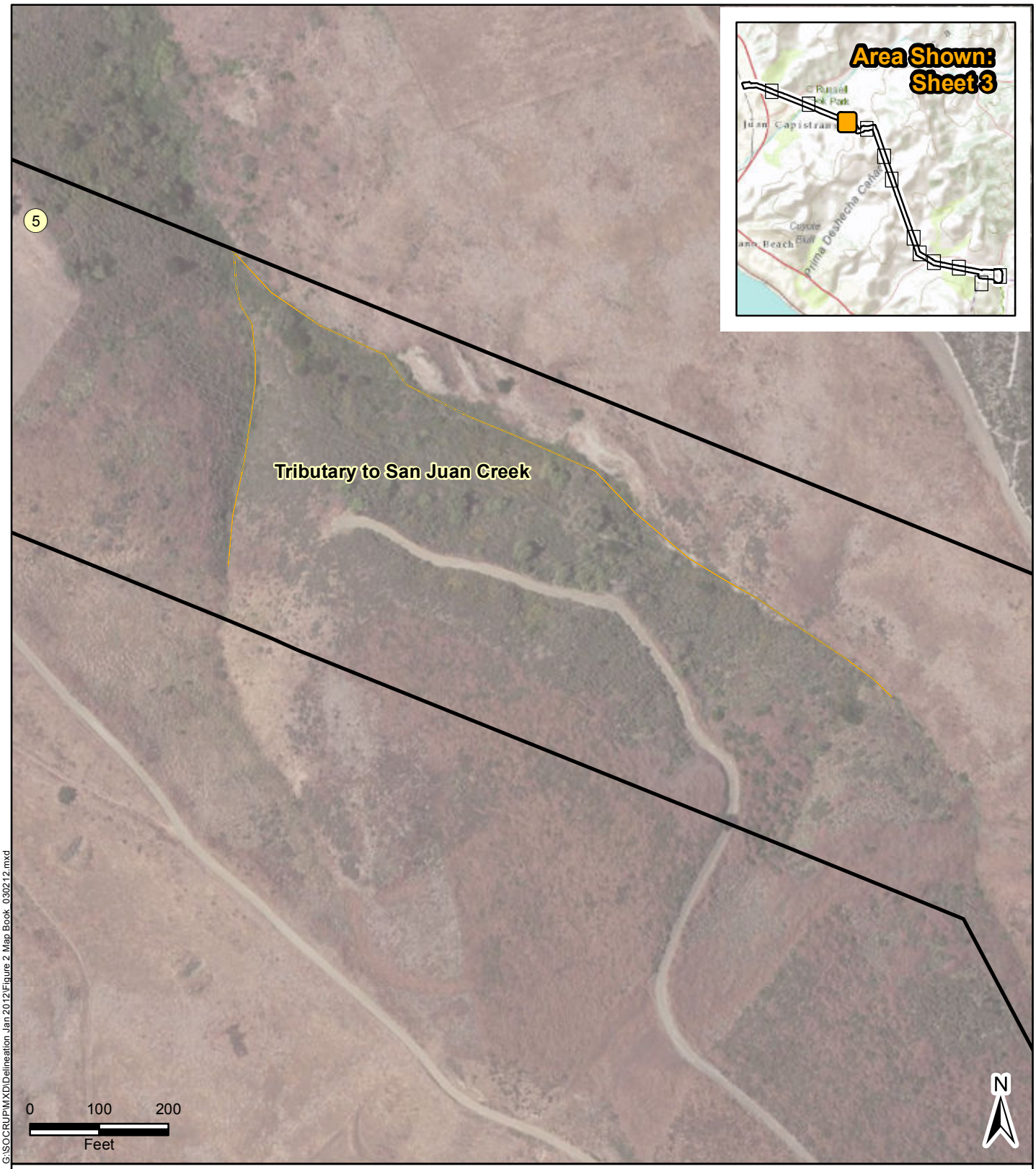

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Delineation Map

Figure 2

Sheet 3 of 12

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Legend

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- ACOE Wetland
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South Orange County Reliability Enhancement Project

Delineation Map

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- CDFG Jurisdiction
- # Photo Location
- # Wetland Soil Pit Location

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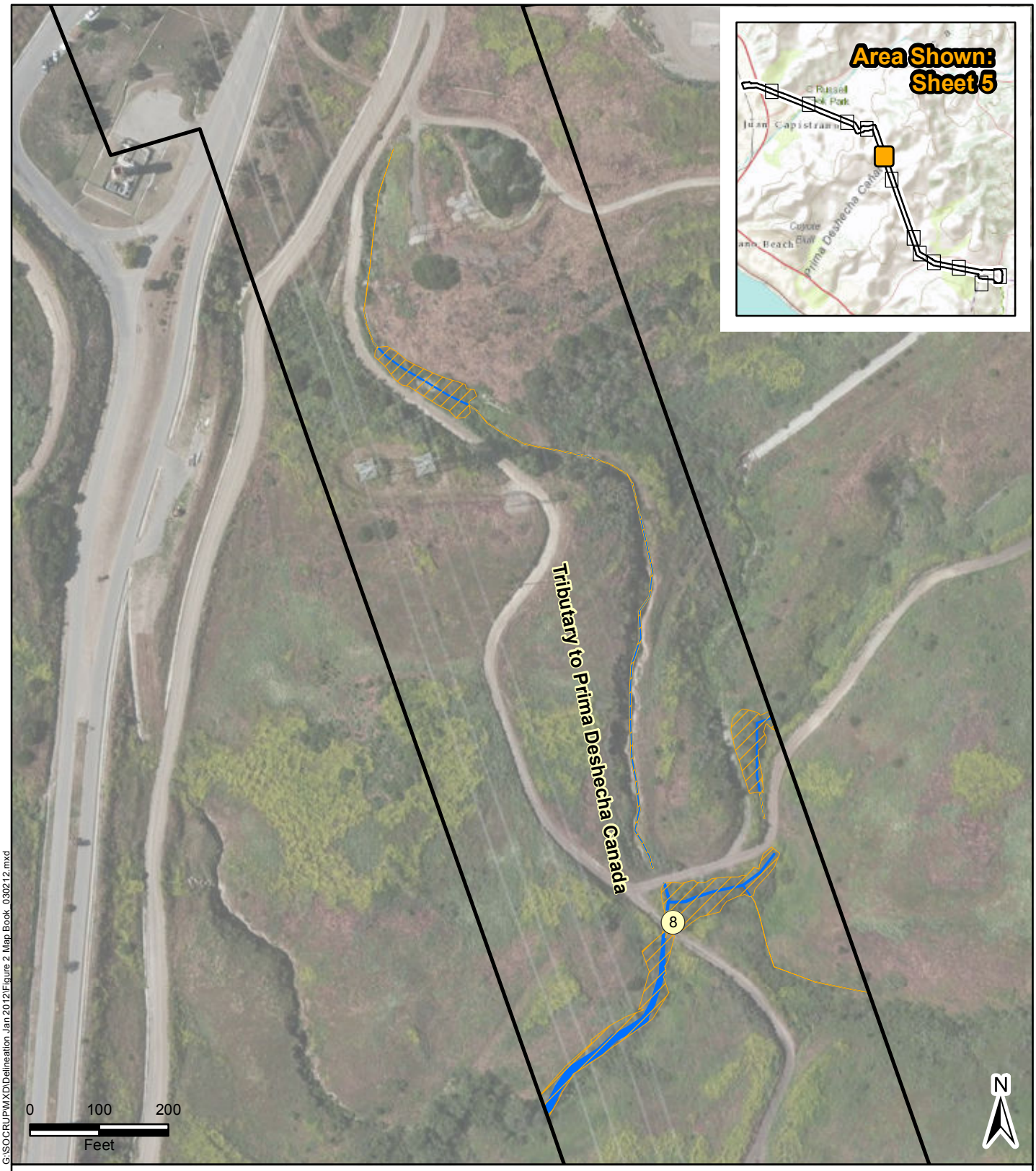

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Delineation Map

Figure 2

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Legend

- Proposed Project Survey Area
- ACOE Waters
- ACOE Wetland
- CDFG Jurisdiction
- # Photo Location
- # Wetland Soil Pit Location

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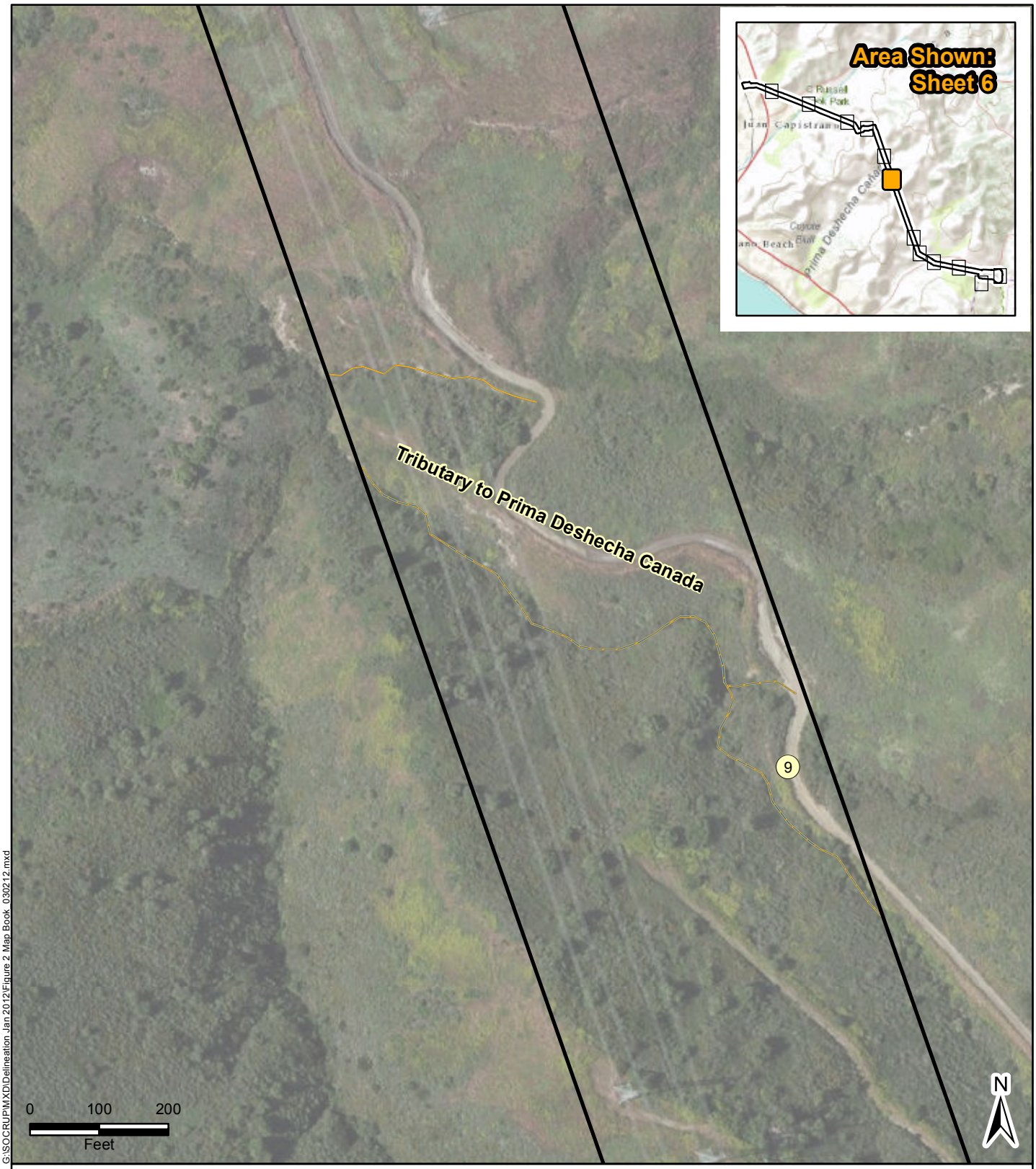

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South Orange County Reliability Enhancement Project

Delineation Map

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Legend

- Proposed Project Survey Area
- ACOE Waters
- ACOE Wetland
- CDFG Jurisdiction
- (#) Photo Location
- [#] Wetland Soil Pit Location

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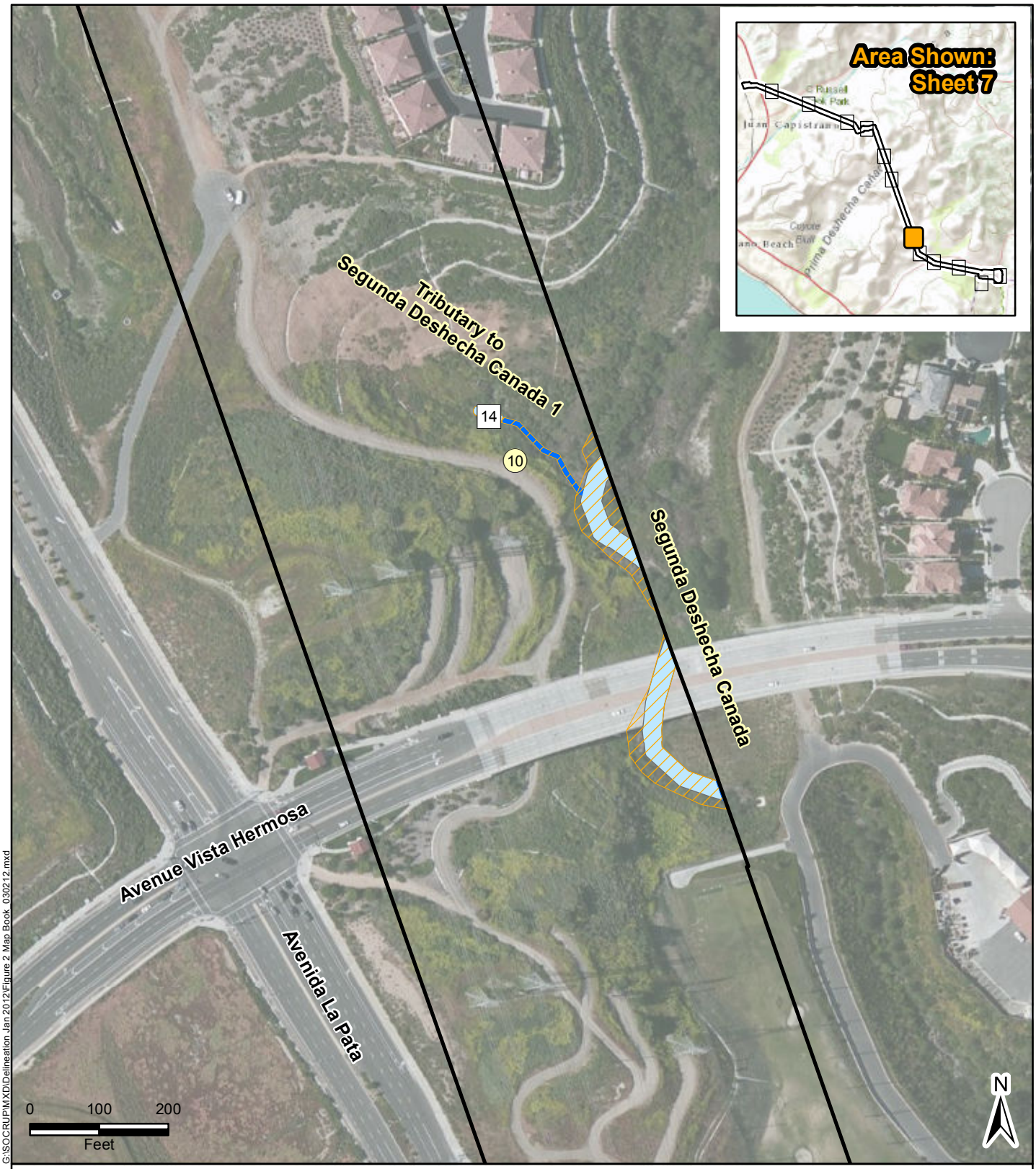

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South Orange County Reliability Enhancement Project

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Legend

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- CDFG Jurisdiction
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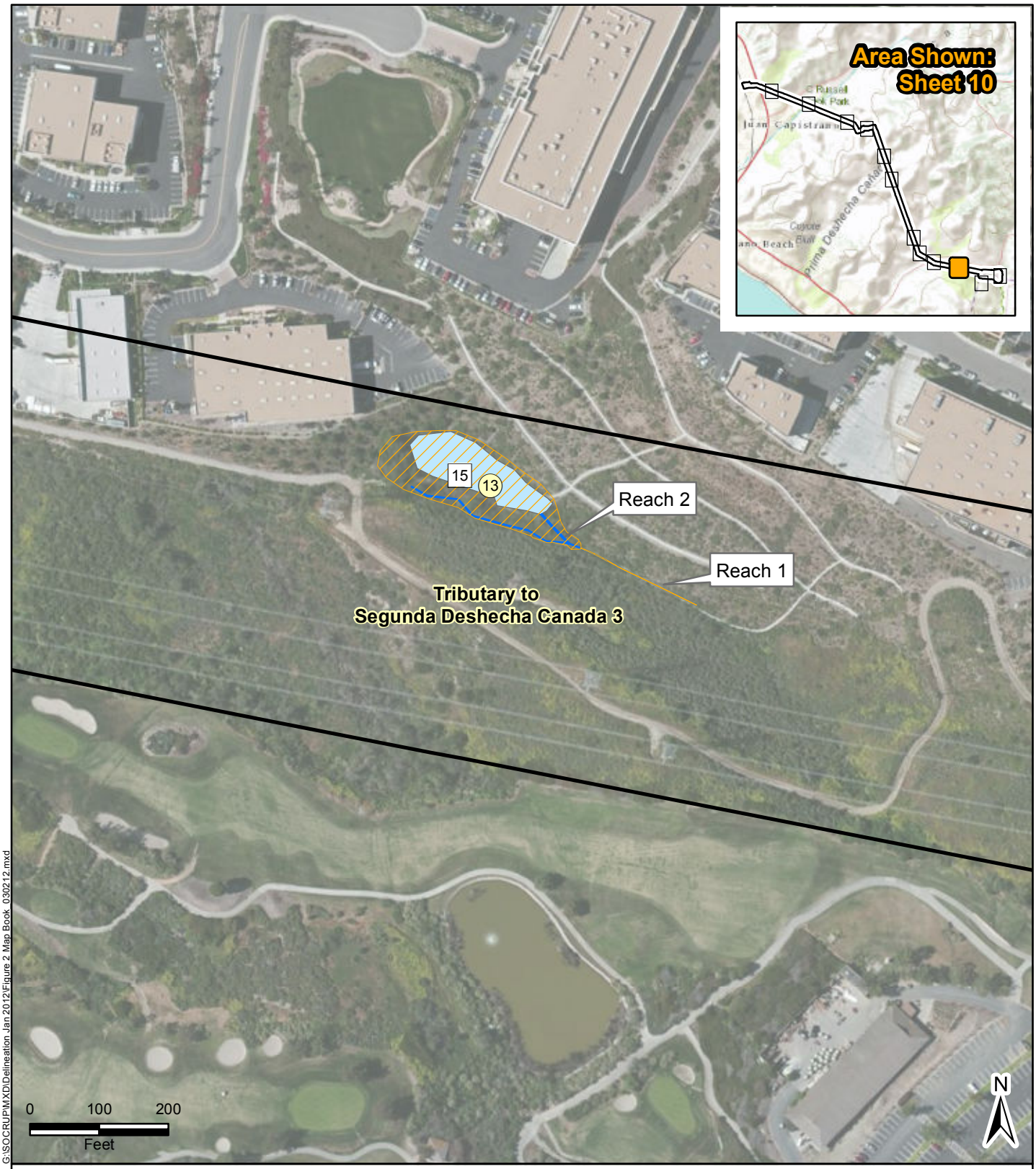

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South Orange County Reliability Enhancement Project

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Legend

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- CDFG Jurisdiction
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SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT

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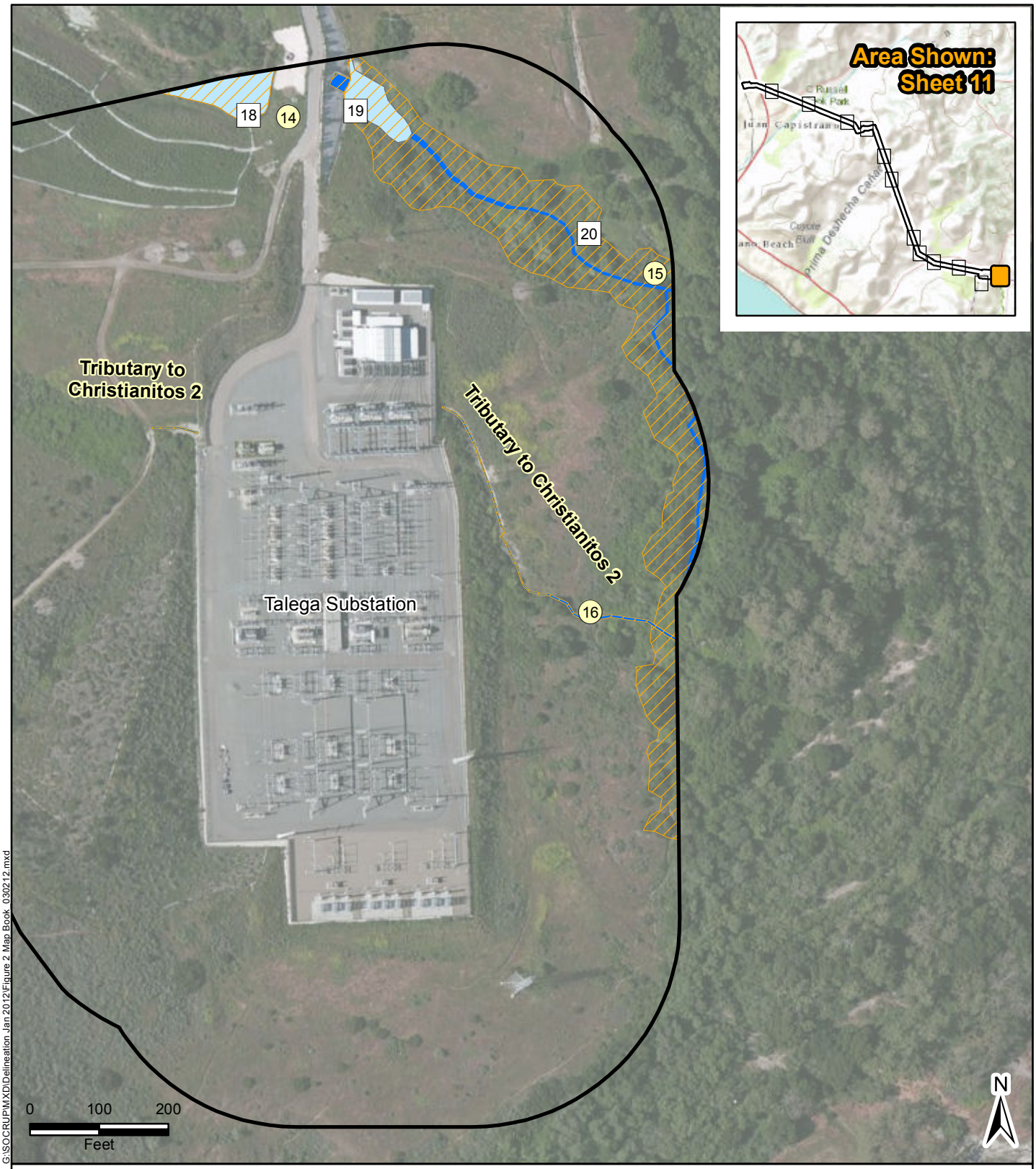

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- ACOE Wetland
- CDFG Jurisdiction
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SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT

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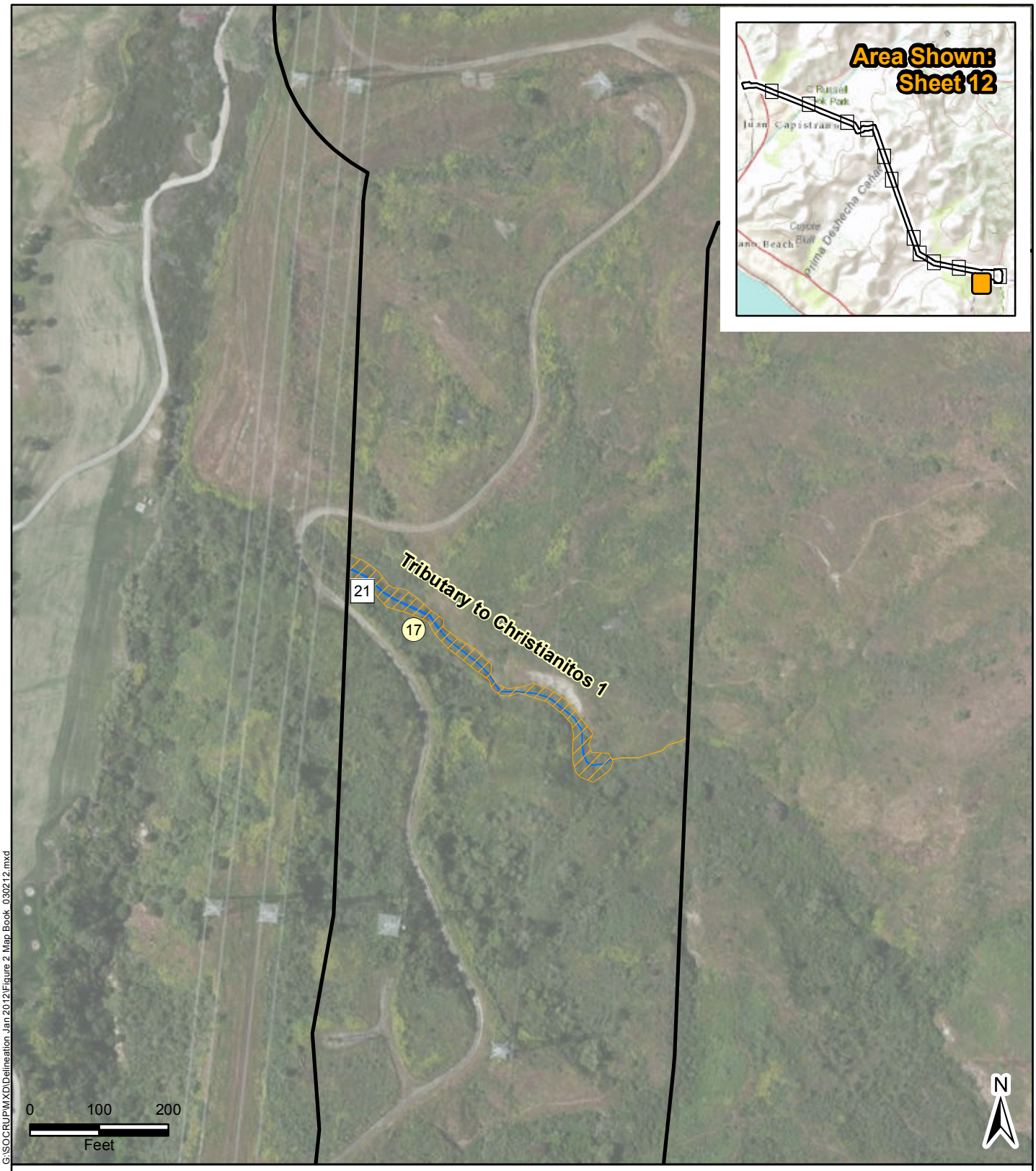

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South Orange County Reliability Enhancement Project

Delineation Map

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- CDFG Jurisdiction
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SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT

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Appendix A: Site Photographs

Appendix A: Site Photographs

	Photo 1: View of Horno Creek facing south. Creek was relatively narrow and was dominated by non-native vegetation.
	Photo 2: View of San Juan Creek facing west. Note flowing water and riparian/wetland vegetation.

Appendix A: Site Photographs

	Photo 3: View of San Juan Creek facing north. This area of San Juan Creek was relatively free of vegetation due to high water velocities.
	Photo 4: View of Adjacent Wetland to San Juan Creek. The wetland was small and had no surface water connection to the Creek.

Appendix A: Site Photographs

	Photo 5: Overview of Tributary to San Juan Creek facing southeast.
	Photo 6: View of Rancho San Juan drainage basin facing northwest. Basin was dominated by mulefat.

	Photo 7: View of Rancho San Juan drainage channel. Note distinct low-flow sign and riparian vegetation.
	Photo 8: View of lower reach of Tributary to Prima Deshecha Cañada facing west. Area was heavily vegetated with riparian vegetation, dominated by mulefat.

	Photo 9: View of upper reach of Tributary to Prima Deshecha Cañada facing northwest. The tributary is dominated by upland vegetation with scattered riparian vegetation.
	Photo 10: View of Tributary Segunda Deshecha Cañada 1. The tributary is located in uplands with OHWM only after connection to an outfall structure (not visible in photo).

	Photo 11: View of Segunda Deshecha Cañada facing south. The drainage supported a mixture of both upland and riparian vegetation.
	Photo 12: View of Tributary Segunda Deshecha Cañada 2 facing west. The tributary is a maintained flood control facility.

	Photo 13: View of lower reach of Tributary Segunda Deshecha Cañada 3 facing north. The tributary is dominated by wetland and riparian vegetation.
	Photo 14: View of basin portion of Tributary to Christianitos Creek 1 facing north. The bottom of the basin was dominated by cattails.

	Photo 15: View of Tributary to Christianitos Creek 1 facing southwest in the lower reach of the drainage. The feature was slightly incised and was dominated by riparian vegetation.
	Photo 16: View of Tributary to Christianitos Creek 2 facing north. The feature was partially channelized in a two foot concrete channel.

Photo 17: View of Tributary to Christianitos Creek 3 facing southeast. A portion of the tributary was heavily vegetated with riparian vegetation.

Appendix B: Wetland Determination Data Forms

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: SOCRUP City/County: Orange Sampling Date: 5/27/10

Applicant/Owner: SDG&E State: CA Sampling Point: #1

Investigator(s): D. Burton, K. McDonald Section, Township, Range: Sec 6, T8S, R7W

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): Concave Slope (%): _____

Subregion (LRR): _____ Lat: 33.5063 Long: 117.6432 Datum: NAD 83

Soil Map Unit Name: _____ NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓	No _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: 10x10)			
1. Baccharis salicifolia	30	Y	FACW
2.			
3.			
4.			
5.			
	30 = Total Cover		
Herb Stratum (Plot size: 10x10)			
1. Xanthium strumarium	5	N	FAC
2. Gnaphalium sp.	5	N	NI
3.			
4.			
5.			
6.			
7.			
8.			
	10 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 90 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

✓ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

Pit is in an area that is seasonally scoured and inundated by overflow from the river.

SOIL

Sampling Point: #1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
1-15	5y 4/2	100					sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ✓ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes ✓ No _____ Depth (inches): 15

Saturation Present? (includes capillary fringe) Yes ✓ No _____ Depth (inches): 12

Wetland Hydrology Present? Yes ✓ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: SOCRUP City/County: Orange Sampling Date: 5/26/10

Applicant/Owner: SDG&E State: CA Sampling Point: #2

Investigator(s): D. Burton, K. McDonald Section, Township, Range: Sec 6, T8S, R7W

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): Concave Slope (%): _____

Subregion (LRR): _____ Lat: 33.50643 Long: 117.64325 Datum: NAD 83

Soil Map Unit Name: _____ NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓ No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓ No _____	
Wetland Hydrology Present?	Yes ✓ No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 10x10)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix lasiolepis	40	Y	FACW
2. Salix exigua	10	N	FACW
3.			
4.			
	50 = Total Cover		
Sapling/Shrub Stratum (Plot size: 10x10)			
1. Baccharis salicifolia	50	Y	FACW
2. Salix exigua	5	N	FACW
3.			
4.			
5.			
	30 = Total Cover		
Herb Stratum (Plot size: 10x10)			
1. Pichris echioides	7	N	NI
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	7 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 93 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

✓ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

Pit is next to area of perennially running/wet region of San Juan Creek

SOIL

Sampling Point: #2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
1-3	5y 3/1	100					silty sand	
3-10	2.5y 3/2	100					sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ **No** _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ✓ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ✓ Water Marks (B1) (**Riverine**)
- ✓ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ✓ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes ✓ No _____ Depth (inches): 3

Saturation Present? (includes capillary fringe) Yes ✓ No _____ Depth (inches): 0

Wetland Hydrology Present? Yes ✓ **No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Sulfidic odor below 3 inches.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: SOCRUP City/County: Orange Sampling Date: 5/26/10

Applicant/Owner: SDG&E State: CA Sampling Point: #3

Investigator(s): D. Burton, K. McDonald Section, Township, Range: Sec 5, T8S, R7W

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): Concave Slope (%): _____

Subregion (LRR): _____ Lat: 33.50602 Long: 117.64256 Datum: NAD 83

Soil Map Unit Name: _____ NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓	No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓	No _____	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: 10x10)			
1. Baccharis salicifolia	50	Y	FACW
2. Salix exigua	5	N	FACW
3. Tamarix rammossissima	10	N	FACW
4.			
5.			
	65 = Total Cover		
Herb Stratum (Plot size: 10x10)			
1. Pichris echioides	7	N	NI
2. Scirpus sp.	10	Y	OBL
3. Cyperus sp.	5	N	OBL
4. Melilotus incana	10	Y	FAC
5.			
6.			
7.			
8.			
	32 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 68 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

✓ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

Pit is next to area of perennially running/wet region of San Juan Creek

SOIL

Sampling Point: #3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
1-3	Gley 1 2.5/10y						silt	
3-10	Gley 1 2.5/10y						rocky clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ **No** _____

Remarks:

Sulfidic odor below 1 inch. Soil almost black.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ✓ Water Marks (B1) (**Riverine**)
- ✓ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ✓ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes ✓ No _____ Depth (inches): 1

Saturation Present? (includes capillary fringe) Yes ✓ No _____ Depth (inches): 0

Wetland Hydrology Present? Yes ✓ **No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: SOCRUP City/County: Orange Sampling Date: 5/27/10

Applicant/Owner: SDG&E State: CA Sampling Point: #4

Investigator(s): D. Burton, K. McDonald Section, Township, Range: Sec 6, T8S, R7W

Landform (hillslope, terrace, etc.): Local relief (concave, convex, none): Concave Slope (%):

Subregion (LRR): Lat: 33.50611 Long: 117.64392 Datum: NAD 83

Soil Map Unit Name: NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No (If no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No

Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	No ✓	**Is the Sampled Area within a Wetland?** Yes No ✓
Hydric Soil Present?	Yes	No ✓	
Wetland Hydrology Present?	Yes	No ✓	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 10x10)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix lasiolepis	5	Y	FACW
2.			
3.			
4.			
	5	= Total Cover	
Sapling/Shrub Stratum (Plot size: 10x10)			
1. Baccharis salicifolia	10	Y	FACW
2.			
3.			
4.			
5.			
	10	= Total Cover	
Herb Stratum (Plot size: 10x10)			
1. Carduus sp.	15	N	NI
2. Tropeolum majus	5	N	NI
3. Bromus diandrus	30	Y	NI
4. Ambrosia psylostachia	10	N	FAC
5.			
6.			
7.			
8.			
	32	= Total Cover	
Woody Vine Stratum (Plot size:)			
1.			
2.			
		= Total Cover	

% Bare Ground in Herb Stratum % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

✓ Dominance Test is >50%

Prevalence Index is ≤3.0[1]

Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No

Remarks:

Pit is approx. 10 feet from a small drainage leading to San Juan Creek and 20 ft from Pit #3.

SOIL

Sampling Point: #4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
1-4	2.5y - 3/3						sandy loam	
4-10	2.5y - 5/3						sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: SOCRUP City/County: Orange Sampling Date: 5/27/10

Applicant/Owner: SDG&E State: CA Sampling Point: #5

Investigator(s): D. Burton, K. McDonald Section, Township, Range: Sec 6, T8S, R7W

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): Concave Slope (%): _____

Subregion (LRR): _____ Lat: 33.50605 Long: 117.64383 Datum: NAD 83

Soil Map Unit Name: _____ NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓ No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓ No _____	
Wetland Hydrology Present?	Yes ✓ No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 10x10)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix lasiolepis	40	Y	FACW
2.			
3.			
4.			
	40 = Total Cover		
Sapling/Shrub Stratum (Plot size: 10x10)			
1. Baccharis salicifolia	10	Y	FACW
2.			
3.			
4.			
5.			
	10 = Total Cover		
Herb Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	_____ = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

✓ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

Approx. 10 feet from water's edge.

SOIL

Sampling Point: #5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
1-6	10yr - 3/2	60	5yr - 5/8	40			sand	
6-10	2.5yr - 2.5/1						sandy silt	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ **No** _____

Remarks:

Sulfuric odor and organic streaking in sandy soil

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ✓ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ✓ No _____ Depth (inches): _____

Water Table Present? Yes ✓ No ✓ Depth (inches): 9

Saturation Present? (includes capillary fringe) Yes ✓ No _____ Depth (inches): 8

Wetland Hydrology Present? Yes ✓ **No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: SOCRUP City/County: Orange Sampling Date: 5/27/10

Applicant/Owner: SDG&E State: CA Sampling Point: # 6

Investigator(s): D. Burton, K. McDonald Section, Township, Range: Sec 5, T8S, R7W

Landform (hillslope, terrace, etc.): Local relief (concave, convex, none): Concave Slope (%):

Subregion (LRR): Lat: 33.506 Long: 117.64227 Datum: NAD 83

Soil Map Unit Name: NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No (If no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No

Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓ No	**Is the Sampled Area within a Wetland?** Yes No ✓
Hydric Soil Present?	Yes No ✓	
Wetland Hydrology Present?	Yes No ✓	

Remarks:

Willow scrub with non-native weed understory.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 10x10)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix lasiolepis	10	Y	FACW
2.			
3.			
4.			
	10 = Total Cover		
Sapling/Shrub Stratum (Plot size: 10x10)			
1. Salix exigua	5	Y	FACW
2. Baccharis sarothroides	5	Y	FACW
3.			
4.			
5.			
	10 = Total Cover		
Herb Stratum (Plot size: 10x10)			
1. Brassica nigra	20	Y	NI
2. Medicago indica	30	Y	FAC
3. Ambrosia psylostachya	5	N	FAC
4.			
5.			
6.			
7.			
8.			
	55 = Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 45 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 80 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

✓ Dominance Test is >50%

Prevalence Index is ≤3.0[1]

Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No

Remarks:

SOIL

Sampling Point: # 6

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	10yr - 4/4							

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

Approx. 10 feet upslope from standing water in region between upland and riparian vegetation.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: SOCRUP City/County: Orange County Sampling Date: 5/27/10

Applicant/Owner: SDG&E State: CA Sampling Point: #7

Investigator(s): D. Burton, K. McDonald Section, Township, Range: Sec 5, T8S, R7W

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): Concave Slope (%): _____

Subregion (LRR): _____ Lat: 33.50601 Long: 117.64227 Datum: NAD 83

Soil Map Unit Name: _____ NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓ No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓ No _____	
Wetland Hydrology Present?	Yes ✓ No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 15x15)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix lasiolepis	20	Y	FACW
2.			
3.			
4.			
	20 = Total Cover		
Sapling/Shrub Stratum (Plot size: 10x10)			
1. Salix exigua	30	Y	OBL
2. Baccharis salicifolia	20	Y	FACW
3.			
4.			
5.			
	50 = Total Cover		
Herb Stratum (Plot size: 10x10)			
1. Juncus sp.	10	N	FACW
2. Polypogon monspeliensis	40	Y	FACW
3. Melilotus indica	10	N	FAC
4.			
5.			
6.			
7.			
8.			
	60 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1. N/A			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 50 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

✓ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

Approximately 6 feet from standing water.

SOIL

Sampling Point: #7

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
1-4	10y - 4/2						sandy clay	
4-8	10y - 3/2						silty sand	
8-10	5y - 3/1						silty sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ✓ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ **No** _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ✓ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes ✓ No _____ Depth (inches): 9

Saturation Present? (includes capillary fringe) Yes ✓ No _____ Depth (inches): 8

Wetland Hydrology Present? Yes ✓ **No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: SOCRUP City/County: Orange County Sampling Date: 5/27/10

Applicant/Owner: SDG&E State: CA Sampling Point: #8

Investigator(s): D. Burton, K. McDonald Section, Township, Range: Sec 6, T8S, R7W

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): Concave Slope (%): _____

Subregion (LRR): _____ Lat: 33.51004 Long: 117.6577 Datum: NAD 83

Soil Map Unit Name: _____ NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓	No _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 15x15)	Absolute % Cover	Dominant Species?	Indicator Status
1. Ficus carica	10	N	NI
2. Eucalyptus citriadora	30	Y	NI
3. Acer negundo	20	N	NI
4.			
	50	= Total Cover	
Sapling/Shrub Stratum (Plot size: 10x10)			
1.			
2.			
3.			
4.			
5.			
	_____	= Total Cover	
Herb Stratum (Plot size: 10x10)			
1. Fragaria x ananassa	90	Y	NI
2. Cyperus alternafolius	10	N	FACW
3.			
4.			
5.			
6.			
7.			
8.			
	100	= Total Cover	
Woody Vine Stratum (Plot size: _____)			
1. N/A			
2.			
	_____	= Total Cover	

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 20 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species 10	x 2 =	20
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals:	(A)	(B)

Prevalence Index = B/A = 2

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

✓ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

At the edge of a maintained golf course with lots of ornamental plant species.

SOIL

Sampling Point: #8

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
1-4	2.5y - 6/2		7.5yr - 6/8				loamyclay	streaking
4-10	2.5y - 4/1	97	5yr - 5/8	3			sandy clay	mottles

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ✓ Water Marks (B1) (**Riverine**)
- ✓ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No _____ Depth (inches): _____

Water Table Present? Yes _____ No _____ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No _____ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: SOCRUP City/County: Orange County Sampling Date: 5/27/10

Applicant/Owner: SDG&E State: CA Sampling Point: #9

Investigator(s): D. Burton, K. McDonald Section, Township, Range: Sec 6, T8S, R7W

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): Concave Slope (%): _____

Subregion (LRR): _____ Lat: 33.5102 Long: 117.65761 Datum: NAD 83

Soil Map Unit Name: _____ NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓ No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓ No _____	
Wetland Hydrology Present?	Yes ✓ No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 15x15)	Absolute % Cover	Dominant Species?	Indicator Status
1. Fraxinus sp.	30	Y	FACW
2. Salix lasiolepis	20	Y	FACW
3. Washingtonia robusta	10	N	NI
4. Acer negundo	10	N	NI
	70	= Total Cover	
Sapling/Shrub Stratum (Plot size: _____)			
1. N/A			
2.			
3.			
4.			
5.			
	_____	= Total Cover	
Herb Stratum (Plot size: _____)			
1. N/A			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	_____	= Total Cover	
Woody Vine Stratum (Plot size: _____)			
1. N/A			
2.			
	_____	= Total Cover	

% Bare Ground in Herb Stratum 100 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

✓ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

Mostly ornamental trees at the edge of a working golf course and a small perennial stream, no understory.

SOIL

Sampling Point: #9

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
1-6	2.5y - 3/2		2.5yr - 5/8				loamyclay	
6-10	2.5yr 5/2		2.5yr - 4/8				clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ✓ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ **No** _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ✓ No _____ Depth (inches): 7

Wetland Hydrology Present? Yes ✓ **No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: SOCRUP City/County: Orange County Sampling Date: 5/27/10

Applicant/Owner: SDG&E State: CA Sampling Point: #10

Investigator(s): D. Burton, K. McDonald Section, Township, Range: Sec 6, T8S, R7W

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): Concave Slope (%): _____

Subregion (LRR): _____ Lat: 33.51027 Long: 117.65754 Datum: NAD 83

Soil Map Unit Name: _____ NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓	No _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 15x15)	Absolute % Cover	Dominant Species?	Indicator Status
1. Washingtonia robusta	30	Y	NI
2. Fraxinus sp.	50	Y	FACW
3. Acer negundo	10	N	NI
4.			
	90%	= Total Cover	
Sapling/Shrub Stratum (Plot size: 10x10)			
1. N/A			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: 10x10)			
1. Cyperus alternafolia	40	Y	FACW
2. Oxalis per-caprae	10	N	NI
3.			
4.			
5.			
6.			
7.			
8.			
	50	= Total Cover	
Woody Vine Stratum (Plot size: 10x10)			
1. N/A			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 50 % Cover of Biotic Crust 0%

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 67 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

✓ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

Approximately 15 feet from running water.

SOIL

Sampling Point: #10

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
1-10	2.5yr - 5/3						sandy loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: SOCRUP City/County: Orange County Sampling Date: 5/27/10

Applicant/Owner: SDG&E State: CA Sampling Point: #11

Investigator(s): D. Burton, K. McDonald Section, Township, Range: Sec 6, T8S, R7W

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): Concave Slope (%): _____

Subregion (LRR): _____ Lat: 33.510 Long: 117.657 Datum: NAD 83

Soil Map Unit Name: _____ NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓ No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓ No _____	
Wetland Hydrology Present?	Yes ✓ No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 15x15)	Absolute % Cover	Dominant Species?	Indicator Status
1. Fraxinus sp.	60	Y	FACW
2. Washingtonia robusta	20	Y	NI
3. Acer negundo	10	N	NI
4.			
	90	= Total Cover	
Sapling/Shrub Stratum (Plot size: 10x10)			
1. N/A			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: 10x10)			
1. Cyperus alternafolius	50	Y	FACW
2. Oxalis per-caprae	5	N	NI
3.			
4.			
5.			
6.			
7.			
8.			
	55	= Total Cover	
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 45 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 67 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

✓ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

Approximately 8 feet from Pit #10, closer to stream.

SOIL

Sampling Point: #11

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
1-6	2.5y - 3/1		5yr - 5/8	10			clay	
6-9	2.5y - 4/1		2.5yr - 5/8	40			sandy clay	
9-10	Gley 1 - 2.5/N							

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No ___

Remarks:

Third layer has sulfur odor; very high rusty streaking component.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ✓ Hydrogen Sulfide Odor (C1)
- ✓ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No ✓ Depth (inches): _____

Water Table Present? Yes ___ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ✓ No ___ Depth (inches): 9

Wetland Hydrology Present? Yes ✓ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Approximately 3 feet from running water.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: SOCRUP City/County: Orange County Sampling Date: 5/27/10

Applicant/Owner: SDG&E State: CA Sampling Point: # 12

Investigator(s): D. Burton, K. McDonald Section, Township, Range: Sec 22, T8S, R7W

Landform (hillslope, terrace, etc.): Local relief (concave, convex, none): Concave Slope (%):

Subregion (LRR): Lat: 33.45998 Long: 117.60082 Datum: NAD 83

Soil Map Unit Name: NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No (If no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No

Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓ No	**Is the Sampled Area within a Wetland?** Yes ✓ No
Hydric Soil Present?	Yes ✓ No	
Wetland Hydrology Present?	Yes ✓ No	

Remarks:

Approximately 5 feet from running water, just within the edge of riparian habitat and upland habitat.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix lasiolepis	10		
2.			
3.			
4.			
	10 = Total Cover		
Sapling/Shrub Stratum (Plot size: 10x10)			
1. Salix exigua	30	Y	OBL
2. Salix lasiolepis	30	Y	FACW
3. Typha sp.	30	Y	OBL
4.			
5.			
	90 = Total Cover		
Herb Stratum (Plot size: 10x10)			
1. Melilotus indica	50	Y	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	50 = Total Cover		
Woody Vine Stratum (Plot size:)			
1. N/A			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 50 % Cover of Biotic Crust

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

✓ Dominance Test is >50%

Prevalence Index is ≤3.0[1]

Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No

Remarks:

Plot is approx. 5 feet from edge of running stream.

SOIL

Sampling Point: # 12

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
1-6	2.5y - 3/2						loamy clay+	
6-10	2.5y - 3/2		2.5yr - 3				loamy clay+	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ✓ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ **No** _____

Remarks:

Mottles and clay increase with depth. The pit extends below the level of the surface water, but the clay is likely preventing saturation seepage.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ **No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

This drainage appears to have been altered in the past, and is likely fed by residential runoff. The toe of the slope is within feet of the drainage, and is covered with upland species along its length.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: SOCRUP City/County: Orange County Sampling Date: 5/27/10

Applicant/Owner: SDG&E State: _____ Sampling Point: #13

Investigator(s): D. Burton, K. McDonald Section, Township, Range: Sec 22, T8S, R7W

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): Concave Slope (%): _____

Subregion (LRR): _____ Lat: 33.460 Long: 117.601 Datum: _____

Soil Map Unit Name: _____ NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓ No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓ No _____	
Wetland Hydrology Present?	Yes ✓ No _____	

Remarks:

The pit is within 8 feet of running water, 2 feet from the toe of the slope. (least Bell's vireo observed immediately adjacent to the site)

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. N/A			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: 10x10)			
1. Baccharis salicifolia	50	Y	FACW
2. Isocoma menziesii	20	N	NI
3.			
4.			
5.			
	70 = Total Cover		
Herb Stratum (Plot size: 10x10)			
1. Ambrosia psilostachya	25	Y	FAC
2. Apium graveloens	5	N	FACW
3. Polypogon monspeliensis	40	Y	FACW
4. Picris echioides	10	N	FAC
5.			
6.			
7.			
8.			
	80 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 20 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species 55.9	x 2 = 111.8
FAC species 20.6	x 3 = 61.8
FACU species _____	x 4 = _____
UPL species 11.8	x 5 = 59
Column Totals: 88.3 (A)	232.6 (B)

Prevalence Index = B/A = 2.6

Hydrophytic Vegetation Indicators:

✓ Dominance Test is >50%

✓ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

SOIL

Sampling Point: #13

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
1-11	2.5y - 3/2		2.5yr - 3/6				loamy clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ✓ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ **No** _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ✓ No _____ Depth (inches): 11

Wetland Hydrology Present? Yes ✓ **No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: SOCRUP City/County: Orange Sampling Date: 5/27/10

Applicant/Owner: SDG&E State: CA Sampling Point: #14

Investigator(s): T. Kegel, L. Jensen Section, Township, Range: Sec 22, T8S, R7W

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): Concave Slope (%): _____

Subregion (LRR): _____ Lat: 33.465742 Long: 117.603443 Datum: NAD 83

Soil Map Unit Name: _____ NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓ No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓ No _____	
Wetland Hydrology Present?	Yes ✓ No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1. Baccharis salicifolia	80	Y	FACW
2.			
3.			
4.			
5.			
	80 = Total Cover		
Herb Stratum (Plot size: _____)			
1. Polypogon monspeliensis	5	N	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	5 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 90 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

✓ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

SOIL

Sampling Point: #14

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
1-11	2.5y - 3/2	100					loamy clay	Hydrogn Sulfide Odor

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- — Histosol (A1)
- — Histic Epipedon (A2)
- — Black Histic (A3)
- ✓ Hydrogen Sulfide (A4)
- — Stratified Layers (A5) (**LRR C**)
- — 1 cm Muck (A9) (**LRR D**)
- — Depleted Below Dark Surface (A11)
- — Thick Dark Surface (A12)
- — Sandy Mucky Mineral (S1)
- — Sandy Gleyed Matrix (S4)
- — Sandy Redox (S5)
- — Stripped Matrix (S6)
- — Loamy Mucky Mineral (F1)
- — Loamy Gleyed Matrix (F2)
- — Depleted Matrix (F3)
- — Redox Dark Surface (F6)
- — Depleted Dark Surface (F7)
- — Redox Depressions (F8)
- — Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- — 1 cm Muck (A9) (**LRR C**)
- — 2 cm Muck (A10) (**LRR B**)
- — Reduced Vertic (F18)
- — Red Parent Material (TF2)
- — Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: ———

Depth (inches): ———

Hydric Soil Present? Yes ✓ No ———

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

~~Primary Indicators (minimum of one required; check all that apply)~~

- ✓ Surface Water (A1)
- — High Water Table (A2)
- ✓ Saturation (A3)
- — Water Marks (B1) (**Nonriverine**)
- — Sediment Deposits (B2) (**Nonriverine**)
- — Drift Deposits (B3) (**Nonriverine**)
- — Surface Soil Cracks (B6)
- — Inundation Visible on Aerial Imagery (B7)
- — Water-Stained Leaves (B9)
- — Salt Crust (B11)
- — Biotic Crust (B12)
- — Aquatic Invertebrates (B13)
- — Hydrogen Sulfide Odor (C1)
- — Oxidized Rhizospheres along Living Roots (C3)
- — Presence of Reduced Iron (C4)
- — Recent Iron Reduction in Tilled Soils (C6)
- — Thin Muck Surface (C7)
- — Other (Explain in Remarks)

~~Secondary Indicators (2 or more required)~~

- — Water Marks (B1) (**Riverine**)
- — Sediment Deposits (B2) (**Riverine**)
- — Drift Deposits (B3) (**Riverine**)
- — Drainage Patterns (B10)
- — Dry-Season Water Table (C2)
- — Crayfish Burrows (C8)
- — Saturation Visible on Aerial Imagery (C9)
- — Shallow Aquitard (D3)
- — FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ✓ No ——— Depth (inches): ———

Water Table Present? Yes ✓ No ——— Depth (inches): ———

Saturation Present? (includes capillary fringe) Yes ✓ No ——— Depth (inches): ———

Wetland Hydrology Present? Yes ✓ No ———

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: SOCRUP City/County: Orange Sampling Date: 7/14/10

Applicant/Owner: SDG&E State: CA Sampling Point: #15

Investigator(s): T. Kegel, L. Jensen Section, Township, Range: Sec 26, T8S, R7W

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): Concave Slope (%): _____

Subregion (LRR): _____ Lat: 33.456041 Long: 117.586498 Datum: NAD 83

Soil Map Unit Name: _____ NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓ No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓ No _____	
Wetland Hydrology Present?	Yes ✓ No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix lasiolepis	100	Y	FACW
2.			
3.			
4.			
	100 = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1. Typha ssp.	10	N	OBL
2.			
3.			
4.			
5.			
	10 = Total Cover		
Herb Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	_____ = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 50 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

✓ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

SOIL

Sampling Point: #15

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
1-11	10GY	100					loamy clay	Strong Hydrogn Sulfide Odor

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ✓ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ **No** _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ✓ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ✓ No _____ Depth (inches): _____

Water Table Present? Yes ✓ No _____ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ✓ No _____ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ **No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: SOCREP | City/County: San Juan Capistrano, Orange | Sampling Date: 12/28/2011

Applicant/Owner: SDG&E | State: CA | Sampling Point: 16

Investigator(s): T. Kegel & S. Underbrink | Section, Township, Range: Sec6, T8S, R7W

Landform (hillslope, terrace, etc.): Outfall Pipe | Local relief (concave, convex, none): Concave | Slope (%): 1-2%

Subregion (LRR): C - Mediterranean California | Lat: 33° 30.408' N | Long: 117°, 38.676' W | Datum:

Soil Map Unit Name: SORRENTO LOAM, 0 TO 2 PERCENT SLOPES | NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes (●) No ( ) (If no, explain in Remarks.)

Are Vegetation [ ] Soil [ ] or Hydrology [ ] significantly disturbed? Are "Normal Circumstances" present? Yes (●) No ( )

Are Vegetation [ ] Soil [ ] or Hydrology [ ] naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes (●)	No ( )	
Hydric Soil Present?	Yes (●)	No ( )	**Is the Sampled Area within a Wetland?** Yes (●) No ( )
Wetland Hydrology Present?	Yes (●)	No ( )	

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Quarcus agrifolia*	30	Yes	Not Listed
2. *Sambucus mexicana*	15	No	FACU
3. *Rhus ovata*	5	No	Not Listed
4. *Arundo donax*	5	No	FACW
Total Cover:	55 %		
Sapling/Shrub Stratum			
1. *Typha latifolia*	60	Yes	OBL
2. *Cyperus alternifolius*	10	No	OBL
3. *Salix lasiolepis*	2	No	FACW
4.			
5.			
Total Cover:	72 %		
Herb Stratum			
1. *Epilobium ciliatum*	5	No	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover:	5 %		
Woody Vine Stratum			
1.			
2.			
Total Cover:	%		

% Bare Ground in Herb Stratum % | % Cover of Biotic Crust %

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	70	x 1 =	70
FACW species	12	x 2 =	24
FAC species		x 3 =	0
FACU species	15	x 4 =	60
UPL species	35	x 5 =	175
Column Totals:	132 (A)		329 (B)

Prevalence Index = B/A = 2.49

Hydrophytic Vegetation Indicators:

- [ ] Dominance Test is >50%
- [x] Prevalence Index is ≤3.0[1]
- [ ] Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- [ ] Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes (●) No ( )

Remarks:

SOIL

Sampling Point: 16

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture[3]	Remarks
0-14	2.5 Y 2.5/1	100					Loam	10% Organic
14-18	Gley 1 3/10GY	90	10 YR 6/6	10	C	M	Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

[3]Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- [ ] Histosol (A1)
- [ ] Histic Epipedon (A2)
- [ ] Black Histic (A3)
- [x] Hydrogen Sulfide (A4)
- [ ] Stratified Layers (A5) (**LRR C**)
- [ ] 1 cm Muck (A9) (**LRR D**)
- [x] Depleted Below Dark Surface (A11)
- [ ] Thick Dark Surface (A12)
- [ ] Sandy Mucky Mineral (S1)
- [ ] Sandy Gleyed Matrix (S4)
- [ ] Sandy Redox (S5)
- [ ] Stripped Matrix (S6)
- [ ] Loamy Mucky Mineral (F1)
- [ ] Loamy Gleyed Matrix (F2)
- [ ] Depleted Matrix (F3)
- [ ] Redox Dark Surface (F6)
- [ ] Depleted Dark Surface (F7)
- [ ] Redox Depressions (F8)
- [ ] Vernal Pools (F9)

Indicators for Problematic Hydric Soils:[4]

- [ ] 1 cm Muck (A9) (**LRR C**)
- [ ] 2 cm Muck (A10) (**LRR B**)
- [ ] Reduced Vertic (F18)
- [ ] Red Parent Material (TF2)
- [ ] Other (Explain in Remarks)

[4]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes (•) No ( )

Remarks: Strong Hydrogen Sulfide odor

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- [x] Surface Water (A1)
- [x] High Water Table (A2)
- [x] Saturation (A3)
- [ ] Water Marks (B1) (**Nonriverine**)
- [ ] Sediment Deposits (B2) (**Nonriverine**)
- [ ] Drift Deposits (B3) (**Nonriverine**)
- [ ] Surface Soil Cracks (B6)
- [ ] Inundation Visible on Aerial Imagery (B7)
- [ ] Water-Stained Leaves (B9)
- [ ] Salt Crust (B11)
- [ ] Biotic Crust (B12)
- [ ] Aquatic Invertebrates (B13)
- [ ] Hydrogen Sulfide Odor (C1)
- [ ] Oxidized Rhizospheres along Living Roots (C3)
- [ ] Presence of Reduced Iron (C4)
- [ ] Recent Iron Reduction in Plowed Soils (C6)
- [ ] Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- [x] Water Marks (B1) (**Riverine**)
- [ ] Sediment Deposits (B2) (**Riverine**)
- [x] Drift Deposits (B3) (**Riverine**)
- [x] Drainage Patterns (B10)
- [ ] Dry-Season Water Table (C2)
- [ ] Thin Muck Surface (C7)
- [ ] Crayfish Burrows (C8)
- [ ] Saturation Visible on Aerial Imagery (C9)
- [ ] Shallow Aquitard (D3)
- [ ] FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes (•)	No ( )	Depth (inches):	2
Water Table Present?	Yes (•)	No ( )	Depth (inches):	5
Saturation Present? (includes capillary fringe)	Yes (•)	No ( )	Depth (inches):	0

Wetland Hydrology Present? Yes (•) No ( )

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: SOCREP | City/County: San Juan Capistrano, Orange | Sampling Date: 12/28/2011

Applicant/Owner: SDG&E | State: CA | Sampling Point: 17

Investigator(s): T. Kegel & S. Underbrink | Section, Township, Range: Sec6, T8S, R7W

Landform (hillslope, terrace, etc.): Outfall Pipe | Local relief (concave, convex, none): Concave | Slope (%): 1-2%

Subregion (LRR): C - Mediterranean California | Lat: 33° 30.406' N | Long: 117°, 38.677' W | Datum:

Soil Map Unit Name: SORRENTO LOAM, 0 TO 2 PERCENT SLOPES | NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes (●) No ( ) (If no, explain in Remarks.)

Are Vegetation [ ] Soil [ ] or Hydrology [ ] significantly disturbed? Are "Normal Circumstances" present? Yes (●) No ( )

Are Vegetation [ ] Soil [ ] or Hydrology [ ] naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes (●)	No ( )	
Hydric Soil Present?	Yes ( )	No (●)	**Is the Sampled Area within a Wetland?** Yes ( ) No (●)
Wetland Hydrology Present?	Yes (●)	No ( )	

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Quarcus agrifolia*	15		Not Listed
2.			
3.			
4.			
Total Cover:	15 %		
Sapling/Shrub Stratum			
1. *Typha latifolia*	10	No	OBL
2. *Arundo donax*	40	Yes	FACW
3.			
4.			
5.			
Total Cover:	50 %		
Herb Stratum			
1. *Epilobium ciliatum*	20	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover:	20 %		
Woody Vine Stratum			
1.			
2.			
Total Cover:	%		

% Bare Ground in Herb Stratum % | % Cover of Biotic Crust %

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	10	x 1 =	10
FACW species	60	x 2 =	120
FAC species		x 3 =	0
FACU species		x 4 =	0
UPL species	15	x 5 =	75
Column Totals:	85 (A)		205 (B)

Prevalence Index = B/A = 2.41

Hydrophytic Vegetation Indicators:

- [X] Dominance Test is >50%
- [X] Prevalence Index is ≤3.0[1]
- [ ] Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- [ ] Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes (●) No ( )

Remarks:

SOIL

Sampling Point: 17

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture[3]	Remarks
0-5	2.5 Y 2.5/1	100					Loam	5% Organic
5-9	2.5 Y 3/1	100					sandy loam	
9-18	2.5 Y 5/3	100					sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

[3]Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) (**LRR C**)
- ☐ 1 cm Muck (A9) (**LRR D**)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils:[4]

- ☐ 1 cm Muck (A9) (**LRR C**)
- ☐ 2 cm Muck (A10) (**LRR B**)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

[4]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes ○ No ◉

Remarks: Strong Hydrogen Sulfide odor

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☒ Surface Water (A1)
- ☒ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1) (**Nonriverine**)
- ☐ Sediment Deposits (B2) (**Nonriverine**)
- ☐ Drift Deposits (B3) (**Nonriverine**)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Plowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☒ Water Marks (B1) (**Riverine**)
- ☐ Sediment Deposits (B2) (**Riverine**)
- ☒ Drift Deposits (B3) (**Riverine**)
- ☒ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ○ No ◉ Depth (inches):

Water Table Present? Yes ◉ No ○ Depth (inches): 8

Saturation Present? (includes capillary fringe) Yes ○ No ◉ Depth (inches):

Wetland Hydrology Present? Yes ◉ No ○

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: SOCREP | City/County: San Juan Capistrano, Orange | Sampling Date: 12/29/2011

Applicant/Owner: SDG&E | State: CA | Sampling Point: 18

Investigator(s): T. Kegel & S. Underbrink | Section, Township, Range: s25,T8S,R7W

Landform (hillslope, terrace, etc.): Basin | Local relief (concave, convex, none): Concave | Slope (%): 1-2%

Subregion (LRR): C - Mediterranean California | Lat: 33° 27.308' N | Long: 117°, 34.314' W | Datum:

Soil Map Unit Name: ALO CLAY, 15 TO 30 PERCENT SLOPES | NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes (●) No ( ) (If no, explain in Remarks.)

Are Vegetation [ ] Soil [ ] or Hydrology [ ] significantly disturbed? Are "Normal Circumstances" present? Yes (●) No ( )

Are Vegetation [ ] Soil [ ] or Hydrology [ ] naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes (●)	No ( )	
Hydric Soil Present?	Yes (●)	No ( )	**Is the Sampled Area within a Wetland?** Yes (●) No ( )
Wetland Hydrology Present?	Yes (●)	No ( )	

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:	%		
Sapling/Shrub Stratum			
1. *Typha latifolia*	80	Yes	OBL
2. *Scirpus americanus*	10	No	OBL
3.			
4.			
5.			
Total Cover:	90 %		
Herb Stratum			
1. *Eleocharis palustis*	10	No	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover:	10 %		
Woody Vine Stratum			
1.			
2.			
Total Cover:	%		

% Bare Ground in Herb Stratum % | % Cover of Biotic Crust %

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	100	x 1 =	100
FACW species		x 2 =	0
FAC species		x 3 =	0
FACU species		x 4 =	0
UPL species		x 5 =	0
Column Totals:	100 (A)		100 (B)

Prevalence Index = B/A = 1.00

Hydrophytic Vegetation Indicators:

- [X] Dominance Test is >50%
- [X] Prevalence Index is ≤3.0[1]
- [ ] Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- [ ] Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes (●) No ( )

Remarks:

SOIL

Sampling Point: 18

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture[3]	Remarks
0-4	2.5 Y 2.5/1	100					Loam	
4-18	10 YR 2/1	100					Clay	Histic

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

[3]Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☒ Black Histic (A3)
- ☒ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) (**LRR C**)
- ☐ 1 cm Muck (A9) (**LRR D**)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils:[4]

- ☐ 1 cm Muck (A9) (**LRR C**)
- ☐ 2 cm Muck (A10) (**LRR B**)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

[4]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes ◉ No ○

Remarks: Strong Hydrogen Sulfide odor

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☒ Surface Water (A1)
- ☒ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1) (**Nonriverine**)
- ☐ Sediment Deposits (B2) (**Nonriverine**)
- ☐ Drift Deposits (B3) (**Nonriverine**)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Plowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (**Riverine**)
- ☐ Sediment Deposits (B2) (**Riverine**)
- ☐ Drift Deposits (B3) (**Riverine**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ◉ No ○ Depth (inches): 5

Water Table Present? Yes ◉ No ○ Depth (inches): 5

Saturation Present? (includes capillary fringe) Yes ◉ No ○ Depth (inches): 0

Wetland Hydrology Present? Yes ◉ No ○

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: SOCREP | City/County: San Juan Capistrano, Orange | Sampling Date: 12/29/2011

Applicant/Owner: SDG&E | State: CA | Sampling Point: 19

Investigator(s): T. Kegel & S. Underbrink | Section, Township, Range: sec25, T8S, R7W

Landform (hillslope, terrace, etc.): Wash | Local relief (concave, convex, none): Concave | Slope (%): 2-3%

Subregion (LRR): C - Mediterranean California | Lat: 33° 27.309' N | Long: 117°, 34.284' W | Datum: NAD 83

Soil Map Unit Name: SORRENTO LOAM, 2 TO 9 PERCENT SLOPES | NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes (●) No ( ) (If no, explain in Remarks.)

Are Vegetation [ ] Soil [ ] or Hydrology [ ] significantly disturbed? Are "Normal Circumstances" present? Yes (●) No ( )

Are Vegetation [ ] Soil [ ] or Hydrology [ ] naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes (●)	No ( )	
Hydric Soil Present?	Yes (●)	No ( )	**Is the Sampled Area within a Wetland?** Yes (●) No ( )
Wetland Hydrology Present?	Yes (●)	No ( )	

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Salix lasiolepis*	90	Yes	FACW
2.			
3.			
4.			
Total Cover:	90 %		
Sapling/Shrub Stratum			
1. *Typha latifolia*	15	No	OBL
2.			
3.			
4.			
5.			
Total Cover:	15 %		
Herb Stratum			
1. *Juncus mexicanus*	10	No	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover:	10 %		
Woody Vine Stratum			
1.			
2.			
Total Cover:	%		

% Bare Ground in Herb Stratum % | % Cover of Biotic Crust %

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	15	x 1 =	15
FACW species	100	x 2 =	200
FAC species		x 3 =	0
FACU species		x 4 =	0
UPL species		x 5 =	0
Column Totals:	115 (A)		215 (B)

Prevalence Index = B/A = 1.87

Hydrophytic Vegetation Indicators:

- [X] Dominance Test is >50%
- [X] Prevalence Index is ≤3.0[1]
- [ ] Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- [ ] Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes (●) No ( )

Remarks:

SOIL

Sampling Point: 19

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture[3]	Remarks
0-18	10YR 4/1	75	Gley 2 2.5/5PB	25	RM	M	Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

[3]Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- [ ] Histosol (A1)
- [ ] Histic Epipedon (A2)
- [ ] Black Histic (A3)
- [x] Hydrogen Sulfide (A4)
- [ ] Stratified Layers (A5) (**LRR C**)
- [ ] 1 cm Muck (A9) (**LRR D**)
- [ ] Depleted Below Dark Surface (A11)
- [ ] Thick Dark Surface (A12)
- [ ] Sandy Mucky Mineral (S1)
- [ ] Sandy Gleyed Matrix (S4)
- [ ] Sandy Redox (S5)
- [ ] Stripped Matrix (S6)
- [ ] Loamy Mucky Mineral (F1)
- [ ] Loamy Gleyed Matrix (F2)
- [ ] Depleted Matrix (F3)
- [ ] Redox Dark Surface (F6)
- [ ] Depleted Dark Surface (F7)
- [ ] Redox Depressions (F8)
- [ ] Vernal Pools (F9)

Indicators for Problematic Hydric Soils:[4]

- [ ] 1 cm Muck (A9) (**LRR C**)
- [ ] 2 cm Muck (A10) (**LRR B**)
- [ ] Reduced Vertic (F18)
- [ ] Red Parent Material (TF2)
- [ ] Other (Explain in Remarks)

[4]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes (●) No ( )

Remarks: Strong Hydrogen Sulfide odor

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- [ ] Surface Water (A1)
- [x] High Water Table (A2)
- [x] Saturation (A3)
- [ ] Water Marks (B1) (**Nonriverine**)
- [ ] Sediment Deposits (B2) (**Nonriverine**)
- [ ] Drift Deposits (B3) (**Nonriverine**)
- [ ] Surface Soil Cracks (B6)
- [ ] Inundation Visible on Aerial Imagery (B7)
- [ ] Water-Stained Leaves (B9)
- [ ] Salt Crust (B11)
- [ ] Biotic Crust (B12)
- [ ] Aquatic Invertebrates (B13)
- [ ] Hydrogen Sulfide Odor (C1)
- [ ] Oxidized Rhizospheres along Living Roots (C3)
- [ ] Presence of Reduced Iron (C4)
- [ ] Recent Iron Reduction in Plowed Soils (C6)
- [ ] Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- [ ] Water Marks (B1) (**Riverine**)
- [ ] Sediment Deposits (B2) (**Riverine**)
- [ ] Drift Deposits (B3) (**Riverine**)
- [ ] Drainage Patterns (B10)
- [ ] Dry-Season Water Table (C2)
- [ ] Thin Muck Surface (C7)
- [ ] Crayfish Burrows (C8)
- [ ] Saturation Visible on Aerial Imagery (C9)
- [ ] Shallow Aquitard (D3)
- [ ] FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ( ) No (●)	Depth (inches):	
Water Table Present?	Yes (●) No ( )	Depth (inches):	15
Saturation Present? (includes capillary fringe)	Yes (●) No ( )	Depth (inches):	10

Wetland Hydrology Present? Yes (●) No ( )

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: SOCREP | City/County: San Juan Capistrano, Orange | Sampling Date: 12/29/2011

Applicant/Owner: SDG&E | State: CA | Sampling Point: 20

Investigator(s): T. Kegel & S. Underbrink | Section, Township, Range: sec25, T8S, R7W

Landform (hillslope, terrace, etc.): Wash | Local relief (concave, convex, none): Concave | Slope (%): 2-3%

Subregion (LRR): C - Mediterranean California | Lat: 33° 27.289' N | Long: 117°, 34.205' W | Datum: NAD 83

Soil Map Unit Name: SORRENTO LOAM, 2 TO 9 PERCENT SLOPES | NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes (●) No ( ) (If no, explain in Remarks.)

Are Vegetation [ ] Soil [ ] or Hydrology [ ] significantly disturbed? Are "Normal Circumstances" present? Yes (●) No ( )

Are Vegetation [ ] Soil [ ] or Hydrology [ ] naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes (●)	No ( )	
Hydric Soil Present?	Yes ( )	No (●)	**Is the Sampled Area within a Wetland?** Yes ( ) No (●)
Wetland Hydrology Present?	Yes (●)	No ( )	

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Quercus agrifoloia*	5	No	Not Listed
2.			
3.			
4.			
Total Cover:	5 %		
Sapling/Shrub Stratum			
1. *Typha latifolia*	80	Yes	OBL
2. *Urtica dioica*	20	Yes	FACW
3.			
4.			
5.			
Total Cover:	100%		
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover:	%		
Woody Vine Stratum			
1.			
2.			
Total Cover:	%		

% Bare Ground in Herb Stratum % | % Cover of Biotic Crust %

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	80	x 1 =	80
FACW species	20	x 2 =	40
FAC species		x 3 =	0
FACU species		x 4 =	0
UPL species	5	x 5 =	25
Column Totals:	105 (A)		145 (B)

Prevalence Index = B/A = 1.38

Hydrophytic Vegetation Indicators:

- [X] Dominance Test is >50%
- [X] Prevalence Index is ≤3.0[1]
- [ ] Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- [ ] Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes (●) No ( )

Remarks:

SOIL

Sampling Point: 20

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture[3]	Remarks
0-18	10YR 3/2	100%					Clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

[3]Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) (**LRR C**)
- ☐ 1 cm Muck (A9) (**LRR D**)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils:[4]

- ☐ 1 cm Muck (A9) (**LRR C**)
- ☐ 2 cm Muck (A10) (**LRR B**)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

[4]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes ○ No ◉

Remarks: Strong Hydrogen Sulfide odor

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1) (**Nonriverine**)
- ☐ Sediment Deposits (B2) (**Nonriverine**)
- ☐ Drift Deposits (B3) (**Nonriverine**)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Plowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (**Riverine**)
- ☒ Sediment Deposits (B2) (**Riverine**)
- ☒ Drift Deposits (B3) (**Riverine**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ○ No ◉ Depth (inches):

Water Table Present? Yes ○ No ◉ Depth (inches):

Saturation Present? (includes capillary fringe) Yes ◉ No ○ Depth (inches): 2

Wetland Hydrology Present? Yes ◉ No ○

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: SOCREP | City/County: San Diego County | Sampling Date: 02/28/2012

Applicant/Owner: SDG&E | State: CA | Sampling Point: 21

Investigator(s): T. Kegel & S. Underbrink | Section, Township, Range: Sec26, T8S,R7W

Landform (hillslope, terrace, etc.): Wash | Local relief (concave, convex, none): Concave | Slope (%): 2-3%

Subregion (LRR): C - Mediterranean California | Lat: 33°, 27', 0.0" N | Long: 117°, 34', 40.8" W | Datum: NAD 83

Soil Map Unit Name: | NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes (•) No ( ) (If no, explain in Remarks.)

Are Vegetation [ ] Soil [ ] or Hydrology [ ] significantly disturbed? Are "Normal Circumstances" present? Yes (•) No ( )

Are Vegetation [ ] Soil [ ] or Hydrology [ ] naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes (•)	No ( )	
Hydric Soil Present?	Yes ( )	No (•)	**Is the Sampled Area within a Wetland?** Yes ( ) No (•)
Wetland Hydrology Present?	Yes (•)	No ( )	

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Baccharis salicifolia*	70	Yes	FACW*
2.			
3.			
4.			
Total Cover:	70 %		
Sapling/Shrub Stratum			
1. *Toxicodendron diversilobum*	20	Yes	FACU
2.			
3.			
4.			
5.			
Total Cover:	20 %		
Herb Stratum			
1. *Ambrosia psilostachya*	10	No	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover:	10 %		
Woody Vine Stratum			
1.			
2.			
Total Cover:	%		

% Bare Ground in Herb Stratum 15 % | % Cover of Biotic Crust %

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	0
FACW species	70	x 2 =	140
FAC species	10	x 3 =	30
FACU species	20	x 4 =	80
UPL species		x 5 =	0
Column Totals:	100 (A)		250 (B)

Prevalence Index = B/A = 2.50

Hydrophytic Vegetation Indicators:

- [ ] Dominance Test is >50%
- [x] Prevalence Index is ≤3.0[1]
- [ ] Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- [ ] Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes (•) No ( )

Remarks:

SOIL

Sampling Point: 21

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture[3]	Remarks
0-18	2.5Y 3/2	95	7.5YR 4/6	5	C	M	Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

[3]Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) (**LRR C**)
- ☐ 1 cm Muck (A9) (**LRR D**)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils:[4]

- ☐ 1 cm Muck (A9) (**LRR C**)
- ☐ 2 cm Muck (A10) (**LRR B**)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

[4]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes ○ No ◉

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☒ Surface Water (A1)
- ☐ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1) (**Nonriverine**)
- ☐ Sediment Deposits (B2) (**Nonriverine**)
- ☐ Drift Deposits (B3) (**Nonriverine**)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Plowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (**Riverine**)
- ☒ Sediment Deposits (B2) (**Riverine**)
- ☒ Drift Deposits (B3) (**Riverine**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ◉ No ○ Depth (inches): 1

Water Table Present? Yes ◉ No ○ Depth (inches): 1

Saturation Present? (includes capillary fringe) Yes ◉ No ○ Depth (inches): 0

Wetland Hydrology Present? Yes ◉ No ○

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Appendix D:
2008 Coastal California Gnatcatcher (*Polioptila californica californica*) Survey Report for San Diego Gas and Electric's Proposed Orange County Transmission Expansion Project

1903 Wright Place
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October 1, 2008

Ms. Sandra Marquez
U.S. Fish and Wildlife Service
6010 Hidden Valley Road
Carlsbad, California 92011

SUBJECT: 2008 Coastal California Gnatcatcher (*Polioptila californica californica*) Survey Report for San Diego Gas & Electric's Proposed Orange County Transmission Expansion Project (Revised: October 1, 2008)

Permit Number: TE-037508-1 and TE-162994-0

Dear Ms. Marquez:

This letter report summarizes the methodology and findings of protocol-level surveys for the federally and state listed threatened coastal California gnatcatcher *Polioptila californica californica* (gnatcatcher) conducted by TRC in 2008 for San Diego Gas & Electric's (SDG&E) proposed Orange County Transmission Expansion Project (project) located in San Juan Capistrano and San Clemente, in Orange County, California. The areas surveyed are located within SDG&E's existing transmission corridor from the Talega substation northeast of Camp Pendleton to the Capistrano substation in southwestern Orange County (refer to Figure 1). Surveys were conducted to determine the presence/absence of coastal California gnatcatchers.

SURVEY LOCATIONS

Surveys were conducted along the existing transmission corridor, and comprised 250 feet on either side of the transmission line (survey area). The survey area was divided into four segments. Segments 1 through 3 were surveyed separately; Segment 4 did not contain suitable gnatcatcher habitat, and was not surveyed (see Figure 1). Only suitable gnatcatcher habitat, consisting of coastal sage scrub, disturbed coastal sage scrub, and restored coastal sage scrub, was surveyed. Elevation in the survey area ranged from approximately 225 to 700 feet above sea

level. Within the survey area, gnatcatcher critical habitat [1] comprises 41.07 acres, excluded essential habitat[2] comprises 52.08 acres, and 33.37 acres is exempt[3] (refer to Figures 2, 3, and 4).

Survey Segment 1

Segment 1 is located west of the SDG&E Talega Substation at the east end of Pico Avenida, and terminates at the existing transmission corridor where it spans Avenida Pico (see Figure 1). This survey segment is within T.8S., R.7W. of the U.S. Geological Survey (USGS) San Clemente 7.5-minute quadrangle.

Survey Segment 2

Segment 2 is located north of Avenida Pico and heads north-northwest to just south of the Prima Deshecha Sanitary Landfill entrance at the end of La Plata Avenue (see Figure 1). This survey area is within T.8S., R.7W. of the USGS San Clemente 7.5-minute quadrangle.

Survey Segment 3

Segment 3 is located north of the Prima Deshecha Sanitary Landfill entrance at La Plata Avenue and heads northwest to San Juan Creek Road (see Figure 1). This survey area is within T.8S., R.7W. of the USGS San Clemente and San Juan Capistrano 7.5-minute quadrangles.

PLANT COMMUNITIES

Within the survey area, approximately 67.75 acres of moderate to good quality coastal sage scrub and 65.20 acres of disturbed and restored coastal sage scrub were surveyed. Dominant native shrub species observed include California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), black sage (*Salvia mellifera*), white sage (*Salvia apiana*), California broom (*Lotus scoparius*), lemonadeberry (*Rhus integrifolia*), laurel sumac (*Malosma laurina*), toyon (*Heteromeles arbutifolia*), coyote bush (*Baccharis piluaris*), mulefat (*Baccharis salicifolia*), and blue elderberry (*Sambucus mexicana*).

METHODOLOGY

Permitted biologists Paula Potenza (Permit No. TE-037508-1) and Vanessa Tisdale (Permit No. TE-162994-0), conducted the surveys according to the *USFWS Coastal California Gnatcatcher Presence/Absence Survey Protocol* for Natural Community Conservation Plan areas (USFWS, 1993). Matt Merscheim, Matt Willis, Kirstie Reynolds, Sommer Fisher, and Ryan Villanueva accompanied Paula Potenza as biologists authorized to conduct activities for gnatcatchers under the direct supervision of an independently authorized biologist. They are listed under or have recently been submitted to Permit No. TE-037508-1.

---

[1] United States Fish and Wildlife Service coastal California gnatcatcher final critical habitat, dated December 19, 2007, available online at http://criticalhabitat.fws.gov/. Critical habitat is considered essential for species survival.
[2] Excluded essential habitat is essential for the species but is administered under local plans, such as an HCP.
[3] Habitat within the jurisdiction of the Department of Defense is considered exempt.

Gnatcatcher surveys were conducted in appropriate vegetation within the survey area. Following protocol for SDG&E's Subregional Natural Community Conservation Plan (NCCP) presence/absence surveys, a minimum of three surveys were conducted at least one week apart. The surveys occurred within the gnatcatcher breeding season (March 15 through June 30). Table 1 below provides the survey dates.

Table 1: 2008 Survey Schedule

Survey Location	Surveyors	Survey Dates
Segment 1	Paula Potenza Matt Merscheim Matt Willis Kirstie Reynolds Sommer Fisher Ryan Villanueva	March 18, 19, 25, and 26; and April 1 and 2
Segment 2	Paula Potenza	April 15 and 29; and May 8
Segment 3	Vanessa Tisdale	May 28; and June 3 and 11

All surveys were conducted between approximately 7:00 a.m. and 12:35 p.m. Weather conditions during the surveys consisted of temperatures from 45 to 74 degrees Fahrenheit, winds from 0 to 10 miles per hour, and cloud cover from 0 to 100 percent. During periods of excessive heat, wind, rain, fog, or other inclement weather surveys were either halted or postponed. Taped vocalizations and "pishing" sounds were used to initially locate gnatcatchers. Taped calls were not used to elicit or prompt further behaviors from birds. Surveys were conducted by slowly walking survey routes and no more than 100 acres of suitable gnatcatcher habitat were surveyed per biologist per day. See Survey Data Summary attachment for a break down of survey conditions for each survey day.

RESULTS

During the surveys, biologists made 19 gnatcatcher observations, for a minimum of 14 individuals in the survey area. Separate individuals were determined by simultaneous sightings, proximity to previous sightings, and time lapse between consecutive sightings. Observations made in close temporal and spatial proximity are considered the same individual; therefore, the total minimum number of gnatcatchers is conservative. Four pairs were confirmed; two pair in Segment 3 and two nesting pair in Segment 1. See Figures 2, 3, 4, and 5 for depictions of the survey area and results on aerial maps and Figures 6 and 7 for depictions of the survey area and result on USGS 7.5 Quadrangles.

Survey Segment 1

Five gnatcatchers were identified; two nesting pairs and one single male (see Figure 2). Survey protocol for NCCP presence/absence surveys requires only three surveys to be conducted; therefore pair territories were not determined. The nesting sites for both pairs were identified based on adult gnatcatcher behaviors, but the nests were not approached. All observations were mapped. Pair 1 was observed in the survey area within good quality coastal sage scrub on a southeast facing slope approximately 425 feet west of the Talega Substation. Pair 2 was observed in the survey area within moderate (disturbed) quality coastal sage scrub on an east facing slope approximately 1,500 feet east of where the transmission corridor spans Pico Avenida. The single male was observed west of the second pair, approximately 1,000 feet east of where the transmission corridor spans Pico Avenida. The single male was observed in moderate (disturbed) coastal sage scrub in a north facing bowl adjacent to a commercial complex.

Survey Segment 2

Two gnatcatchers were identified in Segment 2 (see Figure 3). One male gnatcatcher responded to taped calls played by the surveyor (playback), and was observed just outside of the survey area. The male flew toward the taped calls from the west. After several minutes, the male flew several hundred feet east over a ridgeline and disappeared. The juvenile gnatcatcher responded to playback on May 8, 2008. The juvenile was observed in moderate (disturbed) coastal sage scrub on a west facing slope within the survey area. No adults were observed with the juvenile gnatcatcher.

Survey Segment 3

During the surveys, 11 gnatcatchers observations were made, for a minimum of seven individuals (see Figure 4). One male responded immediately to playback approximately 140 feet south of the survey area. An unknown individual simultaneously called within 100 feet of the male; therefore, these birds are considered Pair 3. Gnatcatchers were detected in this area on two of three surveys. Approximately 250 feet northwest, a male and female responded to playback and were observed together (Pair 4). These birds were detected on two of three surveys. In addition, three single individuals were detected; an unknown individual approximately 600 feet north of Pair 3 was detected on all three surveys, a female approximately 350 feet northwest of Pair 4 was observed on two of three surveys, and an unknown individual was heard calling in ruderal vegetation over 300 feet from known suitable coastal sage scrub.

Please contact me at (760) 603-1740 if you have any questions or comments regarding this letter.

Sincerely,

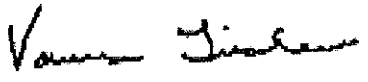
Paula Potenza
Lead Biologist

Attachments:
Surveyor Certification Statement
Survey Data Summary
Figure 1: Project Overview
Figure 2: Segment 1
Figure 3: Segment 2
Figure 4: Segment 3
Figure 5: Segment 4
Figure 6: USGS 7.5 Topographic Quadrangles
Figure 7: USGS 7.5 Topographic Quadrangles

Surveyor Certification Statement

The undersigned certify that this report and the included field data are a complete and accurate account of the findings and conclusions of year 2008 focused NCCP surveys for the coastal California gnatcatcher for the Orange County Transmission Expansion Project, Orange County, California.

Paula Potenza
Permit No. TE-037508-1
TRC
1903 Wright Place, Suite 190
Carlsbad, CA 92008



Vanessa Tisdale
Permit No. TE-162994-0
TRC
1903 Wright Place, Suite 190
Carlsbad, CA 92008

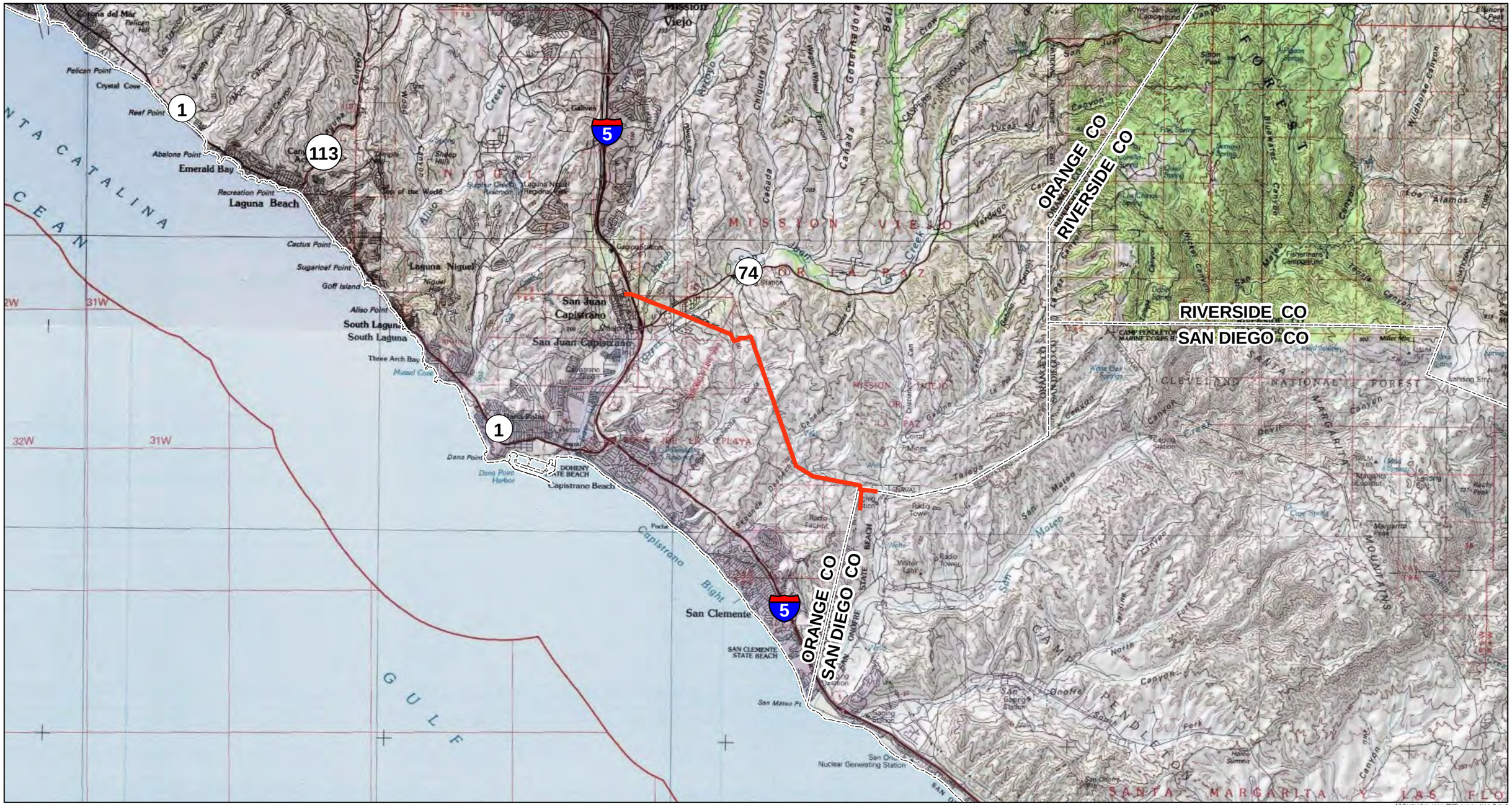
Survey Data Summary

2007/2008 Coastal California Gnatcatcher

Orange County Transmission Expansion Project

Date	Biologists	Hours	Weather Conditions
Segment 1			
18 March 2008	Paula Potenza	0800 to 1230	45° to 65° F, winds 2 to 5 (mph), cloud cover 0%
19 March 2008	P. Potenza	0800 to 1235	50° to 65° F, winds 0 to 8 (mph), cloud cover 100% to 30%
25 March 2008	P. Potenza Matt Merscheim Matt Willis	0745 to 1230	48° to 70° F, winds 2 to 8 (mph), cloud cover 100% to 0%
26 March 2008	P. Potenza Sommer Fisher Kirstie Reynolds Ryan Villanueva	0730 to 1205	48° to 68° F, winds 2 to 8 (mph), cloud cover 100%
1 April 2008	P. Potenza	0800 to 1200	58° to 60° F, winds 0 to 4 (mph), cloud cover 100%
2 April 2008	P. Potenza	0800 to 1215	55° to 65° F, winds 2 to 4 (mph), cloud cover 60% to 0%
Segment 2			
15 April 2008	P. Potenza	0830 to 1230	54° to 70° F, winds 3 to 10 (mph), cloud cover 100% to 10%
29 April 2008	P. Potenza	0700 to 1215	55° to 70° F, winds 0 to 6 (mph), cloud cover 100% to 0%
8 May 2008	P. Potenza	0800 to 1200	58° to 62° F, winds 0 to 8 (mph), cloud cover 100%
Segment 3			
29 May 2008	Vanessa Tisdale	0830 to 1230	63° to 70° F, winds 1 to 3 (mph), cloud cover 60% to 5%
3 June 2008	V. Tisdale	0800 to 1230	68° to 74° F, winds 0 to 2 (mph), cloud cover 95% to 0%
11 June 2008	V. Tisdale	0715 to 1045	63° to 70° F, winds 1 to 3 (mph), cloud cover 95% to 0%

Attachments:
Surveyor Certification Statement
Survey Data Summary
Figure 1: Project Overview
Figure 2: Segment 1
Figure 3: Segment 2
Figure 4: Segment 3
Figure 5: Segment 4
Figure 6: USGS 7.5 Topographic Quadrangles
Figure 7: USGS 7.5 Topographic Quadrangles



Project Span
County

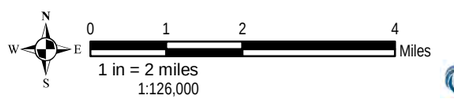
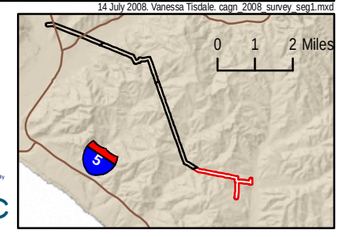


FIGURE 1 - VICINITY MAP
SOUTH ORANGE COUNTY RELIABILITY UPGRADE PROJECT | SDG&E

California gnatcatcher observations
California gnatcatcher nest locations
Substations
Potential California gnatcatcher habitat
Transmission line
250-foot survey area
USFWS California gnatcatcher critical habitat
USFWS Excluded essential habitat
USFWS Exempt habitat

14 July 2008. Vanessa Tisdale. cagn_2008_survey_seg1.mxd

N
W E
S
0 225 450 900 Feet
1 inch equals 900 feet
1:10,800



SDGE
A Sempra Energy utility
TRC

FIGURE 2 - SEGMENT 1
ORANGE COUNTY TRANSMISSION EXPANSION | SDG&E

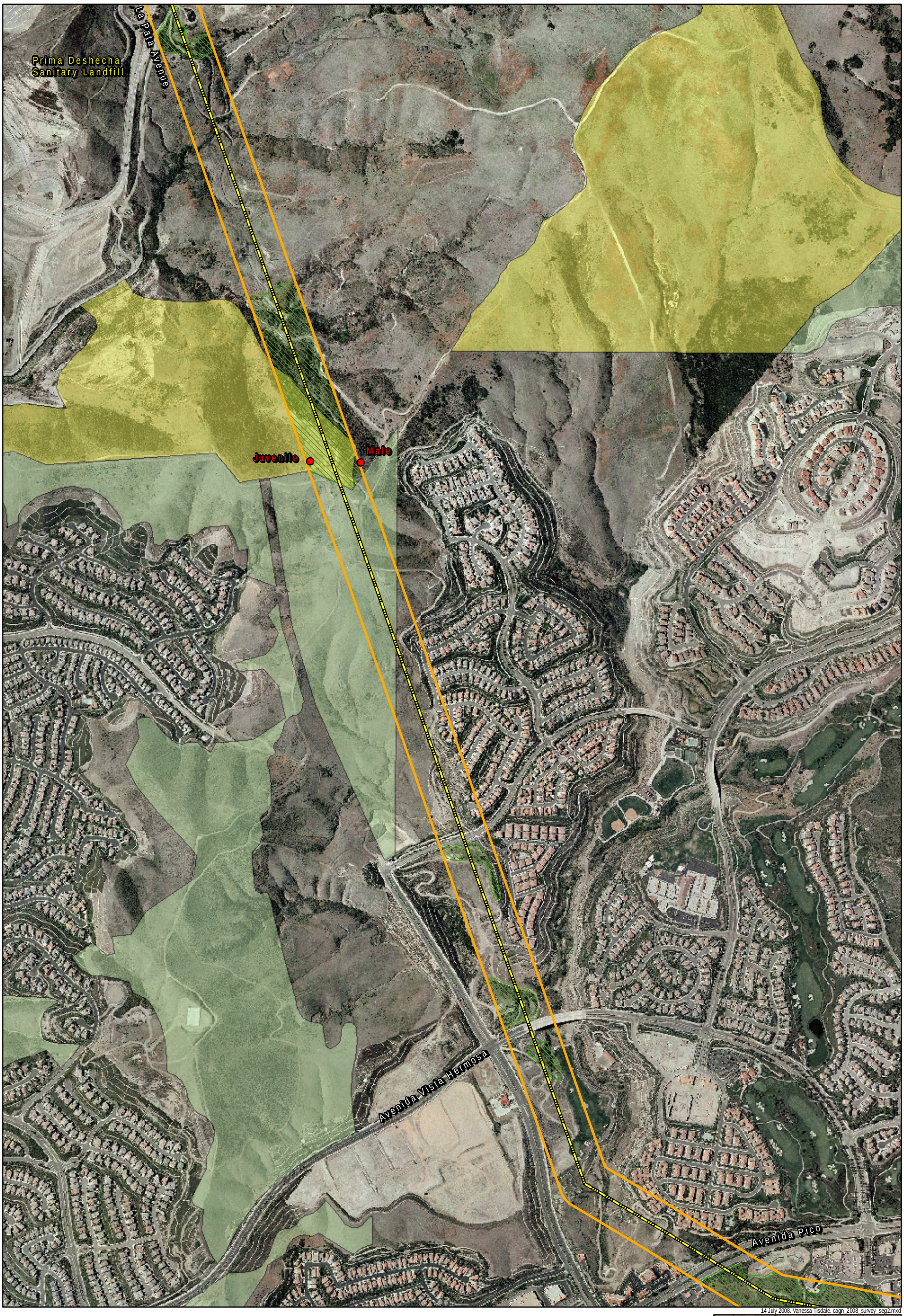


FIGURE 3 - SEGMENT 2

ORANGE COUNTY TRANSMISSION EXPANSION | SDG&E

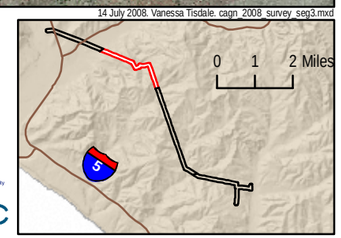
California gnatcatcher observations
California gnatcatcher nest locations
Substations
Potential California gnatcatcher habitat
Transmission line
250-foot survey area
USFWS California gnatcatcher critical habitat
USFWS Excluded essential habitat
USFWS Exempt habitat

14 July 2008. Vanessa Tisdale. cagn_2008_survey_seg3.mxd

N W E S

0 225 450 900 Feet

1 inch equals 900 feet
1:10,800



SDGE
A Sempra Energy utility
TRC

FIGURE 4 - SEGMENT 3
ORANGE COUNTY TRANSMISSION EXPANSION | SDG&E

14 July 2008. Vanessa Tisdale. cagn_2008_survey_seg4.mxd

- California gnatcatcher observations
- California gnatcatcher nest locations
- Substations
- Potential California gnatcatcher habitat
- Ttransmission line
- 250-foot survey area
- USFWS California gnatcatcher critical habitat
- USFWS Excluded essential habitat
- USFWS Exempt habitat

N W E S

0 225 450 900 Feet

1 inch equals 900 feet

1:10,800

SDGE A Sempra Energy utility

TRC

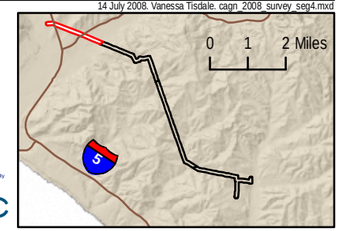


FIGURE 5 - SEGMENT 4

ORANGE COUNTY TRANSMISSION EXPANSION | SDG&E

Appendix E:
2010 Coastal California Gnatcatcher (*Polioptila californica californica*) Survey Report for San Diego Gas and Electric's Proposed South Orange County Reliability Upgrade Project

1903 Wright Place
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Carlsbad, CA 92008

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June 23, 2010

Ms. Sandra Marquez
U.S. Fish and Wildlife Service
6010 Hidden Valley Road
Carlsbad, California 92011

SUBJECT: 2010 Coastal California Gnatcatcher (*Polioptila californica californica*) Survey Report for San Diego Gas & Electric's Proposed South Orange County Reliability Upgrade Project

Permit Number: TE-037508-1

Dear Ms. Marquez:

This letter report summarizes the methodology and findings of protocol-level surveys for the federally and state listed threatened coastal California gnatcatcher (*Polioptila californica californica*) (gnatcatcher) conducted by TRC in 2010 for San Diego Gas & Electric's (SDG&E) proposed South Orange County Reliability Upgrade Project (SOCRUP or "project") which runs between the cities of San Juan Capistrano and San Clemente, in southern Orange County, California as shown in Figure 1. The areas surveyed are located within SDG&E's existing transmission corridor from the Talega substation, located northeast of Camp Pendleton, to the Capistrano substation in southwestern Orange County (see Figures 2 and 3). Surveys were conducted to determine the presence/absence of coastal California gnatcatchers.

SURVEY LOCATIONS

Surveys were conducted along the existing transmission corridor, and comprised 250 feet on either side of the transmission line (survey area). The survey area was divided into two segments of the right-of-way. Each segment was surveyed on a separate day so that no more than 100 acres were surveyed per biologist per survey day. Only suitable gnatcatcher habitat, consisting of coastal sage scrub, disturbed coastal sage scrub, and restored coastal sage scrub, was surveyed. Elevation in the survey area ranged from approximately 225 to 700 feet above sea level. Within

the survey area, gnatcatcher critical habitat [1] comprises 41.07 acres, excluded essential habitat[2] comprises 52.08 acres, and 33.37 acres is exempt[3].

Survey Segment 1

Segment 1 is located in San Clemente, west of the SDG&E Talega Substation at the east end of Pico Avenida, continuing west and then north along the existing utility corridor, terminating on the south side of Calle Saluda. This survey segment is within Township 8S, Range 7W of the U.S. Geological Survey (USGS) San Clemente 7.5-minute quadrangle, as shown on Figure 2.

Survey Segment 2

Segment 2 is located north of Calle Saluda in San Clemente and follows the existing utility corridor north past the Prima Deshecha Sanitary Landfill and then turns northwest, terminating southeast of San Juan Creek Road in San Juan Capistrano. This survey area is within Township 8S, Range 7W of the USGS San Clemente and San Juan Capistrano 7.5-minute quadrangles, as shown on Figure 3.

PLANT COMMUNITIES

Within the survey area, approximately 67.75 acres of moderate to good quality coastal sage scrub and 65.20 acres of disturbed and restored coastal sage scrub were surveyed for a total of approximately 132.95 acres. Dominant native shrub species observed include California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), black sage (*Salvia mellifera*), white sage (*Salvia apiana*), California broom (*Lotus scoparius*), lemonadeberry (*Rhus integrifolia*), laurel sumac (*Malosma laurina*), toyon (*Heteromeles arbutifolia*), coyote bush (*Baccharis piluaris*), mulefat (*Baccharis salicifolia*), and blue elderberry (*Sambucus mexicana*).

METHODOLOGY

Permitted biologist Paula Potenza (Permit No. TE-037508-1), conducted the surveys according to the *USFWS Coastal California Gnatcatcher Presence/Absence Survey Protocol* for Natural Community Conservation Plan areas (USFWS, 1993). Under the direct supervision of Ms. Potenza, Lisa Gadsby, Britta Dahlke, and Martha Heath accompanied Ms. Potenza on several of the surveys so that they could accumulate hours toward gaining a permit to conduct survey activities for gnatcatchers. Gnatcatcher surveys were conducted in appropriate vegetation within the survey area. Following protocol for SDG&E's Subregional Natural Community Conservation Plan (NCCP) presence/absence surveys, a minimum of three surveys were conducted at least one week apart. The surveys occurred within the gnatcatcher breeding season (March 15 through June 30). Table 1 below provides the survey dates and conditions.

[1] United States Fish and Wildlife Service coastal California gnatcatcher final critical habitat, dated December 19, 2007, available online at http://criticalhabitat.fws.gov/. Critical habitat is considered essential for species survival.
[2] Excluded essential habitat is essential for the species but is administered under local plans, such as an HCP.
[3] Habitat within the jurisdiction of the Department of Defense is considered exempt.

Table 1: 2010 Survey Schedule and Data Summary

Date/Segment	Biologists	Hours	Weather Conditions
May 11 Segment 1	Paula Potenza Lisa Gadsby Martha Heath	0620 to 1235	50° to 65° F, winds 1 to 2 (mph), cloud cover 20%
May 17 Segment 2	P. Potenza	0630 to 1205	54° to 56° F, winds 0 to 2 (mph), cloud cover 100%
May 18 Segment 1	P. Potenza Britta Dahlka	0645 to 1235	58° to 68° F, winds 0 to 5 (mph), cloud cover 100%
May 24 Segment 2	P. Potenza M. Heath	0615 to 1225	54° to 62° F, winds 2 to 5 (mph), cloud cover 0 to 15%
May 25 Segment 1	P. Potenza M. Heath	0615 to 1220	43° to 69° F, winds 0 to 6 (mph), cloud cover 0 to 25%
May 31 Segment 2	P. Potenza M. Heath	0600 to 1225	59° to 69° F, winds 0 to 8 (mph), cloud cover 0 to 15%

All surveys were conducted between approximately 6:00 a.m. and 12:35 p.m. Weather conditions during the surveys consisted of temperatures from 43 to 69 degrees Fahrenheit, winds from 0 to 8 miles per hour, and cloud cover from 0 to 100 percent. During periods of excessive heat, wind, rain, fog, or other inclement weather surveys were either halted or postponed. Taped vocalizations and "pishing" sounds were used to initially locate gnatcatchers. Taped calls were not used to elicit or prompt further behaviors from birds. Surveys were conducted by slowly walking survey routes and no more than 100 acres of suitable gnatcatcher habitat were surveyed per biologist per day.

RESULTS

During the surveys, biologists made 21 gnatcatcher observations (which included single, pair, and family groups), for a minimum estimation of 20 individuals (including adults and juveniles) in the survey area. Separate individuals were determined by simultaneous sightings, proximity to previous sightings, and time lapse between consecutive sightings. Observations made in close temporal and spatial proximity are considered the same individual; therefore, the total minimum number of gnatcatchers may be conservative. Six pairs were confirmed with two of the pairs observed as part of a family group. Both of the family groups had at least two juveniles with the pair. In addition, a minimum of three single males were identified. See Figures 2 and 3 for depictions of the survey area and result on USGS 7.5 Quadrangles.

Survey Segment 1

Three pair, one family group of four individuals, and one single male were observed for a total of eleven individuals. See Figure 2: Pair 1, Pair 2, Single Male 1, Pair 3, and Family Group 1 for the location of the gnatcatcher observations on this segment. Survey protocol for NCCP presence/absence surveys requires only three surveys to be conducted; therefore pair territories were not determined. All observations were mapped and depicted on Figure 2.

- Pair 1 was observed once in the survey area near the southwest corner of the Talega Substation on an east facing slope with revegetated coastal sage scrub vegetation.

- Pair 2 was observed during two separate surveys in high quality coastal sage scrub vegetation on the east and north facing slopes of a steep bowl near an existing steel lattice tower overlooking the Talega Substation.

- Single Male 1's location shown on Figure 2 is where a single male was sighted during each of the three surveys and is being considered a single male based on behavior during the sightings and lack of another sighting of a single male in the same general location during the same survey. The single male was observed in moderate (disturbed or revegetated) coastal sage scrub vegetation on north and east facing slopes adjacent to a commercial complex.

- Pair 3 was observed during all three surveys on an east facing slope in good quality coastal sage scrub vegetation located between a commercial golf course to the south and a commercial complex to the north.

- Family Group 1 was observed in good quality (revegetated) coastal sage scrub vegetation just south of Calle Saluda on the west side of the survey corridor. The family group included a pair (male and female) and at least two juvenile gnatcatchers. The family group was identified and documented even though they were just outside of the survey corridor because the coastal sage scrub vegetation they were observed in was not far from vegetation that they could occupy located within the survey area.

Survey Segment 2

One pair, one family group of four individuals, and three single males were observed for a total of nine individuals. See Figure 3: Single Male 2, Pair 4, Single Male 3, Family Group 2, and Single Male 4 for the location of the gnatcatcher observations on this segment. Survey protocol for NCCP presence/absence surveys requires only three surveys to be conducted; therefore pair territories were not determined. All observations were mapped and shown on Figure 3, attached.

- Single Male 2 was observed only once during the May 31st survey and responded to taped calls played by the surveyor (playback). The male was only observed after playback, and after briefly responding vocally to the playback was observed foraging in good quality coastal sage scrub vegetation on an east facing slope near an existing utility access road.

- Pair 4 was only observed once during the May 31st survey and responded to playback of calls. Pair 4 was observed foraging in a large patch of good quality coastal sage scrub vegetation on a north facing slope immediately adjacent to La Pata Avenue, the main access road to the Prima Deshecha Landfill.

- Single Male 3 was observed on three different occasions. Because of the steepness of the slopes and the dense, moderate (disturbed) to good quality coastal sage scrub vegetation, the surveyor was unable to follow and determine if this was more than one individual. Based on the location of the three sightings, it was conservatively estimated as a single individual.

- Family Group 2 was observed in moderate (disturbed) coastal sage scrub vegetation located along a ridgeline with an existing utility access road and in moderate (revegetation) coastal sage scrub on an east facing slope. The family group included a pair (male and female) and at least two juvenile gnatcatchers. The family group was observed at this location on one occasion and on a subsequent survey a pair (male and female) gnatcatcher was observed in the same location and was assumed to be the adult pair from the earlier family group sighting.

- Single Male 4 was observed during all three surveys in the same location, a steep west facing slope with dense, good quality coastal sage scrub vegetation. This male responded aggressively to playback during the first survey. The male flew from the north toward the playback calls and called repeatedly before flying back to the north. Playback was only played the one time during the first survey and was not played again during the remaining surveys at this location. The male appeared territorial and was possible paired. No female gnatcatcher was observed in this area however.

Please contact me at (760) 603-1740 if you have any questions or comments regarding this letter.

Sincerely,

Paula Potenza
Lead Biologist

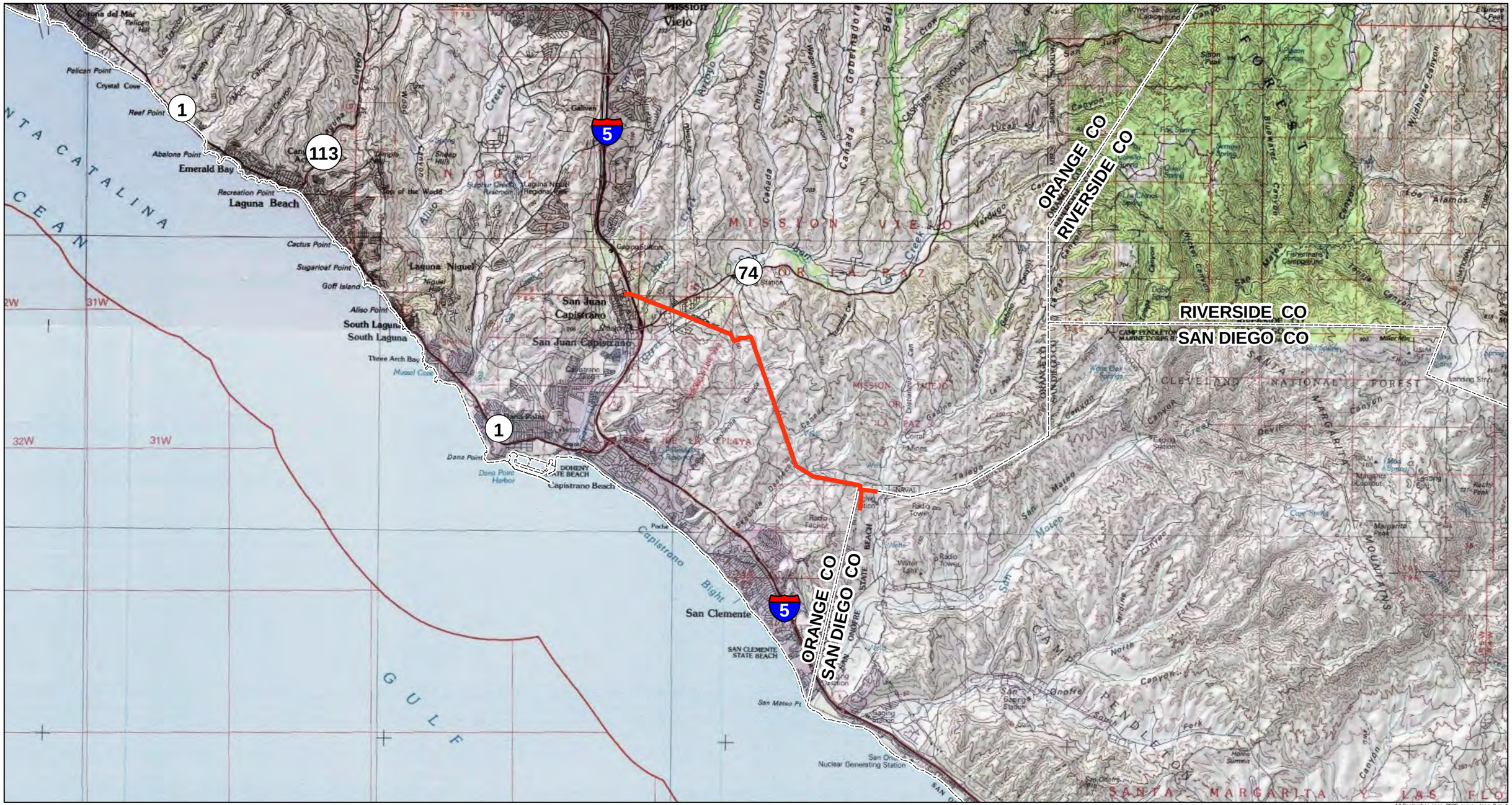
Attachments:
Surveyor Certification Statement
Figure 1: Vicinity Map
Figure 2: USGS 7.5 Topographic Quadrangles
Figure 3: USGS 7.5 Topographic Quadrangles

Surveyor Certification Statement

The undersigned certifies that this report and the included field data are a complete and accurate account of the findings and conclusions of year 2010 focused NCCP surveys for the coastal California gnatcatcher for SDG&E for the South Orange County Reliability Upgrade Project, Orange County, California.

June 8, 2010

Paula Potenza
Permit No. TE-037508-1
TRC
1903 Wright Place, Suite 190
Carlsbad, CA 92008



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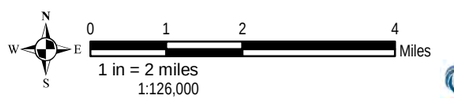


FIGURE 1 - VICINITY MAP
SOUTH ORANGE COUNTY RELIABILITY UPGRADE PROJECT | SDG&E

Single Male 2

Segment 2

Segment 1

Family Group 1

CRISTIANITOS

PICO

Single Male 1

Pair 3

TALEGA

Pair 2

Pair 1

Coastal California Gnatcatcher

Substations

Survey Area

Transmission line

Groupings

17 September 2008. cagn_2008_survey_topo_1.mxd

USGS 7.5 Topographic Quadrangles
Canada Gobernadora
Dana Point
San Clemente
San Juan Capistrano

0 500 1,000 2,000 Feet

1 inch = 2,000 feet
1:24,000

CANADA GOBERNADORA

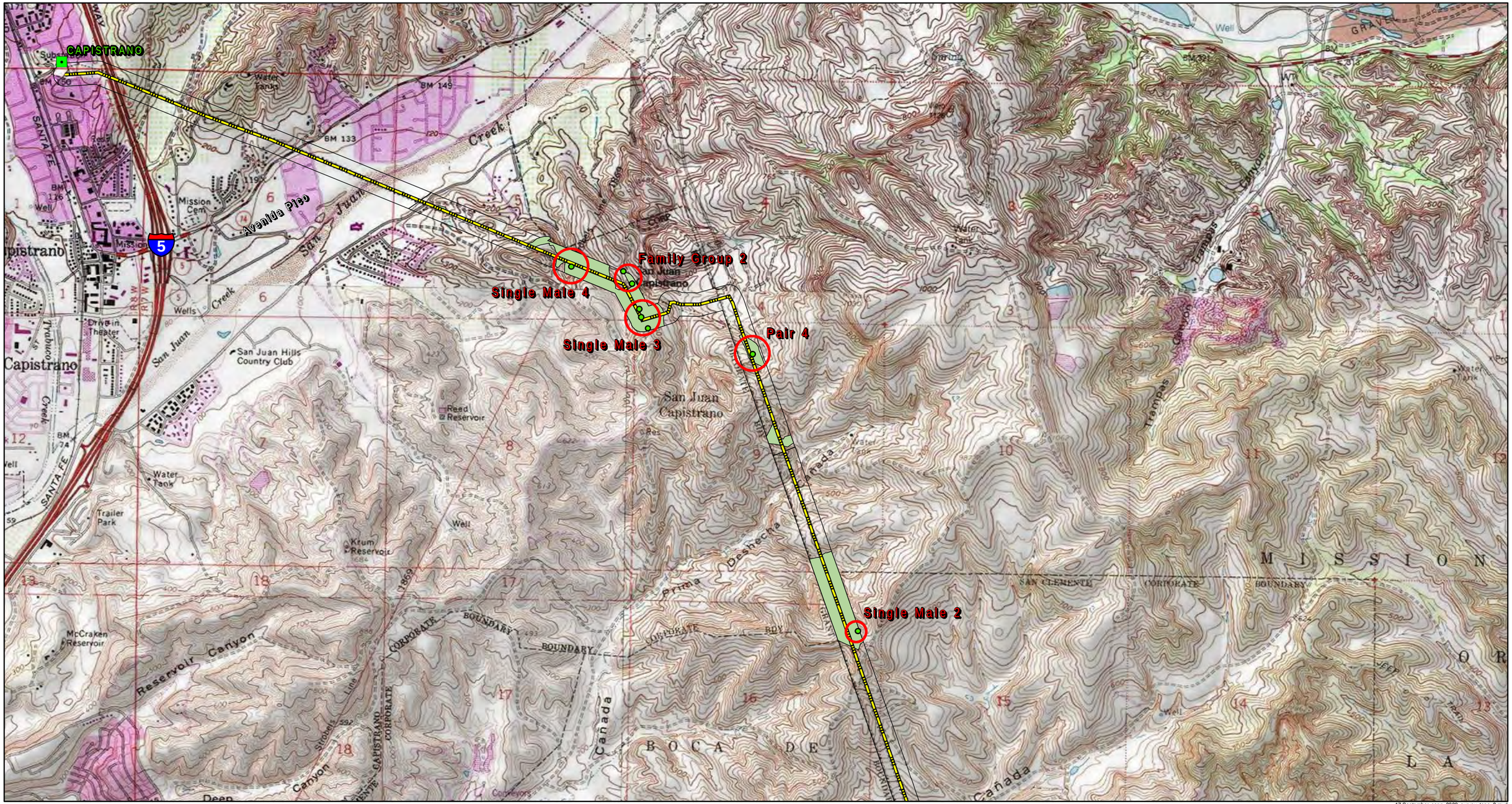
0 0.9 1.8 Miles

DANA POINT

SAN CLEMENTE

FIGURE 2 - USGS 7.5 TOPOGRAPHIC QUADRANGLES

SOUTH ORANGE COUNTY RELIABILITY UPGRADE PROJECT | SDG&E



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- Coastal California Gnatcatcher
- Substations
- Survey Area
- Transmission line
- Groupings

FIGURE3 - USGS 7.5 TOPOGRAPHIC QUADRANGLES

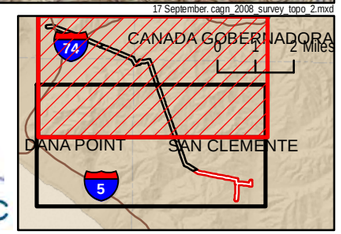
SOUTH ORANGE COUNTY RELIABILITY UPGRADE PROJECT | SDG&E

USGS 7.5 Topographic Quadrangles
Canada Gobernadora
Dana Point
San Clemente
San Juan Capistrano

N W E S

0 500 1,000 2,000 Feet

1 inch = 2,000 feet
1:24,000



Appendix F:
2010 Least Bell's Vireo (*Vireo bellii pusillus*) Survey Result for
San Diego Gas and Electric's Proposed South Orange County Reliability Upgrade Project

1903 Wright Place
Suite 190
Carlsbad, CA 92008

760.603.1740 PHONE
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www.TRCsolutions.com

June 23, 2010

Ms. Sandra Marquez
U.S. Fish and Wildlife Service
6010 Hidden Valley Road
Carlsbad, California 92011

SUBJECT: 2010 Least Bell's Vireo (*Vireo bellii pusillus*) Survey Report for San Diego Gas & Electric's Proposed South Orange County Reliability Upgrade Project

Dear Ms. Marquez:

This letter report summarizes the methodology and findings of protocol-level surveys for the federally and state endangered least Bell's vireo (vireo) conducted by TRC in 2010 for San Diego Gas & Electric's (SDG&E) proposed South Orange County Reliability Upgrade Project (SOCRUP or "project") which runs between the cities of San Juan Capistrano and San Clemente, in southern Orange County, California (as shown in Figure 1-Vicinity Map). The areas surveyed are located within SDG&E's existing transmission corridor from the Talega substation located northeast of Camp Pendleton to the Capistrano substation in southwestern Orange County (refer to Figures 2 and 3). Surveys were conducted to determine the presence/absence of least Bell's vireo.

SURVEY LOCATION

Surveys were conducted along a 250 foot width survey area along the existing transmission corridor. Only suitable vireo habitat, which included riparian woodland/scrub and mixed riparian/coastal sage scrub, was surveyed. Elevation in the survey area ranged from approximately 225 to 700 feet above sea level.

Riparian vegetation suitable for vireo occupation can be found in several creeks and drainages scattered throughout the survey area. Approximately 16 locations along the transmission corridor were surveyed. The northern most location occurring along a drainage with riparian vegetation west of Interstate 5, approximately 220 feet southeast of Golf Course Drive in San Juan Capistrano. The survey area heads southeast spanning San Juan Creek, several drainages with mixed willow riparian scrub/sage scrub south of the Prima Deshecha Sanitary Landfill to Pico Avenida, and several areas of mixed willow riparian scrub/baccharis scrub south of Pico Avenida along the Pacific Golf Course to the SDG&E Talega Substation, which is adjacent to Cristianitos Creek. The area surveyed is within T.8S., R.7W. of the U.S. Geological Survey (USGS) San Juan Capistrano and San Clemente 7.5-minute quadrangle.

PLANT COMMUNITIES

Within the survey area, approximately 40.22 acres of riparian and mixed riparian and coastal sage scrub vegetation were surveyed. Dominant native shrub species observed within the areas surveyed include willows (*Salix* sp.), western cottonwood (*Populus fremontii*), mule-fat (*Baccharis salicifolia*), blue elderberry (*Sambucus mexicana*), poison oak (*Toxicodendron diversilobum*), coyote brush (*Baccharis pilularis*), lemonadeberry (*Rhus integrifolia*), laurel sumac (*Malosma laurina*), toyon, (*Heteromeles arbutifolia*), California sagebrush (*Artemisia californica*), and California buckwheat (*Eriogonum fasciculatum*).

METHODOLOGY

Paula Potenza (TRC biologist) conducted three presence/absence surveys approximately ten days apart for least Bell's vireo Martha Heath accompanied Ms. Potenza on one of the surveys to gain experience with least Bell's vireo and the presence/absence survey protocol. The surveys were conducted on May 12, May 22, and June 1, 2010, according to the *USFWS Least Bell's Vireo Presence/Absence Survey Protocol* (USFWS, 1992). A minimum of three surveys were conducted per SDG&E's Subregional Natural Community Conservation Plan (NCCP) that states "in situations where more than one visit may be necessary to identify a given species, such as certain birds, no more than three site visits shall be required" (SDG&E's NCCP, Section 7.1.3, No. 13, p. 105, 1995). Because this was a presence/absence survey no vireo nest surveys were conducted, taped calls were not played, and vireos were typically not followed to prevent impacts to nests or nesting behaviors. Vireos were identified by calls/songs and by sight and were watched and followed only if identification and location needed to be confirmed. Table 1 below provides the survey dates and conditions.

Table 1: 2010 Survey Schedule and Data Summary

Date	Biologists	Hours	Weather Conditions
May 12	P. Potenza	0645 to 1110	48° to 65° F, winds 0 to 3 (mph), cloud cover 0%
May 22	P. Potenza	0715 to 1135	56° to 70° F, winds 0 to 4 (mph), cloud cover 55 to 95%
June 1	P. Potenza Martha Heath	0700 to 1135	61° to 62° F, winds 0 to 4 (mph), cloud cover 100%

All surveys were conducted between approximately 6:45 a.m. and 11:35 a.m. Weather conditions during the surveys consisted of temperatures from 48 to 70 degrees Fahrenheit, winds from 0 to 4 miles per hour, and cloud cover from 0 to 100 percent. During periods of excessive heat, wind, rain, fog, or other inclement weather surveys were halted or postponed. Surveys were conducted by slowly walking survey routes along the edges and through the riparian vegetation where possible and no more than 3 linear kilometers or 50 hectares of vireo habitat were surveyed on a single survey day.

RESULTS

An estimated total of seven individual least Bell's vireo were observed. Approximately 16 locations were surveyed and vireo was observed at six of those locations. During the surveys an estimated total of seven adults were heard and/or observed and none of the vireo appeared to be banded. The vireos were observed along six different drainages spanned or paralleled by the transmission corridor and one individual was observed in upland vegetation (see Figures 2 and 3). The least Bell's vireo sightings labeled 1 through 6 on Figures 2 and 3 were all located in small drainages with some riparian vegetation. One incidental vireo sighting (see vireo sighting labeled 6 on Figure 3) was made during a coastal California gnatcatcher survey. It was of a single male vireo calling from tree tobacco on a slope with coastal sage scrub vegetation. No drainage was observed in the immediate vicinity and the vireo was only observed this one time at this location. On Figures 2 and 3 were there are overlapping location "dots" for least Bell's vireo sightings, these sightings were counted as a single individual. Since only one vireo was either heard or observed at each of these overlapping "dot" locations, it was assumed that it was the same individual.

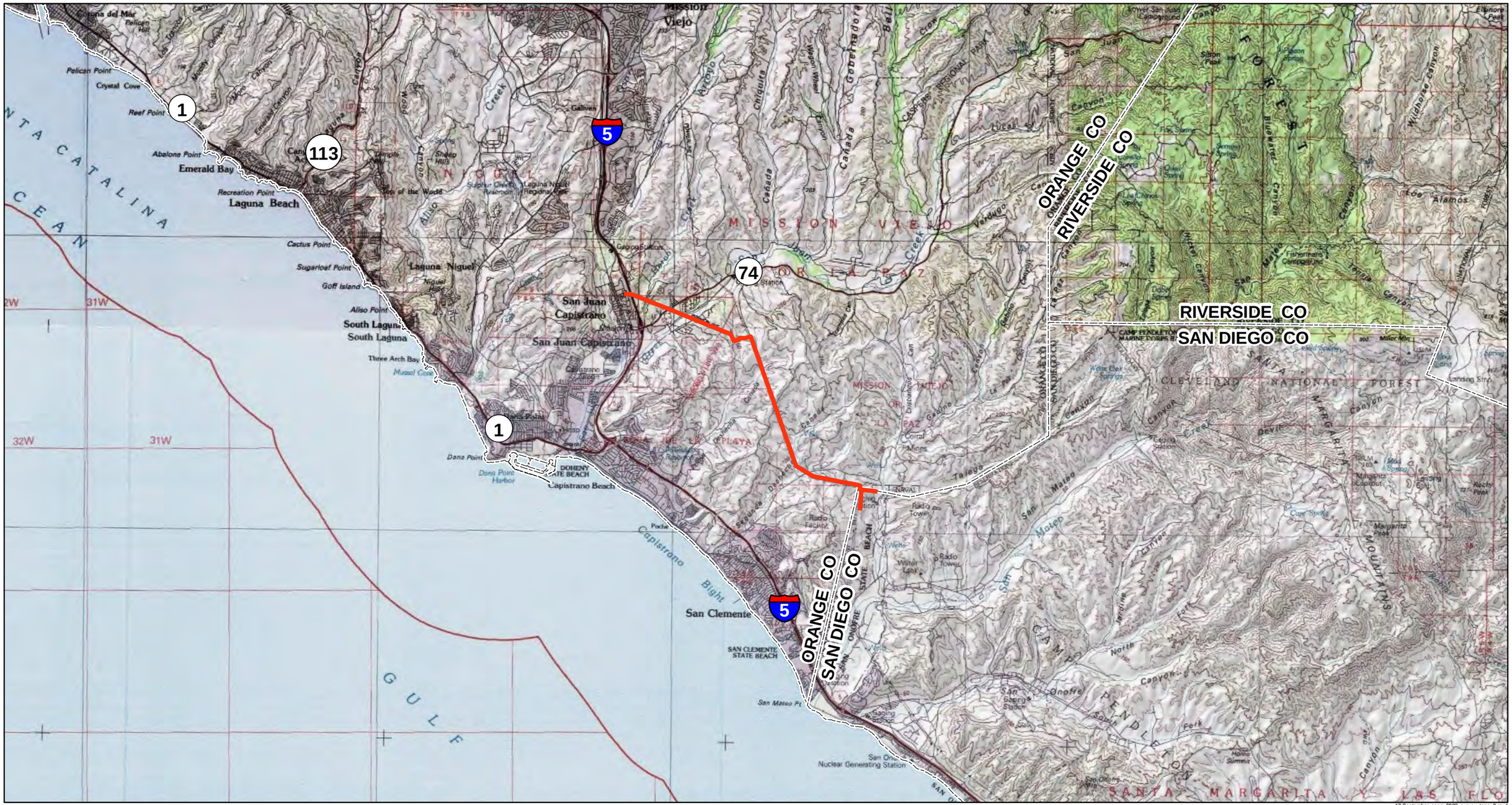
At least 6 brown-headed cowbirds (*Molothrus ater*), both males and females, were heard calling during all of the surveys in the San Juan Creek area (see Figure 3), but no cowbirds were directly observed. In the second drainage south of the Prima Deshecha Sanitary Landfill, a single least Bell's vireo male was observed during all three surveys. An actively baited brown-headed cowbird trap was located in this drainage as well, although the capture rate of brown-headed cowbirds is unknown.

Please contact me at (760) 603-1740 if you have any questions or comments regarding this letter.

Sincerely,

Paula Potenza
Lead Biologist

Attachments
Figure 1: Project Vicinity Map
Figure 2: USGS 7.5 Topographic Quadrangles
Figure 3: USGS 7.5 Topographic Quadrangles



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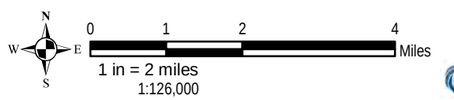


FIGURE 1 - VICINITY MAP
SOUTH ORANGE COUNTY RELIABILITY UPGRADE PROJECT | SDG&E

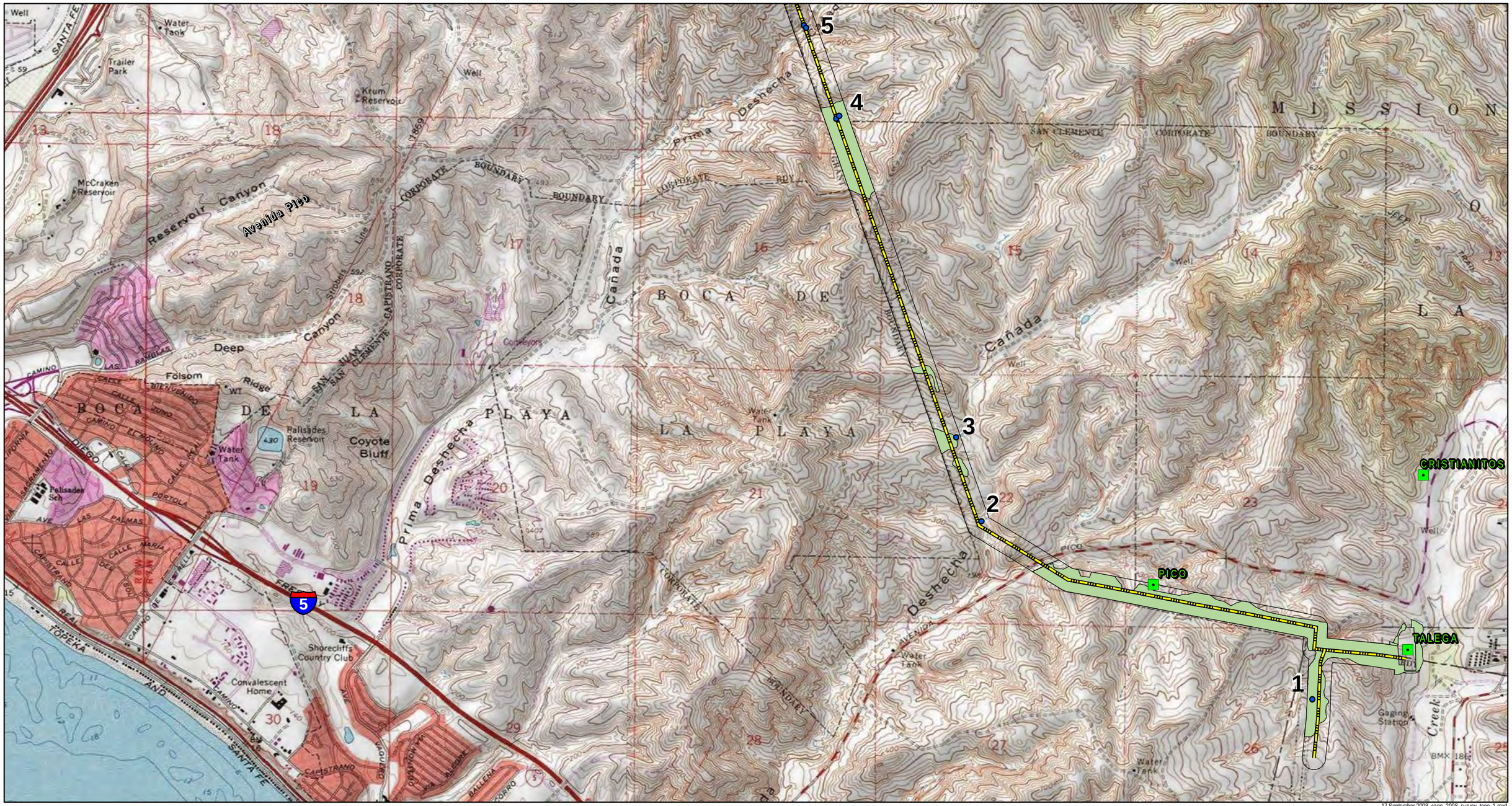
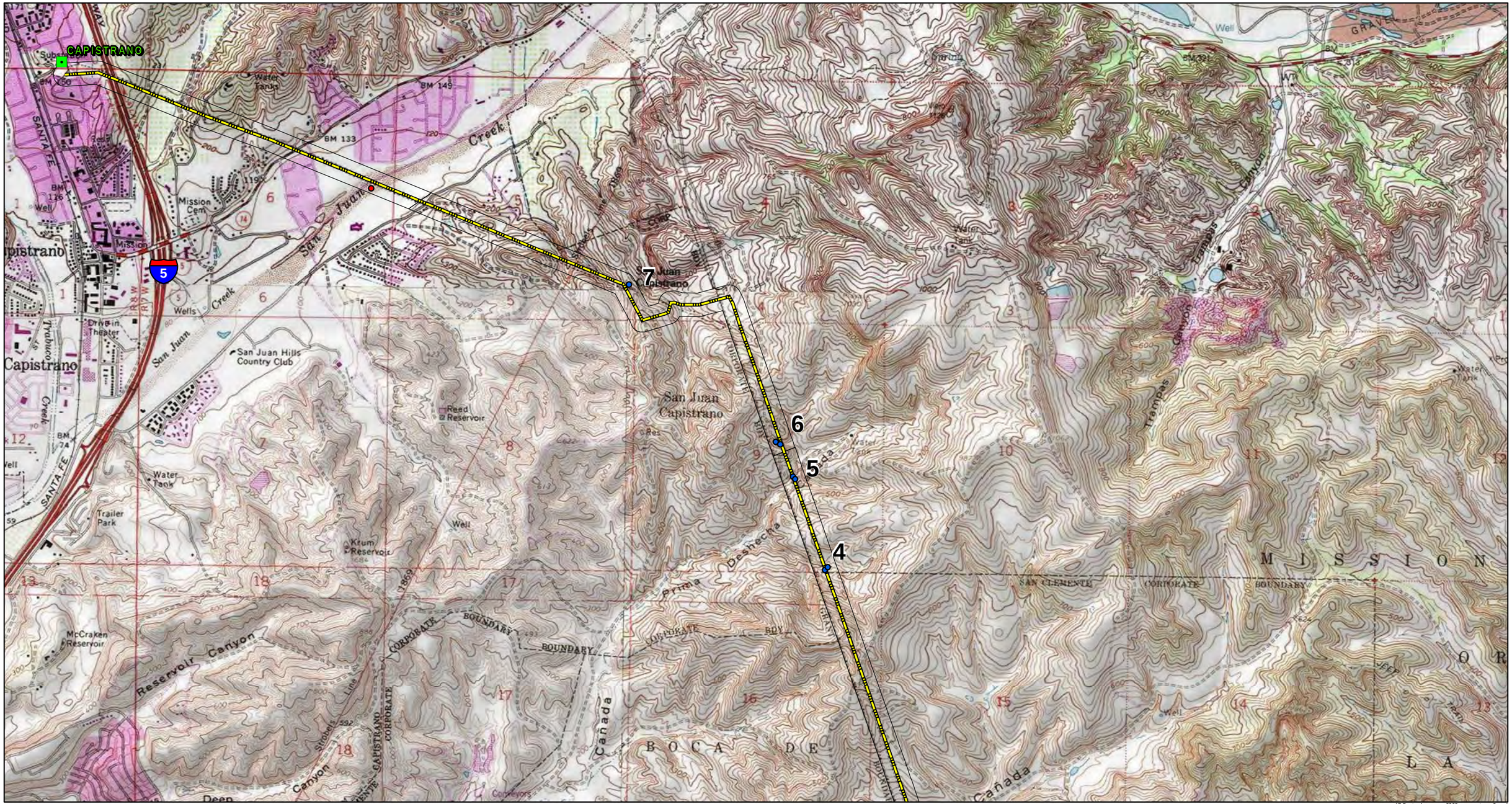


FIGURE 2 - USGS 7.5 TOPOGRAPHIC QUADRANGLES
SOUTH ORANGE COUNTY RELIABILITY UPGRADE PROJECT | SDG&E



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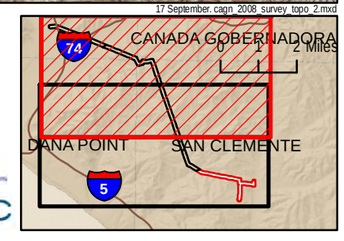


- BHCB
- LBV
- Substations
- Transmission line

FIGURE 2 - USGS 7.5 TOPOGRAPHIC QUADRANGLES
SOUTH ORANGE COUNTY RELIABILITY UPGRADE PROJECT | SDG&E

USGS 7.5 Topographic Quadrangles
Canada Gobernadora
Dana Point
San Clemente
San Juan Capistrano

N W E S
0 500 1,000 2,000 Feet
1 inch = 2,000 feet
1:24,000

SDGE
TRC

Appendix G:
Results of Protocol Surveys for Federally-Endangered Arroyo Toad (*Bufo californicus*) and Southwestern Willow Flycatcher (*Empidonax trailii extimus*) in Conjunction with San Diego Gas & Electric's Orange County Transmission Expansion Project located in Orange County, California

Bloom Biological, Inc.
Research | Consulting | Conservation

June 28, 2010

Ms. Sandra Marquez
Carlsbad Fish & Wildlife Office
6010 Hidden Valley Road
Carlsbad, California 92011

SUBJECT: Results of protocol surveys for federally-endangered Arroyo Toad (*Bufo californicus*) and Southwestern Willow Flycatcher (*Empidonax traillii extimus*) in conjunction with San Diego Gas & Electric's Orange County Transmission Expansion Project located in Orange County, California

Dear Ms. Marquez:

Bloom Biological, Incorporated (BBI) was retained by TRC Solutions, Incorporated to conduct surveys for federally-endangered Arroyo Toad (*Bufo californicus*) and Southwestern Willow Flycatcher (*Empidonax traillii extimus*) in conjunction with San Diego Gas & Electric's (SDG&E) Orange County Transmission Expansion Project located in Orange County, California. The three survey areas are within the SDG&E easement and a 250-foot buffer along San Juan Creek in the southeast corner of the USGS *San Juan Capistrano* 7.5' quadrangle (see attached topo exhibit) and Talega Creek in the southern portion of the USGS *San Clemente* 7.5' quadrangle . This letter describes the methods and the results of these surveys.

PROPOSED PROJECT DESCRIPTION

In order to increase reliability to its customers and substations in the southern Orange County region, SDG&E is proposing to rebuild the existing 138/12 kilovolt (kV) Capistrano Substation with a 230/138/12 kV substation. The South Orange County Reliability Upgrade project (Project) is intended to meet the area load growth and service reliability for approximately 118,000 customers (462 megawatts) within southern Orange County. This project includes upgrading the existing TL13835 (138 kV) with a twin 230 kV circuit and rebuilding the existing 138/12kV Capistrano substation into a new 230/138/12kV substation. The project will bring a new 230kV transmission source into southern Orange County for increased capacity and reliability. This project would have an anticipated in-service date of 2013.

The project would include the following primary components:

- Build new 230kV facilities at Capistrano Substation (Gas Insulated Substation);
- Relocate, rebuild and expand existing 138kV facilities at Capistrano Substation (Gas Insulated Substation);
- Relocate, rebuild and expand existing 12kV facilities at Capistrano Substation;
- New double-circuit 230kV transmission line within existing Talega to Capistrano utility corridor (new steel poles, replacing existing 138kV steel poles/towers/wood pole structures);
- Undergrounding of approximately 3000 feet of 230kV transmission line;
- Relocated 12kV distribution line both within and outside of the existing Talega to Capistrano utility corridor;
- Relocate existing 138kV transmission lines at Talega and add a new 138kV transmission line;
- Upgrade remote ends of all 138kV and 230kV transmission lines affected; and

- Changes to the Talega Substation to accommodate the new 230kV circuit..

METHODS

As previously stated, the three survey areas are within the SDG&E easement and a 250-foot buffer and, for the purposes of this report, will be referred to as Survey Areas A, B and C. These survey areas are as follows:

- Survey Area A - along San Juan Creek in the southeast corner of the USGS *San Juan Capistrano* 7.5' quadrangle. Approximate endpoints are 33° 30' 20.8", 117° 38' 33.0" and 33° 30' 22.3", 117° 38' 37.3".
- Survey Area B - along Talega Creek in the southern portion of the USGS *San Clemente* 7.5' quadrangle. Approximate endpoints are 33° 27' 21.6, 117° 35' 16.5" and 33° 27' 17.9", 117° 35' 13.2".
- Survey Area C – also along Talega Creek in the southern portion of the USGS *San Clemente* 7.5' quadrangle. Approximate endpoints are 33° 27' 04.0", 117° 34' 43.4" and 33° 27' 04.4", 117° 34' 44.2".

For all three sites, protocol surveys for Southwestern Willow Flycatcher were conducted on May 15 and June 5, 11, 17, and 25, 2010 following the Service's standard protocol for this species as described in Sogge *et al* (2010)[1]. Protocol surveys for Arroyo Toad were conducted on April 30; May 7, 15, 23, 29; and June 5, 2010 following the Service's standard protocol for this species as described in *USFWS Survey Protocol for the Arroyo Toad* (1999). All surveys were conducted by BBI biologist Peter Bloom (TE787376).

RESULTS

Southwestern Willow Flycatchers and Arroyo Toads are absent from all three survey areas.

Survey Area A

San Juan Creek in Survey Area A was the only survey location with surface water and the only site with potential, but unoccupied, breeding habitat for Arroyo Toad. Historically (~1994) this reach was occupied Arroyo Toad breeding and upland habitat. The species was extirpated more than a decade ago due to complete loss of upland habitat and permanent urban water runoff which created breeding conditions for Bulllfrogs (*Rana catesbeiana*) (Bloom pers. obs.). This location receives a substantial amount of urban runoff and contains a plant species mix that superficially appeared suitable for Southwestern Willow Flycatcher, however, the dense undergrowth found on this site probably inhibits nesting by this species. This area has potential to provide stopover habitat for migrating willow flycatchers and in some areas up and down stream, and may one day become occupied breeding habitat. Dominant plant species found in the survey area include *Typha latifolia*, *Salix lasiolepis*, *Arundo donax*, *Platanus racemosa*, *Quercus agrifolia*, *Eucalyptus globules*, *Artemisia californica*, *Baccharis salicifolia*, *B. pilularis* and *Salvia douglassiana*. Surrounding areas away from main drainage were dominated by non-native *Avena* and *Bromus* species. Bird species observed in the survey area were American Crow (*Corvus brachyrhynchos*), Anna's Hummingird (*Calypte anna*), Bullock's Oriole (*Icterus bullockii*),Bushtit (*Psaltriparus minimus*), California Gull (*Larus californicus*), California Quail (*Callipepla californica*), California Towhee (*Pipilo crissalis*), Cliff Swallow (*Petrochelidon pyrrhonota*), Common Yellowthroat (*Geothlypis trichas*), Great Blue Heron (*Ardea herodius*), House Finch (*Carpodacus mexicanus*),

[1] Sogge, M.K., Ahlers, D., and Sferra, S.J. 2010. A natural history summary and survey protocol for the Southwestern Willow Flycatcher: USGS Survey Techniques and Methods 2A-10.

House Sparrow (*Passer domesticus*), House Wren (*Troglodytes aedon*), Killdeer (*Charadrius vociferus*), Lesser Goldfinch (*Carduelis psaltria*), Mourning Dove (*Zenaida macroura*), Pacific-Slope Flycatcher (*Empidonax difficilis*), Red-shouldered Hawk (*Buteo lineatus*), Song Sparrow (*Melospiza melodia*), Turkey Vulture (*Cathartes aura*) and Western Scrub-Jay (*Aphelocoma californica*).

Survey Area B

Survey Area B is the larger (~ 200 m x 4 m) of two sites near Camp Pendleton and with occupied arroyo toad breeding habitat 400 meters away in San Mateo Creek. The site has no surface water but receives some runoff from an adjacent golf course. The soil type is a dense clay and while suitable upland foraging habitat for arroyo toads in the wet season, is low quality habitat in the dry season. Dominant plant species found in the survey area include *Salix lasiolepis*, *Quercus agrifolia*, *Baccharis salicifolia*, *B. pilularis* and *Artemisia californica*. Surrounding areas away from main drainage were dominated by non-native grasses. Bird species observed in the survey area were Anna's Hummingird (*Calypte anna*), Bushtit (*Psaltriparus minimus*), California Towhee (*Pipilo crissalis*), Common Raven (*Corvus corax*), House Finch (*Carpodacus mexicanus*), Lesser Goldfinch (*Carduelis psaltria*), Mourning Dove (*Zenaida macroura*), Northern Mockingbird (*Mimus polyglottos*), Red-tailed Hawk (*Buteo jamicensis*), Song Sparrow (*Melospiza melodia*), Western Meadowlark (*Sturnella neglecta*) and Wrentit (*Chamaea fasciata*).

Survey Area C

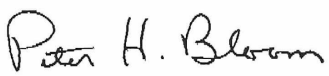
Survey Area C is the smaller (25 m x 25 m) of two sites near Camp Pendleton. Like Survey Area B, the site has no surface water, has an identical soil type and receives some runoff from an adjacent golf course. Dominant plant species found in the survey area are the same as those found at Survey Area B, except for the absence of *Quercus agrifolia* and the addition of dense stands of *Brassica nigra*. Bird species observed in the survey area were American Crow (*Corvus brachyrhynchos*), American Goldfinch (Carduelis tristis), Anna's Hummingird (*Calypte anna*), California Gnatcatcher (*Polioptila californica*), California Quail (*Callipepla californica*), California Thrasher (*Toxostoma redivivum*), California Towhee (*Pipilo crissalis*), Common Raven (*Corvus corax*), House Finch (*Carpodacus mexicanus*), Lesser Goldfinch (*Carduelis psaltria*), Mourning Dove (*Zenaida macroura*), Northern Rough-winged Swallow (Stelgidopteryx serripennis), Nuttall's Woodpecker (*Picoides nuttalli*), Red-tailed Hawk (*Buteo jamaicensis*), Say's Phoebe (Sayornis saya), Song Sparrow (*Melospiza melodia*), Western Kingbird (*Tyrannus verticalis*), Western Scrub-Jay (*Aphelocoma californica*), and Yellow-breasted Chat (*Icteria virens*).

CERTIFICATION: *I hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this biological evaluation, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief.*

If you have any questions or comments regarding this letter please feel free to contact me at 714-544-6147.

Sincerely,

BLOOM BIOLOGICAL, INC.



Peter H. Bloom

Survey Area A

Survey Area B

Survey Area C

0 1200 2400 3600 ft

1:25000

UTM NAD83 Zone 11 Coordinates.
Map: Marcus C. England.
England Ecological. 29 June 2010.

Survey Area Locations

Bloom Biological, Inc.
Research | Consulting | Conservation

Appendix H: Vegetation and Sensitive Species Maps

G:\SOCRUP\MXD\BioTech Feb 2012\Appendix\VegandSpecies1.mxd 03-20-2012

Created For: Mary Turley

Created By: TRC

Date: 4/25/2012

SDG&E is providing this map with the understanding that the map is not survey grade.

Legend

- Proposed Project Survey Area
- 2008 Nest Location
- Coastal Sage Scrub
- Disturbed Coastal Sage Scrub
- Coastal Freshwater Marsh
- Southern Willow Scrub
- Disturbed Southern Willow Scrub
- Riparian Scrub
- Ruderal
- Disturbed
- Ornamental
- Dirt Road
- Developed

N

0 100 200 400 Feet

South Orange County Reliability Enhancement Project

Vegetation and Sensitive Species Maps

Sheet 1 of 18

SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT

SDGE A Sempra Energy utility

G:\SOCRUP\MXD\BioTech Feb 2012\Appendix\VegandSpecies1.mxd 03-20-2012

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- Disturbed Southern Willow Scrub
- Riparian Scrub
- Ruderal
- Disturbed
- Ornamental
- Dirt Road
- Developed

N

0 100 200 400 Feet

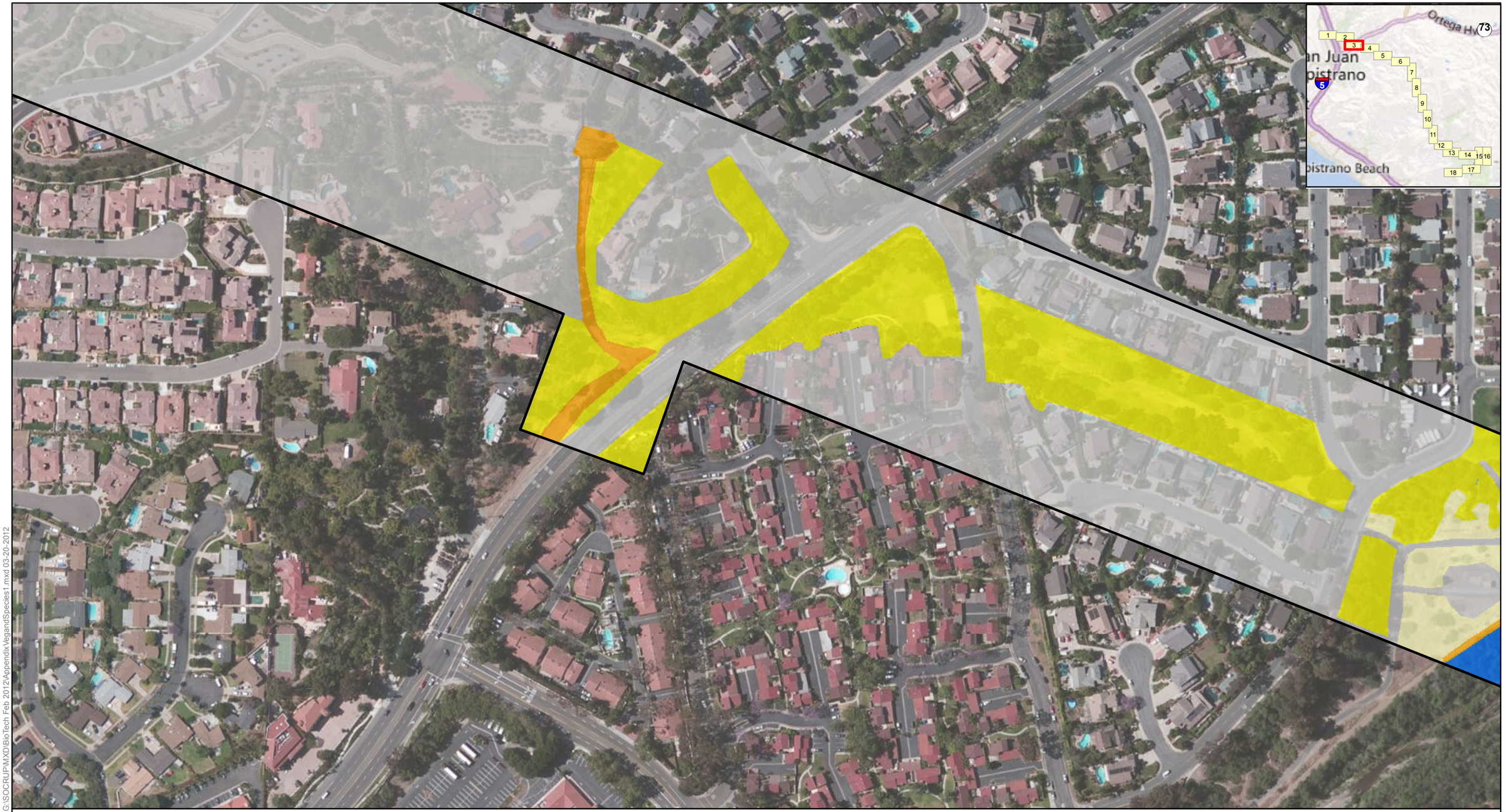
South Orange County Reliability Enhancement Project

Vegetation and Sensitive Species Maps

Sheet 2 of 18

SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT

SDGE A Sempra Energy utility



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- Riparian Scrub
- Ruderal
- Disturbed
- Ornamental
- Dirt Road
- Developed

N

0 100 200 400 Feet

South Orange County Reliability Enhancement Project

Vegetation and Sensitive Species Maps

Sheet 3 of 18

SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT

SDGE A Sempra Energy utility

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- Riparian Scrub
- Ruderal
- Disturbed
- Ornamental
- Dirt Road
- Developed

N

0 100 200 400 Feet

South Orange County Reliability Enhancement Project

Vegetation and Sensitive Species Maps

Sheet 4 of 18

SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT

SDGE A Sempra Energy utility

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- Riparian Scrub
- Ruderal
- Disturbed
- Ornamental
- Dirt Road
- Developed

N

0 100 200 400 Feet

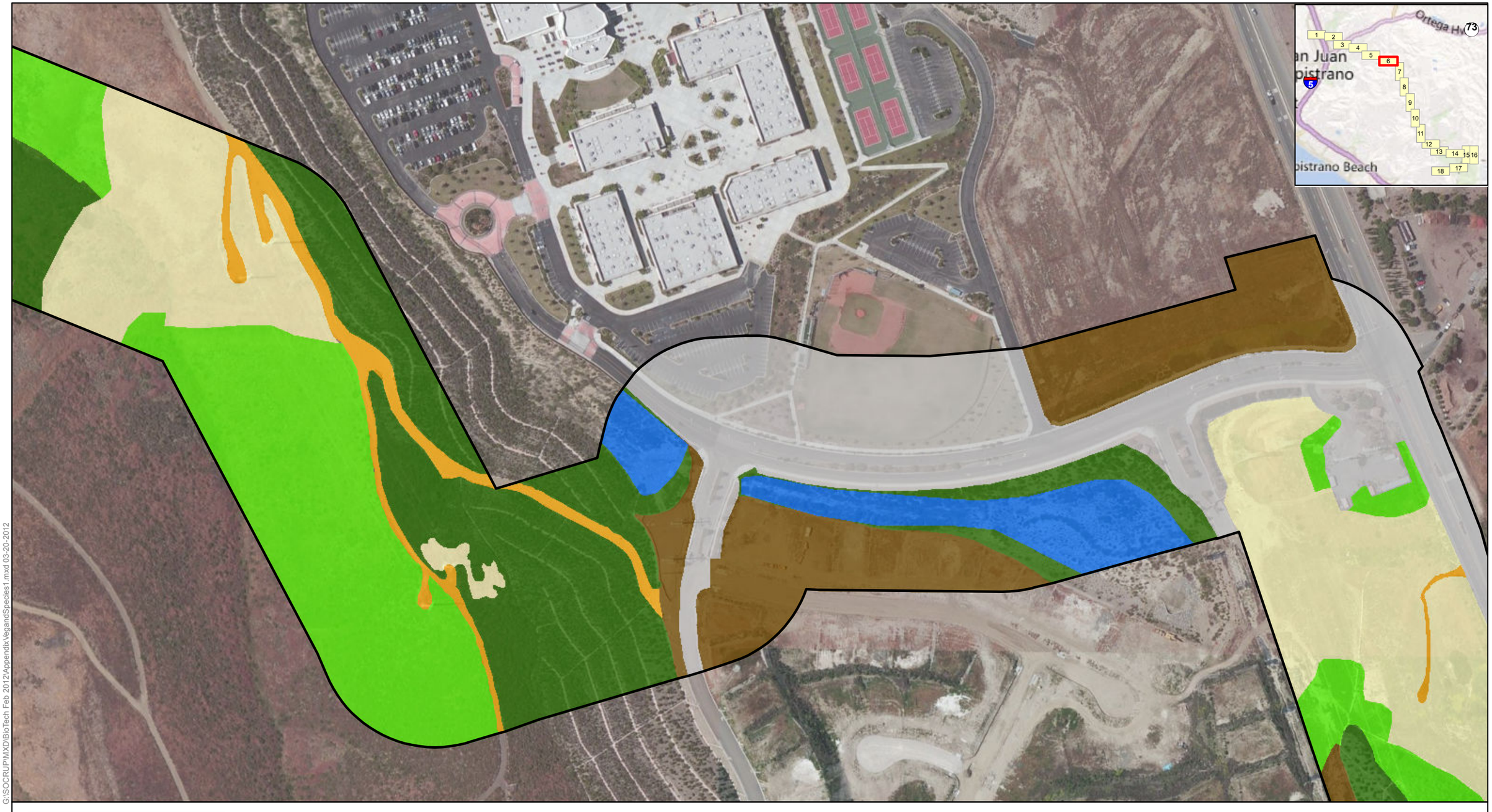
South Orange County Reliability Enhancement Project

Vegetation and Sensitive Species Maps

Sheet 5 of 18

SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT

SDGE A Sempra Energy utility



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- Disturbed Southern Willow Scrub
- Riparian Scrub
- Ruderal
- Disturbed
- Ornamental
- Dirt Road
- Developed

N

0 100 200 400 Feet

South Orange County Reliability Enhancement Project

Vegetation and Sensitive Species Maps

Sheet 6 of 18

SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT

SDGE A Sempra Energy utility

G:\SOCRUP\MXD\BioTech Feb 2012\Appendix Vegand\Species1.mxd 03-20-2012

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- Southern Willow Scrub
- Disturbed Southern Willow Scrub
- Riparian Scrub
- Ruderal
- Disturbed
- Ornamental
- Dirt Road
- Developed

N

0 100 200 400 Feet

South Orange County Reliability Enhancement Project

Vegetation and Sensitive Species Maps

Sheet 7 of 18

SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT

SDGE A Sempra Energy utility

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- Disturbed Southern Willow Scrub
- Riparian Scrub
- Ruderal
- Disturbed
- Ornamental
- Dirt Road
- Developed

N

0 100 200 400 Feet

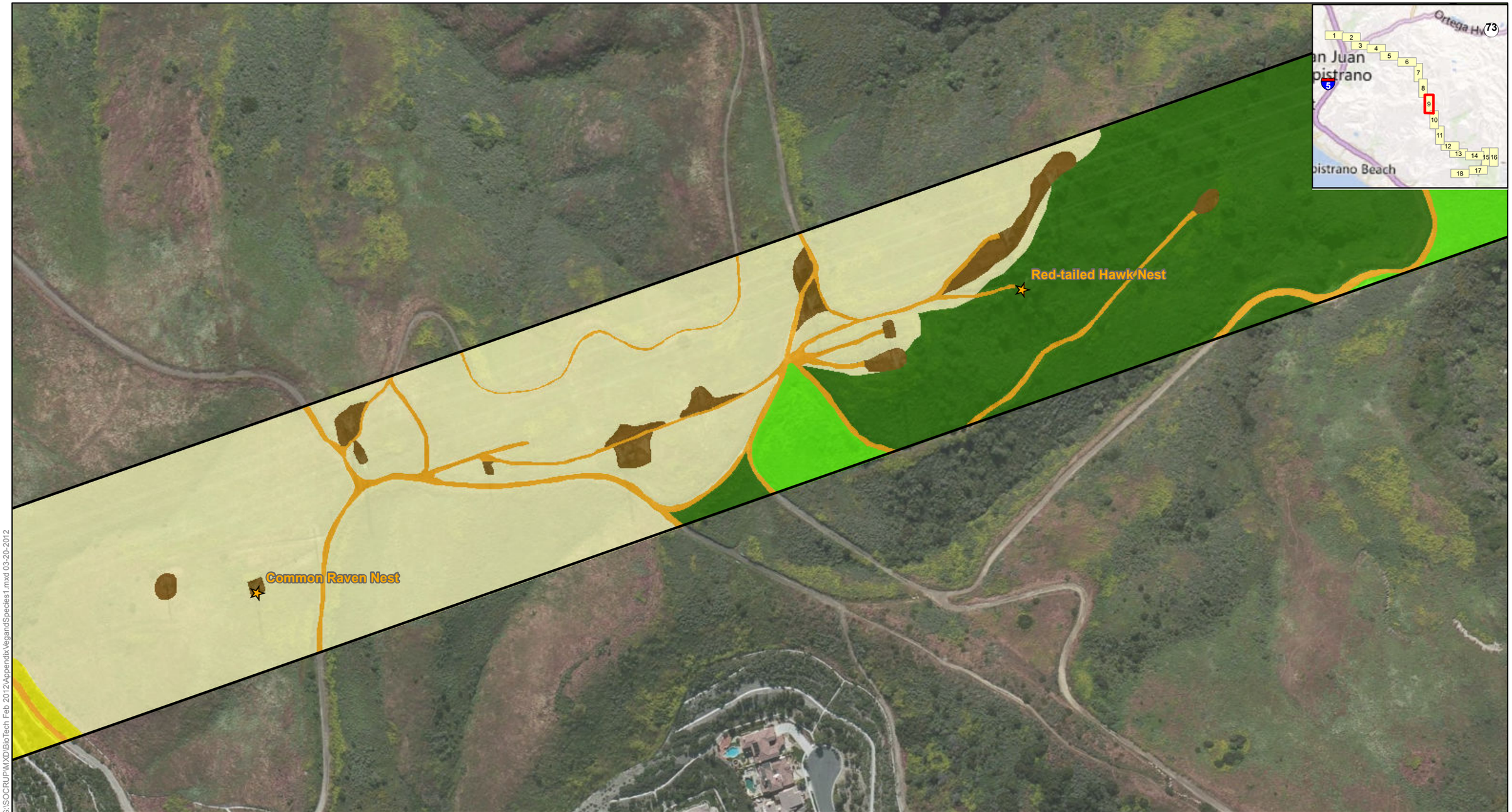
South Orange County Reliability Enhancement Project

Vegetation and Sensitive Species Maps

Sheet 8 of 18

SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT

SDGE A Sempra Energy utility



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- Riparian Scrub
- Ruderal
- Disturbed
- Ornamental
- Dirt Road
- Developed

N

0 100 200 400 Feet

South Orange County Reliability Enhancement Project

Vegetation and Sensitive Species Maps

Sheet 9 of 18

SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT

SDGE A Sempra Energy utility

G:\SOCRUP\MXD\BioTech Feb 2012\Appendix Vegand\Species1.mxd 03-20-2012

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- Riparian Scrub
- Ruderal
- Disturbed
- Ornamental
- Dirt Road
- Developed

N

0 100 200 400 Feet

South Orange County Reliability Enhancement Project

Vegetation and Sensitive Species Maps

Sheet 10 of 18

SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT

SDGE A Sempra Energy utility

G:\SOCRUP\MXD\BioTech Feb 2012\Appendix\VegandSpecies1.mxd 03-20-2012

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- Southern Willow Scrub
- Disturbed Southern Willow Scrub
- Riparian Scrub
- Ruderal
- Disturbed
- Ornamental
- Dirt Road
- Developed

N

0 100 200 400 Feet

South Orange County Reliability Enhancement Project

Vegetation and Sensitive Species Maps

Sheet 11 of 18

SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT

SDGE A Sempra Energy utility

G:\SOCRUP\MXD\BioTech Feb 2012\Appendix\VegandSpecies1.mxd 03-20-2012

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- Riparian Scrub
- Ruderal
- Disturbed
- Ornamental
- Dirt Road
- Developed

N

0 100 200 400 Feet

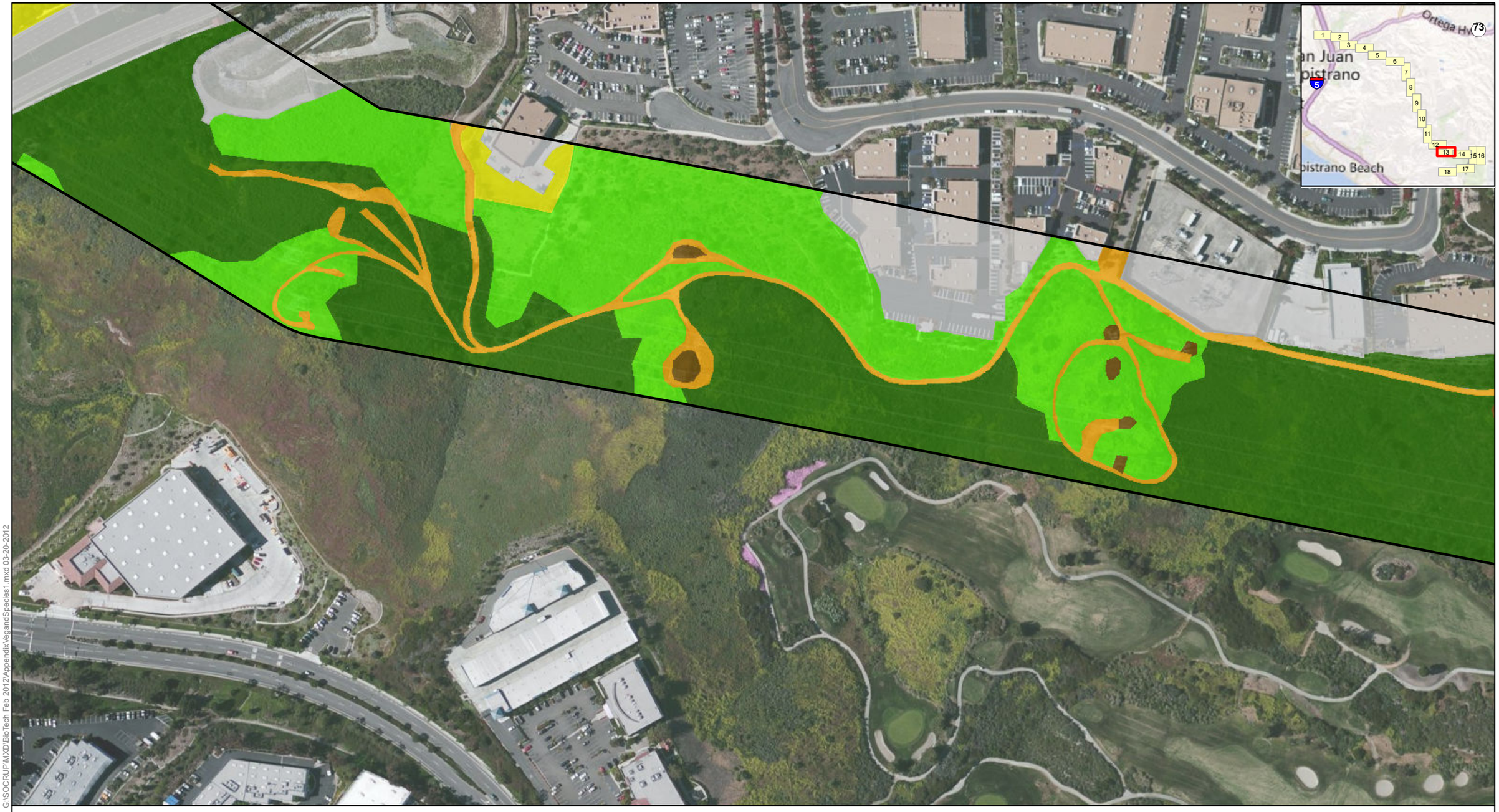
South Orange County Reliability Enhancement Project

Vegetation and Sensitive Species Maps

Sheet 12 of 18

SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT

SDGE A Sempra Energy utility



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- Riparian Scrub
- Ruderal
- Disturbed
- Ornamental
- Dirt Road
- Developed

N

0 100 200 400 Feet

South Orange County Reliability Enhancement Project

Vegetation and Sensitive Species Maps

Sheet 13 of 18

SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT

SDGE A Sempra Energy utility

G:\SOCRUP\MXD\BioTech Feb 2012\AppendixVegandSpecies1.mxd 03-20-2012

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- Riparian Scrub
- Ruderal
- Disturbed
- Ornamental
- Dirt Road
- Developed

N

0 100 200 400 Feet

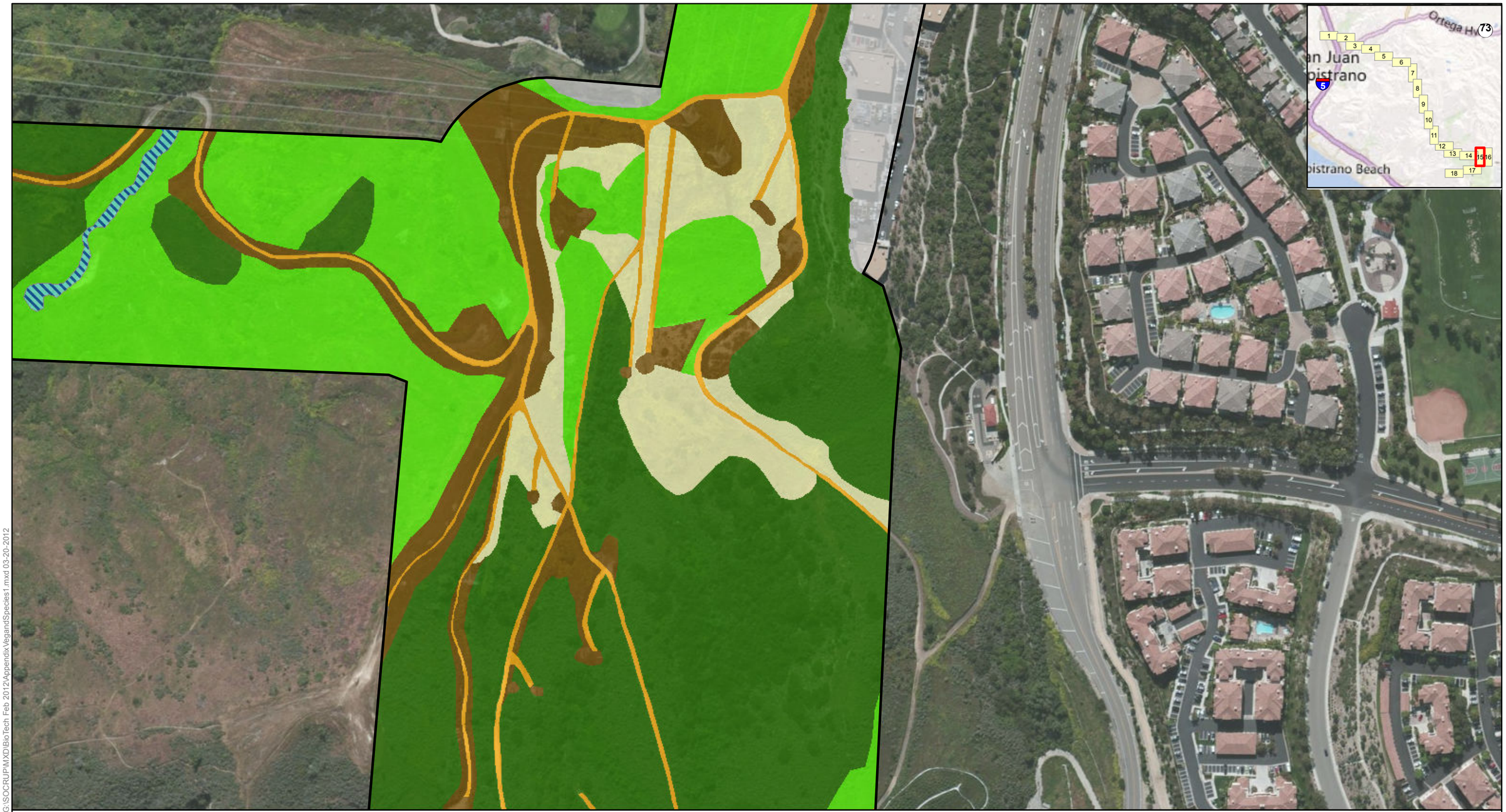
South Orange County Reliability Enhancement Project

Vegetation and Sensitive Species Maps

Sheet 14 of 18

SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT

SDGE A Sempra Energy utility



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- Southern Willow Scrub
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- Riparian Scrub
- Ruderal
- Disturbed
- Ornamental
- Dirt Road
- Developed

N

0 100 200 400 Feet

South Orange County Reliability Enhancement Project

Vegetation and Sensitive Species Maps

Sheet 15 of 18

SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT

SDGE A Sempra Energy utility

G:\SOCRUP\MXD\BioTech Feb 2012\Appendix\Vegand\Species1.mxd 03-20-2012

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- Ruderal
- Disturbed
- Ornamental
- Dirt Road
- Developed

N

0 100 200 400 Feet

South Orange County Reliability Enhancement Project

Vegetation and Sensitive Species Maps

Sheet 16 of 18

SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT

SDGE A Sempra Energy utility

G:\SOCRUP\MXD\BioTech Feb 2012\Appendix\VegandSpecies1.mxd 03-20-2012

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- Riparian Scrub
- Ruderal
- Disturbed
- Ornamental
- Dirt Road
- Developed

N

0 100 200 400 Feet

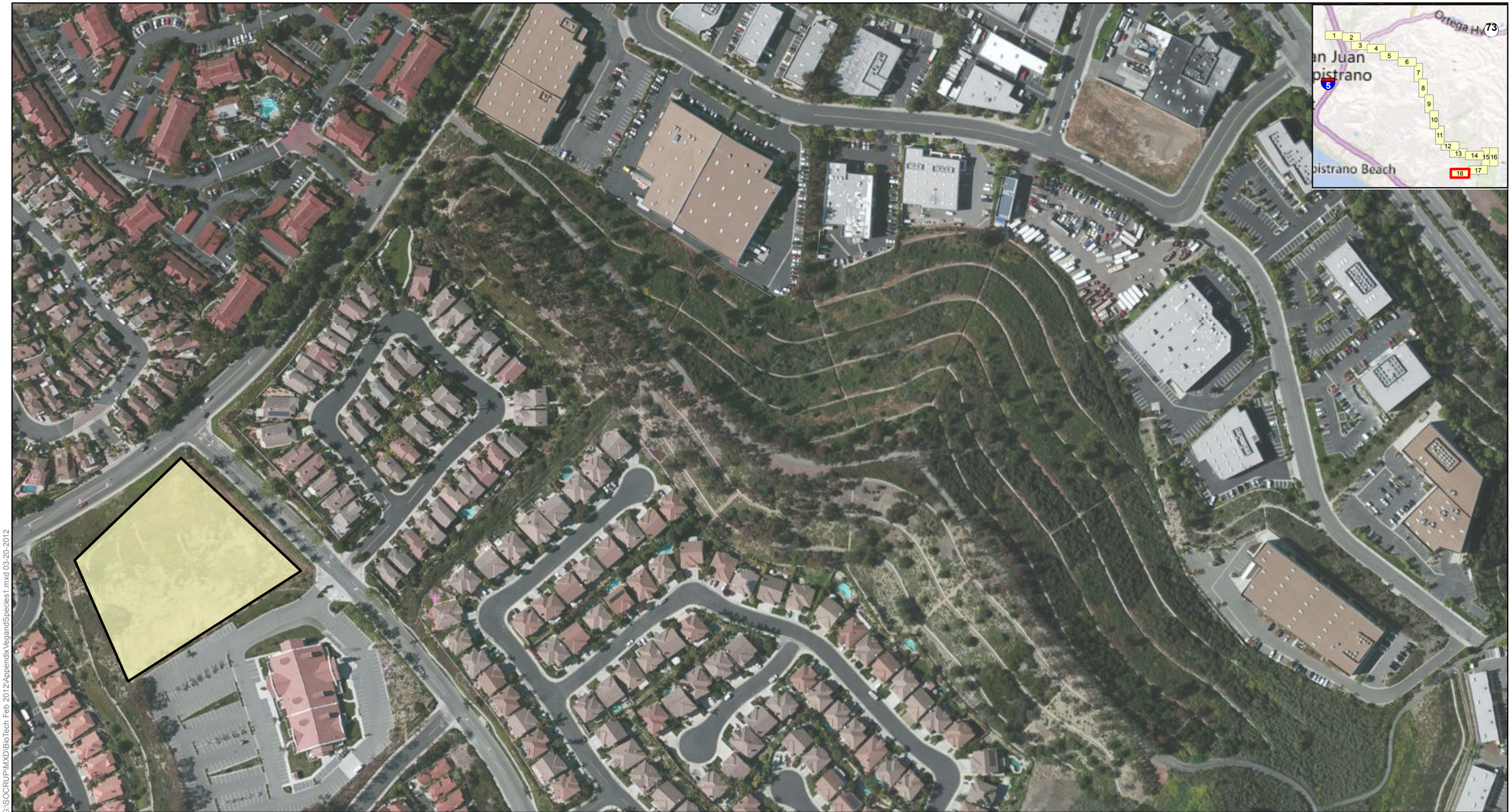
South Orange County Reliability Enhancement Project

Vegetation and Sensitive Species Maps

Sheet 17 of 18

SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT

SDGE A Sempra Energy utility



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- Riparian Scrub
- Ruderal
- Disturbed
- Ornamental
- Dirt Road
- Developed

N

0 100 200 400 Feet

South Orange County Reliability Enhancement Project

Vegetation and Sensitive Species Maps

Sheet 18 of 18

SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT

SDGE A Sempra Energy utility

Appendix I: Photo Exhibit

Appendix I: Photo Exhibit

	Photograph 1: View of coastal sage scrub (CSS) habitat within the survey corridor. Area was dense with native species and had few non native species.
	Photograph 2: View of disturbed CSS within the survey corridor. This habitat type is often seen at the interface between non-native habitats and CSS or CSS that has been historically disturbed through human activities (such as grazing or clearing).

