# Draft
# Environmental Impact Report

## Master Plan 2035

### California Polytechnic State University, San Luis Obispo

CAL POLY
SAN LUIS OBISPO

November 2017

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# Environmental Impact Report

# Master Plan 2035

## California Polytechnic State University, San Luis Obispo

November 2017

State Clearinghouse # 2016101003

**Prepared for**

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# Summary

This Environmental Impact Report (EIR) has been prepared in accordance with the California Environmental Quality Act (CEQA) (Public Resources Code, Section 21000 et seq.) and the CEQA Guidelines (California Code of Regulations, Section 15000 et seq.) to analyze the potential significant impacts associated with the Master Plan 2035 project at the California Polytechnic State University, San Luis Obispo. This EIR is a Program EIR for the Master Plan, and also a project-level EIR for the Slack and Grand Residential Neighborhood component of the Master Plan.

## The Project

The project is the adoption and implementation of the California Polytechnic State University, San Luis Obispo (Cal Poly or University) Master Plan 2035 (Master Plan). The Master Plan provides for needed academic facilities, additional housing on campus, recreation and athletics facilities, and other support facilities on the main campus accommodating students seeking education at Cal Poly, and the University's needs over the next two decades.

Over 15 years after the adoption of the 2001 Master Plan, the majority of the main campus facilities have been developed to accommodate 17,500 full-time equivalent (FTE)[1] students currently enrolled at the University. As Cal Poly education continues to be in great demand, the proposed Master Plan 2035 provides a framework for implementation of the University's goals and programs by identifying needed facilities and improvements within the main campus to accommodate a gradual growth in student enrollment projected to reach 22,500 FTE students, or 25,000 headcount, by 2035.

The University conducted a 2-year wide-ranging planning process to develop the Master Plan, which included over 200 meetings that addressed academic program demand, physical and environmental constraints and opportunities to support a future student enrollment of 22,500 FTEs.

## Master Plan Objectives

The principal objective of the Master Plan is to support and advance the University's educational mission by guiding the physical development of the campus and its facilities over the next 20 years to accommodate gradual student enrollment growth while preserving and enhancing the quality of campus life.

[1] FTE means "full-time equivalency" for the purposes of full-time enrolled students. The current student enrollment on campus of 17,500 FTE students equates to 20,000 headcount students since it includes part-time students as well. (For example, an enrollment level of 10,000 FTE students may have 8,000 full-time students and 4,000 part-time students.)

To do so, the Master Plan lays out the land use, circulation, and physical development of the campus to educate a future student enrollment of 22,500 FTEs, and supports the University goals to:

- Enhance academic quality and student success through Learn by Doing;
- Increase the diversity of students, faculty, and staff;
- Strengthen the campus' compact, cross-disciplinary Academic Core;
- House all freshmen and sophomore students plus 30% of upper division students in residential communities on campus;
- Provide housing opportunities on campus primarily for University faculty and staff to promote faculty and staff recruitment and retention, and to enhance faculty and staff connectivity with the campus. In addition, provide housing opportunities that may be offered to non-traditional students such as graduate students, veterans, and those with families, and possibly alumni or retirement housing, and for the greater San Luis Obispo community;
- Offer more vibrant evening and weekend events and activities on campus;
- Attain a modal shift from cars to more pedestrian, bicycle, and transit use;
- Reinforce campus-wide environmental sustainability;
- Phase enrollment growth parallel with completion of new student housing and instructional facilities; and,
- Generate revenue from public and private sources to realize the Master Plan objectives and to further support and benefit the California State University's (CSU) educational mission

# Project Location

Cal Poly holds over 6,000 acres in San Luis Obispo County. About half of that land makes up the main campus—including its Academic Core, residential areas, agricultural production and rangelands—which abut the City of San Luis Obispo on the south and west, and the County of San Luis Obispo on the north and east. Residential neighborhoods surround the campus to the west and border the southern edge of campus with single family homes. Highway 1 frames the western side of the campus with commercial development. At the southwest corner several multi-family housing complexes accommodate Cal Poly students—with some specifically designed for that purpose, such as Mustang Village and The SLO Student Living.

# Master Plan Characteristics

The Master Plan provides guidance for facilities and improvements over the next 20 years needed to fulfill academic program demands while addressing physical and environmental constraints and opportunities, to support a future enrollment of 22,500 FTE, or 25,000 headcount students. To do so, the Master Plan intensifies development within the campus' Academic Core, and phases new facilities development in the northern area of the campus. At the same time, the Master Plan is designed to protect natural environmental features and agricultural lands that form the character of campus.

# Campus Facilities and Improvements Framework

## Academic Facilities

Currently, the existing campus academic facilities provide approximately 2.1 million square feet of space for University academic programs. The Master Plan provides for approximately 800,000 square feet of new academic facilities, including new multidisciplinary, engineering, and other academic facilities, as well as expanded campus library and other facilities. In addition, approximately 355,000 square feet of the existing academic facilities that have reached the end of their useful life will be replaced. Also, a number of facilities will be renovated/remodeled to provide the needed functionality for the evolving academic programs and teaching methodologies.

## Support Services and Administrative Facilities

The existing support services and administrative facilities provide approximately 240,000 square feet of space. The Master Plan provides for approximately 530,000 square feet of new support and administrative facilities needed to adequately serve the University students, faculty and staff, including a new activity center to support new student housing. The Master Plan also provides for replacement of some existing support facilities as well as a renovation and expansion of the University Union.

## Student Housing

The University provides approximately 8,200 beds in its existing student housing facilities, including student housing facilities under construction. These facilities house approximately 37% of Cal Poly's undergraduate students on campus. A major goal of the Master Plan is to house all freshman and sophomore students on campus, as well as approximately 30% percent of upper division students. To do so, the Master Plan provides for approximately 6,800 new student beds. With this housing, all freshmen and sophomore students will be housed on campus, and the on campus housing will accommodate 65% of all University's undergraduate students. The new student housing will include both student dormitories and apartments. The dormitories will be located predominantly within the east campus area in proximity to the existing student housing, and the apartments within the north campus area within easy walking and biking distance of the campus Academic Core. The new housing will be supported with dining facilities, an activity center, and other amenities, making the campus more attractive to students "24/7."

## Faculty/Staff Housing and Options Primarily for Non-Students

The Master Plan designates five locations as "Residential Neighborhoods" on the edges of the campus, primarily for non-students. The development housing at all these locations could provide a total of up to 1,470 units that will be made available to the University faculty and staff, non-traditional students, and the general public. Providing housing opportunities for University faculty and staff is vital for Cal Poly to recruit and retain faculty and staff. A priority system will be used to make sure that University-related housing needs are fulfilled first, before making units available to the general market in a community where reasonably priced apartment-style housing

is needed. The Residential Neighborhood anticipated to be developed first is the neighborhood east of Grand Avenue at Slack Street, providing 420 apartment-style units.

## Sport and Event Facilities

The Master Plan provides for enhancement of existing facilities, including the field expansion and addition of approximately 4,000 seats to the existing Spanos Stadium to better house home football games, home soccer games, and graduation ceremonies. In addition, a new sports and event arena with approximately 5,500 seats is planned to house men's and women's basketball games, women's volleyball games, and other campus events. A new student housing village will also include a satellite recreation center for students, faculty and staff. Some existing playing fields will be relocated west of the railroad track, and other informal recreation areas will be added adjacent to, and incorporated within, the new student housing. To allow for a potential residential neighborhood on the north side of Slack Street, the track and football practice field will be relocated with the provision of the Master Plan.

## Open Space and Landscaping

The Master Plan further enhances open space throughout the campus, including its existing major and iconic open space areas by extending Dexter Lawn and Centennial Green to create a more meadow like open space with Central Coast landscaping and numerous seating areas. All new buildings on campus will also include adjacent smaller landscaped open spaces that will provide outdoor seating and study areas. Landscaping will use an attractive plant palette with drought-resistant plants. With these components, the Master Plan emphasizes the integrative role of open space: creating connections between landscape and structures, and a comfortable human-scaled setting for educational activities and campus life.

## Circulation Infrastructure Improvements

The Master Plan includes the following key principles for the campus' circulation:

- Shift modal hierarchy to: (1) walking, (2) bikes, (3) transit, and (4) cars;
- Reduce trips and parking demand;
- Create a pedestrian core;
- Provide expanded and improved bicycle circulation system, including bicycle parking closer to major campus facilities and activity centers;
- Consider a campus shuttle;
- Provide adequate access for maintenance, delivery, emergency, and special needs; and,
- Ensure safety of all transportation modes.

The Master Plan provides for an enhanced pedestrian and bike circulation system with new and improved pedestrian and bicycle paths throughout the campus. Additional parking for bicycles located near major activity centers will also be installed at the campus. The planned system increases safety by creating a pedestrian-only core area of the campus and eliminating conflicts between pedestrians, bicycles, and cars. The Master Plan calls for a multi-modal transit center and transit stop to serve the new student housing residential areas. The Master Plan also includes two new roads supporting the planned campus uses that will not only accommodate vehicles, but

also pedestrians and bicycles. In addition, the Master Plan also includes the redesign of three roadways within the campus to restrict through traffic, to create a stronger and safer pedestrian presence, and to encourage bicycle use.

## Parking

Currently, the campus provides 7,427 parking spaces. The Master Plan retains this amount of parking on campus in the future; there will be no increase in the number parking spaces. Any existing parking that will be displaced by new facilities or uses will be replaced, including through the provision of structured parking in new parking structures.

## Utility Infrastructure Improvements

Utility infrastructure improvements will provide modernization and enhancements to the existing campus utility systems to serve new facilities, including drainage, water, sewer - including a new wastewater reclamation facility located near the southwest corner of campus near the railroad tracks, and other utility infrastructure systems. While ensuring a quality operational performance of these systems, the improvements will also conserve water, conserve energy, reduce carbon emissions, and reduce utility costs.

## "Smart Growth," Sustainability, and Environmental Stewardship

The Master Plan incorporates "smart growth" measures, including the compact development form around the Academic Core and mixed uses that reduce the reliance on cars and improve the efficiency of infrastructure and energy use. Furthermore, and importantly, the Master Plan calls for increased housing on campus that will reduce commuting and its associated environmental impacts, and also emphasizes a pronounced shift away from cars toward active transportation modes including walking, bikes, and transit. In addition, the Master Plan emphasizes use of renewable energy sources including solar and wind energy, water reclamation, and waste composting, which is especially important for the University with hands-on, Learn by Doing programs.

Cal Poly is committed to being a leader in sustainability in its facilities and operations, and views sustainability as an essential element of its academic mission. Therefore, the Master Plan strives to protect important environmental resources, keeping most prime agricultural land in production, creating protective buffers around creeks, and preserving open space and resources that are important to Cal Poly's image and character. It also requires that new facilities and campus infrastructure be environmentally responsible, energy efficient, and showcase advancements in sustainable technology. All new buildings are designed to meet LEED (Leadership in Energy and Environmental Design) standards.

## Slack and Grand Residential Neighborhood

The main objectives of the Slack and Grand Residential Neighborhood component of the Master Plan are to:

- Provide housing opportunities on campus primarily for University faculty and staff to promote faculty and staff recruitment and retention, and to enhance faculty and staff connectivity with the campus.
- In addition, provide housing opportunities to non-traditional students such as graduate students, veterans, and those with families, and possibly alumni or retirement housing, and for the greater San Luis Obispo community.
- Generate revenue from public and private sources to realize the Master Plan objectives and to further support and benefit the CSU's educational mission

The 22-acre site of the Slack and Grand residential neighborhood is located northeast of the intersection of Grand Avenue and Slack Street. The site is currently undeveloped, and is only intermittently used by Cal Poly for horse grazing. The neighborhood will provide 420 high-quality rental units in two to five-story apartment buildings. The units will provide a mix of studio, 1, 2, and 3-bedrooms. Parking will be provided on the site at an overall ratio of 1.7 spaces per unit. The amenities provided on the site include open space and courtyards for future residents and their families including a community playground; a day care facility serving the families of the residents; and neighborhood retail primarily serving future residents. The retail is anticipated to include a small café and similar retail, totaling approximately 8,500 square feet, with one small retail space located on the ground floor of apartment buildings along Slack Street and the other on the ground floor of apartment buildings along Grand Avenue. In concept, an amenity of a pool and spa may also be considered. The neighborhood also includes sustainability features in its landscaping, including a habitat restoration zone and retention basins for accommodating runoff on site. All site utilities, including water, sewer, and drainage will connect to the existing utility systems.

# Environmental Impacts

Cal Poly prepared this EIR to analyze the potential environmental impacts associated with the Master Plan project, including the Slack and Grand residential neighborhood. In addition, the EIR identifies mitigation measures capable of avoiding or substantially reducing significant impacts. A summary of environmental impacts, mitigation measures, and a level of impact remaining after mitigation is presented in Table S-1 at the end of this Summary.

The analysis contained in this EIR uses words "significant" and "less than significant" in the discussion of impact. These words specifically define the degree of impact and parallel language used in CEQA Guidelines. As required by CEQA, mitigation measures have been identified in this EIR to avoid or substantially reduce the level of potentially significant adverse impacts to the greatest extent possible. Certain significant impacts, even with the inclusion of mitigation measures, cannot be reduced to a level below significance. Such impacts are identified as "unavoidable significant impacts."

## Impacts Considered and Found to be Less Than Significant

The analysis contained in the EIR indicates that the project will not result in a significant impact with respect to the following:

- Agricultural Resources: Impacts related to Master Plan use designations.
- Geology and Soils: Impacts related to fault rupture.
- Greenhouse Gases (GHG): Impacts related to emissions per service population and diesel particulate matter (DPM).
- Hydrology and Water Quality: Impacts related to flooding, groundwater recharge, inundation by seiche, tsunami, mudflow, or dam/levee failure.
- Noise: Impacts related to noise generation other than short-term and intermittent construction noise.
- Population and Housing: Impacts related to provision of on-campus student housing and residential neighborhoods.
- Growth-inducing and significant irreversible effects.

Pursuant to CEQA and the CEQA Guidelines, an Initial Study was prepared for this project (refer to Appendix A). The Initial Study concluded that implementation of the Master Plan will result in either no impact or a less than significant impact with regard to:

- Hazards and Hazardous Materials
- Land Use and Planning
- Mineral Resources

## Potentially Significant Impacts that Can Be Mitigated

The EIR analysis identified the following potentially significant impacts associated with the Master Plan that can be mitigated to less than significant levels.

- Biological Resources: Impact on sensitive biological resources, including jurisdictional waters, related to campus development affecting sensitive biological areas, including Brizzolara and Stenner Creeks.
- Aesthetics: Impacts related to scenic resources as seen from Highway 1, and light and glare.
- Geology and Soils: Impacts related to strong seismic ground shaking, seismic-related ground failure, landslides, soil erosion, unstable geologic units, and expansive soils.
- Hydrology and Water Quality: Impacts associated with existing drainage patterns and generation of additional runoff.
- Traffic and Circulation: Impact on five study intersections related to traffic associated with residential neighborhoods.
- Public Services and Recreation: Impacts on public services and recreation related to incremental increase in demand for public services over the next 20 years.
- Utilities and Service Systems: Impacts on utilities and service systems related to development of new and improved utility systems on campus and incremental increase in demand for utility services over the next 20 years.

- Water Supply: Impact on water supply related to incremental increase in water use on campus over the next 20 years.

## Unavoidable Significant Impacts

The CEQA Guidelines define a significant impact on the environment as "a substantial, or potentially substantial, adverse change in any of the physical conditions within an area affected by the project, including land, air, water, flora, fauna, ambient noise, and objects of historic or aesthetic significance" (Section 15382). In order to approve a project with unavoidable significant impacts, the lead agency must adopt a Statement of Overriding Considerations. In adopting such a statement, the lead agency finds that it has reviewed the EIR, has balanced the benefits of the project against its unavoidable significant effects, and has concluded that the benefits of the project outweigh the unavoidable adverse environmental effects, and thus, the adverse environmental effects may be considered "acceptable" (CEQA Guidelines, Section 15093[a]).

The EIR identifies the following unavoidable significant impacts associated with implementation of the Master Plan, including the Slack and Grand residential neighborhood component:

- Cultural Resources: Impacts on cultural resources, including historic resources, existing and potentially inadvertently discovered archaeological resources, and potentially inadvertently discovered Native American or tribal cultural resources, paleontological resources, or human remains.
- Agricultural Resources: Project-specific and cumulative impact on agricultural resources due to converting 28 acres of important farmland within the main campus to other campus uses.
- Aesthetics: Site-specific visual impacts associated with Slack and Grand Residential Neighborhood and cumulative aesthetic impact.
- Traffic and Circulation: Project-specific and cumulative traffic impacts at the intersection of Santa Rosa Street/Foothill Boulevard and three U.S. Highway 101 (US 101) freeway segments.
- Air Quality: Project-specific and cumulative long-term operational air quality impacts.
- Construction Noise and Air Quality: Project-specific short-term and intermittent construction-related air quality and noise impacts.
- Noise: Project-specific spectator noise impact during events held at Spanos Stadium.

# Alternatives to the Project

The alternatives to the Master Plan considered include the following:

- Alternative 1: "No Project" (continuation of Current Master Plan alternative, required by CEQA)
- Alternative 2: Less Residential Neighborhoods Housing
- Alternative 3: Increased On-Campus Student Housing
- Alternative 4: Alternate Location for Slack and Grand Residential Units
- Alternative 5: Master Plan without Residential Neighborhoods

# Issues Identified During the NOP Process

In response to the NOP, a number of issues were raised, including air quality, agricultural land, traffic, tribal cultural resources, water supply, biological resources, aesthetics, noise, need for student housing on campus, and need for enhancing bicycle circulation and transit, among other issues. All these issues are addressed in the EIR in Chapter 3.0, Environmental Impact and Mitigation Measures.

# Mitigation Monitoring Program

In accordance with CEQA Section 21081.6, a mitigation monitoring program will be adopted by the Board of Trustees of the California State University if the Master Plan is approved. The mitigation monitoring program will be prepared as a separate document and will be designed to ensure compliance with the adopted mitigation measures contained in the Final EIR. The program will be available for public review prior to the Board of Trustees actions on the Master Plan.

# Summary of Impacts

Table S-1 summarizes the environmental effects associated with implementation of the Master Plan, the mitigation measures required to avoid or minimize adverse impact, and the level of impact remaining after full implementation of identified mitigation measures.

## Table S-1. Summary of Environmental Impacts and Mitigation Measures

| | Potential Environmental Impact | Mitigation Measures | Level of Impact After Mitigation |
|---|---|---|---|
| ***Impacts Considered but Found to be Less than Significant*** (CEQA Guidelines Section 15128) | | | |
| Agricultural Resources | The Master Plan re-designates four areas currently designated for Outdoor Teaching and Learning (and which currently support agricultural uses) to non-agricultural uses. The Master Plan would also convert one area currently designated for non-agricultural use (Recreation, Athletics, and Physical Education) to Agriculture Facilities. The Master Plan has identified these areas as appropriate for other types of University uses to balance competing needs and implement the University's strategic vision and its academic mission as a comprehensive polytechnic University. Therefore, potential impact associated with conflict with existing University Outdoor Teaching and Learning designation is considered less than significant. | Impacts will be less than significant and no mitigation is required. | Less than significant |
| Geology and Soils | No faults have been identified on or near the campus that will indicate a significant risk of impacts due to fault rupture. | Impacts will be less than significant and no mitigation is required. | Less than significant |
| Hydrology and Water Quality | All development pursuant to the Master Plan will be designed to avoid the 100-year flood hazard areas to the extent feasible, and impact related to flooding is considered less than significant.<br><br>Campus development pursuant to the Master Plan will increase impervious surfaces within the campus. While this increase could reduce infiltration to the groundwater basin, the expansion of open spaces, new landscaping and enhanced riparian habitats associated with Brizzolara Creek and Stenner Creek will likely improve infiltration and groundwater recharge. Implementation of Low Impact Development (LID) standards as provided in the 2013 NPDES General Permit No. CAS000004 will also improve infiltration and groundwater recharge. | Impacts will be less than significant and no mitigation is required. | Less than significant |

| | Potential Environmental Impact | Mitigation Measures | Level of Impact After Mitigation |
|---|---|---|---|
| | Therefore, impacts associated with groundwater are expected to be less than significant.<br><br>Given that all new facilities developed pursuant to the Master Plan will be located outside of the delineated flood hazard area along Brizzolara and Stenner Creeks to the extent feasible, the risk of mudflow is considered low. Therefore, impacts associated with inundation by seiche, tsunami, mudflow, or dam/levee failure are considered to be less than significant. | | |
| Noise<br>(long-term operational; project-specific and cumulative) | The project-related traffic noise is not projected to be significant at any of the nine study roadway segments. The campus' noise from day to day activities of students attending classes and engaged in the academic programs is contained within the campus' facilities, including classrooms, laboratories, library, dining facilities, and within campuses interior open spaces. The new student housing will be located deeply within the interior of the campus and far away from the off-campus residential neighborhoods. As the future residents of the new residential neighborhoods will be primarily for non-students, the anticipated ambient noise levels associated with day-to-day activities, including activities at the Grand and Slack residential neighborhood, will be similar to noise generated by residents of any other residential neighborhood with apartment-style units. | Impact will be less than significant, and no mitigation is required. | Less than significant |
| Population and Housing<br>(project-specific and cumulative) | Provision of additional student housing on campus will reduce demand for off campus housing, resulting in the projected 35% decrease in student population living off campus. The provision of residential apartments that will be made available to the general housing market pursuant to the Master Plan, will enable more people to live on campus next to San Luis Obispo and work in San Luis Obispo, helping to reduce the City's acute jobs/housing imbalance. Therefore, by providing additional housing on | Impacts will be less than significant and no mitigation is required. | Beneficial impact/Less than significant |

| | Potential Environmental Impact | Mitigation Measures | Level of Impact After Mitigation |
|---|---|---|---|
| | campus the Master Plan will result in an overall beneficial impact.<br><br>The corresponding residential population on and off campus will be well within the projected future population projections for both the county and City respectively. | | |
| Greenhouse Gases (GHG) and Diesel Particulate Matter (DPM) | The Master Plan will not result in exceedance of the SLO County Air Pollution Control District's thresholds for GHG and DPM. | Impact will be less than significant, and no mitigation is required. | Less than significant |
| Growth-inducing impact | The Master Plan is designed to accommodate additional students generated by growth within the San Luis Obispo region and beyond. The Master Plan's provision of residential neighborhoods with up to 1,470 apartments is anticipated to result in a beneficial effect of improving the existing City of San Luis Obispo's acute jobs/housing imbalance. This is consistent with the local and regional objectives of improving jobs/housing balance opportunities within the communities, and by itself will not result in a significant population growth within the San Luis Obispo county region. | Impact will be less than significant, and no mitigation is required. | Less than significant |
| Utilities and Service Systems | Master Plan buildout will continue to be served by a landfill with sufficient permitted capacity to accommodate the projected needs associated with the Master Plan and Cal Poly will continue to comply with federal, state, and local statutes and regulations related to solid waste. Therefore, impacts associated with the Master Plan will be less than significant.<br><br>Buildout of the Master Plan will not use large amounts of fuel or energy in an unnecessary, wasteful, or inefficient manner, constrain local or regional energy supplies, require or result in the construction of new electrical generation and/or transmission facilities, or conflict with existing energy standards. | Impact will be less than significant, and no mitigation is required. | Less than significant |

| | Potential Environmental Impact | Mitigation Measures | Level of Impact After Mitigation |
|---|---|---|---|
| ***Significant Environmental Impacts That Can Be Avoided or Mitigated*** (CEQA Guidelines Section 15126.4) | | | |
| Biological Resources (project-specific and cumulative) | Campus development pursuant to the Master Plan, including development along Brizzolara and Stenner Creeks, may affect some sensitive biological areas with riparian and other habitats, jurisdictional waters, and other sensitive biological resources within the main campus area. | 3.1-1 Prior to ground disturbing activities on all projects located adjacent to Stenner Creek, Brizzolara Creek, tributaries to the creeks and on the N4 Residential Neighborhood, N5 Residential Neighborhood, Biz Hub and Data Center, BCEC Expansion, new recreational areas in the north campus, and Student Housing with Amenities in the East Campus, the University shall retain an environmental monitor for all measures requiring environmental mitigation to ensure compliance with the EIR mitigation measures. The monitor shall be responsible for (1) ensuring that procedures for verifying compliance with environmental mitigations are implemented; (2) establishing lines of communication and reporting methods; (3) conducting daily and weekly compliance reporting; (4) conducting construction crew training regarding environmentally sensitive areas; (5) maintaining authority to stop work; and (6) outlining actions to be taken in the event of non-compliance. Monitoring shall be at a frequency and duration determined by the University or as directed by the affected natural resource agencies (e.g., USACE, RWQCB, CDFW, USFWS).<br><br>3.1-2 At the time of application for grading permits, all grading plans shall clearly show the location of project delineation fencing that excludes adjacent riparian areas, aquatic sites, and other sensitive communities from disturbance. The fencing shall consist of highly visible construction fence supported by steel T-stakes that are driven into the soil or silt fence that is keyed into the soil. The monitoring biologist shall field-fit the placement of the project delineation fencing to minimize impacts to adjacent communities and other sensitive resources that may be present. The project delineation fencing shall remain in place and functional throughout the duration of the project and no work activities shall occur outside the delineated work area.<br><br>The grading plans shall clearly show all staging areas, | Less than significant |

| | Potential Environmental Impact | Mitigation Measures | Level of Impact After Mitigation |
|---|---|---|---|
| | | which shall be located within the construction area and a minimum of 100 feet outside of adjacent riparian areas, aquatic sites, or other sensitive communities that may be present.<br><br>3.1-3 If any Master Plan Project results in impacts to sensitive communities such as riparian habitat, aquatic sites, native bunchgrass communities, or wetlands, the University shall mitigate the impacts via habitat replacement at a minimum of a 1:1 replacement ratio, unless additional mitigation is imposed by resources agencies through related permitting processes.<br><br>3.1-4 Prior to construction of any facility or improvement within 200 feet of nesting habitat (vegetation and low use agricultural structures), if construction activities are proposed to occur during the nesting season (February 15 to September 15), a nesting bird survey will be conducted by qualified biologists no more than 2 weeks prior to construction to determine presence/absence of nesting birds within the area. In the event that active nests are observed, work activities will be avoided within 100 feet of active passerine nests and 300 feet of active raptor nests until young birds have fledged and left the nest. The nests shall be monitored weekly by a biologist with expertise on nesting birds. The buffer may be reduced if deemed appropriate by the biologist or following consultation with the CDFW and/or USFWS. Readily visible exclusion zones will be established in areas where nests must be avoided. The University will be contacted if any state or federally listed bird species are observed during surveys. Nests, eggs, or young of birds covered by the MBTA and California Fish and Game Code will not be moved or disturbed until the end of the nesting season or until young fledge, nor would adult birds be killed, injured, or harassed at any time. If a nest of any special-status avian species such as California horned-lark (*Eremophila alpestris actia*), white tailed kite (*Elanus leucurus*), loggerheaded shrike (*Lanius ludovicianua*), tricolored blackbird (*Agelaius tricolor*), or burrowing owl (*Athene cunicularia*; wintering or nesting burrow) is | |

| | Potential Environmental Impact | Mitigation Measures | Level of Impact After Mitigation |
|---|---|---|---|
| | | identified, the University will cease all project related activities that are within 500 feet of the active nest/burrow until the University and the biologist have coordinated with CDFW and/or USFWS to determine an appropriate monitoring plan for working in the vicinity of the nest/burrow.<br><br>3.1-5 During the initial site design phase of any Master Plan facility adjacent to riparian areas, a 15-foot buffer will be established from the outer extent of Brizzolara and Stenner Creeks and their tributaries, or other riparian vegetation. Development of new parking areas, structures or other hardscapes, and utility infrastructure within this buffer will be prohibited, except as needed for pedestrian bridges, road crossings, and similar improvements, which will be designed in compliance with Mitigation Measure 3.1-3. In addition, the University will incorporate LID principles in all designs for facilities and improvements that are located adjacent to Brizzolara and Stenner Creeks and their tributaries.<br><br>3.1-6 Prior to construction of the California Boulevard Extension and other improvements, including pedestrian bridges and road crossings, that may encroach on jurisdictional waterways, the University will design the extension and improvements to avoid fill, alteration, or realignment of the jurisdictional features. If avoidance of the jurisdictional areas is not feasible, the University will coordinate with USACE to obtain a Clean Water Act Section 404 permit, CDFW to obtain a Streambed Alteration Agreement, and RWQCB to obtain a Clean Water Act Section 401 Certification. The University will comply with all special conditions of the permits. To support the permit applications, the University will prepare a CHMMP for inclusion into the CDFW and RWQCB permit applications. The CHMMP should propose a 2:1 ratio for permanent impacts and a 1:1 ratio for temporary impacts to the jurisdictional drainages. The permitting agencies may require higher mitigation ratios. If permanent impacts are unavoidable, the CHMMP will identify the off-site location | |

| | Potential Environmental Impact | Mitigation Measures | Level of Impact After Mitigation |
|---|---|---|---|
| | | where the proposed compensatory mitigation will be implemented and the type (e.g., creation, restoration, enhancement, preservation, etc.) of mitigation that will be implemented.<br><br>If the California Boulevard Extension includes vegetation removal or deposition of fill within the banks of Brizzolara Creek, there may be a potential to adversely affect steelhead and California red-legged frog. In this scenario, the University will coordinate with USACE during the Clean Water Act Section 404 permitting to consult with NOAA Fisheries and USFWS regarding the potential for these activities to result in take of steelhead, steelhead critical habitat, California red-legged frog, and/or California red-legged frog critical habitat. If USACE in consultation with USFWS and/or NOAA Fisheries determines that the proposed may affect or result in take of steelhead or California red-legged frog, USACE and/or NOAA Fisheries will issue a biological opinion with an incidental take statement for the project.<br><br>3.1-7 To avoid the potential for take of California red-legged frogs that may disperse through the new recreational areas and the Mount Bishop Road extension area, ground disturbing activities associated with the new recreational areas in the North and West Campus planning areas, the Village Drive extension area, the ITRC site, and the California Boulevard Extension site, will be completed in the dry season (between June 1 and the first fall rains). Ground disturbing activities in these areas or any of the upland pasture areas adjacent to the campus' reservoirs will not be allowed after the first fall rains and before May of any year. Regardless of the seasonal rain patterns, no ground disturbing activities may occur on these sites between December 1 and May 1 of any year.<br><br>3.1-8 Prior to improving existing University trails or constructing new trails in the University's Natural and Open Space Areas, the University will prepare and implement a Trail Plan. The Trail Plan shall emphasize the use of existing | |

| | Potential Environmental Impact | Mitigation Measures | Level of Impact After Mitigation |
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| | | trails in the trail system, identify all sensitive resources within and adjacent to the trail(s) alignment(s), and ensure that the trail alignments do not necessitate the removal of or otherwise adversely affect the sensitive resources. If the Trail Plan includes the construction of new trails, the new trail alignments will be surveyed for sensitive biological resources prior to trail design. The new trail alignments will avoid direct and indirect impacts to any identified sensitive resources. The construction of new trails should minimize the number of creek crossings in the trail system. If the construction of new trails or improvement of existing trails includes the installation of pedestrian bridges over Brizzolara Creek or other waterways, the University will obtain the necessary permits from USACE, USFWS, CDFW, and RWQCB, as necessary. The Trail Plan shall include the following elements:<br>▪ Installation of interpretive signage to inform trail users of the presence of sensitive resources along the trails and identify appropriate trail use conduct<br>▪ Identification of the department and/or individuals responsible for implementing all aspects of the trail plan<br>▪ Adequate buffers from waterways, seeps, springs, and other sensitive resources<br>▪ Use of natural infiltration and BMPs for stormwater management. Designs should focus on the use of natural dispersed infiltration systems, such as vegetated swales, rather than engineered systems, such as storm drains and catch basins<br>▪ Prohibition of motor vehicle use of the trails<br>▪ Identification of which trails are suitable for bicycle use and which trails where bicycle use may be prohibited<br>▪ A trail decommissioning program that is aimed at restoring native habitats in those trail sections that are no longer in use<br>▪ A trail monitoring program<br>▪ A maintenance program that: (1) regularly removes trash from the trail(s) and surrounding habitats; (2) includes periodic inspections for and repairs of erosion | |

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| | | features; (3) includes ongoing invasive species management; (4) prohibits use of erosion control materials that include plastic netting; and (5) includes details for the installation of water bars and drainage dips that serve to direct stormwater across the trail rather than down the trail<br><br>3.1-9 Prior to development of all projects located adjacent to Stenner Creek, Brizzolara Creek, tributaries to the creeks and on the N4 Residential Neighborhood, N5 Residential Neighborhood, Biz Hub and Data Center, Farm Shop, BCEC Expansion, new recreational areas in the north campus, and Student Housing with Amenities in the East Campus, the University will conduct seasonally-timed botanical and wildlife surveys to confirm the presence or absence of special-status species in the development area. Following completion of the surveys, the results will be documented in a Biological Resources Survey Report that identifies the presence/absence of special-status species and provides recommendations for avoiding impacts to special-status resources or mitigation for unavoidable impacts to the resources. If special-status resources are observed in the development area, the University will design the development to avoid the resources as feasible. If avoidance is not feasible, the University will prepare and implement an Environmental Mitigation and Monitoring Program for the project that addresses specific University's means for mitigating the impacts.<br><br>3.1-10 Landscaping for any campus facility or improvement will not utilize any species that are included on the most recent Cal-IPC Invasive Plant Inventory or other resources organizations' invasive species list. The landscape architect or designer responsible for developing the landscape plans will be responsible for ensuring that species identified by the Cal-IPC as invasive are not included in the landscape plans.<br><br>3.1-11 To minimize adverse effects on western pond turtle during any activity that requires dewatering, dredge, or fill of an | |

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| | | aquatic site such as a reservoir, pond, or settling basin, the University will retain a qualified biologist to conduct capture and relocation efforts for western pond turtle. Capture and relocation efforts must be conducted by visual survey and hand capture techniques. To avoid the potential of inadvertently capturing California red-legged frog, traps may not be used to capture western pond turtles. If the biologists observes California red-legged frog during western pond turtle surveys, the biologist must cease all activities in the aquatic site and contact the University so that the University may coordinate with USFWS before continuing the project. Any captured western pond turtles must be relocated to a nearby aquatic site that will not be impacted by project activities.<br><br>3.1-12 If avoidance of the federal and state jurisdictional drainages is not feasible at the Slack and Grand Residential Neighborhood site, the University will coordinate with USACE to obtain a Clean Water Act Section 404 permit, the RWQCB to obtain a Clean Water Act Section 401-certification, and the CDFW to obtain a Streambed Alteration Agreement. To support the permit applications, the University will prepare a CHMMP for inclusion into the CDFW and RWQCB permit applications. The CHMMP should propose a 2:1 ratio for permanent impacts and a 1:1 ratio for temporary impacts to the jurisdictional drainages. The permitting agencies may require higher mitigation ratios. If permanent impacts are unavoidable, the CHMMP will identify the off-site location where the proposed compensatory mitigation will be implemented and the type (e.g., creation, restoration, enhancement, preservation, etc.) of mitigation that will be implemented. Proposed mitigation for the temporary impacts will include removal of the non-native and moderately invasive olive trees and establishment of native trees, such as coast live oak or similar. The CHMMP will include a proposed planting, maintenance, and monitoring program to be conducted over a minimum of 3 years or for a duration mandated by the agency permits. The University will also incorporate LID principles in the design of the Slack and Grand Residential Neighborhood to minimize the permanent impacts to the | |

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| | | site's drainages.<br><br>3.1-13 To avoid the potential for invasive landscape species to become established in riparian areas downstream of the Slack and Grand Site drainages, the Slack and Grand neighborhood landscaping will not utilize any species that are included on the most recent Cal-IPC Invasive Plant Inventory or other resources organizations' invasive species list. The landscape architect or designer responsible for developing the landscape plans will be responsible for ensuring that species identified by the Cal-IPC as invasive are not included in the landscape plans.<br><br>3.1-14 Prior to grading, vegetation removal, or construction on the Slack and Grand site, if construction activities are proposed to occur during the nesting season (February 15 to September 15), a nesting bird survey will be conducted by qualified biologists no more than 2 weeks prior to construction to determine presence/absence of nesting birds within the area. In the event that active nests are observed, work activities will be avoided within 100 feet of active passerine nests and 300 feet of active raptor nests until young birds have fledged and left the nest. The nests shall be monitored weekly by a biologist with expertise on nesting birds. The buffer may be reduced if deemed appropriate by a professional biologist with expertise on nesting birds or following consultation with CDFW and/or USFWS. Readily visible exclusion zones will be established in areas where nests must be avoided. The University will be contacted if any state or federally listed bird species are observed during surveys. Nests, eggs, or young of birds covered by the MBTA and California Fish and Game Code will not be moved or disturbed until the end of the nesting season or until young fledge, nor would adult birds be killed, injured, or harassed at any time.<br><br>3.1-15 To avoid the potential for take of California red-legged frogs that may disperse through the Slack and Grand Residential Neighborhood area, ground disturbing activities associated with the new development will be completed in | |

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| | | the dry season (between June 1 and the first fall rains). Ground disturbing activities in these areas will not be allowed after the first fall rains and before May of any year. Regardless of the seasonal rain patterns, no ground disturbing activities may occur on these sites between December 1 and May 1 of any year.<br><br>3.1-16 The University will retain a qualified biologist to assist the removal/relocation of woodrat middens that are located within the project disturbance areas. Removal of the middens should be conducted after September 1 and before February 15. During implementation of site clearing activities and under supervision of the biologist, the operators will remove all woodrat shelter within the disturbance areas that surround the woodrat middens to be removed. Habitat areas located outside of the work area may not be removed. Upon completion of clearing the adjacent woodrat shelter, the operator will gently nudge the intact middens with equipment or long handled tools. Due to the potential health hazards associated with removing woodrat middens, hand removal is not recommended. The operators will place their equipment within the previously cleared area and not within the undisturbed woodrat shelter area that is located outside of the established work area. The objective is to alarm the woodrats so that they evacuate the midden and scatter away from the equipment and into the undisturbed areas outside of the work area. Once the woodrats have evacuated the midden, the operator will gently pick up the structure with a front loader or other equipment and move it to the undisturbed habitat. The objective of moving the structure is to provide the displaced woodrats with a stockpile of material to scavenge while they build a new midden; consequently, jeopardizing the integrity of the structure is not an issue. | |
| Geology and Soils | Buildout of the Master Plan has the potential to expose people or structures to strong seismic ground shaking, seismic-related ground failure, landslides, soil erosion, unstable geologic units, and expansive soils. | 3.5-1 A geotechnical investigation shall be performed by qualified, licensed professionals for each site-specific Master Plan project before final design of any structures, and recommendations provided in the report shall be implemented, as appropriate. | Less than significant |

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| | | 3.5-2 Design and construction of structures proposed as part of the Master Plan shall conform to all applicable provisions and guidelines set forth in the 2016 CBC (Title 24), CSU seismic requirements, and SEAOC standards.<br><br>3.5-3 Preparation of a SWPPP will be required for new development on 1 acre or more. All development will be required to implement standard BMPs to minimize potential soil erosion during construction activities. | |
| Hydrology and Water Quality (project-specific and cumulative) | Buildout of the Master Plan has the potential to alter the existing drainage pattern and create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. | 3.6-1 During the design review phase of each future development project on the campus, the University will verify that the stormwater BMPs were evaluated for the proposed project and those determined to be appropriate were incorporated into the proposed project. The University will also verify that post-development runoff from the project site will approximate pre-development runoff volumes.<br><br>3.6-2 Prior to the commencement of construction activities associated with new development that will modify existing drainage and/or require the construction of new drainage infrastructure to collect and control runoff, the University will prepare a drainage plan and supportive hydrologic analysis demonstrating compliance with the following or equitable measures to maximize groundwater recharge and maintain existing rain event flow rates and patterns:<br>▪ Off-site runoff will not exceed existing flow rates during storm events.<br>▪ If required to maintain the current flow rate, detention/retention basins will be installed to reduce local increases in runoff, particularly on frequent runoff events (up to 10-year frequency).<br>▪ If proposed, drainage discharge points will include erosion protection and be designed such that flow hydraulics exiting the site mimics the natural condition as much as possible.<br>▪ Drainage from impervious surfaces (e.g., roads, driveways, buildings) will be directed to a common drainage basin. | Less than significant |

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| | | ▪ Where feasible, grading and contouring will be done in a way to direct surface runoff towards the above-referenced basins (and/or closed depressions.<br><br>3.6-3 During the initial site design phase of any facility adjacent to riparian areas, a 25-foot buffer will be established from the outer extent of Brizzolara and Stenner Creeks and their tributaries, or other riparian vegetation. Development of new parking areas, structures or other hardscapes, and utility infrastructure within this buffer will be prohibited, except as needed for pedestrian bridges, road crossings, and similar improvements which will be designed in compliance with Mitigation Measures 3.6-1 and 3.6-2. In addition, the University will incorporate LID principles in all designs for facilities and improvements that are located adjacent to Brizzolara and Stenner Creeks and their tributaries.<br><br>3.6-4 All development pursuant to the Master Plan will comply with current federal and State requirements, including those of the NPDES and the SWCRB. Cal Poly will continue to implement the campus-wide WQMP. In addition to compliance with these regulations, required permits, and continued implementation of the water quality management plan in campus development, all new campus development will be required to implement mitigation measures which require a 25-foot buffer along Brizzolara Creek and Stenner Creeks, and preparation and implementation of a drainage plan and supportive hydrologic analysis demonstrating compliance with specific measures to maximize groundwater recharge and maintain existing rain event flow rates and patterns. | |
| Traffic and Circulation (project-specific and cumulative) | Campus development includes provision of residential neighborhoods on campus that could theoretically generate new trips and traffic if all of the residents in those neighborhoods were new to the area. However, it is highly unlikely as these neighborhoods will most likely enable University faculty and staff to live on campus, and enable more people who currently live outside the city and | 3.7-2 **Highway 1/Stenner Creek Road:** At the time of development of the N5 residential neighborhood, through contractual agreement (s) with the University the developer(s) will fund following mitigation measure:<br>▪ Install traffic signal at intersection<br><br>3.7-3 **Highway 1/ N4 Residential Neighborhood Driveway:** At the time of development of the N4 Residential | Less than significant |

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| | commute to work in San Luis Obispo, to live in proximity to San Luis Obispo. | Neighborhood, through contractual agreements with the University the developers will fund the following mitigation measure:<br>▪ Install traffic signal at intersection<br><br>3.7-4 **Grand Avenue/Slack Street:** At the time of development of the Grand and Slack residential neighborhood, the developer(s) will fund the following mitigation measure:<br>▪ Install traffic signal at intersection<br><br>3.7-5 **California Boulevard/Taft Street:** At the time of development, through contractual agreements with the University, the developer(s) of the Grand and Slack Residential Neighborhood and N2 Residential Neighborhood will:<br>▪ Contribute fair share mitigation to roundabout improvement<br><br>3.7-6 **Broad Street/Rockview Place:** At the time of development of each Residential Neighborhood, through contractual agreements with the University the developers will contribute fair share to the following mitigation measure:<br>▪ Install traffic signal at intersection | |
| Public Services and Recreation (project-specific and cumulative) | The Master Plan buildout, including a gradual increase in student enrollment, provision of new facilities within the campus, and the new residential neighborhoods, is anticipated to result in an incremental increase in demand for public services facilities, including fire and police protection and emergency response services. However, as this anticipated gradual increase in demand will be minimized through enhanced operating procedures, incorporation of all required fire suppression and safety features in all campus development, continued emergency response training, and appropriate staffing of the UPD - which is assessed on an ongoing basis, and with the implementation of the identified mitigation measures it is not anticipated to | 3.11-1 Prior to commencing any construction activities which could require on-campus street or lane closures, the University will notify the SLOFD, CAL FIRE, UPD, and City of San Luis Obispo Police Department of the construction activities and schedules which could impact emergency response operations and shall phase construction activities to ensure existing emergency response times (0 to 5 minutes for developed portions of campus and 5 to 10 minutes for undeveloped hillsides on campus) are not exceeded.<br><br>3.11-2 All proposals for traffic calming measures (speed humps/bumps, traffic circles, roundabouts, etc.) and new or modified access routes will be submitted to the SLOFD and CAL FIRE for review prior to implementation to ensure | Less than significant |

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| | require the provision of a fire or new police protection facility, or other public facility. | such measures will not pose a barrier or cause a delay in emergency response times.<br><br>3.11-3 Prior to commencing any construction activities in campus areas located adjacent to undeveloped, less accessible unincorporated land with an increased (moderate to high) fire hazard, the University will prepare a Fire Protection Plan. The Fire Protection Plan will clearly assign and spell out the responsibility for site fire protection and the methods that will be employed to prevent the ignition of a wildfire. The Fire Protection Plan will be submitted to the SLOFD and CAL FIRE for approval prior to commencement of construction activities and will be implemented throughout construction activities. Additionally, all construction contractors and subcontractors will be made aware of wildlife risks and prevention responsibilities.<br><br>3.11-4 The University will notify the City of San Luis Obispo and the County of San Luis Obispo prior to commencing any construction activities that could temporarily affect existing and/or future public recreational facilities and will collaborate with the City and the County throughout the duration of such construction activities.<br><br>3.11-5 Prior to construction of any proposed residential neighborhood, Cal Poly and the developer of each residential neighborhood shall coordinate with the San Luis Coastal Unified School District to assess the need for, and facilitate the payment of, appropriate in-lieu school fees to reduce potential impact. The amount of in-lieu fees shall be determined as appropriate for each residential neighborhood through coordination and agreement among Cal Poly, each developer, and the San Luis Coastal Unified School District.<br><br>3.11-6 Prior to construction of any proposed residential neighborhood, Cal Poly and the developer of each residential neighborhood shall coordinate with the City of San Luis Obispo to assess the need for, and facilitate the payment of, appropriate in-lieu fees to reduce potential | |

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| | | impact. The amount of in-lieu fees shall be determined as appropriate for each residential neighborhood through coordination and agreement among Cal Poly, each developer, and the City. | |
| Utilities and Service Systems (project-specific and cumulative) | Implementation of the Master Plan will result in an incremental increase in demand for public utilities and services to accommodate the gradual growth in student enrollment and provision of new facilities, including residential neighborhoods. All new and modified water, wastewater, and drainage infrastructure on campus will be designed to accommodate increased flows associated with buildout of the Master Plan, and Cal Poly will continue to comply with applicable state and federal regulations and requirements. | 3.12-1 Cal Poly will continue to assess the condition of on-campus water supply, wastewater, and stormwater infrastructure through the preparation and implementation of the Utility Master Plan and upgrade, repair, or replace any compromised or inadequate infrastructure as needed to meet Campus water supply, wastewater collection and treatment, and stormwater drainage demands.<br><br>3.12-2 Cal Poly will continue to monitor wastewater volumes and shall either purchase additional shares in the City's treatment plant prior to exceedance of current agreement limits, or offset the demand for increased capacity in the City's treatment plant through the construction of new treatment facilities on campus.<br><br>3.12-3 Prior to the commencement of construction activities associated with new development that will modify existing drainage and/or require the construction of new drainage infrastructure to collect and control runoff, Cal Poly will prepare a drainage plan and supportive hydrologic analysis demonstrating compliance with LID Guidelines established by the RWQCB and the University's 2015 WQMP, approved by the RWQCB. | Less than significant |
| Water Supply (project-specific and cumulative) | Campus development pursuant to Master Plan, including development of new residential neighborhoods, will result in an incremental increase in water use. Cal Poly has reduced total water use on campus by 19% since 2013 as a result of the ongoing implementation of the comprehensive water management system that includes extensive retrofit of water fixtures, upgrade of mechanical systems, improved agricultural water use efficiency, and other water conservation measures. However, even with the continued implementation of the water management programs, the Master Plan buildout will | 3.13-1 The water management programs will continue to be developed further and implemented until new water supply sources are secured and operational.<br><br>3.13-2 Additional conservation measures will be undertaken including, but not limited to:<br>▪ Smart landscape irrigation controls (Cal Sense) and low flow plumbing fixtures efficiency measures will be implemented within the first 5 years to reduce water use by 40 AFY.<br>▪ Use of available reclaimed water will be provided for | Less than significant |

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| | generate additional demand for water that could exceed available supply. Therefore, Cal Poly is actively pursuing all feasible options and opportunities to obtain and secure additional water supply source(s) for future campus functions and operations, including recycled water; purchase of water and capacity from the Nacimiento Reservoir's water right holders; and pursuing opportunities for additional water through State water project, among others.<br><br>Implementation of the identified mitigation measures will produce more than sufficient conserved water for the first 5 years of development pursuant to the Master Plan, and will ensure that the campus development pursuant to the Master Plan proceeds in parallel with the available water supplies as the full buildout will not occur until additional water supplies are made available. As a result of this paced development, together with further reductions in water use that enhance wise and efficient use of available water resources, and the prohibition against development without confirmation of available water supplies, the Master Plan will not cause a significant impact on water supply. | by constructing a reclaimed water system to distribute reclaimed water for agriculture and landscape irrigation on campus.<br>▪ Retrofit of all existing buildings will continue until all buildings are equipped with low and ultra-low flow plumbing fixtures.<br>▪ Expansion of the wireless landscape irrigation control system will continue until all campus zones are served by the system.<br>▪ Additional irrigated turf areas on campus will be eliminated, and replanted with drought tolerant plant species.<br>▪ Agricultural operations will continue to implement automation and digital monitoring systems for soil moisture content, watering schedules and other functions, as well as program evaluation with respect to water use associated with different types and sizes of crops.<br><br>3.13-3 New development pursuant to the Master Plan will proceed to the extent supported by available water supplies. At the time that the available water supplies do not support additional development, no further development will be undertaken until such time that additional water supplies become available.<br><br>3.13-4 As part of refining the phasing of incremental future development planned to be undertaken following the development of the identified initial facilities within the first 5 years of the Master Plan, to correspond to available water supplies based on annual reviews of information about the monitored water use and available water supplies, Cal Poly will use a priority system whereby campus academic, student housing, student support, administration, and other facilities necessary to support the gradual growth in student enrollment to 22,500 FTEs are considered first, before considering development of other uses on campus, until a new water supply source is secured and operational. | |

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| ***Unavoidable Significant Environmental Impacts***<br>(CEQA Guidelines Section 15126[b] – Lead Agency must issue a "Statement of Overriding Considerations" under CEQA Guidelines Section 15093 if the Agency determines these effects are significant and approves the project.) | | | |
| Cultural and Native American Resources<br>(project-specific and cumulative) | The Old Power House, the only historic building listed in the National Register of Historic Places, will not be affected by the planned campus development. However, many other historic buildings are spread throughout the campus and many more will "come of age", i.e., become greater than 50 years old, over the next 20 years. Future campus development may affect some of those building which may have historic value.<br><br>The Master Plan area contains 3 prehistoric archaeological sites and some components of future campus development may potentially overlap with these sites, or potentially result in inadvertent discovery of previously unknown archaeological resources.<br><br>A search of the Sacred Lands Files by the Native American Heritage Commission (NAHC) did not identify the presence of Native American cultural resources within the Master Plan area. However, since the Native American contact program resulted in information that the area could have sensitivity for tribal resources, mitigation measures have been identified to ensure that future campus development pursuant to the Master Plan will not significantly affect the previously unknown Native American or tribal cultural resources.<br><br>There are no known paleontological resources within the main campus.<br>However, such previously unknown resources may be potentially inadvertently discovered during future campus development. | 3.2-1 When a proposed Cal Poly project may directly or indirectly impact one or more the potential historic resources listed in Tables 1–4, the resource(s) shall be evaluated by an architectural historian who meets the Secretary of the Interior's Professional Qualification Standards. The architectural historian will photograph the resource, conduct sufficient research to establish an appropriate historical context, and determine whether the resource appears eligible for listing in the NRHP, meets the eligibility requirements for listing in the CRHR, or otherwise constitutes a historical resource for the purposes of CEQA. The architectural historian will document the building's historic context, character-defining features, and eligibility determinations on appropriate Department of Parks and Recreation (DPR) 523 forms, including, at a minimum, DPR 523A and DPR 523B. Copies of these forms will be retained by Cal Poly Facilities and the Cal Poly Archives and will be submitted to the CCIC.<br><br>3.2-2 If a building qualifies as a historical resource, retaining the building in its original location and incorporating it into the new site plan shall be considered. If retaining the building in its original location is not feasible, Cal Poly shall determine whether it is feasible to relocate the building to another location on or off campus. In the event of relocation, Cal Poly shall require that the relocation be conducted in compliance with the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings.<br><br>3.2-3 If a building that qualifies as a historical resource can be preserved on site, but remodeling, renovation or other alterations are required in order to meet Master Plan objectives, Cal Poly shall require that this work be conducted in compliance with the Secretary of the Interior's | Significant and unavoidable |

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| | | Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings. Cal Poly shall also require Historic American Building Survey (HABS)-like documentation (Level 2) of the building's character-defining features before any project alterations to any such features may take place. This documentation shall be retained by the Cal Poly Archives. Historic photographs of the building's original appearance shall be mounted in a prominent public location either outside or inside the building.<br><br>3.2-4 In the event a building that qualifies as a historical resource will be demolished, Cal Poly shall require HABS-like documentation (Level 2) of the building before any project alterations may take place. This documentation shall be retained by the Cal Poly Archives. Historic photographs of the original building shall be mounted in a prominent public location either outside or inside the replacement structure. In addition, Cal Poly shall require the preparation of a booklet on the history of the demolished building. The booklet will be intended for distribution to students and the general public, incorporating information contained in the DPR523 forms previously prepared under Mitigation Measure 3.2-1, selections from the HABS-like documentation, and other appropriate illustrative materials from the Cal Poly Archives.<br><br>3.2-5 If, in the opinion of the qualified architectural historian, the nature and significance of the building is such that its demolition cannot be fully mitigated through documentation, Cal Poly shall reconsider project plans in light of the high value of the resource, and implement modifications to the proposed project that will allow the structure to be preserved intact. These modifications could include project redesign, relocation, or abandonment.<br><br>3.2-6 Future Master Plan projects will be designed to avoid the three known prehistoric archaeological sites CA-SLO-669, CA-SLO-2280, and CA-SLO-2090 to the extent feasible. A | |

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| | | 50 foot-buffer will be established as an Environmentally Sensitive Area for activities near the sites. No grading, storage of materials or equipment, or use of equipment will be allowed within the Environmentally Sensitive Area.<br><br>3.2-7 An archaeological monitor will be present during all ground disturbing construction activities within 50 feet of the Environmentally Sensitive Area's perimeter established for the sites.<br><br>3.2-8 If any of the three known prehistoric archeological sites cannot be avoided, the impacted site will be evaluated for its potential eligibility for inclusion in the CRHR. If the site is determined eligible for inclusion in the CRHR, impacts will be mitigated through the implementation of a data recovery program (Phase III). The data recovery program will be tailored to address the resource's specific reasons for eligibility. The findings of the testing and/or data recovery program(s) shall be presented in a technical report prepared by a qualified archaeologist.<br><br>3.2-9 Prior to development of new facilities and improvements within the campus' currently undeveloped land, including paved areas and landscaped areas, a qualified archaeologist will be retained to conduct a review of existing records search data to determine if the site of new facility or improvement has been previously subject to archaeological study, and whether the study adequately addresses the potential for archaeological resources to occur within the disturbance area associated with construction. If it is determined a study has not been conducted or existing research is inadequate, a new study will be conducted. The study will identify cultural resources that have the potential to be impacted by future development and provide mitigation measures to avoid and/or minimize potential impacts. Additional tasks such as Native American coordination, Phase II archaeological testing, Phase III data recovery, and historic research will be conducted as necessary. The study will identify cultural resources that have the potential to be impacted by future development and | |

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| | | identify resource-specific mitigation measures to avoid and/or minimize potential impacts.<br><br>3.2-10 In the event that archaeological resources (artifacts or features) are exposed during ground-disturbing activities associated with development of any future facility or improvement, construction activities in the immediate vicinity (25 feet) of the discovery will be halted while the resources are evaluated for significance by a qualified archaeologist. Construction activities could continue in other areas. If the discovery proves to be significant (i.e., qualifies as a historical resource), additional work, such as archaeological data recovery or facility redesign, may be warranted. If warranted, data recovery or redesign will be implemented in consultation with the University.<br><br>3.2-11 If human remains are discovered during construction work, all work within 50 feet of the discovery will cease and the County Coroner will be promptly notified. State of California Health and Safety Code Section 7050.5 stipulates that no further disturbance will occur until the County Coroner has made a determination of origin and disposition pursuant to PRC Section 5097.98. If the human remains are determined to be prehistoric, the County Coroner will notify the NAHC, which will determine and notify a Most Likely Descendant (MLD). The MLD will complete the inspection of the site within 48 hours of notification and may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials.<br><br>3.2-12 If previously unknown Native American or tribal cultural resources are encountered during any phase of construction of the future planned Master Plan facilities and improvements, the following measures will be implemented:<br>1. All work in the immediate vicinity of the find (within a 60-foot buffer) will cease and (1) a qualified archaeologist meeting the Secretary of Interior (SOI) standards will assess the find, and (2) as appropriate, a | |

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| | | Native American Tribal representative will be promptly contacted and provided information about the find and invited to perform a site visit when the archeologist makes the assessment to provide Tribal input.<br>2. If significant Native American resource is discovered and avoidance cannot be ensured, an SOI-qualified archeologist will be retained to develop a cultural resources Treatment Plan, as well as a Discovery and Monitoring Plan, which as appropriate, will be provided to a Native American Tribal representative for review and comment.<br>3. All in-field investigations, assessments, and/or data recovery enacted pursuant to the final Treatment Plan will be monitored as appropriate by the proper Native American Tribal Participant(s).<br>4. The University will consult with the proper Native American Tribal representative on the dispositions and treatment of any artifacts or cultural resources encountered during any phase of construction of the future planned facilities and improvements.<br><br>3.2-13 If any paleontological resource is encountered during ground-disturbing activities, activities in the immediate area of the find will be halted and the discovery assessed. A qualified paleontologist will be retained to evaluate the discovery and recommend appropriate treatment options pursuant to guidelines developed by the Society of Vertebrate Paleontology, including development and implementation of a paleontological resource impact mitigation program for treatment of the resource. | |
| Agricultural Resources (project-specific and cumulative) | Buildout of the Master Plan would result in the permanent conversion of approximately 16 acres of Prime Farmland between Mount Bishop Road and the UPRR rail line, and 12 acres of Farmland of Statewide Importance between Stenner Creek Road and Highway 1.<br><br>Potentially significant cumulative impacts would be | 3.3-1 Permanent protection of Important Farmlands will be provided in the form of a perpetual agriculture or conservation easement within the Cal Poly agricultural lands. The amount of land to be conserved in the easement will be proportionate to the amount of Important Farmland converted as a result of implementation of the Master Plan (28 acres) based on the following ratios: the agricultural or conservation easement will protect lands at a 1:1 ratio if | Significant and unavoidable |

