SECTION 4: CHANGES TO THE RECIRCULATED DRAFT EIR/ERRATA

The following are revisions to the Recirculated Draft EIR (RDEIR) for the Tassajara Parks Project. These revisions are minor modifications and clarifications to the document that merely amplify and clarify the analysis, and do not change the significance of any of the environmental issue conclusions within the RDEIR or otherwise trigger recirculation. The revisions are listed by page number. All additions to the text are underlined (underlined) and all deletions from the text are stricken (~~stricken~~).

4.1 - Changes in Response to Specific Comments

Section 2: Project Description

As listed below, updates to several exhibits are reflected in this FEIR.

The applicant has removed the equestrian staging area as a project component. Accordingly, Exhibit 2-9 Future Equestrian Staging Area is removed.

A number of other exhibits were updated as they included an outline of the Future Equestrian Staging Area parcel, which is now removed:

- Exhibit 2-4 Areas of Disturbance
- Exhibit 2-6 Proposed Urban Limit Line
- Exhibit 2-10 Grading Impact Areas
- Exhibit 2-12a Proposed General Plan Land Use Designations, Northern Site
- Exhibit 2-13a Proposed Zoning Designation—Northern Site
- Exhibit 2-14 Development Plan
- Exhibit 3.6-1 Northern Site Soil Geologic Conditions
- Exhibit 3.9-3a Proposed General Plan Land Use Designations, Northern Site
- Exhibit 3.9-4a Proposed Zoning Designation—Northern Site

The County requested that several exhibits be corrected to reflect the location of the community park parcel, the pedestrian staging area, and a connecting pathway between these two components. These components are accurately depicted in Exhibit 2-8 Preliminary Landscaping Plan of the RDEIR. The following exhibits are updated to correctly depict these components:

- Exhibit 2-4 Areas of Disturbance
- Exhibit 2-6 Proposed Urban Limit Line
- Exhibit 2-7 Residential Site Plan
- Exhibit 2-10 Grading Impact Areas
- Exhibit 2-11 Depth of Cut and Fill
- Exhibit 2-12a Proposed General Plan Land Use Designations, Northern Site
- Exhibit 2-13a Proposed Zoning Designation—Northern Site
- Exhibit 2-14 Development Plan
- Exhibit 3.1-5 Visual Simulation View Point Locations
- Exhibit 3.4-7 Special-Status Plant Species—Potential Impacts
- Exhibit 3.6-1 Northern Site Soil Geologic Conditions

- Exhibit 3.6-2 Preliminary Grading and Drainage Plan
- Exhibit 3.9-3a Proposed General Plan Land Use Designations, Northern Site
- Exhibit 3.9-4a Proposed Zoning Designation—Northern Site

As part of these updates, the County made certain additional corrections to remove General Plan designations from roadways areas:

- Exhibit 2-12a Proposed General Plan Land Use Designations, Northern Site
- Exhibit 3.9-3a Proposed General Plan Land Use Designations, Northern Site

As part of these updates, the County made certain additional corrections to remove Zoning Designations from roadways areas:

- Exhibit 2-13a Proposed Zoning Designation—Northern Site
- Exhibit 3.9-4a Proposed Zoning Designation—Northern Site

The County corrected Exhibit 2-6 to reflect that the sewer pump station, Parcel D, and Parcel K would be within the Urban Limit Line

The County corrected the legend of Exhibit 2-10 Grading Impact Areas and Exhibit 3.4-8: Potentially Impacted Wetlands to indicate that shapes in residential area are contours and not parcel delineation.

2.5.1–Northern Site

Footnote 7, page 2-31

It is anticipated that the project would seek to annex into the nearby established ~~Wendt Ranch~~ Dougherty Valley GHAD, rather than establish a new GHAD.

2.5.6–Water Supply

Page 2-39

> ~~Potential sources of water supply include a long-term agreement to purchase water from the Calaveras Public Utility District or the augmenting of~~ The Project proposes to augment EBMUD's potable water availability by facilitating, accelerating and implementing ~~currently~~ conservation beyond currently planned levels within EBMUD's service area by an amount sufficient to offset the Project's water demand.

2.6.2–Approvals

Page 2-42

The text on page 2-42 has been revised to note the required approval by SWRCB of a change petition by EBMUD:

> **Development Agreement**
>
> The Project proponent and the County are considering entering into a Development Agreement to vest the right~~ability~~ to build the Project and provide an agency enforcement mechanism related to land dedication and funding obligations from the Project proponent to

support and implement policies, programs, and other actions intended to enhance agriculture and to preserve open space, wetlands, parks, and other non-urban uses in the Tassajara Valley.

Change to the Urban Limit Line (ULL)

The Project seeks to change the ULL to include the 30-acre Residential Development Area on the Northern Site (refer to Exhibit 2-6), including the making of required findings and any actions related thereto.

Approval of Change Petition

If the EBMUD Board elects to serve the Residential Development Area (and related Pedestrian Staging Area) and annexation is approved by LAFCO, the applicant would subsequently need to obtain approval from the State Water Resources Control Board to approve a change petition to add these portions of the Project Site to EBMUD's place of use under its water rights prior to the provision of water for the Project.

Page 2-42

The text on page 2-42 has been revised to note the anticipated approval by regulatory agencies for potential impacts to biological resources:

Anticipated Approvals from Regulatory Agencies That May be Required to Implement the Project

- U.S. Army Corps of Engineers: Section 404 permit
- Regional Water Quality Control Board: Section 401 certification
- CA Department of Fish and Wildlife: 1600 permit (if needed)
- CA Department of Fish and Wildlife: Incidental Take Permit
- U.S. Fish and Wildlife Service: Biological Opinion

Page 2-48

An updated Exhibit 2-15 Slope Analysis is added to amplify, clarify, and further support discussion of the grading required for the Project.

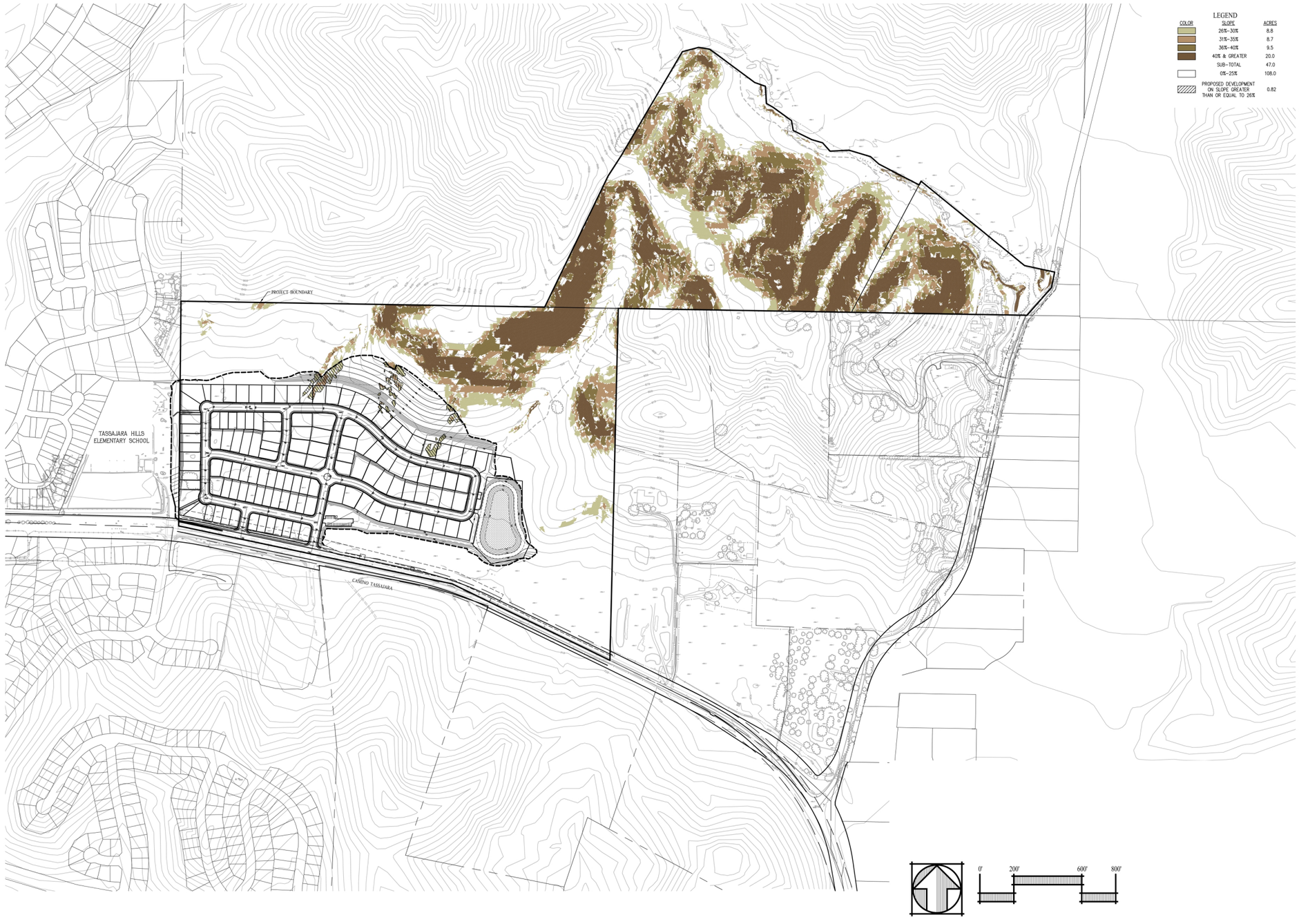
3.2–Agricultural Resources

Page 3.2-13

The text on page 3.2-13 has been revised as follows: ~~Adjustment of the ULL to incorporate the 30-acre Residential Development Area would require approval by the Contra Costa Local Agency Formation Commission (LAFCO).~~ In accordance with the Cortese-Knox-Hertzberg (CKH) Act, the Contra Costa Local Agency Formation Commission (LAFCO) is required to consider the Project's potential impacts on agricultural land and open space in connection with the proposed annexation of the Project Site into the service areas of EBMUD and CCCSD.

Page 3.2-13

Contra Costa LAFCO ~~is currently considering adoption of~~ adopted an Agricultural and Open Space Preservation Policy (Policy) on or about November 9, 2016. One of the main purposes of the Policy is to provide guidance to the applicant on how to assess the impacts on prime agricultural, agricultural and open space lands of applications submitted to LAFCO and to explain how the applicant intends to mitigate those impacts. As part of the ~~draft~~ Policy, mitigation for annexation of agricultural lands should include, but is not limited to, acquisition or dedication of prime agricultural and agricultural land, development rights, and bringing qualified land into an open space plan, open space and agricultural conservation easements to permanently protect adjacent or other prime agricultural, or open space lands within the County.



Source: Carlson, Barbee & Gibson, Inc, 2020.

Exhibit 2-15
Slope Analysis

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~~As noted above, the draft LAFCO policy has not been adopted as of the writing of this R-DEIR. Nevertheless, b~~ Because the Project includes a total of approximately 710 acres of preservation areas within the Northern and Southern Sites (collectively, Dedication Area) for the purposes of non-urban uses only~~,~~ (consisting of ~~including~~ parks, recreation, open space, agriculture, grazing, scenic, wetland preservation and creation, and habitat mitigation), the Project can be viewed as consistent with this ~~draft~~ Ppolicy given the dedication of this land for the express purpose of preserving it in connection with the proposed Project (which involves compact urban development to occur only within the 30-acre Residential Development Area)~~conversion of only 57.29 acres of agricultural land on the Northern Site.~~

Page 3.2-13, Footnote 2

[2] ~~As of the writing of this R-DEIR, LAFCO has not adopted this policy. In the event that such a policy is adopted at~~ such time as the Project submits an annexation application to LAFCO, it would be within LAFCO's discretion to determine how to apply said Policy to the Project.

3.3–Air Quality

Pages 3.3-67 and 3.3-68

Operational Emissions

Long-term, operational GHG emissions would result from Project generated vehicular traffic, on-site combustion of natural gas, operation of any landscaping equipment, off-site generation of electrical power over the life of the Project, the energy required to convey water to and wastewater from the Project Site, and the emissions associated with the hauling and disposal of solid waste from the Project Site.

Operational GHG emissions by source are shown in Table 3.3-27. The total annualized Project emissions are estimated to be 1,953 $MTCO_2e$. The emissions analysis incorporates Project design features and regulatory compliance into the model to quantify emissions. Because the CalEEMod model used to estimate reductions for certain existing regulatory requirements and Project design features is termed "mitigation" within the model, the mitigated output from CalEEMod is used; however, those modeling components are not considered mitigation under CEQA, but rather are treated as Project design features. With a service population (SP) of 358, the Project would generate approximately 5.46 ~~5.45~~ $MTCO_2e/SP/yr$. Therefore, the Project would exceed~~not meet~~ the BAAQMD service population performance threshold~~standard~~ of 4.60 $MTCO_2e/SP/yr$ and would result in significant GHG emissions.

Table 3.3-27: Unmitigated Project Greenhouse Gas Emissions (2020)

Emissions Source	Emissions ($MTCO_2e$)
Area Sources	71
Energy	434
Mobile (Vehicle)	1,349[a]
Waste	34[a]

Emissions Source	Emissions ($MTCO_2e$)
Water	22[a]
Total Operational Emissions	1,910
Annualized Construction Emissions[b]	~~42~~43
Total Project Emissions	~~1,952~~1,953[c]
Service Population	358
Project Emission Generation	*~~5.45~~5.46 $MTCO_2e$/SP/yr*
BAAQMD 2010 Threshold	*4.60 $MTCO_2e$/SP/yr*
Significant Impact?	*Yes*

Notes:
[a] Includes CalEEMod "mitigation" for locational features, Project design features and compliance with regulatory measures.
[b] Construction emissions annualized over an anticipated 30-year Project lifespan.
[c] Total is based on independent rounding and differs slightly when adding rounded numbers.
Source: CalEEMod Output (Appendix B)

~~As shown in Table 3.3-27, the Project's emissions would be above the bright-line BAAQMD small project screening threshold of 1,100 $MTCO_2e$/year. Based on the Project's projected residential population of 358 people, the GHG emissions of this Project would be *5.45~~5.46~~* $MTCO_2e$/SP/yr, also above the BAAQMD threshold of 4.6 $MTCO_2e$/SP/yr, making this a significant impact without the imposition of mitigation measures.~~ Most of the Project's emissions are from mobile sources, which comprise approximately 69 percent of P~~p~~roject emissions. No feasible mitigation measures to reduce mobile source emissions beyond compliance with existing regulations have been identified. The developer has no control over the fuel efficiency of vehicles operated by future residents. The Project may ultimately be served by public transit; however, transit use in suburban locations is limited by infrequent service and distance to transit stops. Construction of a transit stop in an area that would not be expected to generate sufficient transit use to justify a stop and would not result in consequential emission reductions. The design of the Project is conducive to bicycle use for recreational use and for limited use by some cyclists for commuting to job locations; however, it is not anticipated that the amount of cycling trips would ~~not~~ be substantially increased through additional mitigation measures applied to the P~~p~~roject. Actions required by MM AIR-6, which require the Project to utilize solar panels to provide for at least 10 percent of P~~p~~roject electrical needs would reduce the Project's operation-related GHGs from energy use. However, as shown in Table 3.3-28, the emissions after incorporation of MM AIR-6 would still exceed the BAAQMD threshold of 4.6 $MTCO_2e$/SP/yr the residual impact would be significant and unavoidable.

Table 3.3-28: Mitigated Project Greenhouse Gas Emissions (2020)

Emissions Source	Emissions ($MTCO_2e$)
Area Sources	6
Energy	363
Mobile (Vehicle)	1,349
Waste	34
Water	22
Total Operational Emissions	1,774
Annualized Construction Emissions*	43
Total Project Emissions	~~1,816~~1,817
Service Population	358
Project Emission Generation	*~~5.07~~5.08 $MTCO_2e/SP/yr$*
BAAQMD 2011 Threshold	*4.60 $MTCO_2e/SP/yr$*
Significant Impact?	*Yes*

Note:
* Construction emissions annualized over an anticipated 30-year Project lifespan.
Source: CalEEMod Output (Appendix B)

3.12–Transportation and Traffic

Page 3.12-9

16. Dougherty Rd/Crow Canyon Rd–~~Town of~~ City of San Ramon

Page 3.12-18

TRAFFIX school bus service also operates in the vicinity and is operated by a joint powers authority[1]. Annexation into the County Service Area (CSA) T-1[2] or formation of a new similar CSA, as determined appropriate by the County, is expected to be imposed as condition of approval for the Project ~~Site~~; thus, flex and TRAFFIX service ~~would be extended~~ could be expanded via funding obtaining with this CSA: (1) when additional funding becomes available, and (2) if expansion of service ~~is feasible~~ with the TRAFFIX bus operator is determined feasible and~~, and when such expansion is~~ approved by the Board of Directors.

Page 3.12-19

Camino Tassajara, ~~and~~ Crow Canyon Road, Bollinger Canyon Road, and Dougherty Road are defined as Routes of Regional Significance in the Tri-Valley Transportation Plan and the Congestion Management Program.

[1] Town of Danville, City of San Ramon, Contra Costa County, and SRVUSD.
[2] CSA T-1 provides flex transit to an unincorporated area east of Danville of approximately 1.17 square miles consisting of approximately 804 dwelling units directly south of Camino Tassajara and the Project Site. Transit to and from CSA T-1 is fully funded by fees collected from homeowners in the CSA. The travel area is defined as a 1.5-mile corridor along Camino Tassajara between CSA T-1 and I-680, and along I-680 to the Walnut Creek and Dublin BART stations. Annexation of the Project Site into CSA T-1 (or formation of a new similar transit CSA) would require LAFCO approval.

Page 3.12-33

City of San Ramon Facilities

The City of San Ramon's 2030 General Plan Implementing Policy 5.1-I-1 states to strive to maintain a maximum LOS D standard at all intersections during the AM and PM peak periods (City of San Ramon 2011). This analysis recognizes that the 2009 CCTA Tri-Valley Action Plan criteria for routes of regional significance be applied to classified intersections. For this analysis, intersections within the jurisdiction of the City of San Ramon are considered to be significantly impacted if the base case operations are LOS D or better and the Project would degrade operations to LOS E or F, unless it is a route of regional significance, in which case, a significant impact occurs if the base case operations are LOS E or better and the Project would degrade operations to LOS F. Camino Tassajara, ~~and~~ Crow Canyon Road, Bollinger Canyon Road, and Dougherty Road are each defined as a route of regional significance.

Page 3.12-43

Under Construction

- I-680—Conversion of existing HOV lanes between Walnut Creek and San Ramon (22.5 miles).
- I-580—New express (HOT) lanes and conversion of existing lanes between Livermore and Dublin (13.2 miles). (Construction of HOT lanes was completed in 2016.)