Appendix I: Photo Exhibit

	Photograph 3: View of coastal freshwater marsh within Tributary to Christianitos Creek 1. Freshwater marsh plant communities are dominated by perennial, emergent monocots.
	Photograph 4: View of southern willow scrub (SWS) within San Juan Creek. SWS is found in areas adjacent water sources and includes a high percentage of native hydrophilic vegetation.

Appendix I: Photo Exhibit

	Photograph 5: View of disturbed SWS within San Juan Creek. Disturbed SWS has relatively open canopy due to disturbance that often leads to invasion of non-native species.
	Photograph 6: View of riparian scrub south of the Talega substation. Riparian scrub

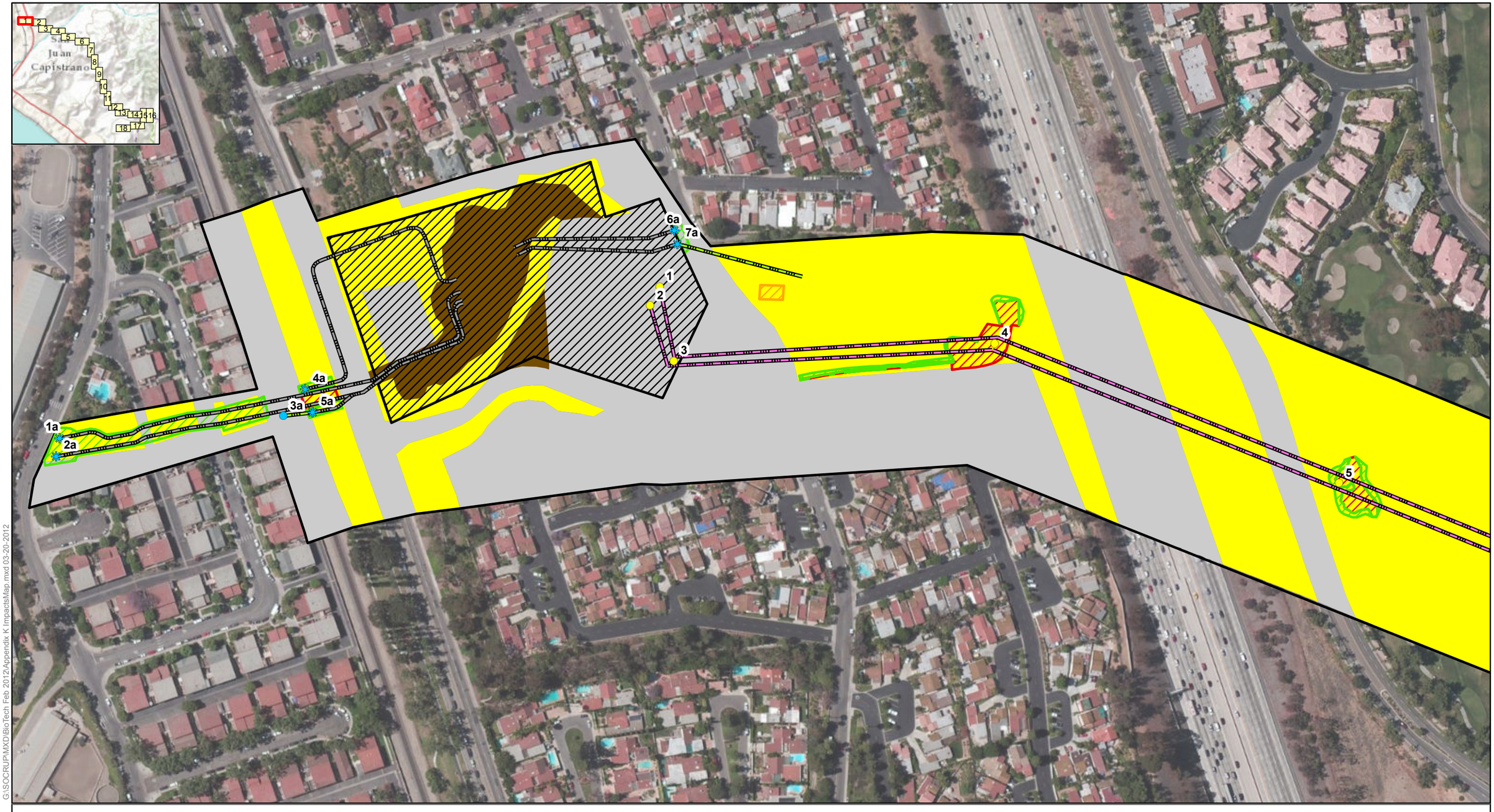
Appendix I: Photo Exhibit

	Photograph 7: View of ruderal habitat within the survey corridor. Ruderal habitat is generally associated with significant human disturbance and is often found near disturbed and developed areas.
	Photograph 8: View of disturbed habitat adjacent to an existing transmission pole. Disturbed areas are relatively free of vegetation due to ongoing maintenance or recent human activity.

	Photograph 9: View of ornamental vegetation adjacent to an existing transmission pole.
	Photograph 10: View of dirt road within the survey area. Dirt roads occur throughout the survey area and are typically used to access the existing transmission poles.

	Photograph 11: View of developed area at the Talega substation.

Appendix J: Impacts Maps



G:\SOCRUP\MXD\BioTech Feb 2012\Appendix K ImpactsMap.mxd 03-20-2012

Created For:
Mary Turley

Created By:
TRC

Date: 4/25/2012

SDG&E is providing this map with the understanding that the map is not survey grade.

Impact Types
- Permanent Impact
- Temporary Impact
- Staging Site (Temporary)
- String Site (Temporary)
- Substation Site

New Poles
- 230kV Standard Pole
- 230kV Cable Pole
- 138kV Standard Pole
- 138kV Cable Pole
- 69kV Standard Pole
- 69kV Cable Pole

Proposed Transmission Lines
- 230kV Transmission Line - Overhead
- 138kV Transmission Line - Overhead
- 69kV Transmission Line - Overhead
- 230kV Transmission Line - Underground
- 138kV Transmission Line - Underground
- 69kV Transmssion Line - Underground

Vegetation Types
- Coastal Sage Scrub
- Disturbed Coastal Sage Scrub
- Coastal Freshwater Marsh
- Southern Willow Scrub
- Disturbed Southern Willow Scrub
- Riparian Scrub
- Ruderal
- Disturbed
- Ornamental
- Dirt Road
- Developed

N

0 100 200 400 Feet

South Orange County Reliability Enhancement Project

Impacts Map

Sheet 1 of 18

SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT

SDGE A Sempra Energy utility

G:\SOCRUP\MXD\BioTech Feb 2012\Appendix K ImpactsMap.mxd 03-20-2012

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Created By: TRC

Date: 4/25/2012

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Impact Types
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- Temporary Impact
- Staging Site (Temporary)
- String Site (Temporary)
- Substation Site

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- 230kV Cable Pole
- 138kV Standard Pole
- 138kV Cable Pole
- 69kV Standard Pole
- 69kV Cable Pole

Proposed Transmission Lines
- 230kV Transmission Line - Overhead
- 138kV Transmission Line - Overhead
- 69kV Transmission Line - Overhead
- 230kV Transmission Line - Underground
- 138kV Transmission Line - Underground
- 69kV Transmssion Line - Underground

Vegetation Types
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- Disturbed Coastal Sage Scrub
- Coastal Freshwater Marsh
- Southern Willow Scrub
- Disturbed Southern Willow Scrub
- Riparian Scrub
- Ruderal
- Disturbed
- Ornamental
- Dirt Road
- Developed

N

0 100 200 400 Feet

South Orange County Reliability Enhancement Project

Impacts Map

Sheet 2 of 18

SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT

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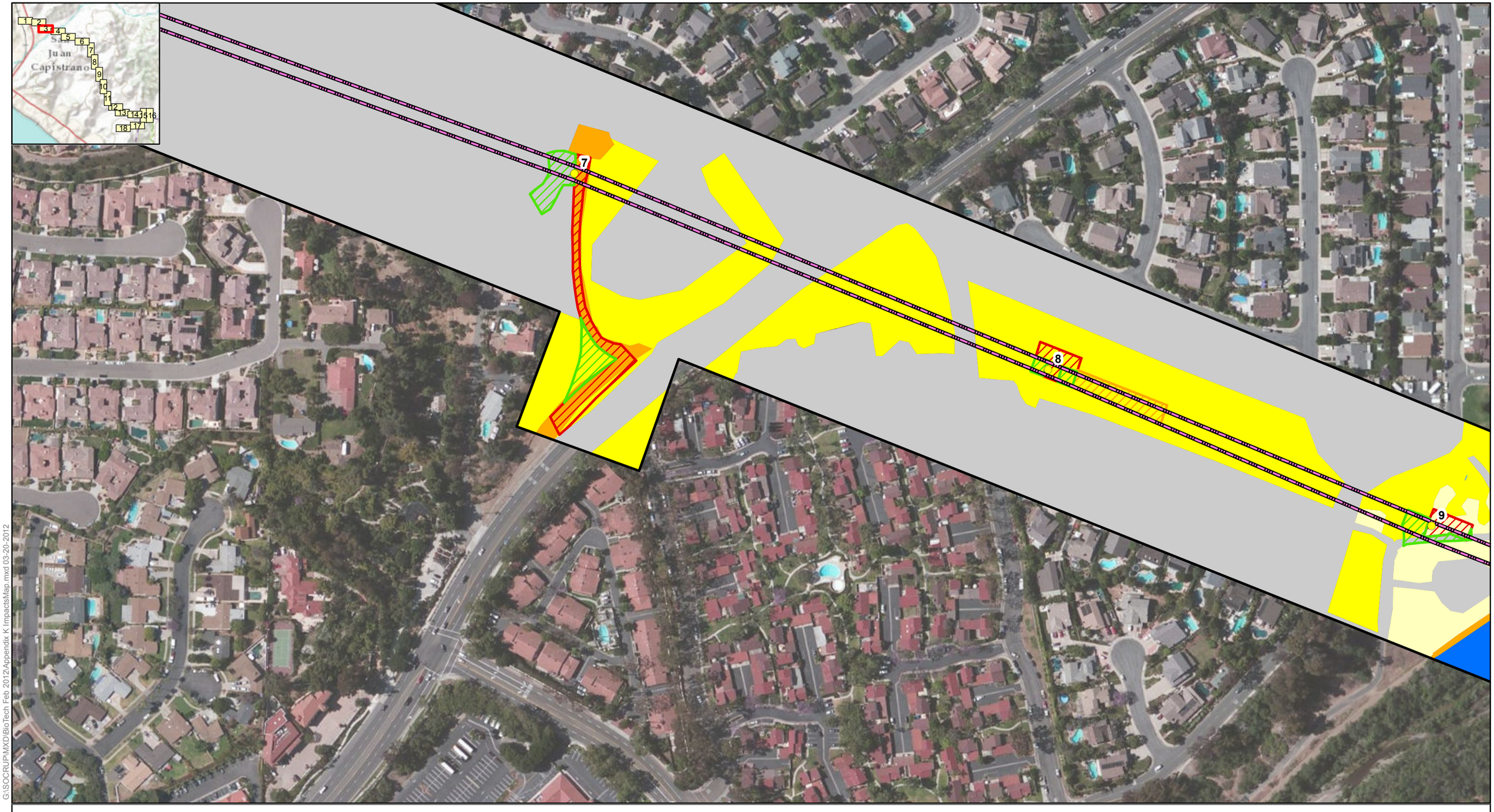

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- Permanent Impact
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- Substation Site

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- Ruderal
- Disturbed
- Ornamental
- Dirt Road
- Developed

N

0 100 200 400 Feet

South Orange County Reliability Enhancement Project

Impacts Map

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South Orange County Reliability Enhancement Project

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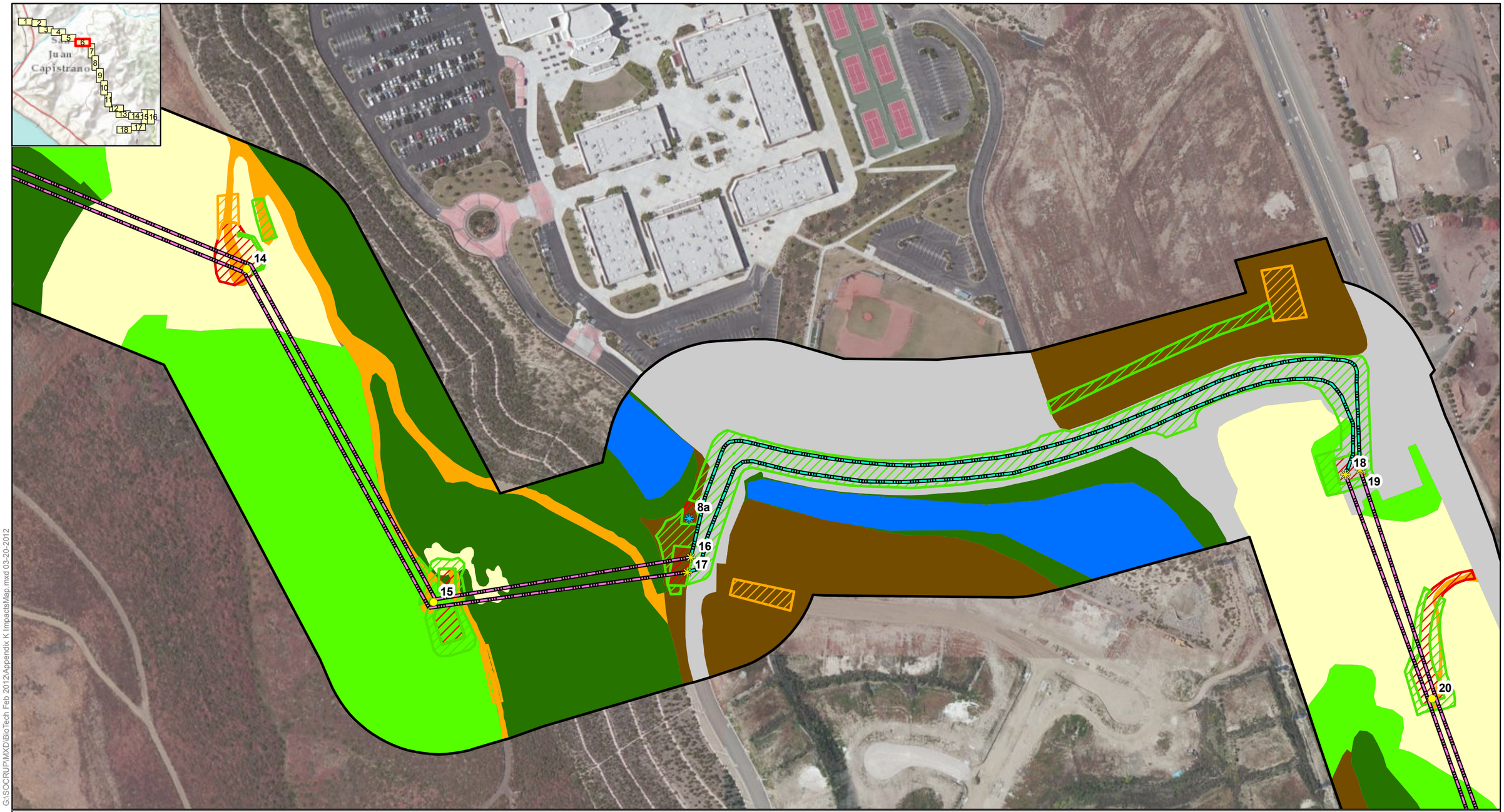

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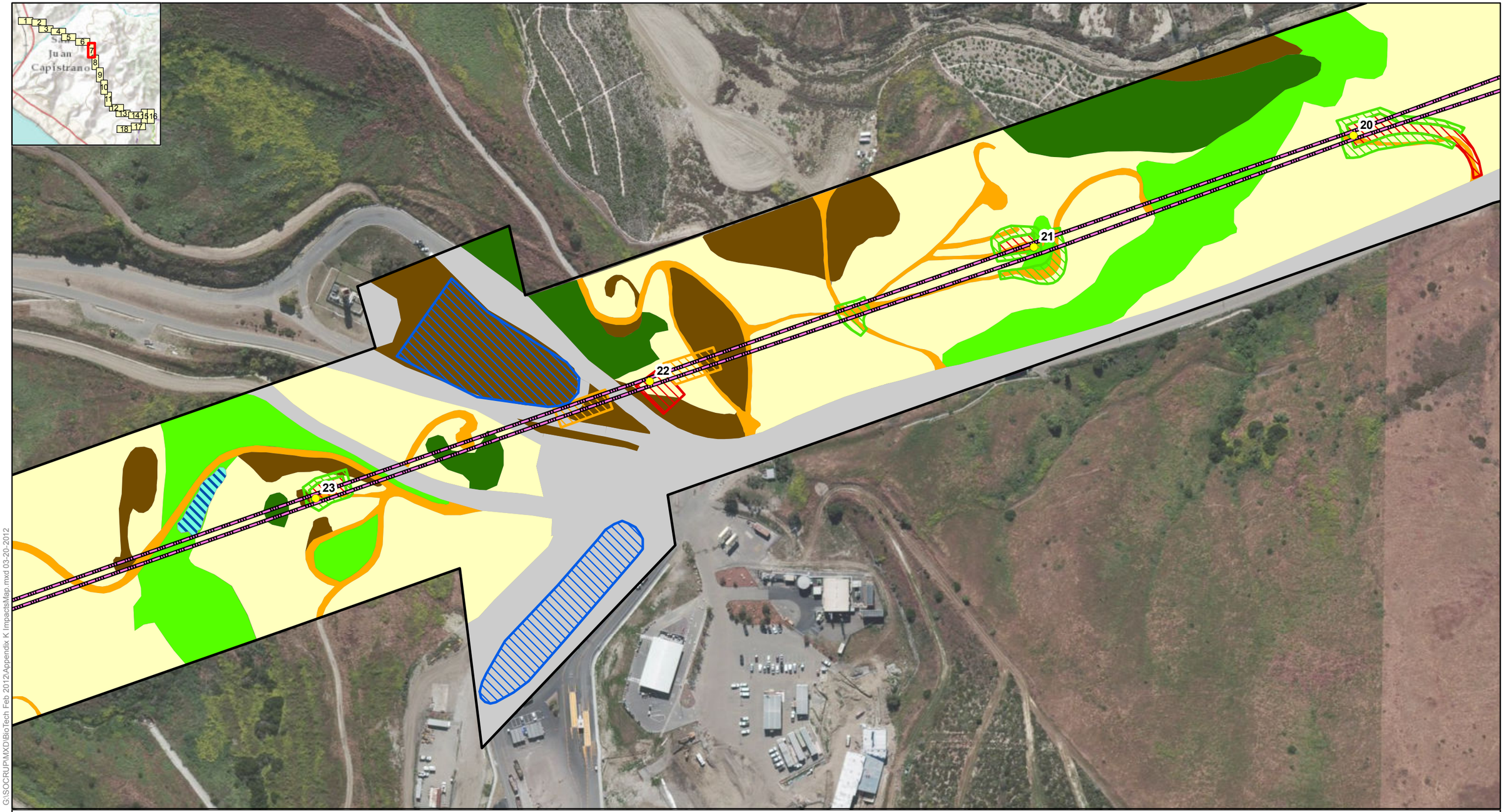

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South Orange County Reliability Enhancement Project

Impacts Map

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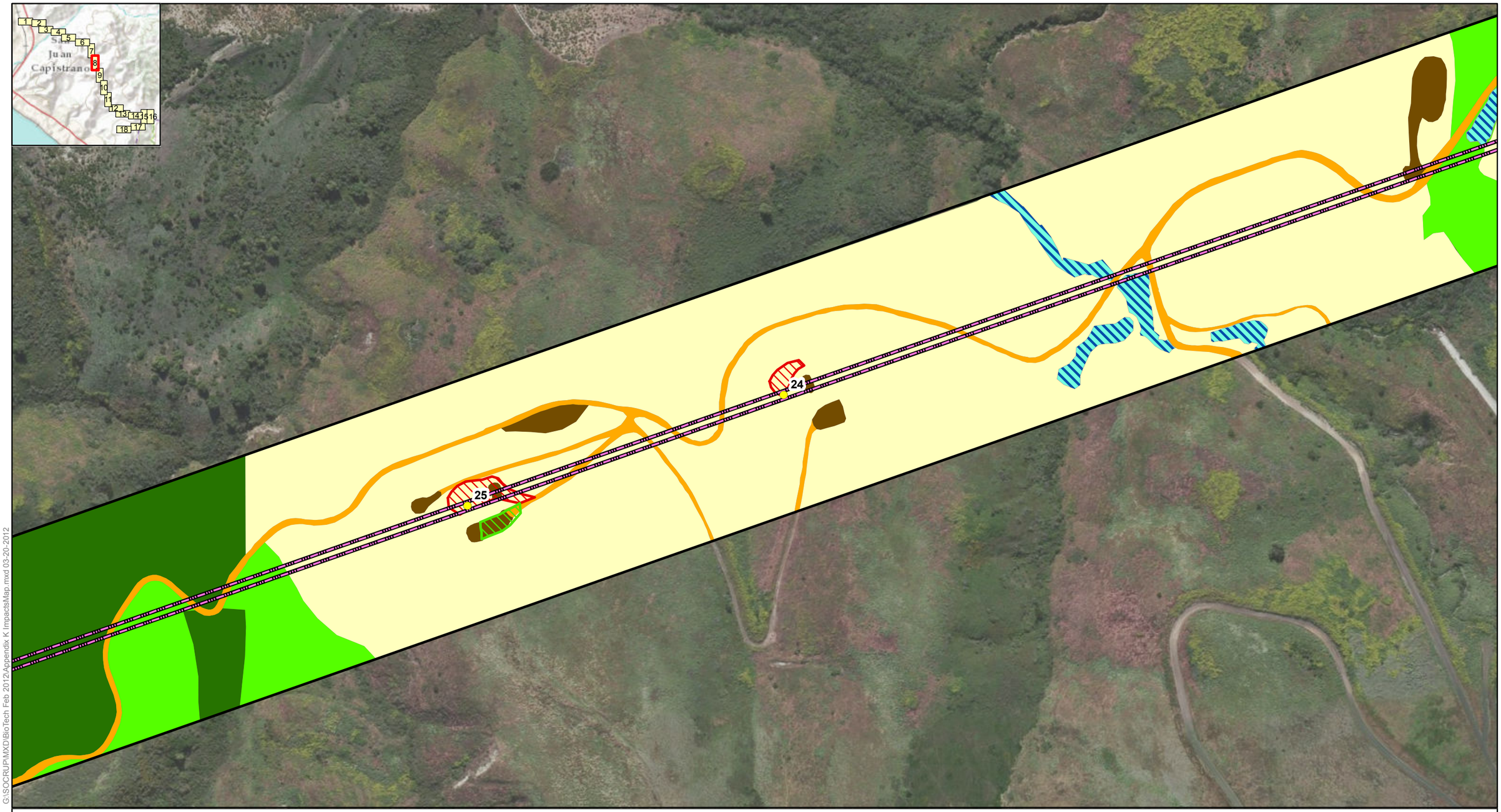

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South Orange County Reliability Enhancement Project

Impacts Map

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South Orange County Reliability Enhancement Project

Impacts Map

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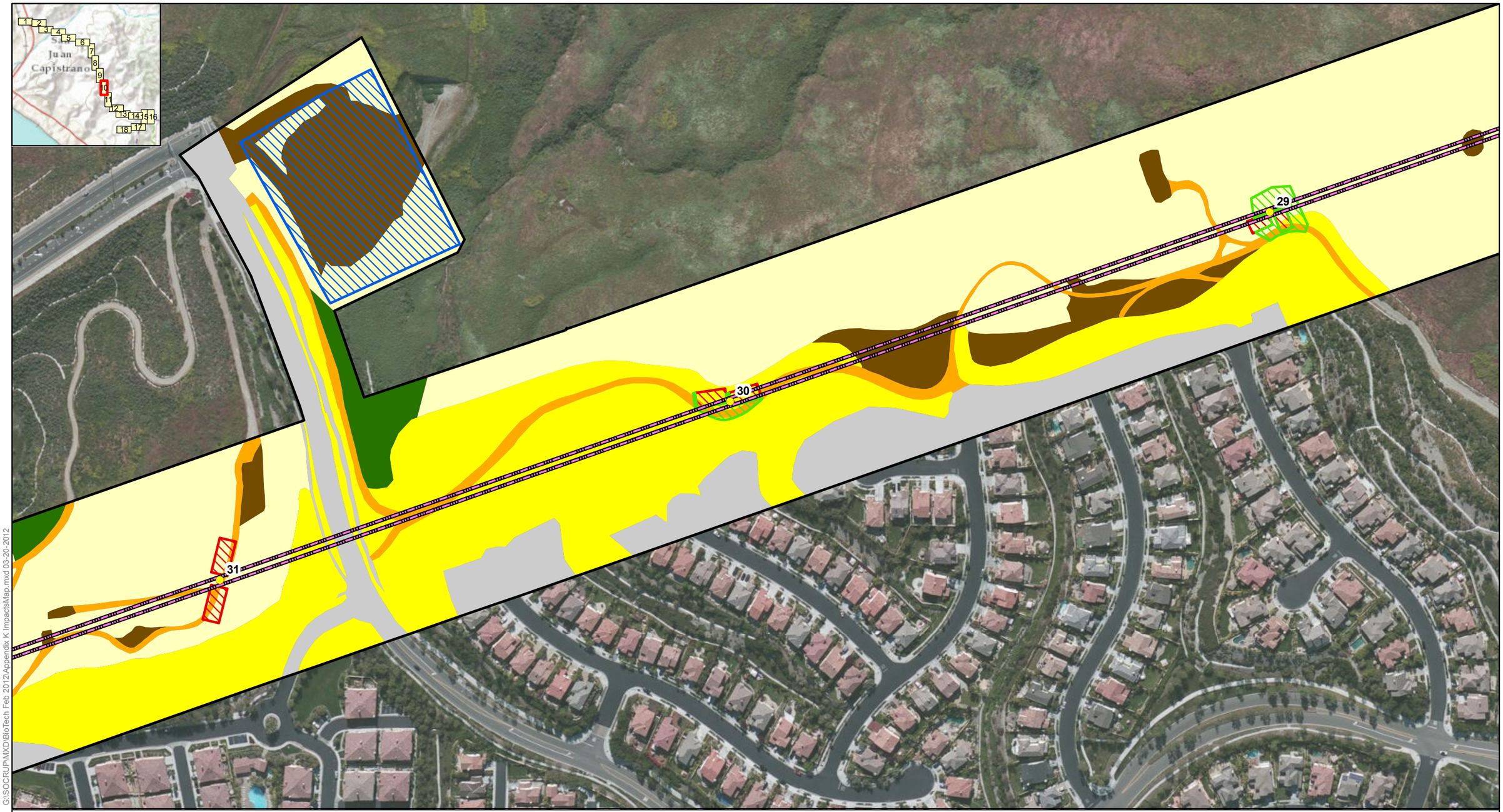

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South Orange County Reliability Enhancement Project

Impacts Map

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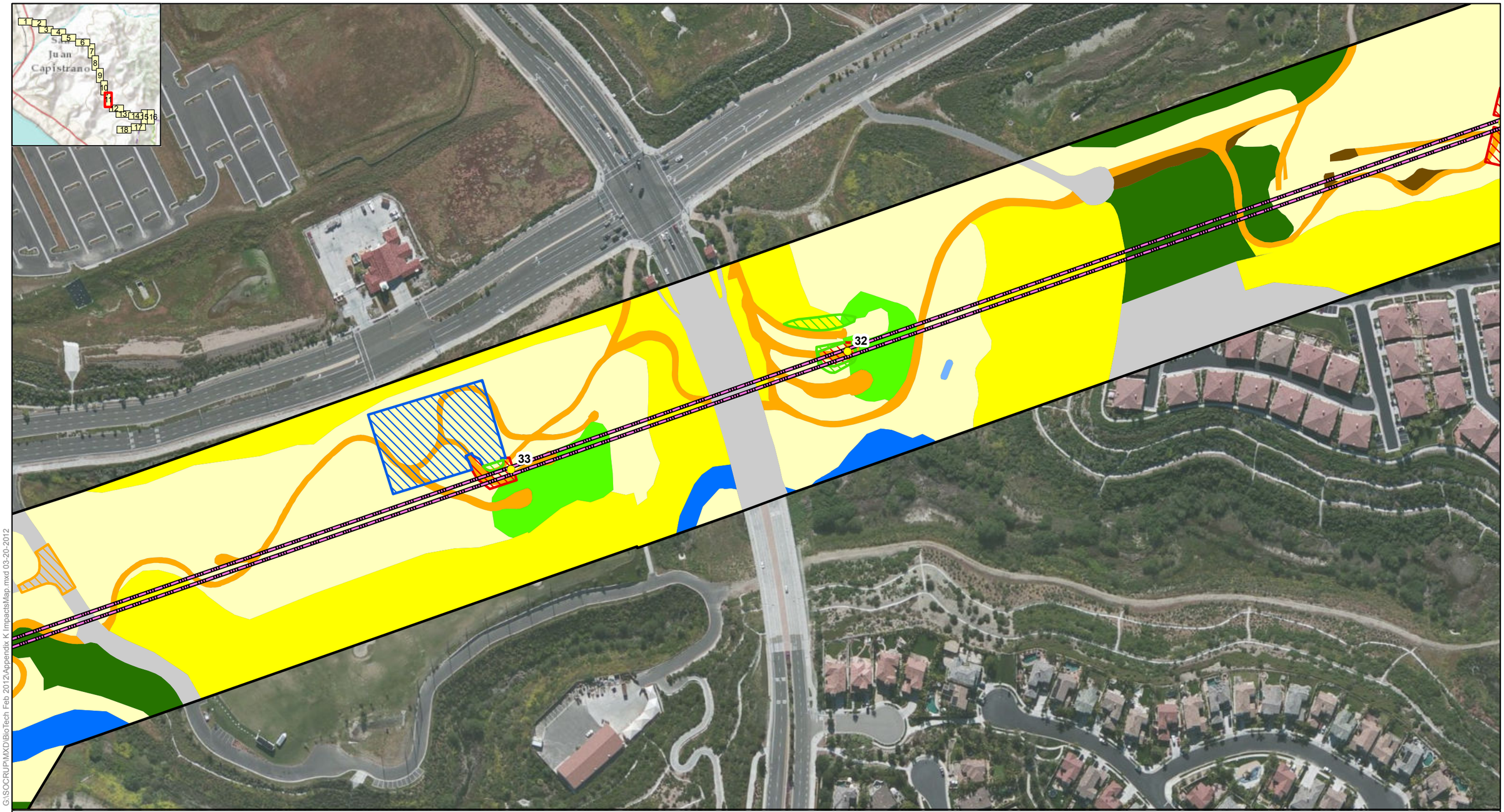

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South Orange County Reliability Enhancement Project

Impacts Map

Sheet 11 of 18

SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT

SDGE

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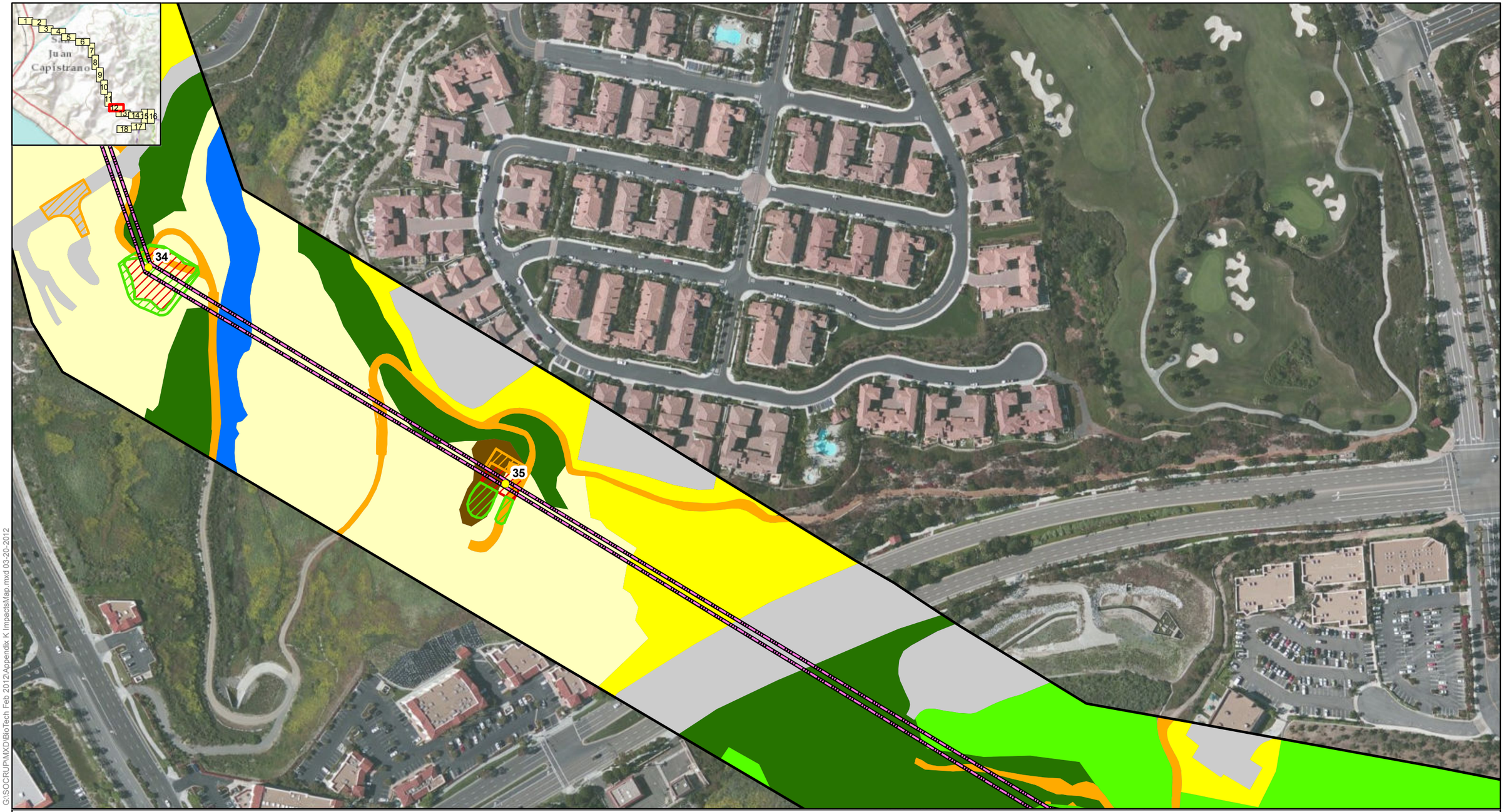

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South Orange County Reliability Enhancement Project

Impacts Map

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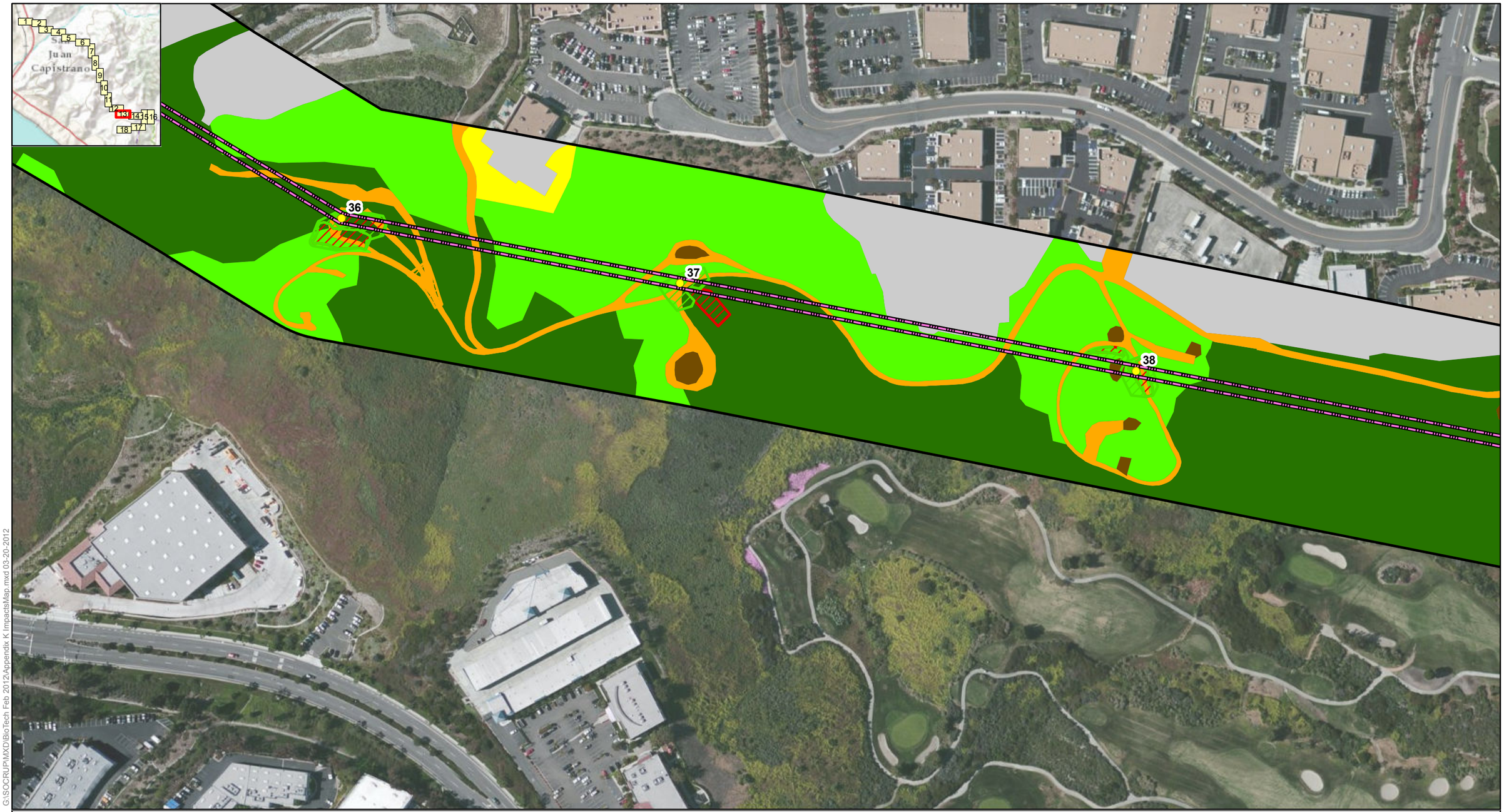

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South Orange County Reliability Enhancement Project

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Sheet 14 of 18

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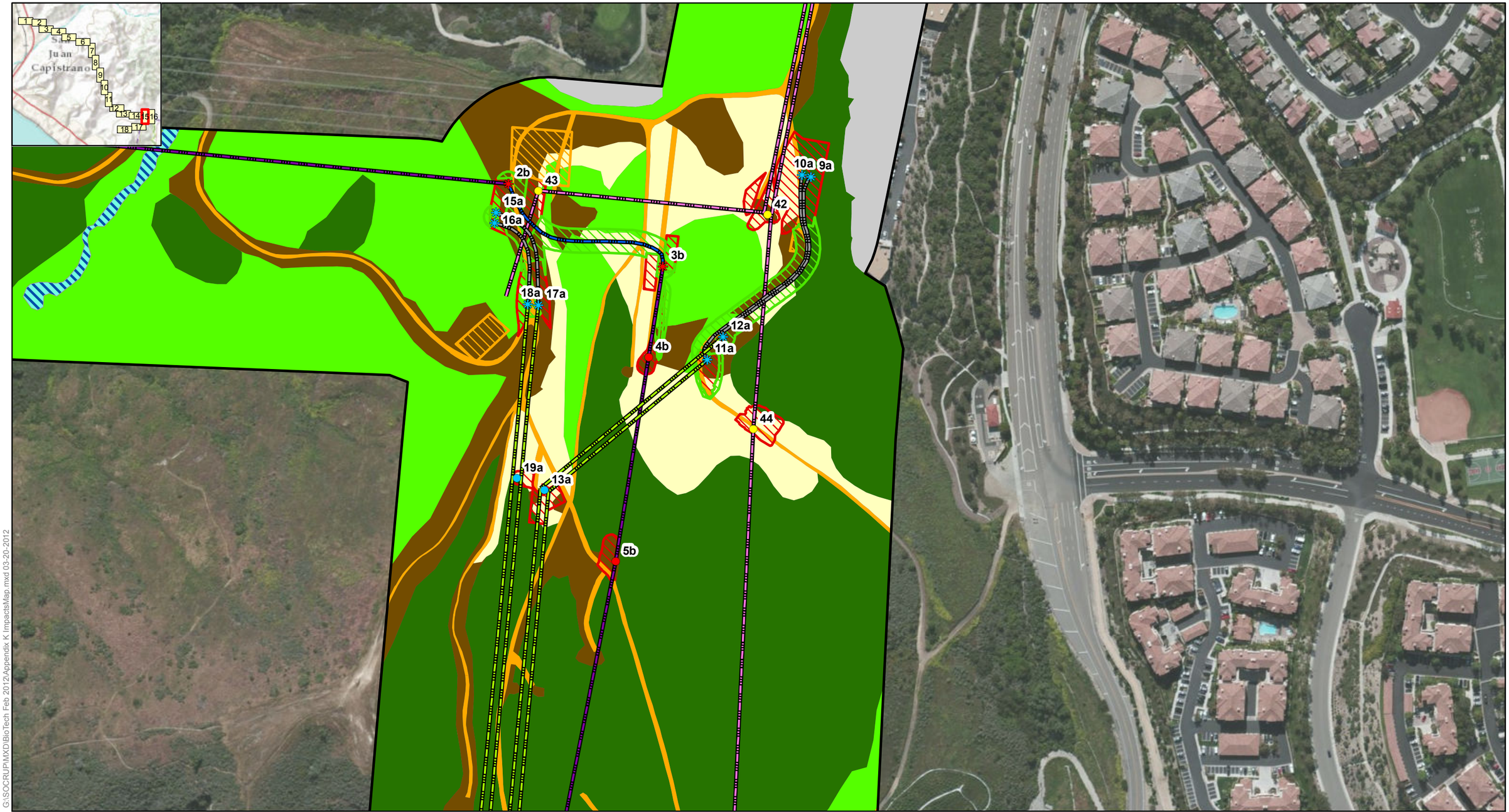

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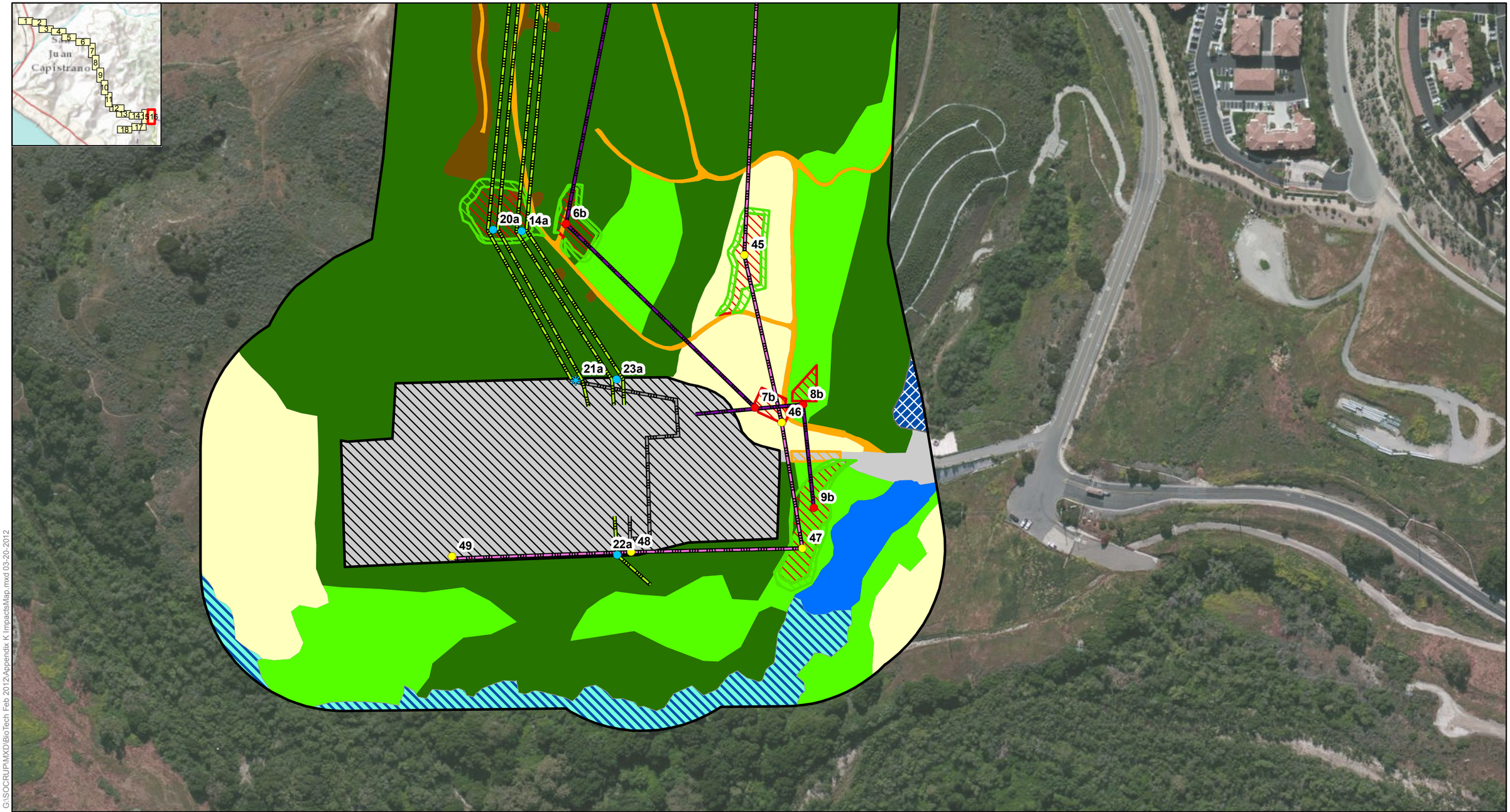

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South Orange County Reliability Enhancement Project

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South Orange County Reliability Enhancement Project

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South Orange County Reliability Enhancement Project

Impacts Map

Sheet 18 of 18

SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT

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Addendum to
Biological Resources Assessment and Jurisdictional Delineation

San Diego Gas & Electric Company

South Orange County Reliability Enhancement Project

Orange County, California

USGS Cañada Gobernadora, San Juan Capistrano,

San Clemente and Dana Point Quadrangles

August 2012

Prepared For:
San Diego Gas & Electric
8315 Century Park Court
San Diego, CA 92123

Prepared By:
123 Technology Drive West
Irvine, CA 92618

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LIST OF APPENDICES

Appendix A: Photo Exhibit

Appendix B: Wetland Delineation Data Forms

Acronyms List

Addendum	Addendum to the Biological Resources Assessment and Jurisdictional Delineation
APMs	Applicant Proposed Measures
ACOE	United States Army Corps of Engineers
CDFG	California Department of Fish and Game
CESA	California Endangered Species Act
CFG	California Fish and Game
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CPCN	Certificate of Public Convenience and Necessity
CPUC	California Public Utilities Commission
CSS	coastal sage scrub
CWA	Clean Water Act
FESA	Federal Endangered Species Act
GIS	Geographic Information Systems
GPS	Global Positioning System
I-5	Interstate 5
kV	kilovolt
NCCP	Natural Community Conservation Plan
NRCS	Natural Resources Conservation Service
NWI	National Wetlands Inventory
OHWM	ordinary high water mark
PEA	Proponent's Environmental Assessment
Proposed Project	South Orange County Reliability Enhancement Project
SDG&E	San Diego Gas & Electric Company
SR-74	State Route 74
SWS	southern willow scrub
TRC	TRC Solutions, Inc.
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
WUS	Waters of the United States

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1.0 INTRODUCTION

This report is an addendum to the following reports prepared for the South Orange County Reliability Enhancement Project (Proposed Project:

1. Biological Resources Assessment (dated May 2012)
2. Jurisdictional Waters and Wetlands Delineation (dated May 2012)

This addendum was prepared by TRC Solutions, Inc. (TRC) in order to identify the presence, or potential for presence, of sensitive biological resources on the distribution line component of the South Orange County Reliability Enhancement Project (Proposed Project), which were not addressed in the Biological Resources Assessment and Jurisdictional Waters and Wetlands Delineation. The Biological Resources Assessment was included as Appendix 4.4-A to the Proponent's Environmental Assessment (PEA) prepared for the Proposed Project as part of an application for Certificate of Public Convenience and Necessity (CPCN) submitted to the California Public Utilities Commission (CPUC) by the San Diego Gas & Electric Company (SDG&E). The Jurisdictional Waters and Wetlands Delineation was included as Appendix C of the Biological Resources Assessment.

The purpose of this addendum to the Biological Resources Assessment and Jurisdictional Waters and Wetlands Delineation (Addendum) is to document the findings of reconnaissance-level review of potential sensitive biological resources (including jurisdictional waters and wetlands) located within work areas associated with proposed relocated distribution facilities (distribution line component of the Proposed Project), analyze potential impacts, and outline mitigation measures to compensate for unavoidable impacts. The relocated distribution facilities addressed within this Addendum will generally include the installation of new overhead distribution lines, removal and partial replacement of existing overhead distribution lines, replacement of cable in existing underground conduits, and the installation of new underground distribution line (trench, conduit, and cable). The distribution facilities are located in the immediate vicinity of the transmission lines that were addressed within the Biological Resources Assessment (see Figure 1, Distribution Overview Map). A description of the distribution facilities covered within this Addendum is included within Section 2.0, Distribution Line Project Description

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2.0 DISTRIBUTION LINE PROJECT DESCRIPTION

Certain distribution facilities that are affected by the San Juan Capistrano Substation rebuild and/or construction of new 230 kilovolt (kV) transmission lines will be relocated. The preliminary preferred distribution line routes are discussed, as applicable, in the following subsections.

2.1 DISTRIBUTION GETAWAYS (SAN JUAN CAPISTRANO SUBSTATION)

Seven distribution (12kV) circuits will leave the proposed San Juan Capistrano Substation from the 12kV switchgear in an underground position west into Camino Capistrano (see Figure 2, Proposed Distribution Map). Two circuits will travel north, two circuits will travel west (adjacent to proposed 138kV transmission lines) and the final three circuits will travel south and then east.

2.2 DISTRIBUTION FACILITIES AT THE SAN JUAN CAPISTRANO SUBSTATION

Required distribution work at the proposed San Juan Capistrano Substation was described, and impacts analyzed, within the Biological Resources Assessment and PEA. Therefore, biological resources within this area (and potential impacts to such resources) are not discussed within this Addendum.

2.3 PROPOSED NEW DISTRIBUTION FACILITIES

The proposed relocated distribution lines will involve new underground installation (new trenching, conduit, and cable), utilization of existing underground facilities, and replacement of existing overhead poles and conductor. Specifically, the distribution facilities will require the following:

- New underground distribution line (trenching, conduit, and cable) within the vicinity of the proposed San Juan Capistrano Substation (including approximately 2,000 feet of new underground distribution line between the substation site and the Interstate 5 (I-5) freeway to the east (refer to Figure 2, Sheet 1).
- New overhead distribution line (including four new cable poles) from Junipero Serra Park east over the I-5 freeway (refer to Figure 2, Sheet 1).
- A small portion of new underground distribution line between I-5 and Rancho Viejo Road (refer to Figure 2, Sheet 1).
- Utilization of a combination of existing underground conduit and cable (no trenching or other ground disturbance required) for approximately 15,650 feet (2.95 miles) south through Rancho Viejo Road, east through State Route 74 (SR-74), and south adjacent to La Pata Avenue (refer to Figure 2, Sheets 2 and 3).
- Approximately 6,000 feet (1.15 miles) of new double-circuit overhead distribution line (including one-for-one replacement of approximately 23 distribution poles) that will replace an existing single-circuit distribution line along La Pata Avenue (refer to Figure 2, Sheets 2 and 3).

- Utilization of a combination of existing conduit and cable near the intersection of La Pata Avenue and Vista Montana (refer to Figure 2, Sheets 3 and 4).
- Approximately 1,400 feet of new overhead distribution line (including one-for-one replacement of approximately eight distribution poles) that will replace an existing single-circuit distribution line adjacent to La Pata Avenue as it enters the Prima Deshecha Landfill site (refer to Figure 2, Sheet 4).
- Installation of new underground distribution line (new trenching, conduit, and cable) as well as the utilization of existing conduit north of the Talega Substation (refer to Figure 2, Sheet 5).
- Removal of existing distribution lines between the existing Capistrano Substation and the Rancho San Juan Development (refer to Figure 2, Sheets 1, 3, and 4).

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3.0 REGULATORY BACKGROUND

A complete discussion of applicable regulations is included within Section 3.0 of the Biological Resources Assessment. There are no additional applicable regulations pertaining to the distribution line component of the Proposed Project that are covered within this Addendum.

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4.0 METHODS

4.1 LITERATURE REVIEW

Prior to performing the biological field surveys (see Figure 3, Survey Area Map), documentation relevant to the distribution facilities and surrounding area was reviewed. The same special status species applicable to the transmission line and substation components of the Proposed Project were found to be applicable to the proposed distribution facilities (see Biological Resources Assessment Appendix A).

4.1.1 Special Status Species

A special status species list was prepared from record searches for the United States Geological Survey (USGS) 7.5-minute San Juan Capistrano, San Clemente, and Dana Point quadrangles within 3 miles of the distribution facilities. Special status species include all federally and state listed endangered and threatened species, candidates for listing, species proposed for listing, fully protected species, and species of special concern, species listed as rare or endangered by the California Native Plant Society (CNPS), and special status species that are identified under the *SDG&E Subregional Natural Community Conservation Plan (NCCP)* that had ranges within Orange County. A sensitive species was considered a potential inhabitant if its known geographical distribution either encompassed part of the distribution facilities or was within the vicinity of the distribution facilities (within approximately 3 miles), and its general habitat requirements (e.g., roosting, nesting, or foraging habitat, specific soil type, permanent water source) were within the boundaries of the distribution facilities. Sources of information that were used to compile the species list included the California Department of Fish and Game (CDFG) California Natural Diversity Data Base (CNDDB) (CNDDB, 2012), the CNPS online inventory (CNPS, 2012), and the *SDG&E Subregional NCCP Covered Species List* (SDG&E, 1995a; Pages 43-45 and Table 3.1) (see Figure 4-A, CNDDB Flora Species within a 3 mile radius of Distribution Lines, Figure 4-B, CNDDB Birds and Mammals Species within a 3 mile radius of Distribution Lines, and Figure 4-C, CNDDB Reptiles, Amphibians, Fish, and Invertebrates Species within a 3 mile radius of Distribution Lines).

4.1.2 Critical Habitat

The United States Fish and Wildlife Service (USFWS) critical habitat areas for listed species within 3 miles of the distribution facility alignment were searched using Geographic Information Systems (GIS) shapefiles provided by the USFWS.

4.1.3 Drainages and Other Water Features

The potential presence of drainages and other water resources was assessed by reviewing USGS topographic maps to identify any blue line streams (USGS, 1975, 1981, 1995, 1997), searching the USFWS National Wetlands Inventory (NWI) (USFWS, 2012), and by reviewing recent aerial images of the distribution line route (Google, 2012). This map is included as Figure 6, Soils Map, within the Biological Resources Assessment.

4.1.4 Soils

The United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) online Soil Survey (NRCS, 2012) was used to assess soils mapped along the distribution facility alignment, and GIS data was used to create a map.

4.2 FIELD SURVEYS

Field surveys were conducted in appropriate habitat within a 500-foot corridor (refer to Figure 3), including approximately 250 feet on either side of the proposed distribution facilities (herein referred to as the survey area). The following sections describe the methods used for reconnaissance-level and habitat assessment surveys and jurisdictional delineation. In all instances, resources were mapped in the field using a Trimble handheld Global Positioning System (GPS) unit or drawn on a 200-scale color aerial photograph.

4.2.1 Reconnaissance-level and Habitat Assessment Surveys

A general habitat assessment was conducted within the survey area by TRC Biologist, Travis Kegel, and biological assistant, Susan Underbrink, on July 5, 2012 to map existing vegetation communities and assess the potential for sensitive or listed plant and wildlife species, including species covered under the *SDG&E's Subregional NCCP*. Surveys were conducted using vehicles and on foot along access roads and around proposed the distribution facilities. Areas within the distribution facility survey area that overlapped with areas previously surveyed under the Proposed Project were not re-surveyed. Meandering transects were also conducted on foot through the surrounding habitat within the 500-foot survey corridor. A meandering transect is a type of survey search pattern that minimizes overlap and maximizes survey coverage in a given area. Suitable habitat for special status species was determined by the presence of diagnostic habitat elements, including, but not limited to, appropriate vegetation communities. The habitat assessment surveys were conducted within the survey area in areas supporting vegetation.

Vegetation communities were recorded on aerial photographs and GPS. Mapped data was then digitized or downloaded in GIS. The vegetation mapping was based upon descriptions provided by Sawyer and Keeler-Wolf (1995 and 2009), *SDG&E's Subregional NCCP* Section 3.1 and Holland (1986).

4.2.2 Drainages and Other Water Features

Fieldwork for the delineation was conducted by TRC Biologist, Travis Kegel, and biological assistant, Susan Underbrink, on July 5, 2012. While in the field, the jurisdictional areas (lengths and widths) were recorded onto a 200-scale color aerial photograph using visible landmarks or were mapped with a handheld Trimble GPS unit. Field data was then digitized using GIS to determine acreages. Additional details on the methodology are provided in the Jurisdictional Waters and Wetlands Delineation, dated May 2012 (Biological Resources Assessment Appendix C).

The survey area was assessed for the presence of drainages, wetlands, and vernal pools, including all suspected jurisdictional areas identified during the literature review. This involved

physically identifying hydrologic, vegetative, and geomorphic characteristics within the survey area in order to delineate potentially jurisdictional waters and wetlands.

Waters of the United States (WUS) were identified pursuant to criteria outlined in Section 401 and Section 404 of the Clean Water Act (CWA), including but not limited to the presence of an ordinary high water mark (OHWM) and connection to a downstream jurisdictional water body. The OHWM was determined by observing signs of flow including but not limited to shelving, drift lines, and disturbed vegetation. "Waters of the State" regulated by CDFG were identified pursuant to criteria outlined in Section 1600 of the California Fish and Game (CFG) Code, including the presence of a defined bed and bank and any associated vegetation. Drainages that appeared to meet the criteria for "Waters of the State" were considered potentially jurisdictional, as any determination is subject to verification by the regulatory agencies.

Potential wetland habitats were evaluated using the methodology set forth in the United States Army Corps of Engineers (ACOE) Manual (ACOE, 1987) and the *Regional Supplement to the Wetland Delineation Manual for the Arid West Region* (ACOE, 2006 and 2008). This involved digging pits to inspect soils in suspected wetland areas. Soil pits were generally at locations where hydrophytic vegetation was observed, or where other wetland indicators were observed or suspected. Soils were assessed for hydric indicators, texture, consistency, and color. The color was assessed using a Munsell chart and then cross-referenced with hydric soil lists. The locations of the soil pits were recorded using a handheld GPS unit. Hydrological and vegetation conditions were recorded for each soil pit using ACOE wetland delineation data forms. The wetland indicator status of the plants was determined using *The National List of Plant Species that Occur in Wetlands* (Lichvar, 2009).

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5.0 RESULTS

5.1 LITERATURE REVIEW

5.1.1 Special Status Species

Special status species were identified as having a potential to occur in the survey area based on the database searches and known occurrences of species in the area. No new species were identified that were not evaluated within the Biological Resources Assessment. CNDDB maps for areas within 3 miles of the proposed distribution line route are provided as Figures 4-A through 4-C. For a complete list of special status species with the potential to occur refer to Appendix A of the Biological Resources Assessment report.

5.1.2 Critical Habitat

The distribution facility survey area is within 3 miles of USFWS critical habitat for the coastal California gnatcatcher, Arroyo toad, San Diego fairy shrimp (*Branchinecta sandiegonensis*) and thread-leaved brodiaea (*Brodiaea filifolia*). Distribution facilities will traverse critical habitat for the Arroyo toad and for coastal California gnatcatcher along a corridor owned by SDG&E which is covered under the *SDG&E Subregional NCCP* and specifically excluded in the designation of critical habitat (SDG&E, 1995a). A critical habitat map for areas within 3 miles of the proposed distribution line route is provided as Figure 5, Critical Habitat Map.

5.1.3 Drainages and Other Water Features

Potential drainages were identified based on the review of aerial and USGS maps. These maps were considered during the field surveys to ensure the identified drainages were studied, in addition to any drainage not mapped by USGS or visible on aerials. The named drainages identified on the USGS include Horno Creek and San Juan Creek.

5.1.4 Soils

Two potentially hydric soil types were identified with the distribution facility survey area. Specifically, the Myford Sandy Loam series and Riverwash soil types are identified as hydric in the NRCS's publication, *Field Indicators of Hydric Soils of the United States* (NRCS, 2012). For a complete description of these soil types and all the soil types occurring within the distribution facility survey area, refer to Section 5.1.4 of the Biological Resources Assessment. It should be noted that per the Arid West Supplement, all hydric soils must be confirmed in the field.

5.2 VEGETATION

Eleven vegetation communities were observed in the distribution facility survey area as mapped on Figure 6, Distribution Vegetation Maps (Sheets 1 – 8). Vegetation within the distribution facility survey area included coastal sage scrub (CSS), Disturbed CSS, Coastal Freshwater Marsh, southern willow scrub (SWS), Disturbed SWS, Riparian Scrub, Ruderal, Disturbed, Ornamental, Dirt Road, and Developed areas. These vegetation communities are the same as those communities described in the BRA, no new vegetation communities were identified within the distribution facility survey area. Detailed vegetation descriptions are included within Section

5.2 of the Biological Resources Assessment. Table 1, Vegetation Communities in Distribution Facilities Survey Area summarizes acreages of each vegetation community found exclusively within the distribution facilities survey area.

Table 1: Vegetation Communities in Distribution Facilities Survey Area

Vegetation Community	Acres
Coastal Sage Scrub	5.36
Disturbed Coastal Sage Scrub	12.71
Coastal Freshwater Marsh	0.27
Southern Willow Scrub	2.67
Disturbed Southern Willow Scrub	0.06
Riparian Scrub	2.34
Ruderal	69.92
Disturbed	28.42
Ornamental	33.90
Dirt Roads	1.37
Developed	131.19
Total	**288.21**

5.3 COMMON WILDLIFE

During the field surveys, numerous common and special status wildlife species, both native and non-native, were observed within the distribution facilities survey area. No new species were observed that were not observed during surveys conducted for the transmission line and substation components of the Proposed Project (refer to Biological Resources Assessment Section 5.3 and Appendix B). Species commonly observed during all surveys include the following (for special status wildlife see Section 5.5 of this Addendum):

- Avifauna commonly observed included red-tailed hawk (*Buteo jamaicensis*), house finch (*Carpodacus cassinii*), lesser goldfinch (*Carduelis psaltria*), common raven (*Corvus corax*), house sparrow (*Passer domesticus*), northern mockingbird (*Mimus polyglottos*), California towhee (*Pipilo crissalis*), spotted towhee (*Pipilo maculatus*), European starling (*Sturnus vulgaris*), California thrasher (*Toxostoma redivivum*), Bewick's wren (*Thryomanes bewickii*), and western kingbird (*Tyrannus verticalis*).
- Reptiles commonly observed included side-blotched lizard (*Uta stansburiana*) and western fence lizard (*Sceloporus occidentalis*).

- Mammals commonly observed or deduced through diagnostic sign, included coyote (*Canis latrans*), California ground squirrel (*Spermophilus beecheyi*), and Audubon's cottontail (*Sylvilagus audubonii*).

5.4 SPECIAL STATUS VEGETATION COMMUNITIES

Some of the vegetation communities occurring within the Proposed Project's survey area are considered sensitive or have special status due to their natural rarity and their decline as a result of development, or due to the number of sensitive plant or animal species dependent upon them. Sensitive habitats also include those regulated by the federal government under the CWA (i.e., jurisdictional wetlands) or the Federal Endangered Species Act (FESA) (i.e., site-specific designated critical habitat areas for federally listed wildlife species). Special status vegetation communities in the survey area include CSS, disturbed CSS, and riparian communities (SWS, Emergent Freshwater Marsh, and Riparian Scrub) which include jurisdictional areas (see Section 5.6 of this Addendum). The special status vegetation communities present within the distribution facilities survey area are the same as those described within the Biological Resources Assessment (Section 5.4). No additional special status habitats were identified during the literature review or field surveys conducted for the distribution facilities.

5.5 SPECIAL STATUS PLANTS AND WILDLIFE

The distribution facilities survey area contains, or has the potential to contain, similar special status plants and wildlife as previously described within the Biological Resources Assessment (Sections 5.5 and 5.6). No additional special status plants or wildlife were identified during the literature review or field surveys conducted for the distribution facilities.

5.6 JURISDICTIONAL DELINEATION OF WATERS AND WETLANDS

The distribution facility survey area supports nine different drainages. These drainages include three previously described relatively permanent waters that are included within the May 2012 Biological Resources Assessment, known as Horno Creek and San Juan Creek and Tributary to Christianitos Creek 1. The remaining six drainages are ephemeral waters tributary to San Juan Creek. Areas that overlap with the May 2012 assessment area with the distribution facility survey area were not re-surveyed or double counted when totaling jurisdiction. The new jurisdiction identified within the distribution facility survey area total approximately 3.01 acres of WUS of which 2.92 acres are wetland, and 4.10 acres of "Waters of the State," of which 4.06 acres are riparian. The locations and boundaries of these jurisdictional waters are depicted in Figure 7, Distribution Delineation Map. A summary of jurisdiction by acreage is provided below in Table 2, Potentially Jurisdictional Waters in Proposed Project Survey Area. A description of each drainage is provided below. Photographs of each drainage are provided in Appendix A, Photo Exhibit. Wetland data taken during this survey are recorded on wetland delineation data forms, which are included as Appendix B, Wetland Delineation Data Forms.

Table 2: Potentially Jurisdictional Waters in Proposed Project Survey Area

Drainage Name	ACOE Wetland	Total ACOE[1]	CDFG Riparian	Total CDFG[2]	Linear Feet
Horno Creek	0.17	**0.17**	0.75	**0.75**	580
San Juan Creek	2.21	**2.21**	2.21	**2.21**	350
Tributary to San Juan Creek 1	-	**0.01**	0.55	**0.56**	670
Tributaries to San Juan Creek 2 through 6	-	**0.04**	0.01	**0.04**	1300
Tributary to Christianitos Creek 1	0.54	**0.54**	0.54	**0.54**	250
Totals	***2.92***	***2.97***	***4.06***	***4.10***	***3150***

5.6.1 Horno Creek

The jurisdiction of the Horno Creek is contained within a perennial drainage and adjacent wetland, both of which are fed by nuisance flow from surrounding developments. The ACOE jurisdiction associated with Horno Creek totals 0.17 acre, of which 0.17 is wetland. The CDFG jurisdiction associated with Horno Creek totals 0.75 acre, of which 0.75 is riparian. The character and function of the drainage was consistent with the description of Horno Creek contained within the Biological Resources Assessment, which covered areas approximately 500 feet upstream. Specifically, this description is included as Section 3.4.1 of Appendix C of the Biological Resources Assessment (Jurisdictional Waters and Wetlands Delineation). The results of the field survey are mapped on Figure 7, Sheet 1.

The adjacent wetland associated with Horno Creek consists of a patch of cattails (*Typha latifolia*) fed by street runoff directly east of the distribution facility survey area. This monoculture of cattails was wet at the time of the survey and contained wetland soils. The result of the data pit is recorded in Appendix B of this Addendum (Sampling Point 1). Photographs of this drainage and habitat conditions are included as Appendix A (Photograph 1).

The distribution lines will cross Horno Creek within an existing underground conduit.

5.6.2 San Juan Creek

The ACOE jurisdiction associated with San Juan Creek within the distribution facility survey area totals 2.21 acres, of which 2.21 acres are wetland. The CDFG jurisdiction associated with San Juan Creek totals 2.21 acres, of which 2.21 acres are riparian. San Juan Creek is a relatively

[1] Includes all wetlands and waters (RPW and non-RPW).
[2] Includes bed and bank and associated riparian habitat, where present.

permanent waters that traverses the distribution facility survey area from northeast to southwest and ultimately connects to the Pacific Ocean, the closest traditional navigable waters. The character and function of the drainage were consistent with the description of San Juan Creek contained within the BRA, which covered areas approximately 1.3 miles downstream. Specifically, a description of San Juan Creek is included as Section 3.4.2 of Appendix C of the Biological Resources Assessment (Jurisdictional Waters and Wetlands Delineation). The results of the field survey are mapped on Figure 7, Sheet 2. A photograph of this drainage and habitat conditions is included in Appendix A (Photograph 3).

The distribution lines will cross San Juan Creek within an existing underground conduit. Soil pits were not excavated in San Juan Creek; it is assumed that all areas within the jurisdictional limits meet wetland parameters.

5.6.3 Tributary to San Juan Creek 1

The ACOE jurisdiction associated with the Tributary to San Juan Creek 1 totals 0.01 acre, none of which is wetland. The CDFG jurisdiction associated with the drainages totals 0.56 acre, of which 0.55 acre is riparian. The Tributary to San Juan Creek 1 is a large ephemeral drainage originating east of La Pata Road. As no access was provided in the east of La Pata, widths and vegetation structure are estimated based on observations through binoculars and observation of similar areas west of La Pata Road. The drainage transverses the survey corridor following a generally southeast to northwest direction, travelling under La Pata Road, and continuing to San Juan Creek. The results of the field survey are mapped on Figure 7, Sheet 3.

Vegetation associated with Tributary to San Juan Creek 1 consisted primarily of shrubby or herbaceous riparian vegetation. Dominant species included mulefat (*Baccharis salicifolia*), mugwort (*Artemisia douglasiana*), and giant nettles (Urtica dioica). In addition patches of arroyo willow (Salix lasiolepis), coast live oak (Quercus agrifolia), and sycamore (*Platanus racemosa*) were present. West of La Pata Road, the drainage was maintained and cleared with little vegetation on the drainage bottom. East of La Pata road, the drainage appeared to be relatively undisturbed with vegetation growing within the drainage bottom. Photographs of this drainage and habitat conditions are included as Appendix A (Photographs 4 and 5).

A soil pit was excavated in Tributary to San Juan Creek 1 indicating a lack of wetland soils. Soils consisted primarily of hard clay and cobbles associated with high water velocities No wetlands soils were identified with the drainage. Results of the data pit are recorded in Appendix B (Sampling Point 2).

5.6.4 Tributaries to San Juan Creek 2 through 6

Tributaries to San Juan Creek 2 through 6 have similar character. The ACOE jurisdiction associated with the four drainages totals 0.04 acre, none of which is wetland. The CDFG jurisdiction associated with the drainages totals 0.04 acre, of which 0.01 acre is riparian. The drainages correspond with steep topography and are bisected by La Pata Road. The drainages are ephemeral in nature and are expected to flow only during and directly after storm events. The drainages transverse the survey corridor following an east to northwest direction, travelling under La Pata Road, and continuing to San Juan Creek. The results of the field survey are mapped on Figure 7, Sheets 3 through 6.

Vegetation associated with Tributaries to San Juan Creek 2 through 6 consists of mainly upland coastal sage scrub species and a few scatted riparian species. The drainage bottoms were generally vegetated with upland species. Species observed included buckwheat (Eriogonum fasciculatum), white sage (Salvia apiana), coyote bush, monkey flower, mulefat, tree tobacco (*Nicotiana glauca*), telegraph weed (*Heterotheca grandifolia*), non-native bromes, black mustard, Mexican elderberry (*Sambucus mexicana*), and toyon (*Heteromeles arbutifolia*). Photographs of this drainage and habitat conditions are included in Appendix A (Photographs 6 and 7).

Soils associated with Tributaries to San Juan Creek 2 through 6 were relatively uniform and appeared to be correlated with the storm water velocities coming through the ephemeral washes. Much of the drainages were vegetated with areas in the steeper topography having exposed clays and rock associated with higher velocity water flow. No wetland soils were identified within the drainages. The result of the soil pit is recorded in Appendix B (Sampling Point 3).

5.6.5 Tributary to Christianitos Creek 1

The ACOE jurisdiction associated with the Tributary to Christianitos Creek 1 totals 0.54 acre, all of which is wetland. The CDFG jurisdiction associated with the drainage totals 0.54 acre, all of which is riparian. This portion of Tributary to Christianitos Creek 1 is entirely within a flood control basin. The character and function of the drainage was consistent with the description of Tributary to Christianitos Creek 1 contained within the Proposed Project Delineation, which covered areas within the flood control basin directly adjacent to the distribution facility survey area. Specifically, a description of the flood control portion of Tributary to Christianitos Creek 1 is included as Section 3.4.10 of Appendix C of the Biological Resources Assessment (Jurisdictional Waters and Wetlands Delineation). The results of the field survey are mapped on Figure 7, Sheet 7.

No new soil samples were excavated; however, soils are expected to be consistent with those taken within the flood control basin. Wetland soils were identified within the basin. Photographs of this drainage and habitat conditions are included within Appendix A (Photograph 8).

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6.0 POTENTIAL IMPACTS

Construction, operation, and maintenance of the proposed distribution facilities could result in impacts to biological resources located within the Proposed Project area. However, these impacts would not differ from those outlined within the Biological Resources Assessment and Section 4.4 of the PEA. Potential impacts resulting from the construction, operation, and maintenance of the distribution facilities would be avoided or minimized through implementation of the operational protocols, habitat enhancement measures, and mitigation set forth in Sections 7.1, 7.2, and 7.4, respectively, of the *SDG&E Subregional NCCP*. Similar to the potential impacts for the transmission and substation components of the Proposed Project, these measures would be sufficient to reduce any impacts to biological resources, including special status species (species covered and not covered under the *SDG&E Subregional NCCP*) to a less-than-significant level. Therefore, no additional Applicant Proposed Measures (APMs) were determined to be required to avoid or minimize potential impacts to biological resources.

6.1 CONSTRUCTION IMPACTS

Construction of the distribution facilities could result in temporary disturbance to or permanent loss of sensitive vegetation communities, rare plant communities, and sensitive plant species. Temporary disturbance includes short-term impacts during construction for new pole structures and removal of existing poles and work at staging/laydown areas. Permanent loss involves long-term impacts associated with permanent distribution facility features such as new distribution poles, or any new access roads or improvements to existing access roads.

SDG&E would be operating under *SDG&E Subregional NCCP* that was established according to the FESA and California Endangered Species Act (CESA) and the state's NCCP Act. This would include compliance with Section 7.1, *Operation Protocols* and Section 7.2, *Habitat Enhancement Measures* of the *SDG&E Subregional NCCP*. Descriptions of the types of potential impacts to biological resources from construction of the distribution facilities are described in Section 6.1 of the Biological Resources Assessment. Construction of the distribution facilities could include impacts to vegetation communities and sensitive habitats, sensitive wildlife species, raptors, and nesting birds.

6.2 OPERATIONS AND MAINTENANCE IMPACTS

Standard operational and maintenance activities, such as road grading, tree trimming, structure installation, and replacement and repairs, could potentially impact special status species, including *SDG&E Subregional NCCP* Covered Species, if present in the distribution facility area (refer to Section 6.2 of the Biological Resources Assessment for a description of potential operation and maintenance impacts to biological resources). However, operation and maintenance of the distribution facilities will be substantially the same as currently exist under baseline conditions. All of the proposed distribution facilities would be located in the immediate vicinity of similar existing features, including transmission and distribution lines. Therefore, the proposed distribution facilities will not create any new potential for impacts to biological resources within the Proposed Project area that does not already exist, and there would be zero net impacts.

6.3 SUMMARY OF IMPACTS

Direct and indirect impacts to special status habitats, plant and wildlife species, including covered species, will be avoided, minimized, or mitigated through compliance with measures outlined in the *SDG&E Subregional NCCP* and implementation of the Avian Power Line Interaction Committee's Suggested Practices for Avian Protection on Power Lines; thereby, reducing impacts to a less-than-significant level. Details on those compliance measures are provided in Sections 6.1 and 6.2 of this Biological Resources Assessment. Since compliance with the existing *SDG&E Subregional NCCP* and regulatory permitting is considered adequate to address impacts to sensitive biological resources, no additional APMs are necessary.

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7.0 REFERENCES

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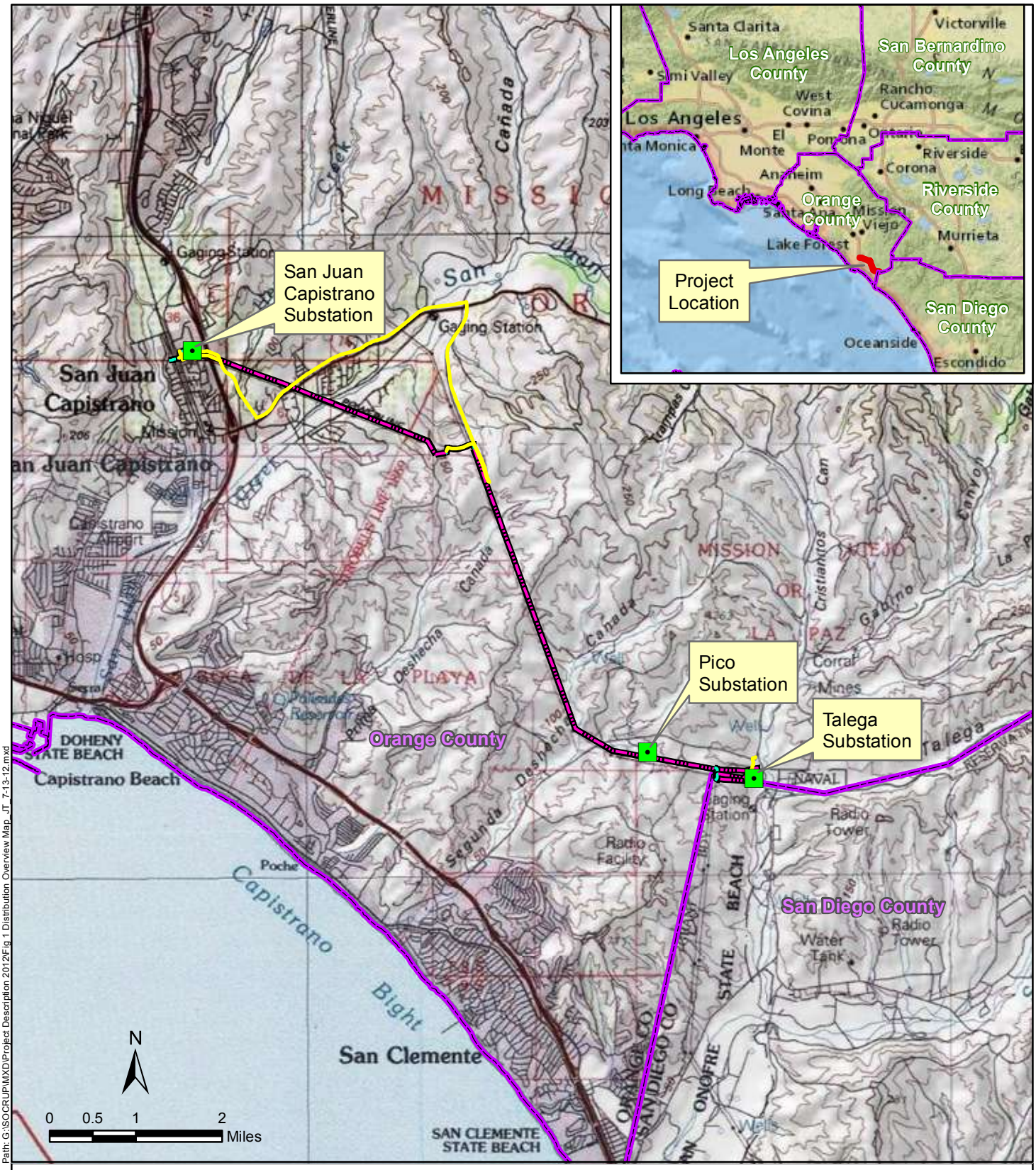
Figures



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Created For: Mary Turley

Created By: TRC

Date: 8/10/2012

SDG&E is providing this map with the understanding that the map is not survey grade.

South Orange County Reliability Enhancement Project

Distribution Overview Map

Figure 1

Legend

- Proposed Distribution Lines
- Substations
- Proposed Overhead Transmission Lines
- Proposed Underground Transmission Lines
- County Boundary

SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT

SDGE A Sempra Energy utility

Path: G:\SOCRUP\MXD\Project Description 2012\DistributionMapbook\08192012.mxd

Created For: Mary Turley

Created By: TRC

Date: 8/13/2012

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Legend

- New Distribution Only Cable Pole
- Pole Replacement Locations (Distribution)
- Pole Replacement Locations (Transmission/Distribution)
- New Underground Distribution (New Trench, Conduit, and Cable)
- New Cable in Existing Underground Conduit
- Remove Underground Cable
- Existing Underground Distribution Line (No work needed)
- New Overhead Distribution Line
- New Overhead Distribution Line (Replace Existing Line)
- Existing Overhead Distribution Line to be Removed
- Stringing Site
- New Road (14ft width)
- Substation

N

0 250 500 1,000 Feet

* Based Upon Preliminary Engineering

South Orange County Reliability Enhancement Project

Proposed Distribution Map

Figure 2

Sheet 1 of 5

SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT

SDGE A Sempra Energy utility

Path: G:\SOCRUP\MXD\Project Description 2012\DistributionMapbook08192012.mxd

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Created By: TRC

Date: 8/13/2012

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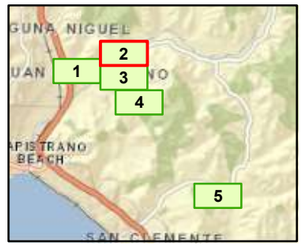

Legend

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- Pole Replacement Locations (Distribution)
- Pole Replacement Locations (Transmission/Distribution)
- New Underground Distribution (New Trench, Conduit, and Cable)
- New Cable in Existing Underground Conduit
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- New Overhead Distribution Line
- New Overhead Distribution Line (Replace Existing Line)
- Existing Overhead Distribution Line to be Removed
- Stringing Site
- New Road (14ft width)
- Substation

N

0 250 500 1,000 Feet

*** Based Upon Preliminary Engineering**

South Orange County Reliability Enhancement Project

Proposed Distribution Map

Figure 2

Sheet 2 of 5

SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT

SDGE A Sempra Energy utility

Path: G:\SOCRUP\MXD\Project Description 2012\DistributionMapbook08192012.mxd

Created For: Mary Turley

Created By: TRC

Date: 8/13/2012

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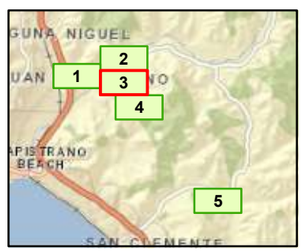

Legend

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- New Underground Distribution (New Trench, Conduit, and Cable)
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- New Overhead Distribution Line (Replace Existing Line)
- Existing Overhead Distribution Line to be Removed
- Stringing Site
- New Road (14ft width)
- Substation

N

0 250 500 1,000 Feet

* Based Upon Preliminary Engineering

South Orange County Reliability Enhancement Project

Proposed Distribution Map

Figure 2

Sheet 3 of 5

SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT

SDGE A Sempra Energy utility

Path: G:\SOCR\UP\MXD\Project Description 2012\DistributionMap book\08192012.mxd

Created For: Mary Turley

Created By: TRC

Date: 8/13/2012

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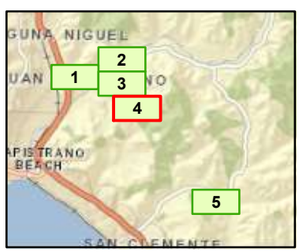

Legend

- New Distribution Only Cable Pole
- Pole Replacement Locations (Distribution)
- Pole Replacement Locations (Transmission/Distribution)
- New Underground Distribution (New Trench, Conduit, and Cable)
- New Cable in Existing Underground Conduit
- Remove Underground Cable
- Existing Underground Distribution Line (No work needed)
- New Overhead Distribution Line
- New Overhead Distribution Line (Replace Existing Line)
- Existing Overhead Distribution Line to be Removed
- Stringing Site
- New Road (14ft width)
- Substation

N

0 250 500 1,000 Feet

* Based Upon Preliminary Engineering

South Orange County Reliability Enhancement Project

Proposed Distribution Map

Figure 2

Sheet 4 of 5

SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT

SDGE A Sempra Energy utility

Path: G:\SOCRUE\MXD\Project Description 2012\Distribution\MapBook\08132012.mxd

Created For:	Created By:
Mary Turley	TRC
Date: 8/13/2012	

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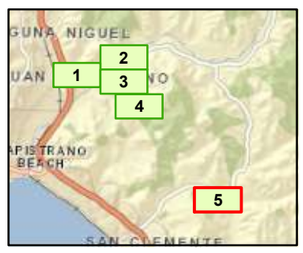

Legend

- New Distribution Only Cable Pole
- Pole Replacement Locations (Distribution)
- Pole Replacement Locations (Transmission/Distribution)
- New Underground Distribution (New Trench, Conduit, and Cable)
- New Cable in Existing Underground Conduit
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- New Overhead Distribution Line
- New Overhead Distribution Line (Replace Existing Line)
- Existing Overhead Distribution Line to be Removed
- Stringing Site
- New Road (14ft width)
- Substation

N

0 250 500 1,000 Feet

* Based Upon Preliminary Engineering

South Orange County Reliability Enhancement Project

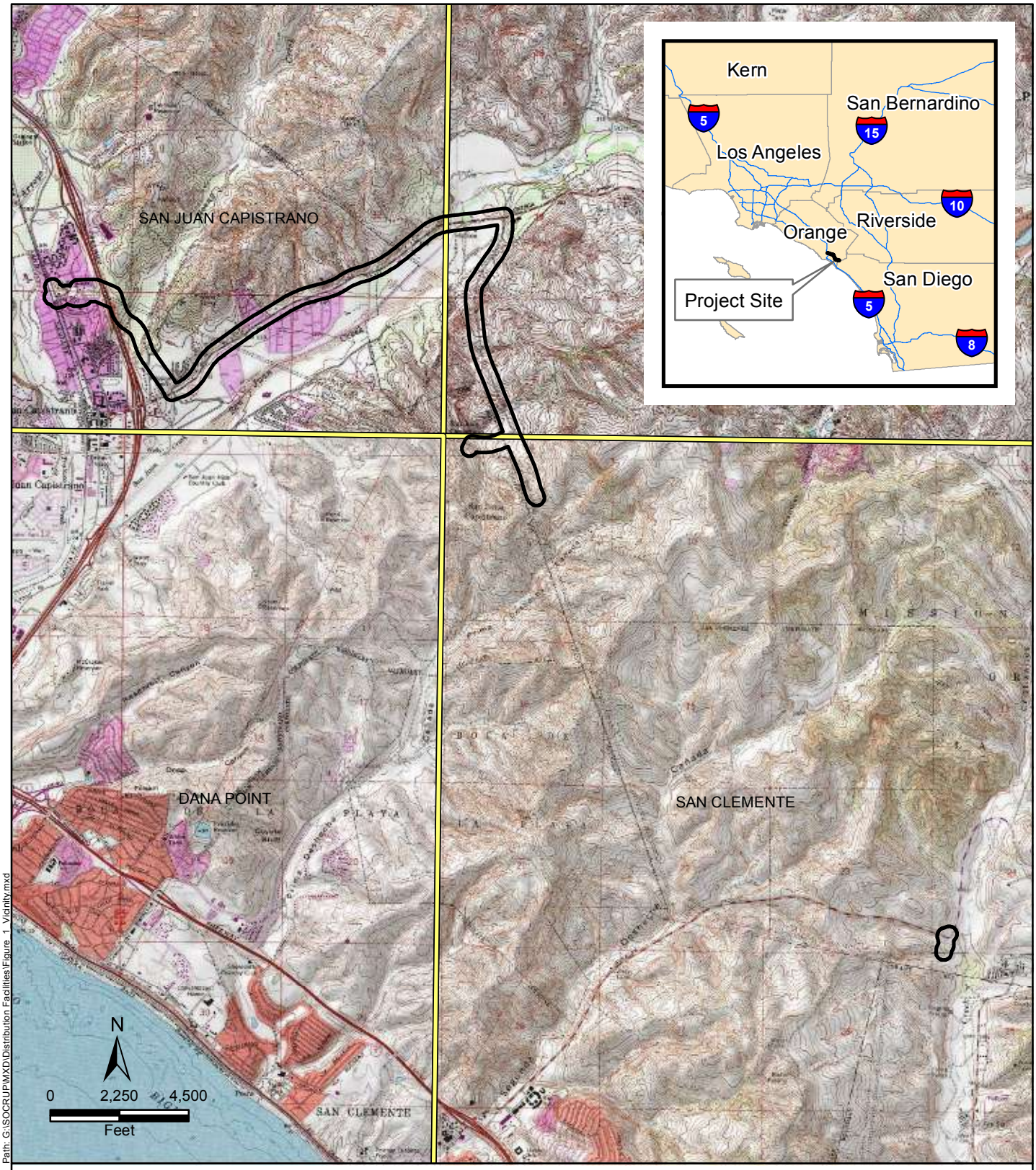
Proposed Distribution Map

Figure 2

Sheet 5 of 5

SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT

SDGE A Sempra Energy utility



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South Orange County Reliability Enhancement Project

Survey Area Map

Figure 3

Created For:	Created By:
Mary Turley	TRC
Date: 8/10/2012	

SDG&E is providing this map with the understanding that the map is not survey grade.

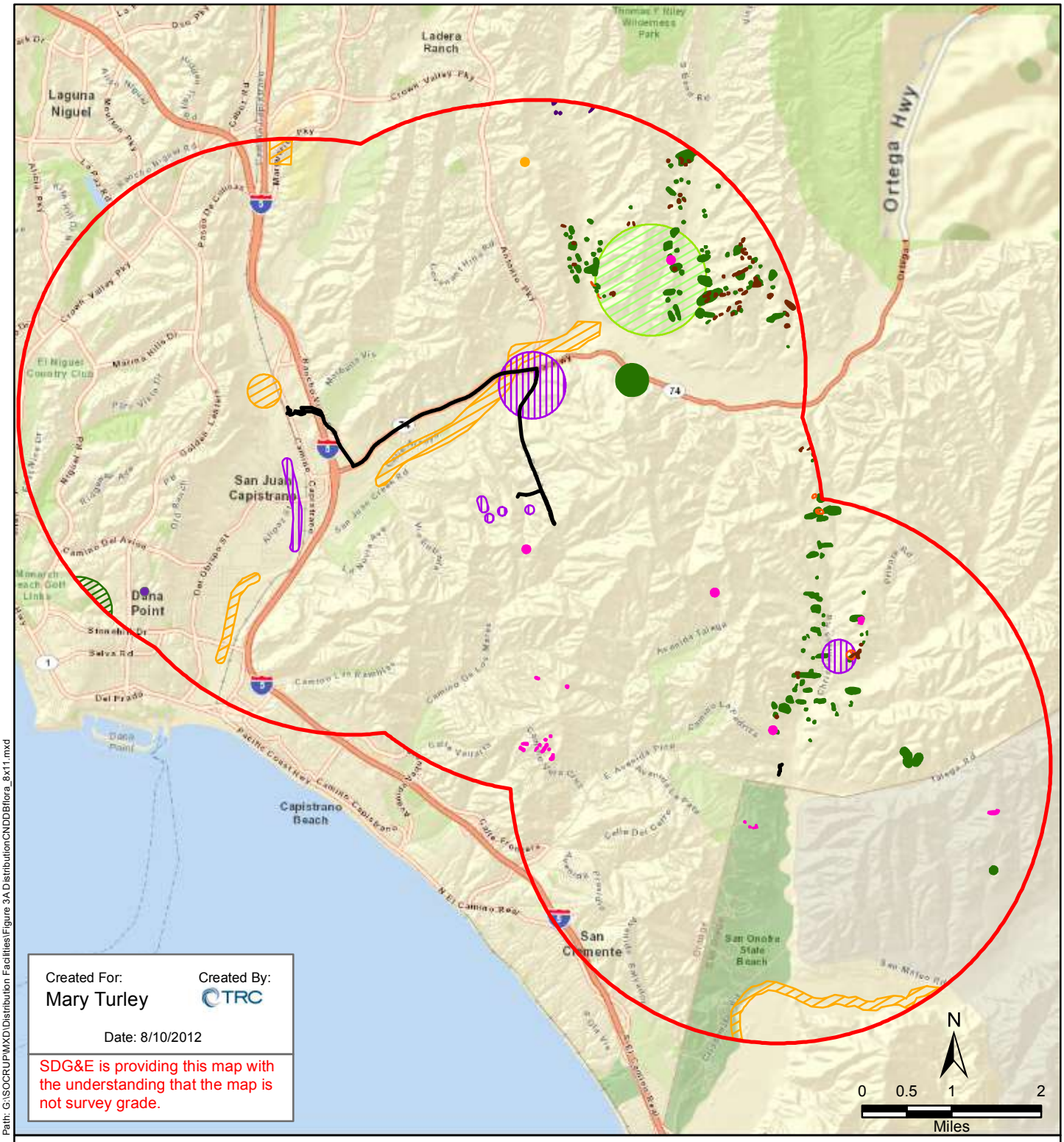
Legend

- Distribution Facility Survey Area
- USGS Quadrangle Boundary

Source: USGS Topo Maps

SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT

SDGE A Sempra Energy utility



Path: G:\SOCRUP\MXD\Distribution Facilities\Figure 3A DistributionCNDDBflora_8x11.mxd

Legend

- Proposed Distribution Lines
- 3 mile radius from distribution work
- Blochman's dudleya
- California satintail
- Coulter's saltbush
- Nuttall's scrub oak
- Palmer's grapplinghook
- Salt Spring checkerbloom
- intermediate mariposa-lily
- many-stemmed dudleya
- mud nama
- southern tarplant
- thread-leaved brodiaea
- white rabbit-tobacco

Source: CNDDB data 07/03/2012

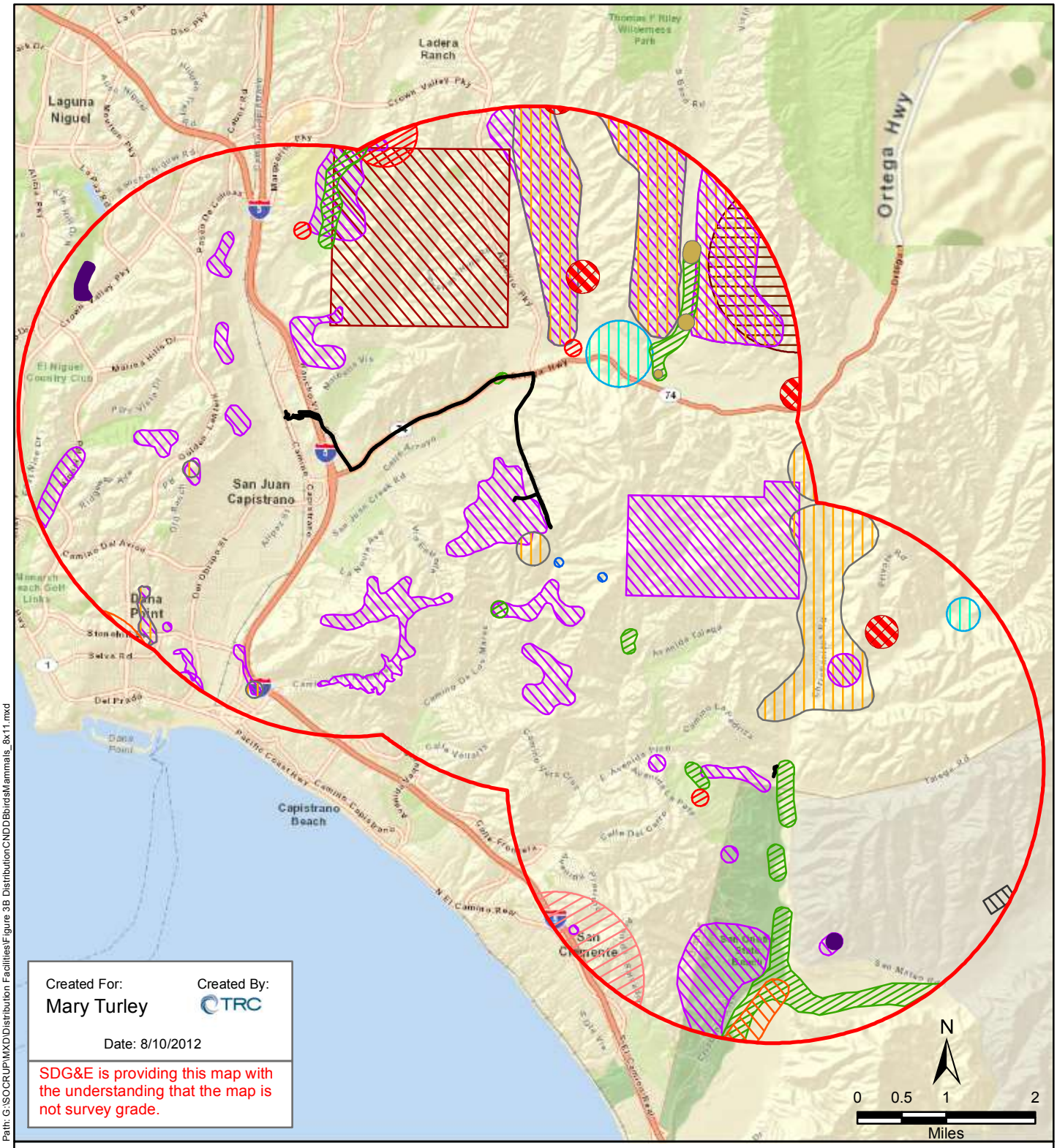
South Orange County Reliability Enhancement Project

CNDDB Flora Species within a 3 mile radius of Distribution Lines

Figure 4-A

SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT

SDGE A Sempra Energy utility



Path: G:\SOCRUP\MXD\Distribution Facilities\Figure 3B DistributionCNDDBbirdsMammals_8x11.mxd

Legend

- Proposed Distribution Lines
- 3 mile radius from distribution work
- white-tailed kite
- burrowing owl
- coastal cactus wren
- least Bell's vireo
- southwestern willow flycatcher
- coastal California gnatcatcher
- tricolored blackbird
- Stephens' kangaroo rat
- Dulzura pocket mouse
- Mexican long-tongued bat
- Yuma myotis
- western mastiff bat
- pallid bat
- southern California rufous-crowned sparrow

Source: CNDDB data 07/03/2012

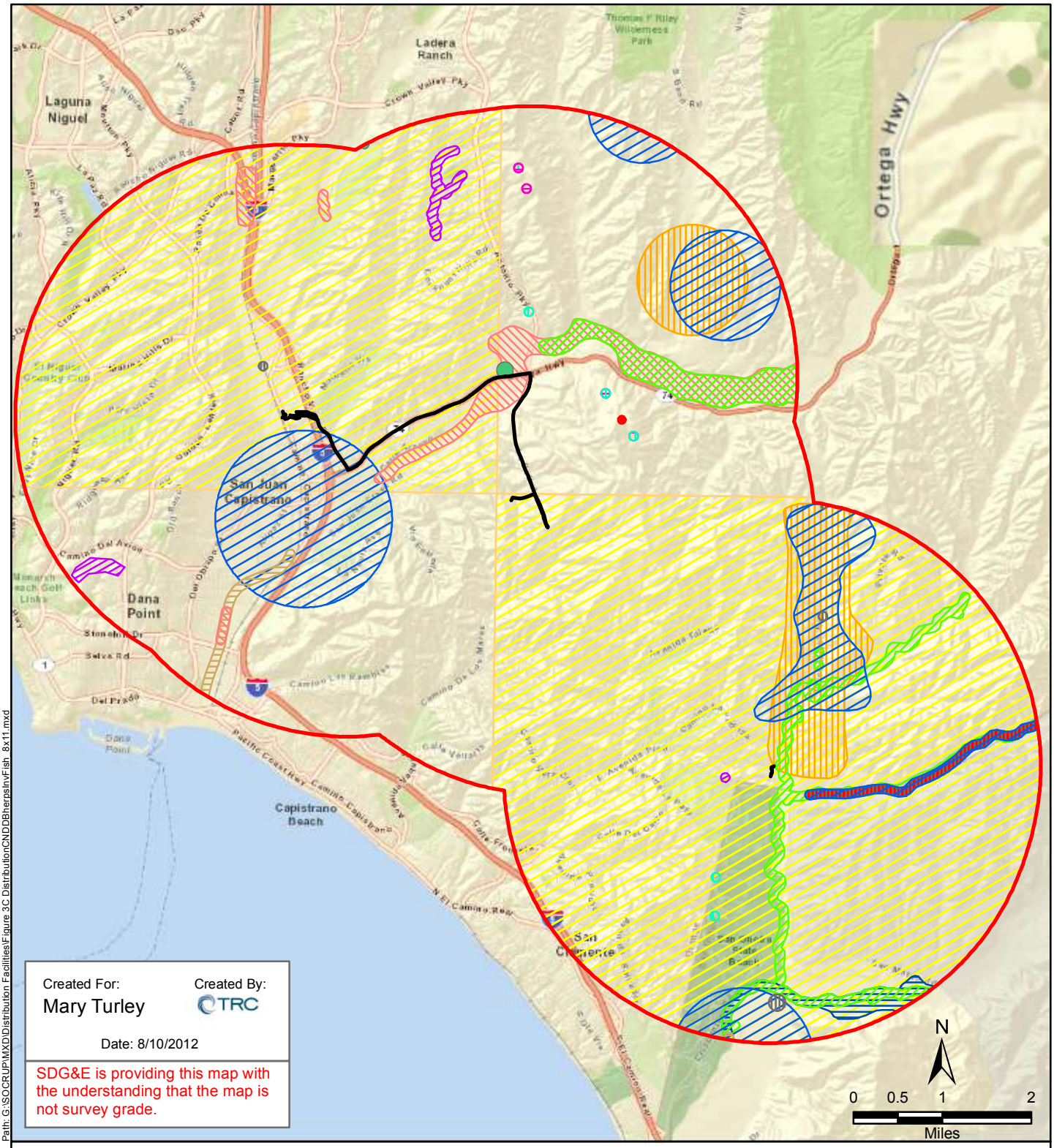
South Orange County Reliability Enhancement Project

CNDDB Bird and Mammal Species within a 3 mile radius of Distribution Lines

Figure 4-B

SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT

SDGE A Sempra Energy utility



Path: G:\SOCRUP\MXD\Distribution Facilities\Figure 3C DistributionCNDDBherpsInvFish 8x11.mxd

Legend

- Proposed Distribution Lines
- 3 mile radius from distribution work
- coast horned lizard
- orangethroat whiptail
- red-diamond rattlesnake
- two-striped garter snake
- western pond turtle
- western spadefoot
- arroyo toad
- tidewater goby
- arroyo chub
- Riverside fairy shrimp
- San Diego fairy shrimp
- monarch butterfly
- southern steelhead - southern California DPS

Source: CNDDB data 07/03/2012

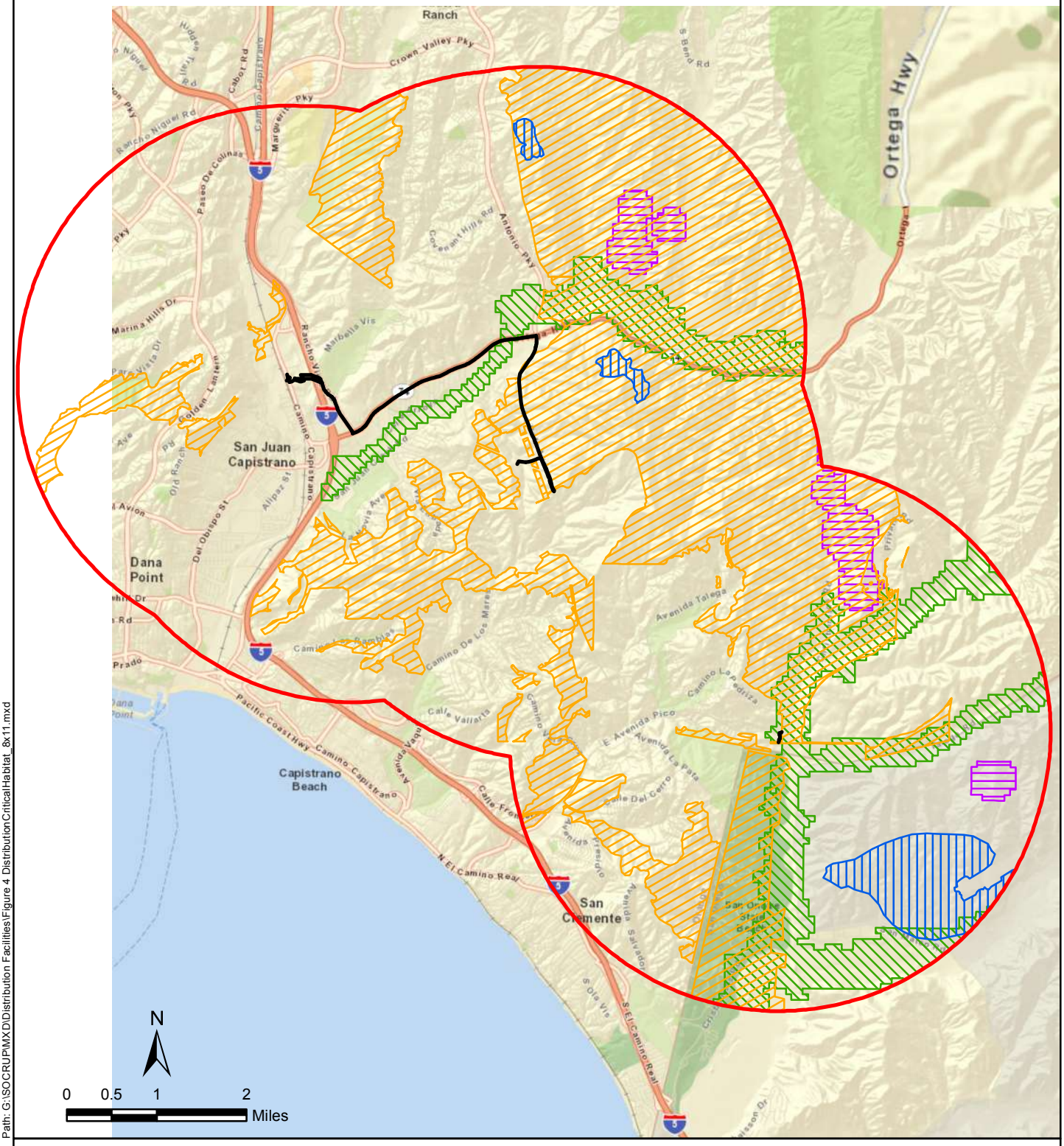
South Orange County Reliability Enhancement Project

CNDDB Reptile, Amphibian, Fish and Invertebrate Species within a 3 mile radius of Distribution Lines

Figure 4-C

SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT

SDGE A Sempra Energy utility



Path: G:\SOCRUP\MXD\Distribution Facilities\Figure 4 DistributionCriticalHabitat_8x11.mxd

Created For: Mary Turley

Created By: TRC

Date: 8/10/2012

SDG&E is providing this map with the understanding that the map is not survey grade.

Source: USFWS Critical Habitat

Legend

- Proposed Distribution Lines
- 3 mile radius from distribution work
- Arroyo (=arroyo southwestern) toad
- Coastal California gnatcatcher
- San Diego fairy shrimp
- Thread-leaved brodiaea

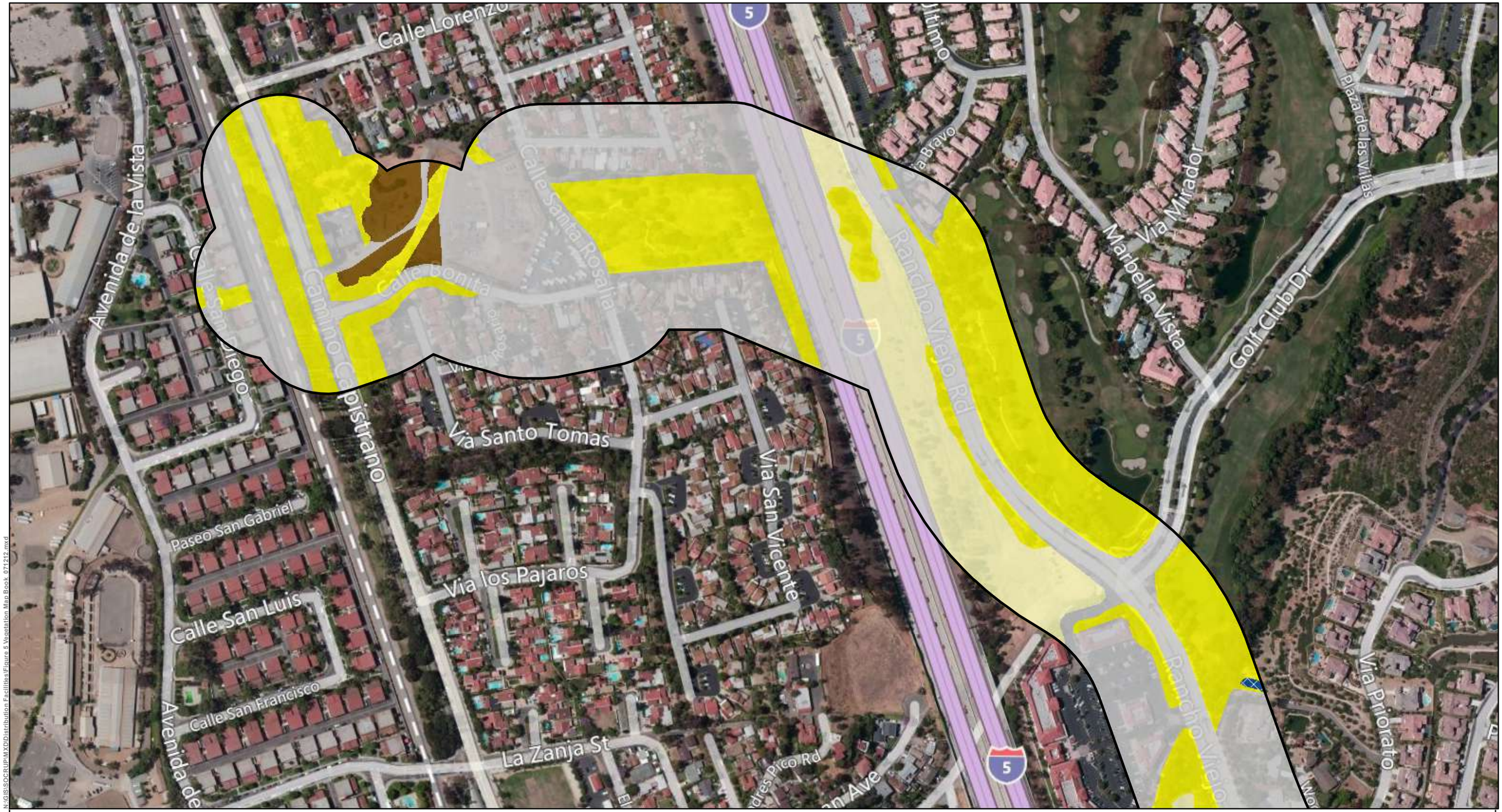
South Orange County Reliability Enhancement Project

Critical Habitat Map

Figure 5

SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT

SDGE A Sempra Energy utility



N:\GIS\SOCRUP\MXD\Distribution Facilities\Figure 6 Vegetation Map Book_071212.mxd

Created For: Mary Turley

Created By: TRC

Date: 8/10/2012

SDG&E is providing this map with the understanding that the map is not survey grade.

Legend

- Distribution Facility Survey Area
- Coastal Sage Scrub
- Disturbed Coastal Sage Scrub
- Coastal Freshwater Marsh
- Southern Willow Scrub
- Disturbed Southern Willow Scrub
- Riparian Scrub
- Ruderal
- Disturbed
- Ornamental
- Dirt Road
- Developed

N

0 150 300 600 Feet

South Orange County Reliability Enhancement Project

Distribution Vegetation Map

Figure 6
Sheet 1

SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT

SDGE A Sempra Energy utility

N:\GIS\SOCRUP\MXD\Distribution Facilities\Figure 5 Vegetation Map Book_071212.mxd

Created For: Mary Turley

Created By: TRC

Date: 8/10/2012

SDG&E is providing this map with the understanding that the map is not survey grade.

Legend

- Distribution Facility Survey Area
- Coastal Sage Scrub
- Disturbed Coastal Sage Scrub
- Coastal Freshwater Marsh
- Southern Willow Scrub
- Disturbed Southern Willow Scrub
- Riparian Scrub
- Ruderal
- Disturbed
- Ornamental
- Dirt Road
- Developed

N

0 150 300 600 Feet

South Orange County Reliability Enhancement Project

Distribution Vegetation Map

Figure 6
Sheet 2

SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT

SDGE A Sempra Energy utility

N:\GIS\SOC\RUP\MXD\Distribution Facilities\Figure 6 Vegetation Map Book_071212.mxd

Created For: Mary Turley

Created By: TRC

Date: 8/10/2012

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Legend

- Distribution Facility Survey Area
- Coastal Sage Scrub
- Disturbed Coastal Sage Scrub
- Coastal Freshwater Marsh
- Southern Willow Scrub
- Disturbed Southern Willow Scrub
- Riparian Scrub
- Ruderal
- Disturbed
- Ornamental
- Dirt Road
- Developed

N

0 150 300 600 Feet

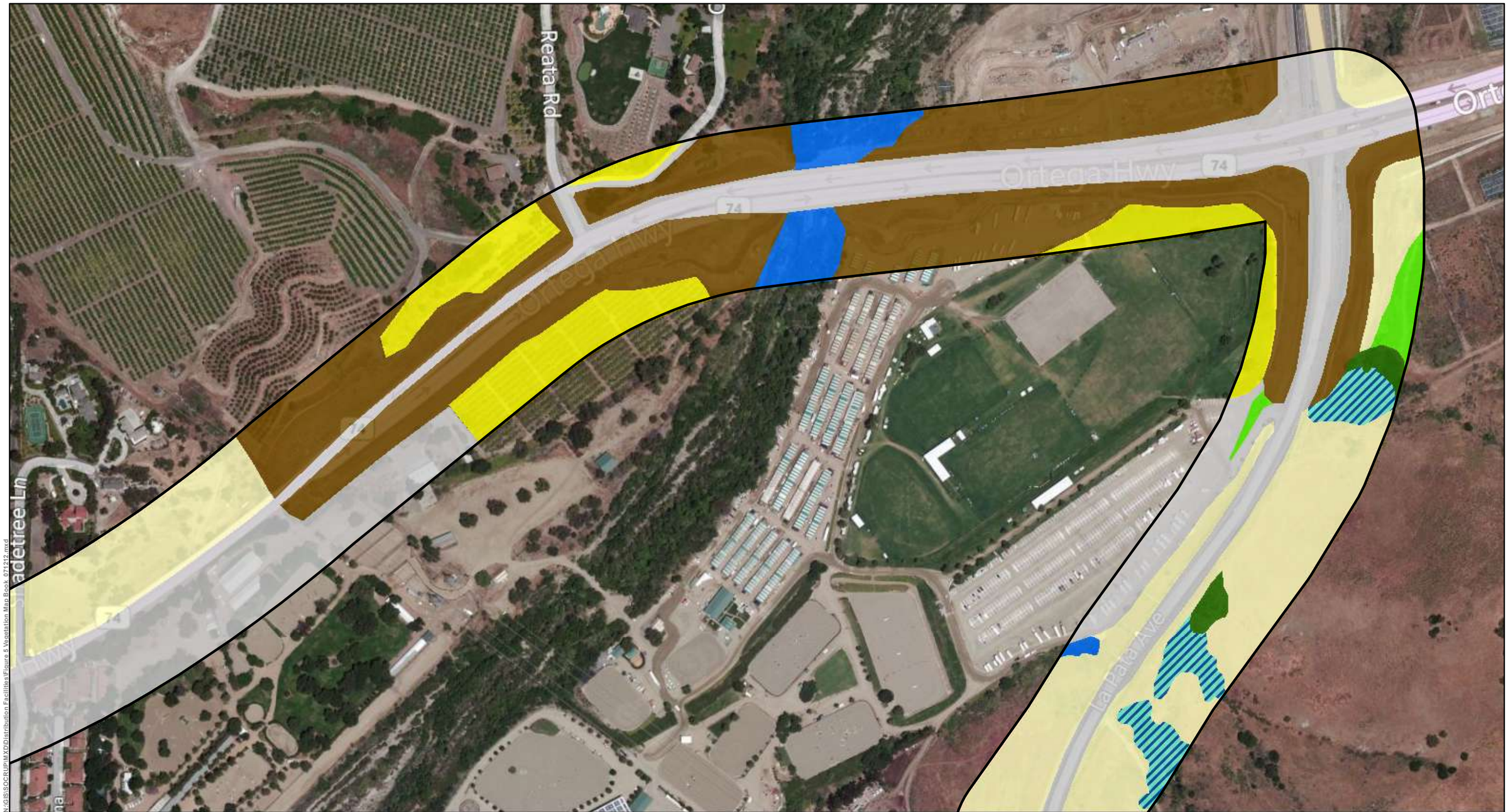
South Orange County Reliability Enhancement Project

Distribution Vegetation Map

Figure 6
Sheet 3

SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT

SDGE A Sempra Energy utility



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Created For: Mary Turley

Created By: TRC

Date: 8/10/2012

SDG&E is providing this map with the understanding that the map is not survey grade.

Legend

- Distribution Facility Survey Area
- Coastal Sage Scrub
- Disturbed Coastal Sage Scrub
- Coastal Freshwater Marsh
- Southern Willow Scrub
- Disturbed Southern Willow Scrub
- Riparian Scrub
- Ruderal
- Disturbed
- Ornamental
- Dirt Road
- Developed

N

0 150 300 600 Feet

South Orange County Reliability Enhancement Project

Distribution Vegetation Map

Figure 6
Sheet 4

SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT

SDGE A Sempra Energy utility

N:\GIS\SOCRUP\MXD\Distribution Facilities\Figure 5 Vegetation Map Book 071212.mxd

Created For: Mary Turley

Created By: TRC

Date: 8/10/2012

SDG&E is providing this map with the understanding that the map is not survey grade.

South Orange County Reliability Enhancement Project

Distribution Vegetation Map

Figure 6
Sheet 5

SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT

SDGE
A Sempra Energy utility

N:\GIS\SOCRUP\MXD\Distribution Facilities\Figure 6 Vegetation Map Book_071212.mxd

Created For: Mary Turley

Created By: TRC

Date: 8/10/2012

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Legend

- Distribution Facility Survey Area
- Coastal Sage Scrub
- Disturbed Coastal Sage Scrub
- Coastal Freshwater Marsh
- Southern Willow Scrub
- Disturbed Southern Willow Scrub
- Riparian Scrub
- Ruderal
- Disturbed
- Ornamental
- Dirt Road
- Developed

N

0 150 300 600 Feet

South Orange County Reliability Enhancement Project

Distribution Vegetation Map

Figure 6
Sheet 6

SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT

SDGE A Sempra Energy utility

N:\GIS\SOCRUP\MXD\Distribution Facilities\Figure 6 Vegetation Map Book 071212.mxd

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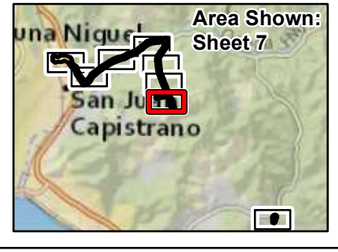


Legend

- Distribution Facility Survey Area
- Coastal Sage Scrub
- Disturbed Coastal Sage Scrub
- Coastal Freshwater Marsh
- Southern Willow Scrub
- Disturbed Southern Willow Scrub
- Riparian Scrub
- Ruderal
- Disturbed
- Ornamental
- Dirt Road
- Developed

N

0 150 300 600 Feet

South Orange County Reliability Enhancement Project

Distribution Vegetation Map

Figure 6
Sheet 7

SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT

SDGE
A Sempra Energy utility

N:\GIS\SOCRUP\MXD\Distribution Facilities\Figure 5 Vegetation Map Book_071212.mxd

Created For: Mary Turley

Created By: TRC

Date: 8/10/2012

SDG&E is providing this map with the understanding that the map is not survey grade.

Legend

- Distribution Facility Survey Area
- Coastal Sage Scrub
- Disturbed Coastal Sage Scrub
- Coastal Freshwater Marsh
- Southern Willow Scrub
- Disturbed Southern Willow Scrub
- Riparian Scrub
- Ruderal
- Disturbed
- Ornamental
- Dirt Road
- Developed

N

0 150 300 600 Feet

South Orange County Reliability Enhancement Project

Distribution Vegetation Map

Figure 6
Sheet 8

SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT

SDGE A Sempra Energy utility

Path: G:\SOCRUP\MXD\Distribution Facilities\Figure 6 Delineation Map Book_071212_INT.mxd

Created For: Mary Turley

Created By: TRC

Date: 8/13/2012

SDG&E is providing this map with the understanding that the map is not survey grade.

Source: Bing Maps Aerial Imagery

Legend

- Distribution Facility Survey Area
- Previously Surveyed Under Proposed Project
- ACOE Waters
- ACOE Wetland
- CDFG Jurisdiction
- Areas Of Non Jurisdiction
- # Data Pit Location
- # Photo Location

N

0 100 200

Feet

South Orange County Reliability Enhancement Project

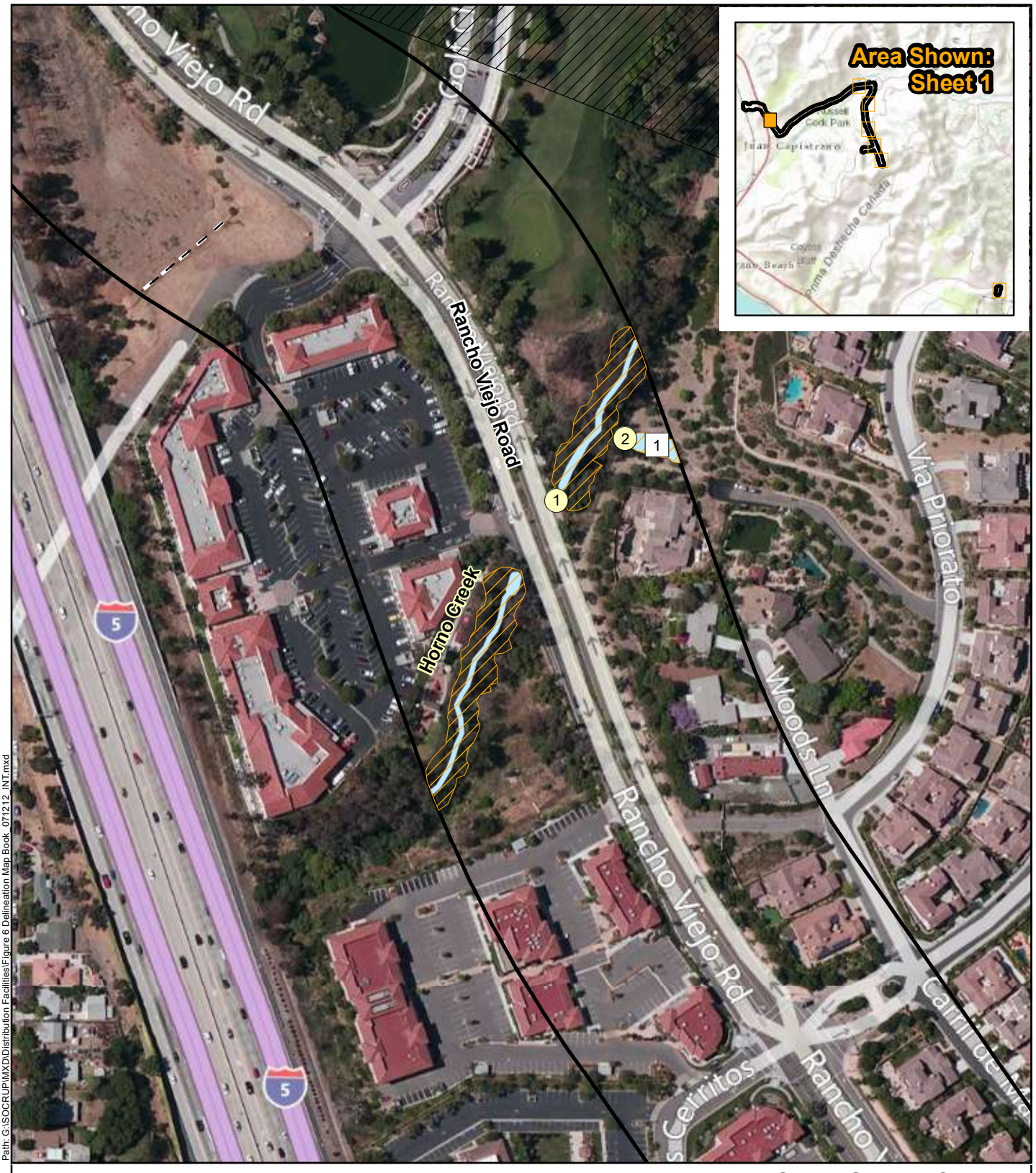
Distribution Delineation Map

Figure 7

Sheet 7 of 7

SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT

SDGE A Sempra Energy utility



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Created For: Mary Turley

Created By: TRC

Date: 8/13/2012

SDG&E is providing this map with the understanding that the map is not survey grade.

Legend

- Distribution Facility Survey Area
- Previously Surveyed Under Proposed Project
- ACOE Waters
- ACOE Wetland
- CDFG Jurisdiction
- Areas Of Non Jurisdiction
- # Data Pit Location
- # Photo Location

N

0 100 200

Feet

Source: Bing Maps Aerial Imagery

South Orange County Reliability Enhancement Project

Distribution Delineation Map

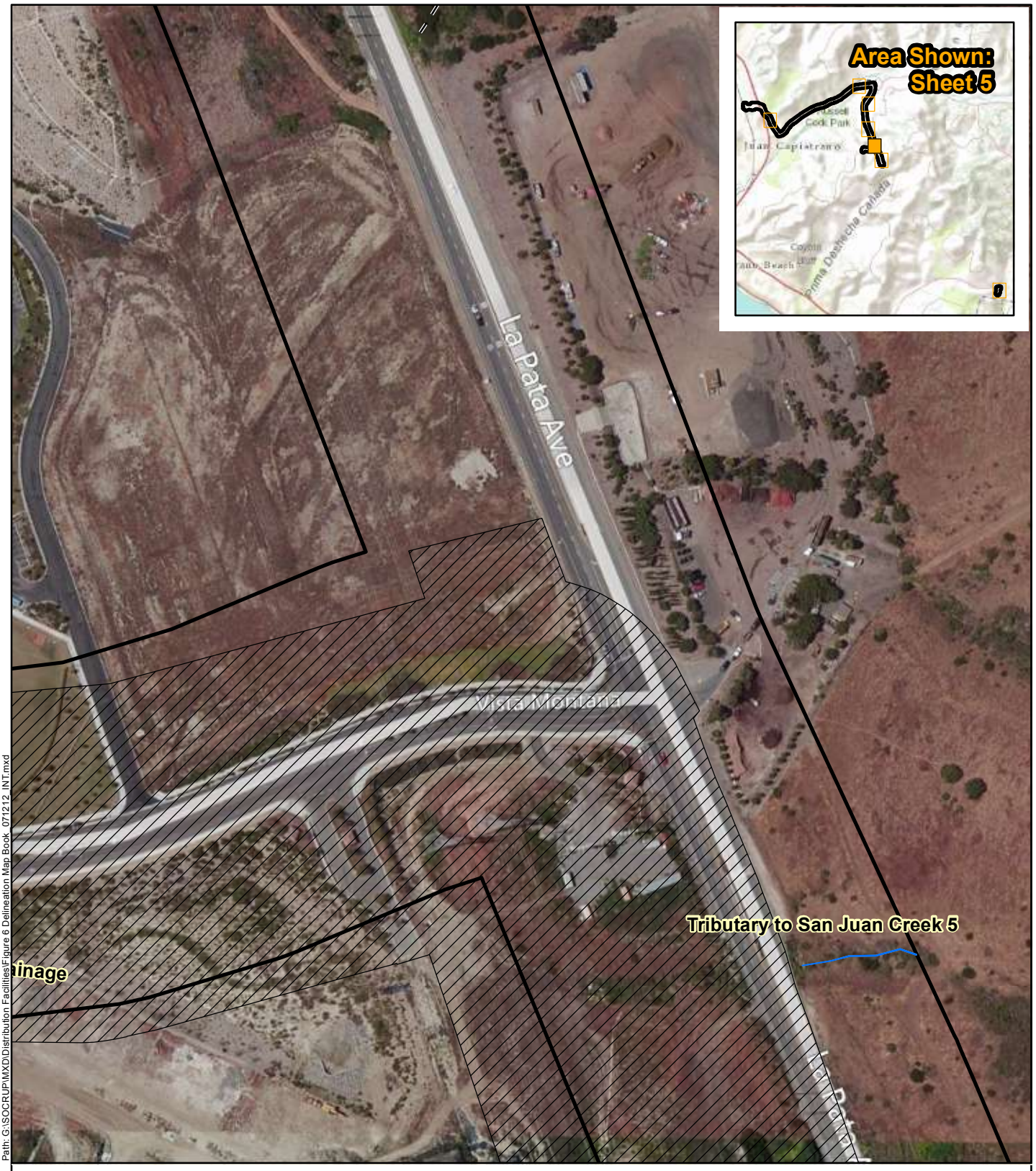
Figure 7

Sheet 1 of 7

SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT

SDGE A Sempra Energy utility

Tributary to San Juan Creek 6
7
La Pata Ave
La Pata Ave
Area Shown:
Sheet 6
Doheny State Beach
Dana Point Harbor
Coyote Hills
Dana Point
Capistrano Beach
Monarch Beach
Laguna Niguel
Aliso Viejo
Laguna Hills
Laguna Woods
Mission Viejo
Lake Forest
Rancho Santa Margarita
Foothill Ranch
Ladera Ranch
Coto de Caza
Las Flores
Trabuco Canyon
Rancho Mission Viejo
Ortega Highway
Antonio Parkway
Oso Parkway
Crown Valley Parkway
Junipero Serra Trail
Aliso Creek Trail
Aliso Creek Park
Juan Capistrano
Coyote Hills
Dana Point
Capistrano Beach
Monarch Beach
Laguna Niguel
Aliso Viejo
Laguna Hills
Laguna Woods
Mission Viejo
Lake Forest
Rancho Santa Margarita
Foothill Ranch
Ladera Ranch
Coto de Caza
Las Flores
Trabuco Canyon
Rancho Mission Viejo
Ortega Highway
Antonio Parkway
Oso Parkway
Crown Valley Parkway
Junipero Serra Trail
Aliso Creek Trail
Aliso Creek Park
Juan Capistrano
Doheny State Beach
Dana Point Harbor



Path: G:\SOCRUP\MXD\Distribution Facilities\Figure 6 Delineation Map Book 071212_INT.mxd

Created For: Mary Turley

Created By: TRC

Date: 8/13/2012

SDG&E is providing this map with the understanding that the map is not survey grade.

Source: Bing Maps Aerial Imagery

Legend

- Distribution Facility Survey Area
- Previously Surveyed Under Proposed Project
- ACOE Waters
- ACOE Wetland
- CDFG Jurisdiction
- Areas Of Non Jurisdiction
- # Data Pit Location
- # Photo Location

N

0 100 200

Feet

South Orange County Reliability Enhancement Project

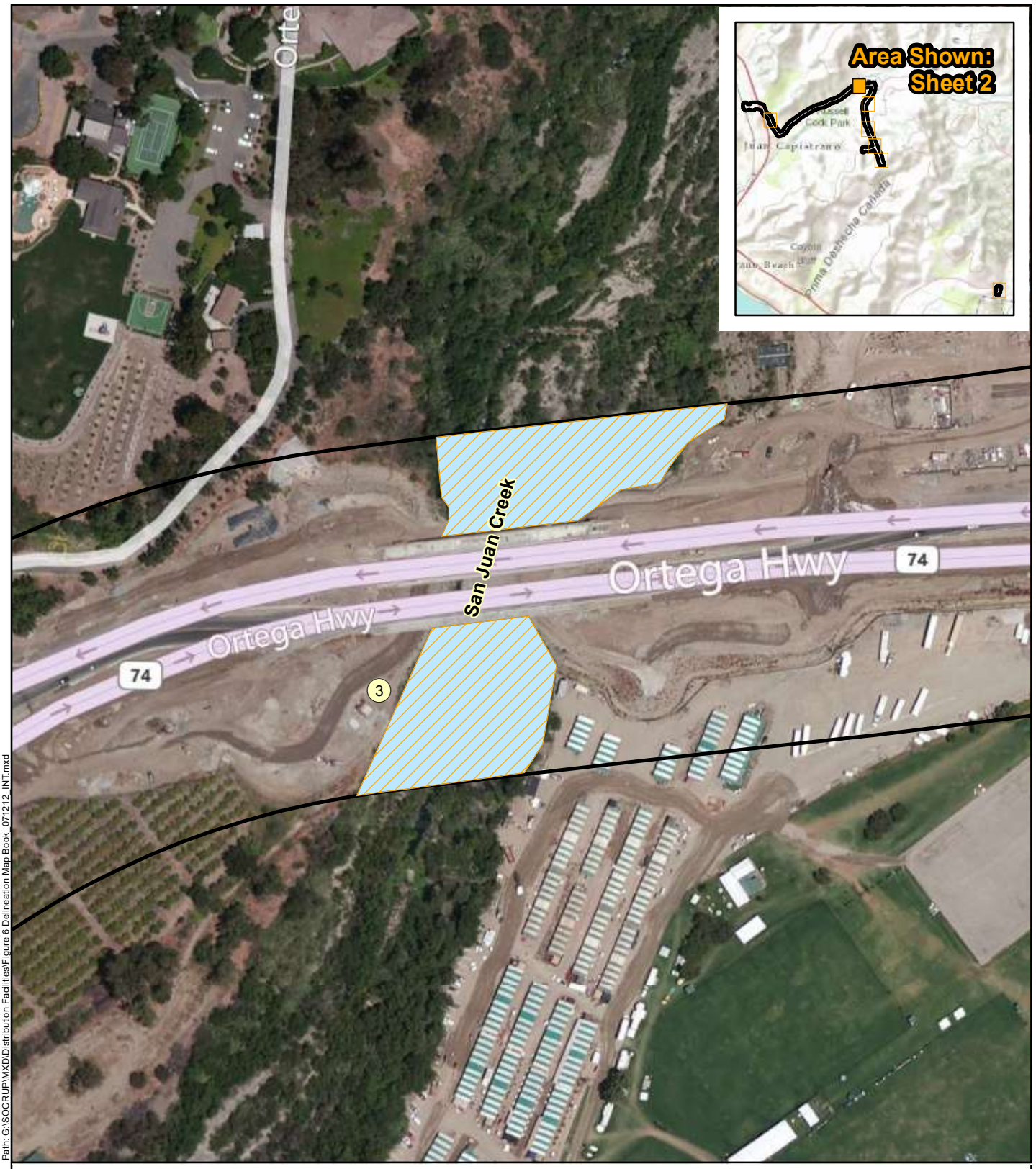
Distribution Delineation Map

Figure 7

Sheet 5 of 7

SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT

SDGE A Sempra Energy utility



Path: G:\SOCRUP\MXD\Distribution Facilities\Figure 6 Delineation Map Book_071212_INT.mxd

Created For: Mary Turley

Created By: TRC

Date: 8/13/2012

SDG&E is providing this map with the understanding that the map is not survey grade.

Source: Bing Maps Aerial Imagery

Legend

- Distribution Facility Survey Area
- Previously Surveyed Under Proposed Project
- ACOE Waters
- ACOE Wetland
- CDFG Jurisdiction
- Areas Of Non Jurisdiction
- # Data Pit Location
- # Photo Location

N

0 100 200

Feet

South Orange County Reliability Enhancement Project

Distribution Delineation Map

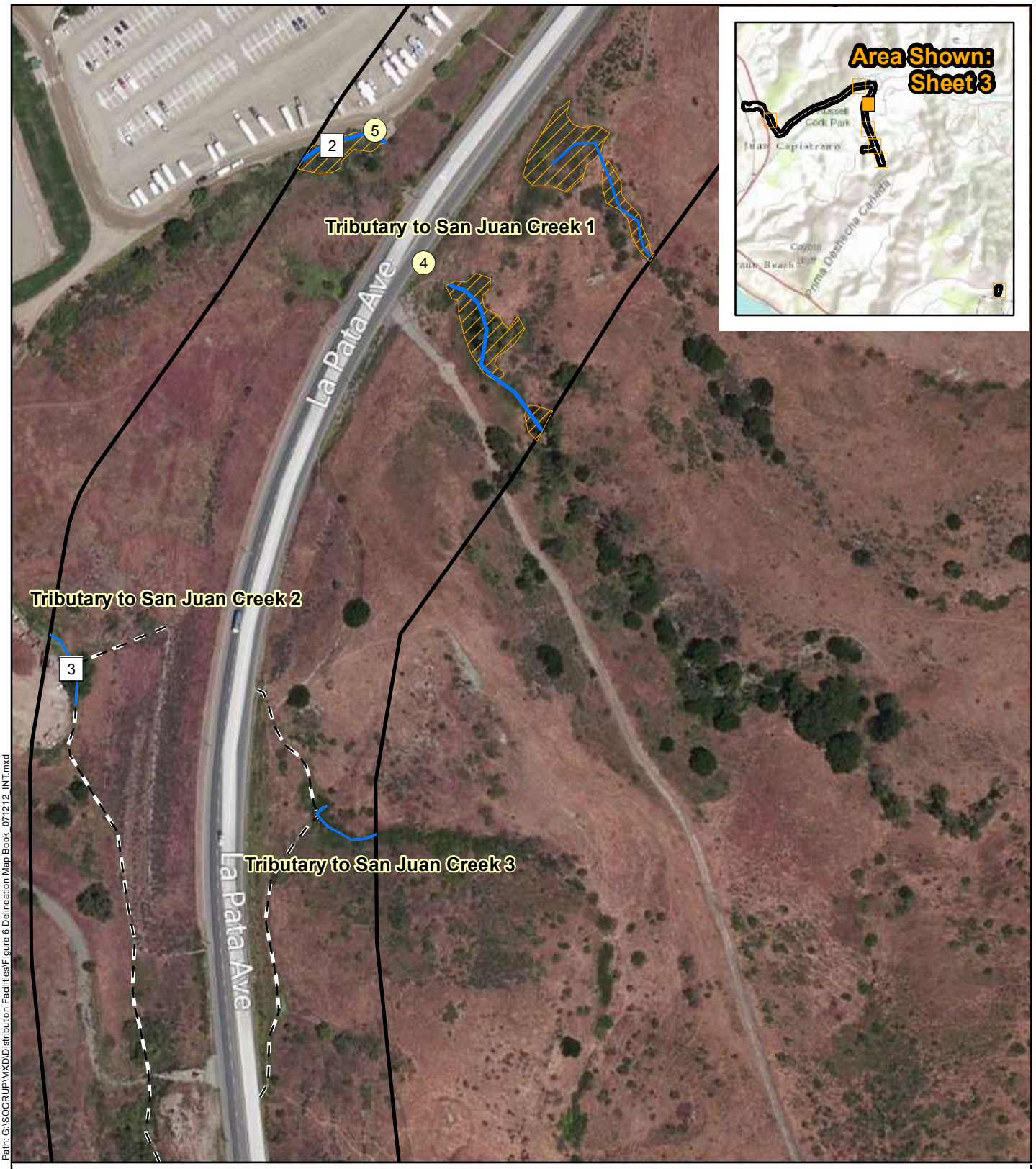
Figure 7

Sheet 2 of 7

SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT

SDGE

A Sempra Energy utility



Path: G:\SOCRUP\MXD\Distribution Facilities\Figure 6 Delineation Map Book_071212_INT.mxd

Created For: Mary Turley

Created By: TRC

Date: 8/13/2012

SDG&E is providing this map with the understanding that the map is not survey grade.

Source: Bing Maps Aerial Imagery

Legend

- Distribution Facility Survey Area
- Previously Surveyed Under Proposed Project
- ACOE Waters
- ACOE Wetland
- CDFG Jurisdiction
- Areas Of Non Jurisdiction
- # Data Pit Location
- # Photo Location

N

0 100 200

Feet

South Orange County Reliability Enhancement Project

Distribution Delineation Map

Figure 7

Sheet 3 of 7

SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT

SDGE A Sempra Energy utility

Path: G:\SOCRUP\MXD\Distribution Facilities\Figure 6 Delineation Map Book_071212_INT.mxd

Created For: Mary Turley

Created By: TRC

Date: 8/13/2012

SDG&E is providing this map with the understanding that the map is not survey grade.

Source: Bing Maps Aerial Imagery

Legend

- Distribution Facility Survey Area
- Previously Surveyed Under Proposed Project
- ACOE Waters
- ACOE Wetland
- CDFG Jurisdiction
- Areas Of Non Jurisdiction
- # Data Pit Location
- # Photo Location

N

0 100 200

Feet

South Orange County Reliability Enhancement Project

Distribution Delineation Map

Figure 7

Sheet 4 of 7

SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT

SDGE A Sempra Energy utility

Appendix A:
Photo Exhibit

Appendix A: Photo Exhibit

	Photograph 1: View of Horno Creek drainage. Canopy was dominated by ornamental trees and the herbaceous layer was dominated by weedy riparian species
	Photograph 2: View of wetland adjacent to Horno Creek. The wetland was composed of a monoculture of cattails.

	Photograph 3: View of San Juan Creek near bridge crossing. Vegetation was dominated by willows (*Salix* sp.).
	Photograph 4: View of Tributary to San Juan Creek 1 east of La Pata Road. Based on observations from a distance, the drainage seemed to be relatively undisturbed.

Appendix A: Photo Exhibit

	Photograph 5: View of Tributary to San Juan Creek 1 west of La Pata Road. Drainage was cleared of vegetation within the channel.
	Photograph 6: View of CSS vegetation associated with the ephemeral Tributary to San Juan Creek 3.

	Photograph 7: View of CSS vegetation associated with the ephemeral Tributary to San Juan Creek 6.
	Photograph 8: View of flood control basin associated with Tributary to Christianitos Creek 1.

Appendix B:
Wetland Delineation Data Forms

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: SOCRE City/County: Orange Sampling Date: 7/5/12

Applicant/Owner: SDG&E State: CA Sampling Point: 1

Investigator(s): T. Kegel, S. Underbrink Section, Township, Range:

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): concave Slope (%): 0-1

Subregion (LRR): Mediterranean Lat: 33.508587° Long: 117.657606° Datum: NAD83

Soil Map Unit Name: 206 SORRENTO LOAM, 0 TO 2 PERCENT SLOPES NWI classification: Non hydric

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ✓ No _____ Hydric Soil Present? Yes ✓ No _____ Wetland Hydrology Present? Yes ✓ No _____	**Is the Sampled Area within a Wetland?** **Yes ✓ No _____**
Remarks:	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1. Typha latifolia	100%	Y	OBL
2.			
3.			
4.			
5.			
	100% = Total Cover		
Herb Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	_____ = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

✓ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes ✓ No _____**

Remarks:

SOIL

Sampling Point: 1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
1-3	2.5YR 3/1	95	5YR 5/8	5	C	M	Clay	
3-18	2.5YR 3/1	80	Gley 1 2.5/N	20	C	M	Clay	Hydrogen Sulfide

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ✓ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ✓ **No** _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ✓ Saturation (A3)
- ✓ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ✓ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ✓ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ✓ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ✓ No _____ Depth (inches): 6 inches

Wetland Hydrology Present? **Yes** ✓ **No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: SOCRE City/County: Orange Sampling Date: 7/5/12

Applicant/Owner: SDG&E State: CA Sampling Point: 2

Investigator(s): T. Kegel, S. Underbrink Section, Township, Range:

Landform (hillslope, terrace, etc.): Drainage Local relief (concave, convex, none): concave Slope (%): 2-3

Subregion (LRR): Mediterranean Lat: 33.515203° Long: 117.622333° Datum: NAD83

Soil Map Unit Name: 206 NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ✓ No _____ Hydric Soil Present? Yes ✓ No _____ Wetland Hydrology Present? Yes ✓ No _____	**Is the Sampled Area within a Wetland?** **Yes ✓ No _____**
Remarks:	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix lasiolepis	40	Y	FACW
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1. Baccharis salicifolia	20	Y	FAC
2.			
3.			
4.			
5.			
	100% = Total Cover		
Herb Stratum (Plot size: _____)			
1. Urtica dioica	20	Y	FAC
2. Artemisia douglasiana	20	Y	FAC
3. Polypogon monspeliensis	2	N	FACW
4. Bromus hordeaceus	5	Y	FACU
5.			
6.			
7.			
8.			
	= Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 80 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

✓ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes ✓ No _____**

Remarks:

SOIL

Sampling Point: 2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	2.5YR 4/2	99	7.5YR 4/6	1	C	M	Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ✓ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ✓ Drift Deposits (B3) (**Riverine**)
- ✓ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: SOCRE City/County: Orange Sampling Date: 7/5/12

Applicant/Owner: SDG&E State: CA Sampling Point: 3

Investigator(s): T. Kegel, S. Underbrink Section, Township, Range:

Landform (hillslope, terrace, etc.): Drainage Local relief (concave, convex, none): concave Slope (%): 2-3

Subregion (LRR): Mediterranean Lat: 33.513166° Long: 117.623509° Datum: NAD 83

Soil Map Unit Name: 209 - NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓ No _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____ No ✓	
Wetland Hydrology Present?	Yes ✓ No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix lasiolepis	100	Y	FACW
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1. Conium maculatum	5%	Y	FACW
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	_____ = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

✓ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No _____

Remarks:

SOIL

Sampling Point: 3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	2.5 Y 4/2	100					Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ✓ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ✓ Drift Deposits (B3) (**Riverine**)
- ✓ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Appendix L-3 Special Status Species Tables

Table 1 Special Status Plant Species with the Potential to Occur in the Proposed Project Area

Common Name	Scientific Name	Status (Fed/State/CNPS/NCCP/HCP)	Vegetation Community	Potential to Occur in Project Survey Area[1, 2]
Allen's daisy	*Pentachaeta aurea* ssp. *allesnii*	--/--/1B.1/--	Coastal scrub, valley and foothill grasslands. Prefers sandy substrate and openings. Occurs between 250 and 1,700 feet.	**Unlikely.** Suitable habitat identified in the proposed project survey area; no occurrences were identified during focused surveys. No CNDDB records within 3.0 miles of survey area.
Aphanisma	*Aphanisma blitoides*	--/--/1B.2/NE	Coastal bluff scrub, Coastal dunes, Coastal scrub. Prefers sandy substrate. Occurs between 0 and 1,000 feet.	**Unlikely.** No suitable habitat identified in the proposed project survey area; no occurrences were identified during focused surveys. No CNDDB records within 3.0 miles of survey area.
Big-leaved crownbeard	*Verbesina dissita*	FT/ST/1B.1/--	Chaparral (maritime) and coastal scrub. Occurs at 150 and 675 feet.	**Unlikely.** Suitable habitat identified in the proposed project survey area; no occurrences were identified during focused surveys. No CNDDB records within 3.0 miles of survey area.
Blochman's dudleya	*Dudleya blochmaniae* ssp. *blochmaniae*	--/--/1B.1/--	Coastal bluff scrub, Chaparral, Coastal scrub, Valley and foothill grassland. Perfers rocky, often clay or serpentinite soils. Occurs between 15 and 1,475 feet.	**Likely.** Suitable habitat identified in the proposed project survey area; no occurrences were identified during focused surveys. The nearest CNDDB record for this species is within 2.5 miles and 2.7 miles of the transmission line.
California satintail	*Imperata brevifolia*	--/--/2.1/--	Chaparral, Coastal scrub, Mojavean desert scrub, Meadows and seeps often alkali, Riparian scrub. Prefers mesic soils. Occurs between 0 and 1,640 feet.	**Likely.** Suitable habitat identified in the proposed project survey area; no occurrences were identified during focused surveys. The nearest CNDDB record is within 1.6 miles of the distribution line and the transmission line survey area.
Chaparral nolina	*Nolina cismontana*	--/--/1B.2/--	Chaparral, coastal scrub. Prefers sandstone or gabbro soils. Occurs between 460 and 4,200 feet.	**Unlikely.** Suitable habitat identified in the proposed project survey area; no occurrences were identified during focused surveys. No CNDDB records within 3.0 miles of survey area.
Chaparral ragwort	*Senecio aphanactis*	--/--/2.2/--	Chaparral, cismontane woodland, coastal scrub. Occurs between 50 and 2,625 feet.	**Unlikely.** Suitable habitat identified in the proposed project survey area; no occurrences were identified during focused surveys. No CNDDB records within 3.0 miles of survey area.
Chaparral sand-	*Abronia villosa* var. *aurita*	--/--/1B.1/--	Chaparral, coastal scrub, desert	**Unlikely.** Suitable habitat identified in the

Common Name	Scientific Name	Status (Fed/State/CNPS/NCCP/HCP)	Vegetation Community	Potential to Occur in Project Survey Area[1, 2]
verbena			dunes/sandy soils. Occurs between 260 and 5,250 feet.	proposed project survey area; no occurrences were identified during field surveys. No CNDDB records within 3.0 miles of survey area.
Cliff spurge	*Euphorbia misera*	--/--/2.2/--	Coastal bluff scrub, coastal scrub, and mojavean desert scrub. Occurs between 30 and 1,640 feet.	**Unlikely.** Suitable habitat identified in the proposed project survey area; no occurrences were identified during focused surveys. No CNDDB records within 3.0 miles of survey area.
Coulter's Matilija poppy	*Romneya coulteri*	--/--/4.2/--	Chaparral and coastal scrub. Occurs between 65 and 4,000 feet.	**Unlikely.** Suitable habitat identified in the proposed project survey area; no occurrences were identified during focused surveys. No CNDDB records within 3.0 miles of survey area.
Coulter's saltbush	*Atriplex coulteri*	--/--/1B.2/--	Coastal bluff scrub, coastal dunes, coastal scrub, valley and foothill grassland. Occurs between 10 and 1,510 feet.	**Likely.** Suitable habitat identified in the proposed project survey area; no occurrences were identified during focused surveys. There are five CNDDB records for this species between 0.02 and 2.6 miles of the transmission line and distribution line survey areas.
Encinitas baccharis	*Baccharis vanessae*	FT/SE/1B.1/CS	Chaparral and cismontane woodland but more common on sandstone substrate. Occurs between 195 and 2,365 feet.	**Likely.** Suitable habitat identified in the proposed project survey area; no occurrences were identified during focused surveys. There are documented CNDDB records for this species within three miles of the transmission line and distribution line survey areas.
Engelmann oak	*Quercus engelmannii*	--/--/4.2/--	Chaparral, cismontane woodland, riparian woodland, valley and foothill grassland. Occurs between 390 and 4,265 feet.	**Unlikely.** Suitable habitat identified in the proposed project survey area; no occurrences were identified during focused surveys. No CNDDB records within 3.0 miles of survey area.
Estuary seablite	*Suaeda esteroa*	--/--/1B.2/--	Marshes and swamps (coastal salt) occurs between 0 and 16 feet.	**Unlikely.** No suitable habitat identified in the proposed project survey area; no occurrences were identified during focused surveys. No CNDDB records within 3.0 miles of survey area.
Felt-leaved monardella	*Monardella hypoleuca* ssp. *lanata*	--/--/1B.2/CS	Chaparral, cismontane woodland. Occurs between 985 and 3,900 feet.	**Unlikely.** No suitable habitat identified in the proposed project survey area; no occurrences were identified during focused surveys; the proposed project area is outside of the species known elevation range. No CNDDB records within 3.0 miles of survey area.
Hall's monardella	*Monardella macrantha* ssp.	--/--/1B.3/--	Broadleaved upland forest,	**Unlikely.** No suitable habitat identified in the

Common Name	Scientific Name	Status (Fed/State/CNPS/NCCP/HCP)	Vegetation Community	Potential to Occur in Project Survey Area[1, 2]
	hallii		chaparral, cismontane woodland, lower montane coniferous forest, valley and foothill grassland. Occurs between 2,400 and 7,200 feet elevation.	proposed project survey area; no occurrences were identified during focused surveys and outside of known elevation range. No CNDDB records within 3.0 miles of survey area.
Intermediate mariposa lily	*Calochortus weedii* var. *intermedius*	--/--/1B.2/--	Rocky and calcareous substrate. Chaparral, coastal scrub, valley and foothill grassland. Occurs between 345 and 2,800 feet.	**Likely.** Suitable habitat identified in the proposed project survey area; no occurrences were identified during focused surveys. The nearest CNDDB record for this species is within 0.50 mile of the transmission line survey area, and another nine records within 3 miles.
Laguna beach dudleya	*Dudleya stolonifera*	FT/ST/1B.1/--	Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland. Prefers rocky substrate. Occurs between 30 and 860 feet.	**Unlikely.** Suitable habitat identified in the proposed project survey area; no occurrences were identified during focused surveys. No CNDDB records within 3.0 miles of survey area.
Little mousetail	*Myosurus minimus* ssp. *apus*	--/--/3.1/CS	Valley and foothill grassland, vernal pools (alkaline). Occurs between 65 and 2,100 feet.	**Unlikely.** Suitable habitat identified in the proposed project survey area; no occurrences were identified during focused surveys. No CNDDB records within 3.0 miles of survey area.
Long-spined spineflower	*Chorizanthe polygonoides* var. *longispina*	--/--/1B.2/--	Chaparral, coastal scrub, meadows and seeps, valley and foothill grassland. Often prefers clay soils. Occurs between 100 and 5,020 feet.	**Unlikely.** Suitable habitat identified in the proposed project survey area; no occurrences were identified during focused surveys. No CNDDB records within 3.0 miles of survey area.
Many-stemmed dudleya	*Dudleya multicaulis*	--/--/1B.2/CS	Chaparral, coastal scrub, valley and foothill grassland. Prefers clay soils. Occurs between 50 and 2,600 feet.	**Likely**. Suitable habitat identified in the proposed project survey area; no occurrences were identified during focused surveys. The nearest CNDDB record for this species is within 1.0 mile of the distribution line, and another nine records within 3.0 miles of the survey areas.
Mesa horkelia	*Horkelia cuneata* ssp. *puberula*	--/--/1B.1/--	Chaparral, cismontane woodland, coastal scrub. Prefers sandy or gravelly soil. Occurs between 230 and 2,660 feet.	**Unlikely.** Suitable habitat identified in the proposed project survey area; no occurrences were identified during focused surveys. No CNDDB records within 3.0 miles of survey area.
Mud nama	*Nama stenocarpum*	--/--/2.2/--	Marshes and swamps (lake margins, riverbanks). Occurs between 15 and 1,640 feet.	**Likely.** Suitable habitat identified in the proposed project survey area; no occurrences were identified during focused surveys. The

Common Name	Scientific Name	Status (Fed/State/CNPS/NCCP/HCP)	Vegetation Community	Potential to Occur in Project Survey Area[1, 2]
				nearest CNDDB record for this species is within 2.3 miles of the distribution line.
Nuttall's scrub oak	*Quercus dumosa*	--/--/1B.1/--	Chaparral and coastal sage scrub. Prefers sandy, clay loam substrate. Occurs between 50 and 1,315 feet.	**Unlikely.** Suitable habitat identified in the proposed project survey area; no occurrences were identified during focused surveys. No CNDDB records within 3.0 miles of survey area.
Orcutt's pincushion	*Chaenactis glabriuscula* var. *orcuttiana*	--/--/1B.1/--	Coastal bluff scrub (sandy), coastal dunes. Occurs between 10 and 330 feet.	**Unlikely.** Suitable habitat identified in the proposed project survey area; no occurrences were identified during focused surveys. No CNDDB records within 3.0 miles of survey area.
Palmer's Grapplinghook	*Harpagonella palmeri*	--/--/4.2/CS	Chaparral, coastal scrub, valley and foothill grassland. Occurs between 65 and 3,140 feet.	**Likely.** Suitable habitat identified in the proposed project survey area; no occurrences were identified during focused surveys. The nearest CNDDB record for this species is within 1.5 miles of the transmission line and distribution line survey areas.
Parry's tetracoccus	*Tetracoccus dioicus*	--/--/1B.2/CS	Chaparral, coastal scrub. Occurs between 540 and 3,280 feet.	**Unlikely.** Suitable habitat identified in the proposed project survey area; no occurrences were identified during focused surveys. No CNDDB records within 3.0 miles of survey area.
Peninsular nolina	*Nolina cismontana*	--/--/1B.2/--	Chaparral, coastal scrub. Prefers sandstone or gabbro soils. Occurs between 460 and 4,200 feet.	**Unlikely.** Suitable habitat identified in the proposed project survey area; no occurrences were identified during focused surveys. No CNDDB records within 3.0 miles of survey area.
Plummer's mariposa lily	*Calochortus plummerae*	--/--/1B.2/--	Chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, valley and foothill grassland. Prefers granitic or rocky substrate. Occurs between 330 and 5,600 feet.	**Unlikely.** Suitable habitat identified in the proposed project survey area; no occurrences were identified during focused surveys. No CNDDB records within 3.0 miles of survey area.
Prostrate vernal pool navarretia	*Navarretia prostrata*	--/--/1B.1/--	Coastal scrub, meadows and seeps, valley and foothill grassland (alkaline), vernal pools. Prefers mesic soils. Occurs between 50 and 4,000 feet.	**Unlikely.** Suitable habitat identified in the proposed project survey area; no occurrences were identified during focused surveys. No CNDDB records within 3.0 miles of survey area.
Robinson's pepper-grass	*Lepidium virginicum* var. *robinsonii*	--/--/1B.2/--	Chaparral and coastal scrub. Occurs between 0 and 2,900 feet elevation.	**Unlikely.** Suitable habitat identified in the proposed project survey area; no occurrences were identified during focused surveys. No

Common Name	Scientific Name	Status (Fed/State/CNPS/NCCP/HCP)	Vegetation Community	Potential to Occur in Project Survey Area[1, 2]
				CNDDB records within 3.0 miles of survey area.
Salt spring checkered bloom	*Sidalcea neomexicana*	--/--/2.2/--	Chaparral, coastal scrub, lower montane coniferous forest, mojavean desert scrub, playas. Prefers alkaline and mesic soils. Occurs between 50 and 5,020 feet.	**Likely.** Suitable habitat identified in the proposed project survey area; no occurrences were identified during focused surveys. The nearest CNDDB record for this species is within 1.2 miles of the transmission line and distribution line survey areas.
San Bernardino aster	*Symphyotrichum defoliatum*	--/--/1B.2/--	Cismontane woodland, coastal scrub, lower montane coniferous forest, meadows and seeps, marshes and swamps, valley and foothill grassland (vernally mesic). Prefers ditches, streams and springs. Occurs between 6 and 6,700 feet.	**Unlikely.** Suitable habitat identified in the proposed project survey area; no occurrences were identified during focused surveys. No CNDDB records within 3.0 miles of survey area.
San Miguel savory	*Satureja chandleri*	--/--/1B.2/CS	Chaparral, cismontane woodland, coastal scrub, riparian woodland, valley and foothill grassland. Prefers rocky, gabbroic or metavolcanic soils. Occurs between 400 and 3,525 feet elevation.	**Unlikely.** Suitable habitat identified in the proposed project survey area; no occurrences were identified during focused surveys. No CNDDB records within 3.0 miles of survey area.
Santa Catalina Island desert-thorn	*Lycium brevipes* var. *hassei*	--/--/1B.1/--	Coastal bluff scrub, coastal scrub. Occurs between 30 to 1,000 feet.	**Unlikely.** Suitable habitat identified in the proposed project survey area; no occurrences were identified during focused surveys. No CNDDB records within 3.0 miles of survey area.
Santa Monica dudleya	*Dudleya cymosa* ssp. *ovatifolia*	FT/--/1B.2/--	Chaparral, coastal scrub. Prefers volcanic or sedimentary, rocky substrate. Occurs between 500 and 5,500 feet.	**Unlikely.** Suitable habitat identified in the proposed project survey area; no occurrences were identified during focused surveys. No CNDDB records within 3.0 miles of survey area.
Smooth tarplant	*Centromadia pungens*	--/--/1B.1/--	Chenopod scrub, meadows and seeps, playas, riparian woodland and valley and foothill grassland. Prefers alkaline soils. Occurs between 0 and 2,100 feet.	**Unlikely.** No suitable habitat identified in the proposed project survey area; no occurrences were identified during focused surveys. No CNDDB records within 3.0 miles of survey area.
South coast saltscale	*Artiplex pacifica*	--/--/1B.2/--	Coastal bluff scrub, coastal dunes, coastal scrub, playas. Occurs between 0 and 460 feet.	**Unlikely.** Suitable habitat identified in the proposed project survey area; no occurrences were identified during focused surveys. No

Common Name	Scientific Name	Status (Fed/State/CNPS/NCCP/HCP)	Vegetation Community	Potential to Occur in Project Survey Area[1, 2]
				CNDDB records within 3.0 miles of survey area.
Southern tarplant	*Centromadia parryi* ssp. *australis*	--/--/1B.1/--	Marshes, swamps, valley and foothill grassland (vernally mesic), vernal pools. Occurs between 0 and 1,400 feet.	**Unlikely.** No suitable habitat identified in the proposed project survey area; no occurrences were identified during focused surveys. No CNDDB records within 3.0 miles of survey area.
Sticky dudleya	*Dudleya viscida*	--/--/1B.2/CS	Coastal bluff scrub, chaparral, coastal scrub. Occurs between 30 and 1,800 feet.	**Unlikely.** Suitable habitat identified in the proposed project survey area; no occurrences were identified during focused surveys. No CNDDB records within 3.0 miles of survey area.
Summer holly	*Comarostaphylis diversifolia* ssp. *diversifolia*	--/--/1B.2/--	Chaparral, cismontane woodland. Occurs between 100 and 1,800 feet.	**Unlikely.** Suitable habitat identified in the proposed project survey area; no occurrences were identified during focused surveys. No CNDDB records within 3.0 miles of survey area.
Tecate cypress	*Hesperocyparis forbesii*	--/--/1B.1/CS	Clay, gabbroic or metavolcanic, closed-cone coniferous forest, chaparral. Occurs 260 to 5,000 feet.	**Unlikely.** Suitable habitat identified in the proposed project survey area; no occurrences were identified during focused surveys. No CNDDB records within 3.0 miles of survey area.
Thread-leaved brodiaea	*Brodiaea filifolia*	FT/SE/1B.1/CS	Chaparral (openings), cismontane woodland, coastal scrub, playas, valley and foothill grassland, vernal pools. Prefers clay substrate. Occurs between 80 to 4,000 feet.	**Likely.** Suitable habitat identified in the proposed project survey area; no occurrences were identified during focused surveys. The nearest CNDDB record for this species is 0.3 mile from the transmission line, and another nine records within 2.4 miles of the transmission line and distribution line.
White rabbit-tobacco	*Pseudognaphalium leucocephalum*	--/--/2.2/--	Chaparral, cismontane woodland, coastal scrub, riparian woodland. Prefers sandy or gravelly. Occurs between 0 to 6,900 feet.	**Likely.** Suitable habitat identified in the proposed project survey area; no occurrences were identified during focused surveys. The nearest CNDDB record is within 0.2 mile of the distribution line, and another three records within 2.9 miles of the transmission line and distribution line.