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| | reduced through implementation of Mitigation Measure 3.3-1. However, when combined with impacts from past, present, and reasonably foreseeable projects in the County with the potential to convert Important Farmland, residual cumulative impacts would be considered significant and unavoidable. | within the Cal Poly lands in San Luis Obispo County or at a 2:1 ratio if within Cal Poly lands outside of the county limits. The land will be comparable in soil quality and use to the Important Farmland being converted to non-agricultural uses and shall have an adequate water supply to support agricultural use that is also protected in the agricultural conservation easement, farmland deed restriction, or other document evidencing the permanent agricultural protection. | |
| Aesthetics (project-specific and cumulative) | Campus development pursuant to the Master Plan could affect existing scenic vistas and aesthetic character of some areas and will include lighting for new facilities and uses that will potentially be seen over a wide area.<br><br>Development of the Slack and Grand Residential Neighborhood will substantially block existing scenic views of the Santa Lucia Hills as seen from portions of Slack Street and from Grand Avenue, | 3.4-1 No portion of the freshman student housing shall exceed the elevation of the highest point of the existing Cerro Vista student housing development located north of the project.<br><br>3.4-2 No portion of development west of Highway 1 shall silhouette above any ridgeline as viewed from Highway 1.<br><br>3.4-3 Future development throughout the campus shall be designed and installed so that no point-source light or light spill-over will be visible from beyond the campus boundary. Prior to approval of each future development plan, the University shall submit a comprehensive lighting plan for review and approval by the CSU. The Lighting Plan shall be prepared by a qualified engineer who is an active member of the Illuminating Engineering Society of North America (IESNA) using guidance and best practices endorsed by the International Dark Sky Association. The lighting plan shall address all applicable aspects of the lighting, including but not limited to all buildings, infrastructure, surface parking lots, parking garage decks, portals and driveways, paths, recreation areas, safety, and signage. The lighting plan shall include the following in conjunction with other measures as determined by the illumination engineer:<br>▪ The point source of all exterior lighting shall be shielded from off-site views;<br>▪ Light trespass from exterior lights shall be minimized by directing light downward and utilizing cut-off fixtures or shields;<br>▪ Illumination from exterior lights shall be the lowest level allowed by public safety standards; | Significant site-specific impact at Slack and Grand residential neighborhood location and cumulative impact. |

| | Potential Environmental Impact | Mitigation Measures | Level of Impact After Mitigation |
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| | | ▪ Exterior lighting shall be designed to minimize illumination onto exterior walls; and,<br>▪ Any signage visible from off-site shall not be internally illuminated. | |
| Traffic and Circulation (project-specific and cumulative) | Campus development includes provision of additional student housing and no increase in parking spaces on campus which will result in a reduction in student commute trips to and from campus, and the associated traffic.<br><br>Under the "worst case" scenario, provision of residential neighborhoods on campus could theoretically generate new trips and traffic if all of the residents in those neighborhoods were new to the area. However, it is highly unlikely that those vehicular trips will be entirely additive to the traffic in the region because the City of San Luis Obispo is a regional employment center with a severe jobs/housing imbalance. According to data from the U.S. Census Bureau[2], 77% of the people employed in San Luis Obispo live outside the city and commute into the city to work. Based on observed vehicle occupancy counts and other established vehicle count data, SLOCOG estimates that 19,400 to 23,400 people who live outside the city commute to work into San Luis Obispo daily. This lack of housing is projected to continue in the future with the City adding 5,972 jobs but only 1,647 housing units between 2015 and 2035.<br><br>Since the Master Plan's residential neighborhood apartments will be made available to the general rental housing market, their effect will most likely enable more people who currently live outside the city and commute to work in San Luis Obispo, to live in proximity to San Luis Obispo. | 3.7-1 **Santa Rosa Street/Foothill Boulevard:** At the time of development of the N4 and N5 Residential Neighborhoods, through contractual agreement(s) with the University the developer(s) will contribute fair share to the following mitigation measure:<br>▪ Add second eastbound through lane<br><br>With this mitigation measure, the operations at the intersection will improve to LOS D in the AM and PM peak hours. However, this measure may be infeasible due to right-of-way constraints; therefore, impact at this intersection is considered significant and unavoidable.<br><br>3.7-7 **US 101 Northbound, Marsh Street to Broad Street:** With the following mitigation measure, the operations at the segment will improve to LOS D in the PM peak hour.<br>▪ Add one mainline lane for a total of three.<br><br>3.7-8 **US 101 Northbound, Broad Street to Osos Street:** With the following mitigation measure, the operations at the segment will improve to LOS D in the PM peak hour.<br>▪ Add one mainline lane for a total of three.<br><br>3.7-9 **US 101 Southbound, Broad Street to Marsh Street:** With the following mitigation measure, the operations at the segment will improve to LOS C in the AM and PM peak hour.<br>▪ Add one mainline lane for a total of three.<br><br>Impacts identified at three US 101 freeway segments are under Caltrans control and the freeway improvements are under Caltrans' responsibility. Caltrans identified improvements to these segments of | Significant |

[2] U.S. Census Bureau. 2017. OnTheMap. U.S. Census Bureau, Center for Economic Studies. Available at: https://onthemap.ces.census.gov/.

| | Potential Environmental Impact | Mitigation Measures | Level of Impact After Mitigation |
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| | | the freeway in its Transportation Planning Fact Sheet, US Route 101 in San Luis Obispo County, September 2009, as part of "General Recommendations" to widen Segments 4 and 5A to a six-lane freeway after implementation of several other measures, including encouraging alternative modes, implementing ITS components, constructing system-wide operational improvements, enhancing intermodal facilities, facilitating goods movement, and similar measures. The widening of the freeway to six lanes is not included in the current Regional Transportation Plan (RTP), it is not included in SLOCOG's US 101 long-term Corridor Mobility Master Plan, and it is not funded. Therefore, the University cannot guarantee implementation of the recommended improvements within the 2035 planning horizon and impacts, including those of the Slack and Grand Residential Neighborhood, on the identified freeway segments are considered significant and unavoidable. | |
| Air Quality (long-term operational; project-specific and cumulative) | The Master Plan is consistent with the San Luis Obispo County Clean Air Plan; provides for more student housing together with new residential housing on campus that reduces commute trips and the associated mobile emissions; improves job/housing balance opportunities which reduce vehicular trips and mobile emissions; results in design and building of compact university community in the campus' core to prevent sprawl; and reduces stationary emissions through implementation of a comprehensive sustainability programs, policies, and campus design and planning features. However operational emissions under the "worst case" scenario analyzed are projected to exceed SLOAPDC daily and annual thresholds for ROG + NOx, and $PM_{10}$., and Slack and Grand residential neighborhood component is projected to also exceed $CO_2$ threshold. Under this scenario, all trips and their mobile emissions attributable to new residential neighborhoods are treated as net new additional trips the region, even though since the residential neighborhood apartments will be made available to the University faculty and staff and to general rental housing market, their effect will most likely enable more people who currently live outside | 3.8-1 The University will continue to exceed Title 24 energy saving requirements on campus by 15% or more on all new or renovation projects by applying a range of techniques and measures that may include planting trees to provide shade and shadow to buildings; use of energy-efficient lighting in buildings and parking lots; use of light-colored roofing materials; installing energy-efficient appliances; installing automatic lighting on/off controls; use of insulation and double-paned glass windows; connecting buildings to central air and water heating and cooling systems, and/or other measures.<br><br>3.8-2 Use low VOC paint for interior and exterior architectural coatings.<br><br>3.8-3 Provide shade tree planting in parking lots to reduce evaporation emissions from parked vehicles. Design should provide up to 50% tree coverage within 10 years of construction using low ROG emitting, low maintenance native drought resistant trees, to the extent feasible.<br><br>3.8-4 Pave and maintain the roads and parking areas .<br><br>3.8-5 Increase number of connected bicycle routes/lanes in the | Significant |

| | Potential Environmental Impact | Mitigation Measures | Level of Impact After Mitigation |
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| | the city and commute to work in San Luis Obispo, to live on campus in proximity to San Luis Obispo, thus reducing mobile emissions associated with the current commute pattern where 77% of people employed in the city commute into the city from other areas. | vicinity of the project.<br><br>3.8-6 On sites of one-half acre or less, orient up to 75% of all site lines to create easy due south orientation of future structures, to the extent feasible.<br><br>3.8-7 Plant drought tolerant, native shade trees along southern exposures of buildings to reduce energy used to cool buildings in summer.<br><br>3.8-8 Utilize green building materials (materials which are resource efficient, recycled, and sustainable) available locally if possible.<br><br>3.8-9 Install high efficiency heating and cooling systems.<br><br>3.8-10 Orient up to 75% or more of campus facilities to be aligned north/south to reduce energy used to cool buildings in summer, to the extent feasible.<br><br>3.8-11 Design building to include roof overhangs that are sufficient to block the high summer sun, but not the lower winter sun, from penetrating south facing windows (passive solar design).<br><br>3.8-12 Utilize high efficiency gas or solar water heaters.<br><br>3.8-13 Utilize built-in energy efficient appliances (i.e. Energy Star®).<br><br>3.8-14 Utilize double-paned windows.<br><br>3.8-15 Utilize energy efficient interior lighting.<br><br>3.8-16 Install energy-reducing programmable thermostats. | |

| | Potential Environmental Impact | Mitigation Measures | Level of Impact After Mitigation |
|---|---|---|---|
| | | 3.8-17 Use roofing material with solar reflectance values meeting the EPA/DOE Energy Star® rating to reduce summer cooling needs. | |
| Air Quality (short-term and intermittent construction-related; project-specific and cumulative) | Implementation of the identified mitigation measures will reduce construction-related emissions associated with the Master Plan, including the Slack and Grand residential neighborhood. As the existing regional fleet of construction equipment is comprised of a mix of older (Tier 2 and even Tier 1) equipment with some new Tier 3 and Tier 4 equipment, utilizing all Tier 3 and Tier 4 equipment would reduce emissions since Tier 4 engine emissions are substantially lower than Tier 3 engines emissions, and greatly lower when comparing Tier 4 engines to even older Tier 2 and 1 engines. However, since it cannot be assured that it is feasible to obtain all Tier 3 and Tier 4 equipment for construction of every facility and improvement on campus, construction air quality impact, including impact on sensitive receptors in close proximity to construction sites, albeit reduced, must be considered significant and unavoidable. | 3.8-18 All construction equipment will be equipped with clean Tier 3 and most advanced clean Tier 4 engines, to the maximum extent feasible.<br><br>3.8-19 Architectural coatings will meet VOC limits, including the limit of 50 g/L for residential interiors and exteriors and 100 g/L for non-residential interiors and exteriors. As appropriate, the schedule for architectural coatings application will be extended, limiting the daily coating activity.<br><br>3.8-20 Most current SLOAPCD standard construction dust mitigation measures will be implemented through construction activity. These measures include watering down exposed areas, covering stockpiles, sweeping adjacent streets, installing wheel washers on equipment, covering haul trucks, among other dust suppression and emissions reduction measures.<br><br>3.8-21 A haul route plan will be prepared for construction of each facility and/or improvement for review and approval by the University that designates haul routes as far as possible from sensitive receptors.<br><br>3.8-22 Staging and queuing areas will be located as distant as possible from sensitive receptors.<br><br>3.8-23 Diesel equipment idling greater than 5 minutes will not be permitted. Signs specifying the 5-minute idling limitations will be installed on-site for the duration of construction.<br><br>3.8-24 Material stockpiles and mobile equipment staging, construction vehicle parking maintenance areas will be located as far as practicable from sensitive uses. | Significant |

| | Potential Environmental Impact | Mitigation Measures | Level of Impact After Mitigation |
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| | | 3.8-25 Equipment will be electrified when feasible.<br><br>3.8-26 Gasoline-powered equipment will be substituted in place of diesel-powered equipment, where feasible.<br><br>3.8-27 Alternatively, natively fueled construction equipment, such as compressed natural gas (CNG), liquefied natural gas (LNG), propane, or biodiesel, will be used on-site where feasible. | |
| Noise (short-term and intermittent construction-related; project-specific and cumulative) | The implementation of the Master Plan, including the Slack and Grand residential neighborhood, will result in short-term and intermittent noise associated with construction of new facilities and improvements within campus that could impact the closest uses in the vicinity of the campus' individual construction sites. | 3.9-1 Construction hours will be consistent with the City of San Luis Obispo regulations which limit construction to the hours between 7:00 AM and 7:00 PM Monday through Saturday. No construction will take place on Sundays or legal holidays.<br><br>3.9-2 Muffled construction equipment will be used wherever possible.<br><br>3.9-3 The contractor will ensure that each piece of operating equipment is in good working condition and that noise suppression features, such as engine mufflers and enclosures, are working and fitted properly.<br><br>3.9-4 Material stockpiles and mobile equipment staging, construction vehicle parking maintenance areas will be located as far as practicable from noise sensitive uses.<br><br>3.9-5 Electricity-powered equipment will be used instead of pneumatic or internal combustion-powered equipment, where practicable.<br><br>3.9-6 Stationary noise sources such as generators or pumps will be located as far away from noise sensitive uses as feasible.<br><br>3.9-7 If a sustained high-noise construction activity takes place | Significant |

| | Potential Environmental Impact | Mitigation Measures | Level of Impact After Mitigation |
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| | | within 100 feet from classrooms or other noise sensitive uses on campus or off campus, measures will be taken to limit the amount of noise affecting the sensitive receptor. These measures may include scheduling the activity when classes are not in session or the sensitive receptor is not use, providing a temporary barrier of no less than 8 feet in height made of wood or other similar materials and placed strategically along the construction site's boundaries; and/or other commonly utilized noise attenuation measures.<br><br>3.9-8 A haul route plan will be prepared for construction of each facility and/or improvement for review and approval by the University that designates haul routes as far as possible from sensitive receptors.<br><br>3.9-9 A telephone number and name of a contact person for registering comments or complaints will be posted on the University website. | |
| Noise (project-specific spectators during events held at Spanos Stadium) | The Master Plan provides for additional seating at the existing Spanos stadium. Even though the stadium's audio equipment will remain the same as it is currently, additional spectators attending evening events at the stadium will generate noise - albeit occurring only at the times that events are held at the stadium. | There are no feasible mitigation measures to reduce noise generated by the spectators during events at the stadium. | Significant |

## Slack and Grand Residential Neighborhood

The identified mitigation measures apply to the Master Plan project and the Slack and Grand Residential Neighborhood project, except for the following measures that apply to the Master Plan only:

- Mitigation Measure 3.3-1, Agricultural Resources
- Mitigation Measures 3.1-1 through 3.1-11, Biological Resources
- Mitigation Measures 3.2-1 through 3.2-13, Cultural Resources
- Mitigation Measures 3.4-1 through 3.4-3, Aesthetics

# 1.0 Introduction

## Purpose of the EIR

This Environmental Impact Report (EIR) has been prepared to evaluate the environmental effects of the adoption and implementation of the proposed California Polytechnic State University, San Luis Obispo (Cal Poly or University) Master Plan 2035. The Master Plan 2035 constitutes a project for the purposes of the California Environmental Quality Act of 1970 (CEQA) and the *Guidelines for Implementation of the California Environmental Quality Act* (CEQA Guidelines).

According to the CEQA Guidelines, an "EIR is an informational document which will inform public agencies, decision makers, and the public generally of the significant environmental effects of a project on the environment, identify possible ways to minimize the significant effects, and describe alternatives to the project." This Draft EIR is an informational document to be used by decision makers, public agencies, and the general public. It is not a policy document of Cal Poly.

The EIR will be used by Cal Poly in assessing impacts of the proposed project. During the project implementation process, mitigation measures identified in the EIR will be applied to the project by Cal Poly and/or other involved agencies.

## The EIR

This document is a Program EIR for the Master Plan prepared pursuant to the provisions of Section 15168 of the CEQA Guidelines. A Program EIR is an EIR prepared on a series of actions that can be characterized as one large project. The project consists of a series of physical and programmatic actions and improvements pursuant to the Master Plan implemented over time to the year 2035 planning horizon. A Program EIR allows later activities, i.e. a subsequent actions and improvements, to be approved provided that the effects of such projects were examined in the Program EIR, and no new or greater effect could occur or no new mitigation measure would be required upon implementation of such subsequent action or improvement. At the time that each facility, improvement, or other action pursuant to the Master Plan is carried forward, Cal Poly will review each individual action or improvement to determine whether the Program EIR fully addressed the potential impacts and identified appropriate mitigation measures. If so, no further environmental review will be required. If the Cal Poly review indicates the potential for new or greater effects than those evaluated in this Program EIR and/or new mitigation measures not identified in this Program EIR, a subsequent environmental review will be conducted at the time such facility, improvement, or other action pursuant to the Master Plan is carried forward.

This EIR is also a project-level EIR for the Slack and Grand Residential Neighborhood component of the Master Plan, which is anticipated to be developed early within the Master Plan planning horizon.

# Legal Requirements

This EIR has been prepared in accordance with CEQA (Public Resources Code [PRC] Section 21000 et seq.) and the CEQA Guidelines, published by the Public Resources Agency of the State of California (California Code of Regulations [CCR] Title 14, Section 15000 et seq.), and in accordance with the Californiae State University (CSU) CEQA Guidelines. The CSU Board of Trustees is the lead agency for this EIR, as defined in Section 21067 of CEQA.

Pursuant to CEQA and the CEQA Guidelines, an Initial Study was prepared for this project. The Initial Study concluded that the project might have a significant effect on the environment. The Initial Study checklist is included in Appendix A of this EIR. A Notice of Preparation (NOP) for this EIR was issued by the University on October 3, 2016, in accordance with the requirements of the CEQA Guidelines Sections 15082(a) and 15375. The NOP indicated that an EIR was being prepared and invited comments on the project from public agencies and the general public.

This EIR was prepared by environmental planning consultants under contract to Cal Poly and under the direction of University staff.

# Scope of the Project

The project is the Master Plan 2035 for the Cal Poly main campus, including the Slack and Grand residential neighborhood component of the Master Plan. The Master Plan provides guidance for facilities and improvements over the next two decades needed to fulfill academic programs demands, while addressing physical and environmental constraints and opportunities, to support a future enrollment of 22,500 full-time equivalent (FTE) (25,000 headcount) students. To do so, the Master Plan provides for consolidation of future facilities development within the main campus' Academic Core and phases new facilities development north of Brizzolara Creek. At the same time, the Master Plan is designed to protect natural environmental features and agricultural lands that form the character of the campus.

# Scope of the Environmental Analysis

Pursuant to CEQA and the CEQA Guidelines, an Initial Study was prepared for this project. The Initial Study concluded that the Master Plan might have a significant effect on the environment with respect to the following environmental issue areas:

- Biological Resources
- Cultural Resources
- Agricultural Resources
- Aesthetics
- Geology/Soils
- Hydrology and Water Quality
- Traffic and Circulation
- Air Quality and Greenhouse Gases
- Noise

- Population and Housing
- Public Services and Recreation
- Utilities and Service Systems
- Water Supply

During the NOP process, the issues raised included air quality, traffic, transit and bicycles, tribal cultural resources, noise, agricultural land, student housing, among other issues raised. All these issues are addressed in this EIR in the appropriate sections.

The EIR includes the following appendices:

- Appendix A: Initial Study/NOP
- Appendix B: Slack and Grand Residential Neighborhood Draft Plans
- Appendix C: Biological Resources Species Information and Photo Documentation
- Appendix D: Geologic Hazards Report for the Slack Street and Grand Avenue Apartments
- Appendix E: Transportation Impact Study for the 2017 Campus Master Plan
- Appendix F: Air Quality Worksheets

# Intended Uses of the EIR

The Master Plan 2035 and subsequent implementing actions are subject to review and approval by the Board of Trustees of the California State University. Implementation of the Master Plan may also involve actions of other agencies, as follows:

- CSU Board of Trustees
  Approval and adoption of the Master Plan
  Approval of public-private partnerships for development of residential neighborhoods
  Approval of conceptual and schematic plans for future facilities and improvements
  Approval of conceptual and schematic plans for Slack and Grand Residential Neighborhood
  Others, as may be necessary

- City of San Luis Obispo
  Approval of any future SLO Transit bus service improvements

- Regional Water Quality Control Board
  Issuance of Construction Storm Water General Permit for construction of new facilities and improvements
  Issuance of Clean Water Act Section 401 Certification

- San Luis Obispo Regional Transit Authority
  Approval of any future regional bus service improvements

- California Public Utilities Commission and Union Pacific Railroad
  Approval of grade-separated vehicular and pedestrian/bicycle railroad crossings for the new roadway connecting Village Drive to Mount Bishop Road

- California Department of Fish and Wildlife
  Issuance of permits or other actions if needed for improvements that may affect sensitive biological resources, including Streambed Alteration Agreements

- US Army Corp of Engineers
  Issuance of permits under Section 10 and under Section 404 if needed for improvements that may affect Brizzolara and/or Stenner Creeks

- Division of State Architect
  Approval of accessibility in future facilities

- State Fire Marshall
  Future facility fire safety review and approval

- Others, as may be necessary

# Public Review and Comment

The Draft Program EIR will be circulated for a 45-day public review period. The public is invited to comment in writing on the information contained in this document. Persons and agencies commenting are encouraged to provide information that they believe was missing from the Draft EIR, or to identify where the information could be obtained. All comment letters, and oral comments received at the public meeting on the Draft EIR that will be held by the University, will be responded to in writing, and the comment letters, together with the responses to those comments, will be incorporated into the Final EIR.

# Contact Person

The primary contact person regarding information presented in this Draft EIR is:

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# 2.0 Project Description

## The Project

The California Polytechnic State University, San Luis Obispo (Cal Poly or University) campus Master Plan 2035 (Master Plan) is a long-range planning document that guides the development and use of campus lands, and looks ahead for the next 20 years. The University anticipates growth in the student body, and the Master Plan provides for needed academic facilities, additional housing on campus, recreation and athletics facilities, and other support facilities on the main campus to accommodate students seeking education at Cal Poly and University needs over the next two decades.

Fifteen years after the adoption of the 2001 Master Plan, the majority of the main campus facilities has been developed to accommodate the 17,500-full-time equivalent (FTE)[3] student, or 20,000 headcount, enrollment level at the University, as of the 2015/2016 academic year. As Cal Poly education continues to be in great demand, the proposed Master Plan 2035 provides a framework for implementation of the University's goals and programs by identifying needed facilities and improvements within the main campus to accommodate a gradual growth in student enrollment, projected to reach 22,500 FTE students, or 25,000 headcount, by 2035.

Enrollment growth at the campus is anticipated to be slower in the early years of the 20-year Master Plan horizon, followed by phased enrollment increases as planned new student housing and instructional facilities are completed.

## Project Objectives

The principal objective of the Master Plan is to support and advance the University's educational mission by guiding the physical development of the campus and its facilities over the next 20 years to accommodate gradual student enrollment growth while preserving and enhancing the quality of campus life.

To do so, the Master Plan lays out the land use, circulation, and physical development of the campus to educate a future student enrollment of 22,500 FTEs, and supports the University goals to:

- Enhance academic quality and student success through Learn by Doing;
- Increase the diversity of students, faculty, and staff;
- Strengthen the campus' compact, cross-disciplinary Academic Core;

[3] FTE means "full-time equivalency" for the purposes of full-time enrolled students. The student enrollment level of 17,500 FTE students equates to 20,000 headcount students since it includes part-time students, on and off-campus online students, and other students (e.g., an enrollment level of 10,000 FTE students may have 8,000 full-time students and 4,000 part-time, on-line, and other students.).

- House all freshmen and sophomore students plus 30% of upper division students in residential communities on campus;
- Provide housing opportunities on campus primarily for University faculty and staff to promote faculty and staff recruitment and retention, and to enhance faculty and staff connectivity with the campus. In addition, provide housing opportunities that may be offered to non-traditional students such as graduate students, veterans, and those with families, and possibly alumni or retirement housing, and for the greater San Luis Obispo community;
- Offer more vibrant evening and weekend events and activities on campus;
- Attain a modal shift from cars to more pedestrian, bicycle, and transit use;
- Reinforce campus-wide environmental sustainability;
- Phase enrollment growth parallel with completion of new student housing and instructional facilities; and,
- Generate revenue from public and private sources to realize the Master Plan objectives and to further support and benefit the California State University's (CSU) educational mission.

# Project Location and Surrounding Uses

Cal Poly comprises over 6,000 acres in San Luis Obispo County. About half of that land makes up the main campus—including the Academic Core, residential areas, agricultural production, and rangelands—which abut the city of San Luis Obispo on the south and west, and the county of San Luis Obispo on the north and east. The Alta Vista and Monterey Heights neighborhoods border the southern edge of campus with single-family homes. To the west of campus are the neighborhoods north of Foothill Boulevard, including Foothill, Bella Montaña, and Ferrini Heights. Santa Rosa Street (Highway 1) frames the western side of the campus with commercial development. At the southwest corner, along Foothill Boulevard, several multi-family housing complexes accommodate Cal Poly students—with some specifically designed for that purpose, such as Mustang Village and Stenner Glen. Figure 1 illustrates the location of the campus and Figure 2 illustrates surrounding uses.

**Figure 1. Campus Location**

**Figure 2. Surrounding Neighborhoods**

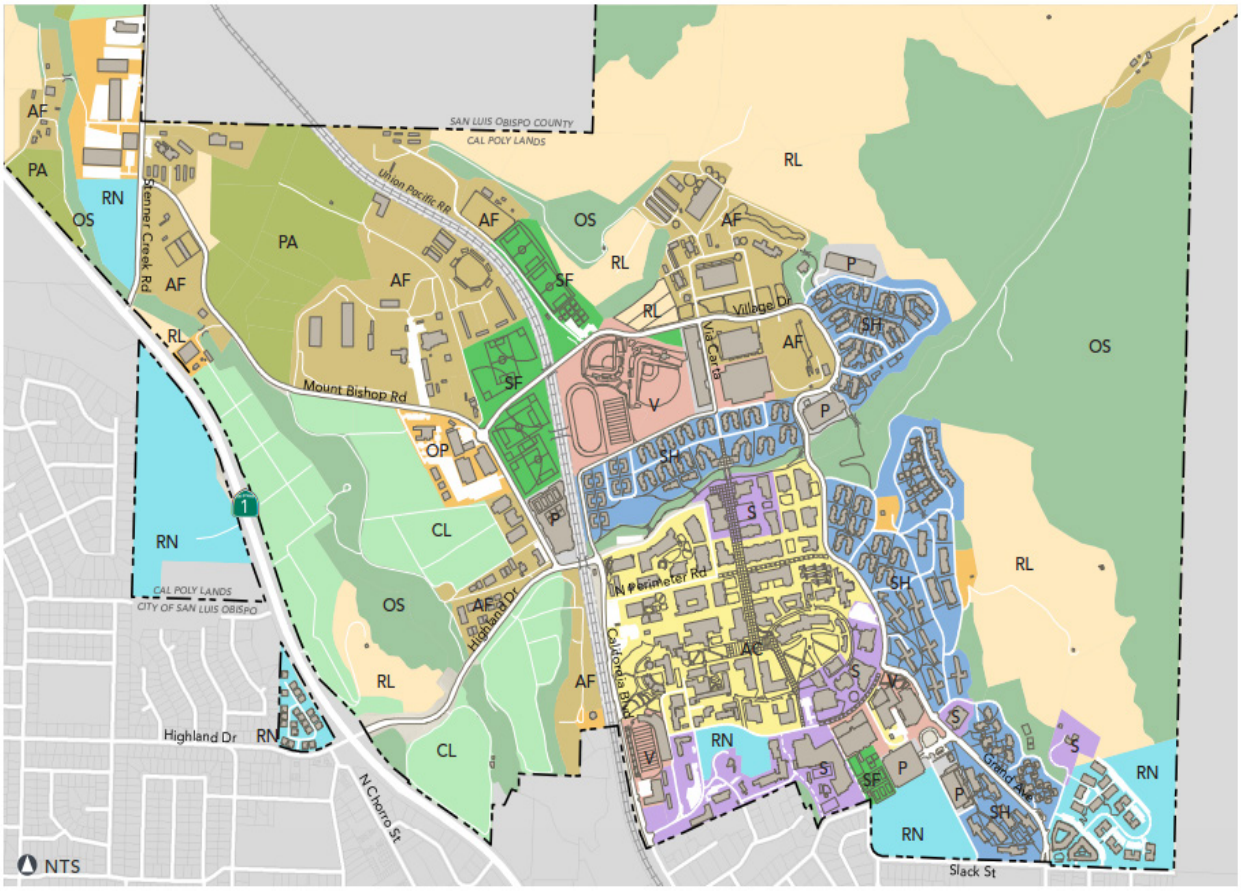

# Project Characteristics

The Master Plan provides guidance for facilities and improvements over the next two decades needed to fulfill academic program demands while addressing physical and environmental constraints and opportunities, to support a future enrollment of 22,500 FTE, or 25,000 headcount, students. To do so, the Master Plan intensifies development within the campus' Academic Core and phases new facilities development north of Brizzolara Creek. At the same time, the Master Plan is designed to protect natural environmental features and agricultural lands that form the character of the campus**.**

## Campus Land Uses

The Master Plan Land Use Map (Figure 3) shows the planned land uses by category. It indicates both areas where uses will change from current activities and areas where future facilities will be developed. Included in the use categories are academic functions, student housing and residential neighborhoods, outdoor teaching and learning facilities, and student support areas. Recreation and athletics locations and major open spaces are also indicated. The map illustrates the location, adjacency, and scale of future facilities and improvements that are planned to be developed over the next 20 years.

## Figure 3. Campus Land Use Map




### LAND USE

The Land Use map for the campus designates the kinds of development suitable for different areas. All areas of campus have a land use designation that reflects the existing or future use.

**Academic Core (AC)** is the most densely developed area of campus, where instructional spaces are concentrated along with many related service and support functions. The uses in the Academic Core generally include activities that engage students, faculty and staff multiple times per day, such as classes and labs, advising services, study areas, food outlets and administrative offices – and will continue to be the focus of campus activity.

**Student Housing (SH)** is focused in the Residential East part of campus, with a first-year student neighborhood encompassing dormitory-style facilities, with new apartment-style housing for older students located in the North Campus, just above Brizzolara Creek.

**Residential Neighborhoods (RN)** are designated predominately for workforce housing, designed for Cal Poly faculty, staff, or other persons employed in the area. Non-traditional students, including, but not limited to, graduate students, married students or students with families, veteran students, or other students needing specific accommodations may also be considered.

**Venues (V)** include the Performing Arts Center, Cal Poly Athletics formal sport facilities such as Spanos Stadium or Baggett Stadium, as well as a new arena for indoor sports, concerts, and other large capacity events. These uses attract both on- and off-campus audiences and contribute to the University's regional draw.

**Sports Fields (SF)** include active recreation space, such as Intermural softball and soccer fields, Athletics practice fields, and tennis courts, as well as swimming pools.

**Services (S)** designates non-academic space used for student support facilities such as the Administration Building, the Recreation Center, and food and retail outlets. A portion of the new Creekside Village is proposed to be designated as Service because student services such as the Cashier's Office or Records, will be decentralized in the future and more proximate to areas where students go on a daily basis.

**Operational (OP)** land use designation covers facilities essential to the day-to-day operation of the University, such as the Mustang Substation, potable water reservoirs, a future water treatment facility, as well as the campus Farm Shop and Facilities Management and Development building.

**Agriculture Facility (AF)** land use designation includes uses and facilities that are supportive to the campus' agricultural operations. These uses and facilities include such things as the Rodeo facilities, the Equine Unit and other animal units, the Agricultural Event Center, and the Wine and Viticulture facility.

**Crop Land (CL)** includes fields in agricultural production for purposes of educational programs for the College of Agriculture, Food, and Environmental Sciences. Such areas include the organic farm, the pumpkin patch, the citrus and deciduous orchards, as well as silage areas for growing animal feed.

**Pasture (PA)** identifies areas that are often irrigated, where animal units are grazed.

**Rangeland (RL)** is typically grazing area, but less formal than the Pasture designation, and includes some hillsides adjacent to the main campus. These lands are not irrigated.

**Open Space (OS)** includes natural areas surrounding main campus, such as Poly Canyon, the eastern hillside where the Cal Poly "P" is located, creek riparian corridors, and some areas within North Campus. These areas are often utilized for outdoor education, hiking and enjoyment of outdoors.

**Parking (P)** land use designation identifies existing and future parking facilities, both surface and in structures. Only parking structures are labeled **"P"**.

# Campus Facilities and Improvements Framework

## Academic Facilities

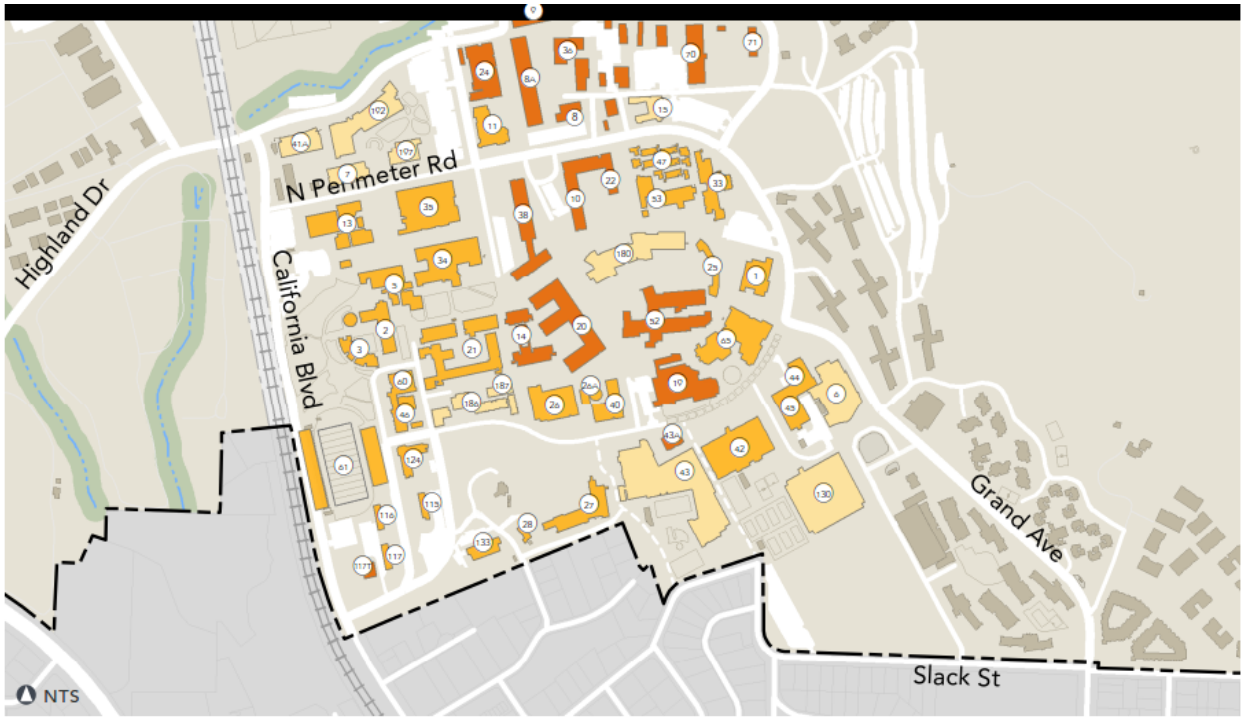
Currently, the existing campus academic facilities provide approximately 2 million square feet of space for University academic programs. The Master Plan provides for approximately 800,000 square feet of new academic facilities, including a new multidisciplinary academic facility and engineering academic and research facility, and the expansion of the Kennedy Library, H.P. Davidson Music Center, and Beef Cattle Evaluation Center.

In addition, approximately 355,000 square feet of the existing academic facilities that have reached the end of their useful life will be replaced. Furthermore, a number of facilities will be renovated/remodeled to provide the needed functionality for the evolving academic programs and teaching methodologies, as illustrated in Figure 4.

## Support Services and Administrative Facilities

The existing support services and administrative facilities provide approximately 240,000 square feet of space. The Master Plan provides for approximately 530,000 square feet of new support and administrative facilities needed to adequately serve the University students, faculty, and staff, including the Activity Center at Via Carta and Brizzolara Creek to support new student housing (Creekside Village) and the Athletic Field House. The Master Plan also provides for replacement of the existing Data Center, Farm Shop, and operations and maintenance facilities, as well as for the expansion of the University Union, Technology Park, and Health and Counseling Center.

**Figure 4. Academic Core Building Inventory**




**Tier 1: Replace**
Low intensity, older buildings that are in need of replacement at higher density, when feasible.

**Tier 2: Renovate**
Buildings may be in need of substantial investment. Replace if appropriate.

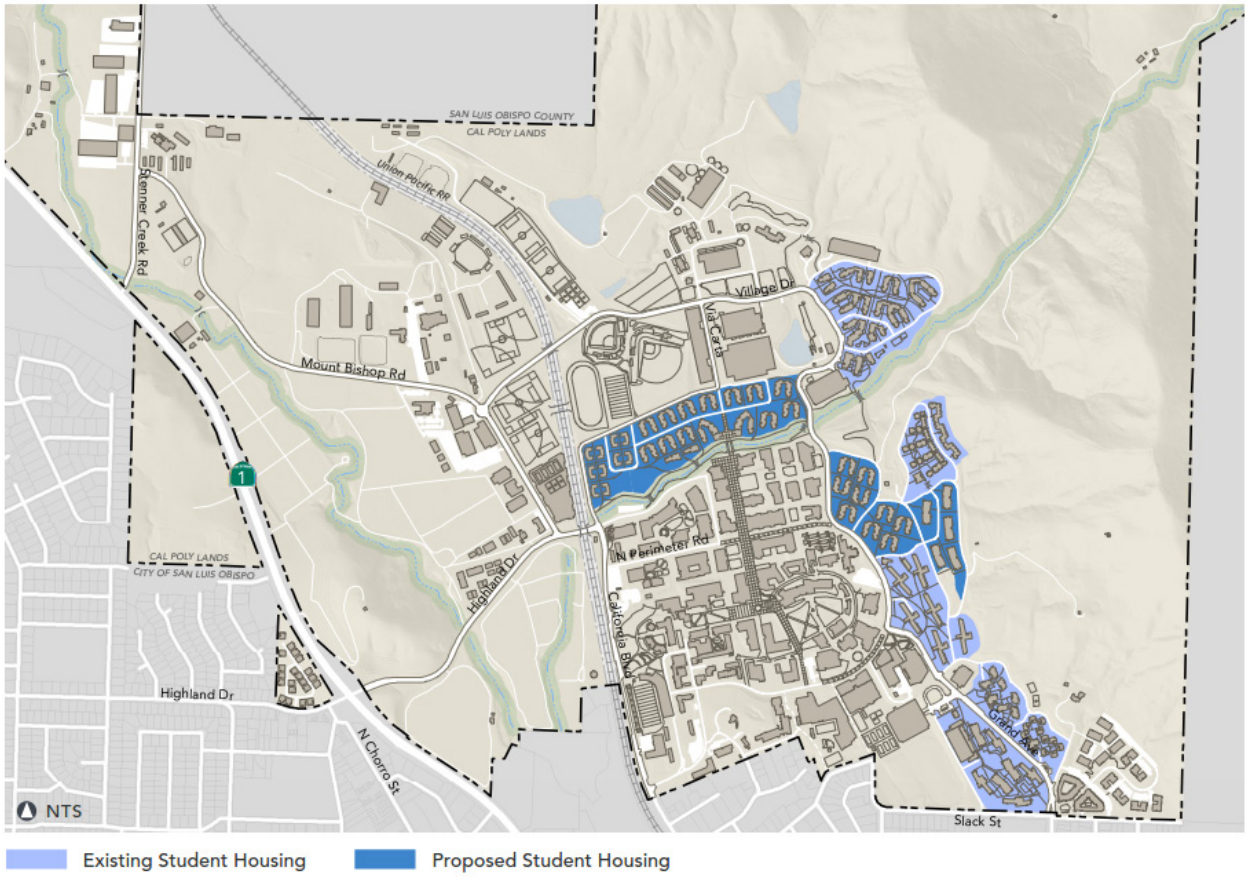
**Tier 3: Retain**
Buildings are current and do not need significant improvements in the near future.

1 Administration
2 Cotchett Education
3 Business
4 Research Development
5 Architecture and Environmental Design
6 Cohan Center
7 Advanced Technology Labs
8 Bioresource & Agricultural Engineering
8A Bioresource & Agricultural Engineering Shop
9 Farm Shop
10 Erhart Agriculture
11 Agricultural Sciences
13 Engineering
14 Pilling Computer Science
15 Corporation Administration
19 Dining Complex
20 Engineering East/Faculty Offices
21 Engineering West
22 English
24 Food Processing & Campus Market
25 Faculty Offices East
26 Graphic Arts
26A Printing Press
27 Health Center
28 Smith Alumni & Conference Center
33 Fisher Science
34 Walter F. Dexter
35 Kennedy Library
36 University Police
38 Mathematics & Science
40 Engineering South
41A Brown Engineering
42 Mott Physical Education
43 Recreation Center
43A Kinesiology
44 Spanos Theatre
45 Davidson Music Center
46 Old Natatorium
47 Faculty Offices North
52 Science
53 Science North
60 Crandall Gymnasium
61 Spanos Stadium
65 McPhee University Union
70 Facilities Management & Development
71 Transportation Services
115 Chase Hall
116 Jespersen Hall
117 Heron Hall
117T CAD Research Center
124 Student Services
130 Grand Avenue Parking Structure
133 Orfalea Family & ASI Children's Center
180 Baker Center for Science & Mathematics
186 Construction Innovations Center
187 Simpson Lab
192 Engineering IV
197 Bonderson Engineering Center

## Student Housing

The University provides approximately 8,200 beds in its existing student housing facilities, including student housing facilities under construction. These facilities house approximately 37% of Cal Poly's undergraduate students on campus. A major goal of the Master Plan is to house all freshman and sophomore students on campus, as well as approximately 30% percent of upper division students. To do so, the Master Plan provides for approximately 6,800 new student beds. With this housing, all freshmen and sophomore students will be housed on campus, and the on-campus housing will accommodate 65% of all University's undergraduate students. The new student housing will include both student dormitories and apartments. The dormitories will be located predominantly within the East Campus area in proximity to the existing student housing, and the apartments within the North Campus area across Brizzolara Creek within easy walking and biking distance of the campus Academic Core. The new housing will be supported with dining facilities, activity centers, and other amenities, making the campus more attractive to students "24/7", which also reduces the need for student residents to have cars, as more amenities and entertainment will be available on-campus. The existing and planned housing on campus is illustrated in Figure 5.

**Figure 5. Existing and Planned Student Housing**



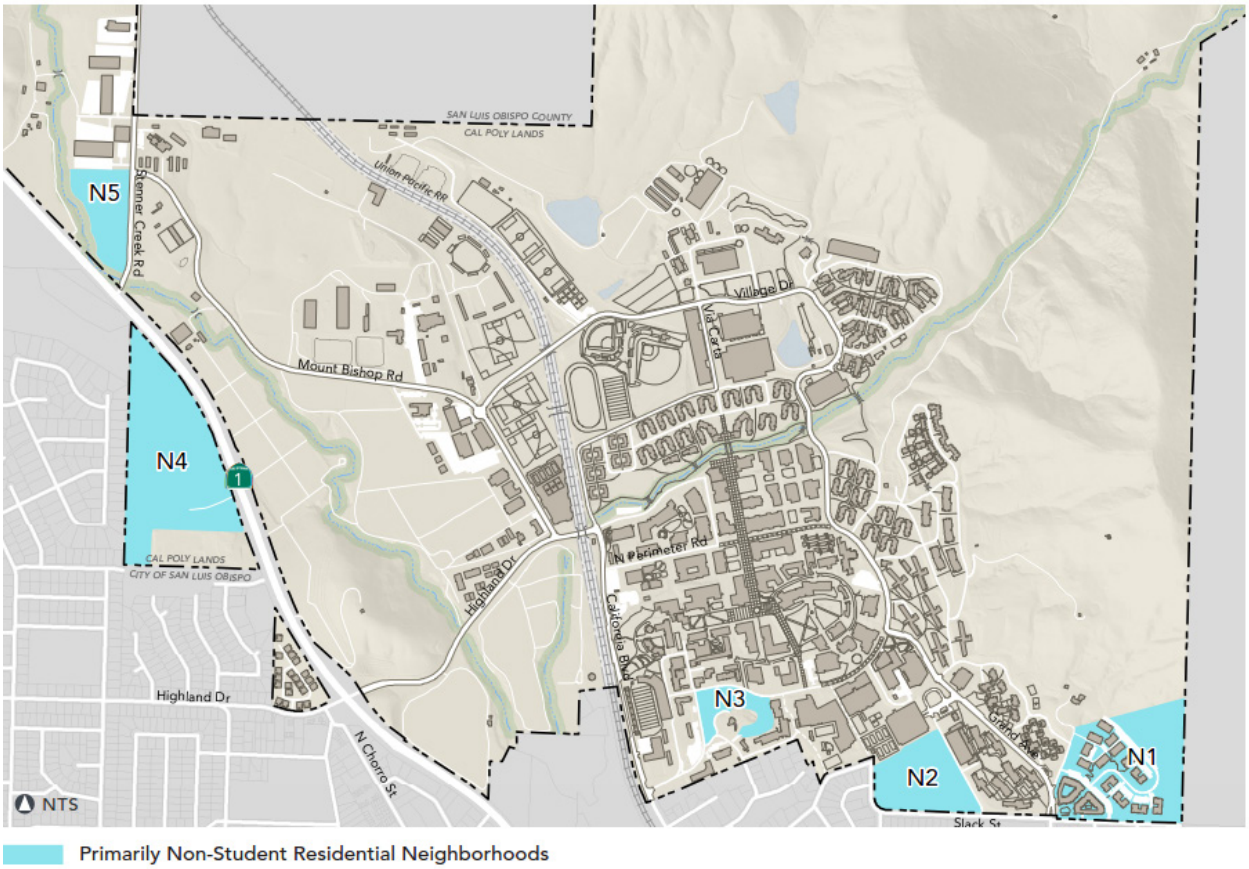
### Faculty/Staff Housing and Options Primarily for Non-Students

The Master Plan designates five locations as "residential neighborhoods" on the edges of the campus (Figure 6):

- two of these locations are on the southern boundary of the campus and will provide "buffers" between the campus itself and adjacent off-campus neighborhoods;
- one location is in the area near the University House and Spanos Stadium; and,
- two locations are farther removed from the Academic Core—one site west of Highway 1, and one site along the west side of Stenner Creek Road.

The development of housing at all of these locations could provide a total of up to 1,470 units that will be made available to the University faculty and staff, non-traditional students, and the general public. Providing housing opportunities for the University faculty and staff is vital for Cal Poly to successfully recruit, and retain, faculty and staff. A priority system will be used to make sure that University-related housing needs are fulfilled first, before making units available to the general market in a community where reasonably priced apartment-style housing is needed. The residential neighborhood anticipated to be developed first is the neighborhood west of Grand Avenue at Slack Street, referred to herein as the Slack and Grand Residential Neighborhood, which will provide 420 apartment-style units.

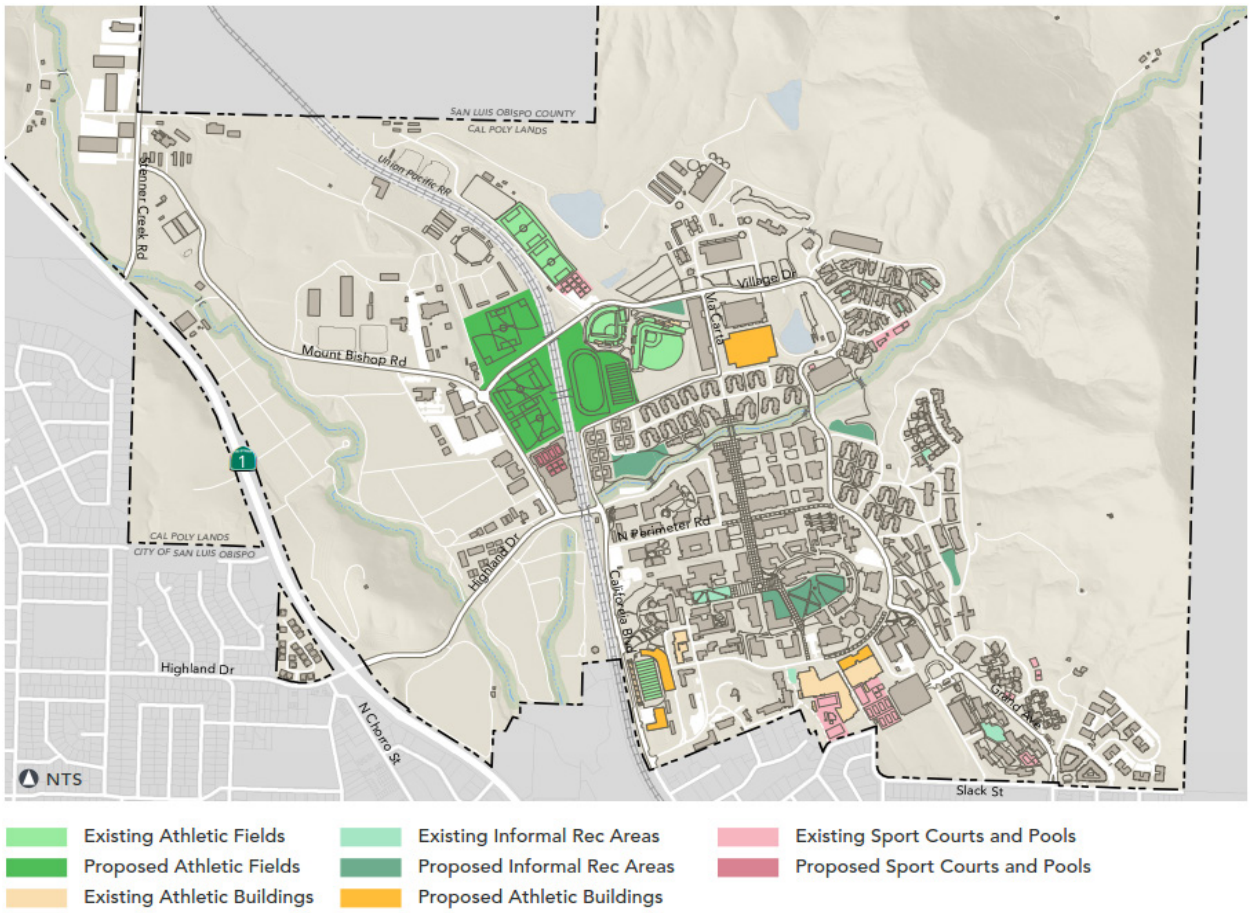
**Figure 6. Residential Neighborhoods Housing**



## Sport and Event Facilities

The Master Plan provides for replacement, as well as renovation, of existing recreation and athletic facilities and for construction of new facilities on campus (Figure 7). The Master Plan provides for enhancement of existing facilities, including the field expansion and addition of approximately 4,000 seats to the existing Spanos Stadium to better house home football games, home soccer games, and graduation ceremonies. In addition, a new sports and event arena with approximately 5,500 seats is also planned at Via Carta north of Brizzolara Creek to house basketball games, women's volleyball games, and other campus events. Creekside Village will also include a recreation center for students, faculty, and staff that could be a satellite facility to the existing Recreation Center. Some existing playing fields will be relocated west of the Union Pacific Railroad (UPRR) tracks, and other informal recreation areas will be added adjacent to, and incorporated within, the new student housing. To allow for a potential residential neighborhood on the north side of Slack Street, the Master Plan relocates the track and football practice field north of Brizzolara Creek.

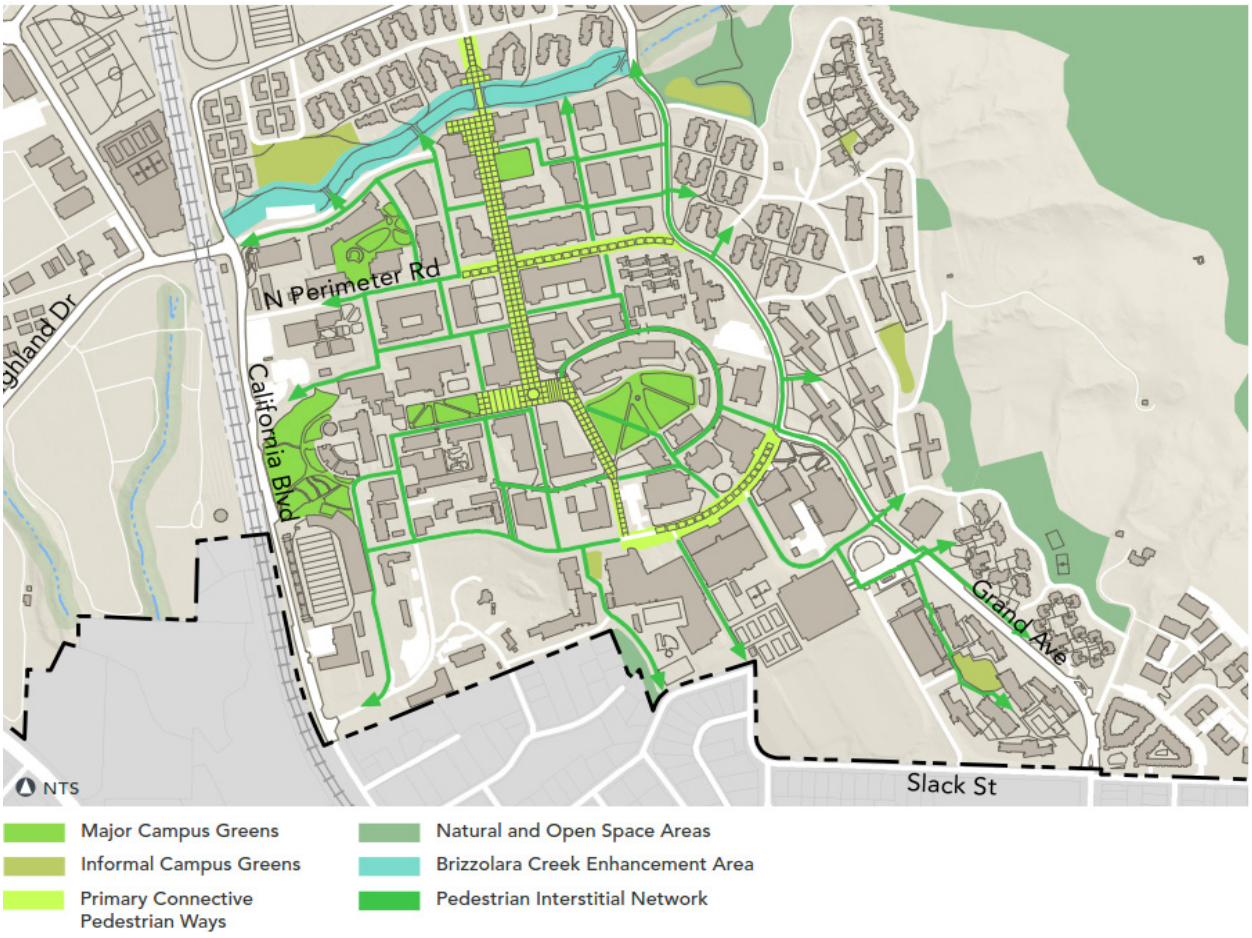
**Figure 7. Athletic and Recreational Facilities**



## Open Space and Landscaping

The Master Plan further enhances open space, including landscaped areas, throughout the campus, as illustrated in Figure 8. The existing major and iconic open space areas of the campus will be enhanced, including extending Dexter Lawn to the east and expanding Centennial Green by the Warren J. Baker Center for Science and Mathematics to create a more meadow-like open space with Central Coast landscaping and numerous seating areas. All new buildings on campus will also include adjacent smaller landscaped open spaces that will provide outdoor seating and study areas. Landscaping will use an attractive plant palette with drought-resistant plants. With these components, the Master Plan emphasizes the integrative role of open space: creating connections between landscape and structures, and a comfortable human-scaled setting for educational activities and campus life.

**Figure 8. Green Space and Landscape Areas**



## Circulation Infrastructure Improvements

The Master Plan includes the following key principles for the campus' circulation:

- Shift modal hierarchy to: (1) walking, (2) bikes, (3) transit, and (4) cars;
- Reduce trips and parking demand;
- Create a pedestrian core;
- Provide expanded and improved bicycle circulation system, including bicycle parking closer to major campus facilities and activity centers;
- Consider a campus shuttle;
- Provide adequate access for maintenance, delivery, emergency, and special needs; and,
- Ensure safety of all transportation modes.

***Pedestrian and Bicycles:*** The Master Plan provides for an enhanced pedestrian and bike circulation system with new and improved pedestrian and bicycle paths throughout the campus. Additional parking for bicycles located near major activity centers will also be installed on the campus. The planned system increases safety by creating a pedestrian-only core area of the campus and eliminating conflicts between pedestrians, bicycles, and cars.

***Transit:*** The Master Plan calls for a multi-modal transit center in the vicinity of the proposed Creekside Village near the terminus of Highland Drive at University Road. A new transit stop is envisioned near the southeast corner of campus at the Performing Arts Center to serve the new residential neighborhood and student housing. An additional stop is planned at the southwest corner of campus. While the Master Plan indicates that transit routes will bring riders to strategic locations at the edge of the campus, thereby eventually eliminating the need for buses to regularly enter the Campus Core, any changes to the current routes, as well as the precise locations and designs of the transit center and future stops, will be determined in cooperation with the City of San Luis Obispo (City) and the San Luis Obispo Regional Transit Authority (RTA).

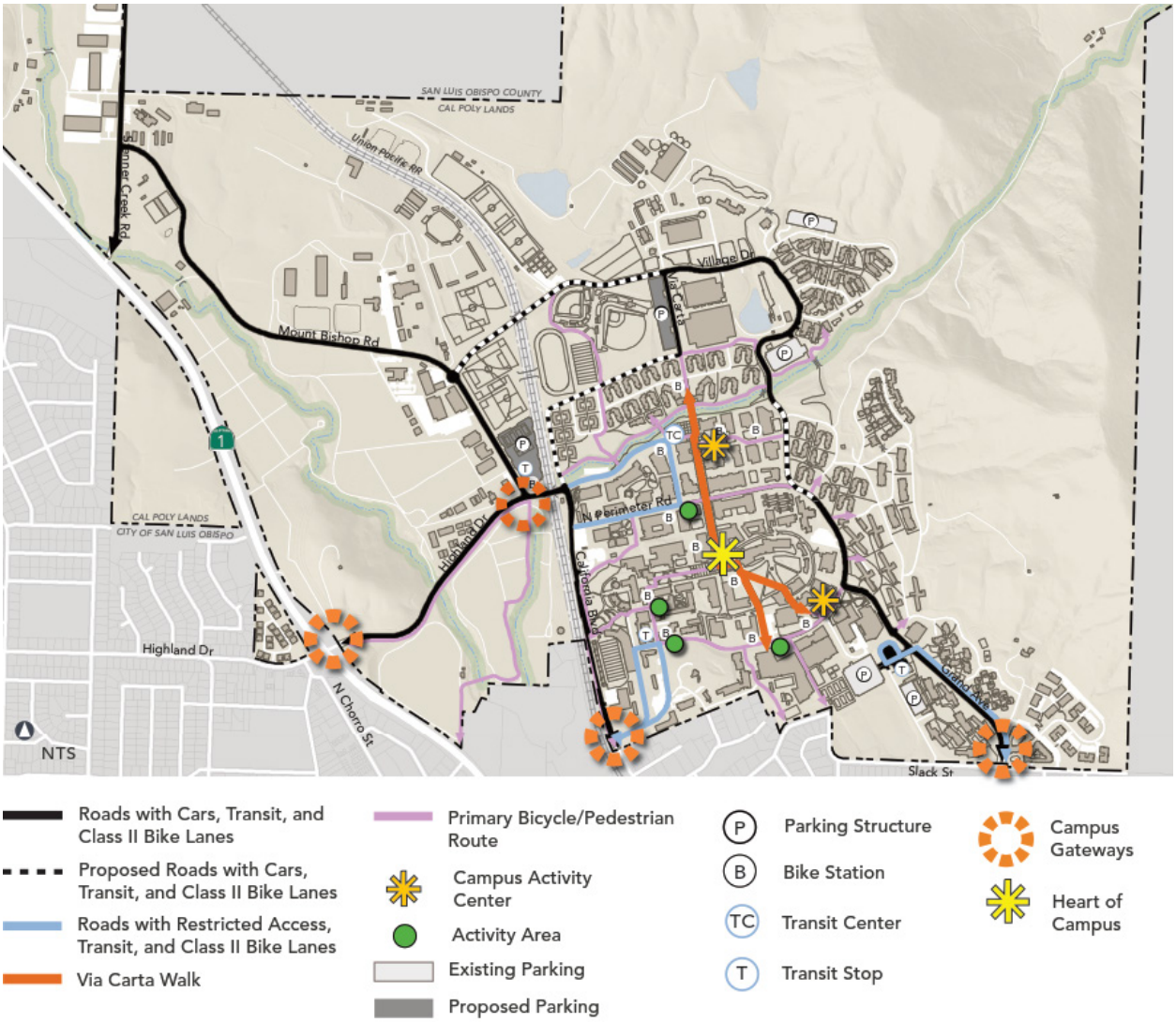
***Roadways****:* The Master Plan includes two new roads supporting the planned campus uses north of Brizzolara Creek. The new northernmost road will connect Village Drive to Mount Bishop Road and utilize, in part, Sports Complex Road; this includes grade-separated UPRR crossings for vehicles and for pedestrians. The second new road will extend from the California Boulevard/Highland Drive intersection north of the creek and east to Via Carta, which includes a bridge across Brizzolara Creek and a new grade-separated pedestrian crossing of the UPRR tracks, north of California Boulevard, to access new residential uses in this vicinity. These new routes will not only accommodate vehicles, but also pedestrians and bicycles.