Page 3.12-44

The text of Mitigation Measure TRANS-1 is revised as shown:

MM TRANS-1 Prior to the issuance of building permits, the Project applicant shall pay the applicable Tri-Valley Transportation Development (TVTD) Fees, which shall serve as partial mitigation for the impact to freeway segments. The fees contribute to the construction of planned freeway improvements, including HOV lanes, auxiliary lanes, interchange improvements as well as other regional transportation improvements, including (among others) the BART extension to Livermore~~, including a contribution toward the new West Dublin BART Station~~. Impact fees are due at time of issuance ~~receipt~~ of building permits. Payment of these fees would~~ill~~ **partially mitigate** the incremental impact.

Page 3.12-87

The following text is added to clarify information related to bike lanes and pedestrian improvements:

Conflict with Alternative Transportation

Impact TRANS-8:	**The Project would not conflict with adopted policies, plans or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks).**

Impact Analysis

The proposed Project was evaluated to determine if it would conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks) or generate pedestrian, bicycle, or transit travel demand that would not be accommodated by

transit, bicycle, or pedestrian facilities and plans. The most prevalent option for residents to access their homes and users to access the pedestrian staging area on the Project Site is by driving given the current and proposed infrastructure. Walking and biking are also viable options. While no transit currently serves the Project Site, County Connection operates flex service in the vicinity of the Project and TRAFFIX school bus service operates in the vicinity of the Project Site. Annexation into the CSA-T-1 district (or formation of a new similar transit CSA) is expected to be imposed as a condition of approval on the Project, thus, flex and TRAFFIX service would be extended.

The CCTA operates the County Connection bus service within the Town of Danville and City of San Ramon along the I-680 corridor. The closest connection to this transit system is the Route 35 bus line, which operates along Bollinger Canyon Road between Wedgewood Road and Dougherty Road in San Ramon.

Five-foot sidewalks would be installed on the Project frontage along Camino Tassajara connecting the Project driveway to the adjacent intersection at Lusitano Street–Tassajara Hills Elementary School Driveway.

In addition, crosswalks would be striped at the full access Project entrance at Intersection #1 along the northern leg. The existing Class II bicycle lanes along Camino Tassajara from the Ballfields westwards would be preserved with implementation of the Project. The Pproject wouldill connect to these bike lanes at the Pproject's main entrance and would provide direct access to the bike facilities at the proposed signalized intersection. A new bike lane would also extend along the Northern Site's entire frontage, and a sidewalk would be constructed along the frontage of the site, connecting the site to the existing sidewalk system along Camino Tassajara. A direct pedestrian connection from the Pproject Ssite to the Tassajara Hills Elementary School is also proposed. Crosswalks wouldill be installed at the Pproject's main entrance driveway to directly connect to the sports fields on the south side of Camino Tassajara.

As described further above, Tthe Project would construct necessary on-site sidewalks, walkways, vehicular parking, and other amenities in compliance with adopted policies, plans and programs, including the 2009 Contra Costa Countywide Bicycle and Pedestrian Plan; thus, the Project's impact on transit, pedestrian, or bicycle facilities is determined to be less than significant.

Pages 3.12-11, 3.12-35, 3.2-45, 3.12-59

The delay calculations for the Camino Tassajara/Hansen Lane intersection have been updated throughout the Transportation Section to reflect the revised phasing, as requested by the Town of Danville. Dallas permitted phasing (northbound left movement), as previously coded in Ssynchro, was removed and standard permitted phasing on northbound left was coded. This resulted in better operations than previously published at Intersection #4 (Camino Tassajara/Hansen Lane). Specifically, Table 3.12-1, Table 3.12-7, Table 3.12-10, and Table 3.12-13 have been updated).

Table 3.12-1: Existing Conditions Intersection Delay and LOS Results

Int#	Intersection	LOS Criteria	Jurisdiction	Control	Existing			
					AM Peak		PM Peak	
					LOS	Delay	LOS	Delay
1	Camino Tassajara/Ballfields–Project Driveway (Full Access)	E	County	Signal	A	1.4	A	2.1
2	Camino Tassajara/Lusitano St–Tassajara Hills ES Driveway	E	County	Signal	D	43.7	A	7.2
3	Camino Tassajara/Blackhawk Dr–Charbray St	E	County	Signal	B	17.6	B	11.3
4	Camino Tassajara/Hansen Ln–Diablo Vista MS Driveway	E	Danville	Signal	C ~~D~~	24.5 ~~44.1~~	A	6.9 ~~7.2~~
5	Camino Tassajara/Oak Gate Dr–Lawrence Rd	E	Danville	Signal	D	47.5	A	9.1
6	Camino Tassajara/Mansfield Dr–Jasmine Wy	E	Danville	Signal	B	18.4	A	6.9
7	Camino Tassajara/Parkhaven Dr	E	Danville	Signal	A	7.4	A	4.8
8	Camino Tassajara/Buckingham Dr–Rassani Dr	E	Danville	Signal	C	25.7	B	10.1
9	Camino Tassajara/Conejo Dr	E	Danville	Signal	B	10.5	A	6.0
10	Camino Tassajara/Tassajara Ranch Dr	E	Danville	Signal	C	32.6	B	19.8
11	Camino Tassajara/Tassajara Village Dr	E	Danville	Signal	A	5.4	B	10.4
12	Camino Tassajara/Blackhawk Rd–Crow Canyon Rd	E	Danville	Signal	D	47.7	D	40.0
13	Camino Tassajara/Old Blackhawk Rd–Liverpool St	E	Danville	Signal	B	15.5	A	9.3
14	Camino Tassajara/Holbrook Dr	E	Danville	Signal	D	35.9	A	9.7
15	Camino Tassajara/Sycamore Valley Rd	E	Danville	Signal	C	34.4	C	22.4
16	Dougherty Rd/Crow Canyon Rd	E	San Ramon	Signal	B	15.7	D	40.7
17	Camino Tassajara/Finley Rd	E	County	SSSC*	C	21.4	D	26.7

Notes:
* For side-street stop-controlled (SSSC) intersections the worst approach delay and LOS is reported.
– Intersection delay, LOS, and v/c ratios calculated with Highway Capacity Manual (HCM) 2010 methodology using Synchro® software.
– Intersections #4 and #5 above are coordinated intersections with leading exclusive pedestrian phases. HCM 2010 methodology does not support the inclusion of exclusive pedestrian phases. To be consistent with the methodology, the leading pedestrian phases only were not implemented in Synchro®.
– Existing traffic counts conducted on March 3, 2015.
Source: Kimley-Horn and Associates, Inc., 2016.

Table 3.12-7: Existing Plus Project Conditions Intersection Delay and LOS

Int#	Intersection	LOS Criteria	Jurisdiction	Control	Existing				Existing + Project					
					AM Peak		PM Peak		AM Peak			PM Peak		
					LOS	Delay	LOS	Delay	LOS	Delay	ΔDelay	LOS	Delay	ΔDelay
1	Camino Tassajara/Ballfields–Project Driveway (Full Access)	E	County	Signal	A	1.4	A	2.1	A	6.4	+5.0	A	6.5	+4.4
2	Camino Tassajara/Lusitano St–Tassajara Hills ES Driveway	E	County	Signal	D	43.7	A	7.2	D	43.7	0	B	12.3	+5.1
3	Camino Tassajara/Blackhawk Dr–Charbray St	E	County	Signal	B	17.6	B	11.3	B	18.4	+.8	B	11.4	+.1
4	Camino Tassajara/Hansen Ln–Diablo Vista MS Driveway[1]	E	Danville	Signal	C ~~D~~	24.5 ~~44.1~~	A	6.9 ~~7.2~~	C ~~E~~	27.7 ~~57.2~~	+3.2 ~~+13.1~~	B ~~A~~	6.8 ~~7.5~~	-.1 ~~+.3~~
5	Camino Tassajara/Oak Gate Dr–Lawrence Rd	E	Danville	Signal	D	47.5	A	9.1	E	64.5	+17.0	A	9.5	+.4
6	Camino Tassajara/Mansfield Dr–Jasmine Wy	E	Danville	Signal	B	18.4	A	6.9	C	23.7	+5.3	A	7.1	+.2
7	Camino Tassajara/Parkhaven Dr	E	Danville	Signal	A	7.4	A	4.8	A	8.3	+.9	A	5.0	+.2
8	Camino Tassajara/Buckingham Dr–Rassani Dr	E	Danville	Signal	C	25.7	B	10.1	C	32.9	+7.2	B	10.4	+.3
9	Camino Tassajara/Conejo Dr	E	Danville	Signal	B	10.5	A	6.0	B	12.8	+2.3	A	6.2	+.2
10	Camino Tassajara/Tassajara Ranch Dr	E	Danville	Signal	C	32.6	B	19.8	D	40.3	+7.7	C	20.4	+.6
11	Camino Tassajara/Tassajara Village Dr	E	Danville	Signal	A	5.4	B	10.4	A	5.4	0	B	10.5	+.1
12	Camino Tassajara/Blackhawk Rd–Crow Canyon Rd	E	Danville	Signal	D	47.7	D	40.0	D	50.6	+2.9	D	41.3	+1.3
13	Camino Tassajara/Old Blackhawk Rd–Liverpool St	E	Danville	Signal	B	15.5	A	9.3	B	16.0	+.5	A	9.4	+.1
14	Camino Tassajara/Holbrook Dr	E	Danville	Signal	D	35.9	A	9.7	D	39.2	+3.3	B	13.2	+3.5
15	Camino Tassajara/Sycamore Valley Rd	E	Danville	Signal	C	34.4	C	22.4	D	41.7	+7.3	C	23.4	+1.0
16	Dougherty Rd/Crow Canyon Rd	E	San Ramon	Signal	B	15.7	D	40.7	B	16.5	+.8	D	43.9	+3.2
17	Camino Tassajara/Finley Rd	E	County	SSSC*	C	21.4	D	26.7	C	22.4	+1.0	D	28.8	+2.1
18	Finley Rd/Project Driveway (Equestrian Staging Area)	E	County	SSSC*	—	—	—	—	A	8.5	—	A	8.5	—

Notes:

~~[1] For this intersection only, the phasing used in the Synchro model was inconsistent with the timing sheet provided by the Town. In August 2016, Kimley-Horn evaluated and confirmed that while revising to match the timing sheet will increase the intersection delay by approximately 5 seconds depending on the peak scenario, LOS will remain as reported even with the increase in delay. Email correspondence from Jake Mirabella, Kimley-Horn, August 18, 2016.~~

* For side-street stop-controlled (SSSC) intersections the worst approach delay and LOS is reported.

– Intersection delay, LOS, and v/c ratios calculated with Highway Capacity Manual (HCM) 2010 methodology using Synchro® software.

– Intersections #4 and #5 above are coordinated intersections with leading exclusive pedestrian phases. HCM 2010 methodology does not support the inclusion of exclusive pedestrian phases. To be consistent with the methodology, the leading pedestrian phases only were not implemented in Synchro®.

– If a specific movement has a delay less than the approach or intersection average, and the trips are increased for this movement, the overall intersection delay is decreased.

Source: Kimley-Horn and Associates, Inc., 2016.

Table 3.12-10: Near-Term Plus Project Conditions Intersection Delay and LOS

Int#	Intersection	LOS Criteria	Jurisdiction	Control	Near Term				Near Term + Project					
					AM Peak		PM Peak		AM Peak			PM Peak		
					LOS	Delay	LOS	Delay	LOS	Delay	ΔDelay	LOS	Delay	ΔDelay
1	Camino Tassajara/Ballfields–Project Driveway (Full Access)	E	County	Signal	A	1.4	A	2.0	A	6.4	+5.0	A	6.4	+4.4
2	Camino Tassajara/Lusitano St–Tassajara Hills ES Driveway	E	County	Signal	D	48.0	A	9.9	D	50.5	+2.5	B	10.2	+.3
3	Camino Tassajara/Blackhawk Dr–Charbray St	E	County	Signal	C	20.9	B	13.9	C	22.2	+1.3	B	14.4	+.5
4	Camino Tassajara/Hansen Ln–Diablo Vista MS Driveway[1]	E	Danville	Signal	C ~~E~~	27.8 ~~57.9~~	A	6.8 ~~8.1~~	C ~~E~~	33.7 ~~74.4~~	+5.9 ~~+16.5~~	A	6.8 ~~8.5~~	0 ~~+.4~~
5	Camino Tassajara/Oak Gate Dr–Lawrence Rd	E	Danville	Signal	E	65.1	B	10.1	**F**	**83.6**	**+18.5**	B	10.7	+.6
6	Camino Tassajara/Mansfield Dr–Jasmine Wy	E	Danville	Signal	C	24.4	A	7.5	C	32.6	+8.2	A	7.8	+.3
7	Camino Tassajara/Parkhaven Dr	E	Danville	Signal	A	8.4	A	5.4	A	9.7	+1.3	A	5.7	+.3
8	Camino Tassajara/Buckingham Dr–Rassani Dr	E	Danville	Signal	C	34.0	B	11.0	D	43.6	+9.6	B	11.5	+.5
9	Camino Tassajara/Conejo Dr	E	Danville	Signal	B	13.2	A	6.5	B	17.1	+3.9	A	6.9	+.4
10	Camino Tassajara/Tassajara Ranch Dr	E	Danville	Signal	D	41.6	C	22.9	D	51.5	+9.9	C	23.8	+.9
11	Camino Tassajara/Tassajara Village Dr	E	Danville	Signal	A	5.4	B	10.6	A	5.4	0	B	10.6	0
12	Camino Tassajara/Blackhawk Rd–Crow Canyon Rd	E	Danville	Signal	D	49.9	D	43.4	D	52.0	+2.1	D	45.1	+1.7
13	Camino Tassajara/Old Blackhawk Rd–Liverpool St	E	Danville	Signal	B	15.9	A	9.4	B	16.4	+.5	A	9.5	+.1
14	Camino Tassajara/Holbrook Dr	E	Danville	Signal	D	37.7	A	9.8	D	41.4	+3.7	B	13.4	+3.6
15	Camino Tassajara/Sycamore Valley Rd	E	Danville	Signal	D	37.6	C	23.4	D	45.4	+7.8	C	24.5	+1.1
16	Dougherty Rd/Crow Canyon Rd	E	San Ramon	Signal	B	16.2	D	46.7	B	17.0	+.8	D	50.6	+3.9
17	Camino Tassajara/Finley Rd	E	County	SSSC*	C	22.8	D	33.3	C	24.0	+1.2	E	36.6	+3.3
18	Finley Rd/Project Driveway (Equestrian Staging Area)	E	County	SSSC*	—	—	—	—	A	8.7	—	A	8.6	—

Notes:

~~[1] For this intersection only, the phasing used in the Synchro model was inconsistent with the timing sheet provided by the Town. In August 2016, Kimley-Horn evaluated and confirmed that while revising to match the timing sheet will increase the intersection delay by approximately 5 seconds depending on the peak scenario, LOS will remain as reported even with the increase in delay. Email correspondence from Jake Mirabella, Kimley-Horn, August 18, 2016~~.

* For side-street stop-controlled (SSSC) intersections the worst approach delay and LOS is reported.

– Intersections that are operating below LOS thresholds are shown in **bold**. Significant impacts are highlighted in blue.

– Intersection delay, LOS, and v/c ratios calculated with Highway Capacity Manual (HCM) 2010 methodology using Synchro® software.

– Intersections #4 and #5 above are coordinated intersection with leading exclusive pedestrian phases. HCM 2010 methodology does not support the inclusion of exclusive pedestrian phases. To be consistent with the methodology, the leading pedestrian phases only were not implemented in Synchro®.

– If a specific movement has a delay less than the approach or intersection average, and the trips are increased for this movement, the overall intersection delay is decreased.

– It should be noted that calculations of delay at saturated conditions (i.e., LOS F) are less reliable than at LOS E or better. Therefore, delay in excess of 80 seconds is reported in the table to allow a relative comparison of without and with Project conditions and should not be interpreted as an exact representation of actual delay.

Source: Kimley-Horn and Associates, Inc., 2016.

Table 3.12-13: Cumulative (2035) Plus Project Conditions Intersection Delay and LOS

Int#	Intersection	LOS Criteria	Jurisdiction	Control	Cumulative				Cumulative + Project					
					AM Peak		PM Peak		AM Peak			PM Peak		
					LOS	Delay	LOS	Delay	LOS	Delay	ΔDelay	LOS	Delay	ΔDelay
1	Camino Tassajara/Ballfields–Project Driveway (Full Access)	E	County	Signal	A	1.3	A	1.8	A	6.6	+5.3	A	6.3	+4.5
2	Camino Tassajara/Lusitano St–Tassajara Hills ES Driveway	E	County	Signal	D	53.1	B	10.0	E	55.2	+2.1	B	10.2	+.2
3	Camino Tassajara/Blackhawk Dr–Charbray St	E	County	Signal	D	35.1	B	19.8	D	38.9	+3.8	C	20.6	+.8
4	Camino Tassajara/Hansen Ln–Diablo Vista MS Driveway[1]	E	Danville	Signal	D ~~F~~	49.0 ~~100.0~~	A ~~B~~	6.8 ~~10.8~~	E ~~F~~	62.2 ~~120.7~~	+13.2 ~~+20.7~~	A ~~B~~	6.8 ~~12.7~~	0 ~~+1.9~~
5	Camino Tassajara/Oak Gate Dr–Lawrence Rd	E	Danville	Signal	**F**	**109.3**	B	13.8	**F**	**137.8**	**+28.5**	B	16.3	+2.5
6	Camino Tassajara/Mansfield Dr–Jasmine Wy	E	Danville	Signal	D	54.5	B	10.4	E	68.0	+13.5	B	11.4	+1.0
7	Camino Tassajara/Parkhaven Dr	E	Danville	Signal	B	15.5	A	8.1	C	22.5	+7.0	A	9.2	+1.1
8	Camino Tassajara/Buckingham Dr–Rassani Dr	E	Danville	Signal	**F**	**82.2**	B	17.9	**F**	**96.5**	**+14.3**	B	19.8	+1.9
9	Camino Tassajara/Conejo Dr	E	Danville	Signal	C	32.5	A	9.3	D	42.2	+9.7	B	10.4	+1.1
10	Camino Tassajara/Tassajara Ranch Dr	E	Danville	Signal	E	71.3	E	56.3	**F**	**82.7**	**+11.4**	E	62.5	+6.2
11	Camino Tassajara/Tassajara Village Dr	E	Danville	Signal	A	5.5	B	11.1	A	5.6	+.1	B	11.2	+.1
12	Camino Tassajara/Blackhawk Rd–Crow Canyon Rd	E	Danville	Signal	E	62.2	D	50.2	E	65.0	+2.8	D	52.9	+2.7
13	Camino Tassajara/Old Blackhawk Rd–Liverpool St	E	Danville	Signal	B	17.6	B	10.3	B	18.5	+.9	B	10.4	+.1
14	Camino Tassajara/Holbrook Dr	E	Danville	Signal	D	45.8	B	10.3	D	50.3	+4.5	B	10.4	+.1
15	Camino Tassajara/Sycamore Valley Rd	E	Danville	Signal	D	50.7	C	34.5	E	60.3	+9.6	D	37.2	+2.7
16	Dougherty Rd/Crow Canyon Rd	E	San Ramon	Signal	C	25.1	D	52.9	C	26.7	+1.6	E	55.5	+2.6
17	Camino Tassajara/Finley Rd	E	County	SSSC*	D	33.6	E	48.1	E	36.4	+2.8	**F**	**55.0**	**+6.9**
18	Finley Rd/Project Driveway (Equestrian Staging Area)	E	County	SSSC*	—	—	—	—	A	8.7	—	A	8.6	—

Notes:

~~[1] For this intersection only, the phasing used in the Synchro model was inconsistent with the timing sheet provided by the Town. In August 2016, Kimley-Horn evaluated and confirmed that while revising to match the timing sheet will increase the intersection delay by approximately 5 seconds depending on the peak scenario, LOS will remain as reported even with the increase in delay. Email correspondence from Jake Mirabella, Kimley-Horn, August 18, 2016.~~

* For side-street stop-controlled (SSSC) intersections the worst approach delay and LOS is reported.