Common Name	Scientific Name	Status (Fed/State/CNPS/NCCP/HCP)	Vegetation Community	Potential to Occur in Project Survey Area[1, 2]

Sources: Appendices M-1 and M-2; SDG&E 2012a, b, CNDDB 2013; CNPS 2013

Notes:

1. All distances listed are approximate
2. Survey Areas are defined in Table 4.4-1.

Status explanations:

Federal

FE = Listed as endangered under the federal Endangered Species Act.
FT = Listed as threatened under the federal Endangered Species Act.
FC = Candidate for listing under the federal Endangered Species Act.

State

SE = Listed as endangered under the California Endangered Species Act.
ST = Listed as threatened under the California Endangered Species Act.

CNPS

1A = Plants presumed extinct in California
1B.1 = Rare, threatened, or endangered in California and elsewhere. Seriously threatened in California
1B.2 = Rare, threatened, or endangered in California and elsewhere. Fairly threatened in California
1B.3 = Rare, threatened, or endangered in California and elsewhere. Not very threatened in California
2.2 = Rare, threatened, or endangered in California, but more common elsewhere. Fairly threatened in California

NCCP/HCP

CS = Covered Species. Covered by the SDG&E Subregional NCCP/HCP
NE = Narrow and Endemic Species. Covered by the SDG&E Subregional NCCP/HCP, but has restrictions; take authorization is limited to emergencies and unavoidable impacts from repairs to existing facilities.

Occurrence explanations:

Unlikely = (1) Species has been identified in the CNDDB records within 3 miles, but either the recorded observations are extremely old; key habitat requirements are absent; or the habitat in the proposed project study area is so degraded, small, or isolated that it would be very unlikely for the species to colonize/utilize the area; (2) suitable habitat is present within 3 miles but species not recorded in CNDDB within 3 miles; or (3) species not identified in CNDDB within 3 miles and no suitable habitat within the project survey area.
Likely = Species is known to occur within 3 miles of the proposed project study area (based on CNDDB records and /or professional expertise specific to the proposed project study area or species) and there is suitable habitat within the proposed project study area.

Table 2: Special Status Wildlife Species with the Potential to Occur in the Proposed Project Area

Common Name	Scientific Name	Status (Fed/State/NCCP/HCP)	Habitat Description or (Associated) Vegetation Community	Potential to Occur in Project Survey Area[1, 2]
Invertebrates				
Monarch butterfly	*Danaus plexippus*	--/--/--	(Wintering sites) Eucalyptus, Monterey pine, cypress groves.	**Likely.** Eucalyptus trees were identified in the proposed project survey area west of the San Juan Creek crossing. The CNDDB includes seven occurrences from the late 1970's to early 1990's within the San Juan Capistrano, Dana Point, and San Clemente USGS Quadrangles. No specific locational detail is provided. .
Riverside fairy shrimp	*Streptocephalus woottoni*	FE/--/CS	Vernal pools and wetlands found in valley and foothill grasslands and coastal scrub.	**Unlikely.** No suitable habitat identified in the proposed project survey area. The nearest CNDDB record for this species is within 1.25 miles of the survey area.
San Diego fairy shrimp	*Branchinecta sandiegonensis*	FE/--/CS	Vernal pools, and occasionally in ditches and road cuts with suitable conditions.	**Unlikely.** No suitable habitat identified in the proposed project survey area. The nearest CNDDB record for this species is within 1.25 miles of the survey area.
Fish				
Arroyo chub	*Gila orcuttii*	--/SSC/--	Inhabits slow moving sections of southern California coastal streams, commonly areas with muddy or sandy substrates.	**Likely.** Suitable habitat identified in the proposed project survey area; no occurrences were identified during field surveys. CNDDB records document the species occurring in San Juan Creek where the proposed project survey area crosses the creek, as well as upstream and downstream of the area and in nearby tributaries.
Southern steelhead southern California DPS	*Oncorhynchus mykiss irideus*	FE/SSC/--	Historically found in major southern California coastal streams.	**Likely.** Suitable habitat identified in the proposed project survey area; no occurrences were identified during field surveys. The nearest CNDDB record for this species is within 1.5 miles of the survey area in San Mateo Creek; the stream will not be crossed by the proposed project. Cristianitos Creek, however, is a tributary of San Mateo Creek and may provide suitable habitat for the species.
Tidewater goby	*Eucyclogobius newberryi*	FE/SSC/--	Inhabits coastal lagoons, estuaries, and marshes.	**Unlikely.** No suitable habitat identified in the proposed project survey area. The nearest CNDDB record for this species is within 1.5 miles of the survey area in Aliso Creek.
Amphibians				

Common Name	Scientific Name	Status (Fed/State/NCCP/HCP)	Habitat Description or (Associated) Vegetation Community	Potential to Occur in Project Survey Area[1, 2]
Arroyo toad	*Bufo californicus*	FE/SSC/CS	Inhabits washes, arroyos, and riparian areas with sandy banks. Prefers streams with quiet pools and sandy banks with scattered vegetation for breeding.	**Likely.** Suitable habitat identified in the proposed project survey area; no occurrences were identified during focused field surveys. The nearest CNDDB records for this species are within 0.1 mile of the survey area, along San Juan Creek, Cristianitos Canyon, and Gabino Creeks.
Western spadefoot	*Spea hammondii*	--/SSC/CS	Inhabits areas with loose or gravelly soil, including coastal sage scrub, chaparral, grasslands, mixed woodlands, foothills, and mountains. Species is nocturnal and spends most of the year underground.	**Likely.** Suitable habitat identified in the proposed project survey area; no occurrences were identified during focused surveys. The nearest CNDDB record for this species is within 0.1 mile of the transmission line, in a pond at the base of a transmission line tower in 2001. Additional records from Horno Creek within 2.2 miles of the distribution line.
Reptiles				
Belding's orange-throated whiptail	*Aspidoscelis hyperythra*	--/SSC/CS	Inhabits areas with loose soil and rocks, semi-arid brushy habitats, including coastal chaparral, dry washes, and rocky hillsides.	**Likely.** Suitable habitat identified in the proposed project survey area; no occurrences were identified during field surveys. The nearest CNDDB records for this species are 1.5 miles and 2.1 miles from the transmission line and distribution line, respectively.
Coast horned lizard	*Phrynosoma coronatum blainvillei*	--/SSC/CS	Inhabits open sandy areas with low vegetation: grasslands, coniferous forests, woodlands, and chaparral. Often found near ant hills.	**Likely.** Suitable habitat identified in the proposed project survey area; no occurrences were identified during field surveys. The nearest CNDDB record for this species is within 0.75 mile of the survey area. Species may be present in coastal sage scrub habitat along proposed project survey area.
Coastal rosy boa	*Lichanura trivirgata roseofusca*	--/--/CS	Most active at night and in the evenings. Occurs in desert and chaparral habitats from the coast of southern California to the Mojave and Colorado deserts. Prefers moderate to dense vegetation and rocky cover in diverse locations such as hillsides, desert canyons, washes, and mountains. Little is known of seasonality, but most commonly found in late spring/early summer.	**Unlikely.** This special status subspecies is limited to extreme southern San Diego County. No occurrences were identified during field surveys and no CNDDB records are present within 3.0 miles of the proposed project survey area.
Northern red-diamond rattlesnake	*Crotalus ruber ruber*	--/SSC/CS	Inhabits arid scrub, coastal chaparral, grasslands, oak and pine woodlands, and cultivated areas. Prefers habitats with scattered rocky areas for cover.	**Likely.** Suitable habitat identified in the proposed project survey area; no occurrences were identified during field surveys. The nearest CNDDB records for this species are 1.5 miles and 2.1 miles from the transmission line and distribution line, respectively.

Common Name	Scientific Name	Status (Fed/State/NCCP/HCP)	Habitat Description or (Associated) Vegetation Community	Potential to Occur in Project Survey Area[1, 2]
Two-striped garter snake	*Thamnophis hammondii*	--/SSC/CS	Inhabits wet areas including pools, creeks, streams, even cattle tanks; often in rocky areas in chaparral, brushy habitats, woodlands, and coniferous forest.	**Likely.** Suitable habitat identified in the proposed project survey area within the perennially wet creeks and drainages crossing the proposed project survey area; no occurrences were identified during field surveys. The nearest CNDDB record for this species is within 0.1 miles of the distribution line.
Western pond turtle	*Emys marmorata*	--/SSC/CS	Inhabits aquatic areas with abundant vegetation including streams, creeks, rivers, ponds, lakes, and irrigation canals. Needs substrate for basking: logs, rocks, exposed banks.	**Likely.** Suitable habitat identified in the proposed project survey area within the perennially wet creeks and drainages crossing the proposed project survey area; no occurrences were identified during field surveys. The nearest CNDDB record for this species within 0.6 mile of transmission line and distribution line, and three more records within 2.2 miles.
Birds				
American peregrine falcon	*Falco peregrinus anatum*	BCC/FP/CS	Widespread throughout western California, prefers open habitats with ample presence of prey birds: coastlines, river and lake edges, and mountain chains. Nests on cliffs, bridges, and buildings, or utilizes abandoned nests made by large birds.	**Present.** Suitable nesting and foraging habitat identified in the proposed project survey area. One active nest was identified in 2008 surveys 2,500 feet west of Talega Substation, but this nest was not found again during 2011 surveys. No CNDDB records within 3.0 miles of survey area.
Western burrowing owl	*Athene cunicularia*	BCC/SSC/NE	Inhabits arid regions of California, including scrublands, agricultural areas, and valley grasslands. Commonly found in areas with burrowing rodents, such as California ground squirrel.	**Likely.** Suitable nesting and foraging habitat identified in the proposed project survey area; no occurrences were identified during field surveys. The nearest CNDDB record for this species is located within the transmission line survey area near the Prima Desecha Landfill.
Coastal (San Diego) cactus wren	*Campylorhynchus brunneicapillus sandiegensis*	--/SSC/NE	Foraging and breeding habitat is coastal sage scrub with key habitat components of tall prickly pear and coastal cholla (*Opuntia littoralis* and *O. oricola*) tall enough to support and protect the birds' nest.	**Likely.** Suitable foraging habitat identified in the proposed project survey area and limited nesting habitat in cacti stands; no occurrences were identified during field surveys. The nearest CNDDB record for this species is within 0.20 mile of the transmission line survey area, and there are five additional records within 3 miles.
Coastal California gnatcatcher	*Polioptila californica californica*	FT/SSC/CS	In California, this species is considered an obligate resident of coastal sage scrub below 500 meters.	**Present.** Suitable nesting and foraging habitat identified in the proposed project survey area; nearly 20 occurrences were identified during 2008 and 2010 habitat assessment and focused surveys in areas of coastal sage scrub from Talega Substation to the

Common Name	Scientific Name	Status (Fed/State/NCCP/HCP)	Habitat Description or (Associated) Vegetation Community	Potential to Occur in Project Survey Area[1, 2]
				south of San Juan Creek Road. In addition, the surveys identified four nesting pairs within the project survey area.
Cooper's hawk	*Accipiter cooperii*	--/WL/CS	Inhabits woodlands, mixed forests, riparian areas, and common in suburban areas of southern California where it is commonly associated with eucalyptus trees. Nests in trees, commonly in oaks in California, but also nonnative tree species in urban areas.	**Present.** Suitable nesting and foraging habitat identified in the proposed project survey area. This species was observed in riparian habitat and eucalyptus trees in the proposed project survey area, particularly in the vicinity of San Juan Creek.
Golden eagle	*Aquila chrysaetos*	BCC/FP/CS	Inhabits rugged regions, often arid and semi-arid, specifically foothills, deserts, and open country with cliffs or scattered large trees.	**Unlikely.** Low quality foraging habitat identified in the proposed project survey area; no occurrences were identified during field surveys. Marginally suitable nesting habitat present on towers or tall trees. No CNDDB records within 3.0 miles of survey area.
Grasshopper sparrow	*Ammodramus savannarum*	--/--/CS	Inhabits grasslands, nests on the ground.	**Unlikely.** Suitable habitat identified in the proposed project survey area; no occurrences were identified during field surveys. No CNDDB records within 3.0 miles of survey area.
Least Bell's vireo	*Vireo bellii pusillus*	FE/SE/CS	Riparian species, nests in brushy lower vegetation (small willows and baccharis) near water sources, but also found in larger willows.	**Present.** Suitable nesting and foraging habitat identified in the proposed project survey area. The species was observed and documented during focused surveys at four drainage locations spanned or paralleled by the proposed project survey area. There are nine CNDDB records within 3 miles of the survey areas
Northern harrier	*Circus cyaneus hudsonius*	--/SSC/CS	Found in grasslands, marshes, and areas of sparse low vegetation that allows it to forage for small mammals only a short distance above the ground. Found in coastal areas, valleys, and agricultural pastureland. Nests on the ground, often nests near closest water source.	**Unlikely.** Suitable nesting and foraging habitat identified in the proposed project survey area; no occurrences were identified during field surveys. Appropriate foraging habitat is present in the more open grassland and sage scrub habitat within the proposed project survey area. No CNDDB records within 3.0 miles of survey area.
Southern California rufous-crowned sparrow	*Aimophila ruficeps canescens*	--/WL/CS	Inhabits mixed chaparral and coastal sage scrub, often rugged hillsides with a mixture of chaparral and scrub.	**Likely.** Suitable nesting and foraging habitat identified in the proposed project survey area; no occurrences were identified during field surveys. The nearest CNDDB records for this species are 1.8 miles and 2.7 miles from the transmission line and distribution line, respectively.

Common Name	Scientific Name	Status (Fed/State/NCCP/HCP)	Habitat Description or (Associated) Vegetation Community	Potential to Occur in Project Survey Area[1, 2]
Southwestern willow flycatcher	*Empidonax traillii extimus*	FE/SE/CS	Riparian obligate songbird, utilizes narrow riparian areas in southern California, usually mixtures of cottonwood, willow, oak, and tamarisk.	**Present.** Suitable foraging habitat was identified in the proposed project survey area. Focused surveys conducted in 2008 observed migratory individuals in the riparian habitat 0.5 mile west and at 1 mile southwest of the Talega Substation. No observations during the 2010 focused surveys for the species. The nearest CNDDB records for this species are 1.4, 1.8, and 2.4 miles from the transmission and distribution lines.
Tricolored blackbird	*Agelaius tricolor*	BCC/SSC/CS	Nests in freshwater marshes, wet riparian scrublands and tamarisk groves, and some wet agricultural areas such as dairies. Forages in grasslands, wetlands, riparian edges, and agricultural fields. Often changes nesting locations from year to year.	**Likely.** Small patches of suitable foraging habitat identified in the proposed project survey area; no occurrences were identified during field surveys. The nearest CNDDB record for this species is within 1.2 miles of the distribution line and 1.9 miles of the transmission line.
White-tailed kite	*Elanus leucurus*	--/FP/--	Inhabits oak savannahs, riparian, and mixed woodlands with nearby open areas for foraging.	**Present.** Suitable nesting and foraging habitat identified in the proposed project survey area; occurrences were identified during field surveys. There are CNDDB records for this species within 0.3, 0.6, and 2.0 miles of the transmission line.
Mammals				
Dulzura pocket mouse	*Chaetodipus californicus femoralis*	--/SSC/CS	Inhabits grasslands, chaparral, and coastal sage scrub.	**Likely.** Suitable habitat identified in the proposed project survey area; no occurrences were identified during field surveys. The nearest CNDDB record for this species is within 2.7 miles of the transmission line survey area.
Mexican long-tongued bat	*Choeronycteris mexicana*	--/SSC/--	San Diego county is the northern extent of this species range. In southern California, this nectar feeder often gets nectar from neighborhood hummingbird feeders. Roosts in mine tunnels, caves, rock fissures, and buildings near oak and mixed woodlands.	**Likely.** Suitable roosting habitat identified in the proposed project survey area; no occurrences were identified during field surveys. The nearest CNDDB record for this species is within 2.7 miles of the proposed project survey area.
Mountain lion	*Felis concolor*	--/--/CS	Wide-ranging species. In southern California, mountain lions inhabit coastal areas, foothills, mountains, and desert areas. Generally, inhabits any area with low human populations and a reliable water source. Individuals commonly undertake large distance movements, which brings them into more heavily human populated areas.	**Likely.** Suitable habitat identified in the proposed project survey area; marginal suitable habitat exists in the less disturbed areas of the project survey area and in the vicinity of Camp Pendleton; no occurrences were identified during field surveys. No CNDDB records within 3.0 miles of survey area.

Common Name	Scientific Name	Status (Fed/State/NCCP/HCP)	Habitat Description or (Associated) Vegetation Community	Potential to Occur in Project Survey Area[1, 2]
Pacific pocket mouse	*Perognathus longimembris pacificus*	FE/SSC/NE	Inhabits coastal sage scrub near the ocean where the substrate consists of fine alluvial sands.	**Unlikely.** Suitable habitat identified in the proposed project survey area; no occurrences were identified during field surveys. No CNDDB records within 3.0 miles of survey area. The species occurs in the northwest corner of Camp Pendleton, approximately four miles southwest of the Talega Substation (MCBCP INRMP 2012).
Pallid bat	*Antrozous pallidus*	--/SSC/--	Common to a wide variety of habitats in California: grasslands, shrublands, woodlands, and mixed conifer forests. Roosts in open dry habitats with rocky areas. Yearlong resident in most parts of its range.	**Likely.** Low quality habitat identified in the proposed project survey area; no occurrences were identified during field surveys. The nearest CNDDB records for this species are 1.5 miles and 2.1 miles from the transmission line and distribution line.
San Diego black- tailed jackrabbit	*Lepus californicus bennettii*	--/--/CS	Inhabits open areas with scattered shrubs and thickets of chaparral. Found in valleys, pastures, and deserts. Occurs in western parts of southern California.	**Unlikely.** Suitable habitat identified within areas of coastal sage scrub vegetation found in the proposed project survey area; no occurrences were identified during field surveys. No CNDDB records within 3.0 miles of survey area.
San Diego desert woodrat	*Neotoma lepida intermedia*	--/SSC/CS	Inhabits sagebrush, mixed chaparral, and desert habitats. Particularly abundant in areas of rocky outcrops, cliffs, and slopes.	**Unlikely.** Suitable habitat identified in the proposed project survey area; no occurrences were identified during field surveys. No CNDDB records within 3.0 miles of survey area.
Southern mule deer	*Odocoileus hemionus*	--/--/CS	Inhabits chaparral, sage scrub, desert scrub, grassland, and coniferous forests.	**Likely.** Suitable habitat identified in the proposed project survey area in the vicinity of Camp Pendleton; no occurrences were identified during field surveys. No CNDDB records within 3.0 miles of survey area.
Stephen's kangaroo rat	*Dipodomys stephensi*	FE/--/LT	Inhabits grasslands and coastal sage scrub with sparse shrub cover, well-drained soils, and gently rolling terrain.	**Unlikely.** Suitable habitat identified in the proposed project survey area; no occurrences were identified during field surveys. The nearest CNDDB record for this species is within 2.8 miles of the survey area within highly disturbed non-native grassland habitat (rifle range) on Camp Pendleton in 1995. The kangaroo rat is not expected to occur in project area based on discussions with USFWS (Jonathan Snyder, Pers. Comm. 2013).
Western mastiff bat	*Eumops perotis californicus*	--/SSC/CS	Inhabits semi-arid to arid habitats, including grasslands, coastal sage scrub, chaparral, and woodlands. Roosts in crevices and shallow caves on cliffs, rock walls, and occasionally buildings.	**Unlikely.** Suitable habitat identified in the proposed project survey area; no occurrences were identified during field surveys. There are no CNDDB records for this species is within 3.0 miles of the project.

Common Name	Scientific Name	Status (Fed/State/NCCP/HCP)	Habitat Description or (Associated) Vegetation Community	Potential to Occur in Project Survey Area[1, 2]

Sources: Appendices M-1 and M-2; SDG&E 2012a, b, CNDDB 2013

Notes:

1. All distances listed are approximate
2. Survey Areas are defined in Table 4.4-1.

Status explanations:

Federal

FE = Federal endangered
FT = Federal threatened
FC = Candidate for listing under the federal Endangered Species Act
BCC = Birds of Conservation Concern

State

SE = State endangered
ST = State threatened
FP = Fully protected under the California Fish and Game Code
SSC = Species of special concern in California
WL = Watch List

NCCP/HCP

CS = Covered Species. Covered by the SDG&E Subregional NCCP/HCP
NE = Narrow and Endemic Species. Covered by the SDG&E Subregional NCCP/HCP, but has restrictions; take authorization is limited to emergencies and unavoidable impacts from repairs to existing facilities.
LT = Limited Take. Covered by the SDG&E Subregional NCCP/HCP, but has restrictions; take authorization is limited to new construction activities within San Diego County. Operational Protocols and Habitat Enhancement Measures are generally applicable to these species habitat.

Other Abbreviations:

C = centigrade
CNDDB = California Natural Diversity Database
Fed = federal
kV = kilovolt

*All distances listed are approximate

Occurrence explanations:

Unlikely = (1) Species has been identified in the CNDDB records within 3 miles, but either the recorded observations are extremely old; key habitat requirements are absent; or the habitat in the proposed project study area is so degraded, small, or isolated that it would be very unlikely for the species to colonize/utilize the area; (2) suitable habitat is present within 3 miles but species not recorded in CNDDB within 3 miles; or (3) species not identified in CNDDB within 3 miles and no suitable habitat within the project survey area.

Common Name	Scientific Name	Status (Fed/State/NCCP/HCP)	Habitat Description or (Associated) Vegetation Community	Potential to Occur in Project Survey Area[1, 2]
Likely = Species is known to occur within 3 miles of the proposed project study area (based on CNDDB records and/or professional expertise specific to the proposed project study area or species) and there is suitable habitat within the proposed project study area. Present = Species observed within the project survey area or has been recently recorded (i.e. CNDDB, other reports) from the area.				

Appendix M

Historical Reports

M-1: An Historic Property Evaluation (McKenna et al.)

M-2: Additional Information Regarding the Nomination of the San Diego Gas & Electric Company Capistrano Substation Building to the National Register of Historic Places (TRC)

M-3: Historical Assessment (Scott A. Moomjian)

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AN HISTORIC PROPERTY EVALUATION:

THE SAN DIEGO GAS & ELECTRIC COMPANY SAN JUAN CAPISTRANO SUB-STATION AT 31050 CAMINO CAPISTRANO, SAN JUAN CAPISTRANO, ORANGE COUNTY, CALIFORNIA

Prepared for:

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Author and Principal Investigator: Jeanette A. McKenna, MA/RPA

Job No. 03-08-04-1342
April 21, 2008

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AN HISTORIC PROPERTY EVALUATION:

THE SAN DIEGO GAS & ELECTRIC COMPANY SAN JUAN CAPISTRANO SUB-STATION AT 31050 CAMINO CAPISTRANO, SAN JUAN CAPISTRANO, ORANGE COUNTY, CALIFORNIA

by,

Jeanette A. McKenna
McKenna et al., Whittier CA

INTRODUCTION

McKenna et al. (Appendix A) initiated an historic property evaluation of the existing San Diego Gas & Electric Company sub-station in San Juan Capistrano (31050 Camino Capistrano) at the request of TRC Solutions, Inc, of Irvine, California. Working with Shelby Manney of TRC Solutions, Inc., Jeanette A. McKenna (Principal Investigator for McKenna et al.) completed the research, field survey, and prepared this report addressing the historic property evaluation of the San Diego Gas & Electric building on Camino Capistrano. This investigation was undertaken for compliance with the National Historic Preservation Act (NHPA); the California Environmental Quality Act (CEQA), as amended; and the City of San Juan Capistrano Council Policy 601 and Council Policy 602.

LOCATION AND SETTING

The San Diego Gas & Electric Company sub-station in San Juan Capistrano is located at 31050 Camino Capistrano (Figures 1 and 2). This property is cross-referenced as Assessor Parcel No. 649-052-03 and located on the east side of Camino Capistrano, between Calle Lorenzo and Calle Bonita. Illustrated in Figure 3, the main building and the subject of this review is located along the Camino Capistrano frontage.

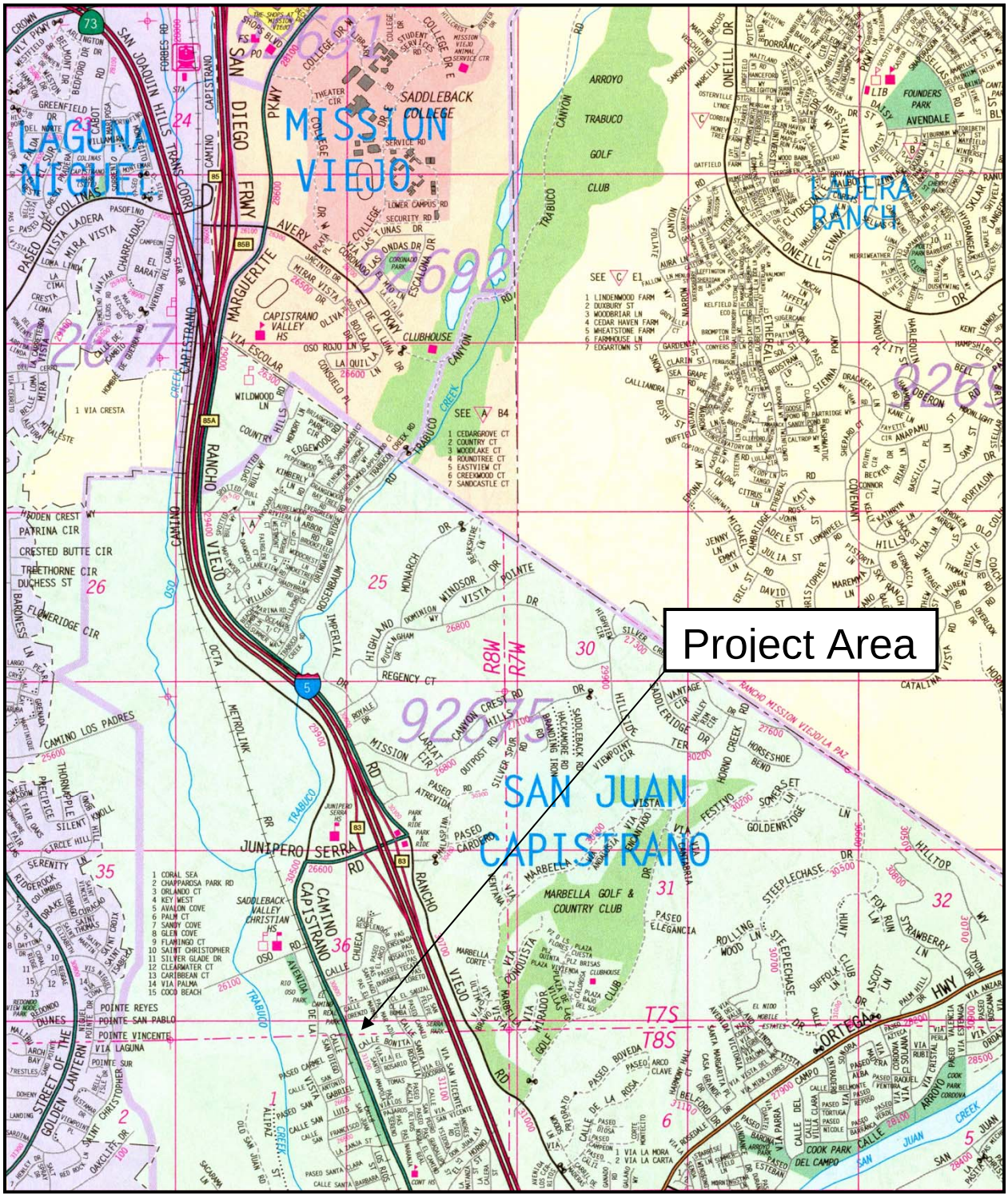

Figure 1. General Location of the Project Area.

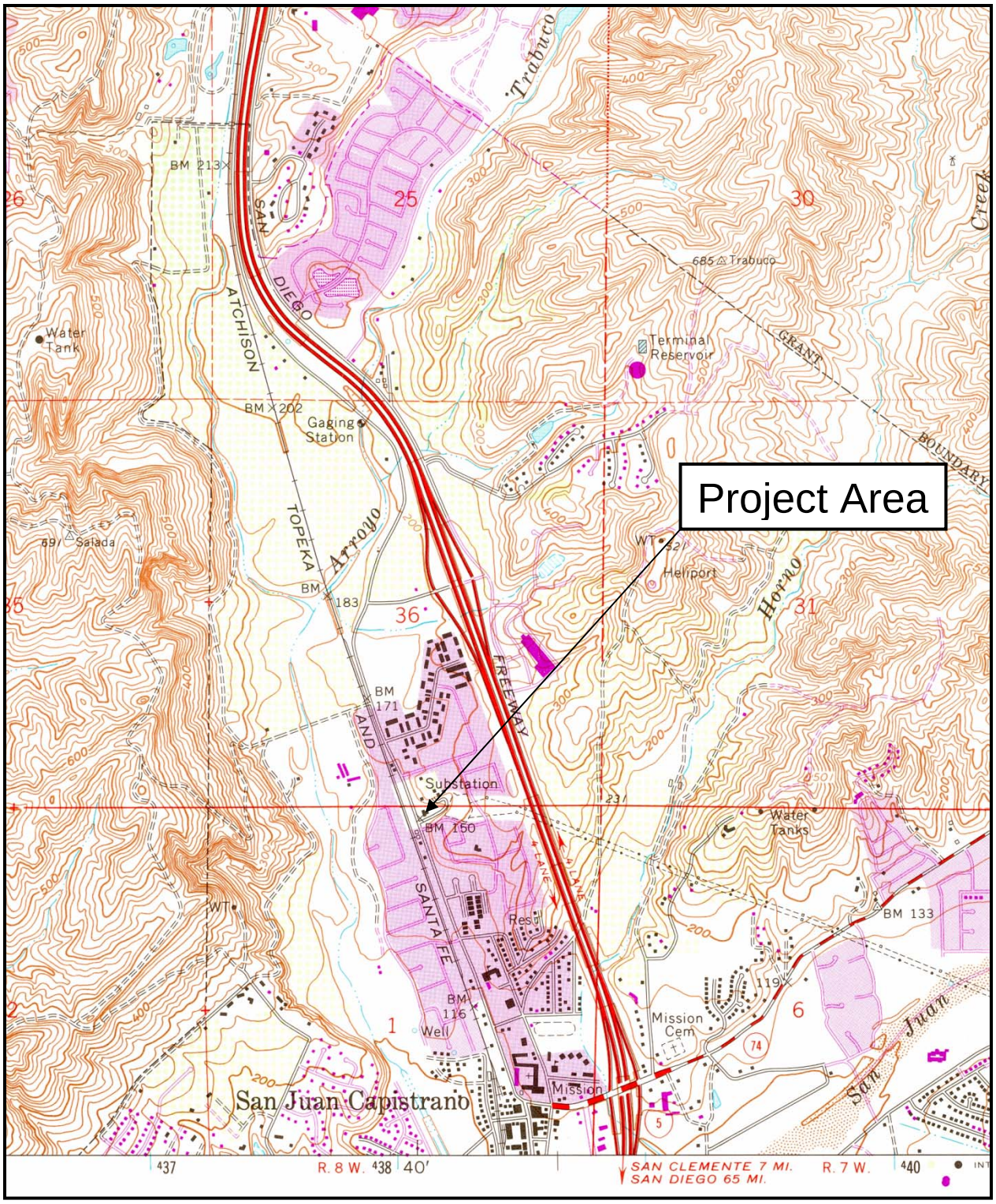

Figure 2. Specific Location of the Project Area (USGS San Juan Capistrano Quadrangle, rev. 1981).

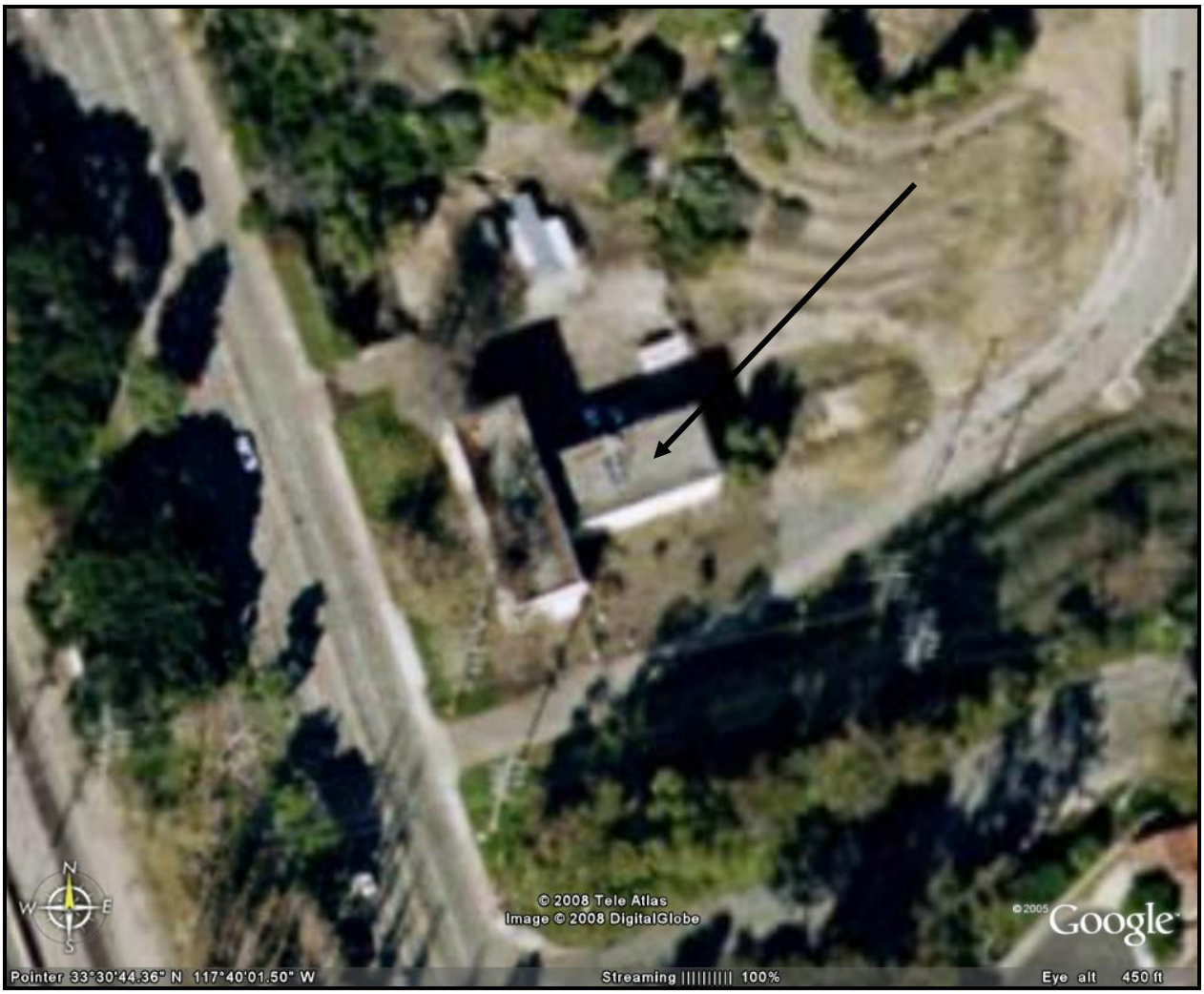

Figure 3. Current Aerial Photograph Illustrating the "T" Shaped Southern California Edison/San Diego Gas & Electric Co. Building at 31050 Camino Capistrano.

HISTORIC BACKGROUND

The history of the City of San Juan Capistrano begins in 1776 with the founding of the Mission san Juan Capistrano (October 30, 1775) by Father Fermin Lasuen. The Mission was founded in a location near a relatively large and long-present population of Native Americans (later known as Juanenos) – the village site of Pituidem (CA-ORA-855) is located to the north of the SDG&E property. The earliest non-Mission related buildings in San Juan Capistrano date to the 1790s and cluster near the Mission complex.

During the Spanish Period (1776-1820), the Mission San Juan Capistrano continued to operate and the populations of Spanish, Native Americans, and others continued to grow, requiring the construction of additional homes and increases agricultural and ranching activities.

The Mexican Period (1821-1847) is associated with the secularization of the Missions in Alta California and the expansion of the land grant program (initiated by the Spanish). In 1841, the Mexican government declared San Juan Capistrano to be a “pueblo” rather than a “parish,” thereby negating the authority of the Church over the area. By 1845, the Mission property (including the actual Mission) was “sold” to John Forster, the brother-in-law of the Mexican Governor. Forster eventually accumulated almost 250,000 acres of land in three counties.

The area was altered drastically during the initial years under the United States (post-1847) and the population growth resulted in poor and scattered residential development, increased crime and violence, and a need to increase services to provide for the people. With the coming of the railroad in 1887, the population continued to grow and San Juan Capistrano settled into becoming a major stop along El Camino Real (now a part of Camino Capistrano). Most development was identified to the south of the Mission.

The 1902 USGS Corona Quadrangle illustrates San Juan Capistrano as a small community along the railroad alignment and only one structure is depicted north of the Mission and east of the El Camino Real alignment (Highway 101). The alignment for Ortega Highway is also illustrated.

As late as 1929, the current project area was identified as being outside the boundaries of San Juan Capistrano (proper) and not included in the historic Sanborn Fire Insurance Map boundaries.

The 1942 -43 Sanitago Peak Quadrangle also illustrated the community of San Juan Capistrano. Here, Highway 101 is still identified as following Camino Capistrano and Ortega Highway is identified as Route 74. The Mission complex is identified at the intersection of Highway 101 and Route 74 and a considerable amount of development is depicted north of the Mission. Four structures are illustrated in the vicinity of the San Diego Gas & Electric facility. These structures have been tentatively associated with the main building (addressed in this report) and the cottages (no longer present). As late as 1981, the substation, as illustrated on the USGS San Juan Capistrano Quad-rangle, illustrated a minimum of six structures within the complex. Today, only one structure and the foundations of others remain.

Dyke (1956) summarizes the history of the San Diego Gas & Electric Company as follows:

> In March of the year 1881, a small group of San Diego citizens decided to organize a company to supply gas service to the city, and they made arrangements to begin construction of an oil gas manufacturing plant on Ninth Street between M and N (Imperial and Commercial). The formal business of organizing the company was completed later, when five members of the group met on April 18. These men – Mr. R.M. Powers, O.S. Witherby, Bryant Howard, James Gordon, and E.W. Morse – adopted and signed the articles of incorporation that officially launched the newly formed San Diego Gas Company on its way.
>
> Thus began, 75 years ago, on April 18, 1881, the business organization from which the present San Diego Gas & Electric Company evolved.
>
> Readers of the San Diego Union on April 7, 1881, learned that the first shipment of machinery and equipment purchased for installation at the gas plant had arrived the day before aboard the steamship *Orizaba*, and that construction of the new works was begun immediately. Thereafter, the newspaper made periodic reports of construction progress at the plant and the laying of gas mains. There was much public interest in the new gas works, because, as *The Union* reported, “In time past such a thing has been talked of, but has never succeeded.”
>
> The new plant made oil gas from crude petroleum. It was the best type of installation then obtainable, but it later proved to be an expensive failure, because of oil and tar being carried into the mains. Therefore, the oil gas plant was replaced in April 1883 by a coal gas plant. During 1886, as a result of the land boom and increasing population in San Diego, the company’s business increased rapidly, and in December of that year, the directors decided to enlarge the gas plant.
>
> Meanwhile, the first electric plant in San Diego had been installed by the Jenney Electric Company and had begun operating in March 1886. The plant, located at Second and I Streets, consisted of arc light machines that supplied current to a number of arc lamps mounted on steel towers, some of which were 125 feet in height. These were the city’s first electric street lights. However, the Jenney company’s venture was financially unsuccessful, and late in the year 1886 its electric plan and properties were purchased by E.S.

Babcock, who headed a business organization that had begun, in 1885, the developments of Coronado.

After purchasing the Jenney properties, Babcock and others formed the Coronado Gas and Electric Company in January 1887 to operate the Jenney plant and continue street arc lighting service to San Diego. The company also announced that it had purchased and planned to install water gas manufacturing equipment and a new arc light generator, for the purpose of supplying electricity and gas to Coronado. Actually, the company preferred to form a consolidation with San Diego Gas Company rather than to operate its own plants, and in March 1887 approached the Gas Company with that proposal.

The proposal was accepted, and in May 1887, San Diego Gas & Electric Light Company was organized and incorporated as the successor to San Diego Gas Company, whose original owners retained control in the new organization. The arc light generator that had been purchased by the Coronado company was installed at the old Jenney plant, and the water gas equipment was installed at the gas plant, where the work of enlarging the original coal gas manufacturing facilities was already under way. In accordance with an agreement with the owners of the former Coronado company, San Diego Gas & Electric Light Company furnished electric power from the old Jenney plant to Coronado during the construction in 1887 of Hotel del Coronado and its power house. The current was furnished by cable laid on the bottom of San Diego Bay. After the hotel and power house were completed in January of 1888, the line under the bay was abandoned. (Permanent electric service to Coronado from San Diego was not begun until 1922. Gas service to Coronado, however, was started in 1909).

At this point the company's prospects appeared bright, to put it conservatively. The land boom, which had started in the summer of 1885 when the city's population was about 4000, has reached dizzy proportions during the closing mother of 1887, and as the new year of 1888 dawned, the population was estimated to be upwards to 30,000.

In anticipation of increased business, the company built a new electric generating plant (later to be named Station A) at Tenth and Imperial on property adjacent to the gas plant. The old Jenney arc light machines were moved to the plant when it was completed in 1888, and an incandescent light generator was added later.

Meanwhile, the city's first incandescent lighting service was already being furnished from a small plant at India and Kalmia Streets, which had been installed in 1888 to furnish power to the city's first electric railway, built in that year by the Electric Rapid Transit Street Car Company. The railway failed on account of insulation difficulties, and the power plant was then used for incandescent lighting. However, the amount of business was slight, so the owner arranged to move the lighting machinery to Station A to be operated by the seam engines available there. Eventually, in 1892, the machinery was purchased outright by San Diego Gas and Electric Light Company.

In 1889, the land boom collapsed, and the city's population was counted in the next year as 16,159. Thereafter until after the turn of the century, the capacity of the company's gas plant, 400,000 cubic feet per day, was far in excess of the community's requirements. And not until 1905 were any major additions made to the electric generating plant.

San Diego's population began to increase again in 1902, and by 1904 the company found itself in the position of not being able to serve the growing needs of the community. The expansion and improvement of its physical properties, especially the electric system, required the expenditure of funds which the company was unable to obtain, so in April 1905 the company was sold to H.M. Byllesby & Company, of Chicago, and incorporated as San Diego Consolidated Gas & Electric Company.

A program of new construction in both the electric and gas departments was immediately undertaken. The electric generating capacity of Station A was increased rapidly, beginning in October 1906 with the installation of the company's first turbine-electric generator, a 500-kilowatt machine. In 1910 the building itself was enlarged, and by January 1, 1915, all available space was occupied by new generating equipment. The construction **in 1918 of a high-voltage transmission line from San Diego to San Juan Capistrano**, tying in there with the Southern California Edison Company system, made possible the further extension of electric services in the country and started the development of the company's present extensive network of transmission and distribution lines and substations.

In the gas department, coal gas generation was abandoned in 1906 upon the installation of a new oil gas generator, and this time the oil gas process proved a commercial success. Additional generators were added periodic-

ally. The peak daily send-out rose from 332,000 cubic feet in 1906 to 6,640,000 cubic feet in 1921.

In January of 1921 the company purchased the power plant of San Diego Electric Railway Company at Kettner and E Street. At this plant, which was named Station B, new turbine generating units were installed as required by load increases, and the size of the plant was doubled in 1928 by the addition of a new building. In 1938, when the capacity of Station B was sufficient to carry the entire electric load, Station A was shut down, after having been in operation for 50 years.

Another major change was made in gas service in 1932, when manufactured gas was replaced by natural gas upon the construction of a pipeline connecting San Diego with natural gas field in the Los Angeles area. To supplement the natural gas supply when necessary, the oil gas plant was maintained until 1950.

In 1940 the name of the company was changed to San Diego Gas & Electric Company. And in 1941, pursuant to provisions of the Public Utility Holding Company Act, control of the company by Standard Gas & Electric Company, which has succeeded H.M Byllesby & Company, was relinquished through disposal of stock. Since then, San Diego Gas & Electric Company has been an independent organization, locally managed and investor-owned.

Under local management since 1941, the company's growth, paralleling that of the communities it serves, has been tremendous by comparison with any previous period in its 75-year history. Since 1941, the electric generating capacity has been increased from 112,000 kilowatts to 460,000 kilowatts. This had been accomplished by the installation of four generating units comprising Silver Gate Station, and the completion in 1954 of Unit No. 1 of the new Encina Station, where Unit No. 2 has since been under construction and will be placed in operation this year. In 1941 the company's natural gas supply line capacity was 24,000,000 cubic feet per day; today it is 137,000,000 cubic feet per day, including the capacity of a second transmission pipeline, built in 1949, which taps at Moreno a line bringing gas to California from Texas.

At the close of 1941, the company was serving 112,615 electric customers and 89,318 gas customers, and its total investment in plant, property, and equipment was less than $50,000,000. By the end of 1955, the company was

serving 250,138 electric customers and 196,597 gas customers, and its investment in plant, property, and equipment exceeded $187,000,000.

As noted above, the expansion of the system from San Diego to San Juan Capistrano was completed in 1918. This corresponds with the references of linking with the Southern California Edison system and the architectural drawings depicting the complex as it was defined in 1917-1918 (Figure 4; next page).

Although the substation has been generally referred to as the San Diego Gas & Electric facility, all architectural drawings and diagrams are identified as being Southern California Edison facility. The name “San Diego Gas & Electric Company” was not officially accepted until ca. 1940, suggesting the building was originally labeled as “Southern California Edison” (as illustrated in the architectural drawings) and renamed later (Figure 5).

Figure 5. West Elevation of the San Diego Gas & Electric Building on Camino Capistrano Illustrating the Company’s Name.

The original facility (SCE/SDG&E) consisted of the main substation building (“T” shaped). A garage, three cottages for on-site employees, driveways, a septic tank, a small orchard, two switch frame pads, one transformer pad, two arresters, a water tank, and cooling tower (along with infrastructure improvements, etc. plumbing and wiring).

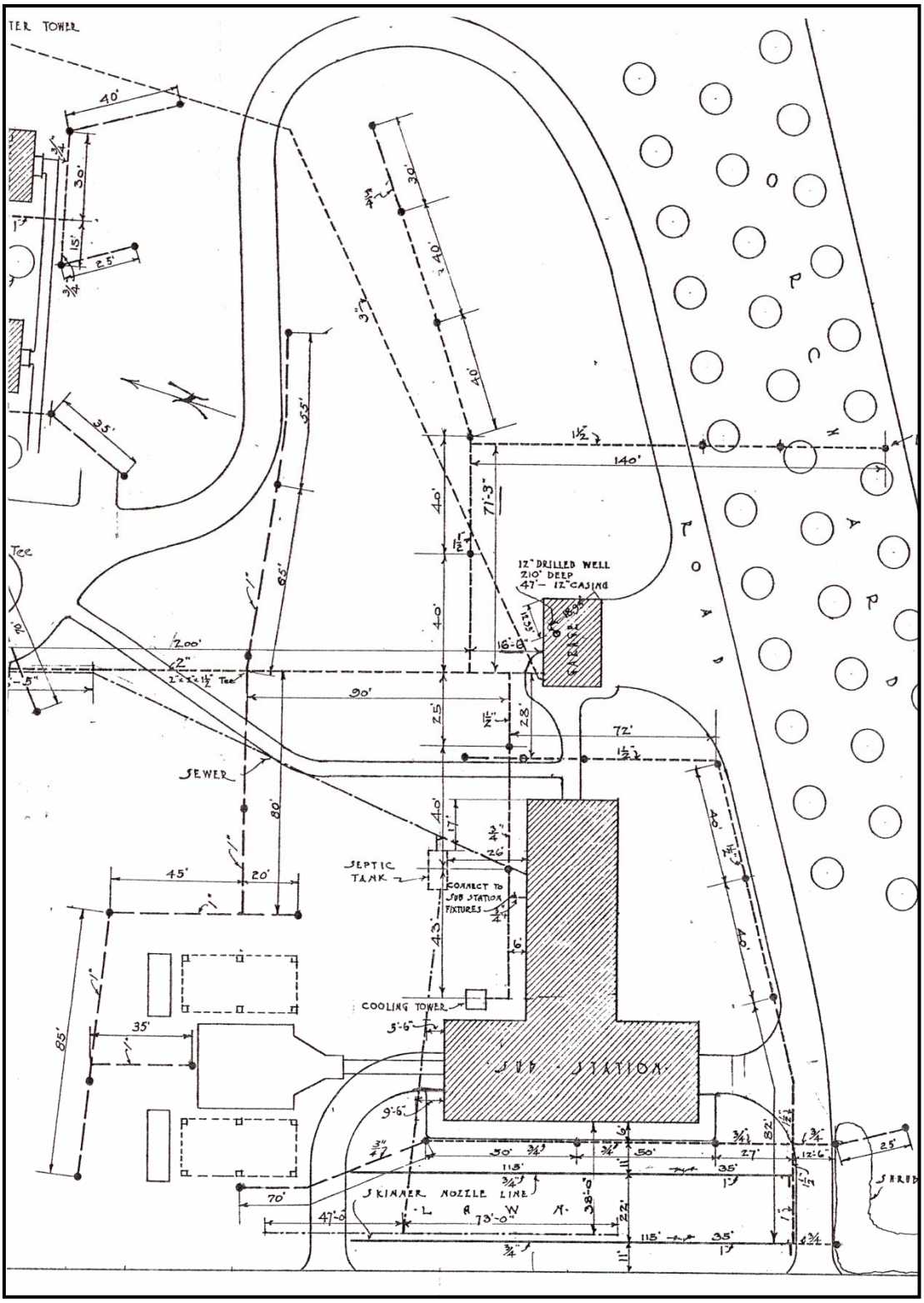

Figure 4. Diagram of the SCE Substation on Camino Capistrano as Defined In 1917-1918 (including cottages, garage, and other features).

As the sole remaining building of the original complex, this report addresses the main sub-station building, only. A comparison of the original drawings and the existing building is presented later in this report. In general, however, the main substation building is a tall building measuring 87 feet 4 inches along the west elevation (facing Camino Capistrano) and 96 feet deep. The western portion of the building (the machine room) is a single story structure with a high ceiling and measuring 87 feet 4 inches by 32 feet 4 inches. This area was accessed by doors on the north and south elevations. A rail system connected the substation machine room with the transformer pad (to the north).

The northern ell (offices, rest rooms, etc.) is a two story structure measuring 32 feet 8 inches by 73 feet 6 inches. This portion of the building was accessed from the west, through the machine room, and also from doors on the north and east elevations.

Both portions of this building exhibit flat roofs with decorative overhangs, recessed windows, and a concrete/stucco surface. There is little ornamentation. Surface scarring indicates the removal of exterior light fixtures, some gutters, and changes in the original design.

METHODOLOGY

To complete the research required to address the significance of the San Diego Gas & Electric Co. building, McKenna et al. completed the following tasks:

1. Archaeological Records Check: McKenna et al. completed a cursory records check through the California State University, Fullerton, South Central Coastal Information Center. This repository houses reports and documents pertaining to identified cultural resources in Los Angeles, Ventura, and Orange counties, including federal, state, and local listings for historic properties. This research was completed by Kristina Lindgren of the McKenna et al. staff on March 12, 2008 (Appendix B).

2. Historic Research: McKenna et al. completed the historic research by reviewing records available through the City of San Juan Capistrano; the Orange County Assessor/Recorder data; a review of historic Sanborn Fire Insurance Maps; review of other historic maps covering the area; and historic background data provided through the San Diego Historical Society and the City of San Juan Capistrano history files (on-line data). McKenna et al. also conducted research into the development history of the San Diego

Gas & Electric Company and its relationship to Southern California Edison. Architectural drawings from Southern California Edison were made available through TRC Solutions (Appendix C).

3. Field Survey: Jeanette A. McKenna, Principal Investigator for McKenna et al., met with Shelby Manney of TRC Solutions on-site (March 12, 2008) and com-pleted the field survey to obtain architectural descriptions and photographs (Appendix D). The property was accessed with permission from San Diego Gas & Electric Co. and in the company of a Company representative. The current lease of the property was also on-site, providing us access to the interior of the building.

4. Analysis and Report Preparation: This report has been prepared in a format requested by the Office of Historic Preservation (OHP) and in a manner con-sistent with the data requirements of the Archaeological Resources Management Report (ARMR) guidelines, as adapted for architectural evaluations. To complete the records, the appropriated California Department of Parks and Recreation forms (DPRs 523) were also completed (Appendix E).

PREVIOUS RESEARCH

McKenna et al. completed a standard archaeological records search through the California State University, Fullerton, South Central Coastal Information Center. This research was completed as an in-house search by Kristina Lindgren of the McKenna et al. staff. Research confirmed the property associated with the San Diego Gas & Electric Co. building was not previously surveyed for cultural resources and, although the buildings has been identified by the City as a Building of Distinction (BOD), no formal record was filed with the SCCIC.

Cultural resources identified near the project area were all identified as prehistoric archaeological sites (CA-ORA-885; CA-ORA-963, CA-ORA-1037/1038, and CA-ORA-1040. The Mission San Juan Capistrano is located south of the project area (approximately .75 miles), but evidence of Mission activities may be identified anywhere in San Juan Capistrano. Despite the lack of investigation in the immediate vicinity of the project area, the area is considered to be sensitive for both prehistoric and historic cultural resources.

CRITERIA FOR EVALUATION

The criteria for the evaluation of the San Diego Gas & Electric Co. building in San Juan Capistrano were derived from the federal (NHPA, Section 106), state (CEQA), and local (San Juan Capistrano) guidelines.

National Historic Preservation Act (NHPA): Section 106

The approach to the current research was all designed to address the potential eligibility of each site or concentration of sites for nomination to the National Register of Historic Places. This level of investigation, generally known as a Section 106 evaluation, is based on the criteria presented in the federal Code of Federal Regulations 36 CRF 60.4, as follows:

> The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites., buildings, structure, and objects that possess integrity of locations, design, setting, materials, wor-kmanship, feeling, and association, and:
>
> (a) That are associated with events that have made a significant contribution to the broad patterns of our history; or
>
> (b) That are associated with the lives of persons significant in our past; or
>
> (c) That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
>
> (d) That have yielded, or may be likely to yield, information important in prehistory or history.

Of great importance is the integrity of a resource. Eligibility for nomination to the National Register of Historic Places is also based on the resource potential to "convey its significance" (U.S. Department of the Interior National Register Bulletin 15:44). **A significant resource MUST have integrity**. The seven aspects of integrity are:

1. Location: Location is the place where the [prehistoric] property was constructed or the place where the [prehistoric] event occurred.

2. Design: Design is the combination of elements that create the form, plan, space, structure, and style of a property.

3. Setting: Setting is the physical environment of the [prehistoric] property.

4. Materials: Materials are the physical elements that were combined or deposited during a particular period of time and I particular pattern or configuration to form a [prehistoric] property.

5. Workmanship: Workmanship is the physical evidence of the crafts of a particular culture or people during any given period in history or prehistory.

6. Feeling: Feeling is the property's expression of the aesthetic or historic sense of a particular period of time.

7. Association: Association is the direct link between an important [prehistoric] event or person and a [prehistoric] property.

In assessing the integrity of a property (resource), the ultimate "... question of integrity is answered by whether or not the property retains the identity for which it is significant" (U.S. Department of the Interior National Register Bulletin 15:45).

California Environmental Quality Act (CEQA), as amended

The current reading of the California Environmental Quality Act (as it pertains to cultural resources) was amended in 1999 and reads as follows:

15064.5. Determining the Significance of Impacts to Archeological and Historical Resources [new section]

For purposes of this section, the term "historical resources" shall include the following:

(1) A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical

Resources (Pub. Res. Code §5024.1, Title 14 CCR, Section 4850 et seq.).

(2) A resource included in a local register of historical resources, as defined in section 5020.1(k) of the Public Resources Code or identified as significant in an historical resource survey meeting the requirements section 5024.1(g) of the Public Resources Code, shall be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.

(3) Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be an historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing on the California Register of Historical Resources (Pub. Res. Code§5024.1, Title 14 CCR, Section 4852) including the following:

(A) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;

(B) Is associated with the lives of persons important in our past;

(C) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or

(D) Has yielded, or may be likely to yield, information important in prehistory or history.

Authority: Sections 21083 and 21087, Public Resources Code.

Reference: Sections 21083.2, 21084, and 21084.1, Public Resources Code; Citizens for Responsible Development in West Hollywood v. City of West Hollywood (1995) 39 Cal.App.4th 490.

21084.1 Historical Resources Guidelines

A project that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment. For purposes of this section, an historic resource is a resource listed in, or determined to be eligible for listing in, the California Register of Historical Resources. Historical resources included in the local register of historical resources, as defined in subdivision (k) of Section 5020.1, or deemed significant pursuant to criteria set forth in subdivision (g) of 5024.1, are presumed to be historically or culturally significant for purposes of this section, unless the preponderance of the evidence demonstrates that the resource is not historically or culturally significant. The fact that a resources is not listed in, or determined to be eligible for listing in, the California Register of Historical Resources, not included in a local register of historical resources, or not deemed significant pursuant to criteria set forth in subdivision (g) of Section 5024.1 shall not preclude a lead agency from determining whether the resource may be an historical resource for purposes of this section.

City of San Juan Capistrano Council Policies
(Policy 601 and 602)

Summarizing the City of San Juan Capistrano Council Policy 601, the general intent of the policy is to "… protect and preserve its unique heritage and valuable built historic, archaeological and paleontological resources within the community …". To this end, the Historic Resources Element of the General Plan was developed, a survey of the City was conducted, and procedures were developed to evaluate, report, and assess the relative significance of cultural resources within the City. In addition, procedures to mitigate adverse impacts were established.

Council Policy 602 addresses alteration, modification, or demolition of significant structures within the City. Council Policy 602 defines an historic resource as a district, site, building, structure or object significant in American history, architecture, engineering, archaeology or culture at the nations, state or local level. In general, these local guidelines rely on the criteria presented for federal and/or state recognition, but also include a lesser level of recognition as a locally identified Building of Distinction. The City of San Juan Capistrano maintains a location "Inventory of Historic and Cultural Landmarks" and "Buildings of Distinction" that include those resources also listed on the various national and state listings.

RESULTS OF THE INVESTIGATIONS

The field survey of the San Diego Gas & Electric Company Building at 31050 Camino Capistrano, San Juan Capistrano, confirmed that the main substation structure is the last standing structure associated with the original complex. The garage and cottages identified on the original 1917-1918 drawings no longer exist. Further, drawings dating the 1960s confirm the enlargement of the complex (to the east and up-slope) and the establishment of fencing and vegetation (landscaping) that was not part of the original complex. The pads identified as the transformer pad and switch frame pads are present, but under equipment and supplies owned by the current lease holder. The lease holder is also storing materials in the main substation building.

West Elevation

The west elevation of the San Diego Gas & Electric Co. substation building faces Camino Capistrano (Figure 6).

Figure 6. West Elevation of the San Diego Gas & Electric Co. Building (facing South/Southeast).

As illustrated, this elevation exhibits five window frames with transom-style rectangles above (although there were no transom windows in the original design). These window frames are identical, recessed, and symmetrically placed on the structure (Figure 7; next page). At the time of the survey, the exterior window frames were covered with plywood. However, an examination of the interior of the building confirmed that the windows are still in place and described as casement windows opened and closed by a wheel and pulley system that operated all five windows with one mechanism (Figure 8).

Figure 8. View of Windows on West Elevation from Interior of Structure, Illustrating the Wheel and Pulley System for Opening the Casement Windows (facing Norhwest).

With the exception of the name change on the west elevation, the building appears to reflect the original design as presented by Southern California Edison in 1917-1978.

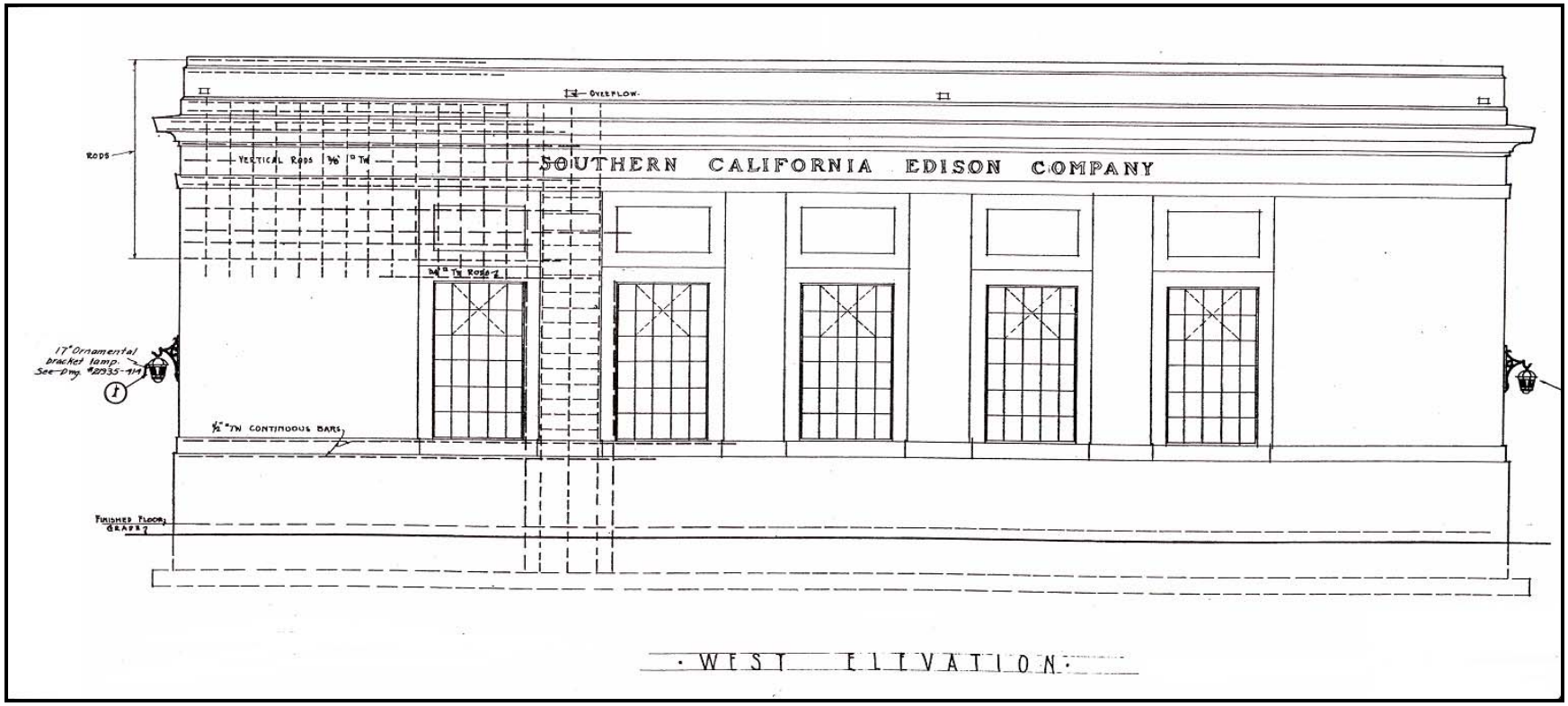

Figure 7. Architectural Diagram of West Elevation of Southern California Edison (San Diego Gas & Electric) Building, ca. 1917.

East Elevation

The east elevation of the San Diego Gas & Electric Co. building is presented in two parts: 1) the east wall of the main machine room (referred to as Sectional C-C) and, 2) the east elevation of the ell – at the eastern end of the building.

The eastern elevation of the main machine room was designed to accommodate two windows (matching those of the west elevation) and a double-wide doorway providing access to the office wing (ell) to the east (Figure 9; next page). As illustrated on the 1917 architectural drawings, the doorway was designed to consist of two matching metal doors with a fenertra (window) above. Illustrated in Figure 10, the windows above the doorway area6 over 6 fixed panes atop double hung solid doors (currently blocked).

Figure 10. Interior Door on East Elevation.

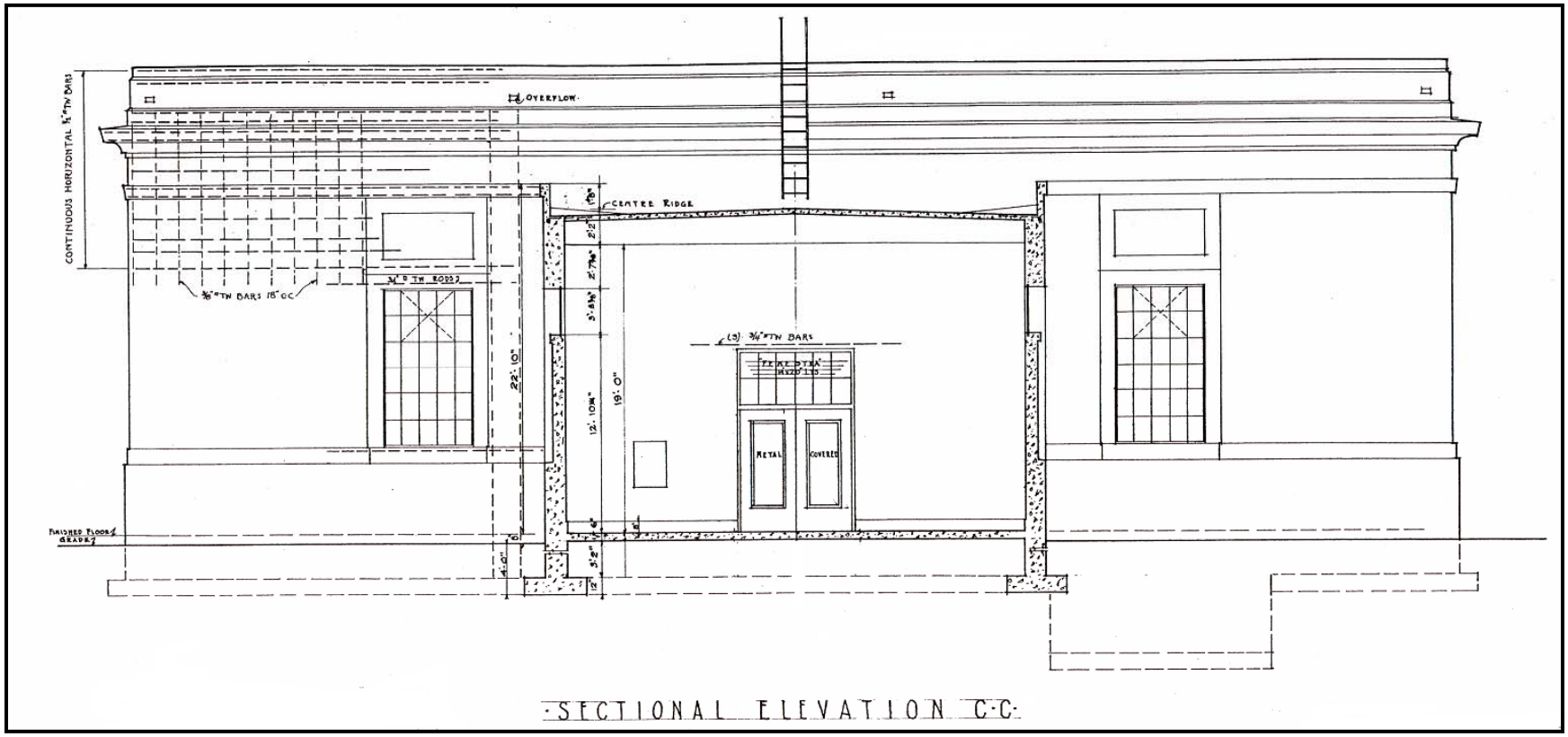

Figure 9. Architectural Diagram of East Elevation of Southern California Edison (San Diego Gas & Electric) Building Machine Room, ca. 1917.

The symmetrical windows are still in place – on either side of the interior doorway. Further, the original concrete floor with a portion of the rails is still intact, although the bay for the generator has been permanently covered.

To the far-eastern elevation, there is a short wall of 32 feet and 8 inches in width and 26 feet and 10 inches in height. The single doorway is a single wide, solid panel door with 3 over 3 fenestration that complements the other entries (Figure 11; next page). As designed, this doorway was centrally located on the elevation and rested on the finished floor level. The recent field survey identified this door, as defined, but also noted the presence of a small stoop outside the doorway (Figure 12). Further, the windows above

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Figure 12. Doorway on Eastern Elevation of Building.

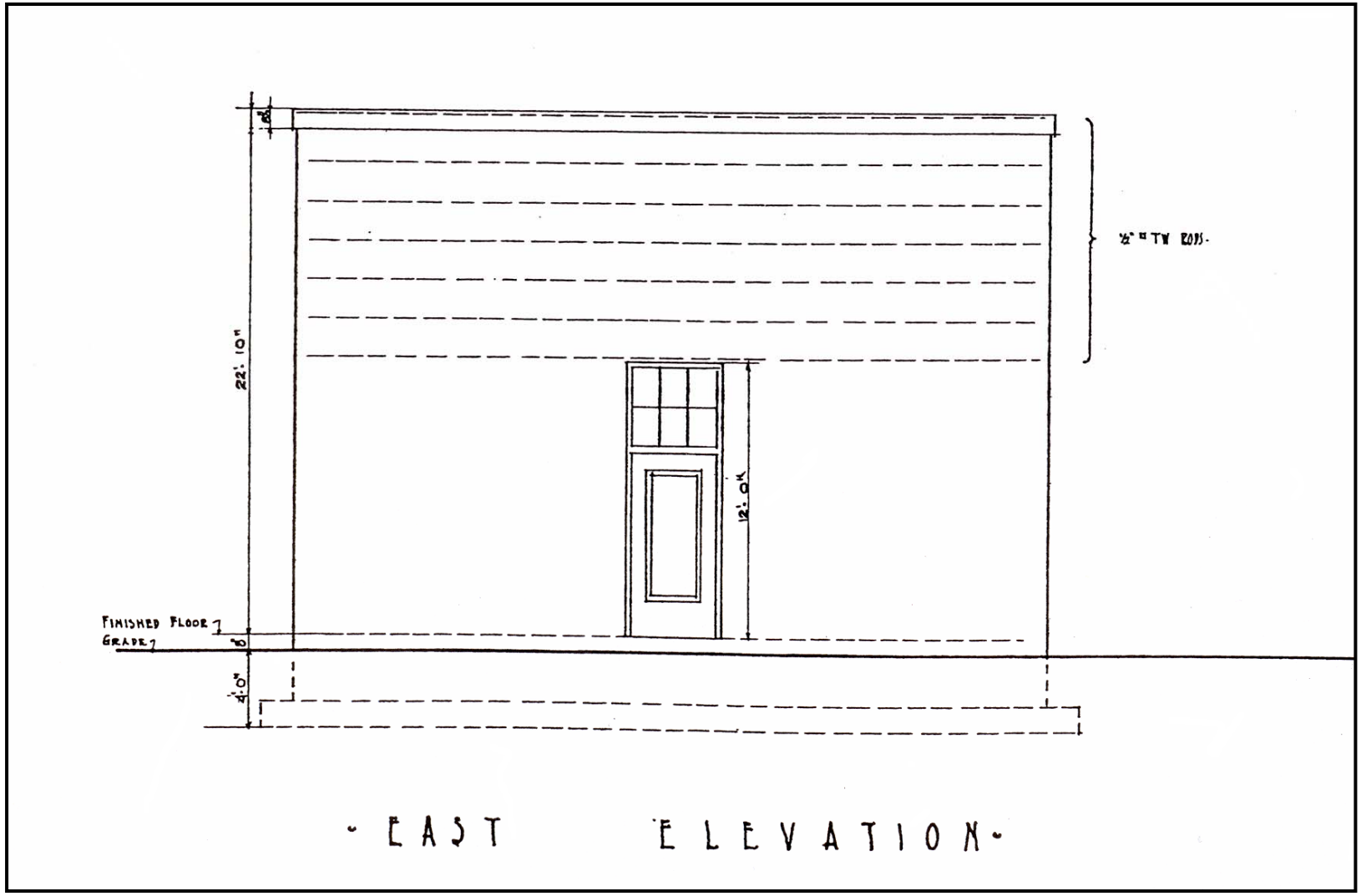

Figure 11. Architectural Diagram of East Elevation of Southern California Edison (San Diego Gas & Electric) Building, ca. 1917.

The windows have been covered (removed) and the stoop with railings was not illustrated on the architectural renderings.

A view of this area from the interior of the buildings (Figure 13) confirmed the removal of the windows. It also showed that this door does not rest on the floor level, as originally drawn, but is raised three steps above the floor, thereby requiring the addition of the stoop on the exterior of the building.

Figure 13. East Elevation Doorway from Interior of Building.

As the only feature on the east elevation, these alterations appear to be significant alterations that impact the integrity of the original building design.

North Elevation

The north elevation of the substation (Figure 14; next page) includes the northern side of the machine room and the northern side of the office complex (ell). As originally designed, this elevation included double hung doors providing access to the machine room and these doors were framed with windows (5 over 5 and 2 over 2 above the doors; and 6 over 2 on either side of the doors). Solid panel are also illustrated between the doors and windows above the doors (Figure 15; next page). Exterior light fixtures were also placed on either side of the entry doors.

Illustrated in Figure 16, the current condition of the main entry is considerably different than originally planned. The original doors are gone, apparently, are the windows

Figure 16. Overview of North Elevation, Main Entry, March, 2008.

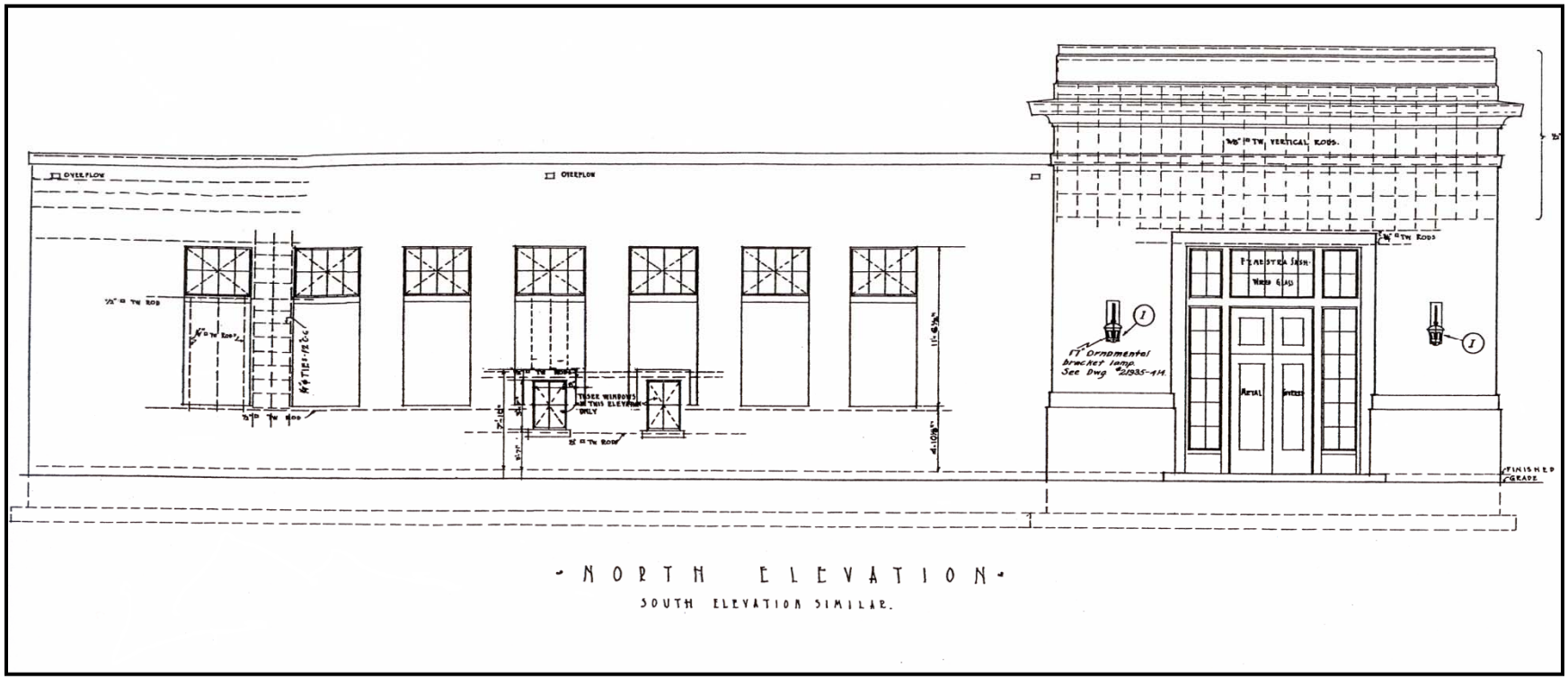

Figure 14. Architectural Diagram of North Elevation of Southern California Edison (San Diego Gas & Electric) Building, ca. 1917.

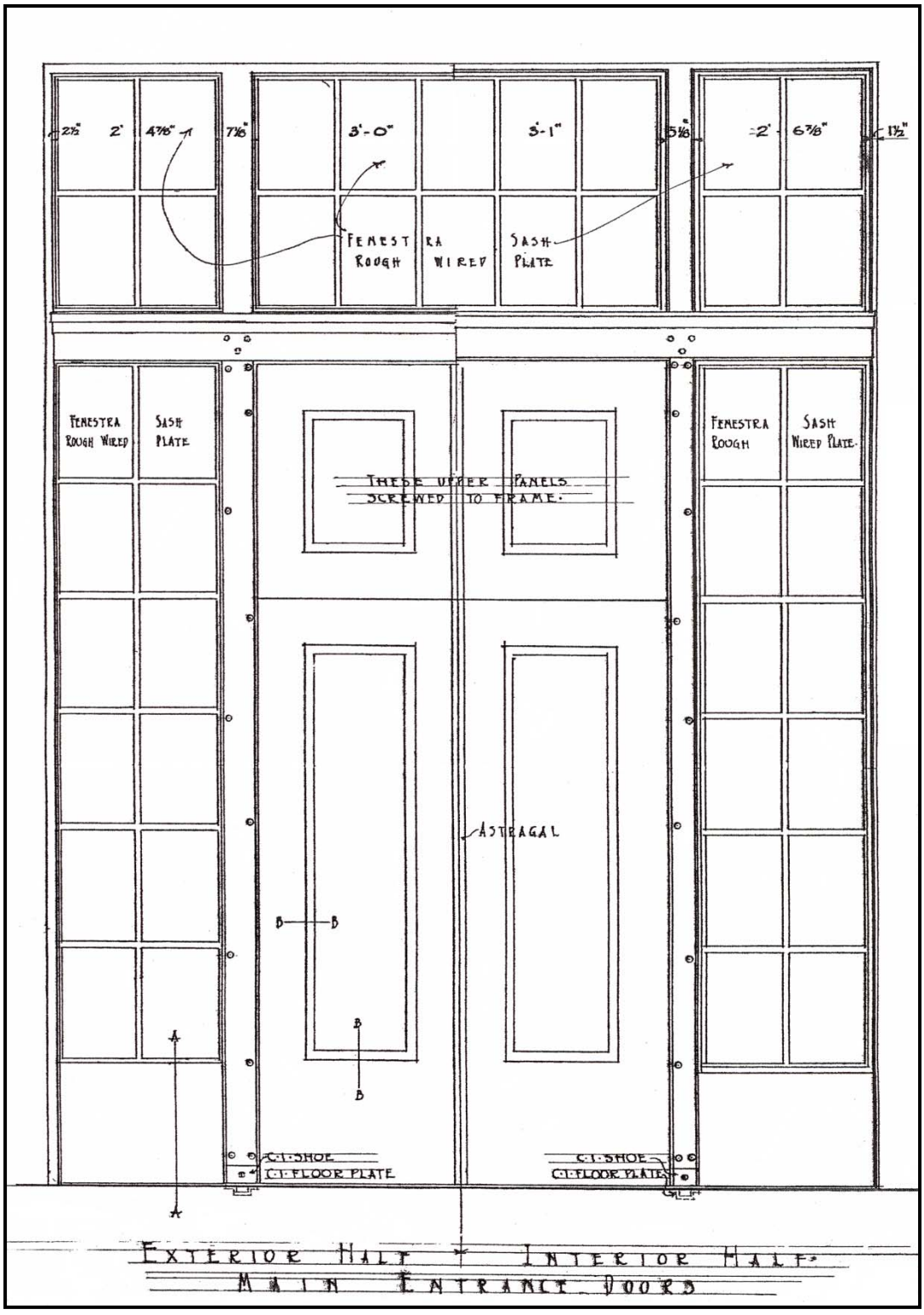

Figure 15. Architectural Diagram of Main Entrance to Southern California Edison (San Diego Gas & Electric) Building, ca. 1917.

However, an interior view of this elevation showed that the windows above the door are, in fact, still present, but covered by plywood. Despite the presence of these windows, the main entry on the north elevation of the machine room has been significantly altered, impacting the integrity of this portion of the building.

To the east, the remainder of the north elevation was originally designed to include seven window frames similar in size and design as those noted on the west elevation. On the north elevation, however, the lower portion of the frame was designed to be solid and the upper portion included the window panes (4 over 4 each). Additionally, two lower windows, in the areas of the reset rooms, were planned in the central portion of the structure (see Figure 14).

At the time of the recent field survey, the north elevation of this building was obviously altered. First, the windows have been replaced by plywood (the window frames may still be beneath the wood). Second, the sixth frame to the east has been converted to a doorway with a ramp entrance. This door was covered with a “make-shift” gable roof supported by 4 by 4 posts and the ramp entry was enlarged to provide better access (possibly to remove a step and render the entrance wheelchair accessible). Third, the seventh window frame to the east has been altered to provide a small loading dock (where trucks can back in and unload). These changes have altered the symmetry of the elevation and the planned access to the building.

South Elevation

The south elevation of the building roughly mirrored the north elevation in size and massing. The main entry on the south elevation was constructed exactly like that on the northern elevation – two hung doors surrounded by windows (Figure 17). At the time of the survey, this entry was altered to consist of two wide plywood doors and plywood covering the windows above the door. These alterations significantly altered the entry and impacted the integrity of the elevation.

He remainder of the south elevation, as noted on the Southern California Edison plans, is “similar” but without the rest room windows (see Figure 14). There are seven window frames with solid bases (concrete panels) topped with 4 over 4 window frames (now covered with plywood). This portion of the building appears to be intact and as designed, although there is evidence that the rain gutters and light fixtures have been removed (Figure 18). Overall, the impacts to this elevation area essentially limited to the main entry.

Figure 17. View of Main Entry on South Elevation of Machine Room.

Figure 18. Overview of South Elevation of San Diego Gas & Electric Building.

Summary

In summarizing the findings, McKenna et al. determined that the footprint of the Southern California Edison/San Diego Gas & Electric Co. building is exactly as planned in 1917-1918 and as built and first occupied in 1918. Between 1918 and ca. 1940, this building was known as the Southern California Edison substation. Subsequent to 1940 and with the various changes in ownership, the San Diego Gas & Electric Company was formally established (by name) and the name on the substation was changed to reflect this newly acquired name.

The building is essentially intact, although altered. The west elevation, facing Camino Capistrano, is intact and reflects the original construction design, despite the covering of the windows with plywood. The name on the building reads "San Diego Gas & Electric Company." It is not known whether or not Southern California Edison had its name on the building, but usually did. Therefore, McKenna et al. has concluded that the name on the building was changed around 1940-41.

The east elevation (away from Camino Capistrano and not visible from the street) was designed to be flat and unadorned. A single door was centered on the elevation. Although originally identified as a "floor level" doorway, the current door is three steps above the floor (both on the interior and exterior), indicating an alteration that resulted in the addition of steps within the structure and outside the structure – with handrails. Although not a significant alteration, it has impacted the integrity of the design on the east elevation.

The main entries on both the north and south elevations have been significantly altered. The original doors have been replaced by plywood doors of different sizes and design. The windows have been removed or covered with plywood. In addition, the light fixtures have been removed and there is evidence that the rain gutters have also been removed.

Although the remainder of the south elevation appears intact, the north elevation has been subjected to additional alterations. One of the six window bays has been converted to an entry with a ramped entrance. Another has been redesigned as a loading bay. These changes have altered to appearance of the elevation and significantly changed the symmetry originally designed for the structure.

Overall, the main substation structure is intact and structurally sound. It has been a feature along Camino Capistrano since ca. 1917-1918 and identified by the City of San Juan Capistrano as a Building of Distinction.

Despite this recognition, recent studies have identified significant alterations to the building's exterior (and additional alterations have been done to the interior). Overall, there has been a noticeable level of loss of integrity with respect to the original design, although these impacts are not readily identifiable from the street frontage. While the structure may still be identified as a Building of Distinction to the City (a local level of recognition), it fails to meet the minimum requirements for recognition as an historical resources with respect to the federal and/or state criteria for significance.

As noted above, the San Diego Gas & Electric Co. building is intact, but altered. It has lost a level of integrity as a result. With respect to the criteria for significance, McKenna et al. has concluded the following:

(a) Is the building associated with events that have made a significant contribution to the broad patterns of our history?

In general, the development of gas and electric services throughout the county can be considered significant, as the utilities helped to move the general population into the "modern age" and provided added services that permitted various areas to support larger populations. This particular building is associated with the regional connection between San Diego and Los Angeles and the merging of utilities provided by Southern California Edison and the San Diego Gas & Electric Company (and its predecessors). As such, McKenna et al. concludes that the building can be associated with events contributing to the broad patterns in our history.

(b) It the buildings associated with the lives of persons significant in our past?

No data was found to associate this particular structure with any significant person. While associated with two successful companies providing an important service, the resource does not meet the minimum requirements of Criterion (b), as intended.

(c) That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

The existing San Diego Gas & Electric Company/Southern California Edison building is a reinforced concrete building with flat walls, a flat roof, casement (industrial) windows, and little to no ornamentation. Its design cannot be attributed to any master architect nor master builder. It is a standard utility building for its period of construction (1910s) and the lettering identifying the building was added much later (ca. 1940). There has been some significant alterations to the building and, therefore, McKenna et al. has concluded that this building does not meet the minimum criteria for significance under Criterion (c).

(d) May be likely to yield, information important in prehistory or history?

The existing structure is located within an area considered highly sensitive for both prehistoric and historic (Mission Period) archaeological resources. This report addresses the standing structure, only. With respect to the standing structure, McKenna et al. has concluded that the resource does not meet the minimum requirements under Criterion (d). Nonetheless, the general area is sensitive and, therefore, some level of monitoring should be considered if the existing facility is to be demolished.

Summarizing the previous discussion, McKenna et al. has determined that the existing structure is significant with respect to Criterion (a), only. However, this level of significance will only stand if the resource maintain integrity, as defined. To assess the integrity, the seven aspects of integrity were also considered.

1. Location: The structure is in its original location and reflects its original footprint (exterior dimensions).

2. Design: The structure is essentially as designed. However, some significant alterations have been documented. The main entry doors have been replaced; some windows have been removed; at least one door has been added and another altered; a loading dock was added on the north elevations; the gutters and exterior light fixtures have been removed; and the surrounding facility has essentially been demolished - thereby impacting the setting (see below).

3. Setting: The setting was originally designed as a complex with the main substation, a garage, cottages, a water tower, cooling tower, pads, drive-

ways, and landscaping. In the 1960s, the landscaping want altered to include fencing, walls, additional vegetation, and the removal of some structures. Today, only the substation and pads remain, essentially eliminating the originally designed setting. Further, removal of machinery with the substation has rendered the building unusable for its original purpose.

4. Materials: The materials used in the construction of the substation remain (e.g. concrete, metal frames casement, concrete floor, etc.). However, the rain gutters, light fixtures, generators, etc. have been removed. The only remaining piece of machinery in the building is the Maris Bros. Hoist. This hoist was manufactured in Pennsylvania and was designed to lift heavy loads and maneuver then throughout the machine room of the substation. This system is intact, serviceable, and worth salvaging. Likewise, the casement windows are worth saving.

5. Workmanship: There is no evidence that the design or craftsmanship used in the construction of this building is associated with any particular culture or people.

6. Feeling: There is no evidence to suggest the existing building expresses any aesthetic or historic sense of a particular period. The tasks once completed at this location were conducted indoors and not visible from the street front. Further, all materials associated with the activities have been removed from the site (and surrounding areas). Except for the name on the building, there is no physical evidence of the original use of the building.

7. Association: Although an association with the development of the utility services within and throughout Southern California has been referenced above, this association is not manifested in the physical remains on the property. The association can be made, but not through the presence of the existing substation building.

Summarizing the discussion on integrity, only location, materials, and association can be applied to this property. The application of materials is somewhat vague, as some significant elements of the original design no longer exist. In being able to apply two aspects and a weak third aspect, McKenna et al. has concluded that the existing structure lacks integrity and, therefore, does not meet the minimum requirements for significance under the federal or state guidelines.

CONCLUSIONS AND RECOMMENDATIONS

McKenna et al. has concluded that the existing San Deigo Gas a& Electric Co. substation is not an historic resource as defined by CEQA and fails to meet the minimum requirements for significance under Section 106 of the federal regulations. The building is, however, a locally significant Building of Distinction with attributed that render it eligible for local recognition. As such, the City of San Juan Capistrano states:

> It is a policy of the City Council that prior to the issuance of any permit for the alteration, modification or demolition of a building or auxiliary structure, the applications shall be reviewed by the Cultural Heritage Commission and the structure shall be evaluated for possible significance. If significance is determined, the applicant may be required to comply with one or more of the following Council policies which pertain to the alteration, modification or demolition of significant structures.
>
> 1. Prior to the issuance of any permit for the demolition of a building listed on the Inventory of Historical and Cultural Landmarks or the Buildings of Distinction, the applicant may be required to advertise for a period of time up to three months that the structure is available for relocation. If at the end of the advertisement period there is no person willing to relocate the building, the applicant will be allowed to demolish the structure in accordance with other applicable policies.
>
> 2. Prior to the issuance of any permit for the alteration, modification or demolition of a significant structure, the owner may be required to provide a photographic record of such structure. Photographs shall include but not be limited to: (1) each elevation; (2) close-ups of any unusual or unique architectural features; and (3) views of the structure from a distance. In addition, measured drawings pr plans may be required to be submitted.
>
> 3. Prior to the issuance of any permit for the demolition of a significance structure, the applicant may be required to allow the removal of any significant or unusual windows, doors or hardware for a period of time up to two weeks at the expense of the person/organization removing the article. This option shall be made available only to local historic-interest groups or organizations.

Based on the findings presented above, McKenna et al. makes the following recommendations:

1. The building should be advertised for relocation, if possible. It is a structurally sound structure that can be moved as a whole or in part. As an industrial structure, it can be placed within a property currently used as an industrial or commercial property;

2. Prior to any proposed demolition, updated architectural drawings should be prepared to represent the current conditions;

3. Prior to any additional alterations, the exterior and interior of the building should be fully photo-documented;

4. Elements within the building, if it is not relocated, should be salvaged (e.g. the casement windows, original doors, and the hoist system);

5. During the relocation or demolition process, the tasks should be monitored by a qualified archaeologist to insure adequate identification and recordation of any prehistoric or historic resources that may be identified within the general area of the existing building.

6. Recommendations regarding this structure should be considered in conjunction with the findings of the archaeological investigations (completed under separate cover).

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San Diego Gas & Electric Company
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1962 Capistrano Plumbing. On file, McKenna et al., Whittier, California.

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1964 Capistrano Substation – Door Details. On file, McKenna et al., Whittier, California.

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1964 Capistrano Substation – Substation Roof Plan. On file, McKenna et al., Whittier, California.

1964 Capistrano Substation – Floor Plan. On file, McKenna et al., Whittier, California.

n.d. Capistrano Substation – Planting Plan. On file, McKenna et al., Whittier, California.

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1918 Capistrano Substation – Plan of Roof Showing Location of 4" by 6" Redwood for Line Track. On file, McKenna et al., Whittier, California.

1918 Capistrano – Layout of Irrigation System. On file, McKenna et al., Whittier, California. On file, McKenna et al., Whittier, California.

1919 Capistrano Substation – Water Pipe and Electric Conduit Crossing under State Highway. On file, McKenna et al., Whittier, California.

1924 Capistrano Substation – Plot Plan for Property Data Book. On file, McKenna et al., Whittier, California. On file, McKenna et al., Whittier, California.

United States Geological Survey (U.S.G.S.)

1902 Corona Quadrangle. Reprinted 1946. On file, California State University, Fullerton, South Central Coastal Information Center, Fullerton, and the University of California, Riverside, Historic Map Library, Riverside, California.

1902 Capistrano Quadrangle. On file, California State University, Fullerton, South Central Coastal Information Center, Fullerton, and the University of California, Riverside, Historic Map Library, Riverside, California.

1941 San Juan Capistrano Quadrangle. On file, California State University, Fullerton, South Central Coastal Information Center, Fullerton, and the University of California, Riverside, Historic Map Library, Riverside, California.

1942 Santiago Peak Quadrangle. On file, California State University, Fullerton, South Central Coastal Information Center, Fullerton, and the University of California, Riverside, Historic Map Library, Riverside, California.

1943 Santiago Peak Quadrangle. On file, California State University, Fullerton, South Central Coastal Information Center, Fullerton, and the University of California, Riverside, Historic Map Library, Riverside, California.

APPENDIX A:

Professional Qualifications

JEANETTE A. McKENNA

Owner and Principal Investigator
McKenna et al., Whittier CA

Ms. McKenna specializes in the field of Cultural Resource Management: prehistoric archaeology, historic archaeology, and history. She is a past member of the Board of Directors for the Society of Professional Archaeologists (SOPA 1993-97) and was certified by the Society to conduct both prehistoric and historic archaeological studies. Ms. McKenna was on the Board of Directors for SOPA when the Society established the Registry of Professional Archaeologists (RPA) and has been a Registered Professional Archaeologist since 1998. Ms. McKenna has over 30 years of professional experience as an archaeologist/cultural resource manager and has participated on over 1300 projects. The majority of her work has been conducted as a Field Director, Project Manager, and/or Principal Investigator throughout California and the Greater Southwest.

TECHNICAL CAPABILITIES

- Vast experience in the greater Southwest, Great Basin, and Southern California regions. Familiar with the full range of cultural resource investigations and has completed projects within the public and private sectors, including environ-mental management firms, planning and engineering firms, and State and federal agencies.
- Active in the discipline of Cultural Resource Management since 1976; over 30 years of professional experience in Southern California, Arizona, and Nevada.
- Particular interest in the desert regions of California and Arizona, with specializations in the Proto-historic and Historic Contact Periods.
- Considerable experience in dealing with prehistoric cultural remains and working directly with Native American groups in archaeological training programs (through Arizona State University and the Southern California Indian Center, Garden Grove).

EDUCATION AND AFFILIATIONS

B.A., Anthropology, 1977, CSU Fullerton
M.A., Anthropology, 1982, CSU Fullerton
Lambda Alpha Lambda Honors Society
Post Graduate Studies, Arizona St. Univ., 1982-85
Post Graduate Studies, UC Riverside, 1991-92
Certification Program: CEQA, Land Use and Environmental Planning, UC Riverside, 1997-98
Society of Professional Archaeologists (SOPA)
Certification: Field/ Prehistoric Archaeology and Historical Archaeology (1984 to Present)
Registry of Professional Archaeologists (RPA)
Board of Directors, Society of Professional Archaeologists 1993-1997 (American Society of Conservation Archaeologists Representative)
BLM California Permit No. CA-02-30
BLM Arizona State Permit No. AZ-000107
Riverside County Registration No. 161
Arizona State Museum Antiquities Permit (renewable)
Curation Agreement, San Bernardino County Museum

SELECTED PROJECT EXPERIENCE

- Historic Architectural Studies for Renovation and Restoration of the Greek Theatre, Los Angeles CA
- Evaluation of Cultural Resources within the Burbank and West Hollywood Redevelopment Project Areas, Los Angeles County, CA
- Historic Property Survey for the City of Whittier, Los Angeles County, CA
- Archaeological Investigations and Resource Evaluations for the Proposed Cajon Pipeline, San Bernardino and Los Angeles Counties, CA
- Archaeological Class I Investigations for the Proposed Mojave Pipeline, San Bernardino County, CA
- Cultural Resources Investigations (Phases I, II, III, and Mitigation Monitoring) for the RIX/SARI Projects, Santa Ana Watershed Project Authority (SAWPA), San Bernardino and Riverside Counties, CA
- Phase I, II, and III Archaeological Investigations for the County Sanitation Districts of Los Angeles County, Puente Hills Landfill Solid Waste Management Facility Expansion Project, Whittier, CA
- Archaeological Mitigation Program, The Phoenix Indian School Track Site Project. Arizona State University Office of Cultural Resource Management and the Bureau of Indian Affairs, Phoenix, AZ
- Archaeological and Testing Program for the Hidden Valley Golf Course and Van Buren Golf Course Properties, Riverside County, CA
- Cultural Resources Overview Studies for the Annexation of Unincorporated County Lands to the City of Ontario, CA
- Historic Property Survey Reports: Warner Bros. Main Lot Ranch Lot Properties, Burbank, CA
- Historic Archaeological Investigations for L.A. County Sheriff's Facility, Lancaster, CA.

APPENDIX B:

Archaeological Records Check

McKenna et al.

History/Archaeology/Historic Architecture/Paleontology

Jeanette A. McKenna, MA
Registered Prof. Archaeologist
Owner and Principal Investigator

ARCHAEOLOGICAL RECORDS CHECK SUMMARY

McKenna et al. completed a standard archaeological records search through the California State University, Fullerton, South Central Coastal Information Center. This research was completed as an in-house search by Kristina Lindgren of the McKenna et al. staff. Research confirmed the property associated with the San Diego Gas & Electric Co. building was not previously surveyed for cultural resources and, although the buildings has been identified by the City as a Building of Distinction (BOD), no formal record was filed with the SCCIC.

Cultural resources identified near the project area were all identified as prehistoric archaeological sites (CA-ORA-885; CA-ORA-963, CA-ORA-1037/1038, and CA-ORA-1040. The Mission San Juan Capistrano is located south of the project area (approximately .75 miles), but evidence of Mission activities may be identified anywhere in San Juan Capistrano. Despite the lack of investigation in the immediate vicinity of the project area, the area is considered to be sensitive for both prehistoric and historic cultural resources.

6008 Friends Avenue, Whittier, California 90601-3724 email = jmckena@earthlink.Net
(562) 696-3852 OFFICE (562) 693-4059 FAX (562) 754-7712 CELL

PROPERTY-NUMBER	PRIMARY-#	STREET.ADDRESS.....	NAMES.....	CITY.NAME.....	OWN	YR-C	OHP-PROG..	PRG-REFERENCE-NUMBER	STAT-DAT	NRS	CRIT
							HIST.SURV.	2672-0018-0190	09/25/06	3D	A
							HIST.SURV.	2672-0003-0042	12/31/95	3D	A
167547		129 W MARIPOSA		SAN CLEMENTE	P	1928	HIST.SURV.	2672-0020-0132	09/25/06	3D	A
							HIST.SURV.	2672-0018-0191	09/25/06	3D	A
							HIST.SURV.	2672-0003-0043	12/31/95	3D	A
167548		210 W MARIPOSA		SAN CLEMENTE	P	1928	HIST.SURV.	2672-0020-0133	09/25/06	3D	A
							HIST.SURV.	2672-0018-0192	09/25/06	3D	A
							HIST.SURV.	2672-0003-0044	12/31/95	3D	A
167549		212 W MARIPOSA		SAN CLEMENTE	P	1927	HIST.SURV.	2672-0020-0134	09/25/06	3D	A
							HIST.SURV.	2672-0018-0193	09/25/06	3D	A
							HIST.SURV.	2672-0003-0045	12/31/95	3D	A
167550		222 W MARIPOSA		SAN CLEMENTE	P	1928	HIST.SURV.	2672-0020-0135	09/25/06	3D	A
							HIST.SURV.	2672-0018-0194	09/25/06	3D	A
							HIST.SURV.	2672-0003-0046	12/31/95	3D	A
167551		239 W MARIPOSA		SAN CLEMENTE	P	1928	HIST.SURV.	2672-0020-0136	09/25/06	3D	A
							HIST.SURV.	2672-0018-0195	09/25/06	3D	A
							HIST.SURV.	2672-0003-0047	12/31/95	3D	A
167738		123 W MARQUITA		SAN CLEMENTE	P	1931	HIST.SURV.	2672-0020-0137	09/25/06	3D	A
							HIST.SURV.	2672-0018-0196	09/25/06	3D	A
167552		154 W MARQUITA		SAN CLEMENTE	P	1949	HIST.SURV.	2672-0018-0197	09/25/06	5D	A
							HIST.SURV.	2672-0003-0048	12/31/95	3D	A
167553		161 W MARQUITA		SAN CLEMENTE	P	1947	HIST.SURV.	2672-0018-0198	09/25/06	5D	A
							HIST.SURV.	2672-0003-0049	12/31/95	3D	A
167554		201 W MARQUITA		SAN CLEMENTE	P	1927	HIST.SURV.	2672-0018-0199	09/25/06	5D	A
							HIST.SURV.	2672-0003-0050	12/31/95	3D	A
167555		204 W MARQUITA		SAN CLEMENTE	P	1928	HIST.SURV.	2672-0020-0138	09/25/06	3D	A
							HIST.SURV.	2672-0018-0200	09/25/06	3D	A
							HIST.SURV.	2672-0003-0051	12/31/95	3D	A
167587		222 W MARQUITA		SAN CLEMENTE	P	1948	HIST.SURV.	2672-0018-0201	09/25/06	5D	A
							HIST.SURV.	2672-0013-0000	12/31/95	6L	A
167574		230 W MARQUITA	SWIGART HOUSE	SAN CLEMENTE	P	1929	HIST.SURV.	2672-0020-0139	09/25/06	3D	AC
							HIST.SURV.	2672-0018-0202	09/25/06	3D	AC
							HIST.SURV.	2672-0003-0003	12/31/95	3B	A
167739		236 W MARQUITA		SAN CLEMENTE	P	1928	HIST.SURV.	2672-0020-0140	09/25/06	3D	AC
							HIST.SURV.	2672-0018-0203	09/25/06	3D	AC
167571		267 W MARQUITA		SAN CLEMENTE	P	1927	HIST.SURV.	2672-0020-0141	09/25/06	3D	AC
							HIST.SURV.	2672-0018-0204	09/25/06	3D	AC
							HIST.SURV.	2672-0003-0066	12/31/95	3B	A
167561		104 W PASEO DE CRISTOBAL		SAN CLEMENTE	P	1929	HIST.SURV.	2672-0020-0147	09/25/06	3D	A
							HIST.SURV.	2672-0018-0024	09/25/06	3D	A
							HIST.SURV.	2672-0003-0056	12/31/95	3D	A
167562		114 W PASEO DE CRISTOBAL		SAN CLEMENTE	P	1929	HIST.SURV.	2672-0020-0148	09/25/06	3D	A
							HIST.SURV.	2672-0018-0036	09/25/06	3D	A
							HIST.SURV.	2672-0003-0057	12/31/95	3D	A
148706			FISHERMAN'S RESTAURANT AND BAR	(VIC) SAN CLEMENT	M		HIST.RES.	DOE-30-03-0024-0000	11/14/03	6Y	
							PROJ.REVW.	FHWA030903C	11/14/03	6Y	
148705	30-176664		METROLINK / BURLINGTON NORTHERN SA	(VIC) SAN CLEMENT	P	1882	HIST.RES.	DOE-30-03-0023-0000	11/14/03	6Y	
							PROJ.REVW.	FHWA030903C	11/14/04	6Y	
144271			ATCHISON TOPEKA & SANTA FE SURFLIN	SAN JUAN CAPISTRA	U	1887	HIST.RES.	DOE-30-03-0015-0000	10/29/03	6Y	
							PROJ.REVW.	FHWA030815A	10/29/03	6Y	
065291	30-161806		GOODWIN-ROSENBAUM HOUSE	SAN JUAN CAPISTRA	U		HIST.RES.	DOE-30-87-0001-0000	08/12/87	2S2	C
							PROJ.REVW.	FHWA870720A	08/12/87	2S2	C
087652	30-162255		SAN JUAN CREEK BRIDGE, AT & SF RR	SAN JUAN CAPISTRA	P	1917	HIST.RES.	DOE-30-93-0002-0000	02/18/94	6Y	
							PROJ.REVW.	COE931220C	02/18/94	6Y	

PROPERTY-NUMBER	PRIMARY-#	STREET.ADDRESS.....	NAMES.....	CITY.NAME.....	OWN	YR-C	OHP-PROG..	PRG-REFERENCE-NUMBER	STAT-DAT	NRS	CRIT
039498	30-160129	32701 ALIPAZ ST	CONGDON, JOEL R., RESIDENCE	SAN JUAN CAPISTRA	P	1876	HIST.RES.	NPS-02000801-9999	07/22/02	1S	B
							NAT.REG.	30-0054	03/29/02	3S	B
							ST.FND.PRG	619.0-HP-88-30-007	12/19/88	6	
							HIST.SURV.	2675-0013-0000		7N	
133039		32701 ALIPAZ ST	STORAGE BARN	SAN JUAN CAPISTRA	M		HIST.RES.	NPS-02000801-0003	07/22/02	6X	
133037		32701 ALIPAZ ST	CONGDON, JOEL R., WATER TOWER	SAN JUAN CAPISTRA	M		HIST.RES.	NPS-02000801-0001	07/22/02	1D	B
133041		32701 ALIPAZ ST	FARM WORKER HOUSING / EQUIPMENT SH	SAN JUAN CAPISTRA	M		HIST.RES.	NPS-02000801-0005	07/22/02	6X	
133042		32701 ALIPAZ ST	FARM WORKER HOUSING / EQUIPMENT SH	SAN JUAN CAPISTRA	M		HIST.RES.	NPS-02000801-0006	07/22/02	6X	
133040		32701 ALIPAZ ST	FARM WORKER HOUSING / EQUIPMENT SH	SAN JUAN CAPISTRA	M		HIST.RES.	NPS-02000801-0004	07/22/02	6X	
133038		32701 ALIPAZ ST	FRUIT STAND	SAN JUAN CAPISTRA	M		HIST.RES.	NPS-02000801-0002	07/22/02	6X	
154951		32122 AVENIDA LOS AMIGOS		SAN JUAN CAPISTRA	U	1953	HIST.RES.	DOE-30-05-0004-9999	05/10/05	6Y	
							PROJ.REVW.	FHWA050418D	05/10/05	6Y	
154952		32152 AVENIDA LOS AMIGOS		SAN JUAN CAPISTRA	U	1953	HIST.RES.	DOE-30-05-0004-0001	05/10/05	6Y	
							PROJ.REVW.	FHWA050418D	05/10/05	6Y	
154953		32162 AVENIDA LOS AMIGOS		SAN JUAN CAPISTRA	U	1953	HIST.RES.	DOE-30-05-0004-0002	05/10/05	6Y	
							PROJ.REVW.	FHWA050418D	05/10/05	6Y	
154954		32172 AVENIDA LOS AMIGOS		SAN JUAN CAPISTRA	U	1954	HIST.RES.	DOE-30-05-0004-0003	05/10/05	6Y	
							PROJ.REVW.	FHWA050418D	05/10/05	6Y	
154955		32192 AVENIDA LOS AMIGOS		SAN JUAN CAPISTRA	U	1950	HIST.RES.	DOE-30-05-0004-0004	05/10/05	6Y	
							PROJ.REVW.	FHWA050418D	05/10/05	6Y	
154956		32212 AVENIDA LOS AMIGOS		SAN JUAN CAPISTRA	U	1950	HIST.RES.	DOE-30-05-0004-0005	05/10/05	6Y	
							PROJ.REVW.	FHWA050418D	05/10/05	6Y	
154957		32222 AVENIDA LOS AMIGOS		SAN JUAN CAPISTRA	U	1953	HIST.RES.	DOE-30-05-0004-0006	05/10/05	6Y	
							PROJ.REVW.	FHWA050418D	05/10/05	6Y	
154958		32232 AVENIDA LOS AMIGOS		SAN JUAN CAPISTRA	U	1950	HIST.RES.	DOE-30-05-0004-0007	05/10/05	6Y	
							PROJ.REVW.	FHWA050418D	05/10/05	6Y	
154959		32242 AVENIDA LOS AMIGOS		SAN JUAN CAPISTRA	U	1953	HIST.RES.	DOE-30-05-0004-0008	05/10/05	6Y	
							PROJ.REVW.	FHWA050418D	05/10/05	6Y	
154961		32252 AVENIDA LOS AMIGOS		SAN JUAN CAPISTRA	U	1950	HIST.RES.	DOE-30-05-0004-0010	05/10/05	6Y	
							PROJ.REVW.	FHWA050418D	05/10/05	6Y	
154960		32262 AVENIDA LOS AMIGOS		SAN JUAN CAPISTRA	U	1954	HIST.RES.	DOE-30-05-0004-0009	05/10/05	6Y	
							PROJ.REVW.	FHWA050418D	05/10/05	6Y	
154962		32282 AVENIDA LOS AMIGOS		SAN JUAN CAPISTRA	U	1953	HIST.RES.	DOE-30-05-0004-0011	05/10/05	6Y	
							PROJ.REVW.	FHWA050418D	05/10/05	6Y	
154963		32292 AVENIDA LOS AMIGOS		SAN JUAN CAPISTRA	U	1953	HIST.RES.	DOE-30-05-0004-0012	05/10/05	6Y	
							PROJ.REVW.	FHWA050418D	05/10/05	6Y	
154964		32302 AVENIDA LOS AMIGOS		SAN JUAN CAPISTRA	U	1953	HIST.RES.	DOE-30-05-0004-0013	05/10/05	6Y	
							PROJ.REVW.	FHWA050418D	05/10/05	6Y	
098189	30-162531	AVIENDA LOS CERRITOS	SAN JUAN CAPISTRANO MISSION CEMETE	SAN JUAN CAPISTRA		1868	PROJ.REVW.	FHWA950809D	11/13/95	6Y	
039456	30-160088	CAMINO CAPISTRANO	MISSION SAN JUAN CAPISTRANO	SAN JUAN CAPISTRA	P	1776	ST.FND.PRG	619.0-HP-88-30-009	12/19/88	6	
							HIST.RES.	NPS-71000170-0000	09/03/71	1S	ABCD
							HIST.SURV.	2675-0001-0000	09/03/71	1S	
							HIST.RES.	SHL-0200-0000	06/20/35	7L	
153130		29943 CAMINO CAPISTRANO	WILLIAMS, ROGER Y., HOUSE / SWANNE	SAN JUAN CAPISTRA	M	1916	HIST.RES.	NPS-06001237-0000	01/10/07	1S	C
							NAT.REG.	30-0077	10/27/06	1S	C
164753		29943 CAMINO CAPISTRANO	WATER TOWER / WILLIAMS, ROGER Y.,	SAN JUAN CAPISTRA	P	1923	HIST.RES.	NPS-06001237-0002	01/10/07	1D	C
164752		29943 CAMINO CAPISTRANO	GARAGE / WILLIAMS, ROGER Y., HOUSE	SAN JUAN CAPISTRA	P	1923	HIST.RES.	NPS-06001237-0001	01/10/07	1D	C
039496	30-160127	31781 CAMINO CAPISTRANO	DOMINGO YORBA ADOBE/CASA GARCIA AD	SAN JUAN CAPISTRA	P	1860	HIST.RES.	NPS-82002222-0000	02/04/82	1S	AC
076136	30-161915	31866 CAMINO CAPISTRANO	ESSLINGER BUILDING	SAN JUAN CAPISTRA	P	1938	HIST.RES.	NPS-88000557-0000	05/16/88	1S	C
039499	30-160130	31879 CAMINO CAPISTRANO	JUDGE RICHARD EGAN HOUSE	SAN JUAN CAPISTRA	P	1883	ST.FND.PRG	619.0-HP-88-30-008	12/19/88	3	
							HIST.SURV.	2675-0014-0000		3S	
167826		31562 EL CAMINO REAL	SAN JUAN ELEMENTARY SCHOOL	SAN JUAN CAPISTRA	M	1920	PROJ.REVW.	FHWA070723A	08/20/07	6Y	
							HIST.RES.	DOE-30-07-0001-0000	08/20/07	6Y	
039497	30-160128	31806 EL CAMINO REAL	CASA DE ESPERANZA/BLAS AGUILAR ADO	SAN JUAN CAPISTRA	M	1794	HIST.RES.	NPS-90001484-0000	10/01/90	1S	

PROPERTY-NUMBER	PRIMARY-#	STREET.ADDRESS.....	NAMES.....	CITY.NAME.....	OWN	YR-C	OHP-PROG..	PRG-REFERENCE-NUMBER	STAT-DAT	NRS	CRIT
							HIST.SURV.	2675-0012-0000	10/01/90	1S	
							NAT.REG.	30-0005	10/01/90	1S	
							ST.FND.PRG	619.0-HP-88-30-005	12/19/88	6	
098185	30-162530	31620 GANADO RD		SAN JUAN CAPISTRA			PROJ.REVW.	FHWA950809D	11/13/95	6Y	
039467	30-160098	LOS RIOS ST	RAILROAD UTILITY BUILDING	SAN JUAN CAPISTRA	P	1920	HIST.RES.	NPS-83001216-0006	04/04/83	1D	
039477	30-160108	LOS RIOS ST	RIOS ADOBE UTILITY STRUCTURE	SAN JUAN CAPISTRA	P	1900	HIST.RES.	NPS-83001216-0016	04/04/83	1D	
039492	30-160123	LOS RIOS ST	LOS RIOS STREET HISTORIC DISTRICT	SAN JUAN CAPISTRA	P	0000	HIST.RES.	NPS-83001216-9999	04/04/83	1S	AC
039489	30-160120	LOS RIOS ST	SANTE FE DEPOT	SAN JUAN CAPISTRA	P	1894	HIST.RES.	NPS-83001216-0028	04/04/83	1D	
039488	30-160119	LOS RIOS ST	OLD SHED	SAN JUAN CAPISTRA	P	1895	HIST.RES.	NPS-83001216-0027	04/04/83	1D	
039468	30-160099	31600 LOS RIOS ST	CLIFF BLANK HOUSE #1	SAN JUAN CAPISTRA	P	1908	HIST.RES.	NPS-83001216-0007	04/04/83	1D	
039469	30-160100	31631 LOS RIOS ST	CLIFF BLANK HOUSE #2	SAN JUAN CAPISTRA	P	1946	HIST.RES.	NPS-83001216-0008	04/04/83	1D	
039470	30-160101	31661 LOS RIOS ST	LABAT HOUSE	SAN JUAN CAPISTRA	P	1887	HIST.RES.	NPS-83001216-0009	04/04/83	1D	
039471	30-160102	31665 LOS RIOS ST	OLIVARES-MESA HOUSE	SAN JUAN CAPISTRA	P	1900	HIST.RES.	NPS-83001216-0010	04/04/83	1D	
039472	30-160103	31701 LOS RIOS ST	STANFIELD HOUSE	SAN JUAN CAPISTRA	P	1925	HIST.RES.	NPS-83001216-0011	04/04/83	1D	
039473	30-160104	31711 LOS RIOS ST	TRULIS HOUSE	SAN JUAN CAPISTRA	P	1910	HIST.RES.	NPS-83001216-0012	04/04/83	1D	
039466	30-160097	31712 LOS RIOS ST	CLARENCE LOBO HOUSE	SAN JUAN CAPISTRA	P	1910	HIST.RES.	NPS-83001216-0005	04/04/83	1D	
039465	30-160096	31720 LOS RIOS ST	FRANK VELASQUEZ HOUSE	SAN JUAN CAPISTRA	P	1922	HIST.RES.	NPS-83001216-0004	04/04/83	1D	
039464	30-160095	31730 LOS RIOS ST	YGNACIO SOTO HOUSE	SAN JUAN CAPISTRA	P	1921	HIST.RES.	NPS-83001216-0003	04/04/83	1D	
039474	30-160105	31731 LOS RIOS ST	RODMAN HOUSE	SAN JUAN CAPISTRA	P	1925	HIST.RES.	NPS-83001216-0013	04/04/83	1D	
039475	30-160106	31735 LOS RIOS ST	MONTANEZ ADOBE	SAN JUAN CAPISTRA	P	1894	HIST.RES.	NPS-83001216-0014	04/14/83	1D	C
							HIST.RES.	NPS-75000450-0000	04/21/75	1S	
039463	30-160094	31752 LOS RIOS ST	DELLA RAMOS HOUSE	SAN JUAN CAPISTRA	P	1918	HIST.RES.	NPS-83001216-0002	04/04/83	1D	
039480	30-160111	31781 LOS RIOS ST	RIOS ADOBE UTILITY STRUCTURE	SAN JUAN CAPISTRA	P	1920	HIST.RES.	NPS-83001216-0019	04/04/83	1D	
039479	30-160110	31791 LOS RIOS ST	OLIVARES ACCESSORY BUILDING	SAN JUAN CAPISTRA	P	1935	HIST.RES.	NPS-83001216-0018	04/04/83	1D	
039478	30-160109	31791 LOS RIOS ST	VICTOR OLIVARES HOUSE	SAN JUAN CAPISTRA	P	1900	HIST.RES.	NPS-83001216-0017	04/04/83	1D	
039476	30-160107	31793 LOS RIOS ST	RIOS ADOBE	SAN JUAN CAPISTRA	P	1794	HIST.RES.	NPS-83001216-0015	04/04/83	1D	
039490	30-160121	31831 LOS RIOS ST	PRYOR HOUSE	SAN JUAN CAPISTRA	P	1880	NAT.REG.	30-0040	08/21/98	7J	
							HIST.RES.	NPS-83001216-0029	04/04/83	1D	
039481	30-160112	31851 LOS RIOS ST	OYHARZABAL HOUSE	SAN JUAN CAPISTRA	P	1900	HIST.RES.	NPS-83001216-0020	04/04/83	1D	
039482	30-160113	31861 LOS RIOS ST	SILVAS ADOBE	SAN JUAN CAPISTRA	P	1794	HIST.RES.	NPS-83001216-0021	04/04/83	1D	
039483	30-160114	31881 LOS RIOS ST	ANTONIO BECERRA HOUSE	SAN JUAN CAPISTRA	P	1890	HIST.RES.	NPS-83001216-0002	04/04/83	1D	
039484	30-160115	31891 LOS RIOS ST	RENAL BROWN HOUSE	SAN JUAN CAPISTRA	P	1920	HIST.RES.	NPS-83001216-0023	04/04/83	1D	
039485	30-160116	31901 LOS RIOS ST	BELLE REYES HOUSE	SAN JUAN CAPISTRA	P	1890	HIST.RES.	NPS-83001216-0024	04/04/83	1D	
039486	30-160117	31911 LOS RIOS ST	OLIVARES HOUSE #1	SAN JUAN CAPISTRA	P	1890	HIST.RES.	NPS-83001216-0025	04/04/83	1D	
039487	30-160118	31921 LOS RIOS ST	OLIVARES HOUSE #2	SAN JUAN CAPISTRA	P	1890	HIST.RES.	NPS-83001216-0026	04/04/83	1D	
081416	30-161995	26604 MISSION ST		SAN JUAN CAPISTRA	U		PROJ.REVW.	HUD921102C	12/09/92		
							PROJ.REVW.	HUD921102C	12/09/92	6Y	
123361		ORTEGA HWY	GREYSTONE VILLA	SAN JUAN CAPISTRA	F	1915	HIST.RES.	NPS-02000151-9999	11/09/99	1S	ABC
							NAT.REG.	30-0046	11/09/99	3S	ABC
130916		ORTEGA HWY	STONE DEER #2	SAN JUAN CAPISTRA	P		HIST.RES.	NPS-02000151-0003	03/15/02	1D	ABC
							NAT.REG.	30-0046	03/15/02	3D	ABC
130915		ORTEGA HWY	STONE DEER #1	SAN JUAN CAPISTRA	P		HIST.RES.	NPS-02000151-0002	03/15/02	1D	ABC
							NAT.REG.	30-0046	03/15/02	3D	ABC
130914		ORTEGA HWY	GREYSTONE VILLA QUONSET HUT GARAGE	SAN JUAN CAPISTRA	P		HIST.RES.	NPS-02000151-0001	03/15/02	1D	ABC
							NAT.REG.	30-0046	03/15/02	3D	ABC
039495	30-160126	27182 ORTEGA HWY	FRANK A. FORSTER HOUSE	SAN JUAN CAPISTRA	P	1909	HIST.RES.	NPS-86002405-0000	09/11/86	1S	
039459	30-160090	27832 ORTEGA HWY	PARRA, MIGUEL, ADOBE	SAN JUAN CAPISTRA	M	1841	HIST.RES.	NPS-79000515-0000	08/21/79	1S	
							FED.FND.PR	629.0-79-HPF-30-01	01/01/79	7L	
							HIST.RES.	NPS-78000731-0000	09/11/78	1S	
039458	30-160089	27832 ORTEGA HWY	HARRISON HOUSE	SAN JUAN CAPISTRA	M	1905	HIST.RES.	NPS-79000515-0000	08/21/79	1S	C
							FED.FND.PR	629.0-79-HPF-30-03	01/01/79	7L	
081414	30-161993	31342 RAMOS ST		SAN JUAN CAPISTRA	U	1922	PROJ.REVW.	HUD921102A	12/09/92	6Y	
081415	30-161994	31362 RAMOS ST		SAN JUAN CAPISTRA	U	1922	PROJ.REVW.	HUD921102B	12/09/92	6Y	
039491	30-160122	RIVER ST	RIVER ST	SAN JUAN CAPISTRA	U		HIST.RES.	NPS-83001216-0030	04/04/83	1D	
090903	30-162292	35565 SIEVERS CANYON RD	SIEVERS ADOBE	SAN JUAN CAPISTRA	F	1827	HIST.RES.	SPHI-ORA-019	11/16/84	7L	

PROPERTY-NUMBER	PRIMARY-#	STREET.ADDRESS.....	NAMES.....	CITY.NAME.....	OWN	YR-C	OHP-PROG..	PRG-REFERENCE-NUMBER	STAT-DAT	NRS	CRIT
167836		SPRING ST	SPRING STREET	SAN JUAN CAPISTRA	M	1875	PROJ.REVW.	FHWA070723A	08/20/07	6Y	
							HIST.RES.	DOE-30-07-0002-0000	08/20/07	6Y	
039462	30-160093	26720 VERDUGO RD	COMBS HOUSE	SAN JUAN CAPISTRA	P	1870	HIST.RES.	NPS-83001216-0001	04/04/83	1D	
039461	30-160092	SR 74	MACHADO BRIDGE, BRIDGE #55-62	(VIC) SAN JUAN CA	S	1933	HIST.SURV.	2675-0005-0000		7R	
039460	30-160091	SR 74	BRIDGE #55-60	(VIC) SAN JUAN CA	S	1933	HIST.SURV.	2675-0004-0000		7R	
039494	30-160125	SR 74	SERRA BRIDGE, BRIDGE #55-64	(VIC) SAN JUAN CA	S	1929	HIST.SURV.	2675-0007-0000		7N	
039493	30-160124	SR 74	DE ANZA BRIDGE, BRIDGE #55-63	(VIC) SAN JUAN CA	S	1933	HIST.SURV.	2675-0006-0000		7N	
147078		SR 74	ORTEGA HIGHWAY SEGMENT	(VIC) SAN JUAN CA	S	1932	HIST.RES.	DOE-30-04-0002-0000	02/19/04	6Y	
							PROJ.REVW.	FHWA040112A	02/19/04	6Y	
118559			BUILDING #6230 / CAPEHART HOUSING	SANTA ANA	F	1973	HIST.RES.	DOE-30-98-1280-0000	09/15/98	6Y	
							PROJ.REVW.	USMC980828A	09/15/98	6Y	
118086			BUILDING #5307 / WHERRY VILLAGE /	SANTA ANA	F	1954	HIST.RES.	DOE-30-98-0825-0000	09/15/98	6Y	
							PROJ.REVW.	USMC980828A	09/15/98	6Y	
118087			BUILDING #5309 / WHERRY VILLAGE /	SANTA ANA	F	1954	HIST.RES.	DOE-30-98-0826-0000	09/15/98	6Y	
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118088			BUILDING #5310 / WHERRY VILLAGE /	SANTA ANA	F	1954	HIST.RES.	DOE-30-98-0827-0000	09/15/98	6Y	
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118090			BUILDING #5312 / WHERRY VILLAGE /	SANTA ANA	F	1954	HIST.RES.	DOE-30-98-0828-0000	09/15/98	6Y	
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118091			BUILDING #5315 / WHERRY VILLAGE /	SANTA ANA	F	1954	HIST.RES.	DOE-30-98-0829-0000	09/15/98	6Y	
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118092			BUILDING #5316 / WHERRY VILLAGE /	SANTA ANA	F	1954	HIST.RES.	DOE-30-98-0830-0000	09/15/98	6Y	
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118093			BUILDING #5317 / WHERRY VILLAGE /	SANTA ANA	F	1954	HIST.RES.	DOE-30-98-0831-0000	09/15/98	6Y	
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118094			BUILDING #5318 / WHERRY VILLAGE /	SANTA ANA	F	1954	HIST.RES.	DOE-30-98-0832-0000	09/15/98	6Y	
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118095			BUILDING #5319 / WHERRY VILLAGE /	SANTA ANA	F	1954	HIST.RES.	DOE-30-98-0833-0000	09/15/98	6Y	
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118096			BUILDING #5321 / WHERRY VILLAGE /	SANTA ANA	F	1954	HIST.RES.	DOE-30-98-0834-0000	09/15/98	6Y	
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118097			BUILDING #5322 / WHERRY VILLAGE /	SANTA ANA	F	1954	HIST.RES.	DOE-30-98-0835-0000	09/15/98	6Y	
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118098			BUILDING #5324 / WHERRY VILLAGE /	SANTA ANA	F	1954	HIST.RES.	DOE-30-98-0836-0000	09/15/98	6Y	
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118099			BUILDING #5325 / WHERRY VILLAGE /	SANTA ANA	F	1954	HIST.RES.	DOE-30-98-0837-0000	09/15/98	6Y	
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118100			BUILDING #5326 / WHERRY VILLAGE /	SANTA ANA	F	1954	HIST.RES.	DOE-30-98-0838-0000	09/15/98	6Y	
							PROJ.REVW.	USMC980828A	09/15/98	6Y	
118101			BUILDING #5327 / WHERRY VILLAGE /	SANTA ANA	F	1954	HIST.RES.	DOE-30-98-0839-0000	09/15/98	6Y	
							PROJ.REVW.	USMC980828A	09/15/98	6Y	
118102			BUILDING #5328 / WHERRY VILLAGE /	SANTA ANA	F	1954	HIST.RES.	DOE-30-98-0840-0000	09/15/98	6Y	
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118103			BUILDING #5329 / WHERRY VILLAGE /	SANTA ANA	F	1954	HIST.RES.	DOE-30-98-0841-0000	09/15/98	6Y	
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118104			BUILDING #5330 / WHERRY VILLAGE /	SANTA ANA	F	1954	HIST.RES.	DOE-30-98-0842-0000	09/15/98	6Y	
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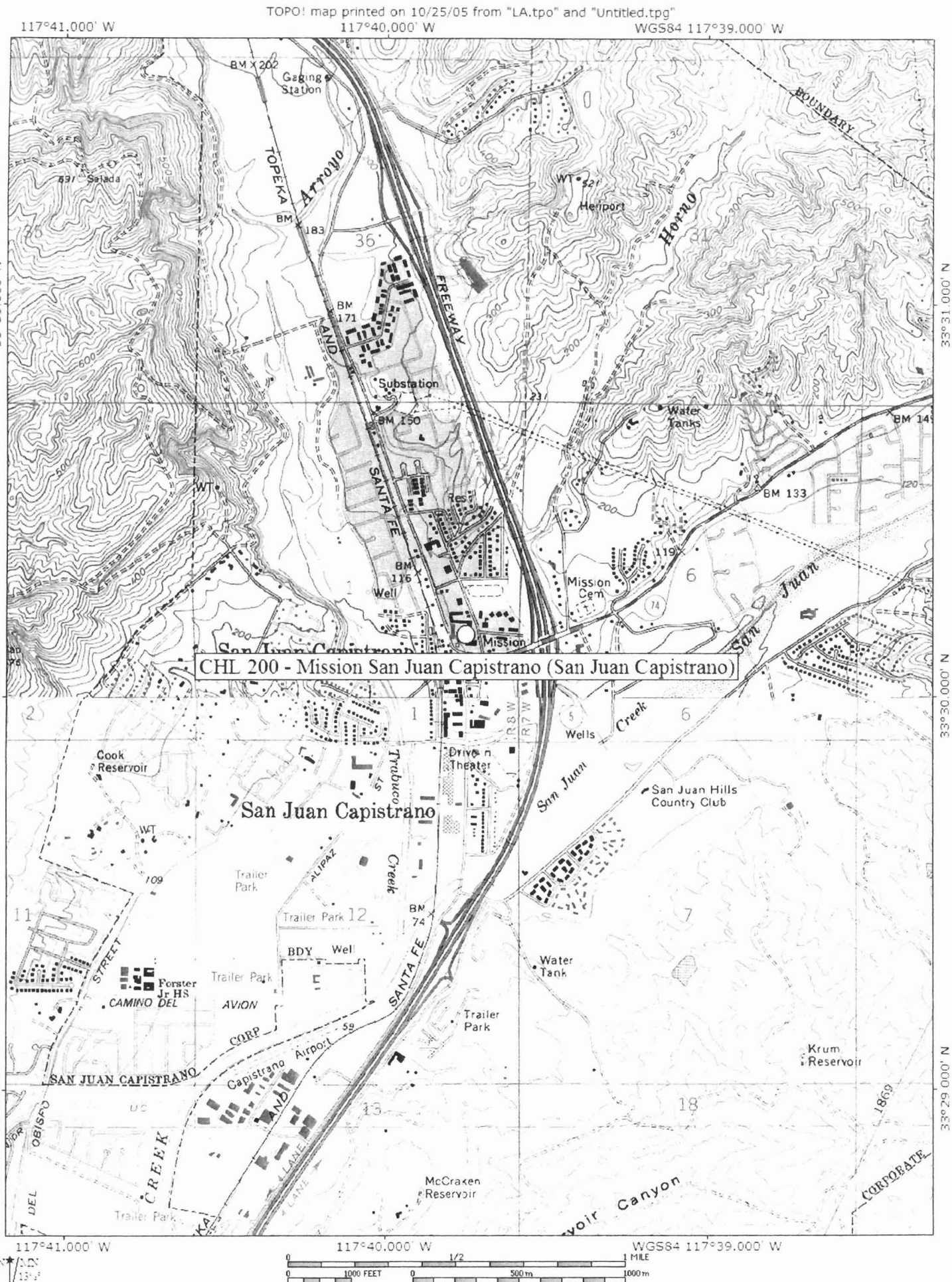
118105			BUILDING #5331 / WHERRY VILLAGE /	SANTA ANA	F	1954	HIST.RES.	DOE-30-98-0843-0000	09/15/98	6Y	
							PROJ.REVW.	USMC980828A\	09/15/98	6Y	
118106			BUILDING #5333 / WHERRY VILLAGE /	SANTA ANA	F	1954	HIST.RES.	DOE-30-98-0844-0000	09/15/98	6Y	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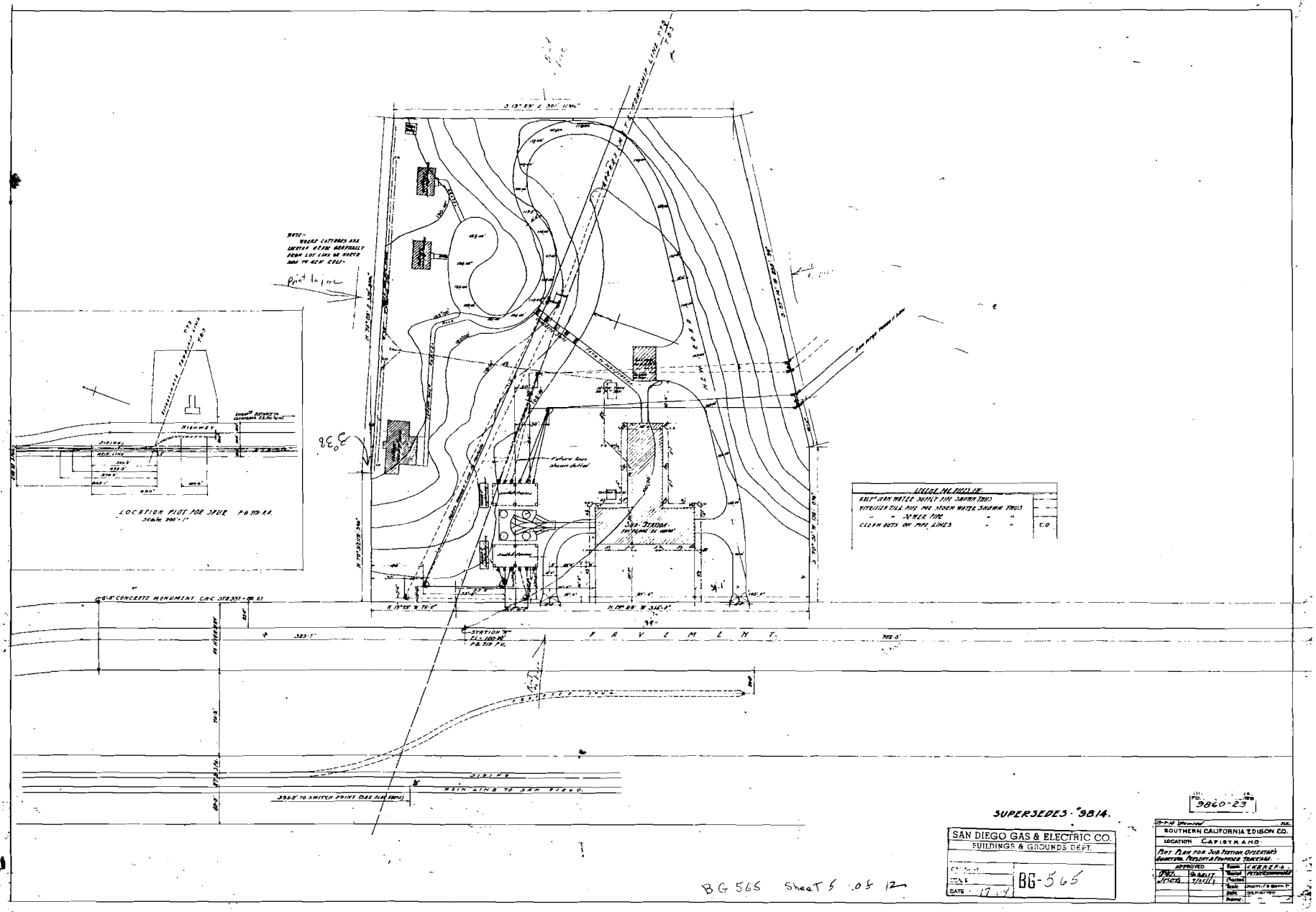
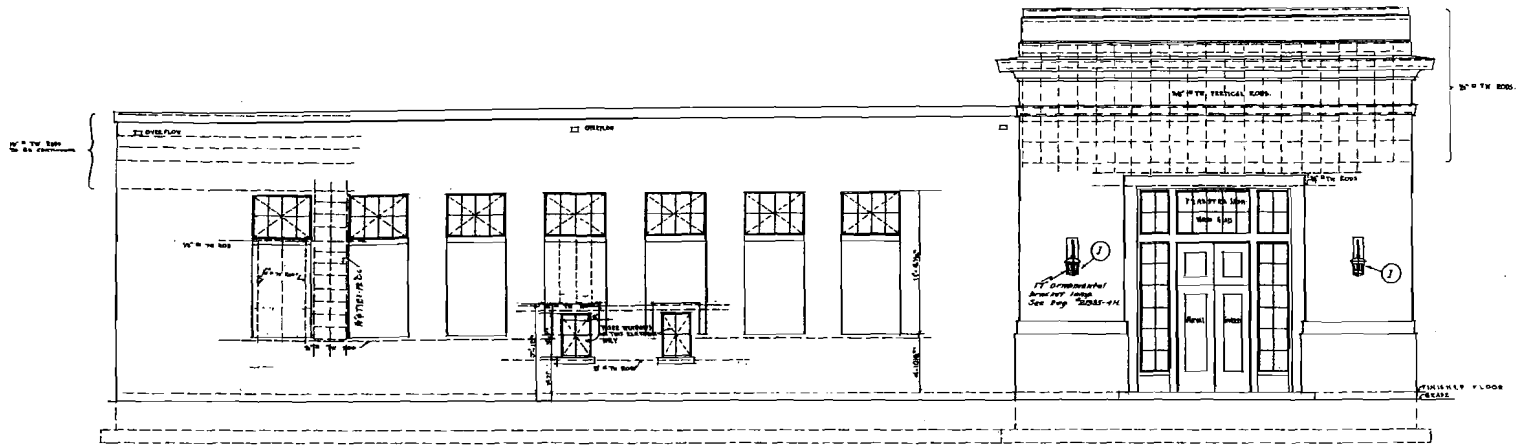
117°40.000' W
WGS84 117°39.000' W
33°31.000' N
33°30.000' N
33°29.000' N
CHL 200 - Mission San Juan Capistrano (San Juan Capistrano)
San Juan Capistrano
Mission
Mission Cem
Substation
Water Tanks
Heriport
Gaging Station
BM X202
BM 183
BM 171
BM 150
BM 116
BM 133
BM 74
Well
Rest
Cook Reservoir
Drive-in Theater
San Juan Hills Country Club
Wells
Creek
San Juan
Trabuco
Trailer Park
Forster Jr HS
CAMINO DEL AVION
SAN JUAN CAPISTRANO
Capistrano Airport
Water Tank
Krum Reservoir
McCracken Reservoir
SANTA FE
FREEWAY
TOPEKA
Arroyo
Horno
BOUNDARY
R8W
R7W
0 1/2 1 MILE
0 1000 FEET 0 500m 1000m
Printed from TOPO! ©2000 National Geographic Holdings (www.topo.com)

APPENDIX C:

Supplemental Research Data

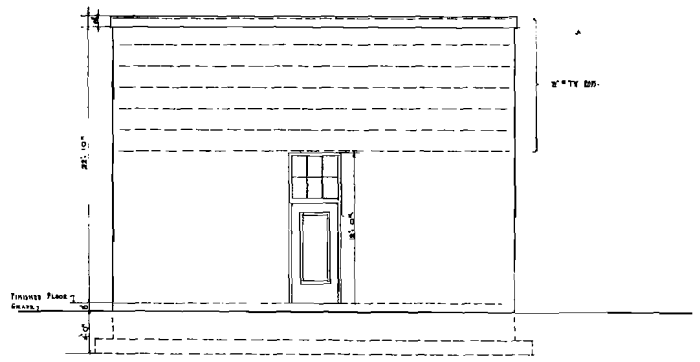


BG 565 Sheet 5 of 12



- NORTH ELEVATION -

SOUTH ELEVATION SIMILAR.



- EAST ELEVATION -

SAN DIEGO GAS & ELECTRIC CO.
BUILDINGS & GROUNDS DEPT.

SCALE
DATE 9-17-64

BG-565

3	Revised	CJ	8-21-68	Added ornamental lamps	JE
2	Revised	CJ	8-21-68	Revised	JE
1	Revised	CJ	8-21-68	Revised	JE
SYM	BLDG	MECH/STRUCT	STNDRD	DATE	REVISIONS

THIS DRAWING WAS PREPARED FOR MICROFILMING
9706-23

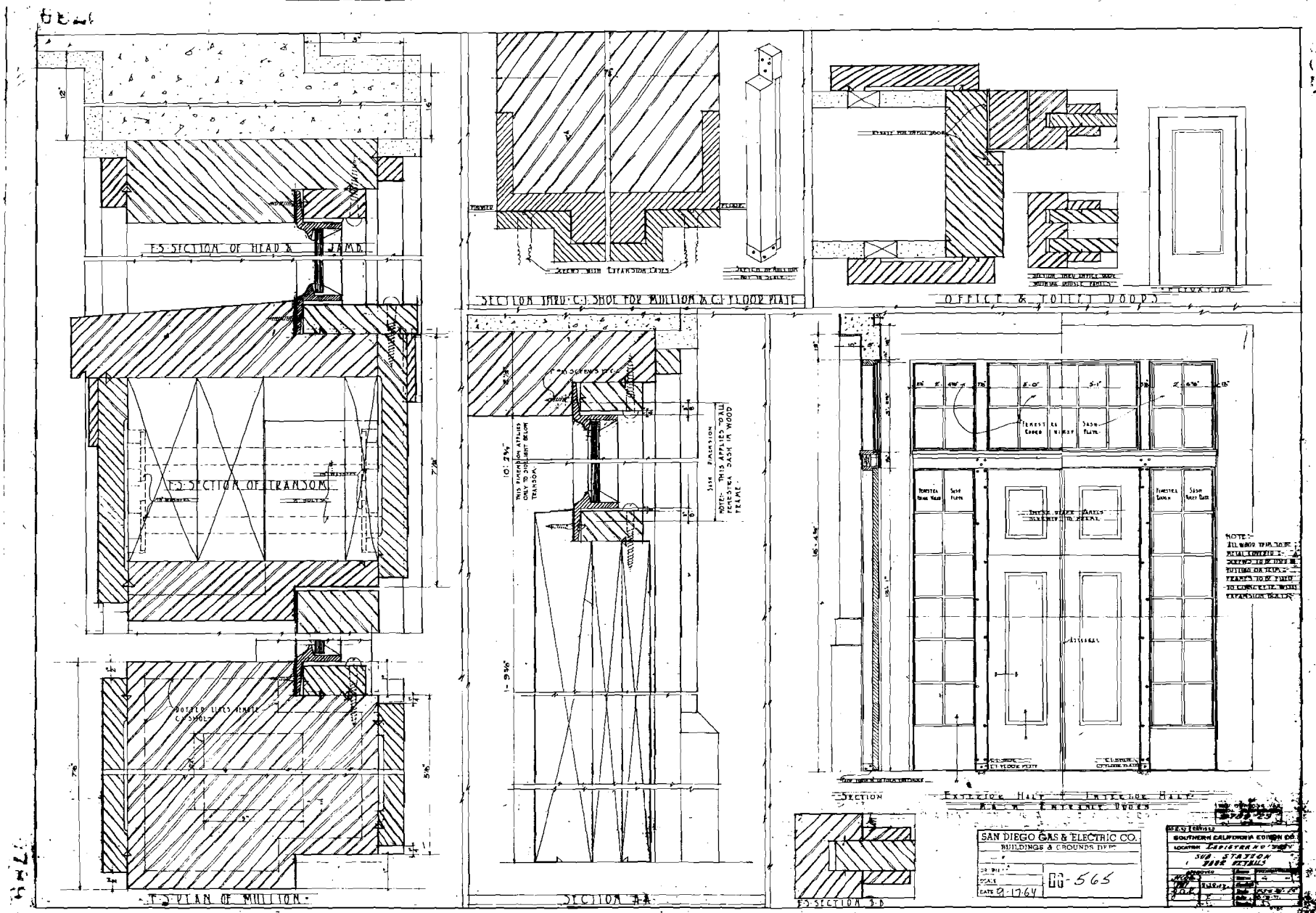
10-2-17 REVISED

SOUTHERN CALIFORNIA EDISON CO.

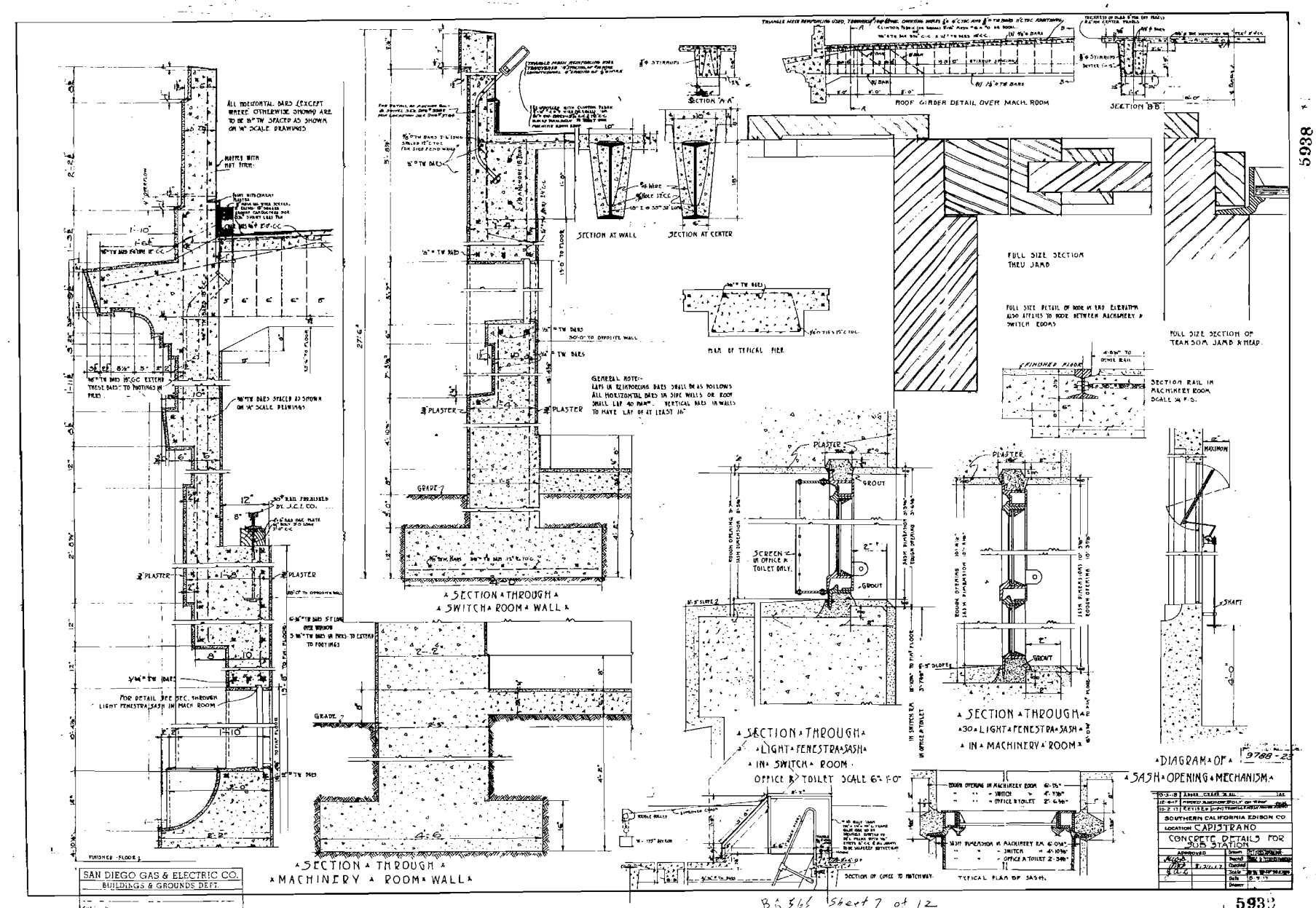
LOCATION CAPISTRANO

SUB STATION
SIDE & END ELEVATIONS

APPROVED		Drawn	17766/17766/17766
JE [illegible]		Traced	- -
[illegible]	11-20-17	Checked	
[illegible]		Scale	1/4" = 1'-0"
11		Date	8-21-17
		Drawer	



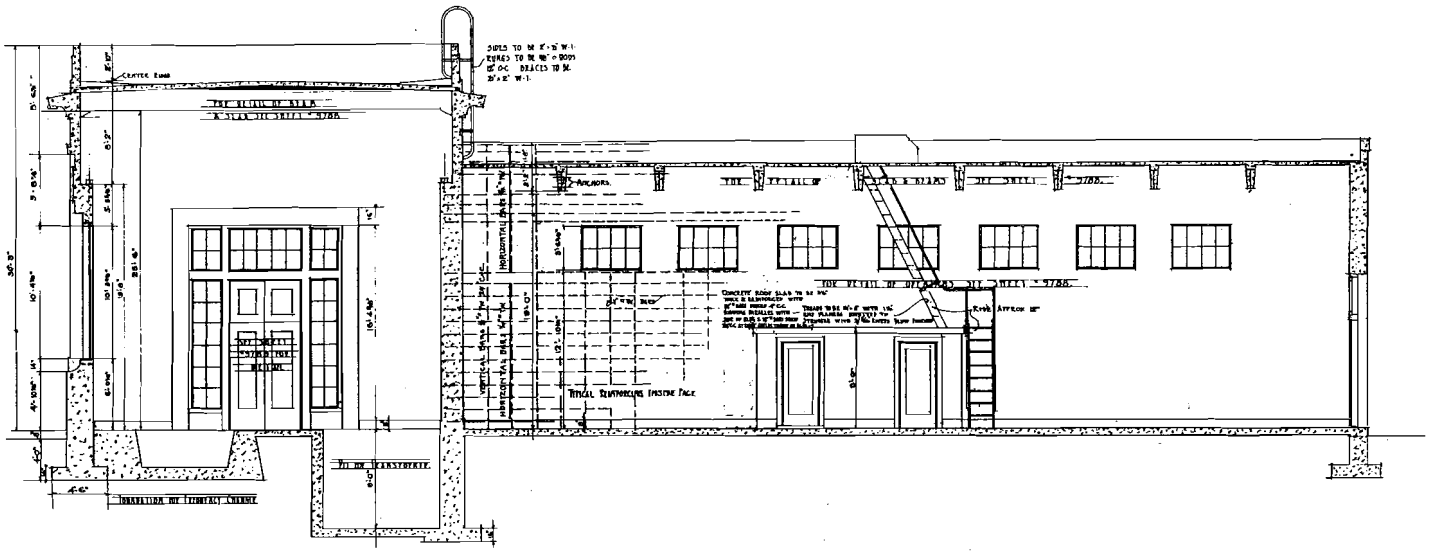
BG 565 Sheet 6 of 12



5938

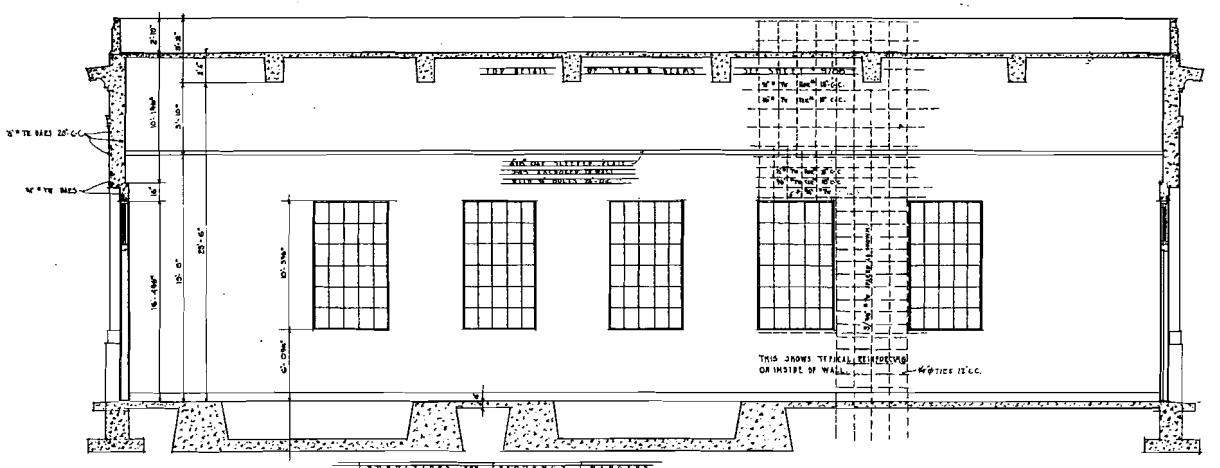
B & 565 Sheet 7 of 12

5938



SECTION A-A

FOR DETAIL OF CORNICE, REINFORCING, WINDOW OPENING & SASH SEE SHEET # 3788
FOR DETAIL OF MAIN DOOR ETC SEE SHEET # 3789



SECTION B-B

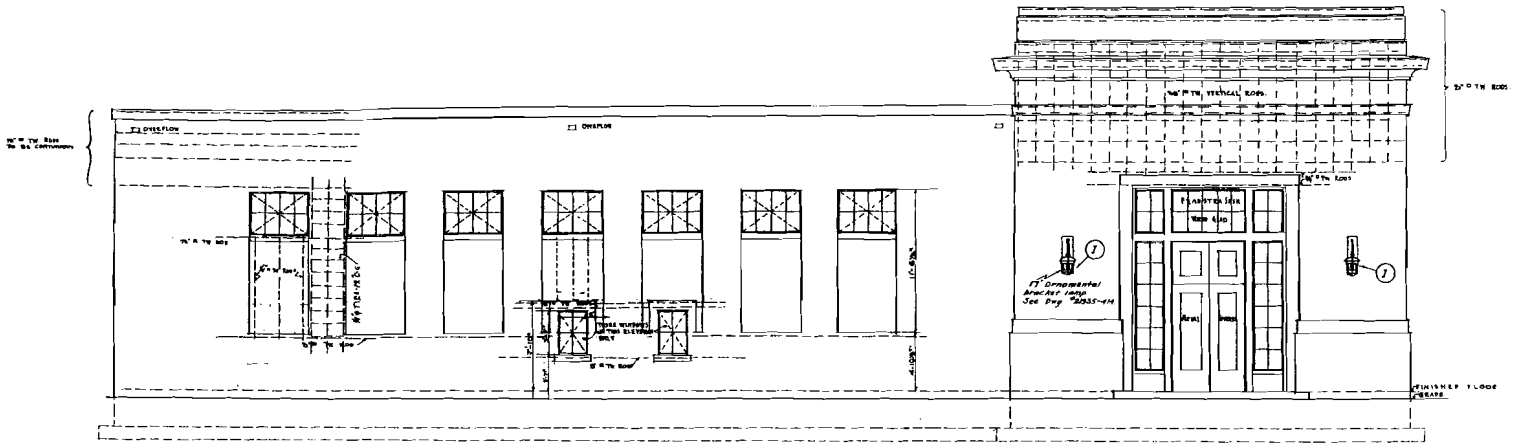
THIS DRAWING FOR INFORMATION 3787-23

SAN DIEGO GAS & ELECTRIC CO.
BUILDINGS & GROUNDS DEPT.
DATE 9-17-64
GG-565

10-8-17 REVISED
SOUTHERN CALIFORNIA EDISON CO.
LOCATION CAPISTRANO
SECTIONS OF STATION BLDG.
APPROVED 10-26-17
Drawn
Traced
Checked
Scale 1/4" = 1'-0"
Date 8-9-17
Drawer

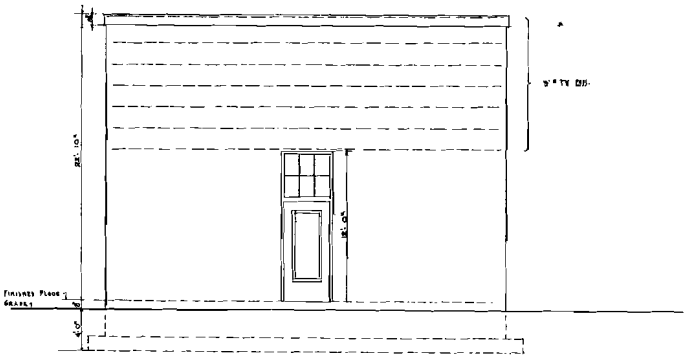
BG 565 Sheet 8 of 12

5939



- NORTH ELEVATION -

SOUTH ELEVATION SIMILAR.



- EAST ELEVATION -

SAN DIEGO GAS & ELECTRIC CO.
BUILDINGS & GROUNDS DEPT

SCALE 1/4"=1'-0"
BG- 565
9-1764

THIS DRAWING SUPERSEDES
9786-23

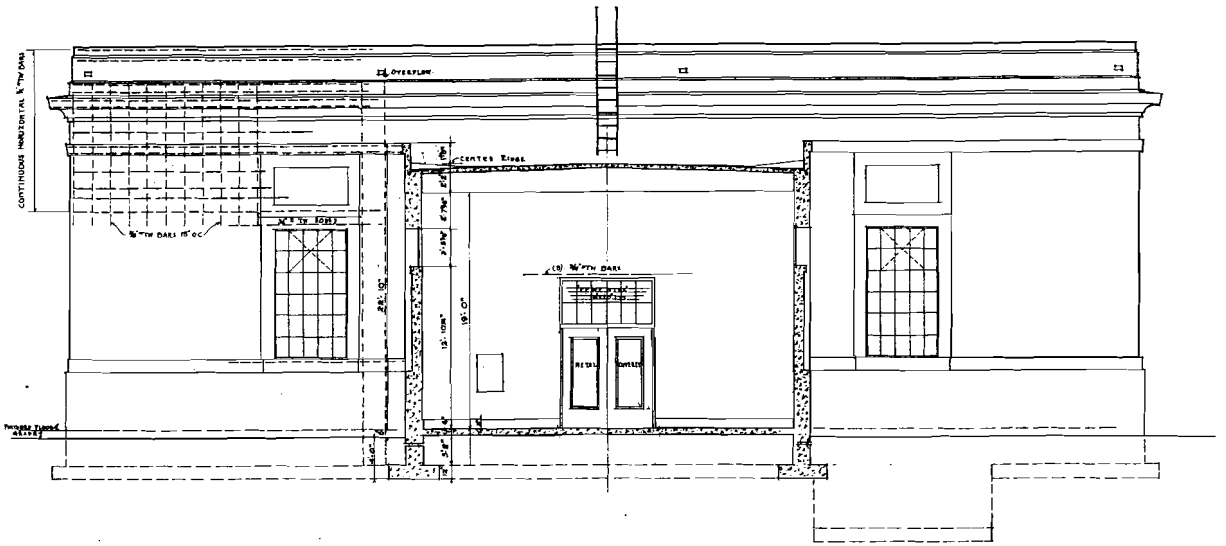
SOUTHERN CALIFORNIA EDISON CO.
LOCATION CAPISTRANO
SUB STATION
SIDE & END ELEVATIONS.