The Master Plan also includes the redesign of North Perimeter Road, University Drive, South Perimeter Road, and the eastern end of Highland Drive to restrict through traffic, to create a stronger and safer pedestrian presence and to encourage bicycle use. North Perimeter Road in particular currently divides the Academic Core and creates significant intermodal conflicts. Access for emergency, maintenance, and disabled access vehicles will continue to be provided with these improvements

Figure 9 and Figure 10 illustrate circulation improvement plans for the campus.

**Figure 9. Academic Core Circulation**

**Figure 10. Main Campus Circulation**




## Parking

Currently, the campus provides 7,427 parking spaces. The Master Plan retains this amount of parking on campus in the future; there will be no increase in the number parking spaces. Any existing parking that will be displaced by new facilities or uses will be replaced, including through the provision of structured parking in new parking structures near the intersection of Mount Bishop Road and Highland Drive, and near Via Carta and Baggett Stadium.

## Utility Infrastructure Improvements

Utility infrastructure improvements will provide modernization and enhancements to the existing campus utility systems to serve new facilities, including drainage, water, sewer (including a new wastewater reclamation facility located near the southwest corner of campus near the UPRR

tracks), and other utility infrastructure systems. While ensuring quality operational performance of these systems, the improvements will also conserve water, conserve energy, reduce carbon emissions, and reduce utility costs.

## "Smart Growth," Sustainability, and Environmental Stewardship

The Master Plan incorporates "smart growth" measures, including the compact development form around the Academic Core and mixed uses that reduce the reliance on cars and improve the efficiency of infrastructure and energy use. Furthermore, and more importantly, the Master Plan calls for increased housing on campus that will reduce commuting and its associated environmental impacts, and emphasizes a pronounced shift away from cars toward active modes of transportation, including walking, bikes, and transit. In addition, the Master Plan emphasizes use of renewable energy sources including solar and wind energy, water reclamation, and waste composting, which is especially important for the University with hands-on, Learn by Doing programs.

Cal Poly is committed to being a leader in sustainability through its facilities and operations, and views sustainability as an essential element of its academic mission. Therefore, the Master Plan strives to protect important environmental resources, keeping most prime agricultural land in production, creating protective buffers around creeks, and preserving open space and scenic resources that are important to Cal Poly's image and character. It also requires that new facilities and campus infrastructure be environmentally responsible, energy efficient, and showcase advancements in sustainable technology. This includes designing new facilities to meet LEED (Leadership in Energy and Environmental Design) standards; continually monitoring, maintaining, and updating energy systems to ensure that Cal Poly runs in the most efficient manner possible; and upgrading or replacing outdated technology and systems, as needed.

The campus has undertaken many sustainably oriented endeavors, catalogued every 2 years in the Biennial Progress Report for Sustainability for Cal Poly Facilities Management and Development, since 2006. Indicators measuring improvements in sustainability efforts include:

- Energy use
- Transportation
- Water resources
- Land use and development
- Greenhouse gases
- Solid waste and recycling
- Curriculum and research

These indicators are monitored by the University to ensure that Cal Poly meets, and in some places, exceeds, the CSU system's Sustainability Policy goals to:

- Reduce Greenhouse Gas (GHG) emissions to 1990 levels by 2020, and to 80% below 1990 levels by 2040
- Increase self-generation of energy from 44 to 80 MW by 2020
- Source energy to 33% renewables by 2020
- Reduce per capita waste going to the landfills to 80% by 2020

- Reduce water use by 20% by 2020
- Purchase at least 20% percent of food from sustainable sources (local, organic, free trade)
- Integrate Sustainability across the curriculum

## Design Character

The Cal Poly campus is located in a spectacularly beautiful natural setting, with topography and views that include the Nine Sisters volcanic peaks, rolling hills, and outcroppings of trees and vegetation. While the natural campus setting is remarkable, it will be critical for those planning the future of Cal Poly to assure that the campus will always retain the visual connection to the surrounding landscape. Modeling of siting and massing of future individual buildings and neighborhoods will assure that they do not block, but rather frame and focus views and vistas from public areas of the campus and major circulation ways.

The Master Plan has considered the topography of the campus in land use, building siting, and open space designations. Incorporating and emphasizing topographic design elements in planning will result in outdoor spaces of varying sizes and character, will provide on-grade access to various floors of buildings, and will provide additional opportunities for informal and impromptu access encouraged for the Academic Core.

***Building Siting and Orientation:*** Building siting and design will consider views, circulation and building entrance orientation, adjacent and nearby open space, any planned expansion, topography, existing site features, and existing and planned adjacent buildings.

***Scale and Massing:*** Buildings in the Academic Core will be at least three, and as many as six, stories in order to accommodate required future growth in the Academic Core and to allow for significant open space. Topography will help determine the appropriate height for new buildings. Stepped back facades will modulate the perceived scale and contribute to view corridors and framed vistas.

***Architectural Style and Materials:*** The new buildings in the Academic Core will be a high-quality, contemporary design. The Warren J. Baker Center for Science and Math is a successful example of scale and materials that are compatible with the existing campus while providing a higher level of architectural design quality than some existing buildings.

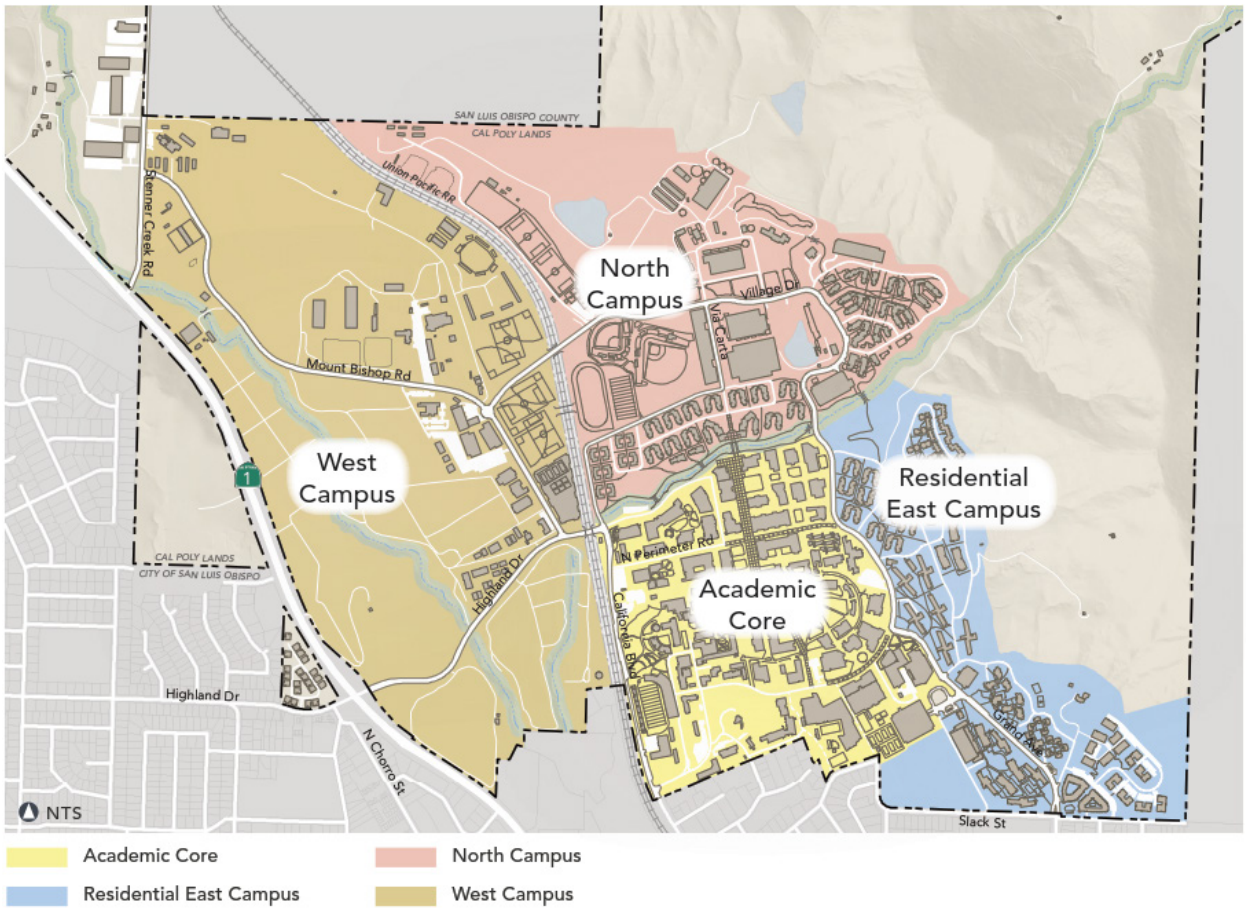
***View Preservation:*** Preservation of views to the Cal Poly outer lands and surrounding hills is an important consideration from open spaces, circulation ways, and building windows. Specific alignment and orientation of roads, major pedestrian pathways, and building siting and massing will consider view framing and view preservation.

# Campus Facilities and Improvements Layout

The Master Plan builds and expands the dynamics, synergy, spatial, and functional interrelations among the campus' uses, facilities, open space, natural environmental features, and agricultural lands. To do so, the Master Plan provides for consolidation of future facilities development within the main campus' Academic Core and phases new facilities development north of Brizzolara Creek. Accordingly, the main campus is organized into the Academic Core,

surrounded by the Residential East Campus, North Campus, and West Campus, as illustrated in Figure 11.

**Figure 11. Main Campus Area Designations**




***Academic Core***: The organization of the Academic Core around significant open spaces and strong and active circulation routes for pedestrians and bicycles will provide the framework for an iconic sense of place for Cal Poly. The Academic Core encompasses the majority of academic teaching and learning facilities. It is roughly defined by Brizzolara Creek to the north, the southern edge of campus to the south, Grand Avenue and Perimeter Road to the east, and the UPRR tracks to the west. Support services for students, faculty, and staff are also located in the Academic Core. Most buildings where classes and laboratories are held are within a 10-minute walking distance, or approximately 0.5 mile. Two activity hubs frame the Academic Core—the Julian A. McPhee University Union (UU) and the new Creekside Village area at the northern edge of the core at Villa Carta and Brizzolara Creek. The UU will be improved for an enhanced indoor and outdoor experience supporting the entire campus community, especially the student housing within close proximity. The new Creekside Village will also support the campus community, especially planned student housing to the north of Brizzolara Creek, and will house a mix of uses such as teaching and office spaces, retail and food services, recreation, student

engagement and study spaces, and more. Figure 12 illustrates planned land uses within the Academic Core.

**Figure 12. Academic Core Land Uses**


Via Carta, which is currently the primary north/south pedestrian and bicycle route for the Academic Core, will become the central spine of campus, providing access to a variety of interactive gathering places, open spaces of numerous types and sizes, and will provide a framework for incorporating new facilities in an integrated, unifying, and welcoming manner. The varied topography of the Academic Core will be capitalized upon to create visually interesting places and to preserve and enhance views of the surrounding hills, campus lands, and buildings. Utilizing the existing topography will allow at-grade access at multiple levels for many of the new facilities.

A major focus of the Academic Core land use plan is to create a true "heart" of campus. This area is anticipated to be a convergence of two spaces—Dexter Lawn and Centennial Meadow. Dexter Lawn, a traditional collegiate landscape, will be extended to the east, terminating at the intersection of Via Carta. Centennial Green will be expanded, resulting in more of a meadow-like open space with Central Coast landscaping and numerous seating areas among trees and foliage. There will be a visual and physical connection between Dexter Lawn and Centennial Meadow. This area is anticipated to be a gathering space, a meeting place, and an iconic convergence of campus life.

The Academic Core will be essentially vehicle free. Emergency, service, and special vehicle access needs will be accommodated within the pedestrian streets and plazas similar to how they are currently accommodated on Mustang Way and northern Via Carta. Well-defined pedestrian and bicycle routes will be provided and wayfinding will be enhanced by better definition of an informal grid across the Academic Core, with secondary walkways integrated with smaller-scale open spaces and seating areas.

***Residential East Campus*:** Student housing is concentrated on the east side of campus, primarily along Grand Avenue, at the base of the eastern hills. The newest housing development at the Grand Avenue entrance to campus, slated to open in fall 2018, will allow all first-year students to live on campus, in traditional dormitory-style housing. These student residential neighborhoods will largely remain the same, with anticipated improvements, such as the replacement of the Vista Grande dining facility, augmentation of the North Mountain residence halls, and renovations of the other residence halls. Additional student housing is planned for the existing parking lots behind the North and South Mountain residence halls.

***North Campus*:** The North Campus encompasses land uses and facilities across Brizzolara Creek from the Academic Core, and is the focus of the future physical development of the campus. Most of the new student housing will be located within the North Campus. In addition to student housing, new recreation facilities are proposed for this area with both passive and active programmable spaces. The track and football practice fields will be located near the UPRR tracks, along a proposed extension of California Boulevard.

An event arena is also proposed north of Brizzolara Creek. The arena is envisioned to house team sports, such as basketball and volleyball, and also provide a venue for concerts, large speaking engagements, and other similar events. Mott Gym, the current home to basketball and volleyball, is likely to remain with major renovations. Two parking structures will be constructed near the baseball stadium—one at Highland Drive and Mount Bishop Road and one at Via Carta—and will replace existing surface parking lots and provide parking for both sport events and residential uses in the area.

***West Campus*:** The West Campus includes agricultural lands and facilities, which are mostly preserved or enhanced under the Master Plan. Some agricultural facilities or related uses might be located on adjacent agricultural lands, as necessary. A new Farm Shop is proposed near Highway 1 and the Facilities Service Yard, and a new Data Center will be relocated farther from the Campus Core to free up key space within the Academic Core. New recreation fields will also be provided in this area.

## Implementation Framework

The Master Plan provides for implementation of the planned facilities and improvements phased over the 20-year time span of the Master Plan. As a neighbor and partner, the University will continue to coordinate its development with the City and County of San Luis Obispo, although as a public university it is not governed by local land use and development regulations. The initial facilities envisioned to be developed early within the first 5 years within the Master Plan timeframe are discussed below.

***Multidisciplinary Academic Facility:*** This new approximately 113,000-square-foot facility will be located within the Academic Core. The facility could be a single building, or part of other mixed facilities depending upon space needs. It will provide classroom, auditorium, and other academic space across disciplines for the University's six colleges.

***Science and Agriculture Teaching and Research Complex:*** This new approximately 75,000-square-foot four-story facility will provide flexible laboratory, research, and teaching space for multidisciplinary academic instruction.

***Engineering Projects Facility:*** This new, approximately 45,000-square-foot engineering academic facility will be located on the H-2 parking lot near the library. The facility will provide needed space for teaching, research and "maker" space.

***Northeast Polytechnic Center I:*** This new, approximately 45,000-square-foot facility will be located on the site of the existing corporation yard. The facility will provide space for instructional, laboratory, faculty offices, and administrative space.

***Beef Cattle Evaluation Center (BCEC) Expansion:*** The BCEC facility will be expanded by approximately 10,000 square feet to provide needed space for continuing agricultural programs.

***H.P. Davidson Music Center Renovation and Addition:*** The campus' Davidson Music Center will be renovated and expanded by approximately 60,000 square feet to provide the necessary space for music, theater, and dance programs.

***Library Remodel and Addition:*** The existing University Library will be remodeled and expanded by approximately 114,300 square feet, providing space necessary for classroom and lecture facilities.

***University Union Renovation and Expansion:*** The existing University Union will be renovated and expanded with approximately 100,000 square feet of additional space.

***Farm Shop/Corporation Yard Replacement:*** The existing farm shop will be relocated and replaced with an approximately 108,400-square-foot corporation yard facility that will consolidate transportation services. As part of this facility, Perimeter Road/Highland Drive will be realigned to create safe pedestrian circulation.

***Health Center/ Medical Clinic Renovation and Addition:*** The existing health center will be renovated and expanded to provide approximately 60,000 square feet of additional space needed to continue providing medical and health services for the University students.

***Data Center Facility:*** The new data center facility will be located at the northwestern corner of the main campus off Stenner Creek Road. The facility will provide approximately 30,000 square feet needed for data storage, office, and teaching space.

***Technology Park Facility:*** This new, approximately 25,000-square-foot facility will be located adjacent to the existing Technology Park facility of similar size and function, and, as with the existing facility, it will provide customized research and office space.

***Student Housing for Freshmen Students:*** This new student housing facility will be located on the site of the existing R-1 and K-1 parking lots. It will provide up to 1,000 beds for the freshmen students in dormitory-style housing.

***Student Housing for Sophomore Students:*** The new student housing will be located in the North Campus area. It will provide up to 1,500 beds for the sophomore students in dormitory-style housing.

***Slack and Grand Residential Neighborhood:*** described below.

## Slack and Grand Residential Neighborhood

***Project Objectives***: The main objectives of the Slack and Grand Residential Neighborhood are to:

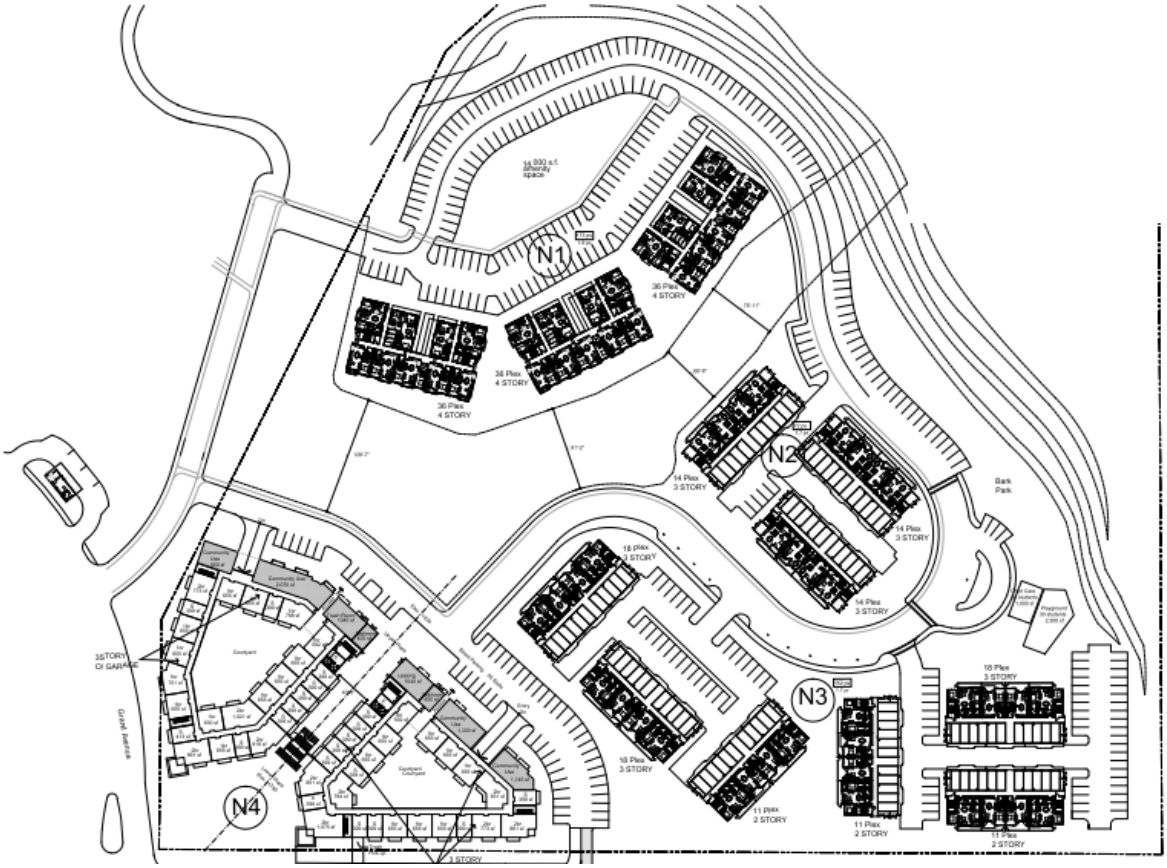
- Provide housing opportunities on campus primarily for University faculty and staff to promote faculty and staff recruitment and retention, and to enhance faculty and staff connectivity with the campus.
- Provide housing opportunities to non-traditional students such as graduate students, veterans, and those with families, and possibly alumni or retirement housing, and for the greater San Luis Obispo community.
- Generate revenue from public and private sources to realize the Master Plan objectives and to further support and benefit the CSU's educational mission

***Project Location and Surrounding Uses***: The 22-acre site of the Slack and Grand Residential Neighborhood is located northeast of the intersection of Grand Avenue and Slack Street. The closest campus uses include Yosemite Hall student housing, Sierra Madre Hall student housing, and Student Housing South to the west. Student Housing South is currently nearing the completion of its construction and is anticipated to open in 2018. The closest off-campus uses to the site include existing school facilities accommodating Charles E. Teach Elementary School, San Luis Obispo Classical Academy High School, and Monart Art School located diagonally across from the site to the southwest of the intersection of Grand Avenue and Slack Street, and single-family residential development across Slack Street to the south.

The site is currently undeveloped, and is only intermittently used by the Cal Poly for horse grazing. Figure 13 illustrates the neighborhood's location, its configuration, and the surrounding uses. Figure 14 illustrates a preliminary site plan for the neighborhood.

**Figure 13. Slack and Grand Residential Neighborhood Location and Surrounding Uses**

**Figure 14. Slack and Grand Residential Neighborhood Preliminary Site Plan**




| Plan | Type | SF | 11 Plex | 14 Plex | 18 Plex | 36 Plex | Podium |
|---|---|---|---|---|---|---|---|
| A1 | 1br/1ba | 720 | 12 | 6 | 18 | 48 | 0 |
| A2 | 2br/2ba | 950 | 12 | 6 | 18 | 0 | 0 |
| A3.1 | 2br/2ba | 1073 | 9 | 18 | 18 | 0 | 0 |
| A3 | 2br/2ba | 1093 | 0 | 0 | 0 | 24 | 0 |
| A4 | 1br/1ba | 908 | 0 | 0 | 0 | 0 | 0 |
| A5 | 2br/2ba | 1130 | 0 | 0 | 0 | 0 | 0 |
| A6 | 2br/2.5ba | 1370 | 0 | 6 | 0 | 0 | 0 |
| A7 | 3br/2.5ba | 1450 | 0 | 6 | 0 | 0 | 0 |
| A8 | 1br/1ba | 730 | 0 | 0 | 0 | 12 | 0 |
| A9 | 2br/1ba | 940 | 0 | 0 | 0 | 12 | 0 |
| A11 | 2br/1ba | 908 | 0 | 0 | 0 | 12 | 0 |
| Podium | Studio | 409 | 0 | 0 | 0 | 0 | 63 |
| | | | | | | | |
| Podium | 1br/1ba | 690 | 0 | 0 | 0 | 0 | 78 |
| Podium | 2br/2ba | 895 | 0 | 0 | 0 | 0 | 42 |
| **TOTAL** | | | **33** | **42** | **54** | **108** | **183** |
| **GRAND TOTAL** | | | | | | | **420** |

***Project Characteristics***: The residential neighborhood at Slack Street and Grand Avenue will provide 420 high-quality rental units in two- to five-story apartment buildings, and will include a mix of studio, one-, two-, and three-bedroom units. Parking will be provided on the site at an overall ratio of 1.7 spaces per unit. Figure 15 shows an artist rendering of future views of the site from the intersection of Grand Avenue and Slack Street.

**Figure 15. Slack and Grand Residential Neighborhood View Rendering**

The amenities provided on-site include open space and courtyards for future residents and their families including a community playground; a day care facility serving the families of the residents; and neighborhood retail primarily serving future residents. The retail is anticipated to include a small café and similar retail, totaling approximately 8,500 square feet, with one small retail located on the ground floor of the apartment buildings along Slack Street and the other on the ground floor of the apartment buildings along Grand Avenue. In concept, an amenity of a spa with a pool may also be considered. As illustrated in Figure 16, the neighborhood also includes sustainability features in its landscaping, including a habitat restoration zone and retention basins for accommodating runoff on-site. All site utilities, including water, sewer, and drainage, will connect to the existing utility systems.

***Construction:*** If approved, construction of the Slack and Grand Residential Neighborhood is anticipated to begin in 2018. All construction, including grading, installation of utilities, and construction of apartment buildings will be completed within 42 months. Site preparation is anticipated to involve approximately 491,000 cubic yards of grading and 59,000 cubic yards of fill.

**Figure 16. Slack and Grand Residential Neighborhood Illustrative Site Plan**


# Project Actions

The Master Plan and subsequent implementing actions are subject to review and approval by the CSU Board of Trustees. Implementation of the Master Plan may also involve actions of other agencies, as follows:

- CSU Board of Trustees
  Approval and adoption of the Master Plan
  Approval of public-private partnerships for development of residential neighborhoods
  Approval of conceptual and schematic plans for future facilities and improvements
  Approval of conceptual and schematic plans for Slack and Grand Residential Neighborhood
  Others, as may be necessary

- City of San Luis Obispo
  Approval of any future SLO Transit bus service improvements

- Regional Water Quality Control Board
  Issuance of Construction Storm Water General Permit for construction of new facilities and improvements
  Issuance of Clean Water Act Section 401 Certification

- San Luis Obispo Regional Transit Authority
  Approval of any future regional bus service improvements

- California Public Utilities Commission and Union Pacific Railroad
  Approval of grade-separated vehicular and pedestrian/bicycle railroad crossings for the new roadway connecting Village Drive to Mount Bishop Road

- California Department of Fish and Wildlife
  Issuance of permits or other actions if needed for improvements that may affect sensitive biological resources, including Streambed Alteration Agreements

- US Army Corp of Engineers
  Issuance of permits under Section 10 and under Section 404 if needed for improvements that may affect Brizzolara and/or Stenner Creeks

- Division of State Architect
  Approval of accessibility in future facilities

- State Fire Marshall
  Future facility fire safety review and approval

- Others, as may be necessary

# 3.0 Environmental Impact and Mitigation Measures

This section of the EIR examines potentially significant effects associated with the Cal Poly Master Plan as identified through the NOP process (see Section 1.0 and Appendix A) and identifies mitigation measures to avoid or substantially reduce impacts found to be potentially significant in the EIR analysis. Each environmental issue for which the Initial Study (see Appendix A) identified a potentially significant impact is discussed in the following manner:

**Environmental Setting** describes the existing environmental conditions in the vicinity of the project as it exists before the commencement of the project to provide a baseline for comparing "before the project" and "after the project" environmental conditions.

**Impact Criteria** defines and lists specific criteria used to determine whether an impact is considered to be potentially significant. Appendix G of the CEQA Guidelines; applicable local, State, federal or other standards; and officially established thresholds of significance are the major sources used in crafting criteria appropriate to the specifics of a project, since "….an ironclad definition of significant effect is not always possible because the significance of an activity may vary with the setting" (CEQA Guidelines Section 15064[b]). Principally, "… a substantial, or potentially substantial, adverse change in any of the physical conditions within an area affected by the project, including land, air, water, flora, fauna, ambient noise, and objects of historic and aesthetic significance" constitutes a significant impact (CEQA Guidelines Section 15382).

In the environmental analysis, impact criteria are listed for those impacts that have been identified as potentially significant through the Initial Study and NOP process.

**Environmental Impact** presents evidence, based to the extent possible on scientific and factual data, about the cause and effect relationship between the project and potential changes in the environment. The exact magnitude, duration, extent, frequency, range or other parameters of a potential impact are ascertained to the extent possible to provide facts in support of finding the impact to be or not to be significant. In determining whether impacts may be significant, all the potential effects, including direct effects, reasonably foreseeable indirect effects, and considerable contributions to cumulative effects, are considered. If, after thorough investigation, a particular impact is too speculative for evaluation, that conclusion is noted (CEQA Guidelines Section 15145).

**Mitigation Measures** identify measures that can reduce or avoid the potentially significant impact identified in the EIR analysis. Standard existing regulations, requirements, and procedures applicable to the project are considered a part of the existing regulatory environment. Mitigation measures are those feasible, project-specific measures that may be needed in addition to compliance with existing regulations and requirements, in order to reduce significant impacts. Mitigation, in addition to measures that the lead agency will implement, can also include

measures that are within the responsibility and jurisdiction of another public agency (CEQA Guidelines Section 15091[a][2]).

**Level of Impact After Mitigation** indicates what effect remains after application of mitigation measures, and whether the remaining effect is considered significant. When these impacts, even with the inclusion of mitigation measures, cannot be mitigated to a level considered less than significant, they are identified as "significant unavoidable impacts." To approve a project with significant unavoidable impacts, the lead agency must adopt a Statement of Overriding Considerations. In adopting such a statement, the lead agency finds that it has reviewed the EIR, has balanced the benefits of the project against its significant effects, and has concluded that the benefits of the project outweigh the unavoidable adverse environmental effects, and thus, the unavoidable adverse environmental effects may be considered "acceptable" (CEQA Guidelines Section 15093 [a]).

# 3.1 Biological Resources

This section examines the potential short-term and reasonably foreseeable long-term impacts to biological resources associated with the Cal Poly campus development included in the Master Plan, including the development of the Slack and Grand Residential Neighborhood. The analysis evaluates the Master Plan in relation to federal and state regulations associated with natural resources as discussed in the Regulatory Setting below. For those instances where potential impacts to sensitive biological resources or conflicts with current regulation may occur, mitigation measures and best management practices (BMPs) are identified with the objective of avoiding or minimizing the impacts to the extent feasible.

The information presented is based on a compilation of biological studies conducted on campus, literature review, and several field surveys by SWCA Environmental Consultants (SWCA) and others. The literature review included existing biological documents prepared for the University property and a query of the California Natural Diversity Database (CNDDB).[4] In addition to the CNDDB query, the California Native Plant Society's (CNPS) Online Inventory of Rare and Endangered Plants of California[5] and the United States Fish and Wildlife Service (USFWS) Information Planning and Conservation tool (IPaC)[6] were reviewed for additional information on rare plants and wildlife that may occur in the area. SWCA biologists conducted field surveys of the campus planning areas on April 22, November 23, and December 21, 2016, and March 10, 2017. Additional biological resources background information is included in Appendix C.

## Regulatory Setting

### Federal

#### Federal Endangered Species Act of 1973

The Federal Endangered Species Act (FESA) provides legislation to protect federally listed plant and animal species. Impacts to listed species resulting from the implementation of a project will require the responsible agency or individual to formally consult with USFWS or the National Oceanic and Atmospheric Administration (NOAA) National Marine Fisheries Service (NOAA Fisheries) to determine the extent of impact to a particular species. If USFWS or NOAA Fisheries determines that impacts to a species will likely occur, alternatives and measures to avoid or reduce impacts must be identified. USFWS and NOAA Fisheries also regulate activities conducted in federal critical habitat, which are geographic units designated as areas that support primary habitat constituent elements for listed species.

[4] California Natural Diversity Data Base (CNDDB). 2017. Rarefind data output for the 5-mile radius. Accessed February 2017.
[5] California Native Plant Society (CNPS). 2017. Electronic Inventory of Endangered and Rare Plants. Available at: www.cnps.org/. Accessed February 2017.
[6] United States Fish and Wildlife Service (USFWS). 2017. Information for Planning and Conservation (IPaC). Available at: https://ecos.fws.gov/ipac/. Accessed October 2016.

Master Plan elements such as the two new roadways, the Creekside Village, the Creekside pedestrian walk, new recreational areas, and a student housing development will be located adjacent to riparian areas and aquatic habitat that could support the FESA listed South-Central California Coast steelhead (*Oncorhynchus mykiss*) and/or California red-legged frog (*Rana draytonii*). If the master plan projects include impacts to these aquatic sites, the University may need to obtain an Incidental Take Permit (ITP) from USFWS and/or NOAA Fisheries to implement the project(s). If a federal nexus is available through the United States Army Corps of Engineers (USACE) Clean Water Act permitting, USACE may consult with USFWS and/or NOAA Fisheries via Section 7 of the FESA to obtain a Biological Opinion and ITP for the project(s). If a federal nexus is not available, the University may consult directly with USFWS and/or NOAA Fisheries under Section 10 of the FESA, to obtain an ITP. Section 10 consultation will require the University to prepare and implement a Habitat Conservation Plan.

## Migratory Bird Treaty Act of 1918

The Migratory Bird Treaty Act (MBTA) protects all migratory birds, including their eggs, nests, and feathers. The MBTA was originally drafted to put an end to the commercial trade in bird feathers, popular in the latter part of the 1800s. The MBTA is enforced by USFWS, and potential impacts to species protected under the MBTA are evaluated by USFWS in consultation with other federal agencies.

## Section 404 of the Clean Water Act

USACE regulates discharges of dredged or fill material into Waters of the United States (WoUS). These waters include wetland and non-wetland bodies of water that meet specific criteria. USACE regulatory jurisdiction, pursuant to Section 10 of the Rivers and Harbors Act of 1899 (33 United States Code [U.S.C.] 403), regulates almost all work in, over, and under waters listed as "navigable waters of the U.S." that results in a discharge of dredged or fill material within USACE regulatory jurisdiction, pursuant to Section 404 of the Clean Water Act. Under Section 404, USACE regulates traditional navigable waters, wetlands adjacent to traditional navigable waters, relatively permanent non-navigable tributaries that have a continuous flow at least seasonally (typically 3 months), and wetlands that directly abut relatively permanent tributaries. USACE will determine jurisdiction over waters that are non-navigable tributaries, that are not relatively permanent and wetlands adjacent to non-navigable tributaries, and that are not relatively permanent only after making a significant nexus finding.

USACE jurisdiction over non-tidal WoUS extends laterally to the Ordinary High Water Mark (OHWM) or beyond the OHWM to the limit of any adjacent wetlands, if present (Code of Federal Regulations [CFR] Title 33, Section 328.4). Jurisdiction over non-tidal waters typically extends upstream to the point where the OHWM is no longer perceptible. USACE jurisdiction over tidal WoUS extends to the line on the shore reached by the highest high water.

If a proposed project includes placement of fill or dredge material in WoUS, the project proponent is required to obtain the necessary permit from USACE. If the project cannot avoid permanent impacts to the WoUS, the project proponent must include a Habitat Mitigation and Monitoring Plan (HMMP) with their permit applications. The HMMP must propose the

applicants means of mitigating permanent impacts so that no net loss of wetland or other waters results from the project.

### Section 401 of the Clean Water Act

The State Water Resources Control Board (SWRCB) and nine Regional Water Control Boards (RWQCB) regulate discharges of fill and dredged material in California, under Section 401 of the Clean Water Act and the State Porter-Cologne Water Quality Control Act, through the State Water Quality Certification Program. State Water Quality Certification is necessary for all projects that require a USACE permit, or fall under other federal jurisdiction, or have the potential to impact Waters of the State. Waters of the State are defined by the Porter-Cologne Act as:

> *"…any surface water or groundwater, including saline waters, within the boundaries of the state."*

In order for a Section 404 permit to be valid, Section 401 of the Clean Water Act requires a Water Quality Certification or waiver to be obtained. The Water Quality Certification (or waiver) determines that the permitted activities will not violate state water quality standards individually or cumulatively over the term of the action. Water quality certification must be consistent with the requirements of the Federal Clean Water Act, California Environmental Quality Act (CEQA), California Endangered Species Act (CESA), and Porter-Cologne Act.

If a proposed project will affect state jurisdictional waters but does not require a Clean Water Act Section 404 permit, SWRCB and the RWQCBs may authorize the project under a Waste Discharge Requirement (WDR) under the Porter-Cologne Water Quality Act. Regardless of a project being permitted via the Clean Water Act or Porter Cologne Water Quality Act, RWQCB will require the proposed project to include Low Impact Development (LID) standards in the project designs. RWQCB defines LID as "*minimizing or eliminating pollutants in storm water through natural processes and maintaining pre-development hydrologic characteristics, such as flow patterns, surface retention, and recharge rates*." Permittees must incorporate LID methodology into new and redevelopment ordinances and design standards unless permittees can demonstrate that conventional BMPs are equally effective, or that conventional BMPs will result in a substantial cost savings while still adequately protecting water quality and reducing discharge volume. In order to justify using conventional BMPs based on cost, permittees must show that the cost of LID will be prohibitive because the "cost would exceed any benefit to be derived." See Chapter 3.6 (Hydrology and Water Quality) for further discussion of stormwater controls and project requirements.

## State

### California Endangered Species Act

The CESA ensures legal protection for plants listed as rare or endangered, and species of wildlife listed as endangered or threatened. The state law also lists California Species of Special Concern (SSC) based on limited distribution, declining populations, diminishing habitat, or unusual scientific, recreational, or educational value. Under state law, the California Department of Fish

and Wildlife (CDFW) is empowered to review projects for their potential to impact state listed species and SSC species, and their habitats. If a proposed project is determined to have potential to result in take of a CESA listed species, the project proponent would need to coordinate with CDFW to obtain a Section 2081 Incidental Take Permit (2081-ITP). Under the CESA, "take" is defined as: "*to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill.*" A 2081-ITP is not required for a project that may result in adverse effects to SSC; however, the project proponent is required to avoid, minimize, or mitigate adverse effects on SSC under CEQA.

### Section 1602 of the Fish and Game Code

CDFW is responsible for conserving, protecting, and managing California's fish, wildlife, and native plant resources. To meet this responsibility, the law requires any person, state, or local government agency or public utility proposing a project that may impact a river, stream, or lake to notify CDFW before beginning the project. If CDFW determines that the proposed project may adversely affect existing fish and wildlife resources, a Lake or Streambed Alteration Agreement is required.

### Other Sections of the Fish and Game Code

"Fully Protected" species may not be taken or possessed without a permit from the Fish and Game Commission and/or CDFW. Information on these species can be found within California Fish and Game Code Sections 3511 (birds), 4700 (mammals), 5050 (reptiles and amphibians), and 5515 (fish).

CDFW also manages the California Native Plant Protection Act of 1977 (Fish and Game Code Section 1900, et seq.), which was enacted to identify, designate, and protect rare plants. In accordance with CDFW guidelines, plant species with CNPS rankings of 1A, 1B, 2A, 2B, and 3 are considered "rare" under the act, and are evaluated in CEQA documents. Impacts to plants of these ranks must be fully evaluated under CEQA. CNPS Rank 4 plants may have a limited distribution. It is strongly recommended that impacts to CNPS Rank 4 plants be evaluated in CEQA documents.

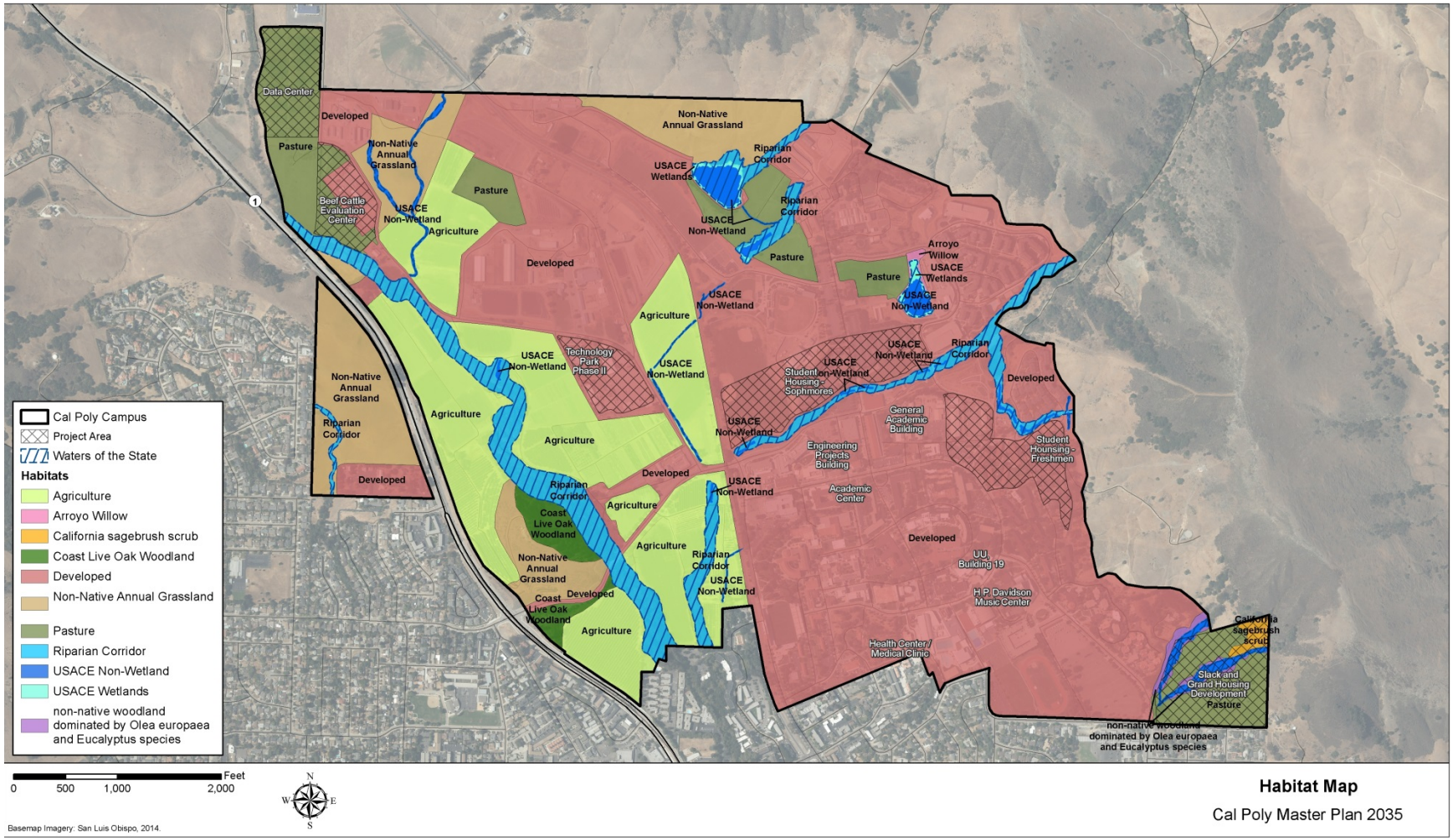
## Slack and Grand Residential Neighborhood

The regulatory setting for the Slack and Grand Residential Neighborhood is the same as the regulatory setting for the Master Plan. Please refer to the Regulatory Setting discussions above.

# Environmental Setting

The habitats in the Master Plan area vary and include, but are not limited to, the built environment, pasture lands, riparian corridors and other waterways, grasslands, woodlands, and scrub. These habitats are illustrated in Figure 17.

## Figure 17. Master Plan Projects Habitat Map



## Built Environment

The existing built campus environment includes the academic, administrative, and support facilities; student housing; parking; other similar facilities, and the accompanying urban landscaping. It contains little native habitat, as it does not contain native or naturalized vegetative communities, or other sensitive biological resources. The built environment does not support potential special-status plant habitat and is not expected to support special-status wildlife species. Much like other built environments, the campus' built environment, including the Campus Core, provides foraging and nesting habitats for avian species such as red-tailed hawk (*Buteo jamaicensis*), American kestrel (*Falco sparverius*), Brewer's blackbird (*Euphagus cyanocephalus*), a variety of gull species (*Larus* sp.), and common passerines, such as house finches (*Haemorhous mexicanus*). These birds may use the existing buildings and the landscaping for nesting.

## Ruderal

Ruderal vegetation is indicative of disturbed areas that have been significantly altered by construction, landscaping, or other types of land-clearing activities. Ruderal habitats often occur along roadsides and fence lines, near developments, and in other areas experiencing severe ground disturbance. Plants found within this habitat are typically introduced Mediterranean species that exhibit clinging seeds, adhesive stems, and rough leaves that assist their invasion and colonization.

Ruderal areas are widespread on the campus. They are intermixed with the developed areas, along fence lines and roadways, and dominate fallow agricultural areas. The dominant species in the ruderal areas varies depending on the specific site conditions. However, several species of fillaree (*Erodium* sp.), poison hemlock (*Conium maculatum*), bristly ox-tongue (*Helminthotheca echioides*), and annual grasses are present in the campus ruderal areas.

## Riparian and Aquatic Habitats

The Master Plan area includes two major creeks, Brizzolara Creek and Stenner Creek; a variety of drainages, some of which are tributaries to the main creeks; and numerous reservoirs. Many of the drainages are tributaries to the reservoirs and some of the reservoirs overflow into the creeks via the drainages. In some instances, this interconnection of the aquatic features is sufficient to establish federal and state jurisdictions over the features. The creeks, drainages, and reservoirs support a variety of habitats ranging from landscapes and ruderal vegetation to riparian scrubs and woodlands. Many of these aquatic resources support suitable habitat for a variety of protected wildlife species, including California red-legged frog, South-Central California Coast steelhead, western pond turtle (*Actinemys marmorata*), and suitable nesting habitat for avian species.

### Brizzolara Creek

Brizzolara Creek flows from the hills in the northeast to the southwest through the Master Plan area. This creek is the northern border of the Residential East planning area and the Campus

Core; it is also the southern border of the North Campus planning area (Figure 11). At its intersection with Highland Drive, Brizzolara Creek makes an abrupt turn to the south and enters the West Campus planning area. An engineered fish ladder designed for steelhead passage is located at the creek's intersection with Highland Drive. Shortly after passing through the southeast corner of the West Campus, Brizzolara Creek converges with Stenner Creek. Most of Brizzolara Creek within the project area supports intact riparian scrub and woodlands, including coyote brush scrub (*Baccharis pilularis* Shrubland Alliance), coast live oak woodland (*Quercus agrifolia* Woodland Alliance), and arroyo willow thicket (*Salix lasiolepis* Shrubland Alliance). Brizzolara Creek is likely a WoUS, subject to USACE jurisdiction, and a Water of the State, subject to CDFW and RWQCB jurisdictions, and is listed as steelhead critical habitat under the FESA.[7] The riparian areas of Brizzolara Creek also support summer or upland habitat for California red-legged frog.

## Stenner Creek

Stenner Creek flows from the northwest to the southeast through the West Campus planning area. Throughout its reach on the campus, Stenner Creek supports an intact riparian corridor that includes coast live oak (*Quercus agrifolia*), arroyo willow (*Salix lasiolepis*), western sycamore (*Platanus racemosa*), cottonwood (*Populus* sp.), and eucalyptus (*Eucalyptus* sp.) trees in the overstory. The understory supports native and non-native shrubs and vines, including coyote brush (*Baccharis pilularis*), California blackberry (*Rubus ursinus*), stinging nettle (*Urtica dioica*), German ivy (*Delaria odorata*), periwinkle (*Vinca major*), and others. Stenner Creek is likely a WoUS, subject to USACE jurisdiction, and a Water of the State, subject to CDFW and RWQCB jurisdictions, and is listed as steelhead critical habitat under the FESA. The riparian areas of Stenner Creek also support summer or upland habitat for California red-legged frog.

## Reservoirs, Ponds, and Detention Basins

The Master Plan area contains reservoirs, ponds, and detention basins for agricultural and stormwater uses. All of these features are manmade; some have earthen bottoms and banks and support natural habitats, while others are lined with engineered materials and don't support natural habitats.

The North Campus area includes portions of the Drumm Reservoir and its drainage, Smith Reservoir and its drainage, and Shepard Reservoir and its drainage. These reservoirs are WoUS subject to USACE jurisdiction; however, the reservoir drainages lack OHWMs. Due to the lack of OHWM, the reservoir drainages are not within USACE jurisdiction.[8] All three reservoirs and their associated drainages support bed and bank features; therefore, they are potentially Waters of the State subject to CDFW and RWQCB jurisdictions.[9] Two wastewater settling basins that support the Swine Unit are also located in the North Campus planning area. These basins are isolated from the nearby jurisdictional waters and likely are not considered to be WoUS.[9]

[7] National Oceanic and Atmospheric Administration National Marine Fisheries Service (NOAA Fisheries). 2005. *National Oceanic and Atmospheric Administration 50 CFR Part 226 Endangered and Threatened Species; Designation of Critical Habitat for Seven Evolutionarily Significant Units of Pacific Salmon and Steelhead in California; Final Rule*. September 1, 2005.

[8] United States Army Corps of Engineers (USACE). 2016. *Preliminary Jurisdictional Determination regarding geographic jurisdiction for the Cal Poly Reservoirs and Drainages Maintenance Project Site*. File No. SPL-2015-00714.

[9] SWCA Environmental Consultants (SWCA). 2015. *Delineation of Waters of the United States for Reservoirs and Various Drainages on the Cal Poly Campus, San Luis Obispo County, California*.

The reservoirs support open water habitat, freshwater marsh, and arroyo willow thicket. The reservoir drainages support non-native grasses, landscape trees, coast live oak woodland, and coyote brush scrub. The uplands surrounding the reservoirs and their drainages support a mix of ruderal vegetation, non-native grasslands, native bunchgrass grasslands, and velvet grass-sweet vernal grass meadows (*Holcus lanatus-Anthoxanthum odoratum* Herbaceous Semi-Natural Alliance). The reservoirs and basins in the North Campus area provide suitable aquatic habitat for California red-legged frog. The upland habitats surrounding the reservoirs and basins provide dispersal habitat for California red-legged frog.

The North Campus area also contains two detention basins that are adjacent to the existing sports fields. The northern detention basin is located between the railroad tracks and Sports Complex Road. The northern basin spills into a drainage that is ultimately connected to Stenner Creek. The northern basin and drainage are potentially WoUS and state jurisdictional features. The southern basin is located just north of Brizzolara Creek at the creek's intersection with Highland Drive. The basin receives runoff and includes an overflow inlet that directs flows to Brizzolara Creek; as such, this basin may be considered WoUS and Waters of the State. These aquatic areas support suitable habitat for California red-legged frog.

The West Campus planning area contains detention basins at the Beef Cattle Evaluation Center (BCEC), the Rodeo facility, the Dairy Unit, and the Technology Park. These engineered basins serve to capture and filter stormwater from the adjacent facilities. In some cases, the facility managers pump the stormwater out of the basins to irrigate adjacent agricultural fields. These basins are not jurisdictional features and are not expected to support sensitive aquatic species.

## Unnamed Drainages

Numerous unnamed drainages traverse the campus, some of which provide hydrologic connections between each other, the reservoirs, and creeks discussed above. These drainages include:

- A tributary to Brizzolara Creek that flows northeast between the existing Cerro Vista student housing and the housing parking area. This drainage supports bed and bank features and has direct connectivity to Brizzolara Creek; therefore, the drainage is considered WoUS and Waters of the State. The drainage supports a mix of landscaping, restored riparian vegetation, and ruderal vegetation.
- Two disturbed drainages in the Slack and Grand site, which is planned for a residential neighborhood in the Master Plan, located in the southeastern corner of the campus. The drainages on the Slack and Grand site are discussed in detail below.
- An existing drainage that is likely WoUS and a state jurisdictional feature that is located adjacent to the proposed western-most new recreational area within the North Campus planning area.
- A small unnamed drainage that is hydrologically connected to Smith Reservoir (North Campus planning area) flows east to west through the West Campus planning area and connects to Brizzolara Creek at Highland Drive. This drainage supports OHWM features and provides a connection between two federal and state jurisdictional features (Smith Reservoir and Brizzolara Creek); therefore, this drainage is considered to be WoUS. A small detention basin that receives flows from the existing sports fields on Sports

Complex Road (North Campus planning area) is hydrologically connected to the drainage and may be a jurisdictional feature as well.

- Two jurisdictional drainages that flow north to south are located adjacent to the existing corporate yard and skirt the eastern edge of the proposed BCEC expansion area. These drainages converge in the general location of the proposed BCEC area and the combined drainage is a tributary to Stenner Creek.
- A roadside wetland feature occurs on the northern side of Mount Bishop Road, which meanders the central portion of the Master Plan area and bisects the various agricultural fields. The Mount Bishop Road shoulder is largely ruderal. The wetland is indicative of a roadside ephemeral drainage and is hydrologically connected to several waterways that USACE has determined to be jurisdictional WoUS.
- An unnamed jurisdictional drainage and tributary to Brizzolara Creek occurs on the proposed Ornamental Horticulture Turf Research site. The unnamed drainage does not support riparian vegetation but includes a defined bed and bank with connectivity to WoUS.
- A small drainage flows through the southwestern corner of the N4 Residential Neighborhood site in the West Campus planning area. The seasonal drainage collects runoff from the N4 site and the residential area located to the west and conveys collected flow in a southerly direction off-site toward Old Garden Creek, which is a tributary to Stenner Creek. The drainage is ephemeral and supports non-native annual grassland and freshwater marsh vegetation.

# Grasslands

The following grassland habitat types were observed in the Master Plan area.

## Non-Native Annual Grassland

Non-native annual grasslands are composed of a dense to sparse cover of annual grasses approximately 0.2 to 0.5 meter high[10]. This community can be occupied by numerous species of annual forbs, especially in years of favorable rainfall. Germination occurs with the onset of late fall rains and growth, flowering, and the setting of seeds, which occurs from winter through spring. The plants are typically dead through the summer–fall dry season and persist as seeds. Although somewhat rare in the Master Plan area, non-native grassland is present at the campus among the various pastures and agricultural areas in the North Campus planning area, as well as on the N4 Residential Neighborhood site (Figure 17). This community differs from the pastures at the University due to the dominance of naturalized grass species and a lack of active plowing, seeding, and irrigation.

## Pasture Lands

Pasture lands are those areas in the Master Plan area that are managed by University staff for the purpose of keeping live stock in fenced paddocks (Figure 17). Pasture lands are widespread on the campus with larger areas being in the North, West, and East Campus planning areas (Figure

[10] Holland, R.F. 1986. *Preliminary Description of Terrestrial Natural Communities of California*. State of California, The Resources Agency, Department of Fish and Wildlife. Sacramento, California.

17). The various pasture lands vary in size and support a mix of bare dirt and non-native grasses. These areas are subject to near constant grazing and trampling by live stock. The vegetative composition in the pastures vary over time depending on what species the managers have seeded the area with, the amount of irrigation, and the level of use at the time. Therefore, the pasture areas do not constitute a naturalized or native grassland community. Plant species observed in the pastures included, but were not limited to, softchess brome (*Bromus hordeaceus*), purple false brome (*Brachypodium distachyon*), fillaree (*Erodium cicutarium*), cheeseweed (*Malva parviflora*), and tree tabacco (*Nicotiana glauca*).

### Common Velvet Grass-Sweet Vernal Grass Meadows

This grassland community is dominated by *Holcus lanatus* (velvet grass) or *Anthoxanthum odoratum* (sweet vernal grass). These non-native perennial species have become naturalized in the wild and are commonly found in moist pastures and occasionally in wetland and riparian areas.[10,11] In order for a plant community to qualify for this alliance, the community must include greater than 50% relative cover of velvet grass or sweet vernal grass. *Preliminary Descriptions of the Terrestrial Natural Communities of California*[10] refers to this community as Coastal Terrace Prairie. Due to its dominance by non-native species, the California Invasive Plant Council (Cal-IPC) considers these species and the community as a moderate threat to California's wildlands. Common velvet grass-sweet vernal grass meadows occur in small patches among the non-native grasslands adjacent to Shepard Reservoir and its associated drainage.

## Tree and Shrub Lands

The following tree and shrub lands were observed in the Master Plan area.

### Arroyo Willow Thicket (*Salix Lasiolepis* Shrubland Alliance)

Arroyo willow thickets are similar in definition to central coast riparian scrub, which consists of scrubby streamside thickets that are dominated by any of several willow species, including Arroyo willow[10]. The thickets vary in density from partially open to impenetrable. The understory commonly supports species such as California blackberry and stinging nettle in drier sites, or cattail and sedges in mesic (moist) sites. This community may change through ecological succession to any of several riparian woodland or forest types absent severe flooding disturbance. Arroyo willow thickets occur on many soil types including sand and gravel bars in areas close to groundwater or surface water. Arroyo willow thickets are present in the tree and shrub stratum of Brizzolara Creek, Stenner Creek, Drumm Reservoir, Shepard Reservoir, and numerous unnamed drainages on the campus.

### Coast Live Oak Woodland

This woodland community (*Quercus Agrifolia* Woodland Alliance) features coast live oak as the dominant evergreen tree. The community may also include western sycamores, arroyo willow, bigleaf maple (*Acer macrophyllum*), boxelder (*Acer negundo*), Pacific madrone (*Arbutus*

[11] Sawyer, J.O., T. Keeler-Wolf, and J.M. Evens. 2009. *A Manual of California Vegetation, Second Edition.* California Native Plant Society, Sacramento. 1,300 pp.

*menziesii*), southern black walnut (*Juglans californica*), Fremont cottonwood (*Populus fremontii*), California bay (*Umbellularia californica*), and/or several other *Quercus* species.[8] The canopy may be continuous or open and can exceed 30 meters in height.[7] The shrub layer is typically poorly developed, but may include species such as toyon (*Heteromeles arbutifolia*) and gooseberry (*Ribes* spp.). The herbaceous layer is dominated by native and exotic grasses and forbs. Coast live oak woodlands typically grow on north-facing slopes and shaded ravines, intergrading with coastal scrub and chaparral communities on xeric sites and coast live oak forest or mixed evergreen forest on mesic sites.[10] Coast live oak woodlands are scattered in the Master Plan area and are largely associated with the Stenner Creek and Brizzolara Creek riparian areas, tributaries to these creeks, and the Smith Reservoir drainage.

### Coyote Brush Scrub

The southwestern bank of Shepard Reservoir includes a stand of coyote brush scrub (*Baccharis Pilularis* Shrubland Alliance) that is located outside of the pasture fence. This stand and other stands in the Master Plan area are entirely comprised of coyote brush, which is a native pioneer species that commonly colonizes disturbed areas. Coyote brush scrub is similar in definition to central coastal scrub. This is a shrubland community that is dominated by coyote brush and may include mock heather (*Ericameria ericoides*), buckbrush (*Ceanothus cuneatus cuneatus*), California sagebrush (*Artemisia californica*), black sage (*Salvia mellifera*), and other scrub species. This community is indicative of disturbed places that are in the process of regenerating.

## Slack and Grand Residential Neighborhood

The N1 Slack and Grand site, is located in the southeastern corner of the campus. The topography slopes from the northwest to the southeast. The upper slopes of the Slack and Grand site support intact coastal scrub dominated by California sagebrush and are dotted with sporadic coast live oak trees. Ten individuals of Hoffman's sanicle (*Sanicula hoffmannii*) were observed among the oak trees in the upper portion of the survey area. Hoffman's sanicle is included in the CNPS Inventory of Rare and Endangered Plants on list 4.3, which indicates that it has a limited distribution. The Hoffman's sanicle occurrences are located just outside the proposed project site and will not be affected by the development. The central and lower portions of the site are characterized by steeply sloping horse pasture with heavily grazed non-native annual grassland, scattered Peruvian pepper trees (*Schinus molle*), and two disturbed drainages. The drainages have headwaters in the hills to the east of the site, flow southwest through the site, and converge at the western end of the site, just above Grand Avenue. Shortly downstream of the convergence, the combined channel directs flows into the municipal storm drain system. The storm drain system continues south and conveys flows into San Luis Obispo Creek in downtown San Luis Obispo. The drainages are ephemeral and only support flowing water for, during, and immediately following rain events.

The vegetation in the drainages is dominated by non-native and moderately invasive trees including olive (*Olea europaea*), Eucalyptus species, and beavertail cactus (*Opuntia ficus indica*). Since these species are likely remnants of past plantings and are not necessarily present due to the presence of water, the vegetation in the drainages does not constitute a riparian woodland. Few native coast live oak trees and native shrubs, including silk tassel (*Garrya elliptica*) and poison oak (*Toxicodendron diversilobum*), occur in the understory. According to

the Spring Botanical Survey and Habitat Assessment Letter Report for the Grand Avenue Faculty and Staff Housing Project,[12] the drainages and associated upland areas support suitable to marginally suitable habitat for California red-legged frog and Monterey dusky-footed woodrat (*Neotoma macrotis luciana*), as well as migratory nesting birds.

# Impact Criteria

The project will result in a significant impact on biological resources if it will:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service;
- Have a substantial adverse effect on any riparian habitat or other sensitive natural communities identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or US Fish and Wildlife Service;
- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;
- Interfere substantially with the movement of any resident or migratory species of wildlife or with established native resident or migratory wildlife corridors; or,
- Conflict with the provisions of an adopted federal Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state Habitat Conservation Plan.