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– Intersection delay, LOS, and v/c ratios calculated with Highway Capacity Manual (HCM) 2010 methodology using Synchro® software.

– Intersections #4 and #5 above are coordinated intersection with leading exclusive pedestrian phases. HCM 2010 methodology does not support the inclusion of exclusive pedestrian phases. To be consistent with the methodology, the leading pedestrian phases only were not implemented in Synchro®.

– If a specific movement has a delay less than the approach or intersection average, and the trips are increased for this movement, the overall intersection delay is decreased.

– It should be noted that calculations of delay at saturated conditions (i.e., LOS F) are less reliable than at LOS E or better. Therefore, delay in excess of 80 seconds is reported in the table to allow a relative comparison of without and with Project conditions and should not be interpreted as an exact representation of actual delay.

Source: Kimley-Horn and Associates, Inc., 2016.

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As shown in Table 3.12-13, the Project would result in increased delay and cause a significant impact at the following intersections:

- ~~Intersection #4: Camino Tassajara/Hansen Lane–Diablo Vista Middle School Driveway (AM peak hour)~~
- Intersection #5: Camino Tassajara/Oak Gate Drive–Lawrence Road (AM peak hour)
- Intersection #8: Camino Tassajara/Buckingham Drive–Rassani Drive (AM peak hour)
- Intersection #10: Camino Tassajara/Tassajara Ranch Drive (AM peak hour)
- Intersection #17: Camino Tassajara/Finley Road (PM peak hour)

All locations except for Intersection #10 and Intersection #17 were deficient under Cumulative No-Project conditions during the AM peak hour. The addition of the Project traffic at these intersections would result in the intersections remaining deficient under Cumulative conditions. Intersections #10 and #17 became deficient with the inclusion of the Project. Intersection #17 is a side-street stop controlled intersection and does not meet the MUTCD peak-hour signal warrant in this analysis scenario. Each impacted intersection is discussed separately below.

~~**Camino Tassajara/Hansen Lane-Diablo Vista Middle School Driveway (Intersection #4)**~~

~~The intersection of Camino Tassajara and Hansen Lane-Diablo Vista Middle School Driveway (Intersection #4) operates at LOS F (100.0 s/veh) under Cumulative Conditions during the AM peak hour. With the addition of the Project, the intersection would continue to operate at LOS F (120.7 s/veh) during the AM peak hour. Because the intersection operates at LOS F, which is below the standard for intersection facilities of LOS E, this is a significant impact.~~

~~With the implementation of MM TRANS-3a, this intersection would operate at an acceptable LOS E (56.6 s/veh) for the AM peak hour. However, because the implementation and timing of this improvement are beyond the control of Contra Costa County (the intersection is under the jurisdiction of the Town of Danville), impacts to this intersection would remain significant and unavoidable.~~

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Mitigation Measures

Implement Mitigation Measure TRANS-1. ~~and:~~

~~**MM TRANS-3a** Prior to the issuance of the first building permit, the Project applicant shall fund optimization of the signal timing at the intersection of Camino Tassajara/Hansen Lane-Diablo Vista Middle School Driveway (Intersection #4). This will require signal coordination with Intersection #5: Camino Tassajara and Oak Gate Drive-Lawrence Road. Both intersections are under the jurisdiction of the Town of Danville. Modifications to signal timing shall be reviewed by and meet the approval of the Town of Danville and Contra Costa Public Works Department prior to implementation.~~

3.13–Utilities and Service Systems

The section is revised to remove reference to CPUD as a water supply option, and to include reference to an independent third party evaluation of potential water demand, based on a range of factors.

Revisions also include clarification on page 3.13-1 regarding the required approvals by EBMUD, as well as clarifications in Table 3.13-2 regarding the unit of measure of acre-feet per year (AFY). All changes are shown in ~~strikeout~~ and/or underline:

3.13–Utilities and Service Systems

3.13.1–Introduction

This section describes the existing utilities and services systems and potential environmental effects from Project implementation on the Project Site and its surrounding area. Descriptions and analysis in this section are based on, among other things, information provided by the updated Water Supply Evaluation (WSE) (dated September 2016) prepared by Tully & Young (Appendix J), hydrologic stormwater modeling (dated February 4, 2016) prepared by Balance Hydrologics, Inc. (Appendix G), California Department of Resources Recycling and Recovery, and Pacific Gas and Electric (PG&E).

3.13.2–Environmental Setting

Potable Water

Background

The Residential Development Area on the Northern Site, along with the proposed pedestrian staging area, are physically adjacent to the East Bay Municipal Utility District's (EBMUD's) existing service area. As such, the Project applicant seeks to have EBMUD play a role in implementing the Project's water strategy, which could be structured in several different ways, subject to the EBMUD Board's discretion, most likely through a service territory annexation. As noted above, any such arrangement would require approval of the EBMUD's Board of Directors as part of a separate public hearing process in accordance with applicable EBMUD policies and procedures <u>following consideration and approval of the Project by the County, as the local land use agency</u>. <u>Additionally, the annexation to EBMUD would require a corresponding expansion of EBMUD's Sphere of Influence (SOI), and both actions would be subject to LAFCO approval</u>.

In March 2014, EBMUD staff sent a comment letter to the County in response to this EIR's Notice of Preparation. The comment letter identified a range of analyses that should be included in the EIR for the Project. In addition, EBMUD's letter noted EBMUD's policies on annexation of properties outside its urban service boundary (USB) and the extension of service by EBMUD to those properties (e.g., EBMUD Policies 3.01, 3.05, and 3.08). To implement the proposed Project's water strategy (as discussed herein under the heading Water Supply) through an extraterritorial water service agreement or annexation, the applicant would need to demonstrate that the Project's water strategy is consistent with these policies, <u>as</u>

determined by the EBMUD Board, and to seek and obtain approval from EBMUD's Board and from the Local Agency Formation Commission (LAFCO).[3] Refer to Section 3.9, Land Use, for further discussion of the Project's consistency with these policies. Water supply information provided herein is based upon, among other data and materials, the updated WSE (Appendix J) prepared to ensure a robust analysis of water supply issues and to provide pertinent information for EBMUD's Board to consider delivering water to the Project, as well as consideration of technical information provided by EBMUD staff, and a letter report commissioned by the County from an independent third party evaluating the potential water demand of the Project.

The following sections describe the Project's potential water supplies and EBMUD's water distribution facilities that could serve the Project.

Water Supply

As indicated in the WSE prepared for the Project (Appendix J), two potential sources of water supply have been identified to meet, or offset, the estimated water demand of the Project:

1. **Water purchased from Calaveras Public Utility District (CPUD):** A long-term agreement for the purchase of sufficient water to meet the Project's maximum water demand of up to 48 acre-feet per year (af/yr) and conveyance losses of about 3 af/yr from the Calaveras Public Utility District (CPUD) pursuant to pre-1914 appropriative water rights exercised in connection with ongoing operations of Schaads Reservoir on the Middle Fork of the Mokelumne River.
2. **Off-site Water Conservation:** Augmenting the availability of potable water from East Bay Municipal Utility District (EBMUD) by facilitating, accelerating and implementing conservation beyond currently planned levels approved in the Water Supply Management Program 2040 (WSMP) within EBMUD's service area by an amount that offsets the Proposed Project's water demand. The Project applicant would be required (as further enforced through a mandated condition imposed on the Project) to enter into a binding agreement with the EBMUD's Board of Directors to confirm the amount of Project water demand that would need to be offset through funding of identified conservation measures; it would be within EBMUD's purview to set the Project's estimated demand in connection therewith.

The applicant no longer proposes to obtain water from CPUD; rather, the Project would be served solely through the availability of water created by the facilitation, acceleration and implementation of EBMUD conservation efforts, as discussed more fully below, and subject to the EBMUD Board of Director's approval.

~~Each water supply source is discussed in detail below.~~

[3] As explained in the WSE, the option of serving the Proposed Project through a water "wheeling" agreement may not require LAFCO approval, because EBMUD would not be providing public water service to the Project if it were wheeling water owned and controlled by the Project's retail water supplier (i.e., a mutual water company or a water company regulated by the California Public Utility Commission).

~~Source 1— CPUD Water~~

~~CPUD water would be obtained pursuant to a water purchase agreement between the Project applicant and CPUD, which is assignable to the entity (such as EBMUD) providing retail water service to the Project. The CPUD water would be made physically available through re-operation of CPUD's Schaads Reservoir (Schaads), located along the upper reaches of the Middle Fork of the Mokelumne River. CPUD owns the reservoir and operates it pursuant to a pre-1914 water right with a priority date of 1852. CPUD would release stored water from Schaads, which would flow downstream into EBMUD's existing Pardee Reservoir (Pardee). From Pardee, EBMUD would convey the CPUD water through the existing Mokelumne River Aqueduct and its service area distribution system for delivery to the Residential Development Area (as well as the adjacent Pedestrian Staging Area) on the Project's Northern Site. The CPUD and the Project applicant have executed a Term Sheet specifying the water supply purchase price, the firm water quantity of up to 200 af/yr, and the 50-plus-year term over which the CPUD is willing to commit to providing the CPUD water.~~

~~The CPUD water supply would be developed through transfer of stored water from Schaads Reservoir. Schaads Reservoir operations would include refill criteria mutually developed by CPUD and EBMUD to ensure the CPUD water supply augments the availability of water for EBMUD to deliver to the Project.~~

~~*Characterizing the Underlying Schaads Reservoir Water Rights*~~
~~In 1939, CPUD acquired certain pre-1914 water rights from the Mokelumne River Power and Water Company in a transaction approved by the State Railroad Commission. The pre-1914 water rights, which date as early as 1852, include rights to the Middle Fork of the Mokelumne River (Schaads water right) and the South Fork of the Mokelumne River.~~

~~The pre-1914 water rights are recognized by the State Water Resources Control Board's (SWRCB's) Water Rights Decision 858 and in SWRCB Bulletin 11. Annual diversions during that period ranged from approximately 4,120 acre-feet (af) to 7,960 af. Since the mid-1900s, the exercise of Mokelumne River water rights held by CPUD and others has been coordinated with EBMUD's exercise of its Mokelumne River water rights pursuant to written agreements and SWRCB decisional law composing a "law of the river." Agreements between CPUD and EBMUD define operational parameters within which CPUD exercises its pre-1914 water rights, including the Schaads water right.~~

~~More specifically, a 1940 agreement between CPUD and EBMUD quantifies CPUD's pre-1914 water rights to the Middle and South Forks of the Mokelumne River, and establishes the relative priority of EBMUD's and CPUD's respective water rights. Under this agreement, CPUD's right to divert up to 12.5 cubic feet per second (cfs) is senior to EBMUD's rights, and CPUD can divert up to 15 cfs by augmenting natural river flows with releases of its previously stored water. Under the 1940 agreement, CPUD diversions in excess of that amount are treated as junior to EBMUD's rights under its Permit No. 2459. The 1940 agreement is included in the WSE in Appendix J.~~

~~Ongoing use of CPUD's pre-1914 Schaads water right on the Middle Fork of the Mokelumne River the right governing ongoing operations of the Schaads reservoir is reported to the SWRCB under Statement of Diversion and Use No. 10773. The CPUD water supply to be purchased and delivered for use by the Project is based on this pre-1914 Schaads water right. As one of the older pre-1914 water rights in California, it is projected that the CPUD water will be firm, or available, during all normal years, single dry years, and multiple dry years—which is consistent with the operational parameters under the law of the river, including, among others, the 1940 CPUD-EBMUD agreement.~~

~~In response to the recent drought, the SWRCB issued curtailment notices advising certain holders of surface water rights that water was not available for their diversion and use under California's water right priority system. On June 12, 2015, the SWRCB issued a curtailment notice for surface water rights in the Sacramento-San Joaquin Rivers watershed that have a priority date of 1903 or later. That is the earliest water right priority date affected by the SWRCB's curtailment program. Although the Mokelumne River is part of the Sacramento-San Joaquin Rivers watershed, CPUD's Schaads water right has a priority date of 1852 and therefore remained unaffected by the SWRCB's curtailment program. The availability of water under the Schaads surface water right despite one of the most severe droughts in California history shows this source of supply is reliable not only during normal hydrologic years but also during single dry and multiple dry water years.~~

~~Schaads Reservoir—Historic and Planned Operations~~

~~Schaads Reservoir has a storage capacity of approximately 1,800 af located in the upper reaches of the Middle Fork of the Mokelumne River (Middle Fork), approximately 5 miles west of the town of West Point. The Middle Fork is the smallest of the Mokelumne River system watersheds, often seeing only minimal flows in the summer, but significant flows in winter due to storm runoff. Because of its small capacity in comparison to the annual flows in the Middle Fork watershed, Schaads easily fills annually to capacity under nearly all conditions.~~

~~Exhibit 3.13-1 shows monthly reservoir storage levels in Schaads Reservoir from January 1995 through February 2015. As demonstrated by the figure, Schaads fills during the wet season and is then drawn down annually by (1) storage releases to generate hydropower, (2) minimum flow release requirements associated with permits to operate the hydropower facility, and (3) water deliveries to Calaveras County Water District (CCWD) to meet consumptive demand in the West Point community pursuant to an agreement between CPUD and CCWD.~~

~~As described above, the CPUD Term Sheet allows for a potential maximum purchase of up to 200 af/yr of water. The Term Sheet was prepared prior to confirming the proposed Project's design and resulting water demand. With the proposed Project's design and resulting water demand now confirmed at up to 48 af/yr, the future water purchase agreement for the Project is anticipated to provide for the purchase and delivery of 50 to 100 af/yr of CPUD water from Schaads Reservoir. As described below, the lower end of that range would be sufficient to meet the proposed Project's total water demand through buildout with a margin of safety in all hydrologic year types (including multiple-dry years), while the upper~~

~~end of that range would deliver approximately twice the water needed to meet Project demand in order to provide an ample margin of safety. Among other things, this EIR analyzes whether the 51 af/yr of CPUD water slated for use by the Project would result in significant unmitigated impacts with respect to meeting the Project's water demand. If the anticipated water purchase agreement were for a different amount of CPUD water, further CEQA review may be required prior to approving such an agreement, pursuant to Public Resources Code Section 21166 and CEQA Guidelines Sections 15162–15164.~~

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~~Exhibit 3.13-1: Historic Monthly Storage Volumes at Schaads Reservoir~~

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~~CPUD would release purchased water from Schaads at a rate of up to approximately 10 to 15 af per month to deliver up to 51 af/yr to meet Project demand (i.e., 48 af/yr to serve the Project and an additional 3 af/yr of conveyance loss) or would release up to approximately 20 to 30 af per month to deliver about 100 af/yr (i.e., to meet Project demand [of 48 af/yr], plus 3 af/yr of conveyance loss, plus an additional 50 af/yr for an ample margin of safety). The precise delivery schedule would be determined by CPUD and EBMUD. The released water would flow downstream to EBMUD's Pardee Reservoir, likely during the summer months. EBMUD would manage the released water at Pardee for delivery on a schedule that meets the Project's demands. EBMUD would use its existing storage and conveyance capacity to regulate the CPUD water supply to meet Project demand year-round. The combined storage capacity of EBMUD's Pardee and Camanche Reservoirs is approximately 615,000 af (2010 EBMUD UWMP at 2-2), and its water rights for the two reservoirs authorize use of up to 364,037 af/yr, or 325 million gallons per day (mgd), to meet demand, which was approximately 216 mgd in 2010 (2010 EBMUD UWMP, Table 4-1 at p. 4-6). The proposed Project's demand of up to 48 af/yr, or 0.04 mgd, would represent approximately 0.02 percent of EBMUD's 2010 level of customer water demand.~~

~~Exhibit 3.13-1 shows actual historic water storage levels in Schaads Reservoir resulting from CPUD's reservoir operations (i.e., stored water releases) for generating hydropower, meeting consumptive demands in Calaveras County Water District's (CCWD) West Point/Wilseyville service area, and maintaining fishery flows. Water deliveries to West Point are made pursuant to a contract with CCWD for up to 200 af/yr, although actual deliveries averaged I 00 af/yr between 2001 and 2014, with a maximum of 185 af/yr in 2009 and a minimum of 37 af/yr in 2006. Fishery releases are 3 cfs, with the remaining releases being made for hydropower. Despite severe drought conditions during the rainfall seasons of 2013, 2014, 2015, and 2016, Schaads Reservoir filled and spilled during the spring of all four drought years.~~

~~Exhibit 3.13-2 depicts the historical Schaads Reservoir water storage conditions that would have occurred if deliveries to West Point were increased to the contractual maximum of 200 af/yr. CPUD has delivered less than the contract maximum on an annual basis, in part because West Point uses other water sources.~~

Source 2—Off-site Water Conservation

Funding implementation of conservation measures within a water supplier's service area to offset demand from new land uses is becoming increasingly common in California and elsewhere.[4] This water source option differs from the prior CPUD Water option because it creates a potable water source by funding the facilitation and acceleration or expansion of water conservation measures within EBMUD's service area. This option would reduce current potable use within EBMUD's service area by an amount sufficient to offset the Proposed Project's water demand. Expanded or accelerated conservation of potable water within EBMUD's service area would provide an ample supply to meet even the Proposed Project's maximum dry-year demand of 48 af/yr.