	APPROVED		
		Drawn	
		Traced	
		Checked	
		Scale	1/4"=1'-0"
		Date	6-9-77
		Drawer	

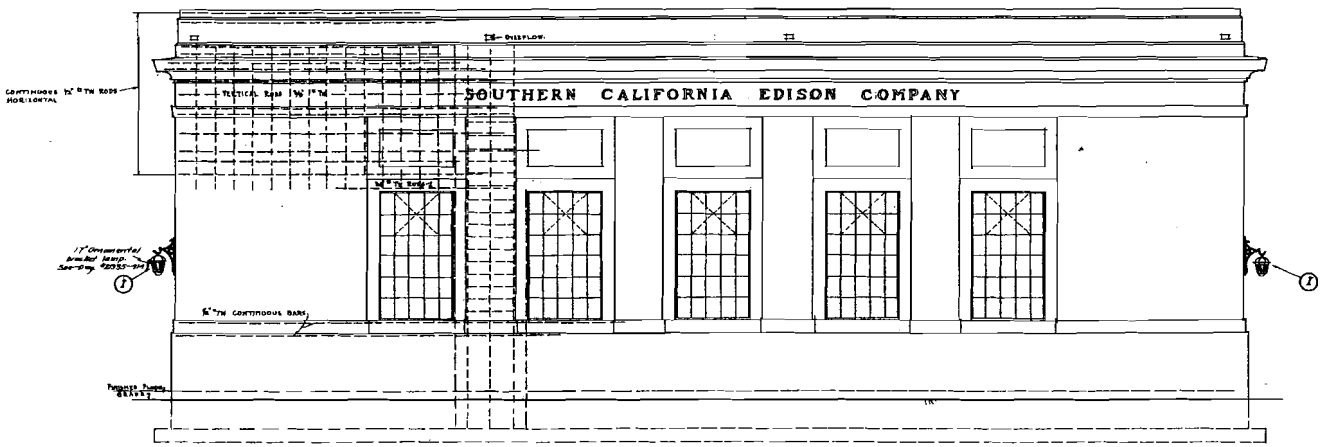
7/8	RJD	1980	(7)	8-21-80	Added ornamental lights
ELEC.	MECH.	STRUCT.		DATE	REVISIONS

RC 5/1 Ch. + G. 1-12-

5040



SECTIONAL ELEVATION C-C



WEST ELEVATION

SAN DIEGO GAS & ELECTRIC CO.
BUILDINGS & GROUNDS DEPT
BG-565
DATE 9-1-64

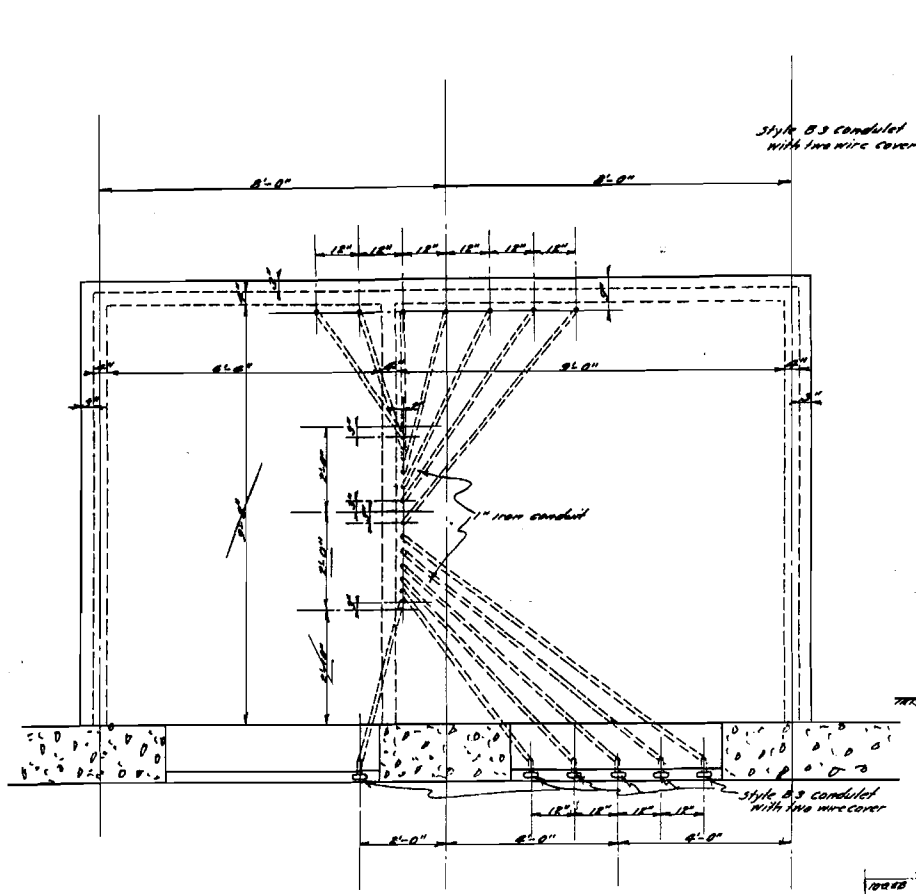
SOUTHERN CALIFORNIA EDISON CO.
LOCATION CAPISTRANO
SUB STATION
FRONT & REAR ELEVATIONS

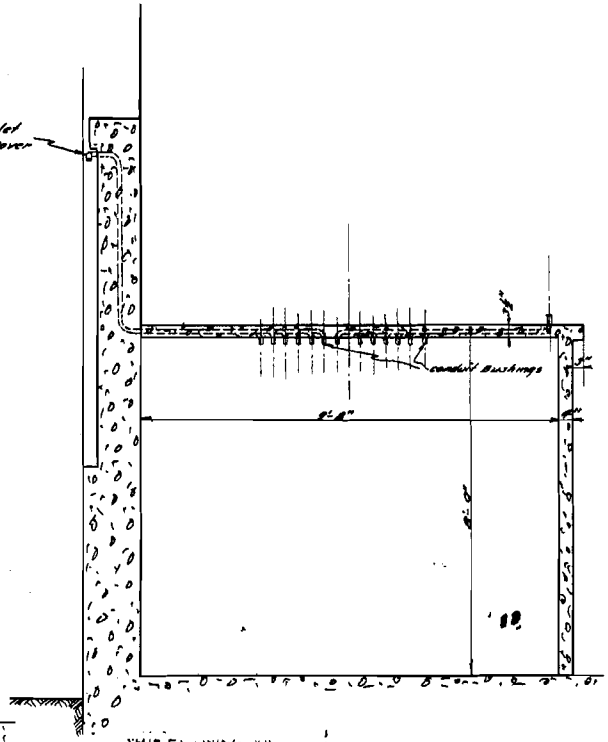
APPROVED
Drawn
Traced
Checked
Scale 1/4"
Date 8-9-64

9785-23

BG 565 Sheet 10 of 12

5941





THIS DRAWING WAS FORMERLY NUMBERED 9968-AE

CAPISTRANO SUBSTATION
LOCATION OF CONDUITS FOR TELEPHONES

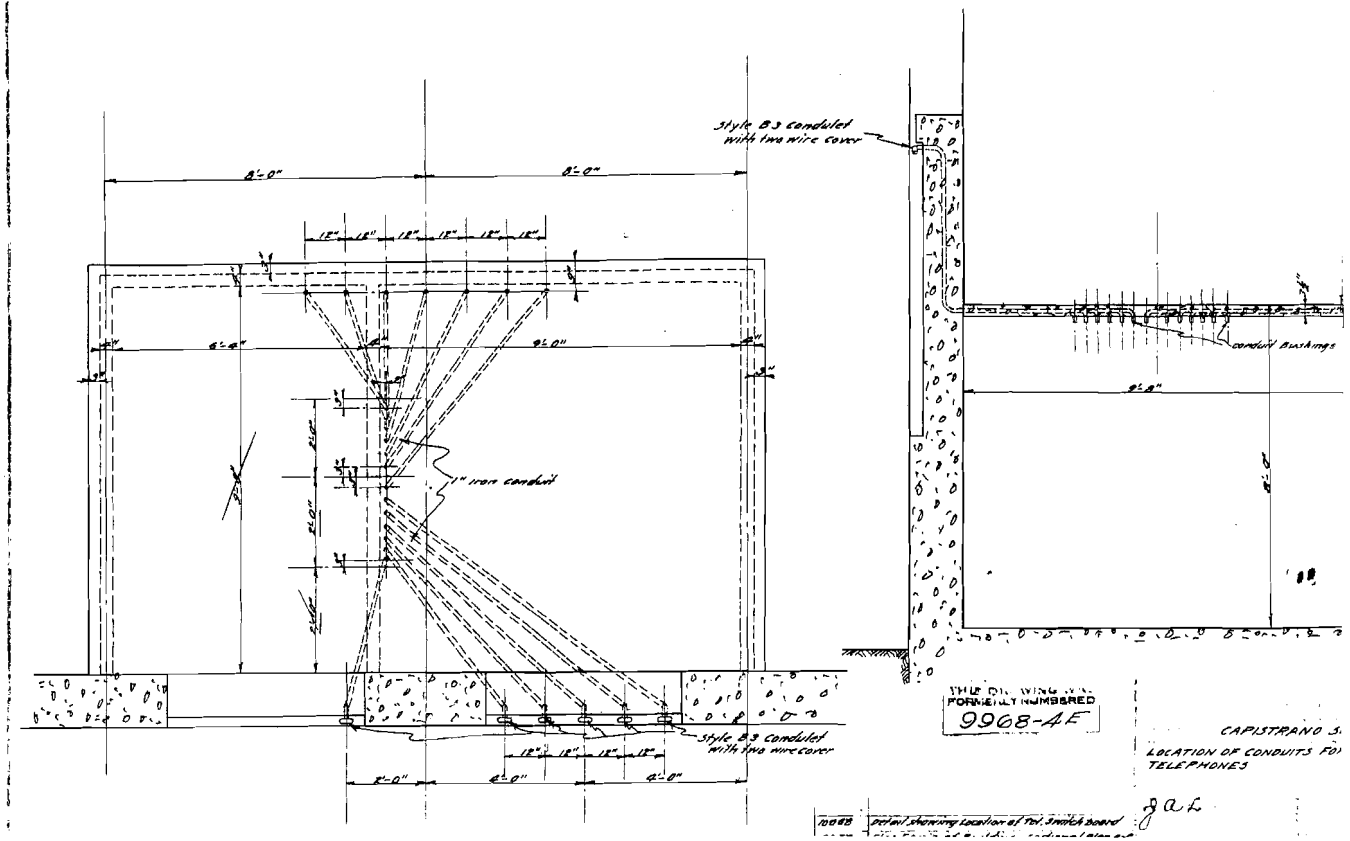
10818	Portion showing Location of Tel. Service Board
9957	Elec. Equip. of Building - Sectional Plan A-A
9960	Plan and Elevations showing loc. of Conduits

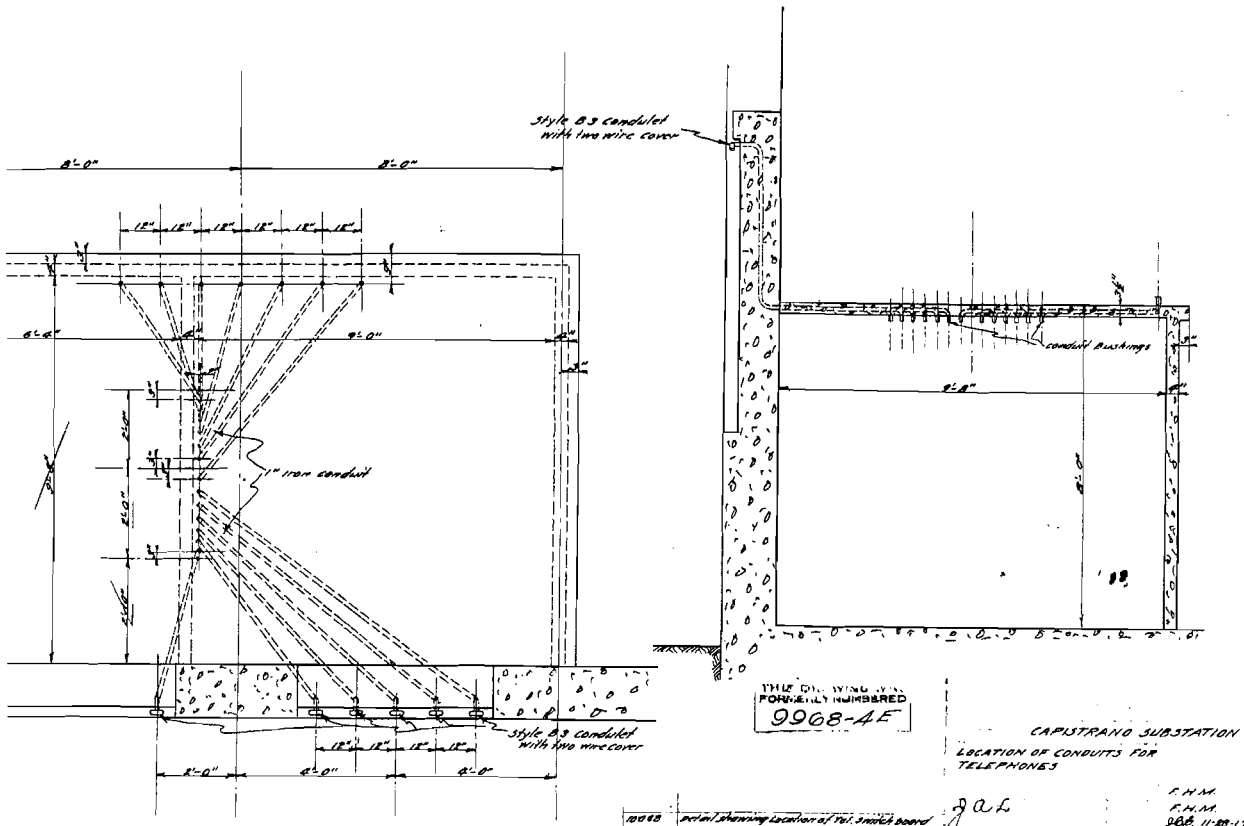
CROSS REFERENCE

F.H.M.
F.H.M.
JRB. 11-20-17
1/2" = 1'
OCT. 30, 1917

W.R.B.

3725


Style B3 conduit with two wire cover
8'-0"
8'-0"
12" 12" 12" 12" 12" 12"
6'-0"
6'-0"
1" iron conduit
Style B3 conduit with two wire cover
conduit bushings
9'-0"
THIS DRAWING IS FORMERLY NUMBERED
9968-AF
CAPISTRANO S.
LOCATION OF CONDUITS FO
TELEPHONES
detail showing location of Tel. Switch board



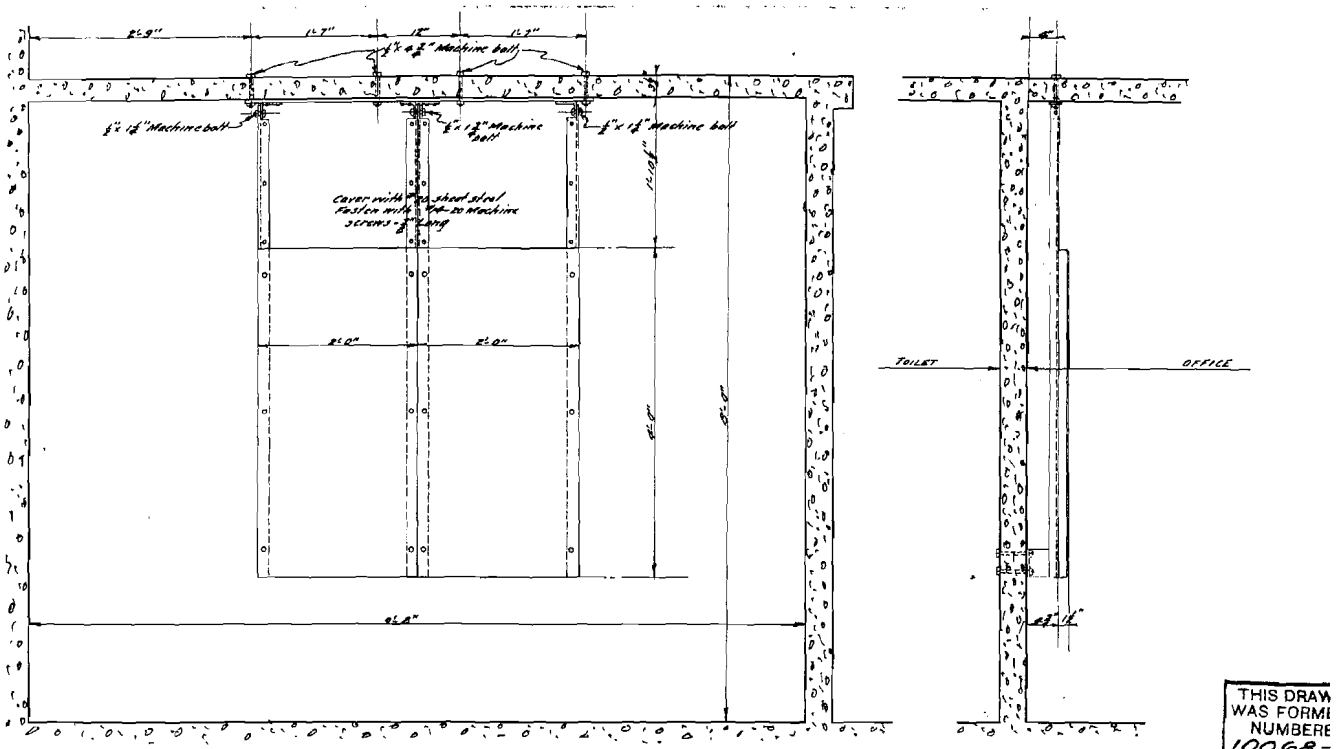
THIS DRAWING WAS FORMERLY NUMBERED 9968-4F

CAPISTRANO SUBSTATION

LOCATION OF CONDUITS FOR TELEPHONES

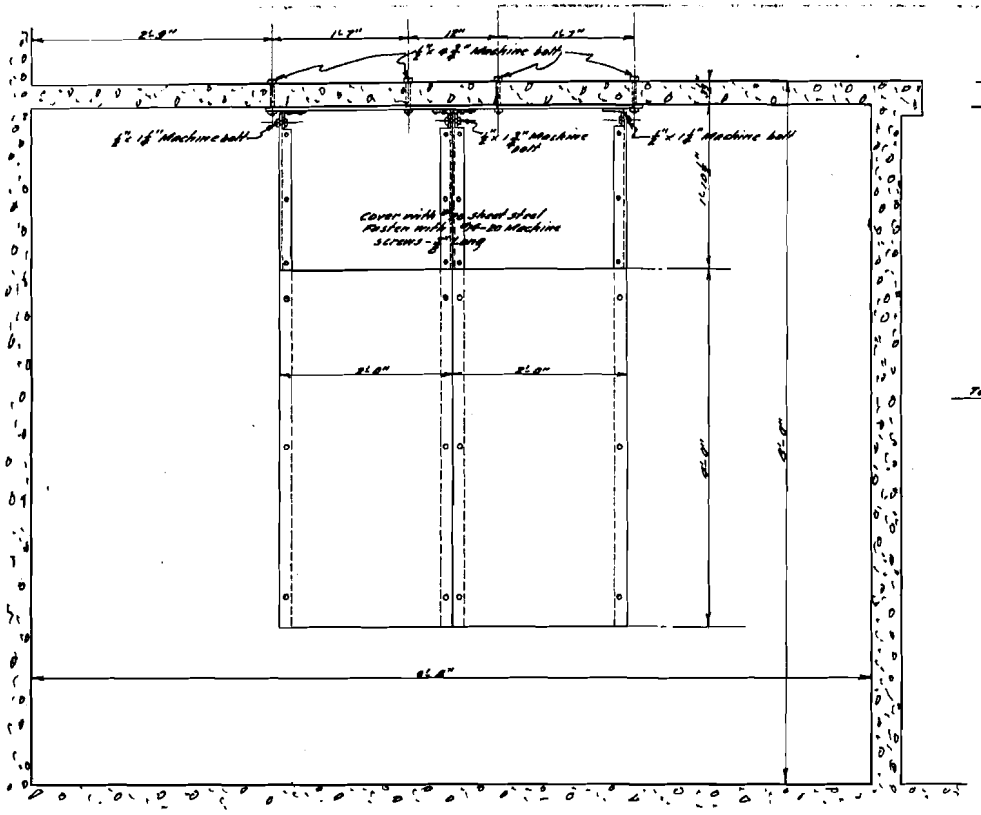
10068	detail showing location of tel. switch board	J.A.L.	F.H.M.
9957	elec. Equip. of Building - sections & Plan A-A		F.H.M.
			J.B.B. 11-28-17
			1" = 1'

3725



THIS DRAW
WAS FORME
NUMBERE
10068-

CAPISTRANO SUBST-



THIS DRAWING WAS FORMERLY NUMBERED 10068-A5

3735

CAPISTRANO SUBSTATION

DETAIL SHOWING LOCATION OF TELEPHONE SWITCH BOARD IN OFFICE

8537	Detail of steel for Telephone switchboard
9968	Location of conduits for Telephones

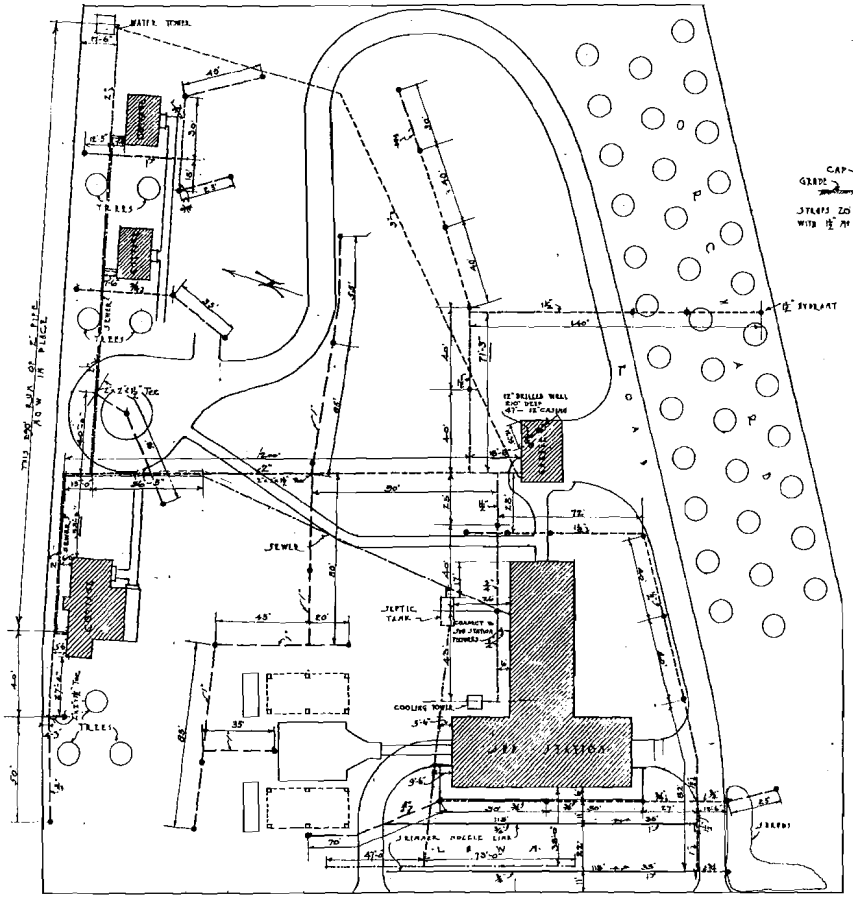
CROSS REFERENCE

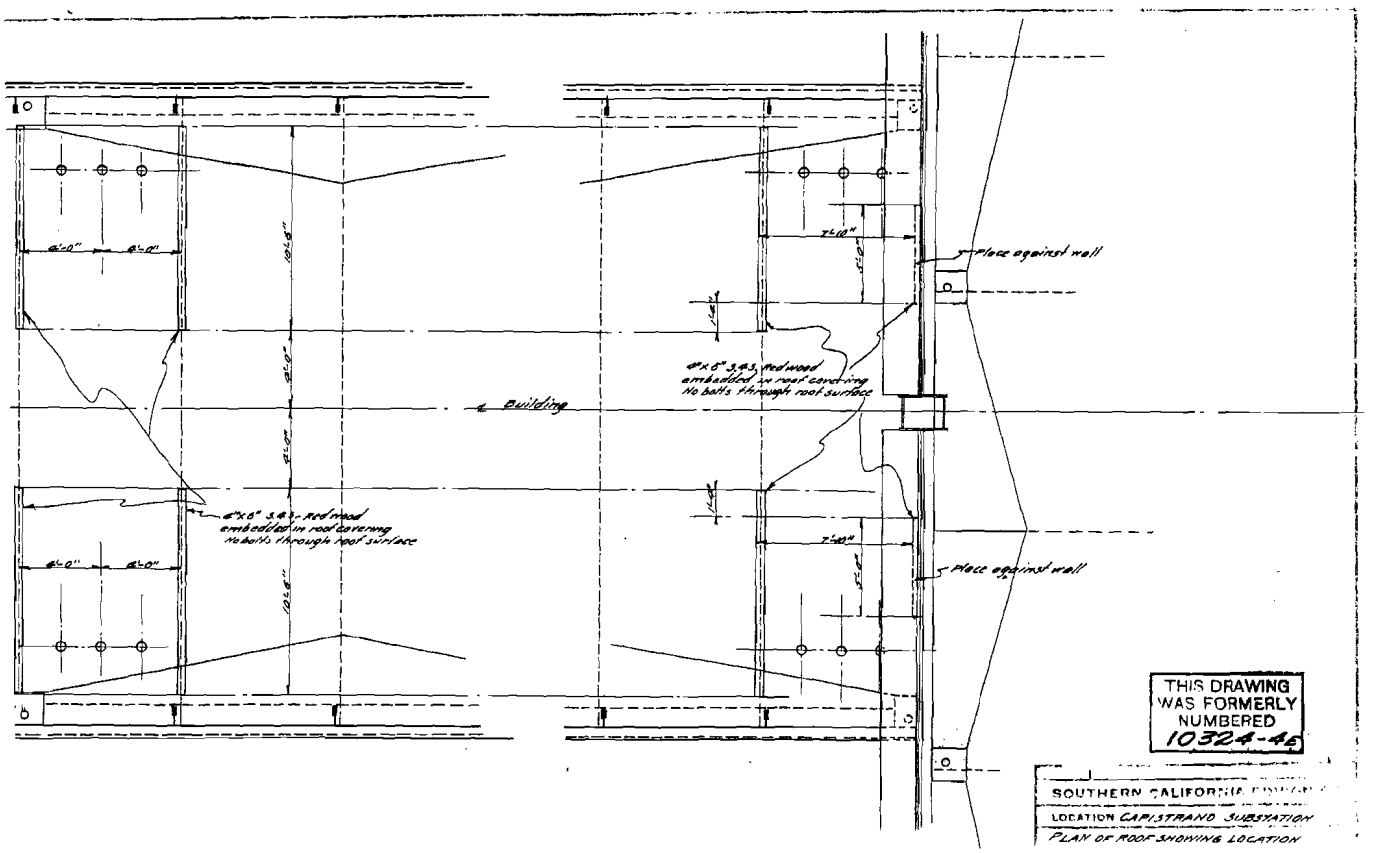
F.N.M. T.H.M. W.R.B. H.C.

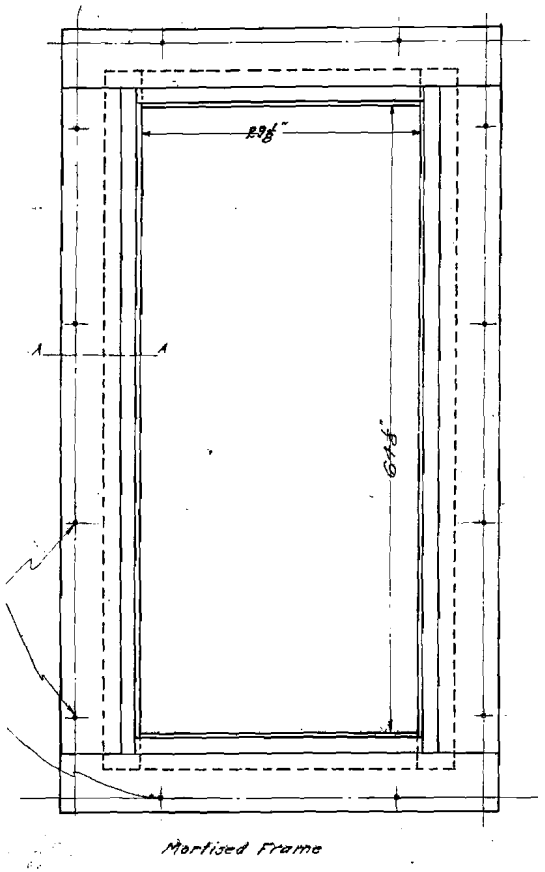
DEC. 11, 1917

3735

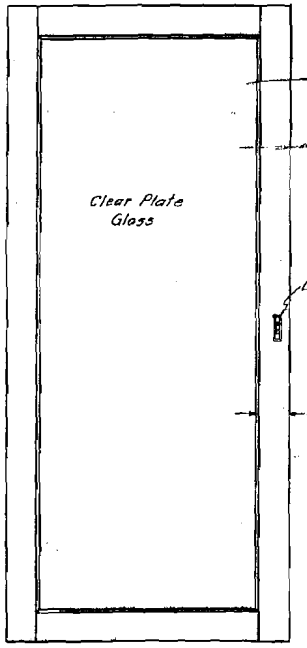
4 1170


WATER TOWER
TREES
SEWER
SEPTIC TANK
COOLING TOWER
TREES
TREES
TREES

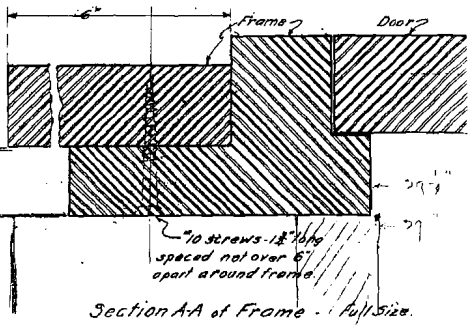

4'-0"
4'-0"
4'-0"
4'-0"
10'-6"
8'-0"
10'-6"
7'-10"
5'-6"
1'-6"
Place against wall
4"x6" S.&.S. redwood embedded in roof covering No bolts through roof surface
℄ Building
4"x6" S.&.S. Redwood embedded in roof covering No bolts through roof surface
7'-10"
5'-6"
Place against wall
THIS DRAWING WAS FORMERLY NUMBERED 1032A-46
SOUTHERN CALIFORNIA
LOCATION CAPISTRANO SUBSTATION
PLAN OF ROOF SHOWING LOCATION



Mortised Frame



Mortised Door



Section A-A of Frame - Full Size.

Note:-

Door and Frame to be made of selected straight grain oak.

Door to have clear plate glass panel, a mortise latch "FA65½B (Union Hdw. & Metal Co.), to be fitted to fram and hung on (3) 2½" x 2½" loose pin, ball tip steel butts, (

Frame and Door finish, light oak, varnished and rubbed.

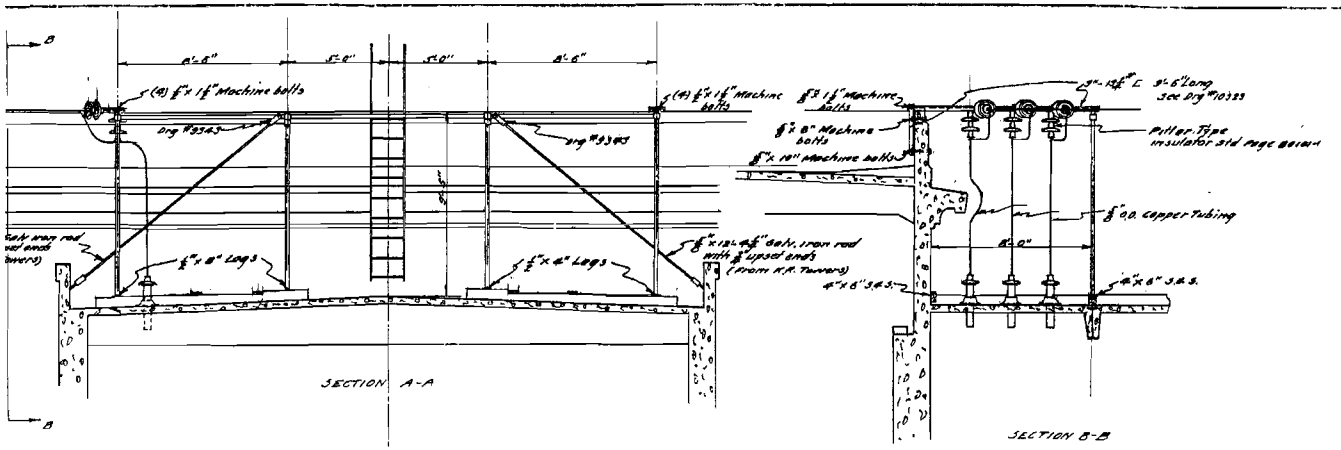
Note on Installation:-

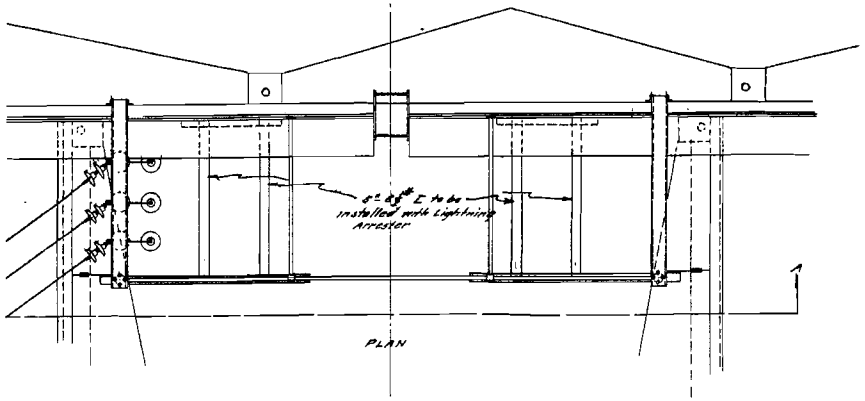
Frame to be securely fastened to concrete wall with "Ideal" 16 bleed, round head wood screws 2½" long, and expansion shields.

THIS DRAWING WAS FORMERLY NUMBERED 10441-E

SOUTHERN CALIFORNIA EDISON	
LOCATION CAPISTRANO SUBSTATION	
Door and Frame for Station Distribution Panel	
APPROVED	Drawn J.C.G.
	Traced J.C.G.

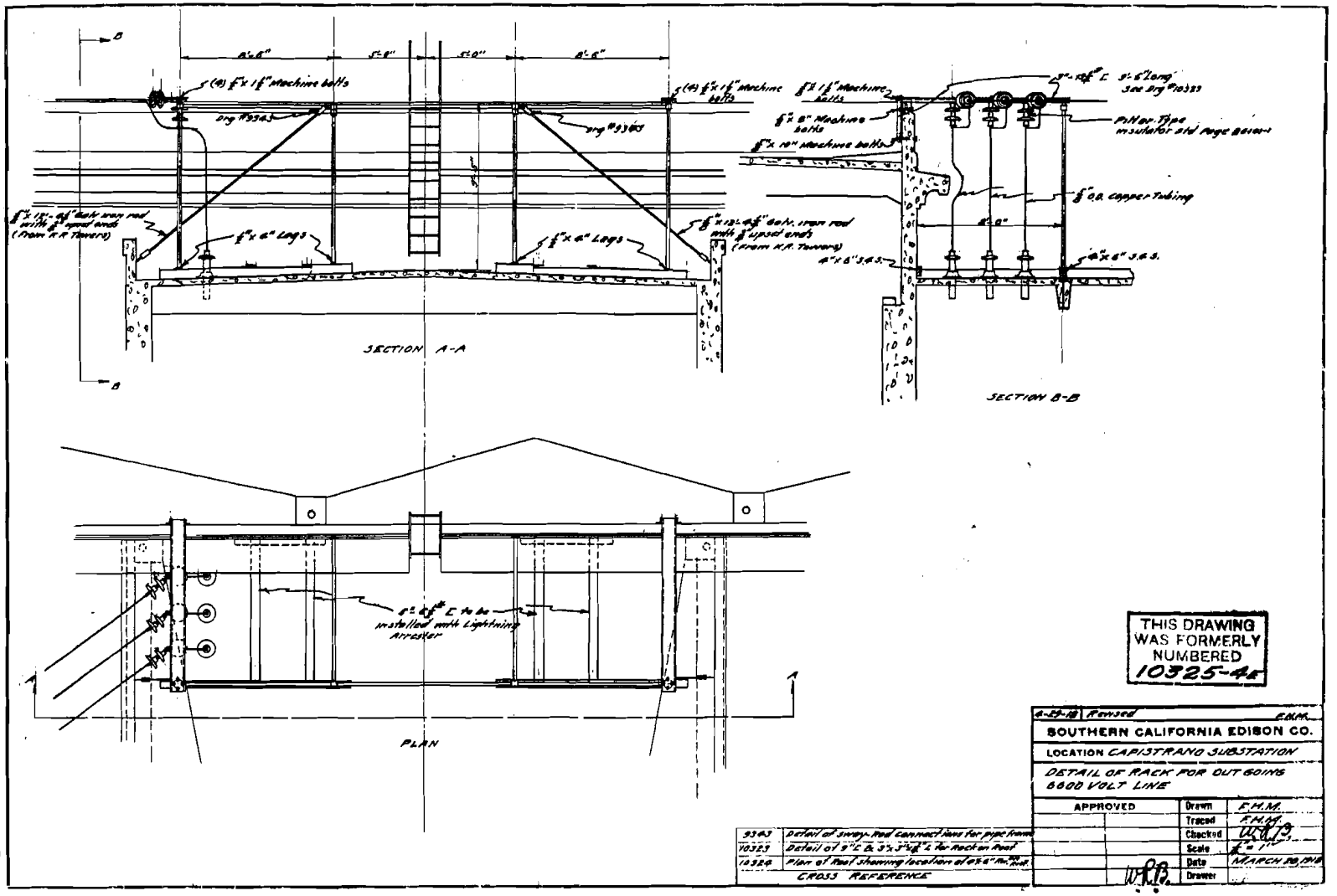
3754





THIS DRAWING WAS FORMERLY NUMBERED 10325-4E

4-28-18	Revised
SOUTHERN CALIFORNIA EDISON C	
LOCATION CAPISTRANO SUBSTATION	
DETAIL OF RACK FOR OUT GOING 6600 VOLT LINE	



THIS DRAWING WAS FORMERLY NUMBERED 10325-4E

6-29-18	Revised	F.M.M.

SOUTHERN CALIFORNIA EDISON CO.

LOCATION CAPISTRANO SUBSTATION

DETAIL OF RACK FOR OUT GOING 6600 VOLT LINE

APPROVED		
	Drawn	F.M.M.
	Traced	F.M.M.
	Checked	W.R.B.
	Scale	1" = 1'
W.R.B.	Date	MARCH 28, 1918
	Drawer	

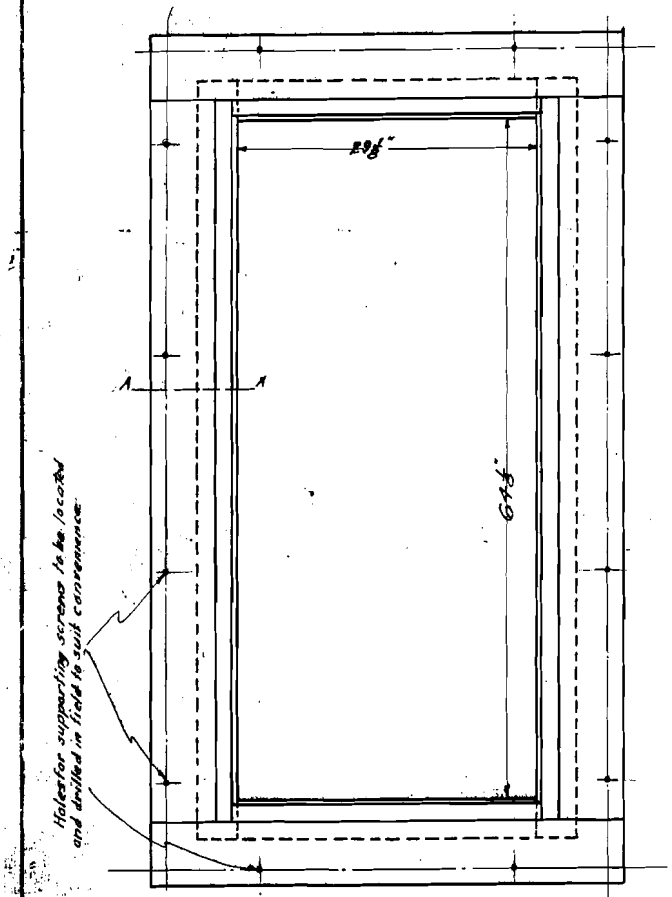
9343	Detail of sway rod connections for pipe frame
10329	Detail of 9'-6" & 5'-3½" ℄ for Rack on Roof
10324	Plan of Roof showing location of 6"x6" Rack

CROSS REFERENCE

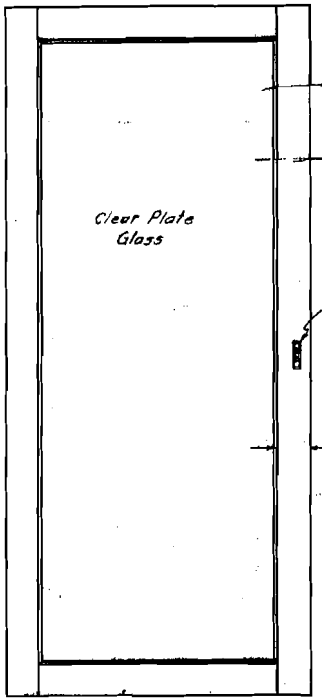
3750

3750

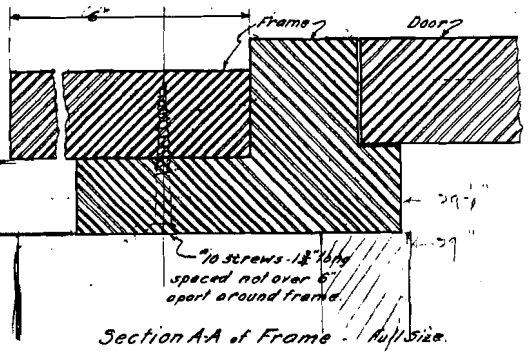
37541 10441



Mortised Frame



Mortised Door



Section A-A of Frame - Full Size.

Note:-

Door and frame to be made of selected straight grain oak.

Door to have clear plate glass panel, a morlise latch "FAB 5½ B (Union Hdw. & Metal Co.), to be fitted to frame and hung on (3) 2½" x 2½" loose pin, ball tip steel butts, (light 3" brass fin)

Frame and Door finish, light oak, varnished and rubbed.

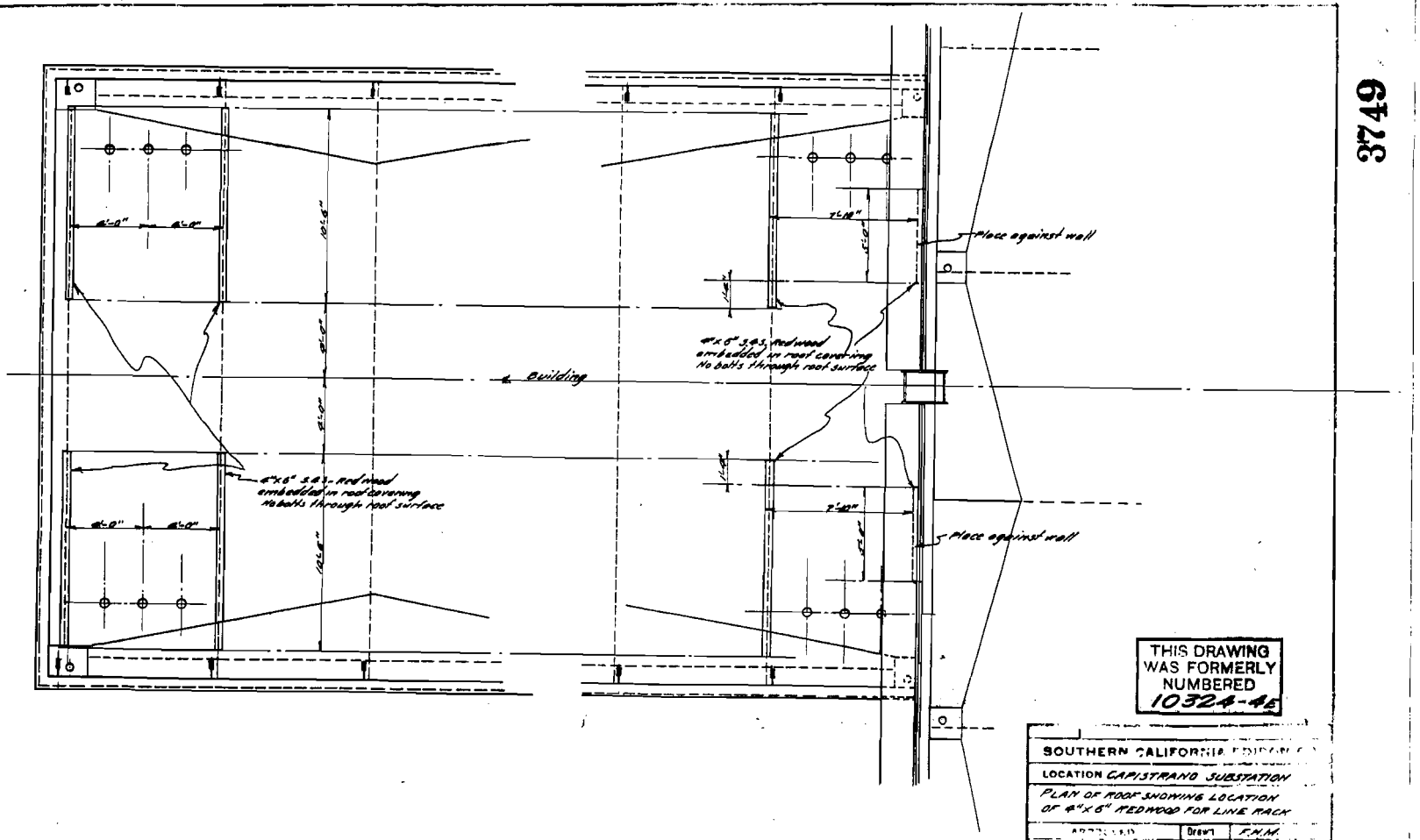
Note on Installation:-

Frame to be securely fastened to concrete wall with "¼ or "/16 bleed, round head wood screws 2½" long, and expansion shields.

THIS DRAWING WAS FORMERLY [redacted] 10441-A2

SOUTHERN CALIFORNIA EDISON CO.	
LOCATION CAPISTRANO SUBSTATION	
Door and Frame for Station Distribution Panel	
APPROVED	Drawn J.C.G.
	Traced J.C.G.
	Checked
	Scale 1" and 1" = 1 ft.
	Date June 27, 1913
	Drawer 4E 3

3965	Tablet Board.
3960	Conduit Drawing.
CROSS REFERENCE	



THIS DRAWING WAS FORMERLY NUMBERED 10324-46

SOUTHERN CALIFORNIA EDISON CO.

LOCATION CAPISTRANO SUBSTATION

PLAN OF ROOF SHOWING LOCATION OF 4"x6" REDWOOD FOR LINE RACK

APPROVED	Drawn	F.H.M.
	Traced	F.H.M.
	Checked	W.R.B.
	Scale	1"=1'
W.R.B.	Date	MARCH 26, 1918
	Drawer	

10325	Detail of Rack For outgoing 6600V Line

CROSS REFERENCE

43541

Drawn.	County	Route	Section

THIS DRAWING WAS FORMERLY NUMBERED 11325-E-A

47123

THIS DRAWING SUPERSEDES DRWG. No. 43204

Supersedes Dwg. No. 43204

47123

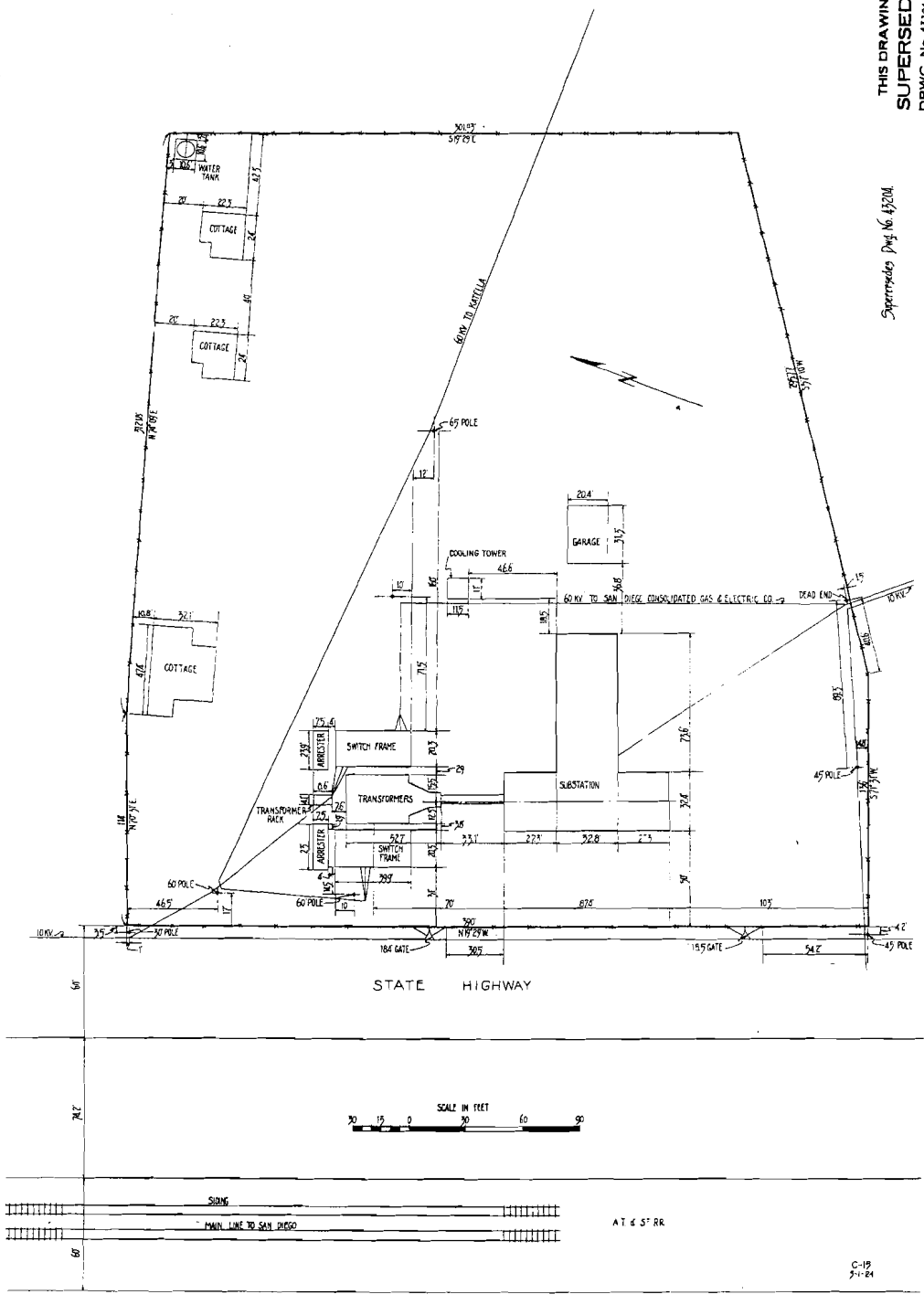
Dwg. No. 47123

CONSTRUCTION SUBSTATION

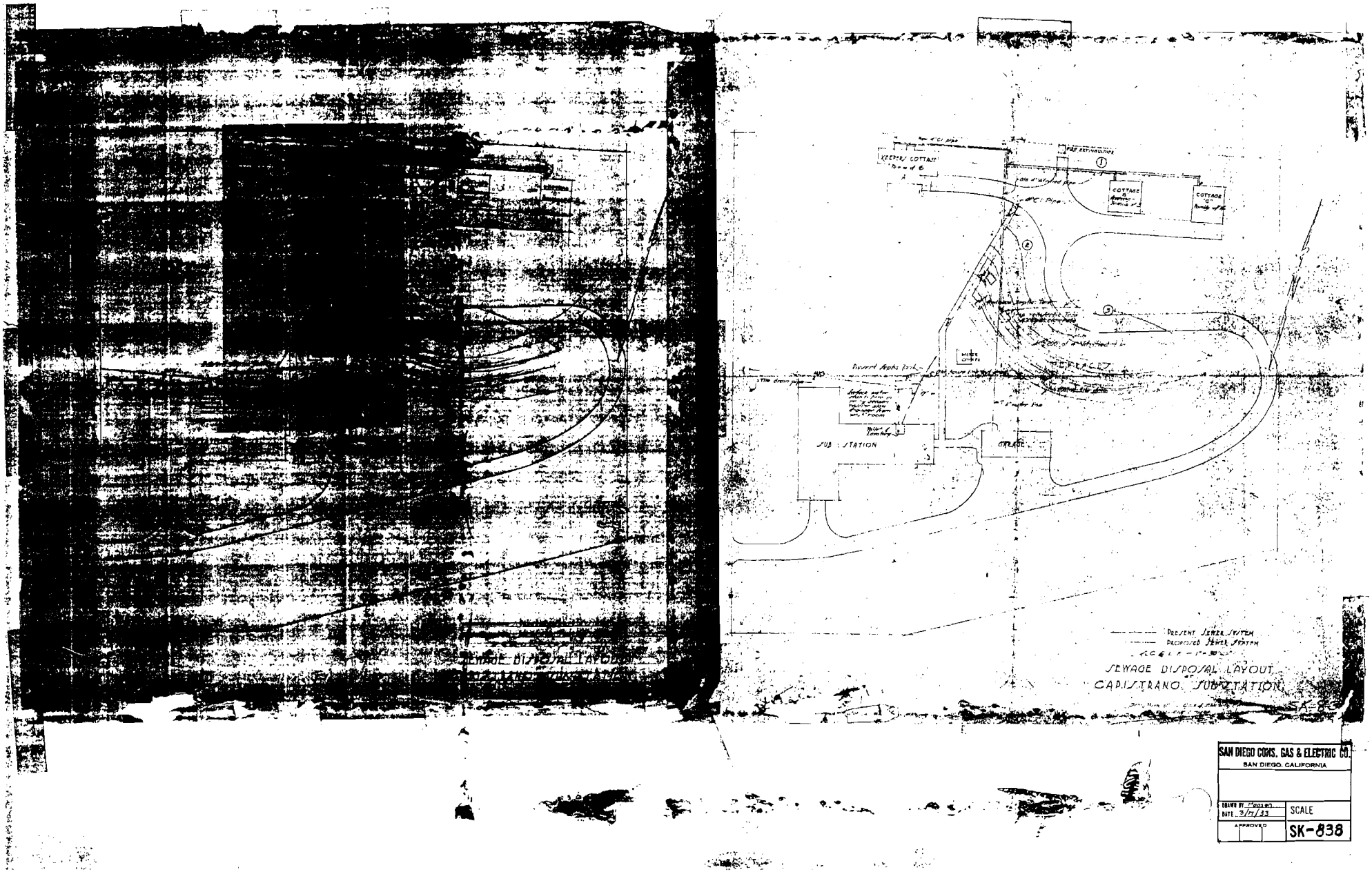
PLOT PLAN

PROJECT DATA BOOK

FOR

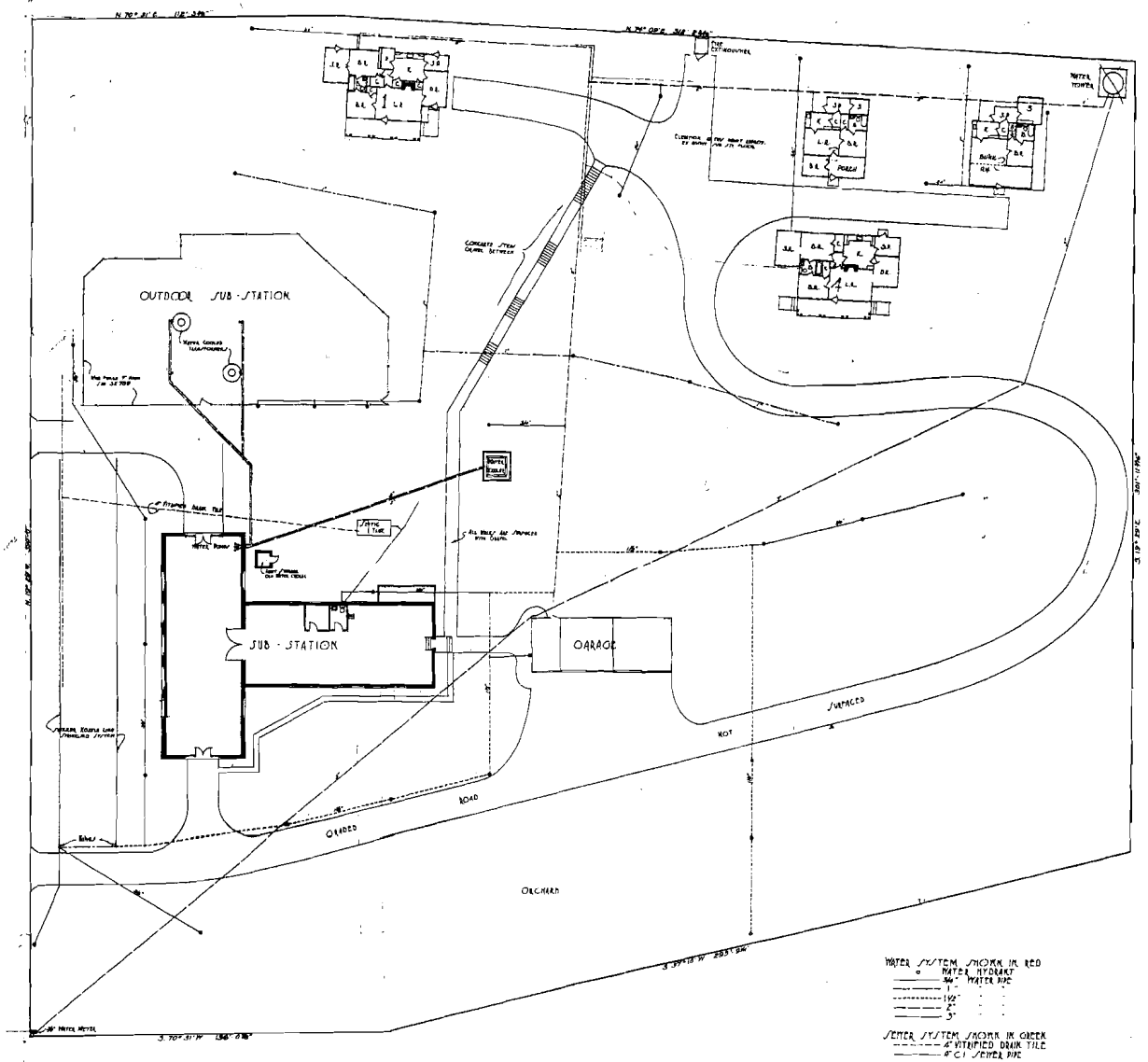


47123



SAN DIEGO CONS. GAS & ELECTRIC CO.
SAN DIEGO, CALIFORNIA

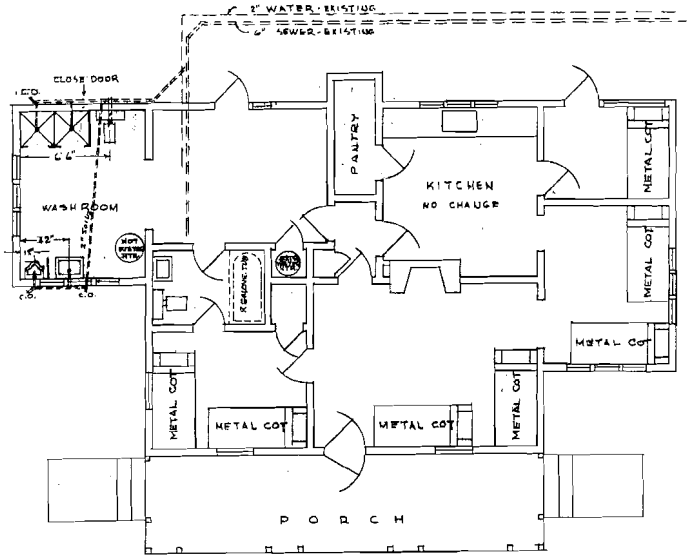
DRAWN BY [illegible]
DATE 3/11/33
SCALE
APPROVED
SK-838



APPROX. 90 FRUIT TREES

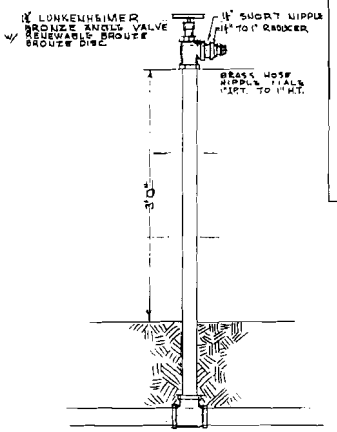
*4 Cathode added 7/4/m
"2+3 " remodeled & repaired 7/m

SAN DIEGO CONS. GAS & ELECTRIC CO.	
SAN DIEGO, CALIFORNIA	
CAPISTRANO SUB-STATION PROPERTY PLAN	
DRAWN BY Chas Hansen	SCALE 1"=20'
DATE 5-22-33	
APPROVED	SK 839

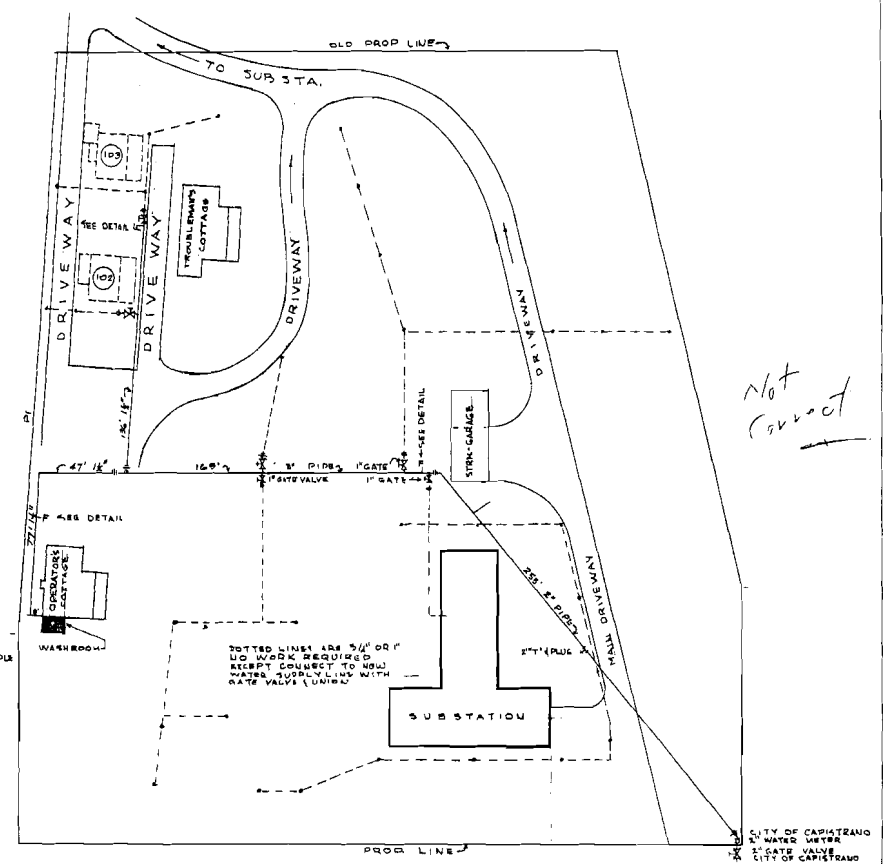


PLUMBING ROUGH IN FOR

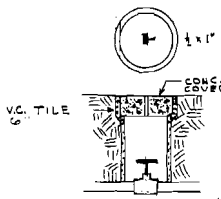
2 - 30" x 30" TERRAZO BASE STEEL SHOWERS
CLOSE COUPLED CLOSET BOWL
WALL HUNG URIDAL
WALL HUNG LAVATORY



DETAIL "F" FIRE - IRRIGATION STANDPIPE



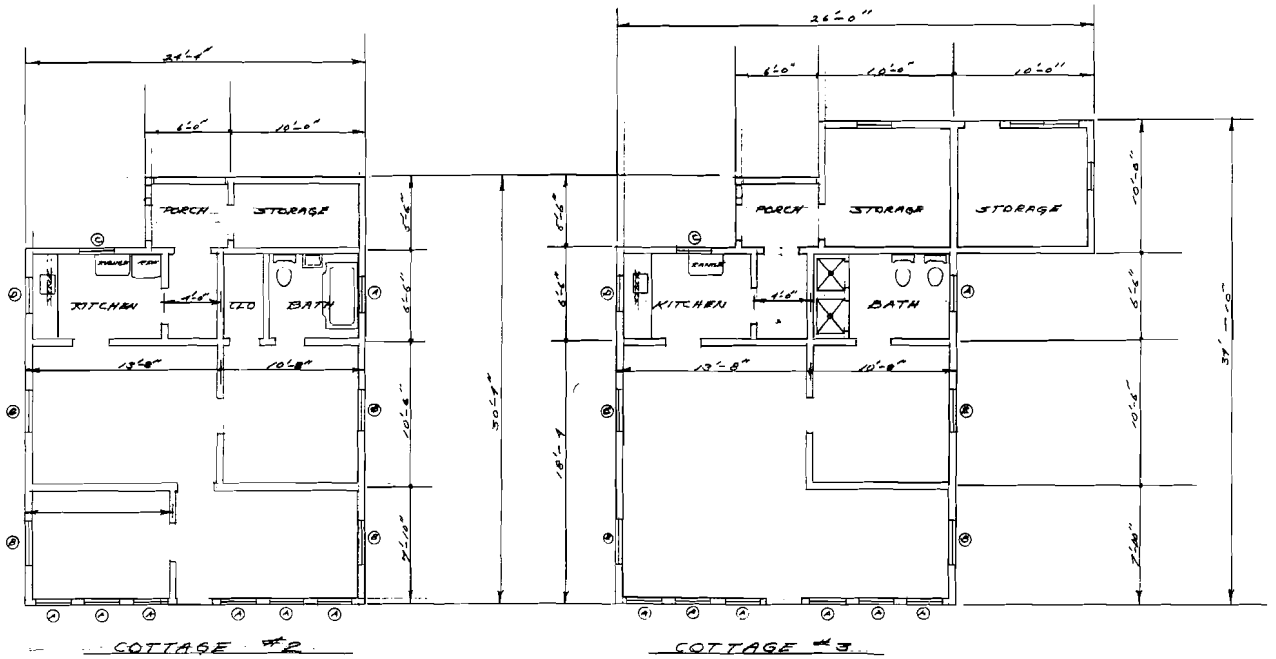
Not Correct



VALVE BOX Sc. 1½" = 1'0"

SAN DIEGO GAS & ELECTRIC CO.	
BUILDINGS & GROUNDS DEPT.	
CAPISTRANO PLUMBING	
DRAWN BY W.M.	BG-437
SCALE AS SHOWN	
DATE 10-5-62	

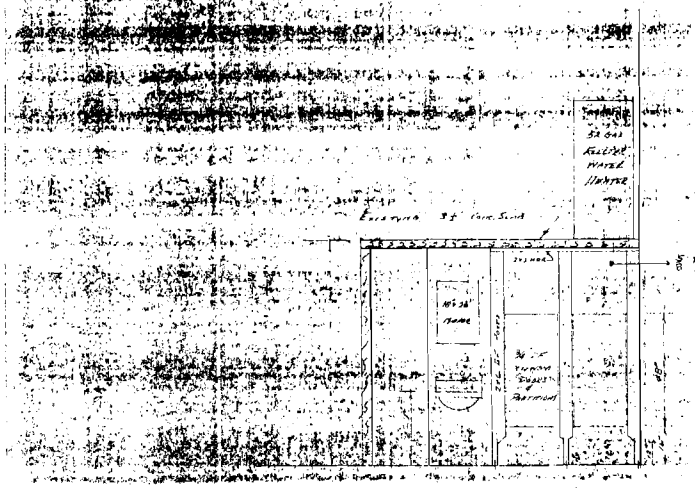
WINDOW SCHEDULE		
A	2'6"x3'	CASEMENT
B	3'-6"x3'	"
C	3'-0"x2'6"	"
D	3'-0"x3'-6"	"



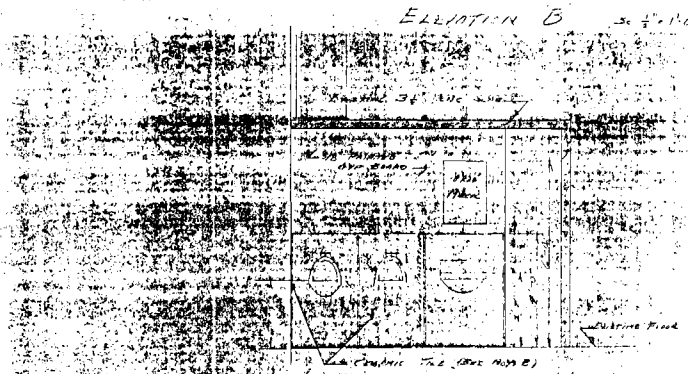
COTTAGE #2 COTTAGE #3

COTTAGES CAPISTRANO SUB.
SCALE 1/4" = 1'-0"

SAN DIEGO GAS & ELECTRIC CO.	
BUILDINGS & GROUNDS DEPT.	
COTTAGES CAPISTRANO SUB	
DRAWN BY CJS	BG-415
SCALE 1/4"=1'-0"	
DATE 6-22-62	



ELEVATION B SC ½" = 1'-0"



NOTES

(A) TOILET PARTITION TO BE ADDITION TO CLEAR WINDOW + WIRING

(B) CERAMIC TILE FOR WALLS SHALL BE 4¼ x 4¼, BRIGHT GLAZED OF STANDARD MFG. DECK TILE TO BE UNGLAZED CERAMIC TILES MFG. FOR FLOOR USE. COLOR TO BE GREY OR BROWN TONES "WHAT EVER MOST AVAILABLE"

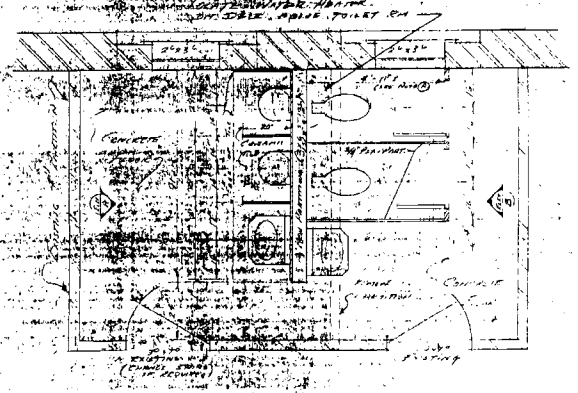
(C) FIXTURES TO BE APPROVED BY ARCHITECT OR EQUAL, AS FOLLOWS

LAVATORY CRANE #F 2223 V.S. W/ CONCEAL # 9500 WHITE OPEN FRONT SEAT & CRANE FLUSH VALVE - ROYAL #412 W/ VACUUM BREAKER

URINALS #F 6240 C W/ CRANE FLUSH VALVE - ROYAL #196 W/ VACUUM BREAKER

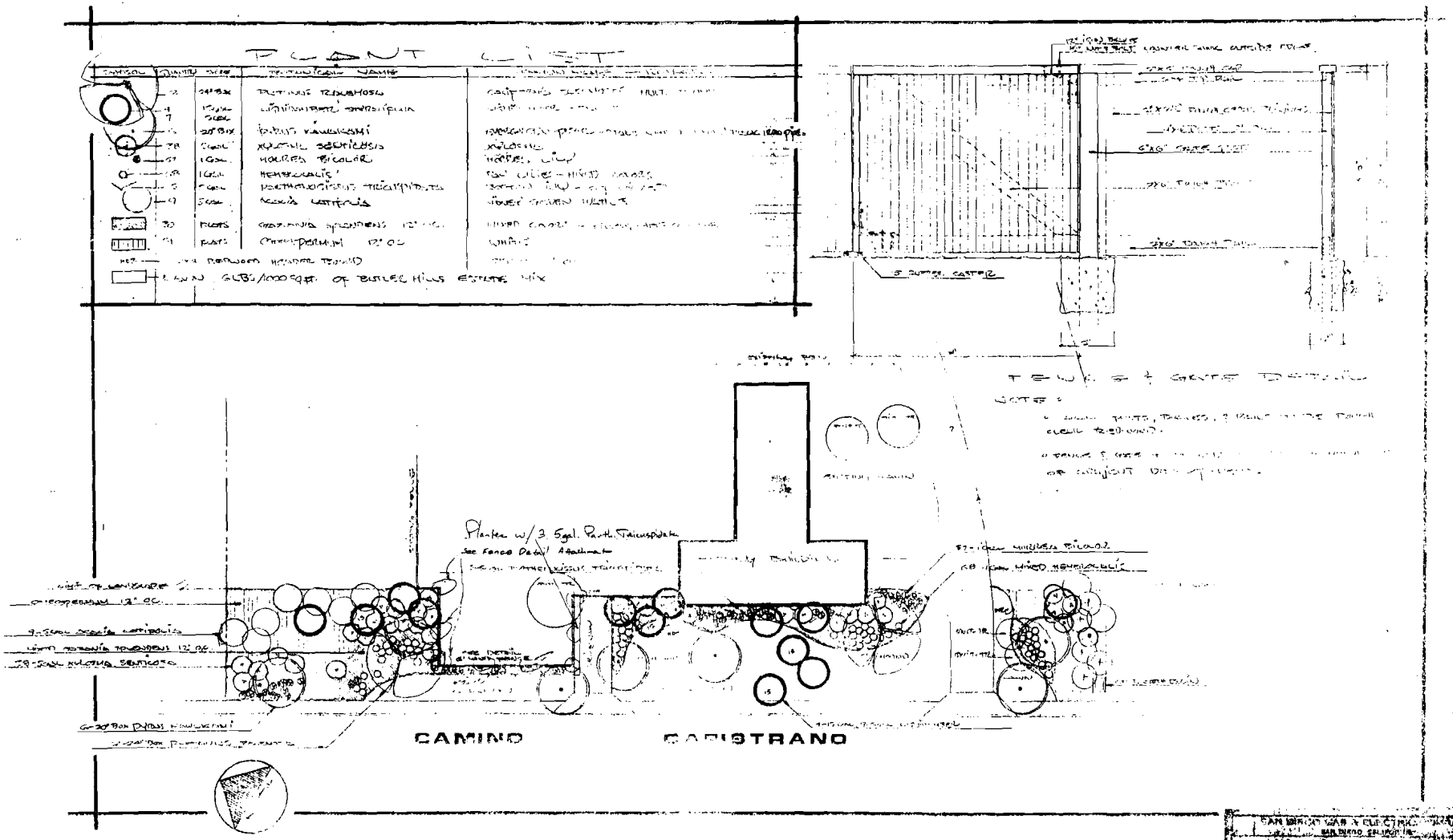
LAVATORIES #F 3969 20"x18" WALL HUNG W/ CONCEALED ARMS #R 2001 & 12 TRAP #F 7201 1¼ x 1½

(D) WATER HEATER TO BE NATIONAL STEEL CORP. CO. ELECTRIC WATER HEATER 52 GAL. MODEL #AEE52 (600 W - 240 V FLAME CLEMENT 3000W LOWER 1½ SINGLE STRIP) - SE REGIN



FLOOR PLAN SC ½" = 1'-0"

SAN DIEGO GAS & ELECTRIC CO.
BUILDINGS & GROUNDS DEPT.

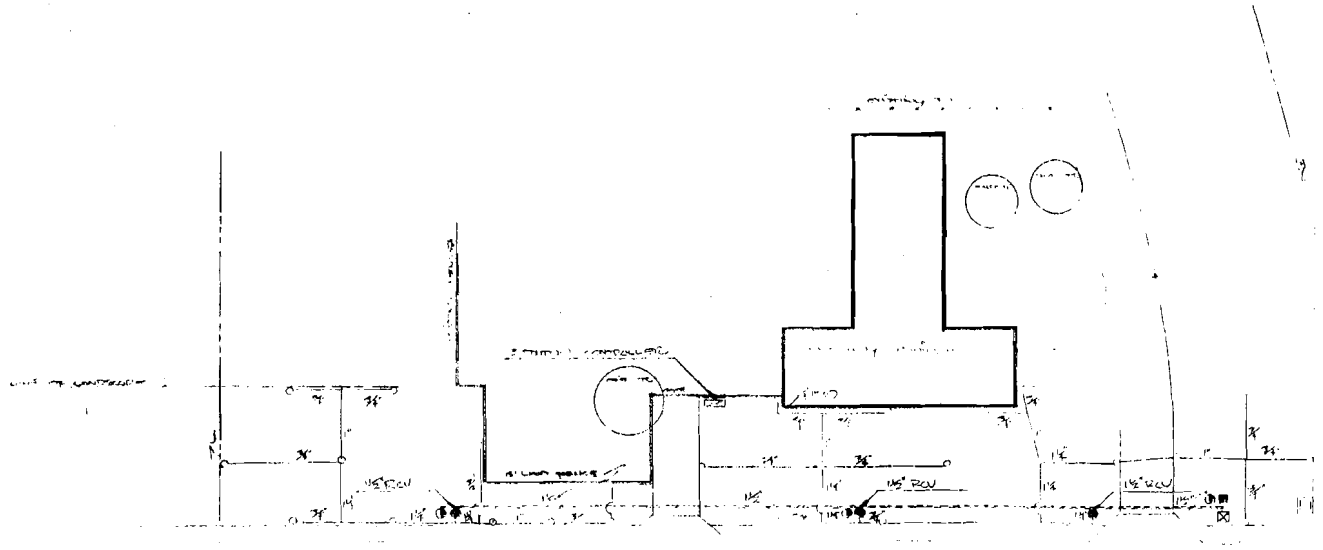

PLANT LIST
Planter w/ 3 5gal. Parth. Tricuspidata
See Fence Detail 4 attachment
CAMINO CAPISTRANO

LEGEND

SYMBOL	DESCRIPTION	MANUFACTURER/MODEL
☒	CONTROL METER	
■	1½" PRESSURE VACUUM BREAKER	CMB 711
●	1½" REMOTE CONTROL VALVES	RAINBIRD 44 SERIES-DIGITAL 3 WAY SOLENOID
◑	3" PLASTIC GATE VALVE	CHRISTY GV4-375 W/LL
○	FLUSHING POP-UP	TORO 324-01, 324-03 & 324-04
⊙	ROTARY POP-UP	TORO 304-01, & 305-01
▭	2 STATION CONTROLLER	RAINBIRD RC 300 TIMER - MOUNT AT TOP OF 1½" GATE VALVE
———	PRESSURE SUPPLY LINES	SCHEDULE 40 PVC
———	NON-PRESSURE SUPPLY LINES	SCHEDULE 40 PVC

NOTES:

- ALL QUICK COUPLER VALVES TO BE ENCLOSED IN 1 CU FT CONCRETE WITH ALL BRASS FITTINGS & NIPPLE.
- ALL RAINBIRD POP UP HEADS TO HAVE 2-3/4" RISERS & 1-1/2" PVC SCHEDULE 40 NIPPLE - SWING JOINT.
- CONTRACTOR TO COMPLY WITH ALL LOCAL & REGULATIONS TOWN, CITY OF SAN JUAN CAPISTRANO.



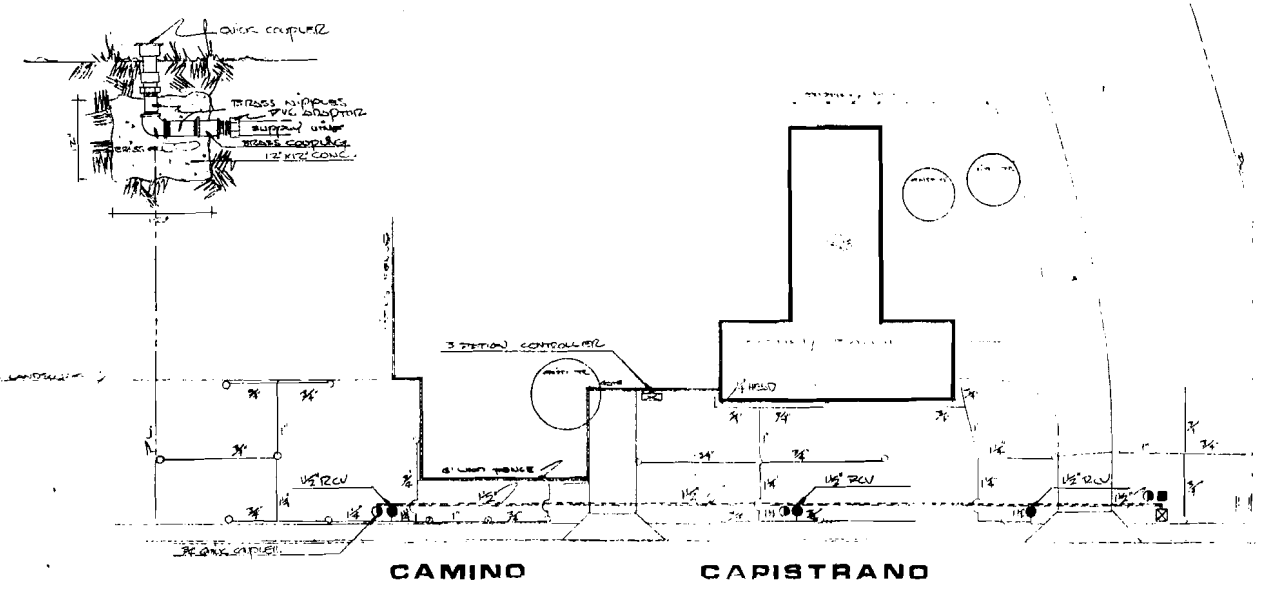
CAMINO CAPISTRANO

LEGEND

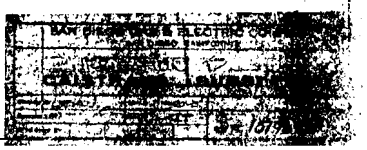
SYMBOL	DESCRIPTION	MANUFACTURER
⊠	WATER METER	
■	1½" PRESSURE VACUUM BREAKER	SHR 711
●	1½ REMOTE CONTROL VALVES	RAINBIRD E SERIES (SUPPLIED BY OWNER)
◑	¾" PLASTIC GASPOWER VALVE	CHAMPION DCV-075-VC SEE DETAIL
○	ROTARY POP-UP	TORO 304-03, 308-03 & 312-03
⊗	ROTARY POP-UP	TORO 304-01, & 308-01
▭	3 STATION CONTROLLER	RAINBIRD RC 3DP FEDERAL MOUNT - SUPPLIED BY OWNER
———	PRESSURE SUPPLY LINES	SCHEDULE 40 PVC
———	NON-PRESSURE SUPPLY LINES	SCHEDULE 40 PVC

NOTES:

1. ALL VALVE BOXES TO BE ANCHORED IN 1 CU FT CONCRETE WITH ALL BRASS FITTINGS & NIPPLES.
2. ALL ROTARY POP UP HEADS TO HAVE 2 - ¾" STREET ELBOWS & 1-¾" x 6" PVC NIPPLE TO NIPPLE - SWING JOINT.
3. CONTRACTOR TO COMPLY WITH ALL RULES & REGULATIONS FOR THE CITY OF SAN JUAN CAPISTRANO.



CAMINO CAPISTRANO



APPENDIX D:

Photographic Record

Signage on South Elevation of SD G & E Building (facing North).

Overview of West Elevation of Building Illustrating Name and Covered Windows (facing East/Northeast).

Overview of West Elevation of SD G & E Building (facing Southeast).

Overview of West Elevation of SD G & E Building (facing Southeast).

Detail of Entry to Eastern Portion of North Elevation, SD G & E Building, San Juan Capistrano (facing Southwest).

Overview fo Western Portion of North Elevation of Ell (facing Southwest).

Detail fo roof Line of SD G & E Building, San Juan Capistrano (facing Northeast).

Detail of Roof Line and Eave on South Elevation of Building (facing North/Northwest).

Detail of Signage on West Elevation (facing Northeast).

Overview of SD G & E Building from Southwest (facing Northeast).

Overview of South Elevation of SD G & E Building (facing North/Northeast).

Detail of Roof Line on South Elevation fo SD G & E Building (facing North).

Covered Window over Bay Doors on South Elevation (facing Northwest).

Utility Hook-ups and Roof Ladder on SD G & E Building (from South; facing Northwest).

Overview of SD G & E Building from Southeast (facing West/Northwest).

Overview of SD G & E Building (facing West/Northwest).

Overviedw of East Elevation of Main Building from East (facing West).

Overview of Main Building and East Ell, SD G & E Building (facing Northwest).

Overview of South Elevation fo Ell (with Altered Window; facing North).

Overview of Southwest Corner of SD G & E Building (facing Northeast).

Overview of North Elevation of SD G & E Building (facing South/Southwest).

Detail of North Elevation (Small Door Added; facing South/Southwest).

Seam in Concrete Illustrating Additional Concrete Sill Development.

Overview of North and East Elevations from East (facing West).

Detail of Concrete Work in Area of Doorway on North Elevation (facing South).

Overview of North elevation of Ell, SD G & E (facing West/Southwest).

Altered Window on North Elevation of Ell (facing South).

Overview of North Elevation of Ell with Altered Window and Added Covered Doorway (facing South).

Overview of North Elevation fo East Ell (facing East/Southeast).

Detail of Drain Pipe and Roof Design at Corner of Main Building and East Ell, SD G & E Building (facing Southwest).

Overview of North Elevation of East Ell, SD G & E Building (facing Southeast).

Overview of North Elevation Illustrating Recessed East Ell, SD G & E Building (facing South/Southwest).

Detail of Scarring on North Elevation where Light Fixture was Removed (facing South),

View of Accessed Doorway on North Elevation of Ell (facing South).

Example of Covered Window on North Elevation of Ell (facing South/Southwest).

Detail of Covered Window on South Elevation of Western Portion fo SD G & E Building (facing West/Southwest).

Overview of Western Portion of the SD G & E Building (facing Southwest).

Overview of Eastern Extent of North Elevation of SD G & E Building, San Juan Capistrano (facing Nouthwest).

Detail of Bay Doors on South Elevation of SD G & E Building (facing Northwest).

Overview of East El from South (facing North).

Overview of South Elevation from Southeast (Facng North).

Overview of Bay Doors on South Elevation of SD G & E Building (facing Northeast).

View of East Elevation fo Ell from Northeast Corner of Building (facing South).

Rear Entry on East Elevation of Ell (facing Southwest).

Exterior Door on East Elevation with Stoop and Railings (facing South).

Overview of East Elevation (facing Southwest).

Overview of Crane within SD G & E Building (facing Southeast).

Exit Door on East Elevation of East Ell, SD G & E Building (facing East).

Detail of Industrial Window with Added Security Bars (West Elevation; facing West).

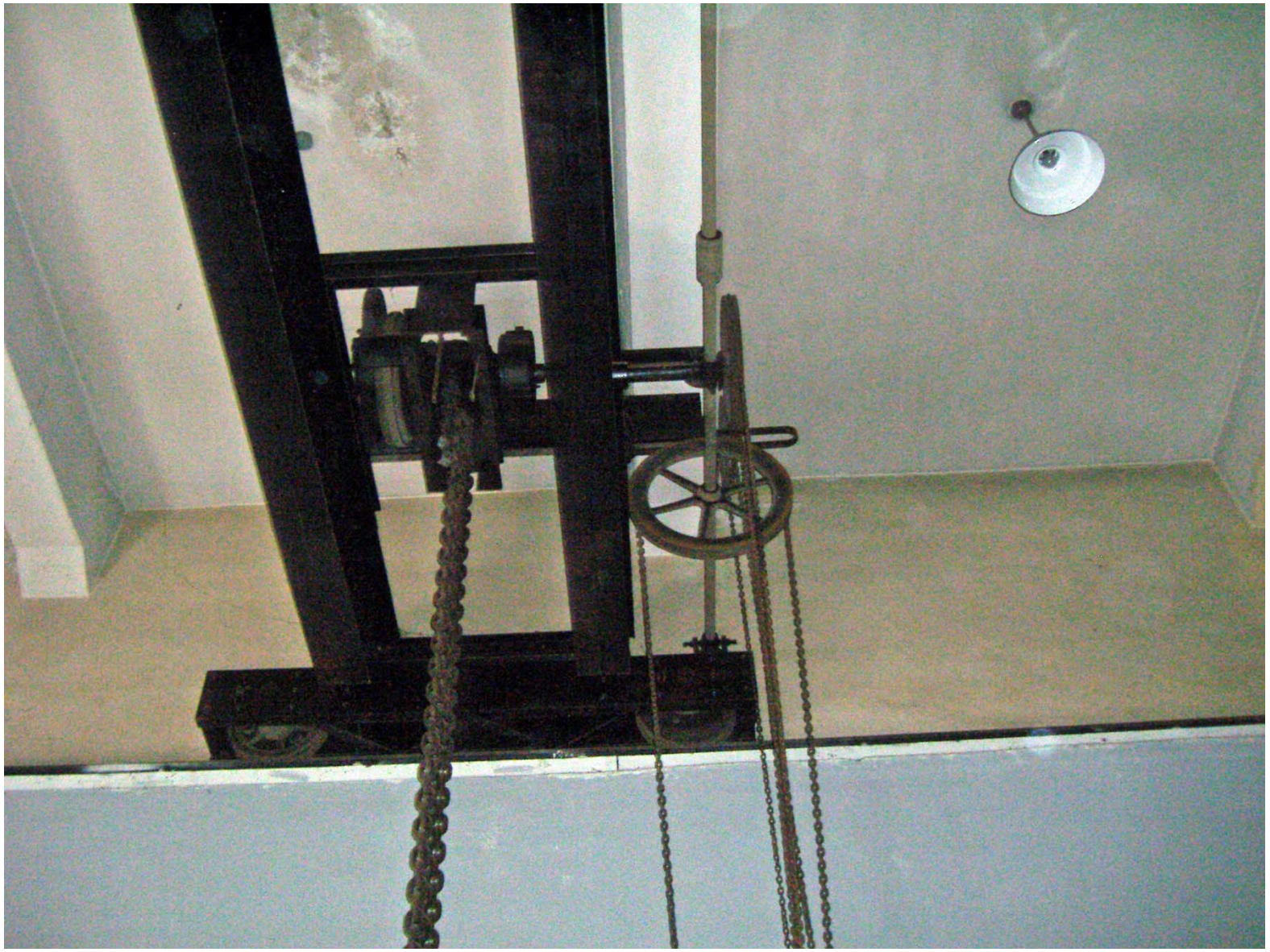
Overview of South Elevation from Interior of SD G & E Building, San Juan Capistrano (facing South).

Example of Industrial Windoe with Crank-Handle Opener, East Elevation from Interior of Building (facing Southeast).

Crane Hook and Chains, SD G & E Building, San Juan Capistrano (facing Southeast).

Overview of North Elevation from Interior of SD G & E Builsing, San Juan Capistrano (facing North).

Dtrail of Fixed Industrial Windows within the SD G & E Buildings, San Juan Capistrano (facing West).



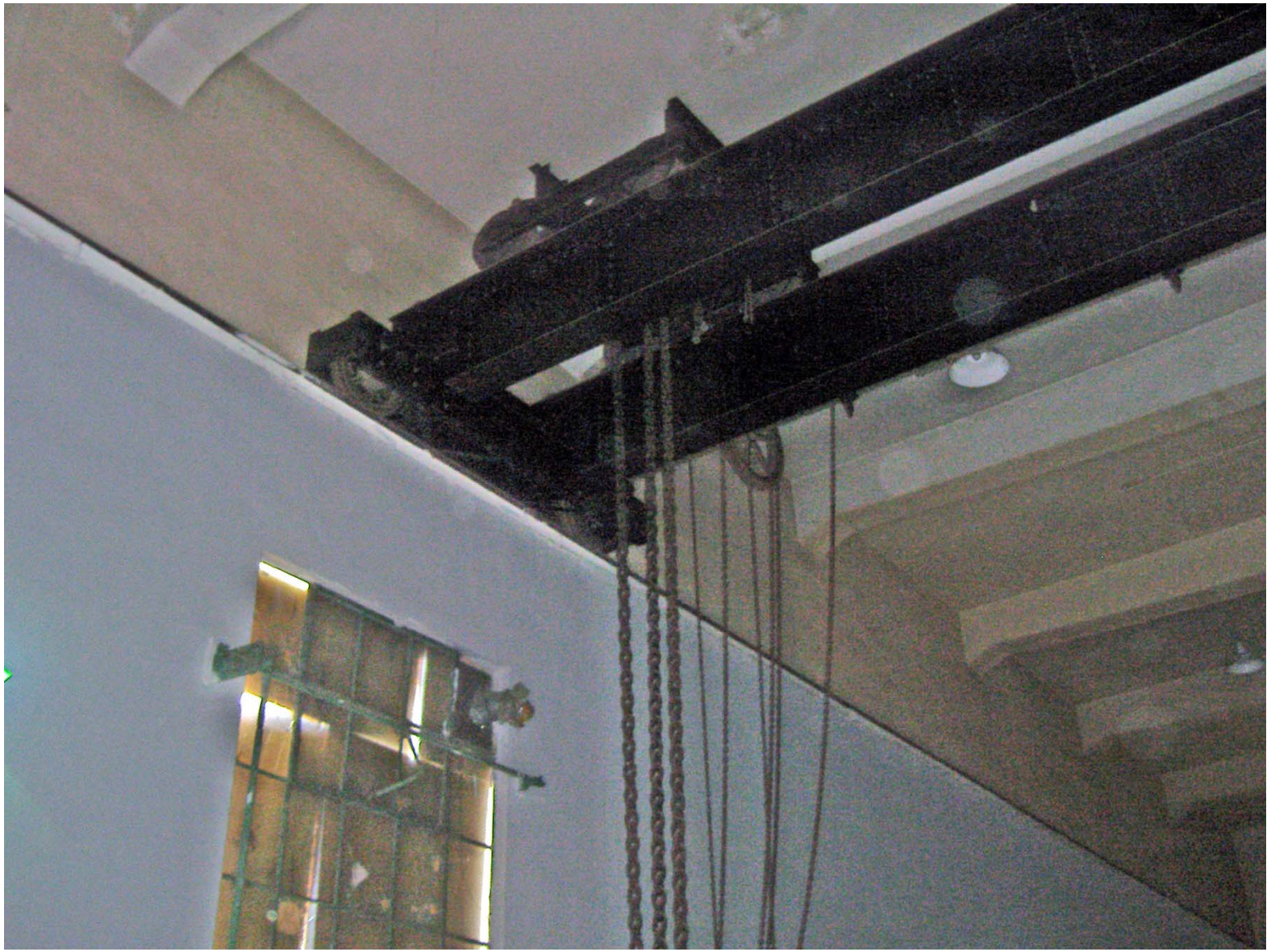
Detail of Crane Pulley System and Tracks along Wall (facing East).

Overview of Interior of SD G & E Building with Crane (facing North).

Detail of Ceiling Beams and Lighting within SD G & E Building.

Overview of Industrial Windows on West Elevation from Interior of SD G & E Building (facing Northwest).

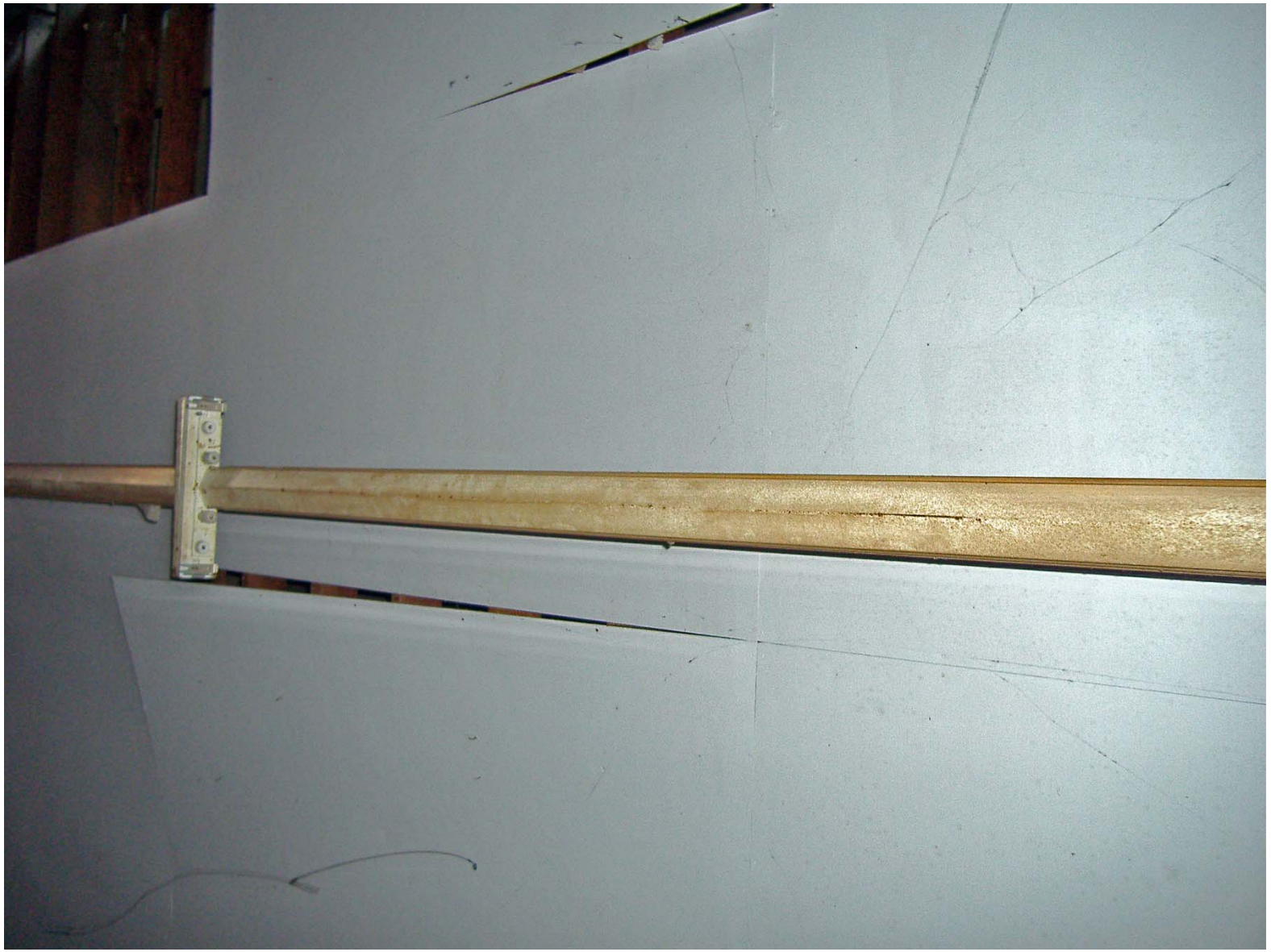
Detail fo Puoured Concrete Floor with Remnants of Rail Tracks (facing North).



Pulley System on Crane within the SD G & E Building in San Juan Capistrano (facing Southeast)

INterior of Main San Diego Gas & Electric Building, San Juan Capistrano (facing South).

Detail of Crane Maker's Mark with SD G & E Building in San Juan Capistrano. (facing South)



Flourescent Light Fixture on Ceiling of Eastern Portion of Building.

Overview of industrial Window on South Elevation of East Ell (facing South).

Example of Industrial Windoe in Northeastern Portion of East Ell (facing North).

Overview of Secondary Offices and Ceiling Beams (facing West).

Stairway Leading to Second Story Offices (facing Northwest).

Concrete Stairway to Second Story Offices (facing North).

Railing Outside Second Story Offices of SD G & E Building (facing Southwest).

Second Story Offices (within East Ell (Original to Design; facing Southwest).

Detail of Sheet-rock Walls in Added Offices within East Ell (facing Southwest).

Overview of North Elevation with Added Covered Entry and Misc. Debris in Yard (facing Southeast).

Interior of East Ell Illustrating Offices and Additional Walls (facing West).

Overview of Second Story Offices (facing North/Northeast).

View of Drive on North Side of SD G & E Building (facing East).

Overview of Wooden Fence on Concrete Sill to North of SD G & E Building (facing North/Northeast).

Overview of Vegetation in Yard to North of SD G & E Building (facing North).

Overview of Yard Area to North of SD G & E Building (facng North).

Broken Concrete Pad Identified as a Garage Area (facing Northeast).

Overview of Main Drive at Camino Capistrano (facing West).

Overview of main Driveway off Camino Capistrano (facing West).

Overview of Yard Area Located North of the SD G & E Building (facing West/Northwest).

Overview of Area East of SD G & E Building and towards Substation Entrance (facing Northeast).

Asphalt road Leading to Modern Substation (facing East).

Overview of SD G & E Building from East (facing West/Northeast).

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May 16, 2013

Ms. Carol Roland-Nawi
State Historic Preservation Officer
Office of Historic Preservation
1725 23rd Street, Suite 100
Sacramento, CA 95816-7100

Subject: Additional information regarding the nomination of the San Diego Gas & Electric Company Capistrano Substation Building to the National Register of Historic Places

Dear Ms. Roland-Nawi:

On April 5, 2013 San Diego Gas & Electric (SDG&E) submitted a notarized letter to the State Office Historic Preservation Officer (SHPO) objecting to the nomination of the San Diego Gas & Electric Capistrano Substation Building to the National Register of Historic Places (NRHP). SDG&E requested that the Office of Historic Preservation (OHP) delay any action pending the receipt and review of additional information from their cultural resources consultant. TRC Solutions, Inc. (TRC) in collaboration with ASM Affiliates (ASM), and specifically, Ms. Shannon Davis Architectural Historian, performed an investigation on behalf of SDG&E, the findings from this investigation are presented in this letter for your review and consideration.

This investigation found no merit in the nomination for the listing of the SDG&E Capistrano Substation building to the NRHP. The structure the nomination refers to as the existing Capistrano Substation is actually a former utility structure that is located on the western portion of the substation property, and has not been actively utilized for utility purposes for over 50 years. The information provided in the nomination does not sufficiently document or demonstrate the structure's eligibility for the NRHP. Further, the nomination is counter to a technical evaluation of the property which found the structure to be ineligible due to lack of integrity (Attachment A: *Historic Property Evaluation: The San Diego Gas & Electric Company San Juan Capistrano Sub-Station*, McKenna, April 21, 2008). Finally, the nomination does not appear to follow the National Park Service's published guidelines for preparing nominations, specifically the *National Register of Historic Places Bulletin 16A: How to Complete the National Register Registration Form*, and the *National Register of Historic Places Bulletin 15: How to Apply the National Register Criteria*. Specific deficiencies include:

1. Section 5: Ownership of Property is incorrect. The property is actually private-and is solely owned by SDG&E.

2. Section 7: Architectural description. There is no identification of character defining features or architectural features that would support the classification of the structure as Georgian Revival.

3. Section 8: No identified area of significance.

4. Section 8: The statement of significance contains inaccuracies such as- the Capistrano Substation was not the main source for electric power for much of Orange County but one of many substations in Orange County circa 1920. San Diego Consolidated Gas & Electric Company, not Southern California Edison Company (SCE), built the transmission line from San Diego to San Juan Capistrano in 1918. Substations are not sources for electricity; they are part of the overall transmission and distribution system.

5. Section 8: The historic context presented to demonstrate this structure's association with significant historic themes and events in local history is insufficient.

6. Section 8: There are no statements or arguments to support how the structure is eligible under Criterion A.

7. Section 8: There is no justification for the period of significance. For the structure to be eligible with a period of significance that extends to present day, Criterion G would have to be met, and is not even addressed.

8. Section 8: No comparison of this structure to similar historic resources.

9. Section 8: No discussion of the seven aspects of integrity.

10. Section 10: Boundary description—there is conflicting information as to what is the extent of the proposed boundary—is it the entire parcel or just the footprint of the structure?

The *National Register of Historic Places Bulletin 16A: How to Complete the National Register Registration Form* states that "Three key concepts—historic significance, historic integrity, and historic context—are used by the National Register program to decide whether a property qualifies for listing." The proposed nomination does not adequately address any of these concepts.

Contrary to the information in the nomination, the structure was originally constructed as part of a SCE facility in 1917, on the western portion of the larger substation property. The structure was operated by SCE until it was purchased by San Diego Consolidated Gas & Electric Company in August, 1928. The property was known as the "Capistrano Substation" and was part of the Santa Ana District for SCE. As-built architectural drawings and historic photographs indicate that the structure originally had "Southern California Edison Company" painted on the west

face; it is believed that the current painted name of "San Diego Gas & Electric Company" replaced that wording after the company adopted that name ca. 1940. It continued to serve as a utility facility until 1964, after which it served as office space, and later was leased to commercial enterprises and used as a storage facility.

The T-shaped structure was just one element of the SCE/SDG&E Substation/facility. The facility originally consisted of the main utility building (structure), a garage, three cottages for on-site employees, a septic tank, two switch frame pads, one transformer pad, two arresters, a water tank, and cooling tower (along with infrastructure improvements. plumbing and wiring), a small orchard, and circulation/driveways. The garage, cottages, water tank, and small orchard no longer exist. The only elements still present besides the structure are several bare concrete pads.

The structure is not within any known historic district, and is not a locally designated historic site in the City of San Juan Capistrano's Inventory of Historical and Cultural Landmarks (IHCL). The structure was included in a local survey list of potential historic resources: the San Juan Capistrano Building of Distinction (BOD) List. According to the San Juan Capistrano General Plan, Cultural Resources Element (page 11) dated December 14, 1999, the BOD list "*serves as an inventory of resources regarded by the Cultural Heritage Commission as potentially eligible for the IHCL list. …it is an honorary designation which imposes no restrictions and conveys no benefits.*" Properties on the BOD are only *potentially* eligible for designation, either for the IHCL, California Register of Historical Resources (CRHR) or NRHP. Properties on the BOD, such as the structure require further evaluation before such a recommendation is to be made.

In 2008, SDG&E hired a qualified archaeologist to conduct a full evaluation to determine eligibility of the structure (see Attachment A). The evaluation is known as the "McKenna Report." The McKenna Report determined that although the former utility structure is significant with respect to Criterion A only, this level of significance will only stand if the resource maintains integrity. The McKenna Report concluded that the structure lacks integrity and, therefore does not meet the minimum requirements for significance under federal guidelines. In 2013, SDG&E retained ASM to review the McKenna Report findings and conduct a site visit to assess the condition of the structure and facility property. ASM' Senior Architectural Historian, Ms. Shannon Davis (Attachment B: Ms. Shannon Davis Resume) who exceeds the Secretary of the Interior's Professional Qualifications for Architectural Historian and Historian, concurred that while the structure and former potential district could have been eligible under Criterion A, the loss of integrity leaves the structure ineligible.

By definition, integrity is the ability of a property to convey its significance. To retain historic integrity, a property will always possess several, and usually most, of the seven aspects of integrity. Essential features must be present. Intrusions and missing elements reduce integrity. The McKenna Report addressed each of the seven aspects of integrity and found that the former utility structure met only two of the seven aspects. The application of materials was found to be vague because some of the significant elements of the original design no longer exist. Ms. Davis also

considered the integrity of the property, and provided more detailed analysis of each of the seven aspects of integrity:

1. Location: The structure is in its original location and reflects its original footprint (exterior dimensions), and as such its integrity of location is good.

2. Design: Damage/removal of some of the features of the structure negatively affects its integrity. Specifically, the design of the building has been altered by the loss of most of the doors and some windows (affecting the original symmetry of the design, as well as the loss of other minor building elements. Notably almost all machinery (save for the hoist) that was integral to the structure's design and function have been lost, elements of the design of the structure that would have directly related to/reflected its potential historical significance were they intact. The interior was substantially changed by the addition of a 2nd floor (later removed) to change the use of the structure for regional office space in the 1960s.

3. Setting: Changes to the historic setting of the Capistrano Substation complex and structure negatively affect this aspect of integrity. The setting of the complex was originally an undeveloped natural setting—as this structure was located on the periphery of the community. The historical setting has experienced a loss of integrity since the complex was originally utilized as a switching station, and was later enlarged and converted to a substation, and also due to residential development to the north, west and south. The loss of all of the other elements of the Capistrano Substation complex has negatively altered the setting of the structure.

4. Materials: The integrity of materials for the structure is questionable due to damage/removal of most of the doors, some windows, gutters, fixtures, and most notably, almost all of the mechanics/machinery.

5 Workmanship: Because of the loss of some materials, there is concurrent loss of some of the workmanship that was employed in the construction of the structure. Further, because of damage to the remaining materials, the structure is less able to convey the workmanship employed in its construction.

6. Feeling: The feeling for the structure is also negatively impacted by the loss of most of the complex, as well as its loss of some features and interior mechanics.

7. Association: While the structure retains integrity of location, it has experienced various degrees of loss of integrity of design, setting, materials, workmanship, and feeling, and as such does not retain overall integrity of association.

In summary, when considering whether or not a property retains integrity, the criterion for which it is eligible must be taken into account. For properties eligible under Criterion A, the resource should retain a high degree of integrity including

location, setting, feeling, and association, as well as good integrity of design, materials, and craftsmanship. While the structure retains integrity of location, it has experienced various degrees of loss of integrity, setting, feeling, and association (the most important aspects for it to retain to be eligible) as well as loss of integrity of design, materials, and workmanship. As such, the structure does not retain sufficient integrity for eligibility.

As noted above, the information provided in the nomination does not demonstrate that the former utility structure is a National Register eligible property. The structure does not possess the characteristics necessary for a finding of significance. Finally, the structure is not considered eligible under Criterion A, as it does not retain sufficient integrity.

Thank you for your consideration of this additional information regarding the nomination of the Capistrano Substation. If you have any questions or require any further information please contact SDG&E's Archaeologist Rachel Ruston at (619) 822-6786 or rruston@semprautilities.com.

Sincerely,

Susan Underbrink

Susan Underbrink M.A., RPA
Project Manager Archaeology

cc: Mr. Jay Correia, State Historian III (w attachments)
Ms. Pamela J. Fair, Vice President, SDG&E (w/o attachments)
Mr. Scott Pearson, Director (w/o attachments)
Ms. Rachel Ruston, Archaeologist, SDG&E (w/o attachments)
Ms. Edalia Olivo-Gomez, Environmental Specialist, SDG&E (w/o attachments)
Ms. Mary Turley, Project Manager, SDG&E (w/o attachments)
Ms. Shannon Davis, Architectural Historian, ASM (w/o attachments)

References

Byrnes, Ilse.
2013 San Diego Gas & Electric Capistrano Substation Nomination to the National Register of Historic Places.

City of San Juan Capistrano
1999 *San Juan Capistrano General Plan*. http://www.sanjuancapistrano.org/index.aspx?page=644 Accessed on 4/2/13.

Larking, Gail
1928 Southern California Edison Company letter to Mr. W. L. Parcey dated August 30, 1928 re the sale of the San Juan Capistrano properties to San Diego Consolidated Gas And Electric Company, includes a copy of the contract for sale.

McKenna et al.
2008 Historic Property Evaluation: The San Diego Gas & Electric Company San Juan Capistrano Sub-Station at 31050 Camino Capistrano, San Juan Capistrano, Orange County, California.

National Park Service.
2002 *National Register of Historic Places Bulletin 15: How to Apply the National Register Criteria.* *http://www.nps.gov/nr/publications/bulletins/nrb15/* accessed multiple days in March and April, 2013

1997 *National Register of Historic Places Bulletin 16A: How to Complete the National Register Registration Form.* *http://www.nps.gov/nr/publications/bulletins/nrb16a/* accessed multiple days in March and April, 2013

Southern California Edison.
1924 Property Data-Southern California Edison Company, January, 1924. Los Angeles, CA

http://www.edison.com/files/backgrounder_mtview_historic.pdf. Accessed on 4/2/13

Attachment A: Historic Property Evaluation

Attachment B: Ms. Shannon Davis Resume

Shannon E. Davis, M.A., RPH
Architectural Historian/Historian

Firm Name: ASM Affiliates, Inc., Pasadena, California

Total Years of Experience: 16

Employment History:

2010-2013	Architectural Historian/Historian, ASM Affiliates, Inc., Pasadena, California
2008-2009	Senior Account Executive, Heritage Travel, a subsidiary of the National Trust for Historic Preservation, Los Angeles, California
2007-2008	Historic Preservation Specialist, American Battlefield Protection Program, National Park Service, Washington, District of Columbia
2006-2007	Project Manager, History Program and HABS/HAER/HALS/CRGIS, National Park Service, Washington, District of Columbia
1998-2006	Historian, National Register of Historic Places, National Park Service, Washington, District of Columbia
1996	Assistant Site Manager, Marietta Manor, Prince George's County, Maryland

Education:

M.A.	1998/Historic Preservation/George Washington University, Washington, D.C.
B.A.	1993/American History/University of Southern California, Los Angeles (Cum laude with honors)

Registrations

2011	Register of Professional Historians (No. 613)

Additional Training:

2012	National Preservation Institute Seminar on Renewable Energy Development: Impacts on Cultural Resources
2011	California Preservation Foundation Workshop on CEQA
2010	California Preservation Foundation Workshop on Cultural Landscapes
2010	California Preservation Foundation Workshop CA Historical Building Code

Professional Memberships:

Member/Society of Architectural Historians
Member/Vernacular Architecture Forum
Member/National Trust for Historic Preservation
Member/California Preservation Foundation
Member/Los Angeles Conservancy

Other Capabilities: Proficient in Windows and Macintosh platforms
Proficient in Word, Excel, Powerpoint, Photoshop, Fireworks, Dreamweaver and Salesforce
Working knowledge of with Access, File Maker, GIS, GPS, Common Spot (CMS) and Flash

Awards/Commendations:

Awards from Keeper of the National Register for exemplary service
Award from National Park Service Director for contributions to Cultural Resources web team
Award for recognition of service to Arlington Heritage Alliance

Citizenship: USA

Languages: Proficient in Spanish

References:

Tanya Gossett, Historic Preservation Planning Program, NPS, 202-354-2024

Beth Savage, Federal Historic Preservation Officer, U.S. GSA, 202-208-1936

Carol Shull, Acting Keeper of the National Register, NPS, 202-354-2234

Richard Longstreth, Director, George Washington Uni. Preservation Program, 202-994-6098

Michael Leventhal, Arlington Co. Historic Preservation Program Coordinator, 703-228-3813

Professional Profile:

Ms. Davis has 16 years of experience in the field of historic preservation. She has an MA in Historic Preservation/American Studies from George Washington University, where she wrote her master's thesis on the architectural history of drive-in theaters, and a B.A. in American History from the University of Southern California. As an Architectural Historian at ASM, Ms. Davis has documented and evaluated numerous cultural resources for California Environmental Quality Act (CEQA) compliance, Historic Structures Reports (HSRs), Historic American Building Survey (HABS), National Register of Historic Places (NRHP), and Section 106 review. Recent projects include a comprehensive city-wide survey of Chula Vista; successfully listing a property in the California Register of Historical Resources (CRHR); preparing NRHP nominations for a historic highway and a historic residential district; developing the historic context of Los Angeles military history for Survey LA; and preparing planning documents for several California Naval bases.

Before joining ASM, Ms. Davis worked for the National Trust for Historic Preservation as their west-coast representative for heritage tourism. Much of Ms. Davis's professional experience is with the cultural resources programs of the National Park Service (NPS). For eight years she

worked for the NRHP as an Historian. She also worked as a Historic Preservation Specialist and Project Manager for three other NPS programs: American Battlefield Protection Program, NPS History Program and HABS/HAER/HALS/CRGIS. Ms. Davis has experience with the operational requirements of a historic site, through her position as Assistant Site Manager of the 1812 Federal home of Supreme Court Justice Gabriel Duvall. Additionally, Ms. Davis served for several years as Chair of a local preservation advocacy group, the Arlington Heritage Alliance, and was one of the founders of the national non-profit Recent Past Preservation Network.

Selected Project Experience:

Impacts Assessment for Renovation of AMK Ranch Historic District, University of Wyoming and Walsh Environmental, Grand Teton National Park, Wyoming, 2012. As Project Manager and Senior Architectural Historian, assessing and evaluating impacts on the historic AMK Ranch Historic Distric for three project alternatives for their renovation and expansion , in support of an Environmental Assessment (EA). Coordinating consultation with the Wyoming State Historic Preservation Office (SHPO). Performing on-site survey of the project area and preparing technical report for direct and indirect visual impacts. Client Reference: Maureen O'Shea-Stone, Walsh Environmental, (303) 443-3282

Maintenance Plan for Naval Postgraduate Engineering Historic District, Naval Support Activity Monterey, NAVFAC SW, Monterey, California, 2012. As Project Manager, facilitate and oversee the condition assessment of five mid-century educational buildings and make prioritized recommendations for their on-going maintenance, in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties*. Developed in partnership with historic architects and structural engineers. Prepared in support of Section 106 and 110 of the National Historic Preservation Act (NHPA). Client Reference: Dr. David Sproul, NAVFAC SW, (619) 532-2819

Historic American Engineering Record (HAER) Documentation for Jet Propulsion Lab (JPL) Facility, Edwards Air Force Base, Kern County, California, 2012. As Project Manager and Senior Architectural Historian, documented mid-twentieth century aeronautics testing facility through field documentation, review of architectural plans, and archival research. Facilitated recommendations for documentation with west-coast NPS regional staff. Provided HAER Level II and Level III documentation for 40 buildings and structures, including archival photographic documentation, outline and short-form historical reports, and hand-drawn sketch plans or reproduction of architectural plans and drawings. Client Reference: Chris Wilson, Edwards Air Force Base, (661) 277-1479

Integrated Cultural Resource Management Plan (ICRMP) for Marine Corps Mountain Warfare Training Center, Bridgeport, NAVFAC Southwest, Mono County, California and Nevada, 2012. As Project Manager and Senior Architectural Historian, compiling ICRMP in collaboration with installation staff. Working with Marine Corp to establish cultural resource and preservation goals and objectives. Synthesizing previous studies to develop one comprehensive planning document for installation that has not heretofore had any preservation management plan. Client Reference: George Herbst, NAVFAC Southwest, (619) 532-3146

Citywide Historic Resources Survey for the City of Chula Vista, California, San Diego County, California, 2012. As Senior Architectural Historian, conducted a reconnaissance survey of more than 12,000 parcels and intensive survey of more the 350 parcels, based on a historic context developed as part of the project for the City of Chula Vista. Solicited public input on and presented findings of the survey in a series of public meetings. Made recommendations of local, state, and national eligibility. In addition to a final survey report, prepared a comprehensive survey database as well as web-based interactive photograph and maps. Client Reference: Lynnette Tessitore-Lopez, City of Chula Vista, (619) 409-5465

Historical Resources Evaluation Report (HRER), Historical Resources Compliance Report (HRCR), and Treatment Plan for the Rancho Lilac Historic District, Caltrans, Valley Center, California, 2012. As Senior Architectural Historian, evaluated the eligibility of 27 built environment resources for the NRHP and as California Historic Landmarks prior to transfer of ownership. Recommended an eligible historic district with three periods of significance: the pioneer homesteading period (1880s-1900), early community and ranching period (1900-1945), and Irving Salomon's association with the property (1945 to 1966). Also prepared Treatment Plan recommending protective easements and covenants to ensure preservation of the district after transfer of ownership. Recommended *Rehabilitation* as the appropriate treatment standard and adherence to the Secretary of the Interior's (SOI) *Standards for the Treatment of Historic Properties*. Project conducted to comply with Public Resources Code (PRC) 5024. Client Reference, Karen Crafts, Caltrans, (619) 688-0188

NRHP Nomination and HABS Documentation for Berylwood Historic District, San Diego Military Family Housing, Naval Base Ventura, Port Hueneme, Ventura County, California, 2012. As Project Manager and Senior Architectural Historian, documented, researched, and reevaluated the 10-acre Berylwood Historic District to prepare an amended NHRP nomination and new HABS documentation of the district that included the 1912 Myron Hunt designed mansion built for prominent local developer and U.S. Senator, Thomas Bard, a second home built 1910-1925 for son and local businessman Richard Bard, as well as supporting structures and the cultural landscape associated with the estate. Developed and presented keynote address for centennial celebration of the construction of the house. Client Reference: Regina Clifford, San Diego Military Family Housing, (760) 400-8192

NRHP Nomination for U.S. Highway 80 in California, Sunrise Powerlink , San Diego and Imperial Counties, California, 2012. As Senior Architectural Historian, evaluated the 186 –mile California segment of U.S. Highway 80, one of the earliest all-weather coast-to-coast highways in the United States. Developed NRHP nomination and supporting materials. Recommended an eligible historic district with contributing constructed during the period of significance (1926-1964) that include 42 bridges and culverts and 186 miles of the road from San Diego to Yuma (both current and abandoned segments of the road). Client Reference: Dayle Cheever, Sunrise Powerlink, (858) 654-1856

Military Context for Survey Los Angeles, City of Los Angeles Office of Historic Preservation, Los Angeles County, California, 2012. As Project Manager and Senior Architectural Historian, prepared pro-bono historic context statement for military history of Los Angeles in support of

ongoing citywide-survey, Survey LA. Client Reference: Janet Hansen, City of Los Angeles, (213) 978-1191

ICRMP for Detachment Fallbrook, NAVFAC Southwest, San Diego County, California, 2011. As Senior Architectural Historian, compiled ICRMP in collaboration with installation staff. Advised client on recommended content, synthesized sections, and prepared three iterations of the plan, incorporating comments from client. Client Reference: Sara Reed, NAVFAC Southwest, (619) 532-4255

Historic Structure Report (HSR) for Building 1133 (1st Marine Corps Division Headquarters), MCB Camp Pendleton, NAVFAC Southwest, San Diego County, California, 2011. As Senior Architectural Historian, prepared HSR to evaluate and assess the architectural and structural state of Building 1133 to establish guidelines and priorities for maintenance and rehabilitation activities. Conducted in compliance with Sections 106 and 110 of the National Historic Preservation Act (NHPA). Client Reference: Alex Bethke, NAVFAC Southwest, (619) 532-2789

HSR for Building 51811 (San Onofre Beach Club), NAVFAC Southwest, MCB Camp Pendleton, San Diego County, California, 2011. As Senior Architectural Historian, prepared HSR to evaluate and assess the architectural and structural state of Building 1133 to establish guidelines and priorities for maintenance and rehabilitation activities. Conducted in compliance with Sections 106 and 110. Client Reference: Alex Bethke, NAVFAC Southwest, (619) 532-2789

HABS Documentation for the Cienega Elementary School, PMC World, Los Angeles, Los Angeles County, California, 2011. As Project Manager and Senior Architectural Historian, documented 1923 elementary school, with features of the Classical Revival and Spanish Colonial Revival styles. Field survey included sketch plan, detailed field notes, and archival research. Documentation prepared to HABS Level II standards. Client Reference: Mark Teague, PMC, (530) 239-0202

Historic Resources Evaluation Report (HRER) for Collier Park, Atkins, City of La Mesa, San Diego County, California, 2011. As Senior Architectural Historian, surveyed, documented, and evaluated 7.7-acre park, portions of which were established in 1910. Report prepared in accordance with CEQA and Section 106 of NHPA prior to the park's redevelopment. Client Reference: Diane Catalano, Atkins, (858) 514 1010.

Built Environment Assessment for Gregory Canyon Landfill Project, PCR Services, San Diego County, California, 2011. As Senior Architectural Historian, surveyed, documented, and evaluated two dairy complexes and associated buildings, of which one complex was recommended eligible. Report prepared in accordance with CEQA and Section 106 of the NHPA prior to the parcel's redevelopment. Client Reference: Luci Hise, PCR Services, (310) 451-4488

Treatment Plan for 918 Discovery Street, City of San Marcos, San Marcos, California, 2011. As Senior Architectural Historian, surveyed, documented, and evaluated residential building prior to

its proposed relocation. Made recommendations for project preparation and execution, and future rehabilitation of the building with specific treatment recommendations for the building's character-defining features. Client Reference: Susan Vandrew-Rodriguez, City of San Marcos, (760) 744-1050 ext. 3237

HRER for the California Valley Solar Ranch Project, Ecology and Environment, Inc., San Luis Obispo County, California, 2011. As Senior Architectural Historian, consulted on and edited evaluation of a four-mi. segment of Highway 58, and two gypsum strip mines for a solar project in the California Valley for Sunpower. Client Reference: Karen Ladd, Ecology and Environment Inc., (619) 696-0578.

HRER for 6940 Otay Mesa Road, Rabago Otay Technical Business Park, RBF Consulting, San Diego County, California, 2011. As Senior Architectural Historian, documented and evaluated mid-20th-century farmstead including ranch house and barns for eligibility for NRHP, CRHR, San Diego County Local Register of Historical Resources, and the County of San Diego Resource Protection Ordinance (RPO) in accordance with CEQA. Client Reference: Alex Jewel, RBF Consulting, (858) 614-5085

Impacts Assessment for SDG&E East County Substation Project, Insignia Environmental and SDG&E, San Diego County, California, 2011. As Senior Architectural Historian, consulted on and edited an evaluation and visual impacts assessment of a 13-mi. segment of historic Old Highway 80. Insignia Environmental requested this assessment for their powerline project in east San Diego County. Client Reference: Anne Marie McGraw, Insignia Environmental, (650) 321-6787

Inventory, Evaluation, and Analysis of Effects on Historic Built-Environment Properties, Centinela Solar Energy, LLC, Imperial County, California, 2011. As Senior Architectural Historian, evaluated 16 resources within a solar project area in Imperial County and assessed the effects of the project on those resources recommended as historically significant. Client Reference: Dave Wilson, LS Power Development, LLC, (636) 534-3221.

Inventory, Evaluation and Analysis of Effects on Historic Built Environment Properties for the Imperial Solar Energy Center West and South Projects, LightSource Renewables, LLC, Imperial Valley, California, 2011. As Senior Architectural Historian, surveyed, documented, and evaluated resources within a solar project area in Imperial County and analyzed the effects of the project on those resources recommended as historically significant for CSolar Development, LLC. Client Reference: Paul Whitworth, LightSource Renewables, LLC, (650) 248-6951

Documenting the Colorado River Front Work and Levee System (CRFWLS): A Historic Context and Inventory, Bureau of Reclamation, San Bernadino, Riverside, and Imperial counties, California, and Yuma, La Paz, and Mojave counties, Arizona, 2011. Consulted on, reviewed, and edited, report providing context for and documenting the CRFWLS.

HSR, Maravilla Handball Court and Market, LA Conservancy, East Los Angeles, Los Angeles County, California, 2011. As Project Manager and Senior Architectural Historian, surveyed, evaluated, researched, and prepared HSR and California Register of Historical Resources

(CRHR) nomination for a 1928 handball court and associated commercial and residential building as a pro-bono project for Los Angeles Conservancy. Evaluated for eligibility for CRHR and NRHP. Property was successfully designated on CRHR in 2012. Report prepared to assist with preservation efforts for neighborhood recreation and community center. Client Reference: Marcello Vavala, LA Conservancy, (213) 430-4217

Section 106 Review and Recommendations, San Diego Military Family Housing, San Diego County, California, 2012. Review of multiple undertakings within historic districts at California Naval and Marine Corp Bases. Make recommendations of effect, consistent with the programmatic agreements governing undertakings at the specific military installation as well as *Secretary of the Interior's Standards for the Treatment of Historic Properties*. Client Reference: Regina Clifford, San Diego Military Family Housing, (760) 400-8192

Convair Lagoon Alternative Analysis of Historic Resources, Atkins, San Diego County, California, 2011. As Senior Architectural Historian, consulted on, reviewed, and edited evaluation of seaplane ramp and pier located in a lagoon formerly owned by the now defunct aircraft manufacturer Convair in the San Diego Bay. Atkins requested a historic built environment study for the proposed demolition of both structures for future redevelopment project. Client Reference: Hannah Arkin, Atkins, (858) 514-1028.

ICRMP for MCAS Miramar, NAVFAC Southwest, San Diego County, California, 2011. As Senior Architectural Historian, addressed comments and finalized ICRMP for base facilities. Client Reference: George Herbst, NAVFAC Southwest, (619) 532-3146

Historic Context and Eligibility Criteria for Puget Sound Dikes, U.S. Fish and Wildlife Service, Multiple Counties in Puget Sound, Washington, 2011. As Senior Architectural Historian, assisted with research to develop historic context for late-nineteenth- and early-twentieth-century dikes that contributed to the agricultural development of the Puget Sound region of northwestern Washington. Developed NRHP eligibility criteria as a management tool for USFWS for future compliance with Section 106 of the NHPA.

HRER for Fort Yuma Healthcare Center, HKM Dowd, Winterhaven, Imperial County, California, 2010. As Senior Architectural Historian, surveyed, evaluated, and edited report for nine buildings on the 1.9 acres at Fort Yuma. Field survey included consultation with Quechan tribe. HSR prepared in support of an Environmental Assessment (EA) for potential demolition, including one contributing building to the Yuma Crossing National Historic Landmark (NHL) historic district. Client Reference: Celia Adams, Dowd HKM, (520) 882-8696

Due Diligence Report for the Renovation of the Imperial Beach Library, RBF Consulting, San Diego County, California, 2010. As Architectural Historian, evaluated the potential for historical significance of the subject property by conducting a constraints analysis to provide baseline information on the architect of record, date of construction, and potential eligibility to the CRHR. Client Reference: Jeff Barfield, RBF Consulting, 858-614-5027

Cultural Resources Survey for 203 E. Olive St., San Marcos, The Planning Center, San Diego County, California, 2010. As Architectural Historian, evaluated and prepared survey report for

one-acre parcel with three agricultural buildings, including 1898 farm house. In compliance with CEQA, each building was evaluated for eligibility for the NRHP, CRHR, and as a CEQA historic resource. Client reference: Alice Houseworth, The Planning Center, (714) 966-9220

Cold War Historic Context for NAWS China Lake, Epsilon Systems Solutions, NAWS China Lake, San Bernardino County, California, 2010. As Architectural Historian, consulted on and edited historic context (1943-1989) prepared for updated inventory and evaluation of two historic districts listed in the NRHP. Context developed for one of the most significant World War II and Cold War research, development, testing, and evaluation facilities in the country. Client reference: Phillip Seven Esser, Epsilon Systems Solutions, (760) 446-6400

HABS Documentation for the American Legion Hall, City of Vista, Vista, San Diego County, California, 2010. As Architectural Historian, documented art deco American Legion Hall to HABS Level III standards. Field survey included photography, sketch plan, detailed field notes, and archival research. Edited survey report, including historical and architectural information prepared to HABS Level II standards. Client Reference: John Hamilton, City of Vista, (760) 726-1340, x 1215

HSR for Palomar College, Palomar College, San Marcos, San Diego County, California, 2010. As Architectural Historian, consulted on and reviewed HSR for seven buildings at Palomar College. In compliance with CEQA, each building was evaluated for eligibility for the NRHP, CRHR, and as a CEQA historic resource. Client Reference: Don R. Thompson, Palomar College, (760) 744-1150 x 2266

Survey Eligibility and Update of NRHP Eligibility of 73 Buildings at Naval Weapons Station Seal Beach, Detachment Corona, NAVFAC Southwest, Riverside County, California, 2010. As Field Director, surveyed 247 acre site to assess NRHP eligibility of 73 buildings, structures, and landscape features, within careful consideration of the site as a cultural landscape. Authored evaluation report, considering potential national, state, and local significance for three distinct periods of significance from 1927 to 1989. Client Reference: Alex Bethke, NAVFAC Southwest, (619) 532-2789

Tenth Avenue Marine Terminal Historical Assessment, Atkins, San Diego, California, 2010. As Architectural Historian, evaluated mid-twentieth century maritime industrial buildings that served as transit sheds and warehouses. Conducted research and fieldwork to determine the buildings' architectural significance and eligibility for the CRHR. Client Reference: Kate Gentles, Atkins, (760) 603-6029

Historic Building Maintenance Plan, Herrmann Hall (Building 220), Naval Postgraduate School, NAVFAC Southwest, Monterey, California, 2010. As Architectural Historian, assisted with preparation of maintenance plan for late nineteenth-century Spanish Mediterranean Revival-style former hotel building. Client Reference: Alex Bethke, NAVFAC Southwest, (619) 532-2789

ICRMP for Naval Base San Diego, NAVFAC Southwest, San Diego County, California, 2010. As Architectural Historian, prepared ICRMP for base facilities including Naval Station San Diego, Mission George Recreational Center, and Broadway Complex. Advised client on

recommended content, conducted interviews, reviewed and synthesized previous cultural resource studies, and wrote three iterations of the plan, incorporating comments from client. Client Reference: Dr. Andy Yatsko, NAVFAC Southwest, (619) 532-2800

ICRMP for Naval Base Coronado, NAVFAC Southwest, San Diego County, California, 2010. As Architectural Historian, prepared ICRMP for base facilities including NAS North Island, Naval Amphibious Base Coronado, Naval Radio Receiving Facility, Outlying Landing Field Imperial Beach, and Special Warfare Mountain Training Center La Posta. Advised client on recommended content, conducted interviews, reviewed and synthesized previous cultural resource studies, and wrote three iterations of the plan, incorporating comments from client. Client Reference: Dr. Andy Yatsko, NAVFAC Southwest, (619) 532-2800

ICRMP for Naval Base Ventura County, NAVFAC Southwest, Ventura County, California, 2010. As Architectural Historian, assisted with preparation of final drafts of ICRMP for base facilities including NAS Point Mugu, CBC Port Hueneme, Laguna Peak, Catalina Heights housing area, and the Camarillo Airport. Prepared three iterations of the plan, incorporating comments from client. Client Reference: Dr. Andy Yatsko, NAVFAC Southwest, (619) 532-2800

2345 S. Gaffey Historic Resources Report, 2345 Gaffey Avenue, LLC/Netarq Design Group, San Pedro, Los Angeles County, California, 2010. As Architectural Historian, assisted with the preparation of a report to private property owner for CEQA compliance. Conducted research and prepared written report detailing the building's architectural significance and eligibility for the NRHP, CRHR, Los Angeles Historic-Cultural Monument, and a Historic Preservation Overlay Zone. Client reference: Juan Garcia-Maruri, netarq design group, inc., (310) 866-6464

National Trust for Historic Preservation

Heritage Travel, National Trust for Historic Preservation, Los Angeles, California, 2008-2009. As Senior Account Executive, worked with west-coast communities and destinations to improve their marketing efforts to heritage and cultural travelers through new website, Gozaic.com. Working from Los Angeles office, participated in developing and executing marketing strategies both for the company and our clients. Represented company at professional conferences. Utilized Salesforce database to ensure timely communication with clients.

American Battlefield Protection Program, National Park Service

NPS Grants Administration, National Park Service Headquarters, 2007-2008. As Historic Preservation Specialist, evaluated applications, monitored projects, coordinated reporting and organized workshops for grant recipients for $1.5 million annual grant program. Reviewed deliverables such as NRHP nominations, easements, cultural resource inventories and management plans.

Section 106 Review, National Park Service Headquarters, 2007-2008. As Historic Preservation Specialist, reviewed projects potentially effecting historic battlefields for which the American Battlefield Protection party was a consulting party. Prepared comments to consultants evaluating

projects and their potential effects on historic resources, and made recommendations for mitigation of projects adversely effecting historic battlefields.

Update of Civil War Sites Advisory Commission Report on the Nation's Civil War Battlefields, National Park Service Headquarters, 2007-2008. Conducted onsite evaluation and boundary determinations for Civil War battlefields in Charleston, South Carolina, and Leesburg, Virginia. Coordinated national survey of preservation activities at 384 Civil War battlefields for report to Congress. Indentified changes in condition and threats, as well as preservation opportunities.

National Park Service History Program and HABS/HAER/HALS/CRGIS

HABS/HAER/HALS/CRGIS Online Publications, National Park Service Headquarters, 2006-2007. As Project Manager, redesigned navigation, content and design of HABS/HAER/HALS/CRGIS website and NPS History Program website. Created online publications for NPS History including Abraham Lincoln web feature, Teaching with Historic Places Lesson Plan on lighthouses, and Maritime Resources of Massachusetts travel itinerary.

Maritime Heritage Program, National Park Service Headquarters, 2006-2007. As Historian, maintained national inventory of historic lighthouses and ships for Maritime Heritage Program. Reviewed applications for the transfer of federally-owned historic light stations, under the National Historic Lighthouse Preservation Act of 2000.

National Park Service Cultural Resources Web Team, 1999-2008. As Team Member, assessed popularity and usability of web materials, and established guidance to achieve increased visibility. Served on subcommittee for website redesign, participated in focus group and usability testing.

National Register of Historic Places, National Park Service

Consultation on Review of National Register of Historic Places and National Historic Landmark Nominations, 1998-2006. As Historian, contributed to peer review of multiple nominations. Edited NHL nomination for Ryman Auditorium, Nashville, Tennessee. Wrote comments for return of Spud Drive-in Theater nomination, Driggs, Idaho to SHPO. Developed presentation for national conference: “America at Play: Documenting and Evaluating Recreational Resources with the National Register of Historic Places.”

Public Outreach for NRHP, 1998-2006. As Historian, contributed to publication of printed and online materials to increase awareness of and understanding of NRHP. Provided guidance on listing properties, benefits of listing, and pertinent laws and regulations. Assisted with development of public workshops, production of brochures, bulletins, power point presentations and exhibits. Assisted with the final editing and printing of two NRHP bulletins: “Telling the Stories Planning Effective Interpretive Programs for Properties Listed in the National Register of Historic Places” and “Historic Residential Suburbs: Guidelines for Evaluation and Documentation for the National Register of Historic Places.” Helped monitor the reprinting of several other NR technical bulletins, which provide standards and guidelines for evaluating historic properties.

Discover our Shared Heritage Travel Itineraries, 1998-2006. As Historian and Team Leader, coordinated the production of 38 travel itineraries developed in partnership with state and local governments, and private organizations, Each travel itinerary was created to highlight historic sites listed in the NRHP, increase awareness of the diverse and representative historic places across the United States, encourage heritage tourism, and provide a valuable educational resource. Managed project development and supervised team members, evaluated new proposals, established work plans, coordinated launch and press releases, researched, wrote and edited historical descriptions, essays and program talking points, created graphics, web pages and PowerPoint presentations.

Development of Thematic Features, NRHP, National Park Service Headquarters, 1999-2006. As Historian, designed, researched and wrote content for periodic thematic features, highlighting the diversity of historic sites listed in the NRHP. Themes included African American History, Asian Pacific Heritage, Hispanic Heritage, Women's History, American Indian Heritage, Preservation Month, Veterans Day, National Park Week, and Family History Month.

Arlington Heritage Alliance

Chair and Board Member of Arlington Heritage Alliance, Arlington, Virginia, 2000-2008. As Chair, determined and guided the initiatives of local historic preservation non-profit organization. Developed projects and publications to broaden local preservation constituency
Developed and facilitated numerous small and large meetings of preservation constituents, including community-wide preservation planning committee. Represented organization at public meetings and in communication with local and national elected officials. Evaluated local development and preservation plans. Developed "My Historic House" program to encourage sensitive renovations and additions. Judged Arlington Historic Preservation Design Awards. Reference: Michael Leventhal, Arlington Co. Historic Preservation Program Coordinator, 703-228-3813

Recent Past Preservation Network

Founder, Recent Past Preservation Network, 2000-2006. As one of the founders, and inaugural Board Member, of a new national preservation non-profit, guided the organization's direction and initiatives, helped develop short- and long-term goals and objectives. Developed and facilitated annual membership meetings. Worked with legal council to file incorporation paperwork and secured 501(c)3 status with the IRS. As Treasurer, prepared and monitored five-year projected budget, filed annual reports, and analyzed fiscal feasibility of proposed projects. Reference: Michael Tomlan, Director of Historic Preservation Planning Program, Cornell University, 607-255-7261

Marietta Manor, Prince George's County, Maryland

Building Restoration, 1996. As Assistant Site Manager, contributed to final stages of restoration of the 1812 Federal home of Supreme Court Justice Gabriel Duvall. Developed and helped implement an interior paint plan based on paint analysis.

Museum Operations, 1996. As Assistant Site Manager, lead interpretative tours for school groups and the general public. Assisted with event planning for on-site programs and the County's Tri-centennial Celebration.

Publications:

2006 *"America at Play: Documenting and Evaluating Recreational Resources with the National Register of Historic Places,"* Preserve and Play: Preserving Historic Recreation and Entertainment Sites. Washington, District of Columbia: National Park Service.

2003 "*From Ticket Booth-To Screen Tower: An Architectural Study of Drive-in Theaters in the Baltimore-Washington-Richmond Corridor," Constructing Image, Identity, and Place: Perspectives in Vernacular Architecture, Vol. IX*. Knoxville, TN: University of Tennessee Press.

Presentations:

2012 "Documentation & Evaluation of Berylwood Historic District," Keynote address for Friends of the Bard Mansion Centennial Celebration, Port Hueneme, California.

2005 "America at Play: Documenting and Evaluating Recreational Resources with the National Register of Historic Places," Preserve and Play National Conference, sponsored by National Park Service, Chicago, Illinois.

2000 "From Ticket Booth-To Screen Tower: An Architectural Study of Drive-in Theaters in the Baltimore-Washington-Richmond Corridor," Arlington Heritage Alliance Annual Meeting, Arlington, Virginia.

1998 "From Ticket Booth-To Screen Tower: An Architectural Study of Drive-in Theaters in the Baltimore-Washington-Richmond Corridor," Vernacular Architecture Forum Conference, Annapolis, Maryland.

1997 "Hot Shoppes: 'Food for the Whole Family' at the Local Chain Restaurant." Marriott International 70th Anniversary Celebration, Bethesda, Maryland.

1995 "Hot Shoppes: 'Food for the Whole Family' at the Local Chain Restaurant."Annual Conference on Washington, DC, Historical Studies, Washington, District of Columbia.

HISTORICAL ASSESSMENT
OF THE
SAN DIEGO GAS & ELECTRIC COMPANY
SAN JUAN CAPISTRANO SUBSTATION
31050 CAMINO CAPISTRANO
SAN JUAN CAPISTRANO, CALIFORNIA 92675

Report Prepared For:

Ecology and Environment, Inc.
368 Pleasant View Drive
Lancaster, NY 14086

Report Prepared By:

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December 2014

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31050 CAMINO CAPISTRANO
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DECEMBER 2014

Executive Summary

This Historical Assessment was prepared at the request of Ecology & Environment, Inc. in order to determine the potential historical and/or architectural significance of a one-story structure, identified as the San Diego Gas & Electric Company San Juan Capistrano Substation, located at 31050 Camino Capistrano in San Juan Capistrano, California ("Building") according to National Register of Historic Places, California Register of Historical Resources, and the City of San Juan Capistrano's Council Policy 601 which defines historic resources and eligibility considerations for significance.

The Building was designed in 1917 in an industrial/utilitarian style and was constructed in 1918 as a Substation for SDCG&E/SDG&E which used the building, as well as other supporting buildings and structures, including an original garage, three cottages, arresters, and transformers in conjunction with electrical power transmission activities. These latter buildings and structures are no longer in existence today. The identity of the original architect and builder could not be ascertained. Over the course of its existence, the Building has been modified and altered to the extent that it does not possess a sufficient degree of original integrity.

Historical research indicates that the Building is not historically and/or architecturally significant. The Building is not associated with any important events or individuals at the local, state or national levels; does not embody the distinctive characteristics of a type, period, or method of construction; and does not represent the notable work of a "master" architect, builder, or craftsman, or important, creative individual.

As a Property which is not historically or architecturally significant under local, state, or national significance criteria, the Building is not eligible for listing in the National Register of Historic Places, the California Register of Historical Resources, the California Historic Resources Inventory, or the Inventory of Historic and Cultural Landmarks (IHCL) of the City of San Juan Capistrano, California.

Introduction

Report Organization

This Historical Assessment was prepared in order to determine the potential historical and/or architectural significance of a one-story, former San Diego Gas & Electric Company Substation located at 31050 Camino Capistrano, San Juan Capistrano,

California. The Building was constructed in 1918. Since structures that are at least 45 years of age may be considered potential historic resources under the California Environmental Quality Act (CEQA), the Building was researched and evaluated as a potential historic resource in accordance with the City of San Juan Capistrano's Council Policy 601; California Register of Historical Resources (state) criteria; and National Register of Historic Places (federal) criteria by Scott A. Moomjian, Esq., Historic Property Consultant, from November-December 2014. The Building was determined by the present study not to be historically and/or architecturally significant.

Project Area

The Building is located in the Orange County community of San Juan Capistrano, California. It consists of approximately 0.93 acres and is defined as Assessor Parcel Number 649-052-03. It is bounded by Calle Lorenzo to the north, Camino Capistrano and Calle San Diego to the west, Calle Bonita to the south, and Calle Santa Rosalia to the east.

Inspection of historic aerial photographs (1938, 1946, 1952, 1963 and 1972) indicates that the surrounding area was largely undeveloped until the late 1960s and early 1970s. Early land use was agricultural in nature until in-fill residential development proliferated in the 1960s. Over the years, the area has experienced steady residential in-fill development, as well as the construction of nearby larger residential development and the remodeling of existing homes. An electrical power distribution site exists west of the Building. The overall setting and environment is no longer characterized as agricultural. Rather it is primarily a collection of single-family development. Overall, architectural styles in and around the Building are extremely eclectic in nature and generally reflect a mix of Spanish and Modern/Contemporary designs.

Project Personnel

Project personnel included Scott A. Moomjian, Esq., Historic Building Consultant, who conducted the field survey, historic research, and prepared the final report with its findings and conclusions.

Project Setting

Physical Project Setting

The Building is located in the Orange County community of San Juan Capistrano, California. It is located in a built, urban environment. The physical setting of the neighborhood is residential and consists of single-family dwellings. Over the years, the neighborhood setting in and around the Building has dramatically changed from agricultural to residential use. Overall, architectural styles in and around the Building are extremely eclectic in nature and generally reflect a mix of Spanish and Modern/Contemporary designs.

Historical Overview of the San Diego Gas & Electric Company (SDG&E)—1881-1940

The history of the San Diego Gas & Electric (SDG&E) Company has been the subject of previous historic studies. The most comprehensive history of the Company is documented in *Reflections, A History of the San Diego Gas & Electric Company 1881-1991*, prepared by Dr. Iris Engstrand and Kathleen Crawford in 1991. The development of the Company and documentation of the Company's properties and substations in San Diego is detailed in the *Historic Designation Research Report for San Diego Gas and Electric's downtown properties*, prepared by Tucker, Sadler & Associates, A.I.A. in 1991.

The pre-cursor to the San Diego Gas & Electric Company was the San Diego Gas Company which was established in San Diego on April 18, 1881. Organizing the Company with a capital stock of $100,000, a "gas works" plant was authorized for construction at a cost of $30,000 at Tenth and M (Imperial) streets. The first electric plant in San Diego had been installed by the Jenney Electric Company of Indianapolis at Second and J Streets at a cost of $30,000. The plant, which began operating in March 1886, had two 100-horsepower boilers supplying two 75-horsepower engines that operated four 30-light direct-current arc light generators furnishing current to six electric-carbon arc lamps mounted on 110-foot-tall towers. This venture soon failed and the Jenney plant and properties were purchased in September 1886 by Elisha S. Babcock and H.L. Story, developers of Coronado, who sought to bring water gas manufacturing equipment to supply electricity and gas to their proposed hotel (the Hotel Del Coronado). Their new company, the Coronado Gas & Electric Company, however, was short-lived. Babcock and L.M. Vance approached the San Diego Gas Company with plans for consolidation, and the new San Diego Gas, Fuel and Electric Light Company was formed on April 15, 1887, just as construction began on the Hotel Del Coronado. The San Diego Company bought the Coronado machinery and the San Diego Gas and Electric Light Company was incorporated on May 12, 1887 by Simon Levi, D.C. Reed, S.C. Bigelow, Joseph A. Flint, and William Iglehart.

From the late 1880s until the early 1890s, the City of San Diego expanded its population and developed new subdivisions. As the decade of the 1890s began, San Diego was experiencing a minor recession. The boom of the 1880s, which had resulted from land speculation had reached its peak. Despite the economic slowdown, San Diegans remained optimistic and promoted the thriving benefits of the City. In 1890, coal gas works located on the block bounded by Ninth, Tenth, M and N Streets churned out power, as did the electric light works fronting Tenth Street. In April 1891, the City instructed the board of public works to award the San Diego Gas and Electric Light Company a contract to supply 91 tower masts and low electric lights. In San Francisco, the powerful Edison General Electric Company of New York, which owned Edison's patent rights, incorporated on July 1, 1891, as the Edison Light and Power Company in California and purchased the California Electric Light Company. In 1896, it merged with the San Francisco Gas Company.

By 1896, the San Diego Gas and Electric Light Company were reported to be one of the city's "most prominent enterprises." Its plant, located at the foot of Ninth Street, was "one of the best equipped on the Pacific coast" and the Company had made many improvements in modernizing equipment. As San Diego grew rapidly during the turn of the century, the Company had difficulty meeting electric demands. As new residential districts opened in 1903 and 1904, the Company could not immediately extend its system to serve customers.

On January 1, 1902, Colonel Henry Marison Byllesby, a noted engineer and financier, organized his own company for the financing, designing, construction, operation, and management of electric and gas companies. In 1881, he had drawn plans for the first steam-operated central station in the United States, which had been installed by the Edison Company for Isolated Lighting in New York. He left Edison in 1885 to join the Westinghouse Electric Company as vice president and remained there until 1891. He then gained addition experience in developing water power and managing small utility companies whose futures seemed insecure.

Byllesby traveled to San Diego and, after thoroughly examining the city's potential, successfully negotiated with the Company owners for the purchase of its properties. In 1905, the Company was reorganized as the San Diego Consolidated Gas & Electric Company (SDCG&E) and new funds, mainly from Chicago, were used to expand and improve facilities. In 1908, plans were made to extend gas service to both Coronado and La Jolla. In 1909, with new roads begin laid out or graded throughout the County, whose population had reached 60,000, the Company had its work cut out in meeting demands of new service. By 1910, the Company was rushing work on extensions to the suburbs as well as furnishing light and heat to La Jolla, La Mesa, Escondido, and outside towns. By this year, the population of San Diego had reached 40,000 and would climb to 75,000 by the end of the decade. The number of people served by the Company would grow from 51,750 in 1911 to 122,000 in 1921, with the number of electric customers increasing from 9,885 to 30,983 and gas customers from 13,061 to 29,651. Gas service was made available to Chula Vista in 1911 and to La Mesa and Lemon Grove in 1912. Lines were extended eastward to service Grossmont, El Cajon, Lakeside, Santee, and Spring Valley in 1911 and to Bostonia in 1912. The lines to the south reached Sunnyside, Bonita, Nestor and Palm City in 1912, and Imperial Beach and San Ysidro in 1913.

In 1916, SDCG&E was authorized by the State Commission to purchase stocks of the Oceanside Electric & Gas Company. During this year, the Company also began negotiations to purchase the Escondido Utilities Company. This acquisition was finalized in 1917. The Company then planned to build a 22,000-volt, 13-mile transmission line from Vista to Escondido. These lines, when completed, joined the main transmission lines north from San Diego through Del Mar and Oceanside.

Between 1905 when the Byllesby group took over control of SDCG&E until 1920, the Company made major gains and expanded its operations throughout San Diego County and beyond. During this time, the Company expanded its facilities to serve more than four times the population of 1905. The annual electric peak load rose from 450 kilowatts

to 11,400 kilowatts, and daily gas deliveries from 336,000 cubic feet to 5,541,000 cubic feet. Electric-generating capacity increased from 770 kilowatts to 11,750 kilowatts. Investment in plant and Building grew from less than $1 million in April 1905 to more than $8 million at the close of 1919.

The 1920s ushered in a decade of continued expansion and new construction for SDCG&E. The Company expanded to keep pace with the growing City and its outlying service destinations. In early 1921, it became apparent that the Company needed an electrical facility or Substation closer to the center of town. A site at the corner of Fourth and Ash Streets was chosen for "Station C," which furnished all commercial direct current within the city and alternating current to the underground and overhead district north of Broadway and west of Balboa Park, including portions of Golden Hill, University Heights, and Mission Hills. When completed, Station C, which was designed in a Spanish Romanesque style, joined Station A, an Industrial styled structure, built in 1911 at 75 9th Avenue, and Station B, a Classic Revival and modified Art Deco styled structure, built between 1911-1941 at 714 West E Street. In 1923, the Company purchased the Timken Building at 6th and E Streets. It was renamed the Electric Building and became the new general offices, serving the Company until the mid-1960s.

Although it took several months for the effects of the stock market crash of October 29, 1929 to be felt in San Diego, the decade of the 1930s was a period of challenges. The Company faced problems associated with changing over from manufactured gas to natural gas; the potential municipal "takeover" of ownership for public utilities; and cuts in gas and electric rates. In 1940, due largely to a series of stock and security transactions, as well as forced divestiture by the Securities and Exchange Commission, the Company eliminated the word "Consolidated" from its name to become known as San Diego Gas & Electric Company or SDG&E.

Building History

As an initial matter, the City of San Juan Capistrano defines a "Historic Resource" as "a district, site, building, structure or object significant in American history, architecture, engineering, archaeology or culture at the national, state or local level." Sometime between 1977-1988, the City placed the Building on its "Buildings and Sites of Distinction list (BOD). According to the City, this list is composed of structures and sites,

> "which are potentially eligible for inclusion on the City's Inventory of Historic and Cultural Landmarks when they meet all listing criteria and/or have Building owner concurrence to be added to the Inventory. The BOD is an honorary designation and imposes no restrictions nor conveys any benefits….However, proposed development on these sites may need to address additional issues under the California Environmental Quality Act."

No justification or explanation was identified during the course of historical research which would indicate the basis for which the Building was added to the City's BOD. In addition, inspection of the City's "Inventory of Historic and Cultural Landmarks

(IHCL)," which is a "list of structures and sites within the City that have been deemed historically and/or culturally significant, at the local level, due to their architectural style and condition; association with historic persons; and/or association with historic event(s)" failed to include the Building. As a result, the Building is not a Historic Resource, as defined by City of San Juan Capistrano.

In April 2008, the Building was the subject of a detailed Historic Building Evaluation. This study, prepared by Jeannette A. McKenna, MA/RPA of McKenna et al. ("McKenna Evaluation") found that the Building was designed in 1917 by an unknown architect as the "Southern California Edison Company" Capistrano Substation. Completed in 1918, the Building later became known as the San Diego Gas & Electric Company Capistrano Substation. When originally constructed the "SCE/SDG&E" facility consisted of the main "T"-shaped Substation building, as well as a garage, three cottages for on-site employees, driveways, a septic tank, a small orchard, two switch frame pads, one transformer pad, two arresters, a water tank, and cooling tower (along with infrastructure improvements, i.e. plumbing and wiring). Today, only the Substation Building remains.

Based upon a close examination of original architectural plans, coupled with an extensive site inspection, the McKenna Evaluation determined that Building had been modified and altered to the extent that the building no longer retained a sufficient degree of original integrity to be considered historically or architecturally significant at the state or federal levels "McKenna et al. has concluded that the existing structure lacks integrity and, therefore, does not meet the minimum requirements for significance under the federal or state guidelines." In addition, the McKenna Evaluation found that because the Building was listed as a "Building of Distinction" by the City of San Juan Capistrano, and possessed some redeeming attributes, the building was "eligible for local recognition." Because of this, mitigation measures were proposed, including architectural and photographic recordation, as well as the relocation or salvage of original physical elements.

In February 2013, the Building was the subject of a National Register of Historic Places nomination prepared by Ilse M. Byrnes ("Byrnes Nomination"). The Nomination concludes, without any evidentiary support, that the Building "is historically significant for it's long association with the development of the area. Since it's construction in 1917/18 it was the main source of electric power for much of Orange County" and its "unique architecture—Georgian Revival—the only one in town, contributes much to the towns [sic.] historic ambience [sic.]." A review of the Byrnes Nomination indicates a host of substantive and procedural flaws associated with its preparation and completion. While the deficiencies are too numerous to note and beyond the scope of this Historical Assessment, it is important to point out that, on its face, the Byrnes Nomination does not conform to the clear requirements of the National Register, as stated in National Register Bulletin 16A ("How to Complete the National Register Of Historic Places Forms") or National Register Bulletin 15 ("How to Apply the National Register Criteria for Evaluation"). Further, the "Statement of Significance, limited to four short paragraphs, fails to provide any historical research or historical documentation in support of its

conclusions. The Nomination, therefore, is without merit and is not acceptable as a form of historical source material.

Historical research indicates that the Building was, in fact, designed in 1917 and constructed in 1918 as a SDCG&E Substation. Substations act as local electrical-distribution hubs, with distribution lines radiating out from the hub into nearby commercial and residential areas. The Building was built in order to connect SDCG&E's power transmission line from San Diego County through to Orange County, where it then connected with Southern California Edison lines and obtained power. A 1917-1918 date of design/construction is supported by period newspaper articles, an examination of the original architectural plans for the Building (dated 1917), the McKenna Evaluation (2008), and by Engstrand and Crawford (1991). In September, 1917 the California Railroad Commission authorized SDCG&E to operate in Orange County under a franchise granted by that county. According to a September 13, 1917 *San Diego Evening-Tribune* newspaper article,

> "The San Diego company intends to construct under this franchise a 7000 kilowatt transmission line through the territory affected from the northern boundary line of San Diego county to a point approximately one and a half miles north of San Juan Capistrano, Orange county, where it will take electric energy from the Southern California Edison company."

In addition, on July 15, 1920, the *San Diego Evening Tribune* noted that in 1917 SDCG&E "extended its high power transmission line to San Juan Capistrano to connect with the southern California Edison lines…." Engstrand and Crawford have written that,

> "The construction of the Company's first high-voltage transmission line in 1918 further extended service and provided the first direct link to another major electric utility. This 66,000-kilowatt line extended 75 miles north from San Diego through Del Mar and Oceanside, and then beyond the county line to the then-rural farm community of San Juan Capistrano, tying in with the transmission system of Southern California Edison. The Company then had access to a source of hydroelectric power to supplement the capacity of its own steam-electric generating plant."

In July 1928, the California Railroad Commission approved an agreement between SDCG&E and Southern California Edison (by then the fifth largest electric utility in the world), for SDCG&E to purchase the Building at a cost of $162,500. At the time, because Southern California Edison maintained a system frequency different from most other West Coast utilities (50-cycle vs. 60-cycle), it was necessary for SDCG&E to purchase and install at the Building a 5,000-kilowatt-frequency changer station from Edison to operate in Orange County (Southern California Edison would later adopt the 60-cycle standard in 1948). Subsequently, a new district office and appliance store was established at San Juan Capistrano in the Capistrano Hotel Building to serve customers there and in Dana Point, San Clemente, and two communities called Coast Royal and Serra. The Company was praised by the *Missionite*, Capistrano's local paper which

stated that SDCG&E had "shown rare foresight and excellent judgment" in reaching out to the north end of its territory, since the area was a growing agricultural district with electric power as a prime requisite.

Review of a 1938 aerial photograph depicts the presence of the Building, which since 1918, largely consisted of the Substation Building as well as a garage, three cottages, arresters, and transformers. Two years later, a new 132,000-volt transmission line was constructed from San Diego to San Juan Capistrano. This line linked the Building with a new Mission Substation in San Diego (located on the northern rim of Mission Valley). This line helped to establish a 35,000-kw-capacity interconnection with Southern California Edison and immediately proved invaluable as electric system requirements increased 30 percent in 1941 (the total length of the line from Southern California Edison's Chino Substation to Mission Valley was 105 miles). In December 1940, Edison built a new 30-mile transmission line between Chino and San Juan Capistrano that connected SDG&E's system with Boulder Dam's power output. By 1991, the Building provided for the exchange of 1.2 million kilowatts and was, for many years, the Company's only tie with other members of a statewide power pool.

Review of 1938, 1946, 1952, 1963, 1972, 1980, 1994, and 2002 aerial photographs depict the presence of the Building during these years. However, inspection of a 2004 aerial photograph shows that by this year, the supporting garage, three cottages, arresters, and transformers were no longer in existence. The only remaining structure located on the property since this time has been the Substation Building. Today, the Building is no longer in use and all interior machinery has been removed.

Historical Overview Of The San Juan Capistrano Community

The area of San Juan Capistrano was originally settled by the Acjachemen tribe, who belonged to the to the Shoshone Indian family. They were hunters and gatherers who had a nomadic form of government with leadership confined to one family. A council of men aided the leader. They worshiped a deity called Chinigchinich with religious ceremonies held in a small temple of reeds in each community. Abundant material has been found within the Capistrano Valley relating to prehistoric Indian life.

In 1769, Spanish explorers led by Don Gaspar de Portola entered the Capistrano Valley on their way to Monterey Bay. By 1775, the Franciscan Padres had received permission to build a Mission in the valley. Although work began to construct the Mission, the site was abandoned when the padres and soldiers returned to San Diego to help an Indian rebellion. Once things had settled, Father Junipero Serra led a party to re-establish the Mission San Juan Capistrano on All Saints' Day, November 1, 1776. Mission San Juan Capistrano became the 7th of 21 missions to be founded in Alta California. Three years later a lack of adequate water for irrigation led to the relocation of the Mission to the site it occupies today. Until 1821, the Mission was prosperous, producing many tons of wheat, barley, corn, beans, and even wine. Thousands of horses, cattle, and sheep roamed the Mission lands.

Mexican independence in 1821 caused a decline in the Mission and the town's population. The Secularization Act of 1833 led to Mission lands being sold to politically important individuals instead of being given to the Acjachemen Indians (now known as the Juaneno Indians), as was originally intended. In 1845, John Forster purchased the Mission buildings from Pio Pico, the last Mexican governor of California and incidentally Forster's brother-in-law.

The United States victory in its war with Mexico in 1848 led to California becoming, first a territory and two years later, the 31st state in the Union. The years following statehood were beneficial for San Juan Capistrano. Cattle were sent north to the gold fields at great profit. People from many parts of the world settled on the town lots. Farmers grew larger crops and bought more land. The agriculture of the area changed and walnuts, citrus, and barley were planted. But the prosperity did not last. The mid-1860s brought drought, smallpox, and state Building tax. A fencing law required ranchers to completely fence their land. In the case of Don Juan Forster, this meant over 250,000 acres had to be fenced. He had to borrow money to buy the fence posts and wire. Many ranchers couldn't afford all these costs and began to sell their land to farmers. Thus, many of the great ranchos became farms. In 1865, the U.S. Government returned the Mission to the Catholic Church and the Forster family moved to its ranch house on Rancho Santa Margarita y Las Flores.

In 1887, the Railroad helped the farmers to transport their produce to markets nationwide. Hay, sheep, English walnuts, honey, oranges, corn, dried fruit, cattle and horses made their way to market by way of the railroad which cut the delivery time tremendously. The early 20th century saw stability in San Juan Capistrano, as the community by this time, was relatively untouched by development. However, the Mission had fallen into disrepair and had no resident priest. In 1910, Father St. John O'Sullivan arrived in town and the Mission's future was changed radically. Suffering from tuberculosis, Father O'Sullivan decided to work to restore what he could of the Mission until his death. Father O'Sullivan not only restored much of the Mission, but also his health. Until his death in 1933, he worked to create what was needed at the Mission. In 1961, San Juan Capistrano incorporated and became a city. Today, much of the city retains its early Spanish-Mexican and boasts a population of about 34,000.

Methods and Results

Archival Research

The archival research for this Historical Assessment included, but was not necessarily limited to, a review of aerial photographs, histories related to SDG&E and its buildings, the McKenna Evaluation of the Building, newspaper articles related to the Building, local, state, and federal inventories/surveys/database material; personal research/archival material in possession of Scott A. Moomjian, Esq.; standard and authoritative sources related to local history, architecture, and building development information.

Field Survey

The field survey work was conducted by Scott A. Moomjian, Esq. on July 16, 2014. An intensive survey of the subject Building and surrounding neighborhood was undertaken during this time.

Description of Surveyed Resource

The Building consists of a one-story, industrial/utilitarian style Substation. The structure is "T"-shaped and has a flat roof with cornice and no eave overhang. The walls are composed of concrete and are finished in stucco. The building is devoid of ornamentation or detail. As noted in the McKenna Evaluation, the building originally featured a number of windows and doors along various elevations. Fenestration consisted of multi-paned windows below transoms. Doors also featured transoms above. Over the years, the building was altered by the replacement, removal, and/or in-fill of original windows, doors, and/or bay sections. Today, the building appears to be in fair condition.

Significance Evaluation

Integrity Evaluation

In addition to determining the significance of a property under local, state, and national criteria, a property must also must possess integrity. Integrity is defined by the National Register of Historic Places, the California Register of Historical Resources, and most local governments as the "ability of a property to convey and maintain its significance" and/or the "authenticity of a property's historic identity, evidenced by the survival of physical characteristics that existed during the property's historic or prehistoric period." A property must not only be shown to be significant under the local, state, or federal criteria, but it also must have integrity. An evaluation of integrity is sometimes a subjective judgment, but it must always be grounded in an understanding of a property's physical features and how they relate to its significance. Historic properties either retain integrity (this is, convey their significance) or they do not. Local, state, and national registers recognize seven aspects of integrity—location, design, setting, materials, workmanship, feeling, and association.

Location

Location is defined by the National and California Registers as "the place where the historic property was constructed or the place where the historic event occurred."

The Building was constructed at its present location in 1918. The Building has remained in its original location throughout its existence.

Design

Design is defined by the National and California Registers as the "combination of elements that create the form, plan, space, structure, and style of a property."

The Building has modified and altered from that of its original appearance. Changes to the building include replacement and/or enlargement of window, door, and bay openings. Further, interior machinery has been removed and other supporting buildings and structures, including an original garage, three cottages, arresters, and transformers (which were used in conjunction with electrical power transmission activities) no longer exist today. In sum, the combination of form, plan, space, structure, and style have been sufficiently changed to the extent that the Building does not retain its design element for integrity purposes.

Setting

Setting is defined by the National and California Registers as the physical environment of a historic property.

The Building has been sited on the same parcel since its original construction in 1918. Originally, the surrounding neighborhood was rural and agricultural in nature. Inspection of the surrounding neighborhood today indicates the overwhelming presence of single-family residential construction. Over the years, in-fill development has occurred throughout the area. As a result, the overall physical environment of the area has been adversely impacted to the extent that the Building no longer retains its original setting element for integrity purposes.

Materials

Materials are defined by the National and California Registers as the physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property.

The existing materials which have gone into the construction of the Building are mostly original. As such, the Building retains its materials element for integrity purposes.

Workmanship

Workmanship is defined by the National and California Register as "the physical evidence of the crafts of a particular culture or people during any given period in history or prehistory."

As with the materials discussion above, the workmanship which has gone into the construction of the Building is mostly original. As such, the Building retains its workmanship element for integrity purposes.

Feeling

Feeling is defined by the National and California Registers as "a property's expression of the aesthetic or historic sense of a particular period of time."

In its current condition, the Building no longer imparts an aesthetic sense of 1910s electrical Substation construction. This is due to the fact that the Building and overall site has been altered and modified over time. As a result, the Building no longer retains its feeling element for integrity purposes.

Association

Association is defined by the National and California Registers as "the direct link between an important historic event or person and a historic Building."

The Building is not directly linked to any important historic events or persons. As a result, the Building does not possess, nor has it ever possessed, an associative element for integrity purposes.

Application of San Juan Capistrano Council Policy 601—Local Register Significance Criteria

Historic Resource

According to the City of San Juan Capistrano, Council Policy 601, a "Historic Resource" is defined as "a district, site, building, structure or object significant in American history, architecture, engineering, archaeology or culture at the national, state, or local level." No historical evidence was identified which would support the contention that the Building is significant in American history, architecture, engineering, archaeology or culture at the national, state, or local level. The Building was constructed in 1918 as an industrial/utilitarian style Substation for SDCG&E/SDG&E which used the building, as well as other supporting buildings and structures (which area no longer in existence today), in conjunction with electrical power transmission activities.