# Environmental Impact

The Master Plan preserves open space on campus and guides new development to in-fill areas in order by intensifying the Campus Core and locating new development in the north and west areas of the main campus. The Master Plan also calls for buffers around the existing creeks to protect these unique natural resources within the campus area, minimizing impacts to environmentally sensitive areas, and providing connectivity between natural communities. Figure 17 shows the location of the nearer-term Master Plan projects in relation to the habitats on campus.

## Jurisdictional Waters and Riparian Habitat

As discussed above, the Master Plan area contains Stenner and Brizzolara Creeks, several unnamed drainages, and reservoirs that are likely jurisdictional WoUS and Waters of the State. In previous coordination with USACE, USACE has concurred with the jurisdictional status of several of the aquatic features on the campus.[9] The Master Plan includes several components that have the potential to directly or indirectly impact these features. Direct impacts to aquatic resources could include construction within state-regulated riparian habitats and direct fill of

[12] Terra Verde Environmental Consulting. 2017. *Spring Botanical Survey and Habitat Assessment Letter Report for the Grand Avenue Faculty and Staff Housing Project, Cal Poly, San Luis Obispo, California*. September 20, 2017.

WoUS, and Waters of the State. Direct impacts may also include deposition of fill or sedimentation in the features, removal of riparian vegetation, re-alignment of a stream system, or any other activity that can result in significant alterations to creeks and drainages. Indirect impacts could include activities in uplands that modify on-site drainage patterns that create alterations to the rate, volume, timing, and direction of surface runoff into the jurisdictional feature.

***Creekside Village and Housing:*** The new Creekside Village and three new student housing facilities will be located near the intersection of Via Carta with Brizzolara Creek and will include improvements on both sides of the creek. This area is currently developed and includes parking, roadways, structures, landscaping, sports fields, and ruderal vegetation. As these facilities will be situated near Brizzolara Creek, which is likely WoUS and Waters of the State, depending on the site designs, construction of Creekside Village and/or the new housing could result in direct or indirect impacts to Brizzolara Creek. Direct impacts could include deposition of fill in the creek; whereas, indirect impacts may include altering adjacent drainage and stormflow patterns in a way that increases sedimentation and non-point source pollution into the creek. Therefore, mitigation has been identified to ensure the provision of an adequate buffer between the Creekside Village and the Brizzolara Creek riparian corridor (refer to Mitigation Measure 3.1-5). In addition, Mitigation Measures 3.1-3, 3.1-6, and 3.1-9 address the University's means of avoiding or minimizing impacts to riparian areas and aquatic sites.

***New Recreational Areas:*** The Master Plan provides for new recreational areas in four locations that may result in direct or indirect impacts to jurisdictional waters. In the North Campus planning area, a new recreation area is planned adjacent to Smith Reservoir. This area includes portions of the Drumm Reservoir and its drainage, Smith Reservoir and its drainage, and Shepard Reservoir and its drainage. These reservoirs are WoUS subject to USACE jurisdiction; however, the reservoir drainages are not within USACE jurisdiction.[7] All three reservoirs and their associated drainages are state waters subject to CDFW and RWQCB jurisdiction.[9]

Three new recreational areas are also planned in the West Campus planning area. This location is immediately east of the existing Union Pacific Railroad track and will support a football field, field house, and other athletic facilities. Three federal and state jurisdictional features are present in this general location. A small unnamed drainage that is hydrologically connected to Smith Reservoir (North Campus planning area) flows east to west through the West Campus area and connects to Brizzolara Creek at Highland Drive. This drainage supports OHWM features and provides a connection between two federal and state jurisdictional features (Smith Reservoir and Brizzolara Creek); therefore, this drainage is considered to be WoUS. A small detention basin that receives flows from the existing sports fields on Sports Complex Road (North Campus planning area) is hydrologically connected to the drainage and may be a jurisdictional feature as well. Two of the planned recreational areas are bordered by Mount Bishop Road to the west. A roadside wetland feature is present on the eastern side of Mount Bishop Road. The wetland is indicative of a roadside ephemeral drainage and is hydrologically connected to several waterways that USACE has determined to be jurisdictional WoUS.[7] Development of these recreational areas has the potential to result in direct and/or indirect impacts to WoUS. Mitigation Measures 3.1-3, 3.1-5, 3.1-6, and 3.1-9 are included to address these potential impacts.

***Roadway Improvements:*** The new recreational areas will be situated between two new road extensions. The Village Drive road extension will begin at Mount Bishop Road in the West Campus area and extend northeast to connect to the existing Via Carta Drive. This alignment will traverse existing agricultural fields and potentially impact the jurisdictional drainage located along Mount Bishop Road. Depending on the final design and alignment, installation of the road extension may result in fill, alteration, and or realignment of the drainage feature.

The California Boulevard road extension will extend the existing California Boulevard to the north from its intersection with Brizzolara Creek, then to the east where it will terminate at Via Carta. The southern end of the proposed California Boulevard extension will connect to Highland Drive in the location where the existing East Creek Road crosses Brizzolara Creek. The existing creek crossing consists of a small vehicle bridge and a fish ladder. If the planned road extension requires alterations to the existing East Creek Road Bridge, it is likely it will directly impact Brizzolara Creek, which is WoUS and Waters of the State. Mitigation Measures 3.1-3, 3.1-5, 3.1-6, and 3.1-9 are included to address these potential impacts.

***Farm Shop:*** The planned location of the Farm Shop is situated between Highway 1 and Stenner Creek. This area is currently developed and includes an equipment shed, active agriculture, asphalt parking, and eucalyptus trees. The farm shop site is directly adjacent to the Stenner Creek riparian corridor, which is comprised of western sycamores, eucalyptus, coast live oak, and other trees. Development of the Farm Shop could encroach on the Stenner Creek riparian area resulting in indirect impacts to jurisdictional WoUS and Waters of the State. Mitigation Measures 3.1-1, 3.1-2, 3.1-3, 3.1-5, and 3.1-6 are included to address this potential impact.

***Ornamental Horticulture Turf Research:*** The new Ornamental Horticulture Turf Research plots (turf plots) will be located in the southern end of the West Campus planning area in a location that is currently orchard and landscape trees. This location supports an unnamed jurisdictional drainage and is bordered by Brizzolara Creek. The unnamed drainage is a tributary to Brizzolara Creek, which supports a coast live oak riparian corridor. If the turf activities were to encroach on the riparian area, impacts to jurisdictional waters could occur. Impacts may include loss of vegetative cover that is essential for shading and temperature regulation. In addition, stormwater and irrigation runoff from the turf plots could convey fertilizer or pesticides into the drainage and/or the creek, potentially affecting the water quality in Brizzolara Creek. The potential impact to jurisdictional waters and steelhead critical habitat associated with fertilizer/pesticide-laden runoff entering the creek can be avoided by incorporating LID design principles in the turf research facility, such as establishing a creek setback and directing stormwater and irrigation runoff to on-site bioswales or to the planned wastewater reclamation facility to reduce the potential for non-point source pollution to result from the turf research area. Mitigation Measure 3.1-5 is included to address this potential impact.

***N4 Residential Neighborhood:*** The N4 Residential Neighborhood is planned to be located on approximately 30 acres situated on the west side of Highway 1 and immediately east of existing residential neighborhoods. The central portion of the site slopes from a ridge toward a seasonal drainage southeast to Highway 1. The seasonal drainage collects runoff from the N4 site and the residential area located to the west and conveys collected flow in a southerly direction off-site toward Old Garden Creek, which is a tributary to Stenner Creek. Freshwater marsh vegetation occurs in the seasonal drainage located in the southwestern portion of the site. At the time of the

field survey (March 10, 2017), the drainage contained several pools of standing water measuring less than 6 inches deep. Remaining portions of the seasonal drainage contained saturated soils with dense herbaceous vegetation. Based on the shallow depth of the water observed during the rainy season, surface water is likely absent for most of the year. During the field survey, small pockets of characteristic seasonal freshwater marsh vegetation were observed along the embankments located adjacent to the drainage. This drainage is likely WoUS and a Water of the State under the jurisdiction of USACE, CDFW, and RWQCB. Depending on the site design, development of the N4 Residential Neighborhood could result in direct and/or indirect impacts to the seasonal drainage. Mitigation Measures 3.1-3, 3.1-5, 3.1-6, and 3.1-9 are included to address these potential impacts.

# Invasive Species

Development of Creekside Village, the student housing associated with the Creekside Village, the Slack and Grand Residential Neighborhood (discussed further below in the project specific analysis), Student Housing with Amenities in the East Campus area, N4 and N5 Residential Neighborhoods, the Farm Shop, and the Ornamental Horticulture Turf Research Plots pursuant to the Master Plan include new landscaping in areas that abut natural areas, including Stenner and Brizzolara Creeks. Introduction of invasive non-native landscape plant materials adjacent to natural areas can adversely affect the natural areas over time. The introduced invasive species can become established in the natural areas and displace native habitat types, which in turn can reduce the habitat's ability to support native plant and wildlife species. In some instances, the conversion of predominantly native habitats to monotypic stands of non-native invasive species can result in a rapid loss of biological diversity. Mitigation Measure 3.1-10 is included to address this potential impact.

# Special-Status Species

## Special-Status Plants

***Creekside Pedestrian Walk:*** The Creekside Pedestrian Walk meanders through Poly Canyon in areas that support non-native annual grassland, coast live oak riparian woodland, large western sycamore trees, and other natural vegetation. This area supports pockets of serpentine soils and is in the vicinity of several rare plant occurrences. CNDDB documents occurrences of Jones's layia (*Layia jonesii*), most beautiful jewel flower (*Streptanthus albidus* ssp. *peramoenus*), mouse-gray dudleya (*Dudleya abramsii* ssp. *murina*), Brewer's spineflower (*Chorizanthe brewerii*), Eastwood's larkspur (*Delphinium parryi* ssp. *eastwoodiae*), San Luis Obispo owl's-clover (*Castilleja densiflora* var. *obispoensis*), and San Luis mariposa-lily (*Calochortus obispoensis*) in the Poly Canyon area.[4] The Master Plan includes the extension of the existing trail going up the canyon, situated between the existing Poly Canyon Road and Brizzolara Creek. Expansion and ongoing use of the existing trail could affect the sensitive plant occurrences. Adverse effects could result if the trail extension required grading. The grading could physically remove the resources, alter drainage patterns that support the resources, or provide an avenue for invasive weeds to spread and alter the habitats that support the resources. Indirect effects of the ongoing trail use including trampling or other degradation of adjacent habitats that could occur if trail

users walked off trail or conducted other activities that could disturbed the habitats. Mitigation Measure 3.1-8 is included to address this potential impact.

***N4 Residential Neighborhood:*** The N4 Residential Neighborhood is planned to be located on approximately 30 acres situated on the west side of Highway 1 and immediately east of existing residential neighborhoods. The elevation ranges from approximately 300 to 400 feet above mean sea level. The soil in the site includes Los Osos-Diablo complex and Los Osos variant clay loam. These loamy clay soils are derived from sandstone or shale.[13] Sandstone and chert rock outcrops occur in scattered locations throughout the site, primarily in areas located west of the seasonal drainage and near the top of the ridge.

Seasonal freshwater marsh, annual grassland, needlegrass grassland, and eucalyptus stands were identified within the N4 Residential Neighborhood site. Freshwater marsh vegetation is limited to areas within and adjacent to the seasonal drainage located in the southwestern portion of the site. At the time of the field survey (March 10, 2017), the drainage contained several pools of standing water measuring less than 6 inches deep. Remaining portions of the seasonal drainage contained saturated soils with dense herbaceous vegetation.

Annual grassland is the dominant plant community throughout the N4 Residential Neighborhood site and is comprised of non-native annual grasses and weedy annual forbs. The native purple needlegrass (*Stipa pulchra*) occurs as part of the annual grassland community. Dense areas of purple needlegrass occur in several locations throughout the southwest and north-central portions of the site. These conditions provide suitable habitat for Cambria morning glory (*Calystegia subacaulis* ssp. *episcopalis*), Blochman's dudleya (*Dudleya blochmaniae*), Jones' layia, and adobe sanicle (*Sanicula maritima*). These species have not been documented on-site, but have potential to occur on-site.[14] If these or other sensitive plant species are present on the site at the time of development, the rare plant occurrences could be adversely affected by the development. Adverse effects could include physical removal of the individuals or altering the species' habitats in such a way that the rare plants can no longer exist on the site. Mitigation Measure 3.1-9 is included to address this potential impact.

## Special-Status Wildlife

### Steelhead and Steelhead Critical Habitat

Steelhead are the anadromous form of rainbow trout. Steelhead historically ranged from Alaska southward to the California-Mexico border, though current data suggest that the Ventura River is presently the southernmost drainage supporting substantial steelhead runs. All populations of steelhead occurring within South-Central California Coast Distinct Population Segment (SCCCS DPS) were federally listed by NOAA Fisheries in August 1997. SCCCS DPS steelhead is listed as federally endangered and is also considered a CDFW SSC.

Optimal habitat for steelhead on the Pacific Coast can be characterized by clear, cool water with abundant instream cover (e.g., submerged branches, rocks, and logs), well-vegetated stream

[13] United States Department of Agriculture. 1984. *Soil Survey of San Luis Obispo County, California Coastal Part*. United States Department of Agriculture, Soil Conservation Service in cooperation with University of California Agricultural Experiment Station

[14] Morro Group, Inc. 2001. *Cal Poly Faculty/Staff Housing Project Site H-9 Biological Resources Assessment*. May 16, 2001.

margins, relatively stable water flow, and a 1:1 pool-to-riffle ratio. However, steelhead are occasionally found in reaches of streams containing habitat that will be considered less than optimal. Stenner and Brizzolara Creeks are known steelhead streams and are included as critical habitat in the San Luis Obispo Creek Hydrologic Sub-area 331024.[7]

***Creekside Pedestrian Walk:*** The Creekside Pedestrian Walk meanders through Poly Canyon. The Master Plan includes an extension of the existing trail going up the canyon, situated between the existing Poly Canyon Road and Brizzolara Creek. If the trail extension includes new bridges or other crossings of Brizzolara Creek, construction of the crossings could result in adverse impacts to steelhead and/or steelhead critical habitat. Adverse effects could include removal of riparian vegetation that provides essential shading and temperature regulations and fill or sedimentation into the creek causing increased turbidity. Mitigation Measures 3.1-3, 3.1-5, 3.1-6, 3.1-8, and 3.1-9 are included to address these potential impacts.

***Creekside Village and Housing:*** The new Creekside Village and three new student housing facilities will be located near the intersection of Via Carta with Brizzolara Creek and will include improvements on both sides of the Creek. This area is currently developed and includes parking, roadways, structures, landscaping, sports fields, and ruderal vegetation. These proposed facilities will be situated adjacent to Brizzolara Creek, which is designated steelhead critical habitat. Depending on the site design, construction of the Creekside Village and/or the new housing could result in direct or indirect impacts to Brizzolara Creek and its designated steelhead critical habitat. Direct impacts could include deposition of fill in the creek; whereas, indirect impacts may include altering adjacent drainage and stormflow patterns in such a way that increases sedimentation and non-point source pollution into the creek. Therefore, mitigation has been identified to ensure adequate buffer between the village and the Brizzolara Creek riparian corridor and that LID development is implemented. Mitigation Measures 3.1-3, 3.1-5, 3.1-6, and 3.1-9 are included to address these potential impacts.

***Roadway Improvements:*** The California Boulevard road extension will extend the existing California Boulevard to the north from its intersection with Brizzolara Creek, then to the east where it will terminate at Via Carta. The southern end of the planned California Boulevard extension will connect to Highland Drive in the location where the existing East Creek Road crosses Brizzolara Creek. The existing creek crossing consists of a small vehicle bridge and a fish ladder. If the road extension requires alterations to the existing East Creek Road Bridge, it is likely that it will directly impact Brizzolara Creek, which is designated steelhead critical habitat. Potential impacts could include removal of riparian vegetation that provides essential temperature regulation, installation of a barrier to passage, and fill or sedimentation into the creek causing increased turbidity. Mitigation Measures 3.1-3, 3.1-5, 3.1-6, and 3.1-9 are included to address these potential impacts.

***Ornamental Horticulture Turf Research:*** The new turf plots will be located in an area that supports an unnamed drainage that is a tributary to Brizzolara Creek. If the turf activities were to encroach on the riparian area, impacts to steelhead critical habitat could occur. Impacts may include loss of vegetative cover that is essential for shading and temperature regulation. In addition, stormwater and irrigation runoff from the turf plots could convey fertilizer or pesticides into the drainage and/or the creek potentially affecting the water quality in Brizzolara Creek. The potential impact to jurisdictional waters and steelhead critical habitat associated with

fertilizer/pesticide-laden runoff entering the creek can be avoided by incorporating LID design principles in the turf research facility, such as establishing a creek setback and directing stormwater and irrigation runoff to on-site bioswales or to the planned new wastewater reclamation facility to reduce the potential for non-point source pollution to result from the turf research area. Mitigation Measure 3.1-5 is included to address this potential impact.

### California Red-legged Frog and California Red-legged Frog Critical Habitat

The California red-legged frog was formally listed by USFWS as federally threatened in 1996, and is considered a CDFW SSC. The campus is located within Critical Habitat area SLO-3 for this species. California red-legged frogs prefer aquatic habitats with little or no flow, the presence of surface water to at least early June, surface water depths to at least 2.3 feet, and the presence of fairly sturdy underwater supports such as cattails. During periods of wet weather, starting with the first rains of fall, some individuals may make overland excursions through upland habitats. During dry periods, the California red-legged frog is rarely encountered far from water.[15] California red-legged frog may use upland shelter habitat under logs, in small mammal burrows, or in soil cracks, provided ample moisture is available in the shelter area.[15]

Shepard Reservoir contains water most of the year; therefore, Shepard Reservoir provides suitable aquatic habitat and its drainage provides suitable upland shelter habitat for California red-legged frog. Smith Reservoir has been dry for the last several years and is typically dry most of the year during years of normal rainfall. Therefore, Smith Reservoir provides suitable aquatic habitat only when water is present. Neither of these reservoirs are known to support breeding California red-legged frogs. CNDDB documents one California red-legged frog observed on the bank of the Swine Unit artificial ponds in 2011.[4] The Swine Unit ponds are located approximately 1,400 feet northwest of Shepard Reservoir and approximately 200 feet from the proposed Irrigation Training and Research Center (ITRC). In support of the Farm Shop Storage Building Project, the Federal Emergency Management Agency (FEMA) had eight protocol surveys conducted within a 1-mile radius of the Farm Shop Storage Building Project Area, which is located in the West Campus planning area.[16] The surveys included the Swine Unit ponds and other reservoirs in the vicinity. No California red-legged frogs were observed during the FEMA surveys. CNDDB documents occurrences of California red-legged frog near Brizzolara Creek in Poly Canyon.[4]

The various drainages and creeks on the campus are ephemeral and are dry for most of the year during years of normal rainfall; therefore, it is unlikely that California red-legged frog would breed in these ephemeral drainages and reservoirs. However, considering the Swine Unit observation and the presence of year-round water in Shepard Reservoir, the presence of this species in the reservoirs and the drainages in the North Campus area when water is present cannot be ruled out. The upland pastures surrounding the reservoirs and drainages is heavily managed and does not support suitable upland shelter refugia such as dense vegetation, moist soils, or debris that maintain moist conditions that would be necessary for amphibians to utilize for shelter. Therefore, California red-legged frog and other amphibians are not expected to utilize

[15] United States Fish and Wildlife Service (USFWS). 2002. *Recovery Plan for the California Red-legged Frog (*Rana aurora draytonii*)*. Region 1 U.S. Fish and Wildlife Service Portland, Oregon. Viii + 173pp. May 28, 2002.
[16] Federal Emergency Management Agency (FEMA). 2006. *Red-legged Frog Survey Report, Farm Shop Storage Building, California Polytechnic State University*.

the upland pastures for shelter during the dry season. If California red-legged frogs were present in the area during the dry season, they would remain in the wetted portions of the reservoir(s). As campus development proposed under the Master Plan will not affect the reservoirs, direct impacts to breeding California red-legged frog or their aquatic habitat are not expected. The planned campus development will require grading and construction activities in the upland pastures adjacent to the reservoirs and ponds. If California red-legged frog were breeding in the reservoir(s) or ponds, the individuals could disperse through the construction areas during the wet season. If this dispersal were to occur when construction was underway, the individual(s) could be crushed or otherwise adversely affected by the construction equipment. These types of impacts would include substantial adverse effects, either directly or through habitat modifications, on a special-status species in California Fish and Game Code policies, regulated by the California Department of Fish and Wildlife and the FESA regulated by USFWS. The potential for this impact can be avoided by conducting construction activities in the upland pastures adjacent to the reservoirs during the dry season, and Mitigation Measure 3.1-7 is identified to avoid potential impacts to dispersing California red-legged frog.

### Western Pond Turtle

Western pond turtles inhabit quiet waters of ponds, small lakes, streams, and marshes and requires basking sites such as partially submerged logs, rocks, mats of floating vegetation, or open mud banks. These turtles tend to congregate in portions of aquatic sites containing abundant underwater cover or areas containing escape routes beneath the water surface such as undercut banks, tangles of roots, and submerged logs.[17] The western pond turtle is considered a SSC species by CDFW and are known to occupy a variety of aquatic sites neighboring the University property including Miossi Creek, Camp San Luis Obispo, Dairy Creek, and Stenner Creek.[4]

The reservoirs, ponds, detention basins, and unnamed drainages discussed in the Environmental Setting above support suitable habitat for western pond turtle when water is present. If a proposed project requires dewatering, dredge, fill, or other impacts to the aquatic sites, western pond turtles can be adversely affected. Adverse impacts to western pond turtles could include collection by project personnel, trampling or crushing by equipment, or stranding and desiccation. These types of impacts would include substantial adverse effects, either directly or through habitat modifications, on a special status species in California Fish and Game Code policies, regulated by the California Department of Fish and Wildlife. Mitigation Measure 3.1-11 has been included to minimize the impact to less than significant.

### Nesting Birds and the Migratory Bird Treaty Act

Nesting birds are protected under the Migratory Bird Treaty Act (MBTA). The campus supports a variety of habitats that could support nesting birds. The campus is largely a built environment; however, it is bordered by grassland and shrubland habitats, has riparian corridors and wooded areas running through it, and is dotted with reservoirs. This transition from the built environment to natural habitats creates an urban interface that has a higher potential to support nesting birds. Wildlife that occur in the undeveloped areas, that would normally avoid the built environments,

[17] Jennings, MR., and Hayes M.P. 1994 Amphibian and Reptile Species of special Concern in California. California Department of Fish and Game, Rancho Cordova California

may use the various landscape trees and shrubs, disturbed vegetation, and, on occasion, the structures for nesting and/or shelter sites. Removal of the nesting substrate during the nesting bird season (February 15 to September 15) could result in the direct loss of nests or indirect disturbances to nests causing the nests to be abandoned. If tree or landscape removal during the nesting bird season is necessary for construction of any Master Plan facility or improvement, pre-disturbance nesting bird surveys are warranted to ensure impacts to nesting birds area avoided. Mitigation Measure 3.1-4 has been included to avoid impacts to nesting birds that are protected under the MBTA.

# Slack and Grand Residential Neighborhood

Potential impacts to biological resources at the Slack and Grand Residential Neighborhood site are discussed below.

## Jurisdictional Waters and Riparian Habitat

The USACE, CDFW, and RWQCB have identified the two drainages on the Slack and Grand Neighborhood site as WoUS and Waters of the State.[18] As proposed, the development includes realigning portions of the drainages, converting other portions of the drainages to urban development, and re-establishing and preserving riparian habitat in the upper reaches of the drainages (Figure 18). These activities will result in permanent and temporary impacts to the drainages. Permanent impacts will include converting portions of the two drainages to urban hardscape. Temporary impacts to the jurisdictional features will result from grading the area for development and installing a storm drain system to manage the flows in the drainages. In order to implement these project activities, the University will need to obtain a Clean Water Act Section 404 permit from USACE, a Clean Water Act Section 401-certification from RWQCB, and a California Fish and Game Code 1600 Streambed Alteration Agreement from CDFW. RWQCB will require the proposed project to incorporate LID standards before certifying the project. See also Section 3.6 (Hydrology and Water Quality).

[18] Terra Verde Environmental Consulting. 2017. Email to Bill Henry of SWCA, re: Resource Agency site visit to the Slack and Grand Residential Development Site and the resulting agency jurisdictional determination.

**Figure 18. Slack and Grand Residential Neighborhood Site Layout**


Since the proposed project will include permanent impacts to the jurisdictional drainages, the necessary regulatory permits will likely require compensatory mitigation for the permanent impacts. A Conceptual Habitat Mitigation and Monitoring Plan (CHMMP) will need to be developed to outline the University's proposed methods for implementing the compensatory mitigation.

## Invasive Species

Development of the Slack and Grand Residential Neighborhood will include new landscaping in areas that abut natural and open space areas, including the jurisdictional drainages. Introduction of invasive non-native landscape plant materials adjacent to natural and open space areas can adversely affect the downstream riparian areas over time. Seed or other propagules from invasive landscape plants can enter the storm drain system and flow downstream to San Luis Obispo Creek. The introduced invasive species can become established in the San Luis Obispo Creek riparian area and displace native habitat types, which in turn can reduce the habitat's ability to support native plant and wildlife species. In some instances, the conversion of predominantly native habitats to monotypic stands of non-native invasive species can result in a rapid loss of biological diversity. Mitigation Measure 3.1-13 has been included to avoid this potential impact.

## Special-Status Plants

The upper slopes of the Slack and Grand Residential Neighborhood site support intact coastal scrub dominated by California sagebrush and are dotted with sporadic coast live oak trees. Ten individuals of Hoffman's sanicle were observed among the oak trees in the upper portion of the site. Hoffman's sanicle has a limited distribution and the CNPS has applied a 4.3 rarity ranking to the species. Based on the current site design, the development of this neighborhood will not impact these rare plant occurrences.

## Special-Status Wildlife

The drainages on the Slack and Grand Residential Neighborhood (N1) site are ephemeral and only support flowing water for a short time following rain events. Based on the sporadic presence of water, the drainages do not support suitable habitat for aquatic species such as California red-legged frog, steelhead, coast range newt, or western pond turtle. The upland areas surrounding the drainages could be used by dispersing California red-legged frog during wet conditions. If present during grading activities, dispersing California red-legged frog could be adversely impacted by grading activities. Adverse impacts could include collection by project personnel, trampling or crushing by equipment, or made subject to depredation when exposed by grading activities. Mitigation Measure 3.1-15 has been included to avoid impacts to dispersing California red-legged frog.

The existing vegetation on the Slack and Grand site supports high quality nesting bird habitat. The large eucalyptus trees in the drainages provide ample raptor nesting opportunities among the annual grassland which is ideal foraging habitat. This blending of wooded areas with open grassland provides a habitat edge that many raptor species utilize for nesting and foraging. Removal of the trees could result in impacts to nesting birds. Mitigation Measure 3.1-11 has been included to avoid impacts to nesting birds.

Several woodrat (*Neotoma* sp.) houses in the understory of the non-native tree plantings lining the ephemeral drainage features were observed during a project-related survey effort.[18] Woodrats cannot be identified to the subspecies level without trapping. As such, observed woodrat houses in the project area have potential to be occupied by the special-status Monterey dusky-footed woodrat (*Neotoma fuscipes luciana*) or common dusky-footed woodrat (*Neotoma fuscipes*). Vegetation removal and realignment of the drainage could impact the woodrat houses by grading over them. Mitigation Measure 3.1-13 has been included to minimize this potential impact.

# Mitigation Measures

3.1-1 Prior to ground disturbing activities on all projects located adjacent to Stenner Creek, Brizzolara Creek, tributaries to the creeks and on the N4 Residential Neighborhood, N5 Residential Neighborhood, Biz Hub and Data Center, BCEC Expansion, new recreational areas in the north campus, and Student Housing with Amenities in the East Campus, the University shall retain an environmental monitor for all measures requiring environmental mitigation to ensure compliance with the EIR mitigation measures. The monitor shall be responsible for

(1) ensuring that procedures for verifying compliance with environmental mitigations are implemented; (2) establishing lines of communication and reporting methods; (3) conducting daily and weekly compliance reporting; (4) conducting construction crew training regarding environmentally sensitive areas; (5) maintaining authority to stop work; and (6) outlining actions to be taken in the event of non-compliance. Monitoring shall be at a frequency and duration determined by the University or as directed by the affected natural resource agencies (e.g., USACE, RWQCB, CDFW, USFWS).

3.1-2 At the time of application for grading permits, all grading plans shall clearly show the location of project delineation fencing that excludes adjacent riparian areas, aquatic sites, and other sensitive communities from disturbance. The fencing shall consist of highly visible construction fence supported by steel T-stakes that are driven into the soil or silt fence that is keyed into the soil. The monitoring biologist shall field-fit the placement of the project delineation fencing to minimize impacts to adjacent communities and other sensitive resources that may be present. The project delineation fencing shall remain in place and functional throughout the duration of the project and no work activities shall occur outside the delineated work area.

The grading plans shall clearly show all staging areas, which shall be located within the construction area and a minimum of 100 feet outside of adjacent riparian areas, aquatic sites, or other sensitive communities that may be present.

3.1-3 If any Master Plan Project results in impacts to sensitive communities such as riparian habitat, aquatic sites, native bunchgrass communities, or wetlands, the University shall mitigate the impacts via habitat replacement at a minimum of a 1:1 replacement ratio, unless additional mitigation is imposed by resources agencies through related permitting processes.

3.1-4 Prior to construction of any facility or improvement within 200 feet of nesting habitat (vegetation and low use agricultural structures), if construction activities are proposed to occur during the nesting season (February 15 to September 15), a nesting bird survey will be conducted by qualified biologists no more than 2 weeks prior to construction to determine presence/absence of nesting birds within the area. In the event that active nests are observed, work activities will be avoided within 100 feet of active passerine nests and 300 feet of active raptor nests until young birds have fledged and left the nest. The nests shall be monitored weekly by a biologist with expertise on nesting birds. The buffer may be reduced if deemed appropriate by the biologist or following consultation with the CDFW and/or USFWS. Readily visible exclusion zones will be established in areas where nests must be avoided. The University will be contacted if any state or federally listed bird species are observed during surveys. Nests, eggs, or young of birds covered by the MBTA and California Fish and Game Code will not be moved or disturbed until the end of the nesting season or until young fledge, nor would adult birds be killed, injured, or harassed at any time. If a nest of any special-status avian species such as California horned-lark (*Eremophila alpestris*

*actia*), white tailed kite (*Elanus leucurus*), loggerheaded shrike (*Lanius ludovicianua*), tricolored blackbird (*Agelaius tricolor*), or burrowing owl (*Athene cunicularia*; wintering or nesting burrow) is identified, the University will cease all project related activities that within 500 feet of the active nest/burrow until the University and the biologist have coordinated with CDFW and/or USFWS to determine an appropriate monitoring plan for working in the vicinity of the nest/burrow.

3.1-5 During the initial site design phase of any Master Plan facility adjacent to riparian areas, a 15-foot buffer will be established from the outer extent of Brizzolara and Stenner Creeks and their tributaries, or other riparian vegetation. Development of new parking areas, structures or other hardscapes, and utility infrastructure within this buffer will be prohibited, except as needed for pedestrian bridges, road crossings, and similar improvements, which will be designed in compliance with Mitigation Measure 3.1-3. In addition, the University will incorporate LID principles in all designs for facilities and improvements that are located adjacent to Brizzolara and Stenner Creeks and their tributaries.

3.1-6 Prior to construction of the California Boulevard Extension and other improvements, including pedestrian bridges and road crossings, that may encroach on jurisdictional waterways, the University will design the extension and improvements to avoid fill, alteration, or realignment of the jurisdictional features. If avoidance of the jurisdictional areas is not feasible, the University will coordinate with USACE to obtain a Clean Water Act Section 404 permit, CDFW to obtain a Streambed Alteration Agreement, and RWQCB to obtain a Clean Water Act Section 401 Certification. The University will comply with all special conditions of the permits. To support the permit applications, the University will prepare a CHMMP for inclusion into the CDFW and RWQCB permit applications. The CHMMP should propose a 2:1 ratio for permanent impacts and a 1:1 ratio for temporary impacts to the jurisdictional drainages. The permitting agencies may require higher mitigation ratios. If permanent impacts are unavoidable, the CHMMP will identify the off-site location where the proposed compensatory mitigation will be implemented and the type (e.g., creation, restoration, enhancement, preservation, etc.) of mitigation that will be implemented.

If the California Boulevard Extension includes vegetation removal or deposition of fill within the banks of Brizzolara Creek, there may be a potential to adversely affect steelhead and California red-legged frog. In this scenario, the University will coordinate with USACE during the Clean Water Act Section 404 permitting to consult with NOAA Fisheries and USFWS regarding the potential for these activities to result in take of steelhead, steelhead critical habitat, California red-legged frog, and/or California red-legged frog critical habitat. If USACE in consultation with USFWS and/or NOAA Fisheries determines that the proposed may affect or result in take of steelhead or California red-legged frog, USACE and/or NOAA Fisheries will issue a biological opinion with an incidental take statement for the project.

3.1-7 To avoid the potential for take of California red-legged frogs that may disperse through the new recreational areas and the Mount Bishop Road extension area, ground disturbing activities associated with the new recreational areas in the North and West Campus planning areas, the Village Drive extension area, the ITRC site, and the California Boulevard Extension site, will be completed in the dry season (between June 1 and the first fall rains). Ground disturbing activities in these areas or any of the upland pasture areas adjacent to the campus' reservoirs will not be allowed after the first fall rains and before May of any year. Regardless of the seasonal rain patterns, no ground disturbing activities may occur on these sites between December 1 and May 1 of any year.

3.1-8 Prior to improving existing University trails or constructing new trails in the University's Natural and Open Space Areas, the University will prepare and implement a Trail Plan. The Trail Plan shall emphasize the use of existing trails in the trail system, identify all sensitive resources within and adjacent to the trail(s) alignment(s), and ensure that the trail alignments do not necessitate the removal of or otherwise adversely affect the sensitive resources. If the Trail Plan includes the construction of new trails, the new trail alignments will be surveyed for sensitive biological resources prior to trail design. The new trail alignments will avoid direct and indirect impacts to any identified sensitive resources. The construction of new trails should minimize the number of creek crossings in the trail system. If the construction of new trails or improvement of existing trails includes the installation of pedestrian bridges over Brizzolara Creek or other waterways, the University will obtain the necessary permits from USACE, USFWS, CDFW, and RWQCB, as necessary. The Trail Plan shall include the following elements:

- Installation of interpretive signage to inform trail users of the presence of sensitive resources along the trails and identify appropriate trail use conduct
- Identification of the department and/or individuals responsible for implementing all aspects of the trail plan
- Adequate buffers from waterways, seeps, springs, and other sensitive resources
- Use of natural infiltration and BMPs for stormwater management. Designs should focus on the use of natural dispersed infiltration systems, such as vegetated swales, rather than engineered systems, such as storm drains and catch basins
- Prohibition of motor vehicle use of the trails
- Identification of which trails are suitable for bicycle use and which trails where bicycle use may be prohibited
- A trail decommissioning program that is aimed at restoring native habitats in those trail sections that are no longer in use
- A trail monitoring program
- A maintenance program that: (1) regularly removes trash from the trail(s) and surrounding habitats; (2) includes periodic inspections for and repairs of erosion features; (3) includes ongoing invasive species management;

(4) prohibits use of erosion control materials that include plastic netting; and (5) includes details for the installation of water bars and drainage dips that serve to direct stormwater across the trail rather than down the trail

3.1-9 Prior to development of all projects located adjacent to Stenner Creek, Brizzolara Creek, tributaries to the creeks and on the N4 Residential Neighborhood, N5 Residential Neighborhood, Biz Hub and Data Center, Farm Shop, BCEC Expansion, new recreational areas in the north campus, and Student Housing with Amenities in the East Campus, the University will conduct seasonally-timed botanical and wildlife surveys to confirm the presence or absence of special-status species in the development area. Following completion of the surveys, the results will be documented in a Biological Resources Survey Report that identifies the presence/absence of special-status species and provides recommendations for avoiding impacts to special-status resources or mitigation for unavoidable impacts to the resources. If special-status resources are observed in the development area, the University will design the development to avoid the resources as feasible. If avoidance is not feasible, the University will prepare and implement an Environmental Mitigation and Monitoring Program for the project that addresses specific University's means for mitigating the impacts.

3.1-10 Landscaping for any campus facility or improvement will not utilize any species that are included on the most recent Cal-IPC Invasive Plant Inventory or other resources organizations' invasive species list. The landscape architect or designer responsible for developing the landscape plans will be responsible for ensuring that species identified by the Cal-IPC as invasive are not included in the landscape plans.

3.1-11 To minimize adverse effects on western pond turtle during any activity that requires dewatering, dredge, or fill of an aquatic site such as a reservoir, pond, or settling basin, the University will retain a qualified biologist to conduct capture and relocation efforts for western pond turtle. Capture and relocation efforts must be conducted by visual survey and hand capture techniques. To avoid the potential of inadvertently capturing California red-legged frog, traps may not be used to capture western pond turtles. If the biologists observes California red-legged frog during western pond turtle surveys, the biologist must cease all activities in the aquatic site and contact the University so that the University may coordinate with USFWS before continuing the project. Any captured western pond turtles must be relocated to a nearby aquatic site that will not be impacted by project activities.

## Slack and Grand Residential Neighborhood

3.1-12 If avoidance of the federal and state jurisdictional drainages is not feasible at the Slack and Grand Residential Neighborhood site, the University will coordinate with USACE to obtain a Clean Water Act Section 404 permit, the RWQCB to obtain a Clean Water Act Section 401-certification, and the CDFW to obtain a Streambed Alteration Agreement. To support the permit applications, the

University will prepare a CHMMP for inclusion into the CDFW and RWQCB permit applications. The CHMMP should propose a 2:1 ratio for permanent impacts and a 1:1 ratio for temporary impacts to the jurisdictional drainages. The permitting agencies may require higher mitigation ratios. If permanent impacts are unavoidable, the CHMMP will identify the off-site location where the proposed compensatory mitigation will be implemented and the type (e.g., creation, restoration, enhancement, preservation, etc.) of mitigation that will be implemented. Proposed mitigation for the temporary impacts will include removal of the non-native and moderately invasive olive trees and establishment of native trees, such as coast live oak or similar. The CHMMP will include a proposed planting, maintenance, and monitoring program to be conducted over a minimum of 3 years or for a duration mandated by the agency permits. The University will also incorporate LID principles in the design of the Slack and Grand Residential Neighborhood to minimize the permanent impacts to the site's drainages.

3.1-13 To avoid the potential for invasive landscape species to become established in riparian areas downstream of the Slack and Grand Site drainages, the Slack and Grand neighborhood landscaping will not utilize any species that are included on the most recent Cal-IPC Invasive Plant Inventory or other resources organizations' invasive species list. The landscape architect or designer responsible for developing the landscape plans will be responsible for ensuring that species identified by the Cal-IPC as invasive are not included in the landscape plans.

3.1-14 Prior to grading, vegetation removal, or construction on the Slack and Grand site, if construction activities are proposed to occur during the nesting season (February 15 to September 15), a nesting bird survey will be conducted by qualified biologists no more than 2 weeks prior to construction to determine presence/absence of nesting birds within the area. In the event that active nests are observed, work activities will be avoided within 100 feet of active passerine nests and 300 feet of active raptor nests until young birds have fledged and left the nest. The nests shall be monitored weekly by a biologist with expertise on nesting birds. The buffer may be reduced if deemed appropriate by a professional biologist with expertise on nesting birds or following consultation with CDFW and/or USFWS. Readily visible exclusion zones will be established in areas where nests must be avoided. The University will be contacted if any state or federally listed bird species are observed during surveys. Nests, eggs, or young of birds covered by the MBTA and California Fish and Game Code will not be moved or disturbed until the end of the nesting season or until young fledge, nor would adult birds be killed, injured, or harassed at any time.

3.1-15 To avoid the potential for take of California red-legged frogs that may disperse through the Slack and Grand Residential Neighborhood area, ground disturbing activities associated with the new development will be completed in the dry season (between June 1 and the first fall rains). Ground disturbing activities in these areas will not be allowed after the first fall rains and before May of any

year. Regardless of the seasonal rain patterns, no ground disturbing activities may occur on these sites between December 1 and May 1 of any year.

3.1-16 The University will retain a qualified biologist to assist the removal/relocation of woodrat middens that are located within the project disturbance areas. Removal of the middens should be conducted after September 1 and before February 15. During implementation of site clearing activities and under supervision of the biologist, the operators will remove all woodrat shelter within the disturbance areas that surround the woodrat middens to be removed. Habitat areas located outside of the work area may not be removed. Upon completion of clearing the adjacent woodrat shelter, the operator will gently nudge the intact middens with equipment or long handled tools. Due to the potential health hazards associated with removing woodrat middens, hand removal is not recommended. The operators will place their equipment within the previously cleared area and not within the undisturbed woodrat shelter area that is located outside of the established work area. The objective is to alarm the woodrats so that they evacuate the midden and scatter away from the equipment and into the undisturbed areas outside of the work area. Once the woodrats have evacuated the midden, the operator will gently pick up the structure with a front loader or other equipment and move it to the undisturbed habitat. The objective of moving the structure is to provide the displaced woodrats with a stockpile of material to scavenge while they build a new midden; consequently, jeopardizing the integrity of the structure is not an issue.

# Level of Impact After Mitigation

The mitigation measures proposed above serve to avoid impacts to nesting birds and minimize potential adverse effects to adjacent aquatic sites by implementing LID design standards. In addition, the measures provide a means to avoid impacts to aquatic sites and jurisdictional features that may support California red-legged frog, steelhead, and designated critical habitats. If proposed project elements are not capable of avoiding impacts to the aquatic and/or potentially jurisdictional features, the University will be required to obtain the appropriate permits from USACE, CDFW, and RWQCB. In the USACE permitting process, USACE will provide a federal nexus for the project(s) and will consult with NOAA Fisheries and/or USFWS as necessary to obtain Incidental Take Statements, including Reasonably Prudent Measures to minimize adverse effects on federally protected species. With implementation of the measures above and the required regulatory permits, impacts to biological resources associated with the Master Plan will be less than significant.

## Slack and Grand Residential Neighborhood

With implementation of the measures above and measures that may be incorporated in future regulatory permits, impacts to biological resources associated with the Slack and Grand Residential Neighborhood will be less than significant.

# Cumulative Impact

The development pursuant to the Master Plan has the potential to affect the campus' jurisdictional waterways and grassland habitats.

The jurisdictional waterways that traverse campus are identified in the Master Plan as environmentally sensitive areas. If particular planned facility or improvements cannot avoid impacts to the jurisdictional waterways, the University is required by federal and state laws to seek and obtain Clean Water Act and California Fish and Game Code permits that will include additional measures to avoid or mitigate impacts to the jurisdictional waterways. Since the federal and state governments have no-net-loss policies for jurisdictional waters, Cal Poly's future development and the potential future development in the surrounding areas within the 20-year timeframe may result in a cumulative loss of some of these resources. The combination of the identified mitigation measures and compliance with applicable federal and state laws by all future development on campus, together with implementation of mitigation measures and compliance with the federal, state, and local regulations and requirements by potential future development in the surrounding area will serve to avoid significant cumulative impacts to jurisdictional waterways.

The Slack and Grand Residential Neighborhood (N1), N4 Residential Neighborhood, N5 Residential Neighborhood, and New Data Center Facility could result in the conversion of grassland habitats into built environments. The University values its grasslands as scientifically interesting features and as assets to its "learn by doing" mission. This is made evident by the fact that 66% of the University's 6,000 acres is managed for grazing land and that the Master Plan aims to avoid the campus' grasslands. While these facilities and land uses in combination with the Oppenheimer project and the current Gold Tree Solar project may convert some of these grasslands into built environments, these facilities and uses will include a small and insignificant number of acres of grasslands when compared the University's land holdings. Due to this low conversion of grasslands, the Master Plan in combination with potential future development in the surrounding area will not result in a cumulatively significant impact to grasslands.

## Slack and Grand Residential Neighborhood

Cumulative impacts associated with the Slack and Grand Neighborhood are addressed above.

# 3.2 Cultural Resources

This section examines the potential impacts to cultural resources associated with the campus development pursuant to the Master Plan, including the development of the Slack and Grand Residential Neighborhood. The information and analysis provided herein is based on a review of existing cultural resources documentation, including record searches prepared for various projects at the Cal Poly campus.

## Environmental Setting

### Natural Setting

The Cal Poly campus is situated at the interface of the western foothills of the Santa Lucia Range, northeast of the city of San Luis Obispo. Several volcanic peaks, including a series of volcanic peaks to the south commonly referred to as the Nine Sisters, stretches from the campus to the coast. The campus is bisected by Brizzolara Creek, which feeds into Stenner Creek and eventually San Luis Obispo Creek. The native vegetation of the project vicinity consists of oak/annual grassland savanna and oak woodland, with dense riparian corridors present along the adjacent Brizzolara Creek. Much of the campus is developed with existing facilities; the Campus Core in particular is densely developed.

Fauna that historically inhabited the project area included black-tailed deer (*Odocoileus hemionus columbianus*), bobcat (*Lynx rufus*), black-tailed jackrabbit (*Lepus californicus*), cottontail rabbit (*Sylvilagus* spp.), black bear (*Ursus americanus*), and grizzly bear (*Ursus horribilis*), as well as other small mammals, reptiles, amphibians, and birds.

### Prehistoric Overview

California prehistory is divided into three broad temporal periods that reflect similar cultural characteristics throughout the state: Paleoindian Period (circa [ca.] 9000–6000 B.C.), Archaic Period (6000 B.C.–A.D. 500), and Emergent Period (A.D. 500–Historic Contact). The Archaic is further divided into Lower (6000–3000 B.C.), Middle (3000–1000 B.C.), and Upper (1000 B.C.–A.D. 500) Periods. These divisions are generally governed by climatic and environmental variables, such as the drying of pluvial lakes at the transition from the Paleoindian to the Lower Archaic period.[19]

The project area lies in the Central Coast Archaeological Region, which is one of eight arbitrary organizational divisions of the state. This region extends southward from Monterey Bay through Big Sur to Morro Bay, and includes southern Santa Cruz and Santa Clara Counties, all of San Benito and Monterey Counties, and most of San Luis Obispo County.[19]

[19] SWCA Environmental Consultants (SWCA). 2016. *Cal Poly Master Plan Update Residential Neighborhood N1 Cultural Resources Survey Report*. On file with Cal Poly Facilities Planning and Capital Projects.

# Ethnographic Overview

The project area was historically occupied by the northernmost subdivision of the Chumash, the Obispeño (after Mission San Luis Obispo de Tolosa), with the Salinan bordering to the north. However, the precise location of the boundary between the Chumashan-speaking Obispeño Chumash and their northern neighbors, the Hokan-speaking Playanos Salinan, is currently the subject of debate, as those boundaries may have changed over time.

# Historic Resources

## Cal Poly Campus Historical Context

Native American villages occupied by Chumash were first recorded in the Cal Poly vicinity by Europeans during Gaspar de Portolá's land expedition in search of Monterey Bay. In 1772, Fray Junípero Serra founded Mission San Luis Obispo de Tolosa, the third Franciscan mission in Alta California, about a mile south of the future campus site. Mission livestock—cattle, horses, mules, and sheep–grazed freely on the slopes of the surrounding hills. This pastoral land use continued after the missions were secularized in the 1830s and former mission lands were parceled out as rancho grants.

The Cal Poly campus occupies grazing lands formerly associated with Rancho Potrero de San Luis Obispo (granted to Maria Concepcion Boronda in 1842, though purchased by Estevan Quintana in the 1820s), Rancho San Luisito (granted to Guadalupe Cantua in 1841), and Rancho El Chorro (granted to John Wilson and James Scott in 1845). No architectural resources date to the pre-American period, but some of the campus boundaries are coterminous with earlier rancho boundaries.[20]

Although "Yankees" and other non-Mexican citizens had taken up residence in Alta California in the 1820s and 1830s, the Mexican-American War of 1846–1848 marked the official intervention of US interests in California. The discovery of gold in the foothills of the Sierra Nevada instigated a population boom, and California achieved statehood in 1850. Severe flooding in 1862, followed by the disastrous drought of 1863–1864, devastated the cattle industry that had supported the San Luis Obispo County economy. Local population did not increase noticeably until further immigration in the 1870s, when dairying, mining, and sheep raising began to form the basis of a newly organized economy. The advent of shipping ports and a narrow-gauge railway supported a burgeoning commercial core in the county seat, the City of San Luis Obispo, which began to grow and acquire the aspects of an Americanized city.[21]

By the 1880s, local boosters were promoting sales of former rancho lands, which were being partitioned into smaller tracts suitable for orchards and diversified crops. Future Cal Poly lands were among the tracts that transferred from rancho heirs to new owners, including prosperous sheep rancher Joseph Hollister and, later, dairymen Charles Walters and Giuseppe Gilardi. The

[20] Steven Marx, ed. 2002. *Cal Poly Land: A Field Guide*. A Project of The Cal Poly Land Centennial Seminar, San Luis Obispo, pp. 143-144.

[21] Myron Angel. 1994. *History of San Luis Obispo County, California, with Illustrations and Biographical Sketces of Its Prominent Men and Pioneers*. Fresno, CA: Word Dancer Press, in affiliation with Friends of the Adobes (facsimile of original edition published in Oakland by Thompson & West in 1883), p. 320.

Rancho Potrero de San Luis Obispo, which had reverted to the Quintana family, was also subdivided. Cal Poly's Serrano Ranch, Peterson Ranch, and Cheda Ranch represent portions of the Rancho Potrero (Spanish for "pasture") that have retained their pastoral land use[22].

The foundation of the California Polytechnic School can be attributed, in large measure, to its promotion by Myron Angel, a local publisher who settled in San Luis Obispo in 1883. As the city gained stature—especially after the Southern Pacific Railroad reached the city from the north in 1894—a concerted effort was made to establish a local school. Legislation was enacted in 1897, and funding was finally allocated in 1902, spurred on by the 1901 completion of the Southern Pacific Railroad line from San Francisco to San Diego, which opened the Central Coast to further settlement and investment. A 281-acre site at the north end of the city was offered to the fledgling school, and the first classrooms were ready for students in the autumn of 1903.[23]

## Cal Poly Architectural Resources Context

### California Polytechnic School (1901–1937)

At its inception at the turn of the twentieth century, the earliest iteration of Cal Poly—the California Polytechnic School—provided vocational education, at the secondary (high school) level, for both boys and girls. The school's administrative offices, boys' dormitories, and classrooms were originally housed in three multistory buildings (no longer extant), built in 1903–1906 in the Mission Revival style by noted regional architect William Weeks. These three large and prominently located buildings formed the nucleus of the campus built environment, surrounded by agricultural fields.[24] The school had barely been established when World War I intervened, drastically reducing enrollment as well as limiting access to building materials. Following the wartime restrictions and post-war economic recession, the campus began to recover, enrollment increased, and the building program expanded. Vocational education remained central to the curriculum, influenced by passage of the Smith-Hughes National Vocation Act of 1917, which promoted vocational education as a legitimate part of the high school curriculum and facilitated the hiring of teachers to train boys from surrounding farms in agricultural subjects.[25]

Under the aegis of State Architect George McDougall (1913–1938) and Assistant State Architect Wesley K. Daniels, the designers and draftsmen of the Office of the State Architect established the Spanish Colonial Revival style as the predominant architectural style for major buildings on campus.[26] Later examples also incorporated some minimal Modern elements. Buildings from this period include a gymnasium, the residence of the school's president, three dormitories, and a natatorium (designed in 1936 and constructed in 1938).

Weeks' buildings have not survived. The oldest building on campus is now the Powerhouse (also referred to as the Old Power House), designed by the Office of the State Architect in 1908 and

[22]Marx, pp.168–169.
[23] Robert E. Kennedy Library. 2001. *Cal Poly: The First Hundred Years,* San Luis Obispo: California Polytechnic State University, 2001, pp. 13-16.
[24] Robert E. Kennedy Library, pp. 12, 17.
[25] Robert E. Kennedy Library, pp. 28, 30.
[26] The Division of the State Architect. 2007. *Celebrating a Century of California Architecture: The Division of the State Architect, 1907–2007*. Sacramento, CA: AIA California Council, p. 36.

listed on the National Register of Historic Places (NRHP) in 1993 (the only NRHP-listed Cal Poly building to date). The Spanish Colonial Revival style dormitories built during President Benjamin Crandall's administration (1924–1933) have all survived. Vernacular barns, workshops, and outbuildings that supported hands-on vocational training during this period have been lost.

Table 1, below shows an inventory of Cal Poly historic-period buildings (i.e., buildings that are 50 or more years old already, or that will pass the 50-year mark by 2035) built between 1901 and 1937, and the proposed action under the Master Plan. The inventory reveals several phases of building construction. These phases can be attributed to the particular administrative body overseeing the campus, to the personal leadership of the early directors and later presidents, to a succession of master plans, and to the political and economic climate of the time.

**Table 1. 1901–1937-Era Buildings: Proposed Action**[27]

| Building | | Year Built | Action |
|---|---|---|---|
| 076-0 | Powerhouse | 1908 | No Action |
| 070-B | Facility Services Electric Shop | 1922 | Demolition |
| 117-0 | Heron Hall (dormitory) | 1927 | Renovation |
| 051-0 | University House | 1928 | No Action |
| 060-0 | Crandall Gymnasium | 1928 | Renovation |
| 116-0 | Jespersen Hall (dormitory) | 1929 | Renovation |
| 115-0 | Chase Hall (dormitory) | 1931 | Renovation |

## California State Polytechnic School (1937–1947)

Cal Poly's development as a leading agricultural school was closely linked to the presidency of Julian A. McPhee, who received his bachelor's degree in agriculture from the University of California in 1917 and his master's degree in agricultural education in 1928. During his long tenure (which witnessed the Great Depression, World War II, the Korean Conflict, and the early years of the Vietnam War), McPhee expanded the school's curriculum, and oversaw rising enrollment and the return of coeds in 1956. Among his most important achievements was his successful advocacy for full accreditation as a degree-conferring institution—the first bachelor's degree was awarded in May 1942. McPhee's academic interests embraced not only vocational training, agricultural education, and teacher training, but also innovative multi-agency networking and funding.[28] The new administration building, with its imposing clock tower, was the first major building constructed under the direction of State Architect Anson Boyd (1940–1962).

Table 2, below shows an inventory of Cal Poly historic-period buildings (i.e., buildings that are 50 or more years old already, or that will pass the 50-year mark by 2035) built between 1937 and

[27] Adapted from Cal Poly Facilities, "Facilities Gross Square Feet (GSF)," annotated by Campus Planner Julie Hawkins, AICP, March 29, 2016.
[28] Robert E. Kennedy Library, pp. 41–42, 44–48, 50–51, 63–65, 76–77.

1947. The inventory reveals several phases of building construction. These phases can be attributed to the particular administrative body overseeing the campus, to the personal leadership of the early directors and later presidents, to a succession of master plans, and to the political and economic climate of the time.

**Table 2. 1937–1947-Era Buildings: Proposed Action[27]**

| Building | | Year Built | Action |
|---|---|---|---|
| 046-0 | Old Natatorium | 1938 | Renovation |
| 002-0 | Cotchett Education Building /Clock Tower | 1941 | Renovation |
| 036-0 | University Police | 1941 | Renovation |
| 036-A | Building 36 (University Police) Storage | 1941 | Renovation |
| 058-0 | Welding | 1941 | Demolition |
| 081-0 | Hillcrest | 1942 | Renovation or Demolition (Either)/TBD |
| 009-0 | Farm Shop | 1947 | Demolition |
| 004-A | Aero Hangar | 1947 | Demolition |
| 070-F | Facility Services Plumbing Shop | 1947 | Demolition |

## California State Polytechnic College (1947–1972)

All of the surviving buildings from this period were constructed according to master plans. The school's first Master Plan, developed by the architectural firm Allison and Rible was based on a projected enrollment of 4,080 students. Allison and Rible took the campus's prevailing architectural style in new directions, influenced by the mid-century popularity of the International style. Brick masonry and expansive glass windows were added to the architectural palette of white stucco and red tile roofs. Among the inaugural buildings of this period were a modern library and a stadium. Building purposes continued to reflect McPhee's dedication to agricultural instruction, and also reflected national post-war interest in science, engineering, and aeronautics. In 1958, the California Department of Education mandated that all non-metropolitan state college campuses needed to plan for an enrollment of 12,000 students.[29] The architectural firm of Falk and Booth was selected to prepare a new Master Plan, completed in 1962. During the 1950s and 1960s, the Campus Core expanded eastward along either side of Dexter Lawn, with the construction of numerous two-story classroom buildings. The proliferation of classrooms, dormitories, and upgrades to campus services constructed at this time reflects the tremendous growth in the student population brought about by veterans' and Baby Boomers' increasing access to college education. An expanding fine arts curriculum is also represented in the building inventory from the mid-1950s on. In 1964, a new Administration Building, designed by the Division of the State Architect, was constructed at a prominent central location along the horseshoe campus road. Robert E. Kennedy's administration, which began in 1967, carried out two more large-scale dormitory projects, as well as the inauguration of the Environmental Horticulture Science program on the outskirts of the Campus Core.

[29] Cal Poly Master Plan Update. 2017. Available at: http://masterplan.calpoly.edu/master-plan/. Accessed August 2017.

Table 3, below shows an inventory of Cal Poly historic-period buildings (i.e., buildings that are 50 or more years old already, or that will pass the 50-year mark by 2035) built between 1947 and 1972. The inventory reveals several phases of building construction. These phases can be attributed to the particular administrative body overseeing the campus, to the personal leadership of the early directors and later presidents, to a succession of master plans, and to the political and economic climate of the time.