The off-site water conservation option included as Source 2 would facilitate either (1) an expansion of EBMUD's existing potable water conservation program by funding potable water

[4] Harder, Jennifer L., Demand Offsets: Water Neutral Development in California, 46 McGeorge Law Review 1, 103 (2014).

conservation at a level beyond what EBMUD ultimately approved on April 24, 2012, as part of its WSMP 2040 Final Plan, or (2) implementation of an acceleration or expansion of measures that were included in the WSMP 2040 Final Plan but are not yet funded for implementation.

EBMUD's 2015 Urban Water Management Plan (UWMP) concludes that water supplies will be more than sufficient to meet water demand in normal and wetter year types through 2040.[5] The UWMP concludes that water supplies will be sufficient to meet demand in single dry years and in the first two years of a three-year dry period through 2040. The UWMP concludes that supplemental water supplies will be needed to meet demand in the third year of a three-year dry period starting in approximately 2025. With the supplemental supplies planned in the WSMP 2040 Final Plan, EBMUD concludes that its water supplies would be sufficient to meet demand during the 30-year planning period (2010-2040) in all years.[6] The WSMP 2040 Final Plan encompasses a diverse portfolio of measures to particularly ensure demand is met in dry years.

The WSMP 2040 Portfolio is designed to be robust, flexible, diverse, and to pursue projects on multiple, parallel tracks in order to respond flexibly to an uncertain water future, according to EBMUD. The broad mix of projects, the inherent scalability present in several of the elements, and the ability to adjust implementation schedules for a particular project or program included in WSMP 2040 help to minimize the risks associated with the uncertainties and development time issues, according to EBMUD.

The water conservation component of the WSMP 2040 evaluated 53 different conservation measures bundled into four different program levels ranging from Level B through Level E (Level A is plumbing code requirements existing in 2009).[7] According to EBMUD, the measures bundled within each program level are not intended to be rigid programs but rather to demonstrate the range in water savings that will be generated when selected measures are implemented together. The WSMP 2040 Final Plan approved conservation Levels B through D, accounting for a projected water savings of 39 mgd (beyond conservation expected to be achieved through natural conservation) within EBMUD's service area by 2040.

Currently, a number of the elements through Level D have not been fully implemented and are awaiting the allocation of funding through EBMUD's annual budgeting process. In 2015 EBMUD reported that currently, 32 mgd of conservation had been achieved throughout the service area of the total 2040 conservation goal of 62 mgd (including naturally occurring conservation from plumbing code requirements), leaving 30 mgd of savings to be achieved between 2016 and 2040. Conservation Level E was projected to achieve 41 mgd of water savings by 2040, with the additional 2 mgd of water savings (beyond the 39 mgd Level D savings) projected to be achieved through implementation of four additional conservation measures (Measure 31: Financial incentives for irrigation upgrades—intensive; Measure 48: Cisterns; Measure 50: Graywater retrofit-existing single family; and Measure 51: Graywater-new single family.)

[5] EBMUD 2015 Urban Water Management Plan, Table 4-5, at p. 58.
[6] WSMP 2040 Final Plan at p. 2-14 ("The WSMP 2040 Portfolio would meet the Need for Water in all years").
[7] See Conservation Technical Analysis Memorandum dated March 19, 2009, attached as Appendix D, TM-5, to EBMUD's WSMP 2040 Final Plan.

~~Exhibit 3.13-2: Monthly Storage Volumes at Schaads Reservoir with Maximum Deliveries to West Point~~

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The WSMP 2040 Final Plan includes an assessment of the amount of water that would be saved for each measure within Levels B through E as well as the unit cost associated with each measure. In consultation with EBMUD, this information would be used to develop the preferred conservation elements to be facilitated and accelerated or expanded under Levels B through D, or expanded under Level E beyond currently planned levels in order to achieve the 48 af/yr conservation savings needed to serve the Proposed Project. Similarly, the cost information associated with each conservation measure would be used to calculate the cost of the conservation offset.

Water Distribution

The following summarizes EBMUD's facilities which may be used in distributing potable water to the Project Site.

East Bay Municipal Utility District

According to EBMUD's 2015 Urban Water Management Plan, EBMUD's primary water source is the Mokelumne River, providing approximately 90 percent of the water used by EBMUD. EBMUD has water rights that allow for delivery of up to a maximum of 325 million gallons per day (mgd) from the Mokelumne River, subject to the availability of Mokelumne River runoff and to the senior water rights of other users, downstream fishery flow requirements, and other Mokelumne River water uses. EBMUD also has secondary supply sources consisting of groundwater, Central Valley Project (CVP) water, and recycled water.

Major EBMUD Facilities

EBMUD's water supply system consists of a network of reservoirs, aqueducts (pipelines), water treatment plants (WTP), pumping plants, and other distribution facilities that convey Mokelumne River waters from Pardee Reservoir to EBMUD customers.

Pardee Dam and Reservoir

Pardee Dam and Reservoir are located approximately 38 miles northeast of Stockton near the town of Valley Springs, downstream from PG&E's Mokelumne River Hydroelectric Project. Pardee Dam, constructed in 1929, is a concrete gravity arch structure rising 345 feet above the riverbed. The reservoir has 37 miles of shoreline, a surface area of 2,222 acres, and a current capacity of 197,950 af at spillway crest elevation. A 27.8-megawatt (MW) Pardee Powerhouse, located at the base of the dam, was placed in service in 1930. It generates 140 million kilowatt-hours (kWh) during a median runoff year.

Pardee Reservoir is used principally for EBMUD's municipal water supply, power generation, and as a supply source for Jackson Valley Irrigation District. Pardee Reservoir is also operated to provide recreational facilities to the public, and to protect and enhance the fishery resources and ecosystem of the lower Mokelumne River.

Camanche Dam and Reservoir

Camanche Dam is located on the Mokelumne River approximately 10 miles downstream from Pardee Dam. Camanche Dam, constructed in 1964, is a zoned earthen structure. Camanche Reservoir has 63 miles of shoreline, a surface area of 7,470 acres, and a current capacity of 417,120 af at spillway crest elevation. An 11.25-MW Camanche Powerhouse,

located at the base of the dam, was placed in service in 1983. It generates 45 million kWh during a median runoff year.

Camanche Reservoir is operated jointly with Pardee Reservoir to provide water supply benefits while satisfying numerous downstream obligations, including stream-flow regulation, water for fisheries and riparian habitat, flood control, and obligations to downstream diverters. It also provides power generation and recreation opportunities.

Mokelumne Aqueduct System

Raw water from Pardee Reservoir is transported approximately 91 miles to EBMUD WTPs and terminal reservoirs through the Pardee Tunnel, the Mokelumne Aqueducts, and the Lafayette Aqueducts. Water flowing by gravity from Pardee Reservoir takes 30 to 45 hours to reach the East Bay. The Pardee Tunnel is a 2.2-mile, 8-foot-high horseshoe structure constructed in 1929. The Mokelumne Aqueducts comprise three, 82-mile-long pipelines that transport water from the end of Pardee Tunnel in Campo Seco to Walnut Creek at the east end of the two Lafayette Aqueducts. The Mokelumne Aqueducts have a total capacity of 200 mgd by gravity flow and up to 325 mgd with pumping at the Walnut Creek pumping plants.

Freeport Regional Water Facility

The Freeport Regional Water Facility is a result of a regional water supply project undertaken by Freeport Regional Water Authority, which was created by exercise of a joint powers agreement between Sacramento County Water Agency and EBMUD. The City of Sacramento is an associate partner. The facility enables delivery of water diverted from the Sacramento River near the town of Freeport to EBMUD customers during dry years and provides water in all years for Sacramento County. It is used to supplement EBMUD's aggressive water conservation and recycling programs to reduce the potential for severe water rationing and associated economic losses during droughts.

Water Treatment Infrastructure

Water from Pardee Reservoir is transported to the EBMUD service area in the Mokelumne Aqueducts, which terminate in Walnut Creek. From Walnut Creek, the water is sent directly to EBMUD's three in-line filtration WTPs or to one or more of EBMUD's terminal reservoirs. The in-line filtration plants that receive water directly from Pardee Reservoir are Walnut Creek WTP, Lafayette WTP, and Orinda WTP. Walnut Creek WTP and Lafayette WTP serve the area east of the Oakland-Berkeley Hills, and Orinda WTP serves primarily the central parts of the service area west of the Oakland-Berkeley Hills. Three other plants, Upper San Leandro WTP, San Pablo WTP, and Sobrante WTP, provide full conventional treatment and receive water from EBMUD's terminal reservoirs. These plants serve the northern and southern parts of EBMUD's distribution system west of the Oakland-Berkeley Hills.

EBMUD Terminal Reservoirs

EBMUD's untreated water storage reservoirs are Briones, Chabot, Lafayette, San Pablo, and Upper San Leandro. The total maximum capacity of these reservoirs is 151,670 af. Upper San Leandro, San Pablo, and Briones reservoirs can supply water to EBMUD throughout the year, whereas Lafayette Reservoir and Lake Chabot provide emergency standby supply. Lake Chabot also provides untreated water supply to several golf courses. These two reservoirs

are not used for regular domestic supplies and are used for public recreation, as is the San Pablo Reservoir.

EBMUD Distribution Facilities
After the WTPs, treated water is distributed throughout EBMUD's service area, which is divided into more than 120 pressure zones ranging in elevation from sea level to 1,450 feet. Approximately 50 percent of treated water is distributed to customers by gravity. The water distribution network includes 4,100 miles of pipe, 140 pumping plants, and 170 neighborhood reservoirs (tanks storing treated drinking water) having a total capacity of 830 million gallons.

An existing EBMUD potable water line is located within the Camino Tassajara right-of-way directly adjacent to the Project frontage.

Wastewater

Wastewater removal for the Residential Development Area (and the adjacent Pedestrian Staging Area) of the Project Site would be provided by the Central Contra Costa Sanitary District (CCCSD), subject to LAFCO's approval of CCCSD's annexation of the Residential Development Area (and the adjacent Pedestrian Staging Area). The Residential Development Area (and Pedestrian Staging Area) is located directly east of and adjacent to the current CCCSD service area.

CCCSD collects and treats an average of approximately 45 million gallons of wastewater per day for approximately 462,000 residents and 3,000 businesses in central Contra Costa County (CCCSD 2015). CCCSD's service area covers approximately 146 square miles and includes the cities of Pleasant Hill, Walnut Creek, Lafayette, and Orinda; the towns of Danville and Moraga; unincorporated areas in central Contra Costa County; and a portion of the cities of San Ramon and Martinez. The District also receives and treats wastewater from the City of Concord and Clayton collection systems (CCCSD 2012).

Collection System

CCCSD operates an approximately 1,500-mile network of collection piping within its service area.

In the Project vicinity, an existing 8-inch sewer line is located within the Camino Tassajara roadway right-of-way, terminating approximately 250 feet before the southwest corner of the Northern Site in front of Tassajara Hills Elementary School.

Treatment Facility
CCCSD owns and operates the Central Contra Costa Sanitary District Treatment Plant (SDTP), located in Martinez, California. The SDTP has a treatment capacity of approximately 54 million gallons per day (mgd) and approximately 240 mgd of wet-weather flow. Its permitted capacity is 53.8 mgd (CCSD 2014). The SDTP currently treats an average of approximately 45 million gallons of wastewater per day (CCCSD 2015). The majority of waste is treated to a secondary level, disinfected by ultraviolet light, and then discharged into Suisun Bay.

Approximately 600 million gallons per year are treated to a tertiary level through additional filtration and disinfection before being distributed as recycled water for landscape irrigation, industrial processes, and plant operations.

Storm Drainage

The Contra Costa County Flood Control and Water Conservation District guides regional drainage plans throughout incorporated and unincorporated County areas. In the Project vicinity, urban areas to the west include drainage facilities consisting of inlets and underground piping that convey runoff to existing storm drains in Camino Tassajara.

Runoff that occurs on the Project Site either ponds on-site or sheet flows to existing natural drainages, ultimately flowing to Tassajara Creek.

As indicated by the letter prepared by Balance Hydrologics dated January 14, 2015, the Northern Site, inclusive of the Residential and Non-urban Development Areas, consists of three small drainage areas with ephemeral drainages flowing to the south, combining and turning to the east along the north side of Camino Tassajara (Balance Hydrologics 2015).

Solid Waste

The Central Contra Costa Solid Waste Authority (CCCSWA) provides solid waste and residential recycling services for areas within Contra Costa County. CCCSWA holds franchise agreements with waste franchises that provide solid waste collection and disposal of residential and commercial solid waste. Valley Waste Management provides garbage, recycling, and curbside compostable services to the Project vicinity.

Landfills

Table 3.13-1 summarizes the two landfills in the Project vicinity. Collectively, the landfills have approximately 63.5 million cubic yards in remaining capacity.

Table 3.13-1: Landfill Summary

Landfill	Location	Tons (approx.)	Cubic Feet (approx.)	
		Maximum Permitted Daily Throughput	Maximum Permitted Capacity	Remaining Capacity
ACME Landfill	950 Waterbird Way Martinez CA 94553	1,500 tons per day	268,700 cubic yards	175,000 cubic yards
Keller Canyon Landfill	901 Bailey Road Pittsburg, CA 94565	3,500 tons per day	75,018,280 cubic yards	63,408,410 cubic yards
Source: California Department of Resources Recycling and Recovery, 2015.				

Electricity

PG&E, which is regulated by the California Public Utilities Commission, provides electricity to all or part of the 47 counties in California, including Contra Costa County. PG&E charges connection and user fees for all new development, and sliding use-based rates for electrical

and natural gas service. In 2014, PG&E obtained approximately 35.8 percent of electricity from its own generation sources and the remaining approximately 64.2 percent from outside sources. PG&E-owned generating facilities include nuclear, natural gas, and hydroelectric, with a net generating capacity of more than 7,684 megawatts. Outside suppliers to PG&E include the California Department of Water Resources, irrigation districts, renewable energy suppliers, and other fossil fuel-fired suppliers. PG&E operates approximately 141,700 circuit miles of transmission and distribution lines. PG&E is interconnected with electric power systems in the western Electricity Coordinating Council, which includes 14 western states; Alberta and British Columbia, Canada; and parts of Mexico. In 2014, PG&E delivered approximately 86,303 gigawatt-hours of electricity to its 5.3 million electrical customers.

Natural Gas

PG&E provides natural gas to all or part of 39 counties in California comprising most of the northern and central portions of the State. PG&E obtains most of its natural gas supplies from western Canada and the balance from U.S. sources. PG&E operates approximately 49,100 miles of transmission and distribution pipelines, and three underground storage fields with a combined storage capacity of approximately 48.7 billion cubic feet (Bcf). In 2014, PG&E delivered approximately 269 Bcf of natural gas to its 4.4 million natural gas customers.

3.13-3–Regulatory Framework

Federal

Clean Water Act

The Federal Water Pollution Control Act of 1972, more commonly known as the Clean Water Act (CWA), regulates the discharges of pollutants into watersheds throughout the nation. Under the CWA, the United States Environmental Protection Agency (EPA) implements pollution control programs and sets wastewater treatment standards.

National Pollutant Discharge Elimination System

Pursuant to Section 402 of the CWA and the Porter-Cologne Water Quality Control Act (discussed below), municipal stormwater discharges in the unincorporated areas of Contra Costa County are regulated under the San Francisco Bay Region Municipal Regional Stormwater National Pollutant Discharge Elimination System (NPDES) Permit No. CAS612008, Order No. R2-2009-0074, adopted October 14, 2009 and revised November 28, 2011. The Municipal Regional Permit is overseen by the Regional Water Board. Contra Costa County is a member agency of the Contra Costa Clean Water Program, which assists municipalities and other agencies in Contra Costa County with implementation of the Municipal Regional Permit. Provision C.3 of the permit addresses post-construction stormwater management requirements for new development and redevelopment projects that add and/or replace 10,000 square feet or more of impervious area. Provision C.3 requires the incorporation of site design, source control, and stormwater treatment measures into development projects in order to minimize the discharge of pollutants in stormwater runoff and non-stormwater discharges and to prevent increases in runoff flows. Low Impact Development methods are to be the primary mechanism for implementing such controls.

Permit Provision C.3.g pertains to hydromodification management. This Municipal Regional Permit provision requires that stormwater discharges shall not cause an increase in the erosion potential of the receiving stream over the existing condition. Increases in runoff flow and volume must be managed so that the post-project runoff does not exceed estimated pre-project rates and durations, where such increased flow and/or volume is likely to cause increased potential for erosion of creek beds and banks, silt pollutant generation, or other adverse impacts on beneficial uses due to increased erosive force. Projects that create and/or replace 1 acre or more of impervious surface and increase impervious surface over pre-project conditions are subject to hydromodification management requirements.

State

Green Building Standards Code

In January 2010, the California Building Standards Commission adopted the statewide mandatory Green Building Standards Code (CAL Green Code) that requires the installation of water-efficient indoor infrastructure for all new projects beginning after January 1, 2011. The CAL Green Code was incorporated as Part 11 into Title 24 of the California Code of Regulations. The CAL Green Code has also been modified through emergency rulemaking to respond to the Governor's emergency drought proclamations, although these modifications only address outdoor water use. The CAL Green Code applies to the planning, design, operation, construction, use and occupancy of every newly constructed building or structure. All Project land uses must satisfy the indoor water use infrastructure standards necessary to meet the CAL Green Code.

The CAL Green Code requires residential and non-residential water efficiency and conservation measures for new buildings and structures that will reduce the overall potable water use inside each building and structure by 20 percent. The 20 percent water savings can be achieved in one of the following ways: (1) installation of plumbing fixtures and fittings that meet the 20 percent reduced flow rate specified in the CAL Green Code, or (2) by demonstrating a 20 percent reduction in water use from the building "water use baseline." The Project would satisfy one of these two requirements through the use of appliances and fixtures such as high-efficiency toilets, faucet aerators, on-demand water heaters, or other fixtures as well as Energy Star and California Energy Commission-approved appliances.

Senate Bill 610—Water Supply Assessments

Under Senate Bill 610, water supply assessments (WSAs) must be furnished to local governments for inclusion in any environmental document for certain projects subject to the California Environmental Quality Act (CEQA). Residential projects subject to a water supply assessment consist of more than 500 dwelling units, whereas the Project consists of only 125 dwelling units. As such, Senate Bill (SB) 610 does not apply to the Project because it is too small, and therefore a WSA is not required as part of the Project's CEQA process. Nevertheless, the WSA law's analytical structure has been applied in the Project's WSE to provide a clear and complete evaluation of whether expected water supplies will be sufficient to meet the projected demand of the Project.

California Model Water Efficient Landscape Ordinance

The Water Conservation in Landscaping Act was enacted in 2006, requiring the Department of Water Resources (DWR) to update the Model Water Efficient Landscape Ordinance (MWELO). In 2009, the Office of Administrative Law (OAL) approved the updated MWELO, which required a retail water supplier or a county to adopt the provisions of the MWELO by January 1, 2010, or to enact its own provisions equal to or more restrictive than the MWELO provisions.