No historical evidence was identified which demonstrates that the Building is significant in American history at the national, state, or local level; that the Building's industrial/utilitarian style of architecture is significant at the national, state, or local level; that the Building's engineering standards, design ingenuity within engineering disciplines, or engineering solutions are significant at the national, state, or local level; or that the Building's cultural component is significant at the national, state, or local level. Since the Building is not an archaeological site, this element of the Council Policy is not applicable. As a result, therefore, the Building is not significant under Council Policy 601.

Scope & Applicability of Council Policy

Council Policy 601 applies to substantial impacts upon buildings and structures that are:

(a) Listed on the "Inventory of Historic and Cultural Landmarks" (IHCL) as adopted by City Council Resolution in accordance with Section 9-2.310 of the Municipal Code." As discussed previously, the Building is not listed on the City's IHCL. Therefore, this provision of Council Policy 601 is not applicable.

(b) Listed as a "State Register of Historic Landmarks" or on the "National Register of Historic Places. The Building is not listed on either the California Register of Historical Resources or the National Register of Historic Places. Therefore, this provision of Council Policy 601 is not applicable.

(c) Those historic resources which are determined by the Planning Director, the State Historic Preservation Officer, or the National Trust for Historic Preservation to be eligible for listing on the California Register of Historic Resources, the National Register of Historic Places, or the City's Inventory of Historic Resources according to the standards for inclusion on either the State, Federal, or Local Registers. The Building has not been determined by the Planning Director, the State Historic Preservation Officer, or the National Trust for Historic Preservation to be eligible for listing on the California Register of Historic Resources, the National Register of Historic Places, or the City's Inventory of Historic Resources according to the standards for inclusion on either the State, Federal, or Local Registers. Therefore, this provision of Council Policy 601 is not applicable.

(d) In cases where there exists a likelihood that significant historic resources once existed on the property as defined by the "sensitive area survey" (i.e. an area that is located immediately adjacent to known sites, and/or an area that historic maps or reference material indicates the presence of possible artifacts) as adopted by City Council Resolution. The Building is not located within a "sensitive area survey" and, therefore, this provision of Council Policy 601 is not applicable.

Application of National and California Register Criteria

When evaluated within its historic context, a property must be shown to be significant for one or more of the four Criteria for Evaluation–A, B, C, or D. The Criteria describe how properties are significant for their association with important events or persons, for their importance in design or construction, or for their information potential. In addition, a Building must not only be shown to be significant under the National and/or California Register criteria, but it also must have integrity (see discussion above).

Criterion A: Event

To be considered for listing under Criterion A, a property must be associated with one or more events important in the defined historic context. The event or trends must clearly be

important within the associated context. Mere association with historic events or trends is not enough, in and of itself, to qualify under Criterion A: the property's specific association must be considered important as well.

The Building does not qualify under National or California Register Criterion A: Event at either the local, state, or national levels. Historical research failed to identify any important events associated with the Building over the course of its existence. It has been asserted that the Building derives historical significance for its "long association with the development of the area" (presumably the San Juan Capistrano area), and since its "construction in 1917/18 it was the main source of electric power for much of Orange County." These determinations, however, have not been defined or examined in a proper historic context, and no showing of important, specific associations with historic events has been demonstrated.

Criterion B: Person

Criterion B applies to properties associated with individuals whose specific contributions to history can be identified and documented. Persons "significant in our past" refers to individuals whose activities are demonstrably important within a local, State, or national historic context. The criterion is generally restricted to those properties that illustrate (rather than commemorate) a person's important achievements. The persons associated with the property must be individually significant within a historic context. Significant individuals must be directly associated with the nominated property. Properties eligible under Criterion B are usually those associated with a person's productive life, reflecting the time period when he or she achieved significance. Speculative associations are not acceptable. Documentation must make clear how the nominated property represents an individual's significant contributions. A property must retain integrity from the period of its significant historic associations. Architects are often represented by their works, which are eligible under Criterion C.

The Building does not qualify under National or California Register Criterion B: Person at either the local, state, or national levels. Historical research failed to identify any important individuals associated with the Building over the course of its existence.

Criterion C: Design/Construction

A property may be eligible under Criterion C if they embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction. Properties which embody the distinctive characteristics of a type, period, or method of construction refer to the way in which a property was conceived, designed, or fabricated by a people or culture in past periods of history. Distinctive characteristics are the physical features or traits that commonly recur in individual types, periods, or methods of construction. To be eligible, a property must clearly contain enough of those characteristics to be considered a true representative of a particular type, period, or method of construction.

A master is a figure of generally recognized greatness in a field, a known craftsman of consummate skill, or an anonymous craftsman whose work is distinguishable from others by its characteristic style and quality. The property must express a particular phase in the development of the master's career, an aspect of his or her work, or a particular theme in his or her craft.

Embodying The Distinctive Characteristics Of A Type, Period, Or Method Of Construction

The Building does not qualify under National or California Register Criterion C: Design/Construction on the basis of its architecture at either the local, state, or national levels. The Building was constructed in 1918 as an industrial/utilitarian style Substation for SDCG&E/SDG&E which used the Building, as well as other supporting buildings and structures (which area no longer in existence today), in conjunction with electrical power transmission activities.

In its current condition, the Building is not considered a representative example of the industrial/utilitarian style. Examination of other former SDG&E Substations, including Stations A, B & C in San Diego, reflect Substation construction with much more elaborate and classical detailing and decoration. Further, the Building has been modified and altered over time and other supporting buildings and structures, including the original garage, three cottages, arresters, and transformers have been removed and are no longer in existence. Although the Building has been classified as an example of "Georgian Revival" or Colonial Revival architecture, this characterization is inaccurate as the building lacks several important, character-defining features of the style, including, but not limited to an accentuated front door, normally with decorative crown (pediment) supported by pilasters, or extended forward and supported by slender columns; doors with overhead fanlights or sidelights; façade(s) which show symmetrically balanced windows and center door; windows with double-hung sashes, usually with multi-paned glazing in one or both sashes; and windows frequently in adjacent pairs. As such, the Building does not embody the distinctive characteristics of a type, period, or method of construction and is not architecturally significant.

Representing The Work Of A Master (National Register) And/Or Important, Creative Individual (California Register)

The Building does not qualify under National or California Register Criterion C: Design/Construction at either the local, state, or national levels on the basis of its architect or builder. Historical research did not ascertain the identity of either the architect responsible for the design of the Building, or the individual responsible for its construction. Given the unremarkable and undistinguished design/construction of the Building, it is likely that the structure was designed and constructed "in house" by SDCG&E employees. In any event, the Building does not represent the work of a master architect, designer, builder, craftsman, or important, creative individual.

Possessing High Artistic Values

The Building does not qualify under National or California Register Criterion C: Design/Construction as a structure which possesses high artistic values. The Building does not articulate a particular concept of design to the extent that an aesthetic ideal is expressed.

Criterion D: Information Potential

Properties may be eligible under Criterion D if they have yielded, or may be likely to yield, information important in prehistory or history.

The Building does not qualify under National or California Criterion D: Information Potential as the Building has not yielded, and is likely not to yield, information important in terms of history or prehistory.

Findings and Conclusions

Impacts Discussion

Since the present study has determined that the Building is not historically and/or architecturally significant under local, state, and national significance criteria, historic resources do not exist on the property and, therefore, no mitigation measures are required.

Application of CEQA

Public Resources Code

CEQA Public Resources Code §21084.1 provides that any project that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment. Public Resources Code Section §5020.1(q) defines "substantial adverse change" as demolition, destruction, relocation or alteration such that the significance of the historical resource would be impaired. According to Public Resources Code Section §5024.1, an historical resource is a resource that is listed in, or determined to be eligible for listing in the California Register of Historical Resources. A resource may be listed as an historical resource in the California Register if it meets any of the following National Register of Historic Places criteria: 1) is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage; 2) is associated with the lives of persons important in our past; 3) embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or 4) has yielded, or may likely yield information important in prehistory or history. In addition, an historical resource is a resource that is listed in, or determined to be eligible for listing in the California Register of Historical Resources; a resource that is included in a local register of historical resources; or is

identified as significant in an historical resource survey if that survey meets specified criteria.

a) Event Association:

The Building does not qualify under event association as a resource which is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage. Historical research indicates that the Building was never associated with any event or events that have made a significant contribution to California's history and cultural heritage.

b) Individual Association:

The Building does not qualify under individual association as a resource which is associated with the lives of persons important in our past. Historical research indicates that the Building was never associated with any important or significant individuals.

c) Design/Construction:

The Building does not embody the distinctive characteristics of a type, period, or method of construction. The Building does not represent the work of an important creative individual, or possess high artistic values.

d) Information Potential:

The Building does not qualify under information potential as a resource which has yielded, or may likely yield, information important in prehistory or history.

As a resource which is not historically or architecturally significant, the Building is not eligible for listing in the California Register of Historical Resources, the California Historic Resources Inventory, the National Register of Historic Places, or the City of San Juan Capistrano Inventory of Historic and Cultural Landmarks (IHCL).

CEQA Guidelines

According to CEQA Guidelines §15064.5(a)(3), a lead agency can find a resource historic if the resource has been determined to be significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California, provided that the determination is supported by substantial evidence in light of the whole record.

The Building has been determined not to be significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California. The Building, therefore, does not qualify as historical resource under CEQA Guidelines §15064.5(a)(3).

The present study has determined that the Building is not historically and/or architecturally significant under local, state, and national significance criteria. Therefore, any proposed development project will not cause a substantial adverse change in the significance of a historical resource.

Mitigation Measures

Since the present study has determined that the Building is not historically and/or architecturally significant under local, state, and national significance criteria, any proposed development project will not cause a substantial adverse change in the significance of a historical resource, and therefore, no mitigation is required.

Conclusion

The Building was designed in 1917 in an industrial/utilitarian style and was constructed in 1918 as a Substation for SDCG&E/SDG&E which used the building, as well as other supporting buildings and structures, including an original garage, three cottages, arresters, and transformers in conjunction with electrical power transmission activities. These latter buildings and structures are no longer in existence today. The identity of the original architect and builder could not be ascertained. Over the course of its existence, the Building has been modified and altered to the extent that it does not possess a sufficient degree of original integrity.

Historical research indicates that the Building is not historically and/or architecturally significant. The Building is not associated with any important events or individuals at the local, state or national levels; does not embody the distinctive characteristics of a type, period, or method of construction; and does not represent the notable work of a "master" architect, builder, or craftsman, or important, creative individual.

As a Building which is not historically or architecturally significant under local, state, or national significance criteria, the building is not eligible for listing in the National Register of Historic Places, the California Register of Historical Resources, the California Historic Resources Inventory, or the Inventory of Historic and Cultural Landmarks (IHCL) of the City of San Juan Capistrano, California.

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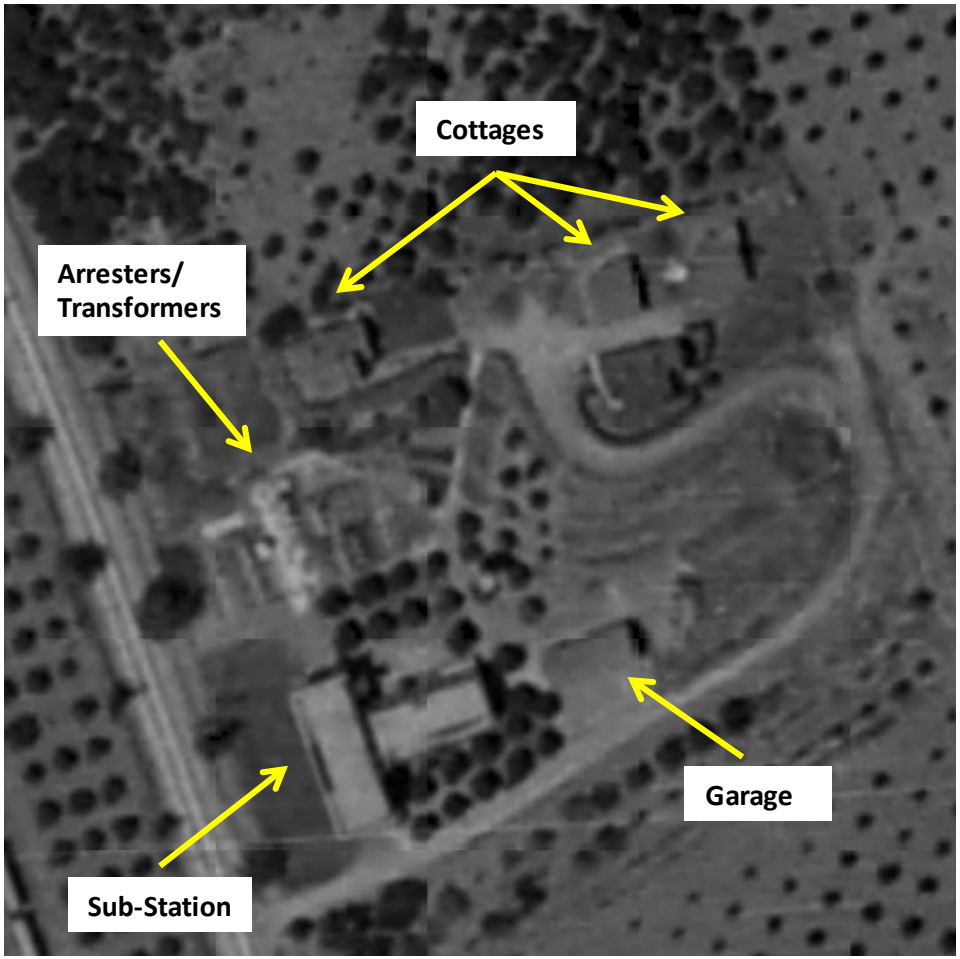
APPENDIX A

AERIAL PHOTOGRAPHS
1938 & 2004

Aerial Photograph
1938



Aerial Photograph
2004

APPENDIX B

PREPARER'S QUALIFICATIONS

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Education:

*Bachelor of Arts, History, 1990; University Of California, Davis (With Honors)
*Master of Arts, History; 1993; University Of San Diego
*Juris Doctor, 1997; California Western School Of Law, ABA/AALS
*Best Appellate Brief Award, Spring 1996
*American Jurisprudence Award, Environmental Law Seminar, Spring 1997

Professional Background:

Between 1990-1995, Mr. Moomjian worked as both an historian and archaeologist in the San Diego area. During this period, he worked as a historian at the University of San Diego, a social studies instructor at two private elementary and secondary schools, and as a historian and archaeologist for a cultural resource management firm. In 1995, while attending law school, Mr. Moomjian became affiliated with the firm of Marie Burke Lia, Attorney at Law. His law school internship was with SANDAG (The San Diego Association of Governments) where complex environmental, land use, energy, transportation, housing, and municipal issues were studied. Today, in addition to his own practice, Mr. Moomjian continues to associate with Ms. Lia in the field of land use law, with a particular emphasis upon historic properties and cultural resources.

For the past fourteen years, Mr. Moomjian has been extensively involved in the field of land use law, emphasizing historic properties and cultural resources. His experience includes effectuating compliance with Section 106 (36 CFR 800) of the National Historic Preservation Act; the preparation of historic preservation components of environmental impact reports, historical assessment technical reports, and Historic American Building Survey (HABS) documentation, required by the California Environmental Quality Act (CEQA); nominating historic properties to the local, state, and national registers; completing certification application procedures and securing the federal tax incentives with the State Office Of Historic Preservation and National Park Service; obtaining development permits of various types; and representation before municipal bodies such as the San Diego Historical Resources Board, San Diego County Historic Site Board, San Diego Planning Commission, San Diego City Council, San Diego County Planning Commission and San Diego County Board of Supervisors.

Mr. Moomjian's extensive experience in the field of historic and cultural properties has also included the surveying of historic resources. In this capacity, he has undertaken all aspects of field work, planning, background research, organization and presentation of survey data, and the completion of historic resource inventory forms. Mr. Moomjian has worked as a principal consultant on historic resource surveys and Historical Resource Research Reports (HRRRs) focusing on the downtown East Village (Ballpark), north East Village, North Embarcadero, and Mid-City areas, as well as those in the Barrio Logan community. He has completed Historic Resource Inventory Updates of the East Village Area for the former Centre City Development Corporation (CCDC), today Civic San Diego. In addition, he has worked in the completion of phase studies and the Programmatic Agreement (PA) for the San Diego County Airport Authority's Quieter Home Program (Loma Portal and Uptown Neighborhoods), as well as an Historic Resource Inventory Update for the City of Murrieta and a Historic Resource Inventory for the City of Chula Vista.

Mr. Moomjian has served as a historic property consultant to the San Diego Unified Port District, the San Diego County Regional Airport Authority, and the former Centre City Development Corporation (CCDC), today Civic San Diego. He is recognized as a qualified historical consultant by the City and County of San Diego, as well as other local municipalities including Del Mar, Oceanside, Escondido, Encinitas, and La Mesa. His professional qualifications meet the Secretary of the Interior's *Standards and Guidelines for Archaeology and Historic Preservation (1995)* in the disciplines of Architectural History, Historical Preservation, and History. In March, 2007, Mr. Moomjian was appointed to the San Diego County Historic Site Board (HSB); he currently serves as its Chairman.

Appendix N

Noise Assessment Tables

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Appendix N
Noise Assessment

1. Construction Noise Analysis based on the Applicant's List of Equipment and Vehicles

Summary Table

Project Component	Activity	Combined Leq at closest receptor (dBA)	Daytime Noise Standard (dBA)
All Substation Construction	General Construction	92	65
Substation: Talega 138 kV	Site Development	61	55
	Below Grade Construction	60	55
	Above Grade Construction	62	55
	Relay Testing	53	55
	138 kV Substation Cutover & Energization (138 kV)	60	55
Substation: San Juan Capistrano 230 kV	Remove RFS 138/12 kV Equipment	95	65
	Site Development	98	65
	Below Grade Construction	100	65
	Above Grade Construction	101	65
	Relay Testing	94	65
	De-energize Temporary TL13835	98	65
	Energization 230 kV Substation & Cutovers	97	65

Project Component	Activity	Combined Leq at closest receptor (dBA)	Daytime Noise Standard (dBA)
Substation: San Juan Capistrano 138/12 kV	Building Removal	99	65
	Site Development	98	65
	Below Grade Construction	99	65
	Above Grade Construction	101	65
	Relay Testing	94	65
	Energization (138 kV) 138/12 kV Substation Cutovers	97	65
	Energize Temporary TL13835	98	65
General Transmission Line Construction	General Construction	100	65
Transmission Segment 4 (Talega Hub to Talega Substation): 69-kV and 138-kV work	Site Grading/Re-establish and Extend Existing Access Roads/Retaining Walls	78	55
	Foundation Installations	72	55
	Underground Trench/ Conduit/ Substructure	70	55
	Steel Structure Installations	69	55
	Cable/Conductor Pulling and Tensioning	76	55
	Removal of Wood Pole Structures	67	55
Transmission Segment 1: Capistrano Substation Getaways 138- kV	Site Development	94	65
	Bore Pits	94	65
	Foundation Installations	94	65
	Underground Trench/ Conduit/ Substructure	97	65
	Steel Structure Installations	90	65

Project Component	Activity	Combined Leq at closest receptor (dBA)	Daytime Noise Standard (dBA)
	Cable/Conductor Pulling and Tensioning	96	65
	Removal of Structures	96	65
Transmission Segment 3: Talega to Rancho San Juan 230-kV	Site Grading/Re-establish and Extend Existing Access Roads/Retaining Walls	93	55
	Foundation Installations	87	55
	Steel Structure Installations	83	55
	Cable/Conductor Pulling and Tensioning	91	55
	Removal of Wood Pole Structures	88	55
Transmission Segment 2: Rancho San Juan 230kV (South Run)	Site Grading/Re-establish and Extend Existing Access Roads	100	65
	Foundation Installations	96	65
	Underground Trench/ Conduit/ Substructure	102	65
	Steel Structure Installations	97	65
	Cable/Conductor Pulling and Tensioning	104	65
	Removal of Steel Riser Structures	105	65
Transmission Segment 1: Rancho San Juan to San Juan Capistrano	Site Grading/Re-establish and Extend Existing Access Roads/Retaining Walls	94	65
	Foundation Installations	85	65
	Steel Structure Installations	84	65
	Conductor Pulling and Tensioning	92	65
	Removal of Wood Structures	88	65

Project Component	Activity	Combined Leq at closest receptor (dBA)	Daytime Noise Standard (dBA)
Transmission Segment 1: Rancho San Juan to San Juan Capistrano 230 kV	Site Grading/Re-establish and Extend Existing Access Roads/Retaining Walls	84	55
	Foundation Installations	74	55
	Steel Structure Installations	67	55
	Conductor Pulling and Tensioning	77	55
	Removal of Wood Structures	68	55
Transmission Segment 4: Talega Hub to Talega Substation TL 230kV	Site Grading/Re-establish and Extend Existing Access Roads/Retaining Walls	84	55
	Foundation Installations	74	55
	Steel Structure Installations	67	55
	Conductor Pulling and Tensioning	77	55
	Removal of Wood Pole Structures	68	55
Transmission Segment 2: Rancho San Juan 138/230kV (North Runs)	Site Grading/Re-establish and Extend Existing Access Roads	98	65
	Underground Trench/ Conduit/ Substructure	102	65
	Steel Structure Installations	99	65
	Cable/Conductor Pulling and Tensioning	104	65
	Removal of Steel Riser Structures	105	65
Distribution Line Construction	Construction at each pole site	86	65

Detailed Table

Project Component	Activity	Equipment	Lmax (dBA) @ 50 ft	Usage Factor (U.F.) %	Distance to Receptor (feet)	Leq / unit	Total Quantity	Combined Leq (dBA)	Noise Standard (dBA)
All Substation Construction	General Construction	3/4-ton or 1-ton pickup truck	75	40	18	80	6	88	65
		Air compressor	78	40	18	83	1	83	65
		Mechanic truck	85	10	18	84	3	89	65
		Combined Exposure from General Construction						**92**	65
Substation: Talega 138 kV	Site Development	Bulldozer	82	40	1,355	49	2	52	55
		Road Grader/Blade	85	40	1,355	52	2	55	55
		Scraper	84	40	1,355	51	2	54	55
		Compactor	83	20	1,355	47	2	50	55
		Loader	79	40	1,355	46	2	49	55
		Backhoe	78	40	1,355	45	2	48	55
		Water truck	74	40	1,355	41	2	44	55
		Dump/haul truck	76	40	1,355	43	2	46	55
		Excavator	81	40	1,355	48	2	51	55
		Combined Exposure from Site Development						**61**	55
	Below Grade Construction	Concrete Truck	79	40	1,355	46	4(*)	52	55
		Drill Rig with Augers	84	20	1,355	48	1	48	55
		Backhoe	78	40	1,355	45	1	45	55
		Fork Lift/Skid Steer Loader	85	50	1,355	53	1	53	55
		Small Mobile Crane (12-ton)	81	16	1,355	44	1	44	55
		Trencher/Ditch Witch	85	50	1,355	53	1	53	55
		Loader	79	40	1,355	46	1	46	55
		Water Truck	74	40	1,355	41	1	41	55

Project Component	Activity	Equipment	Lmax (dBA) @ 50 ft	Usage Factor (U.F.) %	Distance to Receptor (feet)	Leq / unit	Total Quantity	Combined Leq (dBA)	Noise Standard (dBA)
		Handheld Compactor	83	20	1,355	47	2	50	55
		Dump/haul truck	76	40	1,355	43	3(*)	48	55
		Combined Exposure from Below Grade Construction						**60**	55
Substation: Talega 138 kV	Above Grade Construction	3/4-ton or 1-ton pickup truck	75	40	1,355	42	3	47	55
		Bucket Truck/Manlift	75	20	1,355	39	1	39	55
		Large Crane	81	16	1,355	44	1	44	55
		Boom Truck	85	50	1,355	53	1	53	55
		Fork Lift/Skid Steer Loader	85	50	1,355	53	1	53	55
		Line Truck	85	50	1,355	53	2	56	55
		Cable Dolly (trailer)	85	50	1,355	53	1	53	55
		Stringing Rig (trailer)	85	50	1,355	53	1	53	55
		100-hp Oil Processing Truck	85	50	1,355	53	1	53	55
		Combined Exposure from Above Grade Construction						**62**	55
	Relay Testing	Relay/Telecommunication Van	85	50	1,355	53	1	**53**	55
	138 kV Substation Cutover & Energization (138 kV)	Line Truck	85	50	1,355	53	4	59	55
		Relay/Telecommunication Van	85	50	1,355	53	1	53	55
		Combined Exposure from Cutover & Energization						**60**	55
Substation: San Juan Capistrano 230 kV	Remove RFS 138/12 kV Equipment	Dump/Haul Truck	76	40	18	81	3(*)	86	65
		Large Crane	81	16	18	82	1	82	65
		Flatbed	74	40	18	79	2	82	65
		Boom Truck	85	50	18	91	2	94	65

Project Component	Activity	Equipment	Lmax (dBA) @ 50 ft	Usage Factor (U.F.) %	Distance to Receptor (feet)	Leq / unit	Total Quantity	Combined Leq (dBA)	Noise Standard (dBA)
		Crew trucks	75	40	18	80	2	83	65
		Combined Exposure from Remove RFS Equipment						**95**	65
	Site Development	Bulldozer	82	40	18	87	2	90	65
		Road Grader/Blade	85	40	18	90	1	90	65
		Scraper	84	40	18	89	1	89	65
		Compactor	83	20	18	85	2	88	65
		Loader	79	40	18	84	1	84	65
		Backhoe	78	40	18	83	1	83	65
Substation: San Juan Capistrano 230 kV		Water Truck	74	40	18	79	1	79	65
		Dump/Haul Truck	76	40	18	81	13(*)	92	65
		Excavator	81	40	18	86	1	86	65
		Combined Exposure from Site Development						**98**	65
	Below Grade Construction	Concrete Truck	79	40	18	84	16(*)	96	65
		Drill Rig with Augers	84	20	18	86	1	86	65
		Backhoe	78	40	18	83	1	83	65
		Fork Lift/Skid Steer Loader	85	50	18	91	1	91	65
		Small Mobile Crane (12-ton)	81	16	18	82	1	82	65
		Trencher/Ditch Witch	85	50	18	91	1	91	65
		Loader	79	40	18	84	1	84	65
		Water Truck	74	40	18	79	1	79	65
		Handheld Compactor	83	20	18	85	1	85	65
		Dump/Haul Truck	76	40	18	81	10(*)	91	65
		Combined Exposure from Below Grade Construction						**100**	65

Project Component	Activity	Equipment	Lmax (dBA) @ 50 ft	Usage Factor (U.F.) %	Distance to Receptor (feet)	Leq / unit	Total Quantity	Combined Leq (dBA)	Noise Standard (dBA)
	Above Grade Construction	3/4-ton or 1-ton pickup truck	75	40	18	80	4	86	65
		Bucket Truck/Manlift	75	20	18	77	2	80	65
		Large Crane	81	16	18	82	1	82	65
		Boom Truck	85	50	18	91	2	94	65
		Fork Lift/Skid Steer Loader	85	50	18	91	2	94	65
		Line Truck	85	50	18	91	2	94	65
		Cable Dolly (trailer)	85	50	18	91	1	91	65
		Stringing Rig (trailer)	85	50	18	91	1	91	65
		SF6 gas cart (electric)	85	50	18	91	1	91	65
		100-hp Oil Processing Truck	85	50	18	91	1	91	65
		Combined Exposure from Above Grade Construction						**101**	65
	Relay Testing	Relay/Telecommunication Van	85	50	18	91	2	**94**	65
Substation: San Juan Capistrano 230 kV	De-energize Temporary TL13835	Relay/Telecommunication Van	85	50	18	91	2	94	65
		Line Truck	85	50	18	91	1	91	65
		Cable Dolly (trailer)	85	50	18	91	1	91	65
		Boom Truck	85	50	18	91	1	91	65
		Combined Exposure from De-energize Temporary						**98**	65
	Energization 230 kV Substation & Cutovers	Relay/Telecommunication Van	85	50	18	91	2	94	65
		Line Truck	85	50	18	91	2	94	65
		Combined Exposure from 230 kV Substation & Cutovers						**97**	65
Substation:	Building	2-ton Flatbed	74	40	18	79	1	79	65

Project Component	Activity	Equipment	Lmax (dBA) @ 50 ft	Usage Factor (U.F.) %	Distance to Receptor (feet)	Leq / unit	Total Quantity	Combined Leq (dBA)	Noise Standard (dBA)
San Juan Capistrano 138/12 kV	Removal	Truck							
		Bucket Truck/Manlift	75	20	18	77	1	77	65
		Excavator	81	40	18	86	1	86	65
		Jackhammer	89	20	18	91	2	94	65
		Forklift	85	50	18	91	2	94	65
		Dump/Haul Truck	76	40	18	81	16(*)	93	65
		Large Crane	81	16	18	82	1	82	65
		Reel Trailer	85	50	18	91	1	91	65
		Combined Exposure from Building Removal						**99**	65
	Site Development	Bulldozer	82	40	18	87	2	90	65
		Road Grader/Blade	85	40	18	90	2	93	65
		Scraper	84	40	18	89	2	92	65
		834 Rubber Tire Compactor	83	20	18	85	1	85	65
		Loader	79	40	18	84	1	84	65
		Backhoe	78	40	18	83	1	83	65
		Water Truck	74	40	18	79	1	79	65
		Dump/Haul Truck	76	40	18	81	5	88	65
		Excavator	81	40	18	86	1	86	65
		Combined Exposure from Site Development						**98**	65
	Below Grade Construction	Concrete Truck	79	40	18	84	13(*)	95	65
Substation: San Juan Capistrano 138/12 kV		Drill Rig with Augers	84	20	18	86	1	86	65
		Backhoe	79	40	18	84	1	84	65
		Fork Lift/Skid Steer Loader	85	50	18	91	1	91	65
		Small Mobile	81	16	18	82	1	82	65

Project Component	Activity	Equipment	Lmax (dBA) @ 50 ft	Usage Factor (U.F.) %	Distance to Receptor (feet)	Leq / unit	Total Quantity	Combined Leq (dBA)	Noise Standard (dBA)
		Crane (12-ton)							
		Trencher/Ditch Witch	85	50	18	91	1	91	65
		Loader	79	40	18	84	1	84	65
		Water Truck	74	40	18	79	1	79	65
		Handheld Compactor	83	20	18	85	1	85	65
		Dump/Haul Truck	76	40	18	81	7(*)	89	65
		Combined Exposure from Below Grade Construction						**99**	65
	Above Grade Construction	3/4-ton or 1-ton pickup truck	75	40	18	80	4	86	65
		Bucket Truck/Manlift	75	20	18	77	2	80	65
		Large Crane	81	16	18	82	1	82	65
		Boom Truck	85	50	18	91	2	94	65
		Fork Lift/Skid Steer Loader	85	50	18	91	2	94	65
		Line Truck	85	50	18	91	2	94	65
		Cable Dolly (trailer)	85	50	18	91	1	91	65
		Stringing Rig (trailer)	85	50	18	91	1(*)	91	65
		SF6 gas cart (electric)	85	50	18	91	1	91	65
		100-hp Oil Processing Truck	85	50	18	91	1	91	65
		Combined Exposure from Above Grade Construction						**101**	65
	Relay Testing	Relay/Telecommunication Van	85	50	18	91	2	**94**	65
	Energization (138 kV)	Relay/Telecommunication Van	85	50	18	91	2	94	65

Project Component	Activity	Equipment	Lmax (dBA) @ 50 ft	Usage Factor (U.F.) %	Distance to Receptor (feet)	Leq / unit	Total Quantity	Combined Leq (dBA)	Noise Standard (dBA)
	138/12 kV Substation Cutovers	Line Truck	85	50	18	91	2	94	65
		Combined Exposure from 138/12 kV Substation Cutovers						**97**	65
	Energize Temporary TL13835	Relay/Telecommunication Van	85	50	18	91	2	94	65
		Line/Crew Truck	85	50	18	91	2	94	65
		Bucket Truck/Manlift	75	20	18	77	2	80	65
		Stringing Rig (trailer)	85	50	18	91	1	91	65
		Combined Exposure from Energize Temporary TL 13835						**98**	65
General Transmission Line Construction	General Construction	3/4-ton or 1-ton pickup truck	75	25	10	83	3	88	65
		Air compressor	78	50	10	89	2	92	65
		Maintenance truck	85	12.5	10	90	6	98	65
		Water Truck	75	62.5	10	87	4	93	65
		Combined Exposure from General Transmission Construction						**100**	65
Transmission Segment 4 (Talega Hub to Talega Substation): 69kV and 138kV work	Site Grading/Re-establish and Extend Existing Access Roads/Retaining Walls	Bulldozer	82	75	270	66	2	69	55
		Road Grader/Blade	85	100	270	70	1	70	55
		Scraper	84	37.5	270	65	1	65	55
		Compactor	83	50	270	65	1	65	55
		Backhoe/Front Loader	79	50	270	61	2	64	55
		Dump/Haul Truck	76	100	270	61	3	66	55
		Excavator	81	75	270	65	2	68	55
		Drill Rig with Augers	84	100	270	69	2	72	55
		Crane (25 Ton)	81	100	270	66	2	69	55
		Concrete Truck	79	100	270	64	2	67	55
		Combined Exposure from Site Grading/Access Roads						**78**	55
	Foundation	Concrete Truck	79	25	270	58	1	58	55

Project Component	Activity	Equipment	Lmax (dBA) @ 50 ft	Usage Factor (U.F.) %	Distance to Receptor (feet)	Leq / unit	Total Quantity	Combined Leq (dBA)	Noise Standard (dBA)
	Installations	Drill Rig with Augers	84	75	270	68	2	71	55
		Backhoe	79	50	270	61	2	64	55
		Dump/Haul Truck	76	50	270	58	2	61	55
		Combined Exposure from Foundation Installations						**72**	55
	Underground Trench/ Conduit/ Substructure	Dump/Haul Truck	76	37.5	270	57	2	60	55
		Backhoe	78	50	270	60	1	60	55
		Large Crane (100 Ton)	81	75	270	65	1	65	55
		Concrete Truck	79	50	270	61	1	61	55
		Compactor	83	50	270	65	1	65	55
		Combined Exposure from Trench Conduit/Substructure						**70**	55
Transmission Segment 4 (Talega Hub to Talega Substation): 69kV and 138kV work	Steel Structure Installations	2-ton Flatbed Truck	74	25	270	53	1	53	55
		Large Crane	81	37.5	270	62	4	68	55
		Aerial Bucket Truck	75	75	270	59	2	62	55
		Combined Exposure from Steel Structure Installations						**69**	55
	Cable/Conductor Pulling and Tensioning	Aerial Bucket Truck	75	75	270	59	2	62	55
		Puller and Tensioner	85	75	270	69	2	72	55
		Reel Trailer	85	75	270	69	2	72	55
		Splice Trailer	85	75	270	69	1	69	55
		Combined Exposure from Cable/Conductor Pulling						**76**	55
	Removal of Wood Pole Structures	2-ton Flatbed Truck	74	25	270	53	1	53	55
		Aerial Bucket Truck	75	37.5	270	56	2	59	55
		Chainsaw	84	12.5	270	60	2	63	55
		Backhoe/Frontloader	79	25	270	58	1	58	55

Project Component	Activity	Equipment	Lmax (dBA) @ 50 ft	Usage Factor (U.F.) %	Distance to Receptor (feet)	Leq / unit	Total Quantity	Combined Leq (dBA)	Noise Standard (dBA)
		100 Ton Crane/Boom Truck	81	25	270	60	1	60	55
		Combined Exposure from Wood Pole Structures						**67**	55
Transmission Segment 1: Capistrano Substation Getaways 138 kV	Site Development	Bulldozer	82	75	18	90	1	90	65
		Compactor	83	50	18	89	1	89	65
		Loader	79	50	18	85	1	85	65
		Backhoe	78	50	18	84	1	84	65
		Dump/Haul Truck	76	37.5	18	81	1	81	65
		Combined Exposure from Site Development						**94**	65
	Bore Pits	Excavator	81	75	18	89	1	89	65
		Crane	81	37.5	18	86	1	86	65
		Jack-n-Bore Machine	83	100	18	92	1	92	65
		Combined Exposure from Bore Pits						**94**	65
	Foundation Installations	Concrete Truck	79	37.5	18	84	1	84	65
		Drill Rig with Augers	84	100	18	93	1	93	65
		Backhoe	78	37.5	18	83	1	83	65
		Dump/Haul Truck	76	25	18	79	1	79	65
		Combined Exposure from Foundation Installations						**94**	65
Transmission Segment 1: Capistrano Substation Getaways 138 kV	Underground Trench/ Conduit/ Substructure	Dump/Haul Truck	76	37.5	18	81	1	81	65
		100 Ton Crane	81	50	18	87	1	87	65
		Excavator	81	100	18	90	2	93	65
		Backhoe/Frontloader	79	100	18	88	2	91	65
		Concrete Truck	79	25	18	82	1	82	65
		Compactor	83	50	18	89	1	89	65
		Combined Exposure from Underground Trench/Conduit						**97**	65

Project Component	Activity	Equipment	Lmax (dBA) @ 50 ft	Usage Factor (U.F.) %	Distance to Receptor (feet)	Leq / unit	Total Quantity	Combined Leq (dBA)	Noise Standard (dBA)
	Steel Structure Installations	2-ton Flatbed Truck	74	50	18	80	1	80	65
		100 Ton Large Crane	81	50	18	87	1	87	65
		Bucket Truck/Manlift	75	100	18	84	2	87	65
		Combined Exposure from Steel Structure Installations						**90**	65
	Cable/Conductor Pulling and Tensioning	Aerial Bucket Truck	75	75	18	83	2	86	65
		Puller and Tensioner	85	50	18	91	1	91	65
		Reel Trailer	85	50	18	91	1	91	65
		Splice Trailer	85	50	18	91	1	91	65
		Combined Exposure from Cable/Conductor Pulling/Tensioning						**96**	65
	Removal of Structures	2-ton Flatbed Truck	74	37.5	18	79	1	79	65
		Aerial Bucket Truck	75	75	18	83	2	86	65
		Backhoe/Frontloader	79	50	18	85	1	85	65
		Jackhammer	89	50	18	95	1	95	65
		Dump/Haul Truck	76	37.5	18	81	1	81	65
		Large Crane (100 Ton)	81	50	18	87	1	87	65
		Combined Exposure from Removal of Structures						**96**	65
Transmission Segment 3: Talega to Rancho San Juan 230 kV	Site Grading/ Re-establish and Extend Existing Access Roads/ Retaining Walls	Bulldozer	82	75	45	82	1	82	55
		Road Grader/Blade	85	100	45	86	1	86	55
		Scraper	84	100	45	85	1	85	55
		Compactor	83	75	45	83	1	83	55
		Backhoe/Front Loader	79	75	45	79	2	82	55
		Drill Rig with Augers	84	100	45	85	1	85	55

Project Component	Activity	Equipment	Lmax (dBA) @ 50 ft	Usage Factor (U.F.) %	Distance to Receptor (feet)	Leq / unit	Total Quantity	Combined Leq (dBA)	Noise Standard (dBA)
		Excavator	81	75	45	81	2	84	55
		Dump/Haul Truck	76	50	45	74	1	74	55
Transmission Segment 3: Talega to Rancho San Juan 230 kV		Crane (25 Ton)	81	50	45	79	1	79	55
		Concrete Truck	79	50	45	77	1	77	55
		Combined Exposure from Site Grading/Access Roads						**93**	55
	Foundation Installations	Concrete Truck	79	25	45	74	2	77	55
		Drill Rig with Augers	84	50	45	82	2	85	55
		Backhoe	78	75	45	78	2	81	55
		Dump/Haul Truck	76	37.5	45	73	2	76	55
		Combined Exposure from Foundation Installations						**87**	55
	Steel Structure Installations	2-ton Flatbed Truck	74	25	45	69	2	72	55
		100 Ton Large Crane	81	37.5	45	78	2	81	55
		Aerial Bucket Truck	75	50	45	73	4	79	55
		Combined Exposure from Steel Structure Installations						**83**	55
	Conductor Pulling and Tensioning	Aerial Bucket Truck	75	50	45	73	4	79	55
		Puller and Tensioner	85	75	45	85	2	88	55
		Reel Trailer	85	75	45	85	2	88	55
		Combined Exposure from Cable/Conductor Pulling/Tensioning						**91**	55
	Removal of Wood Pole Structures	2-ton Flatbed Truck	74	25	45	69	2	72	55
		Aerial Bucket Truck	75	50	45	73	4	79	55
		Backhoe/Frontloader	79	37.5	45	76	2	79	55
		Jackhammer	89	37.5	45	86	1	86	55
		Dump/Haul	76	25	45	71	1	71	55

Project Component	Activity	Equipment	Lmax (dBA) @ 50 ft	Usage Factor (U.F.) %	Distance to Receptor (feet)	Leq / unit	Total Quantity	Combined Leq (dBA)	Noise Standard (dBA)
		Truck							
		Crane (12 Ton)	81	37.5	45	78	1	78	55
		Combined Exposure from Removal of Wood Pole Structures						**88**	55
Transmission Segment 2: Rancho San Juan 230kV (South Run)	Site Grading/Re-establish and Extend Existing Access Roads	Bulldozer	82	50	10	93	1	93	65
		Excavator	81	100	10	95	1	95	65
		Backhoe/Front Loader	79	100	10	93	1	93	65
		Dump/Haul Truck	76	50	10	87	1	87	65
		Compactor	83	50	10	94	1	94	65
		Combined Exposure from Site Grading/Access Roads						**100**	65
	Foundation Installations	Drill Rig with Augers	84	37.5	10	94	1	94	65
		Backhoe/Front Loader	79	37.5	10	89	1	89	65
		Dump/Haul Truck	76	25	10	84	1	84	65
		Concrete Truck	79	25	10	87	1	87	65
		Combined Exposure from Foundation Installations						**96**	65
	Underground Trench/ Conduit/ Substructure	Excavator	81	100	10	95	2	98	65
		Backhoe/Front Loader	79	100	10	93	2	96	65
		Dump/Haul Truck	76	62.5	10	88	2	91	65
		Crane (12 Ton)	81	25	10	89	1	89	65
		Concrete Truck	79	25	10	87	2	90	65
		Compactor	83	25	10	91	1	91	65
		Combined Exposure from Underground Trench/Conduit						**102**	65
	Steel Structure Installations	2-ton Flatbed Truck	74	50	10	85	1	85	65
		100 Ton Large Crane	81	100	10	95	1	95	65
		Aerial Bucket	75	100	10	89	2	92	65

Project Component	Activity	Equipment	Lmax (dBA) @ 50 ft	Usage Factor (U.F.) %	Distance to Receptor (feet)	Leq / unit	Total Quantity	Combined Leq (dBA)	Noise Standard (dBA)
		Truck							
		Combined Exposure from Steel Structure Installations						**97**	65
	Cable/Conductor Pulling and Tensioning	Aerial Bucket Truck	75	75	10	88	4	94	65
		Puller and Tensioner	85	50	10	96	2	99	65
		Reel Trailer	85	50	10	96	2	99	65
		Splice Trailer	85	50	10	96	2	99	65
		Combined Exposure from Cable/Conductor Pulling/Tensioning						**104**	65
	Removal of Steel Riser Structures	2-ton Flatbed Truck	74	50	10	85	1	85	65
		Aerial Bucket Truck	75	100	10	89	2	92	65
		Backhoe/Front Loader	79	50	10	90	1	90	65
		Jackhammer	89	75	10	102	2	105	65
		Dump/Haul Truck	76	25	10	84	1	84	65
		100 Ton Large Crane	81	25	10	89	1	89	65
		Combined Exposure from Removal of Steel Riser Structures						**105**	65
Transmission Segment 1: Rancho San Juan to San Juan Capistrano 230 kV	Site Grading/Re-establish and Extend Existing Access Roads/Retaining Walls	Water Truck	74	75	40	75	1	75	65
		Bulldozer	82	75	40	83	1	83	65
		Road Grader/Blade	85	100	40	87	1	87	65
		Scraper	84	100	40	86	1	86	65
		Compactor	83	75	40	84	1	84	65
		Backhoe/Front Loader	79	75	40	80	2	83	65
		Drill Rig with Augers	84	100	40	86	1	86	65
		Excavator	81	75	40	82	2	85	65
		Dump/Haul	76	50	40	75	2	78	65

Project Component	Activity	Equipment	Lmax (dBA) @ 50 ft	Usage Factor (U.F.) %	Distance to Receptor (feet)	Leq / unit	Total Quantity	Combined Leq (dBA)	Noise Standard (dBA)
		Truck							
		Crane (25 Ton)	81	50	40	80	1	80	65
		Concrete Truck	79	50	40	78	1	78	65
		Combined Exposure from Site Grading/Access Roads						**94**	65
	Foundation Installations	Concrete Truck	79	25	40	75	1	75	65
		Drill Rig with Augers	84	50	40	83	1	83	65
		Backhoe/Front Loader	79	75	40	80	1	80	65
		Dump/Haul Truck	76	37.5	40	74	1	74	65
		Combined Exposure from Foundation Installations						**85**	65
	Steel Structure Installations	2-ton Flatbed Truck	74	25	40	70	2	73	65
		100 Ton Large Crane	81	37.5	40	79	2	82	65
		Aerial Bucket Truck	75	50	40	74	4	80	65
		Combined Exposure from Steel Structure Installations						**84**	65
	Conductor Pulling and Tensioning	Aerial Bucket Truck	75	50	40	74	4	80	65
		Puller and Tensioner	85	75	40	86	2	89	65
		Reel Trailer	85	75	40	86	2	89	65
		Combined Exposure from Conductor Pulling/Tensioning						**92**	65
	Removal of Wood Structures	2-ton Flatbed Truck	74	25	40	70	1	70	65
		Aerial Bucket Truck	75	50	40	74	2	77	65
		Backhoe/Frontloader	79	37.5	40	77	1	77	65
		Jackhammer	89	37.5	40	87	1	87	65
		Dump/Haul	76	25	40	72	1	72	65

Project Component	Activity	Equipment	Lmax (dBA) @ 50 ft	Usage Factor (U.F.) %	Distance to Receptor (feet)	Leq / unit	Total Quantity	Combined Leq (dBA)	Noise Standard (dBA)
		Truck							
		Crane (12 Ton)	81	37.5	40	79	1	79	65
		Combined Exposure from Removal of Wood Structures						**88**	65
Transmission Segment 4: Talega Hub to Talega Substation TL 230kV	Site Grading/Re-establish and Extend Existing Access Roads/Retaining Walls	Bulldozer	82	75	230	67	1	67	55
		Road Grader/Blade	85	100	230	72	2	75	55
		Scraper	84	37.5	230	66	3	71	55
		Compactor	83	25	230	64	4	70	55
		Backhoe/Front Loader	79	50	230	63	10	73	55
		Drill Rig with Augers	84	37.5	230	66	12	77	55
		Excavator	81	75	230	66	7	75	55
		Dump/Haul Truck	76	75	230	61	8	71	55
		Crane (25 Ton)	81	75	230	66	9	76	55
		Concrete Truck	79	37.5	230	61	10	71	55
		Combined Exposure from Site Grading/Access Roads						**84**	55
	Foundation Installations	Concrete Truck	79	37.5	230	61	1	61	55
		Drill Rig with Augers	84	75	230	69	2	73	55
		Backhoe/Front Loader	79	50	230	63	1	63	55
		Dump/Haul Truck	76	37.5	230	58	2	61	55
		Combined Exposure from Foundation Installations						**74**	55
	Steel Structure Installations	2-ton Flatbed Truck	74	25	230	55	1	55	55
		100 Ton Large Crane	81	37.5	230	63	1	63	55
		Aerial Bucket Truck	75	75	230	60	2	64	55
		Combined Exposure from Steel Structure Installations						**67**	55

Project Component	Activity	Equipment	Lmax (dBA) @ 50 ft	Usage Factor (U.F.) %	Distance to Receptor (feet)	Leq / unit	Total Quantity	Combined Leq (dBA)	Noise Standard (dBA)
	Conductor Pulling and Tensioning	Aerial Bucket Truck	75	75	230	60	2	64	55
		Puller and Tensioner	85	75	230	70	2	74	55
		Reel Trailer	85	75	230	70	2	74	55
		Combined Exposure from Conductor Pulling and Tensioning						**77**	55
	Removal of Wood Pole Structures	2-ton Flatbed Truck	74	25	230	55	1	55	55
		Aerial Bucket Truck	75	37.5	230	57	2	60	55
		Chainsaw	84	12.5	230	62	2	65	55
		Backhoe/Front Loader	79	25	230	60	1	60	55
		100 Ton Large Crane	81	25	230	62	1	62	55
		Combined Exposure from Removal of Wood Pole Structures						**68**	55
Transmission Segment 2: Rancho San Juan 138/230kV (North Runs)	Site Grading/Re-establish and Extend Existing Access Roads	Excavator	81	50	10	92	1	92	65
		Backhoe/Front Loader	79	100	10	93	1	93	65
		Dump/Haul Truck	76	100	10	90	1	90	65
		Compactor	83	50	10	94	1	94	65
		Combined Exposure from Site Grading/Access Roads						**98**	65
	Underground Trench/ Conduit/ Substructure	Excavator	81	100	10	95	2	98	65
		Backhoe/Front Loader	79	100	10	93	2	96	65
		Dump/Haul Truck	76	50	10	87	2	90	65
		Crane (12 Ton)	81	25	10	89	1	89	65
		Concrete Truck	79	25	10	87	2	90	65
		Compactor	83	25	10	91	1	91	65
		Combined Exposure from Underground Trench/Conduit						**102**	65
	Steel	2-ton Flatbed	74	50	10	85	1	85	65

Project Component	Activity	Equipment	Lmax (dBA) @ 50 ft	Usage Factor (U.F.) %	Distance to Receptor (feet)	Leq / unit	Total Quantity	Combined Leq (dBA)	Noise Standard (dBA)
	Structure Installations	Truck							
		100 Ton Large Crane	81	100	10	95	2	98	65
		Aerial Bucket Truck	75	100	10	89	2	92	65
		Combined Exposure from Steel Structure Installations						**99**	65
	Cable/Conductor Pulling and Tensioning	Aerial Bucket Truck	75	75	10	88	4	94	65
		Puller and Tensioner	85	50	10	96	2	99	65
		Reel Trailer	85	50	10	96	2	99	65
		Splice Trailer	85	50	10	96	2	99	65
		Combined Exposure from Cable/Conductor Pulling/Tensioning						**104**	65
	Removal of Steel Riser Structures	2-ton Flatbed Truck	74	50	10	85	1	85	65
		Aerial Bucket Truck	75	100	10	89	2	92	65
		Excavator	81	50	10	92	1	92	65
		Jackhammer	89	75	10	102	2	105	65
		Dump/Haul Truck	76	25	10	84	1	84	65
		100 Ton Large Crane	81	25	10	89	1	89	65
		Combined Exposure from Removal of Steel Riser Structures						**105**	65
Distribution Line Construction	Construction at each pole site	Drilling rig	84	100	50	84	1	84	65
		Forklift	75	75	50	74	1	74	65
		Water truck	76	25	50	70	1	70	65
		Boom truck	76	50	50	73	1	73	65
		Flatbed truck	76	37.5	50	72	1	72	65
		1-Ton Pick-Up truck	74	37.5	50	70	1	70	65
		Concrete truck	81	20	50	74	1	74	65
		Air compressor	78	100	50	78	1	78	65

Project Component	Activity	Equipment	Lmax (dBA) @ 50 ft	Usage Factor (U.F.) %	Distance to Receptor (feet)	Leq / unit	Total Quantity	Combined Leq (dBA)	Noise Standard (dBA)
		Combined Exposure from Distribution Line Construction						**86**	65

Source: SDGE&E 2012. FHWA 2006.

Notes:

(*) Quantity per day assumption based on total vehicle/equipment use indicated in the construction equipment list and total number of working days per activity.

Operational Noise Analysis

Transformers Noise:

NEMA Standards Noise Levels	**(dB at 1 feet)**
230-kV 352 MVA Transformer	91
138-kV 30 MVA Transformer	80

Number of Transformers at SJ Capistrano Substation	
230-kV 352 MVA Transformer	2
138-kV 30 MVA Transformer	3

Estimated Combined Noise Level (dB at 1 feet)	
230-kV 352 MVA Transformers (2 Units)	94
138-kV 30 MVA Transformer (3 Units)	85
ALL TRANSFORMERS (5 Units)	**94.5**
Assumed dB reduction w/ walls	**10**

Estimated dB reduction per distance w/o walls (feet)

20	**50**	**100**	**200**	**300**	**500**	**1000**	**1355**
68	60	54	48	44	40	34	31
59	51	45	39	35	31	25	22
68	**61**	**54**	**48**	**45**	**41**	**34**	**32**

Estimated dB reduction per distance with walls (feet)

20	**50**	**100**	**200**	**300**	**500**	**1000**	**1355**
58	50	44	38	34	30	24	21
49	41	35	29	25	21	15	12
58	**51**	**44**	**38**	**35**	**31**	**24**	**22**

Corona Noise

Estimated Noise within ROW (dB at 25 feet)	
230-kV Line in Fair Weather	24.6
230-kV Line in Wet Weather	49.6

Estimated dB reduction per distance (feet)

45	**50**	**100**	**200**	**400**
19	19	13	7	1
44	44	38	32	26

Range of audible noise levels measured in rain conditions

41 to 63 decibels (IEEE 1974; Miller 1978)

Appendix O

SDG&E Subregional NCCP/HCP Operational Protocols by Environmental Category

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Appendix O: SDG&E Subregional NCCP/HCP Operational Protocols

Table 1: SDG&E Subregional NCCP/HCP Operational Protocols by Environmental Category

Environmental Resource	Monitoring Requirement	Timing of Action
Air Quality		
(1): Vehicles must be kept on access roads. A 15 mile-per-hour speed limit shall be observed on dirt access roads to allow reptile species to disperse. Vehicles must be turned around in established or designated areas only.	Ensure that the applicant operates vehicles as described.	At all times
(39): Large amounts of fugitive dust could interfere with photosynthesis. Fugitive dust created during clearing, grading, earth-moving, excavation or other construction activities will be controlled by regular watering. At all times, fugitive dust emissions will be controlled by limiting on-site vehicle speed to 15 miles per hour.	Ensure that the applicant operates vehicles as described.	At all times
(57): During a system emergency, unnecessary carelessness which results in environmental damage is prohibited.	Ensure that the applicant avoids unnecessary damage to the environment.	During a system emergency
(58): Emergency repair of facilities is required in situations which potentially or immediately threaten the integrity of the SDG&E system, such as pipe leaks, or downed lines, slumps, slides, major subsidence, etc. During emergency repairs the Operational Protocols contained in this Subregional Plan shall continue to be followed to fullest extent possible.	Ensure that the applicant implements the Operational Protocols as feasible.	During emergency repairs
Biological Resources		
(1): Vehicles must be kept on access roads. A 15 mile-per-hour speed limit shall be observed on dirt access roads to allow reptile species to disperse. Vehicles must be turned around in established or designated areas only.	Ensure that the applicant operates vehicles as described.	At all times
(2): No wildlife, including rattlesnakes, may be harmed, except to protect life and limb.	Ensure that the applicant does not harm wildlife.	At all times
(4): Feeding of wildlife is not allowed	Ensure that the applicant does not feed wildlife.	At all times
(5): SDG&E personnel are not allowed to bring pets on the rights-of-way in order to minimize harassment or killing of wildlife and to prevent the introduction of destructive domestic animal diseases to native wildlife populations.	Ensure that the applicant does not bring pets to the rights-of-way.	At all times
(6): Parking or driving underneath oak trees is not allowed in order to protect root structures except in established traffic areas.	Ensure that the applicant avoids driving or parking underneath oak trees, where applicable.	At all times
(7): Plant or wildlife species may not be collected for pets or any other reason.	Ensure that the applicant does not collect plant or wildlife species.	At all times
(8): Littering is not allowed. SDG&E shall not deposit or leave any food or waste on the rights-of-way or adjacent property.	Ensure that the applicant does not litter.	At all times
(10): Field crews shall refer environmental issues including wildlife relocation, dead or sick wildlife, hazardous waste, or questions about avoiding environmental impacts to the Environmental Surveyor.	Ensure that the applicant implements applicable protocols for environmental issues.	At all times

Table 1: SDG&E Subregional NCCP/HCP Operational Protocols by Environmental Category

Environmental Resource	Monitoring Requirement	Timing of Action
Biologists or experts in wildlife handling may need to be brought in by Environmental Surveyor for assistance with wildlife relocations.		
(11): All SDG&E personnel working within the project area shall participate in an employee training program conducted by SDG&E, with annual updates. The program will consist of a brief discussion of endangered species biology and the legal protections afforded to Covered Species; a discussion of the biology of the Covered Species protected under this Subregional Plan; the habitat requirements of these Covered Species; their status under the Endangered Species Acts; measures being taken for the protection of Covered Species and their habitats under this Subregional Plan; and a review of the Operational Protocols. A fact sheet conveying this information will also be distributed to all employees working in the project area.	Ensure that the applicant conducts annual employee training.	At all times
(12): Designated SDG&E staff will conduct selected reviews of SDG&E operations. Any proposed modifications to Operational Protocols, procedures or conditions will be promptly provided to CDFW and USFWS for their review and input for required permit or Subregional Plan amendments.	Ensure that the applicant implement reviews of SDG&E operations.	At all times
(13): The Environmental Surveyor shall conduct preactivity studies for all activities occurring off of access roads in natural areas. The scope of these studies is included in Appendix A [of the SDG&E Subregional NCCP/HCP]. The Environmental Surveyor will complete a preactivity study form contained in Appendix A [of the SDG&E Subregional NCCP/HCP], including recommendations for review by a biologist and construction monitoring as appropriate. Biologists should be called in when there is the potential for unavoidable impacts to Covered Species. The forms are for information only, and will not require CDFW or USFWS approval. These forms shall be faxed to CDFW and USFWS, along with phone notification, who will reply within 5 working days, indicating if they would like to review the project and/or suggest recommendations for post project monitoring. If a biologist is required, he/she will be contacted concurrent to notification to CDFW and USFWS. SDG&E's project may proceed during this time if necessary, in compliance with the recommendations of the biologist (For narrow endemic species see mitigation IV following Table 3.1). USFWS survey protocols performed by qualified biologists will be required for new projects which are defined as projects requiring CEQA review. In those situations where the Environmental Surveyor cannot make a definitive species identification, an on-call biologist will be brought in. When the biologist is called, he or she will be contacted concurrently with CDFW and USFWS. The biologist will make the determination of the species in question and recommend avoidance or mitigation approaches to the Environmental Surveyor and a decision will be made. In those situations where more than one visit may be necessary to identify a given species, such as certain birds, no more than three site visits shall be required. It is expected that the typical USFWS search protocols will not be utilized in most situations due to the Plan's avoidance priority. Background information necessary to complete the annual report shall be collected on the preactivity study form and used by SDG&E to prepare the annual report.	Ensure that the applicant implements preactivity studies as described.	Prior to and during construction
(14): In order to ensure that habitats are not inadvertently impacted, the Environmental Surveyor shall determine the extent of habitat and flag boundaries of habitats which must be avoided. When necessary,	Ensure that the applicant demarcates project areas.	Prior to and during

Table 1: SDG&E Subregional NCCP/HCP Operational Protocols by Environmental Category

Environmental Resource	Monitoring Requirement	Timing of Action
the Environmental Surveyor should also demark appropriate equipment laydown areas, vehicle turn around areas, and pads for placement of large construction equipment such as cranes, bucket trucks, augers, etc. When appropriate, the Environmental Surveyor shall make office and/or field presentations to field staff to review and become familiar with natural resources to be protected on a project specific basis.		construction
(15): SDG&E will maintain a library of rare plant locations known to SDG&E occurring within easements and fee owned properties. "Known" means a verified population, either extant or documented using record data. Information on known sites may come from a variety of record data sources including local agency Habitat Conservation Plans, pre-activity surveys, or biological surveys conducted for environmental compliance on a project site (e.g. initial study), but there is no requirement for development of original biological data. Plant inventories shall be consulted as part of pre-activity survey procedures.	Ensure that the applicant maintains rare plant library as described.	Prior to and during construction
(16). Maintenance, repair and construction Activities shall be designed and implemented to minimize new disturbance, erosion on manufactured and other slopes, and off-site degradation from accelerated sedimentation, and to reduce maintenance and repair costs.	Ensure that the applicant minimizes the need for new disturbance.	At all times
(17): Routine maintenance of all Facilities includes visual inspections on a regular basis, conducted from vehicles driven on the access roads where possible. If it is necessary to inspect areas which cannot be seen from the roads, the inspection shall be done on foot, or from the air.	Ensure that the applicant implements regular inspections.	At all times
(21): When siting new facilities, every effort will be made to cross the wetland habitat perpendicular to the watercourse, spanning the watercourse to minimize the amount of disturbance to riparian areas (see Figure 4 of the SDG&E Subregional NCCP/HCP).	Ensure that the applicant site facilities as described as feasible.	Prior to construction
(22): Gas and other facilities cross streambeds and require maintenance and repair. During such times water may be temporarily diverted as long as after disturbance natural drainage patterns are restored to minimize the impact of the disturbance and help to reestablish or enhance the native habitat. Erosion control during construction in the form of intermittent check dams and culverts should also be considered to prevent alteration to natural drainage patterns and prevent siltation.	Ensure that the applicant restores and protects natural drainages.	At all times
(23): Impacts to wetlands shall be minimized by avoiding pushing soil or brush into washes or ravines	Ensure that the applicant avoids pushing soil or brush into wetland.	At all times
(24): During work on facilities, all trucks, tools, and equipment should be kept on existing access roads or cleared areas, to the extent possible.	Ensure that the applicant maintains all vehicles and equipment on existing access roads to the extent possible.	At all times
(25): Environmental Surveyor must approve of activity prior to working in sensitive areas where disturbance to habitat may be unavoidable.	Ensure that the applicant obtains the Environmental Surveyor's approval.	Prior to and during construction
(26): Insulator washing is allowed from access roads if other applicable protocols are followed.	Ensure that the applicant implements applicable protocols.	During operation and maintenance
(27): Brush clearing around facilities for fire protection shall not be conducted from March through August without prior approval by the Environmental Surveyor. The Environmental Surveyor will make sure that the habitat contains no active nests, burrows, or dens prior to clearing.	Ensure that the applicant implements brush clearing during appropriate times and after habitat surveys.	At all times

Table 1: SDG&E Subregional NCCP/HCP Operational Protocols by Environmental Category

Environmental Resource	Monitoring Requirement	Timing of Action
(28): In the event SDG&E identifies a covered species of plant within a 10' radius around power poles, which is the area required to be cleared for fire protection purposes, SDG&E shall notify USFWS (for ESA listed plants), and CDFW (for CESA listed plants), in writing, of the plant's identity and location and of the proposed Activity, which will result in a Take of such plant. Notification will occur ten (10) working days prior to such Activity, during which time USFWS or CDFW may remove such plant(s). If neither USFWS or CDFW have removed such plant(s) within the ten (10) working days following the notice, SDG&E may proceed to complete its fire clearing and cause a Take of such plant(s). When fire clearing is necessary in instances other than around power poles, and the potential for impacts to Covered Species exists, SDG&E will follow the preactivity study and notification procedures in Operational Protocol number 13.	Ensure that the applicant implements appropriate protocols when a covered species is found within fire clearing boundaries.	At all times
(29): Wire stringing is allowed year round in sensitive habitats if conductor is not allowed to drag on ground or in brush and vehicles remain on access roads.	Ensure that the applicant avoids dragging conductor on the ground or in brush.	During construction
(30): Maintenance of cut and fill slopes shall consist primarily of erosion repair. In situations where revegetation would improve the success of erosion control, planting or seeding with native hydroseed mix may be done on slopes.	Ensure that the applicant repairs eroded soils as described.	During construction and maintenance
(32): Within 6 months of Plan approval, environmentally sensitive tree trimming locations will be identified in the tree trim computer data base system utilized by tree trim contractors. (This data base also tracks the date of each tree trim, type of tree, where threatening dogs reside, etc.). The Environmental Surveyor should be contacted to perform a preactivity survey when trimming is planned in environmentally sensitive areas. Whenever possible, trees in environmentally sensitive areas (determined by CDFW and SDG&E) will be scheduled for trimming in the non-sensitive times.	Ensure that the applicant identifies environmentally sensitive tree trimming locations.	Prior to and during construction
(33): No new Facilities and Activities shall be planned which disturb vernal pools, their watersheds, or impact their natural regeneration. Continued historic maintenance of existing infrastructure utilizing existing access roads is allowed to continue in areas containing vernal pool habitat. New construction of overhead infrastructure which spans vernal pool habitats is allowed as long as the placement of facilities or the associated construction activities in no way impact the vernal pools.	Ensure that the applicant avoids new impacts to vernal pools.	Prior to construction
(34): If any previously unidentified dens, burrows, or plants are located on any project site after the preactivity survey, the Environmental Surveyor shall be contacted. Environmental Surveyor will determine how to best avoid or minimize impacting the resource by considering such methods as project or work plan redevelopment, equipment placement or construction method modification, seasonal/time of day limitations, etc...	Ensure that the applicant surveys for and avoids habitat as feasible.	Prior to and during construction
(35): The Environmental Surveyor shall conduct monitoring as recommended in the preactivity survey report. At completion of work, the Environmental Surveyor shall check to verify compliance, including observing that flagged areas have been avoided and that reclamation has been properly implemented. Also at completion of work, the Environmental Surveyor is responsible for removing all habitat flagging from the construction site.	Ensure that the applicant conducts monitoring as described in the preactivity report and that flagging of sensitive areas is managed appropriately.	At all times

Table 1: SDG&E Subregional NCCP/HCP Operational Protocols by Environmental Category

Environmental Resource	Monitoring Requirement	Timing of Action
(36): The Environmental Surveyor shall conduct checks on mowing procedures, to ensure that mowing is limited to a 12-foot wide area on straight portions of the road (slightly wider on radius turns), and that the mowing height is no less than 4 inches.	Ensure that the applicant implements appropriate mowing protocols.	At all times
(37): Supplies or equipment where wildlife could hide (e.g., pipes, culverts, pole holes) shall be inspected prior to moving or working on them to reduce the potential for injury to wildlife. Supplies or equipment that cannot be inspected or from which animals could not be removed shall be capped or otherwise covered at the end of each work day. Old piping or other supplies that have been left open, shall not be capped until inspected and any species found in it allowed to escape. Ramping shall be provided in open trenches when necessary. If an animal is found entrapped in supplies or equipment, such as a pipe section, the supplies or equipment shall be avoided and the animal(s) left to leave on its own accord, except as otherwise authorized by CDFW.	Ensure that the applicant inspects supplies or equipment.	Prior to and during construction
(38): All steep-walled trenches or excavations used during construction shall be inspected twice daily (early morning and evening) to protect against wildlife entrapment. If wildlife are located in the trench or excavation, the Environmental Surveyor shall be called immediately to remove them if they cannot escape unimpeded.	Ensure that the applicant inspects trenches/excavations twice a day. Ensure that the applicant relocates according to protocol.	Prior to and during construction
(40): Before using pesticides in areas where burrowing owls may be found, a pre-activity survey will be conducted.	Ensure that the applicant conducts pre-activity surveys.	At all times
(41): Repair of erosion by grading, addition of fill, and compacting. In each case of repair, the total area of disturbance shall be minimized by careful access and use of appropriately sized equipment. Repairs shall be done after preactivity surveys conducted by the Environmental Surveyor and in accordance with the recommendations regarding construction monitoring and relevant protocols. Consideration should be given to source of erosion problem, when source is within control of SDG&E.	Ensure that the applicant repairs eroded soils as described.	Prior to and during construction
(42): Vegetation control through grading should be used only where the vegetation obscures the inspection of facilities, access may be entirely lost, or the threat of Facility failure or fire hazard exists. The graded access road area should not exceed 12'-wide on straight portions (radius turns may be slightly wider) (See Figure 23 of the SDG&E Subregional NCCP/HCP).	Ensure that the applicant establishes appropriately sized access roads and minimizes vegetation control.	At all times
(43): Mowing habitat can be an effective method for protecting the vegetative understory while at the same time creating access to a work area. Mowing should be used when permanent access is not required since, with time, total revegetation is expected. If mowing is in response to a permanent access need, but the alternative of grading is undesirable because of downstream siltation potential, it should be recognized that periodic mowing will be necessary to maintain permanent access.	Ensure that the applicant implements mowing instead of grading when possible.	At all times
(44): Maintenance work on access roads should not expand the existing road bed (See Figure 23 of the SDG&E Subregional NCCP/HCP).	Ensure that the applicant avoids unnecessary damage to the environment.	At all times

Table 1: SDG&E Subregional NCCP/HCP Operational Protocols by Environmental Category

Environmental Resource	Monitoring Requirement	Timing of Action
(45): Material for filling in road ruts should never be obtained from the sides of the road which contain habitat without approval from Environmental Surveyor.	Ensure that the applicant avoids unnecessary damage to the environment.	At all times
(47): Access roads will be made available to managers of the regional preserve system subject to coordination with SDG&E.	Ensure that applicant provides access control for regional preserve systems as possible.	At all times
(48): New access roads shall be designed to be placed in previously disturbed areas and areas which require the least amount of grading in sensitive areas during construction whenever possible (See Figure 5 of the SDG&E Subregional NCCP/HCP). Preference shall be given to the use of stub roads rather than linking facilities tangentially.	Ensure that the applicant avoids new disturbance.	Prior to and during construction
(49): SDG&E will consider providing access control on access roads leading into the regional preserve system where such control provides benefit to sensitive resources.	Ensure that applicant provides access control for regional preserve systems as possible.	At all times
(50): New access road construction is allowed year round. Every effort shall be made to avoid constructing roads during the nesting season. During the nesting season, the presence or absence of nesting species shall be determined by a biologist and appropriate avoidance and minimization recommendations followed.	Ensure that the applicant avoids nesting season as feasible.	Prior to and during construction
(51): Construction of new access roads through streambeds requires a Streambed Alteration Agreement from CDFW and/or consultation with the Army Corps of Engineers.	Ensure that the applicant has obtained necessary approval.	Prior to and during construction
(52): Maintenance or construction vehicle access through shallow creeks or streams is allowed. However, no filling for access purposes in waterways is allowed without the installation of appropriately sized culverts. The use of geotextile matting should be considered when it would protect wetland species.	Ensure that the applicant avoids damage to waterways.	Prior to and during construction
(53): Staging/storage areas for equipment and materials shall be located outside of riparian areas. (See Figure 23 of the SDG&E Subregional NCCP/HCP).	Ensure that the applicant stages/stores equipment and materials outside of riparian areas.	At all times
(54): Brush clearing for foot paths or line-of-sight cutting is not allowed from March through August in sensitive habitats without prior approval from the Environmental Surveyor, who will ensure that activity does not adversely affect a sensitive species.	Ensure that the applicant implements brush clearing during appropriate times and after habitat surveys.	At all times
(55): SDG&E survey personnel must keep vehicles on existing access roads. No clearing of brush for panel point placement is allowed from March through August without prior approval from the Environmental Surveyor.	Ensure that the applicant implements brush clearing during appropriate times and vehicles stay on existing access roads.	At all times
(56): Hiking off roads or paths for survey data collection is allowed year round so long as other protocols are met.	Ensure that the applicant implements applicable protocols.	At all times
(57): During a system emergency, unnecessary carelessness which results in environmental damage is prohibited.	Ensure that the applicant avoids unnecessary damage to the environment.	During a system emergency

Table 1: SDG&E Subregional NCCP/HCP Operational Protocols by Environmental Category

Environmental Resource	Monitoring Requirement	Timing of Action
(58): Emergency repair of facilities is required in situations which potentially or immediately threaten the integrity of the SDG&E system, such as pipe leaks, or downed lines, slumps, slides, major subsidence, etc. During emergency repairs the Operational Protocols contained in this Subregional Plan shall continue to be followed to fullest extent possible.	Ensure that the applicant implements the Operational Protocols as feasible.	During emergency repairs
(59): Once the emergency has stabilized, any unavoidable environmental damage will be reported to the Environmental Surveyor by the foreman. The Environmental Surveyor will develop a mitigation plan and ensure its implementation is consistent with this Subregional Plan.	Ensure that the applicant reports unavoidable environmental damage and implements mitigation plan.	Post emergency
(60): Most SDG&E rights-of-way are held in easement only. The activities of underlying fee owners cannot be controlled by SDG&E and are not covered by this Subregional Plan.	None.	At all times
(61): When sensitive habitat exists on either side of a utility right-of-way, SDG&E will not oppose underlying fee owners dedicating said property to conservation purposes. Underlying fee owners are expected to comply with applicable federal, state, and local regulations.	Ensure that the applicant does not oppose conservation of sensitive habitat around utility ROW.	At all times
Geology, Soils, and Mineral Resources		
(16). Maintenance, repair and construction Activities shall be designed and implemented to minimize new disturbance, erosion on manufactured and other slopes, and off-site degradation from accelerated sedimentation, and to reduce maintenance and repair costs.	Ensure that the applicant minimizes the need for new disturbance.	At all times
(17): Routine maintenance of all Facilities includes visual inspections on a regular basis, conducted from vehicles driven on the access roads where possible. If it is necessary to inspect areas which cannot be seen from the roads, the inspection shall be done on foot, or from the air.	Ensure that the applicant implements regular inspections.	At all times
(19): Erosion will be minimized on access roads and other locations primarily with water bars. The water bars are mounds of soil shaped to direct flow and prevent erosion.	Ensure that the applicant implements water bars.	Prior to and during construction
(26): Insulator washing is allowed from access roads if other applicable protocols are followed.	Ensure that the applicant implements applicable protocols.	During operation and maintenance
(30): Maintenance of cut and fill slopes shall consist primarily of erosion repair. In situations where revegetation would improve the success of erosion control, planting or seeding with native hydroseed mix may be done on slopes.	Ensure that the applicant repairs eroded soils as described.	During construction and maintenance
(41): Repair of erosion by grading, addition of fill, and compacting. In each case of repair, the total area of disturbance shall be minimized by careful access and use of appropriately sized equipment. Repairs shall be done after preactivity surveys conducted by the Environmental Surveyor and in accordance with the recommendations regarding construction monitoring and relevant protocols. Consideration should be given to source of erosion problem, when source is within control of SDG&E.	Ensure that the applicant repairs eroded soils as described.	Prior to and during construction
(44): Maintenance work on access roads should not expand the existing road bed (See Figure 23 of the SDG&E Subregional NCCP/HCP).	Ensure that the applicant avoids unnecessary damage to the environment.	At all times

Table 1: SDG&E Subregional NCCP/HCP Operational Protocols by Environmental Category

Environmental Resource	Monitoring Requirement	Timing of Action
(45): Material for filling in road ruts should never be obtained from the sides of the road which contain habitat without approval from Environmental Surveyor.	Ensure that the applicant avoids unnecessary damage to the environment.	At all times
(46): SDG&E access roads will be designed and constructed according to the SDG&E Guide for Encroachment on Transmission Rights-of-Way (4/91).	Ensure that the applicant implements SDG&E Guide for Encroachment on Transmission Rights-of-Way.	Prior to and during construction
(57): During a system emergency, unnecessary carelessness which results in environmental damage is prohibited.	Ensure that the applicant avoids unnecessary damage to the environment.	During a system emergency
(58): Emergency repair of facilities is required in situations which potentially or immediately threaten the integrity of the SDG&E system, such as pipe leaks, or downed lines, slumps, slides, major subsidence, etc. During emergency repairs the Operational Protocols contained in this Subregional Plan shall continue to be followed to fullest extent possible.	Ensure that the applicant implements the Operational Protocols as feasible.	During emergency repairs
Hazards and Hazardous Materials		
(9): Wild Fires shall be prevented or minimized by exercising care when driving and by not parking vehicles where catalytic converters can ignite dry vegetation. In times of high fire hazard, it may be necessary for trucks to carry water and shovels, or fire extinguishers in the field. The use of shields, protective mats, or other fire prevention methods shall be used during grinding and welding to prevent or minimize the potential for fire. Care should be exhibited when smoking in natural habitats.	Ensure that the applicant implements fire prevention measures.	At all times
(10): Field crews shall refer environmental issues including wildlife relocation, dead or sick wildlife, hazardous waste, or questions about avoiding environmental impacts to the Environmental Surveyor. Biologists or experts in wildlife handling may need to be brought in by Environmental Surveyor for assistance with wildlife relocations.	Ensure that the applicant implements applicable protocols for environmental issues.	At all times
(17): Routine maintenance of all Facilities includes visual inspections on a regular basis, conducted from vehicles driven on the access roads where possible. If it is necessary to inspect areas which cannot be seen from the roads, the inspection shall be done on foot, or from the air.	Ensure that the applicant implements regular inspections.	At all times
(18). When the view of a gas transmission line marker becomes obscured by vegetation on a regular basis requiring repeated habitat removal, consideration shall be given to the replacement of markers with taller versions.	Ensure that the applicant incorporates taller line markers when appropriate.	At all times
(26): Insulator washing is allowed from access roads if other applicable protocols are followed.	Ensure that the applicant implements applicable protocols.	During operation and maintenance
(27): Brush clearing around facilities for fire protection shall not be conducted from March through August without prior approval by the Environmental Surveyor. The Environmental Surveyor will make sure that the habitat contains no active nests, burrows, or dens prior to clearing.	Ensure that the applicant implements brush clearing during appropriate times and after habitat surveys.	At all times
(28): In the event SDG&E identifies a covered species of plant within a 10' radius around power poles, which is the area required to be cleared for fire protection purposes, SDG&E shall notify USFWS (for ESA listed plants), and CDFW (for CESA listed plants), in writing, of the plant's identity and location and of the	Ensure that the applicant implements appropriate protocols when a covered species is found within fire clearing boundaries.	At all times

Table 1: SDG&E Subregional NCCP/HCP Operational Protocols by Environmental Category

Environmental Resource	Monitoring Requirement	Timing of Action
proposed Activity, which will result in a Take of such plant. Notification will occur ten (10) working days prior to such Activity, during which time USFWS or CDFW may remove such plant(s). If neither USFWS or CDFW have removed such plant(s) within the ten (10) working days following the notice, SDG&E may proceed to complete its fire clearing and cause a Take of such plant(s). When fire clearing is necessary in instances other than around power poles, and the potential for impacts to Covered Species exists, SDG&E will follow the preactivity study and notification procedures in Operational Protocol number 13.		
(31): Spoils created during maintenance operations shall be disposed of only on previously disturbed areas designated by the Environmental Surveyor or used immediately to fill eroded areas. Cleared vegetation shall be hauled off the rights-of-way to a permitted disposal location.	Ensure that the applicant handles spoils appropriately.	During operation and maintenance
(36): The Environmental Surveyor shall conduct checks on mowing procedures, to ensure that mowing is limited to a 12-foot wide area on straight portions of the road (slightly wider on radius turns), and that the mowing height is no less than 4 inches.	Ensure that the applicant implements appropriate mowing protocols.	At all times
(42): Vegetation control through grading should be used only where the vegetation obscures the inspection of facilities, access may be entirely lost, or the threat of Facility failure or fire hazard exists. The graded access road area should not exceed 12'-wide on straight portions (radius turns may be slightly wider) (See Figure 23 of the SDG&E Subregional NCCP/HCP).	Ensure that the applicant establishes appropriately sized access roads and minimizes vegetation control.	At all times
(57): During a system emergency, unnecessary carelessness which results in environmental damage is prohibited.	Ensure that the applicant avoids unnecessary damage to the environment.	During a system emergency
(58): Emergency repair of facilities is required in situations which potentially or immediately threaten the integrity of the SDG&E system, such as pipe leaks, or downed lines, slumps, slides, major subsidence, etc. During emergency repairs the Operational Protocols contained in this Subregional Plan shall continue to be followed to fullest extent possible.	Ensure that the applicant implements the Operational Protocols as feasible.	During emergency repairs
Hydrology and Water Quality		
(16). Maintenance, repair and construction Activities shall be designed and implemented to minimize new disturbance, erosion on manufactured and other slopes, and off-site degradation from accelerated sedimentation, and to reduce maintenance and repair costs.	Ensure that the applicant minimizes the need for new disturbance.	At all times
(17): Routine maintenance of all Facilities includes visual inspections on a regular basis, conducted from vehicles driven on the access roads where possible. If it is necessary to inspect areas which cannot be seen from the roads, the inspection shall be done on foot, or from the air.	Ensure that the applicant implements regular inspections.	At all times
(19): Erosion will be minimized on access roads and other locations primarily with water bars. The water bars are mounds of soil shaped to direct flow and prevent erosion.	Ensure that the applicant implements water bars.	Prior to and during construction

Table 1: SDG&E Subregional NCCP/HCP Operational Protocols by Environmental Category

Environmental Resource	Monitoring Requirement	Timing of Action
(20): Hydrologic impacts will be minimized through the use of state-of-the-art technical design and construction techniques to minimize ponding, eliminate flood hazards, and avoid erosion and siltation into any creeks, streams, rivers, or bodies of water by use of Best Management Practices.	Ensure that the applicant implements applicable BMPs.	Prior to and during construction
(22): Gas and other facilities cross streambeds and require maintenance and repair. During such times water may be temporarily diverted as long as after disturbance natural drainage patterns are restored to minimize the impact of the disturbance and help to reestablish or enhance the native habitat. Erosion control during construction in the form of intermittent check dams and culverts should also be considered to prevent alteration to natural drainage patterns and prevent siltation.	Ensure that the applicant restores and protects natural drainages.	At all times
(26): Insulator washing is allowed from access roads if other applicable protocols are followed.	Ensure that the applicant implements applicable protocols.	During operation and maintenance
(41): Repair of erosion by grading, addition of fill, and compacting. In each case of repair, the total area of disturbance shall be minimized by careful access and use of appropriately sized equipment. Repairs shall be done after preactivity surveys conducted by the Environmental Surveyor and in accordance with the recommendations regarding construction monitoring and relevant protocols. Consideration should be given to source of erosion problem, when source is within control of SDG&E.	Ensure that the applicant repairs eroded as described.	Prior to and during construction
(52): Maintenance or construction vehicle access through shallow creeks or streams is allowed. However, no filling for access purposes in waterways is allowed without the installation of appropriately sized culverts. The use of geotextile matting should be considered when it would protect wetland species.	Ensure that the applicant avoids damage to waterways.	Prior to and during construction
(57): During a system emergency, unnecessary carelessness which results in environmental damage is prohibited.	Ensure that the applicant avoids unnecessary damage to the environment.	During a system emergency
(58): Emergency repair of facilities is required in situations which potentially or immediately threaten the integrity of the SDG&E system, such as pipe leaks, or downed lines, slumps, slides, major subsidence, etc. During emergency repairs the Operational Protocols contained in this Subregional Plan shall continue to be followed to fullest extent possible.	Ensure that the applicant implements the Operational Protocols as feasible.	During emergency repairs
Public Services, Utilities and Service Systems		
(3): Firearms shall be prohibited on the rights-of-way except for those used by security personnel.	Ensure that the applicant adheres to firearm requirements.	At all times

Appendix P

Public Participation Summary Report

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PUBLIC PARTICIPATION SUMMARY REPORT

FOR THE

DRAFT ENVIRONMENTAL IMPACT REPORT AND THE RECIRCULATED DRAFT ENVIRONMENTAL IMPACT REPORT

FOR

SAN DIEGO GAS AND ELECTRIC COMPANY

SOUTH ORANGE COUNTY RELIABILITY PROJECT

APPLICATION NO.: A.12-05-020
SCH NO.: 2013011011

February 2, 2016

California Public Utilities Commission
505 Van Ness Avenue
San Francisco, CA 94102
Contact: Andrew Barnsdale

Prepared by:

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List of Abbreviations and Acronyms

CEQA	California Environmental Quality Act
CPUC	California Public Utilities Commission
EIR	Environmental Impact Report
NGO	non-government organizations
NOA	Notice of Availability
NOC	Notice of Completion
proposed project	South Orange County Reliability Enhancement Project
SDG&E	San Diego Gas and Electric Company

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1 Overview of the CEQA Public Review Process

1.1 Introduction

The California Environmental Quality Act (CEQA) review process led by the California Public Utilities Commission (CPUC) includes broad public and agency participation to provide input on projects and their potential environmental impacts. The CPUC's public and agency participation efforts include outreach during scoping, draft document review periods, and meetings. Additionally, the CPUC incorporates additional agency outreach to responsible, trustee, and commenting agencies, as necessary.

The purpose of this document is to detail the public and agency participation that occurred for the release of the South Orange County Reliability Enhancement Project (proposed project) Draft Environmental Impact Report (EIR) and the Recirculated Draft EIR.

Chapter 2 details the public participation for the Draft EIR. Chapter 3 details the public participation for the Recirculated Draft EIR. Chapter 4 includes a table containing the name and unique comment identification number associated with every person who commented on the Draft EIR and Recirculated Draft EIR. Documents and materials used for the public participation of the Draft EIR are included in Exhibit A of this report. Documents and materials used for the public participation of the Recirculated Draft EIR are included in Exhibit B of this report.

1.2 Background

San Diego Gas and Electric Company (SDG&E or the applicant) filed an application (A.12-05-020) with the CPUC for the proposed project to rebuild and upgrade a portion of its transmission infrastructure in South Orange County on May 18, 2012. As the lead agency under CEQA, the CPUC commenced public scoping for the proposed project. Comments received from public scoping helped the CPUC craft a comprehensive Draft EIR for the proposed project. The CPUC filed a Notice of Completion (NOC) with the California State Clearinghouse for the public release of the Draft EIR. The Draft EIR and its Notice of Availability (NOA) were published on February 19, 2015, through the State Clearinghouse (SCH No. 2013011011), initiating a 45-day public review period from February 23 and ending on April 10, 2015. The CPUC held two public meetings for the Draft EIR in March 2015 to describe the proposed project; discuss the anticipated impacts from the proposed project, as well as mitigation measures to address such impacts; and receive comments on the Draft EIR.

Public comments on the Draft EIR identified a new alternative to the proposed project and three previously unidentified significant impacts of the proposed project. As a result, the CPUC produced a Recirculated Draft EIR containing this new information. The CPUC filed an NOC with the California State Clearinghouse for the public release of the Recirculated Draft EIR. The Recirculated Draft EIR and its NOA were published on August 10, 2015, through the State Clearinghouse, initiating a 45-day public review period from August 10 and ending on September 24, 2015.

2 Draft EIR Public Participation

Section 15087 of the CEQA Guidelines provides noticing procedures for the CEQA lead agency for a Draft EIR. The guidelines state:

(a) The lead agency shall provide public notice of the availability of a draft EIR at the same time as it sends a notice of completion to the Office of Planning and Research. […] Notice shall be mailed to the last known name and address of all organizations and individuals who have previously requested such notice in writing, and shall also be given by at least one of the following procedures:

1) Publication at least one time by the public agency in a newspaper of general circulation in the area affected by the proposed project. If more than one area is affected, the notice shall be published in the newspaper of largest circulation from among the newspapers of general circulation in those areas.

2) Posting of notice by the public agency on and off the site in the area where the project is to be located.

3) Direct mailing to the owners and occupants of property contiguous to the parcel or parcels on which the project is located. Owners of such property shall be identified as shown on the latest equalized assessment roll.

[…]

(d) The notice required under this section shall be posted in the office of the county clerk of each county in which the project will be located for a period of at least 30 days. The county clerk shall post such notices within 24 hours of receipt.

(e) In order to provide sufficient time for public review, the review period for a draft EIR shall be as provided in Section 15105. The review period shall be combined with the consultation required under Section 15086. When a draft EIR has been submitted to the State Clearinghouse, the public review period shall be at least as long as the review period established by the State Clearinghouse. The public review period and the state agency review period may, but are not required to, begin and end at the same time. Day one of the state review period shall be the date that the State Clearinghouse distributes the document to state agencies.

(f) Public agencies shall use the State Clearinghouse to distribute draft EIRs to state agencies for review and should use areawide clearinghouses to distribute the documents to regional and local agencies.

(g) To make copies of EIRs available to the public, Lead Agencies should furnish copies of draft EIRs to public library systems serving the area involved. Copies should also be available in offices of the Lead Agency.

The noticing that the CPUC conducted for the Draft EIR is further detailed below and meets and exceeds the requirements of Section 15085 and 15087 of the CEQA Guidelines. A copy of the NOC and NOA for the Draft EIR are provided in Exhibits A-1 and A-2, respectively. The NOA for the Draft EIR included the following information in accordance with Section 15087(c) of the CEQA Guidelines:

- A brief description of the proposed project and its location;
- The starting and ending dates for the review period during which the lead agency will receive comments;
- The date, time, and place of the two scheduled public meetings hosted by the lead agency on the proposed project;
- A list of the significant environmental effects anticipated as a result of the project, to the extent that they were known to the CPUC at the time of the notice;
- The address where printed copies of the Draft EIR were available for public review, which included the San Juan Capistrano Regional Library, San Clemente Library[1], and the CPUC website;
- A statement that no sites enumerated under Section 65962.5 of the Government Code were present in the proposed project area; and
- Directions in Spanish on how to get more information on the proposed project translated into Spanish.

2.1 Mailings

To commence the Draft EIR review process, one copy of the NOC form and 15 printed copies of the executive summary were sent to the State Clearinghouse at the Office of Planning and Research. These documents were received on February 19, 2015. Concurrently, copies of the NOA for the Draft EIR were sent to approximately 875 recipients on the project mailing list notifying them of the start of the public review period for the Draft EIR. The project mailing list included local and regional agencies, responsible and trustee agencies, interested parties, Orange County and San Diego County county clerks, and landowners within 300 feet of the proposed project.

Paper and electronic copies of the Draft EIR were mailed to 10 federal, state, regional, and local agencies, and to 8 individuals that requested a copy of the Draft EIR. In accordance with CEQA Guidelines Section 15087(g), the CPUC also mailed paper copies of the Draft

[1] The CPUC was unaware that the San Clemente Library had closed for reconstruction when the NOA was prepared and distributed to the public. However, the CPUC provided a paper copy of the Draft EIR to the temporary San Clemente mobile hub library located at 987 Avenida Vista Hermosa in San Clemente on February 25, 2015, which was the first day the mobile hub library was open during the public comment period. The CPUC did not re-notice the location of the mobile hub library, as patrons would be redirected to the mobile hub library upon visiting the San Clemente Library.

EIR to the San Juan Capistrano Regional Library , San Clemente Library and the temporary San Clemente mobile hub library located at 987 Avenida Vista Hermosa in San Clemente.

2.2 Newspaper Notices

The CPUC published the NOA in the *Orange County Register* and the *San Diego Union Tribune* on February 23, 2015. A Spanish translated NOA for the Draft EIR was published in *La Opinion* on February 23, 2015. Exhibit A-3 includes affidavits from each of the newspapers.

2.3 Voicemail, Fax, Email, and Public Website

The CPUC maintained a voicemail (English and Spanish), fax number, and an email address for the public to submit questions or comments. The CPUC also posted all project related information and documents on a project-specific website. These resources were identified in the NOA for the Draft EIR, newspaper notices, and public meeting materials. The project-specific voicemail, fax, email, and website are as follows:

- Voicemail: 855-520-6799 (toll free)
- Fax: 415-398-5326
- Email: SOCRE.CEQA@ene.com
- Website: http://tinyurl.com/clsee4g

2.4 Public Meetings

The CPUC hosted two public meetings in the vicinity of the proposed project to discuss the Draft EIR. These meetings were held on March 25, 2015 from 1:00 to 3:00 pm at the San Clemente Community Center, and from 6:00 to 8:00 pm at the San Juan Capistrano Community Hall. Attendees to each meeting were asked to sign a sign-in sheet (Exhibit A-4). Each meeting had a Spanish translator present as well as a court reporter to record verbal comments made by the public.

At each meeting, CPUC's consultant, Ecology and Environment, Inc. led a PowerPoint presentation that provided an overview of the proposed project description, significant impacts of the proposed project, environmental review process, purpose of the public meeting, and a description of all methods for the public and agencies to comment on the Draft EIR. A copy of the PowerPoint presentation is provided in Exhibit A-5.

Following the presentation, attendees were given an opportunity to submit verbal comments. Exhibit A-6 includes a copy of the request to speak cards from the meeting. Additionally, poster boards of the proposed project were displayed around the meeting venues and copies of the NOA for the Draft EIR were available to attendees.

2.5 Public and Agency Comments

A total of 318 comment letters regarding the Draft EIR were received by the CPUC at the close of the public comment period. Of the 318 comment letters, 41 were from government agencies, 37 were from non-government organizations (NGOs), and 240 were from individuals. Tables 1 through 3, below, detail the commenters on the Draft EIR. All written

and oral comments received during the public review period will be included in the Final EIR, along with responses prepared by the CPUC for each comment.

3 Recirculated Draft EIR Public Participation

The CPUC fulfilled the same public review requirements for the Recirculated Draft EIR as the Draft EIR, per CEQA Guidelines Section 15088.5.

The noticing that CPUC conducted for the Recirculated Draft EIR is further detailed below and meets and exceeds the requirements of Section 15085 and 15087 of the CEQA Guidelines. A copy of the NOC and NOA for the Recirculated Draft EIR are provided in Exhibits B-1 and B-2, respectively. The NOA for the Recirculated Draft EIR included the following information in accordance with Section 15087(c) of the CEQA Guidelines:

- A brief description of the proposed project and its location;
- A brief explanation of why the CPUC recirculated the Draft EIR;
- The starting and ending dates for the review period during which the lead agency will receive comments;
- A list of the additional significant environmental effects anticipated as a result of the project, to the extent that they were known to the CPUC at the time of the notice;
- The address where printed copies of the Recirculated Draft EIR were available for public review, which included the San Juan Capistrano Regional Library, San Clemente Library, and the CPUC website;
- A statement that no sites enumerated under Section 65962.5 of the Government Code were present in the proposed project area; and
- Directions in Spanish on how to get more information on the proposed project translated into Spanish.

3.1 Mailings

To commence the Recirculated Draft EIR review process, one copy of the NOC form and 15 printed copies of the executive summary were sent to the State Clearinghouse at the Office of Planning and Research. These documents were received on August 10, 2015. Concurrently, copies of the NOA for the Recirculated Draft EIR were mailed to approximately 990 recipients on the project mailing list at the commencement of the public review period for the Recirculated Draft EIR. The project mailing list included local and regional agencies, responsible and trustee agencies, interested parties, Orange County and San Diego County

county clerks, landowners within 300 feet of the proposed project, and landowners within 300 feet of the new alternative (Alternative J) location.

The CPUC mailed paper and electronic copies of the Recirculated Draft EIR to 30 federal, state, regional, and local agencies, and to 140 individuals that requested a copy of the Draft EIR. In accordance with CEQA Guidelines Section 15087(g), the CPUC also mailed paper copies of the Recirculated Draft EIR to the San Juan Capistrano Regional Library and San Clemente Library.

3.2 Newspaper Notices

The CPUC published the NOA for the Recirculated Draft EIR in the *Orange County Register* and the *San Diego Union Tribune* on August 10, 2015. A Spanish translated NOA for the Recirculated Draft EIR was published in *La Opinion* on August 10, 2015. Exhibit B-3 includes affidavits from each of the newspapers.

3.3 Voicemail, Fax, Email, and Public Website

The CPUC updated the voicemail recording and website text with information regarding Recirculated Draft EIR. The same addresses and numbers for the voicemail, fax, email, and public website were used for the Recirculated Draft EIR as the Draft EIR.

3.4 Public Meeting

The CPUC did not hold any public meetings for the Recirculated Draft EIR.

3.5 Public and Agency Comments

A total of 32 comment letters on the Recirculated Draft EIR were received by the CPUC. Of the 32 comment letters, 11 were from government agencies, 5 were from NGOs, and 17 were from individuals. Tables 1 through 3, below, detail the commenters on the Recirculated Draft EIR. All written comments received during the public review period for the Recirculated Draft EIR will be included in the Final EIR, along with responses prepared by the CPUC for each comment

Table 1: Comments Received on the Draft EIR and Recirculated Draft EIR from Agencies and Local Government Personnel

Last Name	First Name	Title	Comment Number (DEIR)	Comment Number (RDEIR)
Federal				
United States Fish and Wildlife Service				
Goebel	Karen	Assistant Field Supervisor	260	-
Gower	Patrick	Fish and Wildlife Biologist	91	-
State				
California Legislature				
Bates	Patricia	Senator (Thirty-Sixth Senate District)	-	329
Brough	William	Assembly member	212	343
Wagner	Donald	Assembly member	51	-
California Public Utilities Commission				
Como	Joseph	Acting Director	-	340
Mee	Charles	Senior Utilities Engineer-Specialist	-	323
Pinjuv	Jordan	Counsel	-	345
California State Board of Equalization				
Harkey	Diane	Board Member	34	-
Department of Transportation				
Carver	Leila	Assoc. Transportation Planner	-	334
El Harake	Maureen	Branch Chief	58	-
Local				
Capistrano Unified School District				
Caster	Ryan	Representative	303	-
Hampton	Clark	Deputy Superintendent, Business Support Services	11	-
City of Aliso Viejo				
Chun	Ross	City Councilmember	38, 306	-
Munzing	Mike	City Councilman and Mayor pro tem	284	-
Phillips	William	Mayor	14	-
City of Dana Point				
Olvera	Carlos	Mayor	77	-
City of Laguna Hills				
Gilbert	Dore	Mayor	210	-
City of Laguna Niguel				
McCloskey	Jerry	Mayor	103	-
City of Mission Viejo				
Raths	Greg	Mayor Pro Tem	86, 215,301	-
Hamm	Chris	Mayor	83	-
Reardon	Rhonda	Former Mayor	271	-

Table 1: Comments Received on the Draft EIR and Recirculated Draft EIR from Agencies and Local Government Personnel

Last Name	First Name	Title	Comment Number (DEIR)	Comment Number (RDEIR)
Schlicht	Cathy	Mayor	97	-
Wood	Lynn	CEO (Chamber of Commerce)	192	-
City of San Clemente				
Pechous	James	City Planner	-	337
City of San Juan Capistrano				
View	Charles	Development Services Director	6, 307, 308	-
County of Orange				
Tieu	David	Senior Civil Engineer (OC Waste and Recycling)	5	-
Bartlett	Lisa	Supervisor (Orange County Board of Supervisors)	23	330
Broming	Richard	Senior Vice President (Orange County Board of Supervisors)	80	320
Burnett	Betty	General Manager (South Orange County Wastewater Authority)	53	-
Cao	Victor	Representing Lisa Bartlett (Orange County Board of Supervisors)	264	-
Wright	Dylan	Director (OC Waste and Recycling)	88	-
Ladera Ranch Civic Council				
McCormick	Jett	Chairman	96	-
Metrolink - Southern California Regional Rail Authority				
Mathieu	Ron	Sr. Public Projects Specialist	85	-
Moulton Niguel Water District				
Serna	Marc	Director of Engineering	296	-
Lopez	Joone	General Manager	209	-
Municipal Water District of Orange County				
Baez	Heather	Government Affairs Manager	263	-
Hunter	Robert	General Manager	12	-
Saddleback College				
Ozurovich	John	Senior Director of Facilities	30, 273	-
Santa Margarita Water District				
Ferons	Daniel	General Manager	32	-
Leach	Jim	Director of External Affairs	262	-
South Coast Air Quality Management District				
Wong	Jilian	Program Supervisor	-	341, 342
South Coast Water District				
Rayfield	Wayne	President	188	-

Table 2: Comments Received on the Draft EIR and Recirculated Draft EIR from NGO and Non-profit Organization Personnel

Last Name	First Name	Title	Comment Number (DEIR)	Comment Number (RDEIR)
Anderson	Joe	Citizens of Safe and Reliable Power	206, 276	-
Armstrong	Jeanne	Goodin, MacBride, Squeri, & Day, LLP	102	-
Arnau	John	OC Waste & Recycling	4	-
Ayer	Jacqueline	FRONTLINES	318	328
Balsamo	Mike	Building Industry Association of Southern California, Inc.	28	-
Bodenhamer	Mark	San Juan Capistrano Chamber of Commerce	24	-
Brown	Wayne	South Orange County Economic Coalition	207, 317	-
Brown	Garry	Orange County Coastkeeper and Inland Empire Waterkeeper	265	-
Burhenn	Thomas	Southern California Edison Company (Director, Regulatory Affairs)	-	336
Burke	Mike	San Clemente Chamber of Commerce	268	-
Caveche	Carolyn	Orange County Taxpayers Association	293	-
Eisenberg	Laura	The Reserve at Rancho Mission Viejo	92	-
Erkeneff	Rick	Surfrider Foundation	267	-
Fisher	Dick	Aliso Viejo Chamber of Commerce	214, 274	-
Fisher	Heidi	Laguna Niguel Chamber of Commerce	7, 184	-
Forney	John	Capistrano Unified School District	44	-
Geier	David	San Diego Gas and Electric (Vice President)	98, 258, 259	346, 347
Hickey	Joe	South OC Business Community	316	-
Lamotte	Steve	Building Industry Association of Orange County	270	-
Newman	Debbie	Laguna Niguel Chamber of Commerce	266	325
Penrose	Lou	Apartment Association of Orange County	208	-
Schaffner	Shawna	CAA Planning	90, 280	-
Scognamiglio	Enzo	Dana Point Chamber of Commerce	203, 282	-
Starr	Bryan	Orange County Business Council	31, 309	-
Stefanides	Dave	Orange County Association of Realtors	105	-
Thomas	Larry	San Juan Capistrano Chamber of Commerce	261	-
Tony	Struthers	Saddleback Memorial Medical Center	204, 275	-

Table 3: Comments Received on the Draft EIR and Recirculated Draft EIR from Individuals

Last Name	First Name	Comment Number (DEIR)	Comment Number (RDEIR)
Agoni	A (illegible)	227	-
Aguilar	Hector and Lauren	-	331
Aguire	Tito	223	-
Alarcon	Michael	15	-
Alexade	Patty	225	-
Allen	Carole	179	-
Apodaca	Beth	39, 294	-
Aschel	Linda	157	-
Atkinson	David	40	-
Babcock	Candy	162	-
Bailer	Susan	180	-
Banks	Maria Elena	89, 219	-
Barnum	Kathy	41	-
Beal	Bruce	66	-
Beas	Ricardo	16, 290	-
Beeman	Brian	17, 288	-
Bentall	Dominic	311	-
Beveridge	Edward	126	-
Bieber	Jim	269	-
Bishop	Dennis	134	-
Bock	Vern	107	-
Boden	Jeff	300	-
Bolt	Jeffery	182	-
Boudreau	Alan	67	-
Bridge	Gary	131	-
Brown	Robert	183	-
Bucknum	Wendy	70, 279	-
Burnett	Barry	173	-
Burnett	Tod	18	-
Byrnes	Ilse	295	-
Cadotte	Chris	71	-
Cadotte	Jackie	72	-
Campbell	Gail and Bill	229	-
Card	Les	42, 73	-
Carter	James	74, 75	-
Cerchio	Gina	152	-
Chiose	Daniel	138	
Chong	Kim	-	321
Coleman	Tari	106	-
Conte	Mike	9	-
Dahl	Jim	29, 281	-

Table 3: Comments Received on the Draft EIR and Recirculated Draft EIR from Individuals

Last Name	First Name	Comment Number (DEIR)	Comment Number (RDEIR)
Diaz	Amelia	253	-
Diaz	Antero	250	-
Diaz	Esmerelda	254	-
DiCandia	Carla	1	-
Ditty	Marilyn	19, 81	-
Divel	Reeca	193	-
Dow	Sandy	128	-
Dugan	Illegible	234	-
Dutchik	Arlene	130	-
Duzich Rohde	Angela	230	-
Ewing	William	246	-
Faubel	Roger	68	-
Faulkner	Lanette	304	-
Finney	Kelly	194	-
Finney	MIchael	245	-
Flores	Arlen	248	-
Flores	Domingo	252	-
Franks	Carolyn	305	-
French	Nancy	43	-
Frisch	Stephanie	59	-
Fusco	Joe & Dawn	10, 211	-
Gaughan	Mark	54, 82	-
Gerrald-Jones	Debra	170	-
Gibson	Charles	33	326
Gila	Jones	-	344
Girot	Vivian	129	-
Goodwin	Bill	125, 175	-
Gray	Natalie	123, 171	-
Greyshock	Steve	45	-
Groos	Eric	93	-
Hanger	Lideen	158	-
Hannifan	Jerry	111	-
Hansen	Bonnie	142	-
Hansen	Maurice	141	-
Hazard	Reed	110	-
Hernandez	Norma	185, 249	-
Hernandez	Ric	117	-
Hildabrand	Gary	69	-
Holmes	Cindy	241	-
Host	Joshua	299	-
Hovey	Leslie	-	332
Hunt	Nancy	169, 195, 277	-
Illegible	Casey	119	-

Table 3: Comments Received on the Draft EIR and Recirculated Draft EIR from Individuals

Last Name	First Name	Comment Number (DEIR)	Comment Number (RDEIR)
Illegible	Casey	168	-
Illegible	Chris	147	-
Illegible	Robert	163	-
Illegible 1	Illegible	139	-
Illegible 10	Illegible	165	-
Illegible 11	Illegible	174	-
Illegible 12	Illegible	176	-
Illegible 13	Illegible	181	-
Illegible 14	Illegible	186	-
Illegible 15	Illegible	217	-
Illegible 16	Illegible	224	-
Illegible 17	Illegible	228	-
Illegible 18	Illegible	231	-
Illegible 19	Illegible	232	-
Illegible 2	Illegible	140	-
Illegible 20	Illegible	233	-
Illegible 21	Illegible	235	-
Illegible 22	Illegible	240	-
Illegible 3	Illegible	144	-
Illegible 4	Illegible	151	-
Illegible 5	Illegible	154	-
Illegible 6	Illegible	155	-
Illegible 7	Illegible	156	-
Illegible 8	Illegible	160	-
Illegible 9	Illegible	161	-
Inman	Karen	94	-
Jackson	Alan	256	-
Janis	Vickie	153	-
Johnson	Jessica	121	-
Johnson	Memit	199	-
Jorgensen	Sam	112	-
Kampp	GIgi	132	-
Keena	Kate	21	-
Keller	Kam	114	-
Kim	Illegible	221	-
Kindred	Shelly	244	-
Kindres	Don	243	-
Koffs	David	145	-
Kohan	Rhen	13, 285, 286	333
Kohler	Deborah	127	-
Kramer	Lawrence	84	-
Krause	Frank	222	-
Kutnick	Erin	36	-

Table 3: Comments Received on the Draft EIR and Recirculated Draft EIR from Individuals

Last Name	First Name	Comment Number (DEIR)	Comment Number (RDEIR)
Larkin-Reed	Heidi	37	-
Larson	Nipper	137	-
Lenkoski	Peter	-	351
Lewis	Erin	247	-
Lhummedieu	William	251	-
Lubert	Randy	302	-
Maisen	Theresa	76	-
Mantander	Doug	148	-
Mantander	Janet	149	-
Martinez	Ana	135	-
Mason	Breanne	146	-
McCann	Michael	60	-
McCauley	Patricia	95	-
McCurry	Pam	133	-
McGrorty	Kathleen	196	-
Mckevitt	Sean	-	349
Mclaughlin	Nora	159	-
Medina	Rachel	238	-
Medina	Tony	239	-
Mendez	Araceli	257	-
Minor	Judy	150	-
Molina	Edwardo	164	-
Montandon	Doug and Janet	122	-
Montes	Maria	237	-
Moore	Donna	187	-
Morceles	Elizabeth	226	-
Morey	Romona	120	-
Neitzke	Jay and Thia	-	350
Nelson	Lisa	218	-
Nelson	Tommy	297	-
Nevin	Shawn	116	-
Newcomer	Michelle	2	-
Oborne	Stacey	3	-
O'Brian	James	313	-
Okamoto	Jeffrey	56	-
Page	Jamie	166	-
Patterson	Pam	314, 315	-
Pearce	Laer	46, 278	-
Pellareo	Linda	236	-
Perez	Jon	136	-
Petersen	Kathleen	35, 291	319, 335
Pictor	Danika	178	-
Porter	Jamie	200	-

Table 3: Comments Received on the Draft EIR and Recirculated Draft EIR from Individuals

Last Name	First Name	Comment Number (DEIR)	Comment Number (RDEIR)
Pride	Joseph	-	322
Putnam	Maxine	177	-
Rabalais	Lois	213	339
Relis	Fausto	108	-
Riggs	Maureen	115	-
Roberts	Paul	87	-
Roberts	Ted	8	-
Robertson	David	47	-
Rodriguez	Al	109	-
Ronan	Ann	216, 312	-
Rottmann	Mark	61	-
Sanderson	Carey	48	-
Sanderson	Lou	62	-
Sanford	David	205	-
Segal	Mario	189	-
Shields	Eric	63	-
Shields	Greg	220	-
Shipley	Christel	242	-
Smith	Dianne	201	-
Smith	Scott	-	338
Snider	Mark	197	-
Somji	Mohamed	64	-
Stanley	Curt	99, 272	-
Stein	Richard	25, 298	-
Stocks	Elizabeth	78	-
Suits	Tammy	-	327
Sutton	James	113	-
Suydam	Michael	49	-
Talley	Vickie	26	-
Tayenaka	Rita	50, 310	-
Taylor	Nancy	104	-
Treff	Cary	57	-
Vance	Peggy	255	-
Vandermost	Julie	20, 287	-
Vandorpe	Tom	79	-
Varner	Donna	27, 283	-
Vegan	Auri	172	-
Vollebregt	Jake	100	-
Volzke	Jonathan	101, 289	-
Wall	Dianne	124	-
Ware	Charles	52	-
Wark	Carolyn	118	-
Wark	Gary	167	-

Table 3: Comments Received on the Draft EIR and Recirculated Draft EIR from Individuals

Last Name	First Name	Comment Number (DEIR)	Comment Number (RDEIR)
Welch	Victoria	55	-
White	Donna	65	-
Whitelock	Judy	190	-
Whitelock	Paul	191	-
Winsor	Kelly	202	-
Winstead	Stephanie	198	-
Winterswyk	Alisha	-	348
Woodfill	Peter	22, 292	324
Zuniga	Mayra	143	-

Exhibit A-1

Draft EIR Notice of Completion (NOC)

Print Form

Appendix C

Notice of Completion & Environmental Document Transmittal

Mail to: State Clearinghouse, P.O. Box 3044, Sacramento, CA 95812-3044 (916) 445-0613
For Hand Delivery/Street Address: 1400 Tenth Street, Sacramento, CA 95814

SCH # 2013011011

Project Title: South Orange County Reliability Enhancement (SOCRE) Project (San Diego Gas & Electric Company)

Lead Agency: California Public Utilities Commission — Contact Person: Andrew Barnsdale. Energy

Mailing Address: 505 Van Ness Avenue — Phone: (415) 703-3221

City: San Francisco — Zip: 94102 — County: San Francisco

Project Location: County: Orange and San Diego — City/Nearest Community: San Juan Capistrano, San Clemente

Cross Streets: Camino Capistrano, Cristianitos Rd (8-mile electrical transmission project, 2 substations) — Zip Code: Various

Longitude/Latitude (degrees, minutes and seconds): 33 ° 30 ′ 44 ″ N / 117 ° 39 ′ 55 ″ W — Total Acres: 1 (permanent)

Assessor's Parcel No.: Multiple — Section: S1 — Twp.: 8S — Range: 8W — Base: San Bernardino

Within 2 Miles: State Hwy #: I — Waterways:

Airports: None — Railways: — Schools: S

Document Type:

CEQA: ☐ NOP ☒ Draft EIR ☐ Supplement/Subsequent EIR (Prior SCH No.) ☐ Early Cons ☐ Neg Dec ☐ Mit Neg Dec Other:

NEPA: ☐ NOI ☐ EA ☐ Draft EIS ☐ FONSI

Other: ☐ Joint Document ☐ Final Document ☐ Other:

Local Action Type:

☐ General Plan Update ☐ General Plan Amendment ☐ General Plan Element ☐ Community Plan
☐ Specific Plan ☐ Master Plan ☐ Planned Unit Development ☐ Site Plan
☐ Rezone ☐ Prezone ☐ Use Permit ☐ Land Division (Subdivision, etc.)
☐ Annexation ☐ Redevelopment ☐ Coastal Permit ☒ Other: CPCN (CPUC)

Development Type:

☐ Residential: Units Acres
☐ Office: Sq.ft. Acres Employees
☐ Commercial: Sq.ft. Acres Employees
☐ Industrial: Sq.ft. Acres Employees
☐ Educational:
☐ Recreational:
☐ Water Facilities: Type MGD
☐ Transportation: Type
☐ Mining: Mineral
☒ Power: Type Transmission, subst MW 138/230 kV
☐ Waste Treatment: Type MGD
☐ Hazardous Waste: Type
☐ Other:

Project Issues Discussed in Document:

☒ Aesthetic/Visual ☒ Agricultural Land ☒ Air Quality ☒ Archeological/Historical ☒ Biological Resources ☐ Coastal Zone ☒ Drainage/Absorption ☐ Economic/Jobs
☐ Fiscal ☒ Flood Plain/Flooding ☒ Forest Land/Fire Hazard ☒ Geologic/Seismic ☒ Minerals ☒ Noise ☒ Population/Housing Balance ☒ Public Services/Facilities
☒ Recreation/Parks ☒ Schools/Universities ☒ Septic Systems ☒ Sewer Capacity ☒ Soil Erosion/Compaction/Grading ☒ Solid Waste ☒ Toxic/Hazardous ☒ Traffic/Circulation
☒ Vegetation ☒ Water Quality ☒ Water Supply/Groundwater ☒ Wetland/Riparian ☒ Growth Inducement ☒ Land Use ☒ Cumulative Effects ☐ Other:

Present Land Use/Zoning/General Plan Designation:

Multiple: Multi-Family/Single Family Residential, Open Space, Recreation/Parks, Industrial, Landfill, Commercial

Project Description: *(please use a separate page if necessary)*

The SOCRE project would include: 1. Rebuilding and upgrading the existing 138/12-kV air-insulated Capistrano Substation (2 acres) as a 230/138/12-kV gas-insulated substation (6.4 acres); 2. Replacing a segment of a single-circuit 138-kV transmission line between the Talega and Capistrano substations with a new double-circuit 230-kV transmission line (7.5 miles), and relocating several transmission and distribution line segments (2 miles, combined) located near the two substations; and 3. Relocating a 12-kV distribution line into new and existing underground conduit and overhead on new structures from the proposed San Juan Capistrano Substation to Prima Deschecha Landfill. Project construction is anticipated to begin November 2013 and would take about 4 years. (Also see attached.)

Note: The State Clearinghouse will assign identification numbers for all new projects. If a SCH number already exists for a project (e.g. Notice of Preparation or previous draft document) please fill in.

Reviewing Agencies Checklist

Lead Agencies may recommend State Clearinghouse distribution by marking agencies below with and "X".
If you have already sent your document to the agency please denote that with an "S".

X	Air Resources Board	X	Office of Historic Preservation
	Boating & Waterways, Department of		Office of Public School Construction
X	California Emergency Management Agency	X	Parks & Recreation, Department of
X	California Highway Patrol		Pesticide Regulation, Department of
X	Caltrans District #12		Public Utilities Commission
	Caltrans Division of Aeronautics	X	Regional WQCB #9
X	Caltrans Planning		Resources Agency
	Central Valley Flood Protection Board		Resources Recycling and Recovery, Department of
	Coachella Valley Mtns. Conservancy		S.F. Bay Conservation & Development Comm.
	Coastal Commission		San Gabriel & Lower L.A. Rivers & Mtns. Conservancy
	Colorado River Board		San Joaquin River Conservancy
	Conservation, Department of		Santa Monica Mtns. Conservancy
	Corrections, Department of		State Lands Commission
	Delta Protection Commission		SWRCB: Clean Water Grants
	Education, Department of	X	SWRCB: Water Quality
X	Energy Commission		SWRCB: Water Rights
X	Fish & Game Region #5		Tahoe Regional Planning Agency
	Food & Agriculture, Department of	X	Toxic Substances Control, Department of
X	Forestry and Fire Protection, Department of	X	Water Resources, Department of
	General Services, Department of		
	Health Services, Department of		Other:
	Housing & Community Development		Other:
X	Native American Heritage Commission		

Local Public Review Period (to be filled in by lead agency)

Starting Date August 10, 2015 Ending Date September 24, 2015

Lead Agency (Complete if applicable):

Consulting Firm: Ecology and Environment, Inc.
Address: 505 Sansome St. Ste 300
City/State/Zip: San Francisco, CA 94111
Contact: Erec DeVost
Phone: (415) 398-5326

Applicant: San Diego Gas and Electric Company
Address: 8330 Century Park Court, CP32D
City/State/Zip: San Diego, CA 92123
Phone: (858) 636-6876

Signature of Lead Agency Representative: _____ **Date:** 8/5/15

Authority cited: Section 21083, Public Resources Code. Reference: Section 21161, Public Resources Code.

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

ATTACHMENT for
SAN DIEGO GAS AND ELECTRIC COMPANY
SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT PROJECT (SCH# 2013011011)
NOTICE OF COMPLETION

Waterways: San Juan Creek, Horno Creek, Rancho San Juan Drainage, Prima Deshecha Canada, Segunda Deshecha Canada, and Christianitos Creek

Railways: Southern California Regional Rail Authority Metrolink, Amtrak, Burlington Northern and Santa Fe Railway

Schools: Schools with the Capistrano Unified School District and private schools, including Harold Ambuehl Elementary School, Jserra Catholic High School, Saddleback Valley Christian, Junipero Serra High School, St. Margaret's Episcopal School, San Juan Hills High School, Vista Del Mar Middle School, Heritage Christian, Talega KinderCare, Capistrano Valley Christian School, Marbella Montessori, Mission Basilica School, San Juan Montessori, Stoneybrooke Christian School.

Project Description: The primary components of the proposed project would include:

- Rebuilding and upgrading the 138/12-kV 60-megavolt ampere (MVA) air-insulated Capistrano Substation as a 230/138/12-kV 700-MVA gas-insulated substation that would be named San Juan Capistrano Substation;
- Replacing a single-circuit 138-kV transmission line between the applicant's Talega and Capistrano substations with a new double-circuit 230-kV transmission line (approximately 7.8-miles long);
- Relocating several transmission line segments (approximately 1.8 miles, total) adjacent to Talega and Capistrano substations to accommodate the proposed Capistrano Substation expansion and new 230-kV line; and
- Relocating several 12-kV distribution lines segments (approximately 6 miles) into underground conduit and overhead on existing and new structures located between the Capistrano Substation and Prima Deschecha Landfill.

Construction of the proposed SOCRE project would take approximately 64 months.

Exhibit A-2

Draft EIR Notice of Availability (NOA)

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

NOTICE OF AVAILABILITY
SAN DIEGO GAS AND ELECTRIC COMPANY
SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT PROJECT
RECIRCULATED DRAFT ENVIRONMENTAL IMPACT REPORT

Si usted necesita más información o una copia de este documento en español, por favor, llame al (855) 520-6799 o visite la siguiente página Web. http://tinyurl.com/clsee4g

San Diego Gas and Electric Company (SDG&E) filed an application for a Certificate of Public Convenience and Necessity (CPCN) with the California Public Utilities Commission (CPUC) for the South Orange County Reliability Enhancement (SOCRE) project to rebuild and upgrade a portion of its transmission infrastructure in South Orange County. The purpose of this Notice of Availability is to announce that the CPUC's Recirculated Draft Environmental Impact Report (EIR) is available for public review and comment.

Background

This Recirculated Draft EIR is part of the ongoing environmental review process for the SOCRE project. The CPUC, as the Lead Agency, prepared a Draft EIR for the SOCRE project and circulated the Draft EIR for public comment for a 45-day period beginning February 23, 2015, and ending April 10, 2015. This Recirculated Draft EIR is considered a partially recirculated EIR because significant new information and analyses have been added or changed in portions of the Draft EIR after it was circulated for public comment in February 2015.

Additionally, the Recirculated Draft EIR contains a new alternative, called the Trabuco Alternative, that was suggested by the public during review of the Draft EIR. Subsequent analysis by the CPUC has shown that the alternative is feasible from a technological, legal, and economic perspective and warrants inclusion in the EIR. The Recirculated Draft EIR adds a description of the alternative to Chapter 3, "Description of Alternatives." A description of the environmental effects resulting from the implementation of the alternative, as compared to the applicant's proposal, has been added to Chapter 5, "Comparison of Alternatives."

Project Description

The proposed project would consist of the following primary components:

- Rebuilding and upgrading the 138/12-kilovolt (kV) 60-megavolt ampere air-insulated Capistrano Substation as a 230/138/12-kV 700-megavolt ampere gas-insulated substation that would be named San Juan Capistrano Substation;
- Replacing a single-circuit 138-kV transmission line between the applicant's Talega and Capistrano substations with a new double-circuit 230-kV transmission line (approximately 7.8 miles long);
- Relocating several transmission line segments (approximately 1.8 miles total) adjacent to Talega and Capistrano substations to accommodate the proposed San Juan Capistrano Substation and new 230-kV line; and
- Relocating several 12-kV distribution lines segments (approximately 6 miles) into underground conduit and overhead on existing and new structures located between the Capistrano Substation and Prima Deshecha Landfill.

Construction of the proposed SOCRE project would take approximately 64 months. The proposed project would be constructed within the cities of San Juan Capistrano and San Clemente, unincorporated Orange County, and United States Marine Corps land in San Diego County.

Significant Adverse Environmental Impacts from the Proposed Project

The Recirculated Draft EIR has identified additional significant impacts on biological resources, cultural resources, and land use and planning from construction and operation of the proposed project that were not previously disclosed in the Draft EIR. The following impacts have been revised in the Recirculated Draft EIR:

Biological Resources: Construction and operation activities for the proposed project would be required within the boundaries of the Talega Conservation Easement (unrecorded) and the Prima Deshecha Conservation Easement (recorded). Both conservation easements were established under the Orange County Southern Subregion Habitat Conservation Plan (HCP). Additional coordination with the U.S. Fish and Wildlife Service and California Department of Fish and Wildlife is needed to determine the proposed project's potential to conflict with HCPs and Natural Community Conservation Plans in the area; therefore, impacts would be considered significant until the completion of SDG&E coordination requirements detailed in Section 6.2 of the SDG&E Natural Community Conservation Plan prove otherwise.

Cultural Resources: In April 2015, the State Historic Resources Commission recommended to the Keeper of the National Register of Historic Places (NRHP) that a former utility structure at the existing Capistrano Substation property be approved as eligible for inclusion in the NRHP. Criteria for eligibility of the California Register of Historic Places is the same as the criteria for eligibility for the NRHP. Therefore, the CPUC has found that demolition of the Capistrano Substation, as proposed by the applicant, would result in a significant adverse impact to a historical resource as defined in Section 15064.5 of the California Environmental Quality Act (CEQA) Guidelines.

Land Use and Planning: Section 9-3.305 of the San Juan Capistrano Municipal Code defines building setbacks, floor area standards, and height limitations for buildings by zoning type. The proposed San Juan Capistrano Substation includes the construction of 50-foot-tall buildings in the Commercial Manufacturing district, which significantly conflicts with the applicable building height limit of 35 feet under the San Juan Capistrano Municipal Code. Additionally, similar to significant impacts discussed for biological resources, the proposed project may also conflict with two conservation easements established under the Orange County Southern Subregion HCP.

No portion of the proposed project would be located on a hazardous materials site identified under Government Code Section 65962.5.

Recirculated Draft EIR Information/ Public Review Period

Consistent with the provisions of Section 15088.5 of the CEQA Guidelines, portions of the Draft EIR have been revised with new information, and only revised chapters and sections are being recirculated. This Recirculated Draft EIR comprises the following chapters:

- **Chapter 1**, **Introduction**, provides a brief overview of the proposed project, CEQA compliance activities conducted to date, and the purpose of this Recirculated Draft EIR and outlines the contents and organization of the Recirculated Draft EIR.
- **Chapter 2**, **Revisions to the Draft EIR,** assists the reader in identifying specific significant revisions to the Draft EIR as a result of comments received during the public review process for the Draft EIR. Revisions were made to the following chapters and sections of the Draft EIR:
    - Chapter 3, "Description of Alternatives";
    - Section 4.4, "Biological Resources";
    - Section 4.5, "Cultural Resources";
    - Section 4.10, "Land Use and Planning"; and
    - Chapter 5 "Comparison of Alternatives"

- **Chapter 3**, **Report Preparation**, provides a list of the individuals involved in the preparation of the Recirculated Draft EIR.
- **Chapter 4, References,** provides a list of new references used in the Recirculated Draft EIR.

The Recirculated Draft EIR is available on the internet at: *http://tinyurl.com/clsee4g*. Hardcopies of the Recirculated Draft EIR are available at the following repositories:

- **San Juan Capistrano Regional Library:** 31495 El Camino Real San Juan Capistrano, CA 92675 (949) 493-1752
- **San Clemente Library:** 242 Avenida Del Mar San Clemente, CA 92672 (949) 492-3493

The CPUC will receive comments on the Recirculated Draft EIR during a 45-day period starting August 10, 2015, and ending September 24, 2015. The CPUC requests that reviewers focus their comments specifically on the new content included in the Recirculated Draft EIR, consistent with the provisions of Section 15088.5 of the CEQA Guidelines. **Comment letters submitted on the previously circulated Draft EIR will be addressed in the Final EIR and do not need to be resubmitted.** Comments received during the public review period of the Recirculated Draft EIR on content not addressed in the Recirculated Draft EIR will not be addressed in the Final EIR. Written comments on the Recirculated Draft EIR may be submitted using any of the following methods:

Email: SOCRE.CEQA@ene.com
Fax: 415-398-5326

Mail: California Public Utilities Commission
RE: SOCRE Project
c/o Ecology and Environment, Inc.
505 Sansome Street, Suite #300
San Francisco, CA 94111

No public meetings will be hosted by the CPUC during this public review period.

Exhibit A-3

Draft EIR Newspaper Affidavits of Publication

- **The Orange County Register**
- **The San Diego Union Tribune**
- **La Opinión**

AFFIDAVIT OF PUBLICATION

STATE OF CALIFORNIA,)
) ss.
County of Orange)

I am a citizen of the United States and a resident of the County aforesaid; I am over the age of eighteen years, and not a party to or interested in the above entitled matter. I am the principal clerk of **The Orange County Register**, a newspaper of general circulation, published in the city of Santa Ana, County of Orange, and which newspaper has been adjudged to be a newspaper of general circulation by the Superior Court of the County of Orange, State of California, under the date of November 19, 1905, Case No. A-21046, that the notice, of which the annexed is a true printed copy, has been published in each regular and entire issue of said newspaper and not in any supplement thereof on the following dates, to wit:

February 23, 2015

I certify (or declare) under the penalty of perjury under the laws of the State of California that the foregoing is true and correct":

Executed at Santa Ana, Orange County, California, on

Date February 23, 2015.

Angel Brtan

Signature

The Orange County Register
625 N. Grand Ave.
Santa Ana, CA 92701
(714) 796-2209

PROOF OF PUBLICATION

Notice of Availability of an Environmental Impact Report
And Notice of Public Meetings for the South Orange County Reliability Enhancement Project

Si usted necesita más información o una copia de este documento en español, por favor, llame al (855) 520-6799 o visite la siguiente página Web. http://tinyurl.com/clsee4g

The California Public Utilities Commission (CPUC) has prepared a Draft Environmental Impact Report (EIR) under the California Environmental Quality Act (CEQA) for consideration of San Diego Gas and Electric Company's (SDG&E) application to build and operate the South Orange County Reliability Enhancement Project (SOCRE; proposed project). The purpose of the proposed project is to increase the reliability and operational flexibility of SDG&E's South Orange County 138-kilovolt (kV) system to reduce the risk of electrical outages.

Brief Project Description and Location
The primary components of the proposed project would include:

- Rebuilding and upgrading the 138/12-kV 60-megavolt ampere (MVA) air-insulated Capistrano Substation as a 230/138/12-kV 700-MVA gas-insulated substation that would be named San Juan Capistrano Substation;
- Replacing a single-circuit 138-kV transmission line between the applicant's Talega and Capistrano substations with a new double-circuit 230-kV transmission line (approximately 7.8-miles long);
- Relocating several transmission line segments (approximately 1.8 miles, total) adjacent to Talega and Capistrano substations to accommodate the proposed Capistrano Substation expansion and new 230-kV line; and
- Relocating several 12-kV distribution lines segments (approximately 6 miles) into underground conduit and overhead on existing and new structures located between the Capistrano Substation and Prima Deshecha Landfill.

Construction of the proposed SOCRE project would take approximately 64 months. The proposed project would be constructed within the cities of San Juan Capistrano and San Clemente, unincorporated Orange County, and United States Marine Corps land in San Diego County.

Significant Adverse Environmental Impacts from the Proposed Project
Construction of the proposed project would result in significant impacts on air quality, transportation and traffic, and cumulative impacts. Impacts on air quality standards, cumulatively considerable net increase in criteria pollutants, and exposure of sensitive receptors to pollutant concentrations would be significant and unavoidable during construction after the implementation of all feasible mitigation. The proposed project would result in maximum daily construction emissions of reactive organic gases (ROG), Particulate matter less than or equal to 10 microns in diameter (PM10), and Particulate matter less than or equal to 2.5 microns in diameter (PM2.5) that would exceed South Coast Air Quality Management District (SCAQMD) regional significance thresholds. Additionally, the proposed project would result in emissions of PM10 and PM2.5 during various substation and transmission line construction phases that are above the SCAQMD's local significance thresholds. The SCAQMD is currently in nonattainment for ozone, PM10, and PM2.5. Therefore, the proposed project's ozone, PM10, and PM2.5 emissions would result in a cumulatively significant impact on ambient air quality during construction activities.

Temporary impacts from generated project traffic along Camino Capistrano in the City of San Juan Capistrano during partial road closures would result in an unacceptable level of service ratings. Additionally, full road closures along Camino Capistrano, Via Pamplona, and Calle San Diego in the City of San Juan Capistrano would be significant and unavoidable during construction after the implementation of all feasible mitigation. Additionally, the proposed project would significantly contribute to a cumulative traffic impact along Camino Capistrano in the City of San Juan Capistrano during partial road closures.

Potentially significant impacts with regards to Aesthetics; Biological Resources; Cultural Resources; Hazards and Hazardous Materials; Hydrology and Water Quality; Land Use and Planning; Noise; Public Services and Utilities; and Transportation and Traffic that would result from construction, operation, and maintenance of the proposed project were identified. With the implementation of mitigation and applicant proposed measures, impacts related to these resources would be less than significant.

No portion of the proposed project would be located on a hazardous materials site identified under Government Code Section 65962.5.

Draft EIR Information/ Public Review Period/ Public Meeting
The Draft EIR is available on the internet at: http://tinyurl.com/clsee4g. Hardcopies of the Draft EIR are available at the following repositories:

- San Juan Capistrano Regional Library: 31495 El Camino Real San Juan Capistrano, CA 92675 (949) 493-1752
- San Clemente Library: 242 Avenida Del Mar San Clemente, CA 92672 (949) 492-3493

The CPUC will receive comments on the Draft EIR during a 45-day period starting February 23, 2015, and ending April 10, 2015. Written comments on the Draft EIR may be submitted using any of the following methods:

Email: SOCRE.CEQA@ene.com
Fax: 415-398-5326

Mail: California Public Utilities Commission
RE: SOCRE Project
c/o Ecology and Environment, Inc.
505 Sansome Street, Suite #300
San Francisco, CA 94111

The CPUC will hold two public meetings on March 25, 2015 to explain the proposed project, discuss the proposed project's significant impacts, and receive comments on the Draft EIR from the public. Information regarding the public meetings is provided below:

March 25, 2015 1:00 to 3:00pm
San Clemente Community Center
Ole Hanson Fireside Room
100 N. Calle Seville
San Clemente, CA 92672
(949) 361-8264

March 25, 2015 6:00 to 8:00pm
San Juan Capistrano Community Hall
25925 Camino Del Avion
San Juan Capistrano, CA 92675
(949) 493-5911

Published: Orange County Register February 23, 2015. R-240 10020242

U-T San Diego

P.O. Box 120191, San Diego, CA 92112-0191

AFFIDAVIT OF PUBLICATION

ECOLOGY AND ENVIRONMENT INC.
ATTN: JESSICA MIDBUST
505 SANSOME ST SUITE 300
SAN FRANCISCO CA 94111

STATE OF CALIFORNIA} ss.
County of San Diego}

The Undersigned, declares under penalty of perjury under the laws of the State of California: That she is a resident of the County of San Diego. That she is and at all times herein mentioned was a citizen of the United States, over the age of twenty-one years, and that he is not a party to, nor interested in the above entitled matter; that he is Chief Clerk for the publisher of

THE UT SAN DIEGO

a newspaper of general circulation, printed and published daily in the City of San Diego, County of San Diego, and which newspaper is published for the dissemination of local news and intelligence of a general character, and which newspaper at all the times herein mentioned had and still has a bona fide subscription list of paying subscribers, and which newspaper has been established, printed and published at regular intervals in the said City of San Diego, County of San Diego, for a period exceeding one year next preceding the date of publication of the notice hereinafter referred to, and which newspaper is not devoted to nor published for the interests, entertainment or instruction of a particular class, profession, trade, calling, race, or denomination, or any number of same; that the notice of which the annexed is a printed copy, has been published in said newspaper in accordance with the instructions of the person(s) requesting publication, and not in any supplement thereof on the following dates, to wit:

February 23rd, 2015

Chief Clerk for the Publisher
CRIS GAZA

I certify under penalty of perjury under the Laws of the State of California that the foregoing is true and correct, and that this affidavit is executed on February 26, 2015 in the City of San Diego, California.

Affidavit of Publication of

Legal Advertisement
Ad # 10902558
ORDERED BY: JESSICA MIDBUST

Notice of Availability of an Environmental Impact Report And Notice of Public Meetings for the South Orange County Reliability Enhancement Project

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Si usted necesita mas informacion o una copia de este documento en espanol, por favor, llame al (855) 320-6799 o visite la siguiente pagina Web. http://tinyurl.com/ciseeag

The California Public Utilities Commission (CPUC) has prepared a Draft Environmental Impact Report (EIR) under the California Environmental Quality Act (CEQA) for consideration of San Diego Gas and Electric Company's (SDG&E) application to build and operate the South Orange County Reliability Enhancement Project (SOCRE; proposed project). The purpose of the proposed project is to increase the reliability and operational flexibility of SDG&E's South Orange County 138-kilovolt (kV) system to reduce the risk of electrical outages.

Brief Project Description and Location
The primary components of the proposed project would include:

- Rebuilding and upgrading the 138/12-kV 60-megavolt ampere (MVA) air-insulated Capistrano Substation as a 230/138/12-kV 700-MVA, gas-insulated substation that would be named San Juan Capistrano Substation;
- Replacing a single-circuit 138-kV transmission line between the applicants Talega and Capistrano substations with a new double-circuit 230-kV transmission line (approximately 7.8-miles long);
- Relocating several transmission line segments (approximately 1.8 miles, total) adjacent to Talega and Capistrano substations to accommodate the proposed Capistrano Substation expansion and new 230-kV line; and
- Relocating several 12-kV distribution lines segments (approximately 6 miles) into underground conduit and overhead on existing and new structures located between the Capistrano Substation and Prima Deshecha Landfill.

Construction of the proposed SOCRE project would take approximately 24 months. The proposed project would be constructed within the cities of San Juan Capistrano and San Clemente, unincorporated Orange County, and United States Marine Corps land in San Diego County.

Significant Adverse Environmental Impacts from the Proposed Project
Construction of the proposed project would result in significant impacts on air quality, transportation and traffic, and cumulative impacts. Impacts on air quality standards, cumulatively considerable net increase in criteria pollutants, and exposure of sensitive receptors to pollutant concentrations would be significant and unavoidable during construction after the implementation of all feasible mitigation. The proposed project would result in maximum daily construction emissions of reactive organic gases (ROG), Particulate matter less than or equal to 10 microns in diameter (PM_{10}), and Particulate matter less than or equal to 2.5 microns in diameter ($PM_{2.5}$) that would exceed South Coast Air Quality Management District (SCAQMD) regional significance thresholds. Additionally, the proposed project would result in emissions of PM_{10} and $PM_{2.5}$ during various substation and transmission line construction phases that are above the SCAQMD's local significance thresholds. The SCAQMD is currently in nonattainment for ozone, PM_{10}, and

U-T San Diego

P.O. Box 120191, San Diego, CA 92112-0191

AFFIDAVIT OF PUBLICATION

$PM_{2.5}$. Therefore, the proposed projects ozone, PM_{10}, and $PM_{2.5}$ emissions would result in a cumulatively significant impact on ambient air quality during construction activities.

Temporary impacts from generated project traffic along Camino Capistrano in the City of San Juan Capistrano during partial road closures would result in an unacceptable level of service ratings. Additionally, full road closures along Camino Capistrano, Via Pamplona, and Calle San Diego in the City of San Juan Capistrano would be significant and unavoidable during construction after the implementation of all feasible mitigation. Additionally, the proposed project would significantly contribute to a cumulative traffic impact along Camino Capistrano in the City of San Juan Capistrano during partial road closures.

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No portion of the proposed project would be located on a hazardous materials site identified under Government Code Section 65962.5.

Draft EIR Information / Public Review Period / Public Meeting

The Draft EIR is available on the internet at: http://tiny url.com/ctseetg. Hardcopies of the Draft EIR are available at the following repositories:

- **San Juan Capistrano Regional Library:** 31495 El Camino Real San Juan Capistrano, CA 92675 (949) 493-1752
- **San Clemente Library:** 242 Avenida Del Mar San Clemente, CA 92672 (949) 492-3493

The CPUC will receive comments on the Draft EIR during a 45-day period starting February 23, 2015, and ending April 10, 2015. Written comments on the Draft EIR may be submitted using any of the following methods:

Email: SOCRE.CEQA@ene.com
Fax: 415-398-5326
Mail: California Public Utilities Commission
RE: SOCRE Project
c/o Ecology and Environment, Inc.
505 Sansome Street, Suite #300
San Francisco, CA 94111.

The CPUC will hold two public meetings on March 25, 2015 to explain the proposed project, discuss the proposed projects significant impacts, and receive comments on the Draft EIR from the public. Information regarding the public meetings is provided below:

March 25, 2015
1:00 to 3:00 p.m.
San Clemente Community Center Ole Hanson Fireside Room
100 N. Calle Seville
San Clemente, CA 92672 (949) 361-8264.

March 25, 2015
6:00 to 8:00 p.m.
San Juan Capistrano Community Hall
25925 Camino Del Avion, San Juan Capistrano, CA 92675 (949) 493-5911.

PROOF OF PUBLICATION
(2015.5C.C.P.)

La Opinión
www.laopinion.com
impreMedia
700 S. Flower St. • Los Angeles, CA 90017
Tel: (213) 896-2260 • Fax: (213) 896-2238

STATE OF CALIFORNIA

I am a citizen of the United States and a resident of the county aforesaid; I am over the age of eighteen years, and not a party to or interested in the above-entitle matter. I am the principal clerk of the printer of La Opinión a newspaper of general circulation, printed and published daily in the city of Los Angeles, County of Los Angeles, and which newspaper has been adjudged a newspaper of general circulation by the Superior Court of the County of Los Angeles, State of California, under the date of July 28, 1969, Case Number: 950176; that the notice, of which the annexed is a printed copy, has been published in each regular and not in any supplement thereof on the following dates, to-wit:

February 23

all in the year 20 15

I certified (or declare) under penalty of perjury that the foregoing is true and correct.

Dated at Los Angeles, California, this

23 day of February, 20 15

Rosa Bermudez
Signature

ADV #017 Controlled
Rev. 03/12

Notificación de Disponibilidad de Informe de Impacto Ambiental y Reuniones Públicas para el Proyecto de Mejora de Confiabilidad del Servicio Eléctrico en la Región Sur del Condado de Orange (Proyecto SOCRE)

Si usted necesita más información o una copia de este documento en español, por favor, llame al (855) 520-6799 o visite la siguiente página Web. http://tinyurl.com/clsee4g

La Comisión de Servicios Públicos de California (CPUC) ha preparado un Informe Preliminar de Impacto Ambiental (EIR) bajo la Ley de Calidad Ambiental de California (CEQA) para evaluar la solicitud de San Diego Gas and Electric Company (SDG&E) para construir y operar el Proyecto de Mejora de Confiabilidad del Servicio Eléctrico en la en la Región Sur del Condado de Orange (SOCRE o proyecto propuesto). El propósito del proyecto propuesto es incrementar la confiabilidad y flexibilidad operacional del sistema de 138 kilovoltios que opera SDG&E en la región sur del Condado de Orange, con la finalidad de reducir los riesgos de interrupción del servicio eléctrico.

Breve Descripción del Proyecto y su Ubicación

Los principales componentes del proyecto propuesto incluirían:

- Reconstrucción y modernización de la Subestación Capistrano existente que opera a 138/12 kilovoltios con una capacidad de 60 megavoltios amperes (MVA) y aislamiento de aire, por una subestación aislada a gas de 230/138/12 kilovoltios con una capacidad de 700 MVA, a ser llamada la Subestación San Juan Capistrano;
- Reemplazo de la línea de transmisión eléctrica de circuito simple de 138 kilovoltios entre las subestaciones Talega y Capistrano operadas por el solicitante, por una nueva línea de transmisión de doble circuito de 230 kilovoltios (de aproximadamente 7,8 millas de longitud);
- Reubicación de varios segmentos de líneas de transmisión eléctrica (aproximadamente 1,8 millas en total) adyacentes a las subestaciones Talega y Capistrano para facilitar la expansión de la Subestación Capistrano y la operación de la nueva línea de 230 kilovoltios; y
- Reubicación de varios segmentos de líneas de distribución eléctrica de 12 kilovoltios (aproximadamente 6 millas) en ductos subterráneos y estructuras eléctricas superficiales existentes, ubicados entre la Subestación Capistrano y el Relleno Sanitario Prima Deshecha.

La construcción del Proyecto SOCRE tomaría aproximadamente 64 meses. El proyecto propuesto sería construido entre las ciudades de San Juan Capistrano y San Clemente, áreas no incorporadas del Condado de Orange, y terrenos del Cuerpo de Marines de Estados Unidos en el Condado de San Diego.

Impactos Ambientales Adversos y Significativos del Proyecto

La construcción del proyecto propuesto podría resultar en impactos significativos sobre la calidad del aire, tráfico y transporte, e impactos acumulativos. Los impactos sobre los estándares de calidad de aire, el incremento acumulativo y considerable de contaminantes atmosféricos, y la exposición de receptores sensibles a concentraciones de estos contaminantes podrían ser significativos e inevitables durante la construcción del proyecto, aun con la implementación de medidas factibles de mitigación. El proyecto propuesto resultaría en emisiones máximas diarias de gases orgánicos reactivos (ROG), de partículas de diámetro menor o igual a 10 micrones (PM10); y de partículas de diámetro menor o igual a 2.5 micrones (PM2.5) que podrían exceder los límites regionales de magnitud de impactos establecidos por el Distrito de Gestión de Calidad de Aire de la Costa Sur de California (South Coast Air Quality Management District - SCAQMD). Adicionalmente, el proyecto propuesto podría resultar en emisiones de PM10 y PM2.5 que exceden los límites de emisión del SCAQMD durante varias fases de construcción de la subestación y línease de transmisión. La región administrada por el SCAQMD se encuentra actualmente en incumplimiento de los estándares de calidad de aire para ozono, PM10 y PM2.5. En consecuencia, las emisiones de ozono, PM10 y PM2.5 resultarán en un impacto acumulativo significativo sobre la calidad del aire durante las actividades de construcción.

Los impactos temporales generados por el proyecto sobre el tránsito a lo largo de Camino Capistrano (en la ciudad de San Juan Capistrano) durante los cierres parciales de vialidad podrían resultar en niveles inaceptables del servicio vial. Adicionalmente, los cierres totales de vialidad en Camino Capistrano, Vía Pamplona y Calle San Diego en la ciudad de San Juan Capistrano podrían ser significativos e inevitables durante la construcción, aun con la implementación de medidas factibles de mitigación. Así mismo, el proyecto propuesto contribuiría significativamente a un impacto acumulativo de tráfico a lo largo de Camino Capistrano, en la ciudad de San Juan Capistrano, durante los cierres parciales de vialidad.

Se identificaron impactos potencialmente significativos relativos a Paisaje; Recursos Biológicos; Recursos Culturales; Peligros y Materiales Peligrosos; Hidrología y Calidad de Aguas; Uso y Planificación del Territorio; Ruido; Servicios Públicos; y Transporte y Tráfico que podrían resultar de la construcción, operación, y mantenimiento del proyecto propuesto. Los impactos relativos a estos recursos serían de baja importancia con la implementación de medidas de mitigación establecidas por la CPUC y las medidas propuestas por el solicitante.

Ninguna sección del proyecto estaría localizada en sitios de materiales peligrosos identificados bajo el Código de Gobierno Sección 65962.5.

Información del EIR Preliminar/Periodo de Revisión Pública/Reunión Pública

El EIR Preliminar está disponible en el internet: http://tinyurl.com/clsee4g. Copias impresas del EIR Preliminar se encuentran disponibles en los siguientes centros de información:

- **Biblioteca Regional de San Juan Capistrano:** 31495 El Camino Real San Juan Capistrano, CA 92675. Teléfono: (949) 493-1752
- **Biblioteca de San Clemente:** 242 Avenida Del Mar San Clemente, CA 92672. Teléfono: (949) 492-3493

La CPUC recibirá comentarios al EIR Preliminar durante un período de 45 días que comienza el 23 de febrero de 2015 y termina el 10 de abril de 2015. Los comentarios al EIR Preliminar pueden enviarse por escrito usando los siguientes métodos:

Correo Electrónico: SOCRE.CEQA@ene.com
Fax: 415-398-5326

Correo Postal: California Public Utilities Commission
RE: SOCRE Project
c/o Ecology and Environment, Inc.
505 Sansome Street, Suite #300
San Francisco, CA 94111

La CPUC convocará dos reuniones públicas el 25 de marzo de 2015 para explicar el proyecto propuesto, hablar de sus impactos significativos y recibir comentarios del público al EIR Preliminar. A continuación se ofrece información relativa a ambas reuniones públicas:

25 de marzo de 2015 de 1:00 a 3:00pm
San Clemente Community Center
Ole Hanson Fireside Room
100 N. Calle Seville
San Clemente, CA 92672
(949) 361-8264

25 de marzo de 2015 de 6:00 to 8:00pm
San Juan Capistrano Community Hall
25925 Camino Del Avion
San Juan Capistrano, CA 92675
(949) 493-5911

Exhibit A-4

Draft EIR Public Meeting Sign-In Sheet

PUBLIC MEETING FOR THE PROPOSED SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT PROJECT

California Public Utilities Commission
San Clemente Community Center, March 25, 2015

Note: Before including your address, telephone number, email address, or other personal identifying information in your comment, you should be aware that your entire comment, including your personal identifying information, may be made publicly available at any time. While you may ask us in your comment to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so. All submissions from individuals identifying themselves as representatives or officials of organizations or businesses will be made available for public inspection in their entirety.

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Name/Nombre	Affiliation/Afiliación:	Address/Dirección:	Email/Correo electrónico:
1. Curt Stanley	Small Business Owner	31441 Santa Margarita Pkwy (Rsm)	curt@adv-in-adv.com
2. Ron Kohen	Homeowner	SJC	already on list
3. Larry Thomas	SC Chamber of Commerce	San Clemente	
4. Hanan Eisenmar	SDG+E		
5. Jim Leach	Santa Margarita Water District		

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Name/Nombre	Affiliation/Afiliación:	Address/Dirección:	Email/Correo electrónico:
6. Heather Baez			
7. Victor Cao	OC Supervisor Liza Bartlett		
8. Julie Tobin	CA State Parks		Julie.Tobin@parks.ca.gov
9. John Ozuzuich	Saddleback College		JOZUZUICH@SADDLEBACK.EDU
10. Jill Fisher	Aliso Viejo, Capistrano's Fo. Ritchey		

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Name/Nombre	Affiliation/Afiliación:	Address/Dirección:	Email/Correo electrónico:
11. Tony Struthers			
12. Gary Brown	O.C. Coastkeeper		
13. Lou Penrose	Apt. Association		
14. Debbie Neuman	Laguna Niguel Chamber		
15. Rick Erikeneff	Southcoast Water		

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Name/Nombre	Affiliation/Afiliación:	Address/Dirección:	Email/Correo electrónico:
16. Aimee Roach	OCWR	32250 La Pata San Juan Capistrano	aimee.roach@ocwr.ocgov.com
17. Mike Burke	San Clemente Chamber		
18. Joe Anderson	Citizens		
19. Cordi Gamble	Rancho Santa Margarita City Council		
20. Shawna Schaffner	CAA Planning.com		sschaffner@caaplanning.com

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Name/Nombre	Affiliation/Afiliación:	Address/Dirección:	Email/Correo electrónico:
21. Joe Anderson	Citizens for Safe & Reliable Power		
22. Jim Bieber	Homeowner		
23. Mary Turley	SDG&E		~~Mary~~ mturley@semprautilities
24. Eduardo Olivo-Gomez	SDG&E		eolivogomez@semprautilities.com
25. Steve LaMotte	BIA/OC		SLamotte@BIAOC.com

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Name/Nombre	Affiliation/Afiliación:	Address/Dirección:	Email/Correo electrónico:
26. Jennifer Bean		24 Strato Ren CA 92688	Jennifer.Bean@asm.ca.gov
27. Nancy Hunt		561 Costa Marbella	scnhunt@aol.com
28. HeatherBraez	MWDOC		hbraez@mwdoc.com
29 LAER PEARCE	LPA	23 BLACKHAWK COTO DE CAZA	LAER@LAER.COM
30. Rhonda Reardon	resident & former Mayor of Mission Viejo	25862 Malia Ct. MV 92691	Rbreardon@gmail.com

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Name/Nombre	Affiliation/Afiliación:	Address/Dirección:	Email/Correo electrónico:
31. WENDY BUCKNUM	CITY OF MISSION VIEJO CITY COUNCILWOMAN		
32. JIM DAHL	SAN CLEMENTE RESIDENT	260 AVE MONTALVO SAN CLEMENTE 92672	JIMDAHL@DSLEXTREME.COM
33. ENZO SCOGNAMIGLIO	CHAMBER OF COMMERCE DANA POINT	24105 CAMINO AVION D.P. 92629	MENAPOLI@GMAIL.COM
34. DONNA VARNER			
35. MIKE MUNZING	AV CITY COUNCIL		

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Name/Nombre	Affiliation/Afiliación:	Address/Dirección:	Email/Correo electrónico:
1. Rhea Kohen	Homeowner	31061 Via Santo Tomas SJC CA 92675	yoxheart
2. Wayne Brown	SOCEC	27758 Santa Margarita Pkwy #378 Mission Viejo, CA	Wayne.Brown@Economiccoalition.com
3. Julie Vandermost	VCSEnvironmental	30940 Rancho Viejo Rd #100 San Juan Capistrano CA 92675	jvandermoste vcsenvironmental.com
4. Kathleen Peterson	Las Brisas HOA	31121 Via Santo Tomas SJC	KTPeterson@MSN.com
5. Nancy Rhenda	Homeowner	31089 Via el Rosario San Juan Capistrano 92675	easter2@cox.net

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Name/Nombre	Affiliation/Afiliación:	Address/Dirección:	Email/Correo electrónico:
6. Brian Beeman		25022 Camino Del Rio SJC CA	BrianFBeeman@gmail.com
7. ROSA BEAS	RICARDO'S PLACE RESTAURANT	32082 CAMINO CAPISTRANO SAN JUAN CAP. CA 92675	beas.rosa@gmail.com
8.. Ricardo Beas	Ricardos Place Restaurant	32082 Camino Capistrano San Juan CA 92675	Ricardo.beas@outlook.com
9. NANCY TAYLOR	REALTOR – 26 YRS RESIDENT – SJC	32932 PASEO DEL LUCERO SJC in 92675	nancytaylor@cox.net
10 Carolyn Quecchio	Orange Taxpayers County Association	PBox 5881 Orange, CA 92863	Carolyn@octax.org

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Name/Nombre	Affiliation/Afiliación:	Address/Dirección:	Email/Correo electrónico:
11. Peter	South Orange County Economic Coalition	16 Glen Echo Dove Canyon CA.	PWOODFILL@COX.NET
12. Ann Ronan	~~Safer~~ Reliable Power	32302 Alipaz St #269 SJC	ann@SJCTRAVEL.com
13. Joe Fusco	Las Brisas HOA	31092 Via Santo Tomas SJC Ca	Jovida2@cox.net
14. Dawn Fusco	Las Brisas HOA	"	"
15. Larri Kramer	SJC Resident	23871 Paseo Estrella SC, 92675	larrykramer1@att.net

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Name/Nombre	Affiliation/Afiliación:	Address/Dirección:	Email/Correo electrónico:
16. CHERYL LARSSON	LAS BRISAS HOA	31095 VIA SANTO TOMAS SJC 92675	CLARSSON224@YAHOO.COM
17. BETH Apodaca	Age well Senior Services	24300 El Toro Rd Laguna Woods	
18. MARC SERNA	MOULTON NIGUEL WATER DISTRICT	26161 Gordon Rd Laguna Hills	MSERNA@MNWD.COM
19. ALAN COLTON	SD G&E	8315 CENTURY PARK CT. CP11B SAN DIEGO, CA 92020	ACOLTON@SEMPRAUTILITIES.COM
20. Anna Dickinson	RCAR	31271 Via Pera SSC, CA 92675	Anna@AnnaDickinson.com

DISTRICT

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Name/Nombre	Affiliation/Afiliación:	Address/Dirección:	Email/Correo electrónico:
21. [illegible]		SJC PO 1029	Ilee.Byrns@gmail.com
22. Lois Rabalais		31096 Via El Rosario STC 92675	
23. Tommy Nelson		32221 Alipaz St #101	tommynelson111@gmail.com
24. Mary Tuley	SDG&E		mtuley@semprautilities.com
25. Joshua Taylor	TRC		jdtaylor@trcsolutions.com

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Name/Nombre	Affiliation/Afiliación:	Address/Dirección:	Email/Correo electrónico:
26. Randy Lebeau	Las Brisas HOA	31654 Via Santo Tomas SJC 92675	randy.lebeau@gmail.com
27. Richard Stein	San Juan Capo resident	27677 Paseo Alondra SJC 92675	ricktheater@cox.net
28. Edalia Olivo-Gomez	SDG&E Environmental Lead		eolivogomez@semprautilities.com
29. JOSHUA HOOT	SJC RESIDENT	28471 VIA ORDAZ	JPHEURBANVILLAGE.COM
30. Louie Camacho	SJC Resident	31271 Via Para SJC CA 92675	Louie.Camacho@fluor.com

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Name/Nombre	Affiliation/Afiliación:	Address/Dirección:	Email/Correo electrónico:
31. Jeff Bott		114 Avenida Del Mar, Apt 310 San Clemente 92672	bottcommo@yahoo.com
32. GREG RATHS		26551 MASIDE MISSION VIEJO CA 92692	GREGRATHS2014@Reagan.com
33. TONY Ferraro		27681 Paseo Estebar SJC	TJFerraro@Gmail.com
34. Lanette Fauvel		27800 Medical Cntr Rd. MV.	Lanette.Faulkner@STJOC.org
35. JERI STEWART		31215 Via San Vicente SJC 92675	jeristewart06@hotmail.com

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Name/Nombre	Affiliation/Afiliación:	Address/Dirección:	Email/Correo electrónico:
36. Ryor Carter	CUSD		
37. John Gillotti	Business Owner		
38. Chris Stewart		31215 Via San Vicente SJC	
39. CAROLYN FRANKS	Business Owner	31791 Los Rios St SJC	
40. Ross Chun	City of Aliso Viejo	27 Sequoia Dr.	

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Name/Nombre	Affiliation/Afiliación:	Address/Dirección:	Email/Correo electrónico:
41. JAMES O'BRIEN	/		MARINECAMPREPAIR@COX.NET
42. JOE HICKEY			joehickey001@gmail.com
43. Bryan Starr	OCBC	2 park Plaza, Suite 100 Irvine, CA	
44. Rita Rajcevich	OCAR		rita@mtfhomes.com
45. D.F. DENTALL		31196 VIA SAN VICENTE SJC	DFERGUSDENTALL@AOL.COM

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San Juan Capistrano Community Hall, March 25, 2015

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Nota: Antes de incluir su dirección, número de teléfono, dirección de correo electrónico, o cualquier otra información de identificación personal en su comentario, usted debe tomar en cuenta que todo su comentario, incluyendo su información de identificación personal, puede ser puesta a disposición del público en cualquier momento. Aun cuando usted puede pedir en su comentario que no se divulgue públicamente su información de identificación personal, no podemos garantizarlo. Todas las comunicaciones de individuos que se identifican como funcionarios o representantes de las organizaciones o empresas se harán completamente disponibles para inspección pública.

Name/Nombre	Affiliation/Afiliación:	Address/Dirección:	Email/Correo electrónico:
46. Derek Newcomer	Home Owner	29250 Via Zamora	dtnewcomer@gmail.com
47. PAM Patterson.			
48.			
49.			
50.			

Exhibit A-5

Draft EIR Public Meeting PowerPoint Presentation

Public Meeting on the Draft EIR for the San Diego Gas and Electric Company

South Orange County Reliability Enhancement Project

Please:

– Sign in and pick up meeting materials

– Fill out a speaker card if you want to submit verbal comments during this meeting

– Fill out a comment card to submit written comments

The presentation will start at 6:15 pm.

Tenemos un traductor en español presente en la sala, por favor contáctenos si necesita asistencia.

South Orange County Reliability Enhancement Project

Public Meeting on the
Draft Environmental Impact Report

March 25, 2015

Housekeeping

- ¿Hay alguna persona en la sala que necesite asistencia en español, además de quienes ya nos han notificado?
- Please turn cell phones off or to a silent mode
- Emergency exit locations
- Restroom locations

Agenda

- Presentation
  - Introductions
  - Purpose of this Meeting
  - How to Comment on the Draft EIR
  - CEQA and CPUC Review Processes
  - Description of the Proposed Project
  - Objectives of the Proposed Project
  - Environmental Impacts
  - Alternatives to the Proposed Project
  - More Information
- Verbal Comments

Introductions

- **California Public Utilities Commission (CPUC), Energy Division**
  - Andrew Barnsdale, Project Manager
  - Rob Peterson, CEQA Regulatory Analyst
- **Ecology and Environment, Inc.**
  - Bonny O'Connor, Project Manager
  - Silvia Yanez, Environmental Scientist, *habla español*
  - Erec DeVost, Environmental Scientist
  - Luke Shillington, Environmental Scientist
  - Jessica Midbust, Planner

Purpose of this Meeting

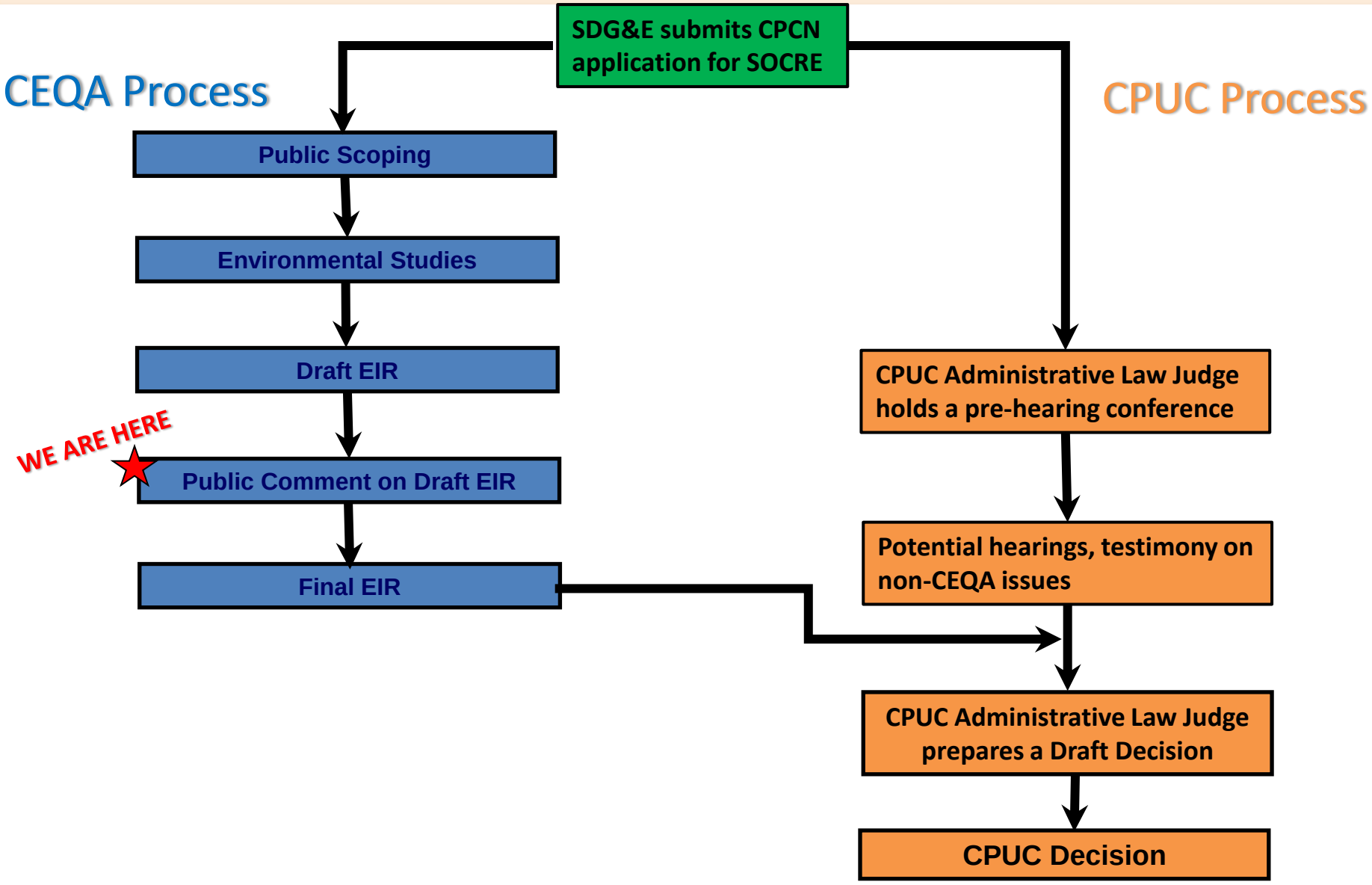
- San Diego Gas and Electric Company (SDG&E) has submitted an application to the CPUC for the South Orange County Reliability Enhancement Project (SOCRE)
- CPUC, as the CEQA Lead Agency, prepared and released (February 23, 2015) a Draft Environmental Impact Report (EIR) and is hosting this meeting to:
  - Share information about the SOCRE Draft EIR
  - Solicit input from the public to include in the Final EIR

How to Comment on the Draft EIR

- Verbal comments will be accepted during this meeting. Please fill out a speaker card.
- The public comment period for the Draft EIR ends on April 10, 2015.
  - Fill out and return a comment form available at this meeting.
  - Email comments to: SOCRE.CEQA@ene.com
  - Mail comments to:
    South Orange County Reliability Enhancement Project

    c/o Ecology and Environment, Inc.
    505 Sansome Street, Suite 300
    San Francisco, CA 94111
  - Fax comments to: 415-398-5326

CEQA and CPUC Review Processes



CPUC Administrative Law Judge Proceeding Process

- On March 3-12-15 the ALJ issued a revised schedule:

Adopted Schedule – A.12-05-020	
SDG&E Serves Amended or Supplemental Opening Testimony	April 7, 2015
ORA and Intervenors serve Reply Testimony	May 26, 2015
Rebuttal Testimony	June 24, 2015
Hearings	July 15-17, 2015
Opening Brief	August 3, 2015
Reply Brief	August 17, 2015
Proposed Decision Issued	4th Quarter 2015
First Commission Meeting to Consider Proposed Decision	4th Quarter 2015

CPUC Administrative Law Judge Proceeding Process

If you would be like to added to the mailing list for the proceeding to address issues not related to the CEQA process, go to: http://www.cpuc.ca.gov/service_lists/

Fill out the Addition/Change to Service List Form (reference A. 1205020) and provide the completed form to the Commission's Process Office (505 Van Ness Ave., San Francisco, CA 94102), or e-mail the form to: Process_Office@cpuc.ca.gov

CPUC's Public Advisor Website

http://www.cpuc.ca.gov/PUC/aboutus/Divisions/CSID/Public+Advisor/

Description of the Proposed Project

Description of Proposed Project

The primary components of the proposed project include:

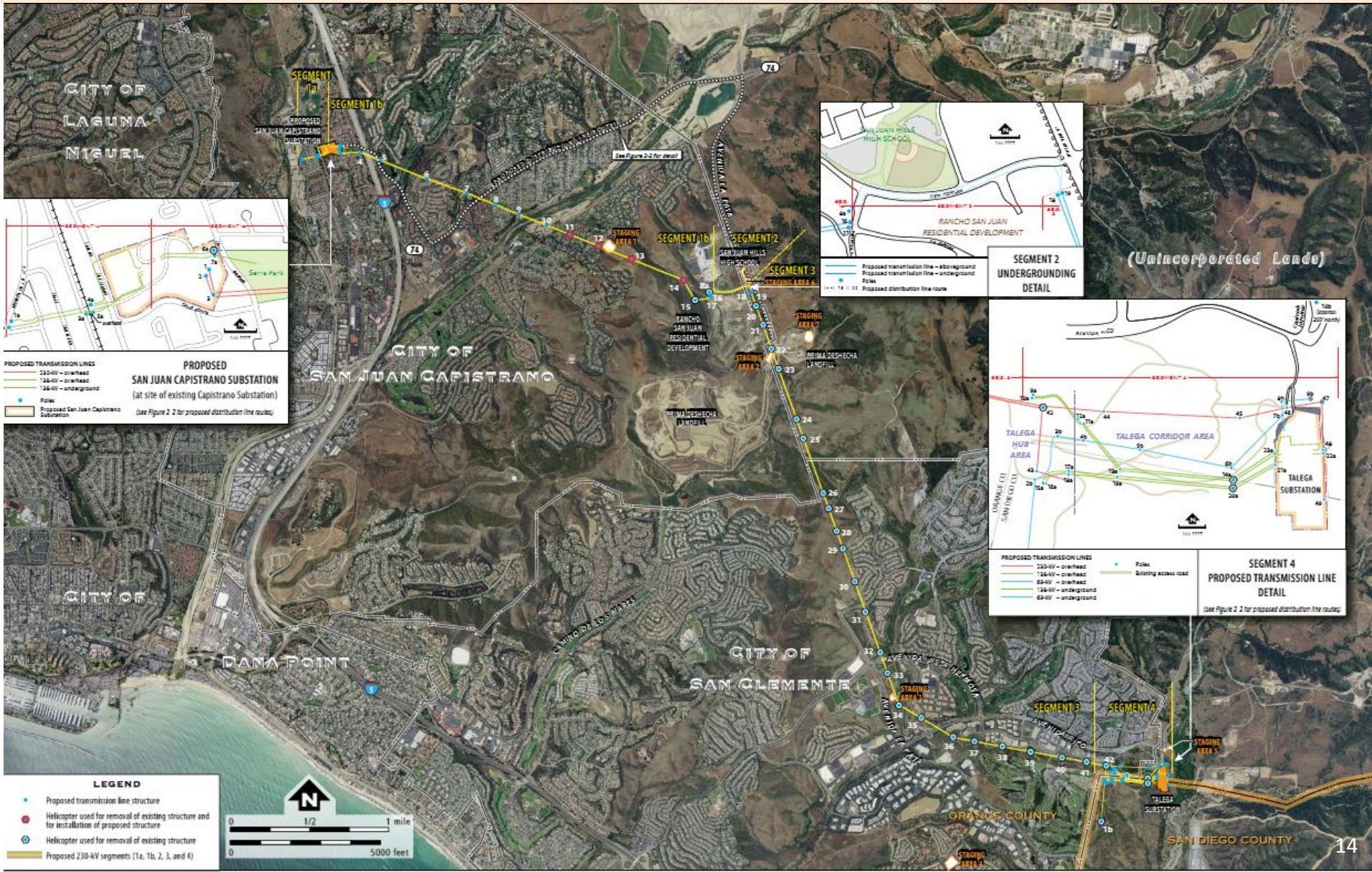
- Rebuilding and upgrading the 138/12-kilovolt (kV) 60-megavolt ampere (MVA) air-insulated Capistrano Substation as a 230/138/12-kV 700-MVA gas-insulated (GIS) substation that would be named the San Juan Capistrano Substation;
- Replacing a single-circuit 138-kV transmission line between the Talega and Capistrano substations with a new double-circuit 230-kV transmission line;
- Relocating several transmission line segments adjacent to the Talega and Capistrano substations to accommodate the proposed Capistrano Substation expansion and new 230-kV line; and
- Relocating several 12-kV distribution line segments into underground conduit and overhead on existing and new structures located between the Capistrano Substation and Prima Deshecha Landfill.