**Table 3. 1947–1972-Era Buildings: Proposed Action[27]**

| Building | | Year Built | Action |
|---|---|---|---|
| 034-0 | Walter F. Dexter Building | 1949 | Renovation |
| 061-K | Spanos Stadium East Bleachers | 1949 | Demolition |
| 080-0 | Environmental Health & Safety | 1951 | Demolition |
| 057-0 | Veterinary Hospital | 1953 | No Action |
| 057-A | Veterinary Hospital Annex | 1953 | No Action |
| 018-C | Dairy Science Artificial Insemination Lab | 1953 | No Action |
| 018-E | Dairy Science Bull Barn | 1953 | No Action |
| 018-F | Dairy Science Judging Pavilion | 1953 | No Action |
| 018-G | Dairy Science Cow Shelter | 1953 | No Action |
| 100-0 | Shasta Hall (dormitory) | 1953 | Either/TBD |
| 101-0 | Diablo Hall (dormitory) | 1953 | Either/TBD |
| 102-0 | Palomar Hall (dormitory) | 1953 | Either/TBD |
| 103-0 | Whitney Hall (dormitory) | 1953 | Either/TBD |
| 104-0 | Lassen Hall (dormitory) | 1953 | Either/TBD |
| 008-0 | Bioresource and Agricultural Engineering | 1954 | Demolition |
| 008-A | Bioresource and Agricultural Engineering Shop | 1954 | Demolition |
| 008-S | Agricultural Engineering North Storage | 1954 | Demolition |
| 008-T | Agricultural Engineering Paint Storage | 1954 | Demolition |
| 008-U | Agricultural Engineering South Storage | 1954 | Demolition |
| 040-0 | Engineering South | 1954 | Renovation |
| 046-A | Dance Studio | 1954 | Renovation |
| 052-0 | Science Building | 1955 | Demolition |
| 058-B | Welding Storage 1 | 1955 | Demolition |
| 058-C | Welding Storage 2 | 1955 | Demolition |
| 004-0 | Research Development Center | 1956 | Demolition |
| 004-D | Aero Jet Engine Test Facility | 1956 | Demolition |
| 004-E | Aero Hazardous Material Storage | 1956 | Demolition |
| 020-0 | Engineering East | 1957 | Demolition |

| Building | | Year Built | Action |
|---|---|---|---|
| 010-0 | Alan E. Erhart Agriculture | 1959 | Demolition |
| 028-0 | Albert B. Smith Alumni and Conference Center | 1959 | Renovation |
| 028-A | Alumni Center Storage | 1959 | Renovation |
| 038-0 | Mathematics and Science | 1959 | Demolition |
| 042-A | Anderson Aquatic Center | 1959 | Renovation |
| 042-B | Mott Physical Education Equipment Storage | 1959 | Renovation |
| 042-C | Mott Physical Education Track Equipment Storage | 1959 | Renovation |
| 105-0 | Trinity Hall (dormitory) | 1959 | Either/TBD |
| 106-0 | Santa Lucia Hall (dormitory) | 1959 | Either/TBD |
| 107-0 | Muir Hall (dormitory) | 1959 | Either/TBD |
| 108-0 | Sequoia Hall (dormitory) | 1959 | Either/TBD |
| 109-0 | Fremont Hall (dormitory) | 1959 | Either/TBD |
| 110-0 | Tenaya Hall (dormitory) | 1959 | Either/TBD |
| 009-B | Farm Shop Storage | 1960 | Demolition |
| 009-C | Farm Shop Hazardous Materials Storage | 1960 | Demolition |
| 027-0 | Health Center | 1960 | Renovation |
| 042-0 | Robert A. Mott Physical Education | 1960 | Renovation |
| 019-0 | Dining Complex | 1961 | Demolition |
| 024-0 | Food Processing | 1961 | Demolition |
| 024-A | Food Processing Annex | 1961 | Demolition |
| 024-Z | Original Campus Store | 1961 | Demolition |
| 044-0 | Alex and Faye Spanos Theatre | 1961 | Renovation |
| 045-0 | H. P. Davidson Music Center | 1961 | Renovation |
| 070-0 | Facilities | 1961 | Demolition |
| 070-C | Facility Services Grounds Shop | 1961 | Demolition |
| 070-D | Facility Services Welding Shop | 1961 | Demolition |
| 070-E | Facility Services Paint Shop | 1961 | Demolition |
| 071-0 | Transportation Services | 1961 | Demolition |
| 034-A | Walter F. Dexter Building Addition | 1962 | Renovation |
| 128-B | Orchard House | 1962 | No Action |
| 128-C | West Field Equipment Storage | 1962 | No Action |
| 128-D | West Field Storage | 1962 | No Action |
| 026-0 | Graphic Arts | 1962 | Demolition |
| 021-0 | Engineering West | 1962 | Renovation |

| Building | | Year Built | Action |
|---|---|---|---|
| 021-S | Architecture Shop Storage | 1962 | Renovation |
| 022-0 | English | 1962 | Demolition |
| 034-A | Walter F. Dexter Building Addition | 1962 | Renovation |
| 052-A | Science Southeast and Southwest Additions | 1962 | Demolition |
| 001-0 | Administration | 1964 | Renovation |
| 051-A | University House Catering | 1968 | No Action |
| 053-0 | Science North | 1968 | Demolition |
| 053-A | Science North Annex | 1968 | Demolition |
| 014-0 | Frank E. Pilling Building | 1969 | Demolition |
| 114-0 | Yosemite Hall (dormitory) | 1969 | No Action |
| 114-A | Yosemite Hall Tower 0 | 1969 | No Action |
| 114-B | Yosemite Hall Tower 1 (dormitory) | 1969 | No Action |
| 114-C | Yosemite Hall Tower 2 (dormitory) | 1969 | No Action |
| 114-D | Yosemite Hall Tower 3 (dormitory) | 1969 | No Action |
| 114-E | Yosemite Hall Tower 4 (dormitory) | 1969 | No Action |
| 114-F | Yosemite Hall Tower 5 (dormitory) | 1969 | No Action |
| 114-G | Yosemite Hall Tower 6 (dormitory) | 1969 | No Action |
| 114-H | Yosemite Hall Tower 7 (dormitory) | 1969 | No Action |
| 114-J | Yosemite Hall Tower 8 (dormitory) | 1969 | No Action |
| 114-K | Yosemite Hall Tower 9 (dormitory) | 1969 | No Action |
| 048-0 | Environmental Horticulture Science (EHS) | 1969 | No Action |
| 048-B | EHS Lath House | 1969 | No Action |
| 048-C | EHS Soil Science Greenhouse | 1969 | No Action |
| 048-D | EHS Tractor Barn | 1969 | No Action |
| 048-E | EHS Garcia Barn | 1969 | No Action |
| 048-F | EHS Solar Greenhouse | 1969 | No Action |
| 048-H | EHS Labs C & D | 1969 | No Action |
| 048-I | EHS Shade House | 1969 | No Action |
| 048-J | EHS Lath House (AI) | 1969 | No Action |
| 048-K | EHS Greenhouse | 1969 | No Action |
| 048-L | EHS Greenhouse | 1969 | No Action |
| 048-N | Bug House | 1969 | No Action |
| 052-B | Science Observatory | 1970 | Demolition |
| 004-C | Public Safety Lab | 1970 | Demolition |

| Building | | Year Built | Action |
|---|---|---|---|
| 004-R | Aero Storage | 1970 | Demolition |
| 019-A | Sandwich Factory | 1970 | Demolition |
| 056-0 | Swine Unit | 1970 | No Action |
| 056-C | Swine Unit Fattening Unit | 1970 | No Action |
| 056-E | Swine Unit Old Farrowing Unit | 1970 | No Action |
| 065-0 | Julian McPhee University Union | 1971 | Renovation |
| 065-C | Julian McPhee University Union Corp Space | 1971 | Renovation |
| 065-U | Julian McPhee U Union Hazardous Materials | 1971 | Renovation |

## California Polytechnic State University (1972–present)

The 1970 Master Plan (for a projected enrollment of 15,000) saw the construction of a new student union downslope from the administration building. From 1972 to 1985 (the end of the "historic period" for purposes of this proposed Master Plan), and on to the present, Cal Poly's built environment has become increasingly more architecturally eclectic. A number of large-scale buildings have been constructed as a second or third band around the horseshoe core, expanding the architectural skyline upward and outward and repurposing areas formerly dedicated to agricultural uses. As a result, new agricultural buildings and athletic fields have also made their appearance upslope from this expanding core.

Table 4, below shows an inventory of Cal Poly historic-period buildings (i.e., buildings that are 50 or more years old already, or that will pass the 50-year mark by 2035) built between 1972 and the present. The inventory reveals several phases of building construction. These phases can be attributed to the particular administrative body overseeing the campus, to the personal leadership of the early directors and later presidents, to a succession of master plans, and to the political and economic climate of the time.

**Table 4. 1972–Present Buildings: Proposed Action[27]**

| Building | | Year Built | Action |
|---|---|---|---|
| 055-0 | Beef Cattle Evaluation Center | 1972 | No Action |
| 055-A | Beef Cattle Evaluation Center Residence | 1972 | No Action |
| 055-B | Beef Cattle Evaluation Center Office | 1972 | No Action |
| 113-0 | Sierra Madre Hall (dormitory) | 1973 | No Action |
| 113-A | Sierra Madre Hall Tower 0 (dormitory) | 1973 | No Action |
| 113-B | Sierra Madre Hall Tower 1 (dormitory) | 1973 | No Action |
| 113-C | Sierra Madre Hall Tower 2 (dormitory) | 1973 | No Action |
| 113-D | Sierra Madre Hall Tower 3 (dormitory) | 1973 | No Action |
| 113-E | Sierra Madre Hall Tower 4 (dormitory) | 1973 | No Action |

| Building | | Year Built | Action |
|---|---|---|---|
| 113-F | Sierra Madre Hall Tower 5 (dormitory) | 1973 | No Action |
| 027-A | Health Center Addition | 1974 | Renovation |
| 070-B | Facility Services Warehouse | 1975 | Demolition |
| 053-Z | Science North Addition (Building 33 Project) | 1976 | Demolition |
| 021-A | Engineering West Addition | 1977 | Renovation |
| 005-0 | Architecture & Environmental Design | 1977 | Renovation |
| 033-0 | Clyde P. Fisher Science Hall | 1977 | Demolition |
| 017-A | Crop Science Insecticide Storage | 1978 | No Action |
| 074-0 | Building 74 | 1979 | Demolition |
| 074-D | Building 74 Emergency Operations Center | 1979 | Demolition |
| 074-A | Building 74 Storage | 1979 | Demolition |
| 035-0 | Robert E. Kennedy Library | 1980 | Renovation |
| 047-0 | Faculty Offices North | 1980 | Demolition |
| 048-M | Environmental Horticulture Pesticide Storage | 1980 | No Action |
| 051-B | University House Storage | 1980 | No Action |
| 070-G | Facility Services PCB Storage | 1982 | Demolition |
| 071-A | Transportation Services Paint Booth | 1982 | Demolition |
| 074-B | Building 74 Hazardous Material | 1983 | Demolition |
| 055-C | Beef Cattle Evaluation Center Residence Trailer | 1984 | No Action |
| 013-0 | Engineering | 1985 | Renovation |
| 013-A | Engineering Mechanical/Storage | 1985 | Renovation |
| 024-X | Food Processing Annex Addition | 1985 | Demolition |
| 053-Y | Science North Second Floor Addition | 1985 | Demolition |
| 056-B | Swine Unit Addition | 1985 | No Action |

## Ranches

The Master Plan does not address any proposed actions for the Cal Poly ranches. These buildings, however, relate to the larger administrative timeline and master plans in terms of their acquisition and subsequent use; some of the ranch houses, barns and other architectural resources were often already in place when acquired. Their historical context is therefore a mixture of county ranching activity and Cal Poly's campus development.

## Table 5. Cal Poly Ranches[27]

| Building | | Year Built |
|---|---|---|
| ***Parker Ranch*** | | |
| 122-0 | Parker Ranch | 1929 |
| 122-C | Parker Storage | 1929 |
| 122-D | Parker Barn | 1929 |
| ***Cheda Ranch*** | | |
| 121-A | Cheda Ranch McCloud | 1938 |
| 121-B | Cheda Ranch Santa Ynez | 1938 |
| 121-0 | Cheda Ranch | 1951 |
| 121-C | Cheda Ranch Shed | 1951 |
| 121-D | Cheda Ranch Barn | 1951 |
| 121-E | Cheda Ranch Milking Barn | 1951 |
| 121-F | Cheda Ranch Carport | 1951 |
| ***Peterson Ranch*** | | |
| 123-0 | Peterson Ranch | 1950 |
| 123-A | Peterson Ranch Residence 2 | 1950 |
| 123-C | Peterson Barn | 1950 |
| 123-D | Peterson Shed | 1950 |
| ***Serrano Ranch*** | | |
| 125-0 | Serrano Ranch | 1950 |
| 125-C | Serrano Ranch Sheep Barn | 1950 |
| ***Chorro Creek Ranch*** | | |
| 126-0 | Chorro Creek Ranch | 1968 |
| 126-A | Chorro Creek Ranch Shop | 1968 |
| 126-C | Chorro Creek Ranch Equipment Storage | 1968 |
| 126-U | Chorro Creek Ranch Garage | 1968 |
| ***Escuela Ranch*** | | |
| 127-A | Escuela Ranch Pole Barn | 1975 |

All of the buildings inventoried in Table 1 through Table 5 are, or will become, historic-*period* resources (resources built in 1985 or earlier) by 2035.

# Archaeological Resources

A review of existing cultural resource data from the California Historical Resources Information System's Central Coast Information Center (CCIC) at University of California, Santa Barbara was conducted to provide context regarding known cultural resources within the Master Plan area. The records search review revealed that approximately 25% of the Master Plan area has been previously subject to cultural resources study. The majority of this previous work was conducted more than 10 years ago and was completed for various projects on campus, primarily within the north and western areas of the campus.

In addition, in 2016, SWCA Environmental Consultants (SWCA) completed background research and a pedestrian archeological survey of the proposed Slack and Grand Residential Neighborhood (N1) site. This survey did not identify any cultural resources within this project area.[19]

While the greater San Luis Obispo area, and portions of the campus outside of the Master Plan area, contains numerous previously documented archaeological sites, few are known within the Master Plan area. This is likely partially due to the fact that much of the campus has been subject to varying levels of development since the beginning of the twentieth century, which may have resulted in the displacement and/or destruction of archaeological resources, particularly throughout the Campus Core and immediately surrounding areas.

CCIC data reveals that three previously identified archaeological sites and one prehistoric isolate (i.e. a single artifact) are located within the Master Plan area (Table 1). None of these resources have been evaluated for the California Register of Historical Resources (CRHR).

**Table 6. Previously Identified Archaeological Resources within the Master Plan Area**

| Name | Site Description | Recorded by/Year | Associated Area |
|---|---|---|---|
| CA-SLO-669 | Prehistoric Site: Bedrock Mortars | Dills 1973 | Academic Core |
| CA-SLO-2090 | Prehistoric Site: Lithic Scatter | Maki 2001 | West Campus |
| CA-SLO-2280 | Prehistoric Site: Shell and Lithic Scatter | Maki 2003 | North Campus |
| N/A | Prehistoric Isolate: Flake | Nichols 1999 | North Campus |

# Native American and Tribal Cultural Resources

As part of the cultural resources identification process, the California Native American Heritage Commission (NAHC) was contacted by letter on November 30, 2016, requesting a review of the Sacred Lands File. The NAHC responded on December 2, 2017 stating that the search of the Sacred Lands File did not indicate the presence of Native American cultural resources within the Master Plan area.

Cal Poly also contacted the sole group that has requested to be consulted pursuant to Assembly Bill 52 (AB 52)[30], Torres Martinez Desert Cahuilla Indians on July 28, 2016. No response has been received to date and no Tribal Cultural Resources have been identified within the Master Plan area.

In addition, as part of outreach to local Native American groups, seven Native American contacts that may have additional information about the project area were identified through the NAHC and contacted. A letter requesting information concerning cultural resources in the area was sent to each of these contacts on December 9, 2016. To date, a single response has been received from the Northern Chumash Tribe indicating that Cal Poly sits in a place that may have experienced considerable activity and or occupation by the Northern Chumash.

Therefore, while there are no known Native American or tribal cultural resources within the campus, mitigation measures have been identified to ensure that future campus development pursuant to the Master Plan will not significantly affect previously unknown Native American and/or tribal cultural resources.

## Slack and Grand Residential Neighborhood

Please refer to the Environmental Setting above. No historic buildings or structures, archaeological resources, or tribal cultural resources are known to occur within the Slack and Grand Neighborhood project area.[19]

# Regulatory Setting

## Federal

### National Historic Preservation Act of 1966

Enacted in 1966 and amended most recently in 2014, the National Historic Preservation Act (NHPA; 54 U.S.C. 300101 et seq.) instituted a multifaceted program, administered by the Secretary of the Interior, to encourage sound preservation policies of the nation's cultural resources at the federal, state, and local levels. The NHPA authorized the expansion and maintenance of the NRHP, established the position of State Historic Preservation Officer, and provided for the designation of State Review Boards. The NHPA also set up a mechanism to certify local governments to carry out the goals of the NHPA, assisted Native American tribes to preserve their cultural heritage, and created the Advisory Council on Historic Preservation (ACHP).

#### Section 106

Section 106 of the NHPA (54 U.S.C. 306108) states that federal agencies with direct or indirect jurisdiction over federally funded, assisted, or licensed undertakings must take into account the effect of the undertaking on any historic property that is included in or eligible for inclusion in the NRHP, and that the ACHP must be afforded an opportunity to comment, through a process

[30] AB 52 requires early consultation with Native American Tribes when a written request for consultation has been provided.

outlined in the ACHP regulations in 36 CFR Part 800, on such undertakings. The Section 106 process involves identification of significant historic resources within an "area of potential effect [APE]; determination if the undertaking will cause an adverse effect on historic resources; and resolution of those adverse effects through execution of a Memorandum of Agreement." In addition to the ACHP, interested members of the public, including individuals, organizations, and agencies (such as the California Office of Historic Preservation) are provided with opportunities to participate in the process.

## National Register of Historic Places

The NRHP was established by the NHPA as "an authoritative guide to be used by federal, state, and local governments, private groups and citizens to identify the Nation's cultural resources and to indicate what properties should be considered for protection from destruction or impairment" (36 CFR 60.2). The NRHP recognizes properties that are significant at the national, state, and local levels. To be eligible for listing in the NRHP, a resource must be significant in American history, architecture, archaeology, engineering, or culture. Districts, sites, buildings, structures, and objects of potential significance must also possess integrity of location, design, setting, materials, workmanship, feeling, and association.

### Significance

A property is eligible for the NRHP if it is significant under one or more of the following criteria:

- **Criterion A:** It is associated with events that have made a significant contribution to the broad patterns of our history;
- **Criterion B:** It is associated with the lives of persons who are significant in our past;
- **Criterion C:** It embodies the distinctive characteristics of a type, period, or method of construction, or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components may lack individual distinction; and/or,
- **Criterion D:** It has yielded, or may be likely to yield, information important in prehistory or history. Ordinarily cemeteries, birthplaces, or graves of historic figures, properties owned by religious institutions or used for religious purposes, structures that have been moved from their original locations, reconstructed historic buildings, and properties that are primarily commemorative in nature, are not considered eligible for the NRHP, unless they satisfy certain conditions. In general, a resource must be 50 years of age to be considered for the NRHP, unless it satisfies a standard of exceptional importance.

## Native American Graves Protection and Repatriation Act of 1990

The Native American Graves Protection and Repatriation Act of 1990 sets provisions for the intentional removal and inadvertent discovery of human remains and other cultural items from federal and tribal lands. It clarifies the ownership of human remains and sets forth a process for repatriation of human remains and associated funerary objects and sacred religious objects to the Native American groups claiming to be lineal descendants or culturally affiliated with the remains or objects. It requires any federally funded institution housing Native American remains

or artifacts to compile an inventory of all cultural items within the museum or with its agency and to provide a summary to any Native American tribe claiming affiliation.

## State

PRC Section 5024.1 requires that any properties that can be expected to be directly or indirectly affected by a proposed project be evaluated for CRHR eligibility. The purpose of the CRHR is to maintain listings of the state's historical resources and to indicate what properties are to be protected, to the extent prudent and feasible, from material impairment and substantial adverse change. The term "historical resources" includes a resource listed in, or determined to be eligible for listing in, the CRHR; a resource included in a local register of historical resources; and any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant. The criteria for listing properties in the CRHR were expressly developed in accordance with previously established criteria developed for listing in the NRHP.

According to PRC Section 5024.1(c)(1–4), a resource may be considered historically significant if it retains integrity and meets at least one of the following criteria. A property may be listed in the CRHR if the resource:

> *(1) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;*
>
> *(2) Is associated with the lives of persons important in our past;*
>
> *(3) Embodies the distinctive characteristics of a type, period, region or method of installation, or represents the work of an important creative individual, or possesses high artistic values; or*
>
> *(4) Has yielded, or may be likely to yield, information important in prehistory or history.*

Under CEQA, if an archeological site is not a historical resource but meets the definition of a "unique archeological resource" as defined in PRC Section 21083.2, then it should be treated in accordance with the provisions of that section. A *unique archaeological resource* is defined as follows:

> *An archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:*
>
> *(1) Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.*
>
> *(2) Has a special and particular quality such as being the oldest of its type or the best available example of its type.*

*(3) Is directly associated with a scientifically recognized important prehistoric or historic event or person.*

Resources that neither meet any of these criteria for listing on the CRHR nor qualify as a *unique archaeological resource* under CEQA PRC Section 21083.2 are viewed as not significant. Under CEQA, "A non-unique archaeological resource need be given no further consideration, other than the simple recording of its existence by the lead agency if it so elects" (PRC Section 21083.2[h]).

## California Historical Landmarks

California Historical Landmarks (CHLs) are buildings, structures, sites, or places that have anthropological, cultural, military, political, architectural, economic, scientific or technical, religious, experimental, or other value and that have been determined to have statewide historical significance by meeting at least one of the criteria listed below. The resource also must be approved for designation by the County Board of Supervisors (or the city or town council in whose jurisdiction it is located), be recommended by the State Historical Resources Commission, and be officially designated by the Director of California State Parks. The specific standards now in use were first applied in the designation of CHL #770; CHLs #770 and above are automatically listed in the CRHR.

To be eligible for designation as a landmark, a resource must meet at least one of the following criteria:

- It is the first, last, only, or most significant of its type in the state or within a large geographic region (northern, central, or southern California);
- It is associated with an individual or group having a profound influence on the history of California; or,
- It is a prototype of, or an outstanding example of, a period, style, architectural movement, or construction or is one of the more notable works or the best surviving work in a region of a pioneer architect, designer, or master builder.

## California Points of Historical Interest

California Points of Historical Interest are sites, buildings, features, or events that are of local (city or county) significance and have anthropological, cultural, military, political, architectural, economic, scientific or technical, religious, experimental, or other value. Points of historical interest designated after December 1997 and recommended by the State Historical Resources Commission are also listed in the CRHR. No historic resource may be designated as both a landmark and a point. If a point is later granted status as a landmark, the point designation will be retired. In practice, the point designation program is most often used in localities that do not have a locally enacted cultural heritage or preservation ordinance.

To be eligible for designation as a point of historical interest, a resource must meet at least one of the following criteria:

- It is the first, last, only, or most significant of its type within the local geographic region (city or county);
- It is associated with an individual or group having a profound influence on the history of the local area; or,
- It is a prototype of, or an outstanding example of, a period, style, architectural movement or construction or is one of the more notable works or the best surviving work in the local region of a pioneer architect, designer, or master builder.

## Native American Heritage Commission

California PRC Section 5097.91 established the NAHC, whose duties include the inventory of places of religious or social significance to Native Americans and the identification of known graves and cemeteries of Native Americans on private lands. PRC Section 5097.98 specifies a protocol to be followed when the NAHC receives notification of a discovery of Native American human remains from a county coroner.

## California Public Records Act

Sections 6254(r) and 6254.10 of the California Public Records Act were enacted to protect archaeological sites from unauthorized excavation, looting, or vandalism. Section 6254(r) explicitly authorizes public agencies to withhold information from the public relating to "Native American graves, cemeteries, and sacred places maintained by the Native American Heritage Commission." Section 6254.10 specifically exempts from disclosure requests for "records that relate to archaeological site information and reports, maintained by, or in the possession of the Department of Parks and Recreation, the State Historical Resources Commission, the State Lands Commission, the NAHC, another State agency, or a local agency, including the records that the agency obtains through a consultation process between a Native American tribe and a State or local agency."

## Health and Safety Code, Sections 7050 and 7052

Health and Safety Code, Section 7050.5, declares that, in the event of the discovery of human remains outside of a dedicated cemetery, all ground disturbance must cease and the County Coroner must be notified. Section 7052 establishes a felony penalty for mutilating, disinterring, or otherwise disturbing human remains, except by relatives.

## California Penal Code, Section 622.5

The California Penal Code, Section 622.5, provides misdemeanor penalties for injuring or destroying objects of historic or archaeological interest located on public or private lands, but specifically excludes the landowner.

## Public Resources Code, Section 5097.5

PRC Section 5097.5 defines as a misdemeanor the unauthorized disturbance or removal of archaeological, historic, or paleontological resources located on public lands.

## Assembly Bill 52

### Consultation with Native Americans

AB 52 formalizes the lead agency–tribal consultation process, requiring the lead agency to initiate consultation with California Native American groups that are traditionally and culturally affiliated with the project, including tribes that may not be federally recognized.

### Tribal Cultural Resources

Section 4 of AB 52 adds PRC Section 21074(a) and (b), which address tribal cultural resources and cultural landscapes. Section 21074(a) defines tribal cultural resources as one of the following:

1. Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:

    a. Included or determined to be eligible for inclusion in the CRHR.

    b. Included in a local register of historical resources as defined in subdivision (k) of Section 5020.1.

2. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.

## Slack and Grand Residential Neighborhood

The regulatory setting for the Slack and Grand Residential Neighborhood is the same as the regulatory setting for the Master Plan. Please refer to the Regulatory Setting discussions above.

# Impact Criteria

The project will result in a significant impact on cultural resources if it will:

- Cause a substantial adverse change in the significance of an historic resource. This will include physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historic resource will be materially impaired;
- Cause a substantial adverse change in the significance of an archaeological resource;
- Cause a substantial adverse change to a Tribal Cultural Resource—defined as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe—and that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources or a resource

determined by the lead agency, in its discretion and supported by substantial evidence, to be significant;
- Directly or indirectly destroy a unique paleontological resource or site; or,
- Disturb any human remains, including those interred outside of formal cemeteries.

# Environmental Impact

The Master Plan provides for new facilities and improvements throughout its planning area. Ground disturbance associated with future campus development may result in direct impacts to known and unknown archaeological resources and indirect or direct impacts to historic-era built environment resources. Direct impacts result from land modification directly and immediately caused by the construction, landscaping, operation, or maintenance of a facility. Common indirect impacts include erosion, change of setting, vibration, unauthorized artifact collecting, and vandalism.

## Historic Resources

The physical aspects of a university campus must constantly evolve to meet a host of needs. This evolutionary process entails the alteration or demolition of some pre-existing buildings. It should be noted, very few buildings in any setting will ever be classified as historically significant, and buildings do not automatically achieve historical significance simply by virtue of turning fifty. But whether due to limited building space at the Campus Core, to the obsolescence or deterioration of older structures, or to other factors, campus renovations require an assessment of the impacts of proposed projects on the built environment.

Cal Poly is a campus with a long and distinguished history in California. Like other universities that have passed the century mark, its building inventory includes dozens of older structures representative of earlier stages in the physical development of the campus. It is therefore appropriate to articulate a historic resource plan, and to identify those buildings that have enduring value to the University not only for their architectural merit, but also for their varied associations with the Cal Poly campus's history, purpose, and significant accomplishments.

The oldest building on campus is the Powerhouse, designed by the Office of the State Architect in 1908. As its name implies, the Powerhouse played an important role in the operation of the campus's physical plant. The sole survivor from the first decade of Cal Poly's existence, the Powerhouse was listed on the NRHP in 1993.

In the following section, several other extant historic-period buildings are called out for what appears to be their greater-than-average potential to prove historically significant. It should be understood that the buildings named below are not intended to represent an exhaustive list of potentially eligible buildings, and that these suggestions are not based on formal architectural evaluations. Many, but not all, were designed by noted architectural firms, including the Office of the State Architect (from 1963, the Division of the State Architect). Ideally, these examples will serve to highlight the various ways a building—even a plain utilitarian structure—can have an important Cal Poly story to tell.

## Phase 1 Buildings (1908–1938)

These early buildings are likely to be significant resources as fine examples of buildings designed for a public institution by the Office of the State Architect.

- 117-0 – Heron Hall (dormitory), built 1927 (George McDougall)
- 051-0 – University House, built 1928 (W. K. Daniels)
- 060-0 – Crandall Gymnasium, built 1928 (Alfred Eichler)
- 116-0 – Jespersen Hall (dormitory), built 1929 (George McDougall)
- 115-0 – Chase Hall (dormitory), built 1931 (George McDougall)
- 046-0 – Old Natatorium, built 1938 (Alfred Eichler)

Along with the Powerhouse, these six buildings constitute the surviving historical core of the Cal Poly campus.

## Phase 2 Buildings (1938–1942)

A period of architectural modernization was well under way by 1941. The then-new Administration Building (complete with clock tower), may have been designed in a traditional style that complemented the early dormitory buildings, but it replaced a multi-story Mission Revival structure built in 1903. After 1964, when the present Administration Building was constructed, the former Administration Building became the Business and Education Building. The Hillcrest Building was associated originally with the Hillcrest dormitories, which were demolished to make way for six new dorms built in 1959. It has been attributed to the acclaimed Modernist architect Richard J. Neutra, although the attribution has not been sufficiently documented. Hillcrest was remodeled in 1958, when it was referred to in plans as the "existing cafeteria" and "existing Hillcrest Lounge."[31] Cal Poly buildings associated with post-World War II aeronautical projects may constitute another historical sub-context with individual or collective significance, depending on the importance of the activities associated with them. The Aero Hangar, for example, has continued to be an important laboratory/shop space where students manufacture project prototypes in a hands-on environment that has epitomized Cal Poly's "learn by doing" philosophy since the building's construction in 1947.

- 002-0 – Cotchett Education Building (Clock Tower), built 1941 (Office of the State Architect)
- 081-0 – Hillcrest, built 1942 (Attributed to Richard J. Neutra)
- 004-A – Aero Hangar, built 1947 (Office of the State Architect)

## Phase 3 Buildings (1947–1963)

Many of the classroom buildings added to the campus during this phase, though not listed here, should be viewed holistically and within the context of the first Cal Poly Master Plan, completed in 1949. The flagship building of this phase is the Dexter Building, originally the campus library,

[31] Heather Hughes. 2015. *On Campus Historic Preservation at California Polytechnic State University, San Luis Obispo,* Master's Project. California Department of Public Works, Division of Architecture, Los Angeles Branch, Hillcrest Lounge Alterations, South Mountain Residence Halls Buildings, housed in Cal Poly Archives. Available at: http://digitalcommons.calpoly.edu/cgi/viewcontent.cgi?article=1057&context=fpcp_mp. Accessed August 2017.

which was sited next to the 1941 administration building. These two buildings and Dexter Lawn became visual anchors for the new Campus Core, which faced east, rather than west. Cal Poly buildings (such as the Aero Jet Engine Test Facility and Hazardous Material Storage) associated with post-Korean War aeronautical projects may constitute another historical sub-context with individual or collective significance, depending on the importance of the activities associated with them.

- 034-0 – Walter F. Dexter Building, built 1949 (Office of the State Architect)
- 004-D – Aero Jet Engine Test Facility, built 1956
- 004-E – Aero Hazardous Material Storage, built 1956

## Phase 4 Buildings (1964–1969)

Although Allison and Rible introduced mid-century Modern architecture to the Cal Poly campus, the 1964 Administration Building, designed by the Division of the State Architect, created a new architectural statement on campus. Its distinctive and unabashedly Modern style, with its high-rise, cantilevered form, was a striking departure from other campus buildings and may be said to have inaugurated the more architecturally eclectic campus of today. With the passage of the Donahoe Higher Education Act, enabling University of California and CSU campuses to hire private architects (rather than rely solely on the Division of the State Architect) for campus construction projects, Cal Poly's use of private architects accelerated.[32] In 1969, two private architectural firms were hired to design new buildings. The Santa Barbara-based architectural firm of Arendt, Mosher and Grant selected a Late International style for the Frank E. Pilling Building; Falk & Booth selected the Brutalist style for the dormitories, further demonstrating new directions in campus architecture.

- 001-0 – Administration, built 1964 (Division of the State Architect)
- 014-0 – Frank E. Pilling Building, built 1969 (Arendt, Mosher and Grant)
- 114-0 – Yosemite Hall (dormitory), built 1969 (Falk & Booth)
- 114-A – Yosemite Hall Tower 0, built 1969 (Falk & Booth)
- 114-B – Yosemite Hall Tower 1 (dormitory), built 1969 (Falk & Booth)
- 114-C – Yosemite Hall Tower 2 (dormitory), built 1969 (Falk & Booth)
- 114-D – Yosemite Hall Tower 3 (dormitory), built 1969 (Falk & Booth)
- 114-E – Yosemite Hall Tower 4 (dormitory), built 1969 (Falk & Booth)
- 114-F – Yosemite Hall Tower 5 (dormitory), built 1969 (Falk & Booth)
- 114-G – Yosemite Hall Tower 6 (dormitory), built 1969 (Falk & Booth)
- 114-H – Yosemite Hall Tower 7 (dormitory), built 1969 (Falk & Booth)
- 114-J – Yosemite Hall Tower 8 (dormitory), built 1969 (Falk & Booth)
- 114-K – Yosemite Hall Tower 9 (dormitory), built 1969 (Falk & Booth)

[32] The Division of the State Architect. 2007. *Celebrating a Century of California Architecture: The Division of the State Architect, 1907–2007*. Sacramento, CA: AIA California Council, p. 48.

### Phase 5 Buildings (1970–1985)

The 1970 Master Plan Update was in place when the following buildings were constructed. Signature buildings designed in variations of the Brutalist style by private architectural firms dominated new large-scale construction projects.

- 065-0 – Julian McPhee University Union, built 1971 (Joseph Esherick & Associates)
- 113-0 – Sierra Madre Hall (dormitory), built 1973 (architect??)
- 113-A – Sierra Madre Hall Tower 0 (dormitory), built 1973
- 113-B – Sierra Madre Hall Tower 1 (dormitory), built 1973
- 113-C – Sierra Madre Hall Tower 2 (dormitory), built 1973
- 113-D – Sierra Madre Hall Tower 3 (dormitory), built 1973
- 113-E – Sierra Madre Hall Tower 4 (dormitory), built 1973
- 113-F – Sierra Madre Hall Tower 5 (dormitory), built 1973
- 033-0 – Clyde P. Fisher Science Hall, built 1977 (Kruger, Bensen & Ziemer)
- 035-0 – Robert E. Kennedy Library, built 1980 (Marquis Associates)
- 047-0 – Faculty Offices North, built 1980 (Reibsamen, Nickels and Rex)
- 013-0 – Engineering, built 1985 (Grant, Pedersen, Phillips)

Of all of the potential historic buildings discussed above, the Powerhouse is the only extant formally evaluated historic resource on campus. Table 1 through Table 4, above, list potential historic resources and proposed Master Plan actions. Specific project-related impacts cannot be determined at this time.

## Archaeological Resources

Based on the records search review, the Master Plan area contains three prehistoric archaeological sites (CA-SLO-669, CA-SLO-2090, and CA-SLO-2280). Some components of future campus development under the Master Plan may potentially overlap with these sites. Project-specific impacts to identified archaeological resources cannot be determined at this time.

In addition, a single prehistoric isolate (P-40-038191) is also within the Master Plan area. Isolated artifacts, however, lack the context that is afforded to artifacts within an archaeological site, such as contemporary and associated artifacts, ecofacts, and features. Without this context, isolates typically lack the potential to yield information important in prehistory, the CRHR Criterion (4) under which archaeological resources are most often found to be significant. As such, P-40-038191 is not eligible for the CRHR. The prehistoric isolate does not constitute a unique archaeological resource, as it does not contain information needed to answer important scientific research questions; does not have a special and particular quality such as being the oldest of its type or the best available example of its type; and is not directly associated with a scientifically recognized important prehistoric or historic event or person. Consequently, the prehistoric isolate is not considered historically significant.

## Tribal Cultural Resources

No known tribal cultural resources are located within the Master Plan area. The search by the NAHC of Sacred Land Files, as well as Native American consultation and outreach, did not identify tribal cultural resources within or adjacent to the Master Plan area.

## Paleontological Resources

The Master Plan study area is underlain by Franciscan Complex (KJf) deposits of the Coast Ranges and Young Surficial Deposits (Qya). The Franciscan Complex includes Cretaceous and Jurassic sandstone with smaller amounts of shale, chert, limestone, and conglomerate[33]. This deposit primarily consists of variably deformed and metamorphosed sandstone, graywacke, mudstone, and chert. It is rare to find fossils within the Franciscan Complex, as this formation is heavily deformed and metamorphosed in many locations—a process that destroys fossils; however, significant finds have been documented within this formation including trace fossils, mollusks, and marine reptiles. Qya consists of alluvial gravel and sand, and is typically too young to produce significant paleontological findings.

At present, there are no known paleontological resources, unique geologic formations, or sites located within the Master Plan area. However, it is possible that paleontological resources could be discovered during ground-disturbing activities associated with construction of future planned facilities and improvements. Therefore, mitigation has been identified to reduce the potential impact in the event that such previously unknown resources are discovered.

## Slack and Grand Residential Neighborhood

No historic resources, archaeological resources, paleontological resources, or tribal cultural resources are known to occur within the Slack and Grand Neighborhood project area.[19] As such, the proposed development is not anticipated to result in adverse impacts to cultural resources. Nevertheless, standard inadvertent discovery mitigation measures are warranted and proposed below.

# Mitigation Measures

### Historic Resources

3.2-1 When a proposed Cal Poly project may directly or indirectly impact one or more the potential historic resources listed in Tables 1–4, the resource(s) shall be evaluated by an architectural historian who meets the Secretary of the Interior's Professional Qualification Standards. The architectural historian will photograph the resource, conduct sufficient research to establish an appropriate historical context, and determine whether the resource appears eligible for listing in the NRHP, meets the eligibility requirements for listing in the CRHR, or otherwise

[33] Wiegers, Mark O. 2010. Geologic Map of the San Luis Obispo 7.5' Quadrangle Version 1.0. Electronic Document. Available at: ftp://ftp.consrv.ca.gov/pub/dmg/rgmp/Prelim_geo_pdf/SanLuisObispo24k_preliminary.pdf. Accessed March 29, 2017.

constitutes a historical resource for the purposes of CEQA. The architectural historian will document the building's historic context, character-defining features, and eligibility determinations on appropriate Department of Parks and Recreation (DPR) 523 forms, including, at a minimum, DPR 523A and DPR 523B. Copies of these forms will be retained by Cal Poly Facilities and the Cal Poly Archives and will be submitted to the CCIC.

3.2-2 If a building qualifies as a historical resource, retaining the building in its original location and incorporating it into the new site plan shall be considered. If retaining the building in its original location is not feasible, Cal Poly shall determine whether it is feasible to relocate the building to another location on or off campus. In the event of relocation, Cal Poly shall require that the relocation be conducted in compliance with the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings.

3.2-3 If a building that qualifies as a historical resource can be preserved on site, but remodeling, renovation or other alterations are required in order to meet Master Plan objectives, Cal Poly shall require that this work be conducted in compliance with the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings. Cal Poly shall also require Historic American Building Survey (HABS)-like documentation (Level 2) of the building's character-defining features before any project alterations to any such features may take place. This documentation shall be retained by the Cal Poly Archives. Historic photographs of the building's original appearance shall be mounted in a prominent public location either outside or inside the building.

3.2-4 In the event a building that qualifies as a historical resource will be demolished, Cal Poly shall require HABS-like documentation (Level 2) of the building before any project alterations may take place. This documentation shall be retained by the Cal Poly Archives. Historic photographs of the original building shall be mounted in a prominent public location either outside or inside the replacement structure. In addition, Cal Poly shall require the preparation of a booklet on the history of the demolished building. The booklet will be intended for distribution to students and the general public, incorporating information contained in the DPR523 forms previously prepared under Mitigation Measure 3.2-1, selections from the HABS-like documentation, and other appropriate illustrative materials from the Cal Poly Archives.

3.2-5 If, in the opinion of the qualified architectural historian, the nature and significance of the building is such that its demolition cannot be fully mitigated through documentation, Cal Poly shall reconsider project plans in light of the high value of the resource, and implement modifications to the proposed project that will allow the structure to be preserved intact. These modifications could include project redesign, relocation, or abandonment.

### Level of Impact after Mitigation

For reasons presented above, this EIR conservatively concludes that implementation of the proposed Master Plan could result in a significant and unavoidable impact on historic properties/historical resources.

## Archaeological Resources

3.2-6 Future Master Plan projects will be designed to avoid the three known prehistoric archaeological sites CA-SLO-669, CA-SLO-2280, and CA-SLO-2090 to the extent feasible. A 50 foot-buffer will be established as an Environmentally Sensitive Area for activities near the sites. No grading, storage of materials or equipment, or use of equipment will be allowed within the Environmentally Sensitive Area.

3.2-7 An archaeological monitor will be present during all ground disturbing construction activities within 50 feet of the Environmentally Sensitive Area's perimeter established for the sites.

3.2-8 If any of the three known prehistoric archeological sites cannot be avoided, the impacted site will be evaluated for its potential eligibility for inclusion in the CRHR. If the site is determined eligible for inclusion in the CRHR, impacts will be mitigated through the implementation of a data recovery program (Phase III). The data recovery program will be tailored to address the resource's specific reasons for eligibility. The findings of the testing and/or data recovery program(s) shall be presented in a technical report prepared by a qualified archaeologist.

3.2-9 Prior to development of new facilities and improvements within the campus' currently undeveloped land, including paved areas and landscaped areas, a qualified archaeologist will be retained to conduct a review of existing records search data to determine if the site of new facility or improvement has been previously subject to archaeological study, and whether the study adequately addresses the potential for archaeological resources to occur within the disturbance area associated with construction. If it is determined a study has not been conducted or existing research is inadequate, a new study will be conducted. The study will identify cultural resources that have the potential to be impacted by future development and provide mitigation measures to avoid and/or minimize potential impacts. Additional tasks such as Native American coordination, Phase II archaeological testing, Phase III data recovery, and historic research will be conducted as necessary. The study will identify cultural resources that have the potential to be impacted by future development and identify resource-specific mitigation measures to avoid and/or minimize potential impacts.

3.2-10 In the event that archaeological resources (artifacts or features) are exposed during ground-disturbing activities associated with development of any future facility or improvement, construction activities in the immediate vicinity (25 feet) of the discovery will be halted while the resources are evaluated for significance by a qualified archaeologist. Construction activities could continue in other areas.

If the discovery proves to be significant (i.e., qualifies as a historical resource), additional work, such as archaeological data recovery or facility redesign, may be warranted. If warranted, data recovery or redesign will be implemented in consultation with the University.

3.2-11 If human remains are discovered during construction work, all work within 50 feet of the discovery will cease and the County Coroner will be promptly notified. State of California Health and Safety Code Section 7050.5 stipulates that no further disturbance will occur until the County Coroner has made a determination of origin and disposition pursuant to PRC Section 5097.98. If the human remains are determined to be prehistoric, the County Coroner will notify the NAHC, which will determine and notify a Most Likely Descendant (MLD). The MLD will complete the inspection of the site within 48 hours of notification and may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials.

## Native American and Tribal Cultural Resources

3.2-12 If previously unknown Native American or tribal cultural resources are encountered during any phase of construction of the future planned Master Plan facilities and improvements, the following measures will be implemented:

1. All work in the immediate vicinity of the find (within a 60-foot buffer) will cease and (1) a qualified archaeologist meeting the Secretary of Interior (SOI) standards will assess the find, and (2) as appropriate, a Native American Tribal representative will be promptly contacted and provided information about the find and invited to perform a site visit when the archeologist makes the assessment to provide Tribal input.

2. If significant Native American resource is discovered and avoidance cannot be ensured, an SOI-qualified archeologist will be retained to develop a cultural resources Treatment Plan, as well as a Discovery and Monitoring Plan, which as appropriate, will be provided to a Native American Tribal representative for review and comment.

3. All in-field investigations, assessments, and/or data recovery enacted pursuant to the final Treatment Plan will be monitored as appropriate by the proper Native American Tribal Participant(s).

4. The University will consult with the proper Native American Tribal representative on the dispositions and treatment of any artifacts or cultural resources encountered during any phase of construction of the future planned facilities and improvements.

### Paleontological Resources

3.2-13 If any paleontological resource is encountered during ground-disturbing activities, activities in the immediate area of the find will be halted and the discovery assessed. A qualified paleontologist will be retained to evaluate the discovery and recommend appropriate treatment options pursuant to guidelines developed by the Society of Vertebrate Paleontology, including development and implementation of a paleontological resource impact mitigation program for treatment of the resource.

## Slack and Grand Residential Neighborhood

Implement Mitigation Measures 3.2-10 through 3.2-13.

# Level of Impact After Mitigation

Even with the identified mitigation, implementation of the proposed Master Plan could result in a significant and unavoidable impact on historic resources, archaeological resources, paleontological resources, and Tribal Cultural Resources. Future projects may result in direct, significant, and unavoidable impacts such as the alteration and/or physical destruction of a cultural resource that qualifies as a historical resource. Indirect impacts may occur as a result of the change of setting of a historical resource. Such indirect impacts might include, for example, the loss of spatial relationships with other historically related buildings, infill buildings crowding or physically overshadowing older structures that were once prominent on the landscape, and similar alterations that make it more difficult for the significant resource to express its historic architectural importance.

## Slack and Grand Residential Neighborhood

Implementation of the identified mitigation measures will reduce potential impacts to cultural resources to a less-than-significant level.

# Cumulative Impact

The greater San Luis Obispo area, including areas adjacent to the campus, contains known and potentially unknown cultural resource sites. Given the prevalence of cultural resource sites in the immediate vicinity of the Master Plan area and the number of CEQA-exempt construction and agricultural activities outside of the Master Plan area that potentially involve disturbance of culturally sensitive areas, it is likely that significant pre-historic and historic resources are often not identified and could be significantly affected without the implementation of surveys, avoidance, and mitigation measures.

If CRHR-eligible resources or paleontological resources are identified with the Master Plan area, impacts to these resources, as a result of future development, may be significant. While cultural resources are generally tied to their geographic footprint, they may be directly or indirectly

related to other resources in the area. As such, significant impacts to resources within the Master Plan area could diminish the region's cultural setting and could result in potentially significant cumulative impacts. The mitigation provided in this section will reduce potential impacts to the extent feasible; however, cumulative impacts will still be considered significant and unavoidable.

## Slack and Grand Residential Neighborhood

No direct impacts to any known CRHR-eligible resources or significant paleontological resources will occur as result of the development of the Slack and Grand Residential Neighborhood and mitigation measures are in place to reduce potential impacts unknown resources. Therefore, implementation of the project will not result in a cumulatively considerable adverse effect to pre-historic, historic, or paleontological resources.

# 3.3 Agricultural Resources

This section examines the potential impacts to agricultural resources associated with the campus development pursuant to the Cal Poly Master Plan, including the development of the Slack and Grand Residential Neighborhood.

## Environmental Setting

### Regional Agriculture

According to the most recent United States Department of Agriculture (USDA) National Agricultural Statistics Service (NASS) Census of Agriculture, California is the leading agriculture-producing state, with a total value of more than $42.6 billion in agricultural products sold in 2012, an increase from nearly $33.9 billion in 2007.[34] The California Department of Food and Agriculture (CDFA) reported $47 billion in sales in 2015, a decrease of nearly 17% compared to 2014. California remained the number one state in cash farm receipts, with combined commodities representing nearly 13% of the U.S. total 2014 receipts. California's leading crops remained fruits, nuts, and vegetables.[35]

Within California, in 2015, San Luis Obispo County ranked 16th among state counties in overall agricultural production with total sales of over $828 million, a 7.9% decrease compared to 2014 sales.[35] The top commodities in the county were strawberries and wine grapes, which accounted for 45% of the total combined value of the county's agricultural industry. Strawberry sales totaled $222.6 million (27%) and wine grapes were valued at $146.4 million (18%). Other 2015 top 10 commodities in San Luis Obispo County included: cattle and calves (7%), broccoli (6%), vegetable transplants (5%), cut flowers (3%), head lettuce (3%), leaf lettuce (2%), avocados (2%), and lemons (2%).[36]

Table 7 shows the total production value of agricultural industry categories within the county in 2014 and 2015. The decline in animal industry, field crops, and fruit and nut crops production was primarily the result of ongoing drought conditions.

[34] U.S. Department of Agriculture, National Agricultural Statistics Service (NASS). 2014. *2012 Census of Agriculture*. United States Summary and State Data, Volume 1, Geographic Area Series, Part 51. May 2014. Available at: https://www.nass.usda.gov/. Accessed May 2017.
[35] California Department of Agriculture (CDFA). 2016. *California Agricultural Statistics Review – 2015–2016*. Available at: https://www.cdfa.ca.gov/statistics/PDFs/2016Report.pdf. Accessed May 2017.
[36] County of San Luis Obispo Department of Agriculture, Weights & Measures. 2016. *Watering the Drought: 2015 Annual Report*.

**Table 7. County of San Luis Obispo Total Production Value by Agricultural Category[36]**

| Agricultural Category | 2014 | 2015 | Change |
|---|---|---|---|
| Animal Industry | $135,017,000 | $70,659,000 | - $64,358,000 |
| Field Crops | $16,812,000 | $15,600,000 | - $1,212,000 |
| Nursery Stock | $84,394,000 | $100,138,000 | + $15,744,000 |
| Fruit and Nut Crops | $468,518,000 | $428,344,000 | - $40,174,000 |
| Vegetable Crops | $195,329,000 | $214,059,000 | + $18,730,000 |
| **TOTAL PRODUCTION VALUE** | **$900,070,000** | **$828,800,000** | **- $71,270,000** |

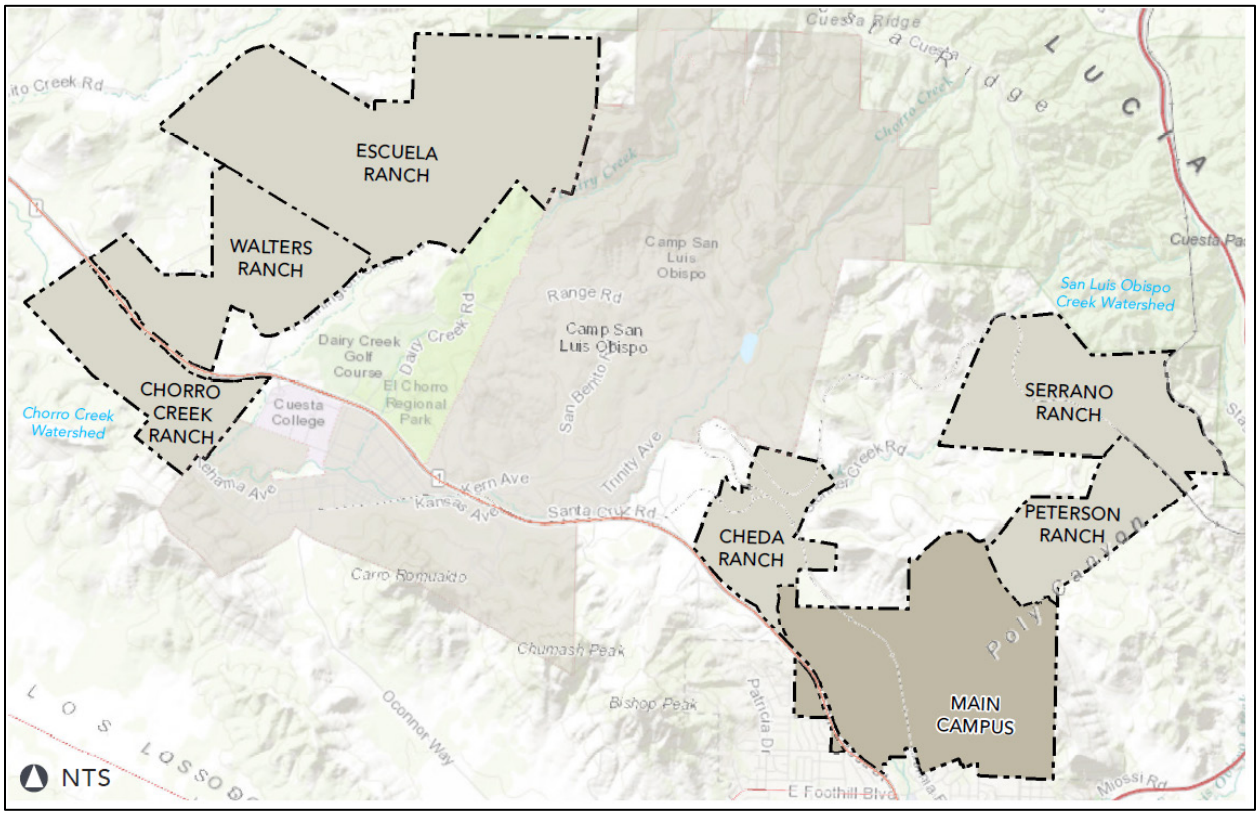
## University Agricultural Resources and Facilities

Cal Poly agricultural land and facilities provide valuable tools for teaching and hands-on learning for all aspects of agricultural and environmental sciences. The University's agricultural holdings include:

- Approximately 6,000 acres of agricultural production, processing, and research land and facilities near the Cal Poly campus in San Luis Obispo County (Figure 19), including the Peterson, Serrano, Cheda, Escuela, Walters, and Chorro Creek Ranches;
- The 3,200-acre Swanton Pacific Ranch and 600-acre Valencia property, both in Santa Cruz County, which provide forest, range, and watershed resources for additional research and production; and,
- The 450-acre Bartleson Ranch and Conservancy in Arroyo Grande, which provides avocado and lemon groves for additional research.

Ranch and conservancy lands off campus are not proposed to be modified under the Master Plan, and are therefore outside of the Master Plan scope. Cal Poly's agricultural lands in San Luis Obispo County are located in two watersheds—approximately 3,000 acres in the San Luis Obispo Creek watershed immediately surrounding the main campus, and an additional 3,100 acres in the Chorro Creek watershed located along Highway 1 approximately halfway between San Luis Obispo and Morro Bay. Cal Poly's agricultural land includes both cropland and grassland. Generally, irrigated row crops are grown on prime soils, dry land crops are grown on less fertile soils, and rangeland is predominantly located on sloped areas and occasionally used for grazing.

**Figure 19. Cal Poly Regional Agricultural Land Holdings.**




The campus's agricultural resources include facilities and operations to facilitate functions important to teaching and learning on the Campus Farm. The Campus Farm is a diverse farming operation that includes organic and conventional row crop production, orchard and vineyard production, beef cattle production, swine production, sheep and goat production, poultry production, a composting operation, ornamental operations, and a training area for farm tractor operations. In 2015, the Campus Farm included approximately 34 acres of row crops, 165 acres of orchards/vineyards, 40 acres of silage production, 80 acres of irrigated pasture, and 489 acres of non-irrigated pasture (Figure 20).

**Figure 20. Existing Agricultural Lands and Facilities on Campus (2001 Master Plan)**

**LEGEND**

**Facilities**

| | |
|---|---|
| A | Animal Science |
| B | Beef Evaluation |
| C | BRAE Irrigation Training Research Center |
| D | Corporation Yards (future) |
| E | Crops |
| F | Dairy |
| G | Equestrian |
| H | Environmental Horticulture Science |
| I | Equipment |
| J | Poultry |
| K | Residential Housing (Ag) |
| L | Rodeo |
| M | Swine |

**Fields**

| | |
|---|---|
| 1 | Crops |
| 2 | Composting |
| 3 | Experimental Farm (certified organic) |
| 4 | Irrigation Study Field |
| 5 | ITRC Expansion |
| 6 | NRM Logging |
| 7 | Pasture |
| 8 | Rangeland/Grazing |
| 9 | Red Rock Pit |
| 10 | Tractor Safety and Electric Farming System |

Campus Farm facilities and other campus agricultural resources and facilities are described below.

- **Crops Unit:** the Horticulture & Crop Science Department manages approximately 70 acres of productive citrus, avocados, grapes, deciduous orchard, and berries, and additional nonbearing acreage near the Campus Core planning area for instructional use. The Crops Unit also houses a facility for processing freshly picked fruits and vegetables and the Cal Poly Organic Farm.
- **The Cal Poly Organic Farm:** an 11-acre vegetable production unit that is a certified organic farm by the California Certified Organic Farmers (CCOF) and provides learning opportunities in organic and sustainable farming and gardening practices. Vegetable production includes produce that is sold locally at farmers markets, the campus farm market, and to local vendors and restaurants.
- **Environmental Horticulture Unit:** the Environmental Horticulture Unit of the Horticulture & Crop Science Department includes a student-operated commercial greenhouse range and nursery involving wholesale and retail sales. This includes 35,000 square feet of greenhouses; a 5,000-square-foot retractable roof greenhouse; 7,500 square feet of shade houses; a 10,000-square-foot US Golf Association specification experimental green; an extensive field container growing area, laboratories for outdoor ornamentals used in landscaping; and demonstration gardens, including hydroponic systems, lighting systems, and temperature controlled environments for teaching and research. The Environmental Horticulture Unit also includes the Leaning Pine Arboretum and student-operated Poly Plant Shop.
- **Leaning Pine Arboretum:** a 5-acre arboretum with a diverse array of gardens displaying hundreds of unique trees, shrubs, and other landscape plants primarily from the world's five regions—Australia, California, Chile, the Mediterranean basin, and South Africa.
- **The Poly Plant Shop:** a student-operated shop that provides an on-campus source for cut flowers, landscape, and interior plants.
- **Modern laboratories:** laboratories are located in the Agricultural Sciences Building and at the Crops and Environmental Horticulture Units, including laboratories for biotechnology, landscape industries with computer-aided design and drafting (CADD), pest management, post-harvest technology, and plant materials.
- **Trestle Vineyard:** a 14-acre commercial vineyard and pilot winery that promotes environmentally and economically sustainable vineyard practices. The vineyard has historically included approximately 12.5 acres of planted acreage in Pinot Noir, Syrah, Tempranillo, and Chardonnay; however, a virus infection required vine removal in 2015. The 10-12 ton capacity pilot winery includes a cool room, presses, a de-stemmer and elevator, steam generator, bottling line, tanks, sinks, and work areas.
- **Irrigation Training and Research Center:** the Irrigation Training and Research Center (ITRC) was officially formed in 1989 to enhance the irrigation teaching program at Cal Poly through activities in training and research in irrigation, drainage, and water management. Focus areas of the ITRC include: (1) irrigation projects (irrigation district modernization, water balances, river basin return flow issues, SCADA (Supervisory Control and Data Acquisition), canal automation, pump automation, flow measurement, water conveyance equipment, energy consumption, and efficiency); (2) farm irrigation (drip, surface and sprinkler irrigation, drainage, salinity, energy consumption, irrigation evaluations, evapotranspiration, pumps); and (3) landscape (primarily development of

urban water conservation programs). The ITRC includes training rooms and office space for both graduate and undergraduate students; an outdoor Water Resources Facility to demonstrate pumps, pump testing, flow measurement, SCADA, and canal automation; and an outdoor Merriam Irrigation Practices Field containing a complete assortment of on-farm and landscape irrigation systems and equipment.

- **Pilot Food Plant and Labs:** the pilot food plant and labs include resources for food safety, sensory evaluation, quality control, culinary science/product development, chemistry, and nutrition and health assessment.
- **Animal Units:** animal laboratory units are maintained on campus as self-supported commercial operations to offer students real world experience while supporting the expenses associated with live animals. Each animal unit includes some indoor and/or covered facilities as well as outdoor areas for grazing and exercise. On-campus animal units include: the Equine Center, the Beef Center, the Swine Center, the Sheep and Goat Center, and the Poultry Center.
- **Equine Center:** the campus Equine Center includes facilities to support the entire spectrum of commercial equine production, including a breeding lab, foaling stall, stallion barn, student horse barn, 150 acres of irrigated and dry pastures, sand arenas and adjacent pens, and a variety of barns and pipe corrals.
- **Beef Center:** the Beef Center (completed in 2006) supports new technologies for teaching and researching embryo transfer and artificial insemination and is the site for Cal Poly's heifer development program and annual Bull Test. The Beef Center includes eight lay-up pens for heifer development and health management, 10 stalls designed for breeding and embryo transfer activities, seven 3-acre paddocks for performance testing bulls, and a student residence. On-campus beef operations also include Parker Barn and the Beef Cattle Evaluation Center (BCEC). Parker Barn provides calving facilities for first-calf heifers and is surrounded by pastures so cattle can be grouped by calving date. The BCEC is a facility used for applied feedlot research projects, progeny testing of cattle, heifer development, and lab instruction. The BCEC also houses the campus Processing Center.
- **Meat Processing Center:** a state-of-the-art meat processing center that holds the only USDA certification on a university campus. The Meat Processing Center is a fully functioning plant with the capabilities to involve students in all stages of meat processing from harvesting to packaging. The Meat Processing Center includes separate harvesting areas, a meat fabrication and processing space, a one-truck food processing oven, packaging areas and coolers, food-safety testing area, and other multi-purpose areas for learning and outreach work. Cal Poly produces and sells fresh beef, pork, lamb, poultry, and specialty meats, including bacon, sausage, and jerky.
- **Swine Center:** the Swine Center includes outdoor pastures, a farrowing barn, an enclosed temperature-controlled nursery-grower building for piglets, and a Cargill-style barn for gestating sows. The Swine Center also includes a 12-pen grower barn, which is used for research studies designed by Cal Poly faculty or students.
- **Sheep and Goat Center:** the Sheep and Goat Center includes barns and corrals for managing the animals, but most importantly, this center includes approximately 140 acres of irrigated pasture and open rangeland at Cheda Ranch for grazing. An existing milking barn has been renovated into a classroom/shearing/lambing barn with laboratory facilities, a wool press, and storage capabilities. In addition, sheep pens and corrals were

built into the dairy barn for use if needed. Sheep and goat graze at Cheda Ranch and in temporary enclosures across campus, providing beneficial weed abatement and firebreak control near campus facilities.