Senate Bill 221—Written Verification of Water Supply

Under SB 221, approval by a city or county of certain residential subdivisions requires an affirmative written verification of sufficient water supply. Residential projects subject to a written verification of water supply consist of a subdivision of more than 500 dwelling units, or, where the public water system has fewer than 5,000 services connections, and the proposed residential development would account for an increase of 10 percent or more in the number of the public water system's existing service connections. The Project does not meet either of these thresholds.

Senate Bill 7 (SBX7-7)

On November 10, 2009, Governor Arnold Schwarzenegger signed SB No. 7 (SBX7-7), which established a statewide goal of achieving a 20 percent reduction in urban per capita water use by 2020 for urban retail water suppliers. Since the Project is yet to be built, this legislation only indirectly applies. The efforts undertaken throughout the County by other urban retail suppliers to comply with this statute, though not directly, would affect the Project's use of appliances, fixtures, landscapes and other water using features, through changes or additions to County ordinances and/or through an emerging "conservation ethic" anticipated to develop in communities in and around the Project.

California Urban Water Management Planning Act

The Urban Water Management Planning Act (California Water Code Sections 10610-10656) requires that all urban water suppliers prepare urban water management plans and update them every 5 years.

San Francisco Bay Regional Water Quality Control Board

Together with the State Water Quality Control Board, the San Francisco Bay Regional Water Quality Control Board makes critical water quality decisions for its region, including setting standards, issuing permits, (waste discharge permits), determining compliance with those requirements, and taking appropriate enforcement actions.

2014 Sustainable Groundwater Management Act

The Sustainable Groundwater Management Act provides a framework for sustainable management of groundwater supplies by local authorities. The Act requires the formation of local groundwater sustainability agencies that must assess conditions in their local water basins and adopt locally-based management plans. The act provides a 20 year time frame for groundwater sustainability agencies to implement plans and achieve long-term groundwater sustainability.

California Solid Waste Reuse and recycling Access Act of 1991

The California Solid Waste Reuse and R~~r~~ecycling Access Act of 1991 required local agencies to adopt an ordinance governing the provision of adequate areas for collection and loading of recyclable materials in development projects. Consistent with this, Chapter 418-10 of the Contra Costa County Ordinance Code, requires waste from the haulers of a local agency to meet minimum resource recovery requirements in order to dispose of solid waste in landfills located in the unincorporated area of the County.

California Integrated Waste Management Act

To minimize the amount of solid waste that must be disposed of by transformation and land disposal, the State Legislature passed Assembly Bill (AB) 939, the California Integrated Waste Management Act of 1989, effective January 1990. The legislation required each local jurisdiction in the State to set diversion requirements of 25 percent by 1995 and 50 percent by 2000; established a comprehensive statewide system of permitting, inspections, enforcement, and maintenance for solid waste facilities; and authorized local jurisdictions to impose fees based on the types or amounts of solid waste generated. In 2007, SB 1016, Wiggins, Chapter 343, Statutes of 2008, introduced a new per capita disposal and goal measurement system which moves the emphasis from an estimated diversion measurement number to using an actual disposal measurement number as a per capita disposal rate factor. As such, the new disposal-based indicator (pounds per person per year) uses only two factors: a jurisdiction's population (or in some cases employment) and its disposal as reported by disposal facilities.

Title 24, California's Energy Efficiency Standards for Residential and Nonresidential Buildings

Title 24, Part 6, of the California Code of Regulations establishes California's Energy Efficiency Standards for Residential and Nonresidential Buildings. The standards were updated in 2013. The 2013 standards set a goal of reducing growth in electricity use by 561.2 gigawatt-hours per year (GWh/y) and growth in natural gas use by 19 million therms per year (therms/y). The savings attributable to new nonresidential buildings are 151.2 GWh/y of electricity savings and 3.3 million therms. For nonresidential buildings, the standards establish minimum energy efficiency requirements related to building envelope, mechanical systems (e.g., heating, ventilation, and air conditioning [HVAC]; and water heating systems), indoor and outdoor lighting, and illuminated signs.

Local

Contra Costa County

General Plan

The Contra Costa County General Plan sets forth the following goals and policies related to utility systems and services that are relevant to this analysis:

Public Facilities/Services Element

- **Goal 7-D:** To cooperate with other local jurisdictions to promote the most cost effective methods of providing public facilities necessary for supporting the economic, social, and environmental well-being of the County and its residents.

- **Policy 7-1:** New development shall be required to pay its fair share of the cost of all existing public facilities it utilizes, based upon the demand for these facilities which can be attributed to new development.
- **Policy 7-2:** New development, not existing residents, should be required to pay all costs of upgrading existing public facilities or constructing new facilities which are exclusively needed to serve new development.
- **Policy 7-3:** Broad-based funding sources for public facilities shall be sought which benefit both existing, new, and future residents of the County.
- **Policy 7-4:** The financial impacts of new development on public facilities should generally be determined during the project review process and may be based on the analysis contemplated under the Growth Management Element or otherwise. As part of the project approval, specific findings shall be adopted which relate to the demand for new public facilities and how the demand affects the service standards included in the growth management program.
- **Policy 7-5:** The County shall take an active role in coordinating major infrastructure construction within the County, particularly the transportation system network and extension of sewer and water service, to assure consistency of these improvements with the General Plan.
- **Goal 7-F:** To assure potable water availability in quantities sufficient to serve existing and future residents.
- **Goal 7-G:** To encourage the development of locally controlled supplies to meet the growth needs of the County.
- **Goal 7-H:** To encourage the conservation of water resources available to the County and to the State.
- **Goal 7-I:** To protect and enhance the quality of the water supplied to County residents.
- **Goal 7-J:** To ensure that new development pays the costs related to the need for increased water system capacity.
- **Policy 7-16:** Water service systems shall be required to meet regulatory standards for water delivery, water storage and emergency water supplies.
- **Policy 7-17:** Water service agencies shall be encouraged to establish service boundaries and to develop supplies and facilities to meet future water needs based on the growth policies contained in the County and cities' General Plans.
- **Policy 7-18:** Water service agencies should generally be discouraged from constructing new water distribution infrastructure which exceeds future water needs based on the buildout projections of the County General Plan and city general plans.
- **Policy 7-19:** Urban development shall be encouraged within the existing water Spheres of Influence adopted by the Local Agency Formation Commission; expansion into new areas within the Urban Limit Line beyond the Spheres should be restricted to

those areas where urban development can meet all growth management standards included in this General Plan.

- **Policy 7-21:** At the project approval stage, the County shall require new development to demonstrate that adequate water quantity and quality can be provided. The County shall determine whether (1) capacity exists within the water system if a development project is built within a set period of time, or (2) capacity will be provided by a funded program or other mechanism. This finding will be based on information furnished or made available to the County from consultations with the appropriate water agency, the applicant, or other sources.
- **Policy 7-26:** The need for water system improvements shall be reduced by encouraging new development to incorporate water conservation measures to decrease peak water use.
- **Goal 7-K:** To provide sewer collection, treatment and disposal facilities adequate to meet the current and projected needs of existing and future residents.
- **Goal 7-L:** To provide wastewater treatment that preserves, and to the extent feasible, enhances water quality and the natural environment.
- **Goal 7-M:** To develop wastewater reclamation as a supplement to imported surface water supplies.
- **Goal 7-N:** To assure that new development pays the costs related to the need for increased sewer system capacity.
- **Policy 7-29:** Sewer treatment facilities shall be required to operate in compliance with waste discharge requirements established by the California Regional Water Quality Control Board. Development that would result in the violation of waste discharge requirements shall not be approved.
- **Policy 7-30:** Sewer service agencies shall be encouraged to establish service boundaries and develop treatment facilities to meet future service needs based on the growth policies contained in the County and cities' General Plans.
- **Policy 7-31:** Urban development shall be encouraged within the sewer Spheres of Influence adopted by the Local Agency Formation Commission. Expansion into new areas within the Urban Limit Line but beyond the Spheres of Influence should be restricted to those areas where urban development can meet growth management standards included in this General Plan.
- **Policy 7-33:** At the project approval stage, the County shall require new development to demonstrate that wastewater treatment capacity can be provided. The County shall determine whether (1) capacity exists within the wastewater treatment system if a development project is built within a set period of time, or (2) capacity will be provided by a funded program or other mechanism. This finding will be based on information furnished or made available to the County from consultations with the appropriate water agency, the applicant, or other sources.

- **Policy 7-37:** The need for sewer system improvements shall be reduced by requiring new development to incorporate water conservation measures which reduce flows into the sanitary sewer system.
- **Goal 7-O:** To protect and enhance the natural resources associated with creeks and the Delta, and their riparian zones, without jeopardizing the public health, safety, and welfare.
- **Goal 7-P:** To protect creeks and riparian zones identified as valuable from damage caused by nearby development activity.
- **Goal 7-Q:** To employ alternative drainage systems improvements which rely on increased retention capacity to lessen or eliminate the need for structural modifications to watercourses, whenever economically possible.
- **Goal 7-R:** To enhance opportunities for public accessibility and recreational use of creeks, streams, drainage channels and other drainage system improvements.
- **Goal 7-T:** To ensure that new development pays its fair share of the costs related to increased runoff created by the development.
- **Goal 7-U:** To support the concept that existing development pays the cost of building and maintaining drainage improvements required to serve existing developed areas.
- **Policy 7-38:** Watershed management plans shall be developed which encourage the development of detention basins and erosion control structures in watershed areas to reduce peak stormwater flows, as well as to provide wildlife habitat enhancement.
- **Policy 7-39:** Land use plans and zoning shall be the primary means for floodplain management in preference to structural improvements, where possible.
- **Policy 7-40:** Alternative drainage system improvements such as floodplains, leveed floodways, bypass channels and culverts, and detention basins, shall be incorporated into new flood control plans and existing plans as they are revised.
- **Policy 7-44:** New development should be required to finance its legal share of the full costs of drainage improvements necessary to accommodate projected peak flows due to the project. Reimbursement from subsequent developments, which benefit from the added capacity may be provided.
- **Policy 7-45:** On-site water control shall be required of major new developments so that no significant increase in peak flows occurs compared to the site's pre-development condition, unless the Planning Agency determines that off-site measures can be employed which are equally effective in preventing adverse downstream impacts expected from the development or the project is implementing an adopted drainage plan.
- **Policy 7-51:** Detention basins shall be designed for multiple uses such as parks and playing fields when not used for holding water, if liability and maintenance issues can be satisfactorily resolved.

- **Policy 7-55:** As appropriate and to the extent allowed by law, assess all new development projects at least $0.35 per square foot of impervious surface created. This drainage fee is to be collected through existing County Flood Control drainage area fee ordinances, newly adopted drainage area fee ordinances, existing and new assessment districts, or other financial entities. The fee may be applied to the cost of any developer-sponsored regional flood control improvements on- or off-site which mitigate the project's flooding impacts. Regional facilities are defined as systems sized to handle at least 15 cubic feet per second and suitable for public agency maintenance, i.e., 24-inch diameter and larger storm drains.

Contra Costa County Ordinance Code

Title 8 Chapter 82-26—Water Conservation Landscaping in New Developments

The Water Conservation in Landscaping Act was enacted in 2006, requiring the Department of Water Resources (DWR) to update the Model Water Efficient Landscape Ordinance (MWELO). In 2009, the Office of Administrative Law (OAL) approved the updated MWELO, which required a retail water supplier or a county to adopt the provisions of the MWELO by January 1, 2010, or to enact its own provisions equal to or more restrictive than the MWELO provisions. Since the County did not adopt a new landscape ordinance by January 1, 2010 the Project is subject to the MWELO as amended.

Title 9 Division 916—Water and Sewers

This division requires that adequate approved water supply system shall be provided to serve all of a proposed subdivision, that landscaping conform to applicable water conservation requirements, and that sewerage shall be provided to a proposed subdivision by a public sanitation district or utility having adequate plant and facility capacity.

Title 10 Division 1010—Drainage

This division is adopted to provide for the implementation of drainage, recreation and riparian vegetation provisions of the general plan, protect watercourse riparian vegetation, permit control of projects that may change the hydraulic characteristics of watercourses and drainage facilities, control erosion and sedimentation, prevent the placement or discharge of polluting matter into watercourses, and require adequate watercourse drainage facilities.

Title 4 Chapter 418-10—Recycling Requirements for Landfill Disposal

Chapter 418-10 of the Contra Costa County Ordinance Code, requires waste from the haulers of a local agency to meet minimum resource recovery requirements in order to dispose of solid waste in landfills located in the unincorporated area of the County.

Title 4 Chapter 418-14—Construction and Demolition Debris Recovery

This chapter requires that a debris recovery plan indicating at least 50 percent diversion of construction and demolition debris must be submitted to and approved by the community development department prior to the issuance of a building or demolition permit. The plan must include a description of the management methods planned to be used for all types of construction and demolition debris; the name of all service providers and or facilities to be used for debris management; and an acknowledgment that the owner understand the requirements of this chapter.

3.13-4–Methodology

FirstCarbon Solutions evaluated impacts on utilities and service systems through, among other data and materials, review of the Contra Costa County General Plan, Tassajara Parks Water Supply Evaluation (WSE), CCCSD Sanitary Sewer Management Plan and Collection System Master Plan Update, and site plans. Agency websites were reviewed for relevant information about facilities and services provided.

3.13-5–Thresholds of Significance

According to the CEQA Guidelines' Appendix G Environmental Checklist, to determine whether impacts to utilities and service systems are significant environmental effects, the following questions are analyzed and evaluated. Would the Project:

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

d) Have sufficient water supplies available to serve the Project from existing entitlements and resources, or are new or expanded entitlements needed?

e) Result in a determination by the wastewater treatment provider which serves or may serve the Project that it has adequate capacity to serve the Project's projected demand in addition to the provider's existing commitments?

f) Be served by a landfill with sufficient permitted capacity to accommodate the Project's solid waste disposal needs?

g) Comply with federal, state, and local statutes and regulations related to solid waste?

h) Result in the unnecessary, wasteful, or inefficient use of energy?

3.13.6–Project Impacts and Mitigation Measures

This section discusses potential environmental impacts associated with the development and operation of the Project and provides feasible mitigation measures where appropriate. As described in Section 2 of this R-DEIR, an Agreement Regarding Preservation and Agricultural Enhancement in the Tassajara Valley (Agricultural Preservation Agreement) (formally referred to as the Memorandum of Understanding (MOU)) is currently being considered by the county and the other adjacent jurisdiction (San Ramon) as well as the East Bay Regional Park District, which reflects each signatory agency's respective commitment to endeavor to preserve and enhance certain land in the county for agriculture and open space, wetlands, parks, recreation and other non-urban uses. The effect of the Agricultural

Preservation Agreement would be to merely continue existing policies relating to the preservation of agricultural, open space and other non-urban uses~~y~~. It would also require the signatory agencies to support the dedication and permanent preservation of land at two locations comprising approximately seven hundred ten (710) acres of the Project Site (collectively, "**Dedication Area**"). Following Project approval by the County, the Dedication Area would be required to be permanently preserved through fee title conveyance to EBRPD (or, at EBRPD's request, to the Regional Parks Foundation). The foregoing requirement would also be enforced via implementation of the Project's Development Agreement. In addition, the Agricultural Preservation Agreement would also secure the irrevocable payment of $4 million, under specified circumstances, to an agricultural enhancement fund. Therefore, the Agricultural Preservation Agreement would not result in a substantial adverse change to existing conditions with respect to utilities and service systems. The range of implementation actions intended to achieve the preservation goals of the Agricultural Preservation Agreement that may, in the future, ~~to~~ be considered ~~pursuant to the MOU~~ (assuming the Agricultural Preservation Agreement is ~~were it to be~~ adopted) may~~would~~ include, among others, promoting agriculture through the purchase of land or easements from willing sellers, through continuing the Williamson Act program and its related tax benefits, as well as through technical support to better manage weeds and water. To the extent that any specific projects that could be considered for funding pursuant to the Agricultural Preservation Agreement—such as land conservation, weed management or abatement, or additional groundwater management tools~~improvements~~—could have adverse environmental effects, such projects would be subject to separate project-level CEQA review as proposed actions are defined and funding for them is identified. As the precise location and scope of any such projects is not known at this time, further consideration of potential impacts would be speculative.

Water

Impact USS-1: The Project may result in a need for additional water supplies, additional treatment capacity, or additional distribution facilities beyond what has been planned for.

Impact Analysis

This analysis is based, among other things, on the WSE prepared for the Project, as included in Appendix J of this RDEIR. The information below is a summary of the analysis and conclusions presented therein.

Water Demand

As indicated in the WSE prepared for the Project, two distinct groups of water demand factors were created for the Project: (1) residential, and (2) non-residential. Residential uses consist of both indoor and outdoor water. The non-residential uses are limited to streetscapes, temporary construction water, and a public restroom facility and drinking water fountain at the Pedestrian Staging Area.

Several factors were considered in the development of unit water demand factors for the Project, ranging from state and County landscape and other water-use mandates, to changes in the types of housing products being offered. These factors were incorporated into the determination of unit water demand factors. Additional discussion of water demand factors considered is provided in Appendix J, as well as~~including~~ an independent third-party evaluation of the estimated water demand for a project of this scope and size, prepared by Schaaf & Wheeler (see Appendix N). Recognizing that varying methodologies can be employed in determining demand, the ~~results of the~~ third party evaluation considered three different methodologies, which confirmed a range of potential water demand, from approximately 48 afy to 92 AFY. Taking into consideration the results of these three methodologies, the third party evaluation~~, with an~~ identified the amount of ~~conservative assumption of~~ 56.3 AFY as most reflective of an appropriately conservative demand estimation, while taking into consideration reasonable assumptions~~, based on the use of Dublin San Ramon Services District planning factors, given the Project's proximity to this service area~~.

Residential Water Use Demand Factors

Distinct demand factors are provided for the following residential uses:

- Indoor Residential Use—this category identifies the generally anticipated water use for an average household.
- Outdoor Residential Use—this category addresses the landscape water demands for the two lot sizes planned within the Project.

Outdoor residential use varies with the lot size and the amount of landscaped area, while indoor demand varies slightly based on the number of people per dwelling unit. Consistent with the WSE, residential unit water demand factors are described herein as "the acre-feet of water use annually per dwelling unit"—or acre-feet/dwelling unit (af/du).

Indoor Residential Water Use Factors

The Project's residential elements would be built in accordance with all applicable~~,~~ building codes including, without limitation, the Cal Green Code, as it may be modified prior to Project implementation.

Because the Project's residential elements would be built in accordance with all of the building codes in effect at the time of Project implementation, this would result in indoor water use similar to other new developments. For the purposes of this analysis, single-family detached homes are estimated to use 0.18 af/yr for indoor water demand, similar to indoor water use of new suburban single-family dwelling units and older homes retrofitted with new water efficient fixtures and appliances. Additional information regarding indoor water demand is provided in Appendix J.