Objectives of the Proposed Project

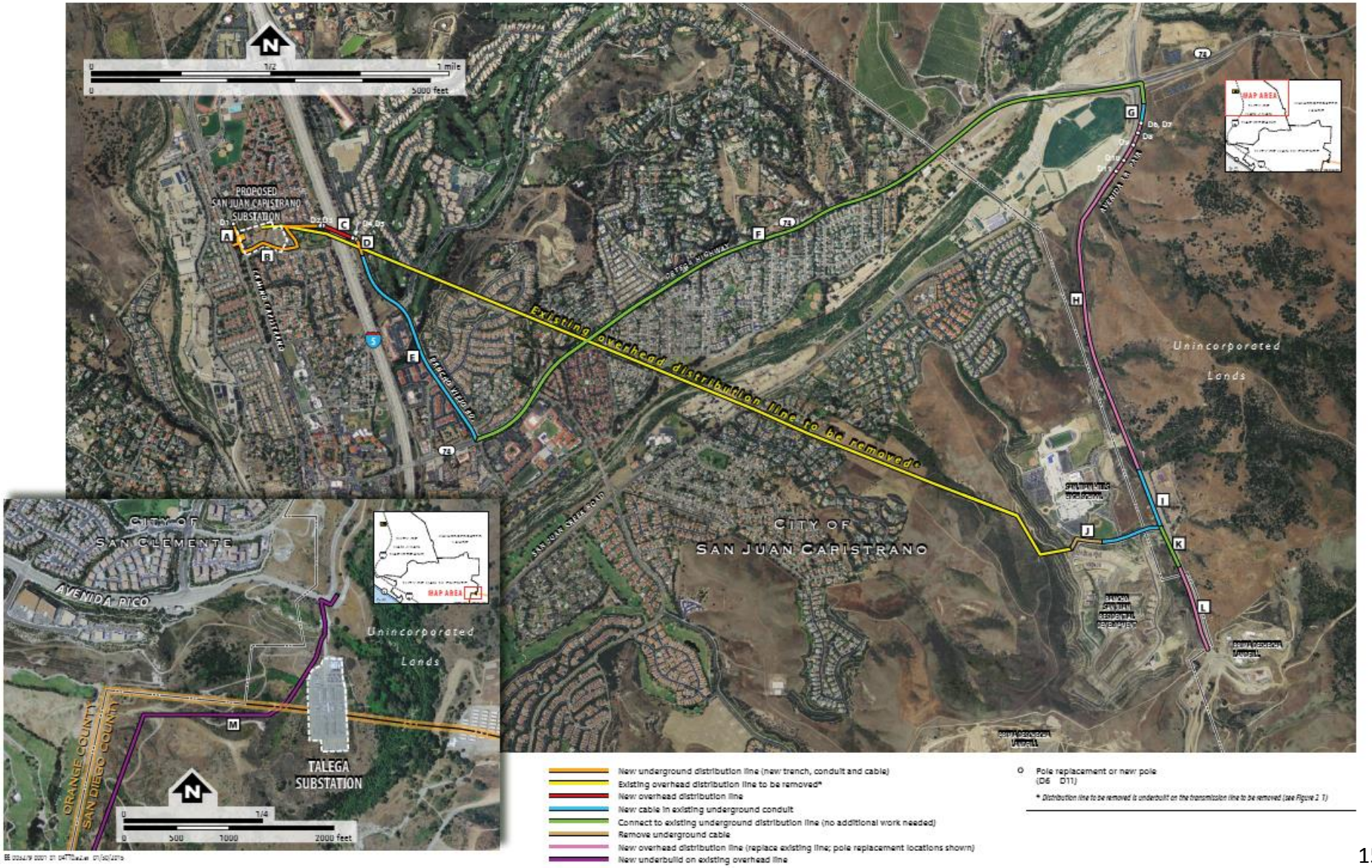
The basic objectives of the proposed project are to:

1. Reduce the risk of instances that could result in the loss of power to customers served by the South Orange County 138-kV System through the 10-year planning horizon;
2. Replace inadequate equipment at the Capistrano Substation; and
3. Redistribute power flow of the applicant's South Orange County 138-kV System such that operational flexibility is increased.

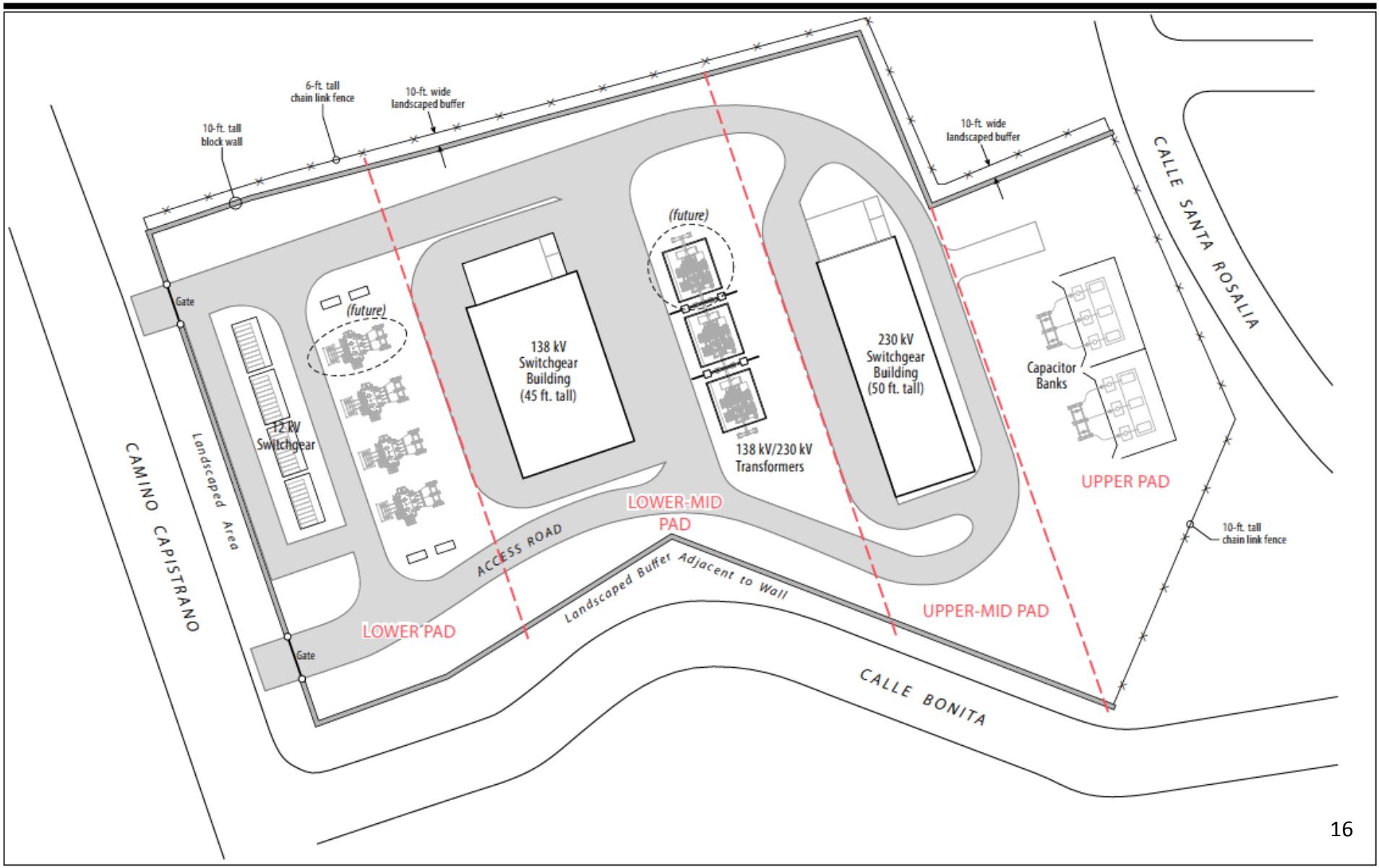
Proposed Transmission Lines



Proposed 12-kV Distribution Lines



Proposed San Juan Capistrano Substation



Environmental Impacts

The proposed project would have a Less than Significant Impact with Mitigation on the following resources:

- Aesthetics
- Biological Resources
- Cultural Resources
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Noise
- Public Services and Utilities

Environmental Impacts

The proposed project would have a Significant Impact on the following resources:

- Air Quality
- Traffic and Transportation
- Cumulative Impacts on Traffic and Transportation

Air Quality

- Reactive organic gases (ROG), particulate matter less than or equal to 10 microns in diameter (PM_{10}), and particulate matter less than or equal to 2.5 microns in diameter ($PM_{2.5}$) would exceed South Coast Air Quality Management District (SCAQMD) thresholds during construction.
- Emissions of PM_{10} and $PM_{2.5}$ during various substation and transmission line construction phases are above the SCAQMD's local significance thresholds.
- Mitigation:
  - Fugitive dust emission controls and vehicle emission reduction measures.

Transportation and Traffic

- Project traffic along Camino Capistrano (City of San Juan Capistrano) during partial road closures
- Full road closures along Camino Capistrano, Via Pamplona, and Calle San Diego (City of San Juan Capistrano)
- Mitigation:
  - Advance notification of full road closures

Photo source: Google 2015.

Cumulative Impacts

- Transportation and Traffic:
  - Significantly contribute to cumulative traffic impacts along Camino Capistrano (City of San Juan Capistrano) during partial road closures
- Mitigation:
  - Advance notification of partial and full road closures

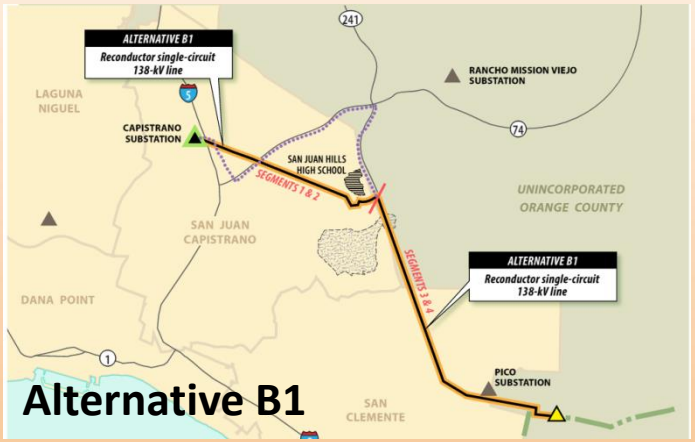
Alternatives to the Proposed Project

Alternatives Screening Report

- Twelve alternatives identified
- Ten alternatives were carried forward to the EIR

Environmentally Superior Alternatives

- Alternative B1: Reconductor Laguna Niguel-Talega 138-kV Line
- Alternative D: SCE 230-kV Loop In to Reduced-Footprint Substation at Landfill



For More Information

CPUC Website for the

Environmental Review of the SOCRE Project

http://tinyurl.com/clsee4g

Thank you!

We will take a short break before inviting the public to submit verbal comments

Verbal Comments

- Fill out Speaker Request form and turn into Jessica.
- Speakers will be invited to the podium one-by-one.
- Each speaker will have 2 minutes to submit their comments. A one minute warning will be provided.
- The audience shall maintain order and allow speakers to talk during their turn without interruption.
- Additional time may be provided to speakers at the end depending available time.
- All verbal comments will be recorded by the transcriptionist.
- We will not to respond to all verbal comments made tonight; the purpose of tonight's meeting is to record comments so that we can respond fully in the Final EIR.

Exhibit A-6

Draft EIR Public Meeting Speaker Cards

SAN CLEMENTE

REQUEST TO SPEAK/SOLICITUD PARA PARTICIPAR

Public Meeting for the South Orange County Reliability Enhancement Project Draft EIR

California Public Utilities Commission
San Clemente Community Center; San Juan Capistrano Community Hall, March 25, 2015

NAME/NOMBRE: Curt Stanley

AFFILIATION (if applicable)/AFILIACIÓN (si aplica):

REQUEST TO SPEAK/SOLICITUD PARA PARTICIPAR

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California Public Utilities Commission
San Clemente Community Center; San Juan Capistrano Community Hall, March 25, 2015

NAME/NOMBRE: LARRY Thomas

AFFILIATION (if applicable)/AFILIACIÓN (si aplica): San Juan Capistrano Chamber of Commerce

REQUEST TO SPEAK/SOLICITUD PARA PARTICIPAR

Public Meeting for the South Orange County Reliability Enhancement Project Draft EIR

California Public Utilities Commission
San Clemente Community Center; San Juan Capistrano Community Hall, March 25, 2015

NAME/NOMBRE: JIM LEACH

AFFILIATION (if applicable)/AFILIACIÓN (si aplica): SANTA MARGARITA WATER DIST.

REQUEST TO SPEAK/SOLICITUD PARA PARTICIPAR

Public Meeting for the South Orange County Reliability Enhancement Project Draft EIR

California Public Utilities Commission
San Clemente Community Center; San Juan Capistrano Community Hall, March 25, 2015

NAME/NOMBRE: Heather Baez

AFFILIATION (if applicable)/AFILIACIÓN (si aplica):

REQUEST TO SPEAK/SOLICITUD PARA PARTICIPAR

Public Meeting for the South Orange County Reliability Enhancement Project Draft EIR

California Public Utilities Commission
San Clemente Community Center; San Juan Capistrano Community Hall, March 25, 2015

NAME/NOMBRE: VICTOR CAO

AFFILIATION (if applicable)/AFILIACIÓN (si aplica): ORANGE COUNTY SUPERVISOR, LISA BARTLETT

REQUEST TO SPEAK/SOLICITUD PARA PARTICIPAR

Public Meeting for the South Orange County Reliability Enhancement Project Draft EIR

California Public Utilities Commission
San Clemente Community Center; San Juan Capistrano Community Hall, March 25, 2015

NAME/NOMBRE: JOHN OZUROVICH

AFFILIATION (if applicable)/AFILIACIÓN (si aplica): SADDLEBACK COLLEGE

SAN CLEMENTE

REQUEST TO SPEAK/SOLICITUD PARA PARTICIPAR

Public Meeting for the South Orange County Reliability Enhancement Project Draft EIR

California Public Utilities Commission
San Clemente Community Center; San Juan Capistrano Community Hall, March 25, 2015

NAME/NOMBRE: Dick Fisher

AFFILIATION (if applicable)/AFILIACIÓN (si aplica): Retired Rep. Chamber / Laguna Urban Ranchers

REQUEST TO SPEAK/SOLICITUD PARA PARTICIPAR

Public Meeting for the South Orange County Reliability Enhancement Project Draft EIR

California Public Utilities Commission
San Clemente Community Center; San Juan Capistrano Community Hall, March 25, 2015

NAME/NOMBRE: TONY STRUTHERS

AFFILIATION (if applicable)/AFILIACIÓN (si aplica):

REQUEST TO SPEAK/SOLICITUD PARA PARTICIPAR

Public Meeting for the South Orange County Reliability Enhancement Project Draft EIR

California Public Utilities Commission
San Clemente Community Center; San Juan Capistrano Community Hall, March 25, 2015

NAME/NOMBRE: GARRY BROWN

AFFILIATION (if applicable)/AFILIACIÓN (si aplica): O.C. COASTKEEPER

REQUEST TO SPEAK/SOLICITUD PARA PARTICIPAR

Public Meeting for the South Orange County Reliability Enhancement Project Draft EIR

California Public Utilities Commission
San Clemente Community Center; San Juan Capistrano Community Hall, March 25, 2015

NAME/NOMBRE: Debbie Neuman

AFFILIATION (if applicable)/AFILIACIÓN (si aplica): Laguna Niguel Chamber

REQUEST TO SPEAK/SOLICITUD PARA PARTICIPAR

Public Meeting for the South Orange County Reliability Enhancement Project Draft EIR

California Public Utilities Commission
San Clemente Community Center; San Juan Capistrano Community Hall, March 25, 2015

NAME/NOMBRE: SOUTH COAST WATER
RICK ERICKENEFF

AFFILIATION (if applicable)/AFILIACIÓN (si aplica):

REQUEST TO SPEAK/SOLICITUD PARA PARTICIPAR

Public Meeting for the South Orange County Reliability Enhancement Project Draft EIR

California Public Utilities Commission
San Clemente Community Center; San Juan Capistrano Community Hall, March 25, 2015

NAME/NOMBRE: Mike Burke

AFFILIATION (if applicable)/AFILIACIÓN (si aplica): San Clemente Chamber of Commerce

SAN CLEMENTE

REQUEST TO SPEAK/SOLICITUD PARA PARTICIPAR

Public Meeting for the South Orange County Reliability Enhancement Project Draft EIR

California Public Utilities Commission
San Clemente Community Center; San Juan Capistrano Community Hall, March 25, 2015

NAME/NOMBRE: Joe Anderson

AFFILIATION (if applicable)/AFILIACIÓN (si aplica): Citizens for Safe+Reliable Power

REQUEST TO SPEAK/SOLICITUD PARA PARTICIPAR

Public Meeting for the South Orange County Reliability Enhancement Project Draft EIR

California Public Utilities Commission
San Clemente Community Center; San Juan Capistrano Community Hall, March 25, 2015

NAME/NOMBRE: Jim Bieber

AFFILIATION (if applicable)/AFILIACIÓN (si aplica): Home owner

REQUEST TO SPEAK/SOLICITUD PARA PARTICIPAR

Public Meeting for the South Orange County Reliability Enhancement Project Draft EIR

California Public Utilities Commission
San Clemente Community Center; San Juan Capistrano Community Hall, March 25, 2015

Steve LAMOTTE

NAME/NOMBRE: Building Industry Association/OC

AFFILIATION (if applicable)/AFILIACIÓN (si aplica):

REQUEST TO SPEAK/SOLICITUD PARA PARTICIPAR

Public Meeting for the South Orange County Reliability Enhancement Project Draft EIR

California Public Utilities Commission
San Clemente Community Center; San Juan Capistrano Community Hall, March 25, 2015

NAME/NOMBRE: Nancy Allen

AFFILIATION (if applicable)/AFILIACIÓN (si aplica):

REQUEST TO SPEAK/SOLICITUD PARA PARTICIPAR

Public Meeting for the South Orange County Reliability Enhancement Project Draft EIR

California Public Utilities Commission
San Clemente Community Center; San Juan Capistrano Community Hall, March 25, 2015

NAME/NOMBRE: LAER PEARCE

AFFILIATION (if applicable)/AFILIACIÓN (si aplica): RESIDENT

REQUEST TO SPEAK/SOLICITUD PARA PARTICIPAR

Public Meeting for the South Orange County Reliability Enhancement Project Draft EIR

California Public Utilities Commission
San Clemente Community Center; San Juan Capistrano Community Hall, March 25, 2015

NAME/NOMBRE: Rhonda Reardon

AFFILIATION (if applicable)/AFILIACIÓN (si aplica): Resident & former Mayor of Mission Viejo

SAN CLEMENTE

REQUEST TO SPEAK/SOLICITUD PARA PARTICIPAR

Public Meeting for the South Orange County Reliability Enhancement Project Draft EIR

California Public Utilities Commission
San Clemente Community Center; San Juan Capistrano Community Hall, March 25, 2015

NAME/NOMBRE: Wendy Bucknum WENDY BUCKNUM

AFFILIATION (if applicable)/AFILIACIÓN (si aplica): ~~Councilwoman~~ COUNCILWOMAN, Mission Viejo

REQUEST TO SPEAK/SOLICITUD PARA PARTICIPAR

Public Meeting for the South Orange County Reliability Enhancement Project Draft EIR

California Public Utilities Commission
San Clemente Community Center; San Juan Capistrano Community Hall, March 25, 2015

NAME/NOMBRE: Shawna Schaffner, CAA Planning

AFFILIATION (if applicable)/AFILIACIÓN (si aplica):

REQUEST TO SPEAK/SOLICITUD PARA PARTICIPAR

Public Meeting for the South Orange County Reliability Enhancement Project Draft EIR

California Public Utilities Commission
San Clemente Community Center; San Juan Capistrano Community Hall, March 25, 2015

NAME/NOMBRE: JIM DAHL

AFFILIATION (if applicable)/AFILIACIÓN (si aplica):

REQUEST TO SPEAK/SOLICITUD PARA PARTICIPAR

Public Meeting for the South Orange County Reliability Enhancement Project Draft EIR

California Public Utilities Commission
San Clemente Community Center; San Juan Capistrano Community Hall, March 25, 2015

NAME/NOMBRE: ENZO SCOGNAMIGLIO

AFFILIATION (if applicable)/AFILIACIÓN (si aplica): DANA POINT CHAMBER -

REQUEST TO SPEAK/SOLICITUD PARA PARTICIPAR

Public Meeting for the South Orange County Reliability Enhancement Project Draft EIR

California Public Utilities Commission
San Clemente Community Center; San Juan Capistrano Community Hall, March 25, 2015

NAME/NOMBRE: DONNA VARNER

AFFILIATION (if applicable)/AFILIACIÓN (si aplica):

REQUEST TO SPEAK/SOLICITUD PARA PARTICIPAR

Public Meeting for the South Orange County Reliability Enhancement Project Draft EIR

California Public Utilities Commission
San Clemente Community Center; San Juan Capistrano Community Hall, March 25, 2015

NAME/NOMBRE: MIKE MUNZING

AFFILIATION (if applicable)/AFILIACIÓN (si aplica):

SAN CLEMENTE

REQUEST TO SPEAK/SOLICITUD PARA PARTICIPAR

DID NOT SPEAK

Public Meeting for the South Orange County Reliability Enhancement Project Draft EIR

California Public Utilities Commission
San Clemente Community Center; San Juan Capistrano Community Hall, March 25, 2015

NAME/NOMBRE: LOU PENROSE

AFFILIATION (if applicable)/AFILIACIÓN (si aplica): APARTMENT ASSOCIATION

REQUEST TO SPEAK/SOLICITUD PARA PARTICIPAR

Public Meeting for the South Orange County Reliability Enhancement Project Draft EIR

California Public Utilities Commission
San Clemente Community Center; San Juan Capistrano Community Hall, March 25, 2015

NAME/NOMBRE: Rhen Kohan

AFFILIATION (if applicable)/AFILIACIÓN (si aplica): Homeowner

SAN JUAN CAPISTRANO

REQUEST TO SPEAK/SOLICITUD PARA PARTICIPAR

Public Meeting for the South Orange County Reliability Enhancement Project Draft EIR

California Public Utilities Commission
San Clemente Community Center; San Juan Capistrano Community Hall, March 25, 2015

NAME/NOMBRE: WAYNE A. BROWN

AFFILIATION (if applicable)/AFILIACIÓN (si aplica): South Orange County Economic Coalition

REQUEST TO SPEAK/SOLICITUD PARA PARTICIPAR

Public Meeting for the South Orange County Reliability Enhancement Project Draft EIR

California Public Utilities Commission
San Clemente Community Center; San Juan Capistrano Community Hall, March 25, 2015

NAME/NOMBRE: Julie Vandermost

AFFILIATION (if applicable)/AFILIACIÓN (si aplica): VCS Environmental

REQUEST TO SPEAK/SOLICITUD PARA PARTICIPAR

Public Meeting for the South Orange County Reliability Enhancement Project Draft EIR

California Public Utilities Commission
San Clemente Community Center; San Juan Capistrano Community Hall, March 25, 2015

NAME/NOMBRE: BRIAN BEEMAN

AFFILIATION (if applicable)/AFILIACIÓN (si aplica): RESIDENT

REQUEST TO SPEAK/SOLICITUD PARA PARTICIPAR

Public Meeting for the South Orange County Reliability Enhancement Project Draft EIR

California Public Utilities Commission
San Clemente Community Center; San Juan Capistrano Community Hall, March 25, 2015

NAME/NOMBRE: JONATHAN VOLZKE

AFFILIATION (if applicable)/AFILIACIÓN (si aplica):

REQUEST TO SPEAK/SOLICITUD PARA PARTICIPAR

Public Meeting for the South Orange County Reliability Enhancement Project Draft EIR

California Public Utilities Commission
San Clemente Community Center; San Juan Capistrano Community Hall, March 25, 2015

NAME/NOMBRE: Ricardo Beas

AFFILIATION (if applicable)/AFILIACIÓN (si aplica): Ricardos Place

SAN JUAN CAPISTRANO

REQUEST TO SPEAK/SOLICITUD PARA PARTICIPAR

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California Public Utilities Commission
San Clemente Community Center; San Juan Capistrano Community Hall, March 25, 2015

NAME/NOMBRE: Kathleen Petersen Los Arcos HOA

AFFILIATION (if applicable)/AFILIACIÓN (si aplica):

REQUEST TO SPEAK/SOLICITUD PARA PARTICIPAR

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California Public Utilities Commission
San Clemente Community Center; San Juan Capistrano Community Hall, March 25, 2015

NAME/NOMBRE: Peter Woodfill

AFFILIATION (if applicable)/AFILIACIÓN (si aplica): South OC. Economic Coalition

REQUEST TO SPEAK/SOLICITUD PARA PARTICIPAR

Public Meeting for the South Orange County Reliability Enhancement Project Draft EIR

California Public Utilities Commission
San Clemente Community Center; San Juan Capistrano Community Hall, March 25, 2015

NAME/NOMBRE: Carolyn Cavecche

AFFILIATION (if applicable)/AFILIACIÓN (si aplica):

REQUEST TO SPEAK/SOLICITUD PARA PARTICIPAR

Public Meeting for the South Orange County Reliability Enhancement Project Draft EIR

California Public Utilities Commission
San Clemente Community Center; San Juan Capistrano Community Hall, March 25, 2015

NAME/NOMBRE: Beth Apodaca Agewell Senior Services

AFFILIATION (if applicable)/AFILIACIÓN (si aplica):

REQUEST TO SPEAK/SOLICITUD PARA PARTICIPAR

Public Meeting for the South Orange County Reliability Enhancement Project Draft EIR

California Public Utilities Commission
San Clemente Community Center; San Juan Capistrano Community Hall, March 25, 2015

NAME/NOMBRE: I.M. BYRNES

AFFILIATION (if applicable)/AFILIACIÓN (si aplica):

REQUEST TO SPEAK/SOLICITUD PARA PARTICIPAR

Public Meeting for the South Orange County Reliability Enhancement Project Draft EIR

California Public Utilities Commission
San Clemente Community Center; San Juan Capistrano Community Hall, March 25, 2015

NAME/NOMBRE: MARC SERNA

AFFILIATION (if applicable)/AFILIACIÓN (si aplica): MOULTON NIGUEL WATER DISTRICT

(2)

SAN JUAN CAPISTRANO

REQUEST TO SPEAK/SOLICITUD PARA PARTICIPAR

Public Meeting for the South Orange County Reliability Enhancement Project Draft EIR

California Public Utilities Commission
San Clemente Community Center; San Juan Capistrano Community Hall, March 25, 2015

NAME/NOMBRE: Tommy Nelson

AFFILIATION (if applicable)/AFILIACIÓN (si aplica): resident

REQUEST TO SPEAK/SOLICITUD PARA PARTICIPAR

Public Meeting for the South Orange County Reliability Enhancement Project Draft EIR

California Public Utilities Commission
San Clemente Community Center; San Juan Capistrano Community Hall, March 25, 2015

NAME/NOMBRE: RICHARD STEIN

AFFILIATION (if applicable)/AFILIACIÓN (si aplica): RESIDENT

REQUEST TO SPEAK/SOLICITUD PARA PARTICIPAR

Public Meeting for the South Orange County Reliability Enhancement Project Draft EIR

California Public Utilities Commission
San Clemente Community Center; San Juan Capistrano Community Hall, March 25, 2015

NAME/NOMBRE: JOSHUA HOST

AFFILIATION (if applicable)/AFILIACIÓN (si aplica): SOC RESIDENT

REQUEST TO SPEAK/SOLICITUD PARA PARTICIPAR

Public Meeting for the South Orange County Reliability Enhancement Project Draft EIR

California Public Utilities Commission
San Clemente Community Center; San Juan Capistrano Community Hall, March 25, 2015

NAME/NOMBRE: Jeff Boldt

AFFILIATION (if applicable)/AFILIACIÓN (si aplica):

REQUEST TO SPEAK/SOLICITUD PARA PARTICIPAR

Public Meeting for the South Orange County Reliability Enhancement Project Draft EIR

California Public Utilities Commission
San Clemente Community Center; San Juan Capistrano Community Hall, March 25, 2015

NAME/NOMBRE: GREG RATHS

AFFILIATION (if applicable)/AFILIACIÓN (si aplica):

REQUEST TO SPEAK/SOLICITUD PARA PARTICIPAR

Public Meeting for the South Orange County Reliability Enhancement Project Draft EIR

California Public Utilities Commission
San Clemente Community Center; San Juan Capistrano Community Hall, March 25, 2015

NAME/NOMBRE: Rachel Lubert

AFFILIATION (if applicable)/AFILIACIÓN (si aplica):

SAN JUAN CAPISTRANO

REQUEST TO SPEAK/SOLICITUD PARA PARTICIPAR

Public Meeting for the South Orange County Reliability Enhancement Project Draft EIR

California Public Utilities Commission
San Clemente Community Center; San Juan Capistrano Community Hall, March 25, 2015

NAME/NOMBRE: Ryan Carter

C.U.S.D.

AFFILIATION (if applicable)/AFILIACIÓN (si aplica):

REQUEST TO SPEAK/SOLICITUD PARA PARTICIPAR

Public Meeting for the South Orange County Reliability Enhancement Project Draft EIR

California Public Utilities Commission
San Clemente Community Center; San Juan Capistrano Community Hall, March 25, 2015

NAME/NOMBRE: Lanthe Faulkner

AFFILIATION (if applicable)/AFILIACIÓN (si aplica): Mission Hospital

REQUEST TO SPEAK/SOLICITUD PARA PARTICIPAR

Public Meeting for the South Orange County Reliability Enhancement Project Draft EIR

California Public Utilities Commission
San Clemente Community Center; San Juan Capistrano Community Hall, March 25, 2015

NAME/NOMBRE: CAROLYN FRANKS.

AFFILIATION (if applicable)/AFILIACIÓN (si aplica): Business Owner.

REQUEST TO SPEAK/SOLICITUD PARA PARTICIPAR

Public Meeting for the South Orange County Reliability Enhancement Project Draft EIR

California Public Utilities Commission
San Clemente Community Center; San Juan Capistrano Community Hall, March 25, 2015

NAME/NOMBRE: Ross Chun

AFFILIATION (if applicable)/AFILIACIÓN (si aplica): City of Aliso Viejo

REQUEST TO SPEAK/SOLICITUD PARA PARTICIPAR

Public Meeting for the South Orange County Reliability Enhancement Project Draft EIR

California Public Utilities Commission
San Clemente Community Center; San Juan Capistrano Community Hall, March 25, 2015

NAME/NOMBRE: Charlie Views

AFFILIATION (if applicable)/AFILIACIÓN (si aplica): City of San Juan Capistrano

REQUEST TO SPEAK/SOLICITUD PARA PARTICIPAR

Public Meeting for the South Orange County Reliability Enhancement Project Draft EIR

California Public Utilities Commission
San Clemente Community Center; San Juan Capistrano Community Hall, March 25, 2015

NAME/NOMBRE: Bryan Starr

AFFILIATION (if applicable)/AFILIACIÓN (si aplica): OCBC

SAN JUAN CAPISTRANO

REQUEST TO SPEAK/SOLICITUD PARA PARTICIPAR

Public Meeting for the South Orange County Reliability Enhancement Project Draft EIR

California Public Utilities Commission
San Clemente Community Center; San Juan Capistrano Community Hall, March 25, 2015

NAME/NOMBRE: Rita Tavenaks

AFFILIATION (if applicable)/AFILIACIÓN (si aplica): Orange County Assoc of Realtors

REQUEST TO SPEAK/SOLICITUD PARA PARTICIPAR

Public Meeting for the South Orange County Reliability Enhancement Project Draft EIR

California Public Utilities Commission
San Clemente Community Center; San Juan Capistrano Community Hall, March 25, 2015

NAME/NOMBRE: DOMINIC BENTALL

AFFILIATION (if applicable)/AFILIACIÓN (si aplica):

REQUEST TO SPEAK/SOLICITUD PARA PARTICIPAR

Public Meeting for the South Orange County Reliability Enhancement Project Draft EIR

California Public Utilities Commission
San Clemente Community Center; San Juan Capistrano Community Hall, March 25, 2015

NAME/NOMBRE: Ann RONAN

AFFILIATION (if applicable)/AFILIACIÓN (si aplica): Co-CHAIR CITIZENS FOR Safe + Reliable

REQUEST TO SPEAK/SOLICITUD PARA PARTICIPAR

Public Meeting for the South Orange County Reliability Enhancement Project Draft EIR

California Public Utilities Commission
San Clemente Community Center; San Juan Capistrano Community Hall, March 25, 2015

NAME/NOMBRE: JAMES O'BRIEN

AFFILIATION (if applicable)/AFILIACIÓN (si aplica):

REQUEST TO SPEAK/SOLICITUD PARA PARTICIPAR

Public Meeting for the South Orange County Reliability Enhancement Project Draft EIR

California Public Utilities Commission
San Clemente Community Center; San Juan Capistrano Community Hall, March 25, 2015

NAME/NOMBRE: Pam Patterson

AFFILIATION (if applicable)/AFILIACIÓN (si aplica):

REQUEST TO SPEAK/SOLICITUD PARA PARTICIPAR

Public Meeting for the South Orange County Reliability Enhancement Project Draft EIR

California Public Utilities Commission
San Clemente Community Center; San Juan Capistrano Community Hall, March 25, 2015

NAME/NOMBRE: JOE HICKEY

AFFILIATION (if applicable)/AFILIACIÓN (si aplica):

SAN JUAN CAPISTRANO

REQUEST TO SPEAK/SOLICITUD PARA PARTICIPAR

DID NOT SPEAK

Public Meeting for the South Orange County Reliability Enhancement Project Draft EIR

California Public Utilities Commission
San Clemente Community Center; San Juan Capistrano Community Hall, March 25, 2015

NAME/NOMBRE: John Fusco

AFFILIATION (if applicable)/AFILIACIÓN (si aplica): Las Brisas HOA

REQUEST TO SPEAK/SOLICITUD PARA PARTICIPAR

DID NOT SPEAK

Public Meeting for the South Orange County Reliability Enhancement Project Draft EIR

California Public Utilities Commission
San Clemente Community Center; San Juan Capistrano Community Hall, March 25, 2015

NAME/NOMBRE: John Gillotti

AFFILIATION (if applicable)/AFILIACIÓN (si aplica): SJC Business owner

Exhibit B-1

Recirculated Draft EIR Notice of Completion (NOC)

Print Form

Appendix C

Notice of Completion & Environmental Document Transmittal

Mail to: State Clearinghouse, P.O. Box 3044, Sacramento, CA 95812-3044 (916) 445-0613
For Hand Delivery/Street Address: 1400 Tenth Street, Sacramento, CA 95814

SCH # 2013011011

Project Title: South Orange County Reliability Enhancement (SOCRE) Project (San Diego Gas & Electric Company)

Lead Agency: California Public Utilities Commission — Contact Person: Andrew Barnsdale, Energy

Mailing Address: 505 Van Ness Avenue — Phone: (415) 703-3221

City: San Francisco — Zip: 94102 — County: San Francisco

Project Location: County: Orange and San Diego — City/Nearest Community: San Juan Capistrano, San Clemente

Cross Streets: Camino Capistrano, Cristianitos Rd (8-mile electrical transmission project, 2 substations) — Zip Code: Various

Longitude/Latitude (degrees, minutes and seconds): 33 ° 30 ′ 44 ″ N / 117 ° 39 ′ 55 ″ W — Total Acres: 11 (permanent)

Assessor's Parcel No.: Multiple — Section: S1 — Twp.: 8S — Range: 8W — Base: San Bernardino

Within 2 Miles: State Hwy #: I-5, SR-74, SR-1, SR-73 — Waterways: See attachment

Airports: None — Railways: See attachment — Schools: See attachment

Document Type:

CEQA: ☐ NOP ☒ Draft EIR — NEPA: ☐ NOI — Other: ☐ Joint Document
☐ Early Cons ☐ Supplement/Subsequent EIR ☐ EA ☐ Final Document
☐ Neg Dec (Prior SCH No.) ☐ Draft EIS ☐ Other:
☐ Mit Neg Dec Other: Recirculated Draft EIR ☐ FONSI

Local Action Type:

☐ General Plan Update ☐ Specific Plan ☐ Rezone ☐ Annexation
☐ General Plan Amendment ☐ Master Plan ☐ Prezone ☐ Redevelopment
☐ General Plan Element ☐ Planned Unit Development ☐ Use Permit ☐ Coastal Permit
☐ Community Plan ☐ Site Plan ☐ Land Division (Subdivision, etc.) ☒ Other: CPCN (CPUC)

Development Type:

☐ Residential: Units _____ Acres _____
☐ Office: Sq.ft. _____ Acres _____ Employees _____
☐ Commercial: Sq.ft. _____ Acres _____ Employees _____
☐ Industrial: Sq.ft. _____ Acres _____ Employees _____
☐ Educational: _____
☐ Recreational: _____
☐ Water Facilities: Type _____ MGD _____
☐ Transportation: Type _____
☐ Mining: Mineral _____
☒ Power: Type Transmission, subst MW 138/230 kV
☐ Waste Treatment: Type _____ MGD _____
☐ Hazardous Waste: Type _____
☐ Other: _____

Project Issues Discussed in Document:

☒ Aesthetic/Visual ☐ Fiscal ☒ Recreation/Parks ☒ Vegetation
☒ Agricultural Land ☒ Flood Plain/Flooding ☒ Schools/Universities ☒ Water Quality
☒ Air Quality ☒ Forest Land/Fire Hazard ☒ Septic Systems ☒ Water Supply/Groundwater
☒ Archeological/Historical ☒ Geologic/Seismic ☒ Sewer Capacity ☒ Wetland/Riparian
☒ Biological Resources ☒ Minerals ☒ Soil Erosion/Compaction/Grading ☒ Growth Inducement
☐ Coastal Zone ☒ Noise ☒ Solid Waste ☒ Land Use
☒ Drainage/Absorption ☒ Population/Housing Balance ☒ Toxic/Hazardous ☒ Cumulative Effects
☐ Economic/Jobs ☒ Public Services/Facilities ☒ Traffic/Circulation ☐ Other:

Present Land Use/Zoning/General Plan Designation:

Multiple: Multi-Family/Single Family Residential, Open Space, Recreation/Parks, Industrial, Landfill, Commercial

Project Description: *(please use a separate page if necessary)*

The SOCRE project would include: 1. Rebuilding and upgrading the existing 138/12-kV air-insulated Capistrano Substation (2 acres) as a 230/138/12-kV gas-insulated substation (6.4 acres); 2. Replacing a segment of a single-circuit 138-kV transmission line between the Talega and Capistrano substations with a new double-circuit 230-kV transmission line (7.5 miles), and relocating several transmission and distribution line segments (2 miles, combined) located near the two substations; and 3. Relocating a 12-kV distribution line into new and existing underground conduit and overhead on new structures from the proposed San Juan Capistrano Substation to Prima Deschecha Landfill. Project construction is anticipated to begin November 2013 and would take about 4 years. (Also see attached.)

Note: The State Clearinghouse will assign identification numbers for all new projects. If a SCH number already exists for a project (e.g. Notice of Preparation or previous draft document) please fill in.

Reviewing Agencies Checklist

Lead Agencies may recommend State Clearinghouse distribution by marking agencies below with and "X".
If you have already sent your document to the agency please denote that with an "S".

X	Air Resources Board	X	Office of Historic Preservation
	Boating & Waterways, Department of		Office of Public School Construction
X	California Emergency Management Agency	X	Parks & Recreation, Department of
X	California Highway Patrol		Pesticide Regulation, Department of
X	Caltrans District #12		Public Utilities Commission
	Caltrans Division of Aeronautics	X	Regional WQCB #9
X	Caltrans Planning		Resources Agency
	Central Valley Flood Protection Board		Resources Recycling and Recovery, Department of
	Coachella Valley Mtns. Conservancy		S.F. Bay Conservation & Development Comm.
	Coastal Commission		San Gabriel & Lower L.A. Rivers & Mtns. Conservancy
	Colorado River Board		San Joaquin River Conservancy
	Conservation, Department of		Santa Monica Mtns. Conservancy
	Corrections, Department of		State Lands Commission
	Delta Protection Commission		SWRCB: Clean Water Grants
	Education, Department of	X	SWRCB: Water Quality
X	Energy Commission		SWRCB: Water Rights
X	Fish & Game Region #5		Tahoe Regional Planning Agency
	Food & Agriculture, Department of	X	Toxic Substances Control, Department of
X	Forestry and Fire Protection, Department of	X	Water Resources, Department of
	General Services, Department of		
	Health Services, Department of		Other:
	Housing & Community Development		Other:
X	Native American Heritage Commission		

Local Public Review Period (to be filled in by lead agency)

Starting Date August 10, 2015 Ending Date September 24, 2015

Lead Agency (Complete if applicable):

Consulting Firm: Ecology and Environment, Inc.
Address: 505 Sansome St. Ste 300
City/State/Zip: San Francisco, CA 94111
Contact: Erec DeVost
Phone: (415) 398-5326

Applicant: San Diego Gas and Electric Company
Address: 8330 Century Park Court, CP32D
City/State/Zip: San Diego, CA 92123
Phone: (858) 636-6876

Signature of Lead Agency Representative: _____ **Date:** 8/5/15

Authority cited: Section 21083, Public Resources Code. Reference: Section 21161, Public Resources Code.

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

ATTACHMENT for
SAN DIEGO GAS AND ELECTRIC COMPANY
SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT PROJECT (SCH# 2013011011)
NOTICE OF COMPLETION

Waterways: San Juan Creek, Horno Creek, Rancho San Juan Drainage, Prima Deshecha Canada, Segunda Deshecha Canada, and Christianitos Creek

Railways: Southern California Regional Rail Authority Metrolink, Amtrak, Burlington Northern and Santa Fe Railway

Schools: Schools with the Capistrano Unified School District and private schools, including Harold Ambuehl Elementary School, Jserra Catholic High School, Saddleback Valley Christian, Junipero Serra High School, St. Margaret's Episcopal School, San Juan Hills High School, Vista Del Mar Middle School, Heritage Christian, Talega KinderCare, Capistrano Valley Christian School, Marbella Montessori, Mission Basilica School, San Juan Montessori, Stoneybrooke Christian School.

Project Description: The primary components of the proposed project would include:

- Rebuilding and upgrading the 138/12-kV 60-megavolt ampere (MVA) air-insulated Capistrano Substation as a 230/138/12-kV 700-MVA gas-insulated substation that would be named San Juan Capistrano Substation;
- Replacing a single-circuit 138-kV transmission line between the applicant's Talega and Capistrano substations with a new double-circuit 230-kV transmission line (approximately 7.8-miles long);
- Relocating several transmission line segments (approximately 1.8 miles, total) adjacent to Talega and Capistrano substations to accommodate the proposed Capistrano Substation expansion and new 230-kV line; and
- Relocating several 12-kV distribution lines segments (approximately 6 miles) into underground conduit and overhead on existing and new structures located between the Capistrano Substation and Prima Deschecha Landfill.

Construction of the proposed SOCRE project would take approximately 64 months.

Exhibit B-2

Recirculated Draft EIR Notice of Availability (NOA)

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

NOTICE OF AVAILABILITY
SAN DIEGO GAS AND ELECTRIC COMPANY
SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT PROJECT
RECIRCULATED DRAFT ENVIRONMENTAL IMPACT REPORT

Si usted necesita más información o una copia de este documento en español, por favor, llame al (855) 520-6799 o visite la siguiente página Web. http://tinyurl.com/clsee4g

San Diego Gas and Electric Company (SDG&E) filed an application for a Certificate of Public Convenience and Necessity (CPCN) with the California Public Utilities Commission (CPUC) for the South Orange County Reliability Enhancement (SOCRE) project to rebuild and upgrade a portion of its transmission infrastructure in South Orange County. The purpose of this Notice of Availability is to announce that the CPUC's Recirculated Draft Environmental Impact Report (EIR) is available for public review and comment.

Background

This Recirculated Draft EIR is part of the ongoing environmental review process for the SOCRE project. The CPUC, as the Lead Agency, prepared a Draft EIR for the SOCRE project and circulated the Draft EIR for public comment for a 45-day period beginning February 23, 2015, and ending April 10, 2015. This Recirculated Draft EIR is considered a partially recirculated EIR because significant new information and analyses have been added or changed in portions of the Draft EIR after it was circulated for public comment in February 2015.

Additionally, the Recirculated Draft EIR contains a new alternative, called the Trabuco Alternative, that was suggested by the public during review of the Draft EIR. Subsequent analysis by the CPUC has shown that the alternative is feasible from a technological, legal, and economic perspective and warrants inclusion in the EIR. The Recirculated Draft EIR adds a description of the alternative to Chapter 3, "Description of Alternatives." A description of the environmental effects resulting from the implementation of the alternative, as compared to the applicant's proposal, has been added to Chapter 5, "Comparison of Alternatives."

Project Description

The proposed project would consist of the following primary components:

- Rebuilding and upgrading the 138/12-kilovolt (kV) 60-megavolt ampere air-insulated Capistrano Substation as a 230/138/12-kV 700-megavolt ampere gas-insulated substation that would be named San Juan Capistrano Substation;
- Replacing a single-circuit 138-kV transmission line between the applicant's Talega and Capistrano substations with a new double-circuit 230-kV transmission line (approximately 7.8 miles long);
- Relocating several transmission line segments (approximately 1.8 miles total) adjacent to Talega and Capistrano substations to accommodate the proposed San Juan Capistrano Substation and new 230-kV line; and
- Relocating several 12-kV distribution lines segments (approximately 6 miles) into underground conduit and overhead on existing and new structures located between the Capistrano Substation and Prima Deshecha Landfill.

Construction of the proposed SOCRE project would take approximately 64 months. The proposed project would be constructed within the cities of San Juan Capistrano and San Clemente, unincorporated Orange County, and United States Marine Corps land in San Diego County.

Significant Adverse Environmental Impacts from the Proposed Project

The Recirculated Draft EIR has identified additional significant impacts on biological resources, cultural resources, and land use and planning from construction and operation of the proposed project that were not previously disclosed in the Draft EIR. The following impacts have been revised in the Recirculated Draft EIR:

Biological Resources: Construction and operation activities for the proposed project would be required within the boundaries of the Talega Conservation Easement (unrecorded) and the Prima Deshecha Conservation Easement (recorded). Both conservation easements were established under the Orange County Southern Subregion Habitat Conservation Plan (HCP). Additional coordination with the U.S. Fish and Wildlife Service and California Department of Fish and Wildlife is needed to determine the proposed project's potential to conflict with HCPs and Natural Community Conservation Plans in the area; therefore, impacts would be considered significant until the completion of SDG&E coordination requirements detailed in Section 6.2 of the SDG&E Natural Community Conservation Plan prove otherwise.

Cultural Resources: In April 2015, the State Historic Resources Commission recommended to the Keeper of the National Register of Historic Places (NRHP) that a former utility structure at the existing Capistrano Substation property be approved as eligible for inclusion in the NRHP. Criteria for eligibility of the California Register of Historic Places is the same as the criteria for eligibility for the NRHP. Therefore, the CPUC has found that demolition of the Capistrano Substation, as proposed by the applicant, would result in a significant adverse impact to a historical resource as defined in Section 15064.5 of the California Environmental Quality Act (CEQA) Guidelines.

Land Use and Planning: Section 9-3.305 of the San Juan Capistrano Municipal Code defines building setbacks, floor area standards, and height limitations for buildings by zoning type. The proposed San Juan Capistrano Substation includes the construction of 50-foot-tall buildings in the Commercial Manufacturing district, which significantly conflicts with the applicable building height limit of 35 feet under the San Juan Capistrano Municipal Code. Additionally, similar to significant impacts discussed for biological resources, the proposed project may also conflict with two conservation easements established under the Orange County Southern Subregion HCP.

No portion of the proposed project would be located on a hazardous materials site identified under Government Code Section 65962.5.

Recirculated Draft EIR Information/ Public Review Period

Consistent with the provisions of Section 15088.5 of the CEQA Guidelines, portions of the Draft EIR have been revised with new information, and only revised chapters and sections are being recirculated. This Recirculated Draft EIR comprises the following chapters:

- **Chapter 1**, **Introduction**, provides a brief overview of the proposed project, CEQA compliance activities conducted to date, and the purpose of this Recirculated Draft EIR and outlines the contents and organization of the Recirculated Draft EIR.
- **Chapter 2**, **Revisions to the Draft EIR,** assists the reader in identifying specific significant revisions to the Draft EIR as a result of comments received during the public review process for the Draft EIR. Revisions were made to the following chapters and sections of the Draft EIR:
    - Chapter 3, "Description of Alternatives";
    - Section 4.4, "Biological Resources";
    - Section 4.5, "Cultural Resources";
    - Section 4.10, "Land Use and Planning"; and
    - Chapter 5 "Comparison of Alternatives"

- **Chapter 3**, **Report Preparation**, provides a list of the individuals involved in the preparation of the Recirculated Draft EIR.
- **Chapter 4, References,** provides a list of new references used in the Recirculated Draft EIR.

The Recirculated Draft EIR is available on the internet at: *http://tinyurl.com/clsee4g*. Hardcopies of the Recirculated Draft EIR are available at the following repositories:

- **San Juan Capistrano Regional Library:** 31495 El Camino Real San Juan Capistrano, CA 92675 (949) 493-1752
- **San Clemente Library:** 242 Avenida Del Mar San Clemente, CA 92672 (949) 492-3493

The CPUC will receive comments on the Recirculated Draft EIR during a 45-day period starting August 10, 2015, and ending September 24, 2015. The CPUC requests that reviewers focus their comments specifically on the new content included in the Recirculated Draft EIR, consistent with the provisions of Section 15088.5 of the CEQA Guidelines. **Comment letters submitted on the previously circulated Draft EIR will be addressed in the Final EIR and do not need to be resubmitted.** Comments received during the public review period of the Recirculated Draft EIR on content not addressed in the Recirculated Draft EIR will not be addressed in the Final EIR. Written comments on the Recirculated Draft EIR may be submitted using any of the following methods:

Email: SOCRE.CEQA@ene.com
Fax: 415-398-5326

Mail: California Public Utilities Commission
RE: SOCRE Project
c/o Ecology and Environment, Inc.
505 Sansome Street, Suite #300
San Francisco, CA 94111

No public meetings will be hosted by the CPUC during this public review period.

Exhibit B-3

Recirculated Draft EIR Newspaper Affidavits of Publication

- **The Orange County Register**
- **The San Diego Union Tribune**
- **La Opinión**

AFFIDAVIT OF PUBLICATION

STATE OF CALIFORNIA,)
) ss.
County of Orange)

I am a citizen of the United States and a resident of the County aforesaid; I am over the age of eighteen years, and not a party to or interested in the above entitled matter. I am the principal clerk of **The Orange County Register**, a newspaper of general circulation, published in the city of Santa Ana, County of Orange, and which newspaper has been adjudged to be a newspaper of general circulation by the Superior Court of the County of Orange, State of California, under the date of November 19, 1905, Case No. A-21046, that the notice, of which the annexed is a true printed copy, has been published in each regular and entire issue of said newspaper and not in any supplement thereof on the following dates, to wit:

August 10, 2015

"I certify (or declare) under the penalty of perjury under the laws of the State of California that the foregoing is true and correct":

Executed at Santa Ana, Orange County, California, on

Date: August 10, 2015

Signature

The Orange County Register
625 N. Grand Ave.
Santa Ana, CA 92701
(714) 796-2209

PROOF OF PUBLICATION

Notice of Availability of a Recirculated Draft Environmental Impact Report for the South Orange County Reliability Enhancement Project (SOCRE)

Si usted necesita más información o una copia de este documento en español, por favor, llame al (855) 520-6799 o visite la siguiente página Web. http://tinyurl.com/clsee4g

The California Public Utilities Commission (CPUC), as the Lead Agency under the California Environmental Quality Act (CEQA), prepared a Draft Environmental Impact Report (EIR) for the SOCRE project and circulated it for a 45-day public comment period, beginning February 23, 2015, and ending April 10, 2015. A Recirculated Draft EIR was released on August 10, 2015 because significant new information and analyses have been added or changed in portions of the Draft EIR since it was circulated for public comment in February 2015.

The Recirculated Draft EIR contains a new alternative, called the Trabuco Alternative, that was suggested by the public during review of the Draft EIR. The Recirculated Draft EIR also identifies additional significant impacts on biological resources, cultural resources, and land use and planning from construction and operation of the proposed project that were not previously disclosed in the Draft EIR. Consistent with the provisions of Section 15088.5 of the CEQA Guidelines, portions of the Draft EIR have been revised with new information, and revised chapters and sections are being recirculated.

The Recirculated Draft EIR is available on the internet at: http://tinyurl.com/clsee4g. Hardcopies of the Recirculated Draft EIR are available at the following repositories:

" San Juan Capistrano Regional Library: 31495 El Camino Real San Juan Capistrano, CA 92675 (949) 493-1752
" San Clemente Library: 242 Avenida Del Mar San Clemente, CA 92672 (949) 492-3493

The CPUC will receive comments on the Recirculated Draft EIR during a 45-day period starting August 10, 2015, and ending September 24, 2015. The CPUC requests that reviewers focus their comments specifically on the new content included in the Recirculated Draft EIR, consistent with the provisions of Section 15088.5 of the CEQA Guidelines. **Comment letters submitted on the previously circulated Draft EIR will be addressed in the Final EIR and do not need to be resubmitted.** Comments received during the public review period of the Recirculated Draft EIR on content not addressed in the Recirculated Draft EIR will not be addressed in the Final EIR. Written comments on the Recirculated Draft EIR may be submitted using any of the following methods:

Email: SOCRE.CEQA@ene.com
Fax: 415-398-5326
Mail: California Public Utilities Commission
RE: SOCRE Project
c/o Ecology and Environment, Inc.
505 Sansome Street, Suite #300
San Francisco, CA 94111

No public meetings will be held by the CPUC during this public review period.

Published: Orange County Register August 10, 2015. R-1272 10078965

The San Diego
Union-Tribune
P. O. Box 120191, San Diego, CA 92112-0191

AFFIDAVIT OF PUBLICATION

ECOLOGY AND ENVIRONMENT, INC.
505 SANSOME STREET, SUITE 300
SAN FRANCISCO CA 94111

STATE OF CALIFORNIA} ss.
County of San Diego}

The Undersigned, declares under penalty of perjury under the laws of the State of California: That she is a resident of the County of San Diego. That she is and at all times herein mentioned was a citizen of the United States, over the age of twenty-one years, and that he is not a party to, nor interested in the above entitled matter; that she is Chief Clerk for the publisher of

THE SAN DIEGO UNION TRIBUNE

a newspaper of general circulation, printed and published daily in the City of San Diego, County of San Diego, and which newspaper is published for the dissemination of local news and intelligence of a general character, and which newspaper at all the times herein mentioned had and still has a bona fide subscription list of paying subscribers, and which newspaper has been established, printed and published at regular intervals in the said City of San Diego, County of San Diego, for a period exceeding one year next preceding the date of publication of the notice hereinafter referred to, and which newspaper is not devoted to nor published for the interests, entertainment or instruction of a particular class, profession, trade, calling, race, or denomination, or any number of same; that the notice of which the annexed is a printed copy, has been published in said newspaper in accordance with the instructions of the person(s) requesting publication, and not in any supplement thereof on the following dates, to wit:

August 10, 2015

Chief Clerk for the Publisher
Cris Gaza

I certify under penalty of perjury under the Laws of the State of California that the foregoing is true and correct, and that this affidavit is executed on August 12, 2015 in the City of San Diego, California.

Affidavit of Publication of

Legal Advertisement
Ad # 10935393

ORDERED BY: JESSICA MIDBUST

Notice of Availability of a Recirculated Draft Environmental Impact Report for the South Orange County Reliability Enhancement Project (SOCRE)

Si usted necesita más información o una copia de este documento en español, por favor, llame al (855) 520-6799 o visite la siguiente página Web. http://tinyurl.com/clsee4g

The California Public Utilities Commission (CPUC), as the Lead Agency under the California Environmental Quality Act (CEQA), prepared a Draft Environmental Impact Report (EIR) for the SOCRE project and circulated it for a 45-day public comment period, beginning February 23, 2015, and ending April 10, 2015. A Recirculated Draft EIR was released on August 10, 2015 because significant new information and analyses have been added or changed in portions of the Draft EIR since it was circulated for public comment in February 2015.

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Email: SOCRE.CEQA@ene.com
Fax: 415-398-5326
Mail: California Public Utilities Commission
RE: SOCRE Project
c/o Ecology and Environment, Inc.
505 Sansome Street, Suite #300
San Francisco, CA 94111

No public meetings will be held by the CPUC during this public review period.

PROOF OF PUBLICATION
(2015.5C.C.P.)

La Opinión
www.laopinion.com impreMedia
915 Wilshire Blvd, Los Angeles, CA 90017
Tel: (213) 896-2260 • Fax: (213) 896-2238

STATE OF CALIFORNIA

I am a citizen of the United States and a resident of the county aforesaid; I am over the age of eighteen years, and not a party to or interested in the above-entitle matter. I am the principal clerk of the printer of La Opinión a newspaper of general circulation, printed and published daily in the city of Los Angeles, County of Los Angeles, and which newspaper has been adjudged a newspaper of general circulation by the Superior Court of the County of Los Angeles, State of California, under the date of July 28, 1969, Case Number: 950176; that the notice, of which the annexed is a printed copy, has been published in each regular and not in any supplement thereof on the following dates, to-wit:

August 10

all in the year 20 15

I certified (or declare) under penalty of perjury that the foregoing is true and correct.

Dated at Los Angeles, California, this

10 day of August, 20 15

Rosa Berumen
Signature

This space is for the County Clerk's filing Stamp

Proof of publication:

Notificación de Disponibilidad de la Reedición del Informe Preliminar de Impacto Ambiental del Proyecto de Mejora de Confiabilidad del Servicio Eléctrico al Sur del Condado de Orange (SOCRE)

Si usted necesita más información o una copia de este documento en español, por favor, llame al (855) 520-6799 o visite la siguiente página Web: http://tinyurl.com/clsee4g

La Comisión de Servicios Públicos de California (CPUC), como Agencia Líder del proceso de evaluación de impacto ambiental bajo la Ley de Calidad Ambiental de California (CEQA), preparó un Informe Preliminar de Impacto Ambiental (Draft EIR) para el Proyecto SOCRE y lo publicó para revisión y consulta pública durante un período de 45 días que comenzó el 23 de febrero de 2015 y finalizó el 10 de abril de 2015. Debido a que se ha incorporado una cantidad significativa de nueva información y análisis que han añadido o cambiado secciones del Draft EIR previamente publicado en febrero de 2015, el día 10 de agosto de 2015 la CPUC publicó una Reedición del Draft EIR.

La Reedición del Draft EIR contiene una nueva alternativa de proyecto, llamada la Alternativa Trabuco, la cual fue sugerida por el público durante la revisión de la versión previa del Draft EIR. La Reedición del Draft EIR también identifica impactos significativos adicionales asociados a la construcción y operación del proyecto propuesto sobre recursos biológicos, culturales, y de uso y planificación del territorio. De conformidad con las cláusulas de la Sección 15088.5 de los Lineamientos de la CEQA, los capítulos y secciones del Draft EIR que hayan sido corregidos con nueva información deben reeditarse y publicarse nuevamente para revisión y consulta.

La Reedición del Draft EIR está disponible en el siguiente enlace de Internet: http://tinyurl.com/clsee4g. Igualmente, se dispone de copias impresas de este documento en los siguientes repositorios: _

- **Biblioteca Regional de San Juan Capistrano:** 31495 El Camino Real San Juan Capistrano, CA 92675 (949) 493-1752
- **Biblioteca de San Clemente:** 242 Avenida Del Mar San Clemente, CA 92672 (949) 492-3493

La CPUC recibirá comentarios a la Reedición del Draft EIR durante un período de 45 días, comenzando el 10 de agosto de 2015. La CPUC solicita a los revisores que enfoquen sus comentarios específicamente en el nuevo contenido que se incluye en la Reedición del Draft EIR, tal como lo establecen las cláusulas de la Sección 1088.5 de los Lineamientos de la CEQA. **Los comentarios emitidos sobre la versión anterior del Draft EIR serán atendidos en el Informe Final y no necesitan ser reenviados.** Los comentarios recibidos durante el período de revisión pública de la Reedición del Draft EIR que no correspondan a nuevos contenidos revisados o añadidos en la Reedición del Draft EIR no serán incorporados en el Informe Final. Los comentarios escritos sobre la Reedición del Draft EIR pueden presentarse a través de cualquiera de los siguientes métodos:

Email: SOCRE.CEQA@ene.com
Correo Electrónico: SOCRE.CEQA@ene.com
Fax: 415-398-5326Mail:

Correo Postal:
California Public Utilities Commission
RE: SOCRE Project
c/o Ecology and Environment, Inc.
505 Sansome Street, Suite #300
San Francisco, CA 94111

La CPUC no convocará reuniones públicas durante este período de revisión.

Appendix Q

Revised Traffic Memorandum and Applicant Draft Traffic Control Plan

Q-1: Revised Traffic Memorandum

Q-2: Applicant Draft Traffic Control Plan

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MEMORANDUM

To:	Amy DiCarlantonio Bonny O'Connor Ecology and Environment, Inc.	Date:	February 16, 2016
From:	John Boarman, PE Charlene Sadiarin LLG, Engineers	LLG Ref:	3-12-2147
Subject:	South Orange County Reliability Enhancement Project		

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INTRODUCTION

San Diego Gas & Electric Company (the applicant or SDG&E) proposes to rebuild its 138/12-kilovolt (kV) Capistrano Substation in the City of San Juan Capistrano as a 230/138/12-kV substation called "San Juan Capistrano Substation." The applicant also proposes to construct a double-circuit 230-kV transmission line to connect the proposed San Juan Capistrano Substation to the Talega Substation in San Diego County, east of the City of San Clemente. The primary components of the proposed project would include:

1. Rebuilding and upgrading the 138/12-kV 60-megavolt ampere (MVA) air-insulated Capistrano Substation as a 230/138/12-kV 700-MVA gas-insulated (GIS) substation that would be named San Juan Capistrano Substation;
2. Replacing a single-circuit 138-kV transmission line between the applicant's Talega and Capistrano substations with a new double-circuit 230-kV transmission line (approximately 7.8-miles long);
3. Relocating several transmission line segments (approximately 1.8 miles, total) adjacent to Talega and Capistrano substations to accommodate the proposed Capistrano Substation expansion and new 230-kV line; and
4. Relocating a 12-kV distribution line and several distribution line segments into underground conduit and overhead on new structures to provide power from the proposed San Juan Capistrano Substation to the San Juan Hills High School and Rancho San Juan residential development area and Prima Deschecha Landfill (approximately 6 miles).

EXISTING CONDITIONS

The proposed project would be constructed within the cities of San Juan Capistrano and San Clemente, unincorporated Orange County, and United States Marine Corps land in San Diego County. The areas within these four jurisdictions where components of the proposed project would be constructed make up the proposed project area.

The study area for this project encompasses the roadway facilities that would be potentially affected by the construction of the project. The major regional vehicular access to the proposed project area is provided via Interstate 5 and State Route 74. Other roadways affected by the construction of the project and included in the study area include: Junipero Serra Road, Camino Capistrano. Rancho Viejo Road, Calle Arroyo, San Juan Creek Road, La Pata Avenue, Avenida la Pata, Avenida Pico, and Calle Saluda.

The traffic conditions of roads within the vicinity of the Proposed Project differ, therefore LOS varies accordingly to congestion and volume at any given time. Roadway congestion ranges from LOS A (least congested) to LOS F (most congested) and measures roadway traffic flow efficiency. In general, both the *City of San Juan Capistrano General Plan* and the *City of San Clemente General Plan* specify that the intersection LOS A though D are acceptable, but LOS E and F are not adequate unless exempted. For example, the City of San Clemente has exempted both I-5 and Avenida Pico from this general citywide traffic circulation goal. LOS E and F represent situations where the roadway capacity has been equaled by the traffic volume (LOS=1.0). For roadway segments, the city of San Clemente has the goal of LOS C for smaller capacity roadways and LOS D for larger capacity roadways (such as Avenida Pico within the Proposed Project area).

Additionally, the *City of San Juan Capistrano General Plan* designates "Hot Spot" locations that experience unique congestion. The "Hot Spot" designations imply certain exceptions to the standard performance criteria and/or require a different traffic analysis. The City of San Juan Capistrano defines "Hot Spot" designations in three categories:

- School Hot Spot: Location where the normal operation of an arterial highway would be affected by the presence of a school. School Hot Spots require traffic impact studies to address specific traffic impacts at the affected locations.
- Operations Hot Spot: Sections of roadways where closely spaced intersections or side friction caused by numerous driveways degrades the performance of the roadway compared to its theoretical carrying capacity. The Operations Hot Spots are locations where the standard ICU procedure does not fully depict the actual traffic characteristics. As a result, areas designated as Operations Hot Spots require a special traffic operations analysis in addition to the ICU analysis. The maximum volume-to-capacity (V/C) ratio is 1.00 for Operations Hot Spots.

- Space Constrained Hot Spot: Intersections or sections of roadway that cannot be improved to their full standard to due to limited space (right-of-way, or other constraints). The City sets a maximum ICU of 1.00 for Spaced Constrained Hot Spots.

School Hot Spots and Operations Hot Spots are located in the proposed project area. School Hot Spots are located on San Juan Creek Road east of the La Novia Avenue intersection, La Novia Avenue between Ortega Highway (SR-74) and Calle Arroyo, Camino Capistrano north of the Ortega Highway (SR-74) intersection, and Rancho Viejo Road north of Village Road. An Operations Hot Spot is located along Ortega Highway (SR-74) at the intersection of I-5.

EXISTING AND NEAR-TERM CUMULATIVE (YEAR 2020) TRAFFIC VOLUMES

The most recent available existing average daily traffic (ADT) volumes for the study roadway segments were obtained from the following documents:

- South Orange County Reliability Enhancement Project Environmental Assessment Report (May 2012)
- The Ranch Plan EIR Traffic Report (May 2004)
- Orange County Transportation Authority 2013/14 Traffic Flow Map
- City of San Juan Capistrano Volumes Map (Public Works Department, 2012)
- City of San Clemente 2010 General Plan Update
- 2013 Traffic Volumes on California State Highways (Caltrans)

In order to reflect Year 2015 baseline conditions, an annual growth factor of 2% was applied to the existing ADT volumes. ***Table 1*** contains the Year 2015 baseline ADT volumes.

Long-term volumes for the project area roadways were obtained from area traffic studies. The near-term cumulative (Year 2020) ADT volumes were forecasted through interpolation between the long-term ADT volumes and the existing ADT volumes. ***Table 2*** contains the near-term cumulative (Year 2020) ADT volumes.

PROJECT TRIP GENERATION/DISTRIBUTION

The trip generation for the trucks and crewmembers during the construction phase of the project were based on the estimated construction workforce and schedule prepared by the applicant (see the table in ***Attachment A***). Based on the estimated construction schedule/analysis, the construction phase of the project is estimated to generate a peak of 41 cars/vans/pickup trips and 30 truck trips. These amounts represent where different phases of construction overlap with respect to location and

construction schedule. These roundtrips were multiplied by two to account for one-way incoming and one-way outgoing trips.

A Passenger Car Equivalent (PCE) factor was applied to the generated truck trips in the analysis. PCE is defined as the number of passenger cars that are displaced by a single heavy vehicle of a particular type under the prevailing conditions. Heavy vehicles have a greater traffic impact than passenger cars since: (1) they are larger than passenger cars, and therefore, occupy more roadway space; and (2) their performance characteristics are generally inferior to passenger cars, leading to the formation of downstream gaps in the traffic stream (especially on upgrades) which cannot always be effectively filled by normal passing maneuvers. A PCE of 1.0 was applied to cars/vans/pickups. A PCE of 3.0 was applied to trucks.

With the application of the PCE, the worst case construction trip generation is 262 ADT = 2 one-way trips x [(41 car/van/pickup trips x 1.0 PCE) + (30 truck trips x 3.0 PCE)]. It should be noted that this ADT is worst case and not all roadways would necessarily experience the full combined traffic. For the purposes of this study, to represent the worst-case scenario, the 262 ADT was distributed to all of the study roadways.

ROADWAY SEGMENT LOS ANALYSIS

Roadway segment LOS analysis was conducted for the study roadway segments to aid in the evaluation of potential traffic impacts to the local roadway system due to the construction operations associated with the South Orange County Reliability Enhancement Project. Conducting only daily roadway segment LOS analysis is considered sufficient due to the temporary nature of the construction operations. Therefore, peak hour intersection analysis is not considered necessary.

During the construction phase, partial closure of the following roadways are expected to occur:

- Vista Montana (Partial closure);
- Via Pamplona (Partial closure); and
- Calle San Diego (Partial closure).

For Vista Montana and Via Pamplona, no more than half of the roadway will be closed to traffic at a time. Lane closures on Vista Montana and Via Pamplona will be required for no longer than five days at each location. Since Calle San Diego is a two-lane roadway and full closure is not required, partial closure was assumed to be half the capacity of the roadway.

Table 1 shows the Year 2015 daily street segment operations throughout the study area. As seen in *Table 1*, with the addition of project traffic, there is no change in the daily study street segment operations LOS in the Year 2015 scenario.

Table 2 shows the near-term cumulative (Year 2020) daily street segment operations throughout the study area. As seen in *Table 2*, with the addition of project traffic, there is no change in the daily study street segment operations LOS in the near-term cumulative (Year 2020) scenario.

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Table 1
Year 2015 Street Segment Operations

Street Segment	Classification	Existing Capacity (LOS E)[a]	Year 2015			Year 2015 + Project			Δ[f]
			ADT [c]	V/C [d]	LOS [e]	ADT	V/C	LOS	
Junipero Serra Road	4 Lanes Undivided	25,000	14,700	0.588	A	14,962	0.598	A	262
Camino Capistrano									
North of SR 74	3 Lanes Undivided	18,750	15,200	0.811	D	15,462	0.825	D	262
South of SR 74	4 Lanes Undivided	25,000	18,900	0.756	C	19,162	0.766	C	262
Rancho Viejo Road	4 Lanes Undivided	25,000	14,100	0.564	A	14,362	0.574	A	262
Calle Arroyo	4 Lanes Undivided	25,000	7,800	0.312	A	8,062	0.322	A	262
San Juan Creek Road	2 Lanes Undivided	12,500	11,500	0.920	E	11,762	0.941	E	262
La Novia Avenue	2 Lanes Undivided	12,500	14,000	1.120	F	14,262	1.141	F	262
Via Pamplona	2 Lanes Undivided	12,500[g]	700	0.056	A	962	0.154	A	262
Vista Montana	4 Lanes Divided	37,500[g]	6,700	0.179	A	6,962	0.557	A	262
Calle San Diego	2 Lanes Undivided	12,500[g]	800	0.064	A	1,062	0.170	A	262
La Pata Avenue	2 Lanes Undivided	12,500	5,300	0.424	A	5,562	0.445	A	262
Avenida la Pata									
North of Avenida Pico	6 Lanes Divided	56,300	6,600	0.117	A	6,862	0.122	A	262
South of Avenida Pico	4 Lanes Divided	37,500	9,900	0.264	A	10,162	0.271	A	262
Avenida Vista Hermosa	4 Lanes Divided	37,500	31,900	0.851	D	32,162	0.858	D	262
Calle Del Cerro	2 Lanes Divided	12,500	15,400	1.232	F	15,662	1.253	F	262
Avenida Vista Montana	2 Lanes Undivided	12,200	6,600	0.528	A	6,862	0.549	A	262
Avenida Pico									
West of Avenida La Pata	6 Lanes Divided	56,300	51,700	0.918	E	51,962	0.923	E	262
East of Avenida La Pata	6 Lanes Divided	56,300	15,400	0.274	A	15,662	0.278	A	262
Calle Saluda	2 Lanes Undivided	12,500	4,300	0.344	A	4,562	0.365	A	262
State Route 74									
West of La Novia Avenue	4 Lanes Undivided	25,000	46,700	1.868	F	46,962	1.878	F	262
East of La Novia Avenue	4 Lanes Undivided	25,000	46,700	1.868	F	46,962	1.878	F	262
Interstate 5									
North of SR 74	8 Main Lanes + 2 HOV Lanes	180,000 [b]	269,200	1.496	F	269,462	1.497	F	262
South of SR 74	8 Main Lanes + 2 HOV Lanes	180,000 [b]	297,700	1.654	F	297,962	1.655	F	262

Footnotes:

a. Capacities based on Orange County Highway Design Manual Roadway Classification Table.
b. Capacities based on City of San Diego Roadway Classification Table.
c. Average Daily Traffic.
d. Volume-to-Capacity ratio.
e. Level of Service.
f. Δ denotes an increase in the traffic volume between the Existing and Existing+Project scenarios.
g. During construction, partial closure of this roadway is required, which would lower the roadway capacity. As confirmed by SDG&E, the capacity of the roadway would be reduced by no more than half during construction. For the purposes of this analysis, the capacity was reduced by half.

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Table 2
Near-Term Cumulative (Year 2020) Street Segment Operations

Street Segment	Classification	Capacity (LOS E)[a]	Near-Term Cumulative (Year 2020) without Project			Near-Term Cumulative (Year 2020) with Project		
			ADT [c]	V/C [d]	LOS [e]	ADT	V/C	LOS
Junipero Serra Road	4 Lanes Undivided	25,000	16,520	0.661	B	16,782	0.671	B
Camino Capistrano								
North of SR 74	3 Lanes Undivided	18,750	17,020	0.908	E	17,282	0.922	E
South of SR 74	4 Lanes Undivided	25,000	20,720	0.829	D	20,982	0.839	D
Rancho Viejo Road	4 Lanes Undivided	25,000	14,790	0.592	A	15,052	0.602	B
Calle Arroyo	4 Lanes Undivided	25,000	8,570	0.343	A	8,832	0.353	A
San Juan Creek Road	2 Lanes Undivided	12,500	11,960	0.957	E	12,222	0.978	E
La Novia Avenue	2 Lanes Undivided	12,500	15,370	1.230	F	15,632	1.251	F
Via Pamplona	2 Lanes Undivided	12,500[g]	770	0.062	A	1,032	0.165	A
Vista Montana	4 Lanes Divided	37,500[g]	7,360	0.196	A	7,622	0.610	B
Calle San Diego	2 Lanes Undivided	12,500[g]	880	0.070	A	1,142	0.183	A
La Pata Avenue	2 Lanes Undivided	12,500	5,760	0.461	A	6,022	0.482	A
Avenida la Pata								
North of Avenida Pico	6 Lanes Divided	56,300	14,560	0.259	A	14,822	0.263	A
South of Avenida Pico	4 Lanes Divided	37,500	10,810	0.288	A	11,072	0.295	A
Avenida Vista Hermosa	4 Lanes Divided	37,500	36,900	0.984	E	37,162	0.991	E
Calle Del Cerro	2 Lanes Divided	12,500	16,920	1.354	F	17,182	1.375	F
Avenida Vista Montana	2 Lanes Undivided	12,200	7,250	0.580	A	7,512	0.601	B
Avenida Pico								
West of Avenida La Pata	6 Lanes Divided	56,300	56,480	1.003	F	56,742	1.008	F
East of Avenida La Pata	6 Lanes Divided	56,300	20,180	0.358	A	20,442	0.363	A
Calle Saluda	2 Lanes Undivided	12,500	4,730	0.378	A	4,992	0.399	A
State Route 74								
West of La Novia Avenue	4 Lanes Undivided	25,000	49,890	1.996	F	50,152	2.006	F
East of La Novia Avenue	4 Lanes Undivided	25,000	51,020	2.041	F	51,282	2.051	F
Interstate 5								
North of SR 74	8 Main Lanes + 2 HOV Lanes	180,000 [b]	293,520	1.631	F	293,782	1.632	F
South of SR 74	8 Main Lanes + 2 HOV Lanes	180,000 [b]	321,340	1.785	F	321,602	1.787	F

Footnotes:

a. Capacities based on Orange County Highway Design Manual Roadway Classification Table.
b. Capacities based on City of San Diego Roadway Classification Table.
c. Average Daily Traffic.
d. Volume-to-Capacity ratio.
e. Level of Service.
f. Δ denotes an increase in the traffic volume between the Cumulative (Year 2020) with and without project scenarios.
g. During construction, partial or full closure of this roadway is required, which would lower the roadway capacity. As confirmed by SDG&E, the capacity of the roadway would be reduced by no more than half during construction. For the purposes of this analysis, the capacity was reduced by half.

APPLICANT PROPOSED MEASURES

The applicant has committed to the following applicant proposed measures (APMs) as part of the design of the proposed project:

- **APM PS-3: Roadway Repair.**
  SDG&E Contract Administrators oversee all aspects of construction and would ensure that contractors repair any damage caused by construction activities. Contract Administrators would also work with the customer and/or local agency to ensure repairs are sufficient and consistent with pre-construction conditions. Contractors working for SDG&E typically photograph and/or video document pre-construction conditions. At the completion of the construction activities, this documentation is used to ensure that any damage that is caused by construction work is repaired.

- **APM TR-1: Avoid Traffic Near Schools.**
  Construction generated traffic associated with the San Juan Capistrano Substation and construction of the 138kV getaways (new underground cable packages and new Pole Nos. 1a though 7a) would avoid the start and ending time for the Saddleback Valley Christian School and Junipero Serra Catholic High School. Workers would arrive at construction sites by 7:30 AM and would not leave prior to 3:30 PM.

  Saddleback Valley Christian School and Junipero Serra Catholic High School are designated as School Hot Spots.

- **APM TR-2: Avoid SR-74 Traffic.**
  Construction generated traffic associated with the San Juan Capistrano Substation and construction of the 138kV getaways (new underground cable packages and new Pole Nos. 1a though 7a) would avoid the SR-74 off-ramp from I-5. Avoidance of the SR-74 and I-5 interchange would ensure that construction generated traffic would not exacerbate existing conditions on the stretch of road between the intersections of SR-74 and Rancho Viejo Road and SR-74 and Del Obispo.

  The SR-74 / I-5 interchange is designated as an Operations Hot Spot.

- **APM TR-3: Emergency Access.**
  SDG&E would coordinate with local emergency response agencies during all construction within existing roadways. Coordination with local response agencies (such as Orange County Sheriff's Department and Orange County

Fire Authority) would ensure that impacts to emergency access are less than significant.

- **APM TR-4: Off-Peak Deliveries.**
  Deliveries would be scheduled during off-peak traffic periods to reduce trips during off-peak traffic periods to reduce trips during the most congested periods of the day.

- **APM TR-5: Material Removal, City Streets.**
  For any underground work along city streets, materials would be removed from work areas on a daily basis to minimize traffic impacts.

- **APM TR-6: Helicopter Use.**
  When helicopters are in use for construction activities, designated fly yards would be kept clear of all construction activity. If helicopters are used during construction of the proposed project, existing helicopter landing areas would be used whenever feasible. Helicopter landing areas along the existing ROW would be located away from residences and other land uses (generally at least one mile from sensitive noise receptors).

- **APM TR-7: Traffic Control Plans.**
  Contractors working for SDG&E would develop specific traffic control plans immediately prior to the start of construction that adhere to the Standing Traffic Control Procedure from the authority having jurisdiction (federal, state, county, city, and municipality) of the roadway being impacted. The traffic control plans would be created for the various construction phases of the San Juan Capistrano Substation, underground transmission and underground distribution segments leaving the San Juan Capistrano Substation, and overhead transmission.

  The approved traffic control plans would describe the lane closures and other methods for reducing adverse construction-related traffic impacts and require SDG&E to coordinate in advance with emergency service providers to avoid restricting movements of emergency vehicles, to ensure that emergency vehicle access is maintained and that impact to traffic flow are minimized.

  All traffic control plans would be developed, reviewed and approved by the authority having jurisdiction of the specific roadway being impacted. The traffic control plans would be communicated to the public at least 48 hours in

advance to the traffic control measures being installed in the roadway or as required by the traffic control permit.

VISTA MONTANA PEAK HOUR INTERSECTION ANALYSIS

Although the daily street segment operations along Vista Montana are at an acceptable LOS even with the addition of project traffic, there were concerns about the traffic operations during the school peak hours since the student and faculty parking lots are accessible only via Vista Montana. A peak-hour intersection analysis was conducted for the four intersections along Vista Montana:

1. Vista Montana / Via Pamplona
2. Vista Montana / San Juan Hills High School Driveway
3. Vista Montana / Via Granada
4. Vista Montana / La Pata Avenue

Peak hour intersection turning movement traffic counts were conducted in May 2015 when school was in session. The peak hour counts were conducted between the hours of 6:00-8:00 AM and 2:00-4:00 PM. ***Attachment B*** contains the intersection manual count sheets.

An overall 10% growth was observed between the existing and near-term cumulative (Year 2020) study segment volumes. This growth factor was applied to the existing intersection volumes to forecast near-term cumulative (Year 2020) intersection volumes. As discussed earlier, the project is estimated to generate 262 daily trips (2 x 131 one-way trips). For the purposes of this study, to represent the worst-case scenario, 131 incoming trips were distributed to Vista Montana during the school AM peak hour and 131 outgoing trips were distributed to Vista Montana during the school PM peak hour.

SDG&E provided draft detailed traffic control plans for the seven phases of construction along Vista Montana. For the analysis of the near-term cumulative (Year 2020) with project scenario, the lane geometry for Phase 2 was assumed since it represented the worst-case scenario with the most lane closures and movement restrictions at the intersections along Vista Montana. The lane closures and restrictions for each intersection during Phase 2 are described below:

1. **Vista Montana / Via Pamplona:**
    - Northbound left turns are prohibited.
    - Westbound movement is restricted to a single shared thru/right-turn lane.

2. **Vista Montana / San Juan Hills High School Driveway:**
    - Southbound left turns are prohibited.
    - Eastbound movement is restricted to a single thru lane. Eastbound left turns are prohibited.
    - Westbound movement is restricted to a single shared thru/right-turn lane.
3. **Vista Montana / Via Granada:**
    - Eastbound movement is restricted to a single shared thru/right-turn lane.
    - Westbound movement is restricted to one dedicated thru lane and one dedicated left-turn lane.
4. **Vista Montana / La Pata Avenue:**
    - No lane closures or restricted movements.

Table 3 shows the near-term cumulative (Year 2020) intersection operations along Vista Montana. As seen in *Table 3*, with the addition of project traffic, the following intersections are calculated to operate at an unacceptable LOS:

- Vista Montana / Via Granada
- Vista Montana / La Pata Avenue

Additionally, at the Vista Montana / San Juan Hills High School Driveway intersection, a significant amount of traffic intending to make a southbound left is forced to travel out of direction due to the project prohibiting the southbound left-turn movement.

Attachment C contains the peak hour intersection analyses worksheets.

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TABLE 3
NEAR-TERM CUMULATIVE (YEAR 2020) INTERSECTION OPERATIONS

Intersection	Control Type	Peak Hour	Existing		Near-Term Cumulative (Year 2020) without Project		Near-Term Cumulative (Year 2020) with Project	
			Delay[a]	LOS[b]	Delay	LOS	Delay	LOS
1. Vista Montana / Via Pamplona	OWSC[c]	AM	19.6	C	24.1	C	20.8	C
		PM	17.6	C	20.4	C	23.7	C
2. Vista Montana / San Juan Hills High School Driveway	OWSC[c]	**AM**	**67.4**	**F**	**91.8**	**F**	**43.5 [d]**	**E [d]**
		PM	**>100**	**F**	**>100**	**F**	**26.8 [d]**	**D [d]**
3. Vista Montana / Via Granada	OWSC[c]	**AM**	**11.8**	**B**	**12.3**	**B**	**71.6**	**F**
		PM	**15.3**	**C**	**17.9**	**C**	**52.9**	**F**
4. Vista Montana / La Pata Avenue	Signal	**AM**	**>100**	**F**	**>100**	**F**	**>100**	**F**
		PM	**19.2**	**B**	**21.7**	**C**	**21.7**	**C**

Footnotes:
a. Average delay expressed in seconds per vehicle.
b. Level of Service.
c. OWSC – Two-Way Stop Controlled intersection. Minor street left turn delay is reported.
d. The prohibition of left turns at this intersection during construction causes a significant amount of out-of-direction travel at this intersection, which is not reflected in the delay and LOS.

General Notes:
1. Bold and shaded represents a potential significant impact

SIGNALIZED		UNSIGNALIZED	
DELAY/LOS THRESHOLDS		DELAY/LOS THRESHOLDS	
Delay	LOS	Delay	LOS
0.0 ≤ 10.0	A	0.0 ≤ 10.0	A
10.1 to 20.0	B	10.1 to 15.0	B
20.1 to 35.0	C	15.1 to 25.0	C
35.1 to 55.0	D	25.1 to 35.0	D
55.1 to 80.0	E	35.1 to 50.0	E
≥ 80.1	F	≥ 50.1	F

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CONCLUSION

As seen in *Table 1* and *Table 2*, there is no degradation in the study roadway segment operations LOS to an unacceptable LOS with the addition of project traffic.

For Via Pamplona and Calle San Diego, partial closures would result in only one lane open for traffic. Per CEQA, since there is no degradation in the study roadway segment operations LOS to an unacceptable LOS with the addition of project traffic and the reduction in roadway capacity, no significant impacts occur at Via Pamplona and Calle San Diego. In addition, the short duration of the lane closures (about one week) is further evidence that the impact would not rise to a significant level. However, it should be noted that the partial closures would require flagging operations, which could result in long traffic delays throughout the duration of the lane closures.

Based on the peak hour intersection analysis conducted along Vista Montana near San Juan Hills High School, significant impacts were determined to occur at the following intersections:

- Vista Montana / San Juan Hills High School Driveway
- Vista Montana / Via Granada
- Vista Montana / La Pata Avenue

To mitigate these significant impacts along Vista Montana to below a level of significance, lane closures should be scheduled on days when San Juan Hills High School is not in session. In addition, construction-generated traffic associated with the project should avoid the start and ending time for San Juan Hills High School. Workers should arrive at construction sites by 7:30 AM and should not leave prior to 3:30 PM.

cc: File

ATTACHMENT A

CONSTRUCTION TRIP GENERATION TABLE

Proposed Project Component	Approximate Duration of Construction Activities (months) and Start Date	Affected Roadways	Construction Generated ADT[1]			Construction Generated ADT[1] with PCE Factor Applied[2]		
			Total	Cars/ Vans/ Pickups	Trucks	Total[3]	Cars/ Vans/ Pickups (PCE = 1.0)	Trucks (PCE = 3.0)
230kV Construction (East of I-5) Year 2017: 1. 230kV Structures and Stringing 2. 230kV Segment 2 (23007)	2017	I-5, Junipero Serra Road, Rancho Viejo Road, SR-74, Via Priorato, Sundance Drive, San Juan Creek Road, Calle Arroyo, Juliana Farms Road, La Pata Avenue, and Vista Montana	50	28	22	94	28	66
Segment 4/Talega: 1. Talega Substation construction 2. 69/138kV Segment 4 construction	2019	I-5 and Avenida Pico	45	26	19	83	26	57

Notes:

[1]Average Daily Trips are calculated by taking the total number of vehicle trips (for all vehicles combined) required and dividing by the approximate number of construction days. ADT values given include trips associated with the hauling of waste and materials, such as haul trucks and cement trucks.

[2]A Passenger Car Equivalent (PCE) factor of 1.0 was applied to cars, pick-ups (smaller trucks), and vans; a PCE of 3.0 was applied to large vehicles (large trucks and other vehicles) to account for the effects of their larger sizes and slower movements on traffic operations. Large vehicles could include waste haul trucks, water trucks, line trucks, boom trucks, concrete trucks, and large equipment deliveries.

[3]These ADT values represent where different phases of construction (such as San Juan Capistrano Substation construction and 138kV getaways construction) overlap with respect to location (i.e. affected roadways) and construction schedule. Note that the potential cumulative ADT shown is worst case and all common roadways listed would not necessarily experience full combined traffic.

Crew Assumptions:

Trench crew (transmission or distribution) Assumes 5 workers per crew, 1 specialty monitor or inspector per crew, 2 haul trucks per crew, one water truck per crew, and 2 traffic control trips where applicable.

Transmission Pads/Grading Crew assumes 5 workers per crew, 1 specialty monitor or inspector per crew, 1 water truck per crew, 2 haul trucks per crew, and an average of approximately 1 large equipment delivery (e.g. backhoe) per day.

Transmission foundation crew assumes 5 workers per crew, 1 specialty monitor or inspector per crew, 2 concrete trucks, 2 waste/haul trucks, and approximately 1 larger equipment or material delivery.

ATTACHMENT B

INTERSECTION MANUAL COUNT SHEETS

Turn Count Summary

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136

Location: Vista Montana @ Via Pamplona

Date of Count: *Tuesday, May 19, 2015*

Analysts: *LV/CD*

Weather: *Sunny*

AVC Proj No: *15-0355*

LINSCOTT LAW & GREENSPAN engineers

Vehicular Count

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136

AVC

Location: Vista Montana @ Via Pamplona

AM Period (6:00 AM - 8:00 AM)													
	Southbound			Westbound			Northbound			Eastbound			
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	TOTAL
6:00 AM	0	0	0	0	2	0	5	0	0	0	2	0	9
6:15 AM	0	0	0	0	34	0	4	0	0	0	18	0	56
6:30 AM	0	0	0	0	257	3	4	0	0	0	82	0	346
6:45 AM	0	0	0	0	271	3	6	0	0	0	171	0	451
7:00 AM	0	0	0	0	97	2	12	0	0	0	75	0	186
7:15 AM	0	0	0	0	205	3	12	0	1	0	143	0	364
7:30 AM	0	0	0	0	354	4	18	0	1	0	200	0	577
7:45 AM	0	0	0	0	216	5	13	0	3	3	177	0	417
Total	0	0	0	0	1,436	20	74	0	5	3	868	0	2,406

AM Intersection Peak Hour : **6:45 AM - 7:45 AM** Intersection PHF : **0.68**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
Volume	0	0	0	0	927	12	48	0	2	0	589	0	1,578
PHF	#####	#####	#####	#####	0.65	0.75	0.67	#####	0.50	#####	0.74	#####	0.68
Movement PHF	#DIV/0!			0.66			0.66			0.74			0.68

PM Period (2:00 PM - 4:00 PM)													
	Southbound			Westbound			Northbound			Eastbound			
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	TOTAL
2:00 PM	0	0	0	0	35	2	8	0	0	0	9	0	54
2:15 PM	0	0	0	0	55	1	1	0	0	0	15	0	72
2:30 PM	0	0	0	0	102	4	6	0	0	1	81	0	194
2:45 PM	0	0	0	0	109	14	9	0	1	1	250	0	384
3:00 PM	0	0	0	0	156	3	9	0	1	0	216	0	385
3:15 PM	0	0	0	0	81	2	5	0	0	0	95	0	183
3:30 PM	0	0	0	0	34	4	0	0	1	0	46	0	85
3:45 PM	0	0	0	0	27	10	5	0	2	1	22	0	67
Total	0	0	0	0	599	40	43	0	5	3	734	0	1,424

PM Intersection Peak Hour : **2:30 PM - 3:30 PM** Intersection PHF : **0.74**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
Volume	0	0	0	0	448	23	29	0	2	2	642	0	1146
PHF	#####	#####	#####	#####	0.718	0.411	0.806	#####	0.5	0.5	0.642	#####	0.74
Movement PHF	#DIV/0!			0.74			0.78			0.64			0.74

Turn Count Summary

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136

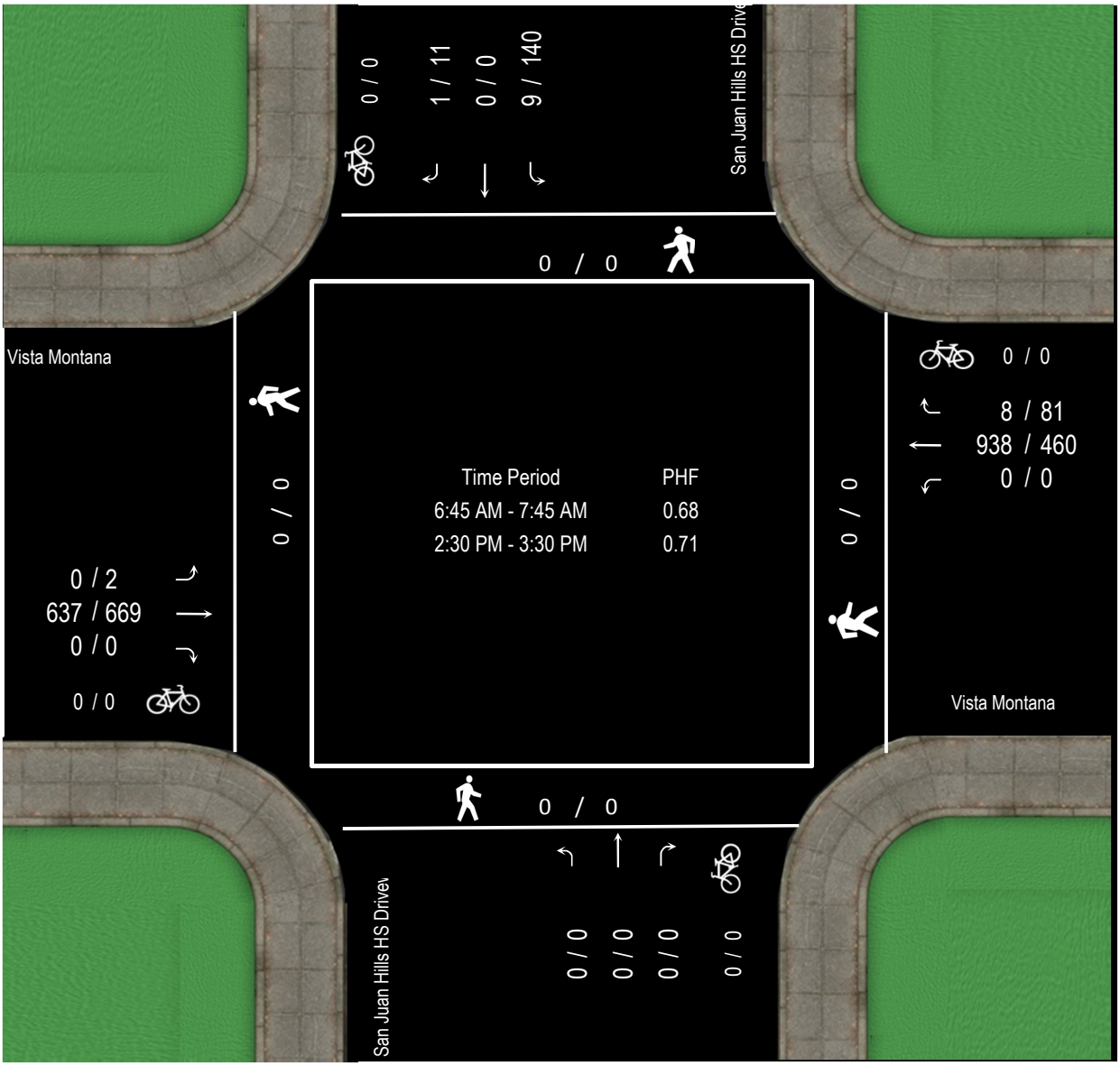
Location: Vista Montana @ San Juan Hills HS Driveway

Date of Count: *Tuesday, May 19, 2015*

Analysts: *LV/CD*

Weather: *Sunny*

AVC Proj No: *15-0355*



LINSCOTT LAW & GREENSPAN engineers

Vehicular Count

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136

AVC

Location: Vista Montana @ San Juan Hills HS Driveway

AM Period (6:00 AM - 8:00 AM)													
	Southbound			Westbound			Northbound			Eastbound			
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	TOTAL
6:00 AM	0	0	1	0	2	0	0	0	0	0	7	0	10
6:15 AM	0	0	0	0	34	0	0	0	0	0	22	0	56
6:30 AM	0	0	0	1	260	0	0	0	0	0	86	0	347
6:45 AM	0	0	2	1	274	0	0	0	0	0	177	0	454
7:00 AM	0	0	1	2	99	0	0	0	0	0	87	0	189
7:15 AM	1	0	2	2	207	0	0	0	0	0	155	0	367
7:30 AM	0	0	4	3	358	0	0	0	0	0	218	0	583
7:45 AM	0	0	0	0	221	0	0	0	0	0	190	0	411
Total	1	0	10	9	1,455	0	0	0	0	0	942	0	2,417

AM Intersection Peak Hour : **6:45 AM - 7:45 AM** Intersection PHF : **0.68**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
Volume	1	0	9	8	938	0	0	0	0	0	637	0	1,593
PHF	0.25	#####	0.56	0.67	0.66	#####	#####	#####	#####	#####	0.73	#####	0.68
Movement PHF		0.63			0.66			#DIV/0!			0.73		0.68

PM Period (2:00 PM - 4:00 PM)													
	Southbound			Westbound			Northbound			Eastbound			
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	TOTAL
2:00 PM	0	0	5	1	37	0	0	0	0	0	17	0	60
2:15 PM	0	0	3	10	56	0	0	0	0	0	15	1	85
2:30 PM	1	0	19	39	105	0	0	0	0	0	85	2	251
2:45 PM	7	0	66	33	116	0	0	0	0	0	259	0	481
3:00 PM	2	0	36	3	157	0	0	0	0	0	225	0	423
3:15 PM	1	0	19	6	82	0	0	0	0	0	100	0	208
3:30 PM	0	0	13	4	38	0	0	0	0	0	46	0	101
3:45 PM	2	0	7	1	35	0	0	0	0	0	27	0	72
Total	13	0	168	97	626	0	0	0	0	0	774	3	1,681

PM Intersection Peak Hour : **2:30 PM - 3:30 PM** Intersection PHF : **0.71**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
Volume	11	0	140	81	460	0	0	0	0	0	669	2	1363
PHF	0.39	#####	0.53	0.519	0.732	#####	#####	#####	#####	#####	0.646	0.25	0.71
Movement PHF		0.52			0.85			#DIV/0!			0.65		0.71

Turn Count Summary

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136

Location: Vista Montana @ Via Granada

Date of Count: *Tuesday, May 19, 2015*

Analysts: *LV/CD*

Weather: *Sunny*

AVC Proj No: *15-0355*

LINSCOTT LAW & GREENSPAN engineers

Vehicular Count

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136

AVC

Location: Vista Montana @ Via Granada

AM Period (6:00 AM - 8:00 AM)													
	Southbound			Westbound			Northbound			Eastbound			
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	TOTAL
6:00 AM	0	0	0	0	2	3	0	0	0	0	8	0	13
6:15 AM	0	0	0	0	34	7	1	0	0	0	22	0	64
6:30 AM	0	0	0	0	261	8	0	0	0	0	86	0	355
6:45 AM	0	0	0	0	275	25	4	0	0	0	179	0	483
7:00 AM	0	0	0	0	101	9	1	0	0	0	88	0	199
7:15 AM	0	0	0	0	209	6	3	0	0	2	155	0	375
7:30 AM	0	0	0	0	361	2	3	0	0	1	221	0	588
7:45 AM	0	0	0	0	221	10	1	0	0	1	189	0	422
Total	0	0	0	0	1,464	70	13	0	0	4	948	0	2,499

AM Intersection Peak Hour : **6:45 AM - 7:45 AM** Intersection PHF : **0.70**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
Volume	0	0	0	0	946	42	11	0	0	3	643	0	1,645
PHF	#####	#####	#####	#####	0.66	0.42	0.69	#####	#####	0.38	0.73	#####	0.70
Movement PHF	#DIV/0!			0.68			0.69			0.73			0.70

PM Period (2:00 PM - 4:00 PM)													
	Southbound			Westbound			Northbound			Eastbound			
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	TOTAL
2:00 PM	0	0	0	0	38	6	5	0	0	0	22	0	71
2:15 PM	0	0	0	0	66	2	8	0	0	0	18	0	94
2:30 PM	0	0	0	0	143	6	5	0	1	0	104	0	259
2:45 PM	0	0	0	0	149	1	6	0	0	0	325	0	481
3:00 PM	0	0	0	0	160	3	15	0	0	0	261	0	439
3:15 PM	0	0	0	0	87	7	16	0	1	0	119	0	230
3:30 PM	0	0	0	0	42	6	11	0	0	0	59	0	118
3:45 PM	0	0	0	0	36	5	9	0	0	0	34	0	84
Total	0	0	0	0	721	36	75	0	2	0	942	0	1,776

PM Intersection Peak Hour : **2:30 PM - 3:30 PM** Intersection PHF : **0.73**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
Volume	0	0	0	0	539	17	42	0	2	0	809	0	1409
PHF	#####	#####	#####	#####	0.842	0.607	0.656	#####	0.5	#####	0.622	#####	0.73
Movement PHF	#DIV/0!			0.85			0.65			0.62			0.73

Turn Count Summary

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136

Location: Vista Montana @ La Pata Ave

Date of Count: *Tuesday, May 19, 2015*

Analysts: *LV/CD*

Weather: *Sunny*

AVC Proj No: *15-0355*

LINSCOTT LAW & GREENSPAN engineers

Vehicular Count

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136

AVC

Location: Vista Montana @ La Pata Ave

AM Period (6:00 AM - 8:00 AM)													
	Southbound			Westbound			Northbound			Eastbound			
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	TOTAL
6:00 AM	5	19	1	0	0	0	0	2	0	0	0	8	35
6:15 AM	41	11	1	0	0	0	0	1	0	0	0	23	77
6:30 AM	269	14	3	1	0	0	0	3	0	0	0	86	376
6:45 AM	300	28	9	0	0	0	1	1	0	0	0	183	522
7:00 AM	110	38	8	5	0	0	0	6	0	0	0	89	256
7:15 AM	215	18	4	13	0	0	0	27	0	1	0	157	435
7:30 AM	362	13	8	8	0	0	0	17	1	1	0	223	633
7:45 AM	231	12	3	4	0	0	1	10	0	2	0	188	451
Total	1,533	153	37	31	0	0	2	67	1	4	0	957	2,785

AM Intersection Peak Hour : **6:45 AM - 7:45 AM** Intersection PHF : **0.73**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
Volume	987	97	29	26	0	0	1	51	1	2	0	652	1,846
PHF	0.68	0.64	0.81	0.50	#####	#####	0.25	0.47	0.25	0.50	#####	0.73	0.73
Movement PHF		0.73			0.50			0.49			0.73		0.73

PM Period (2:00 PM - 4:00 PM)													
	Southbound			Westbound			Northbound			Eastbound			
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	TOTAL
2:00 PM	42	15	6	6	1	0	1	23	1	0	0	27	122
2:15 PM	68	10	6	7	0	0	0	15	0	1	0	25	132
2:30 PM	149	9	5	5	0	0	0	35	0	0	0	109	312
2:45 PM	150	16	3	5	0	0	0	28	0	0	0	331	533
3:00 PM	162	11	3	4	0	0	0	22	1	1	0	275	479
3:15 PM	94	17	2	3	0	0	0	21	0	1	0	134	272
3:30 PM	47	17	5	5	0	0	2	14	1	0	0	70	161
3:45 PM	40	7	4	3	0	0	0	18	1	1	0	42	116
Total	752	102	34	38	1	0	3	176	4	4	0	1,013	2,127

PM Intersection Peak Hour : **2:30 PM - 3:30 PM** Intersection PHF : **0.75**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
Volume	555	53	13	17	0	0	0	106	1	2	0	849	1596
PHF	0.86	0.779	0.65	0.85	#####	#####	#####	0.757	0.25	0.5	#####	0.641	0.75
Movement PHF		0.88			0.85			0.76			0.64		0.75

ATTACHMENT C

PEAK HOUR INTERSECTION ANALYSIS WORKSHEETS

Intersection	
Int Delay, s/veh	0.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	589	0	12	927	2	48
Conflicting Peds, #/hr	0	1	1	0	1	4
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	90	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	68	68	68	68	68	68
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	866	0	18	1363	3	71

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	870	0	1587	871
Stage 1	-	-	-	-	870	-
Stage 2	-	-	-	-	717	-
Critical Hdwy	-	-	4.12	-	6.63	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.83	-
Follow-up Hdwy	-	-	2.218	-	3.519	3.319
Pot Cap-1 Maneuver	-	-	775	-	108	349
Stage 1	-	-	-	-	409	-
Stage 2	-	-	-	-	446	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	774	-	105	348
Mov Cap-2 Maneuver	-	-	-	-	105	-
Stage 1	-	-	-	-	408	-
Stage 2	-	-	-	-	435	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	19.6
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	319	-	-	774	-
HCM Lane V/C Ratio	0.23	-	-	0.023	-
HCM Control Delay (s)	19.6	-	-	9.8	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	0.9	-	-	0.1	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	0	637	938	8	9	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	110	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	68	68	68	68	68	68
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	937	1379	12	13	1

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1391	0	-	0	1853	696
Stage 1	-	-	-	-	1385	-
Stage 2	-	-	-	-	468	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	488	-	-	-	66	384
Stage 1	-	-	-	-	197	-
Stage 2	-	-	-	-	597	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	488	-	-	-	66	384
Mov Cap-2 Maneuver	-	-	-	-	66	-
Stage 1	-	-	-	-	197	-
Stage 2	-	-	-	-	597	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	67.4
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	488	-	-	-	72
HCM Lane V/C Ratio	-	-	-	-	0.204
HCM Control Delay (s)	0	-	-	-	67.4
HCM Lane LOS	A	-	-	-	F
HCM 95th %tile Q(veh)	0	-	-	-	0.7

Intersection	
Int Delay, s/veh	0.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	643	3	42	946	0	11
Conflicting Peds, #/hr	0	1	1	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	110	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	70	70	70	70	70	70
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	919	4	60	1351	0	16

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	923	0	1717	462
Stage 1	-	-	-	-	921	-
Stage 2	-	-	-	-	796	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	736	-	81	547
Stage 1	-	-	-	-	348	-
Stage 2	-	-	-	-	405	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	735	-	74	547
Mov Cap-2 Maneuver	-	-	-	-	74	-
Stage 1	-	-	-	-	348	-
Stage 2	-	-	-	-	372	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	11.8
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	547	-	-	735	-
HCM Lane V/C Ratio	0.029	-	-	0.082	-
HCM Control Delay (s)	11.8	-	-	10.3	-
HCM Lane LOS	B	-	-	B	-
HCM 95th %tile Q(veh)	0.1	-	-	0.3	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	652	0	2	0	0	26	1	51	1	29	97	987
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	893	0	3	0	0	36	1	70	1	40	133	1352
Adj No. of Lanes	2	1	0	1	1	0	1	2	0	1	2	1
Peak Hour Factor	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	1132	0	521	53	0	47	57	1031	15	57	1022	978
Arrive On Green	0.33	0.00	0.33	0.00	0.00	0.03	0.03	0.29	0.29	0.03	0.29	0.29
Sat Flow, veh/h	3442	0	1583	1774	0	1583	1774	3572	51	1774	3539	1583
Grp Volume(v), veh/h	893	0	3	0	0	36	1	35	36	40	133	1352
Grp Sat Flow(s),veh/h/ln	1721	0	1583	1774	0	1583	1774	1770	1854	1774	1770	1583
Q Serve(g_s), s	14.7	0.0	0.1	0.0	0.0	1.4	0.0	0.9	0.9	1.4	1.7	18.0
Cycle Q Clear(g_c), s	14.7	0.0	0.1	0.0	0.0	1.4	0.0	0.9	0.9	1.4	1.7	18.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.03	1.00		1.00
Lane Grp Cap(c), veh/h	1132	0	521	53	0	47	57	511	535	57	1022	978
V/C Ratio(X)	0.79	0.00	0.01	0.00	0.00	0.76	0.02	0.07	0.07	0.70	0.13	1.38
Avail Cap(c_a), veh/h	2428	0	1117	114	0	102	114	511	535	114	1022	978
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.0	0.0	14.1	0.0	0.0	30.0	29.2	16.1	16.1	29.9	16.4	8.0
Incr Delay (d2), s/veh	1.3	0.0	0.0	0.0	0.0	22.1	0.1	0.3	0.2	14.6	0.3	178.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.1	0.0	0.0	0.0	0.0	0.9	0.0	0.5	0.5	0.9	0.9	65.1
LnGrp Delay(d),s/veh	20.2	0.0	14.1	0.0	0.0	52.1	29.4	16.3	16.3	44.5	16.7	186.7
LnGrp LOS	C		B			D	C	B	B	D	B	F
Approach Vol, veh/h		896			36			72			1525	
Approach Delay, s/veh		20.2			52.1			16.5			168.2	
Approach LOS		C			D			B			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.0	23.0		25.5	7.0	23.0		6.9
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0
Max Green Setting (Gmax), s	4.0	18.0		44.0	4.0	18.0		4.0
Max Q Clear Time (g_c+I1), s	3.4	2.9		16.7	2.0	20.0		3.4
Green Ext Time (p_c), s	0.0	0.2		3.8	0.0	0.0		0.0

Intersection Summary		
HCM 2010 Ctrl Delay		109.8
HCM 2010 LOS		F

Intersection	
Int Delay, s/veh	0.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	642	2	23	448	2	29
Conflicting Peds, #/hr	0	0	0	0	3	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	90	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	74	74	74	74	74	74
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	868	3	31	605	3	39

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	873	0	1237	872
Stage 1	-	-	-	-	872	-
Stage 2	-	-	-	-	365	-
Critical Hdwy	-	-	4.12	-	6.63	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.83	-
Follow-up Hdwy	-	-	2.218	-	3.519	3.319
Pot Cap-1 Maneuver	-	-	773	-	181	349
Stage 1	-	-	-	-	408	-
Stage 2	-	-	-	-	674	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	773	-	173	348
Mov Cap-2 Maneuver	-	-	-	-	173	-
Stage 1	-	-	-	-	407	-
Stage 2	-	-	-	-	647	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	17.6
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	327	-	-	773	-
HCM Lane V/C Ratio	0.128	-	-	0.04	-
HCM Control Delay (s)	17.6	-	-	9.9	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	0.4	-	-	0.1	-

Intersection	
Int Delay, s/veh	16.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	2	669	460	81	140	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	110	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	71	71	71	71	71	71
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	942	648	114	197	15

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	762	0	-	0	1182	381
Stage 1	-	-	-	-	705	-
Stage 2	-	-	-	-	477	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	846	-	-	-	~ 183	617
Stage 1	-	-	-	-	451	-
Stage 2	-	-	-	-	590	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	846	-	-	-	~ 182	617
Mov Cap-2 Maneuver	-	-	-	-	~ 182	-
Stage 1	-	-	-	-	451	-
Stage 2	-	-	-	-	588	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	147.6
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	846	-	-	-	192
HCM Lane V/C Ratio	0.003	-	-	-	1.108
HCM Control Delay (s)	9.3	-	-	-	147.6
HCM Lane LOS	A	-	-	-	F
HCM 95th %tile Q(veh)	0	-	-	-	10.3

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	0.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	809	0	17	539	2	42
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	110	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	73	73	73	73	73	73
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1108	0	23	738	3	58

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1108	0	1524	554
Stage 1	-	-	-	-	1108	-
Stage 2	-	-	-	-	416	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	626	-	109	476
Stage 1	-	-	-	-	278	-
Stage 2	-	-	-	-	634	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	626	-	105	476
Mov Cap-2 Maneuver	-	-	-	-	105	-
Stage 1	-	-	-	-	278	-
Stage 2	-	-	-	-	611	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	15.3
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	410	-	-	626	-
HCM Lane V/C Ratio	0.147	-	-	0.037	-
HCM Control Delay (s)	15.3	-	-	11	-
HCM Lane LOS	C	-	-	B	-
HCM 95th %tile Q(veh)	0.5	-	-	0.1	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	849	0	2	0	0	17	1	106	0	13	53	555
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	1132	0	3	0	0	23	1	141	0	17	71	740
Adj No. of Lanes	2	1	0	1	1	0	1	2	0	1	2	1
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	1308	0	602	37	0	33	29	977	0	29	977	1039
Arrive On Green	0.38	0.00	0.38	0.00	0.00	0.02	0.02	0.28	0.00	0.02	0.28	0.28
Sat Flow, veh/h	3442	0	1583	1774	0	1583	1774	3632	0	1774	3539	1583
Grp Volume(v), veh/h	1132	0	3	0	0	23	1	141	0	17	71	740
Grp Sat Flow(s),veh/h/ln	1721	0	1583	1774	0	1583	1774	1770	0	1774	1770	1583
Q Serve(g_s), s	19.8	0.0	0.1	0.0	0.0	0.9	0.0	2.0	0.0	0.6	1.0	18.0
Cycle Q Clear(g_c), s	19.8	0.0	0.1	0.0	0.0	0.9	0.0	2.0	0.0	0.6	1.0	18.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	1308	0	602	37	0	33	29	977	0	29	977	1039
V/C Ratio(X)	0.87	0.00	0.00	0.00	0.00	0.70	0.03	0.14	0.00	0.59	0.07	0.71
Avail Cap(c_a), veh/h	1530	0	704	109	0	97	109	977	0	109	977	1039
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.7	0.0	12.6	0.0	0.0	31.7	31.6	17.8	0.0	31.9	17.4	6.9
Incr Delay (d2), s/veh	4.8	0.0	0.0	0.0	0.0	22.9	0.5	0.3	0.0	17.7	0.1	4.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.2	0.0	0.0	0.0	0.0	0.6	0.0	1.0	0.0	0.4	0.5	14.4
LnGrp Delay(d),s/veh	23.5	0.0	12.6	0.0	0.0	54.7	32.1	18.1	0.0	49.5	17.6	11.1
LnGrp LOS	C		B			D	C	B		D	B	B
Approach Vol, veh/h		1135			23			142			828	
Approach Delay, s/veh		23.5			54.7			18.2			12.4	
Approach LOS		C			D			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.1	23.0		29.8	6.1	23.0		6.4
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0
Max Green Setting (Gmax), s	4.0	18.0		29.0	4.0	18.0		4.0
Max Q Clear Time (g_c+I1), s	2.6	4.0		21.8	2.0	20.0		2.9
Green Ext Time (p_c), s	0.0	0.6		3.0	0.1	0.0		0.0

Intersection Summary		
HCM 2010 Ctrl Delay		19.2
HCM 2010 LOS		B

Intersection	
Int Delay, s/veh	0.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	648	0	14	1019	3	53
Conflicting Peds, #/hr	0	1	1	0	1	4
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	90	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	68	68	68	68	68	68
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	953	0	21	1499	4	78

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	957	0	1747	958
Stage 1	-	-	-	-	957	-
Stage 2	-	-	-	-	790	-
Critical Hdwy	-	-	4.12	-	6.63	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.83	-
Follow-up Hdwy	-	-	2.218	-	3.519	3.319
Pot Cap-1 Maneuver	-	-	719	-	85	311
Stage 1	-	-	-	-	372	-
Stage 2	-	-	-	-	409	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	718	-	82	310
Mov Cap-2 Maneuver	-	-	-	-	82	-
Stage 1	-	-	-	-	371	-
Stage 2	-	-	-	-	397	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	24.1
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	270	-	-	718	-
HCM Lane V/C Ratio	0.305	-	-	0.029	-
HCM Control Delay (s)	24.1	-	-	10.2	-
HCM Lane LOS	C	-	-	B	-
HCM 95th %tile Q(veh)	1.2	-	-	0.1	-

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	0	701	1031	9	10	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	110	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	68	68	68	68	68	68
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1031	1516	13	15	3

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1529	0	-	0	2038	765
Stage 1	-	-	-	-	1523	-
Stage 2	-	-	-	-	515	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	432	-	-	-	49	346
Stage 1	-	-	-	-	166	-
Stage 2	-	-	-	-	565	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	432	-	-	-	49	346
Mov Cap-2 Maneuver	-	-	-	-	49	-
Stage 1	-	-	-	-	166	-
Stage 2	-	-	-	-	565	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	94.3
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	432	-	-	-	57
HCM Lane V/C Ratio	-	-	-	-	0.31
HCM Control Delay (s)	0	-	-	-	94.3
HCM Lane LOS	A	-	-	-	F
HCM 95th %tile Q(veh)	0	-	-	-	1.1

Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	707	4	47	1040	0	13
Conflicting Peds, #/hr	0	1	1	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	110	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	70	70	70	70	70	70
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1010	6	67	1486	0	19

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1016	0	1890	509
Stage 1	-	-	-	-	1013	-
Stage 2	-	-	-	-	877	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	678	-	62	509
Stage 1	-	-	-	-	312	-
Stage 2	-	-	-	-	367	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	677	-	56	509
Mov Cap-2 Maneuver	-	-	-	-	56	-
Stage 1	-	-	-	-	312	-
Stage 2	-	-	-	-	330	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	12.3
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	509	-	-	677	-
HCM Lane V/C Ratio	0.036	-	-	0.099	-
HCM Control Delay (s)	12.3	-	-	10.9	-
HCM Lane LOS	B	-	-	B	-
HCM 95th %tile Q(veh)	0.1	-	-	0.3	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	717	0	3	0	0	29	2	57	2	32	107	1085
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	982	0	4	0	0	40	3	78	3	44	147	1486
Adj No. of Lanes	2	1	0	1	1	0	1	2	0	1	2	1
Peak Hour Factor	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	1226	0	564	56	0	50	60	953	36	60	970	998
Arrive On Green	0.36	0.00	0.36	0.00	0.00	0.03	0.03	0.27	0.27	0.03	0.27	0.27
Sat Flow, veh/h	3442	0	1583	1774	0	1583	1774	3476	133	1774	3539	1583
Grp Volume(v), veh/h	982	0	4	0	0	40	3	40	41	44	147	1486
Grp Sat Flow(s),veh/h/ln	1721	0	1583	1774	0	1583	1774	1770	1839	1774	1770	1583
Q Serve(g_s), s	16.9	0.0	0.1	0.0	0.0	1.6	0.1	1.1	1.1	1.6	2.1	18.0
Cycle Q Clear(g_c), s	16.9	0.0	0.1	0.0	0.0	1.6	0.1	1.1	1.1	1.6	2.1	18.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.07	1.00		1.00
Lane Grp Cap(c), veh/h	1226	0	564	56	0	50	60	485	504	60	970	998
V/C Ratio(X)	0.80	0.00	0.01	0.00	0.00	0.80	0.05	0.08	0.08	0.74	0.15	1.49
Avail Cap(c_a), veh/h	3877	0	1784	108	0	96	108	485	504	108	970	998
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.0	0.0	13.6	0.0	0.0	31.6	30.7	17.7	17.7	31.5	18.1	7.8
Incr Delay (d2), s/veh	1.3	0.0	0.0	0.0	0.0	24.6	0.3	0.3	0.3	16.2	0.3	225.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.1	0.0	0.0	0.0	0.0	1.1	0.1	0.6	0.6	1.0	1.0	80.2
LnGrp Delay(d),s/veh	20.3	0.0	13.6	0.0	0.0	56.2	31.1	18.0	18.0	47.6	18.4	233.2
LnGrp LOS	C		B			E	C	B	B	D	B	F
Approach Vol, veh/h		986			40			84			1677	
Approach Delay, s/veh		20.3			56.2			18.5			209.5	
Approach LOS		C			E			B			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.2	23.0		28.4	7.2	23.0		7.1
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0
Max Green Setting (Gmax), s	4.0	18.0		74.0	4.0	18.0		4.0
Max Q Clear Time (g_c+I1), s	3.6	3.1		18.9	2.1	20.0		3.6
Green Ext Time (p_c), s	0.0	0.3		4.5	0.0	0.0		0.0

Intersection Summary		
HCM 2010 Ctrl Delay		134.6
HCM 2010 LOS		F

Intersection	
Int Delay, s/veh	0.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	706	3	26	494	3	32
Conflicting Peds, #/hr	0	0	0	0	3	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	90	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	74	74	74	74	74	74
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	954	4	35	668	4	43

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	961	0	1363	959
Stage 1	-	-	-	-	959	-
Stage 2	-	-	-	-	404	-
Critical Hdwy	-	-	4.12	-	6.63	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.83	-
Follow-up Hdwy	-	-	2.218	-	3.519	3.319
Pot Cap-1 Maneuver	-	-	716	-	150	311
Stage 1	-	-	-	-	371	-
Stage 2	-	-	-	-	644	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	716	-	142	310
Mov Cap-2 Maneuver	-	-	-	-	142	-
Stage 1	-	-	-	-	370	-
Stage 2	-	-	-	-	613	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	20.4
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	281	-	-	716	-
HCM Lane V/C Ratio	0.168	-	-	0.049	-
HCM Control Delay (s)	20.4	-	-	10.3	-
HCM Lane LOS	C	-	-	B	-
HCM 95th %tile Q(veh)	0.6	-	-	0.2	-

Intersection	
Int Delay, s/veh	32.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	3	735	507	89	154	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	110	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	71	71	71	71	71	71
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	1035	714	125	217	18

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	839	0	-	0	1303	420
Stage 1	-	-	-	-	777	-
Stage 2	-	-	-	-	526	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	791	-	-	-	~ 152	582
Stage 1	-	-	-	-	414	-
Stage 2	-	-	-	-	557	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	791	-	-	-	~ 151	582
Mov Cap-2 Maneuver	-	-	-	-	~ 151	-
Stage 1	-	-	-	-	414	-
Stage 2	-	-	-	-	554	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	294.7
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	791	-	-	-	160
HCM Lane V/C Ratio	0.005	-	-	-	1.47
HCM Control Delay (s)	9.6	-	-	-	294.7
HCM Lane LOS	A	-	-	-	F
HCM 95th %tile Q(veh)	0	-	-	-	15.2

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	0.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	889	0	19	593	3	47
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	110	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	73	73	73	73	73	73
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1218	0	26	812	4	64

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1218	0	1676	609
Stage 1	-	-	-	-	1218	-
Stage 2	-	-	-	-	458	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	568	-	86	438
Stage 1	-	-	-	-	243	-
Stage 2	-	-	-	-	604	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	568	-	82	438
Mov Cap-2 Maneuver	-	-	-	-	82	-
Stage 1	-	-	-	-	243	-
Stage 2	-	-	-	-	576	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	17.9
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	347	-	-	568	-
HCM Lane V/C Ratio	0.197	-	-	0.046	-
HCM Control Delay (s)	17.9	-	-	11.6	-
HCM Lane LOS	C	-	-	B	-
HCM 95th %tile Q(veh)	0.7	-	-	0.1	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	933	0	3	0	0	19	2	117	0	15	59	610
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	1244	0	4	0	0	25	3	156	0	20	79	813
Adj No. of Lanes	2	1	0	1	1	0	1	2	0	1	2	1
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	1376	0	633	39	0	35	33	938	0	33	938	1053
Arrive On Green	0.40	0.00	0.40	0.00	0.00	0.02	0.02	0.27	0.00	0.02	0.27	0.27
Sat Flow, veh/h	3442	0	1583	1774	0	1583	1774	3632	0	1774	3539	1583
Grp Volume(v), veh/h	1244	0	4	0	0	25	3	156	0	20	79	813
Grp Sat Flow(s),veh/h/ln	1721	0	1583	1774	0	1583	1774	1770	0	1774	1770	1583
Q Serve(g_s), s	23.1	0.0	0.1	0.0	0.0	1.1	0.1	2.3	0.0	0.8	1.1	18.0
Cycle Q Clear(g_c), s	23.1	0.0	0.1	0.0	0.0	1.1	0.1	2.3	0.0	0.8	1.1	18.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	1376	0	633	39	0	35	33	938	0	33	938	1053
V/C Ratio(X)	0.90	0.00	0.01	0.00	0.00	0.71	0.09	0.17	0.00	0.61	0.08	0.77
Avail Cap(c_a), veh/h	1469	0	676	104	0	93	104	938	0	104	938	1053
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.2	0.0	12.3	0.0	0.0	33.0	32.8	19.2	0.0	33.1	18.8	6.8
Incr Delay (d2), s/veh	7.9	0.0	0.0	0.0	0.0	23.3	1.2	0.4	0.0	16.8	0.2	5.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.4	0.0	0.0	0.0	0.0	0.7	0.1	1.2	0.0	0.5	0.6	16.7
LnGrp Delay(d),s/veh	27.1	0.0	12.3	0.0	0.0	56.3	34.0	19.6	0.0	49.9	18.9	12.3
LnGrp LOS	C		B			E	C	B		D	B	B
Approach Vol, veh/h		1248			25			159			912	
Approach Delay, s/veh		27.0			56.3			19.8			13.7	
Approach LOS		C			E			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.3	23.0		32.2	6.3	23.0		6.5
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0
Max Green Setting (Gmax), s	4.0	18.0		29.0	4.0	18.0		4.0
Max Q Clear Time (g_c+I1), s	2.8	4.3		25.1	2.1	20.0		3.1
Green Ext Time (p_c), s	0.0	0.7		2.1	0.1	0.0		0.0

Intersection Summary		
HCM 2010 Ctrl Delay	21.7	
HCM 2010 LOS	C	

Intersection	
Int Delay, s/veh	1.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	658	0	145	1032	0	53
Conflicting Peds, #/hr	0	1	1	0	1	4
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	68	68	68	68	68	68
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	968	0	213	1518	0	78

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	972	0	2916	973
Stage 1	-	-	-	-	972	-
Stage 2	-	-	-	-	1944	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	709	-	17	306
Stage 1	-	-	-	-	367	-
Stage 2	-	-	-	-	122	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	708	-	17	305
Mov Cap-2 Maneuver	-	-	-	-	17	-
Stage 1	-	-	-	-	366	-
Stage 2	-	-	-	-	122	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.5	20.8
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	305	-	-	708	-
HCM Lane V/C Ratio	0.256	-	-	0.301	-
HCM Control Delay (s)	20.8	-	-	12.3	0
HCM Lane LOS	C	-	-	B	A
HCM 95th %tile Q(veh)	1	-	-	1.3	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	0	711	1165	9	0	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	68	68	68	68	68	68
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1046	1713	13	0	18

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1726	0	-	0	2766	1720
Stage 1	-	-	-	-	1720	-
Stage 2	-	-	-	-	1046	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	366	-	-	-	21	111
Stage 1	-	-	-	-	159	-
Stage 2	-	-	-	-	338	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	366	-	-	-	21	111
Mov Cap-2 Maneuver	-	-	-	-	21	-
Stage 1	-	-	-	-	159	-
Stage 2	-	-	-	-	338	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	43.5
HCM LOS			E

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	366	-	-	-	111
HCM Lane V/C Ratio	-	-	-	-	0.159
HCM Control Delay (s)	0	-	-	-	43.5
HCM Lane LOS	A	-	-	-	E
HCM 95th %tile Q(veh)	0	-	-	-	0.5

Intersection	
Int Delay, s/veh	0.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	707	4	47	1171	3	13
Conflicting Peds, #/hr	0	1	1	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	110	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	70	70	70	70	70	70
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1010	6	67	1673	4	19

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1016	0	2820	1014
Stage 1	-	-	-	-	1013	-
Stage 2	-	-	-	-	1807	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	683	-	20	290
Stage 1	-	-	-	-	351	-
Stage 2	-	-	-	-	144	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	682	-	18	290
Mov Cap-2 Maneuver	-	-	-	-	18	-
Stage 1	-	-	-	-	351	-
Stage 2	-	-	-	-	130	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	71.6
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	76	-	-	682	-
HCM Lane V/C Ratio	0.301	-	-	0.098	-
HCM Control Delay (s)	71.6	-	-	10.9	-
HCM Lane LOS	F	-	-	B	-
HCM 95th %tile Q(veh)	1.1	-	-	0.3	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	717	0	3	0	0	29	2	57	2	32	107	1216
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	982	0	4	0	0	40	3	78	3	44	147	1666
Adj No. of Lanes	2	1	0	1	1	0	1	2	0	1	2	1
Peak Hour Factor	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	1227	0	564	56	0	50	6	952	36	60	1077	1046
Arrive On Green	0.36	0.00	0.36	0.00	0.00	0.03	0.00	0.27	0.27	0.03	0.30	0.30
Sat Flow, veh/h	3442	0	1583	1774	0	1583	1774	3476	133	1774	3539	1583
Grp Volume(v), veh/h	982	0	4	0	0	40	3	40	41	44	147	1666
Grp Sat Flow(s),veh/h/ln	1721	0	1583	1774	0	1583	1774	1770	1839	1774	1770	1583
Q Serve(g_s), s	16.9	0.0	0.1	0.0	0.0	1.6	0.1	1.1	1.1	1.6	2.0	20.0
Cycle Q Clear(g_c), s	16.9	0.0	0.1	0.0	0.0	1.6	0.1	1.1	1.1	1.6	2.0	20.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.07	1.00		1.00
Lane Grp Cap(c), veh/h	1227	0	564	56	0	50	6	485	504	60	1077	1046
V/C Ratio(X)	0.80	0.00	0.01	0.00	0.00	0.80	0.52	0.08	0.08	0.74	0.14	1.59
Avail Cap(c_a), veh/h	5449	0	2507	108	0	96	108	485	504	108	1077	1046
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.0	0.0	13.6	0.0	0.0	31.6	32.7	17.7	17.7	31.5	16.6	7.2
Incr Delay (d2), s/veh	1.3	0.0	0.0	0.0	0.0	24.6	58.0	0.3	0.3	16.2	0.3	271.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.1	0.0	0.0	0.0	0.0	1.1	0.1	0.6	0.6	1.0	1.0	97.4
LnGrp Delay(d),s/veh	20.3	0.0	13.6	0.0	0.0	56.2	90.7	18.0	18.0	47.6	16.8	278.3
LnGrp LOS	C		B			E	F	B	B	D	B	F
Approach Vol, veh/h		986			40			84			1857	
Approach Delay, s/veh		20.3			56.2			20.6			252.1	
Approach LOS		C			E			C			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.2	23.0		28.4	5.2	25.0		7.1
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0
Max Green Setting (Gmax), s	4.0	18.0		104.0	4.0	18.0		4.0
Max Q Clear Time (g_c+I1), s	3.6	3.1		18.9	2.1	22.0		3.6
Green Ext Time (p_c), s	0.0	12.0		4.5	0.0	0.0		0.0

Intersection Summary		
HCM 2010 Ctrl Delay		165.9
HCM 2010 LOS		F

Intersection	
Int Delay, s/veh	0.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	860	3	26	651	0	32
Conflicting Peds, #/hr	0	0	0	0	3	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	74	74	74	74	74	74
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1162	4	35	880	0	43

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1169	0	2117	1167
Stage 1	-	-	-	-	1167	-
Stage 2	-	-	-	-	950	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	598	-	56	236
Stage 1	-	-	-	-	296	-
Stage 2	-	-	-	-	376	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	598	-	49	235
Mov Cap-2 Maneuver	-	-	-	-	49	-
Stage 1	-	-	-	-	295	-
Stage 2	-	-	-	-	333	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	23.7
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	235	-	-	598	-
HCM Lane V/C Ratio	0.184	-	-	0.059	-
HCM Control Delay (s)	23.7	-	-	11.4	0
HCM Lane LOS	C	-	-	B	A
HCM 95th %tile Q(veh)	0.7	-	-	0.2	-

Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	0	892	510	92	0	167
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	71	71	71	71	71	71
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1256	718	130	0	235

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	848	0	-	0	2039	783
Stage 1	-	-	-	-	783	-
Stage 2	-	-	-	-	1256	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	790	-	-	-	62	394
Stage 1	-	-	-	-	450	-
Stage 2	-	-	-	-	268	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	790	-	-	-	62	394
Mov Cap-2 Maneuver	-	-	-	-	62	-
Stage 1	-	-	-	-	450	-
Stage 2	-	-	-	-	268	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	26.8
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	790	-	-	-	394
HCM Lane V/C Ratio	-	-	-	-	0.597
HCM Control Delay (s)	0	-	-	-	26.8
HCM Lane LOS	A	-	-	-	D
HCM 95th %tile Q(veh)	0	-	-	-	3.7

Intersection	
Int Delay, s/veh	2.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	889	3	19	593	9	47
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	110	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	73	73	73	73	73	73
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1218	4	26	812	12	64

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1222	0	2084	1220
Stage 1	-	-	-	-	1220	-
Stage 2	-	-	-	-	864	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	570	-	58	220
Stage 1	-	-	-	-	279	-
Stage 2	-	-	-	-	413	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	570	-	55	220
Mov Cap-2 Maneuver	-	-	-	-	55	-
Stage 1	-	-	-	-	279	-
Stage 2	-	-	-	-	394	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	52.9
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	148	-	-	570	-
HCM Lane V/C Ratio	0.518	-	-	0.046	-
HCM Control Delay (s)	52.9	-	-	11.6	-
HCM Lane LOS	F	-	-	B	-
HCM 95th %tile Q(veh)	2.5	-	-	0.1	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	933	0	3	0	0	19	2	117	0	15	59	610
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	1244	0	4	0	0	25	3	156	0	20	79	813
Adj No. of Lanes	2	1	0	1	1	0	1	2	0	1	2	1
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	1376	0	633	39	0	35	33	938	0	33	938	1053
Arrive On Green	0.40	0.00	0.40	0.00	0.00	0.02	0.02	0.27	0.00	0.02	0.27	0.27
Sat Flow, veh/h	3442	0	1583	1774	0	1583	1774	3632	0	1774	3539	1583
Grp Volume(v), veh/h	1244	0	4	0	0	25	3	156	0	20	79	813
Grp Sat Flow(s),veh/h/ln	1721	0	1583	1774	0	1583	1774	1770	0	1774	1770	1583
Q Serve(g_s), s	23.1	0.0	0.1	0.0	0.0	1.1	0.1	2.3	0.0	0.8	1.1	18.0
Cycle Q Clear(g_c), s	23.1	0.0	0.1	0.0	0.0	1.1	0.1	2.3	0.0	0.8	1.1	18.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	1376	0	633	39	0	35	33	938	0	33	938	1053
V/C Ratio(X)	0.90	0.00	0.01	0.00	0.00	0.71	0.09	0.17	0.00	0.61	0.08	0.77
Avail Cap(c_a), veh/h	1469	0	676	104	0	93	104	938	0	104	938	1053
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.2	0.0	12.3	0.0	0.0	33.0	32.8	19.2	0.0	33.1	18.8	6.8
Incr Delay (d2), s/veh	7.9	0.0	0.0	0.0	0.0	23.3	1.2	0.4	0.0	16.8	0.2	5.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.4	0.0	0.0	0.0	0.0	0.7	0.1	1.2	0.0	0.5	0.6	16.7
LnGrp Delay(d),s/veh	27.1	0.0	12.3	0.0	0.0	56.3	34.0	19.6	0.0	49.9	18.9	12.3
LnGrp LOS	C		B			E	C	B		D	B	B
Approach Vol, veh/h		1248			25			159			912	
Approach Delay, s/veh		27.0			56.3			19.8			13.7	
Approach LOS		C			E			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.3	23.0		32.2	6.3	23.0		6.5
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0
Max Green Setting (Gmax), s	4.0	18.0		29.0	4.0	18.0		4.0
Max Q Clear Time (g_c+I1), s	2.8	4.3		25.1	2.1	20.0		3.1
Green Ext Time (p_c), s	0.0	0.7		2.1	0.1	0.0		0.0

Intersection Summary			
HCM 2010 Ctrl Delay		21.7	
HCM 2010 LOS		C	

SDG&E Draft Traffic Control Plan

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SOUTH ORANGE COUNTY RELIABILITY PROJECT
SAN JUAN CAPISTRANO SUBSTATION TRAFFIC CONTROL PLANS
CAMINO CAPISTRANO
CURB TO CURB ROAD WIDTH = 60'
EXISTING SPEED LIMIT = 45 MPH
CONSTRUCTION SPEED LIMIT = 35 MPH

Table 6C-3(CA). Taper Length Criteria for Temporary Traffic Control Zones (for 12 feet Offset Width)

Speed* S (mph)	Minimum Taper Length** for Width of Offset 12 feet (W)			
	Merging L (feet)	Shifting L/2 (feet)	Shoulder L/3 (feet)	Down Stream (feet)***
20	80	40	27	50
25	125	63	42	50
30	180	90	60	50
35	245	123	82	50
40	320	160	107	50
45	540	270	180	50
50	600	300	200	50
55	660	330	220	50
60	720	360	240	50
65	780	390	260	50
70	840	420	280	50
75	900	450	300	50

Table 6C-1. Recommended Advance Warning Sign Spacing

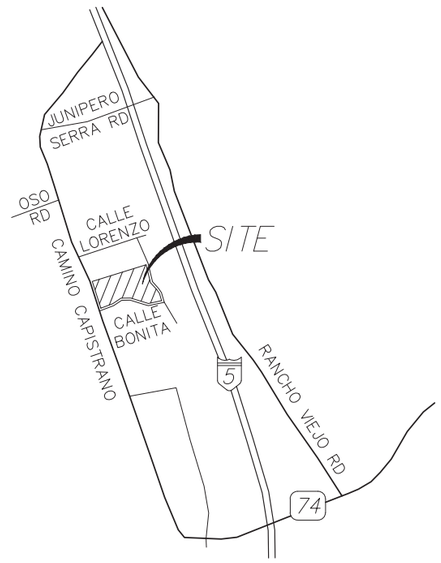
Road Type	Distance Between Signs**		
	A	B	C
Urban - 25 mph or less***	100 feet	100 feet	100 feet
Urban - more than 25 mph to 40 mph***	250 feet	250 feet	250 feet
Urban - more than 40 mph***	350 feet	350 feet	350 feet
Rural	500 feet	500 feet	500 feet
Expressway / Freeway	1000 feet	1500 feet	2640 feet

Table 6C-2. Stop Sight Distance as a Function of Speed on Level Roads. (Used as suggested buffer space length or location for flagger station

Speed	Distance
20 mph	115 feet
25 mph	155 feet
30 mph	200 feet
35 mph	250 feet
40 mph	305 feet
45 mph	360 feet
50 mph	425 feet
55 mph	495 feet
60 mph	570 feet
65 mph	645 feet
70 mph	730 feet
75 mph	820 feet

Table 6C-3. Taper Length Criteria for Temporary Traffic Control Zones

Type of Taper	Taper Length
Merging Taper	at least L
Shifting Taper	at least 0.5 L
Shoulder Taper	at least 0.33 L
1-Lane, 2-way Traffic Taper	50' min., 100' max.
Downstream Taper	50' min., 100' max.



VICINITY MAP

NO SCALE

THOMAS BROS. INDEX
952, C-7

TRAFFIC CONTROL SIGNS	
SIGN NO.	SIGN DESIGNATION
C12(CA)	NARROW LANE(S)
C27(CA)	OPEN TRENCH
G20-2	END ROAD WORK
R2-1	SPEED LIMIT (35 MPH)
R3-2	NO LEFT TURN
W3-5a	35 MPH SPEED ZONE AHEAD
W20-1	ROAD WORK 1000 FT

UTILITY ALERT NOTE:

ATTENTION IS DIRECTED TO THE POSSIBLE EXISTENCE OF UNDERGROUND UTILITY FACILITIES NOT KNOWN OR IN A LOCATION DIFFERENT FROM THAT WHICH IS SHOWN ON THE PLANS OR IN THE SPECIAL PROVISIONS. THE CONTRACTOR SHALL TAKE STEPS TO ASCERTAIN THE EXACT LOCATION OF ALL UNDERGROUND FACILITIES PRIOR TO PERFORMING WORK THAT MAY DAMAGE SUCH FACILITIES OR INTERFERE WITH THEIR SERVICE. FOURTY-EIGHT HOURS BEFORE EXCAVATING, THE CONTRACTOR SHALL VERIFY THE LOCATION OF UNDERGROUND FACILITIES BY CONTACTING UNDERGROUND SERVICE ALERT AT TELEPHONE 1-800-422-4133.

THE CONTRACTOR MUST ALSO INDIVIDUALLY CONTACT OPERATORS OF GRAVITY SEWER SYSTEMS AND CERTAIN OTHER UTILITIES, WHO ARE NOT MEMBERS OF UNDERGROUND SERVICE ALERT.

REVISIONS

NO.	WORK DONE	DATE:	BY:	APP'D:

SAN DIEGO GAS & ELECTRIC COMPANY
SAN DIEGO, CALIFORNIA

SAN JUAN CAPISTRANO SUBSTATION

TRAFFIC CONTROL PLAN

DRAWN BY: CGV	DATE: 3/27/15	SCALE AS NOTED	W.O.: 5984480	REV:	
CHECKED BY:	DATE:				
APPROVED BY:	DATE:				SJC-TC-1
CAD NO:	PLOT SCALE: 1 = 1				

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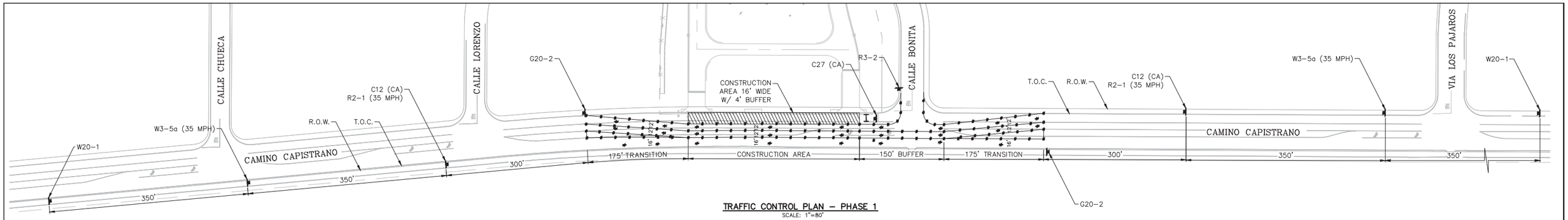
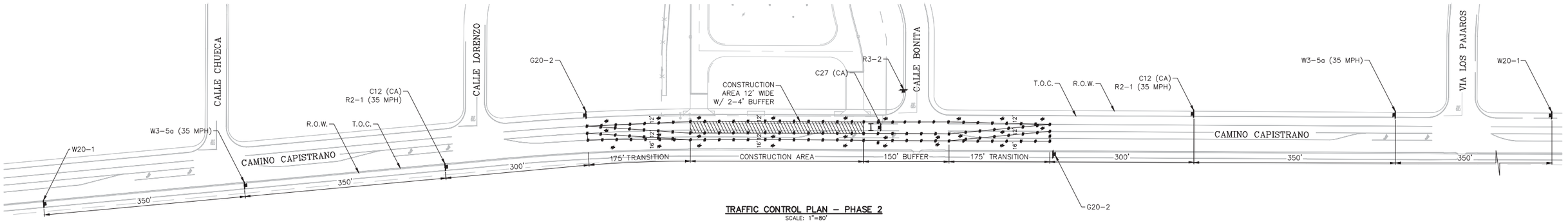


TRAFFIC CONTROL PLAN – PHASE 1
SCALE: 1"=80'



TRAFFIC CONTROL PLAN – PHASE 2
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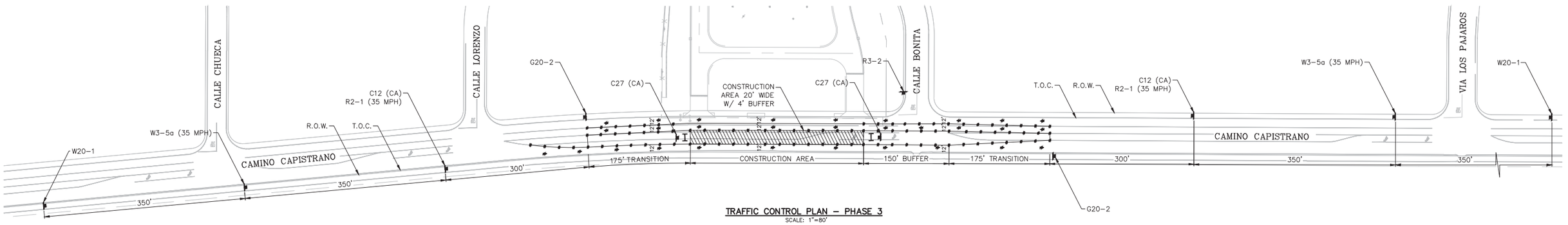
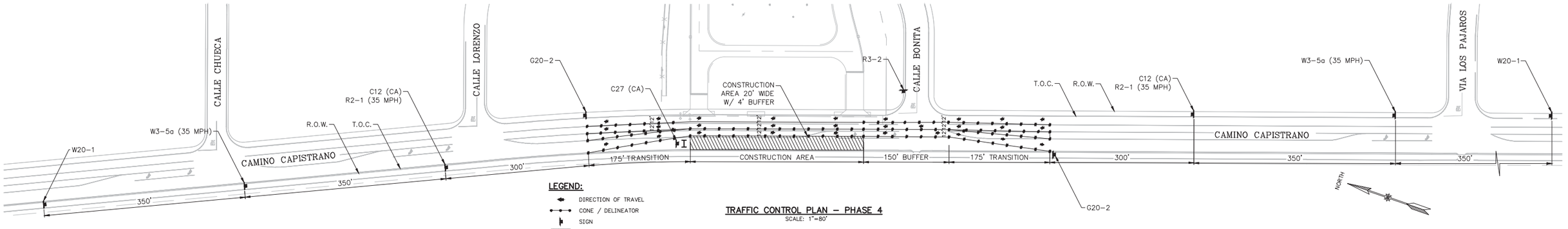


TRAFFIC CONTROL PLAN – PHASE 3
SCALE: 1"=80'



TRAFFIC CONTROL PLAN – PHASE 4
SCALE: 1"=80'

LEGEND:

- DIRECTION OF TRAVEL
- CONE / DELINEATOR
- SIGN
- WORK AREA
- CHANGEABLE MESSAGE SIGN

REVISIONS

NO.	WORK DONE	DATE:	BY:	APP'D:	NO.	WORK DONE	DATE:	BY:	APP'D:	NO.	WORK DONE	DATE:	BY:	APP'D:	NO.	WORK DONE	DATE:	BY:	APP'D:

SAN DIEGO GAS & ELECTRIC COMPANY
SAN DIEGO, CALIFORNIA

SAN JUAN CAPISTRANO SUBSTATION

TRAFFIC CONTROL PLAN

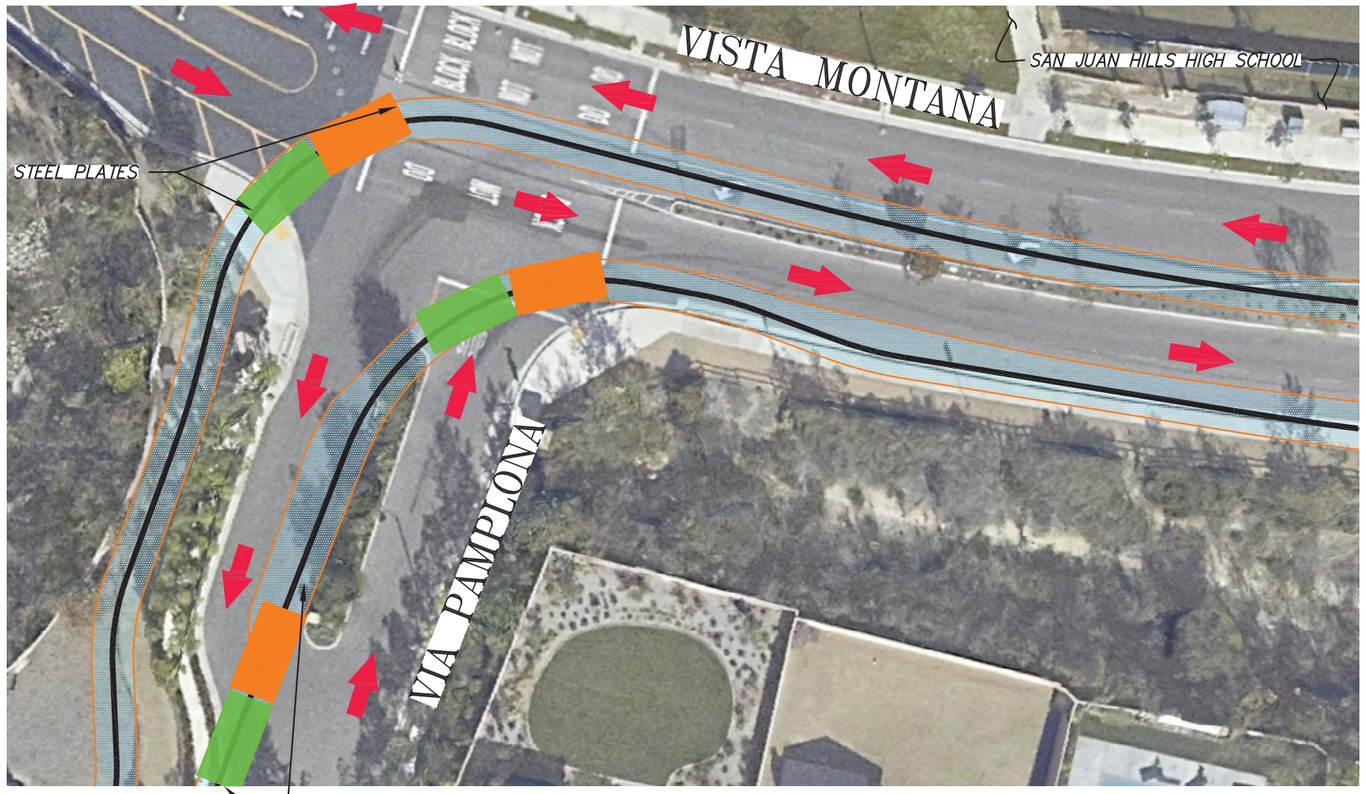
DRAWN BY: CGV	DATE: 3/27/15	SCALE AS NOTED	W.O.: 5984480	REV: –	
CHECKED BY:	DATE:				
APPROVED BY:	DATE:				SJC–TC–2
CAD NO: –	PLOT SCALE: 1 = 1				

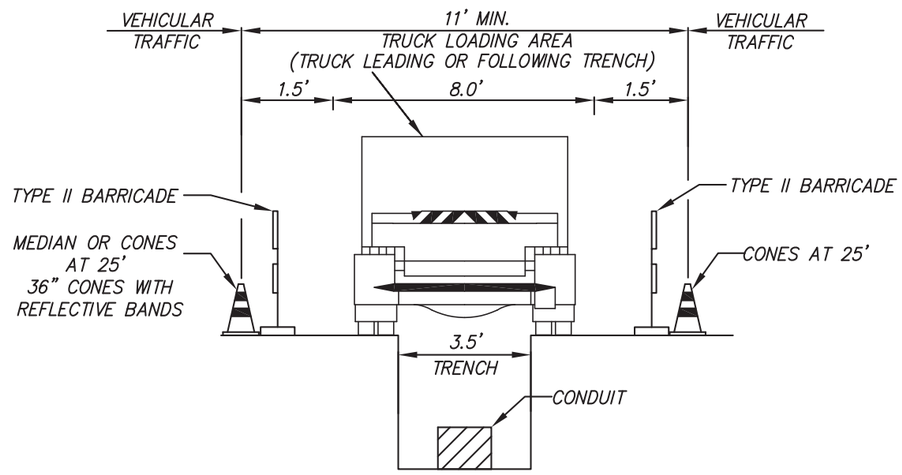
Mar. 27, 2015 – 17:30:09

VISTA MONTANA 230KV

GENERAL NOTES

1. IN MAKING OPEN CUT ROAD CROSSINGS, THE CONTRACTOR SHALL NOT BLOCK MORE THAN ONE HALF OF THE ROAD AT A TIME. ONE LANE OF TRAFFIC IN EACH DIRECTION MUST BE MAINTAINED AT ALL TIMES.
2. OPEN TRENCH LIMITED BY CONSTRUCTION, 150' – 300' PER DAY.
3. CONSTRUCTION ACTIVITIES LIMITED TO ONE LANE ONLY.
4. CONSTRUCTION ACTIVITIES TO CROSS DRIVEWAY IN TWO PHASES TO MAINTAIN ACCESS.





A TYPICAL TRENCH WITH TRUCK LOADING AREA LEADING OR FOLLOWING TRENCH
NO SCALE

LEGEND

- PROPOSED 230KV ℄ TRENCH
- VEHICULAR TRAFFIC
- TRUCK LOADING AREA
- STEEL PLATES PHASE 1
- STEEL PLATES PHASE 2

GRAPHIC SCALE
0' 20' 40' 80'
SCALE 1"= 40'

VISTA MONTANA 230KV
ACCESS ROUTE

N:\SDGE\R071091\S080059\CADD\EXHIBIT\TC-PRELIMINARY C3D.DWG 3/20/2015

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Appendix R

Electrical Engineering Memorandums

R-1: ZGlobal Memorandum

R-2: Stephenson Engineering Memorandum

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South Orange County
Reliability Enhancement Project

CPCN Application No. A.12-05-020

Trabuco Alternative
A Power Flow Analysis

For
Ecology and Environment, Inc.

By
ZGlobal, Inc.

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www.zglobal.biz

February, 2016

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Introduction

Currently, the 480 MW of demand in the South Orange County service area is supplied by the existing 230-kV transmission network at SDG&E's Talega Substation. Power is supplied from the Talega 230/138kV Substation and is transmitted to seven distribution substations which are: Capistrano, Laguna Niguel, Margarita, Pico, San Mateo, Rancho Mission Viejo, and Trabuco over a 138-kV transmission network. If a contingency occurs, requiring the Talega 230 kV or 138 kV bus to be removed from service, power flow to South Orange County may be interrupted dependent upon the severity of the outage or contingency.

The objectives of the South Orange County Reliability enhancement Project (SOCRE or proposed project) are:

- Reduce the risk of instances that could result in the loss of power to customers served by the South Orange County 138-kV System through the 10-year planning horizon;
- Replace inadequate equipment at Capistrano Substation; and
- Redistribute power flow of the applicant's South Orange County 138-kV System such that operational flexibility is increased.

The primary components of the proposed project would include:

- Rebuilding and upgrading the 138/12-kilovolt (kV), 60-megavolt ampere (MVA), air-insulated Capistrano Substation as a 230/138/12-kV 700-MVA gas-insulated substation (GIS) that would be named "San Juan Capistrano Substation;"
- Replacing a single-circuit 138-kV transmission line between the applicant's Talega and Capistrano substations with a new double-circuit 230-kV transmission line (approximately 7.8 miles long);
- Relocating several transmission line segments (approximately 1.8 miles total) adjacent to the Talega and Capistrano substations to accommodate the proposed Capistrano Substation expansion and new 230-kV line; and
- Relocating several 12-kV distribution lines segments (approximately 6 miles) into underground conduit and overhead on existing and new structures located between the Capistrano Substation and Prima Deshecha Landfill.

A detailed description of the proposed project and further discussion of the objectives for the proposed project are provided in the SOCRE Draft EIR[1].

The Draft EIR (DEIR) and Recirculated Draft EIR (RDEIR) identified 12 alternatives to the SOCRE project:

1. Alternative A – No Project
2. Alternative B1 – Reconductor Laguna Niguel–Talega 138 kV Line
3. Alternative B2 – Use of Existing Transmission Lines (Additional Talega–Capistrano 138 kV Line)

[1] http://www.cpuc.ca.gov/Environment/info/ene/socre/attachment/Recirculated%20Draft%20SOCRE%20EIR.pdf

4. Alternative B3 – Phased Construction of Alternatives B1 and B2
5. Alternative B4 – Rebuild South Orange County 138 kV System
6. Alternative C1 – SCE 230 kV Loop-in to Capistrano Substation
7. Alternative C2 – SCE 230 kV Loop-in to Capistrano Substation Routing Alternative
8. Alternative D – SCE 230 kV Loop-In to Reduced-Footprint Substation at Landfill
9. Alternative E – New 230 kV Talega–Capistrano Line Operated at 138 kV
10. Alternative F – 230 kV Rancho Mission Viejo Substation Work Planned at Rancho Mission Viejo Substation
11. Alternative G – New 138 kV San Luis Rey–San Mateo Line and San Luis Rey Substation Expansion
12. Alternative J – SCE 230 kV Loop In to Trabuco Substation

Trabuco Alternative

Alternative J – SCE 230 kV Loop In to the Trabuco Substation (Trabuco alternative) was identified by the public during the Draft EIR public comment period. This alternative would effectively expand the existing 138/12-kV Trabuco Substation into a 230/138/12-kV substation wherein an additional 230 kV energy source from one of the SONGS-Santiago 230 kV lines would be interconnected to enhance the reliability associated with supporting the loads connected to the South Orange County 138 kV area network. Refer to **Figure 1a** - Trabuco Alternative Conceptual Site Plan.

This report provides, from a power flow analysis perspective, the results of a direct comparison of the SOCRE Project to the Trabuco Alternative, the looping in of SCE's SONGS-Santiago 230 kV transmission line into the Trabuco Substation. It does not purport to be a thorough long-term planning analysis as conducted by the applicant and the CAISO, but rather applies three distinct configurations; No Project (current conditions); the Proposed Project (SOCRE); and the Trabuco Alternative configuration for a direct comparative analysis utilizing CAISO/SDG&E Transmission Planning base cases. Using this approach takes advantage of CAISO's regional planning process wherein load forecasts, generation resources and dispatch, contingencies, infrastructure topologies, applications of special protection schemes (SPS), renewable energy penetration, etc. are determined by the CAISO in collaboration with SDG&E and other entities (such as the CPUC, CEC, and other stakeholders) during the study plan development of the overall Transmission Planning Process (TPP).

The Trabuco alternative includes looping in one of SCE's SONGS-Santiago 230 kV transmission lines into the Trabuco 138/12 kV distribution substation and will require an expansion of the existing substation to accommodate the 230 kV infrastructure.

Under this alternative, the applicant would expand its existing 138/12-kV Trabuco Substation in Laguna Niguel into a 230/138/12-kV substation. The applicant would construct a 230-kV breaker and ½ scheme switchyard to loop-in the SONGS-Santiago 230 kV transmission line and include two 230/138-kV transformers with capacity to support the SOC load. Refer to Figure 1a for the Trabuco Alternative Conceptual Site Plan. This plan does not depict a full breaker and ½ bus scheme, however, it does provide the conceptual view of integrating a 230 kV bus and breaker yard as an extension to the existing Trabuco substation.

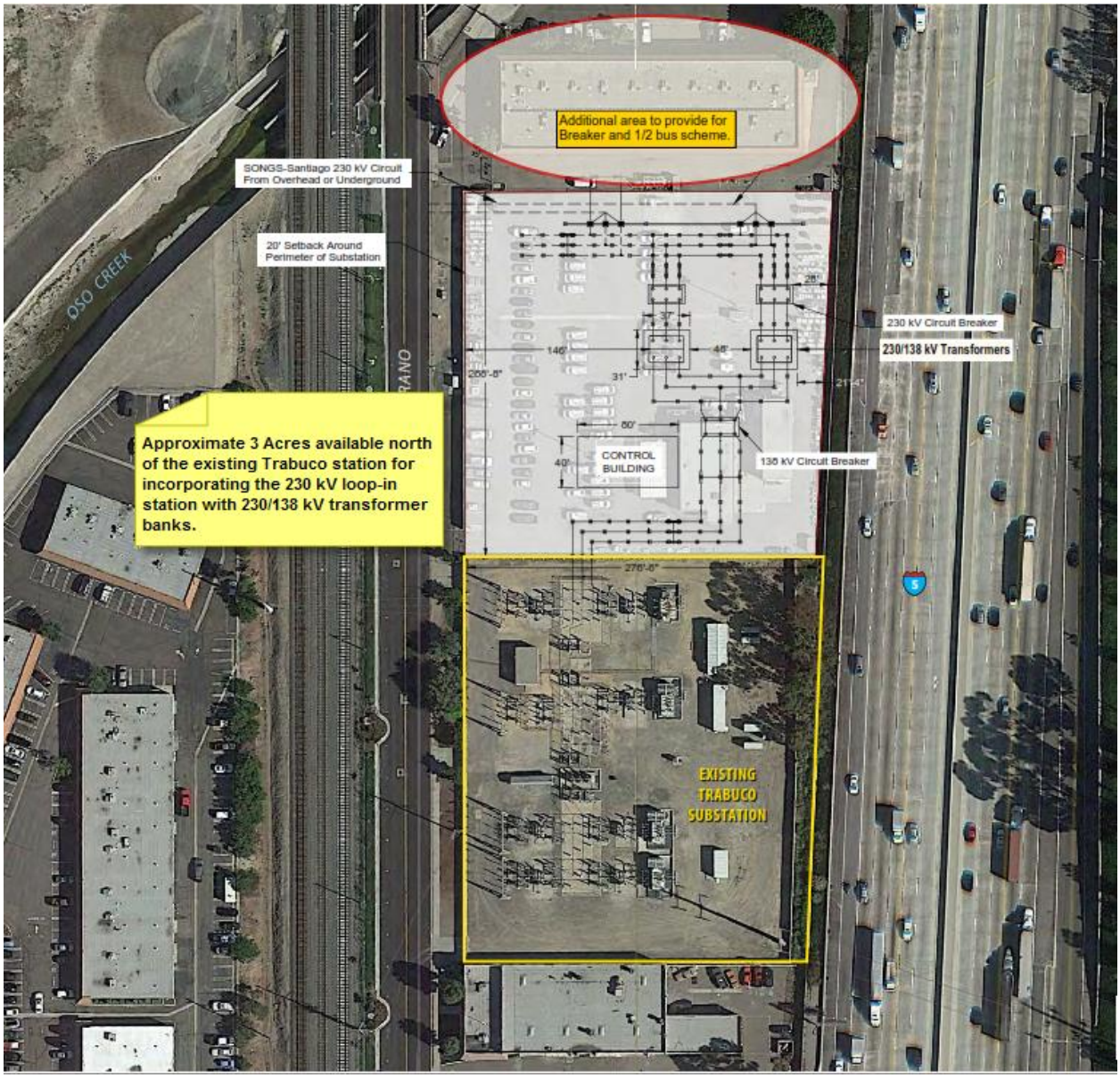

Figure 1a - Trabuco Alternative Conceptual Site Plan

The applicant would acquire minimally approximately 2 acres of land, currently owned by AT&T, adjacent to the north side of the existing Trabuco Substation for the construction and operation of the 230-kV switchyard. A new overhead or underground transmission line segment (approximately 0.5 miles long) would be constructed within a new ROW that would loop SCE's Santiago–SONGS 230-kV line into the expanded substation. The new 230-kV transmission loop-in line would either exit the Trabuco Substation to the north in a new underground conduit along Camino Capistrano to connect to the Santiago–SONGS 230-kV line or exit the Trabuco Substation to the east overhead across Interstate 5, then into a new underground conduit along La Alameda, Los Altos, and Plaza and Bellogente roads to connect to the Santiago–SONGS 230-kV line. Refer to Figure 1b. The Santiago–SONGS 230-kV line would then become two new transmission lines: the Trabuco-SONGS 230-kV transmission line and the Trabuco-Santiago 230-kV transmission line.

Major modifications to the existing Trabuco Substation would not be required as part of this alternative because the existing 138/12-kV equipment has not been identified as aging equipment by the applicant. It is anticipated that the Trabuco 138/12-kV system would remain operational while the new 230/138kV equipment is installed. Any potential disruptions of service would be limited to the time required to establish a physical connection between the new 230/138-kV equipment and the existing 138-kV equipment.

Power Flow Analysis Approach

The Trabuco based alternative for this analysis consists of adding two (2) 230 kV, 392 MVA/468 MVA (Normal/Emergency rating) transformer banks at the substation and looping in one of SCE's existing SONGS-Santiago 230 kV transmission lines which are located approximately 0.5 miles north of Trabuco substation (Figure 1b). Rather than using a single 230/138 kV transformer and a spare, the analysis included use of both 230/138 kV transformers connected in parallel.

Figure 1b – Trabuco Area Map

The SONGS-Santiago 230 kV line becomes two new transmission line segments: the SONGS-Trabuco 230 kV transmission line and the Trabuco-Santiago 230-kV transmission line. Table 1.0 provides the line parameters of the revised line configuration.

Line	Length (miles)	Resistance (per unit)	Reactance (per unit)	Susceptance (per unit)	Capacity Normal/Emergency (MVA)
Existing SONGS-Santiago 230 kV	28.4	0.001630	0.029470	0.115880	1195/1315
SONGS-Trabuco 230 kV	17.1	0.000981	0.0177	0.0698	1195/1315
Trabuco-Santiago 230 kV	11.3	0.000649	0.01173	0.0461	1195/1315

Table 1.0 - Reconfigured SONGS-Santiago line parameters

Power Flow Cases

The following base cases were used for the analysis:

1. A 2017 Summer Peak Reliability base case and associated contingency files from the CAISO's 2015/2016 TPP (CAISO_Reliability 1516_SDGE_2017_SP).
2. The 2025 Summer Peak Reliability base case and associated contingency files from the CAISO's 2015/2016 TPP (CAISO_Reliability 1516_SDGE_2025_SP).
3. The 2024 Policy Driven (Commercial Interest) Summer Peak base case and associated contingency files from the CAISO's 2014/2015 TPP (CAISO_Policy Driven Base case 2024 ISO Peak).

No alterations or adjustments were made to the base cases regarding condition parameters such as generation and load level. The only revisions made were associated with modeling in the Trabuco alternative to conduct a direct performance comparison of one project versus the other.

For reference, Tables 2a, and 2b display the comparative generation and load profiles for each of the base cases. Table 2c displays the combined energy import flows for the Southwest Power Link (*Imperial Valley to Miguel*) and the Sunrise Powerlink (*Imperial Valley to Suncrest*), Path 44 (*SONGS to SDG&E*), and Path 43 (*SONGS to SCE)* for each of the base cases.