- **Poultry Center:** the Poultry Center has housing facilities for 7,000 broilers and 7,000 replacement pullets. In addition, the center includes two egg production facilities—a two-story turbo house and a stacked deck house (both are exact replicas of the facilities currently used in the commercial egg production industry). The Poultry Center also includes a research house that can hold approximately 2,200 birds and a battery room with almost 100 individual brooding pens.
- **Biotechnology Laboratories:** the Animal Science Department has four state-of-the-art equipped laboratories for student and faculty research projects, including biotechnology and nutrition research facilities to support cell biology, histology, embryology, and immunology.
- **Cal Poly Dairy:** the dairy manages a herd of approximately 200 cows, producing milk for the Cal Poly Creamery, which produces a variety of dairy food products including cheeses, milk, and ice cream available for commercial sale. The land surrounding the dairy provides grazing for cattle.
- **Cal Poly Veterinary Center:** the Cal Poly Veterinary Center supports the health needs of all on-campus animals (approximately 1,200 livestock and 12,000 poultry birds). The center includes two mobile veterinary units to assist the campus veterinarians as they respond to the needs of the beef, dairy, equine, poultry, sheep, and swine centers. The Veterinary Center also includes a teaching laboratory where most veterinary courses are held, a pharmacy, in-house laboratory, small animal surgery facilities, imaging center, and multiple animal science anatomy and physiology labs.
- **Cal Poly Animal Nutrition Center:** the Cal Poly Animal Nutrition Center is the only Hazard Analysis Critical Control Point (HACCP) certified, Food Safe Feed Safe qualified commercial feed mill in a University setting in the United States. The Animal Nutrition Center produces the feed required for the various animal units on campus. Students participate in all aspects of this commercial plant, including procurement of raw materials, ration formulations, product preparation and delivery, HACCP plan development, and state and federal regulatory audits. The mill supports the nearly 18,000 animals on campus, and is capable of formulating research diets for a wide variety of animals.
- **Cal Poly Rodeo Facility:** the Cal Poly Rodeo Team competes annually on the college rodeo circuit. Rodeo facilities include an arena with practice areas, seating, backup facilities for rodeo events, and parking for classes and labs that routinely use the facility, as well as land for year-round livestock and feed support. Adjacent pastures, pens, and hay storage areas support approximately 50-100 head of practice stock. In addition, stalls are available for students to board their horses, along with feed storage and trailer space.
- **Cal Poly Certified Organic Compost:** Cal Poly began on-campus composting operations during the 1990s. Under the Agricultural Operations Department, the compost unit processes over 7,000 cubic yards of manure and 3,500 cubic yards of green waste and wood chips into 3,500 cubic yards of finished compost. Compost is used on campus and is available for public purchase.

Agricultural lands and resources on campus have been configured in an attempt to balance the features of the land with teaching and learning needs. Agricultural land use is particularly intense

on the fields closest to the Campus Core because they serve as teaching laboratories where students can learn all aspects of agricultural production processes throughout the academic year. Livestock and poultry facilities are grouped in the West Campus planning area near complementary uses, and crops are concentrated within Cal Poly's prime agricultural soils in the West Campus' fertile lowlands west of the railroad tracks along Stenner and Brizzolara Creeks.

Agricultural lands not used for daily or weekly student learning activities are located west of the main campus in the Chorro Creek watershed and in the more northwesterly portions of the Stenner Creek watershed (e.g., Cheda Ranch). Most of these more remote lands are used for forage hay production, grazing, including longitudinal studies of grazing practices, or for enterprise activities such as avocado orchards and vineyards where irrigation is available. These outer ranch areas are not proposed to be modified pursuant to the Master Plan.

As recognized in the Master Plan, and as evidenced by the existing extensive agricultural on-campus facilities, agricultural facilities and uses are an important educational tool at the University. Cal Poly's College of Agriculture, Food and Environmental Sciences has nine undergraduate departments that offer 15 individual majors and 22 minors. Undergraduate departments and majors offered at Cal Poly include:

- Agribusiness
  - Majors: Agricultural Business
- Agricultural Education and Communication
  - Majors: Agricultural Science, Agricultural Communication
- Animal Science
  - Majors: Animal Science, Dairy Science
- BioResource and Agricultural Engineering
  - Majors: Agricultural Systems Management, BioResource and Agricultural Engineering
- Experience Industry Management
  - Majors: Recreation, Parks and Tourism Administration
- Food Science and Nutrition
  - Majors: Food Science, Nutrition
- Horticulture and Crop Science
  - Majors: Agricultural and Environmental Plan Sciences, with three possible concentrations (Environmental Horticultural Science, Fruit and Crop Science, and Plant Protection Science)
- Natural Resources Management and Environmental Sciences
  - Majors: Environmental Earth and Soil Sciences, Environmental Management and Protection, Forestry and Natural Resources
- Wine and Viticulture
  - Majors: Wine and Viticulture

Graduate programs include:

- Master of Agricultural Education
- Master of Professional Studies in Dairy Products Technology
- Master of Science in Forestry Sciences

- Master of Science in Agriculture (with 10 specializations available)
- Master of Science in Water Engineering (in partnership with the College of Engineering)
- Master of Nutrition

Other centers and institutes available to students on campus include:

- Agricultural Research Institute
- Brock Center for Agricultural Communication
- California Institute for the Study of Specialty Crops
- Center for Sustainability
- Coastal Resources Institute
- Dairy Innovation Institute
- Irrigation Training and Research Center (ITRC)
- Cal Poly Strawberry Center
- Urban Forest Ecosystems Institute

## Campus Soils

Campus soils are shown in Figure 21 and their agricultural characteristics are summarized in Table 10. These soil units have been classified by national, state, and local agencies by their ability to support agricultural uses, including the USDA's land capability classification (LCC) system and Important Farmland Inventory and the California Department of Conservation (CDOC) Farmland Mapping and Monitoring Program (FMMP).

### USDA Natural Resource Conservation Service Classifications

The USDA Natural Resources Conservation Service (NRCS) assesses the potential agricultural productivity and limitations of different soils by utilizing both the LCC system (described in the National Soil Survey Handbook[37] Part 622.02) and the Important Farmland Inventory (pursuant to requirements of CFR Chapter 7 Part 657). The LCC system classifies soil units based on their capability to produce commonly cultivated crops and pasture plants without deteriorating over a long period of time (Table 8). The system is subdivided into capability class and capability subclass. Capability classes range from I to VIII (1 to 8), with soils having the slightest limitations to agricultural use receiving the highest ratings (Class I). LCC sub-classes are utilized to further characterize soils within a specific class by designating the main hazard by which a particular soil is limited by reference to a letter, including: erosion (e); water (w); shallow, droughty, or stony (s); and very cold or very dry (c). Class I soils have no sub-classes because soils of this type have few limitations. Some soils are given different classifications for irrigated and non-irrigated conditions.

LCC classifications of the soils at the campus are shown in Table 8.

[37] United States Department of Agriculture, Natural Resources Conservation Service. 2017. *National Soil Survey Handbook, Title 430-VI*. March 2017. Available at: http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/ref/?cid=nrcs142p2_054242. Accessed May 2017.

**Figure 21. Campus Soils Map**

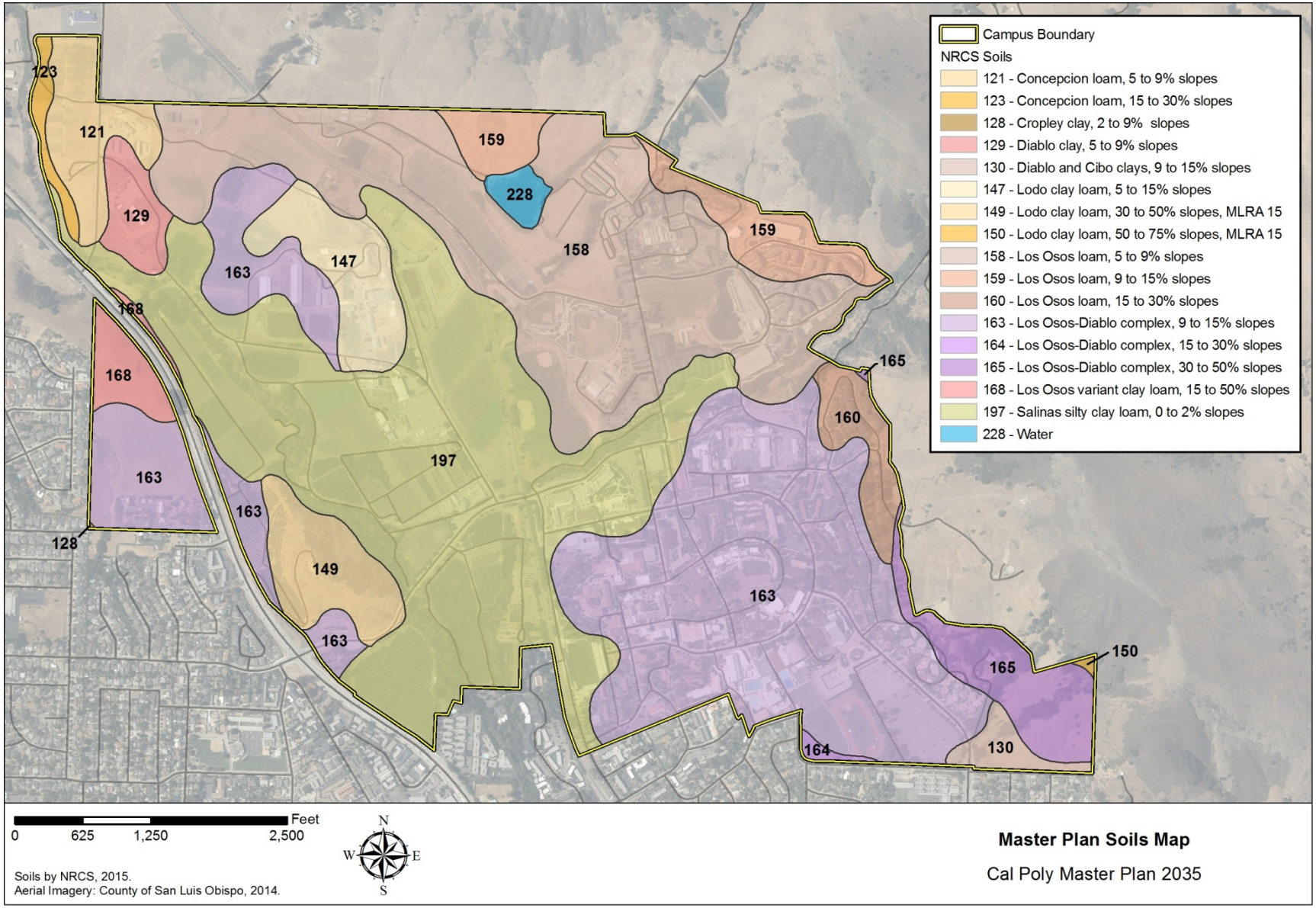


**Table 8. Land Capability Classifications**

| Class | Definition[37] |
|---|---|
| I (1) | Slight limitations that restrict use. |
| II (2) | Moderate limitations that reduce the choice of plants or require moderate conservation practices. |
| III (3) | Severe limitations that reduce the choice of plants or require special conservation practices, or both. |
| IV (4) | Very severe limitations that restrict the choice of plants or require very careful management, or both. |
| V (5) | Little or no hazard of erosion, but other limitations, impractical to remove, that limit their use mainly to pasture, range, forestland, or wildlife food and cover. |
| VI (6) | Severe limitations that make them generally unsuited to cultivation and that limit their use mainly to pasture, range, forestland, or wildlife food and cover. |
| VII (7) | Very severe limitations that make them unsuited to cultivation and that restrict their use mainly to grazing, forestland, or wildlife. |
| VIII (8) | Limitations that preclude their use for commercial plant production and limit their use to recreation, wildlife, or water supply for esthetic purposes. |

The NRCS Important Farmland Inventory is an inventory of the prime and unique farmland of the nation, as well as an inventory of farmland of statewide and local importance developed in consultation with the appropriate state or local agency. Its purpose is to identify the extent and location of important rural lands needed to produce food, feed, fiber, forage, and oilseed crops.

**Prime Farmland** is identified as land with the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops, and that is also available for these uses. It has the soil quality, growing season, and moisture supply needed to economically produce sustained high yields of crops when treated and managed, including water management, according to acceptable farming methods. In general, prime farmlands have an adequate and dependable water supply from precipitation or irrigation, a favorable temperature and growing season, acceptable acidity or alkalinity, acceptable salt and sodium content, and few or no rocks. They are permeable to water and air, and are not excessively erodible or saturated with water for long periods of time. Soils must meet specific criteria related to moisture, available water capacity, temperatures, pH levels, root zones, slope, permeability, and rock composition in order to meet the NRCS classification of prime farmlands.

**Unique Farmland** is land, other than prime farmland, that is used for the production of specific high-value food and fiber crops. Unique farmlands must have an adequate moisture supply and a combination of favorable factors related to soil quality and other site conditions that favor the growth of a specific food or fiber crop.

**Farmlands of Statewide Importance** are lands that are of statewide importance for the production of food, feed, fiber, forage, and oilseed crops. The criteria for defining and delineating this land are determined by the appropriate state agency.

Some local areas have additional farmlands that are locally significant for the production of food, feed, fiber, forage, and oilseed crops. While not identified as having national or statewide

importance, these lands may be identified by the appropriate local agency as having local significance.

Based on the NRCS Important Farmland Inventory criteria set out in the Code of Federal Regulations (7 CFR Part 657 – Prime and Unique Farmlands) and the National Soil Survey Handbook Part 622.03,[37] California and other states prepare and maintain a current list of soil survey map units that meet the criteria for farmland. In California, this is done by the CDOC FMMP.

## Farmland Mapping and Monitoring Program

The CDOC Division of Land Resource Protection developed the FMMP in 1984 to analyze impacts to California's agricultural resources. Land is rated based on the LCC system, California's Revised Storie Index, and recent land use. Land designations include:

- **Prime Farmland (P):** Farmland with the best combination of physical and chemical features able to sustain long-term agricultural production. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Land must have been used for irrigated agricultural production at some time during the 4 years prior to the mapping date.
- **Farmland of Statewide Importance (S):** Farmland similar to Prime Farmland but with minor shortcomings, such as greater slopes or less ability to store soil moisture. Land must have been used for irrigated agricultural production at some time during the 4 years prior to the mapping date.
- **Unique Farmland (U):** Farmland of lesser quality soils used for the production of the state's leading agricultural crops. This land is usually irrigated, but may include non-irrigated orchards or vineyards as found in some climatic zones in California. Land must have been cropped at some time during the last 4 years prior to the mapping date.
- **Farmland of Local Importance (L):** Land of importance to the local agricultural economy as determined by each county's board of supervisors and a local advisory committee. In San Luis Obispo County, Farmland of Local Importance is defined as areas that meet all the characteristics of Prime Farmland or Farmland of Statewide Importance with the exception of irrigation. Additional farmlands of Local Importance include dryland field crops of wheat, barley, oats, and safflower.
- **Farmlands of Local Potential (LP):** San Luis Obispo County also developed an additional category of Farmlands of Local Importance to classify lands having the potential for farmland, which have Prime or Statewide characteristics but are not cultivated. These lands are considered Farmlands of Local Potential.
- **Grazing Land (G):** Land on which the existing vegetation is suited to the grazing of livestock.
- **Urban and Built-Up Land (D):** Land occupied by structures with a building density of at least one unit to 1.5 acres, or approximately six structures to a 10-acre parcel. This land is used for residential, industrial, commercial, construction, institutional, public administration, railroad and other transportation yards, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, water control structures, and other developed purposes.

- **Other Land (X):** Land not included in any other mapping category. Common examples include low density rural developments; brush, timber, wetland, and riparian areas not suitable for livestock grazing; confined livestock, poultry or aquaculture facilities; strip mines, borrow pits; and water bodies smaller than 40 acres. Vacant and nonagricultural land surrounded on all sides by urban development and greater than 40 acres is mapped as Other Land.
- **Water (W):** Perennial water bodies with an extent of at least 40 acres.

Based on the FMMP for San Luis Obispo County,[38] the majority of main campus land is designated as Urban and Built-up Land (approximately 51%), particularly within the Campus Core and residential East Campus planning areas. Substantial additional areas located predominantly in the West and North campus planning areas include Prime Farmland (15%), Farmland of Statewide Significance (2%), Unique Farmland (2%), Farmland of Local Potential (10%), and Grazing Land (7%). The Main Campus FMMP designations are shown in Figure 22.

The Storie Index is a widely accepted method of rating soils for agricultural potential in California, which has been used for over 50 years. Since 2005, the NRCS has published Storie Index ratings generated digitally from the NRCS National Soil Information System. Ratings are generated solely from soil characteristics, including a wide range of soil profile and landscape characteristics such as soil depth, surface texture, subsoil conditions, drainage, salinity, erosion, and topography. The index is defined by a grade system, ranging from 1 to 6 (Table 9) and range from less than 10 to 100, with a rating of 100 representing the highest possible potential for agricultural production. Grade 1 soils (Storie Index ratings between 80 and 100) are considered excellent for agriculture and are considered prime soils. Grade 6 soils (Storie Index rating of less than 10) are considered unsuited for agriculture.[39]

**Table 9. Revised Storie Index Ratings[40]**

| Grade | Storie Index Rating | Definition |
|---|---|---|
| 1 | 80–100 | Excellent – very minor or no limitations that restrict use of general agricultural use |
| 2 | 60–80 | Good – suitable for most crops, but have minor limitations that narrow the choice of crops and may require some special management practices |
| 3 | 40–60 | Fair – suited to fewer crops or to special crops and require careful management |
| 4 | 20–40 | Poor – limited to a narrow range of crops and require special management for intensive agriculture |
| 5 | 10–20 | Very Poor – generally not suited to cultivated crops but can be used for pasture and range |
| 6 | Less than 10 | Non-agricultural – not suited to agricultural use |

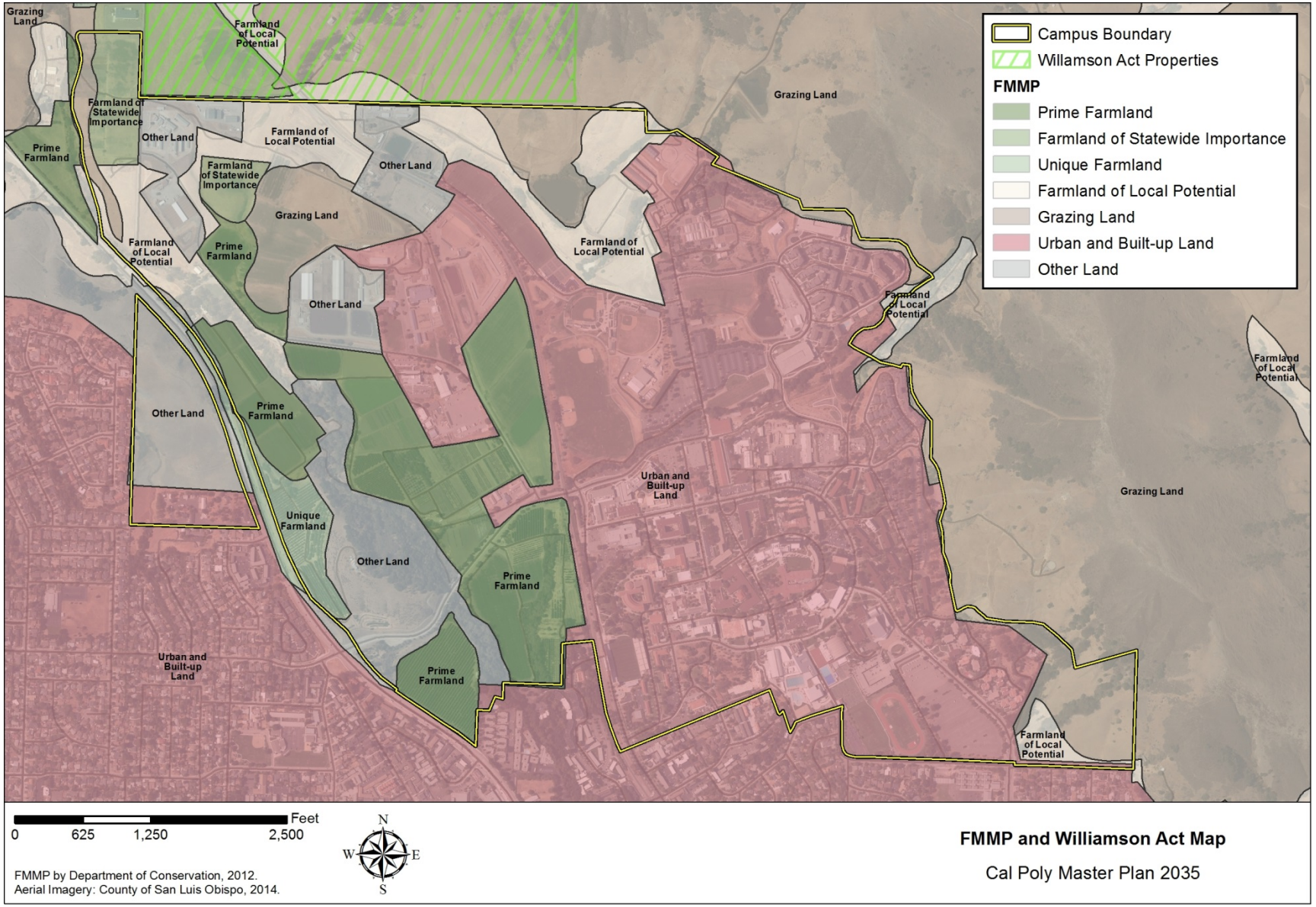
[38] California Department of Conservation. 2016. San Luis Obispo County Important Farmland 2014 Map. Division of Land Resource Protection, Farmland Mapping and Monitoring Program. October 2016.
[39] O'Geen, A.T., S.B. Southard, R.J. Southard. 2008. *A Revised Storie Index for Use with Digital Soils Information*. University of California, Division of Agriculture and Natural Resources Publication 8335. September 2008.
[40] United States Department of Agriculture, Soil Conservation Service (SCS). 1984. *Soil Survey of San Luis Obispo County, California – Coastal Part*. National Cooperative Soil Survey, in cooperation with the University of California Agricultural Experiment Station.

The Revised Storie Index ratings of the soils on campus are shown in Table 10.

**Table 10. Campus Soils – Revised Storie Index Ratings[40]**

| Soil Unit | Area (acres) | Area (%) | LCC | | Revised Storie Index Rating |
|---|---|---|---|---|---|
| | | | Irrigated | Non-Irrigated | |
| 121 – Concepcion loam (5-9% slopes) | 23.5 | 3% | IIIe | IIIe | 41 – Fair |
| 123 – Concepcion loam (15-30% slopes) | 5.2 | <1% | -- | IVe | 34 – Poor |
| 128 – Cropley clay (2-9% slopes) | 0.1 | <1% | IIe | IIIe | 54 – Fair |
| 129 – Diablo clay (5-9% slopes) | 12.3 | 1% | IIe | IIIe | 51 – Fair |
| 130 – Diablo and Cibo clays (9-15% slopes) | 7.7 | <1% | IIIe | IIIe | 42 – Fair |
| 147 – Lodo clay loam (5-15% slopes) | 27.3 | 3% | -- | IVe | 20 – Poor/Very Poor |
| 149 – Lodo clay loam (30-50% slopes) | 25.6 | 3% | -- | VIe | 9 – Non-agricultural |
| 150 – Lodo clay loam (50-75% slopes) | 0.5 | <1% | -- | VIIe | 4 – Non-agricultural |
| 158 – Los Osos loam (5-9% slopes) | 187.1 | 21% | IIIe | IIIe | 68 – Good |
| 159 – Los Osos loam (9-15% slopes) | 30.4 | 3% | IIIe | IIIe | 65 – Good |
| 160 – Los Osos loam (15-30% slopes) | 15.3 | 2% | -- | IVe | 54 – Fair |
| 163 – Los Osos-Diablo complex (9-15% slopes) | 243.6 | 28% | IIIe | IIIe | 57 – Fair |
| 164 – Los Osos-Diablo complex (15-30% slopes) | 1.7 | <1% | -- | IVe | 48 – Fair |
| 165 – Los Osos-Diablo complex (30-50% slopes) | 27.7 | 3% | -- | VIe | 26 – Poor |
| 168 – Los Osos variant clay loam (15-50% slopes) | 11.9 | 1% | -- | VIe | 38 – Poor |
| 197 – Salinas silty clay loam (0-2% slopes) | 254.2 | 29% | I | IIIc | 77 – Good |
| 228 - Water | 4.9 | <1% | n/a | n/a | n/a |

**Figure 22. Farmland Mapping and Monitoring Program Map**



### Farmland Conversion

CDOC utilizes the FMMP to track the conversion of farmland to other uses in California. According to tracked data, the San Luis Obispo County showed a net loss of approximately 10,706 acres of Important Farmland between 2012 and 2014,[38] as that land was converted to other uses/designations. The farmland lost consisted entirely of Farmland of Local Importance (15,101 acres), whereas County acreages of Prime Farmland increased by128 acres, Farmland of Statewide Importance by 1,024 acres, and Unique Farmland by 3,243 acres during the same period. Urban and Built-up Land in the county increased by 3,933 acres.

The total conversion of land to non-agricultural uses within San Luis Obispo County between 2012 and 2014 is shown in Figure 23.

## Slack and Grand Residential Neighborhood

The onsite soils of the planned Slack and Grand Residential Neighborhood (N1) are classified as grazing land and Farmland of Local Potential (Figure 22). Currently, the sloping hillside project site is undeveloped and is used by Cal Poly for horse grazing on an intermittent basis. The site primarily consists of heavily grazed non-native annual grassland. The University currently has this site designated as Outdoor Teaching and Learning.

# Regulatory Setting

## State Regulations and Policy

### Assembly Bill 857

AB 857, passed in 2003, established farmland retention for agricultural uses as one of three state planning priorities. Another priority, efficient urban development, would also conserve farmland. This law requires state agencies to apply the policy and calls for an annual report by the Governor on their progress. The bill states as follows:

The state planning priorities, which are intended to promote equity, strengthen the economy, protect the environment, and promote public health and safety in the state, including in urban, suburban, and rural communities, shall be as follows:

a) To promote infill development and equity by rehabilitating, maintaining, and improving existing infrastructure that supports infill development and appropriate reuse and redevelopment of previously developed, underutilized land that is presently served by transit, streets, water, sewer, and other essential services, particularly in underserved areas, and to preserving cultural and historic resources.

b) To protect environmental and agricultural resources by protecting, preserving, and enhancing the state's most valuable natural resources, including working landscapes such as farm, range, and forest lands, natural lands such as wetlands, watersheds, wildlife habitats, and other wildlands, recreation lands such as parks, trails, greenbelts, and other

open space, and landscapes with locally unique features and areas identified by the state as deserving special protection.

c) To encourage efficient development patterns by ensuring that any infrastructure associated with development that is not infill supports new development that uses land efficiently, is built adjacent to existing developed areas to the extent consistent with the priorities specified pursuant to subdivision (b), is in an area appropriately planned for growth, is served by adequate transportation and other essential utilities and services, and minimizes ongoing costs to taxpayers.

### Williamson Act

The Williamson Act, also known as The California Land Conservation Act of 1965, is the State of California's primary conservation program for agricultural and open space lands. The voluntary program allows property owners to receive reduced property taxes in exchange for 10 or 20-year commitments in the form of legally enforceable contracts to keep the property in agricultural production. The program is a two-step process involving the establishment of an agricultural preserve by the local legislative body and then approval of a land conservation contract.

No land within the Cal Poly campus is currently under an Agricultural Preserve or Williamson Act contract. Several adjacent parcels to the north of the campus include substantial lands under Williamson Act contracts (Figure 22).

## Local Regulations and Policy

The Cal Poly campus is not subject to either the City or County agriculture policies or ordinances.

### Master Plan 2035 Guiding Principles

The following "Guiding Principles" were developed early on in the process by the Master Plan 2035 professional team with input from campus leadership, including the college deans, and based largely on the current (2001) Master Plan. Guiding Principles can be thought of both as starting points for the plan process as well as overarching directives relevant to all or most Master Plan topics. They are categorized as GP (General Principle), MPP (Master Plan Principle), IP (Implementation Program), OR (Other Recommendation), Academic Mission (AM), Sustainability (S), or University Life (UL). The following draft Master Plan 2035 principles have been identified as being relevant to agricultural resources and the location of other campus facilities on agriculturally designated land:

**S 02** Cal Poly should preserve and enhance the viability of agriculture and natural habitat systems on its holdings by providing adequate land area including appropriate buffers, connectivity or corridors between related natural communities, and linear continuity along streams.

**GP 6** Cal Poly's land and resource uses should advance the University's academic mission.

**GP 7** Planning should preserve and encourage the Learn By Doing approach to Cal Poly's academic curriculum and reflect that approach in the overall campus character, including outdoor teaching and learning (OTL).

**GP 13** Cal Poly's scenic setting—a campus surrounded by open spaces—should be preserved; its open lands and the surrounding natural environment are highly valued and should be considered in campus planning efforts.

**GP 15** The siting of new land uses and buildings should always be considered within the context of the greater campus; functional connections among related activities should be considered, including the nature of activities, "adjacencies" and paths of travel.

**AM 10** Cal Poly should continue to recognize Outdoor Teaching and Learning (OTL) as important to the University's character, history and ongoing mission and that OTL extends beyond agricultural facilities and encompasses many kinds of teaching and learning opportunities across numerous disciplines.

**AM 11** OTL activities that do not require extensive amounts of land should be integrated within the Academic Core where practical.

**UL 15** Recreational and athletic facilities should be in close proximity to the population they are intended to serve.

**UL 17** Future intercollegiate facilities and large programmable recreation facilities (fields, gyms, and courts) should be located outside of the Academic Core with integrated amenities promoting access.

## Slack and Grand Residential Neighborhood

The regulatory setting for the Slack and Grand Residential Neighborhood is the same as the regulatory setting for the Master Plan. Please refer to the Regulatory Setting discussions above.

# Impact Criteria

The project will result in a significant impact on agricultural resources if it will:

- Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Important Farmland), as shown on the maps prepared pursuant to the FMMP of the California Resources Agency, to non-agricultural use;
- Conflict with existing zoning for agricultural use, or a Williamson Act contract;
- Conflict with existing zoning for, or cause rezoning of, forest land (as defined in PRC section 12220(g)), timberland (as defined by PRC section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))

- Result in the loss of forest land or conversion of forest land to non-forest use; or,
- Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use.

# Environmental Impact

## Conversion of Important Farmland

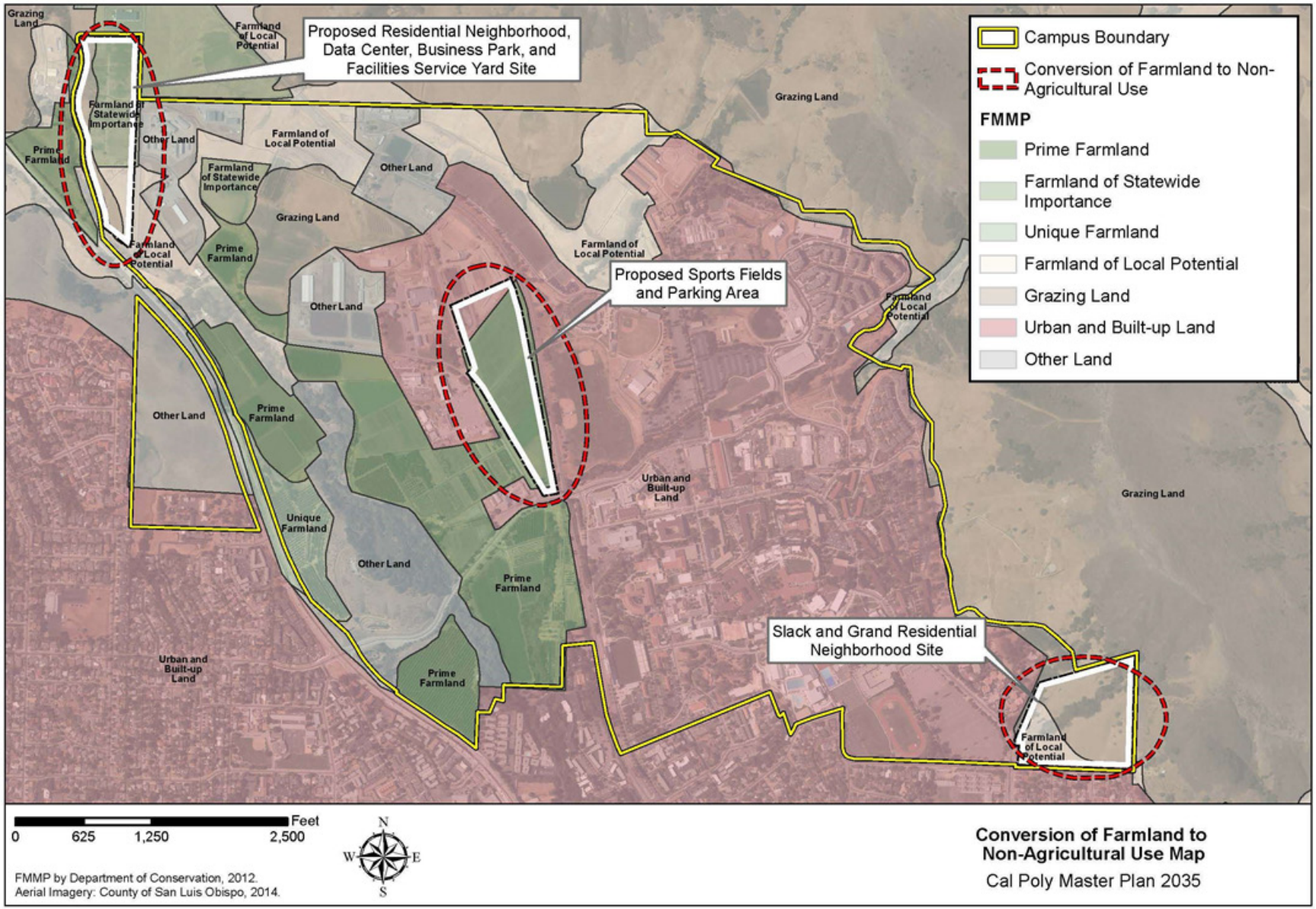
As defined by CEQA, Important Farmland consists of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. Historically, Cal Poly's most intense agricultural uses were centered along the north side of Brizzolara Creek. Agricultural land use is particularly intense on the fields closest to the academic core because they serve as teaching laboratories so that students can learn all aspects of production throughout the academic year. Livestock and poultry facilities are grouped in the West Campus planning area, along with crops that are concentrated on Cal Poly's prime agricultural soils in the fertile lowlands west of the railroad tracks along Stenner and Brizzolara Creeks.

The Master Plan expands the built campus to the north across Brizzolara Creek at the border of the Campus Core and North Campus planning area, and provides for housing for upper division students near recreation areas to the north and east of the academic core. The Master Plan will predominantly maintain the land use pattern of animal facilities on the flanks of the foothills and croplands in the plains along the lower creeks; however, development of residential housing and recreational facilities in the North and West Campus planning areas will impact Important Farmland, as discussed below.

New sports fields and a new parking area (to serve the sports fields and adjacent new student housing) will be located north of Highland Drive, between Mount Bishop Road and the Union Pacific Railroad (UPRR) rail line. This area consists of approximately 16 acres of Prime Farmland, which will be converted to non-agricultural use (Figure 22). The Master Plan also includes a new Data Center, Business Park, and N5 Residential Neighborhood, and relocation of the Facilities Service Yard northwest of Stenner Creek Road, between Stenner Creek Road and Highway 1, to free up key space within the Academic Core. This approximately 26-acre area includes approximately 12 acres of Farmland of Statewide Importance, which will be converted to non-agricultural use (Figure 22). The Slack and Grand Residential Neighborhood would also convert a total of 4.75 acres of Farmland of Local Potential to non-agricultural use, but is not considered a conversion of Important Farmland.

The Master Plan provides for consolidation of some of the more spread-out agricultural operations on campus, including, for example, by connecting the beef unit and beef evaluation center, building a new Farm Shop in the West Campus planning area near Highway One and Stenner Creek, closer to the fields where most equipment is used, and moving the ITRC irrigation practices field to the vicinity of Shepard Reservoir. The Master Plan also accommodates expanded equine facilities in their current location.

**Figure 23. Conversion of Farmland to Non-agricultural Use Map**



The remaining changes to agricultural land use will be phased north and east of Mount Bishop Road. The areas north and east of Mount Bishop Road predominantly consist of Grazing Land, Other Land, and Urban and Built-up Land, but Farmland of Local Potential, Prime Farmland, and Farmland of Statewide Importance are also mapped in this area (Figure 22). The improvements and the expansion of agricultural facilities in west and north campus areas will likely result in the disturbance and development of areas containing prime soils and/or Important Farmlands. However, use of these areas will remain agricultural in nature and implementation of the Master Plan will not convert these areas to non-agricultural uses.

The Master Plan will result in the permanent conversion of approximately 16 acres of Prime Farmland between Mount Bishop Road and the UPRR rail line, and 12 acres of Farmland of Statewide Importance between Stenner Creek Road and Highway 1. Prime Farmland that will be converted consists of soil unit 197—Salinas silty clay loam (0-2% slopes)—the highest quality agricultural soil on campus based on the FMMP, LCC, and California Revised Storie Index ratings (Table 10). For these reasons, this impact is considered to be significant.

## Conflict with Agricultural Zoning/Williamson Act Contract

While the University has agricultural land designations of its own, the overall purpose and function of these designations differs greatly from typical government jurisdictional agricultural land use designations. The purpose of City and County agricultural zoning is to protect high quality soils and agriculturally productive areas to support the market production of animals, and vegetable, fruit, and nut crops in California. The campus is not subject to City nor County agricultural land use zoning designations or ordinances. Cal Poly is a state polytechnic university whose primary purpose and function is to provide higher education for the state's student population. Thus, Cal Poly uses its agricultural lands and facilities as a tool in providing "learn by doing" education offering bachelor and master degrees in agricultural sciences, and not for market agricultural production.

Currently, substantial areas surrounding the Campus Core planning area, including predominantly agricultural areas, are designated as Outdoor Teaching and Learning (Figure 24). As enrollment at Cal Poly increases and a significantly larger proportion of students are being housed on campus, more activities are clustered around the Campus Core area. This growth puts pressure on outdoor teaching and learning activities that have historically been located close to the academic core. The development of the Master Plan included extensive reviews of the space needs of outdoor learning activities to determine how to balance the need for an expanded Campus Core and preservation of outdoor learning and agricultural facilities. Two key factors considered in developing the Master Plan Land Use map were: (1) the need for proximity or access to the core for outdoor teaching and learning activities that very regularly draw students and faculty, and (2) the specific features of the land and facilities themselves, such as prime agriculture land in production or ecologically unique areas, that cannot be relocated or replaced. As a result of these reviews, the Master Plan developed new land use designations for various agricultural uses, including:

- **Agriculture Facility (AF)** land use designation includes uses and facilities that are supportive to the campus' agricultural operations. These uses and facilities include the

Rodeo facilities, the Equine Unit and other animal units, the Agricultural Event Center, and the Wine and Viticulture facility.

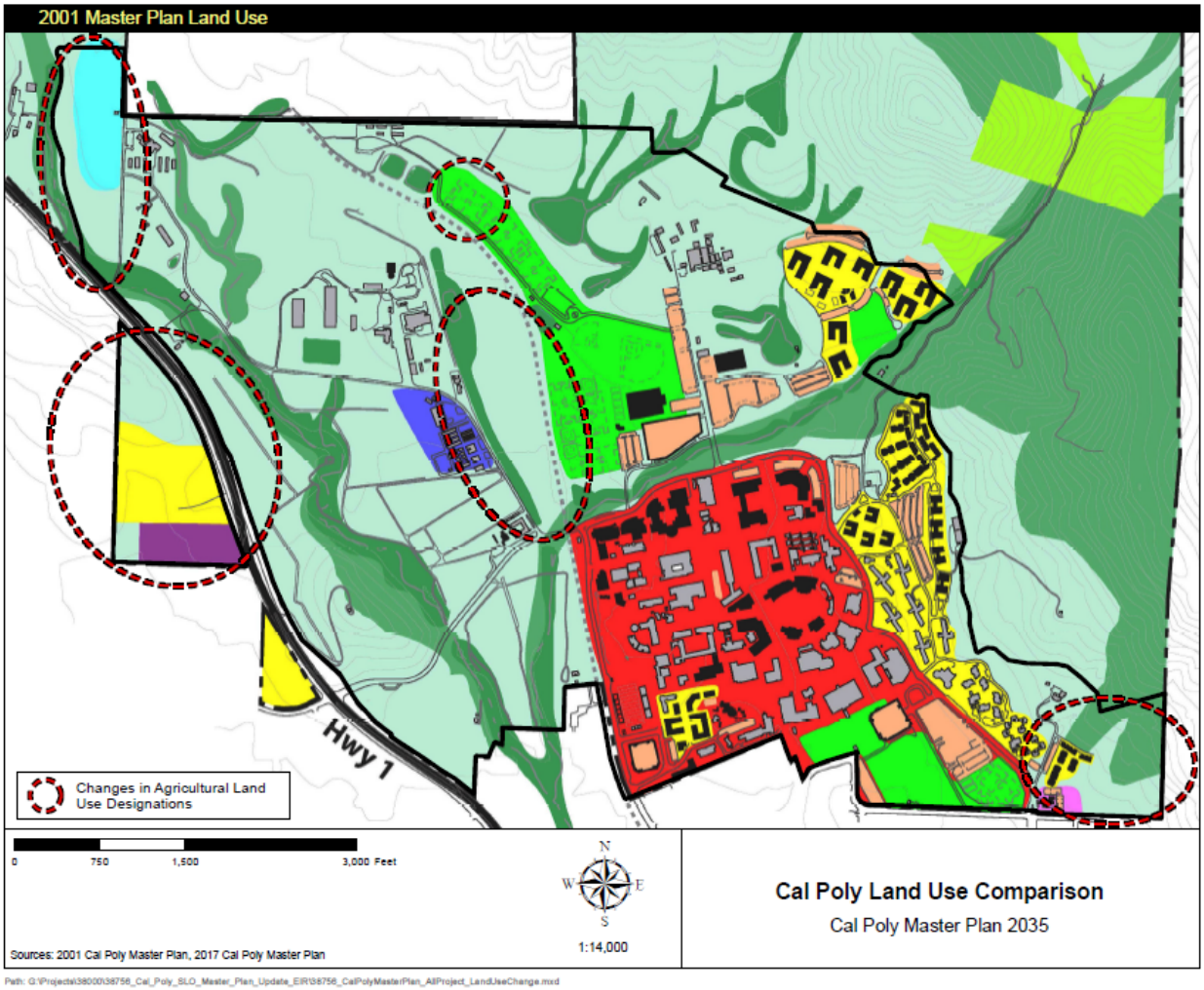
- **Crop Land (CL)** includes fields in agricultural production for purposes of educational programs for the College of Agriculture, Food, and Environmental Sciences. Such areas include the organic farm, the pumpkin patch, and the citrus and deciduous orchards, as well as silage areas for growing animal feed.
- **Pasture (PA)** identifies areas where animal units are grazed and those areas are often irrigated.
- **Rangeland (RL)** is typically grazing area, but less formal than the Pasture area and includes some hillsides adjacent to the main campus. These areas are not irrigated.

The Master Plan proposed changes to agricultural land use designations are shown in Figure 25. The Master Plan re-designates four areas currently designated for Outdoor Teaching and Learning (and which currently support agricultural uses) to non-agricultural uses. The Master Plan would also convert one area currently designated for non-agricultural use (Recreation, Athletics, and Physical Education) to Agriculture Facilities. All other agricultural land use designations in the Master Plan (Agriculture Facility, Crop Land, Pasture, Rangeland) are generally consistent with the current Outdoor Teaching and Learning designation, and the Master Plan maintains agricultural uses within these areas.

The development of sports fields, parking lots, residential neighborhoods, a Data Center, Business Park, and Facilities Service Yard changes the existing Outdoor Teaching and Learning designation at four locations. However, these changes support the larger academic purposes of the University. Unlike agriculturally zoned areas outside of the University campus, which are intended to protect high quality soils and agriculturally productive areas to support the production of animals and vegetable, fruit, and nut crops, Cal Poly's land use configuration must balance the features and use of the land within the overarching teaching and learning needs and programs of the University, while also balancing the preservation and enhancement of these agricultural resources with other growth needs. The Master Plan has identified these areas as appropriate for other types of University uses to balance competing needs and implement the University's strategic vision and its academic mission as a comprehensive polytechnic University. Therefore, potential impact associated with conflict with existing University Outdoor Teaching and Learning designation is considered less than significant.

No land within the Cal Poly campus is subject to a Williamson Act contract and campus development will not affect any lands off-campus under Williamson Act. Therefore, no impact will result.

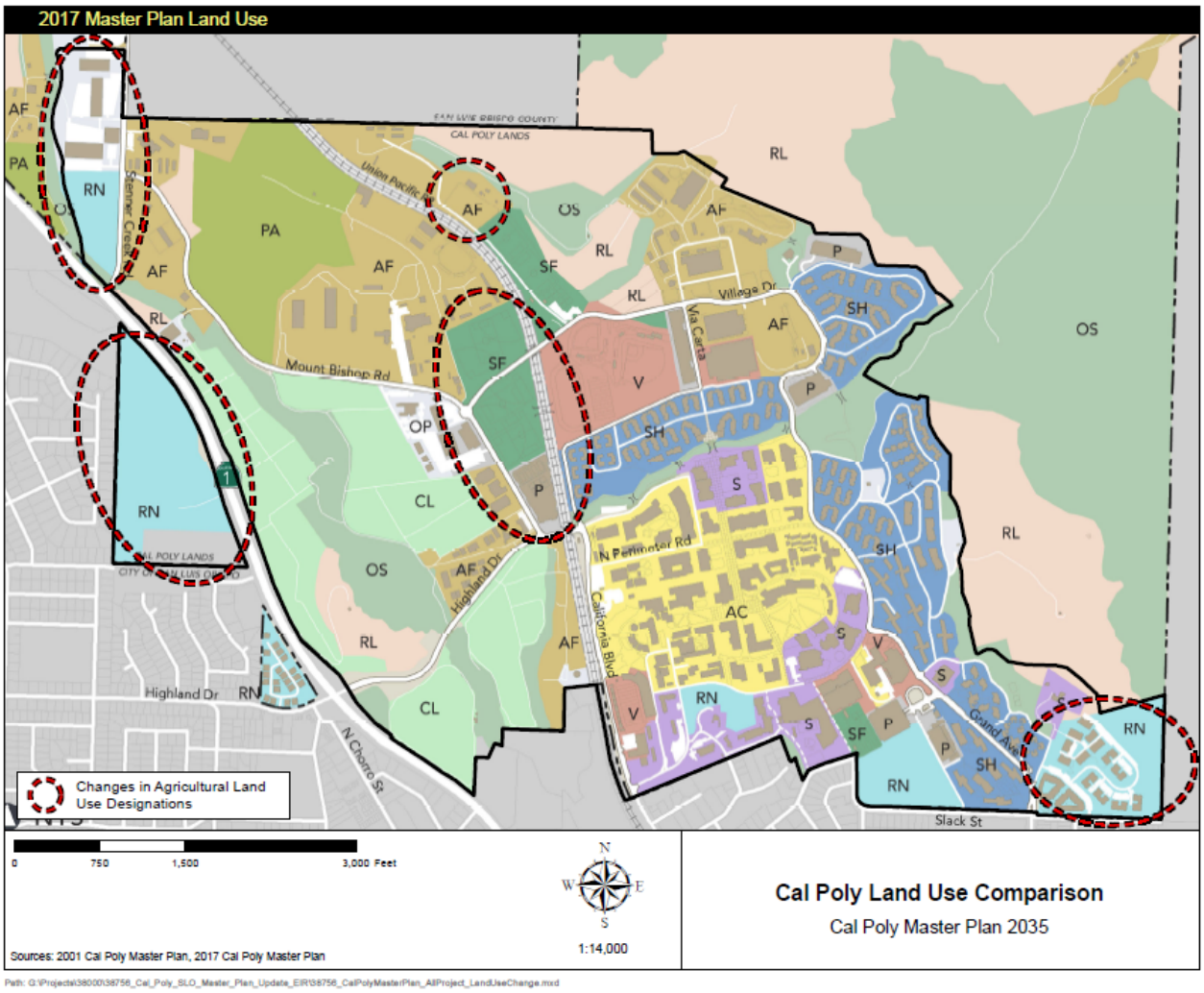
**Figure 24. Change in Agricultural Land Use Designations: Existing Designations**




- Campus Instructional Core
- Residential Communities
- Public Facilities and Utilities
- Areas Suitable for Ancillary Activities and Facilities
- CDF Lease Property
- Parking (surface & structure)
- Remote Parking Options
- Outdoor Teaching and Learning

  Includes:
  - Recreation, Athletics and Physical Education
  - Natural Environment
  - Preserves

**Figure 25. Change in Agricultural Land Use Designations: Proposed Designations**




**Academic Core (AC)** is the most densely developed area of campus, where instructional spaces are concentrated along with many related service and support functions. The uses in the core generally include activities that engage students, faculty and staff multiple times per day, such as classes and labs, advising services, study areas, food outlets and administrative offices – and will continue to be the focus of campus activity.

**Student Housing (SH)** is focused in the Residential East part of campus, with a first-year student neighborhood encompassing dormitory-style facilities, with new apartment-style housing for older students located in the North Campus, just above Brizzolara Creek.

**Residential Neighborhoods (RN)** are designated predominately for workforce housing, designed for Cal Poly faculty, staff, or other persons employed in the area. Non-traditional students, including, but not limited to, graduate students, married students or students with families, veteran students, or other students needing specific accommodations may also be considered.

**Venues (V)** include the Performing Arts Center, Cal Poly Athletics formal sport facilities such as Spanos Stadium or Baggett Stadium, as well as a new arena for indoor sports, concerts, and other large capacity events. These uses attract both on- and off-campus audiences and contribute to the University's regional draw.

**Sports Fields (SF)** include active recreation space, such as Intermural softball and soccer fields, Athletics practice fields, and tennis courts, as well as swimming pools.

**Services (S)** designates non-academic space used for student support facilities such as the Administration Building, the Recreation Center, and food and retail outlets. A portion of the new Creekside Village is proposed to be designated as Service because student services such as the Cashier's Office or Records, will be decentralized in the future and more proximate to areas where students go on a daily basis.

**Operational (OP)** land use designation covers facilities essential to the day-to-day operation of the University, such as the Mustang Substation, potable water reservoirs, a future water treatment facility, as well as the tcampus Farm Shop and Facilities Management and Development building.

**Agriculture Facility (AF)** land use designation includes uses and facilities that are supportive to the campus' agricultural operations. These uses and facilities include such things as the Rodeo facilities, the Equine Unit and other animal units, the Agricultural Event Center, and the Wine and Viticulture facility.

**Crop Land (CL)** includes fields in agricultural production for purposes of educational programs for the College of Agriculture, Food, and Environmental Sciences. Such areas include the organic farm, the pumpkin patch, the citrus and deciduous orchards, as well as silage areas for growing animal feed.

**Pasture (PA)** identifies areas where animal units are grazed and often irrigated.

**Rangeland (RL)** is typically grazing area, but less formal than the Pasture designation, and includes some hillsides adjacent to the main campus. These are not irrigated.

**Open Space (OS)** includes natural areas surrounding main campus, such as Poly Canyon, the eastern hillside where the Cal Poly "P" is located, and some areas within North Campus. These areas are often utilized for outdoor education, hiking and enjoyment of outdoors.

**Parking** land use designation identifies existing and future parking facilities, both surface and in structures. Only parking structures are labeled **"P"**.

## Conversion of Forest Land or Timberland

The 3,200-acre Swanton Pacific Ranch and 600-acre Valencia property, both in Santa Cruz County, provide forest, range, and watershed resources to support the University. The main campus does not contain forest land or timberland. The Master Plan addresses future development within the main campus and, therefore, would not result in any impact to forest land or timberland.

## Other Changes that Would Convert Farmland

The Master Plan will guide development within the main campus for the next 20 years. The land uses and campus facilities identified in the Master Plan, including additional on-campus student housing, new academic facilities, and transportation/circulation improvements within campus, would not indirectly affect off-campus agricultural areas. The Master Plan does not include uses that would adversely affect off-campus farmland and will not result in any changes that would indirectly convert off-campus farmland to non-agricultural use.

## Slack and Grand Residential Neighborhood

The proposed Slack and Grand Residential Neighborhood (N1) would result in the conversion of 4.75 acres of Farmland of Local Potential into a non-agricultural use. Farmland of Local Potential is not included in the overall designation of Important Farmland. The proposed Residential Neighborhood development would also change the existing Outdoor Teaching and Learning designation of the project site. However, this change supports the larger academic purposes of the University. The purpose of City and County agricultural zoning is to protect high quality soils and agriculturally productive areas to support the market production of animals, and vegetable, fruit, and nut crops in California. Unlike City and County agricultural zoning designations, Cal Poly's land use configuration must balance the features and use of the land within the overarching teaching and learning needs and programs of the University, while also balancing the preservation and enhancement of these agricultural resources with other growth needs. The proposed Slack and Grand Residential Neighborhood (N1) site is also relatively isolated from all other Cal Poly agricultural uses and operations, and is surrounded to the west and south by heavy urban uses. Therefore the conversion of Farmland of Local Potential and change in University land use designation would be considered a less-than-significant impact on agricultural resources.

The project site is not under a Williamson Act contract. The project would not result in the rezoning or conversion of forest or timber resources, or any other changes that could cause the conversion of Important Farmland.

# Mitigation Measures

3.3-1 Permanent protection of Important Farmlands will be provided in the form of a perpetual agriculture or conservation easement within the Cal Poly agricultural lands. The amount of land to be conserved in the easement will be proportionate to the amount of Important Farmland converted as a result of implementation of the Master Plan (28 acres) based on the following ratios: the agricultural or conservation easement will protect lands at a 1:1 ratio if within the Cal Poly lands in San Luis Obispo County or at a 2:1 ratio if within Cal Poly lands outside of the county limits. The land will be comparable in soil quality and use to the Important Farmland being converted to non-agricultural uses and shall have an adequate water supply to support agricultural use that is also protected in the agricultural conservation easement, farmland deed restriction, or other document evidencing the permanent agricultural protection.

## Slack and Grand Residential Neighborhood

The conversion of grazing land and Farmland of Local Potential does not qualify as a significant impact under CEQA and no other significant impacts to agricultural resources would occur. No mitigation is required.

# Level of Impact After Mitigation

The identified mitigation measure will protect existing agricultural lands and uses within the easement areas; however, it will not fully mitigate the permanent conversion of 16 acres of Prime Farmland and 12 acres of Farmland of Statewide Importance to non-agricultural use.

No additional feasible mitigation measures are available that will fully mitigate impacts related to the loss of Important Prime Farmland and Farmland of Statewide Importance. To substantially reduce this impact would require changing the Master Plan uses to preserve the affected farmlands on main campus, particularly as related to relocation of the parking and sports field areas within Prime Farmland. Such a change was determined infeasible because parking is intended to be within reasonable walking distance to classrooms and offices and should be accessible from the new and existing student housing, as supported by General Principle 15 of the Master Plan. University Life Principle 15 of the Master Plan also states that recreational facilities should be located near the populations they serve. In addition, other areas that are not prime agricultural land are primarily hillsides and not suitable for grading for parking or flat play fields. Relocation of the sports fields or parking to non-prime agricultural lands in close proximity to the main campus currently used for grazing would impact the academic programs of the College of Agriculture. Finally, the University is focusing new development within the Campus Core to emphasize infill development and "smart growth" principles in order to minimize intense uses on the periphery of the campus and preserve the surrounding natural environment as supported by General Principle 13.

Cal Poly's land use configuration must balance the features and use of the land within the overarching teaching and learning needs and programs as a comprehensive polytechnic University. Therefore, this impact is considered significant and unavoidable.

## Slack and Grand Residential Neighborhood

No mitigation is required. Impacts to agricultural resources will remain less than significant.

# Cumulative Impact

The Master Plan will guide development within the main campus for the next 20 years. The land uses and campus facilities identified in the Master Plan, including additional on-campus student housing, an increase in academic and support facilities, and transportation/circulation improvements within campus, will not indirectly affect off-campus agricultural areas. The Master Plan does not include uses that will adversely affect agricultural resources off-campus,

and will not result in any changes that will indirectly convert agricultural resources off-campus to non-agricultural use.

Based on the CDOC statistics, the San Luis Obispo County showed a net loss of approximately 10,706 acres of Important Farmland between 2012 and 2014,[38] as that land was converted to other uses/designations (Figure 26) . The farmland lost consisted entirely of Farmland of Local Importance (15,101 acres), whereas County acreages of Prime Farmland increased by 128 acres, Farmland of Statewide Importance by 1,024 acres, and Unique Farmland by 3,243 acres during the same period. The Master Plan will result in the direct conversion of approximately 16 acres of Prime Farmland and 12 acres of Farmland of Statewide Importance and will also change the agricultural land use designations at certain locations to non-agricultural designations. Nonetheless, even though the County increased the acreage of both Prime Farmland and Farmland of Statewide Importance during the 2012–2014 period, there is a potential for future conversion of these farmlands associated with growth and development within San Luis Obispo County over the next 20 years (i.e., within the Master Plan's 20-year planning horizon). Prime Farmland and Farmland of Statewide Importance are a finite resource that cannot be replaced. Therefore, cumulative impacts are considered potentially significant.

Potentially significant cumulative impacts would be reduced through implementation of Mitigation Measure 3.3-1. However, when combined with impacts from past, present, and reasonably foreseeable projects in the County with the potential to convert Important Farmland, residual cumulative impacts would be considered significant and unavoidable.

## Slack and Grand Residential Neighborhood

The Slack and Grand Residential Neighborhood (N1) would not convert Important Farmland and would not considerably contribute to a significant cumulative conversion of Important Farmland. The change in land use designation at the N1 site to non-agricultural designation would support the overarching teaching and learning needs and programs as a comprehensive polytechnic University. Lands within the Cal Poly campus are designated and used to meet the overarching teaching and learning needs of the University and a change in the agricultural designations on campus would not result in a considerable contribution to cumulative land use designation changes associated with other development in San Luis Obispo County. Therefore, cumulative impacts are considered less than significant.