Outdoor Residential Water Use Factors

Outdoor water use is primarily a factor of lot size and the extent of landscaping. The Project includes approximately 125 lots with two average lot sizes: 5,000 square feet and 7,500 square feet.

As indicated in the updated WSE, outdoor demands for the Project are calculated based on regulations contained in the County's water conservation landscaping ordinance. The ordinance provides a methodology to calculate landscape water demands that follows the MWELO example. The outdoor demand reflects that the use of water (i.e., the "evapotranspiration") to irrigate turf would be about 48 inches per year (or 4 feet per year), and that under MWELO the average landscape demand would be 55 percent of turf water use.

To provide flexibility to the Project to landscape lots as appropriate (and within the County's standards) and to provide a conservative assumption for this analysis, each lot is assumed to have a landscaped area equal to the lot square footage minus the house footprint and a reasonable amount of hardscape with a limit of up to 25 percent turf in the front yard. The remaining area of each lot is conservatively assumed to demand the maximum allowed by the MWELO. This approach provides for a conservatively higher estimated outdoor water demand.

The maximum permissible landscape water demands would come to 0.08 af/yr for the smaller lots, and 0.20 af/yr for the larger lots. The County water conservation landscaping ordinance that further restricts the turf area would likely further reduce these estimates, so that these values provide a conservatively high outdoor residential water demand value.

Summary of Residential Water Use Demand Factors

Table 3.13-2 provides a summary of the unit water demand factors, in acre-feet per year (AFY), used to estimate the Project's water use.

Table 3.13-2: Summary of Proposed Project Demand Factors

Unit Type	Indoor Demand (AFY)	Outdoor Demand (AFY)	Unit Demand (AFY)
5,000 sf	0.18	0.08	0.26
7,500 sf	0.18	0.20	0.38

Non-Residential Water Use Demand Factors

Non-residential water demands of the Project would result from streetscapes, the Pedestrian Staging Area public restroom and drinking fountain, and other miscellaneous uses, including temporary construction water. (No water demand is anticipated associated with the wetlands creation/preservation proposed as part of the Project.) The method and basis for determining the unit water demand factor for each of these classifications is detailed in the updated WSE in Appendix J.

Table 3.13-3 provides a summary of the non-residential demand factors used to estimate the Project's future water demands.

Table 3.13-3: Summary of Non-Residential Demand Factors

Land Use	Demand (af/yr)	Notes
Streetscape	2	On-going Demand
Trailhead bathroom	0.18	On-going Demand
Wetland	0	No Water Demand
Construction	1	Temporary Demand

Non-Revenue Water Demands

To fully represent the Project's demand for water resources, non-revenue water also needs to be considered. Non-revenue water represents all of the water necessary to deliver to the customer accounts and reflects distribution system leaks, water demands from potentially un-metered uses such as fire protection, hydrant, flushing, and unauthorized connections, and inescapable inaccuracies in meter readings. In most instances, the predominant source of non-revenue water is from system leaks—the loss from fittings and connections from water sources through treatment plants, tanks, pumping plants, major delivery system backbone pipelines, and community distribution systems. Because a significant portion of the delivery system used to bring water to the Project will be new, the percentage of non-revenue water is estimated to meet the 10 percent goal set forth by the American Water Works Association. Therefore, the Project's water delivery system is expected to require an additional 4 af of water annually at buildout to serve the residences and other Project needs.

Total Project Water Demand Projection

At buildout, as explained more fully in the WSE, the Project is estimated to need approximately 42 af of water annually (prior to considerations of non-revenue water and the effect of dry years on exterior irrigation water demand), approximately 46 af of water annually when considering non-revenue water, and up to approximately 48 af of water annually when considering increased exterior irrigation demand during a dry year (as shown in Table 3.13-4, Table 3.13-5, and discussed in the following section).

Table 3.13-4: Estimated Project Water Demands

Category		Unit Count or Acres					Demand Factor (af/du or af/ac)	Demand (af/yr)				
		2020	2025	2030	2035	2040		2020	2025	2030	2035	2040
Residential												
5000 SF	Indoor	31	63	63	63	63	0.18	6	11	11	11	11
Lot	Outdoor						0.08	2	5	5	5	5
7500 SF	Indoor	31	62	62	62	62	0.18	6	11	11	11	11
Lot	Outdoor						0.20	6	13	13	13	13
							Total Residential Demand					40

Category	Unit Count or Acres					Demand Factor (af/du or af/ac)	Demand (af/yr)				
	2020	2025	2030	2035	2040		2020	2025	2030	2035	2040
Other											
Street scaping	1	1	1	1	1	1.80	2	2	2	2	2
Trailhead Restroom	0	1	1	1	1	0.18	0	0.18	0.18	0.18	0.18
Construction Water	1	0	0	0	0	1.0	1	0	0	0	0
						Total Indoor	11	23	23	23	23
						Total Outdoor	11	19	19	19	19
						Total	23	42	42	42	42
						Loss Factor 10%	2	4	4	4	4
						Total with Loss	**25**	**46**	**46**	**46**	**46**

Water Demands during Single- and Multiple Dry-Year Conditions

As indicated in the WSE, to adequately assess the sufficiency of available water supplies the Project's normal-year water demand is modified to reflect anticipated increases in demand during drier conditions. Conservative modifications to the estimated Project's water demand are made to reflect conditions expected during single-dry and multiple-dry year events, as follows:

Single-dry year: Landscape irrigation demands would increase to reflect an earlier start of landscape irrigation due to limited rainfall in the single driest year. An adjustment factor of 5 percent is applied to the total normal-year water demand values to conservatively reflect the expected increase in demand for water.

Multiple-dry years: During multiple dry years, demands are also expected to increase during the first in a series of dry years—as discussed above for the single-dry year condition. However, during the second and third consecutive dry years, demands also are expected to reflect water shortage contingency plans implemented by the retail water purveyor. During the second year, the water purveyor is assumed to request a reduction target of 10 percent. To be environmentally conservative, the WSE assumes a resulting demand reduction of 5 percent to accommodate conservatively low participation by customers. During the third year, the purveyor is expected to set a conservation target of 20 percent. For this analysis the demands in the third year are only reduced by 10 percent to, again, reflect the possibility of a conservatively low participation rate by the customers. Thus, during multiple-dry conditions, demands initially increase due to reduced effective precipitation, but then decrease due to short-term conservation measures.

The estimated water demands for single-dry and multiple-dry years are shown in Table 3.13-5. The Project is expected to demand up to approximately 48 af of water annually when considering increased exterior irrigation demand during a dry year.

Table 3.13-5: Proposed Project Water Demands under Dry-Year Conditions

Category	Single Dry	Multiple Dry Year		
		Year 1	Year 2	Year 3
% Increase (reduction)	5%	5%	0%	-10%
Resulting Demand (af/yr)	48	48	46	41

Water Supply Availability

~~As previously indicated under Section 3.13.2, Environmental Setting, two sources of water supply have been identified to meet, or offset, the estimated water demand of the Project: CPUD water or off-site water conservation.~~

~~Sufficiency of each water supply is discussed below.~~

~~**Source 1—CPUD Water**~~

~~As previously discussed under Section 3.13.2, Environmental Setting, the CPUD and the Project applicant have executed a Term Sheet specifying the water supply purchase price, the firm water quantity of up to 200 af/yr, and the 50-plus-year term over which the CPUD is willing to commit to providing the CPUD water.~~

~~The CPUD water supply would be used to meet the Project's maximum demand of 48 af/yr at buildout (maximum, dry-year demand) and to accommodate the estimated 3 af/yr conveyance loss, which is about one-quarter of the maximum of 200 af/yr of CPUD water available under the Term Sheet. The reliability of the CPUD Water would at least preserve, and could enhance, dry-year water supply availability within EBMUD's service area. The 200 af/yr Term Sheet amount was selected before the Project's design, unit count, and water demand were confirmed. As such, the 200 af/yr Term Sheet provides for about four times the water needed to meet the Proposed Project's maximum 48 af/yr water demand and 3 af/yr of conveyance loss (51 af/yr total). That demand could easily be met by the water amount specified in the final water purchase agreement that would be approved after the County certifies the Project's EIR and approves the Project. In other words, although up to 200 af/yr of CPUD water is available under the Term Sheet, the proposal is to purchase only the amount needed to meet the Project's demand and cover conveyance losses (up to a total of 51 af/yr) with a margin of safety. Completing the water purchase agreement after EIR certification and Project approval is consistent with *Riverwatch v. Olivenhain MWD* (2009) 170 Cal.App.4th 1186.~~

~~The actual flow rate of CPUD Water released downstream from Schaads to Pardee would be established in operating agreements between CPUD and EBMUD, with the flow rate and timing matching other CPUD and EBMUD objectives. For example, CPUD water would be released with appropriate flow ramping—at the start and end of the delivery period—to assure no significant adverse effects to fish and wildlife resources along the entire flow path to EBMUD's Pardee Reservoir.~~

~~Exhibit 3.13-3 combines Exhibit 3.13-1 and Exhibit 3.13-2, to show actual historic Schaads storage levels and storage with maximum West Point service area deliveries with the anticipated purchase and delivery of 100 af/yr to meet the Proposed Project's water demand, to cover conveyance losses, and to provide an ample margin of safety. Exhibit 3.13-3 also incorporates anticipated refill criteria to be established in operating agreements between CPUD and EBMUD. Based on a summer pattern of releases over approximately 4 months, the resulting re-operation of Schaads to provide up to 100 af/yr of water for the Proposed Project (including conveyance losses, and an ample margin of safety) and implementation of anticipated refill criteria would result in a pattern of reservoir water storage levels like that depicted by the dashed orange line graphed in Exhibit 3.13-3.~~

~~Exhibit 3.13-3 shows that the re-operation of Schaads to provide water for the Project would slightly reduce reservoir storage by the end of each October compared with existing operations—but, prior to any refill criteria considerations, Schaads would still refill annually. The dashed orange line depicts Schaads storage resulting from ongoing operations for fishery flows and hydropower generation, delivery of up to 200 af/yr to CCWD's West Point service area, and delivery of up to 100 af/yr for the Project (48 af/yr of dry-year demand plus approximately 3 af/yr of conveyance losses) plus another approximately 49 af/yr to provide an ample margin of safety. That operation of Schaads Reservoir would maintain and protect all existing uses, including fishery flows, hydropower and consumptive uses.~~

~~*CPUD Long-term Water Purchase Agreement Details*~~
~~The Term-Sheet defining the key long-term water purchase agreement terms between the Project applicant and CPUD is provided in Appendix J, Exhibit 1. Key terms are:~~

- ~~Purchase of up to 200 acre-feet per year of pre-1914 water, which can be reliably diverted even in single-dry and multiple-dry years. Although up to 200 af/yr of CPUD water is available under the Term Sheet, the proposal is to develop a purchase agreement for only the amount needed to meet the Project's demand of up to 51 af/yr plus up to 49 af/yr to provide an ample margin of safety.~~
- ~~An initial agreement term of 25 years, with an option to extend for an additional 25 years at the Project proponent's sole discretion, and subsequent renewal under terms mutually agreed to by CPUD and the Project's proponent or its successor in interest.~~
- ~~Ability to assign the water purchase agreement for the pre-1914 CPUD water to the Project's ultimate retail water purveyor that would serve the Project (such as a mutual water company, state-regulated public water utility company, or EBMUD).~~

~~The WSE anticipates that the final agreement would only include enough water to meet the Project's maximum buildout demand (dry year) of 48 af/yr, conveyance loss of about 3 af/yr, plus up to 49 af/yr to provide an ample margin of safety.~~

Source—Off-site Water Conservation

The Off-site Water Conservation option ~~differs from the CPUD Water option because it~~ creates a potable water source by funding the facilitation and acceleration or expansion of

water conservation measures within EBMUD's service area. As described above, funding implementation of conservation measures within a water supplier's service area to offset demand from new land uses is becoming increasingly common in California and elsewhere. Further, as detailed above in Section 3.13.2 Environmental Setting, this option would reduce current potable use within EBMUD's service area by an amount sufficient to offset the Project's water demand. Expanded conservation of potable water within EBMUD's service area would provide an ample supply to meet even the proposed Project's maximum dry-year demand of 48 af/yr. Even if the higher demand figure of 56.3 AFY estimated by Schaaf & Wheeler, the independent third party evaluator, were used, the Project could meet its demand with the facilitation and expansion or acceleration of water conservation measures. To ensure impacts are fully mitigated and take into account the foregoing, the County would condition the Project such that the Project developer would be required to enter into a binding agreement with EBMUD that provides for the Project to fully accommodate its identified demand at a minimum of 56.3 AFY or the amount ultimately confirmed by EBMUD, whichever is greater.

Water Supply Sufficiency

The WSE's sufficiency analysis integrates the water demands with the water supplies and the assessment of existing and other planned future land uses (refer to Section 4.2.1 of the WSE for further discussion of other planned uses). The results are presented in ~~Table 3.13-6 and~~ Table 3.13-7 beginning with "current" conditions and continuing with 5-year increments from 2020 through 2040. ~~Each table represents one of the two water supply options.~~ This analysis assumes that the Project is fully constructed before 2040.

~~Table 3.13-6: Assessment of Sufficiency of CPUD Supplies (Option 1)~~

~~Year~~	~~Project Water Demand (af/yr)~~	~~Hydrologic Year Type~~		~~CPUD Schaads Reservoir~~	~~Sufficient~~
~~Current~~	~~0~~	~~Normal~~		~~0~~	~~n/a~~
	~~0~~	~~Single Dry~~		~~0~~	~~n/a~~
	~~0~~	~~Multiple Dry~~	~~Year 1~~	~~0~~	~~n/a~~
	~~0~~		~~Year 2~~	~~0~~	~~n/a~~
	~~0~~		~~Year 3~~	~~0~~	~~n/a~~
~~2020~~	~~25~~	~~Normal~~		~~25~~	~~yes~~
	~~26~~	~~Single Dry~~		~~26~~	~~yes~~
	~~26~~	~~Multiple Dry~~	~~Year 1~~	~~26~~	~~yes~~
	~~25~~		~~Year 2~~	~~25~~	~~yes~~
	~~22~~		~~Year 3~~	~~22~~	~~yes~~
~~2025~~	~~46~~	~~Normal~~		~~46~~	~~yes~~
	~~48~~	~~Single Dry~~		~~48~~	~~yes~~
	~~48~~	~~Multiple Dry~~	~~Year 1~~	~~48~~	~~yes~~
	~~46~~		~~Year 2~~	~~46~~	~~yes~~
	~~41~~		~~Year 3~~	~~41~~	~~yes~~

~~Year~~	~~Project Water Demand (af/yr)~~	~~Hydrologic Year Type~~		~~CPUD Schaads Reservoir~~	~~Sufficient~~
~~2030~~	~~46~~	~~Normal~~		~~46~~	~~yes~~
	~~48~~	~~Single Dry~~		~~48~~	~~yes~~
	~~48~~	~~Multiple Dry~~	~~Year 1~~	~~48~~	~~yes~~
	~~46~~		~~Year 2~~	~~46~~	~~yes~~
	~~41~~		~~Year 3~~	~~41~~	~~yes~~
~~2035~~	~~46~~	~~Normal~~		~~46~~	~~yes~~
	~~48~~	~~Single Dry~~		~~48~~	~~yes~~
	~~48~~	~~Multiple Dry~~	~~Year 1~~	~~48~~	~~yes~~
	~~46~~		~~Year 2~~	~~46~~	~~yes~~
	~~41~~		~~Year 3~~	~~41~~	~~yes~~
~~2040~~	~~46~~	~~Normal~~		~~46~~	~~yes~~
	~~48~~	~~Single Dry~~		~~48~~	~~yes~~
~~2040 (*cont.*)~~	~~48~~	~~Multiple Dry~~	~~Year 1~~	~~4~~	~~yes~~
	~~46~~		~~Year 2~~	~~46~~	~~yes~~
	~~41~~		~~Year 3~~	~~41~~	~~yes~~

Table 3.13-7: Assessment of Sufficiency of Off-site Water Conservation ~~(Option 2)~~

Year	Project Water Demand (af/yr)	Hydrologic Year Type		Off-site Water Conservation (af/yr)	~~/~~ Sufficient?
Current	0	Normal		48	n/a
	0	Single Dry		48	n/a
	0	Multiple Dry	Year 1	48	n/a
	0		Year 2	48	n/a
	0		Year 3	48	n/a
2020	25	Normal		48	yes
	26	Single Dry		48	yes
	26	Multiple Dry	Year 1	48	yes
	25		Year 2	48	yes
	22		Year 3	48	yes
2025	46	Normal		48	yes
	48	Single Dry		48	yes
	48	Multiple Dry	Year 1	48	yes
	46		Year 2	48	yes
	41		Year 3	48	yes
2030	46	Normal		48	yes

Year	Project Water Demand (af/yr)	Hydrologic Year Type		Off-site Water Conservation (af/yr)	~~/~~ Sufficient?
	48	Single Dry		48	yes
	46	Multiple Dry	Year 1	48	yes
	46		Year 2	48	yes
	41		Year 3	48	yes
2035	46	Normal		48	yes
	48	Single Dry		48	yes
	46	Multiple Dry	Year 1	48	yes
	46		Year 2	48	yes
	41		Year 3	48	yes
2040	46	Normal		48	yes
	48	Single Dry		48	yes
	48	Multiple Dry	Year 1	48	yes
	46		Year 2	48	yes
	41		Year 3	48	yes

As previously indicated, the WSE estimates water demands for the Project to be 46 af/yr at buildout during normal conditions (including non-revenue water demands). During single- and multiple-dry years, Project demands are estimated to increase to as much as 48 af/yr, but also to decrease to as low as 41 af/yr during multiple-dry years.

~~To address potential conveyance water losses associated with Supply Option 1 (CPUD Water), which might be as much as about 3 af/yr, up to 51 af/yr of CPUD Water would be released from Schaads Reservoir to ensure that 48 af/yr of CPUD Water is made available for delivery to EBMUD at Pardee Reservoir to meet Project demand, if this source is selected.~~

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~~Exhibit 3.13-3: 20-Year Reservoir Storage Record at Schaads Reservoir~~

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~~Table 3.13-6 and~~ Table 3.13-7 provides a detailed comparison of water demands and available water supplies. Based on this representation, sufficient water would be available under all hydrologic conditions in each of the 5-year increments through 2040. As indicated in the WSE, ~~either one of~~ the Project's proposed water supply source would be sufficient to independently ensure that the Project's demand is fully met, while addressing the operational needs of the entities involved in delivering the water. This is true even if the higher demand figures set forth in the third party evaluation were utilized in the analysis.