Basecase	SDG&E Generation (MW)	SCE Generation (MW)	LADWP Generation (MW)	IID Generation (MW)
CAISO_Reliability 1516_SDGE_2017_SP	3905	14604	5293	1457
CAISO_Reliability 1516_SDGE_2025_SP	4031	15201	5897	2416
CAISO_Policy Driven Base case 2024 ISO Peak	4709	18989	6384	2174

Table 2a – Generation Variances between selected base cases

Basecase	SDG&E South Orange County (SOC) Load (MW)	SDG&E Load (includes SOC Load) (MW)	SCE Load (MW)	LADWP Load (MW)
CAISO_Reliability 1516_SDGE_2017_SP	468	5144	25288	6598
CAISO_Reliability 1516_SDGE_2025_SP	483.6	5255	26572	6978
CAISO_Policy Driven Base case 2024 ISO Peak	428	5000	25158	7465

Table 2b – Load Variances between selected base cases

Basecase	Net Path 43 Flow (MW)	Net Path 44 Flow (MW)	Southwest and Sunrise Powerlink Flow (MW)
CAISO_Reliability 1516_SDGE_2017_SP	-10	-12	2414
CAISO_Reliability 1516_SDGE_2025_SP	18	-184	2894
CAISO_Policy Driven Base case 2024 ISO Peak	599	-717	2889

Table 2c – Path Flow Variances between selected base cases

Note that the negative sign for the Path 43 and 44 values indicates flow direction into the SONGS node. See Figure 2.0 displaying a typical power flow plot for the SONGS and Talega connection.

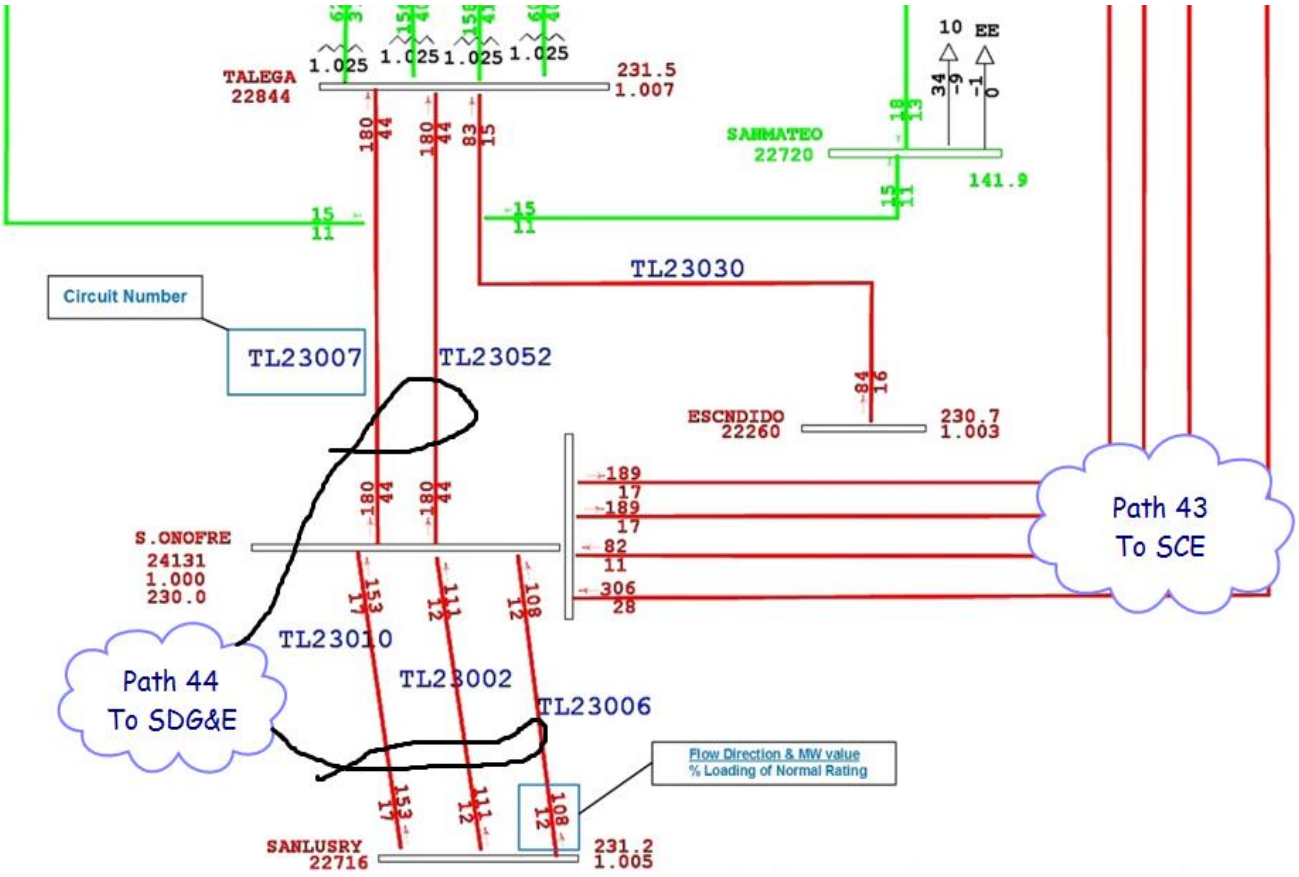

Figure 2.0 – Power Flow Plot sample section Path 43 and Path 44 transmission lines

Table 3.0 provides a breakdown of the base cases and their associated configurations or Case numbers aligned with the particular project (Trabuco alternative, Proposed, or No Project) being analyzed.

Scenario or Case #	Base case name	Base case Description	Notes
A1	Reliab1516_SDGE_2017_SP	Base or Original CAISO (SDG&E) 2017 Reliability Summer Peak base case	From the CAISO 2015/2016 Transmission Planning Process: Reflects current system configurations with no project.
A2	Reliab1516_SDGE_2017_SP_Trabuco	A1 + Trabuco project	Modeled Trabuco alternative into original base case (Case A1).
B1	Reliab1516_SDGE_2025_SP	Base or Original CAISO (SDG&E) 2025 Reliability Summer Peak base case	From the CAISO 2015/2016 Transmission Planning Process: with CAISO approved SOCRE project modeled in base case.
B2	Reliab1516_SDGE_2025_SP_NOSOCRE	B1 + SOCRE project removed	CAISO approved project removed from base case. Base case reflects current system configuration.
B3	Reliab1516_SDGE_2025_SP_NOSOCRE_Trabuco	B2 + Trabuco alternative	Trabuco alternative modeled in base case with SOCRE project removed.
C1	Policy_2024_ISO_Peak_CI_east_v7_masked	Base or Original CAISO Base case	CAISO 2024 Policy Driven (Commercial Interest) base case with 33% renewable penetration with approved SOCRE project modeled in base case.
C2	Policy_2024_ISO_Peak_CI_east_v7_masked_NOSOCRE	Case C1 + SOCRE project removed	SOCRE approved project removed from base case. Base case reflects current system configuration.
C3	Policy_2024_ISO_Peak_CI_east_v7_masked_NOSOCRE_Trabuco	C2 + Trabuco alternative	Trabuco project modeled in base case with SOCRE project removed.

Table 3.0 –Base Case Scenario List

There are three (3) contingency files used to assess the impacts of outages or contingencies associated with these base cases. The contingency files, listed below, were run for each of the 8 different case scenarios. The files were adjusted as necessary to accommodate the topology changes for each of the project scenarios (No Project, Proposed Project and Trabuco Alternative).

1. **SDGE-MAIN_P1~P7** (NERC TPL-001-4 based)

   Contains Category P1 (N-1) 500 kV and 230 kV line and transformer outages; adjacent system (SCE – IID) contingencies; selected generator outages; Category C (N-2) stuck breaker, bus, and common structure outages

2. **SDGE-SUB-N1**

   Contains Sub-System Multiple Terminal line, transformer and generator outages

3. **SDGE-C125-SPS**

   Contains Category C (N-2, bus fault, stuck breaker) Orange Co. contingencies; N-3 for 69 kV and 138 kV bus outages

Analysis Results

Case A1: Reliab1516_SDGE_2017_SP

Case A1 uses the **Reliab1516_SDGE_2017_SP** base case from the CAISO's 2015/2016 transmission planning process.

Case A1 reflects the current system configuration and conditions without the proposed project. Using the contingency files, a steady state power flow analysis was conducted wherein no overloads or voltage violations issues were identified under normal (N-0) conditions or single contingencies (N-1) for Case A1. However, overloads or voltage violations were identified under certain double contingencies (N-2). These double contingencies (N-2)[2] are shown in the Case A1 and A2 results Table 4.0.

Facility								Rated MVA	Outage	Loading		Worst Outage Description	Outage detail
From	Name	kV	To	Name	kV	ck	Type			2017SDGE_NOSOCRE Case A1	2017SDGE_Trabuco Case A2		
22841	LAGNA NL TAP	138	22396	LAGNA NL	138	1	Line	136	13816/13831	116%	72%	CP-PI 1 + TA-RMV 1 138 kV	Line "CAPSTRNO 138" "PICO 138" "1 " & Line "TALEGA 138" "R.MSNVJO 138" "1 "
22808	STUARTTP	69	22400	LASPULGS	69	1	Line	32	TA-4T	114%	97%	TALEGA 230 kV 4T CB	Transormer "TALEGA 230" "TALEGA 138" "2 " & Transformer "TALEGA 230" "TALEGA 138" "4 "
22844	TALEGA	230	22840	TALEGA	138	1	Tran	195	TA-4T	113%	60%	TALEGA 230 kV 4T CB	Transormer "TALEGA 230" "TALEGA 138" "2 " & Transformer "TALEGA 230" "TALEGA 138" "4 "
22844	TALEGA	230	22840	TALEGA	138	3	Tran	192	TA-4T	111%	59%	TALEGA 230 kV 4T CB	Transormer "TALEGA 230" "TALEGA 138" "2 " & Transformer "TALEGA 230" "TALEGA 138" "4 "
22840	TALEGA	138	22842	TA TAP33	138	1	Line	273	TA-8T	106%	69%	TALEGA 138 kV 8T CB	Line "TALEGA 138" "R.MSNVJO 138" "1 " & Line "TALEGA 138" "PICO 138" "1 "
22656	PICO	138	22842	TA TAP33	138	1	Line	273	TA-8T	103%	65%	TALEGA 138 kV 8T CB	Line "TALEGA 138" "R.MSNVJO 138" "1 " & Line "TALEGA 138" "PICO 138" "1 "
22112	CAPSTRNO	138	22656	PICO	138	1	Line	201	13835/13831	96%	60%	TA-TA TAP33-PICO 1 + TA-RMV 1 138 kV	Line "LAGNA NL TAP " "TALEGA 138" "1 " & Line "LAGNA NL TAP " "SANMATEO 138" "1 " & Line "TALEGA 138" "R.MSNVJO 138" "1 "

Table 4.0 – Power Flow Results for Case A1 and A2

The worst overload displayed is the Laguna Niguel Tap to Laguna Niguel 138 kV line (116% of the emergency rating of the line) with the double line outage of the Capistrano-Pico and Talega-Rancho Mission Viejo 138 kV lines. A presumption is that these overloads are currently being mitigated with specific SPS applications.

Case A2: Reliab1516_SDGE_2017_SP_Trabuco

Case A2 reflects all the same configurations and parameters as Case A1 with the Trabuco alternative modeled into the base case. As shown in Table 4.0, the Trabuco alternative would mitigate the overloads or voltage violations identified under the current system configuration (Case A1). Under Case A2, no overloads or voltage violations were exposed under N-1 or N-2 contingencies.

Conclusion for A1 & A2

Integrating the Trabuco alternative (Case A2) removed the Category C (N-2) overloads or voltage violations in the South Orange county area. The worst contingency loading decreased from 116% to 72% with the Trabuco alternative.

This initial exercise (comparing the Trabuco alternative to current conditions) is a procedural step in the effort to compare and contrast the current system configuration with the Trabuco alternative (current and long-term). Figures 3.0 and 4.0 show power flow plots for Case A1 and A2 respectively. The contingency power flow plots are located in Appendix A.

[2] NERC refers to these as "Category C" contingencies.

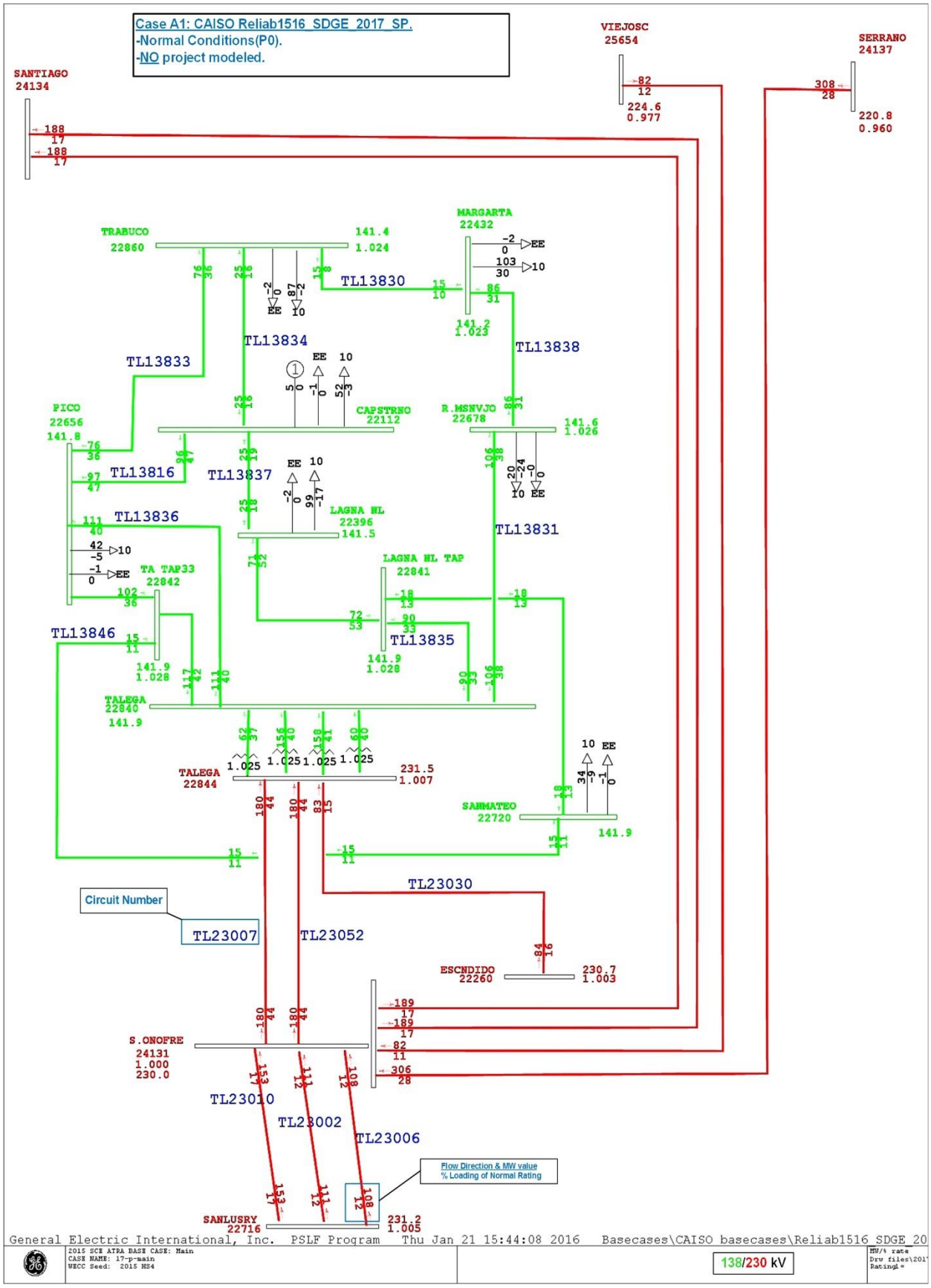

Figure 3.0 – Case A1 Normal Conditions Power Flow Plot

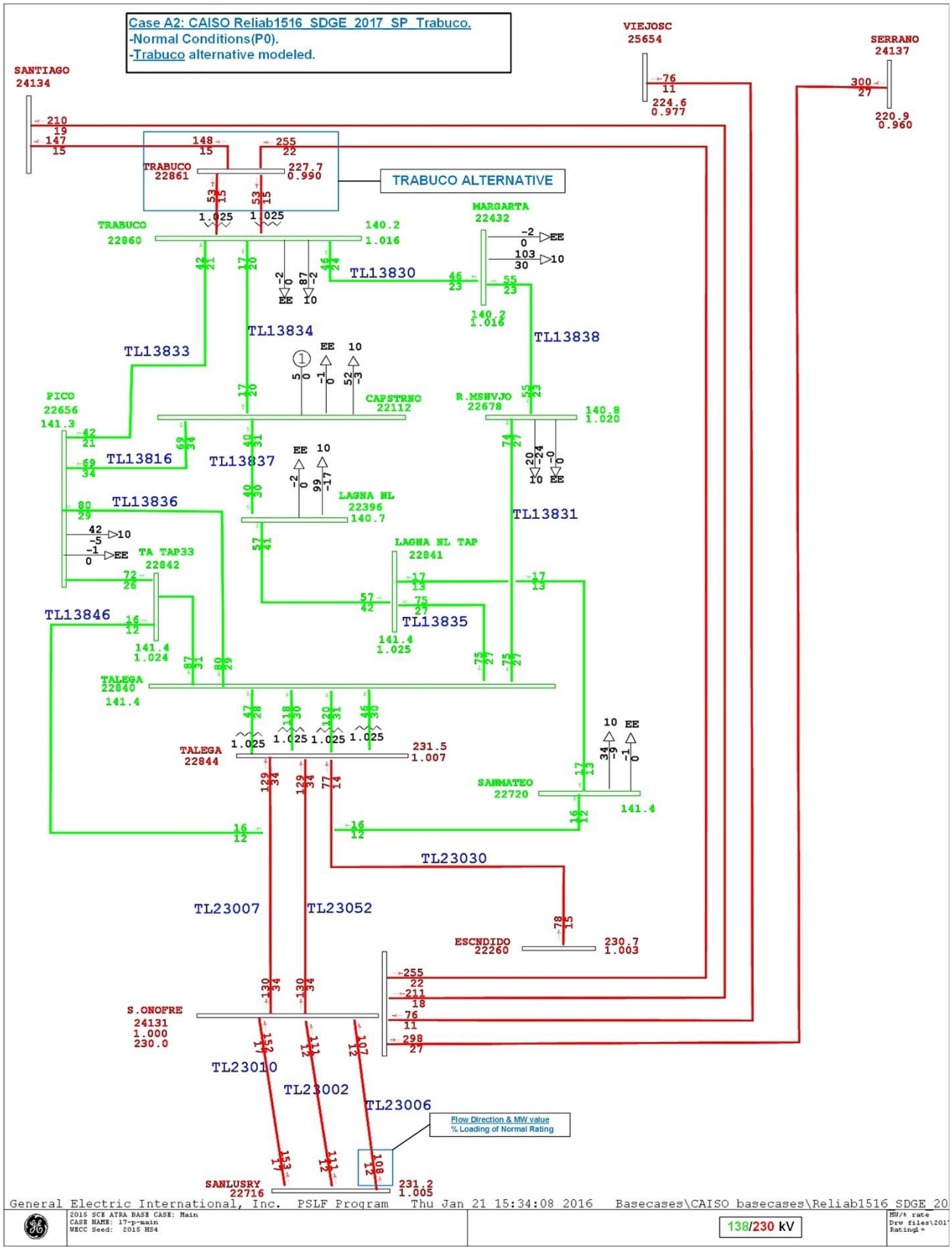

Figure 4.0 – Case A2 (Trabuco Alternative) Normal Conditions Power Flow Plot

Case B1, B2, and B3

Case B1 is the CAISO (SDG&E) 2025 Reliability Summer Peak base case (**Reliab1516_SDGE_2025_SP)** from the CAISO 2015/2016 Transmission Planning Process. Case B1 contains the CAISO approved Proposed Project in the base case. Under Case B1, no overloads or voltage violations were exposed under N-1 or/and N-2 contingencies.

Case B2 effectively removes the proposed project from the topology, returning the circuitry to its current system configuration. The same contingency files were incorporated into Case B2 (no other topology, load, generation, or other parameters were adjusted in the case). Under Case B2, several overloads or voltage violations were exposed under N-2 contingencies. Refer to Table 5.0 for a list of the contingency results. No overloads or voltage violations issues were identified under single contingencies (N-1) for Case B2.

Case B3 uses the Case B2 model and incorporates the Trabuco alternative configuration. As shown in Table 5.0, the Trabuco alternative would mitigate the overloads identified under Case B2 (current system configuration). Under Case B3, no overloads or voltage violations were exposed under N-1 or/and N-2 contingencies.

Facility								Rated MVA	Outage	Loading		Worst Outage description	Outage Detail
From	Name	kV	To	Name	kV	ck	Type			2025SDGE_NoProject Case B2	2025SDGE-Trabuco Case B3		
22844	TALEGA	230	22840	TALEGA	138	1	Tran	195	TA-4T	120%	64%	TALEGA 230 kV 4T CB	Transormer "TALEGA 230" "TALEGA 138" "2 " & Transformer "TALEGA 230" "TALEGA 138" "4 "
22844	TALEGA	230	22840	TALEGA	138	1	Tran	195	TA-4W	120%	64%	TALEGA 230 kV 4W CB	Transormer "TALEGA 230" "TALEGA 138" "2 " & Transformer "TALEGA 230" "TALEGA 138" "4 "
22844	TALEGA	230	22840	TALEGA	138	1	Tran	195	TA-5W	119%	61%	TALEGA 138 kV 5W CB	Transformer "TALEGA 138" "TALEGA 69" "1 " & Transformer "TALEGA 230" "TALEGA 138" "2 " & Transformer "TALEGA 230" "TALEGA 138" "4 "
22844	TALEGA	230	22840	TALEGA	138	3	Tran	192	TA-4T	118%	63%	TALEGA 230 kV 4T CB	Transormer "TALEGA 230" "TALEGA 138" "2 " & Transformer "TALEGA 230" "TALEGA 138" "4 "
22844	TALEGA	230	22840	TALEGA	138	3	Tran	192	TA-4W	118%	63%	TALEGA 230 kV 4W CB	Transormer "TALEGA 230" "TALEGA 138" "2 " & Transformer "TALEGA 230" "TALEGA 138" "4 "
22844	TALEGA	230	22840	TALEGA	138	3	Tran	192	TA-5W	116%	60%	TALEGA 138 kV 5W CB	Transformer "TALEGA 138" "TALEGA 69" "1 " & Transformer "TALEGA 230" "TALEGA 138" "2 " & Transformer "TALEGA 230" "TALEGA 138" "4 "
22860	TRABUCO	138	22656	PICO	138	1	Line	204	13816/13831	113%	57%	CP-PI 1 + TA-RMV 1 138 kV	Line "CAPSTRNO 138" "PICO 138" "1 " & Line "TALEGA 138" "R.MSNVJO 138" "1 "
22840	TALEGA	138	22842	TA TAP33	138	1	Line	273	TA-8T	116%	74%	TALEGA 138 kV 8T CB	Line "TALEGA 138" "R.MSNVJO 138" "1 " & Line "TALEGA 138" "PICO 138" "1 "
22842	TA TAP33	138	22656	PICO	138	1	Line	273	TA-8T	113%	70%	TALEGA 138 kV 8T CB	Line "TALEGA 138" "R.MSNVJO 138" "1 " & Line "TALEGA 138" "PICO 138" "1 "
22841	TA TAP	138	22396	LAGNA NL	138	1	Line	136	13816/13831	102%	67%	CP-PI 1 + TA-RMV 1 138 kV	Line "CAPSTRNO 138" "PICO 138" "1 " & Line "TALEGA 138" "R.MSNVJO 138" "1 "

Table 5.0 - Power Flow Results for Case B2 and B3

The purpose of this comparison is to display the viability of the Trabuco alternative to mitigate reliability violation relative to current conditions. A second 230 kV source connecting to the Trabuco substation significantly off-loads the Talega substation. For Case B3 there were no 230 kV, 138 kV, or 69 kV reliability violation in this exercise. Refer to Figure 5.0, 6.0, and 7.0 for the Normal Conditions power flow plots for Case B1, B2, and B3 respectively.

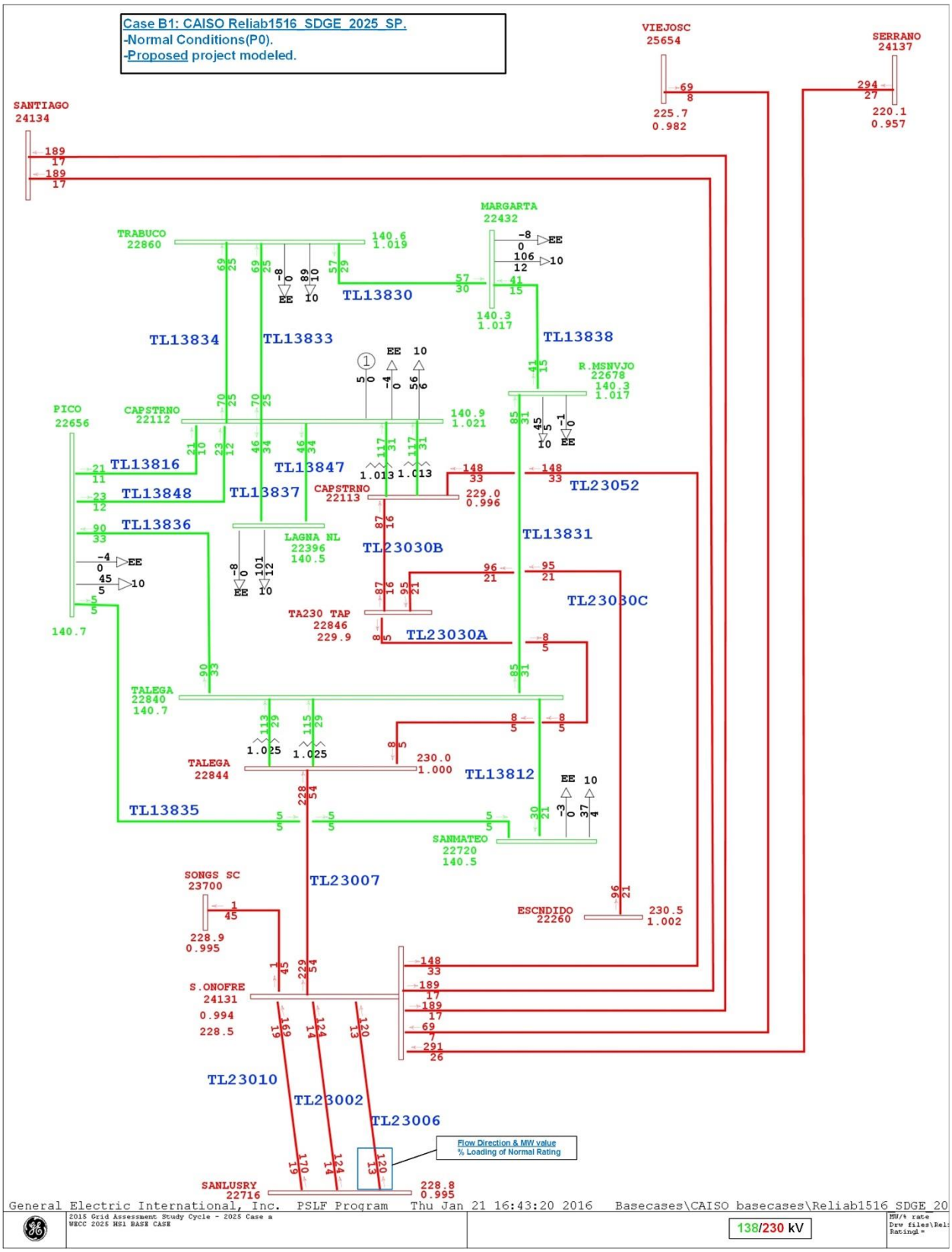

Figure 5.0 – Case B1 Normal Conditions Power Flow Plot

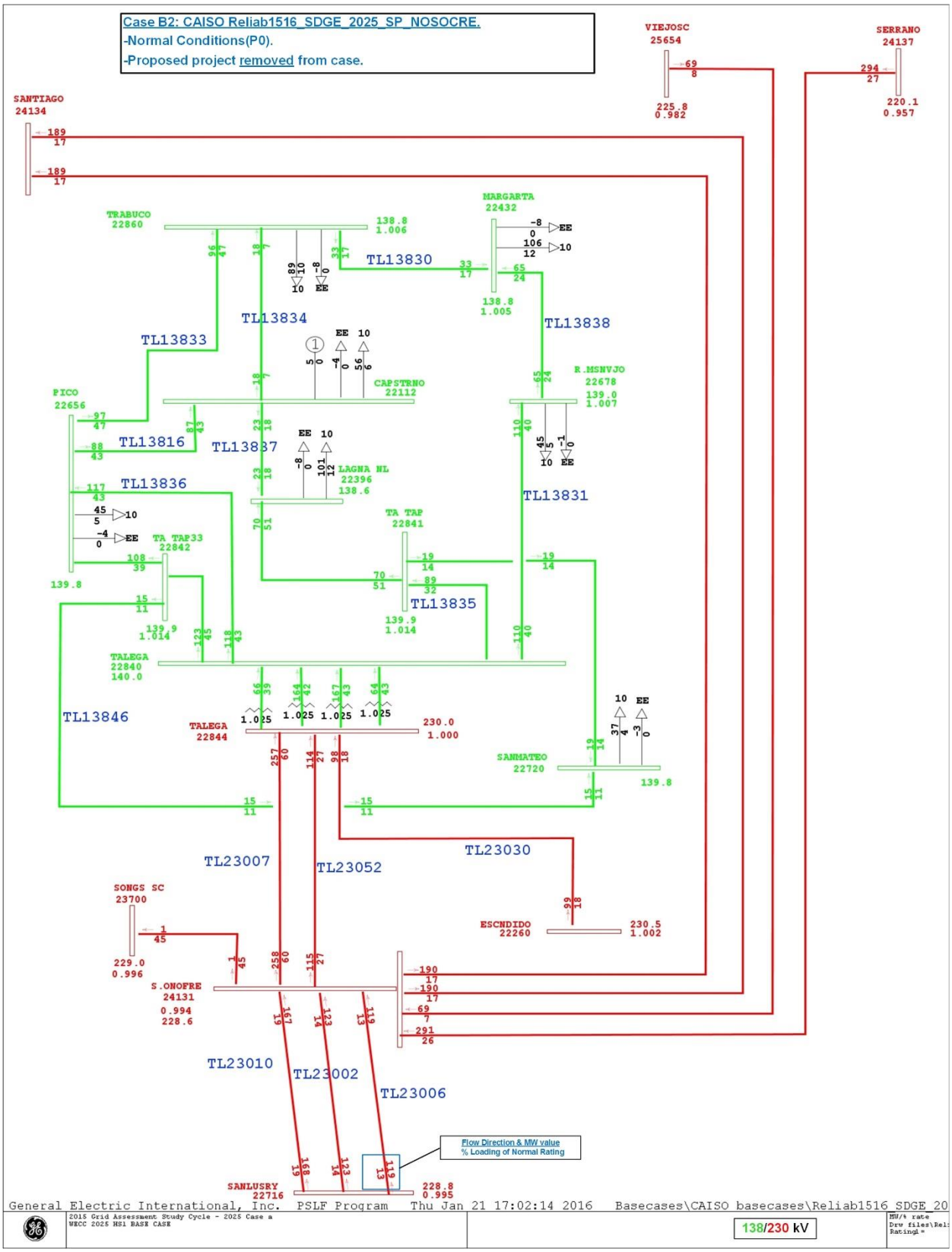

Figure 6.0 – Case B2 Normal Conditions Power Flow Plot

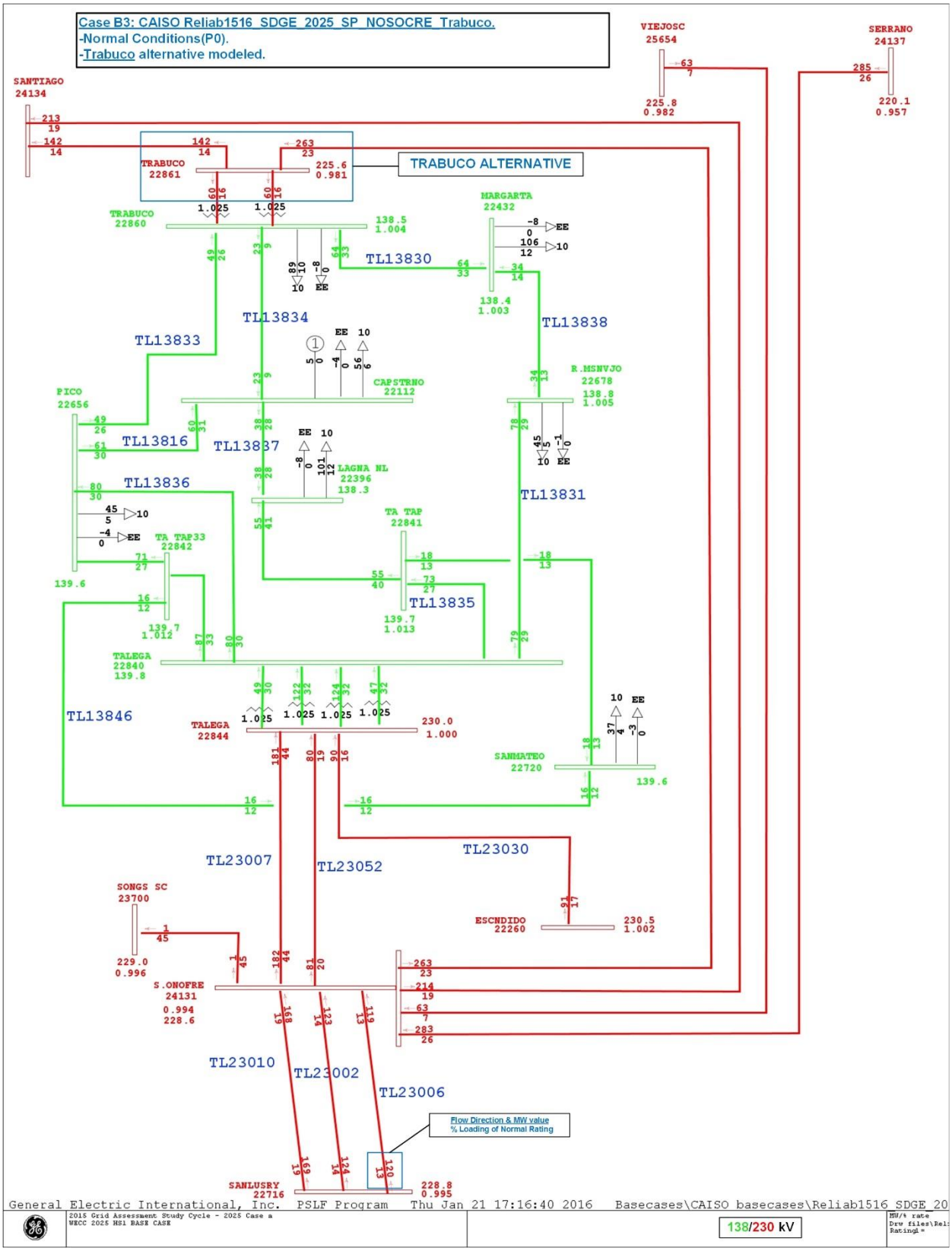

Figure 7.0 – Case B3 Normal Conditions Power Flow Plot

Case C1, C2, and C3

Case C1 is the CAISO's 2024 Policy Driven – Commercial Interest base case with 33% RPS renewable penetration. Case C1 contains the proposed project in the base case. Under Case C1, an overload of the Bernardo-Felicita Tap 69 kV line would occur under an N-2 contingency of the Palomar-Escondido 230 kV line #1 and #2. This line overload may be currently addressed in the 2015/2016 transmission planning process.

Case C2 removed the proposed project from the topology, returning the circuitry to its current system configuration. The same contingency files were incorporated into Case C2 (no other topology, load, generation, or other parameters were adjusted in the case). Under Case C2 and similar to Case C1, an overload of the Bernardo-Felicita Tap 69 kV line would occur under an N-2 contingency of the Palomar-Escondido 230 kV line #1 and #2. Refer to Table 6.0 for a list of the contingency results.

Case C3 uses the Case C2 model and incorporates the Trabuco alternative configuration. Under Case C3 and similar to Case C1 and Case C2, an overload of the Bernardo-Felicita Tap 69 kV line would occur under an N-2 contingency of the Palomar-Escondido 230 kV line #1 and #2. Table 6.0 shows the overload of the Bernardo-Felicita Tap 69 kV line would be slightly reduced under the Trabuco alternative (Case C3) compared to the proposed project (Case C1).

Facility								Rated MVA	Outage	Loading			Worst Outage Description	Outage Detail
From	Name	kV	To	Name	kV	ck	Type			2024SDGE Case C1	2024SDGE_NOSOCRE Case C2	2024SDGE-Trbco Case C3		
22056	BERNARDO	69	22284	FELCTATP	69	1	Line	102	23014/23015	107%	102%	102%	PEN-ES #1 + #2 230 kV	Line "PEN 230" "ESCNDIDO 230" "1" & Line "PEN 230" "ESCNDIDO 230" "2"
22844	TALEGA	230	22840	TALEGA	138	1	Tran	195	TA-4T	NA	96%	62%	TALEGA 230 kV 4T CB	Transformer "TALEGA 230" "TALEGA 138" "2" & Transformer "TALEGA 230" "TALEGA 138" "4"

Table 6.0 - Power Flow Results for Case C1, C2 and C3

Refer to Figures 8.0, 9.0, and 10.0 for the Normal Conditions power flow plots for C1, C2, and C3 respectively.

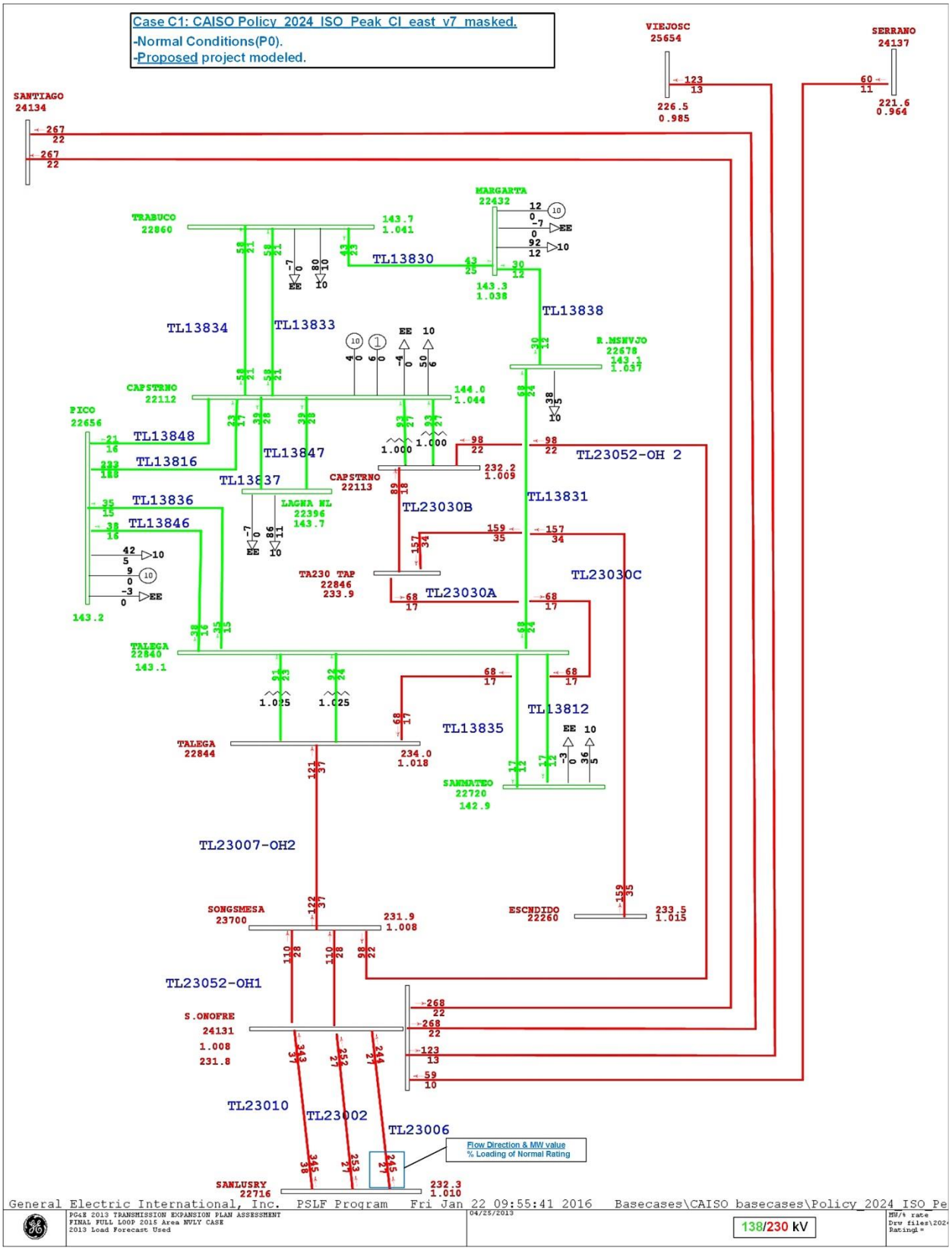

Figure 8.0 – Case C1 Normal Conditions Power Flow Plot

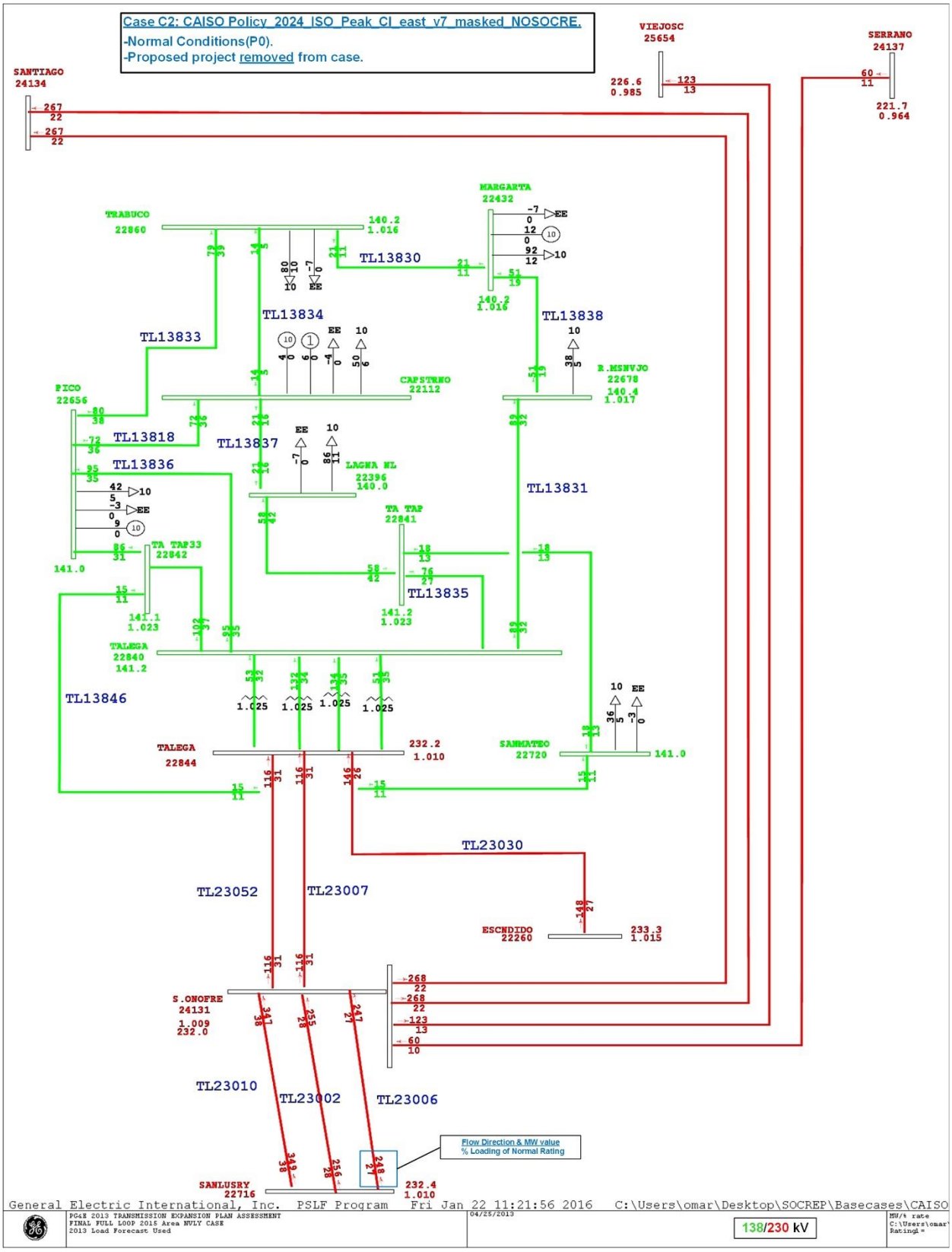

Figure 9.0 – Case C2 Normal Conditions Power Flow Plot

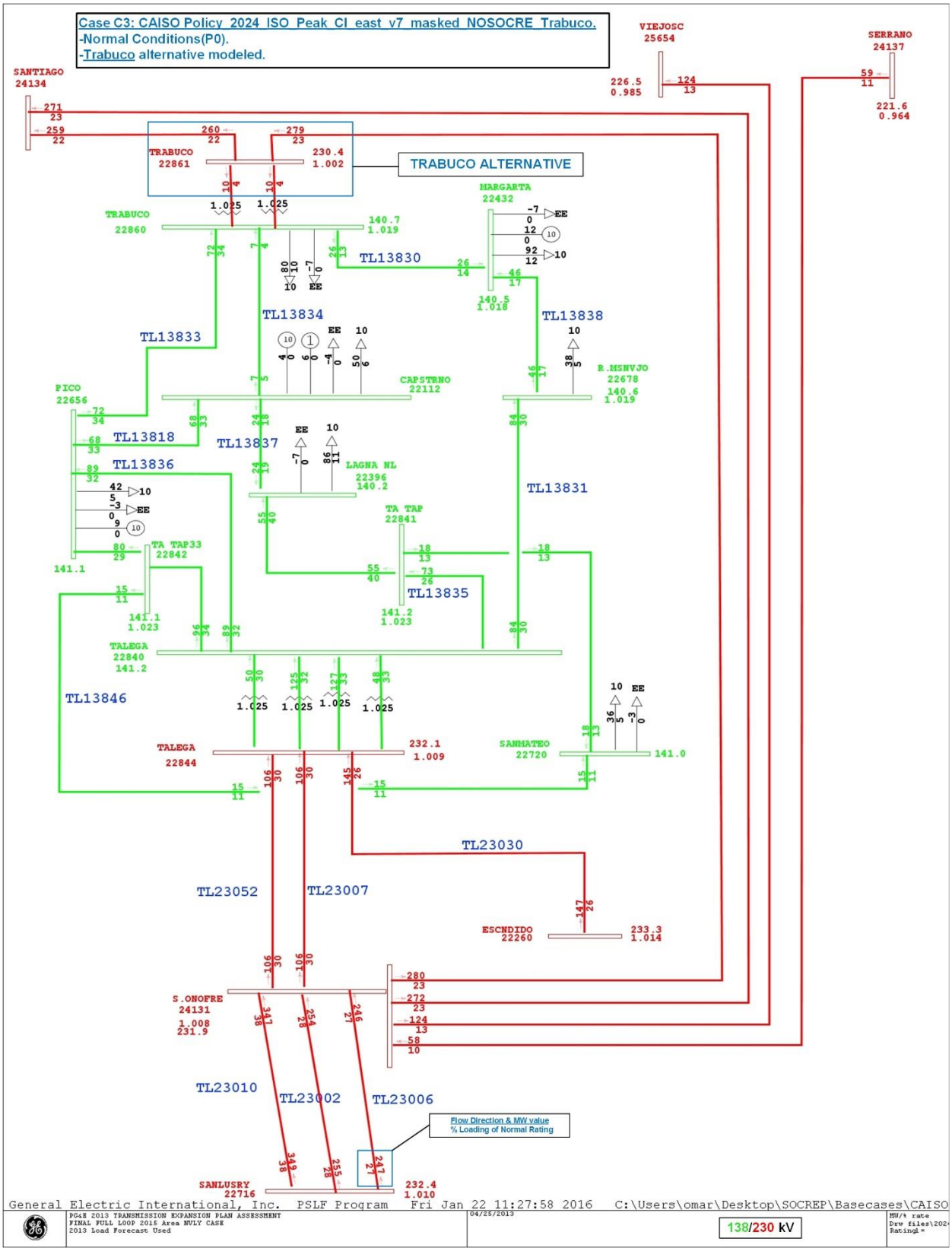

Figure 10.0 – Case C3 Normal Conditions Power Flow Plot

Summary Conclusions

- **The Trabuco Alternative is technically feasible** given the configuration of the Trabuco Alternative wherein an additional or alternative 230 kV energy source provides support and an increase in the reliability of the South Orange County 138 kV network.

- **The Trabuco Alternative reduces or eliminates** potential overloads caused by multiple outages (N-2/Cat. C) in the South Orange County System at a level that meets or exceeds outage reduction realized by the SOCRE project, as indicated from this analysis and assumptions.

- **Strategic cost estimating for the Trabuco Alternative** is presumed to be lower than the estimated cost of the Proposed Project as the Trabuco Alternative utilizes existing 138 kV/12 kV infrastructure and does not require the wholesale replacement and new build as does the Proposed Project's San Juan Capistrano substation. Estimates utilizing SDG&E's Per Unit Cost Guide for 2016 as posted on the CAISO website assumes an SDG&E designed breaker and ½ bus scheme for looping in the SONGS-Santiago 230 kV line and connections to two 230/138 kV transformers. Assuming an additional 50% contingency (*beyond the already figured in 35% contingency of the Unit Cost methodology*) provides a cost estimate significantly lower than the Proposed Project's nearly $400M cost estimate.

  Note: *costs associated with any new ROW, land acquisition, environmental and licensing would need to be included. Additionally, possible impacts, upgrades and/or mitigation of SCE owned transmission circuits, such as the Ellis and Santiago substation ratings increase identified by the CAISO, also exist with the proposed SOCRE project according to the CAISO (refer to Witness Testimony of Robert Sparks of October 2, 2015)*[3].

- **This Trabuco Alternative analysis did not identify need for upgrading of any of the 138 kV transmission circuits.** The Trabuco Alternative provides an alternative or additional 230 kV source to the South Orange County 138 kV system, improves reliability, and utilizes the existing 138/12 kV infrastructure at the Trabuco Substation.

[3] http://www.caiso.com/Documents/Oct22015SupplementalRebuttalTestimonyofRobertSparks-SouthOrangeCountyReliabilityEnhancementProjectA1205020.pdf

APPENDIX A – Contingency Power Flow Plots

Contingency Power Flow Plots

Plot #	Description	Page #
1	Case A1; P6-2 Contingency – Loss of Two 230/138 kV Talega Transformers	23
2	Case A1; P6-2 Contingency – Loss of Two 138 kV lines (*Ckt # 13816 & 13831*)	24
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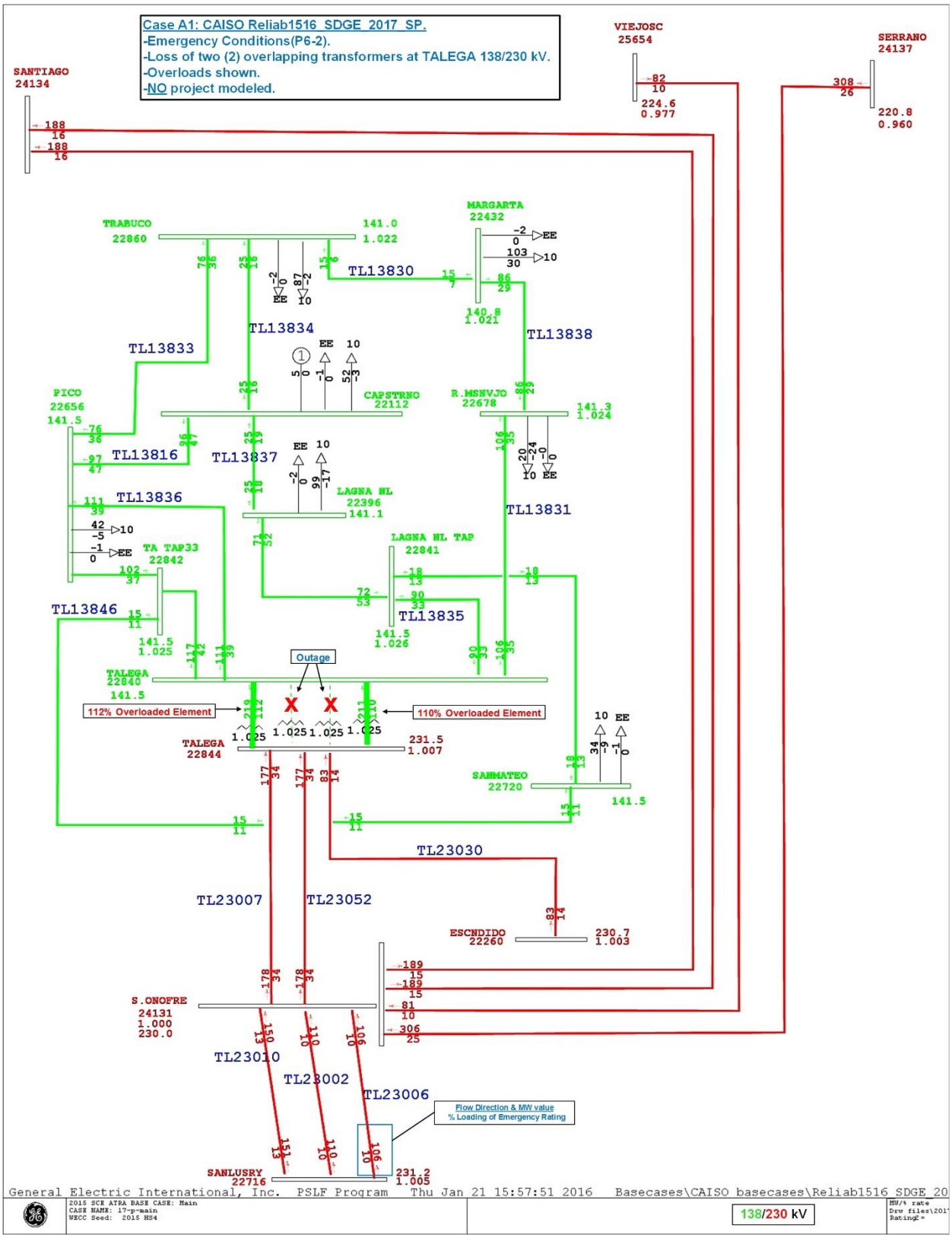
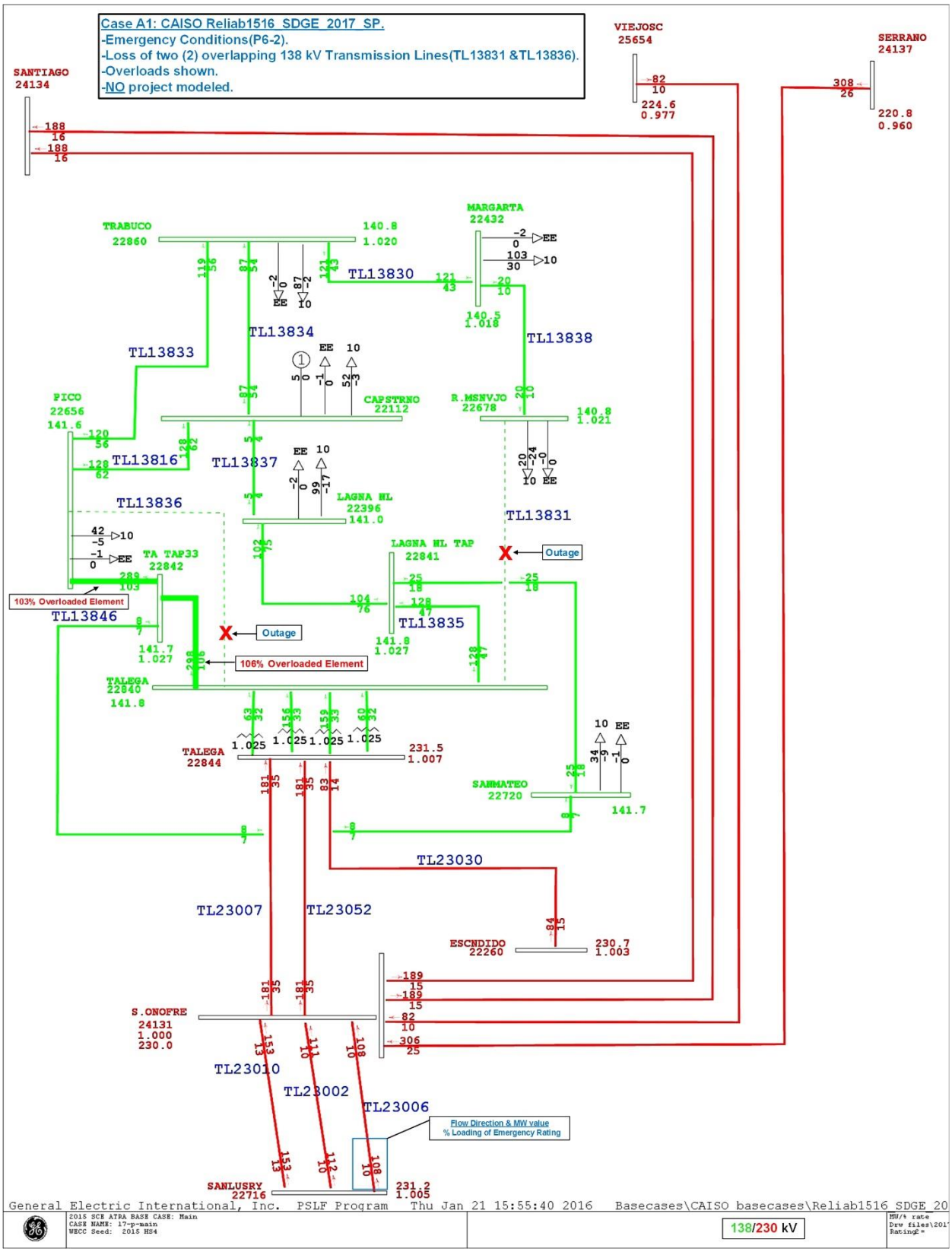
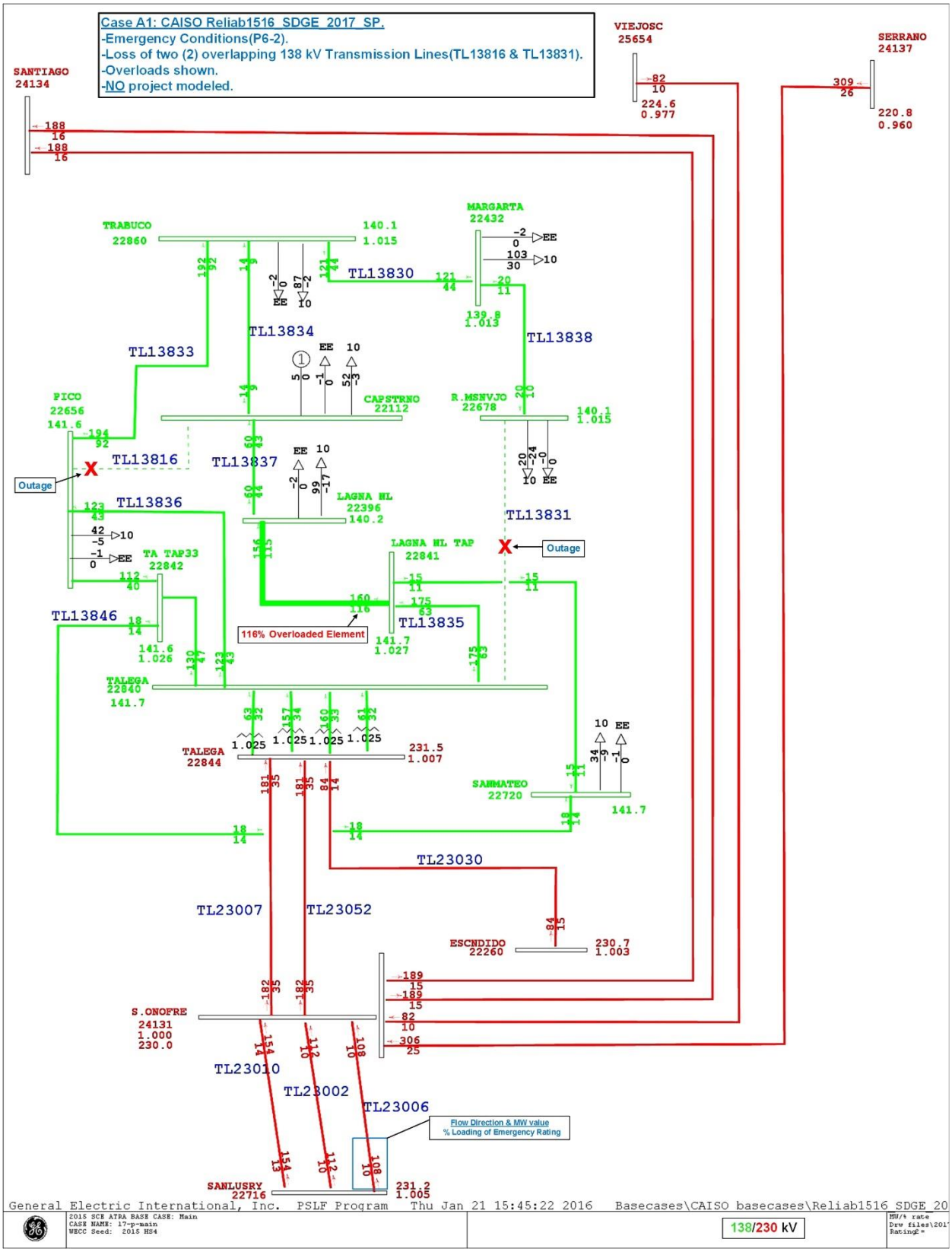
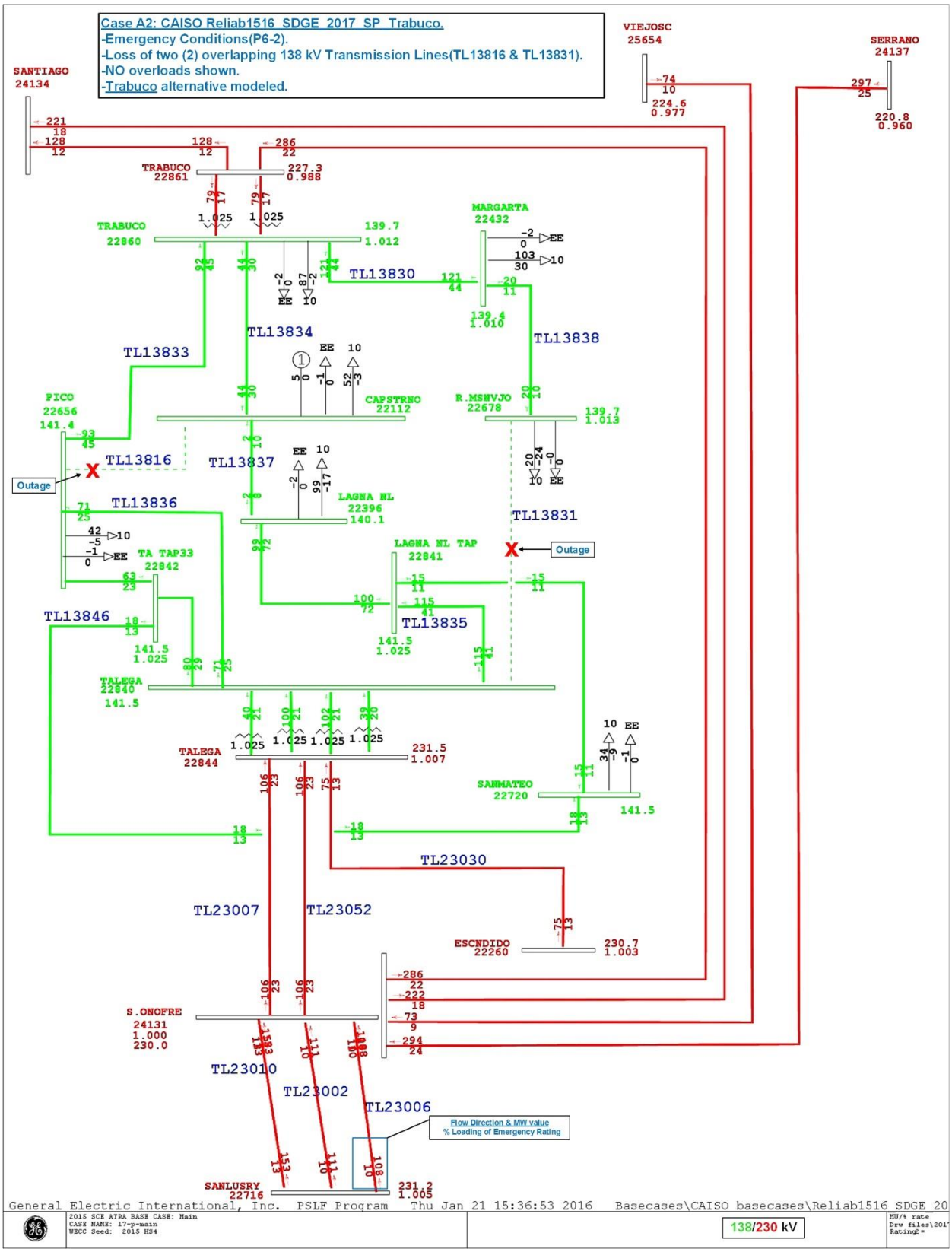
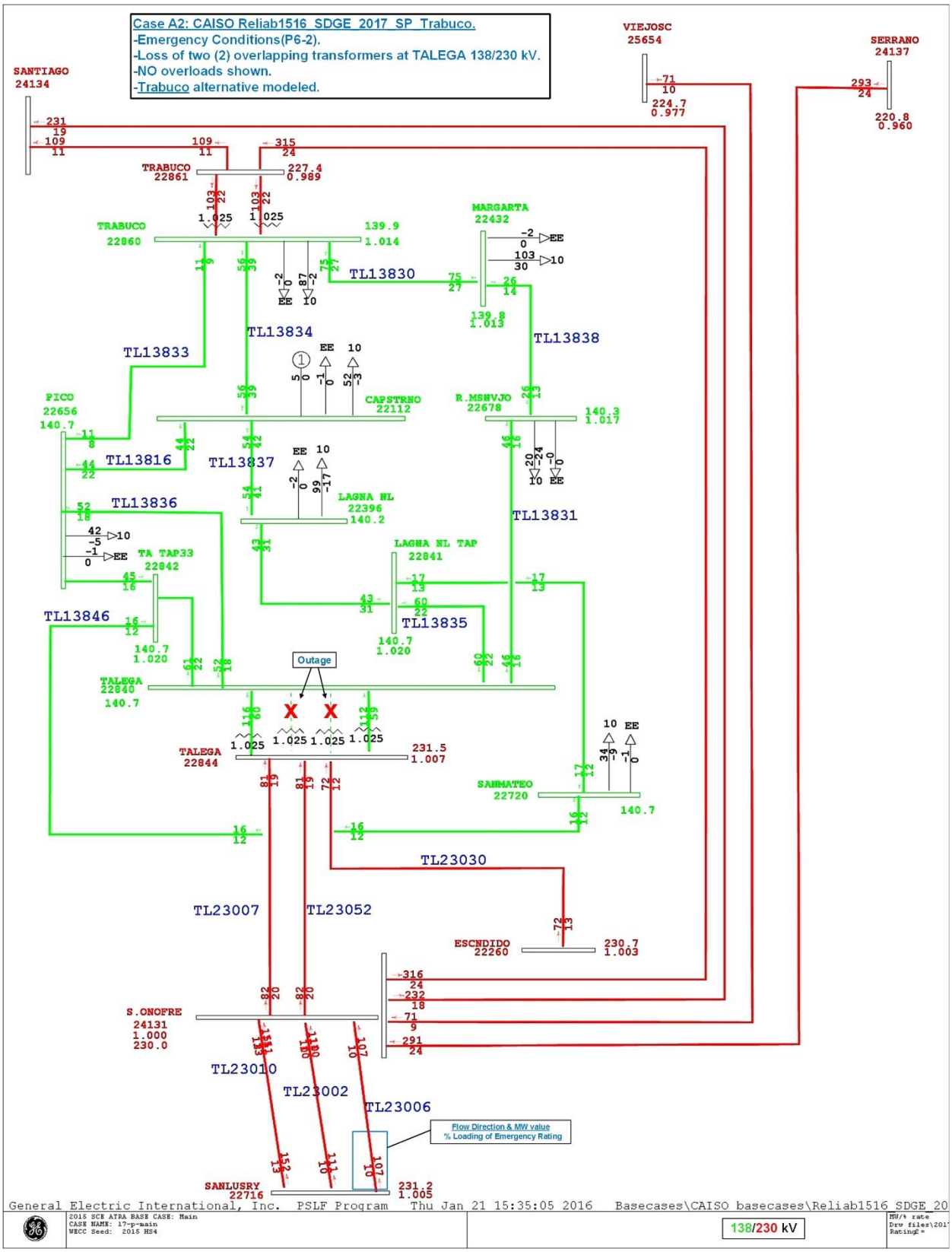
14	Case C3; P6-2 Contingency – Loss of Two 230/138 kV Talega Transformers	36

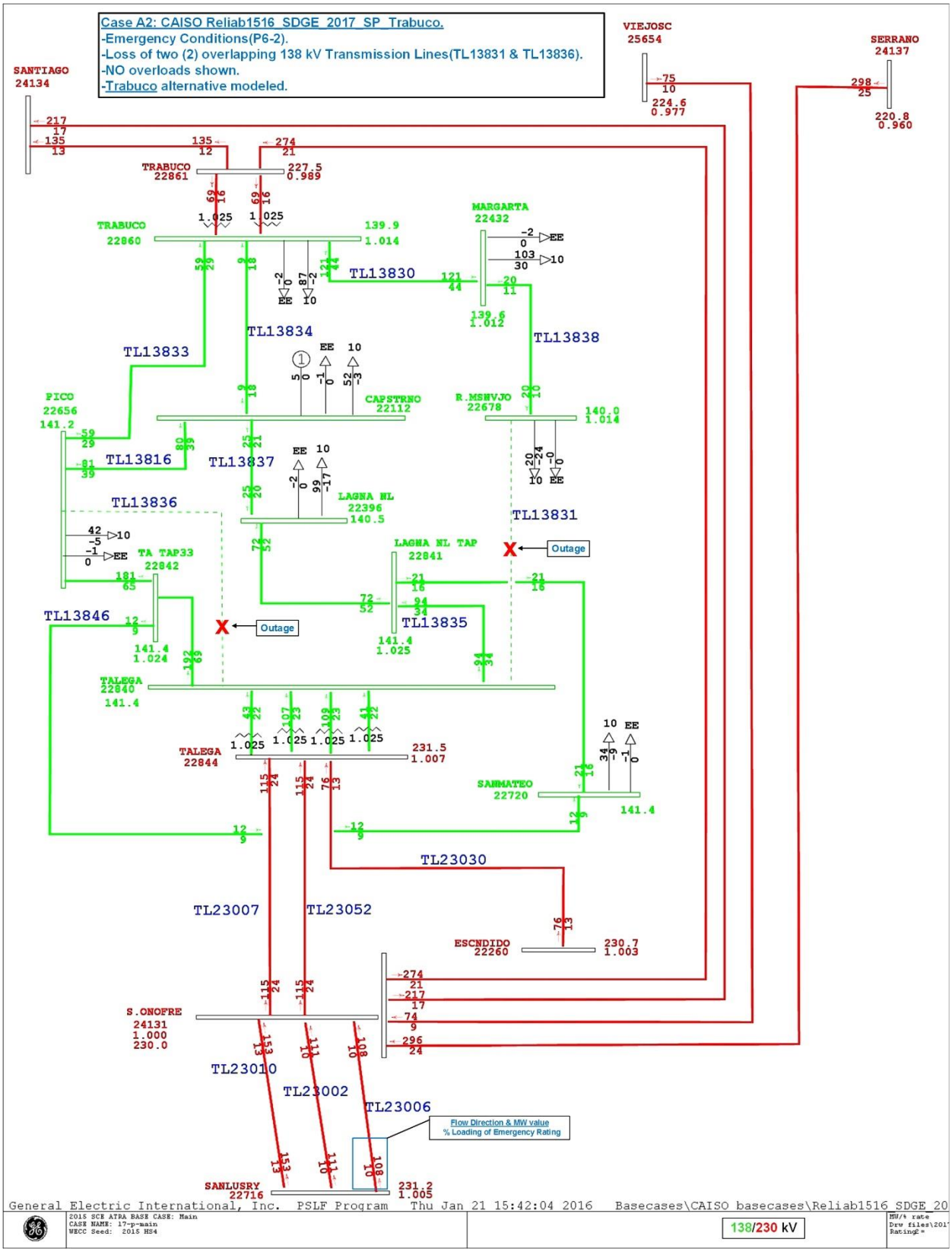

Case A1: CAISO Reliab1516_SDGE_2017_SP.
-Emergency Conditions(P6-2).
-Loss of two (2) overlapping transformers at TALEGA 138/230 kV.
-Overloads shown.
-NO project modeled.
SANTIAGO
24134
VIEJOSC
25654
SERRANO
24137
TRABUCO
22860
MARGARTA
22432
CAPSTRNO
22112
R.MSNVJO
22678
PICO
22656
LAGNA NL
22396
LAGNA NL TAP
22841
TA TAP33
22842
TALEGA
22840
TALEGA
22844
SANMATEO
22720
ESCNDIDO
22260
S.ONOFRE
24131
SANLUSRY
22716
TL13830
TL13834
TL13833
TL13838
TL13816
TL13837
TL13836
TL13831
TL13835
TL13846
TL23030
TL23007
TL23052
TL23010
TL23002
TL23006
Outage
112% Overloaded Element
110% Overloaded Element
Flow Direction & MW value
% Loading of Emergency Rating
138/230 kV
General Electric International, Inc. PSLF Program Thu Jan 21 15:57:51 2016 Basecases\CAISO basecases\Reliab1516_SDGE_20

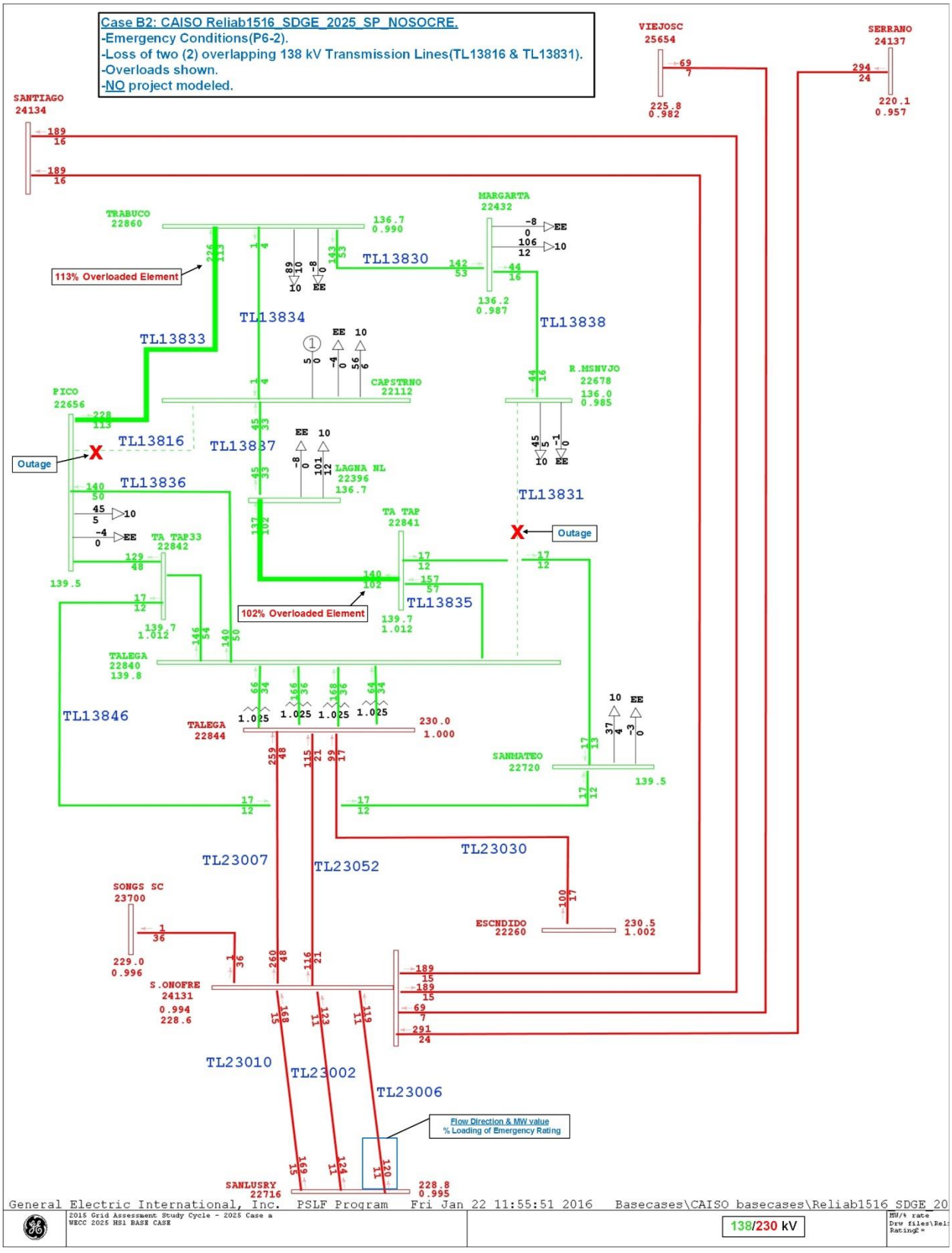

Case A1: CAISO Reliab1516_SDGE_2017_SP.
-Emergency Conditions(P6-2).
-Loss of two (2) overlapping 138 kV Transmission Lines(TL13831 &TL13836).
-Overloads shown.
-NO project modeled.
SANTIAGO 24134
VIEJOSC 25654
SERRANO 24137
TRABUCO 22860
MARGARTA 22432
TL13830
TL13834
TL13833
TL13838
PICO 22656
CAPSTRNO 22112
R.MSNVJO 22678
TL13816
TL13837
TL13836
LAGNA NL 22396
TL13831
LAGNA NL TAP 22841
TA TAP33 22842
103% Overloaded Element
TL13846
Outage
106% Overloaded Element
TL13835
TALEGA 22840
TALEGA 22844
SANMATEO 22720
TL23030
TL23007
TL23052
ESCNDIDO 22260
S.ONOFRE 24131
TL23010
TL23002
TL23006
Flow Direction & MW value
% Loading of Emergency Rating
SANLUSRY 22716
General Electric International, Inc. PSLF Program Thu Jan 21 15:55:40 2016 Basecases\CAISO basecases\Reliab1516_SDGE_20
2015 SCE ATRA BASE CASE: Main
CASE NAME: 17-p-main
WECC Seed: 2015 HS4
138/230 kV

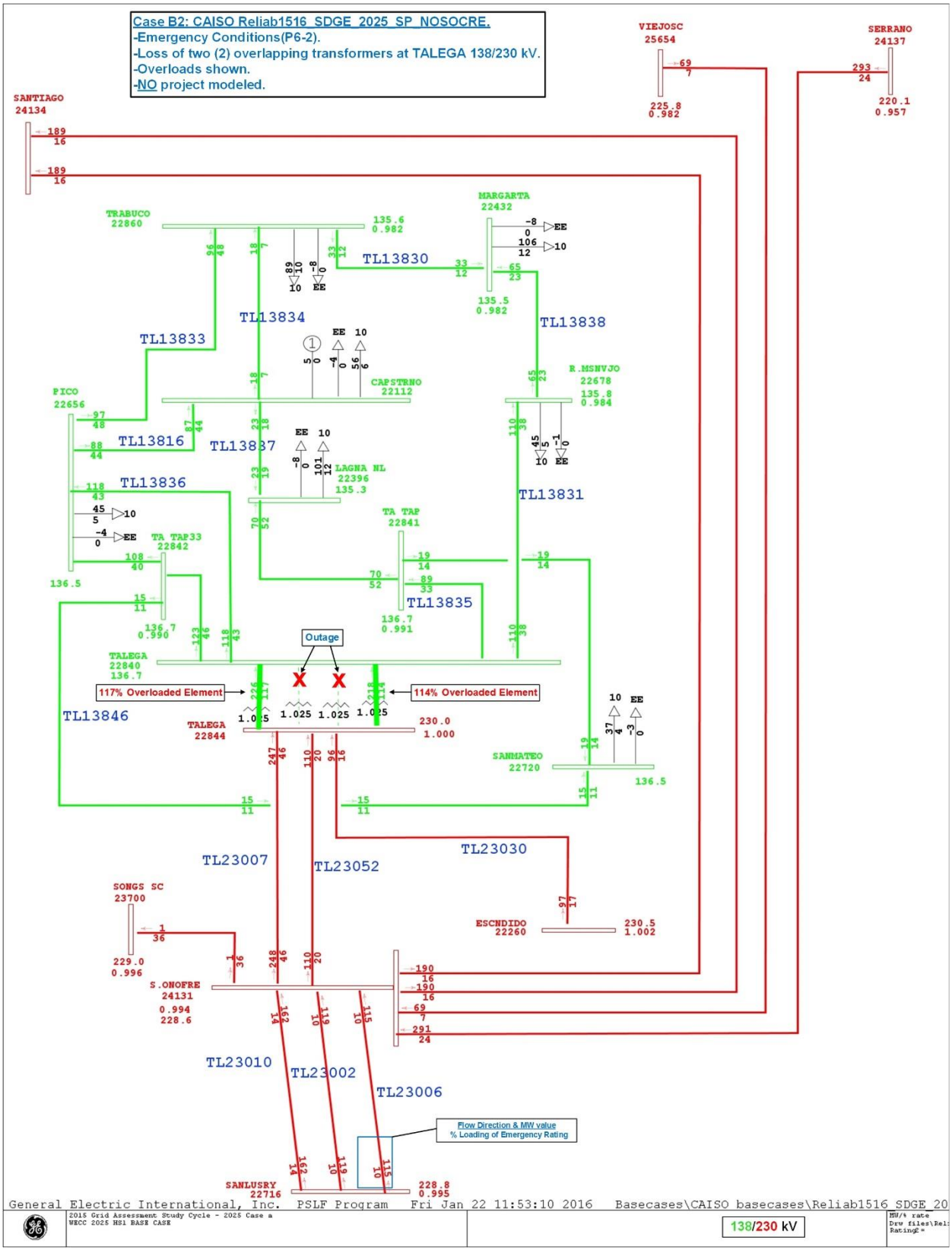

Case A1: CAISO Reliab1516_SDGE_2017_SP.
-Emergency Conditions(P6-2).
-Loss of two (2) overlapping 138 kV Transmission Lines(TL13816 & TL13831).
-Overloads shown.
-NO project modeled.
SANTIAGO
24134
VIEJOSC
25654
SERRANO
24137
TRABUCO
22860
MARGARTA
22432
TL13830
TL13834
TL13833
TL13838
PICO
22656
CAPSTRNO
22112
R.MSNVJO
22678
TL13816
TL13837
Outage
TL13836
LAGNA NL
22396
TL13831
LAGNA NL TAP
22841
TA TAP33
22842
116% Overloaded Element
TL13835
TL13846
TALEGA
22840
TALEGA
22844
SANMATEO
22720
TL23030
TL23007
TL23052
ESCNDIDO
22260
S.ONOFRE
24131
TL23010
TL23002
TL23006
Flow Direction & MW value
% Loading of Emergency Rating
SANLUSRY
22716
General Electric International, Inc. PSLF Program Thu Jan 21 15:45:22 2016 Basecases\CAISO basecases\Reliab1516_SDGE_20
2015 SCE ATRA BASE CASE: Main
CASE NAME: 17-p-main
WECC Seed: 2015 HS4
138/230 kV

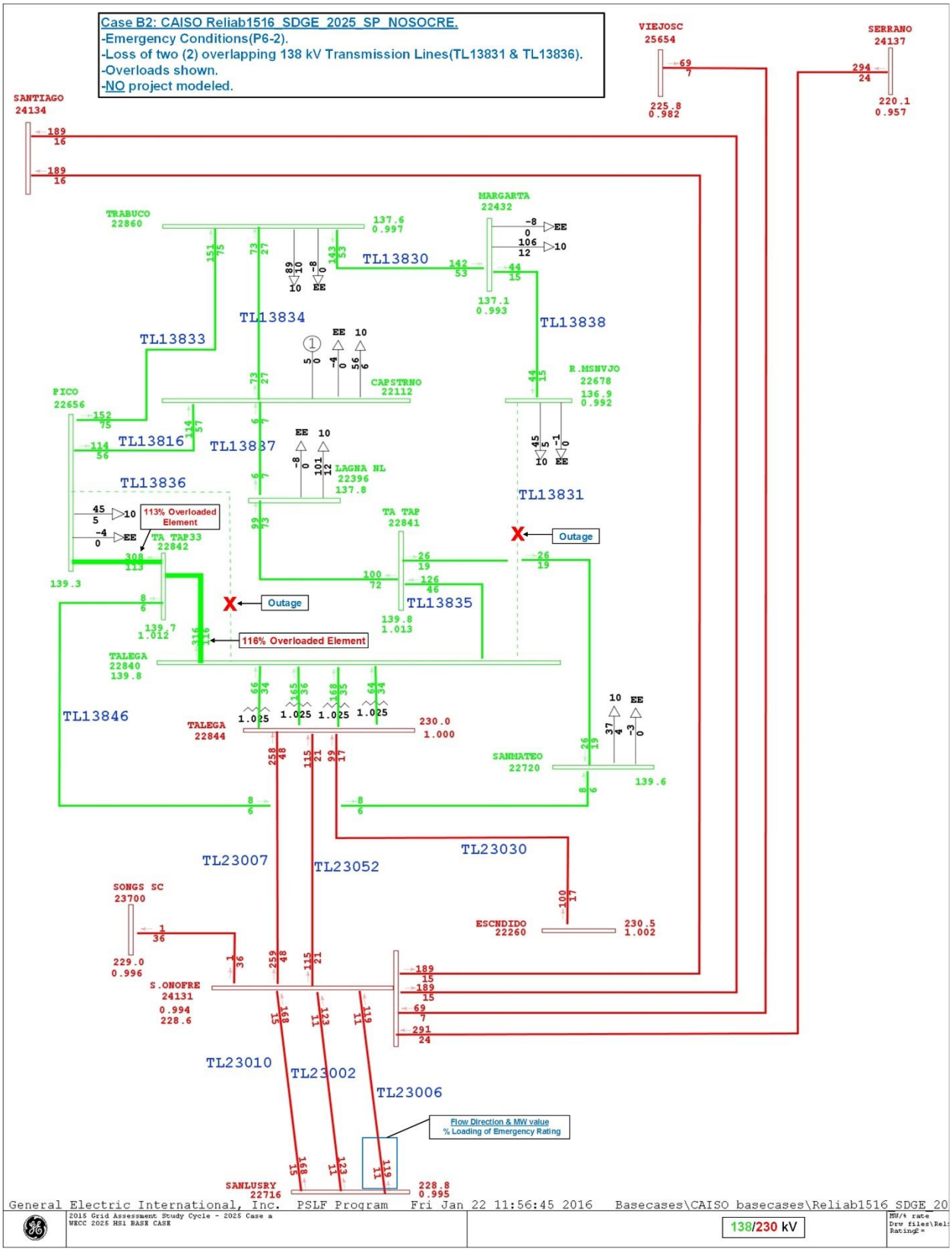

Case A2: CAISO Reliab1516_SDGE_2017_SP_Trabuco.
-Emergency Conditions(P6-2).
-Loss of two (2) overlapping 138 kV Transmission Lines(TL13816 & TL13831).
-NO overloads shown.
-Trabuco alternative modeled.
SANTIAGO 24134
VIEJOSC 25654
SERRANO 24137
TRABUCO 22861
TRABUCO 22860
MARGARTA 22432
TL13830
TL13834
TL13833
TL13838
PICO 22656
CAPSTRNO 22112
R.MSHVJO 22678
TL13816
TL13837
TL13836
TL13831
Outage
LAGNA NL 22396
LAGNA NL TAP 22841
TA TAP33 22842
TL13846
TL13835
TALEGA 22840
TALEGA 22844
SANMATEO 22720
TL23030
TL23007
TL23052
ESCNDIDO 22260
S.ONOFRE 24131
TL23010
TL23002
TL23006
Flow Direction & MW value
% Loading of Emergency Rating
SANLUSRY 22716
General Electric International, Inc. PSLF Program Thu Jan 21 15:36:53 2016 Basecases\CAISO basecases\Reliab1516_SDGE_20
2015 SCE ATRA BASE CASE: Main
CASE NAME: 17-p-main
WECC Seed: 2015 HS4
138/230 kV

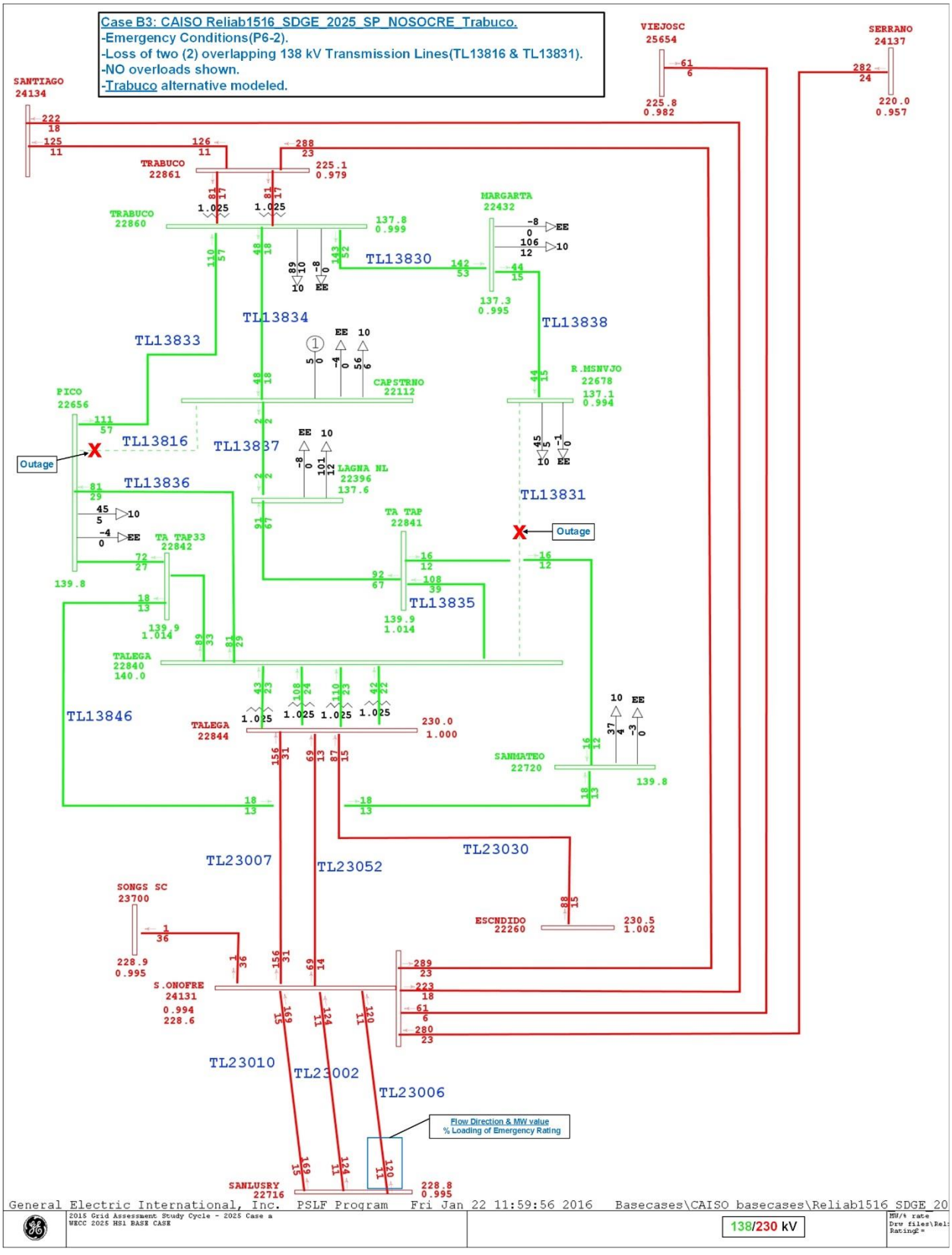

Case A2: CAISO Reliab1516_SDGE_2017_SP_Trabuco.
-Emergency Conditions(P6-2).
-Loss of two (2) overlapping transformers at TALEGA 138/230 kV.
-NO overloads shown.
-Trabuco alternative modeled.
SANTIAGO 24134
VIEJOSC 25654
SERRANO 24137
TRABUCO 22861
TRABUCO 22860
MARGARTA 22432
TL13830
TL13834
TL13833
TL13838
PICO 22656
CAPSTRNO 22112
R.MSHVJO 22678
TL13816
TL13837
TL13836
LAGNA NL 22396
TL13831
TA TAP33 22842
LAGNA NL TAP 22841
TL13846
TL13835
Outage
TALEGA 22840
TALEGA 22844
SANMATEO 22720
TL23030
TL23007
TL23052
ESCNDIDO 22260
S.ONOFRE 24131
TL23010
TL23002
TL23006
Flow Direction & MW value
% Loading of Emergency Rating
SANLUSRY 22716
General Electric International, Inc. PSLF Program Thu Jan 21 15:35:05 2016 Basecases\CAISO basecases\Reliab1516_SDGE_20
2015 SCE ATRA BASE CASE: Main
CASE NAME: 17-p-main
WECC Seed: 2015 HS4
138/230 kV

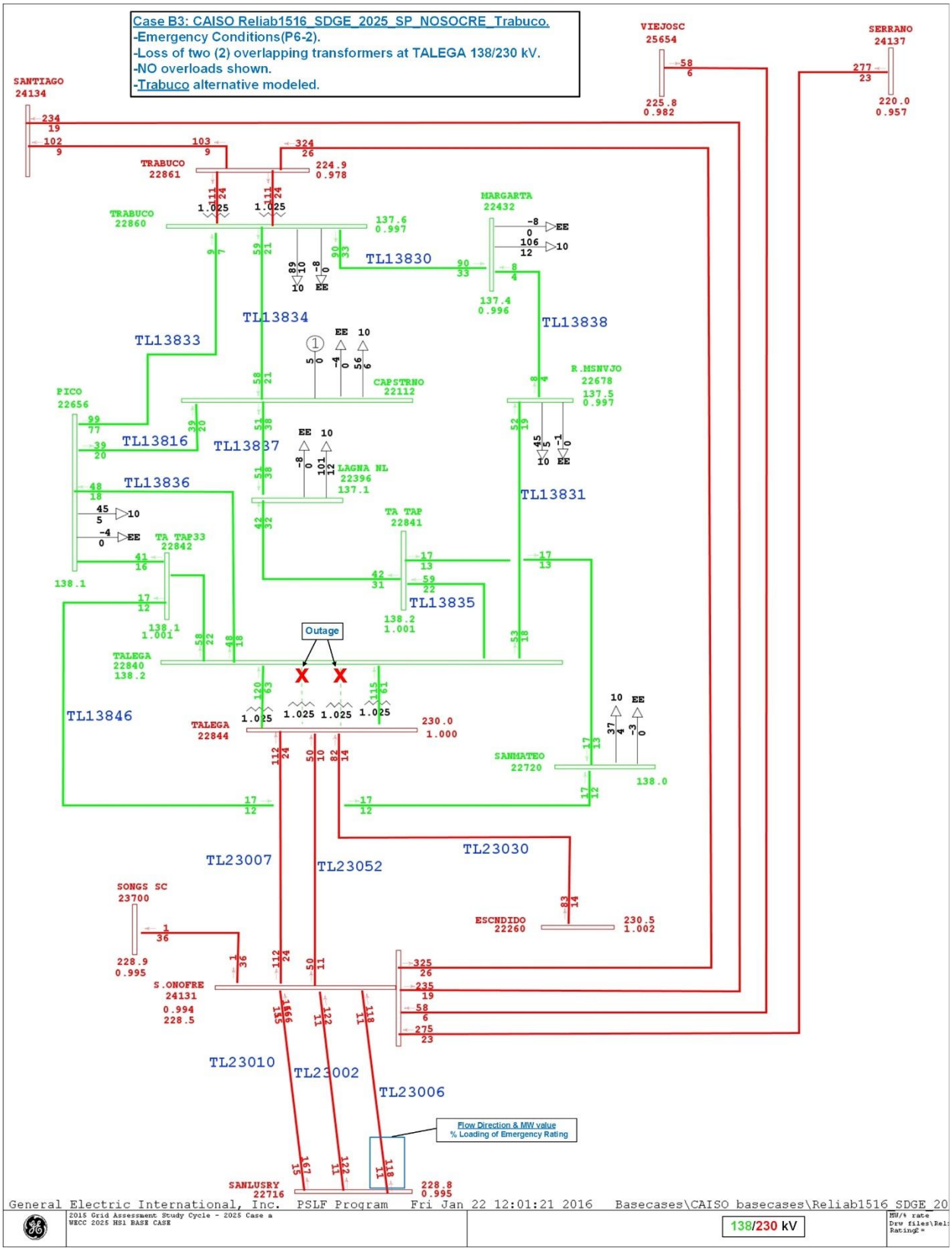

Case A2: CAISO Reliab1516_SDGE_2017_SP_Trabuco.
-Emergency Conditions(P6-2).
-Loss of two (2) overlapping 138 kV Transmission Lines(TL13831 & TL13836).
-NO overloads shown.
-Trabuco alternative modeled.
SANTIAGO 24134
VIEJOSC 25654
SERRANO 24137
TRABUCO 22861
TRABUCO 22860
MARGARTA 22432
TL13830
TL13834
TL13833
TL13838
PICO 22656
CAPSTRNO 22112
R.MSNVJO 22678
TL13816
TL13837
TL13836
LAGNA NL 22396
TL13831
LAGNA NL TAP 22841
Outage
TA TAP33 22842
TL13846
TL13835
TALEGA 22840
TALEGA 22844
SANMATEO 22720
TL23030
TL23007
TL23052
ESCNDIDO 22260
S.ONOFRE 24131
TL23010
TL23002
TL23006
Flow Direction & MW value
% Loading of Emergency Rating
SANLUSRY 22716
General Electric International, Inc. PSLF Program Thu Jan 21 15:42:04 2016 Basecases\CAISO basecases\Reliab1516_SDGE_20
138/230 kV

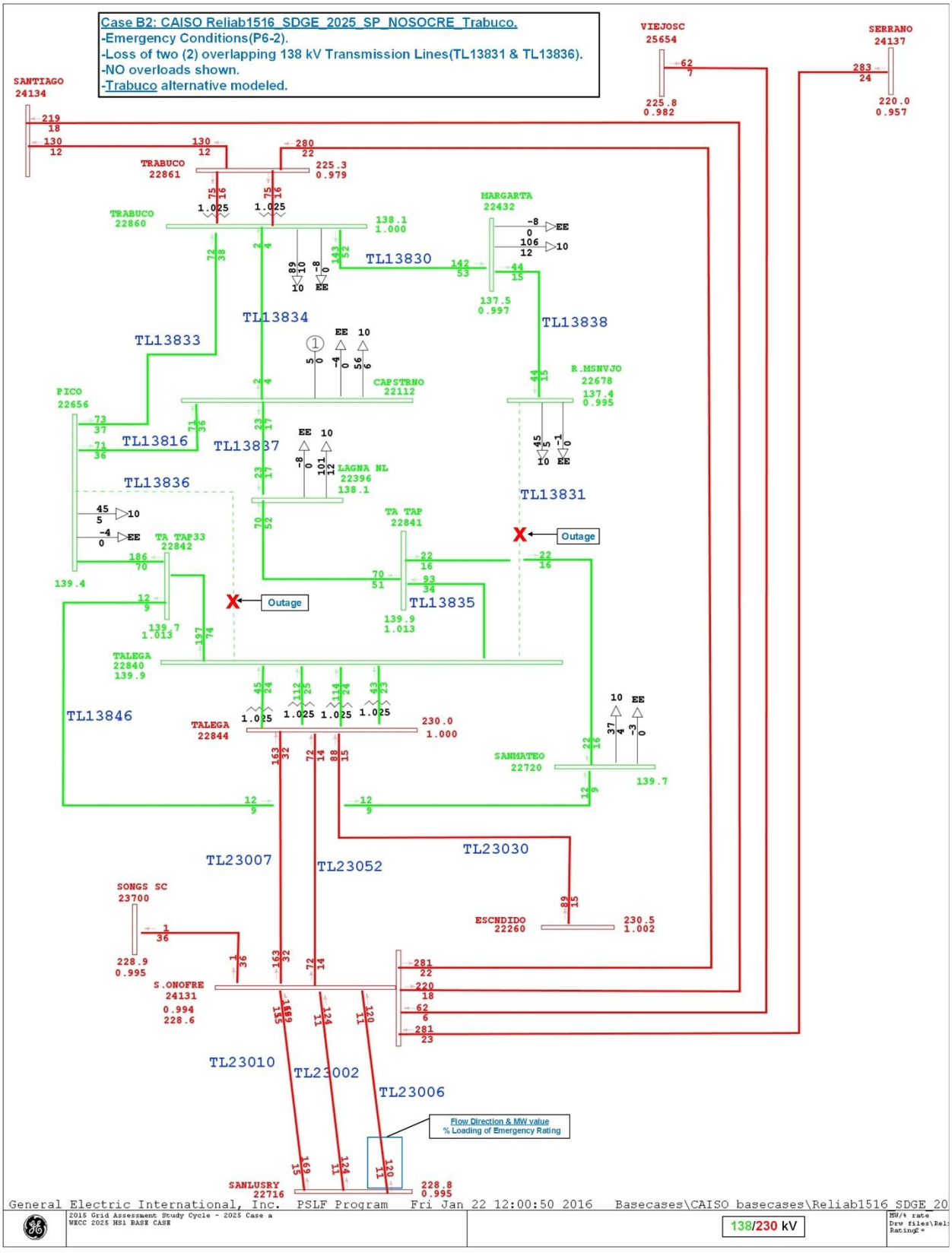

Case B2: CAISO Reliab1516_SDGE_2025_SP_NOSOCRE.
-Emergency Conditions(P6-2).
-Loss of two (2) overlapping 138 kV Transmission Lines(TL13816 & TL13831).
-Overloads shown.
-NO project modeled.
VIEJOSC 25654
225.8 0.982
SERRANO 24137
220.1 0.957
SANTIAGO 24134
TRABUCO 22860
136.7 0.990
MARGARTA 22432
136.2 0.987
TL13830
TL13834
TL13833
TL13838
113% Overloaded Element
CAPSTRNO 22112
R.MSNVJO 22678
136.0 0.985
PICO 22656
TL13816
TL13837
TL13836
TL13831
Outage
LAGNA NL 22396
136.7
TA TAP 22841
TA TAP33 22842
139.5
139.7 1.012
102% Overloaded Element
TL13835
TALEGA 22840 139.8
TL13846
TALEGA 22844
230.0 1.000
SANMATEO 22720
139.5
TL23007
TL23052
TL23030
SONGS SC 23700
229.0 0.996
ESCNDIDO 22260
230.5 1.002
S.ONOFRE 24131
0.994 228.6
TL23010
TL23002
TL23006
Flow Direction & MW value
% Loading of Emergency Rating
SANLUSRY 22716
228.8 0.995
General Electric International, Inc. PSLF Program Fri Jan 22 11:55:51 2016 Basecases\CAISO basecases\Reliab1516_SDGE_20
2015 Grid Assessment Study Cycle - 2025 Case a
WECC 2025 HS1 BASE CASE
138/230 kV

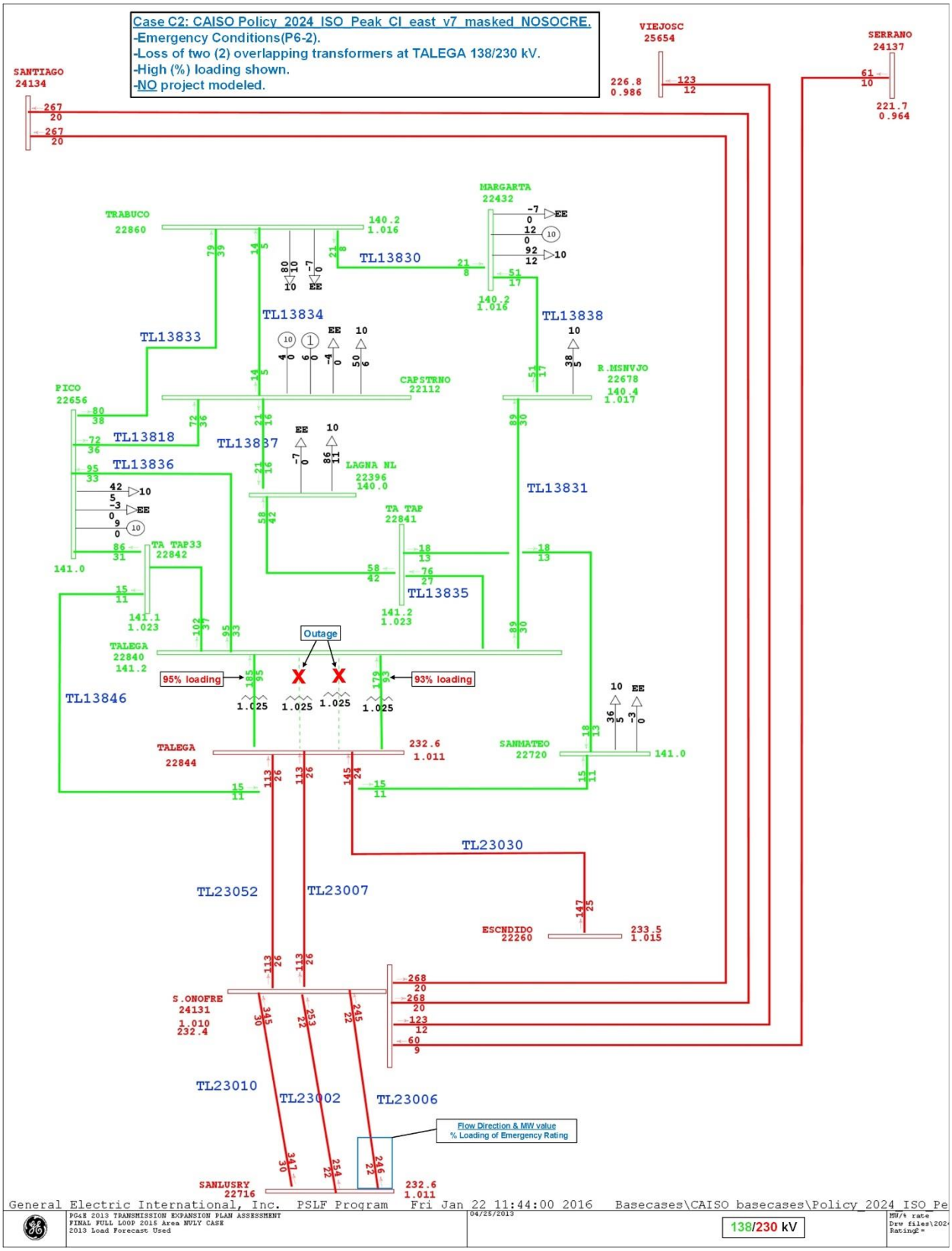

Case B2: CAISO Reliab1516_SDGE_2025_SP_NOSOCRE.
-Emergency Conditions(P6-2).
-Loss of two (2) overlapping transformers at TALEGA 138/230 kV.
-Overloads shown.
-NO project modeled.
VIEJOSC
25654
225.8
0.982
SERRANO
24137
220.1
0.957
SANTIAGO
24134
TRABUCO
22860
135.6
0.982
MARGARTA
22432
135.5
0.982
TL13830
TL13834
TL13833
TL13838
CAPSTRNO
22112
R.MSNVJO
22678
135.8
0.984
PICO
22656
TL13816
TL13837
LAGNA NL
22396
135.3
TL13836
TL13831
TA TAP
22841
TA TAP33
22842
136.5
TL13835
136.7
0.991
136.7
0.990
Outage
TALEGA
22840
136.7
117% Overloaded Element
114% Overloaded Element
TL13846
1.025
1.025
1.025
1.025
TALEGA
22844
230.0
1.000
SANMATEO
22720
136.5
TL23030
TL23007
TL23052
SONGS SC
23700
229.0
0.996
ESCNDIDO
22260
230.5
1.002
S.ONOFRE
24131
0.994
228.6
TL23010
TL23002
TL23006
Flow Direction & MW value
% Loading of Emergency Rating
SANLUSRY
22716
228.8
0.995
General Electric International, Inc. PSLF Program Fri Jan 22 11:53:10 2016 Basecases\CAISO basecases\Reliab1516_SDGE_20
2015 Grid Assessment Study Cycle - 2025 Case a
WECC 2025 HS1 BASE CASE
138/230 kV

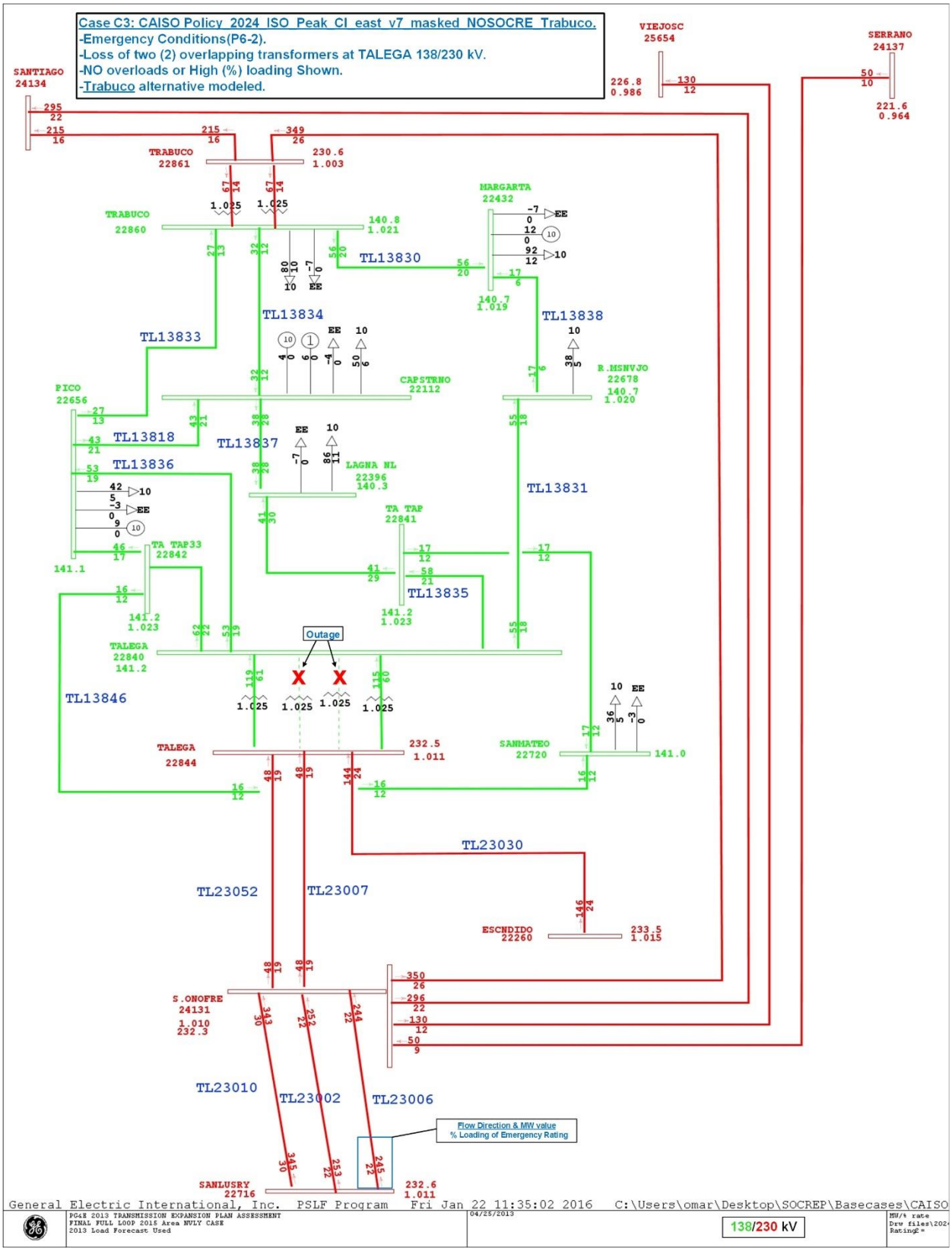

Case B2: CAISO Reliab1516_SDGE_2025_SP_NOSOCRE.
-Emergency Conditions(P6-2).
-Loss of two (2) overlapping 138 kV Transmission Lines(TL13831 & TL13836).
-Overloads shown.
-NO project modeled.
VIEJOSC 25654
SERRANO 24137
SANTIAGO 24134
TRABUCO 22860
MARGARTA 22432
TL13830
TL13834
TL13833
TL13838
CAPSTRNO 22112
R.MSNVJO 22678
PICO 22656
TL13816
TL13837
LAGNA NL 22396
TL13836
TL13831
113% Overloaded Element
TA TAP33 22842
TA TAP 22841
Outage
TL13835
116% Overloaded Element
TALEGA 22840
TALEGA 22844
SANMATEO 22720
TL13846
TL23007
TL23052
TL23030
SONGS SC 23700
ESCNDIDO 22260
S.ONOFRE 24131
TL23010
TL23002
TL23006
Flow Direction & MW value
% Loading of Emergency Rating
SANLUSRY 22716
General Electric International, Inc. PSLF Program Fri Jan 22 11:56:45 2016 Basecases\CAISO basecases\Reliab1516_SDGE_20
2015 Grid Assessment Study Cycle - 2025 Case a
WECC 2025 HS1 BASE CASE
138/230 kV


Case B3: CAISO Reliab1516_SDGE_2025_SP_NOSOCRE_Trabuco.
-Emergency Conditions(P6-2).
-Loss of two (2) overlapping 138 kV Transmission Lines(TL13816 & TL13831).
-NO overloads shown.
-Trabuco alternative modeled.
SANTIAGO 24134
VIEJOSC 25654
SERRANO 24137
TRABUCO 22861
TRABUCO 22860
MARGARTA 22432
TL13830
TL13834
TL13833
TL13838
CAPSTRNO 22112
R.MSNVJO 22678
PICO 22656
TL13816
TL13837
TL13836
TL13831
LAGNA NL 22396
TA TAP 22841
TA TAP33 22842
TL13835
TALEGA 22840
TL13846
TALEGA 22844
SANMATEO 22720
TL23030
TL23007
TL23052
SONGS SC 23700
ESCNDIDO 22260
S.ONOFRE 24131
TL23010
TL23002
TL23006
SANLUSRY 22716
Outage
Outage
Flow Direction & MW value
% Loading of Emergency Rating
General Electric International, Inc. PSLF Program Fri Jan 22 11:59:56 2016 Basecases\CAISO basecases\Reliab1516_SDGE_20
2015 Grid Assessment Study Cycle - 2025 Case a
WECC 2025 HS1 BASE CASE
138/230 kV


Case B3: CAISO Reliab1516_SDGE_2025_SP_NOSOCRE_Trabuco.
-Emergency Conditions(P6-2).
-Loss of two (2) overlapping transformers at TALEGA 138/230 kV.
-NO overloads shown.
-Trabuco alternative modeled.
SANTIAGO 24134
TRABUCO 22861
TRABUCO 22860
MARGARTA 22432
VIEJOSC 25654
SERRANO 24137
TL13830
TL13834
TL13833
TL13838
CAPSTRNO 22112
PICO 22656
R.MSNVJO 22678
TL13816
TL13837
LAGNA NL 22396
TL13836
TL13831
TA TAP 22841
TA TAP33 22842
TL13835
Outage
TALEGA 22840
TALEGA 22844
SANMATEO 22720
TL13846
TL23007
TL23052
TL23030
SONGS SC 23700
ESCNDIDO 22260
S.ONOFRE 24131
TL23010
TL23002
TL23006
Flow Direction & MW value
% Loading of Emergency Rating
SANLUSRY 22716
General Electric International, Inc. PSLF Program Fri Jan 22 12:01:21 2016 Basecases\CAISO basecases\Reliab1516_SDGE_20
2015 Grid Assessment Study Cycle - 2025 Case a
WECC 2025 HS1 BASE CASE
138/230 kV


Case B2: CAISO Reliab1516_SDGE_2025_SP_NOSOCRE_Trabuco.
-Emergency Conditions(P6-2).
-Loss of two (2) overlapping 138 kV Transmission Lines(TL13831 & TL13836).
-NO overloads shown.
-Trabuco alternative modeled.
SANTIAGO 24134
VIEJOSC 25654
SERRANO 24137
TRABUCO 22861
TRABUCO 22860
MARGARTA 22432
TL13830
TL13834
TL13833
TL13838
CAPSTRNO 22112
R.MSNVJO 22678
PICO 22656
TL13816
TL13837
LAGNA NL 22396
TL13836
TL13831
TA TAP 22841
TA TAP33 22842
Outage
TL13835
TALEGA 22840
TL13846
TALEGA 22844
SANMATEO 22720
TL23007
TL23052
TL23030
SONGS SC 23700
ESCNDIDO 22260
S.ONOFRE 24131
TL23010
TL23002
TL23006
Flow Direction & MW value
% Loading of Emergency Rating
SANLUSRY 22716
General Electric International, Inc. PSLF Program Fri Jan 22 12:00:50 2016 Basecases\CAISO basecases\Reliab1516_SDGE_20
2015 Grid Assessment Study Cycle - 2025 Case a
WECC 2025 HS1 BASE CASE
138/230 kV


Case C2: CAISO Policy_2024_ISO_Peak_CI_east_v7_masked_NOSOCRE.
-Emergency Conditions(P6-2).
-Loss of two (2) overlapping transformers at TALEGA 138/230 kV.
-High (%) loading shown.
-NO project modeled.
SANTIAGO 24134
VIEJOSC 25654
SERRANO 24137
TRABUCO 22860
MARGARTA 22432
TL13830
TL13834
TL13838
TL13833
PICO 22656
CAPSTRNO 22112
R.MSNVJO 22678
TL13818
TL13837
TL13836
LAGNA NL 22396
TL13831
TA TAP 22841
TA TAP33 22842
TL13835
Outage
TALEGA 22840
95% loading
93% loading
TL13846
TALEGA 22844
SANMATEO 22720
TL23030
TL23052
TL23007
ESCNDIDO 22260
S.ONOFRE 24131
TL23010
TL23002
TL23006
Flow Direction & MW value
% Loading of Emergency Rating
SANLUSRY 22716
General Electric International, Inc. PSLF Program Fri Jan 22 11:44:00 2016 Basecases\CAISO basecases\Policy_2024_ISO_Pe
PG&E 2013 TRANSMISSION EXPANSION PLAN ASSESSMENT
FINAL FULL LOOP 2015 Area NVLY CASE
2013 Load Forecast Used
04/25/2013
138/230 kV


Case C3: CAISO Policy_2024_ISO_Peak_CI_east_v7_masked_NOSOCRE_Trabuco.
-Emergency Conditions(P6-2).
-Loss of two (2) overlapping transformers at TALEGA 138/230 kV.
-NO overloads or High (%) loading Shown.
-Trabuco alternative modeled.
SANTIAGO 24134
VIEJOSC 25654
SERRANO 24137
TRABUCO 22861
TRABUCO 22860
MARGARTA 22432
TL13830
TL13834
TL13833
TL13838
PICO 22656
CAPSTRNO 22112
R.MSNVJO 22678
TL13818
TL13837
TL13836
LAGNA NL 22396
TL13831
TA TAP 22841
TA TAP33 22842
TL13835
Outage
TALEGA 22840
TL13846
TALEGA 22844
SANMATEO 22720
TL23030
TL23052
TL23007
ESCNDIDO 22260
S.ONOFRE 24131
TL23010
TL23002
TL23006
Flow Direction & MW value
% Loading of Emergency Rating
SANLUSRY 22716
General Electric International, Inc. PSLF Program Fri Jan 22 11:35:02 2016 C:\Users\omar\Desktop\SOCREP\Basecases\CAISO
PG&E 2013 TRANSMISSION EXPANSION PLAN ASSESSMENT
FINAL FULL LOOP 2015 Area NVLY CASE
2013 Load Forecast Used
04/25/2013
138/230 kV

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South Orange County 230/138 kV Through Flow Analysis

Background

Concerns have been raised regarding "through flow" issues resulting from a connection between San Diego Gas and Electric Company's (SDG&E's) 138 kilovolt (kV) South Orange County System and Southern California Edison's (SCE's) 230 kV source, as proposed for Alternative J. Through flow events occur when a considerable amount of power is shunted through a lower voltage system as a result of a combination of outages of higher voltage. Through flow issues could arise when the lower voltage system does not have sufficient capability to handle the influx of power.

As shown on Figure 1, there are four SCE 230 kV lines that enter from the North, going on to the San Onofre Nuclear Generation Station (SONGS). There are two lines from Santiago Substation, one from Serrano Substation, and one from Viejo Substation.

Alternative J Analysis

Under Alternative J, SCE's Santiago-SONG 230 kV line would loop into SDG&E's Trabuco Substation. In the event that outages occur on three of the four SCE 230 kV lines, power would go from Santiago Substation to Trabuco Substation, through the Trabuco 230/138 kV transformers, through the South Orange County 138 kV system, back through the Talega 230/138 kV transformers to the 230 kV, and on to SONGS.

SDG&E provided the power flow data for the SOCRE-area analysis, which were also used for the through flow analysis. The through flow cases in Table 1 were modeled with generation added at Santiago Substation and as load added at San Luis Rey Substation. For each 100 megawatt (MW) added 52.6 MW went directly from Santiago to San Luis Rey Substation (south of SONGS); the remaining 47.4 MW circulated through the Western Electricity Coordinating Council (WECC) transmission system, traveling from Santiago Substation to various parts of SCE's and SDG&E'S grid (for example to Devers, Palo Verde, and through the Southwest Powerlink and Sunrise) to get from Santiago Substation to San Luis Rey Substation. This shows that the "direct" impedance from Santiago to Trabuco through the 138 kV and on to San Luis Rey has similar impedances as for power going clockwise through the balance of the WECC grid.

In the case where 500 MW is added to the South Orange County 138 kV System, the flows through the Trabuco transformers were 361 MW. The South Orange County 138 kV System would easily handle 361 MW given that this amount is less than what it would handle if Talega Substation were out of service. Therefore, Alternative J would not create any through flow issues to the South Orange County 138 kV System as a result of SCE's Santiago-SONGS 230kV line looping in the Trabuco Substation.

Table 1. Power Flow Results for Various South Orange County 138 kV System Scenarios

Scenario	Flow in MW
2025 Basecase	
Case that models SOCRE	183.4 MW from Edison to SONGS.
Case that does not model SOCRE or Trabuco	180.7 MW from Edison to SONGS
Case that models a Trabuco 230 kV connection	200.5 MW from Edison to SONGS
Through-flow case with three SCE 230 kV out of service [(a) (b)]	
Through flow with 0 MW added	98 MW through 138 kV
Through flow with 100 MW added	150 MW through 138 kV
Through flow with 200 MW added	203 MW through 138 kV
Through flow with 300 MW added	256 MW through 138 kV
Through flow with 400 MW added	308 MW through 138 kV
Through flow with 500 MW added	361 MW through 138 kV

Note:

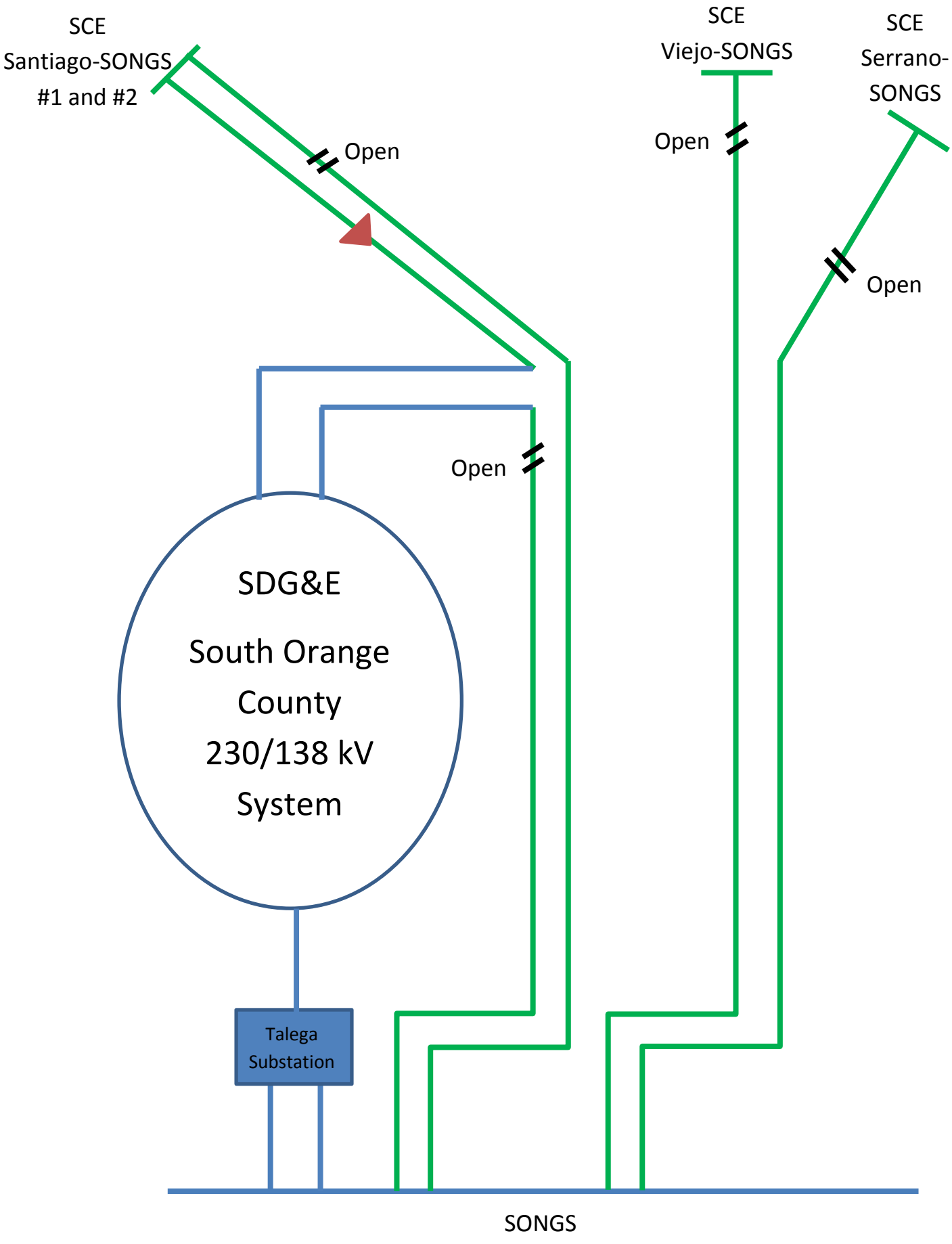
(a) 2024 base cases were used for these analyses. The difference in SOCRE area loads between 2024 and 2025 is about six MW.

(b) See Figure 1.

Alternative D Analysis

Under Alternative D, SCE's Serrano-SONG 230 kV line would loop into a new SDG&E 230/138/12 kV substation at the Prima Deshecha Landfill. The power flow data provided by SDG&E for the SOCRE-area was used for the through flow analysis of Alternative D. Results of this analysis were almost identical to Alternative J and no through flow issues were identified. Therefore this analysis is not discussed further.

Figure 1. Worst Case Scenario for Through Flow in the SDG&E South Orange County 138 kV System with SCE 230 kV Interconnection at Trabuco Substation



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Appendix S

National Register of Historic Places Correspondence and the Capistrano Preservation Alternative

S-1: National Register of Historic Places Evaluation/Return Sheet

S-2: Applicant Proposed Preservation Alternative

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United States Department of the Interior

NATIONAL PARK SERVICE
1849 C Street, N.W.
Washington, DC 20240

The United States Department of the Interior
National Park Service

National Register of Historic Places
Evaluation/Return Sheet

Property Name: San Diego Gas and Electric San Juan Capistrano Substation Orange County,

Reference Number: 15000570

Reason for Return

The request for Determination of Eligibility is being returned for substantive and technical revision. The submission claims significance under Criterion A in the area of engineering, and the boundary of the property consists of the footprint of the substation building (also referred to as the utility building and hereafter referred to as "the building"). The property owner, which objects to the nomination, petitioned for a substantive review of the nomination which resulted in an extension of the review period. The petitioner presented a number of documents to support its conclusion that the property is not eligible.

It is our opinion that the building is eligible for inclusion in the National Register of Historic Places under Criterion A, but that the documentation submitted is inadequate to fully support this finding and fails to address significant questions brought up by the petitioner.

It is apparent, as noted in the 2008 McKenna report, that the San Juan Capistrano substation likely meets the test of significance under Criterion A. The substation served as a vital and pioneering link between two power distribution systems, allowing for further growth of the overall system and thus spurring growth and development in the region. The building in question, while, as the petitioner points out repeatedly, is only a component of the substation, it is a significant and highly visual component. The location and design of this building, and of similar buildings in other power facilities of the era, is meant to present a face to the community. It is not simply a utilitarian structure meant simply to protect important components from the elements; the decision to utilize a restrained classical vocabulary was a conscious effort to "brand" the facility and present a

dignified and substantial air to what is ordinarily a rather mundane component of power infrastructure.

Where the document falls short is in the analysis of integrity of the substation as a whole as it relates to the extant, nominated building. The petitioner rightly points out that a "substation" is more than a building, that it includes many elements that work together to facilitate the flow of power. The nomination as presented gives short shrift to the discussion of what the key components are and of how such a facility works. By limiting the boundaries and description and, for the most part, the focus of the nomination to the footprint of the building, the nomination does not truly provide an analytical discussion of integrity. The substation may have had many of its components moved or demolished, but there are remnants evident on the ground that can help tell the story and illustrate the working of the facility. It might be best, if this property is resubmitted, to revisit the boundaries of the nominated property and to look at the entirety of the facility.

The nomination does not adequately describe the role that equipment in the building played; this is important in helping to support the claim of significance. It is clear that some of the equipment and activities of the substation were sensitive or fragile enough that the construction of a shelter for them was necessary. What were they?

The petitioner's position that the document submitted was substantially revised between its presentation to the State Review Board and its submission to the Keeper is immaterial. The role of the State Review Board is advisory – to advise the State Historic Preservation Officer whether a property meets one of more of the National Register criteria for evaluation and to recommend whether or not it be nominated.

The various reports presented by the petitioner bring up valid points concerning the evaluation of integrity of the property, in particular how the building works in conjunction with the entire substation property and how the loss of certain features of the substation affect the ability of the building to reflect the significant of the substation. In other points of integrity, the reports miss the mark. The analyses of integrity of setting, of design, of materials, and of association are all too narrowly read. The immediate setting of the facility – the building and accompanying structures (both extant and missing) is important; the change from an open agricultural land to residential land is much less so. The alteration of a door or window or two does not constitute a marked change in the integrity of the building; it still represents the functional intent of the designer. So, too, the loss of minor fixtures such as gutters and lights does not constitute a sever loss of integrity of materials. The nomination as presented, does, however, fail to fully account for the effects of the loss of exterior equipment and structure and how this affects the overall integrity of design, feeling, and association.

The comparative analysis provided is a good start, especially in light of the contentious nature of the nomination, but the petitioner does bring up a valid point about the lack of comparable examples of substations (distributive, not generating) in the area. Limiting

the comparatives to listed or eligible properties limits the full range of truly comparable resources. This substation was the pioneer in expansion of power distribution in the area. But from reading the nomination, we have no idea what the geographic spread of these facilities was (especially in the historic period), or how many there are or what condition other might be in. Of course, the petitioner misses the mark in the narrow reading of comparables by discounting properties that aren't located in southern California. While nominated for its significance at the local level, the property is still an example of a type common to all developed areas of the state.

To summarize, the substantive aspects of this nomination that need to be addressed are the boundaries, the evaluation of integrity of the building as it relates to the substation as a whole, and a better comparative analysis of similar and relatively contemporaneous facilities in the area.

Technical issues

Please check the appropriate box in Section 3; this is a request for determination of eligibility based on owner objection. Also, if submitting scans of correspondence, please respect the hierarchy of importance of such documents. The official notification of objection from the owner was buried 181 pages into a 400+ page pdf of correspondence. Such a significant part of a nomination package should be up front along with the letter of transmittal.

We appreciate the opportunity to review this DOE and hope that you find these comments useful. Please feel free to contact me if you have any questions. I can be reached at (202) 354-2275 or email at <James_Gabbert@nps.gov>.

Sincerely,

Jim Gabbert, Historian
National Register of Historic Places
9/22/2015

EXHIBIT 1

Capistrano Preservation Alternative without Confidential Attachment A (Substation Drawings) and Attachment B (Chattel Report without Confidential Drawings)

1.0 INTRODUCTION

On April 29, 2015, the California State Historic Resources Commission's (SHRC) recommended that the existing utility structure located on the Capistrano Substation site be deemed eligible for the National Register of Historic Places (NRHP). The State Historic Preservation Office (SHPO) submitted the recommendation to the Keeper of the NRHP (Keeper) on July 17, 2015 and SDG&E submitted a formal objection on August 21, 2015. In a communication dated September 22, 2015, the Keeper declined to make a determination of eligibility and instead returned the nomination to the SHPO for substantive and technical revisions. In particular, the Keeper found that the nomination did not include an adequate analysis of the integrity of the original substation complex of which the Utility Structure was a part.

However, based on the SHRC's initial recommendation on April 29, 2015, SDG&E investigated the feasibility of a preservation alternative consistent with CEQA guidelines. As outlined in the CEQA Guidelines §§ 15064.5(b)(4) and 15126(a), a preservation alternative should be considered where a historical resource is identified. Therefore, SDG&E developed the Capistrano Preservation Alternative for the CPUC's consideration and inclusion in the Final EIR.

2.0 DESCRIPTION OF THE CAPISTRANO PRESERVATION ALTERNATIVE

2.1 Scope and Design – Capistrano Preservation Alternative

Following the SHRC recommendation, SDG&E identified and retained a historic preservation consulting firm, Chattel, Inc. (Chattel), to determine what would be necessary to avoid significant impact to the existing utility structure, assuming that the structure is ultimately deemed eligible for NRHP listing. Notwithstanding that the Keeper has declined to make a determination of eligibility at this time, based on the inadequacy of the nomination, SDG&E has nonetheless elected to develop the Capistrano Preservation Alternative and for purposes of SDG&E's comments on the Recirculated DEIR, it is assumed that the Utility Structure qualifies as an historical resource.

In coordination with Chattel, SDG&E developed the Capistrano Preservation Alternative to avoid a potentially significant impact on the existing utility structure (refer to Substation Design Drawings in Attachment A). As set forth in the Assessment of Capistrano Alternative prepared by Chattel (see Attachment B)[1], the Capistrano Preservation Alternative would not result in a substantial adverse change to the utility structure, and therefore would have a less-than-significant impact on the assumed historical resource, because the Capistrano Preservation Alternative has been designed, and would be implemented, in conformance with the Secretary of

[1] Chattel's September 22, 2015 report, entitled "Capistrano Substation Utility Structure, 31050 Camino Capistrano, San Juan Capistrano, California - Assessment of Capistrano Preservation Alternative" is attached hereto as Attachment B.

the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings (the "Secretary's Standards") and otherwise would not materially impair the historic significance of the utility structure. Attachment A contains substation design drawings that depict the Capistrano Preservation Alternative's design and layout.

Based upon Chattel's recommendations (see Attachment B) the Capistrano Preservation Alternative avoids significant impact to the existing utility structure (assuming the structure qualifies as a historic resource). The west wing of the structure would be rehabilitated in conformance with the Secretary's Standards while the east wing of the structure (located away from Camino Capistrano, which is less visible from the street and has less architectural detail) would be removed. SDG&E would then utilize the remaining portion of the existing utility structure as part of utility operations.

Under the Capistrano Preservation Alternative, in order to incorporate the retained portion of the existing utility structure into the San Juan Capistrano Substation design,[2] modifications to the design, specifications, and layout of the substation are made compared to the San Juan Capistrano Substation design included in SDG&E's Proposed Project. The primary modification to the substation design is a reduction in the size of the rebuilt 138/12 kV substation located on the "lower pad" portion of the substation site. By reducing the ultimate distribution capacity of the proposed rebuilt Capistrano Substation from 120 MVA to 90 MVA, the proposed 230/138/12 kV substation can be constructed within SDG&E's existing property. This modification would reduce the number of distribution 138/12kV transformers, 12kV switchgear sections and 12kV capacitors from four to three each (with no space for future expansion). Attachment A, Substation Design Drawings, provides the substation site plan and other design drawings and figures for the San Juan Capistrano 230/138/12kV Substation under the Capistrano Preservation Alternative.

Under the Capistrano Preservation Alternative, like the Proposed Project, the Applicant would rebuild and expand the 138/12kV substation at the Capistrano site, and would also construct a new 230/138kV substation at the Capistrano site. All other elements of the Capistrano Preservation Alternative (new 230kV transmission lines, 138kV power line relocations and undergrounding west of the Capistrano Substation site, and 12kV distribution line relocations) would be the same as the design of the Applicant's Proposed Project (as refined).

Substation design modifications include:

- The existing earthen mounds, vegetation and trees along the western edge of the property (between Camino Capistrano and the existing utility structure) would be removed and replaced with landscaping that returns the existing utility structure's setting to an earlier appearance.

[2] SDG&E proposes to name the rebuilt Capistrano Substation as the San Juan Capistrano Substation.

- Because the substation grade would be raised approximately 5 feet to accommodate vehicles carrying equipment, an approximately 5 foot tall retaining wall would be constructed parallel to the northern and eastern walls of the existing utility structure. The retaining wall would be set back a minimum of 5 feet from the existing utility structure walls providing a personnel access way on these sides of the building.

- The western perimeter of the substation (along Camino Capistrano) would have a masonry wall approximately 10 feet tall on the inside of the substation and when viewed from the exterior would vary from approximately 12 feet to 15 feet in height. This is due to the fact that the substation grade behind the wall is raised by approximately 5 feet. The lower approximately 5 feet is the retaining wall, which would be coupled with an upper approximately 10 feet of masonry wall to collectively serve as the substation security and screen wall. The northern and southern perimeter walls would remain at approximately 10 feet in height, identical to the Proposed Project.

- The security screen wall would abut the existing utility structure on the north and south sides terminating approximately 4 inches from the structure (refer to substation drawings in Attachment A) creating separation between the existing utility structure and the western perimeter wall.

- The southern and western walls of the retained portion of the existing utility structure would be located outside of the secured substation facility and would be visible from Camino Capistrano. The northern and eastern walls of the existing utility structure would effectively act as part of the substation security wall.

- New steel replacement doors would be installed in the southern, eastern and northern walls of the existing utility structure and would replace the existing doors at these locations. The northern and eastern doors will serve as part of the security wall.

- A driveway access to the existing utility structure would be constructed from the main substation access drive to the structure's southern door.

- The southern driveway's vehicle access gate to the rebuilt Capistrano Substation would be set back approximately 80 feet from Camino Capistrano.

- The northern driveway's access gate would remain (similar to the Proposed Project) set back approximately 35 feet from Camino Capistrano.

- The northern and southern vehicular access gates would be approximately 30 feet in width, each comprised of a pair of black wrought iron sliding gates, each approximately 15 feet in width.

- Grading and the phased site development, including cut and fill, would be similar to that of Proposed Project substation design.

With respect to the existing utility structure itself, the west wing would be retained and rehabilitated per the Secretary's Standards. The east wing would be removed to provide adequate room for redevelopment of the substation. The northern and eastern walls of the retained portion of the existing utility structure would serve as part of the security wall of the substation, and would only be entered from the exterior (which would be inside the substation security wall). Modifications to the existing utility structure include:

- East Wing Demolition –12 inches of roof and walls would be retained at the point where the east wing intersects the west wing of the existing utility structure. This work is designed to allow the remaining portion of the roof and wall visually to read as a "ghost" of the east wing once it is removed.
- West Wing Rehabilitation:
  - Western Wall –The exterior wall where earthen mounds are to be removed would be repaired and waterproofed. The concrete wall iron jacking would be repaired at locations where steel rebar is exposed at western interior wall. Window rehabilitation would include removal of existing glazing, repairing existing sash and frames, and reglazing with like-kind translucent wire glass. Security bars on all windows would be installed on the interior.
  - Northern Wall – Deteriorated, non-original doors, sidelights, and transom window would be replaced to match the original. Doors, sidelights and transom would be constructed of steel rather than wood for increased security. Due to lack of visibility from the street, it is not proposed to include glazing, but rather this door assembly would be constructed exclusively of steel following the original pattern. The northern wall and replacement door would serve as part of the security wall of the substation and would only be accessed from the exterior (i.e., from within the substation).
  - Eastern Wall –The interior door at the location of demolished east wing would be replaced with a new exterior door to match the original, but designed for exposure to the elements. Due to the lack of visibility from the street, it is not proposed that glazing be included in either the new exterior door or existing windows, but rather for these assemblies would be constructed exclusively of steel following the original pattern. The eastern wall, windows and replacement door would serve as part of the security wall of the substation and would only be accessed from the exterior (i.e., from within the substation).
  - Southern Wall – Deteriorated, non-original doors, sidelights, and transom window would be replaced to match the original. Doors, sidelights and transom would be constructed of steel rather than wood for increased security. Due to the visibility from the street, it is proposed to include translucent wire glass at the transom only, but otherwise the new door assembly would be constructed of steel following the original pattern. Where glazing occurs at the transom, security bars would be installed on the interior.

- Interior Window Sills - Damage to concrete would be repaired at windows sills where water infiltration has occurred.
- Interior Crane – The moveable crane would be retained.
- Lighting - Development and implementation of a lighting plan would include exterior wall sconces on the north and south walls. Such exterior wall sconces would operate manually.

Chattel determined that, assuming the utility structure subsequently qualifies as an historical resource, the Capistrano Preservation Alternative would not have a significant impact on the utility structure, in part because it conforms with the Secretary's Standards. However, to ensure conformance with the Secretary's Standards through final design and construction, Chattel recommended that SDG&E retain a qualified professional historic architect meeting the Secretary of the Interior's Professional Qualifications Standards to monitor those activities. Chattel also recommended that SDG&E prepare Historic American Building Survey (HABS) photographic documentation for the utility structure before the east wing is removed. Chattel concluded that these measures would further reduce the Capistrano Preservation Alternative's already less-than-significant impact on the utility structure (assuming that it is subsequently determined to be an historical resource under CEQA). SDG&E is agreeable to these measures, which should therefore be considered Applicant Proposed Measures.

As shown in San Juan Capistrano Substation drawings provided in Attachment A, the 138kV (GIS) switchgear building, the three 230/138kV transformers, the 230kV (GIS) switchgear building, and the 230kV capacitor banks would all have a design and be located on the substation property similar to the layout for the Proposed Project. Table 1, Key Substation Ultimate Design Differences highlights the key differences between the Proposed Project and the Capistrano Preservation Alternative San Juan Capistrano Substation design.

Table 1: Key Substation Ultimate Design Differences

Substation Design Element	Capistrano Preservation Alternative Design	Proposed Project Design
Former Utility Structure	Western portion retained with rehabilitation consistent with Secretary's Standards	Entire structure removed
138/12kV Transformers	Three transformers	Four transformers
12kV Switchgear	Three ¼ sections of switchgear (12 circuits)	Four ¼ sections switchgear (16 circuits)
12kV Capacitors	Three 12kV capacitors	Four 12kV capacitors

Table 1 (cont.): Key Substation Ultimate Design Differences

Substation Design Element	Capistrano Preservation Alternative Design	Proposed Project Design
Western Screen/Security Wall	Varies up to 15 feet tall from the exterior	10 feet tall
Southern Driveway	80 foot setback from the Camino Capistrano	35 foot setback from Camino Capistrano

The construction schedule for the San Juan Capistrano Substation, under the Capistrano Preservation Alternative, is anticipated to be approximately 51 months. Construction equipment and personnel would be similar to those identified for the Proposed Project in the Draft EIR, Section 2.4.1.

2.2 Consideration of CEQA Criteria

Consistent with CEQA Guidelines (Section 15126.6) and the South Orange County Reliability Enhancement Project Recirculated Draft Environmental Impact Report (RDEIR), the Capistrano Preservation Alternative was evaluated according to the following criteria:

1. Would the Capistrano Preservation Alternative accomplish most of the basic project objectives?
2. Would the Capistrano Preservation Alternative be economically, technically, and legally feasible?
3. Would the Capistrano Preservation Alternative avoid or substantially lessen one or more significant impacts identified for the Proposed Project?
4. Would the Capistrano Preservation Alternative increase the severity of any impact identified for the Proposed Project, or create a new potentially significant impact that was not identified for the Proposed Project?

Conformance with Project Objectives

The Capistrano Preservation Alternative would meet each of the Proposed Project objectives included within the DEIR (Section 1.3.1) as well as the Applicant's objectives outlined in Proponent's Environmental Assessment (PEA) Section 2.2. Similar to the Proposed Project, the Capistrano Preservation Alternative would provide the following benefits:

- Reduced risk of an uncontrolled outage of all of the South Orange County load;
- Reduced risk of a controlled interruption of a portion of the South Orange County load;
- Compliance with mandatory NERC, WECC, and CAISO transmission planning standards;
- Rebuild of the Capistrano Substation to replace aging equipment and increase capacity;

- Improved transmission and distribution operating flexibility;
- Provides a redundant second 230kV source for the South Orange County service area;
- Accommodates projected customer load growth in the South Orange County area; and
- Locates new and upgraded facilities within existing transmission corridors, SDG&E ROW, and utility owned property.

Feasibility

The Capistrano Preservation Alternative is feasible from a technological, legal, and economic perspective. SDG&E has conducted preliminary engineering and design (refer to Section 2.1 and Attachment A), and has determined that the Capistrano Preservation Alternative is in fact feasible from a technical, engineering, and construction perspective. While the cost of the Capistrano Preservation Alternative may increase in comparison to the cost of Proposed Project, such increase in cost would be minimal in relation to the overall cost of either the Capistrano Preservation Alternative or the Proposed Project. Therefore, the Capistrano Preservation Alternative is considered to be economically feasible. Finally, the Capistrano Preservation Alternative would utilize the same existing SDG&E property proposed for use by the Proposed Project. SDG&E has legal rights to the Capistrano Substation site as property owner and the CPUC would retain discretionary authority over the siting of the project, all in a similar manner as for the Proposed Project. Therefore, the Capistrano Preservation Alternative is considered to be legally feasible.

Environmental Advantages

As described above and detailed within Attachment B, the Capistrano Preservation Alternative would reduce potentially significant impacts to the potentially historical resource to a level less than significant. Therefore, if the Keeper ultimately finds that the existing utility structure is eligible for listing on the NRHP, the Capistrano Preservation Alternative would reduce at least one potentially significant impact in comparison to the Proposed Project.

Environmental Disadvantages

No environmental disadvantages have been identified with the Capistrano Preservation Alternative in comparison to the Proposed Project. As further described in Section 3.0 below, the Capistrano Preservation Alternative would not be anticipated to increase the severity of any impact identified for the Proposed Project and would not create any new impact not previously identified for the Proposed Project.

Conclusion

The Capistrano Preservation Alternative is feasible, would meet the basic objectives of the Proposed Project, and would reduce potentially significant impacts to a potential historical resource identified for the Proposed Project. Therefore, the Capistrano Preservation Alternative should be considered by the CPUC and included in the Final Environmental Impact Report.

3.0 COMPARISON OF THE CAPISTRANO PRESERVATION ALTERNATIVE

3.1 Methodology

As stated in Section 2.1 above, the Capistrano Preservation Alternative was analyzed to ensure that at least one potentially significant impact identified for the Proposed Project would be avoided or substantially reduced (to a level less than significant) by implementation of the Capistrano Preservation Alternative. The Capistrano Preservation Alternative was compared to the Proposed Project in terms of the resource areas that the DEIR/RDEIR found to be impacted by the Proposed Project.

While the focus of the Comparison of the Capistrano Preservation Alternative to the Proposed Project is the six potentially significant impacts identified within the RDEIR, the comparison included below also analyzes whether or not the Capistrano Preservation Alternative would increase impacts for other resources affected by the Proposed Project. The RDEIR and DEIR collectively identify six potentially significant impacts of the Proposed Project (air quality, biological resources, cultural resources, land use and planning, traffic and transportation, and cumulative impacts) with impacts to all other resource areas being less than significant.

For purposes of this Comparison, SDG&E presents the RDEIR findings with respect to the Proposed Project's impacts. SDG&E does not agree that the RDEIR has properly identified as significant impacts to biological resources, land use and planning, traffic and transportation, and cumulative impacts. The air quality impact would be similar for each Alternative considered.[3] With respect to traffic impacts, as stated in SDG&E's April 10, 2015 Comments on the Draft EIR, Detailed Comments at 3-4: "SDG&E's construction and engineering contractors do not expect a full closure of any of these roads during underground construction and SDG&E did not state there would be any full road closures in the PEA. The Project refinements identified in more detail in Attachment A - Minor Project Design Refinements will eliminate the temporary and cumulative traffic impacts." With respect to biological and land use impacts, as set forth in SDG&E's September 24, 2015 RDEIR Comments at Section IV, SDG&E is in full compliance with its Natural Communities Conservation Plan ("NCCP") and, with the Segment 4 Design Revisions set forth in Exhibit 2, bringing permanent transmission structures within SDG&E's existing easements, the United States Fish & Wildlife Service ("USFWS") has agreed that no conflict between the Proposed Project and recorded and potential conservation easements is expected. With respect to land use impacts on local height limitations, the Commission's General Order 131-D, CPUC Decision 94-06-014, and numerous court rulings confirm that the CPUC has exclusive jurisdiction over the construction of electric utility facilities, preempting local ordinances. Therefore the local ordinances cited in the RDEIR are not applicable to the Proposed Project. With respect to the potential historical resource, on August 21, 2015, SDG&E

[3] Rebuilding Capistrano Substation, at least as a 138/12 kV substation, is a reasonably anticipated outcome under all Alternatives considered in the RDEIR/DEIR. Therefore, each such Alternative will have a similar effect on air quality as the Proposed Project—and many alternatives require rebuilding two substations rather than just one.

submitted to the Keeper its objection to the proposed determination of eligibility of the existing utility structure for the NRHP, opposing the SHRC's recommendation. If the Keeper ultimately finds that the existing utility structure is not eligible for listing on the NRHP, then the Proposed Project would not have a significant effect on a historical resource.

SDG&E provides the Comparison below, based on the RDEIR's findings, without conceding that the RDEIR findings are accurate.

3.2 Analysis of the Capistrano Preservation Alternative

An analysis of the environmental advantages and disadvantages of the Capistrano Preservation Alternative in comparison to the RDEIR's findings regarding the Proposed Project is contained within the following subsections. Table 2, Comparison Summary, summarizes the determinations of impacts to CEQA resources for the Capistrano Preservation Alternative in comparison to RDEIR's findings regarding the Proposed Project. As shown in Table 2 and detailed below, the Capistrano Preservation Alternative would have similar or less impacts than the Proposed Project for all CEQA resource areas.

Table 2: Comparison Summary

Resource Area	Proposed Project	Pres. Alt.
Aesthetics	LTS	Similar
Agriculture & Forestry	LTS	Similar
Air Quality	S	Similar
Biological Resources	*S*[1]	Similar
Cultural Resources	S	Less
Geology, Soils, & Minerals	LTS	Similar
Greenhouse Gases	LTS	Similar
Hazards	LTS	Similar
Hydrology and Water Quality	LTS	Similar
Land use and Planning	*S*[2]	Similar
Noise	LTS	Similar
Population & Housing	LTS	Similar
Public Services and Utilities	LTS	Similar
Recreation	LTS	Similar
Transportation and Traffic	*S*[3]	Similar
Cumulative	*S*[3]	Similar

Notes:
LTS = less than significant
S = Significant
[1] Note that following initial consultation with USFWS, impacts would be LTS.
[2] As outlined in SDG&E's comments, CPUC jurisdiction preempts local ordinances and impacts would be LTS.
[3] Traffic control plans submitted on SDG&E's Minor Project Refinement (dated April 2015) reduce impacts to LTS.

Under the Capistrano Preservation Alternative, the San Juan Capistrano Substation would be rebuilt and expanded to allow for additional 138kV connections as well as for the connection to new 230kV transmission lines. As described in Section 2.1 above, the principal difference between the Capistrano Preservation Alternative and the Proposed Project is the retention and rehabilitation of the west wing of the existing utility structure and the reduced ultimate substation buildout for the distribution facilities.

Reduction of Potentially Significant Impacts

Historic Resources

As documented in Attachment B, the Capistrano Preservation Alternative would reduce impacts to historical resources to less than significant through the preservation and rehabilitation of the western wing of the existing utility structure in conformance with the Secretary's Standards,

consistent with the assessment included within Attachment B (historic site 30-179873)[4]. Therefore, the Capistrano Preservation Alternative would have less impacts to historical resources when compared to the Proposed Project.

Air Quality

The DEIR identified short term, significant impacts relating to the emission of criteria pollutants. Emission of criteria pollutants is governed by the location, extent (area of disturbance), duration (length of construction), and intensity (amount of equipment required) of construction activities. These impacts were the direct result of construction activities, including the use of heavy construction equipment. The Capistrano Preservation Alternative would include construction activities very similar to the Proposed Project in location, extent, duration, and intensity. Therefore, Capistrano Preservation Alternative would have similar effects on air quality as the Proposed Project.

Biological Resources

The RDEIR found: "The proposed project may conflict with two conservation easements established within the Orange County Southern Subregion HCP and considered preserve areas under the SDG&E NCCP/HCP." As set forth in SDG&E's September 24, 2015 RDEIR Comments at Section IV, SDG&E is in full compliance with its Natural Communities Conservation Plan ("NCCP") and, with the Segment 4 Design Revision set forth in Exhibit 2, bringing permanent transmission structures and wires within SDG&E's existing easements, the United States Fish & Wildlife Service ("USFWS") has agreed to a process that would result in the Proposed Project being consistent (i.e. having no conflicts) with recorded and potential conservation easements and the Orange County Southern Subregion HCP. The Capistrano Preservation Alternative would have similar (less than significant) effects on biological resources as the Proposed Project.

Land Use and Planning

Like the Proposed Project, the Capistrano Preservation Alternative would include rebuilding and expanding the San Juan Capistrano Substation, including the construction of a 138kV gas insulated substation (GIS) structure (approximately 45 feet tall), and a 230kV GIS structure (approximately 50 feet tall). The RDEIR found in LU-2 that the "proposed project would directly conflict with applicable building height regulations defined within the San Juan Capistrano Municipal Code." The Commission's General Order 131-D, CPUC Decision 94-06-014, and numerous court rulings confirm that the CPUC has exclusive jurisdiction over the construction of electric utility facilities, preempting local ordinances. Therefore the local ordinances cited in the RDEIR are not applicable to the Proposed Project. The Capistrano

[4] Note that the potentially significant impact to historic resources was made in the RDEIR on the assumption that former utility structures would quality as a historic resource. However, the Keeper of NRHP has most recently declined to rule on the eligibility of the structure and has requested revisions to the nomination, including additional analysis concerning the integrity of the original substation complex.

Preservation Alternative would have an inconsistency with the inapplicable City of San Juan Capistrano zoning ordinance similar to that of the Proposed Project.

The RDEIR found in LU-3: "The proposed project may also conflict with two conservation easements established under the Orange County Southern Subregion HCP." As set forth in SDG&E's September 24, 2015 RDEIR Comments at Section IV, SDG&E is in full compliance with its Natural Communities Conservation Plan ("NCCP") and, with the Segment 4 Design Revision set forth in Exhibit 2, bringing permanent transmission structures and wires within SDG&E's existing easements, the USFWS has agreed to a process that would result in the Proposed Project being consistent with recorded and potential conservation easements and the Orange County Southern Subregion HCP. The Capistrano Preservation Alternative would have similar effects on LU-3 as the Proposed Project.

Traffic and Transportation

The Capistrano Preservation Alternative would include rebuilding and expansion of the Capistrano Substation, including the undergrounding of existing 13kV and 12kV lines west of the Capistrano Substation site that would result in temporary impacts to traffic circulation on Camino Capistrano and Calle San Diego. The Capistrano Preservation Alternative would include the same scope of work between the Talega Substation and up to the Capistrano Substation site. Therefore, similar impacts to traffic circulation would occur during stringing operations (for example – across the I-5 Freeway) and during underground construction at Vista Montana and Via Pamplona. The Capistrano Preservation Alternative would have similar impacts on traffic circulation as the Proposed Project. However, it is important to note that impacts to traffic circulation are actually less than significant, as detailed in SDG&E's comments on the DEIR. Specifically, SDG&E can construct underground lines at Vista Montana, Via Pamplona, and Calle San Diego without full road closures. Additionally, SDG&E's substation engineering consultant prepared draft traffic control plans for Camino Capistrano that would allow for construction to occur while retaining 3 lanes of travel, thus retaining roadway capacity and reducing impacts to traffic circulation to a less than significant level. Similarly, the Capistrano Preservation Alternative would not result in significant impacts to traffic circulation.

Cumulative Impacts

The Capistrano Preservation Alternative would include rebuilding and expansion of the Capistrano Substation, including the undergrounding of existing 13kV and 12kV lines west of the Capistrano Substation site that would result in temporary cumulative impacts to traffic circulation on Camino Capistrano. Therefore, the Capistrano Preservation Alternative would have similar cumulative impacts when compared to the Proposed Project. However, it is important to note that impacts to traffic circulation (including the cumulative impacts identified within the DEIR) are actually less than significant, as detailed in SDG&E's comments on the DEIR. Pursuant to the Draft traffic control plans submitted with SDG&E's comments on the DEIR, roadway capacity on Camino Capistrano could be maintained at three lanes, thus limiting impacts a less than significant level. Similarly, the Capistrano Preservation Alternative would not result in significant cumulative impacts to traffic circulation on Camino Capistrano.

Other Resource Areas

The Capistrano Preservation Alternative would have a very similar scope of work compared to the Proposed Project, and this would generally result in very similar impacts to CEQA resource areas, as summarized in Table 2 above. A comparison of such impacts is included below for each of the 10 resources areas with less than significant impacts.

Aesthetics

The Capistrano Preservation Alternative would have the same alignment as the Proposed Project for all distribution, power, and transmission lines to be installed, removed, or relocated. Therefore, impacts to aesthetic resources (including viewsheds, view corridors, scenic highways and roads, and scenic vistas) would be similar for the Capistrano Preservation Alternative when compared to the Proposed Project. Similarly, impacts to visual character from the distribution, power, and transmission lines would be similar for the Capistrano Preservation Alternative when compared to the Proposed Project.

Potential impacts relating to degradation of the existing visual character at the San Juan Capistrano Substation site would be similar (or less) for the Capistrano Preservation Alternative when compared to the Proposed Project. While the Capistrano Preservation Alternative includes a redesigned San Juan Capistrano Substation, the revisions are relatively minor and would actually result in less visual change from existing conditions when compared to the Proposed Project. As further described above and within Attachments A and B, the western wing of the existing utility structure would be retained, rehabilitated, and incorporated into the design of the new San Juan Capistrano Substation. The view of the San Juan Capistrano Substation would therefore not only be altered less under the Capistrano Preservation Alternative than under the Proposed Project, the design of the new substation under the Capistrano Preservation Alternative would also include positive measures such as wall design and landscaping that would increase the consistency of the site with the historic look and feel of the substation site. In addition, prominent existing visual features, including existing overhead 138kV structures, would be removed (138kV lines would be relocated to an underground position as they enter the substation, similar to the design of the Proposed Project) thus providing for a more unified landscaped as discussed within the DEIR (page 4.1-26, lines 40 and 41). Therefore, impacts relating to degradation of existing visual character for the Capistrano Preservation Alternative would be similar, or less, when compared to the Proposed Project.

Agriculture and Forestry Resources

The Capistrano Preservation Alternative would have the same physical footprint as the Proposed Project, thereby have the same potential to affect agricultural and forestry resources. Therefore, impacts to agricultural and forestry resources would be similar for the Capistrano Preservation Alternative when compared to the Proposed Project.

Geology, Soils, and Mineral Resources

The Capistrano Preservation Alternative would have the same footprint as the Proposed Project, and would require a similar amount of grading, grubbing, and other earth disturbing activities as well as similar construction activities and equipment usage. Therefore, impacts relating to geologic hazards, seismic hazards, landslides, unstable and expansive soils, liquefaction, and soil erosion would be similar for the Capistrano Preservation Alternative when compared to the Proposed Project.

Greenhouse Gases

The Capistrano Preservation Alternative would include similar construction activities, including duration, location, and intensity. Therefore, impacts associated with greenhouse gas emissions from construction would be similar for the Capistrano Preservation Alternative when compared to the Proposed Project.

The San Juan Capistrano Substation design and operation under the Capistrano Preservation Alternative would be similar to the Proposed Project, and would actually contain a smaller ultimate buildout (less equipment) when compared to the Proposed Project. Therefore, impacts relating to the emission of greenhouse gases (including from the utilization of sulfur hexafluoride) would be similar or less for the Capistrano Preservation Alternative when compared to the Proposed Project.

Hazards and Hazardous Materials

The Capistrano Preservation Alternative would have the same footprint as the Proposed Project, and would require a similar construction equipment, materials, and equipment. Therefore, impacts relating to fire hazards, emergency response plans, evacuation routes, hazardous materials sites, and hazardous materials and waste handling and exposure would be similar for the Capistrano Preservation Alternative when compared to the Proposed Project.

Hydrology and Water Quality

The Capistrano Preservation Alternative would have the same footprint as the Proposed Project, and would require a similar amount of grading, grubbing, and other earth disturbing activities. The Capistrano Preservation Alternative would also be subject to the same water quality related regulations and best management practices, such the SDG&E BMP Manual, NPDES Regulations (including preparation implementation of a SWPPP), and hazardous materials storage regulations (such as the preparation and implementation of SPCC plans). Therefore, the Capistrano Preservation Alternative would have similar impacts on water quality standards and waste discharge requirements when compared to the Proposed Project.

Because the Capistrano Preservation Alternative would have the same footprint as the Proposed Project, would include similar construction and operation activities, in the same locations, potential impacts relating flooding, flood hazards, tsunami hazards, mud flow hazards, and

drainage patterns would be similar for the Capistrano Preservation Alternative and the Proposed Project.

The Capistrano Preservation Alternative would have a similar, low potential to require dewatering during construction activities. Similar to the Proposed Project, the Capistrano Preservation Alternative would not be anticipated to affect groundwater (either directly or indirectly) in any other ways. Therefore, potential impacts on ground water would be similar for the Capistrano Preservation Alternative when compared to the Proposed Project.

Noise

Construction of the Capistrano Preservation Alternative would be similar to construction of the Proposed Project, including having a similar construction schedule and the same physical locations where construction activities would occur. Therefore, less than significant impacts associated with construction noise and groundborne vibration would be similar for the Capistrano Preservation Alternative when compared to the Proposed Project.

The Capistrano Preservation Alternative would include the same scope of work as the Proposed Project in relation to operation of new 230kV overhead transmission lines. Therefore, potential impacts associated with corona noise would be similar for the Capistrano Preservation Alternative when compared to the Proposed Project.

The revised ultimate substation layout under the Capistrano Preservation Alternative would include space for one less 138/12kV transformer, and the same number of 230/138kV transformers as the Proposed Project. The 230/138kV transformers would be located in the same location as the Proposed Project design. The location of the 138/12kV transformers have been shifted slightly; however, the noise emission from the 138/12kV transformers are lower in relation to the 230kV transformers and the 138/12kV transformers are located further from sensitive noise receptors. Therefore, impacts from transformers are anticipated to be similar for the Capistrano Preservation Alternative and the Proposed Project.

Population and Housing

The Capistrano Preservation Alternative would include a similar work force (both for construction and operation) as the Proposed Project and would have the same potential to indirectly induce growth through the improved electrical transmission system the Capistrano Preservation Alternative would provide. Therefore, impacts to population and housing would be similar for the Capistrano Preservation Alternative when compared to the Proposed Project.

Public Service and Utilities

The Capistrano Preservation Alternative would include a similar work force (for both construction and operation) as the Proposed Project, would include the same physical footprint as the Proposed Project, and would have the same potential for use of public services including law enforcement, fire protection, parks, schools, and other public services. Therefore, impacts would be similar for the Capistrano Preservation Alternative when compared to the Proposed Project.

The Capistrano Preservation Alternative would result in similar requirements for water use, wastewater, and solid waste. Therefore, impacts upon these services would be similar for the Capistrano Preservation Alternative when compared to the Proposed Project.

The Capistrano Preservation Alternative would occupy the same footprint as the Proposed Project, with no substantial difference in new impervious areas or anticipated runoff volumes. While retention of a portion of the existing utility structure would increase impervious area when compared to the Proposed Project substation design, the reduction in equipment would offset some of that increase. Therefore, impacts to stormwater retention and drainage facilities would be similar for the Capistrano Preservation Alternative when compared to the Proposed Project.

Recreation

The Capistrano Preservation Alternative would not induce increased substantial new use of existing recreational facilities such that existing facilities would be degraded. The Capistrano Preservation Alternative would include a similar work force (for both construction and operation) as the Proposed Project. Therefore, impacts to recreational facilities would be similar for the Capistrano Preservation Alternative when compared to the Proposed Project.

Determination

The Capistrano Preservation Alternative would result in fewer potentially significant impacts as the existing utility structure (historic site 30-179873) would be preserved in accordance with the Secretary's Standards, with the west wing retained and rehabilitated, and incorporated into the design and future use of the San Juan Capistrano Substation (refer to Attachments A and B). Impacts associated with traffic and cumulative traffic would be similar for the Capistrano Preservation Alternative and the Proposed Project and, as noted in SDG&E's comments on the DEIR and again summarized in SDG&E's comments on the RDEIR, these impacts can be reduced to a level less than significant. Similarly, the Capistrano Preservation Alternative would result in the same impacts to land use and planning and biological resources identified for the Proposed Project within the RDEIR. However, as stated within SDG&E's comments to the RDEIR, these impacts should be considered less than significant for the Proposed Project, and as such would be less than significant for the Capistrano Preservation Alternative. Due to the substantially similar construction scenario between the Capistrano Preservation Alternative and the Proposed Project, similar temporary, significant impacts related to the emission of criteria pollutants would be anticipated to result. Finally, the Capistrano Preservation Alternative would be anticipated to have similar or less, impacts to the remaining CEQA resource areas identified by the DEIR to have less than significant impacts under the Proposed Project.