## Figure 26. 2012-2014 FMMP Land Use Conversion Table

**SAN LUIS OBISPO COUNTY**
**2012-2014 Land Use Conversion**

**CALIFORNIA DEPARTMENT OF CONSERVATION**
**Division of Land Resource Protection**

**Farmland Mapping and Monitoring Program**

### PART I
### County Summary and Change by Land Use Category

| LAND USE CATEGORY | TOTAL ACREAGE INVENTORIED | | 2012-14 ACREAGE CHANGES | | | |
|---|---|---|---|---|---|---|
| | 2012 | 2014 | ACRES LOST (-) | ACRES GAINED (+) | TOTAL ACREAGE CHANGED | NET ACREAGE CHANGED |
| Prime Farmland | 40,862 | 40,990 | 879 | 1,007 | 1,886 | 128 |
| Farmland of Statewide Importance | 20,884 | 21,908 | 518 | 1,542 | 2,060 | 1,024 |
| Unique Farmland | 39,982 | 43,225 | 629 | 3,872 | 4,501 | 3,243 |
| Farmland of Local Importance | 304,410 | 289,309 | 16,767 | 1,666 | 18,433 | -15,101 |
| IMPORTANT FARMLAND SUBTOTAL | 406,138 | 395,432 | 18,793 | 8,087 | 26,880 | -10,706 |
| Grazing Land | 1,183,072 | 1,189,777 | 2,552 | 9,257 | 11,809 | 6,705 |
| AGRICULTURAL LAND SUBTOTAL | 1,589,210 | 1,585,209 | 21,345 | 17,344 | 38,689 | -4,001 |
| Urban and Built-up Land | 45,576 | 49,509 | 93 | 4,026 | 4,119 | 3,933 |
| Other Land | 244,034 | 244,104 | 492 | 562 | 1,054 | 70 |
| Water Area | 8,780 | 8,778 | 2 | 0 | 2 | -2 |
| TOTAL AREA INVENTORIED | 1,887,600 | 1,887,600 | 21,932 | 21,932 | 43,864 | 0 |

### PART II
### Land Committed to Nonagricultural Use

| LAND USE CATEGORY | TOTAL ACREAGE 2014 |
|---|---|
| Prime Farmland | DATA |
| Farmland of Statewide Importance | NOT |
| Unique Farmland | AVAILABLE |
| Farmland of Local Importance | |
| IMPORTANT FARMLAND SUBTOTAL | |
| Grazing Land | |
| AGRICULTURAL LAND SUBTOTAL | |
| Urban and Built-up Land | |
| Other Land | |
| Water Area | |
| TOTAL ACREAGE REPORTED | |

### PART III Land Use Conversion from 2012 to 2014

| LAND USE CATEGORY | | Prime Farmland | Farmland of Statewide Importance | Unique Farmland | Farmland of Local Importance | Subtotal Important Farmland | Grazing Land | Total Agricultural Land | Urban and Built-up Land | Other Land | Water Area | Total Converted To Another Use |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Prime Farmland | to: | -- | 1 | 8 | 825 | 834 | 10 | 844 | 1 | 34 | 0 | 879 |
| Farmland of Statewide Importance | to: | 4 | -- | 9 | 478 | 491 | 6 | 497 | 0 | 21 | 0 | 518 |
| Unique Farmland | to: | 10 | 1 | -- | 108 | 119 | 437 | 556 | 2 | 71 | 0 | 629 |
| Farmland of Local Importance (1)(2) | to: | 975 | 1,504 | 1,778 | -- | 4,257 | 8,627 | 12,884 | 3,600 | 283 | 0 | 16,767 |
| IMPORTANT FARMLAND SUBTOTAL | | 989 | 1,506 | 1,795 | 1,411 | 5,701 | 9,080 | 14,781 | 3,603 | 409 | 0 | 18,793 |
| Grazing Land (1) | to: | 7 | 6 | 1,975 | 210 | 2,198 | -- | 2,198 | 244 | 110 | 0 | 2,552 |
| AGRICULTURAL LAND SUBTOTAL | | 996 | 1,512 | 3,770 | 1,621 | 7,899 | 9,080 | 16,979 | 3,847 | 519 | 0 | 21,345 |
| Urban and Built-up Land | to: | 1 | 0 | 0 | 14 | 15 | 35 | 50 | -- | 43 | 0 | 93 |
| Other Land | to: | 10 | 30 | 102 | 31 | 173 | 142 | 315 | 177 | -- | 0 | 492 |
| Water Area | to: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | -- | 2 |
| TOTAL ACREAGE CONVERTED | to: | 1,007 | 1,542 | 3,872 | 1,666 | 8,087 | 9,257 | 17,344 | 4,026 | 562 | 0 | 21,932 |

**(1) Conversion to irrigated farmland is primarily due to the addition of vineyards in the region surrounding Paso Robles. Lesser additions of orchards and row crops were also made throughout the county.**
**(2) Conversion to Grazing Land is due to nonirrigated grain areas having been left idle for four or more update cycles.**

# 3.4 Aesthetics

This section examines the potential aesthetics impacts associated with the campus development pursuant to the Master Plan, including the development of the Slack and Grand Residential Neighborhood.

## Environmental Setting

The visual character of the Cal Poly main campus is influenced by both built and natural elements. Located adjacent to the city of San Luis Obispo, the campus is also situated at the eastern end of the highly scenic Chorro Valley, which extends from San Luis Obispo northwest to Morro Bay and the Pacific Ocean. University lands include range and agricultural areas, natural preserves, and campus developed areas.

### Visual Setting

The center of campus (the Academic Core) includes administrative and academic buildings, agricultural support facilities, and student housing. The Campus Core is relatively compact, and the existing buildings include a variety of architectural styles and forms. The core is generally bound by Highland Drive on the north, California Boulevard on the west, Slack Street on the south, and the Santa Lucia Hills on the east (Figure 27). The aesthetic quality of the Campus Core is the inherent result of an evolution of architectural styles and planning trends over several decades. As detailed in Section 3.2, Cultural Resources, older buildings on campus show a use of brick and concrete particularly popular at the time, and the newer facilities introduced more metal exterior finishes and components. Much of the newer architecture tends to be spare on ornamentation, and appears to intentionally represent its functional, institutional use. Large, multi-story structures are common within the Campus Core.

**Figure 27. Cal Poly San Luis Obispo Main Campus View**

Although the core of the campus is the most densely developed (Figure 28), visibility from the surrounding off campus areas is relatively limited. The campus can be easily seen from streets and neighborhoods in the immediate vicinity, however because of topography and intervening development, the Campus Core is not readily seen from public viewpoints away from campus. Portions of the Campus Core can be seen from Highway 1, although because of viewing distance, it occupies just a small portion of the overall viewshed and is generally indistinguishable from off campus development.

**Figure 28. The University Union in the Central Part of Campus**

The visual context of the Residential East Campus is largely defined by multi-story dormitories, athletic fields, and parking areas (Figure 29). Two- and five-story student housing complexes are located along both sides of Grand Avenue, and larger-scale on-campus housing is northeast of the Campus Core in and near Poly Canyon (at the east border of the North Campus). Mature landscaping can be seen throughout the area. Much of this visual setting is also influenced by the undeveloped Santa Lucia Hills, which rise up to the east, and by the established single-family residential neighborhoods to the south along Slack Street and Longview Lane.

**Figure 29. Student Housing in the Eastern Part of Campus**


Portions of these student residential areas along the eastern side of campus can be seen from various off-campus locations. The southernmost section is easily visible from the closest neighborhoods. As student housing such as Cerro Vista extends somewhat up the hillside, it can be seen from a portion of Highway 1. Grand Avenue serves as a primary gateway to campus. Important scenic resources along this section of Grand Avenue approaching campus include the Santa Lucia Hills to the northeast as well as the Morros to the west. Throughout other portions of San Luis Obispo, this area of campus has limited visibility due to viewing distance, intervening topography, development, and mature tree canopy.

The North Campus comprises a variety of agricultural, athletic, and residential functions (Figure 30). Academic uses include equine, environmental horticulture, and beef unit facilities, along with various barns, greenhouses, and study labs. Baggett Field, Janssen Field, and various parking lots are also located within the area. The multi-story Poly Canyon Village, a mixed-use student housing development, is seen at the eastern perimeter of this area. The North Campus is generally accessed by Village Drive, Via Carta, and unnamed, unpaved access roads. The visual character of the area is mixed. Sports and agricultural fields transition to the multi-story residential developments seen to the east.

**Figure 30. Various Uses in the North Part of Campus**

Because the topography rises up gradually from the center of campus to the north, portions of the North Campus have a certain amount of increased visibility from the surrounding area. Travelling northbound on Johnson Avenue near Bishop Street in the city of San Luis Obispo, a portion of the North Campus area can be seen in the distance. In addition, views from Highway 1 include much of the North Campus area, including agriculture and sports fields in the mid-ground, with student housing rising up at the base of the foothills to the northeast. Viewing distances from these public viewpoints to the northern area of campus range from approximately 0.6 to 1 mile. Although some existing development in this area is visible from public viewpoints, it is generally not easily discernable in the overall landscape and occupies a relatively small percentage of the total viewshed. Throughout other portions of the San Luis Obispo, the northern section of campus has limited visibility due to viewing distance, intervening topography, development, and mature tree canopy.

The West Campus is the least developed (Figure 31). A combination of agricultural fields, support facilities, and working labs are seen throughout the area. Structures associated with the Dairy Science and Poultry Science Complexes, the Beef Cattle Evaluation Center, the Corporation Warehouse, and Tech Park are located within the West Campus. Stenner Creek generally bisects West Campus in a north-south direction. The overall landform of the area rises up from the southwest to the northeast, interspersed with a few small, elevated knolls. Radio Hill is part of the western campus area, located just northeast of Highway 1 and Highland Drive.

Much of the western side of campus is bordered by Highway 1. The primary access roads for the area are Stenner Creek Road and Mount Bishop Road.

**Figure 31. Visual Setting of the Western Part of Campus**

*View of the western part of campus looking northeast from Highway 1.*

West Campus also includes a triangular-shaped undeveloped area of land west of and adjacent to Highway 1, just north of Westmont Avenue. Surrounding uses consist of a single-family residential neighborhood to the west and residences and a California Department of Forestry and Fire Protection (CAL FIRE) facility to the south.

Because of its proximity to Highway 1, West Campus is the most visible portion of campus as seen from Highway 1 (Figure 32). As seen from Highway 1 much of the west side of campus provides the fore- and mid-ground setting for views of the Santa Lucia Hills to the east. The vegetation of Stenner Creek, which runs somewhat parallel to Highway 1, limits views to portions of the West Campus area. However, because the landform gradually rises up east of the creek, those elevated areas are seen from the highway. Although some existing development within this campus area is somewhat visible from Highway 1, it tends to be subordinate to the overall landscape setting.

**Figure 32. Western Part of Campus Looking West from Highway 1**

The undeveloped portion of the West Campus located west of Highway 1 is seen as the foreground for scenic views to Bishop Peak and the Morros to the west. The topography of the northern portion of this area rises up quickly from Highway 1, precluding views of the Morros and at the same time serving as the primary ridgeline to the west.

Portions of the western side of campus can be seen from the surrounding area. Travelling northbound on Johnson Avenue near Bishop Street in the City of San Luis Obispo, a portion of the western side of campus can be seen in the distance. The campus land located west of Highway 1 is surrounded by residential neighborhoods in the areas of Skyline Drive and Westmont Avenue in San Luis Obispo. Accordingly, from these neighborhoods views to this portion of campus are readily available.

## Visual Setting of Proposed Slack and Grand Residential Neighborhood

The Master Plan 2035 proposes the new N1 Residential Neighborhood within the Residential East Campus. The approximately 22-acre area of this proposed residential and mixed-use development is located at the northeast corner of Slack Street and Grand Avenue, a primary entryway to campus (Figure 34). Grand Avenue approaching the project site from the south is a designated San Luis Obispo City Scenic Roadway.

Other existing Cal Poly development in the project proximity includes student housing to the north and west, including the yak?ityutyu Residential Community (Student Housing South Project), which includes heights up to five stories. An established single-family residential neighborhood is located directly across Slack Street to the south of the Slack and Grand Residential Neighborhood site. The topography of this site is somewhat varied but generally rises up from Grand Avenue toward the foothills to the northeast. The site ranges in elevation from approximately 380 feet above sea level near the intersection of Slack Street and Grand Avenue to approximately 580 feet along its northeast perimeter. Although existing development can be seen in the vicinity, the visual character and quality of the project site is mostly defined by its open pasture land and the Santa Lucia Hills rising up immediately behind the site to the east. An unnamed seasonal drainage cuts diagonally through the site from the northeast to the southwest. Native and non-native vegetation helps visually define the drainage, and large eucalyptus trees border the northern and western perimeter of the site. These groves of mature trees tend to visually isolate the project site from the other, more developed portions of campus and reinforce its open-space appearance (Figure 33).

**Figure 33. Existing View of the Slack and Grand Site as seen from the Corner of Grand Avenue Looking Northeast toward the Santa Lucia Hills**

# Regulatory Setting

The project is located entirely within the jurisdiction of the CSU. In addition, the proposed Master Plan contains a number of policies and goals directed at the protection of campus visual resources.

# Master Plan 2035 Visual Policy and Goals

The Master Plan includes the following vision statement regarding design character relative to the campus's natural setting:

> *Cal Poly is located in a spectacularly beautiful natural setting including dramatic topography and views that includes the Nine Sisters volcanic peaks, rolling hills and outcroppings of trees and vegetation. While the natural campus setting is remarkable, it will be critical for those planning the future of Cal Poly to assure that the campus will always retain the visual connection to the surrounding landscape. Modeling of siting and massing of future individual buildings and neighborhoods will assure that they do not block, but rather frame and focus views and vistas from public areas of the campus and major circulation ways. The Master Plan has considered the topography of the campus in land use, building siting, and open space designations.*

## Master Plan 2035 Principles

The Master Plan 2035 provides a vision and guiding principles regarding the visual appearance of its implementation. The following are Master Plan aesthetic principles relative to the potential effect of the campus on public viewpoints surrounding the campus.

### Guiding Principles

The Master Plan states that these Guiding Principles can be thought of both as starting points for the plan process as well as overarching directives relevant to all or most Master Plan topics.

**GP 05** Cal Poly's scenic setting – a campus surrounded by open spaces -- should be preserved; its open lands and the surrounding natural environment are highly valued and should be considered in campus planning efforts.

**GP 06-8/I0** Open space should be incorporated into the core campus and integrated into the scope of every new building project, for aesthetics, leisure, social interactions, and activities contributing to a healthy lifestyle.

**GP 07** Land uses should be suitable to their locations considering the environmental features of the proposed sites.

**GP 09** The siting and design of campus buildings and other features should reflect and enhance visual and physical connections to the surrounding natural environment

and outdoor spaces on campus, and should maintain, enhance or create aesthetically pleasing views and vistas.

**GP 10** Campus buildings should incorporate the best design elements regarding massing, human scale, materials, articulation, architectural interest, sustainability and connections with surrounding buildings and spaces; design should reflect authenticity and attention to details in materials, historical context and architectural style.

### Design and Scale

**DC 01** The siting and design of campus facilities should incorporate a full 360-degree approach, where all sides of the facility contribute to a cohesive and aesthetically pleasing experience.

**DC 05** The design of campus facilities should maintain and incorporate a pedestrian sense of scale.

**DC 06** The Academic Core should be primarily pedestrian oriented with simple, cohesive and straightforward pedestrian circulation and appropriate amenities, scale, and design at the ground level.

### Gateways and Edges

**DC 10** The edge of the campus should be transparent, friendly, and aesthetically pleasing to the surrounding community.

### Infrastructure

**DC 14** Public facilities and utility support structures should be concealed from view unless their visibility serves an explicit educational function.

### Sustainability

**S 05** The siting and design of campus buildings and other features should reflect and enhance visual and physical connections to the surrounding natural environment and outdoor spaces on campus.

### Transparency

**GP 16/ I 04** Cal Poly should consider potential impacts -- including but not limited to traffic, parking, noise, and glare -- on surrounding areas, especially nearby single-family residential neighborhoods, in its land use planning, building and site design, and operations.

## State and National Scenic Highway Designations

In 1999, Highway 1 was designated by the State of California as an Officially Designated Scenic Highway. The County of San Luis Obispo promoted the designation based on the high level of existing visual quality along the corridor as well as the desire to protect its visual resources in the

future. In 2003, Highway 1 was also bestowed the title of "All-American Road" in the National Scenic Byway program. This designation recognizes the visual characteristics of the Highway 1 corridor as being among the highest quality in the nation. These designations illustrate the highest level of concern and viewer sensitivity for the aesthetics regarding the highway corridor and beyond.

# Adjacent Community Visual Sensitivity

The Cal Poly campus is surrounded by the city of San Luis Obispo, San Luis Obispo County, and the State of California Department of Transportation and Department of Corrections lands. Many of the new facilities and improvements developed on campus pursuant to the Master Plan may be seen from public viewpoints in these surrounding jurisdictions. Therefore, these surrounding areas are considered for purposes of assessing visual impact associated with implementation of the Master Plan.

The following section describes and excerpts various visual policies, ordinances, and goals that are utilized by the City and County of San Luis Obispo. Although the City and County have no regulatory authority over CSU lands, these policies, ordinances, and goals serve as indicators of potential sensitivity to changes in the visual environment.

# Excerpts of County of San Luis Obispo Visual Policy

## General Plan Conservation and Open Space Element, Chapter 9 – Visual Resources

This section defines the following as major visual issues:

### Scenic Landscapes

> *Development will inevitably occur within some of the county's scenic areas. The location and design of development in these areas can have a profound effect on urban and rural landscapes. Buildings that are appropriately placed and designed can complement and even blend with the natural landscape. However, inappropriately located and designed development including telecommunication facilities, roads, and billboards can detract from and conflict with an area's overall character. Land management practices may also cause unnecessary harm to visual resources.*

### Scenic Corridors

> *Scenic corridors are view areas, or "viewsheds" from popular public roads and highways that have unique or outstanding scenic qualities. Inappropriate development or billboards can intrude upon these viewsheds. Some examples are highly visible graded roads and pads, buildings that are too close to a highway, and building designs that silhouette against the skyline, telecommunications facilities, utilities, signage, and other structures that dominate rather than blend with a natural landscape. Scenic highways and roads are scenic corridors that are designated to conserve and enhance their scenic beauty. Highway 1 is a*

*designated State Scenic Highway and National Scenic Byway from San Luis Obispo to the Monterey County line.*

### Visual Resources, Goal 2, The natural and historic character and identity of rural areas will be protected.

#### *Policy VR 2.1 Develop in a manner compatible with Historical and Visual Resources.*

*Through the review of proposed development, encourage designs that are compatible with the natural landscape and with recognized historical character, and discourage designs that are clearly out of place within rural areas.*

#### *Policy VR 2.2 Site Development and Landscaping*

*Through the review of proposed development, encourage designs that emphasize native vegetation and conform grading to existing natural forms. Encourage abundant native and/or drought-tolerant landscaping that screens buildings and parking lots and blends development with the natural landscape.*

### Visual Resources, Goal 7 – Views of the night sky and its constellations of stars will be maintained.

#### *Policy VR 7.1 Nighttime light pollution*

*Protect the clarity and visibility of the night sky within communities and rural areas, by ensuring that exterior lighting, including streetlight projects, is designed to minimize nighttime light pollution.*

## County of San Luis Obispo Land Use and Circulation Element

### IV. San Luis Obispo Area Plan

#### *Overview*

*Some of the factors which have contributed to the unique and desirable character of the planning area include the presence of a compact urban center surrounded by open agricultural lands, meandering streams, rolling hills, and ridges, clean air and relatively little traffic congestion. The volcanic Morros give additional character to the area, marching from the city west to Morro Bay. The presence of a state university and a community college has provided educational opportunities for local residents and an educated labor force for local employers. These educational institutions have also brought many students from other areas, contributing to social diversity and a high level of consumer activity in the city. Within the context of state and national economic conditions, the policies and actions of the County, the City and other public agencies can influence the future of the area. Public policies can assist in encouraging appropriate, integrated patterns of land use. Land use strategies need to balance economic growth with the equally important need to protect and enhance the local environment. Conservation of the area's resources is an integral part of economic development in order to have a lasting economy that is strengthened by the region's environmental assets.*

### *1.6 Vision for San Luis Obispo North Sub-area*

*This plan's vision for the future includes continued opportunities for economic vitality and growth, along with the opportunity to maintain the environmental attributes that have themselves contributed to the area's historically healthy economy. The community's excellent living environment and educational opportunities can act to attract or retain businesses providing high quality job opportunities for local residents, enabling them to afford housing within the area, while also enhancing local tax revenues needed for public services. The sub-area should maintain a rural character in harmony with agriculture, business, recreational, environmental and residential opportunities.*

San Luis Obispo Greenbelt

Note: Portions of the North Campus and West Campus are located within an area designated as a proposed Greenbelt on the County Land Use and Circulation Element Proposed San Luis Obispo Greenbelt Map. The County has no jurisdiction over these campus lands, thus they are not formally within any County greenbelt area.

*The rural setting that surrounds San Luis Obispo is in direct contrast to the activity within the city. This distinction between city and country should be protected by both the City and County, by establishing a "greenbelt" that would involve property owners in voluntary, innovative methods of open space preservation while maintaining economic land uses. In the area shown in Figure 4-2 [of the County Conservation and Open Space Element], the City and County seek to keep undeveloped land open, while accommodating rural homesites. A greenbelt typically is privately-held land where voluntary, contractual commitments are made between the jurisdiction (the County in this case) and owners that grant land use incentives in return for retaining their property in agricultural and open space use. Other arrangements may be financial, where the potential development value of the property is purchased, leaving it in private ownership for continued use. New development that occurs as an incentive bonus is usually guided to fit unobtrusively within the existing landscape.*

Gateways

Note: Portions of the North Campus and West Campus are located within or adjacent to an area designated as a “Gateway to San Luis Obispo” on the County Conservation and Open Space Element Community Separator and Gateway Map. The County has no jurisdiction over these campus lands, thus they are not formally within any County gateway area.

*Gateways are entrance corridors that herald the approach of a new urban landscape, and that define the arrival point as a worthy destination. All of the road corridors leading into San Luis Obispo are endowed with special natural and built characteristics that are often unique. These entrance corridors are characterized by production agriculture lands which, as a secondary benefit to the production of food and fiber, provide scenic landmarks, historical structures, and rural countryside that denote a special place, culminating with entry into the city. Each of these corridors has a unique character that helps define and enhance the city's central place within the region.*

***Highway 1 from Camp San Luis to Highland Drive.***

*Assessment: High-quality views of Stenner Creek, Cal Poly's agriculture program, and of Bishop Peak and San Luis Mountain should be retained.*

### *4.5 Land Use Programs*

Scenic Roads and Highways in San Luis Obispo North Sub-area

*The natural and pastoral landscapes along the major roadways in the planning area provide a high-quality visual experience and enjoyment for local residents and tourists alike. However, inappropriate development could reduce the scenic qualities along these visual corridors. The Agriculture and Open Space Plan recommends that scenic corridors be identified and standards adopted to protect scenic land. As part of preparation of this area plan, visual surveys were conducted to identify scenic backdrops along highway corridors. Visually sensitive areas are identified in this plan as two types:*

*1. The most critical landmarks and hillsides near scenic roadways continue to be designated in the Sensitive Resource Area (SRA) combining designation, which is discussed in Chapter 6. Special development standards in the Combining Designations section of Articles 9 and 10 of the Land Use Ordinance apply to construction for dwellings, residential accessory uses and residential access roads, and to some agricultural accessory structures if proposed near the roadway.*

*2. The important foreground and background views of the landscape along scenic highways and roads are identified in a highway corridor design area. Although the highway corridor design area is not designated as a Sensitive Resource Area combining designation, the same concerns and standards for development described in number 1 above apply. Foreground views along highways and railroads are identified in a highway corridor design area. These areas are close enough to the viewing public to reveal individual trees, rock outcrops, creeks, hillsides and historic structures such as farm houses and barns. These elements of the scenic corridors have their own scenic values, while they also serve to frame and enhance views of the more distant scenic backdrops. Accordingly, the highway corridor design area includes areas within 100 feet of Highways 1, 101, 227, Los Osos Valley Road, Orcutt Road, and the Southern Pacific Railroad (which is proposed to accommodate increasing numbers of vacation and business travelers).*

### *Chapter 6: Combining Designations*

Sensitive Resource Area (SRA)

Note: The hillsides east of campus are identified as a Sensitive and Scenic Resource Area (SRA) on the San Luis Obispo Planning Area Rural Combining Designations Map. The campus itself is not within the SRA or within the jurisdiction of the County, and as a result is not subject to the SRA ordinances or standards.

*This designation covers the highly scenic and important backdrops and natural landmarks visible from scenic highways and the urban area, and is applied to locations of rare or endangered plants and animals. The intent of an SRA is to call attention to the importance of these resources, and to protect the public's interest in them through standards in Articles 9 [Planning Area Standards] and 10 [Community Planning Standards] of the LUO.*

*Scenic and visual qualities of distant ridges, peaks and hillsides, as well as the closer or "foreground" elements such as rock outcrops, oak woodlands, creeks and other visually appealing natural formations and vegetation contribute to the widespread perception by local residents and visitors alike that the San Luis Obispo area is a desirable place to live or visit. This perception, in turn, has a beneficial effect on the economic stability of the recreation and tourist industries. Other economic sectors also benefit from local employees and employers alike who place a high value on living in San Luis Obispo. Therefore, identification and protection of the scenic resources in the San Luis Obispo planning area is an important aspect of planning.*

*Ridges, peaks and hillsides comprise scenic backdrops and natural landmarks. They rise above urban areas and highways, terminating vistas with a largely undeveloped appearance. The scenic backdrops to which the SRA has been applied include scenic lands visible to travelers along Highways 1, 101, 227, Los Osos Valley Road, Foothill Boulevard, Orcutt Road, and the Southern Pacific Railroad, including the following areas:*

*9. The Morros: including Islay Hill, Righetti (or Mine) Hill, Cerro San Luis, Bishop Peak, Chumash Peak, Cerro Romauldo and associated hills (SRA). The SRA covers this area from the tops of these hills, peaks and connecting ridges down to the 280 foot elevation, except that it terminates at the 320 foot elevation above Cuesta College west of O'Connor Way, the 225 foot elevation around the base of the South Street Hills, and varies from 280 feet to 200 feet along Highway 1 east of Cuesta College to the city limits. These areas correspond to the visually prominent backdrops visible from Highways 1, 101, 227, Los Osos Valley Road, Foothill Boulevard and Prefumo Canyon Road.*

# Excerpt of City of San Luis Obispo Visual Policies

## San Luis Obispo General Plan – Conservation and Open Space Element

### 9.1.1. Preserve natural and agricultural landscapes.

The City will implement the following policies and encourage other agencies with jurisdiction to do likewise:

*A. Natural and agricultural landscapes that the City has not designated for urban use shall be maintained in their current patterns of use.*

*B. Any development that is permitted in natural or agricultural landscapes shall be visually subordinate to and compatible with the landscape features. Development includes, but is not limited to buildings, signs (including billboard signs), roads, utility and telecommunication lines and structures. Such development shall:*

*1. Avoid visually prominent locations such as ridgelines, and slopes exceeding 20 percent.*

*2. Avoid unnecessary grading, vegetation removal, and site lighting.*

*3. Incorporate building forms, architectural materials, and landscaping, that respect the setting, including the historical pattern of development in similar settings, and avoid stark contrasts with its setting.*

*4. Preserve scenic or unique landforms, significant trees in terms of size, age, species or rarity, and rock outcroppings.*

### 9.1.3. Utilities and signs.

*In and near public streets, plazas, and parks, features that clutter, degrade, intrude on, or obstruct views should be avoided. Necessary features, such as utility and communication equipment, and traffic equipment and signs should be designed and placed so as to not impinge upon or degrade scenic views of the Morros or surrounding hillsides, or farmland, consistent with the primary objective of safety.*

### 9.2.1. Views to and from public places, including scenic roadways.

Note: Highway 1 adjacent to portions of the North Campus and West Campus is identified as a "Roadway of High or Moderate Scenic Value Outside of the City Limit" in the Conservation and Open Space Element – Scenic Roadways and Vistas Map, Figure 11, and in the Circulation Element – Scenic Roadways Map, Figure 3. In addition, Grand Avenue at the southern portion of campus is designated as a "Scenic Roadway of Moderate Scenic Value" as it approaches campus, and as a "Roadway of High or Moderate Scenic Value Outside of the City Limit" within the campus boundary, though again it should be noted that the City has no jurisdiction to designate the scenic quality of roads on campus.

*The City will preserve and improve views of important scenic resources from public places, and encourage other agencies with jurisdiction to do so. Public places include parks, plazas, the grounds of civic buildings, streets and roads, and publicly accessible open space. In particular, the route segments shown in Figure 11 [of the Conservation and Open Space Element] are designated as scenic roadways.*

*A. Development projects shall not wall off scenic roadways and block views.*

*B. Utilities, traffic signals, and public and private signs and lights shall not intrude on or clutter views, consistent with safety needs.*

*C. Where important vistas of distant landscape features occur along streets, street trees shall be clustered to facilitate viewing of the distant features.*

*D. Development projects, including signs, in the viewshed of a scenic roadway shall be considered "sensitive" and require architectural review.*

## 15. Scenic Roadways

Note: Highway 1 adjacent to portions of the North Campus and West Campus is identified as a "Roadway of High or Moderate Scenic Value Outside of the City Limit" in the Conservation and Open Space Element – Scenic Roadways and Vistas Map, Figure 11, and in the Circulation Element – Scenic Roadways Map, Figure 3. In addition, Grand Avenue at the southern portion of campus is designated as a "Scenic Roadway of Moderate Scenic Value" as it approaches campus, and as a "Roadway of High or Moderate Scenic Value Outside of the City Limit" within the campus boundary.

### *15.1.1. Scenic Routes*

The route segments shown in Figure 11 of the Conservation and Open Space Element – Scenic Roadways Map are designated as scenic roadways.

### *15.1.2. Development along Scenic Routes*

*The City will preserve and improve views of important scenic resources form streets and roads. Development along scenic roadways should not block views or detract from the quality of views.*

*A. Projects, including signs, in the viewshed of a scenic roadway should be considered as "sensitive" and require architectural review.*

*B. Development projects should not wall off scenic roadways and block views.*

*C. As part of the city's environmental review process, blocking of views along scenic roadways should be considered a significant environmental impact.*

*F. Lighting along scenic roadways should not degrade the nighttime visual environment and night sky per the City's Night Sky Preservation Ordinance.*

### *15.1.3. Public Equipment and Facilities*

*The City and other agencies should be encouraged to avoid cluttering scenic roadways with utility and circulation-related equipment and facilities.*

*B. Public utilities along scenic highways should be installed underground.*

*C. The placement of landscaping and street trees should not block views from Scenic Routes. Clustering of street trees along scenic roadways should be considered as an alternative to uniform spacing.*

## Slack and Grand Residential Neighborhood

The regulatory setting for the Slack and Grand Residential Neighborhood is the same as the regulatory setting for the Master Plan. Please refer to the Regulatory Setting discussions above.

# Impact Criteria

According to CEQA and the CSU CEQA Handbook, impacts will be significant if the project will:

- Have a substantial adverse effect on a scenic vista;
- Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway;
- Substantially degrade the existing visual character or quality of the site and its surroundings; or,
- Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

# Environmental Impact

## Scenic Vistas

Scenic vistas are defined as high-quality views displaying good aesthetic and compositional value that can be seen from public viewpoints. If implementation of the Master Plan substantially degrades the scenic landscape as viewed from public roads, or in particular designated scenic routes, or from other public or recreation areas, this will be considered a potentially significant impact on the scenic vista. Scenic vistas related to the viewing experience associated with implementation of the Master Plan include views of the Morros, the Santa Lucia Hills, Cuesta Ridge, important rock outcroppings, patterns of natural vegetation, and predominant rural land.

Future development of the Academic Core will have limited visibility from public viewpoints in the surrounding community. Because the center of campus is already well developed, future development will generally be seen as infill and will not represent a substantial new visual feature. Development adjacent to existing residential neighborhoods will however have the potential to block views of the surrounding hills and ridgelines, including the Morros and the Santa Lucia Hills.

In general, future development of the eastern side of campus will have the potential to adversely impact views as experienced by the surrounding community. Views of the Santa Lucia Hills are identified in Cal Poly and San Luis Obispo County planning documents as scenic resources, which should be preserved. The Master Plan includes a new freshman student housing project located at the base of these foothills, directly behind the existing South Mountain (red brick) residence halls, at an area currently used as a parking lot. Because of its elevated location, development in this area may, depending on the height of the structures, be seen from a section of Highway 1. Existing student housing, such as Cerro Vista can be seen extending somewhat up

the hillside north of the planned new student housing. Visibility of new student housing could result in an adverse visual impact if the buildings were to extend noticeably further up the hillside than the existing student housing in the vicinity. If so, such visibility will draw attention to the new student housing and will encroach onto the hillside scenic vista as seen from Highway 1. Also, because of the proximity of the campus to residential neighborhoods along Slack Street and Longview Lane, development at the southeastern portion of campus (east of Grand Avenue) will have the potential to impact views of the surrounding hills, including the Morros and the Santa Lucia Hills. The Master Plan proposes a new residential neighborhood (N1) at the corner of Slack Street and Grand Avenue in this area. The Slack and Grand Residential Neighborhood is discussed under separate headings.

The Master Plan describes development in the northern portion of campus as including a mixed use academic, office, and student activity center adjacent to future student housing, as well as a sports arena. These projects will be located in the less visible portion of the area, closest to the Academic Core, and thus will not present a new visual intrusion or potential impact on a scenic vista. Depending on the final design of these future developments, it is possible that these structures could interfere with quality views of the distant hills as seen from Highway 1 (see below).

The West Campus includes some of the most visually sensitive areas of the Cal Poly main campus. Highway 1, which passes immediately adjacent to the campus, is a designated State and National Scenic Highway. In addition, portions of the campus in this area are described in City of San Luis Obispo General Plan as a "Greenbelt." San Luis Obispo County also defines portions of campus adjacent to Highway 1 as part of a "Greenbelt," and part of a "Gateway to San Luis Obispo." The County Conservation and Open Space Element defines Highway 1 as a "Scenic Corridor," requiring development within 100 feet of the highway to include sensitive design components to preserve scenic resources and views. These policy designations do not govern Cal Poly lands, but they are noted in order to assess fully potential visual impacts associated Master Plan development in this portion of campus.

The Master Plan includes the development of new recreational facilities, include rodeo facilities, and two residential neighborhoods (N4 and N5) in this area. These projects are primarily located in the southern, less visible portion of the area, closest to the center of campus, and thus will not present a new visual intrusion or impact. However, depending on the final design of these future developments, it is possible that these large structures could interfere with quality views of the distant hills as seen from Highway 1.

The Master Plan also includes development in the western portion of campus away from the center of campus, which has the potential to substantially block hillside views as seen from Highway 1. In particular, future Master Plan development constructed immediately adjacent to Highway 1 could result in significant visual impacts due to view blockage of the Santa Lucia Hills.

Development described in the Master Plan west of Highway 1 will have the potential to impact the community in terms of blocking views of the surrounding hills from adjacent existing residential neighborhoods. Development in this area could also silhouette above the primary ridgeline to the west and block views of the Morros as seen from Highway 1.

# Scenic Vistas – Slack and Grand Residential Neighborhood

The Master Plan identifies a new residential neighborhood at the corner of Slack Street and Grand Avenue (Figure 34). This near-term Master Plan component provides for development of 420 various-size apartments in two to five-story buildings, with the tallest buildings at the entrance near the corner of Slack Street and Grand Avenue. The design will follow the contemporary-craftsman style, with an abundance of contrasting geometric planes and expressed functionality. The plan shows abundant landscaping throughout the site, with courtyards, play areas and green-spaces throughout the site. The project will require the removal of the majority of the existing trees along Grand Avenue as well as along the drainage bisecting the site.

**Figure 34. Illustrative Site Plan of Slack and Grand Residential Neighborhood**


Figure 33 illustrates the existing view of the site as seen from the southwest corner of Grand Avenue looking northeast toward the Santa Lucia Hills, and Figure 35 shows the artist rendering of the future view at the entry to the site at the corner of Grand Avenue and Slack Street. As shown in Figure 35, the buildings flanking the entry plaza, with three stories of apartments over the podium parking, at the corner of Slack Street and Grand Avenue will impede views of the Santa Lucia Hills as seen from Grand Avenue. It should be noted, however, that such views are currently impacted by the large trees fronting Grand Avenue and Slack Street, which also presents a current visual intrusion onto the views of the Santa Lucia Hills. From certain viewing

locations, the uppermost portion of the Santa Lucia Hills will be seen beyond the buildings, however from viewpoints approaching campus on Grand Avenue and its sidewalks, hillside views will be effectively eliminated. Grand Avenue is a City Designated Scenic Roadway. As views of the Santa Lucia Hills are identified scenic resources, this impact to scenic vistas is considered to be significant.

**Figure 35. Site View Rendering**

Design changes to lessen the impact of the Slack and Grand Residential Neighborhood were reviewed and considered, resulting in lowering the height of the residential buildings at the southern portion of the site to two stories along a portion of Slack Street, in order to reduce the impact on hillside views from the single-family neighborhood across from the site. However, to substantially lessen the impact on views of the Santa Lucia Hills would require changing the height of the buildings and restricting their locations, which was determined not to be feasible. Changing the height of buildings and restricting their locations would result in development of less housing on the site, providing fewer housing opportunities for the University faculty that is vital for Cal Poly to recruit, and retain, faculty and staff, as well as for the general non-student population, enabling more people to live next to San Luis Obispo and work in San Luis Obispo. San Luis Obispo has an acute imbalance of housing versus employment as it lacks sufficient housing. According to data from the U.S. Census Bureau,[41] 77% of the people employed in San Luis Obispo live outside the city and commute into the city to work. This lack of housing is projected to continue in the future with the City adding 5,972 jobs but only 1,647 housing units

[41] U.S. Census Bureau. 2017. OnTheMap. U.S. Census Bureau, Center for Economic Studies. Available at: https://onthemap.ces.census.gov/.

between 2015 and 2035.[42] Restricted building heights and locations would also substantially impede the ability to develop a cohesive neighborhood community with needed on-site amenities for the residents, and for such development to be economically viable. Thus, the ability to achieve the major project objectives of providing housing opportunities on campus primarily for University faculty and staff to promote faculty and staff recruitment and retention, and to enhance faculty and staff connectivity with the campus; providing housing opportunities to non-traditional students such as graduate students, veterans, and those with families, and possibly alumni or retirement housing, and for the greater San Luis Obispo community; and generate revenue to realize the Master Plan objectives and to further support and benefit the CSU's educational mission would be substantially constrained.

## Scenic Resources as seen from the State Scenic Highway

A scenic resource is a specific feature or element with a high degree of memorability or landmark characteristics that contributes to the high visual quality of the corridor. From along State Highway 1 through the Chorro Valley, the Morros, Cuesta Ridge, the Santa Lucia Hills, unique rock outcroppings, significant groupings of trees, and certain old ranch buildings are considered the primary scenic resources. Implementation of the Master Plan will result in a significant impact if it were to damage or have a substantial negative effect on views of any of those specific resources as seen from Highway 1, an Officially Designated State Scenic Highway.

In the Residential East Campus, the Master Plan envisions a new freshman student housing project located directly behind the existing freshmen dorms at the base of the Santa Lucia Hills, in an area currently used as a parking lot. Because of its elevated location, development in this area could be seen from a section of Highway 1 depending on the height of the structures. Visibility of new student housing will result in an adverse visual impact if the project were to extend noticeably further up the hillside than the other existing development in the vicinity. Such visibility will draw attention to the new development and will encroach onto the hillside scenic resource as seen from Highway 1.

As described in the Master Plan, future development in the North Campus could include larger projects such as a new a mixed use academic, office, and student support activity center adjacent to future student housing as well as a sports arena. These projects are proposed to be located in the southern, less visible portion of this planning area, closest to the Campus Core planning area. Depending on the final design of these future developments, it is possible that these large structures could interfere with quality views of the Santa Lucia Hills scenic resource as seen from Highway 1.

The West Campus is the most visually sensitive in terms of proximity to the State Scenic Highway 1. Future development in the western portion of campus will include rodeo facilities, recreational facilities, and two new residential neighborhoods (N4 and N5) west of Highway 1. Some of these projects will be located in the southern, less visible portion of the area, closest to the center of campus. However depending on the final design of these future developments, it is

[42] San Luis Obispo Council of Governments (SLOCOG). 2017. *2050 Regional Growth Forecast for San Luis Obispo County*. Adopted June 2017.

possible that larger structures could interfere with quality views of the Santa Lucia Hills and Cuesta Ridge scenic resource as seen from Highway 1.

Other developments in the western portion of campus away from the center of campus could also substantially block hillside views as seen from Highway 1. Future development constructed on the west side of Stenner Creek immediately adjacent to Highway 1 could result in significant visual impacts due to view blockage of the Santa Lucia Hills and Cuesta Ridge scenic resource.

Development described in the Master Plan west of Highway 1 will have the potential to impact the community in terms of blocking views of the surrounding hills from adjacent existing residential neighborhoods. Development in this area could also silhouette above the primary ridgeline to the west and block views of the Morros scenic resource as seen from Highway 1.

## Slack and Grand Residential Neighborhood

The Slack and Grand Residential Neighborhood will not be visible from Highway 1, an Officially Designated State Scenic Highway.

## Visual Character and Quality

Implementation of the Master Plan will be considered to have a significant impact on the visual character of the setting if it altered the area in a way that substantially changed, detracted from, or degraded the visual quality. A fundamental change in visual character is inevitable with the evolution of a college campus over time. The degree to which proposed change reflects documented community values and meets users' and other viewers' aesthetic expectations is a basis for determining levels of significance. Visual compatibility may be used as a measure of the potential impact that the project may have on the visual character and quality of the site.

The visual character of the campus is influenced by both built and natural elements. Located adjacent to the City of San Luis Obispo, the campus is also situated at the eastern end of the highly scenic Chorro Valley, which extends from San Luis Obispo northwest to Morro Bay and the Pacific Ocean. University lands include range and agricultural areas, natural preserves, and campus developed areas.

The visual character of the campus itself varies according to area. The Academic Core is relatively compact, and the existing buildings include a variety of architectural styles and forms. The aesthetic quality of the campus center is the inherent result of an evolution of architectural styles and planning trends over several decades.

The Residential East Campus is largely defined by multi-story dormitories, athletic fields, and parking areas. Two- to five-story student housing complexes are located along both sides of Grand Avenue, and larger-scale on-campus housing at the border of the North Campus planning area in and near Poly Canyon. Mature landscaping can be seen throughout the area. This area of campus is also influenced by the undeveloped Santa Lucia hills which rise up to the east, and the surrounding densely developed single-family residential neighborhoods that border campus.

The visual character of the North Campus planning area is mixed and supports a variety of agricultural, athletic, and residential functions. The Master Plan proposes to transition from sports and agricultural fields to mixed-use multi-story residential developments east of this area.

The West Campus is the least developed. A combination of agricultural fields, support facilities and working labs are seen throughout the area. Stenner Creek generally bisects the western side of campus in a north-south direction. The overall landform of the area rises up from the southwest to the northeast, interspersed with a few small, elevated knolls.

Much of the visual setting of the area surrounding the campus is established by the combination of the dramatic topography and mountain peaks along with the existing vegetative patterns. The Highway 1 corridor between San Luis Obispo and the City of Morro Bay is mostly rural, however development can be seen in the vicinity of the project site and throughout the valley. This includes relatively densely developed residential areas surrounding the south-west to south-east portions of the campus. Although these developments are generally visible from the highway, the adjacent hills and mountain peaks rising up behind them tend to dominate the views and define the scenic character.

Future development of the Academic Core will have limited visibility from public viewpoints in the surrounding community. Because the central campus is already well-developed, future development will generally be seen as in-fill and will not represent a substantially new visual intrusion that will degrade the existing visual character or quality of the site and its surroundings. Proposed new Master Plan facilities adjacent to existing residential neighborhoods surrounding the Academic Core's southern border have the potential to impact the community in terms of incompatible visual scale and character if such facilities were to extend several stories higher than the existing and surrounding core buildings.

The residential neighborhoods proposed in the Master Plan for the East Campus area, specifically at the campus' border with Slack Street and Longview Avenue, intended primarily for faculty and staff will likely be two to five stories, which is consistent with the overall pattern of development in this area on campus, including the new Student Housing South project situated between these two residential neighborhood sites.

The new residential neighborhood near Stenner Creek (N5) in the western part of campus will have the potential to affect the visual quality and character of views from Highway 1. Multi-story housing development in this area could appear visually inconsistent with the existing agricultural character of the area.

Other developments in the western part of campus as envisioned in the Master Plan could also substantially degrade visual quality as seen from Highway 1 by way of introducing non-agricultural appearing uses into areas away from the center of campus. Development on the west side of Stenner Creek immediately adjacent to Highway 1 could result in a significant visual impact due to alteration of visual character by introducing urban uses into the agricultural setting.

Future development west of Highway 1 will have the potential to impact the adjacent to existing residential neighborhoods in terms of incompatible visual scale.

## Slack and Grand Residential Neighborhood

The Master Plan includes the new Slack and Grand Residential Neighborhood (N1) at the corner of Slack Street and Grand Avenue in the eastern portion of campus. This site is currently used as pasture land, and is surrounded by freshman student dorms to the north and west (across Grand Avenue), single-family homes to the south (across Slack Street), and the Santa Lucia hills rising up to the east. This near-term project is comprised of two- to five-story apartment buildings, which will be generally visually compatible with nearby campus development, specifically the Yosemite freshmen dorms across Slack Street and the new yakʔityutyu Residential Community (Student Housing South) with up to five story buildings at the opposite corner of Slack Street and Grand Avenue.

## Light and Glare

Future development of the central part of campus will have limited visibility from public viewpoints in the surrounding area. Because the central part of the campus is already well-developed, a substantial amount of ambient and point-source light already exists in the area. Nonetheless, campus development with new facilities and improvements pursuant to the Master Plan has the potential to result in significant light and glare impact to the closest residential neighborhoods.

Because of development in the Residential East Campus area's proximity to residential neighborhoods along Slack Street, Longview Lane and other areas, anticipated Master Plan development will have the potential to result in light and glare impacts.

Future development in the North and West Campus areas includes sports arenas, parking structures, student housing and residential neighborhoods. Most of these facilities will be located in the southern, less visible portion of the area, closest to the center of campus, and thus are not expected to serve as significant new sources of lighting in the area. However, nighttime lighting, particularly associated with the sports facilities will potentially be seen over a wide area and could result in a substantial amount of nighttime glare. In addition, lighting associated with the potential N4 and N5 residential neighborhoods west of Highway 1 could present new light and glare impacts to nearby off-campus residential communities, particularly with the N4 site, and present a new source of light or glare in the otherwise more rural setting of the N5 site. Therefore, impact associated with lighting of these future facilities within the campus is considered to be potentially significant.

## Slack and Grand Residential Neighborhood

The Master Plan includes a new residential neighborhood at the corner of Slack Street and Grand Avenue in the eastern portion of campus. Because of its proximity to residential neighborhoods along Slack Street, Grand Avenue, and other areas, the Slack and Grand Residential Neighborhood will have the potential to result in light and glare impacts. Due to the proposed two- to five-story buildings and required public safety requirements, it has the potential to result in a substantial new source of light as seen from off-campus viewpoints in the immediate project vicinity.

# Mitigation Measures

## Measures Related to Scenic Vistas

Development of the Slack and Grand Residential Neighborhood will substantially block existing views of the Santa Lucia Hills as seen from portions of Slack Street and from Grand Avenue, resulting in a potentially significant direct long-term impact to scenic vistas.

During the design process for the Slack and Grand Residential Neighborhood, design changes to lessen the impact on the hillside view from the existing residential neighborhood across Slack Street from the site were implemented by lowering the height of buildings along a portion of Slack Street to two stories. However, lowering the height of other buildings on the southern portion of the site and restricting the locations of the buildings within the site in order to preserve a viewing area to the Santa Lucia Hills was determined not to be infeasible and this impact is considered significant and unavoidable.

Development of the freshman student housing in the Residential East Campus area has the potential to extend noticeably further up the hillside than other existing development in the vicinity. Such visibility will draw attention to the new development and will encroach onto the Santa Lucia hillside as seen from Highway 1, resulting in potentially significant direct long-term impacts to the existing scenic vista.

3.4-1 No portion of the freshman student housing shall exceed the elevation of the highest point of the existing Cerro Vista student housing development located north of the project.

Development on the west side of Highway 1 has the potential to silhouette above the primary ridgeline as seen from Highway 1, resulting in potentially significant direct long-term impacts to the existing scenic vista.

3.4-2 No portion of development west of Highway 1 shall silhouette above any ridgeline as viewed from Highway 1.

## Measures Related to Scenic Resources as seen from the State Scenic Highway 1

Development on the west side of Highway 1 has the potential to silhouette above the primary ridgeline as seen from Highway 1, resulting in potentially significant direct long-term impacts to the ridgeline Scenic Resource along a State Scenic Highway.

Implement Mitigation Measures 3.4-2.

## Measures Related to the Existing Visual Character and Quality of the Site and its Surroundings

Development of the Slack and Grand Residential Neighborhood will transform the project site from rural open space to residential urban use.

Design changes to lessen the impact of the Slack and Grand Residential Neighborhood were considered and implemented, including lowering the heights of the residential structures along a portion of Slack Street, in order to reduce the impact on the adjacent single-family neighborhood across the street from the site. Additionally, all exterior building colors throughout the project will use a variety of muted earth-tones to blend with the natural hillside setting and reduce surface glare, all exposed retaining walls throughout the project will be textured and colored to reduce noticeability and/ or screened by vegetation, and where feasible, all retaining walls taller than 6 feet will be stepped-back (off-set) and designed to accommodate integral planting.

With these features and since this residential neighborhood is visually consistent with existing campus student housing residential communities directly adjacent and across the street from the project site, therefore, this impact would be considered less than significant.

## Measures Related to Light or Glare Affecting Day or Nighttime Views in the Area

Projects resulting from implementation of the Master Plan, including the Slack and Grand Residential Neighborhood, will have the potential to cast a substantial new source of light and glare into the surrounding area, resulting in potentially significant direct long-term impacts to nighttime views.

3.4-3 Future development throughout the campus shall be designed and installed so that no point-source light or light spill-over will be visible from beyond the campus boundary. Prior to approval of each future development plan, the University shall submit a comprehensive lighting plan for review and approval by the CSU. The Lighting Plan shall be prepared by a qualified engineer who is an active member of the Illuminating Engineering Society of North America (IESNA) using guidance and best practices endorsed by the International Dark Sky Association. The lighting plan shall address all applicable aspects of the lighting, including but not limited to all buildings, infrastructure, surface parking lots, parking garage decks, portals and driveways, paths, recreation areas, safety, and signage. The lighting plan shall include the following in conjunction with other measures as determined by the illumination engineer:

- The point source of all exterior lighting shall be shielded from off-site views;
- Light trespass from exterior lights shall be minimized by directing light downward and utilizing cut-off fixtures or shields;
- Illumination from exterior lights shall be the lowest level allowed by public safety standards;

- Exterior lighting shall be designed to minimize illumination onto exterior walls; and,
- Any signage visible from off-site shall not be internally illuminated.

# Level of Impact After Mitigation

Application of the Master Plan Guiding Principles related to visual quality, along with implementation of identified mitigation measures will minimize potential impacts related to scenic resources as seen from State Scenic Highway 1, visual quality and character of the site and surroundings as seen from the off-campus surrounding areas, and light and glare as seen from the off-campus surrounding areas, and therefore, impacts will be less than significant.

## Slack and Grand Residential Neighborhood

Implementation of identified mitigation measures related to light and glare as seen from the off-campus surrounding areas, will minimize potential impacts from the project and therefore, impacts will be less than significant. However, the potential impact related to scenic vistas as seen from the off-campus surrounding areas, is considered to be significant and unavoidable.

# Cumulative Impact

The discussion of cumulative impacts relates to the potential for implementation of the Master Plan to contribute to an aggregate change in visual quality as seen from surrounding public viewing areas, taking into consideration existing as well as future development.

The Cal Poly campus continues to grow and evolve according to its mission and goals. New student housing, sports, and agricultural teaching facilities have been constructed in the last several years and can be seen in the visual context of the campus. The Master Plan anticipates substantial future growth throughout the campus, much of which will be visible from off-campus public viewpoints.

Surrounding the Cal Poly campus, both the City and County of San Luis Obispo have undergone some degree of visible growth over the last several years. The northeastern portion of San Luis Obispo, in the vicinity of the campus has for the most part reached “maximum build-out”, and although development continues to occur, it generally appears incremental and does not substantially alter the overall visual character of that area.

Visible development in the Chorro Valley northwest of the campus includes residential lots in the Paso de Caballo area, expansion of Cuesta College, the Sheriff’s Facility, County Animal Services, the shooting range, and Wood’s Humane Society, all of which are visible from Highway 1.

Various elements of future campus development will be visible from off-campus public viewpoints. The most noticeable development will be that located the closest to existing residential neighborhoods and in the western and northern campus areas along Highway 1. Each of these areas is considered highly sensitive to changes in the visual environment, and is

identified in local planning documents as having desirable open space and gateway characteristics, which increases the aesthetic sensitivity of the area. This change in visual character, when experienced along with other projects in the last several years in addition to future development within the City and County, could contribute to a potential emerging perception that the Chorro Valley is undergoing a visual change toward increasing development. With the implementation of the identified Master Plan mitigation measures the potential impact will be reduced to a less-than-significant level, except for the impact on scenic views associated with the Slack and Grand residential neighborhood. When combined with anticipated growth within the County and City over the next 20 years, the cumulative impact is considered to be significant.

## Slack and Grand Residential Neighborhood

Implementation of identified mitigation measures related to light and glare as seen from the off-campus surrounding areas, will minimize potential impacts from the Slack and Grand residential neighborhood project and therefore, light and glare impacts will be less than significant. However, application of the Master Plan Guiding Principles related to visual quality, along with changes made in the design will not fully minimize potential impacts related to scenic vistas as seen from the off-campus surrounding areas, and therefore cumulative visual impact would be considered significant.

# 3.5 Geology and Soils

This section examines the potential impacts to geology and soils associated with the campus development pursuant to the Master Plan, including the development of the Slack and Grand Residential Neighborhood. The Geologic Hazards Report for the Slack and Grand Avenue Apartments is included as Appendix D.

## Environmental Setting

### Geology

The Cal Poly campus is located in the vicinity of the Santa Lucia Range of the Coast Ranges Geomorphic Province of California. The Coast Ranges lie between the Pacific Ocean and the Sacramento-San Joaquin Valley and trend northwesterly along the California coast for approximately 600 miles between Santa Maria and the Oregon border. The Santa Lucia Range extends approximately 105 miles between the cities of San Luis Obispo and Monterey.

The San Luis Obispo region is underlain primarily by Jurassic-era (approximately 180-million-year-old) rocks of the Franciscan complex. The Franciscan complex is a mixture of igneous, metamorphic, and sedimentary rocks. Cretaceous and Tertiary sedimentary rocks in the Monterey and Pismo formations overlie the Franciscan complex in many parts of the San Luis Obispo area. The most distinctive morphological feature in the area is a chain of 14 Tertiary-era volcanic plugs (remnants of volcanos) that extend northwesterly from the city of San Luis Obispo to the city of Morro Bay, terminating in the prominent visual landmark of Morro Rock. Other notable members of the volcanic chain include Hollister Peak, Bishop Peak, and Cerro San Luis Obispo, which is located approximately 1.5 miles southwest of the campus.

### Seismicity

The Cal Poly campus is located in a seismically active region that includes several active earthquake faults of local and regional significance. An active fault is generally defined as a fault that has a historic seismic record or displaces Holocene-age deposits (11,000 years and younger). Active faults with the greatest potential to affect the Cal Poly campus include the San Andreas, Los Osos, Nacimiento, Rinconada, and Hosgri-San Simeon Faults.

Figure 36 shows the active faults near the Cal Poly campus. The nearest active fault is the Los Osos Fault, which extends adjacent to the southwest edge of the city. The fault's main strand lies near the intersection of Los Osos Valley Road and Foothill Boulevard, approximately 3.75 miles west of the campus. The fault is identified under the Alquist-Priolo Fault Hazards Act, which was enacted to help identify and map active faults and inform the process of building structures for human occupancy in the vicinity of mapped faults.

**Figure 36. Local Faults**

The Rinconada Fault trends northwest to southeast approximately 20 miles east of the campus. The Nacimiento Fault is located approximately 25 miles northwest of San Luis Obispo and the Hosgri-San Simeon Fault is located approximately 15 miles offshore, about 30 miles west of the city. The San Andreas Fault is considered to be the most likely source of a future major earthquake in California, with potential seismic events of up to a magnitude of 8.5 on the Richter scale. An earthquake of this size will result in as much as 30 feet of ground displacement. The San Andreas Fault is located approximately 40 miles east of Cal Poly and poses the primary seismic risk for the San Luis Obispo area.

## Soils

Soil types within the campus vary and include slopes of more than 20%. The suitability of such soils for development varies, as does the potential for geologic hazards. Table 11 identifies the soil types within the campus and their characteristics, and Figure 37 illustrates the soils in the Master Plan area.

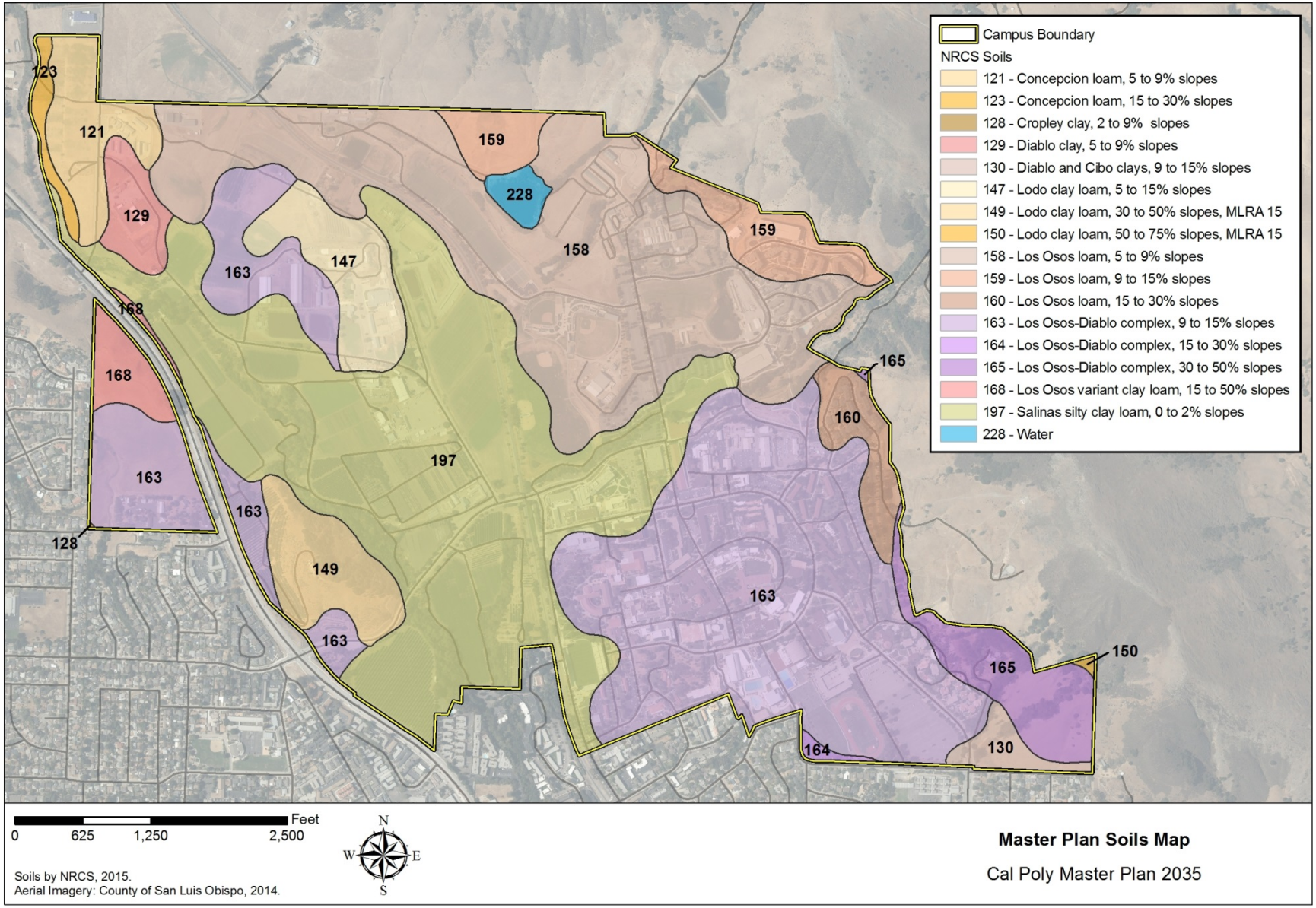
**Table 11. Campus Soil Types**[43]

| Soil Unit | Percent Slope | Shrink Swell Potential | Erosion Hazard | Description |
|---|---|---|---|---|
| 121 – Concepcion Loam | 5-9% | High | Moderate | Very deep soil, moderate drainage, permeability very slow, runoff medium to moderate hazard |
| 123 – Concepcion Loam | 15-30% | High | Moderate to high | Deep to moderate soil, well drained, permeability very slow |
| 128 – Cropley Clay | 2-9% | High | Slight to moderate | Moderate well drainage, potential for soil compaction |
| 129 – Diablo Clay | 5-9% | High | Slight to moderate | Deep soil, drains well |
| 132 – Diablo and Cibo Clay | 30-50% | High | High | Drains well, slow permeability |
| 147 – Lodo Clay Loam | 5-15% | Moderate to high | Moderate | Somewhat excessively drained, Moderate permeability |
| 148 – Lodo Clay Loam | 15-30% | Moderate to high | High | Somewhat excessively drained, Moderate permeability |
| 149 – Lodo Clay Loam | 30-50% | Low | High | Excessively drained, moderate permeability |
| 150 – Lodo Clay Loam | 50-75% | Moderate to high | High | Shallow soil, excessive drainage, very steep, permeability moderate |
| 158 – Los Osos Loam | 5-9% | High | Moderate | Moderate to deep soil, drains well |
| 160 – Los Osos Loam | 15-30% | High | High | Moderate to deep soil, drains well |
| 161 – Los Osos Loam | 30-50% | High | High | Moderate to deep soil, drains well |

[43] United States Department of Agriculture Natural Resources Conservation Science (NCRS). 2017. Web Soil Survey.

| Soil Unit | Percent Slope | Shrink Swell Potential | Erosion Hazard | Description |
|---|---|---|---|---|
| 163 – Los Osos-Diablo Complex | 9-15% | High | Moderate | Moderate soil, drains well, permeability slow, runoff medium |
| 164 – Los Osos-Diablo Complex | 15-30% | High | High | Moderate deep, drains well, permeability slow |
| 165 – Los Osos-Diablo Complex | 30-50% | High | High | Moderate deep, drains well, permeability slow |
| 183 – Obispo Rock Outcrop Complex | 15-75% | Moderate to high | High to very high | Shallow soil, well drained, permeability slow, surface runoff rapid |
| 194 – Riverwash | | Variable | Variable | Permeability rapid to very slow, moderate well drain |
| 197 – Salinas Silty Clay Loam | 0-2% | Moderate | Slight | Very deep soil, drains well, permeability slow |
| 127 – Cropley Clay | 2-9% | High | Slight | Drains well, potential for soil compaction |
| 128 – Cropley Clay | 2-9% | High | Slight | Moderate well drainage, potential for soil compaction |
| 129 – Diablo Clay | 5-9% | High | Slight to moderate | Deep soil, drains well |
| 130 – Diablo and Cibo Clay | 9-15% | High | Moderate | Deep soil, drains well, slow permeability |
| 131 – Diablo and Cibo Clay | 15-30% | High | Moderate | Drains well, slow permeability |
| 132 – Diablo and Cibo Clay | 30-50% | High | High | Drains well, slow permeability |
| 147 – Lodo Clay Loam | 5-15% | Moderate to high | Moderate | Moderate permeability |
| 148 – Lodo Clay Loam | 15-30% | Moderate to high | High | Moderate permeability |
| 149 – Lodo Clay Loam | 30-50% | Low | High | Excessively drain, moderate permeability |
| 158 – Los Osos Loam | 5-9% | High | Moderate | Moderate to deep soil, drains well |
| 159 – Los Osos Loam | 9-15% | High | Moderate | Moderate to deep soil, drains well |
| 160 – Los Osos Loam | 15-30% | High | High | Moderate to deep soil, drains well |
| 161 – Los Osos Loam | 30-50% | High | High | Moderate to deep soil, drains well |
| 194 – River Wash | | Variable | Variable | Permeability rapid to very slow, moderate well drain |
| 216 – Tierra Sand Loam | 2-9% | High | Slight or moderate | Moderate to well drain, surface runoff slow to medium drain |

**Figure 37. Master Plan Soils Map**



# Geologic Hazards

## Earthquakes

A historic record search indicates that approximately 46 earthquakes with magnitudes of 5.0 or greater have occurred within 65 miles of the campus between 1800 and 2016.[44] Based upon these historical earthquakes, the highest peak horizontal ground acceleration (PGA) estimated to have occurred at the campus is 0.269g;[45] this earthquake had a 5.9 magnitude, occurred in 1906, and was located approximately 2.8 miles northwest of the campus, which was also the closest earthquake to the campus. This earthquake probably occurred on the Los Osos Fault. The largest magnitude earthquake that the search revealed was a 7.9 magnitude earthquake on the southern portion of the San Andreas Fault, 40 miles northeast of the Cal Poly campus. This earthquake, known as the 1857 Fort Tejon earthquake, produced an estimated PGA of 0.11g at the campus.