~~With the Project relying on either one of the two water supply options, as would be mutually agreed upon between the Project Applicant and EBMUD (as well as CPUD, as appropriate), and the assessment of surface water reliability conditions demonstrated for each supply option, sufficient.~~ Sufficient water is determined to exist to meet Project demands during normal, single dry, and multiple dry water years. Because the Project is not located within the service area of any existing public water system and, therefore, there are no other existing or future customers, water availability for existing EBMUD~~and CPUD~~ customers and planned future land uses would remain unchanged from conditions otherwise planned. As such, no new or expanded water entitlements would be required since the Project's demand would be offset through the facilitation and acceleration or expansion of specified conservation measures, as determined appropriate and acceptable by the EBMUD Board.

However, as noted above, the provision of water to the Project is dependent upon the involvement of EBMUD and—subject to the EBMUD's Board's discretion—would most likely be based on a service territory annexation. EBMUD's Board would have the authority to evaluate and confirm that the off-site conservation measures would ~~decide which source of water supply and which transaction structure best meet~~ achieve the performance standard of meeting the Project's water demand in normal years, single-dry years, and multiple-dry years without reducing water supply availability for existing or future customers in EBMUD's existing service area—all over the 20-year planning horizon specified by the state's water-and-land-use-planning laws (SB 610, Urban Water Management Planning Act). The Project applicant would be required to enter into a binding agreement with the EBMUD's Board of Directors to confirm the amount of Project water demand that would need to be offset through funding of identified conservation measures, and it would be within EBMUD's purview to set the Project's estimated demand in connection therewith. ~~Depending on the transaction structure decided upon, it~~ is anticipated that Local Agency Formation Commission (LAFCo) approval would be required. ~~In addition, if EBMUD selects CPUD Water as a supply source, CPUD would be required to approve the water purchase and operation agreements needed to implement the Project's water supply.~~ Without the appropriate EBMUD and~~,~~ LAFCo~~, and/or CPUD~~ approvals ~~(as necessary for the selected water source and transaction structure)~~, water may not be able to reach the Project Site. As such, mitigation is provided, requiring all necessary water supply approvals to be obtained prior to the recordation of the final map. Moreover, to further ensure impacts are fully mitigated, the County would condition the Project such that the Project developer would be required to enter into a binding agreement with EBMUD that provides for the Project to fully accommodate its identified demand at a minimum of 56.3 AFY or the amount ultimately

confirmed by EBMUD, whichever is greater. With the implementation of this mitigation, impacts with respect to water supply availability would be less than significant.

Water Treatment Facilities
The Project Site is located in an area served by the Walnut Creek Water Treatment Plant (WTP), which has a current treatment capacity of approximately 91 million gallons per day and a maximum-day demand of approximately 72 mgd (EBMUD 2006). Forecasted demand capacity is estimated to be approximately 96 mgd in 2030, and, as such, planned expansion improvements at the Walnut Creek WTP are already under construction and would increase capacity to 115 mgd (EBMUD 2015; EBMUD 2006).

The Project's total water demand of 48 af/yr (under single dry-year conditions) equates to approximately 15.3 million gallons per year or approximately 0.04 mgd. This represents less than 0.05 percent of the WTP's current capacity and less than 0.04 percent of the WTP's capacity once improvements are completed. As such, sufficient water treatment capacity exists to serve the Project and the additional expansion or construction of treatment facilities would not be required. Impacts would be less than significant.

Water Distribution Facilities
Subject to the EBMUD Board's approval, t~~T~~he Project would connect to EBMUD facilities located in the Camino Tassajara right-of-way directly adjacent to the Northern Site. On-site facilities would be constructed to serve the Project and function appropriately with the existing~~providing~~ EBMUD distribution facilities. As such, no new or expanded water distribution facilities would be required beyond those included as part of the Project. Impacts would be less than significant.

Level of Significance Before Mitigation
Potentially significant impact.

Mitigation Measure
MM USS-1 Prior to the recordation of the Final Map, the Project applicant must demonstrate to the DCD that all required approvals are obtained to implement provision of water to the Project Site via the selected water supply.

Level of Significance After Mitigation
Less than significant impact.

4.0–Cumulative Effects

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Table 4-1 is updated to reflect status of Magee Ranch Project

Table 4-1: Cumulative Projects

Jurisdiction	Project	Characteristics	Location	Status
Contra Costa County	Creekside Memorial Park Cemetery	Administrative offices/chapel building, indoor mausoleum; four outdoor mausoleums, storage building and corporation yard; one-acre site set aside for a possible future fire station, and several forms of landscaping	58.7 acres of 221.6-acre site at 7000 Camino Tassajara	Pending
	Alamo Creek Residential Development	Approximately 250 of 1,193 residences remain to be constructed	South of Camino Tassajara and west of Southern Site	Approved
Town of Danville	Podva Property Residential Development	20 single-family residences on 10 acres and 99 acres of permanent open space	End of Midland Way, Danville	Approved; under construction
	Danville Hotel	37,500 square feet of new residential, retail and restaurant space including 16 residential units	411 Hartz Avenue, Danville	Approved; under construction
Town of Danville (*cont.*)	Magee Ranch	70 single-family residences, 287 acres of open space	Southeast of Diablo Road and Green Valley/McCauley Road	~~Approved; unbuilt~~ **Approval was rescinded by Town of Danville**
	Tyler Court	Six single family residences on 2.48 acres	853 Diablo Road	Complete
	Weber Property	22 single family residences on 15 acres	Weber Lane	Complete
City of San Ramon	Walgreens	14,400-square-foot pharmacy	11440 Windermere Parkway	Pending
City of Dublin	The Groves	930 residential units	Dublin Boulevard/Keegan Street	Approved; under construction
	The Terraces	626 dwelling units	Dublin Boulevard/Keegan Street	Approved; under construction
	East County Hall of Justice	196,213 square feet courthouse	Hacienda Drive/Gleason Drive	Approved; under construction
	Grafton Plaza Mixed Use	235 dwelling units; 496,000 square feet mixed uses	Dublin Boulevard/Grafton Drive	Approved; unbuilt
	Grafton Station Phase III	133,446 square feet commercial	Dublin Boulevard/Tassajara Road	Approved; unbuilt

Jurisdiction	Project	Characteristics	Location	Status
	Kaiser Dublin Medical Center	1.2 million square feet of medical campus and commercial uses on 58.7 acres.	Dublin Boulevard/Lockhart Street	Pending
Source: Town of Danville, City of San Ramon, City of Dublin				

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Energy

The geographic scope of the cumulative energy analysis is the Pacific Gas & Electric (PG&E) service area. PG&E's electrical service area consists of all or part of the 47 counties in California (including Contra Costa County), while its natural gas service area consists of 39 counties in California comprising most of the northern and central portions of the State (including Contra Costa County).

The Project would demand an estimated 861,000 ~~million~~ kilowatt-hours of electricity and 5 million cubic feet of natural gas on an annual basis. The Project's structures would be designed in accordance with Title 24, California's Energy Efficiency Standards for Residential and Nonresidential Buildings as applicable. These standards include minimum energy efficiency requirements related to building envelope, mechanical systems (e.g., HVAC and water heating systems), and indoor and outdoor lighting. The incorporation of the Title 24 standards into the Project would ensure that the Project would not result in the inefficient, unnecessary, or wasteful consumption of energy. Future development projects in the PG&E service area would also be required to comply with Title 24 energy efficiency standards. Therefore, the Project, in conjunction with other future projects, would not have a cumulatively significant impact related to energy consumption.

Appendix N

A new Appendix N that includes the Water Demand Estimate for the Tassajara Parks Project, prepared by Schaaf & Wheeler, has been added.

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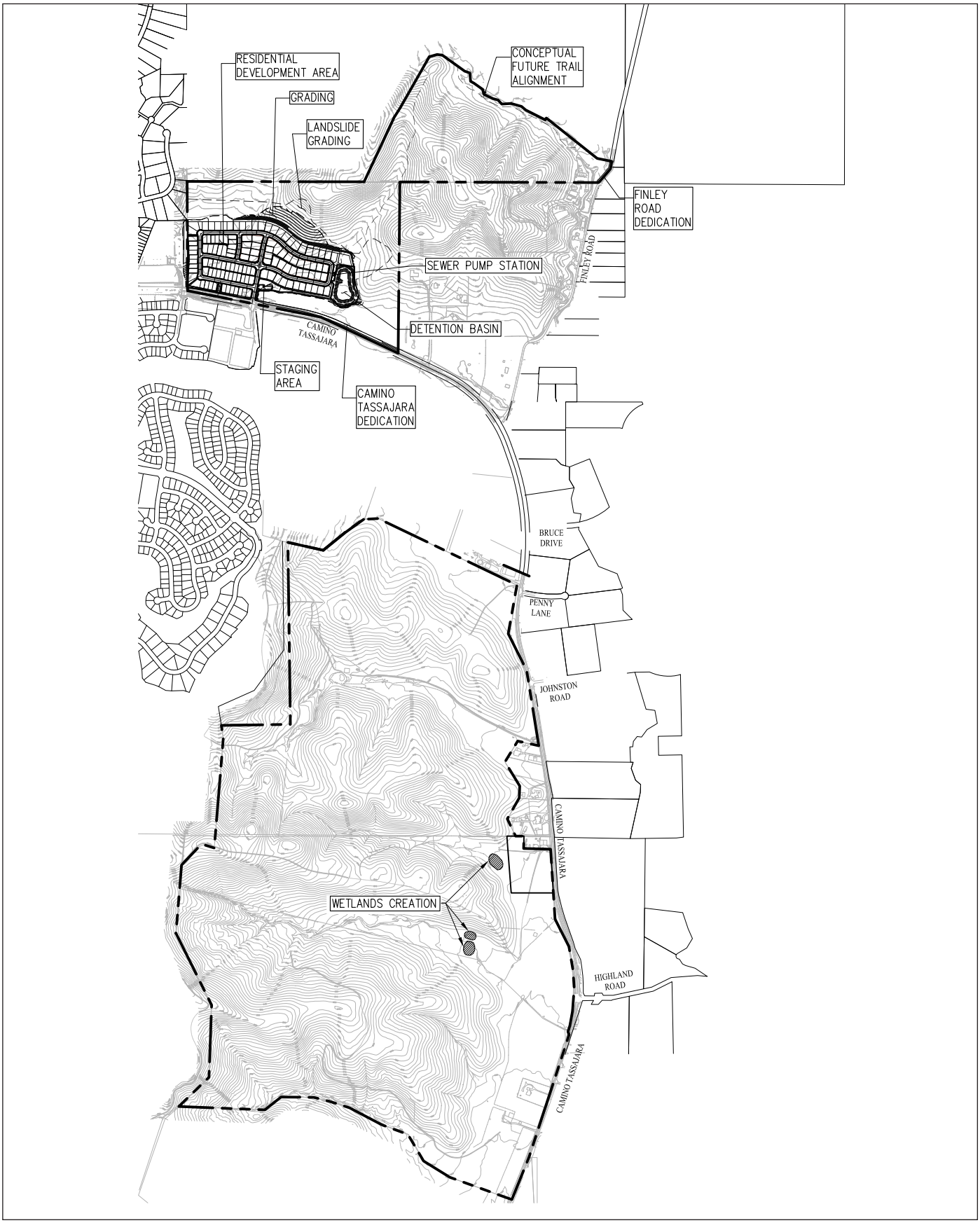

Source: Carlson, Barbee & Gibson, Inc, September 02, 2020.

Exhibit 2-4
Areas of Disturbance

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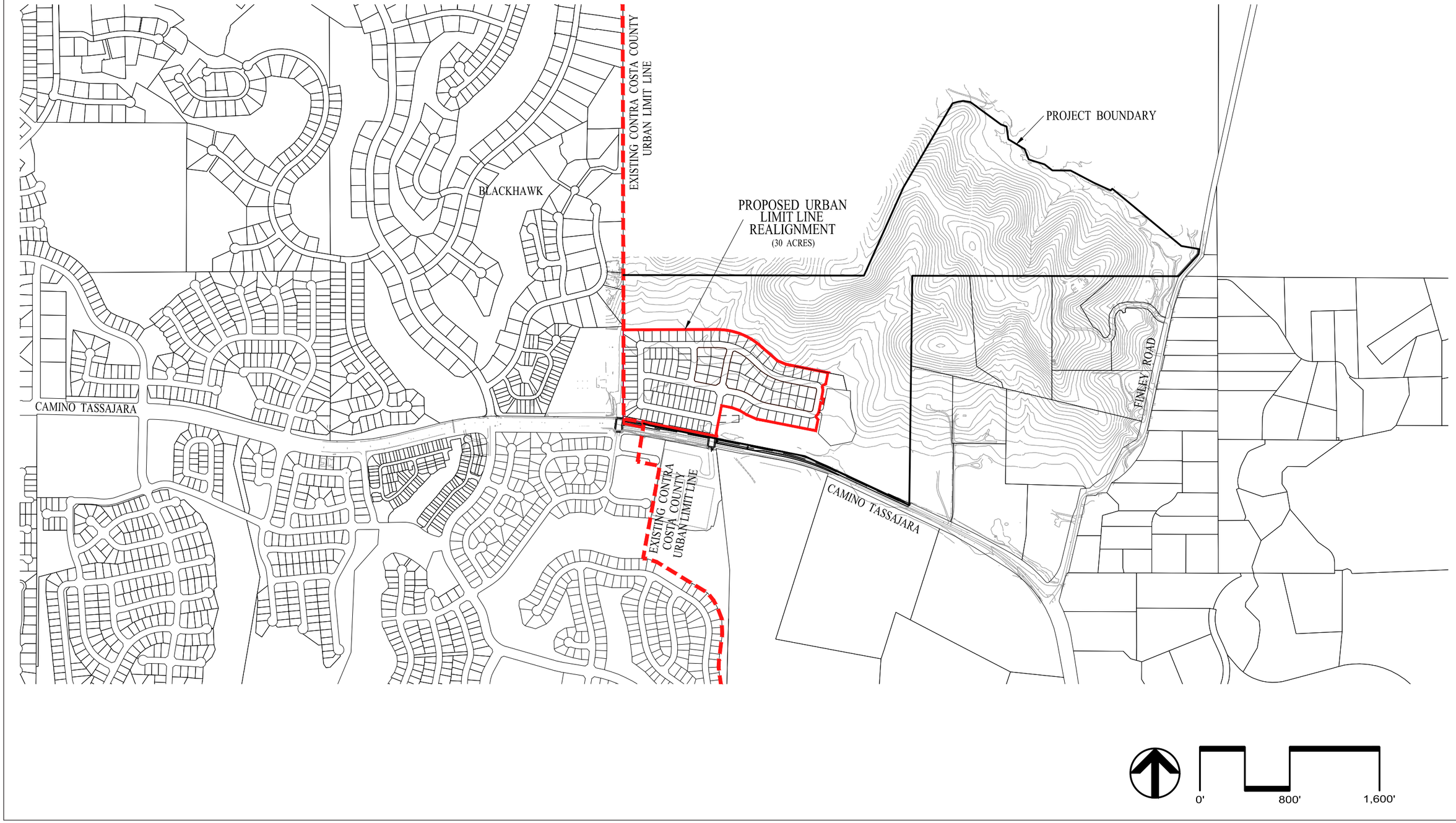

Source: Carlson, Barbee & Gibson, Inc, September 02, 2020.

Exhibit 2-6
Proposed Urban Limit Line

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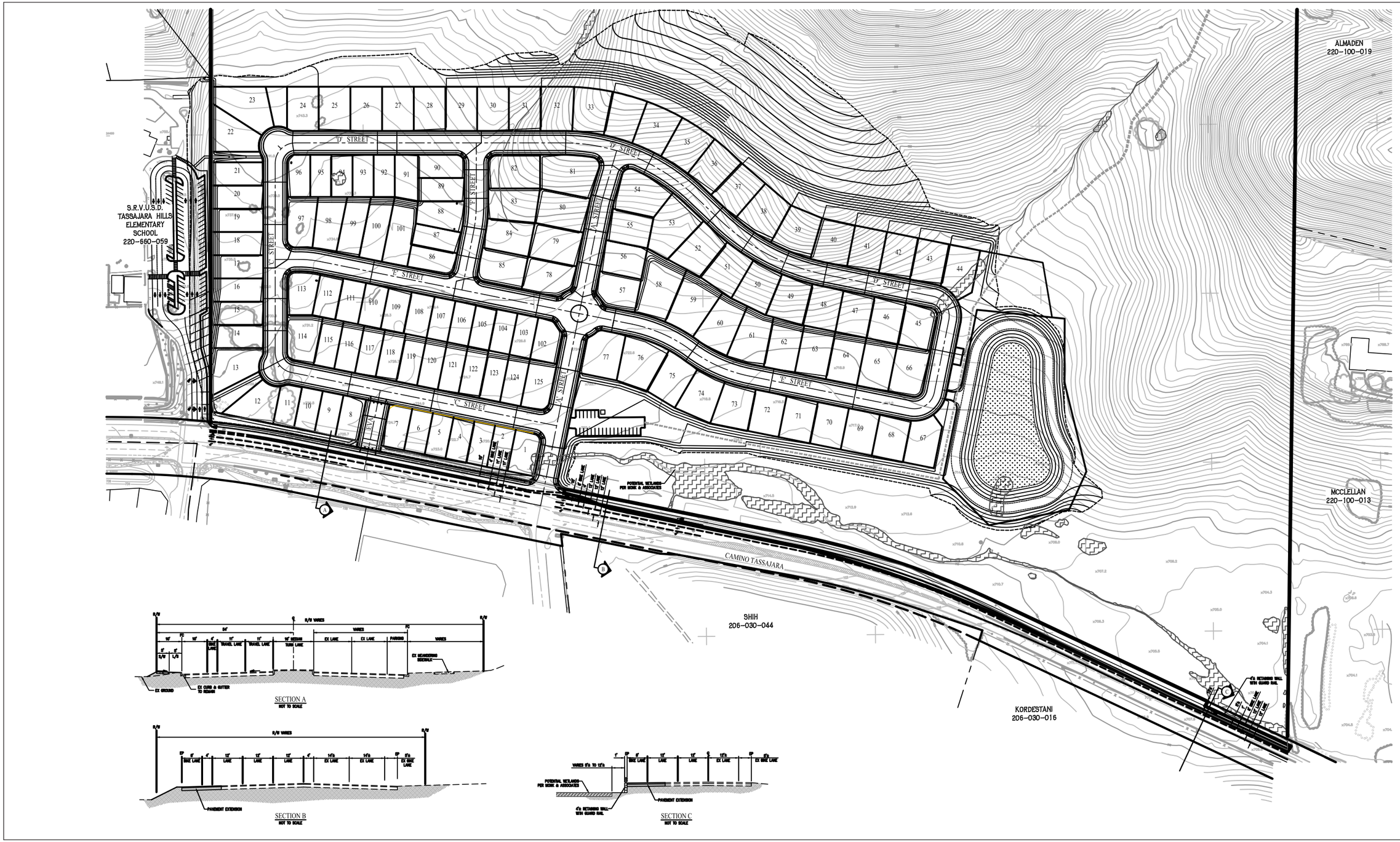

Source: Carlson, Barbee & Gibson, Inc, 2020.