In addition, the Capistrano Preservation Alternative would meet the basic project objectives, including providing for a redundant second 230kV source that could adequately support the South Orange County load in the event of the loss of the Talega Substation, complying with mandatory NERC, WECC and CAISO reliability standards, and rebuilding Capistrano Substation so that it can provide reliable electric service to the citizens of San Juan Capistrano.

ATTACHMENT A

Substation Design Drawings (OMITTED - CONFIDENTIAL)

ATTACHMENT B

Assessment of Capistrano Preservation Alternative
(Chattel September 22, 2015)

without Confidential Drawings

CAPISTRANO SUBSTATION UTILITY STRUCTURE
31050 CAMINO CAPISTRANO, SAN JUAN CAPISTRANO, CALIFORNIA
ASSESSMENT OF CAPISTRANO PRESERVATION ALTERNATIVE

Prepared for
San Diego Gas and Electric Company

Prepared by
Chattel, Inc.
Historic Preservation Consultants

September 22, 2015

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I. INTRODUCTION

This report evaluates the Capistrano Preservation Alternative (the Preservation Alternative) prepared by San Diego Gas & Electric Company (SDG&E). It was developed for the Capistrano Substation located at 31050 Camino Capistrano in San Juan Capistrano, Orange County, California (the Property) as part of SDG&E's comments on the Recirculated Draft Environmental Impact Report (RDEIR) prepared for the California Public Utilities Commission (CPUC) for the South Orange County Reliability Enhancement Project (the SOCRE Project). The CPUC originally circulated a Draft Environmental Impact Report Draft EIR) for the SOCRE Project on February 23, 2015. The proposed SOCRE Project analyzed in the Draft EIR included, among other regional utility improvements, substantial modifications to the Property and the existing improvements thereon, including demolition of an existing onsite utility structure ((the Utility Structure). The CPUC circulated the RDEIR for public comment on August 10, 2015. The objective of this report is to evaluate the Preservation Alternative with respect to its historical resources impact on the Utility Structure under the California Environmental Quality Act (CEQA).

The Utility Structure is the only building currently located on the Property. It was formerly used to house functions related to the Property's function as an electrical substation. However, while the substation continues to function as such today, the Utility Structure has played no role in the operation of the substation for decades and now sits vacant. The Utility Structure has been the subject of multiple historical resource assessments over the past several years. Three qualified consultants, including one retained by the CPUC, concluded that the Utility Structure was not eligible for listing on the National Register of Historic Places (National Register) and did not qualify as an "historical resource" under CEQA.[1]

Recently, however, the Utility Structure was nominated by a private citizen to the National Register. In the nomination, the Utility Structure was described as significant under Criterion A for its association with electrical power distribution in Southern California. Subsequently, on April 29, 2015, the State Historical Resources Commission (SHRC) recommended that the State Historic Preservation Officer (SHPO) nominate the Utility Structure as eligible for listing on the National Register. That recommendation was forwarded to the Keeper of the National Register (Keeper) on July 17, 2015. On August 21, 2015, SDG&E submitted to the Keeper its objection to the proposed determination of eligibility. Most recently, in a communication dated September 22, 2015 (the Keeper Communication), the Keeper declined to make a determination of eligibility and instead returned the nomination to the SHPO for substantive and technical revisions. In particular, the Keeper found that the nomination did not include an adequate analysis of the integrity of the original substation complex of which the Utility Structure was a part.

However, the CPUC completed the RDEIR prior to the Keeper's review of the nomination. As a result,the based upon the SHRC recommendation, the RDEIR states: "Because the former utility structure's eligibility for listing in the NRHP [National Register] has not yet been determined, it is assumed for the purposes of this analysis that the structure will be determined to be eligible for listing in the NRHP."[2]

Notwithstanding that the Keeper has now declined to make a determination of eligibility based on the inadequacy of the nomination, SDG&E has nonetheless elected to develop the Preservation Alternative and for purposes of this report, it is assumed that the Utility Structure qualifies as an historical resource. It is, however, uncertain whether and when (1) the nomination will be further

[1] Ecology and Environment, Inc., *South Orange County Reliability Enhancement Project Recirculated Environmental Impact Report (RDEIR),* August 2015, 2-97.

[2] Ibid, 2-97.

revised in accordance with the Keeper's comments and (2) the Keeper will find those revisions acceptable and make a determination of eligibility.

Notwithstanding that the RDEIR found that the demolition of the Utility Structure would be considered a significant impact under CEQA because the structure is potentially an historical resource, the RDEIR did not include a preservation alternative to reduce or avoid the significant impacts on that assumed historical resource. Therefore, SDG&E determined that it would prepare the Preservation Alternative for the CPUC's consideration. SDG&E retained Chattel, Inc., a historic preservation consulting firm, to help formulate the Preservation Alternative in a manner that avoids a significant impact on the Utility Structure. Consequently, in coordination with Chattel, Inc., SDG&E developed the Preservation Alternative, which has been designed to conform with the *Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings* (the *Secretary's Standards*), while still meeting key objectives of the proposed SOCRE Project. Projects that alter historical resources in conformance with the *Secretary's Standards* are considered to have a less-than-significant impact under CEQA.

The Preservation Alternative is described in a set of drawings prepared by NV5 engineers dated September 2015 (the Drawing Set). The Drawing Set is attached as **Exhibit A**. As shown on the Drawing Set, the Utility Structure includes a west wing along Camino Capistrano (the West Wing) and an east wing that is largely not visible from Camino Capistrano (the East Wing). The Preservation Alternative entails the retention and rehabilitation of the West Wing and the removal of the majority of the East Wing to provide adequate room to rebuild the substation, all in conformance with the *Secretary's Standards*. The East Wing is less architecturally articulated than the more publically-oriented West Wing, and it is less visible from the street, as it is located away from Camino Capistrano and the West Wing blocks views of it. Following the removal of the East Wing, the proposed 230/138/12 kV substation would be constructed within the existing Property by reducing the ultimate distribution capacity of the proposed rebuilt Capistrano Substation from 120 MVA to 90 MVA. This represents a modification of the project originally proposed by SDG&E, as it would reduce the number of distribution 138/12kV transformers, 12kV switchgear sections and 12kV capacitors from four to three each. All other elements (new 230kV transmission lines, 138kV power line relocations and undergrounding west of the Property, and 12kV distribution line relocations) would be the same as the project originally proposed by SDG&E, as analyzed in both the Draft EIR and the RDEIR as the SOCRE "Proposed Project".

This report evaluates the impact of the Preservation Alternative on the Utility Structure and its conformance with the *Secretary Standards,* and concludes that the Preservation Alternative would not result in a substantial adverse change in the significance of the Utility Structure, and that the Preservation Alternative does conform with the *Secretary's Standards*, as discussed in detail in Section VII, below. Therefore, the Preservation Alternative would not have a significant impact on an historical resource under CEQA.

II. INFORMATION SOURCES

The Property has been previously surveyed multiple times for historic and architectural significance (McKenna, Moomjian, and TRC). Historic context information was synthesized, verified, and further supplemented by Chattel, Inc.'s own research. Robert Chattel and Gabrielle Harlan attended a site visit of the Property on July 17, 2015, and Ms. Harlan also attended a site visit on March 26, 2015. Primary research materials include: the Southern California Edison Company Collection and the Southern California Edison Records, 1848-1989 Manuscript Collection at the Huntington Library in San Marino, California; Sanborn fire insurance maps; historical background data available online from the San Diego Historical Society and the City of San Juan Capistrano history files; and historic

drawings of the Property made available by SDG&E. In addition, the history of SDG&E was compiled from aforementioned surveys and several published works on the history of the company, including Iris Engstrand and Kathleen Crawford's *Reflections – A History of the San Diego Gas & Electric Company 1881-1991,* and William A. Myers*, Iron Men and Copper Wires – Centennial History of the Southern California Edison Company.*

III. PROPERTY HISTORY

The Utility Structure was constructed as part of a larger Capistrano Substation complex (the Substation Complex) on the Property, which is a large parcel of land adjacent to Camino Capistrano, a primary thoroughfare through San Juan Capistrano. The Property originally was owned by the Buchheim family. They were ranchers, and they had large orange groves in the area. However, by 1917, the Southern California Edison Company (SCE) had acquired the Property, and it soon began construction of its new Substation Complex, which was completed in 1918. A historic photograph illustrating the original Substation Complex, as well as historic photographs of the Utility Structure, are included as **Exhibit B**.

The original Substation Complex served as a connection point between SCE's 50 Hertz (Hz) transmission system and the 60 Hz system of San Diego Consolidated Gas & Electric Company. The electrical equipment in the Substation Complex included both indoor and outdoor components that were interdependent, and operated together as an integrated system.

The Utility Structure was the main structure in the Substation Complex. It was referred to in early construction drawings as the "indoor substation." However, the Substation Complex included several other structures. The Utility Structure was designed to have the most public presence on the street, as it was the only one that faced onto Camino Capistrano. Directly to the rear of the Utility Structure was a garage, which is no longer extant. All that remains of the garage structure is its scored concrete footprint. The original Substation Complex also included three residential structures, which were all located on the northern edge of the Property. The largest and most architecturally elaborate of the three was the Chief Operator's Cottage, and this residential unit was located in the closest proximity to the Utility Structure. The necessity for constructing the cottage on the Property was the fact that the chief operator was on call 24 hours a day. The other two cottages, which were substantially smaller and less architecturally elaborate, were workmen's cottages, which provided housing for the staff who helped to operate and maintain both the Substation Complex and other facilities in the region.

As is evidenced by historic site maps of the Property, another cottage was constructed sometime in the 1930s, bringing the total of residential cottages constructed as part of the substation to four. This later cottage was located in close proximity to the other two workmen's cottages. None of these cottages remain extant on the Property today.[3] Historic site maps illustrating the development of the Property are included as **Exhibit C**.

The Substation Complex also included outdoor equipment that was more industrial in nature than the structures and not enclosed in any interior space. Instead, the equipment was designed to withstand an outdoor environment . As such, the equipment is referred to as components of the "outdoor substation" in early drawings. The outdoor substation components included high and low

[3] According to the recent National Register nomination prepared for the Utility Structure, one of the four cottages on the Property was demolished or removed in 1960 when it was no longer needed for the operation of the Substation Complex. At approximately the same point in time, two of the cottages were relocated to the area of the Los Rios neighborhood in San Juan Capistrano. In 2002, the garage and the remaining cottage were also demolished. See Ilse Byrnes, *San Diego Gas & Electric Capistrano Substation Revised Nomination to the National Register of Historic Places*, 2014, Section Eight, Page 8.

voltage power lines that connected certain internal components of the substation (e.g., the frequency changer and switching station), racks and large transformers, control cables, circuit breakers, and meters. A cooling tower was located immediately adjacent to the Utility Structure on its north side (at the crux of the west and east wings of the structure) and a water tower was located at the northeast corner of the Property.

Also located to the immediate north of the Utility Structure was an equipment track, which was comprised of two metal rail lines set parallel to one another and oriented in a roughly north-south direction. The track traversed the small portion of the Property that lay between the outdoor substation and the Utility Structure. On this equipment track, equipment could be conveyed easily to and from the interior of the Utility Structure through doors located on its north side. The equipment track penetrated into the interior of the Utility Structure a distance of approximately five feet.

Other than foundation remnants and the outdoor portion of the equipment track, none of the outdoor substation structures or equipment is extant today.

The Utility Structure itself was designed in the shape of a “T” with two wings that were set perpendicular to one another. The structure also was functionally divided into two sections that corresponded to these two wings. The first section is rectangular-shaped and aligned with Camino Capistrano, the street that lies immediately to the west. This section was known historically as the "Converter Room,” and is referred to in this report as the “West Wing.” A lower rectangular section intersects with the West Wing at its midpoint on the east elevation. This section of the structure was historically known as the “Switch Room,” and is referred to in this report as the “East Wing.”

The West Wing housed a large piece of machinery called a transmission converter or "frequency changer." This piece of equipment is no longer extant today. The frequency changer served as the connecting point between SCE and SDG&E’s electrical systems. Its function was to provide conversion between the 50 Hz system of SCE and the 60 Hz system of SDG&E. This allowed electricity to flow from one company's power grid to the other. The high voltage power lines of both companies fed directly into the frequency changer; the lines of SCE arrived to it from the north while the lines of SDG&E came in from the south. In addition to housing this piece of machinery, it also appears that the interior space of the West Wing functioned to provide for the movement and temporary storage of other heavy equipment necessary to the regular maintenance and operation of the frequency changer. Such movement of heavy equipment on a fairly regular basis was apparently required due to the nature of the Property, which was perceived as somewhat constrained in size. The equipment track conveyed heavy equipment from the outdoor substation into the Utility Structure’s interior. Once inside, the machinery could be further conveyed to virtually any location within the interior of the West Wing by means of a Maris Bros. Hoist (i.e., a crane), which was installed as an integral part of the Utility Structure.

The East Wing, or “Switch Room”, housed a distribution switching station with small distribution controls for the 4kV system that fed the distribution circuits. Power lines feeding into the outdoor substation carried electricity over long distances. Therefore, for ease and efficiency in transport, this electricity needed to be at a high voltage. However, once the electricity arrived at the Substation Complex, it needed to be stepped down to a lower voltage before being delivered to customers. It was the function of the outdoor transformers to perform this stepping down, and this process worked both to reduce the loss of electricity and to make the system operate efficiently. The switch room located inside the East Wing was connected to the 4kV power lines located to the exterior by means of cables connected to low voltage circuit breakers. This set-up allowed for the Chief Operator and the workmen inside the Utility Structure to control, isolate, and repair electrical problems along the 4kV system almost immediately as they came up.

IV. REGULATORY SETTING

Federal and state law provides a framework for determining if (1) a structure is a historical resource for purposes of CEQA analysis, and (2) a proposed project, or alternative to that project, would result in a significant impact on an historical resource.

A. National Register of Historic Places (National Register)

The National Register is the nation's official list of historic and cultural resources worthy of preservation. Authorized under the National Historic Preservation Act of 1966, as amended, the National Register is part of a national program to coordinate and support public and private efforts to identify, evaluate, and protect the country's historic and archaeological resources. Properties listed in the National Register include districts, sites, buildings, structures, and objects that are significant in American history, architecture, archaeology, engineering, and culture. The National Register is administered by the National Park Service (NPS), which is part of the U.S. Department of the Interior. Resources are eligible for the National Register if they:

A) are associated with events that have made a significant contribution to the broad patterns of our history;
B) are associated with the lives of significant persons in our past;
C) embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
D) have yielded or may be likely to yield, information important in history or prehistory.[4]

Once a resource has been determined to satisfy one of the above-referenced criteria, then it must be assessed for "integrity." Integrity refers to the ability of a property to convey its significance, and the degree to which the property retains the identity, including physical and visual attributes, for which it is significant under the four basic criteria listed above. The National Register recognizes seven aspects or qualities of integrity: location, design, setting, materials, workmanship, feeling, and association. To retain its historic integrity, a property normally must possess most of these aspects.

The National Register includes only those properties that retain sufficient integrity to accurately convey their physical and visual appearance from their identified period of significance. Period of significance describes the period in time during which a property's importance is established. It can refer simply to the date of construction, or it can span multiple years, depending on the reason the property is important. The period of significance is established based on the property's relevant historic context and as supported by facts contained in the historic context statement.

Relationship to Preservation Alternative

The Property is not currently listed in the National Register and has not been determined eligible for listing on the National Register. As previously discussed, the SHRC has recommended that the Keeper determine that the Utility Structure is eligible for listing, but the Keeper has thus far declined to make a determination of eligibility and has returned the nomination to the SHPO for substantive and technical revisions. However, for purposes of this report, consistent with the RDEIR, it is assumed that the Utility Structure qualifies as an historical resource .

[4] *National Register Bulletin #15: How to Apply the National Register Criteria for Evaluation* (National Park Service, 1990, revised 2002).

B. Secretary of the Interior's Standards for Treatment of Historic Properties

The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings or the Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings (Weeks and Grimmer, 1995) (previously defined as the *Secretary's Standards*), were promulgated pursuant to the National Historic Preservation Act, 16 U.S.C. 470 et seq. and provide general guidance on treatments for historical resources and their immediate surroundings or setting. The NPS identifies four treatment approaches, which include preservation, rehabilitation, restoration and reconstruction. These treatments, in hierarchical order, are described as follows:

> **Preservation** focuses on the maintenance and repair of existing historic materials and retention of a property's form as it has evolved over time.
>
> **Rehabilitation** acknowledges the need to alter or add to a historic property to meet continuing or changing uses while retaining the property's historic character.
>
> **Restoration** depicts a property at a particular period of time in its history, while removing evidence of other periods.
>
> **Reconstruction** re-creates vanished or non-surviving portions of a property for interpretive purposes.[5]

The *Secretary's Standards* are not prescriptive or technical, but "are intended to promote responsible preservation practices" and "provide philosophical consistency" regarding treatments for historical resources (NPS, 2003). The *Secretary's Standards* are intended to be flexible and adaptable to specific project conditions to balance continuity and change while retaining historic building fabric to the extent feasible. Their interpretation requires the exercise of professional judgment and balance of the various opportunities and constraints of any given project based on use, materials retention and treatment, and compatibility of new construction. Not every standard necessarily applies to every aspect of a project, nor is it necessary to comply with every standard to achieve conformance.

Relationship to Preservation Alternative

As discussed in greater detail below, CEQA utilizes the *Secretary's Standards* as a means of determining whether a project, or alternative to a project, would have a significant, or less than significant, impact on an historical resource. In determining whether the Preservation Alternative is in conformance with the *Secretary's Standards*, the rehabilitation standard has been used, as detailed in Section VII.B, below.

C. California Register of Historical Resources (California Register)

The California Register is the State's version of the National Register program. It was enacted in 1992, and became official on January 1, 1998.

The California Register was established to serve as an authoritative guide to the State's significant historical and archaeological resources (California Public Resources Code (PRC) §5024.1). State law provides that the California Register shall include historical resources that the SHRC determines are significant and meet any of the following four criteria (which parallel National Register criteria):

[5] http://www.nps.gov/tps/standards/four-treatments.htm (accessed 22 September 2015)

1. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
2. Is associated with the lives of persons important in our past;
3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual or possesses high artistic values; or
4. Has yielded, or may be likely to yield, information important in prehistory or history.

The California Register also includes properties which have been formally determined eligible for listing in, or are listed in, the National Register.

Relationship to Project

The Property is not currently listed in the California Register.

D. California Environmental Quality Act (CEQA, Public Resources Code § 21000 et seq.)

According to CEQA, an historical resource is a resource listed in, or determined eligible for listing in, the California Register.

If a proposed project is expected to cause a substantial adverse change in a historical resource, that constitutes a significant impact on the historical resource. "Substantial adverse change in the significance of an historical resource means the physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired" (PRC §15064.5 (b)(1)). Section 15064.5 (b)(2) of the PRC provides that an historical resource is *materially impaired* when a project:

(A) demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register…;
(B) demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register... or its identification in an historical resources survey... unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or
(C) demolishes or materially alters those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register... as determined by a lead agency for the purposes of CEQA.

CEQA utilizes the *Secretary's Standards* as a means of evaluating when a proposed project will generally be found to have a less-than-significant impact on an historical resource. Section 15064.5(b)(3) of the State CEQA Guidelines provides:

> Generally, a project that follows the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings or the Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings (1995), Weeks and Grimmer, shall be considered as mitigated to a level of less than a significant impact on the historical resource.

Similarly, Section 15126.4(b)(1) of the State CEQA Guidelines states:

Where maintenance, repair, stabilization, rehabilitation, restoration, preservation, conservation or reconstruction of the historical resource will be conducted in a manner consistent with the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings (1995), Weeks and Grimmer, the project's impact on the historical resource shall generally be considered mitigated below a level of significance and thus is not significant.

Relationship to Preservation Alternative:

The Preservation Alternative has been evaluated in order to determine if it would result in a significant impact on the Utility Structure. As discussed in Section VII.A, below, the Preservation Alternative would not materially impair the Utility Structure, and therefore would not cause a substantial adverse change in its historic significance. This conclusion is reinforced in Section VII.B, below, where it is demonstrated that the Preservation Alternative would not cause a substantial adverse change in the historic significance of the Utility Structure because the Preservation Alternative conforms to the *Secretary's Standards*.

V. PROPERTY ASSESSMENT

A. Physical Description

Overview

The Utility Structure is a single-story building with a "T"-shaped footprint. It is one-story in height, and it has a flat roof with parapet walls. The walls, roof and floor are poured-in-place reinforced concrete. The windows are metal sash, multi-light divided casements. Contemporary photographs of the Utility Structure and the Property as they currently exist today are included as **Exhibit D**.

The Utility Structure is divided into two wings, in terms of both its architectural articulation and its historic function—the West Wing (the portion of the structure that runs parallel to Camino Capistrano) and the East Wing. Architecturally, the two wings are differentiated from each other in terms of both the amount of architectural decoration that they possess and in their physical massing. The West Wing measures 87 feet, 4 inches in length and 32 feet, 4 inches deep. The East Wing is a rectangular mass that is set perpendicular to the West Wing, intersecting the West Wing at its midpoint. It is the shorter of the two wings, measuring only 73 feet, 6 inches long. However, it has approximately the same width as the West Wing at 32 feet, 8 inches in width. The West Wing is the taller of the two wings, with walls that are 30 feet, 8 inches in height. The East Wing, which is set to the rear of the Property and away from the street, is significantly lower. Its walls are 22 feet, 10 inches in height.

The two wings are differentiated from each other in terms of architectural decoration as well. The West Wing has a restrained use of the Neoclassical Revival style. Elements of Classical Revival style architecture include the strict symmetry of the wing's façade, especially in relation to its fenestration pattern, as well as the decorative cornice that runs around its entire perimeter. In contrast, the East Wing is relatively stark and unadorned, although it too displays a strong sense of symmetry in its fenestration pattern. The only exterior ornamentation on the East Wing is a horizontal band at the top of its parapet wall that is of board-formed concrete and some "blind panels", also constructed of concrete, that are located under each of the windows on its north and south facades.

The interior of the Utility Structure is divided into two primary spaces that correspond to the structure's massing, as they are large, rectangular volumes connected by a pair of interior doors. The space of the West Wing is essentially one large, voluminous room, while the space of the East Wing is currently subdivided into a series of compartmentalized interior spaces divided by gypsum-board partition walls.

In its design, the Utility Structure features practices common to industrial buildings of its era; the West Wing with its detailed façade and large windows is intended as the public face of the structure, while the East Wing is more utilitarian. In comparison to the East Wing is relatively unfenestrated, with much smaller windows placed high upon its north and south facades. The East Wing was designed as a large box with small exterior openings to allow for the greatest amount of wall surface for the placement of switching of equipment. This pattern is typical of electrical utility buildings of the era, including the Pacific Gas & Electric Company (PG&E) Powerhouse in Sacramento and the Jessie Street Substation in San Francisco, both of which are considered exemplars of this building type.

In architectural historian Mark D. Kessler's book, titled *The Early Public Garages of San Francisco: An Architectural and Cultural Study, 1906-1929*, he dedicates a brief section to the architectural development of electrical substations at the turn of the twentieth century. Although Kessler's work focuses on the design of electrical substations in northern California, and particularly substations in San Francisco designed for the PG&E, his work is applicable to substation design throughout the State during this era. Many architects in California designed electrical substations of similar design to those erected by PG&E.

In his book, Kessler explains how the design of substations represented a curious dichotomy, one in which there was a distinct tension between the way that the exterior of a structure was represented to the public and the manner in which it functioned and was designed on the interior. In regard to substation structures at the turn-of-the-century, Kessler writes as follows: "…the substation is related to the exposition building, in a manner similar to the link between the garage and the train station."[6] The Utility Structure conforms to the description provided by Kessler of a typical substation as a smaller structure "of reinforced concrete faced in stucco," and the appearance of being a miniaturization of a larger prototype.

As Kessler writes, "the exterior [of substation structures] focused exclusively on the representation of the client [the power company that commissioned the building] to the public, the interior determined solely by the dictates of efficiency and utility." Therefore, the challenge for architects of substation facilities at the turn of the century was to design a structure that presented a formal and decorative appearance to the public that connoted qualities such as reliability and dependability—such as might be found on a more publically-oriented building such as a bank building, and which would invite the public into its interior—while also working to accommodate the technical functions of a working substation in the structure's interior, a decidedly non-public function.

The Utility Structure, which was part of the original Substation Complex, illustrates the dichotomy described by Kessler. The front of the structure, the West Wing that faces onto Camino Capistrano, exhibits the care that was taken by its unknown architect to present a dignified and public face to the street. As described in the recent National Register nomination, the "detailed primary façade was the most prominent and visible aspect of the substation complex, intended to be viewed by the community in front of the more prosaic and utilitarian elements of the complex."[7] In contrast, the East Wing is utilitarian and represents the purely functional, rather than the semi-public, aspect of the

[6] See Mark D. Kessler, *The Early Public Garages of San Francisco: An Architectural and Cultural Study, 1906-1929*. Jefferson (North Carolina: McFarland & Company, Inc., 2013), 174.

[7] See Byrnes, Section 8, Page 10.

Utility Structure. This dichotomy between the West Wing and the East Wing is illustrated in a Significant Spaces Diagram that is attached as **Exhibit D**. The Substation Complex worked as an integrated whole in order to provide electrical service to the public; however, it was the West Wing of the Utility Structure that conveyed to the public the image of the electrical company.

Detailed Description of the Exterior Elevations of the Utility Structure

West Wing – West Elevation

The west elevation, or front façade, of the Utility Structure, which is part of the West Wing, faces Camino Capistrano. This elevation exhibits five large metal sash, divided-light casement windows with transom windows above them. These windows are placed symmetrically upon the elevation. In their design, they are windows typical of industrial applications during the early twentieth century; they have wire glass panes. Today, the window frames are covered with plywood to the exterior of the structure in order to protect the glass panes from breakage and to secure the structure from entry and vandalism. However, the windows are still in place behind the plywood. To the interior of the West Wing, the casement windows have a wheel and pulley system mechanism that allows all five windows to be opened at once. A band molding runs parallel to the exterior window sills. Beneath the band molding is a concrete band suggesting a plinth. Above the windows is an architrave and a frieze containing the words “SAN DIEGO GAS & ELECTRIC” beneath the projecting cornice.

West Wing – North Elevation

This elevation includes a pair of doors, as centered upon it, which provide access to the interior of the West Wing. The current doors are replacement doors, but originally, they were frame doors with glass panes to the interior. Over each door was a single transom, and over the transoms was located a 5/5 divided light transom. To each side of the doors were sidelights that spanned the height of both the doors, the single transom, and the divided light transom. These sidelights were comprised of two different windows on each side of the door. The bottom portion was a divided light window in a 2/6 configuration. The upper window was arranged in a 2/2 configuration. While the doors, single-pane transoms, and the lower portion of the sidelights are no longer extant, the upper divided-light transom and upper 2/2 sidelights appear to remain in place behind a plywood covering. There is also a projecting cornice on this elevation. Originally, exterior light fixtures were placed on either side of the entry doors, but these are no longer extant.

West Wing – East Elevation

The eastern elevation of the West Wing was designed to accommodate two windows that match those on the west elevation. These two windows flank the East Wing as it intersects with the midpoint of the West Wing. Each window is symmetrically placed on the wall in relation to the midpoint of the West Wing in its north-south orientation. There is also a projecting cornice on this elevation.

West Wing – South Elevation

The south elevation of the West Wing mirrors the north elevation in size and massing. The main entry on the south elevation was constructed exactly like that on the northern elevation. It is comprised of two paired doors. As originally designed, these paired doors were topped with single-pane transoms, a divided-light transom above that, and sidelights. However, like the north elevation, the paired doors are replacements, the single-pane transoms and lower portions of the sidelights are no longer extant. However, the upper portions of the sidelights and the upper, divided-light transoms

are still extant and simply covered with plywood. Like the north elevation, the two light fixtures that once flanked the doors are no longer extant. There is also a projecting cornice on this elevation.

West Wing – Interior

The interior of the West Wing is one large, voluminous space. On the east wall, it has an interior doorway that serves to connect the space with that of the adjacent East Wing. As illustrated in the 1917 architectural drawings for the Utility Structure, the doorway was designed to consist of two matching metal doors with a transom window above it. The doors and transom remain extant, although it appears that a wood barrier has been placed on one side of them (if not two) to prevent access. The floor of the West Wing is scored concrete. To the north end of the space, the equipment track that exists to the exterior of the north elevation comes into the West Wing a distance of 5-10 feet. The equipment track is comprised of steel rails embedded into the concrete floor, with which they are almost flush. The ceiling is exposed concrete beams. At the plane of the ceiling there is a built-in ledge that supports a Maris Bros. hoist of steel.

East Wing

East Wing – North Elevation

The north elevation features seven metal sash windows in a 4/4 configuration. They are similar in design to the primary windows on the West Wing (those located on the west and east elevations). However, they are much smaller and located high on the wall, and at the same level as the divided-light upper transom located above the doors on the north elevation of the West Wing. At the very top of the walls is a narrow concrete band of board-formed concrete; it is at the same level as the architrave on the West Wing. Beneath the sill of each of these seven windows is a recessed concrete panel, or “blind panel,” that is intended to suggest that the window opening is much larger than it actually is (likely an effort, in effect, to more closely match the dimensions of the windows located on the West Wing). Also located on the north elevation, below the fourth and fifth of the seven windows (left to right), are two small windows. These two windows originally opened into the restroom and to the office space to the East Wing’s interior. Today, like the rest of the windows on the north elevation of the East Wing, they are covered in plywood. One of the blind panels, the second from the east end of this elevation, has been altered in order to accommodate a new exterior door with a ramp, as well as a small gable-roofed porch enclosure over this new entry. The first blind panel from the east end of this elevation has also been altered to accommodate the opening for a loading dock.

East Wing – East Elevation

The east elevation of the East Wing features a single, centrally placed doorway. It has a single wide, solid panel door. Originally, there was a transom window above it in a 3/3 configuration, but it is no longer extant. As originally designed, this doorway was flush with the finished floor level of the structure’s interior. However, today, this door rests on a small stoop located outside the doorway. The stoop is flanked with pipe metal railings that appear to date from the late 1920s or 1930s, as they are vaguely Streamline Moderne in their design. At the very top of the wall is a narrow concrete band of board-formed concrete.

East Wing –South Elevation

The south elevation of the East Wing essentially mirrors that of the northern wing as originally designed, with the exception of the two windows that were integrated into the design of the blind panels. There are seven metal sash, divided-light windows in a 4/4 configuration with recessed, blind panels of concrete placed below them in order to give the impression of larger window openings,

similar to the ones located on the West Wing. At the very top of the wall is a narrow concrete band of board-formed concrete.

East Wing – Interior

The interior of the East Wing was originally designed as a large open space with the exception of a small office and restroom that were placed in the center of the north wall, as shown on the original floor plans for the structure. Subsequently, however, a mezzanine level was added and the space on both levels broken up into a series of compartmentalized rooms, divided by gypsum board partition walls. These rooms are generally arranged to an open space to the center of the wing. An interior stair was also added adjacent to the original restroom in order to access the mezzanine level. These alterations remain in place today.

At the western end of the East Wing, the interior space of the East Wing connects with that of the West Wing by means of an interior doorway. As illustrated in the 1917 architectural drawings for the Utility Structure, the doorway was designed to consist of two matching metal doors with a transom window above it. The doors and transom remain extant, although it appears that a wood barrier has been placed on one side of them to prevent access. At the eastern end of the East Wing, at the location of the single door that leads to the exterior, is an interior stair comprised of three steps, which appears to be an addition that was added when the concrete pad, or stoop, to the exterior of the door was added.

B. Alterations

What follows is a list of the known alterations that have occurred at both the former Utility Structure and the rest of the Substation Complex since the original construction of the Substation Complex in 1918. They are as follows:

<u>Alterations to the Utility Structure</u>

West Wing

- Replacement of the door and sidelights located on the north and south elevations (the transom window located above both of these doors appears to be intact).

- Removal of the frequency changer located inside the West Wing.

- The infill of the “pit" located at the northern end of the interior of the West Wing (as shown on the original architectural drawings).

- The alteration, at an unknown point in time (but likely sometime soon after June 8, 1928, when the Substation Complex was transferred from Southern California Edison to the San Diego Consolidated Gas and Electric Company), of the painted signage on the frieze located on the front of the structure. To reflect the change in ownership, it was altered to read “San Diego Gas & Electric.” The original signage reflected the original ownership of the structure and read as follows: “Southern California Edison Company.”

- Addition of plywood covering on windows located on the west and east elevations, as well as over the transoms above the doors on the north and south elevations.

- Removal of the two exterior light fixtures that flanked the exterior doors located on the north and south elevations (four light fixtures, total).

- Removal of interior light fixtures.
- Removal of rain gutters.[8]

East Wing

- Addition of interior mezzanine level at an unknown date (but likely within the last two decades).
- Addition of interior stairway to access mezzanine level.
- Removal of original electrical switching equipment located to the interior of the East Wing.
- Removal of original fixed ladder system to access the roof (as shown in the original architectural drawings).
- Division of large undifferentiated space to the interior of the East Wing into compartmentalized rooms, as divided by gypsum-board covered walls and as arranged around a central open space.
- Addition of plywood covering over the exterior window openings located on the north and south facades.
- Alteration of an original concrete "blind panel" located on the north elevation to become an exterior door entry.
- Alteration of an original concrete "blind panel" located on the north elevation to allow the construction of a loading dock.
- Addition of a covered entrance porch and ramp at the location of the altered "blind panel" located on the north elevation.
- Replacement of a historic exterior door located on the east elevation.
- Removal of the transom window located above the exterior door located on the east elevation.
- Addition of a concrete pad with steps adjacent to the exterior door located on the east elevation.
- Addition of a pipe metal railing at the location of the exit door located on the east elevation .
- Removal of interior light fixtures.

[8] There is no evidence on the original architectural drawings that the Utility Structure was originally constructed with rain gutters; however, it is quite possible that there were rain gutters or that they were installed shortly after the building's completion, in which case they likely would still be considered a historic feature. Jeannette McKenna's report contends that there were originally rain gutters on the building, but no evidence has been located to substantiate that assertion. See McKenna, 33.

- Removal of rain gutters.[9]

Alterations to the Property

- Expansion of the Property on September 19, 1940 through acquisition of a parcel located to the immediate east of the original substation property.
- Removal of original outdoor substation equipment (which was first removed and replaced in the 1940s, then completely removed at a later date).[10]
- Addition of an outdoor substation on the eastern portion of the Property.
- Removal of the Chief Operator's cottage and the three workmen's cottages.
- Installation of contemporary landscaping, including a berm and trees located to the west of the Utility Structure in the front-yard setback adjacent to Camino Capistrano (this appears to have occurred sometime in the 1970s or 1980s based on undated, but contemporary, landscape drawings).
- Addition of wood fencing along the northwest side of the Property (adjacent to Camino Capistrano).
- Addition of metal barrier/gate along the west side of the Property (adjacent to Camino Capistrano) and south of the Utility Structure.
- Addition of wood fencing along the west side of the property (adjacent to Camino Capistrano) and north of the Utility Structure.

C. Character-Defining Features

The NPS defines character-defining features as "the overall shape of the building, its materials, craftsmanship, decorative details, interior spaces and features, as well as the various aspects of its site and environment."[11] Establishing character-defining features is helpful in determining whether a project will result in material impairment that results in the loss of those physical characteristics that convey the significance of an historical resource. In *Preservation Brief 17: Architectural Character: Identifying the Visual Aspects of Historic Buildings as an Aid to Preserving Their Character*, the NPS recommends a three-step process to identify a building's visual character and is employed below.

Overall visual aspects:

- Prominence of the West Wing, orientation to and setback from the street.
- Open front-yard setback (landscape has been altered from original).
- T-shaped plan comprised of the West Wing and the East Wing.

[9] There is no evidence on the original architectural drawings that the Utility Structure was originally constructed with rain gutters; however, it is quite possible that there were rain gutters or that they were installed shortly after the building's completion, in which case they likely would still be considered a historic feature. Jeannette McKenna's report contends that there were originally rain gutters on the building, but no evidence has been located to substantiate that assertion. See McKenna, 33.

[10] The Substation Complex ultimately required full replacement after higher voltage substations were constructed to the north in Orange and Los Angeles Counties, and to the south in Oceanside and San Diego County, and the electrical grid grew.

[11] See Lee H. Nelson, FAIA, "Preservation Brief 17: Architectural Character Identifying the Visual Aspects of Historic Buildings as an Aid to Preserving Their Character," National Park Service, Technical Preservation Services.

- Neoclassical Revival style and decorative detailing on the West Wing.
- Symmetrical design of all of the elevations (with the exception of the north elevation of the East Wing, which has been altered).
- Regular pattern of divided-light, operable steel windows with wire glass panes on the West Wing, including the wheel and pulley system that operated all five windows on west elevation with one mechanism, as well as fixed-transom windows located above the operable sash.
- Door fenestration on the north and south elevations of the West Wing (original doors, sidelights and transoms have all been altered).
- Flat roof.

Visual character at close range:

- Smooth plaster finish on the exterior as well as the board-formed concrete finish visible in some locations.

Visual character of interior spaces, features and finishes:

- Open quality of the interior of the West Wing; the equipment track (or rails) located to the exterior and interior of the north side of the West Wing.
- Maris Bros. hoist (i.e., crane) on the interior of the West Wing.
- Interior paired doors with transom above that connects the West and East Wings.

D. Integrity

The Utility Structure has a fairly high degree of integrity, particularly the West Wing. There, the only real alterations to the structure include the replacement of the doors on the north and south elevations. The only other significant alterations relating to the West Wing are in regard to its setting. At an unknown date, most likely in the 1970s or 1980s, based on the style of some undated landscape plans for the Utility Structure that are in the drawing collection of SDG&E, earthen berms and trees were added to the site that are not in keeping with the structure's historic appearance as a public presence along Camino Capistrano. Instead, these landscaping additions obscure the West Wing from public view and, in addition, introduce potential water infiltration issues into the structure's interior. Other modifications to the structure in the area of the West Wing are relatively insignificant, as they are easily reversible. These modifications include the addition of a plywood covering over all of the structure's windows and the installation of security bars over the windows to the structure's interior.

The East Wing has a lesser degree of integrity than the West Wing, although it is still moderately high. Alterations to the East Wing include the modification of one of the "blind panels" on the north elevation to accommodate an entry door and the construction of a covered entry porch with ramp in this location. Another alteration is the modification of the adjacent "blind panel" on the same elevation in order to provide a loading dock located to the East Wing's exterior. Other alterations to the East Wing include the replacement of the single door located on the east elevation, the removal of the transom above the door, the addition of a mezzanine level to the interior and the addition of a staircase to provide access to the mezzanine level, and the compartmentalization of what was once one large volume of space through the addition of gypsum board partition walls throughout the space.

The original Substation Complex has a low degree of integrity overall. Alterations to the Property include the removal of the original outdoor substation equipment (and related outdoor components such as the water tower, circuit breakers, high and low voltage power lines, racks and large

transformers, control cable, meters, a water tower; and cooling tower) and the garage, the Chief Operator's cottage, the two workmen's cottages constructed in 1918, the additional workman's cottage constructed in the 1930s, as well as the small orchard that existed on the site.

VI. PRESERVATION ALTERNATIVE

The Preservation Alternative involves the retention and rehabilitation of the West Wing for continued use, the removal of most of the East Wing, and related improvements at the Property. The East Wing includes significantly less architectural articulation and public orientation than the West Wing, which faces the street. As previously described, the East Wing is located to the rear of the West Wing and was not intended to be seen from the street in the same manner as the West Wing. However, given that most of the East Wing would be removed, the Preservation Alternative seeks to balance continuity and change through rehabilitation of the retained portion, the street-facing West Wing.

In order to incorporate the retained portion of the existing Utility Structure into the design of the proposed rebuilt substation, the Preservation Alternative includes modifications to the design, specifications, and layout of the substation. The primary modification to the substation design is a reduction in the size of the rebuilt 138/12 kV substation that would be located on the "lower pad" portion of the Property. As previously discussed, the analysis below of the Preservation Alternative is based on the Drawing Set for the Preservation Alternative attached as **Exhibit A**.

Substation design modifications include:

- The existing earthen mounds, vegetation and trees along the western edge of the Property (between Camino Capistrano and the existing Utility Structure) would be removed and replaced with landscaping that returns the appearance of the existing Utility Structure's setting to one strongly reminiscent of its original appearance.
- Because the substation grade would be raised approximately 5 feet to accommodate vehicles carrying equipment, an approximately 5-foot-tall retaining wall would be constructed parallel to the northern and eastern walls of the retained West Wing. The retaining wall would be set back a minimum of 5 feet from the existing West Wing walls to provide a personnel access way on these sides of the building.
- The western perimeter of the Property (along Camino Capistrano) would be improved with have a masonry wall approximately 10 feet tall on the inside of the rebuilt substation and when viewed from the street would vary from approximately 12 feet to 15 feet in height. This is due to the fact that the substation grade behind the wall would be raised by approximately 5 feet. The lower approximately 5 feet is the retaining wall, which would be coupled with an upper masonry wall approximately 10 feet in height to collectively serve as a substation security and screen wall. The northern and southern perimeter walls would remain at approximately 10 feet in height, identical to the Proposed Project.
- The security screen wall would abut the existing Utility Structure on the north and south sides, terminating approximately 4 inches from the structure (refer to Attachment 42) and creating separation between the existing Utility Structure and the western perimeter wall.
- The southern and western walls of the retained portion of the existing Utility Structure would be located outside of the secured substation facility and would be visible from Camino Capistrano. The northern and eastern walls of the existing Utility Structure would effectively act as part of the substation security wall.
- New steel replacement doors would be installed in the southern, eastern and northern walls of the existing Utility Structure and would replace the existing doors at these locations. The northern and eastern doors would serve as part of the security wall.

- A driveway access to the existing Utility Structure would be constructed from the main substation access drive to the structure's southern door.
- The southern driveway's vehicle access gate to the rebuilt substation would be set back approximately 80 feet from Camino Capistrano.
- The northern driveway's access gate would remain (similar to the Proposed Project) set back approximately 35 feet from Camino Capistrano.
- The northern and southern vehicular access gates would be approximately 30 feet in width, each comprised of a pair of black wrought iron sliding gates, each approximately 15 feet in width.
- Grading and the phased site development, including cut and fill, would be similar to that of Proposed Project substation design.

With respect to the existing Utility Structure itself, the West Wing would be retained and rehabilitated in accordance with the *Secretary's Standards*. The East Wing would be removed to provide adequate room for redevelopment of the substation. The northern and eastern walls of the retained portion of the existing Utility Structure would serve as part of the security wall of the rebuilt substation, and could only be entered from the exterior (which would be inside the substation security wall). Proposed modifications to the existing Utility Structure include the following:

- East Wing Demolition – 12 inches of the East Wing roof and walls would be retained at the point where the East Wing intersects the West Wing. This work is designed to allow the remaining portion of the roof and wall visually to read as a "ghost" of the East Wing once it is removed.

- West Wing Rehabilitation:
  - Western Wall – The exterior wall adjacent to where earthen mounds would be removed would be repaired and waterproofed. The concrete wall iron jacking would be repaired at locations where steel rebar is exposed at western interior wall. Window rehabilitation would include removal of existing glazing, repairing existing sash and frames, and reglazing with like-kind translucent wire glass. Security bars or polycarbonate security glass as storm windows would be installed on all windows on the interior.
  - Northern Wall – Deteriorated, non-original doors, sidelights, and transom windows would be replaced to match the original. Doors, sidelights and transoms would be constructed of steel rather than wood for increased security. Due to lack of visibility from the street, glazing is not proposed, but rather this door assembly would be constructed exclusively of steel following the original pattern. The northern wall and replacement door would serve as part of the security wall of the rebuilt substation and would only be accessed from inside the substation (i.e., inside the security walls).
  - Eastern Wall – The interior door located at the juncture of the East Wing with the West Wing would be replaced with a new exterior door to match the original, but designed for exposure to the elements. Due to the lack of visibility from the street, glazing would not be included in either the new exterior door or existing windows, but rather these assemblies would be constructed exclusively of steel following the original pattern. The eastern wall, windows and replacement door would serve as part of the security wall of the rebuilt substation and would only be accessed from inside the substation (i.e., inside the security walls).
  - Southern Wall – Deteriorated, non-original doors, sidelights, and transom windows would be replaced to match the original. Doors, sidelights and transoms would be constructed of steel rather than wood for increased security. Due to the visibility from the street, it is proposed to include translucent wire glass at the transom only, but otherwise the new door assembly would be

constructed of steel following the original pattern. Where glazing occurs at the transom, security bars would be installed on the interior.

- Interior Window Sills – Damage to concrete would be repaired at windows sills where water infiltration has occurred.
- Interior Crane – The moveable crane would be retained.
- Lighting – Development and implementation of a lighting plan to include exterior wall sconces on the north and south walls, which would operate manually.

VII. REVIEW OF PRESERVATION ALTERNATIVE

The Preservation Alternative was reviewed in detail in order to determine its potential for causing a substantial adverse change to the Utility Structure. To make this determination, pursuant to the State CEQA Guidelines, the Preservation Alternative was assessed for its potential to materially impair the Utility Structure and, as part of that inquiry, whether it conforms with the *Secretary's Standards*.

As detailed in the analysis below, the Preservation Alternative would not result in a substantial adverse change to the Utility Structure, and therefore would have a less-than-significant impact on the assumed historical resource, because the Preservation Alternative has been designed, and would be implemented, in conformance with the *Secretary's Standards* and otherwise would not materially impair the Utility Structure.

A. Material Impairment/Substantial Adverse Change

The following discussion assesses whether or not the Preservation Alternative would result in material impairment of the Utility Structure through alteration of those physical characteristics that convey its historical significance and justify its assumed eligibility for listing on the National Register under Criterion A. These physical characteristics are the character-defining features identified in Section VI.C, above.

Overall visual aspects:

- *Prominence of the West Wing, orientation to and setback from the street*
  Under the Preservation Alternative, the West Wing and its relationship to the street would be unchanged.

- *Open front-yard setback (landscape has been altered from original)*
  The open front-yard setback would be retained and enhanced by the restoration of the original grade to be consistent with the historic appearance. This area would be further improved with landscape planting that is strongly reminiscent of the original appearance.

- *T-shaped plan comprised of a West Wing and East Wing*
  Most of the East Wing would be removed, but a small portion would be retained to reference the original T-shaped plan. As previously discussed, the East Wing has a substantially more utilitarian design than the West Wing. The East Wing was designed as a more utilitarian container, or box, the primary purpose of which was only to house equipment supportive of the operations of the Substation Complex. In comparison to the West Wing, which fronts on Camino Capistrano and has therefore always been visible to the public, the East Wing is located further from the street and largely unnoticed because the view of it is largely blocked by the West Wing. Moreover, while the East Wing has a moderately high degree of integrity, it is somewhat compromised by alterations to the exterior and interior and therefore has substantially less integrity than the West Wing. The retained portion of the Utility Structure, the West Wing, would continue to serve both primary use as the public face of the electric

company as well as the secondary use of providing space for support of substation operations.

- *Neoclassical Revival style and decorative detailing on the West Wing*
  The West Wing and its Neoclassical Revival style and decorative detailing would be retained and rehabilitated.

- *Symmetrical design of all of the elevations (with the exception of the north elevation of the East Wing, which has been altered).*
  The West Wing would retain its symmetry when viewed from the street.

- *Regular pattern of divided-light, operable steel windows with wire glass panes on the West Wing, including the wheel and pulley system that operated all five windows on west elevation with one mechanism, as well as fixed-transom windows located above the operable sash*
  The West Wing would retain its fenestration. Windows facing the street will be restored including the wheel and pulley system.

- *Door fenestration on the north and south elevations of the West Wing (original doors, sidelights and transoms have all be altered)*
  New doors, sidelights and transoms on the north and south elevations would match the historic pattern, but would be constructed of steel rather than wood for increased security.

- *Flat roof*
  The flat roof on the retained West Wing would be unaltered.

Visual character at close range:

- *Smooth plaster finish on the exterior as well as the board-formed concrete finish visible in some locations*
  Exterior wall finishes would be restored on the retained West Wing.

Visual character of interior spaces, features and finishes:

- *Open quality of the interior of the West Wing; the equipment track (or rails) located to the exterior and interior of the north side of the West Wing*
  The open interior of the West Wing would be retained in support of the electrical substation. 5’ of the exterior equipment track to the north of the West Wing, as well as the entirety of the equipment track to the interior of the structure, would be retained.

- *The Maris Bros. hoist (i.e., crane) on the interior of the West Wing*
  The hoist would be retained.

- *Interior paired doors with transom above that connects the West and East Wings*
  The interior door at the location of the removed East Wing would be replaced with a new exterior door to match the original, but designed for exposure to the elements. It would be constructed of steel rather than wood for increased security following the original pattern.

For these reasons, the Preservation Alternative would not materially impair the ability of the Utility Structure to convey its historical significance and, therefore, the development of the Preservation Alternative would not cause a substantial adverse change in the historic significance of the Utility Structure.

B. Conformance with the *Secretary's Standards*

As previously discussed, another way to demonstrate that a project would not materially impair an historical resource is to show that the project conforms with the *Secretary's Standards.* Pursuant to Sections 15064.5(b)(3) and 15126.4(b)(1) of the State CEQA Guidelines, a project that follows the *Secretary's Standards* generally has a less-than–significant impact on an historical resource.

The appropriate, overarching treatment in judging the Preservation Alternative's impact on the Utility Structure is rehabilitation, which is defined as "the act or process of making possible a compatible use for a property through repair, alterations, and additions while preserving those portions or features which convey its historical, cultural, or architectural values."[12] The Preservation Alternative conforms with each of the applicable rehabilitation standards in the *Secretary's Standards* for the following reasons:

1. *A property will be used as it was historically or be given a new use that requires minimal change to its distinctive materials, features, spaces, and spatial relationships.*

   In conformance with Standard 1, the Property would continue to be used for its historic purpose in support of an electrical substation. While Standard 1 does allow for some flexibility in use if the historic use cannot be maintained, it also stresses that new uses should always be compatible with the historic use. This is because introducing a new use into a structure—even a new use identified as compatible—has the potential to change, obscure, or destroy character-defining spaces, materials, features, or finishes to a greater extent than maintaining the use for which a structure was originally designed. Therefore, in preservation practice, keeping the historic use is almost always preferable to introducing a new use. The continued use and operation of the retained portion of the Utility Structure as a functioning element of the rebuilt electrical substation for which it was designed is not only consistent with its historic use, but also with what is generally considered best preservation practice.

   If the Keeper concurs with the recommendation of the SHRC that the Utility Structure is eligible for listing on the National Register, it will be found eligible for significance under Criterion A for its association with electrical power distribution in Southern California. As described in the nomination for the Property to the National Register, the original Substation Complex "was the original location where electrical power distribution networks in Los Angeles and San Diego were connected, providing long-range distributed electrical power to this portion of Orange County for the first time," and the Utility Structure " is directly associated with the Southern California Edison Company's expansion and growth in the wake of regional efforts to expand hydroelectric power capacity in the Los Angeles area, and its presence facilitated the suburban growth of San Juan Capistrano through reliable transmission of electrical power."[13] Just as the construction of the original Substation Complex was prompted by population growth and technological innovations during the 1910s, the Preservation Alternative responds to the need for expanded capacity of electrical power due to growth and technological advances of the present era. Providing expanded capacity at this location is entirely consistent with the Property's historical association with regional efforts to expand power capacity between Los Angeles and San Diego.

[12] See Kay D. Weeks, "The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring & Reconstructing Historic Buildings" (National Park Service, 1995).

[13] See Byrnes, Section 9, Page 13.

The Preservation Alternative is consistent with the Property's historical use as a substation, and the Utility Structure, which was designed to be the public face of the power company for which it was constructed, would continue to serve in exactly this same role. Moreover, its visibility as the public face for the electrical company to which it belongs would be strengthened by restoring the immediate setting around the Utility Structure to one resembling its historic appearance and improve the building's visibility on Camino Capistrano. This visibility would be enhanced with the removal of a non-original earthen berm and trees located to the front of the Property, which currently serve to obscure the structure from full public view. The increased visibility of the structure with the removal of the non-historic elements, in addition to the improvements to the landscape in the immediate vicinity of the Utility Structure to one reminiscent of the historic appearance, results in strong conformance with this rehabilitation standard with respect to the West Wing.

The loss of most of the East Wing would result in the removal of limited historic materials and features, but the overall Preservation Alternative conforms with Standard 1. The East Wing was not generally visible from the street, nor was it originally intended to be so. This is evident in the design of the East Wing, which has a low-slung massing in comparison to the taller West Wing. It is also evidenced by the fact that the East Wing exhibits very little architectural articulation as far as decorative detailing, and it is relatively unfenestrated. While the West Wing was designed to serve as the public face for the electrical company for which it was built, the East Wing was designed as a more utilitarian container, or box, the primary purpose of which was only to house equipment supportive of the operations of the Substation Complex. Moreover, while the East Wing has a moderately high degree of integrity, it is somewhat compromised by alterations to the exterior and interior and therefore has substantially less integrity than the West Wing. The interior of the retained portion of the Utility Structure, the West Wing, would continue to serve both primary use as the public face of the electric company, as well as the secondary use of providing space for support of substation operations. The rehabilitation of the retained West Wing also would balance the limited loss of historic materials and features associated with the East Wing and achieve overall conformance with Standard 1.

2. *The historic character of a property will be retained and preserved. The removal of distinctive materials or alteration of features, spaces, and spatial relationships that and therefore has characterize a property will be avoided.*

In conformance with Standard 2, the utilitarian character of the Property, as derived from its function as an electrical facility, would be maintained in the Preservation Alternative. Outdoor equipment would occupy the majority of the Property in much the same manner as it did historically. Changes in the specific equipment does not constitute an impact because it is only the Utility Structure itself that was found to be historically significant, not the original equipment housed inside it. The continued presence of electrical operations proximate to the Utility Structure would support its historic function and maintain its context.

While most of the East Wing would be removed, the retention and rehabilitation of the West Wing would preserve the essential features, spaces and spatial relationships of the Utility Structure that characterize its function as the public face of the Property. The west and south elevations of the Utility Structure would remain open to public view. Windows and doors in all elevations of the retained West Wing would be rehabilitated or reconstructed with new materials consistent with the historic pattern, but with greater attention to security to meet contemporary needs. Regrading and new landscape improvements in the front yard setback would return the setting along the street to an earlier appearance. See discussion of Standard 5 regarding retention of character-defining features.

3. *Each property will be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or elements from other historic properties, will not be undertaken.*

   In conformance with Standard 3, the Preservation Alternative would not create a false sense of historical development and would not add conjectural features from other historic properties.

4. *Changes to a property that have acquired historic significance in their own right will be retained and preserved.*

   The only feature of the Property that has historic significance is the Utility Structure. There are no other features of the Property that are extant or that have acquired significance in their own right. In conformance with Standard 4, as discussed under Standard 1, key features of the Utility Structure and its setting would be retained and rehabilitated.

5. *Distinctive materials, features, finishes, and construction techniques or examples of craftsmanship that characterize a property will be preserved.*

   In conformance with Standard 5, the Preservation Alternative preserves the majority of the distinctive materials, features, finishes and construction techniques that characterize the Utility Structure and are considered character-defining features. Identification of such features includes three broad categories: the overall visual aspects; visual character of interior spaces, features and finishes; and, visual character at close range. Section VII.A, above, provides a detailed assessment of the Preservation Alternative's potential impact on each of the character-defining features and demonstrates conformance with Standard 5.

6. *Deteriorated historic features will be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature will match the old in design, color, texture, and, where possible, materials. Replacement of missing features will be substantiated by documentary and physical evidence.*

   In conformance with Standard 6, the Preservation Alternative includes the repair of the reinforced concrete exterior walls and windows of the retained portion of the Utility Structure. Since existing non-historic doors have deteriorated and historic doors are well documented, replacements would closely match the character of the original doors (see discussion of Standard 2). Window glazing has generally deteriorated beyond repair and would be replaced in kind or with additional steel required to ensure security of the Utility Structure.

7. *Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.*

   In conformance with Standard 7, treatments would use the gentlest means possible. Mitigation for design review and construction monitoring would include review of proposed treatments and implementation by a historic preservation architect meeting the *Secretary of the Interior's Professional Qualifications Standards*.

8. *Archeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.*

   Standard 8 does not apply to the Preservation Alternative.

9. *New additions, exterior alterations, or related new construction will not destroy historic materials, features, and spatial relationships that characterize the property. The new work will be differentiated from the old and will be compatible with the historic materials, features, size, scale and proportion, and massing to protect the integrity of the property and its environment.*

   The immediate setting of the Utility Structure along the street, once the non-historic berms and trees are removed, would create a relatively flat and uniform area that approximates the level of the original grade as shown in historic photographs of the Property (i.e., nearly level with the sidewalk along Camino Capistrano that fronts the Utility Structure). The proposed new retaining walls that would be located proximate to the northern and eastern walls of the Utility Structure would be physically separated from the retained portion of the Utility Structure and not visible from the street. The north and east walls of the West Wing would serve as part of the security wall of the substation, thereby reducing the amount of new construction required in proximity to the retained portion of the Utility Structure. The proposed new security walls would complete the enclosure of the Property, but would be physically separated from the retained portion of the Utility Structure.

   The SOCRE Project also includes the construction and installation of outdoor switchgear, capacitors, transformers and two indoor gas insulated substations on the Property, but outside the immediate vicinity of the retained portion of the Utility Structure. These elements would not only be physically separated from the retained portion of the Utility Structure, but they are also compatible with the utilitarian features of an improved electrical facility. The two indoor gas insulated substations have been sensitively placed in a manner that maintains a substantial distance between them and the retained portion of the Utility Structure. Moreover, they would be located uphill from the Utility Structure, outside its immediate setting, so that they do not visually compete. The outdoor equipment replaces similar equipment that has existed over time at the Property. The indoor gas insulated substations, located at some distance from the retained portion of the Utility Structure, introduces a new element to the Property that is complementary to the historic use, allows for the continued viability of the substation, and would not detract from the Utility Structure's historic character.

10. *New additions and adjacent or related new construction will be undertaken in such a manner that, if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.*

    In conformance with Standard 10, the Preservation Alternative would improve the Property in a manner consistent with its historic use as an electrical substation. No additions is proposed to the retained portion of the Utility Structure, and the proposed new retaining and security walls would be physically separated from it to allow for future removal without impact to the Utility Structure. The development of the two indoor gas insulated substations would not impact the immediate setting of the Utility Structure because these facilities would be located some distance from the Utility Structure.

C. Proposed Measures

The Drawing Set for the Preservation Alternative evaluated in this report has been found by a qualified professional historic architect to be in conformance with the *Secretary's Standards* and otherwise not to materially impair the historical significance of the Utility Structure. Therefore, the Preservation Alternative would not result in a substantial adverse change in the Utility Structure's historical significance and, accordingly, would have a less-than-significant impact on the Utility Structure under CEQA.

In order to ensure conformance with the *Secretary's Standards* through final design and construction, a measure for ongoing design review and construction monitoring by a qualified professional historic architect is recommended, as set forth below. In addition, a measure is recommended for Historic American Building Survey (HABS) documentation with respect to the removal of the East Wing, as set forth below. It is industry practice when a portion of a potential historical resource is removed to prepare HABS documentation to provide a high-quality record of the Property before alteration. There are many historic photographs that document the original construction of the Utility Structure, and HABS photographs would supplement them. These recommended measures would further reduce the Capistrano Preservation Alternative's already less-than-significant impact on the Utility Structure (assuming that it is subsequently determined to be an historical resource under CEQA) and, if agreeable to SDG&E, would be considered Applicant Proposed Measures.

Recommended Measure for Continued Design Collaboration and Construction Monitoring

SDG&E shall retain a qualified professional historic architect meeting the Secretary of the Interior's Professional Qualifications Standards (36 Code of Federal Regulations Part 61) to review and comment on design and construction drawings and monitor construction to ensure conformance with the *Secretary's Standards*. The role of the historic architect will include collaboration on a range of items relating to materials selection, construction methods, design of exterior and interior alterations, and monitoring of construction activities. The historic architect will participate in a pre-construction meeting with the general contractor and subcontractors and periodically monitor construction to completion of construction. The historic architect shall notify SDG&E and the CPUC if any unforeseen circumstance arises during construction that could potentially result in nonconformance with the *Secretary's Standards*. The historic architect, SDG&E and CPUC shall resolve any unforeseen circumstance in a manner that conforms with the *Secretary's Standards*.

Recommended Measure for Historic American Building Survey (HABS) Documentation

SDG&E shall retain a qualified professional photographer to prepare HABS documentation. This documentation shall record the existing appearance of the Utility Structure in large and medium format HABS photographs. All documentation components shall be completed in accordance with the Guidelines for Architectural and Engineering Documentation (HABS standards). The photographs shall consist primarily of large format, 4-inch by 5-inch, black and white negatives (one set), contact prints (one set) and 8-inch by 10-inch prints (two sets), archivally processed and printed on fiber-based paper. The set of original negatives shall be made at the time the photographs are taken. The original, archivally-sound negatives and prints shall be and distributed as follows: (1) the Library of Congress in Washington, DC through the National Park Service (one set of negatives and contact prints); and (2) Huntington Library in San Marino, California (one set of 8-inch by 10-inch prints). The draft documentation shall be assembled and submitted to the SDG&E for review and approval prior to submittal to the repositories. The HABS documentation shall be completed prior to the start of the removal of the East Wing.

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IX. QUALIFICATIONS

This report was prepared by Chattel, Inc., a 20 plus year old historic preservation-consulting firm. Comprised of professionals meeting the *Secretary of the Interior's Professional Qualifications Standards* (36 CFR Part 61, Appendix A) in history, architectural history and historic architecture, the firm offers a variety of professional services, including historical resources evaluation and project effects analysis, and consultation on federal, state and local historic preservation statutes and regulations.

Chattel staff members engage in a collaborative process and work together as a team on individual projects. For preparation of this report, firm president Robert Chattel, AIA, and principal associate, Gabrielle Harlan, assumed lead roles, while consulting principal planner, Susan O'Carroll, provided support services. Robert Chattel, as historic architect, provided design consultation services to SDG&E's engineering team on how to design the Preservation Alternative to ensure conformance with the *Secretary's Standards* and drafted the conformance section of this report. Gabrielle Harlan, as architectural historian, was responsible for conducting the initial onsite assessment of the Utility Structure, and researching, writing and assembling this report. Susan O'Carroll provided input and editorial assistance.

Robert Jay Chattel, AIA
President / Historic Architect
Both a licensed general contractor and architect in California with more than 30 years' experience in planning, design and construction, Robert Chattel's unique qualifications include meeting the *Secretary of the Interior's Professional Qualifications Standards* in architectural history and historic architecture. Robert has experience working for non-profit, government, and for-profit entities. He holds a B.A. in Architecture from U.C. Berkeley and a M.S. in Historic Preservation from Columbia University. As President, He specializes in applying the *Secretary's Standards* and interpreting federal, state and local historic preservation law and regulations.

Gabrielle Harlan, Ph.D.
Principal Associate / Architectural Historian
With a Ph.D. in the History of Art and Architecture and an M.A. in Architectural History (both awarded from the University of Virginia), and a B.Arch. in Architecture from the University of Arizona, Gabrielle meets the *Secretary of the Interior's Professional Qualifications Standards* in historic architecture, architecture, history, and architectural history. Her role at Chattel includes preparing Historic Structures Reports, researching and writing historic contexts, and conducting architectural assessments and surveys.

Susan O'Carroll, Ph.D.
Consulting Principal Planner
Susan O'Carroll has over 25 years of planning experience, and has worked as a CEQA specialist managing preparation of environmental impact reports, negative declarations, and environmental document critiques. She has a M.Pl. and Ph.D. in Planning from the University of Southern California.

Chattel, Inc. | Historic Preservation Consultants

ROBERT JAY CHATTEL, AIA

PRESIDENT / PRINCIPAL, PRESERVATION ARCHITECT/ARCHITECTURAL HISTORIAN

PROFESSIONAL QUALIFICATIONS

Meets the Secretary of the Interior's Professional Qualifications Standards in Architectural History, Architecture and Historic Architecture.

PROFESSIONAL EXPERIENCE

PRESIDENT, CHATTEL, INC. JUNE 1994-PRESENT

SELECTED PROJECTS

BOYLE HOTEL (East Los Angeles Community Corporation) - Collaborate on exterior and interior treatments with project architect, and prepare Investment Tax Credit application.

MISSION SANTA BARBARA (Old Mission Santa Barbara, Inc and California Missions Foundation) - Prepare Historic Structure Report and prioritize work associated with Save America's Treasures grant.

THE MOB MUSEUM (City of Las Vegas) - Perform historic resources assessment and prepare a reuse feasibility analysis, in collaboration with cultural planner Carol Goldstein, for the 1933 former U.S. Post Office and Court House located downtown. Research and write National Register amendment documenting the building's association with an event of national significance. Consult with local, state, and federal agencies to ensure conformance with *Secretary's Standards* for certified rehabilitation and Save America's Treasures grant.

9936 DURANT (City of Beverly Hills) - Complete historic resources assessment and participate in preparation of Environmental Impact Report with range of alternatives considered for reducing historic resources impact of proposed project.

SOUTHERN CALIFORNIA GAS COMPANY COMPLEX (CIM Group) - Prepare National Register and local (Los Angeles) landmark nominations. Compile documentation for certified rehabilitation involving conversion of four buildings into residential lofts. Perform environmental review and write cultural resource section of environmental impact report.

CANNERY ROW CONSERVATION DISTRICT (Cannery Row Company) - Collaborate with Winter and Company to prepare conservation district design guidelines and incentives, boundaries and other criteria for protecting four potential historic districts identified in historic resources survey and providing for appropriate infill development.

901 S. BROADWAY (Neighborhood Effort) - Design collaboration on rehabilitation of former Blackstone's Department store as mixed income and affordable housing with ground floor retail, and preparation of Investment Tax Credit application.

242 S. BROADWAY (Neighborhood Effort) - Preparation of Parts 2 and 3 of Investment Tax Credit application and design collaboration on rehabilitation of former Victor Clothing Company building for use as affordable housing.

CHATEAU ARNAZ CONDOMINIUM PROJECT (City of Beverly Hills) - Cultural resources analysis for EIR analyzing impact of replacing four apartment buildings with condominium building.

PRESERVATION ORDINANCE (City of Carmel-by-the-Sea) - Prepared historic preservation ordinance and provide peer review of historic preservation element in update of General Plan.

MARE ISLAND (Lennar Mare Island LLC) - Participated in strategic planning for Lennar Mare Island, LLC, master developer, and City of Vallejo on rehabilitation and reuse of 650-acre historic district at former Mare Island Naval Shipyard.

STUART COMPANY PLANT AND OFFICE BUILDING (BRE Properties, Inc.) - Review project for conformance with the *Secretary's Standards* and assist with local (Pasadena) design and environmental review. Participate in design collaboration with project architect, structural engineer, and landscape architect, and conduct construction monitoring.

LOS ANGELES UNIFIED SCHOOL DISTRICT - Prepare historic resources policies for California Environmental Quality Act reviews used in 29 cities within district boundaries. Act as master reviewer for projects involving historic resources. Perform environmental review and write cultural resource section of Ambassador Hotel (Central Los Angeles Area Learning Center #1) environmental impact report.

BREED STREET SHUL (Breed Street Shul Project, Inc.) - Provide design review and construction monitoring for Phase 1 seismic stabilization and stained glass window restoration. Prepare National Register nomination and historic review documentation for local (Los Angeles) environmental review. Consult with federal agencies on Section 106 compliance.

TWOHY BUILDING (CIM Group) - Compile documentation for certified rehabilitation involving conversion of former office building into 36 apartment units with ground floor retail in San Jose. Prepare National Register nomination.

ADDITIONAL EXPERIENCE

PROJECT MANAGER, HISTORIC RESOURCES GROUP	1994 -1995
ASSET MANAGER, H.T. GREENE & ASSOCIATES	1988 - 1994
ASSOCIATE CITY PLANNER, COMMUNITY REDEVELOPMENT AGENCY	1984 -1988
DIRECTOR OF PROGRAMS, LOS ANGELES CONSERVANCY	1983 -1984

EDUCATION

COLUMBIA UNIVERSITY IN THE CITY OF NEW YORK
Master of Science in Historic Preservation — MAY 1983

UNIVERSITY OF CALIFORNIA AT BERKELEY
Bachelor of Arts in Architecture — JUNE 1980

PROFESSIONAL LICENSES
California Architect License Number C 27398
California Class B General Contractor License Number B 692817

PROFESSIONAL AFFILIATIONS
Architect Member, American Institute of Architects

MEMBERSHIPS
President's Circle Member, California Preservation Foundation
Life Member, Southern California Chapter of the Society of Architectural Historians (SAH/SCC)

AWARDS
Preservation Award, (Pacific Electric Railway – El Prado Bridge), Los Angeles Conservancy, 2015
Design Award (Railroad Square), California Preservation Foundation, 2014
Preservation Honor Award (Boyle Hotel), National Trust for Historic Preservation, 2013
Design Award (Jane B. Eisner School), California Preservation Foundation, 2013
Preservation Award (Compton City Hall), Los Angeles Conservancy, 2013
Governor's Historic Preservation Award (City of Orange Cultural Resources and Historic Preservation Element of the General Plan), Office of Historic Preservation, 2012
President's Award (Johnnie's Broiler), Los Angeles Conservancy, 2010
Preservation Award (Breed Street Shul stabilization), Los Angeles Conservancy, 2005
Design Award (Twohy Building), California Preservation Foundation, 2004
Preservation Award (Far East Building), Los Angeles Conservancy, 2004
Award (Plaza Preservation Project), Old Towne Preservation Association, Orange, 2002
Award of Excellence (Breed Street Shul), Cultural Heritage Commission, Los Angeles, 2000
Pauline Hirsh Memorial Award, Jewish Historical Society of Southern California, 2000
President's Award (Beverly Hills Waterworks), California Preservation Foundation, 1991
Award (Earthquake Hazard Reduction: Cumulative Impacts on Historic Buildings), California Preservation Foundation, 1987
Faculty Award for Outstanding Work in Preservation Design (Beverly Hills Water Works), Columbia University, 1983
First Place (Residential Design and Architectural Model), California State Fair, 1976

COMMUNITY INVOLVEMENT

Vice President, Sam and Alfreda Maloof Foundation for Arts and Crafts (SAMFAC)	2012-2013
Member, Board of Directors, SAMFAC	2011-2014
Vice President, Advocacy Committee Chair, California Preservation Foundation (CPF)	2012-2013
Member, Board of Trustees, Advocacy Committee Chair, CPF	2010-2013
President Emeritus, California Historical Society (CHS)	2014-present
President, California Historical Society	2012-2014
Member, Facilities and Operations Committee Chair, Board of Trustees, CHS	2005-2014
Vice President, Breed Street Shul Project, Inc.	1999-2011
Vice President, Jewish Historical Society of Southern California	1989-2010
Member, Board of Directors, Jewish Historical Society of Southern California	1985-2010
Co-Chair, California Preservation Conference, Los Angeles	1989
President, Southern California Chapter of the Society of Architectural Historians (SAH)	1987-1989
Member, Board of Directors, SAH	1985-1989

RECENT PRESENTATIONS

"Medicinal Masterpiece: Rehabilitation and Adaptive Reuse of the Stuart Building," speaker, "From the Field: Conserving Southern California's Modern Architecture," Getty Conservation Institute, December 2014.

"Sputtering About Sputniks: Evaluating Modern Resources," session panelist, California Preservation Conference, May 2013

"The Atomic Wild, Wild West," guest speaking engagement on issues facing modern resources, School of the Art Institute of Chicago, February 2013

"Historic Preservation and New Construction in Pasadena," mobile workshop presenter, American Planning Association National Conference, April 2012

"Incentivize It! Santa Monica's Incentives and Development Trends," mobile workshop moderator, California Preservation Conference, Santa Monica, May 2011

"CEQA and Alternatives for Greater Historic Preservation," session panelist, California Preservation Conference, Santa Monica, May 2011

"Context and Issues Surrounding Historic District Designations in Urban Environments," workshop panelist, California Preservation Foundation, Berkeley, January 2011.

"Make History: Public-Private Partnerships to Rehabilitate Historic Buildings," workshop panelist, California Preservation Foundation, South Pasadena, February 2010.

"Financing Historic Preservation," workshop panelist, California Preservation Conference, Palm Springs, April 2009.

"Financing Historic Preservation" workshop panelist, California Preservation Foundation annual conference, Napa, April 2008.

"40 Forward," James Marston Fitch Colloquium to celebrate pioneering preservation teaching, research and advocacy at Columbia University, New York, March 2005.

"Far East Building Rehabilitation: Mixed Use Case Study," Secretary of the Interior's Standards for the Treatment of Historic Properties workshop, California Preservation Foundation, Sacramento, June 2003.

"Breed Street Shul," Power of Place: Cultural Landscapes workshop, Little Tokyo Service Center and University of Southern California, Los Angeles, March 2003.

TEACHING EXPERIENCE

"Historic Preservation: Principles and Practice", Urban Planning Department, UCLA, Fall 2007
"Historic Preservation: Principles and Practice", Urban Planning Department, UCLA, Spring 2007
"Undiscovered Los Angeles: Water and Steel," UCLA Extension, Spring 2001
"Undiscovered Los Angeles: Downtown LA Bike Tour," Summer 1999
"Historic Preservation: State of the Art," Spring 1999
"Historic Preservation: A Studio," UCLA Extension, Summer 1998
"Historic Preservation: State of the Art," UCLA Extension, Spring 1998
"Undiscovered Los Angeles: Water and Steel," UCLA Extension, Fall 1997
"Historic Preservation: State of the Art," UCLA Extension, Summer 1997
"Historic Preservation: State of the Art," UCLA Extension, Spring 1997

PUBLICATIONS

"Preserving Place in Los Angeles," with Gabrielle Harlan, *Urbanisme*, July/August 2008

EXHIBIT A: DRAWINGS OF THE CAPISTRANO PRESERVERVATION ALTERNATIVE

CAPISTRANO SUBSTATION UTILITY STRUCTURE
31050 CAMINO CAPISTRANO, SAN JUAN CAPISTRANO, CA

CONFIDENTIAL - DOCUMENTS OMITTED

EXHIBIT B: HISTORIC PHOTOGRAPHS

CAPISTRANO SUBSTATION UTILITY STRUCTURE
31050 CAMINO CAPISTRANO. SAN JUAN CAPISTRANO, CA

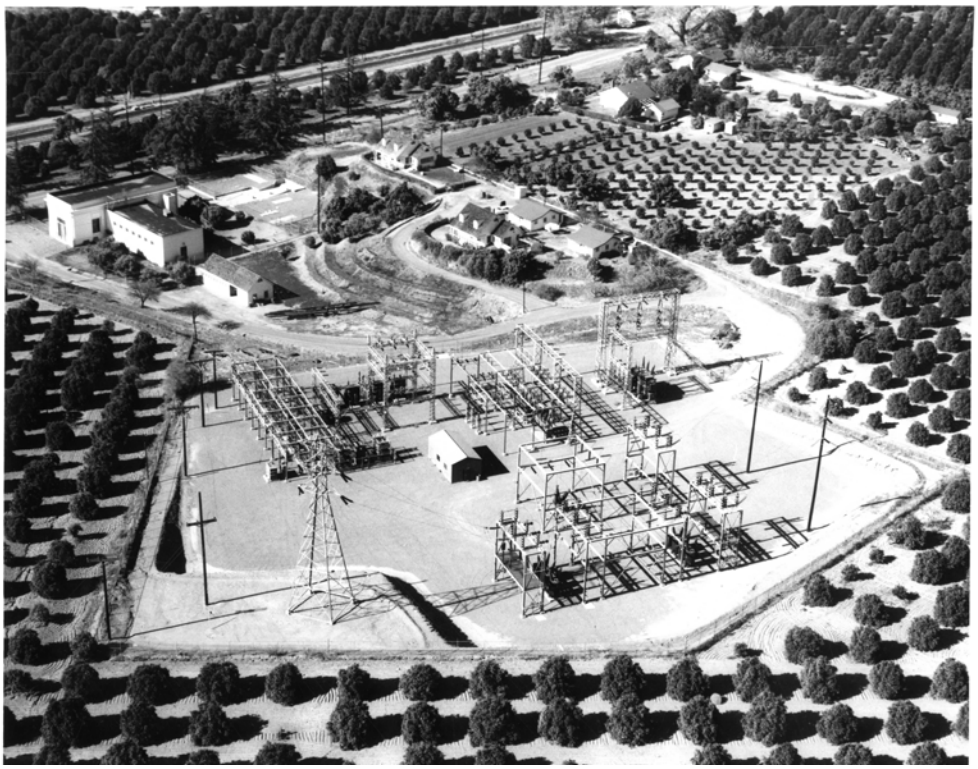

Figure 1: Capistrano Substation, view northwest, date unknown (Photo source: San Diego Gas & Electric Company)

Figure 2: Subject property prior to construction of the substation, 1917
(Photo credit: Huntington Library, San Marino, CA)

Figure 3: Construction materials on the subject property prior to completion of the substation, 1918
(Photo credit: Huntington Library, San Marino, CA)

Figure 4: Photograph of the construction of the Utility Structure, north elevation of the East Wing (left) and West Wing (right), view south, 1918 (Photo credit: Huntington Library, San Marino, CA)

Figure 5: Photograph of the construction of the Utility Structure, south elevation of the West Wing (left) and East Wing (right), view north, 1918 (Photo credit: Huntington Library, San Marino, CA)

Figure 6: Photograph of the construction of the Utility Structure, south elevation of the West Wing (left) and East Wing (right), view northwest, 1918 (Photo credit: Huntington Library, San Marino, CA)

Figure 7: Scaffolding and formwork to the interior of the West Wing for the construction of the exterior walls, view north, 1918 (Photo credit: Huntington Library, San Marino, CA)

Figure 8: Excavation of the interior to accommodate the concrete pad for the 5,000 kw frequency changer placed to the interior of the West Wing, view south, ca. 1918 (Photo credit: Huntington Library, San Marino, CA)

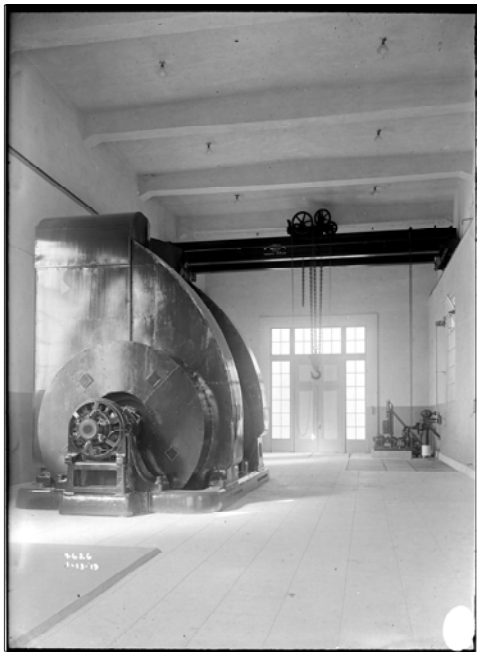

Figure 9: Photograph showing the interior of the West Wing with the 5,000 kw frequency changer installed, view north, ca. 1918
(Photo credit: Huntington Library, San Marino, CA)

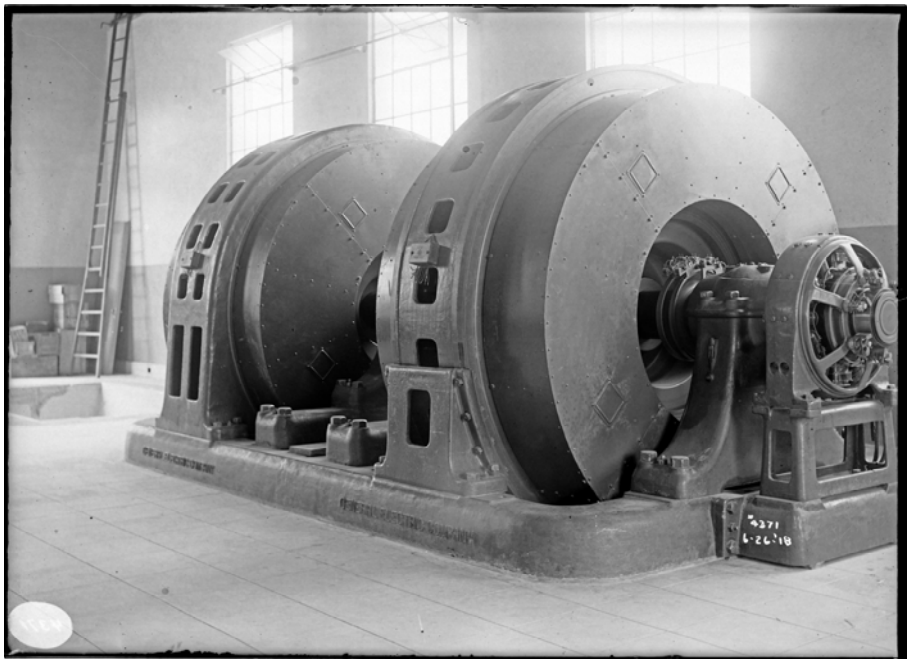

Figure 10: Photograph of the 5,000 kw frequency changer located to the interior of the West Wing, view southwest, ca. 1918
(Photo credit: Huntington Library, San Marino, CA)

Figure 11: Excavation of the interior of the East Wing before being finished with scored concrete flooring surface, view east, 1918
(Photo collection: Huntington Library, San Marino, CA)

Figure 12: Construction of the permanent scaffolding system from which to suspend the electrical panels, interior of the East Wing, view west, 1918 (Photo credit: Huntington Library, San Marino, CA)

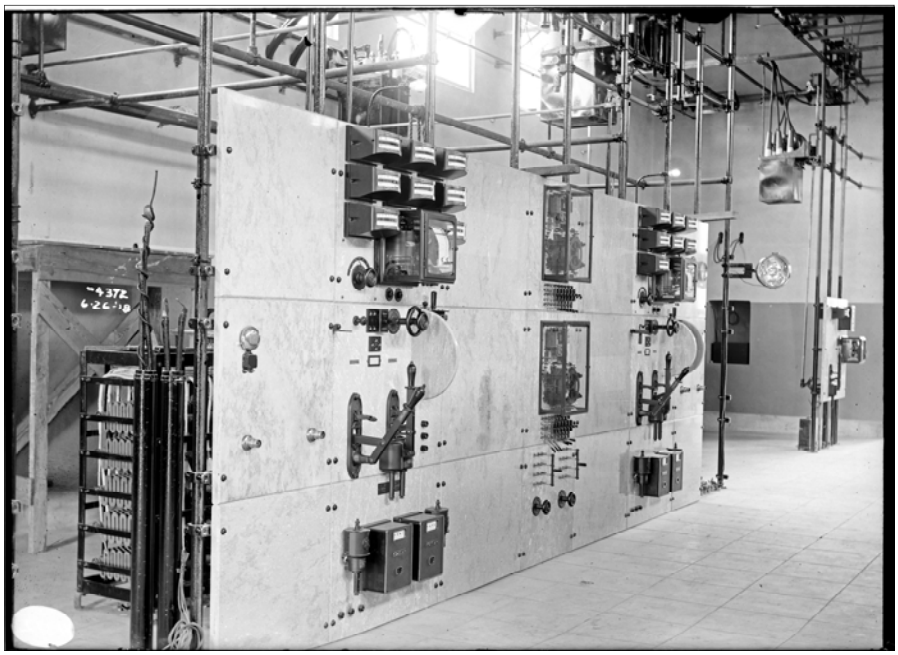

Figure 13: Photograph of the electrical panel installation located to the interior of the East Wing, exact direction of view unknown, ca. 1918 (Photo credit: Huntington Library, San Marino, CA)

Figure 14: Photograph of the Utility Structure temporary tent camp erected at the site during construction of the utility structure, view west, 1918

Figure 15: Photograph of the site with the temporary tent camp erected during construction of the Utility Structure shown to far right, view southwest, ca. 1918 (Photo credit: Huntington Library, San Marino, CA)

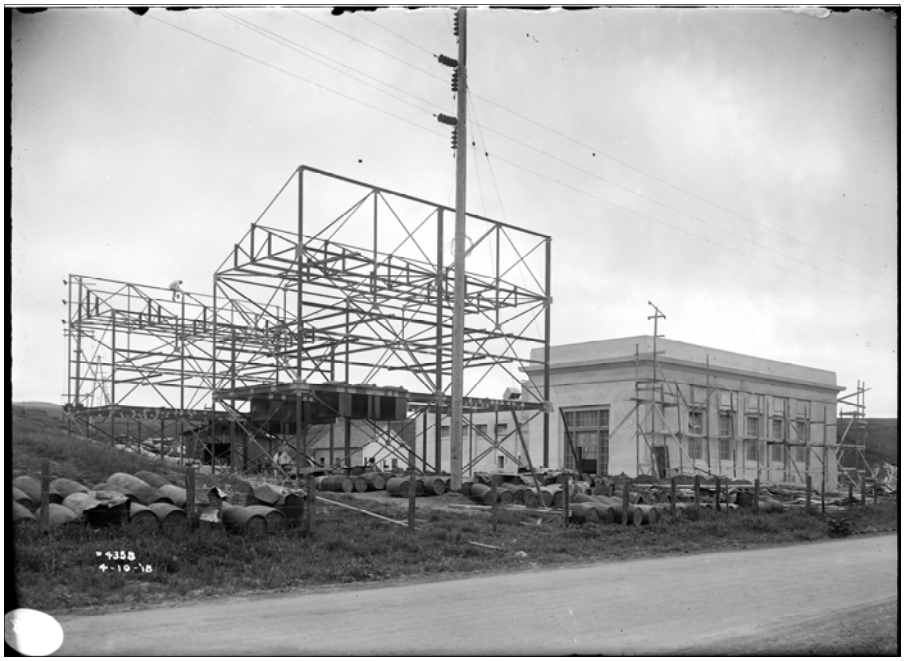

Figure 16: Photograph of the completed substation Utility Structure and the open rack system located to the north, view southeast, 1918
(Photo credit: Huntington Library, San Marino, CA)

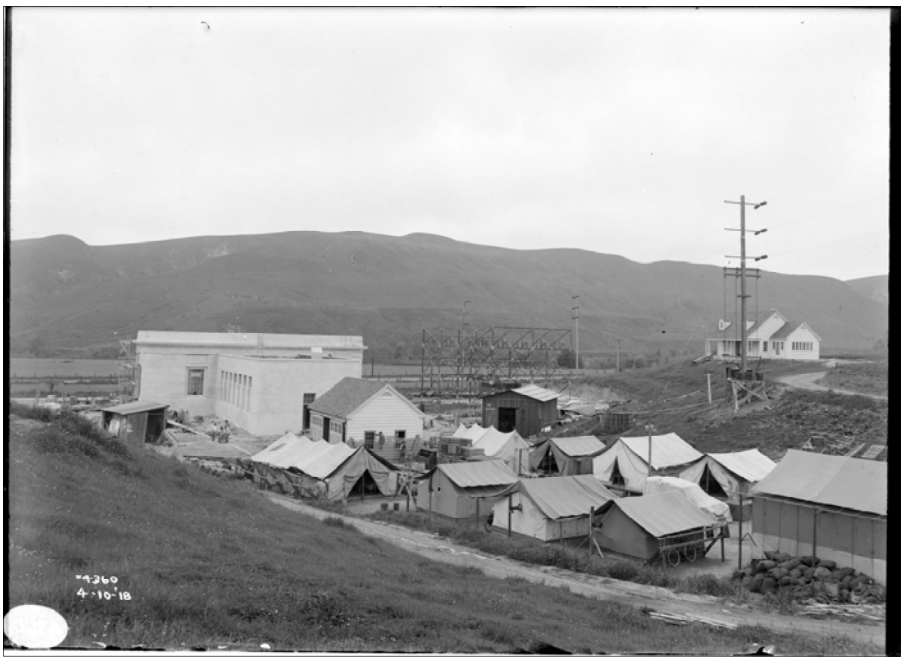

Figure 17: Photograph showing the temporary tent city erected during construction with the east and south elevations of the completed Utility Structure in the background, 1918
(Photo credit: Huntington Library, San Marino, CA)

Figure 18: The interior of the completed East Wing, view west, ca. 1918
(Photo credit: Huntington Library, San Marino, CA)

Figure 19: Construction of the interior view east, 1918
(Photo credit: Huntington Library, San Marino, CA)

Figure 20: Capistrano Substation Utility Structure, 1918
(Photo credit: Huntington Library, San Marino, CA)

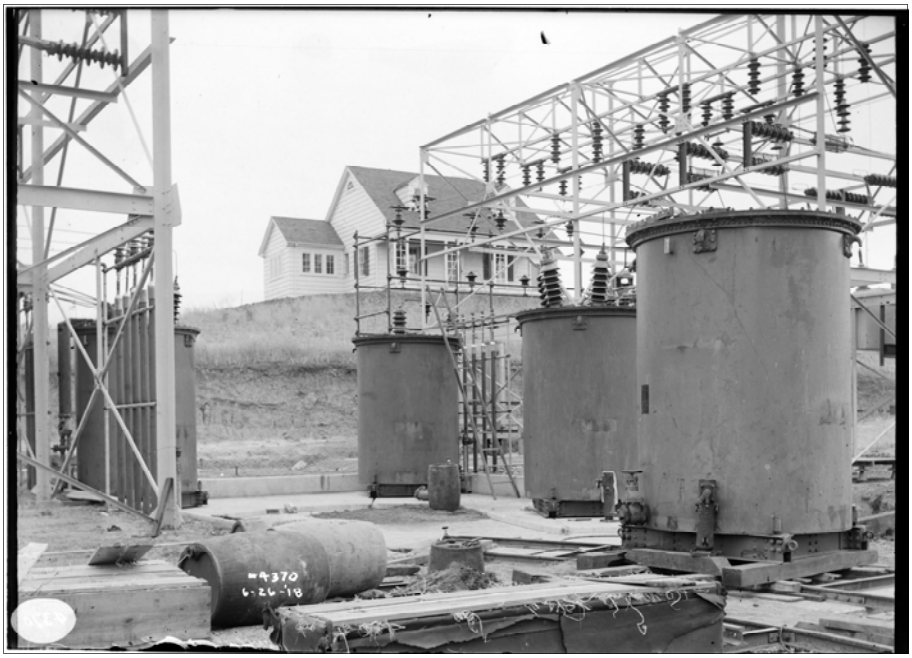

Figure 21: The open racks located to the north of the Utility Structure, view northeast, 1918
(Photo credit: Huntington Library, San Marino, CA)

Figure 22: The two workmen's cottages erected on the subject property, 1918 (Photo credit: Huntington Library, San Marino, CA)

Figure 23: North and west elevations of the West Wing, with a small portion of the East Wing visible to the rear, view southeast, 1921 (Photo credit: Huntington Library, San Marino, CA)

Figure 24: West and south elevations of the West Wing of the Utility Structure, with a small portion of the East Wing visible, view northeast, 1921 (Photo credit: Huntington Library, San Marino, CA)

Figure 25: Interior of the East Wing, view east, 1923 (Photo credit: Huntington Library, San Marino, CA)

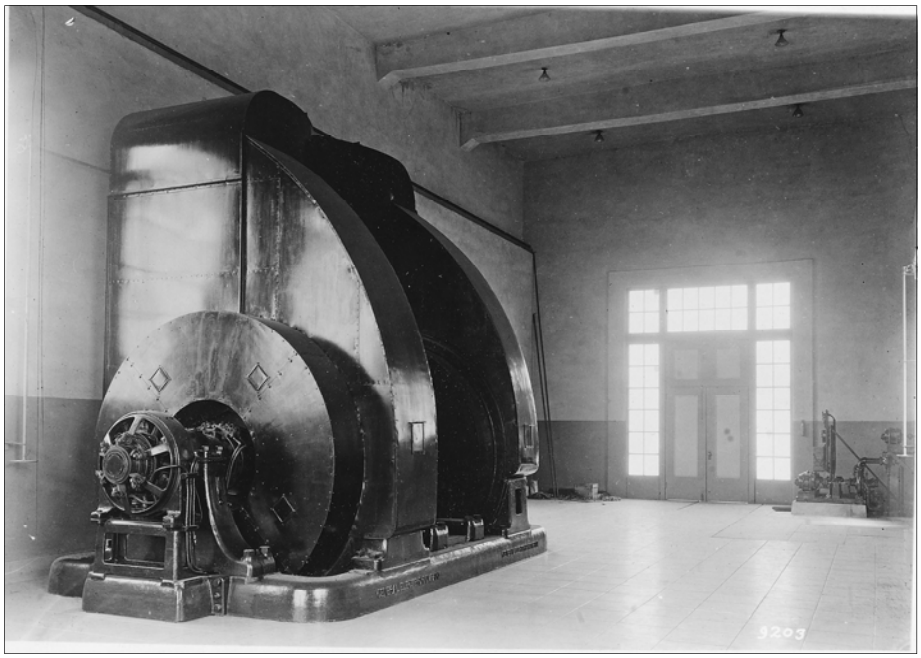

Figure 26: Interior of the West Wing, view north, 1923 (Photo credit: Huntington Library, San Marino, CA)

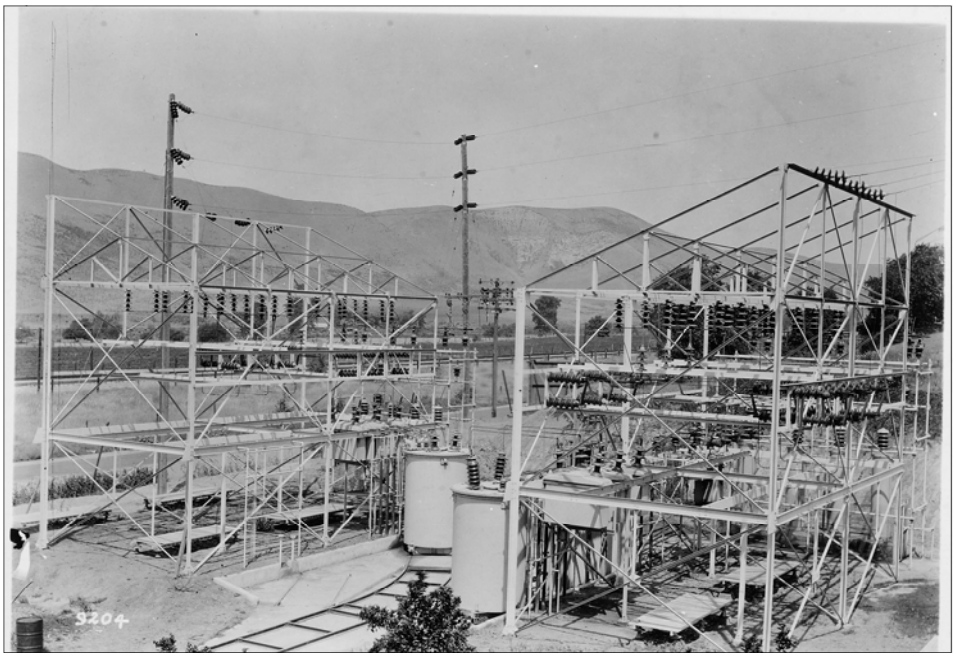

Figure 27: The outdoor rack located to the north of the Utility Structure, view northwest, 1923 (Photo credit: Huntington Library, San Marino, CA)

Figure 28: The Utility Structure and the outdoor rack located to the north of it, view southwest, 1923 (Photo credit: Huntington Library, San Marino, CA)

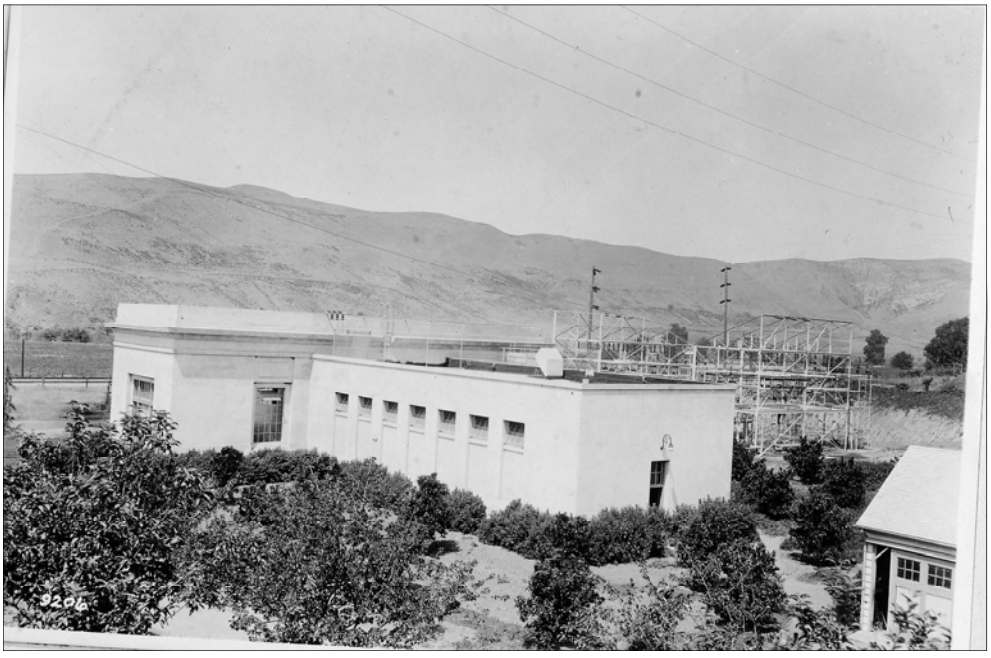

Figure 29: The Utility Structure with the outdoor rack located to the north of it, view northwest, 1923 (Photo credit: Huntington Library, San Marino, CA)

EXHIBIT C: MAPS

CAPISTRANO SUBSTATION UTILITY STRUCTURE
31050 CAMINO CAPISTRANO, SAN JUAN CAPISTRANO, CA

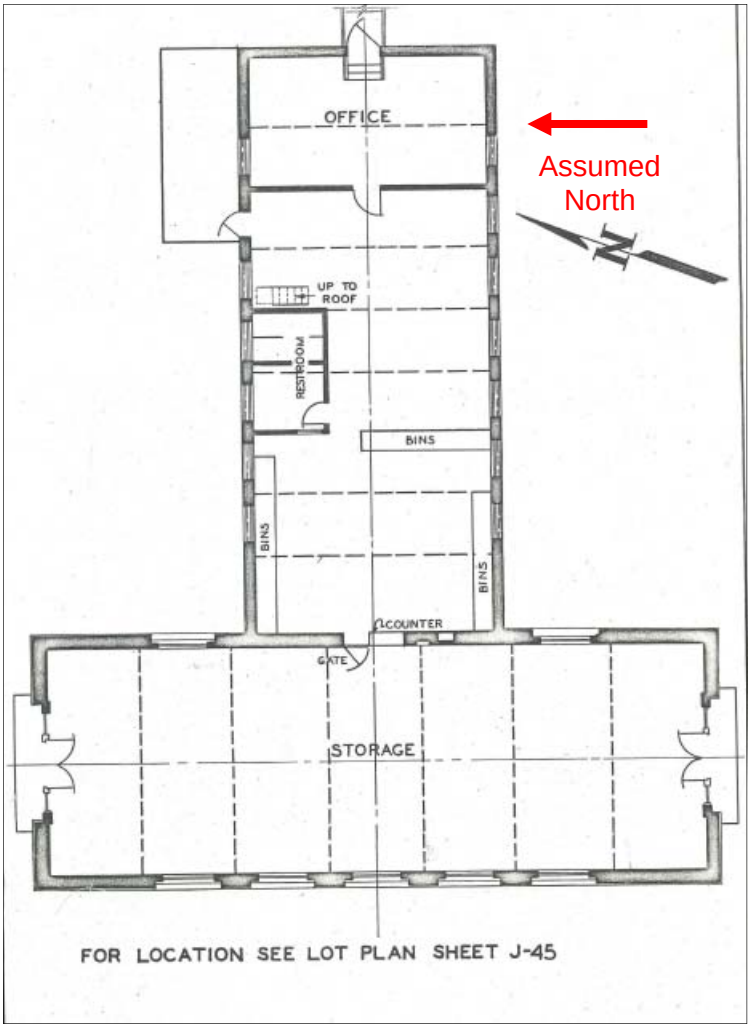

Figure 1: Floor plan of the Capistrano Substation Utility Structure (circa 1933)

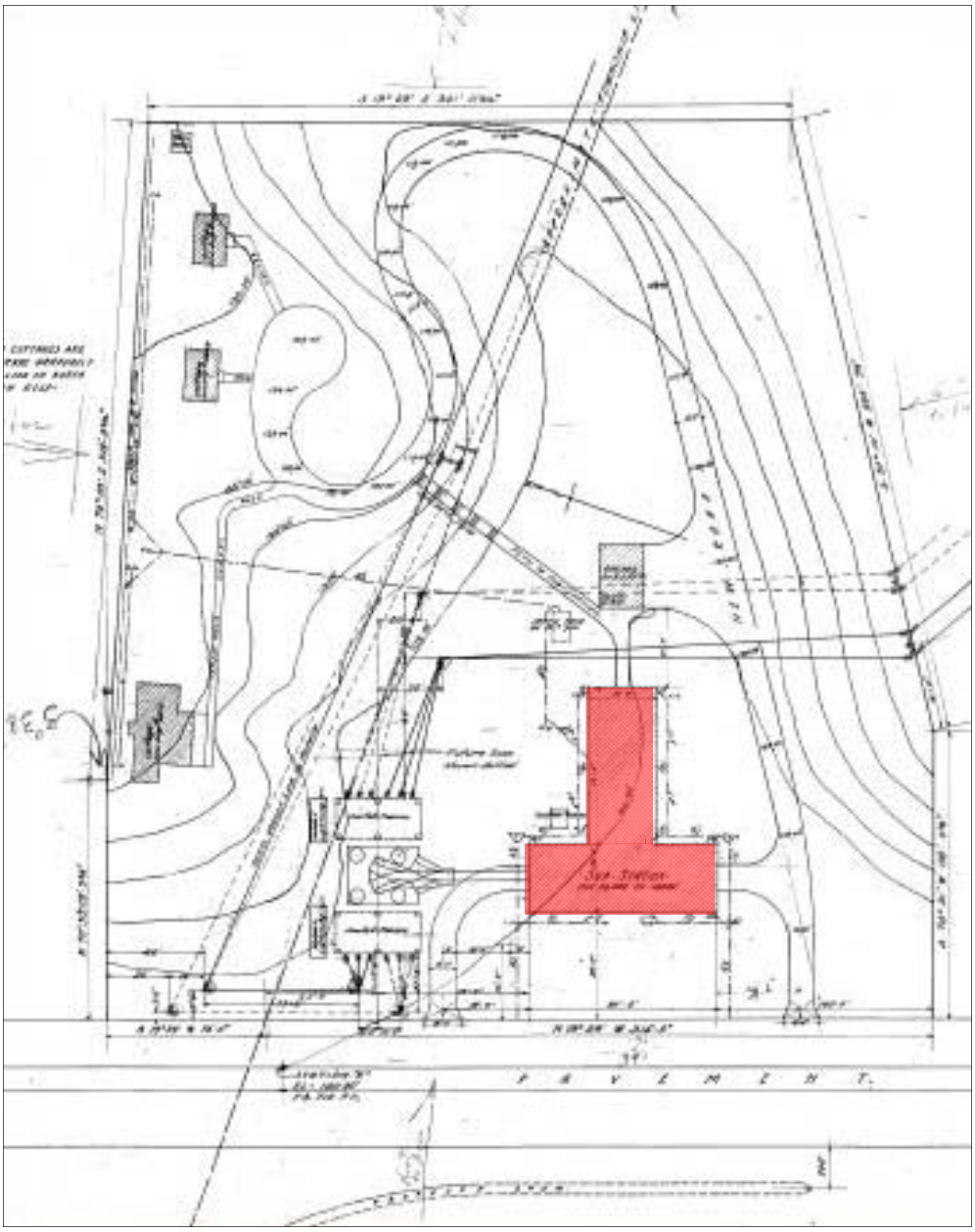

Figure 2: 1917 Assessor's map showing the subject property with the Utility Structure in red

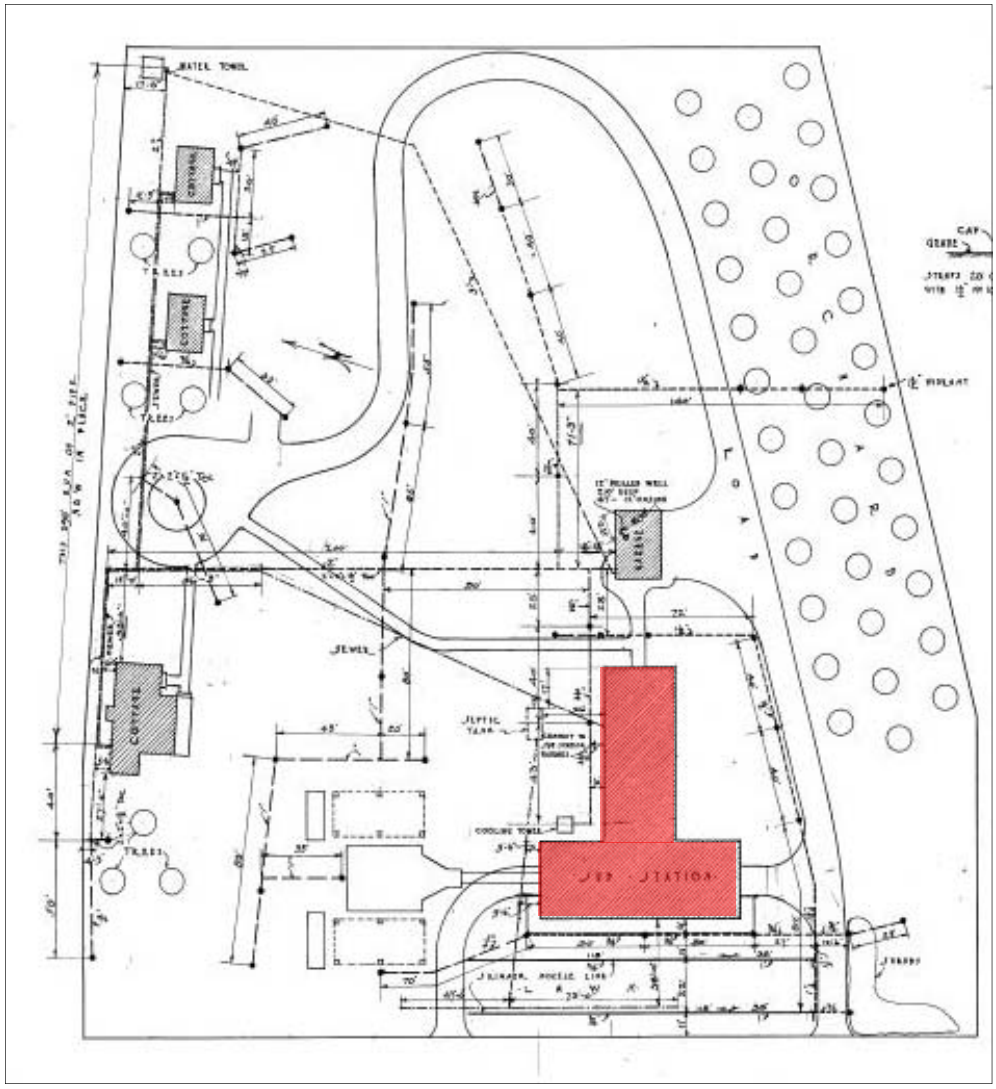

Figure 3: 1918 Assessor's map showing the subject property with the Utility Structure in red

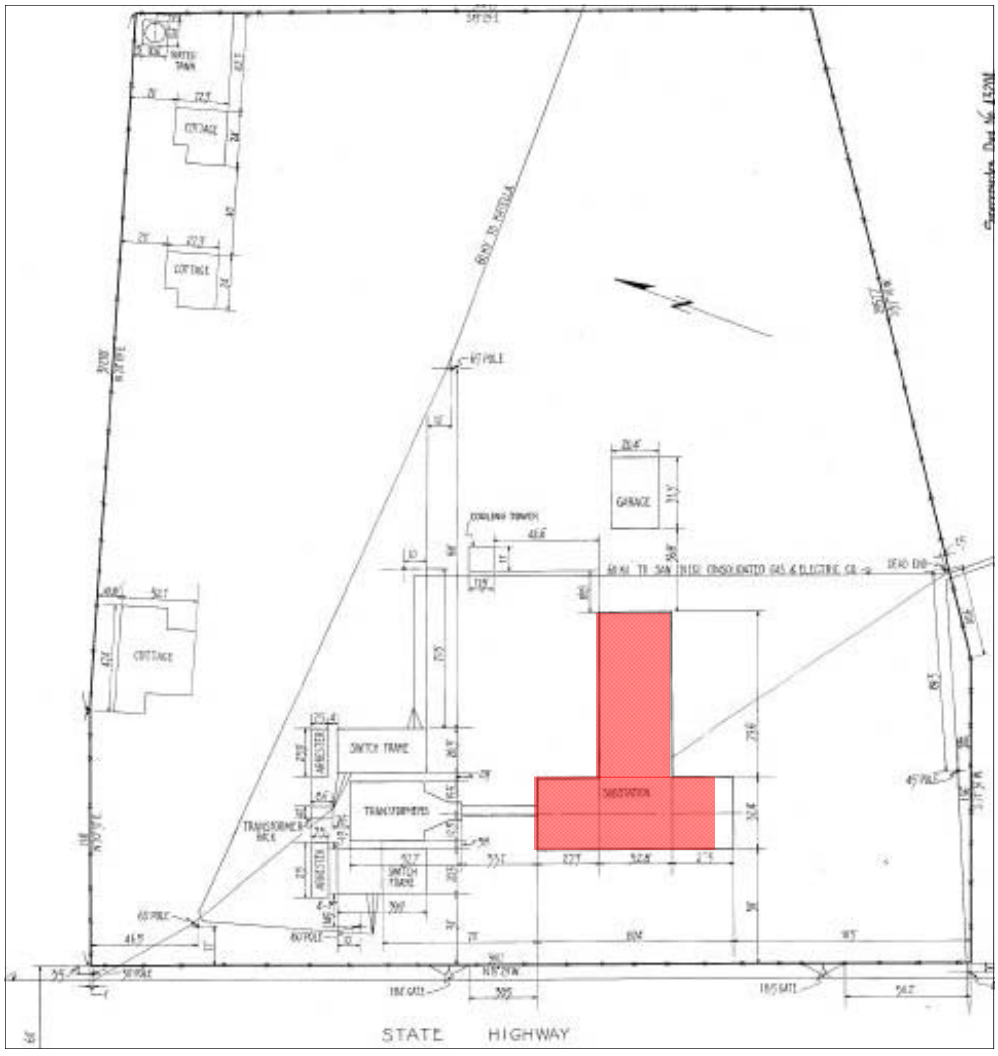

Figure 4: 1924 Assessor's map showing the subject property with the Utility Structure in red

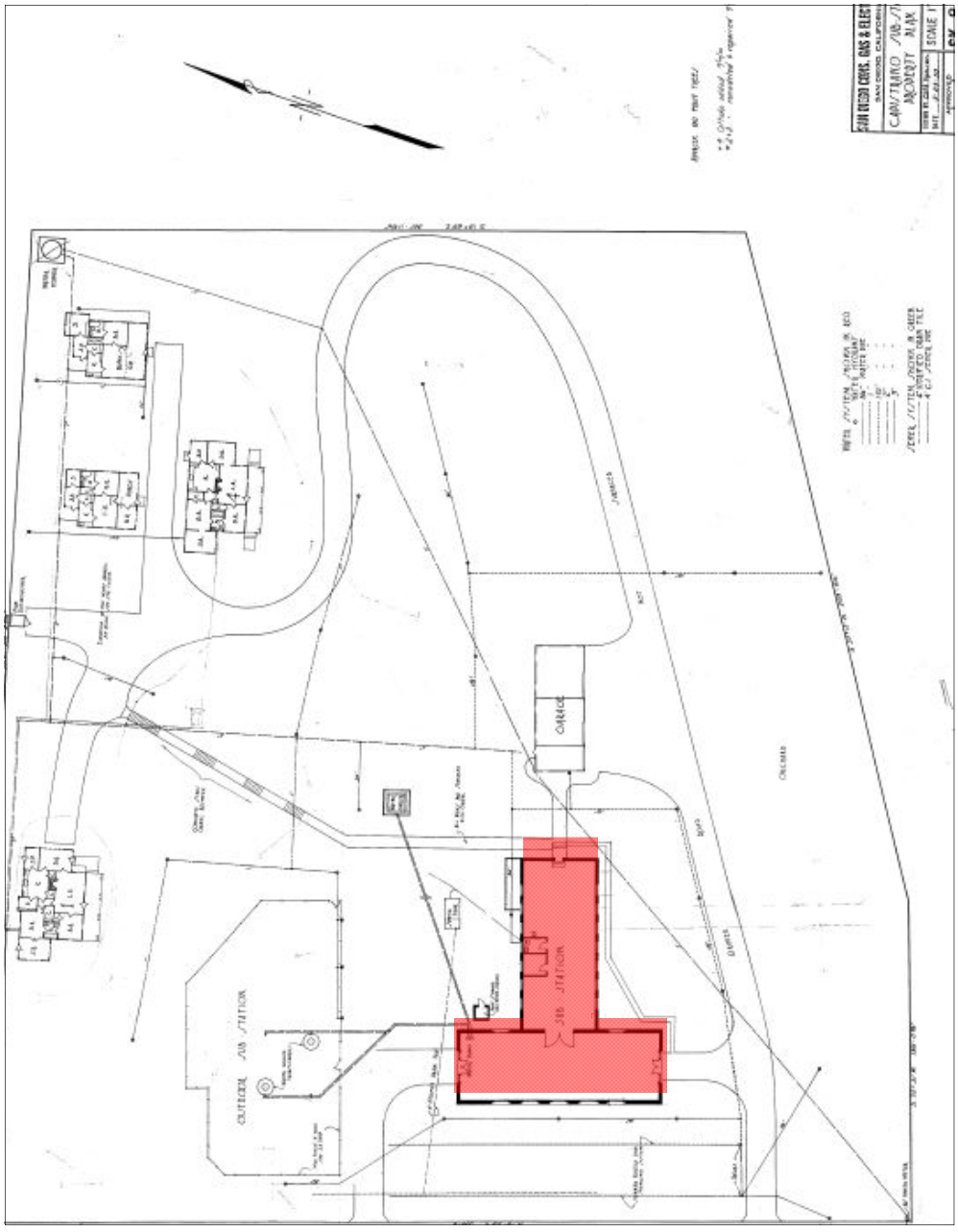

Figure 5: 1933 Assessor's map showing the subject property with the Utility Structure in red

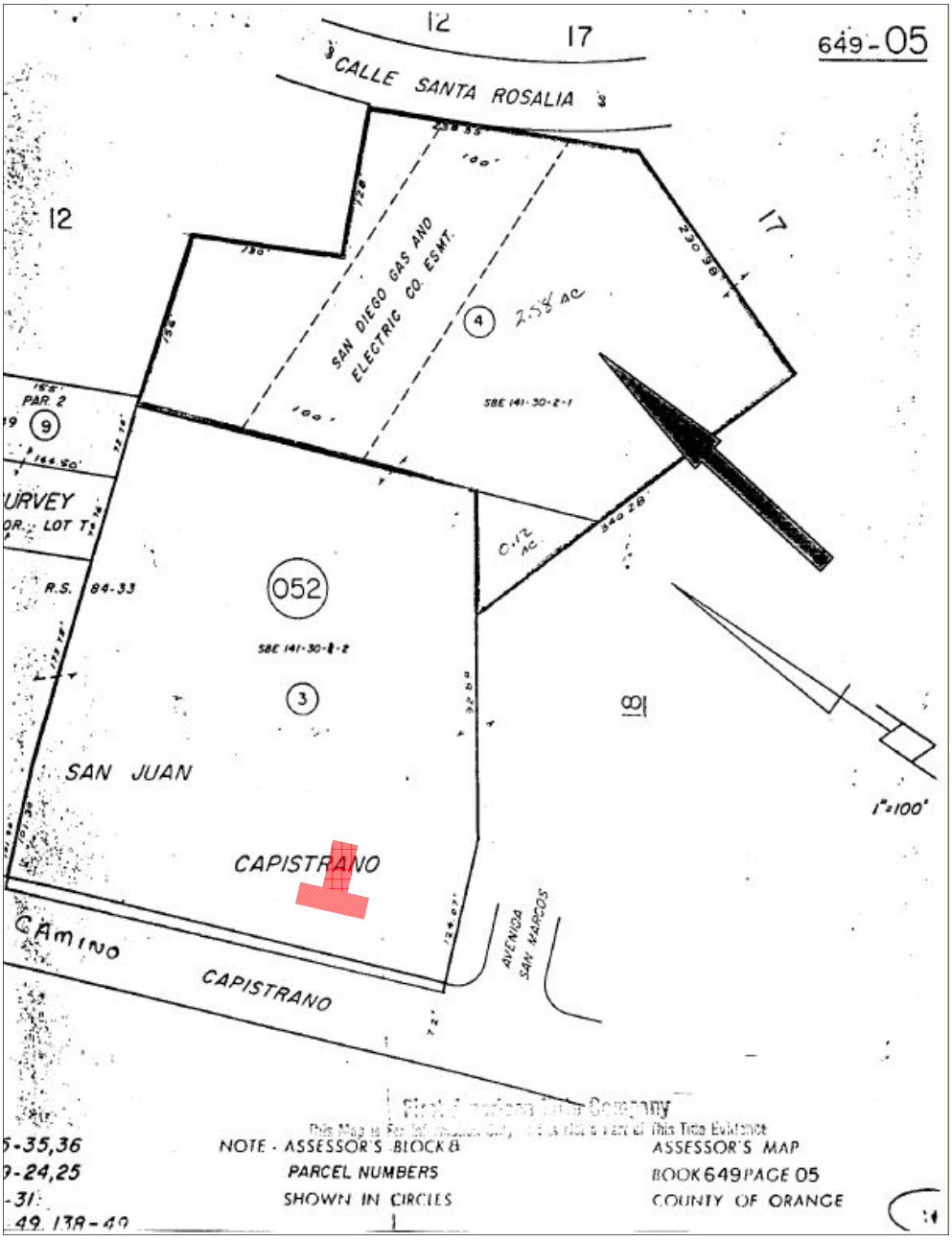

Figure 6: 1940 Assessor's map of the subject property with the approximate location of the Utility Structure shown in red. Also note the separate parcel located to the east of the site, to which the large black arrow is pointing, as that parcel would soon become part of the site.

Figure 7: 1967 Assessor's map of the subject property showing the approximate location of the Utility Structure in red

Figure 8: 2004 Assessor's map of the subject property showing the location of the Utility Structure in red

EXHIBIT D: CONTEMPORARY PHOTOS

CAPISTRANO SUBSTATION UTILITY STRUCTURE
31050 CAMINO CAPISTRANO, SAN JUAN CAPISTRANO, CA

Photo 1: Aerial photo of the Capistrano Substation Complex (as outlined) with the Utility Structure located to the west of the site (Google Earth Map, 2015)

Photo 2: Utility Structure, west elevation of the West Wing, view southeast (Chattel 2015)

Photo 3: Utility Structure, detail of the landscaping adjacent to both the west elevation of the West Wing (left) and to Camino Capistrano (right) with contemporary, non-original berm and trees, view south (Chattel 2015)

Photo 4: Driveway entrance from Camino Capistrano to the site as located to the north of the Utility Structure, view east (Chattel 2015)

Photo 5: Utility Structure, north elevation of the West Wing (right) and north elevation of the east wing beyond (left), view south east (Chattel 2015)

Photo 6: Utility Structure, north elevation of the West Wing (right) with partial north elevation of East Wing beyond (left), view south (Chattel 2015)

Photo 7: Utility Structure, detail of the rail lines located in front of the entrance doors on the north elevation of the West Wing, view east (Chattel 2015)

Photo 8: Utility Structure, the north elevation of the East Wing, view south (Chattel 2015)

Photo 9: Utility Structure, the alteration of the "blind panel" to accommodate an entry on the north elevation of the East Wing, view southwest (Chattel 2015)

Photo 10: Utility Structure, detail of windows and "blind panels" on the north elevation of the East Wing, view southwest (Chattel 2015)

Photo 11: Utility Structure, the East Wing of the building (left) with the West Wing beyond, view southwest (Chattel 2015)

Photo 12: Utility Structure, south elevation with West Wing (left) and East Wing (right) (Chattel 2015)

Photo 13: Utility Structure, south elevation of the West Wing (left) and East Wing (right) (Chattel 2015)

Photo 14: Utility Structure and view east of the subject property at driveway located to the south of the structure (Chattel 2015)

Photo 15: Detail of the foundation of the demolished garage that lies east of the Utility Structure (Chattel 2015)

Photo 16: Utility Structure and view west towards Camino Capistrano from the southeastern edge of the subject property (Chattel 2015)

Photo 17: View north towards the location where the four residential cottages once stood on the northeast portion of the subject property (Chattel 2015)

Photo 18: View southwest towards Utility Structure from the location where the four residential cottages once stood on the northeastern portion of the subject property (Chattel 2015)

Photo 19: Utility Structure, interior of West Wing, view north (Chattel 2015)

Photo 20: Utility Structure, interior of West Wing, view south. Note the Maris Bros. hoist (i.e. crane) located at the plane of the ceiling. (Chattel 2015)

Photo 21: Utility Structure, interior of West Wing, detail of connecting doors to East Wing, view east (Chattel 2015)

Photo 22: Utility Structure, interior of West Wing, detail of window, view east (Chattel 2015)

Photo 23: Utility Structure, interior of West Wing, detail of doors and transom at south end of wing, view south (Chattel 2015)

Photo 24: Utility Structure, interior of West Wing, detail of windows on west wall, view west Chattel 2015)

Photo 25: Utility Structure, ground floor level interior photo of the East Wing, view east (Chattel 2015)

Photo 26: Utility Structure, mezzanine level interior photo of the East Wing, view southwest (Chattel 2015)

Photo 27: Utility Structure, ground floor level photo of the East Wing, view west (Chattel 2015)

Photo 28: Utility Structure, ground floor level photo of the East Wing, view north (Chattel 2015)

EXHIBIT E: SIGNIFICANT SPACES DIAGRAM

CAPISTRANO SUBSTATION UTILITY STRUCTURE
31050 CAMINO CAPISTRANO, SAN JUAN CAPISTRANO, CA

Figure 1: Significant Space Diagram of the Capistrano Substation Utility Structure shows that portion of the building that is of primary significance as well as the portion of the building that is of secondary significance

Appendix T

Spanish Translation of Master Responses A, C, and D

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Respuesta Principal A: Impactos Significativos

Un impacto, tal como se define bajo CEQA[1], incluye los efectos directos e indirectos que son causados por un proyecto y están relacionados con un cambio físico (Sección 15358 de las Directrices de CEQA). La CPUC[2] usó el Apéndice G de las Directrices de CEQA como criterio para la evaluación de los impactos del proyecto propuesto. La CPUC también identificó y usó umbrales de importancia que son aplicables en los análisis ambientales para determinar si los impactos según cada criterio serían significativos. Todas las medidas de mitigación factibles se aplicaron a los impactos que se identificaton como significativos. La aplicación de estas medidas de mitigación a menudo reduce los impactos del proyecto propuesto por debajo del umbral de importancia (es decir, la importancia del impacto se reduce a "menos significativo"). En algunos casos, aún con la aplicación de todas las medidas de mitigación factibles, un impacto significativo podría no reducir su grado de importancia a "menos significativo". En estos casos, los impactos fueron clasificados como "significativos".

La CPUC tiene autoridad para aprobar un proyecto propuesto a pesar de la existencia de impactos significativos (Sección 21083 del Código de Recursos Públicos [PRC]; Sección 15043 de las Directrices de CEQA); para ello, la CPUC necesitaría preparar una Declaración de Consideraciones Primordiales, la cual proporciona una explicación de los beneficios económicos, legales, sociales, tecnológicos, o de otro tipo que compensarían los riesgos ambientales inevitables (Sección 21083 de PRC; Sección 15093 de Directrices de CEQA).

Bosquejo del EIR[3]

El Capítulo 4 del Bosquejo del Informe de Impacto Ambiental (EIR, por sus siglas en inglés), "Análisis Ambiental" incluyó el análisis de los impactos del proyecto propuesto sobre los recursos ambientales identificados por CEQA. Para cada recurso, se describió el entorno ambiental y legal aplicable, la metodología y criterios de evaluación, y el análisis de impactos ambientales. La CPUC incorpora medidas de mitigación que podrían reducir los impactos considerados como significativos, incluso si dichas medidas no reducen el impacto a un nivel menos significativo.

El Bosquejo del EIR identifica tres recursos que se afectarían de manera significativa e inevitable: la calidad del aire, el transporte y el tránsito, y los impactos acumulativos. Los impactos identificados como significativos e inevitables en el Bosquejo del EIR ocurrirían a corto plazo y sólo se producirían durante la construcción del proyecto propuesto. La Sección 6.6 del Bosquejo del EIR, "Efectos Adversos Significativos e Inevitables", proporciona un resumen de los impactos específicos y significativos, indicando:

> *La construcción del proyecto propuesto resultaría en impactos significativos sobre la calidad del aire, el transporte y el tránsito, y los impactos acumulativos. Como se discutió en la Sección 4.3, "Calidad del Aire", el proyecto propuesto generaría impactos sobre las normas de calidad del aire, el aumento neto y considerable acumulativo de contaminantes atmosféricos de interés, y la exposición de poblaciones sensibles a concentraciones de estos contaminantes; estos impactos serían significativos e inevitables durante la construcción aún después de la implementación de todas las medidas de mitigación factibles. Durante la construcción, el proyecto propuesto resultaría en emisiones máximas diarias de [gases orgánicos reactivos] ROG, [partículas de polvo de 10 micrones de diámetro] PM_{10} y [partículas de polvo de 2.5*

[1] "CEQA" (que se pronuncia "si cua") es la Ley de Calidad Ambiental de California.
[2] "CPUC" es La Comisión de Servicios Públicos de California.
[3] Las siglas "EIR" corresponden a Informe de Impacto Ambiental.

microns de diámetro] $PM_{2.5}$ que excederían los umbrales de importancia regional establecidos por el [Distrito de Gestion de Calidad del Aire del Sur de California] SCAQMD. Además, el proyecto propuesto daría lugar a emisiones de PM_{10} y $PM_{2.5}$ durante diversas fases de construcción de la subestación y línea de transmisión que excederían los umbrales importancia local del SCAQMD. El área geográfica del SCAQMD está en incumplimiento de los estándares de concentraciones ozono, PM_{10} y $PM_{2.5}$. Por lo tanto, las emisiones de ozono, PM_{10}, y $PM_{2.5}$ generadas durante las actividades de construcción del proyecto propuesto se traducirían en un impacto acumulativo significativo sobre la calidad del aire ambiental.

Como se discutió en la Sección 4.15, "Transporte y Tránsito," los efectos temporales sobre el tránsito a lo largo de Camino Capistrano, en la Ciudad de San Juan Capistrano durante los cierres parciales de vías asociados al proyecto se traducirían en niveles de servicio (LOS) inaceptables. Además, los cierres completos de vías a lo largo de Camino Capistrano, Via Pamplona, y la calle San Diego, en la Ciudad de San Juan Capistrano resultarían en impactos significativos e inevitables durante la construcción, aún con la implementación de todas las medidas de mitigación factibles.

Como se ha expuesto anteriormente en la Sección 6.4.15, el proyecto propuesto contribuiría significativamente a un impacto acumulativo sobre el tránsito a lo largo de Camino Capistrano, en la Ciudad de San Juan Capistrano, durante el cierre parcial de vías (Tabla 6-4).

Bosquejo Modificado del EIR

Como resultado de la información adicional obtenida después de la publicación de la Bosquejo de EIR, la CPUC decidó preparar y publicar un Bosquejo Modificado del EIR, de conformidad con Sección 15088.5 de las Directrices de CEQA. En el Capítulo 2 del Bosquejo Modificado del EIR, "Las Modificaciones del Bosquejo del EIR," se analizaron nuevamente los impactos del proyecto propuesto sobre recursos biológicos, recursos culturales, y el uso de la tierra. El Bosquejo Modificado del EIR identificó que el proyecto propuesto resultaría en impactos significativos e inevitables sobre estos tres recursos. Los impactos significativos e inevitables identificados en el Bosquejo Modificado del EIR serían a corto y largo plazo y se producirían durante la construcción y operación del proyecto propuesto.

Recursos Biológicos. Durante el proceso de revisión pública, el Servicio Estadounidense de Pesca y Vida Silvestre (USFWS) y el Departamento de Pesca y Vida Silvestre de California (CDFW) determinaron que una parte del nuevo derecho de paso requerido por el proyecto propuesto de San Diego Gas & Electric Company (SDG&E, o el solicitante) cruzaría terrenos dentro de los límites de la Servidumbre de Conservación de Talega (no registrado) y que los impactos asociados a la construcción del proyecto podrían ocurrir dentro de la Servidumbre de Conservación del Vertedero de Prima Deshecha (registrado), la cual está está fuera del derecho de paso existente del solicitante. El establecimiento de un nuevo derecho de paso en la Servidumbre de Conservación de Talega y las actividades que afectarían terrenos fuera del derecho de paso del solicitante dentro de la Servidumbre de Conservación de Vertedero de Prima Deshecha (registrado) no fueron descritos en el Bosquejo del EIR, y por lo tanto no se evaluaron sus impactos potenciales. Las dos servidumbres de conservación antes mencionadas se establecieron en asociación con el Plan Conservación del Hábitat Subregional del Sur del Condado de Orange (HCP, por sus siglas en inglés). El proyecto propuesto puede entrar en conflicto con dos servidumbres de conservación establecidas en el HCP Subregional del Sur del Condado de Orange y con las zonas previstas y consideradas en el Plan de SDG&E de Conservación de Comunidades Naturales (NCCP/HCP, por sus siglas en inglés). Las dos servidumbres de conservación en cuestión son la Servidumbre de Conservación de Talega (no registrado) y la Servidumbre de Conservación de Vertedero de Prima Deshecha (registrado). Con base en discusiones recientes sostenidas con el USFWS, el establecimiento

de un nuevo derecho de paso o cruces dentro de los límites de la (s) servidumbre (s), en zonas fuera del derecho de paso existente del solicitante, entrarían en conflicto con las dos servidumbres de conservación, lo cual resultaría en un impacto significativo.

Recursos culturales. Después de la publicación del Bosquejo de EIR, la Comisión de Recursos Históricos del Estado de California votó unánimemente a favor de recomendar el edificio construido en 1918 frente a Camino Capistrano, en la propiedad de la Subestación Capistrano, conocido como "la antigua estructura de utilidad" (sitio histórico 30-179873), elegible para inclusión en el Registro Nacional de Lugares Históricos (NRHP, por sus siglas en inglés). La recomendación fue remitida al Custodio de la NRHP el 17 de julio de 2015. La nominación de esta estructura para su inclusión en el NRHP cambia las condiciones de la evaluación de Recursos Culturales. Debido a que la elegibilidad de la antigua estructura de utilidad para su inclusión en el NRHP aún no se ha determinado, para los fines de este análisis se asume que la estructura será determinada como elegible para su inclusión en el NRHP. Por lo tanto, la construcción y operación del proyecto propuesto tendría un impacto significativo sobre un recurso histórico.

Uso de la Tierra. Durante el período de comentarios públicos sobre el Bosquejo del EIR, la Ciudad de San Juan Capistrano presentó una carta de comentarios que, entre otras cosas, identificó que la propuesta del solicitante supera las restricciones de altura de los edificios de la Ciudad en la zona de Distrito de Manufactura Comercial. La Sección 9-3.305 del Código Municipal de San Juan Capistrano limita la altura de los edificios en el Distrito de Manufactura Comercial a 35 pies. Por lo tanto, la propuesta de la Subestación San Juan Capistrano, que incluye la construcción de edificios de 50 pies de alto, entraría en conflicto con los límites de altura de construcción aplicables de acuerdo con el Código Municipal de San Juan Capistrano. Las subsecciones correspondientes al marco legal aplicable y análisis de impactos de la Sección 4.10 se han actualizado con esta información.

EIR Final

El EIR Final incluye correcciones basadas en las observaciones recibidas durante los períodos de comentarios públicos para el Bosquejo del EIR y el Bosquejo Modificado del EIR (ver Anexo 1). El Capítulo 4 del EIR, "Análisis Ambiental", identifica que el proyecto propuesto daría lugar a impactos significativos e inevitables sobre la calidad del aire y los recursos culturales. Estos impactos significativos serían de corto y largo plazo, y se producirían durante la construcción y operación del proyecto propuesto.

Los impactos significativos sobre el transporte y el tránsito, los recursos biológicos, uso de la tierra, y los impactos acumulativos sobre el transporte y el tránsito se han reducido a “menos significativo” o “menos significativo después de la implementación de medidas de mitigación”, tal como se presenta a continuación.

Transporte y Tránsito/Impactos Acumulativos sobre el Transporte y Tránsito. Durante el período de comentarios públicos para el Bosquejo del EIR, el solicitante presentó modificaciones menores al diseño de proyecto (Carta de Comentario No. 98). Estas modificaciones al diseño de proyecto incluyen un bosquejo del plan de control de tránsito, el cual mantendría tres carriles abiertos a lo largo de Camino Capistrano durante la construcción y evitaría los cierres parciales o totales de vías a lo largo de Camino Capistrano. Además, el bosquejo del plan de control de tráfico incluye correcciones al proyecto propuesto que evitarían los cierres totales de vialidad a lo largo de Via Pamplona y Calle San Diego; y proporciona detalles adicionales sobre los cierres parciales de estas vías.

Se repitió el análisis de tránsito del EIR incorporando la información del bosquejo del plan de control de tráfico antes mencionado. El Apéndice P del EIR Final presenta un Memorando de Tránsito Corregido, preparado por la empresa de ingeniería de tráfico Linscott, Law, and Greenspan Engineers. El Memorando de Tránsito Corregido muestra que los impactos sobre los niveles de servicio (LOS, por sus siglas en inglés) de los caminos ya no superarían el umbral de importancia establecido. En el EIR Final se presenta una versión corregida de la Tabla 4.15-5 del Bosqueo del EIR (Anexo 1) para demostrar que no se excede el umbral de LOS a lo largo de Camino Capistrano.

Igualmente, en el EIR Final se ha corregido la Sección 4.15.3.3 del Bosquejo del EIR (Anexo 1) para incorporar los resultados de la Memorando de Tránsito Corregido. Los impactos sobre el Transporte y Tránsito se han reclasificado como "menos significativo con la implementación de medidas de mitigación".

Del mismo modo, las modificaciones menores al diseño de proyecto, que mantendría tres carriles abiertos a lo largo de Camino Capistrano durante la construcción y evitaría los cierres parciales o totales de vías a lo largo de Camino Capistrano, tuvieron un impacto similar sobre los impactos acumulativos sobre el tránsito y el transporte. Se repitió el análisis de tránsito acumulativo, incorporando la información del bosquejo del plan de control de tráfico. El Memorando de Tránsito Corregido muestra que los impactos sobre los niveles de servicios (LOS) ya no superarían el umbral de importancia establecido (Apéndice Q). La Tabla 6-4 del Bosquejo del EIR se ha corregido en el EIR Final para demostrar que el umbral de LOS no se supera a lo largo de Camino Capistrano. Además, se han hecho correcciones al texto de la Sección 6.4.15 del Bosquejo del EIR (Anexo 1) para eliminar los impactos acumulativos y significativos sobre el transporte.

Recursos Biológicos. Desde la publicación del Bosquejo Modificado del EIR, la CPUC ha decidido que la determinación de la capacidad del solicitante para obtener nuevos derechos de paso dentro de la Servidumbre de Conservación de Talega (no registrado) y la Servidumbre de Conservación de Vertedero de Prima Deshecha (registrado) está fuera del alcance de este documento de CEQA. Se supone, como sucede en la mayoría de estos casos, que es factible para el solicitante obtener un nuevo derecho de paso a lo largo de su ruta propuesta. Por lo tanto, el impacto significativo identificado en el Bosquejo Modificado del EIR asociado a un nuevo derecho de paso en el área de conservación ya no es aplicable.

El impacto significativo asociado al incumplimiento del NCCP/HCP de SDG&E que fue identificado en el BosquejoModificado del EIR se ha reducido a "menos significativo con la implementación de medidas de mitigación." Se ha corregido la Medida de Mitigación (MM) BIO-10 para requerir al solicitante la preparación de un plan de mitigación que describa cómo va a consultar y registrar la finalización de su consulta con USFWS y CDFW, según lo dispuesto en el NCCP/HCP de SDG&E.

Además, desde la pubicación del Bosquejo del EIR, la CPUC ha decidido que la coordinación con todos los propietarios y titulares de servidumbres de conservación no es necesaria para evitar conflictos con el NCCP/HCP de SDG&E. La coordinación con USFWS y CDFW, que son los organismos de ejecución para el NCCP/HCP de SDG&E, sería suficiente para evitar conflictos con el NCCP/HCP de SDG&E y otros planes de conservación aplicables.

Se han realizado las siguientes correcciones a la discusión del Impacto BR-6 en la Sección 4.4.3.3 del EIR (Anexo 1):

- Todos los componentes del Proyecto serían construidos dentro del área del Plan Subregional NCCP/HCP de SDG&E, así como dentro de áreas del Plan Subregional HCP del Sur del Condado de Orange.
- El proyecto propuesto es considerado como una acción prevista bajo el Plan Subregional NCCP/HCP de SDG&E. Este Plan establece áreas de hábitat para Especies Protegidas, las cuales son consideradas áreas de preservación; cualquier impacto que ocurra dentro de estas áreas de preservación requiere medidas específicas de mitigación. Las áreas de preservación incluyen zonas de reserva o conservación establecidas por documentos de planificación regional; áreas de preservación establecidas por el gobierno estadal, federal, o local; o áreas publicas o privadas designadas para la protección a largo plazo de plantas y vida silvestre.
- El Plan Subregional NCCP/HCP de SDG&E require que aquellas áreas que no están definidas como reservas en documentos de planificación existentes sean evaluadas por un biólogo calificado para determinar si las mismas consisten de hábitat de calidad moderada, alta, o muy alta. Estas áreas serán tratadas como reservas y estarán sujetas a las mismas medidas de mitigación.
- El proyecto propuesto cruzaría áreas cubiertas por el HCP del Condado de Orange, las cuales han estado o se encuentran en proceso de designación como áreas de preservación. Estas áreas incluyen los espacios abiertos de la Ciudad de San Juan Capistrano; una Servidumbre de Conservación en el Área de Desarrollo Talega; y la Playa Estadal de San Onofre. Se requerirá coordinación con USFWS y CDFW para asegurar que el proyecto cumple con las provisiones del Plan Subregional NCCP/HCP de SDG&E que requieren la aplicación de medidas de mitigación apropiadas en estas áreas de reserva, ya que su inclumplimiento podría resultar en un conflicto significativo.
- El proyecto propuesto se considera una acción prevista en el Plan Subregional NCCP/HCP de SDG&E, este Plan contiene medidas para coordinar con las entidades a cargo de su implementación y para proveer medidas de mitigación adicional en caso de que ocurran impactos permanentes sobre las áreas de reserva HCP/NCCP.
- SDG&E coordinaría con las autoridades competentes durante el proceso de aprobación del proyecto propuesto para asegurar que los impactos, las medidas de mitigación y los protocolos operativos sean implementados bajo los criterios del Plan Subregional NCCP/HCP. La medida de mitigación MM BR-10 requiere que el solicitante obtenga verificación por escrito por parte de USFWS y CDFW indicando el cumplimiento de los requisitos del Plan Subregional NCCP/HCP previo al inicio de la etapa de construcción. La implementación de la medida MM BR-10 reduciría los posibles conflictos con el Plan Subregional NCCP/HCP de SDG&E a un nivel de importancia "menos significativo."

Se han realizado las siguientes correcciones a la Medida de Mitigación MM BR-10:

Medida de Mitigacion BR-10: Desarrollo del Plan de Mitigación. A los fines de asegurar compatibilidad con el Plan Subregional NCCP/HCP, el solicitante preparará e implementará un Plan de Mitigación para el proyecto. Este Plan de Mitigación:

- Describirá de forma detallada el proceso de consulta con agencias, de conformidad con la Seccion 6.2.1 del Plan NCCP/HCP de SDG&E. De manera alternativa, puede desarrollarse un cronograma y proceso de consulta actualizado, tal como lo permite USFWS y CDFW.

- Solicitará a SDG&E suministrar a la CPUC una comunicación escrita emitida por el USFWS y el CDFW confirmando que el proceso de consulta se ha realizado de forma satisfactoria para ambas agencias y conforme con el Plan Subregional NCCP/HCP de SDG&E.
- Incluirá un resumen de los lineamientos y procedimientos del Plan Subregional NCCP/HCP de SDG&E relevantes para otros HCPs/NCCPs, planes de conservación y áreas de conservación o reserva de carácter publico o privado, incluyendo pero no limitado a;
  - Protocolos operacionales en áreas de hábitat sensible;
  - Mitigación para impactos temporales y permanentes, incluyendo la mejora de hábitat y uso de créditos de mitigación;
  - Procedimientos de coordinación y consulta con el USFWS y el CDFW;
  - La definición de áreas de reserva de conformidad con el Plan Subregional NCCP/HCP de SDG&E;
  - La identificación y trazado de mapas de áreas que pueden calificar como reserva dentro de un radio de 100 pies de cualquier componente del proyecto; y
  - Una revisión de los sitios que pudieran presentar posibles incompatibilidades entre planes de conservación.

Este plan será entregado al USFWS, al CDFW y a la CPUC para revisión y comentarios con el propósito de generar un bosquejo final del plan, y aprobado por la CPUC a más tardar dos meses antes del inicio de la etapa de construcción. La implementación del Plan de Mitigacion, será finalizada antes del inicio de la etapa de construcción, excepto cualquier restauración o mejora física de hábitat que se requiera como resultado de la consulta con las agencias.

Uso de la Tierra. La Sección 8 del Artículo XII de la Constitución de California establece el derecho de prioridad de la CPUC sobre las jurisdicciones locales con respecto a la regulación de los servicios públicos propiedad de inversores privados y la construcción y localización de servicios eléctricos. La Sección 8 del Artículo XII declara, "Una ciudad, condado, u otro organismo público no puede regular las cuestiones sobre las cuales la Legislatura otorga poder de regulación a la Comisión [de Servicios Públicos de California]."

Mediante el Código de Servicios Públicos, la Legislatura autorizó a la CPUC a "hacer todas las cosas, tanto si son designadas específicamente en esta ley o en adición a las mismas, que sean necesarias y convenientes para el ejercicio de tal poder y jurisdicción" (§ 701del Código de Servicios Públicos de California). Otras provisiones del Código de Servicios Públicos autorizan a la CPUC regular la modificación o ampliación de instalaciones eléctricas, requerir a los proveedores de servicios públicos dar servicio a los usuarios, y supervisar el diseño y emplazamiento de instalaciones eléctricas de empresas de servicios públicos, de forma tal que promuevan la salud y la seguridad. (Ver, por ejemplo, las secciones 761, 762, y 768 del Código de Servicios Públicos de California.) La competencia exclusiva de la CPUC se extiende a las regulaciones locales sobre uso de la tierra.

La CPUC ha confirmado su intención de ejercer la jurisdicción exclusiva sobre todas las instalaciones eléctricas que son propiedad de empresas de servicios públicos en California, afirmando que "[todas] las líneas de transmisión eléctrica, líneas de distribución, subestaciones e instalaciones que son propiedad de una empresa de servicios públicos permanecen bajo la jurisdicción exclusiva de la Comisión y esta

jurisdicción no puede reemplazada por ninguna agencia local." (Refiérase a Reglas, Procedimientos y Prácticas Aplicables a Líneas de Transmisión Máxima de 200 Kilovoltios (1994) 55 Cal. P.U.C. 2d 87.)

Para aclarar aún más su ejercicio de la competencia sobre líneas de transmisión eléctrica, particularmente con respecto a aquellas que operan a un voltaje menor de de 200 kilovoltios (kV), en 1995, la CPUC emitió la orden general (GO) 131-D, que regula la planificación y construcción de instalaciones de generación de energía eléctrica, líneas de transmisión/distribución eléctrica, y subestaciones en California. La Sección XIV.B de la GO 131-D reitera el derecho de prioridad de la CPUC sobre la regulación local, afirmando que "las jurisdicciones locales que actúan de conformidad con su autoridad están supeditadas a la regulación de proyectos de líneas de energía eléctrica, líneas de distribución, subestaciones o instalaciones eléctricas construidas por empresas de servicios públicos sujetas a la competencia de la Comisión." Este lenguaje no restrinje los derechos de prioridad de la CPUC con respecto a todas las líneas de transmisión que son propiedad de empresas de servicios públicos (independientemente de su capacidad) y otras instalaciones de servicios públicos mencionadas en la Sección 8 de Artículo XII de la Constitución de California, sino simplemente aclara que estos poderes reemplazan la regulación de jurisdicciones locales sobre las líneas eléctricas que funcionan a un voltaje menor a 200 kV.

Tomando en cuenta la competencia exclusiva de la CPUC sobre la construcción y emplazamiento de las líneas de transmisión eléctrica, SDG&E no estaría obligado a cumplir con las ordenanzas, políticas, o planes locales, incluyendo las restricciones de altura de la Subestación San Juan Capistrano propuesta, ya que las mismas no son aplicables al proyecto propuesto. Debido a que las ordenanzas locales no son aplicables, el proyecto propuesto no daría lugar a un impacto significativo bajo CEQA. Sin embargo, los conflictos y contradicciones con las jurisdicciones locales forman parte de las consideraciones de la CPUC durante su proceso de revisión. Con base en lo anterior, se incluyeron las siguientes correcciones a a la Sección 4.10.3.3 del EIR (Anexo 1):

- Aun cuando el proyecto podría contradecir las regulaciones aplicables sobre altura de edificios definidas en el Código Municipal de San Juan Capistrano, la CPUC tiene responsabilidad y jurisdicción sobre el emplazamiento y aprobación de subestaciones y líneas de transmisión eléctrica, sustituyendo a las autoridades locales, las cuales carecen de jurisdicción. Por lo tanto, los impactos bajo este criterio sería menos que significativos. Sin embargo, los conflictos o contradicciones con las regululaciones locales son consideradas por la CPUC durante su proceso de revisión.

Además, por las razones descritas anteriormente en la sección de Recursos Biológicos, la discusión del impacto LU-3 en la Sección 4.10.3.3 del EIR (Anexo 1) ha sido corregida en consonancia con los cambios realizados en Impacto BR-6 descrito en la Sección 4.4.3.3.

Respuesta Principal C: Alternativa Ambientalmente Superior

El Capítulo 3 del Bosquejo del EIR, "Descripción de las Alternativas del Proyecto" (Anexo 1) proporciona "información suficiente sobre cada alternativa para permitir una evaluación, análisis y comparación a profundidad con respecto al proyecto propuesto." El Capítulo 5 del Bosquejo del EIR, "Comparación de Alternativas," (Anexo 1) compara los impactos ambientales de las alternativas al proyecto propuesto (Sección 15126.6 (d) de las Directrices de CEQA). Si una alternativa causara uno o más efectos significativos, además de aquéllos que serían causados por el proyecto propuesto, los efectos significativos de la alternativa se discuten, pero en menos detalle que los asociados al proyecto propuesto.

Bosquejo del EIR

Como se analiza en la Respuesta Principal A referente a impactos significativos, el Bosquejo del EIR identifica tres recursos que tendrían impactos significativos, incluyendo la calidad del aire, el transporte y el tránsito, y los impactos acumulativos. El Capítulo 5 del Bosquejo del EIR identificó a la Alternativa A (sin proyecto) como la Alternativa Ambientalmente Superior porque se evitaría todos los impactos significativos del proyecto propuesto. Sin embargo, como se indica en la Sección 5.3 del Bosquejo del EIR, cuando la Alternativa Ambientalmente Superior es la alternativa sin proyecto, CEQA requiere la identificación de una Alternativa Ambientalmente Superior entre las otras opciones (Sección 15126.6(e)(2) de las Directrices de CEQA). Por lo tanto, se encontró que las Alternativas B1 y D califican como Alternativas Ambientalmente Superior porque:

• Las dos alternativas podrían reducir sustancialmente las emisiones de aire del proyecto propuesto.

• Las dos alternativas reducirían la importancia del impacto en el transporte y el tránsito a un nivel menos que significativo.

• Las dos alternativas reducirían los impactos acumulativos significativos a un nivel de importancia menos que significativo.

La Alternativa B1 fue identificada como la Alternativa Ambientalmente Superior para la calidad del aire, porque reduciría las emisiones del aire del proyecto propuesto más que el resto des las opciones (62 por ciento). Sin embargo, la Alternativa D reduciría las emisiones del aire del proyecto propuesto en un 61 por ciento. La diferencia del porcentaje resulta insignificante y, por lo tanto, los impactos sobre la calidad del aire se consideran equivalentes bajo ambas alternativas.

La Alternativa D evitaría completamente las vías en las que el proyecto propuestoque tendría un impacto significativo sobre el tránsito. La Alternativa B1 puede resultar en la generación de pocos tránsito sobre Via Pamplona y el cierre parcial y a corto plazo de Via Pamplona; sin embargo, estos impactos serían insignificantes y, por lo tanto, los impactos en el transporte y el tránsito y sus impactos acumulativos se consideran equivalentes bajo ambas alternativas.

Bosquejo Modificado del EIR

Como se analiza en la Respuesta Principal A referente a los impactos significativos, y en la Respuesta Principal F referente a la modificación y re-edición del Bosquejo del EIR, se recibieron comentarios del público sobre el Bosquejo del EIR y se identificaron nuevos impactos significativos y una nueva alternativa potencialmente factible, denominada la Alternativa J.

El Bosquejo Modificado del EIR identificó un total de seis recursos que tendrían impactos significativos, incluyendo los recursos biológicos, recursos culturales, y uso de la tierra, además de la calidad del aire, el transporte y el tránsito, y los impactos acumulativos. Se corrigió el Capítulo 5 del Bosquejo Modificado del EIR para incluir la Alternativa J, así como un análisis de los impactos de cada alternativa sobre los recursos biológicos, culturales, y de uso de la tierra. El Bosquejo Modificado del EIR identifica a la Alternativa A (sin proyecto) como la Alternativa Ambientalmente Superior, ya que la misma evitaría todos los impactos significativos del proyecto propuesto. Sin embargo, según Sección 15126.6 de las Directrices de CEQA, se encontró que la Alternativa J es la Alternativa Ambientalmente Superior porque:

• La Alternativa J reduciría sustancialmente las emisiones de calidad del aire en comparación con las emisiones del aire del proyecto propuesto.

• La Alternativa J reduciría los impactos significativos relativos a incompatibilidad los planes NCCPs y HCPs aplicables a un nivel menos que significativo.

• La Alternativa J reduciría impactos significativos sobre los recursos históricos a un nivel menos que significativo.

• La Alternativa J reduciría impactos significativos en el transporte y el tránsito a un nivel menos que significativo.

• La Alternativa J reduciría los impactos acumulativos significativos a un nivel menos que significativo.

La Alternativa J fue identificada como la Alternativa Ambientalmente Superior con respecto a la calidad del aire porque reduciría las emisiones del aire del proyecto propuesto más que el resto de las alternativas (88 por ciento). La Alternativa J no afectaría las tierras designadas para conservación en virtud de un HCP o NCCP existente. Asi mismo, la Alternativa J evitaría la afectación de un recurso histórico conocido y potencialmente significativo en la Subestación Capistrano. Además, la Alternativa J limitaría principalmente la construcción dentro de áreas previamente perturbadas, reduciendo a su vez posibles impactos sobre los recursos biológicos y culturales no descubiertos previamente. La Alternativa J evitaría por completo el uso de vías sobre las que el proyecto propuesto tendría un impacto significativo sobre el tránsito, sin generar nuevos impactos.

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Como se discute con más detalle en la Respuesta Principal A referente a impactos significativos, los comentarios del público al Bosquejo Modificado del EIR resultaron en la reducción de impactos significativos sobre los recursos biológicos, uso de la tierra, el transporte y el tránsito, y los impactos acumulativos a niveles "menos significativos con la implementación de medidas de mitigación." En tal sentido, se corrigió el Capítulo 5; sin embargo, la Alternativa J sigue siendo la Alternativa Ambientalmente Superior (luego de la Alternativa A) porque:

• La Alternativa J reduciría sustancialmente las emisiones de calidad del aire en comparación con las emisiones del aire del proyecto propuesto.

• La Alternativa J reduciría impactos significativos en los recursos históricos a un nivel menos que significativo.

Decisión de la CPUC

Los Comisionados de la CPUC no están obligados a aprobar la alternativa identificada como la Alternativa Ambientalmente Superior en el EIR Final. El EIR es un elemento de información que los Comisionados consideran al momento de tomar sus decisiones. Los Comisionados pueden preparar una Declaración de Consideraciones Primordiales para aprobar un proyecto con impactos significativos, la cual equilibra los beneficios económicos, legales, sociales, tecnológicos, o de otro tipo de un proyecto propuesto en contraposición a sus riesgos ambientales inevitables (Sección 15093 de Directrices de CEQA).

Respuesta Principal D: Adecuación de Alternativas

El EIR contiene un rango razonable de alternativas al proyecto propuesto que pueden cumplir de manera factible con la mayoría de los objetivos básicos del proyecto y evitarían o reducirían un impacto ambiental potencialmente significativo asociado con el mismo (Sección 15126.6 (a) de Directrices de CEQA). El EIR evalúa un total de 11 alternativas al proyecto propuesto, así como una alternativa sin proyecto (Alternativa A), tal como es requerido por la Sección 15126.6 (e) de las Directrices de CEQA. En el Capítulo 3 se incluye una descripción de cada alternativa, mientras que en el Capítulo 5 del Bosquejo del EIR "Comparación de Alternativas " se presenta una comparación de los impactos ambientales de cada alternativa al proyecto propuesto (Anexo 1).

Factibilidad

Las Directrices de CEQA requieren que el EIR "tome en consideración un rango razonable de alternativas *potencialmente* factibles" (énfasis añadido, según Sección 15126.6 (a)). La CPUC utilizó consideraciones tecnológicas, económicas y jurídicas para determinar la posible viabilidad de las alternativas al proyecto. Para determinar si alternativas seleccionadas para la evaluación eran técnica, legal, y económicamente posibles, se utilizó información públicamente disponible en conjunto con las respuestas ofrecidas por el solicitante a los requerimientos de datos e información recibida durante el proceso del EIR. A pesar de que el tiempo para la ejecución de alternativas no se utilizó como criterio principal de selección, los plazos de ejecución para cada alternativa se consideran factibles debido a que ninguna de ellas podría ser implementada por completo antes del año 2020, cuando los eventos de Categoría C podrían requerir la desconexión de cargas eléctricas en el sistema de 138 kilovoltios al Sur del Condado de Orange (CAISO 2011, 2014a, 2014b).

Objetivos

Los objetivos del proyecto que se utilizaron para evaluar las alternativas se enumeran en la Sección 1.2.1 del Bosquejo del EIR (Anexo 1). Como se explica en el Capítulo 3, "Descripción de Las Alternativas", y en el Apéndice B, Informe de Evaluación de Alternativas, del EIR (Anexo 1), cada una de las 11 alternativas evaluadas en el Bosquejo del EIR cumplen con la mayoría de los objetivos del proyecto. La CPUC desarrolló los objetivos del proyecto para permitir la revisión de un rango razonable de alternativas. Los objetivos del proyecto se basan en los objetivos planteados por el solicitante. Los objetivos relativos a proporcionar una segunda fuente de 230 kV al sistema de 138 kV del Sur del Condado de Orange y ofrecer redundancia al sistema existente no se utilizaron para definir las alternativas.

Adicionalmente, la CPUC concluye que la Alternativa Sin Proyecto (Alternativa A) también alcanza la mayor parte de los objetivos del proyecto. Esta conclusión de la CPUC no afecta la evaluación de alternativas en el EIR ya que la evaluación de la Alternativa Sin Proyecto es requerido por la Sección 15126.6 (e)de las Directrices de CEQA; sin embargo, pero puede ser relevante para la evaluación del

proyecto por parte de los Comisionados. El propósito de Alternativa A es comparar las consecuencias de no aprobar el proyecto con las consecuencias de aprobarlo.

La CPUC incluyó el Objetivo 2 (Sustitución de equipo inadecuado en la Subestación Capistrano) con base en reclamos de SDG&E referentes al envejecimiento de equipos en la Subestación Capistrano. Las excepciones establecidas en la GO 131-D típicamente permiten al solicitante (SDG&E) reemplazar y reconstruir equipos en las subestaciones sin la aprobación de la CPUC, siempre y cuando las modificaciones no cambien la superficie o la capacidad de la subestación. Como se detalla en la Sección 3.2.1 del Bosquejo del EIR (Anexo 1), es razonablemente previsible que las actividades de mantenimiento exentas bajola GO 131-D, tales como la sustitución de equipos y de la línea de suministro de energia electrica en la Subestación Capistrano, ocurrieran bajo la Alternativa Sin Proyecto. Por esta razón, la CPUC concluyó que la Alternativa A (Alternativa Sin Proyecto) cumple este objetivo, ya que el solicitante podría reemplazar equipos sin un permiso de CPUC. Sin embargo, el EIR no evalúa los impactos ambientales asociados a estas mejoras, ya que se desconoce el calendario y alcance de dichos trabajos y por lo tanto resulta en una conclusión especulativa. Del mismo modo, las alternativas que cumplen con este objetivo no requieren necesariamente de las mejoras a la subestación que se incluyen en la descripción de la alternativa o en el análisis del impacto ambiental de la alternativa. Por ejemplo, la Alternativa B1 cumple con el Objetivo 2 porque permitiría la actualización de equipos en la Subestación Capistrano. Sin embargo, la ejecución de Alternativa B1 no requiere de las mejoras en la Subestación Capistrano. Por lo tanto, se desconoce el alcance y calendario exacto de las mejoras que SDG&E implementaría y por lo tanto, sus impactos ambientales serían especulativos. En la descripción de alternativas sólo se incluyen aquéllas que requieren mejoras en la subestación.

Impactos Ambientales

Las alternativas evaluadas en el EIR podrían disminuir sustancialmente un impacto significativo asociado al proyecto propuesto, con excepción de la Alternativa G. El proyecto propuesto tendría impactos significativos sobre la calidad del aire y los recursos culturales. Tal como se resume en la Tabla 5-1 del Bosqeujo del EIR (Anexo 1), cualquiera de las alternativas tendría un impacto menos significativo sobre la calidad del aire o los recursos culturales en comparación con el proyecto propuesto, con excepción de la Alternativa G. La Alternativa G tendría impactos similares sobre la calidad del aire e impactos de mayor relevancia sobre los recursos culturales en comparación con el proyecto propuesto. Tal como se discute con más detalle en la Respuesta Principal C: Alternativa Ambientalmente Superior, durante la preparación del Informe de Evaluación de Alternativas (Apéndice B del EIR; Anexo 1) se consideró que la Alternativa G reduciría el impacto potencial y significativo sobre el tránsito y, por tanto, se analizó con detalle en el EIR. Como resultado del proceso de CEQA, el alcance tanto de la Alternativa G como del proyecto propuesto evolucionó y los impactos ambientales previamente identificados como significativos (cierres de vías) también cambiaron. Luego de una evaluación adicional del proyecto propuesto y de la Alternativa G, la CPUC determinó que la Alternativa G ya no reduciría sustancialmente un impacto significativo.

Como se discute con más detalle en la Respuesta Principal C: Alternativa Ambientalmente Superior, la CPUC concluye que la Alternativa J puede disminuir sustancialmente los impactos significativos del proyecto propuesto en comparación con las otras alternativas.

Desconexión de Carga Eléctrica

Un aspecto del análisis de alternativas que generó numerosos comentarios es la suposición de que cualquier alternativa al proyecto daría lugar a la desconexión de carga eléctrica o pérdida de servicio dentro del sistema de 138 kV del Sur del Condado de Orange. La desconexión de carga eléctrica, que se

define en el Capítulo 1, "Introducción" del Bosquejo del EIR (Anexo 1) como la desconexión deliberada de la corriente eléctrica en líneas específicas, es utilizada con moderación por los operadores del sistema eléctrico para mantener la confiabilidad del sistema cuando hay una emergencia en el mismo, tal como una interrupción imprevista de una línea de transmisión o de un transformador. La desconexión de carga eléctrica no debe ser vista como un posible resultado de cualquier alternativa, incluyendo el proyecto propuesto, sino más bien una herramienta que puede ser utilizada por el operador del sistema para proteger la infraestructura eléctrica durante una interrupción imprevista. Como se analiza en el Apéndice B del EIR " Informe de Evaluación de Alternativas " (Anexo 1), el solicitante ha identificado varios ejemplos de modos de falla habituales que podrían ocurrir en la Alternativa A (Sin Proyecto), las cuales darían lugar a la desconexión de carga eléctrica. Sin embargo, en este caso la desconexión de carga eléctrica, probablemente sería permisible y ocurriría en cumplimiento de las normas de la Corporación de Confiabilidad de América del Norte (NERC), del Consejo Coordinador de Electricidad del Occidente (WECC), y del Operador Independiente del Sistema de California (CAISO). Las 11 alternativas evaluadas mitigarían plenamente la totalidad o la mayoría de los escenarios identificados. La CPUC no puede determinar el número exacto de escenarios de falla de modo común que el solicitante ha identificado como posibles de ocurrir aún después de la implementación de cada alternativa. Sin embargo, ni el proyecto propuesto ni ninguna de las alternativas eliminaría todos los escenarios posibles que requerirían la desconexión de carga eléctrica. Por lo tanto, la capacidad del proyecto propuesto o de una alternativa para asegurar que el sistema de 138 kV del Sur del Condado de Orange del solicitante permanecerá en cumplimiento de los requisitos obligatorios de rendimiento del sistema después de una falla de modo común no sirve como criterio útil para comparar cualquiera de las alternativas con el proyecto propuesto.

Aprobación de Alternativas por parte de CAISO y CPUC

Tal como se discutió en la Sección 1.2 del Informe de Evaluación de Alternativas (Apéndice B; Anexo 1), CAISO gestiona el flujo de electricidad a través de las líneas de energía de alta tensión y larga distancia, también conocida como la red de energía eléctrica masiva. Los proyectos de transmisión que conectarían a la red de transmisión eléctrica gestionada por CAISO son propuestos por los proveedores de servicios públicos propiedad de inversores privados, como SDG&E, para su inclusión en el proceso anual de planificación de transmisión eléctrica de CAISO. Si un proyecto es aprobado por CAISO, el solicitante presenta el proyecto para su posterior revisión y aprobación por parte de la CPUC, si el mismo requiere su aprobación. La aprobación de la CPUC es necesaria para el proyecto propuesto, ya que cumple con los requisitos especificados en la GO 131-D para un Certificado de Conveniencia y Necesidad Pública (CPCN, por sus siglas en inglés) (CPUC 1995).

En el caso de que los Comisionados de la CPUC aprueben una alternativa al proyecto propuesto que afectaría a la red de transmisión eléctrica, la aprobación de la CPUC podría proporcionar al solicitante el permiso necesario para construir la alternativa aprobada y no requeriría necesariamente de una revisión ambiental posterior bajo CEQA. El solicitante presentará el proyecto a CAISO durante su proceso anual de planificación de transmisión y la construcción de una alternativa determinada no comenzaría hasta que CAISO finalize su revisión. Se han corregido las descripciones de las alternativas de acción para divulgar las aprobaciones razonablemente previsibles que serían necesarias para cada alternativa antes de su implementación. Como se discutió anteriormente, el cronograma para la implementación de las alternativas no se utilizó como un criterio de selección de viabilidad. Todas las alternativas siguen siendo potencialmente viables desde el punto de vista de la ejecución, y los plazos de aprobación adicionales son razonables teniendo en cuenta que ninguna de las alternativas podría ser implementada por completo antes del año 2020, cuando los eventos de la categoría C dentro del sistema de 138 kV del Sur del Condado de Orange podrían requerir de desconexión de carga eléctrica (CAISO 2011, 2014a, 2014b).

Varias alternativas evaluadas en el EIR proporcionan una segunda fuente de 230 kV en el sistema de 138 kV del Sur del Condado de Orange. Las Alternativas C1, C2, D, F y J proporcionan una segunda fuente de electricidad de 230 kV que podría afectar la la red de transmisión eléctrica y por lo tanto requerir de la revisión por parte de CAISO.

Reemplazo de Equipos en la Subestación Capistrano

Las Alternativas B2 y B3 se han modificado para aclarar la forma en que cambiaría la Subestación Capistrano si se implementa cualquiera de estas alternativas.

Desvío de Flujo de Potencia

Como parte del proceso de selección de alternativas, la CPUC revisó los posibles problemas derivados de desvíos en el flujo de potencia eléctrica asociados con las Alternativas D y J. Este tipo de eventos de flujo de potencia eléctrica ocurren cuando una cantidad considerable de energía se desvía a través de un sistema de baja tensión como resultado de una combinación de cortes en las líneas de alta tensión. Ver Apéndice R del Bosquejo del EIR (Anexo 1). Durante nuestros esfuerzos independientes de modelaje de flujo de potencia, la CPUC no pudo replicar los problemas identificados por SDG&E. Por lo tanto, las alternativas contenidas en el EIR se determinaron como potencialmente viables desde el punto de vista tecnológico y se han conservado en el EIR Final.

Alternativa J

Tal como se discute en la Respuesta Principal F: Modificación del Bosquejo del EIR, un comentario público sobre el Bosquejo del EIR identificó una posible alternativa al proyecto propuesto que incluía la actualización de la Subestación Trabuco en lugar de la Subestación Capistrano y la interconexión de la Subestación Trabuco a la línea de transmisión de 230 kV Santiago-SONGS de SCE. La Alternativa J ha demostrado ser una alternativa potencialmente viable que cumple con la mayoría de los objetivos del proyecto, mientras que reduce los impactos significativos sobre la calidad del aire y los recursos culturales.

En tal sentido, se corrigió el Capítulo 3 del Bosquejo del EIR, "Descripción de Alternativas" para aclarar que la descripción de la Alternativa J incluye la construcción de dos transformadores de 230/138 kV en paralelo con un diseño de interruptor único en la Subestación Trabuco. Así mismo, una línea de transmisión de doble circuito de aproximadamente de 0.5 millas conectaría a la Subestación Trabuco con la línea de transmisión de 230 kV Santiago-SONGS de SCE. Con el fin de añadir el equipo de 230/138 kV, la Alternativa J requeriría la expansión de la Subestación Trabuco existente sobre una propiedad de 2 acres ubicada al norte de la misma, actualmente bajo propiedad y uso de AT&T. El punto de interconexión para Alternativa J se ubicaría en la intersección de los nuevos circuitos dobles de líneas de transmisión de 230 kV y la línea de transmisión existente de 230 kV Santiago-SONGS de SCE. El Apéndice R incluye un informe preparado por ZGlobal Inc. que ilustra un diseño de subestación potencialmente factible y las rutas de interconexión que cumplen con los requisitos reglamentarios necesarios (es decir, NERC, WECC).

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