Exhibit 2-7
Residential Site Plan

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GRADING IMPACT

DISTURBED AREA (GRADING/IMPROVEMENTS)	DISTURBED AREA:	42.4 ac
DISTURBED AREA - REMEDIAL GRADING	DISTURBED AREA:	10.3 ac
DISTURBED AREA - EARTHEN TRAIL (4,880 LF)	DISTURBED AREA:	0.4 ac
	TOTAL DISTURBED AREA:	54.3 ac

LEGEND

- PROPOSED GRADING DAYLIGHT
- MAJOR CONTOUR
- MINOR CONTOUR
- EARTHEN TRAIL

0' 400' 1,200' 1,600'

Source: Carlson, Barbee & Gibson, Inc, September 02, 2020.

Exhibit 2-10
Grading Impact Areas

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Source: Carlson, Barbee & Gibson, Inc, 2020.

Exhibit 2-11
Depth of Cut and Fill

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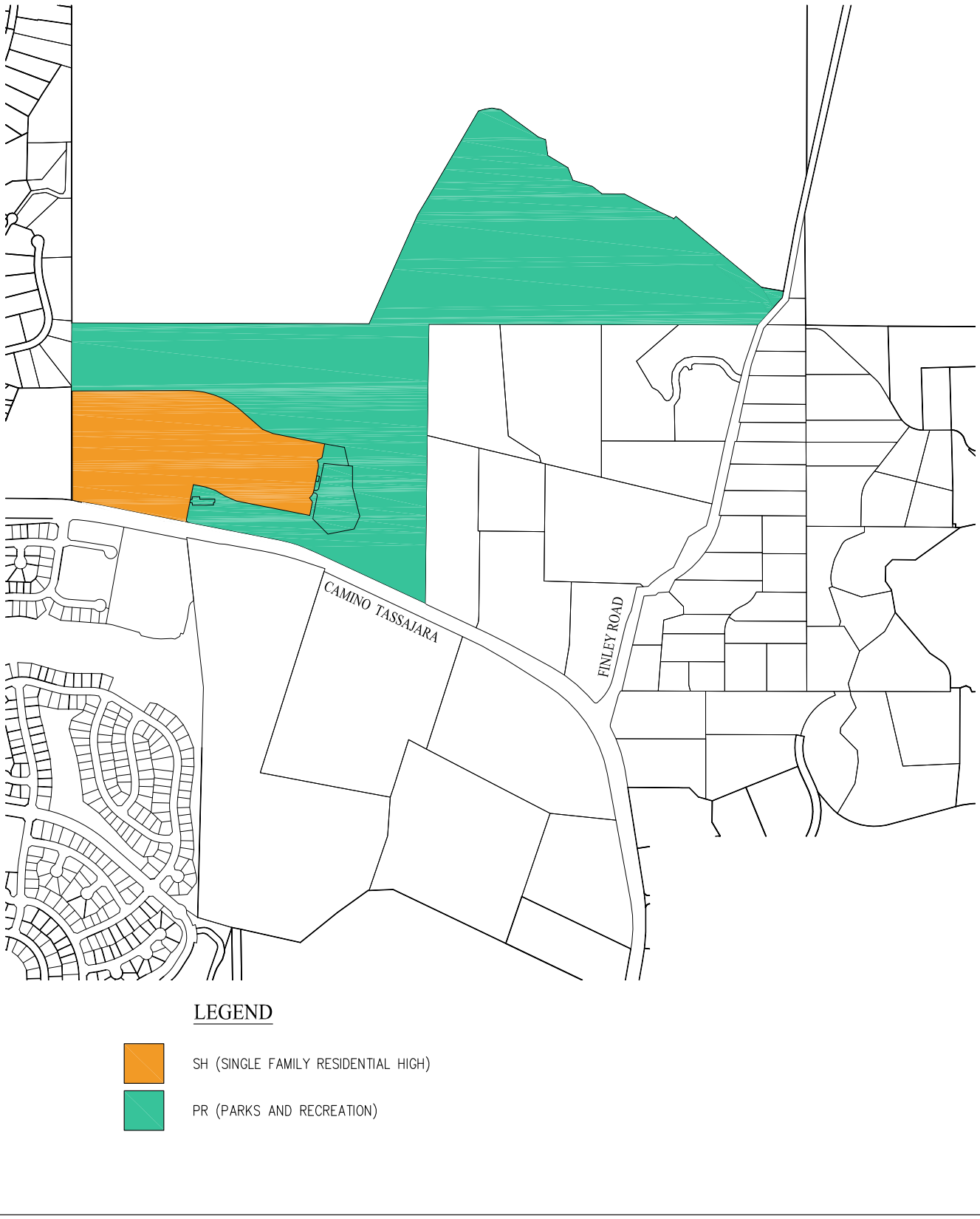

Source: Carlson, Barbee & Gibson, Inc, September 2020.

Exhibit 2-12a
Proposed General Plan Land Use Designations
Northern Site

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Source: Carlson, Barbee & Gibson, Inc, September 02, 2020.

Exhibit 2-13a
Proposed Zoning Designation – Northern Site

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Source: Environmental Vision, 2020

Exhibit 3.1-5
Visual Simulation View Point Locations

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Source: Carlson, Barbee & Gibson, Inc, 2020.

Exhibit 3.4-7
Special-Status Plant Species - Potential Impacts

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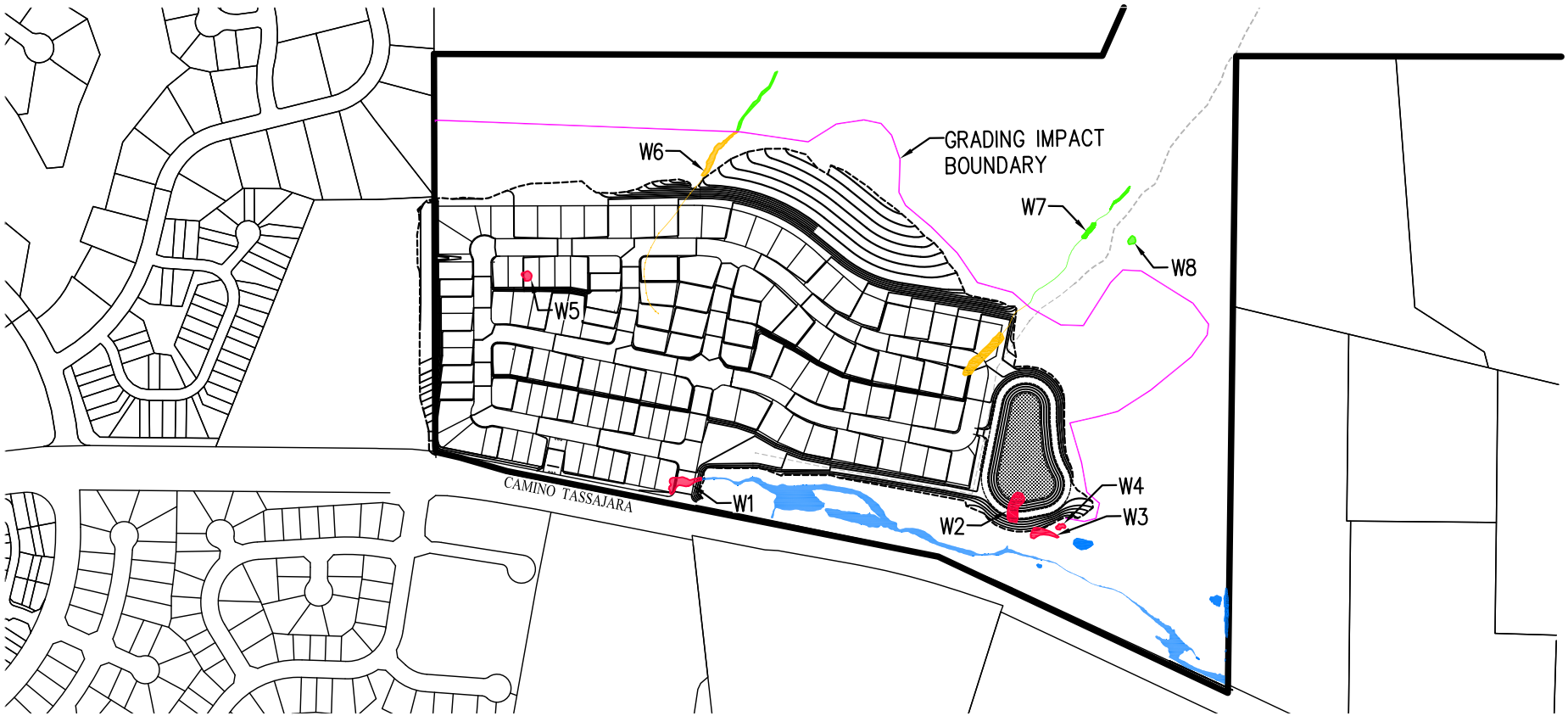

AREA	POTENTIAL WETLANDS		2006 CONFIRMED WETLANDS		OTHER WATERS	
	EXISTING	IMPACTED	EXISTING	IMPACTED	EXISTING	IMPACTED
W1	45,164 sf	2,453 sf	-	-	-	-
W2	3,179 sf	3,179 sf	-	-	-	-
W3	1,565 sf	1,565 sf	-	-	-	-
W4	376 sf	376 sf	-	-	-	-
W5	730 sf	730 sf	-	-	-	-
W6	-	-	3,567 sf	2,094 sf	515 lf (1,030 sf)	515 lf (1,030 sf)
W7	-	-	5,317 sf	4,312 sf	485 lf (1,455 sf)	129 lf (387 sf)
W8	-	-	467 sf	467 sf	-	-
TOTALS:	51,014 sf (1.17 Ac)	8,303 sf (0.19 Ac)	9,351 sf (0.21 Ac)	6,873 sf (0.16 Ac)	1,000 lf (2,485 sf) (0.06 Ac)	644 lf (1,417 sf) (0.03 Ac)

LEGEND

- 2006 CONFIRMED WETLANDS AND OTHER WATERS (IMPACTED)
- 2006 CONFIRMED WETLANDS AND OTHER WATERS (NOT IMPACTED)
- POTENTIAL WETLANDS AND OTHER WATERS (IMPACTED)
- POTENTIAL WETLANDS AND OTHER WATERS (IMPACTED)
- MAJOR CONTOUR
- MINOR CONTOUR

Source: Carlson, Barbee & Gibson, Inc, 2020

Exhibit 3.4-8
Potentially Impacted Wetlands

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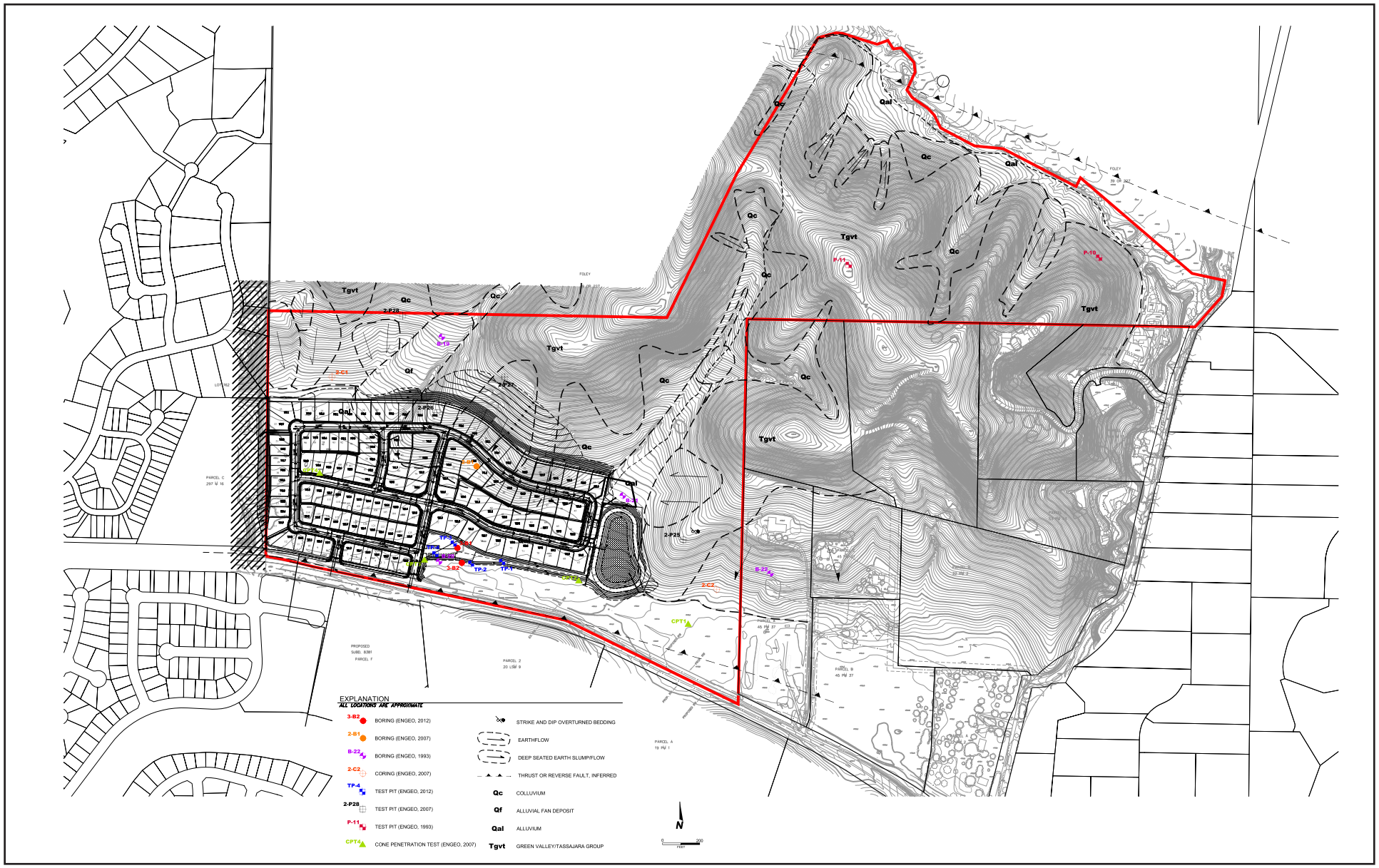

Source: ENGEO Inc., September 2020.

Exhibit 3.6-1
Northern Site Soil Geologic Conditions

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Source: Carlson, Barbee & Gibson, Inc, 2020

Exhibit 3.6-2
Preliminary Grading and Drainage Plan

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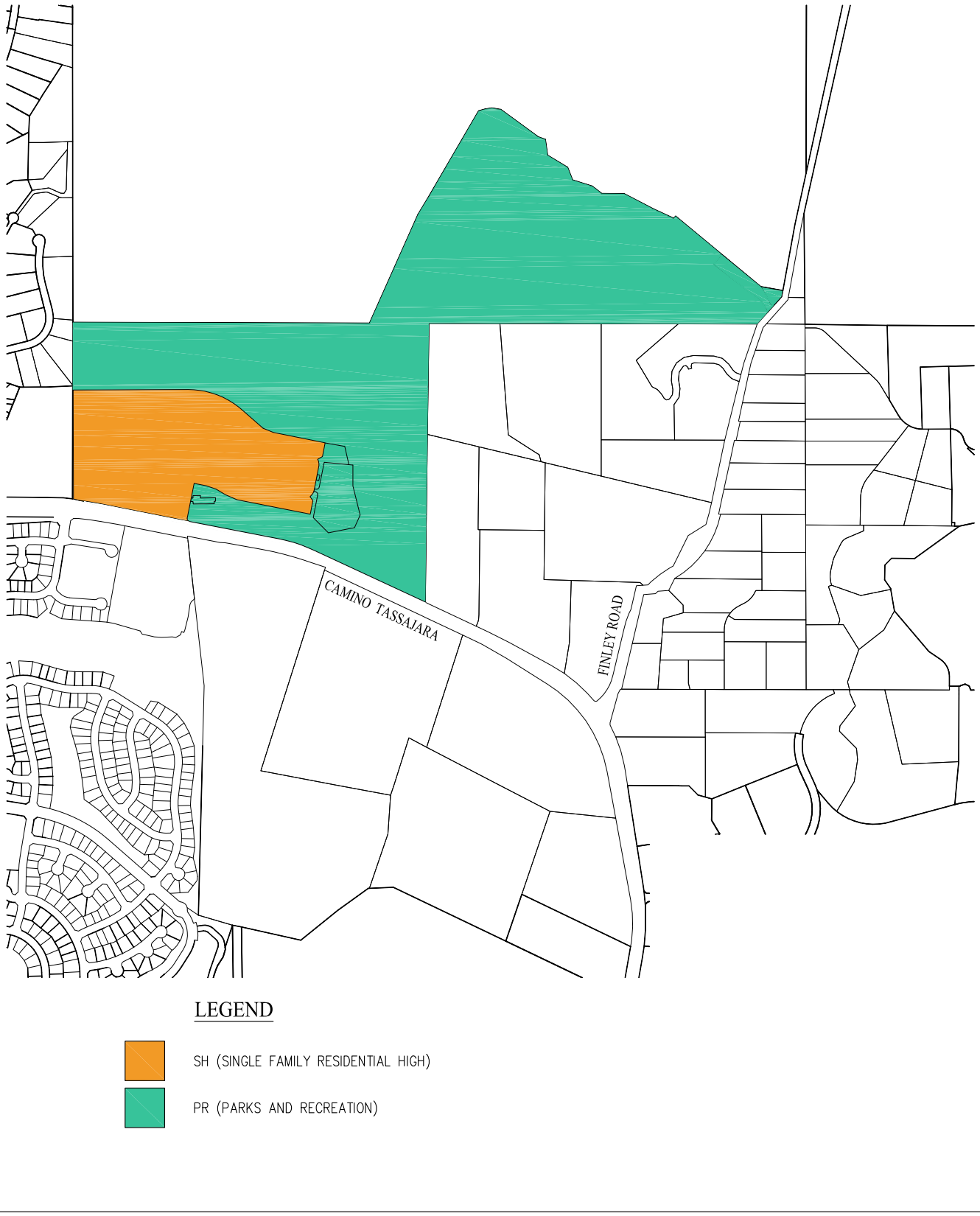

Source: Carlson, Barbee & Gibson, Inc, September 2020.

Exhibit 3.9-3a
Proposed General Plan Land Use Designations
Northern Site