The San Andreas Fault is considered to be the most likely source of a future major earthquake in California. There are segments along the fault where no large earthquakes have occurred for long intervals of time. Studies conducted by the United States Geological Survey show that large earthquakes have occurred at about 150-year intervals on the southern San Andreas fault. As the last large earthquake on the southern San Andreas occurred in 1857, that section of the fault is considered a likely location for an earthquake in the next few decades.

As described above, several active faults in the area could rupture and subject the campus to seismic shaking. Several types of seismic hazards are associated with earthquake events, including liquefaction.

## Fault Rupture

Surface rupture refers to the top of the ground moving unevenly along a fault—one side moves horizontally, vertically, or both, with respect to the other side. It typically occurs within an area of linear traces along previous ruptures, which mark a fault zone, and often in concert with movement on adjacent or intersecting faults. Rupture of the ground surface along a fault trace typically occurs during earthquakes of about magnitude 5.0 or greater. Surface rupture endangers life and property when structures or lifeline facilities are located on, or cross over, a fault.

The fault activity nomenclature defined under the Alquist-Priolo Earthquake Fault Zoning Act was used as the basis for evaluating fault activity and seismicity for this study. The activity rating of faults under the act is summarized by the following guidelines:

> *A fault is considered* active *if it can be substantiated that the fault has ruptured during the Holocene (within the last 11,000 years before present);*
>
> *A fault is considered* potentially active *if it can be substantiated that the fault has ruptured during the Pleistocene (within the last 2,000,000 years before present) but not during the Holocene;*

[44] Earth Systems. 2017a. *Geologic Hazards Report for Slack and Grand Avenue Apartments, San Luis Obispo, CA*. April 19, 2017.
[45] g = the acceleration due to Earth's gravity, equivalent to g-force.

> *A fault is considered* inactive *if it can be substantiated that the fault has not ruptured during the Pleistocene or Holocene (in other words, it has not ruptured within the last 2,000,000 years).*

The closest mapped fault that is known to be active is the Los Osos fault zone, which is approximately 3.75 miles southwest of the site.[44] Other faults that could affect the site during the project's lifespan are the San Andreas fault and the Hosgri-San Simeon fault. Other local faults mapped in the project vicinity are classified as potentially active to inactive. The San Andreas Fault is considered to be the most likely source of a future major earthquake in California, with potential seismic events of up to a magnitude of 8.5 on the Richter scale. The San Andreas Fault is located approximately 40 miles northeast of Cal Poly and poses the primary seismic risk for the San Luis Obispo area. Both the Los Osos fault zone and San Andreas fault zone have been identified under the State of California Alquist Priolo Fault Hazards Act (APFHE). A map showing the location of the faults discussed is presented on Figure 36. A description of the major active faults is presented below.

**Los Osos Fault Zone.** The Los Osos Fault is mapped running northwest to southeast along the Los Osos Valley at the base of the Irish Hills. Studies of a portion of the Los Osos Fault located near the intersection of Los Osos Valley and Foothill Roads indicates that faulting activity has taken place within the last 11,000 years.[44] This evidence of recent activity resulted in the establishment of an Alquist-Priolo Special Studies Zone along a portion of the fault by the California Division of Mines and Geology.[46] The Los Osos Fault is estimated to be capable of generating a maximum credible earthquake of moment magnitude 6.75 to 7.0.

**San Andreas Fault Zone.** The Mojave segment of the southern San Andreas Fault is mapped along the eastern San Luis Obispo County line, approximately 40 miles northeast of the Cal Poly campus. The San Andreas Fault is the most historically active fault in California, and is considered to be the most likely source of future major earthquakes in California. The San Andreas Fault is estimated to be capable of a maximum credible seismic event of moment magnitude 8.3 to 8.5. It is expected that a magnitude 8.5 earthquake on the fault could result in up to 30 feet of ground displacement along the fault trace.

**San Simeon-Hosgri Fault.** The Hosgri Fault is located offshore approximately 15 miles west of San Luis Obispo. The fault trends in a northwesterly to southeasterly direction, and comes onshore as the San Simeon Fault near San Simeon Point. It has been identified as having an earthquake event of magnitude 7.2 to 7.7 every 200 to 800 years. The San Simeon Fault, which is onshore, is a right-lateral fault that has been substantiated as having ruptured during the Holocene, thus, indicating the fault is active.[46] The Hosgri Fault, which is also a right-lateral fault, is inferred to have moved within the Holocene, also indicating the fault is active. The last rupture event along the San Simeon Fault could have occurred between about 265 and 2,000 years ago.[46] The southern segment of the Hosgri Fault could be responsible for the 1927 magnitude 7.0 Lompoc Earthquake.

[46] SWCA Environmental Consultants (SWCA). 2001. *Cal Poly Master Plan FEIR, Geology Section*. Prepared for Cal Poly. March 21, 2001.

## Seismic Ground Shaking

Ground shaking refers to the vibration that occurs during an earthquake in response to displacement along a fault. Typically, ground shaking has a side-to-side component as well as a vertical component, with the actual movement depending on the type of fault, a site's distance from the fault, and the rock and soil conditions at the site. Shaking endangers life and property by damaging or destroying structures and lifeline facilities.

Most of California is located in a seismically active area. As such, there is potential to experience strong ground shaking from earthquakes on a regional or local fault. The San Andreas Fault and the offshore Hosgri Fault present the most likely source of ground shaking for San Luis Obispo, have a high probability of producing a major earthquake within an average lifespan. The highest risk from ground shaking is found on deep soils that were deposited by water, are geologically recent, and have many pore spaces among the soil grains.[47]

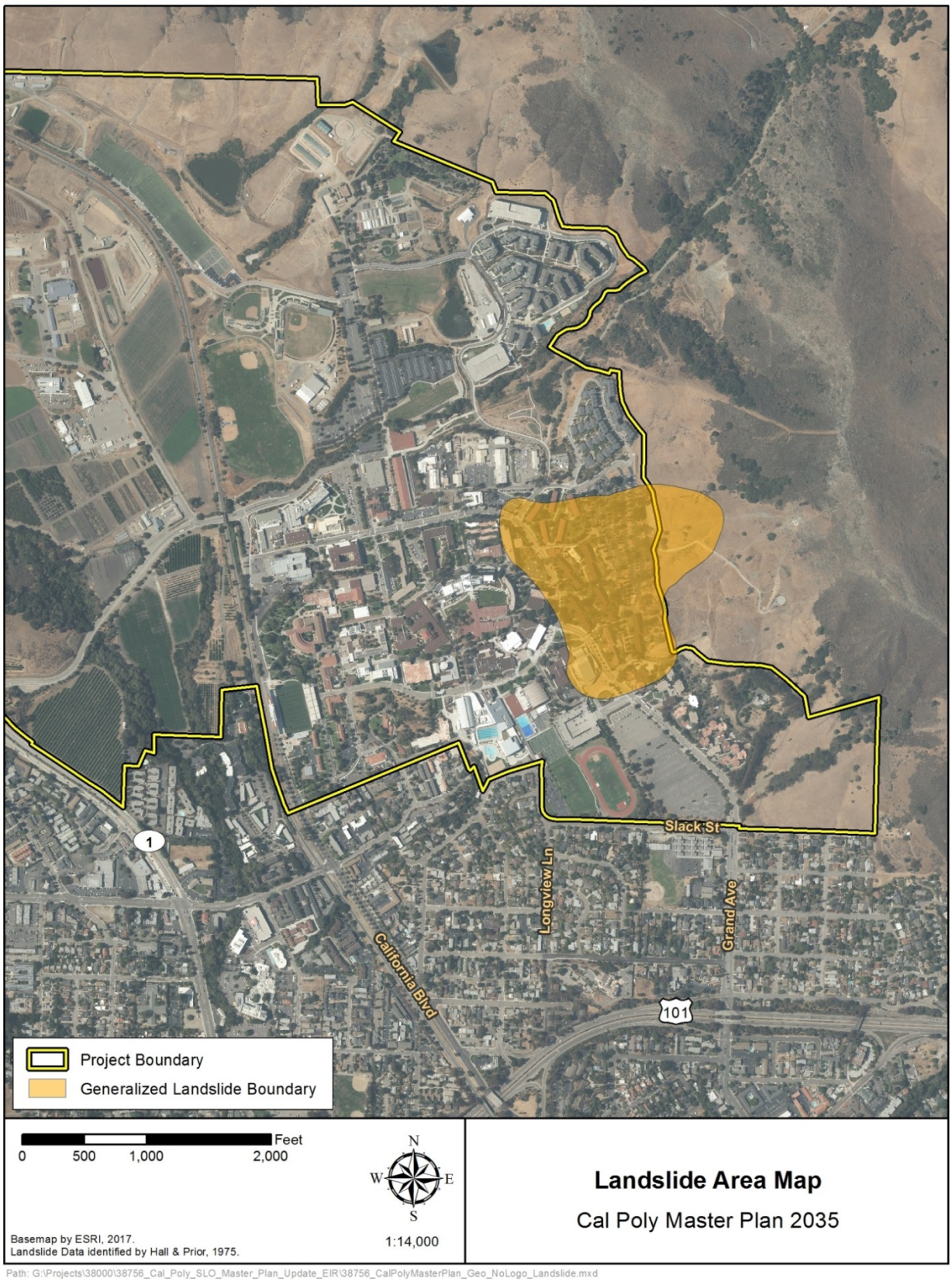
## Landslides and Slope Instability

Slope instability can occur as a gradual spreading of soil, a relatively sudden slippage, a rockfall, or in other forms. Causes include steep slopes, inherently weak soils, saturated soils, and earthquakes. Improper grading and man-made drainage can be contributing factors. Slope instability may result in gradual or sudden damage to buildings, roads, and utility lines. Sudden movement can be a threat to lives through immediate injury or suffocation, or loss of access.

Steep hillsides form the eastern boundary of the Cal Poly campus. A geologic map prepared by Hall and Prior in 1975 found that most of the eastern third of the Cal Poly campus is underlain by a landslide (Figure 38). A portion of the Student Housing South development that is located along Grand Avenue, for instance, is located within an area of high landslide potential.[48] A landslide event also occurred recently in February 2017 on the slope above the Fremont Dorm, which is located at the intersection Klamath and Deer Road (approximately 1,500 feet north and east of the Student Housing South project), which resulted in immediate closure of the building. Grading work has since been done to remove the upper landslide mass contributing to the driving force of the landslide. Investigations are currently in progress to develop recommendations to best reduce potential risks associated with this landslide.[49]

[47] City of San Luis Obispo. 2004. Ground Shaking and Landslide Hazards Map.
[48] SWCA Environmental Consultants (SWCA). 2014. *Student Housing South EIR, Geology Section*. Prepared for Cal Poly.
[49] Earth Systems. 2017b. *Fremont Dorm Emergency Landslide Consultation, San Luis Obispo, CA*. March 2017.

**Figure 38. Existing Landslide Boundary**



## Seismically-Induced Settlement and Liquefaction

Settlement occurs when the ground supporting part of a structure or facility lowers more than the rest or becomes softer, usually because ground shaking reduces the voids between soil particles (and often with groundwater rising in the process). The result can be more strain on the supporting features than they were built to withstand, leading to cracked walls or floors and broken water and sewer lines.

Liquefaction is the sudden loss of the soil's supporting strength due to groundwater filling and lubricating the spaces between soil particles as a result of ground shaking. Soils with high risk for liquefaction are typically sandy and in creek floodplains or close to lakes. In extreme cases of liquefaction, structures can tilt, break apart, or sink into the ground. The likelihood of liquefaction increases with the strength and duration of an earthquake.

The soils in the San Luis Obispo area (including the Cal Poly campus) that are most susceptible to ground shaking, and which contain shallow ground water, are the ones most likely to have a potential for settlement and for liquefaction. Soils located within the project site range from low to moderate risk for liquefaction (Figure 39).

## Differential Settlement

Differential settlement occurs when a foundation of a particular building spans two materials having different settlement characteristics, such as soil and rock. The soil-supported portion of the building will settle more than the rock-supported portion; this situation can stress and possibly damage foundations, often resulting in severe cracks and displacement. To reduce this potential, it is necessary for all foundations of an individual building to bear in relatively uniform material.

## Expansive Soils

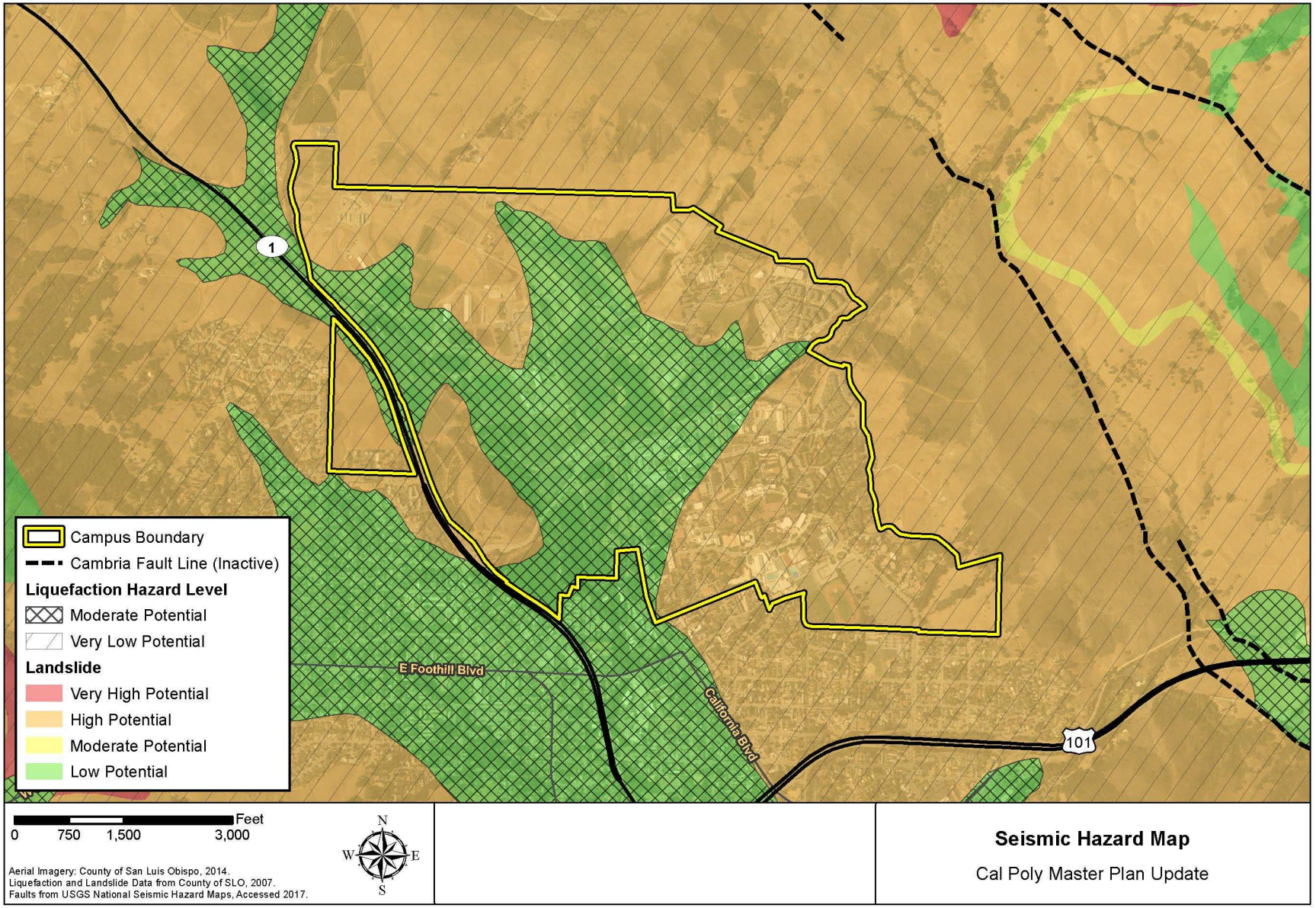
Expansive soils tend to swell with seasonal increases in soil moisture and shrink during the dry season as soil moisture decreases. The volume changes that the soils undergo in this cyclical pattern can stress and damage slabs and foundations. All soils on the Cal Poly campus do have expansion potential to some degree (Table 11).

## Soil Erosion

Topsoil is the upper, outermost layer of soil, usually the top 2 to 8 inches, which generally contains the highest concentration of organic matter and is where plants generally concentrate their roots and obtain most of their nutrients. The depth of topsoil can be measured as the depth from the surface to the first densely packed soil layer known as subsoil.

Depending on soil type, some soils are more susceptible to higher erosion potential than others. Grading and excavation activities commonly associated with construction often expose soils to wind or water erosion, resulting in the loss of topsoil.

## Figure 39. Seismic Hazard Zones



## Slack and Grand Residential Neighborhood

A site-specific Geologic Hazards Report was prepared for the N1 Residential Neighborhood planned to be located northeast of Slack Street and Grand Avenue, overlooking the southern end of the campus. [44] The site slopes down generally from east to west with the lowest elevation of the site being near the intersection of Grand Avenue and Slack Street. The site elevation ranges from approximately 370 to 550 feet above sea level. A relatively shallow but well-defined tree-lined drainage swale bisects the site. Soils onsite consist of Diablo and Cibo clays, 9-15% slope, and Los Osos-Diablo complex, 9-15% slope. Two types of bedrock were found underlying the soils on the project site, sandstone of the Franciscan Mélange and Metavolcanic rock. No faults cross through the site and the closest active fault is the Irish Hills segment of the Los Osos Fault, located approximately 3.75 miles southwest.

No evidence of significant active landsliding was observed onsite. However, the report identified ancient landslide debris along the drainage swale within the site as well as evidence of surficial seepage. The ancient landslide debris that is present within this portion of campus and on the N1 site was found to be inactive. The project site is within an area with very low potential for liquefaction.

# Regulatory Setting

## Federal Regulations

### Clean Water Act

The Federal Water Pollution Control Act of 1972, often referred to as the Clean Water Act, empowers the United States Environmental Protection Agency (USEPA) with regulation of wastewater and stormwater discharge into surface waters by using National Pollution Discharge Elimination System (NPDES) permits and pretreatment standards. At the state level, these permits are issued by the SWRCB (and often through its RWQCBs), but the USEPA retains jurisdiction at its discretion. The Clean Water Act's primary application for geology and soils is with respect to the control of soil erosion during construction.

## State Regulations

### The Alquist-Priolo Act

The Alquist-Priolo Earthquake Fault Zoning Act was developed by the state to regulate development near active faults and mitigate the surface fault rupture potential and other hazards. The act identifies active earthquake fault zones and restricts building habitable structures over known active or potentially active faults.

### Building Standards

The development and maintenance of all buildings owned by the State of California, including those on the Cal Poly campus or other buildings owned by the CSU Trustees and/or the Regents of the University of California, must comply with the building standards approved by and

codified by the California Building Standards Commission (BSC). Established in 1953 by the California Building Standards Law, the BSC is an independent commission within the State and Consumer Services Agency responsible for publishing approved building standards in a state building code. The BSC reviews and approves the building codes proposed and adopted by various state agencies, and codifies and publishes them in one state building standards code in Title 24 of the California Code of Regulations. Code compliance determinations at the CSU are the ultimate responsibility of the Department of Capital Planning, Design and Construction within the Office of the Chancellor.

In addition to meeting or exceeding existing building code requirements and practices, the project will also be subject to the standard practices of the Structural Engineers Association of California (SEAOC). The goal of SEAOC is to establish high professional standards to advance the state-of-the-art and the state-of-the-practice of structural engineering and to provide the public with safe and economical buildings.

## Seismic Hazards Mapping Act

Under the Seismic Hazards Mapping Act of 1990, the California Department of Conservation, California Geological Survey identifies and maps areas prone to earthquake hazards, liquefaction, earthquake-induced landslides, and amplified ground shaking. The purpose of the Seismic Hazards Mapping Act is to minimize loss of life and property through the identification, evaluation, and mitigation of seismic hazards.

Staff geologists in the Seismic Hazard Zonation Program of the California Geological Survey gather existing geological, geophysical and geotechnical data from numerous sources to produce the Seismic Hazard Zone Maps. They integrate and interpret these data regionally in order to evaluate the severity of the seismic hazards and designate as Zones of Required Investigation (ZORI) those areas prone to liquefaction and earthquake–induced landslides. Cities and counties are then required to use the Seismic Hazard Zone Maps in their land use planning and building permit processes.

## California State University Seismic Requirements

The CSU Seismic Requirements were established to implement the Seismic Policy set by the CSU Board of Trustees. The CSU Seismic Policy applies to all structures within the bounds of a CSU campus master plan. Planning for all projects shall address the options considered to improve seismic performance beyond minimally required code conformance. The basis for determination of the selected option selected for shall be documented. The CSU Seismic Requirements address many special conditions, including Geotechnical Investigations, Modular Buildings, Pre-engineered Structures, Temporary Use of Buildings, Voluntary Retrofits, Use of Engineered Wood Products, and Designated Seismic Systems. Design professionals are expected to directly notify the CSU construction manager and seismic peer reviewer of potential construction changes or modification to the approved design documents that could substantively impact expected structural performance, and, where appropriate, directly contact the seismic peer reviewer for consideration of and concurrence with the changes as specific conditions warrant.

## Slack and Grand Residential Neighborhood

The regulatory setting for the Slack and Grand Residential Neighborhood is the same as the regulatory setting for the Master Plan. Please refer to the Regulatory Setting discussions above.

# Impact Criteria

The following significance criteria for Geology and Soils have been derived from the CEQA Guidelines (Appendix G, Environmental Checklist Form, Section IX). Impacts of the proposed project will be considered significant and will require mitigation if the project will:

- Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:
    - Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map or based on other substantial evidence of a known fault;
    - Strong seismic ground shaking;
    - Seismic-related ground failure, including liquefaction; or,
    - Landslides;
- Result in substantial soil erosion or the loss of topsoil;
- Be located on a geologic unit that is unstable, or that would become unstable as a result of the project, and potentially result in on-or off-site landslide, lateral spreading, subsidence, liquefaction or collapse; or,
- Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property.

# Environmental Impact

## Seismic Hazards

### Fault Rupture

Seismic activity is common in California, including the San Luis Obispo area. The Los Osos Fault, located approximately 3.75 miles southwest of the site, and the San Andreas Fault, located approximately 40.0 miles east of the project site, are identified Alquist-Priolo earthquake faults and pose risks associated with surface rupture during a seismic event. However, the delineated fault zones associated with these faults do not encompass any portion of the campus, and no faults have been identified on or near the campus that will indicate a significant risk of impacts due to fault rupture.

Therefore, potential impacts associated with fault rupture will be less than significant.

## Seismic Ground Shaking

The campus is located in a seismically active area and has the potential to experience strong ground shaking from earthquakes on regional and local faults. There are several faults in the vicinity of the campus that are capable of producing strong ground motion, including the Hosgri-San Simeon, Los Osos and San Andreas faults. During an earthquake along any of these faults, seismically-induced ground shaking will be expected to occur.[44] The severity of the shaking will be influenced by the distance of the site to the seismic source. Based on geotechnical studies prepared in 2004 for the Mustang Stadium, expert assumptions indicate that the most significant seismic event predicted to affect structures within the Cal Poly campus would be a 6.8 magnitude event along the Los Osos Fault.[48] There is the potential for impacts as new development on campus could be exposed to the effects of unstable earth conditions during a ground-shaking event, potentially exposing people and structures to risk of injury, loss or death.

All design and construction of Master Plan facilities and improvements will be in compliance with the CSU Seismic Requirements. This includes conducting site-specific geotechnical studies, using established campus-specific "seismic ground motion parameters" that supersede California Building Code (CBC) values and implement a conservative evaluation on CBC Structural Risk Category assignments, addressing potential options considered to improve seismic performance beyond minimally required code conformance, and independent technical peer review assessing seismic performance of the overall structural system(s). Peer review starts at the individual facility inception and continues until construction. In compliance with CSU Seismic Requirements, seismic hazards will be predominantly addressed through proper structural design in accordance with applicable earthquake loads and seismic performance requirements. In addition, seismic ground shaking will be further addressed through compliance with the 2016 CBC and standards established by SEAOC. Therefore, seismic ground shaking impacts will be reduced to a less-than-significant level.

## Seismic Ground Failure/Liquefaction

Due to the varied nature of subsurface soils on the Cal Poly campus, the estimated ground depth to groundwater, and underlying bedrock, the potential for liquefaction and liquefaction-induced lateral spreading varies throughout the campus (Figure 39). Depending on sub-surface conditions at each site of the proposed Master Plan's facilities and improvements, new development could expose people and structures to the effects of liquefaction during a ground-shaking event.

All facilities proposed under the Master Plan will be analyzed in a site-specific geotechnical study and soils engineering report prior to consideration for approval. Measures recommended by the reports to minimize risk associated with seismic ground failure and liquefaction will be implemented.

In addition, all new Master Plan development will be required to comply with CSU Seismic Requirements (as detailed above), the 2016 CBC (effective January 1, 2017), and standards established by SEAOC. Compliance with these existing requirements and regulations will reduce potential impact to a less-than-significant level.

# Unstable Geologic Conditions

There is a moderate risk of unstable geologic conditions due to the potential for differential settlement and characteristics of underlying native soil units. Therefore, in development of all Master Plan's facilities and improvements, particular consideration will continue to be given to avoiding potential impacts associated with these conditions, and to the incorporation of site-specific and facility-specific design and construction measures that avoids risk of structural damage.

All Master Plan facilities and improvements will be required to prepare a site-specific geotechnical investigation and soils report prior to its consideration for approval. The report shall identify measures to avoid or reduce impacts associated with unstable geologic conditions. The implementation of the recommended measures in the geotechnical report, along with compliance with the 2016 CBC standards, will avoid risks associated with unstable geologic conditions. With continuing implementation of these requirements, the potential impact will be reduced to a less-than-significant level.

## Landslides

Landslides have been identified on the Cal Poly campus, specifically in the eastern portion of the campus, such as of the area of Grand Avenue, Klamath Road, and Deer Road. New Master Plan development within that area, including proposed student housing, could face an increased risk of landslide and could expose people and property to the risk from unstable ground conditions, resulting in a potentially significant impact.

The University will continue to prepare site-specific soils engineering investigations, as well as additional site-specific geologic evaluations in areas that are considered to have a high potential for landslides, for all Master Plan development in the eastern portion of the campus. Slope stability for each individual facility will be addressed through implementation of the recommendations of the geotechnical (soils and geologic) studies prepared for each individual facility. Therefore, with implementation of site-specific measures identified in the required geologic and/or soil engineering investigations and building code standards, potential impact to individual facilities and improvements will be reduced to a less-than-significant level.

## Soil Erosion

Construction activity is the most likely source of soil erosion associated with the build-out of the Master Plan. Loss of top soil will be affiliated with grading, fill, and development of each individual project. Exposed soils will be subject to wind and water during the construction period.

All new development will be required to comply with the SWRCB's General Permit for Discharges of Stormwater Associated with Construction Activity (Construction General Permit Order 2009-0009-DWQ). All new facilities and improvements that will result in over 1 acre of ground disturbance will be required to prepare a Storm Water Pollution Prevention Plan (SWPPP) for review and approval by the Central Coast RWQCB. The SWPPP will include information related to the facility design, stormwater collection and discharge points, and general

topography and drainage patterns across the individual facility site before and after construction. The SWPPP will list BMPs that will be implemented to prevent stormwater runoff and applicable monitoring programs to be implemented as needed.

All new development pursuant to the Master Plan will include all necessary stormwater infrastructure to support planned facilities. Site-specific geotechnical reports will be prepared and implemented for all Master Plan facilities and will include measures to prevent erosion on and off-site, including requirements for finished grades to direct surface runoff away from foundations, design of discharges to be non-erosive, installation of drains in areas that will otherwise not drain freely, stabilization of erodible soils during and following construction activities by establishing and maintaining vegetation, and long-term maintenance of drainage facilities as applicable. Continued compliance with these existing regulations will reduce potential impacts associated with soil erosion to a less-than-significant level.

### Expansive Soils

Expansive soils are present on the Cal Poly campus. All proposed Master Plan facilities will be subject to site-specific geotechnical surveys that will identify specific areas containing expansive soils and recommend precautionary construction measures and engineering techniques to avoid adverse impacts associated with this soil condition. Precautionary construction measures commonly used for slab protection include placement of non-expansive material beneath the slab or pre-moistening of sub-slab soils.

Implementation of the identified appropriate engineering techniques including maintaining relatively uniform moisture contents across the facility's site, designing structures to resist the movement associated with expansive soils, setting structures back from the top and toe of slopes with expansive soils, reducing slope inclinations in highly expansive soils, and similar techniques. With the incorporation of these measures, impacts associated with expansive soils will be reduced to a less-than-significant level.

## Slack and Grand Residential Neighborhood

Consistent with the requirements outlined above, a site-specific Geotechnical Hazards Report was prepared by Earth Systems Pacific for the proposed N1 Residential Neighborhood northeast of Slack Street and Grand Avenue.[44] As documented in the report, Earth Systems Pacific found evidence of surficial seepage that could lead to shallow surficial slumping.[44] The report determined that the risk associated with slumping could be reduced by grading, retention, or installation of drains. Although the report found no evidence of significant active landsliding on the site, it did identify a small, shallow soil slump type landslide (approximately 4 to 5 feet deep) near the eastern edge of the site. The report concluded that the loose soil in the slump could be removed or retained to reduce its impact on the site to a less-than-significant level.[44]

The report also investigated the ancient landslide debris that is present within and along the southern bank of the west-trending drainage on the Slack and Grand Residential Neighborhood site and concluded that the landslide is inactive given that the majority of the ancient landslide debris has been eroded out of the drainage swale. The report also concluded that while the ancient landslide debris present along the southern bank of the drainage will most likely be

removed during the construction, a small portion of the landslide is expected to remain along the eastern boundary of the site.[44] Recommendations in the report indicate that potential impacts associated with the ancient landslide can be avoided or reduced to a less-than-significant level by implementing geotechnical techniques such as debris removal, grading, or using retaining structures. As such, with the incorporation of the recommended measures, the report concluded the ancient landslide debris has a very low potential of impacting future development on the Slack and Grand Residential Neighborhood site and that the landslide presents a very low risk. [44] These recommended measures of the Geotechnical Hazard Report will be implemented into the Slack and Grand Residential Neighborhood project.

The potential for surface fault rupture to occur at the site is considered to be very low due to lack of any faults crossing the site. Due to the presence of relatively shallow sandstone bedrock underlying the site, potential for seismically induced liquefaction, differential settlement, and lateral spreading are considered to be negligible, and soil erosion and expansive soils were not identified as having high potential on the project site.

# Mitigation Measures

3.5-1 A geotechnical investigation shall be performed by qualified, licensed professionals for each site-specific Master Plan project before final design of any structures, and recommendations provided in the report shall be implemented, as appropriate.

3.5-2 Design and construction of structures proposed as part of the Master Plan shall conform to all applicable provisions and guidelines set forth in the 2016 CBC (Title 24), CSU seismic requirements, and SEAOC standards.

3.5-3 Preparation of a SWPPP will be required for new development on 1 acre or more. All development will be required to implement standard BMPs to minimize potential soil erosion during construction activities.

## Slack and Grand Residential Neighborhood

Based on the findings of the Geologic Hazards Report, implementation of Mitigation Measures 3.5-1 through 3.5-3, and compliance with existing regulations and requirements in design and construction, all potential impacts have been reduced to a less-than-significant level.[44] No additional mitigation measures are required.

# Level of Impact After Mitigation

Implementation of Mitigation Measures 3.5-1 through 3.5-3 will reduce potential impacts to geology and soils associated with development of the Master Plan. These measures will be required to be implemented, in combination with other measures identified during subsequent site-specific CEQA analysis, in order for impacts related to geology and soils from development as a result of the Master Plan to be considered significant but mitigable.

## Slack and Grand Residential Neighborhood

Implementation of Mitigation Measures 3.5-1 through 3.5-3 and continuing compliance with existing regulations and requirements will reduce potential impacts of this Master Plan project to a less-than-significant level. No additional mitigation measures are required.

# Cumulative Impact

The broader geographic area for cumulative geologic impacts encompasses the City and County of San Luis Obispo in addition to Cal Poly campus. For Master Plan development in areas prone to landslides, expansive or highly erosive soils, or unstable geologic conditions, implementation of site-specific engineering recommendations is required to minimize the potential for significant geologic impacts.

The proposed developments and improvements under the Master Plan will not result in a significant cumulative effect by exposing people or structures to substantial geologic hazards. All new development on Cal Poly campus and development not associated with Cal Poly within the City and the County will comply with all applicable regulations and requirements regarding design and construction activities and the applicable building standards and requirements. These regulations and requirements are designed to ensure that structures developed in regions prone to significant ground shaking can withstand the likely stress associated with such events or conditions. Mandatory compliance with these requirements will ensure that cumulative impact involving seismic ground shaking, liquefaction, and fault rupture is less than significant. Compliance with the 2016 CBC by the regional development community, including at the Cal Poly campus, will ensure that the cumulative effects involving seismic ground shaking, related ground failure and/or soil instability will be less than significant. Therefore, no significant cumulative impacts related to geotechnical hazards will occur as a result of Master Plan development within the campus in addition to future development adjacent to or nearby the Cal Poly campus.

## Slack and Grand Residential Neighborhood

Cumulative impacts associated with the Slack and Grand Neighborhood are addressed above.

# 3.6 Hydrology and Water Quality

This section examines the potential impacts to hydrology and water quality associated with the campus development pursuant to the Master Plan, including the development of the Slack and Grand Residential Neighborhood.

## Environmental Setting

The environmental setting description is based on information in the Water Quality Management Plan for Cal Poly Land in San Luis Obispo Creek and Chorro Creek Watersheds.[50]

### Watershed

The University campus is located within two watersheds: San Luis Obispo Creek and Chorro Creek. However, the majority of Cal Poly land lies within the San Luis Obispo Creek watershed and Stenner Sub-basin.

### Stream/Creek System

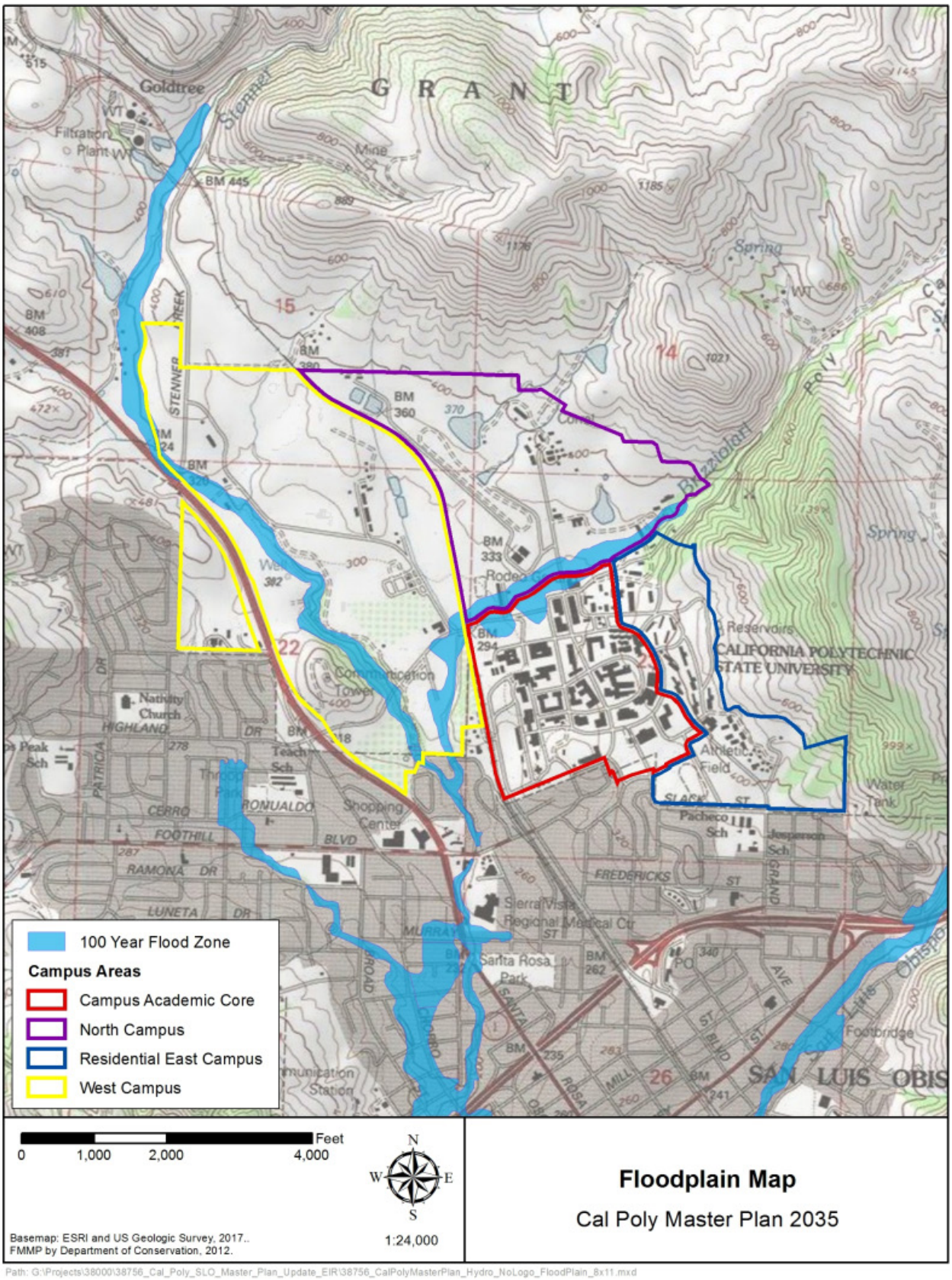
Brizzolara Creek and Stenner Creek, two major streams associated with San Luis Obispo Creek, traverse the Cal Poly campus. These tributaries begin in the Santa Lucia Range, traverse through campus, and continue to urbanized areas of San Luis Obispo. Stenner Creek flows southwest through the western ranches of the campus for approximately 1.8 miles to its junction with San Luis Obispo Creek. Stenner Creek is the most affected by the known point source discharges including from animal holding facilities, processing facilities, and agricultural fields. Brizzolara Creek drains the Poly Canyon area north of Highland Drive, skirts the instructional core of the campus, and flows southwest towards the city of San Luis Obispo. Brizzolara Creek receives the greatest influence of stormwater runoff from hardened surfaces (Figure 40).

The National Flood Insurance Rate Maps identify 100-year flood hazard areas along Brizzolara and Stenner Creeks. Brizzolara and Stenner Creeks and their floodplains are shown in Figure 30. Brizzolara Creek and Stenner Creek are also considered state and federal jurisdictional waterways.

Chorro, Pennington, Walters, and Chumash Creeks are part of the Chorro Creek watershed. Chorro Creek flows through the Chorro Creek Ranch near the Cuesta College and eventually flows to the Morro Bay Estuary. Ranching practices on these lands, most notably excessive erosion from over grazing, have the greatest potential for impact on water quality in these creeks.

[50] California Polytechnic State University. 2015. *Water Quality Management Plan For Cal Poly Land In San Luis Obispo Creek and Chorro Creek Watersheds, WDR R3-2003-035*. February 2015.

**Figure 40. Floodplain Map**



## Water Supply

Cal Poly's water is derived from Whale Rock Reservoir and local groundwater. Water from the reservoir is delivered by the City of San Luis Obispo; local groundwater is pumped from 7 agricultural wells owned and operated by the University. Groundwater is limited by relatively shallow, low capacity aquifers, especially during drought years. In accordance with a State Water Resources Control Board permit, Cal Poly also holds surface water rights to Brizzolara Creek on the Cal Poly campus, and to Old Creek, which supplies Whale Rock Reservoir near Cayucos. Environmental setting, potential impacts, and mitigation measures related to water supply are addressed in greater detail in Section 3.13 Water Supply.

## Reservoir System

There are seven reservoirs located within the San Luis Obispo Creek watershed, four of which are located within Cal Poly land: Indonesian, Drumm, Shepard, and Smith. Surface runoff from Horse Canyon flows into Indonesian and Shepherd Reservoirs. Smith Reservoir is part of the system, but its water is not directly controlled through the campus reservoir system. It receives overflow from Shepard Reservoir from the northwest and drainage from a northerly riparian area adjacent to the Horse Unit. The water then moves through a 4-foot culvert into Brizzolara Creek. Drumm Reservoir water is used primarily for irrigation, research at the Irrigation Training and Research Center, and non-point source pollution abatement at constructed wetlands in James Creek, which flow into Drumm Reservoir.

Cal Poly owns the rights to 1,200 acre-feet of water from Whale Rock Reservoir. About 449 acre-feet are used for annual agricultural purposes, and the remainder is allocated for domestic use. The water is pumped from Whale Rock Reservoir to Middlecamp Reservoir, and then to Indonesian Reservoir for distribution to the campus agriculture reservoir system for irrigation of crops and animal production. Excess water is allowed to flow via a drainage to Nelson Reservoir where it provides for recharge of the Stenner Creek aquifer. In addition, Cal Poly riparian water rights on Stenner Creek allow for gravity flow diversion to Middlecamp and Nelson Reservoirs with overflow to Stenner Creek. Middlecamp Reservoir uses pipes at the site to drain and clean the reservoir.

At the discretion of the City of San Luis Obispo, water may be added to Middlecamp Reservoir from Salinas Reservoir instead of Whale Rock Reservoir. Additionally, the City may add water to Middlecamp Reservoir via the city water treatment plant back-flushing process.

Six agricultural reservoirs are located within the Chorro Creek watershed, three of which are located on the Cal Poly campus: Gibson, Johnson, and Tyler. Gibson receives its water directly from the California Men's Colony wastewater facility. The water can then be transferred to Johnson Reservoir. This water is used primarily for irrigation on fodder crops for cattle. Tyler Reservoir is located west of Gibson and captures surface flow. Due to concerns about fish migrating in the Chorro Creek watershed, the California Department of Fish and Wildlife requires the other three reservoirs (Fox, Gary's, and John's) to remain opened to allow surface water to flow through; these reservoirs are unlikely to be used in the near future. These agricultural reservoirs are used for agricultural operations only, and agricultural options are not

anticipated to increase under the Master Plan. For further details regarding Cal Poly's reservoir system, see Section 3.13 Water Supply.

## Groundwater System

Most of Cal Poly land lies within the San Luis Obispo Creek Basin. The basin is 18 square miles and is drained by San Luis Obispo Creek. The basin extends from the northern limits of the City of San Luis Obispo, southerly along the alignment of the creek to the Pacific Ocean at Avila Beach (approximately 12 miles southwest from campus). Near the southern portion of the City in the Edna Valley area, the basin extends approximately four miles east of the Pismo Basin. In the Los Osos Valley area, the basin extends approximately four miles west to the Los Osos Basin near Baywood Park.

According to the Department of Water Resources (DWR), the basin's water-bearing formations extend to a depth of 160 feet and have a total storage capacity of 67,000 acre-feet. The San Luis Obispo County Master Water Plan Update currently estimates the production of this basin at 6,000 acre-feet per year. The basin has a usable storage above sea level of 22,000 acre-feet with an estimated maximum safe annual yield of 5,900 acre-feet.

The USEPA has established guidelines for groundwater classification under the Groundwater Protection Strategy as follows:

- **Class I: Special Ground Waters.** Class I ground waters are resources of unusually high value. They are highly vulnerable to contamination and are 1) irreplaceable sources of drinking water and/or 2) ecologically vital.
- **Class II: Current and potential sources of drinking water and water having other beneficial uses.** All non-class I ground water currently used, or potentially available, for drinking water and other beneficial use is included in this category, whether or not is it particularly vulnerable to contamination. This class is divided into two subclasses; current sources of drinking water, and potential sources of drinking water.
- **Class III: Ground waters that are saline, or otherwise contaminated beyond levels which would allow use for drinking or other beneficial purposes.** They include ground waters 1) with total-dissolved-solids (TDS) concentration over 10,000 mg/1, or 2) that are so contaminated by naturally occurring conditions, or by the effects of broad-scale human activity (i.e. unrelated to a specific activity), that they cannot be cleaned up using treatment methods reasonably employed in public water supply systems.

The groundwater quality for irrigation uses is generally considered Class 1 or Class 2, and occasionally Class 3, as established by the Agriculture Department, University of California, Davis. The groundwater is hard and high in chlorides, sulfates, iron, manganese, magnesium, nitrates, and total dissolved solids. These concentrations occasionally exceed USEPA Drinking Water Standards.

Cal Poly occupies much of the Stenner Sub-basin within the San Luis Obispo Creek Basin. The Stenner Sub-basin serves as an important groundwater recharge area for the San Luis Obispo Creek Basin. Surface water quality in this area is especially important, as it will have an impact on groundwater quality as well.

The Chorro Basin is approximately 1.1 square miles in size and annual production is estimated at 1,833 acre-feet. No measure of safe annual yield has been established for this basin. Chorro Creek flows through the Chorro Creek Ranch near the California Men's Colony.

## Irrigation Wells

Cal Poly uses a total of seven irrigation wells; two irrigation wells are located within the San Luis Obispo Creek Watershed, and five irrigation wells are located within the Chorro Creek Watershed. Only the two wells located in the Stenner Creek sub-basin of the San Luis Obispo Creek Watershed are used to supply groundwater to the main campus. The water they supply to the main campus is non-potable and used for agricultural purposes only. The other five irrigation wells are used to disperse water to other agricultural lands outside of the main campus.

Depth to groundwater at the land irrigation (disposal) sites varies from greater than 20 feet to less than 6 feet in field bordering campus creeks. Groundwater movement within the disposal area is generally towards Stenner Creek, to the south-southwest on the main campus and to the southwest in the Chorro watershed.

## Wastewater Ponds

The University campus has seven lined wastewater ponds located within the San Luis Obispo Creek watershed, two are associated with the Swine Unit, four with the Dairy Unit (two are emergency overflow ponds), and one with Beef Cattle Evaluation Center (BCEC). All pond waters have the potential to be used for spray irrigation.

## Surface Runoff and Storm Drainage

The campus experiences most of its rainy season in the winter months from October through March. Storm drainage can be a challenge during particularly heavy rainy seasons. Storm drains located on campus lead to local water bodies, including Stenner or Brizzolara Creeks, and ultimately to the ocean. Most of the area drains to Brizzolara Creek which runs across the north side of campus. Portions of the West Campus drain to Stenner Creek. The University, in compliance with existing laws and State and Regional Water Boards requirements, has developed an aggressive Storm Water Management Program.[51] This program includes annually cleaning and vacuuming catch basins, drainage inlets and area drains every October. The campus has also installed storm-interceptors as part of the Poly Canyon Student Housing complex and approximately 10% of the existing drainage inlets have open bottoms.[52]

Cal Poly implements a campus-wide Water Quality Management Plan (WQMP), approved by the Central Coast RWQCB. This plan seeks to maintain and improve the quality of water passing through the campus by monitoring pollution in surface waters, groundwater, and the stormwater that leaves the campus through the sewer system. The plan also addresses permit requirements

[51] California Polytechnic State University, Administration and Finance – Water. 2017. *Campus Resources: Water*. Available at: https://afd.calpoly.edu/sustainability/campus_resources/water. Accessed March 2017.

[52] California Polytechnic State University. 2017. *Draft Cal Poly Master Plan 2035*. Available at: http://masterplan.calpoly.edu/wp-content/uploads/2014/10/DraftCal-PolyMasterPlan2035-TEXTONLY-9-28-16.pdf. Accessed March 2017.

and the use of Best Management Practices (BMPs) in service and construction activities. The University has generally been in conformance with adopted water quality standards, with limited exceedances.

## Slack and Grand Residential Neighborhood

The planned N1 Residential Neighborhood is located on a 16-acre parcel northeast of Slack Street and Grand Avenue, overlooking the southern end of the campus. The site slopes down generally from east to west with the lowest elevation of the site being near the intersection of Grand Avenue and Slack Street. The site supports two disturbed, tree-lined, and unnamed drainages that have headwaters in the hills to the east of the site, flow southwest through the site, and converge at the western end of the site, just above Grand Avenue. Shortly downstream of the convergence, the combined channel directs flows into the municipal storm drain system, through the City of San Luis Obispo for approximately one mile, and into San Luis Obispo Creek.

According to the United States Department of Homeland Security, Federal Emergency Management Agency (FEMA), Flood lnsurance Rate Map, the project site is not located within a 100-year flood zone or located within Flood Zone X, which indicates areas that have been determined to have less than a 0.2 percent chance of being flooded in any given year. Consequently, the potential for flooding to affect the site is considered to be low.

Surface water runoff on the site is by sheet flow over the gently sloping terrain and directed into the existing drainage swales. No evidence of significant surficial erosion, other than the three main drainage channels, was observed on within the site area during the site reconnaissance (Earth Systems Pacific 2017).

The project site sits on 2 different water management zones (WMZ). The southwest part of the site is in WMZ 3 while the rest of the site sits on WMZ 10. Using the Central Coast Region Post-Construction Storm Water Management Requirements, it was determined that for WMZ 3 performance requirements 1, 2, and 4 need to be applied and for WMZ 10 performance requirement 1 and 2 are required. This means that for the entire project site, at a minimum, the project will be required to treat the water that touches the impervious surface by designing a treatment system that will retain the storm water runoff that is equal to the volume of the runoff generated by the 85$^{th}$ percentile 24-hour storm event, based on local rainfall data. The project proposes two different options that can achieve this in the form of underground storage chambers or above ground retention basins.

# Regulatory Setting

## Federal

### Federal Clean Water Act

The Federal Water Pollution Control Act of 1972 and its 1977 amendments, collectively known as the Clean Water Act (CWA; United States Code [U.S.C.] Title 33, Section 1251 et. seq.), aims to restore and preserve the chemical, physical, and biological integrity of the nation's waterways

by preventing pollution and giving assistance to publicly-owned treatment works for the improvement of wastewater treatment, and to protect the integrity of wetlands. The CWA regulates the water quality of all discharges into waters of the United States including wetlands and perennial and intermittent stream channels.

# State Regulations

## Porter-Cologne Water Quality Control Act

The Porter-Cologne Act is the principal law governing water quality regulation in California. It establishes a comprehensive program to protect water quality and the beneficial uses of water. The Porter-Cologne Act applies to surface waters, wetlands, and ground water and to both point and nonpoint sources of pollution. Pursuant to the Porter-Cologne Act (California Water Code section 13000 et seq.), the policy of the State is as follows:

- That the quality of all the waters of the State shall be protected,
- That all activities and factors affecting the quality of water shall be regulated to attain the highest water quality within reason, and
- That the State must be prepared to exercise its full power and jurisdiction to protect the quality of water in the State from degradation.

The Porter-Cologne Act established nine Regional Water Boards (based on hydrogeological barriers) and the State Water Board, which are charged with implementing its provisions and which have primary responsibility for protecting water quality in California.

## State Water Resources and Regional Water Quality Control Boards

The establishment and enforcement of water quality standards for the discharge into and maintenance of water throughout California is managed by SWRCB and nine RWQCBs. The SWRCB enforces the federal Clean Water Act on behalf of the EPA. The RWQCB is the primary State agency ensuring that the quality of potable water supplies is protected. The Cal Poly campus is located within Region 3, the Central Coast RWQCB. Most of the quantitative objectives are based on the California Code of Regulations Title 22-State Drinking Water Standards. Other considerations include the Porter-Cologne Water Quality Act and the SWRCB's Antidegradation Policy.

The RWQCB also regulates urban runoff discharges under the National Pollutant Discharge Elimination System (NPDES) permit regulations, including from point discharge sources (i.e., industrial outfall discharges) and non-point discharge sources (i.e. stormwater runoff) sources. The RWQCB implements the NPDES program by issuing construction and industrial discharge permits. Cal Poly is subject to the State Water Resources Control Board Water Quality Order No. 2013-0001-DWQ, National Pollutant Discharge Elimination System General Permit No. CAS000004, Waste Discharge Requirements for Storm Water Discharges From Small Municipal Separate Storm Sewer Systems (2013 General Permit). This permit requires the implementation of specific tasks as well as monitoring and reporting on stormwater management activities, including those during construction and post-construction. Cal Poly is also subject to the State's General Permit for Storm Water Discharges Associated with Construction and Land Disturbance

Activities (Construction General Permit Order 2009-0009-DWQ). This permit requires the preparation of a Stormwater Pollution Prevention Plan (SWPPP) for discharges regulated under the SWRCB program and applies to construction activities resulting in a land disturbance of one acre or more, or less than one acre but part of a larger common plan of development (i.e., a campus). Construction activity subject to this permit includes clearing, grading and disturbances to the ground such as stockpiling, or excavation, but does not include regular maintenance activities performed to restore the original line, grade, or capacity of the facility. BMPs are required. The USEPA defines BMPs as "schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of Waters of the United States." BMPs include treatment requirements, operating procedures, and practices to control site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage" (40 CFR 122.2). The RWQCB, the local extension of the SWRCB, currently monitors these SWPPPs.

## SWRCB'S Antidegradation Policy

The Antidegradation Policy applies to the disposal of waste to high-quality surface water and groundwater. This policy requires that the quality of existing high-quality water be maintained unless the State finds that any change will be consistent with maximum benefit to the people of the State, will not unreasonably affect present and anticipated beneficial use of such water, and will not result in water quality less than that prescribed in policies as of the date on which such policies became effective. The Antidegradation Policy also requires best practicable treatment or control (BPTC) of discharges to high-quality waters to assure that pollution or nuisance will not occur, and that the highest water quality consistent with maximum benefit to the people of the state will be maintained.

## California Impaired Waterbodies

If a project has the potential to discharge directly into a water body listed as impaired due to sedimentation/siltation and/or turbidity, pursuant to Section 303(d) of the Clean Water Act, the SWPPP must include a Sampling and Analysis Plan (SAP) for Sediment. The purpose of a SAP for Sediment is to determine if BMPs implemented on the construction site are effective for preventing sedimentation impacts. Direct discharge is defined as a point source or conveyance that discharges directly to 303(d) water bodies that do not first flow through a tributary river or stream (that itself is not listed as impaired) or combine with stormwater from offsite in a municipal separate storm sewer system (MS4).

The Clean Water Act lists San Luis Obispo Creek and Stenner Creek as Impaired. Old Creek (above Whale Rock Reservoir) has not been assessed. San Luis Obispo Creek has been listed as impaired for pollutants related to Water Contact Recreation and Non-contact water recreation. Stenner Creek has been listed as impaired for pollutants related to Water Contact Recreation.

## Sustainable Groundwater Management Act

In September 2014, Governor Brown signed three legislative bills (AB 1739, SB 1168, and SB 1319) that, together, are known as the Sustainable Groundwater Management Act (SGMA). The legislation provides a framework for sustainable management of groundwater resources by local

agencies, defined as a local public agency with water supply, water management, or land use responsibilities within a groundwater basin.

The legislation lays out a process and timeline for local agencies to achieve sustainability, including:

- Local agencies must form local groundwater sustainability agencies (GSAs) within two years;
- Local agencies in basins deemed medium- and high-priority must prepare groundwater sustainability plans (GSPs) within five to seven years (2020 or 2022 depending on the overdraft status of the basin); and
- When plans are in place, local agencies must implement the GSPs and achieve sustainability within 20 years (2040 or 2042).

A combination of local agencies may form a GSA; if a portion of a groundwater basin is not included within a GSA, the local county is presumed to be the GSA for that area.

The Sustainable Groundwater Management Act is directed at groundwater basins or sub-basins that have been designated by DWR as medium- or high-priority through the California Statewide Groundwater Elevation Monitoring (CASGEM) program.

The legislation also provides local agencies with the tools to achieve sustainability, including specific authorities and procedures. Among other powers, local agencies may:

- Conduct investigations to carry out the requirements of the Act;
- Require registration of wells and measurement of extractions;
- Require annual extraction reports;
- Impose well spacing requirements and limits on extractions from individual groundwater wells; and
- Assess fees to implement local groundwater management plans.

DWR has the responsibility to review GSPs for compliance. In basins where a GSA is not formed in a timely manner, a GSP is determined to be inadequate, or groundwater sustainability is deemed unlikely to be achieved, the State Water Board can designate a basin as probationary and intervene with an interim plan to protect groundwater resources.

DWR has designated San Luis Obispo Valley Basin as a medium priority basin. There are currently two existing GSA's for the basin, San Luis Obispo City Council as GSA, and County of San Luis Obispo Board of Supervisors as GSA. A prepared GSP is due by January 31, 2022.

## Groundwater Management Act of 1992

The Groundwater Management Act, commonly referred to as Assembly Bill (AB) 3030, is designed to provide local public agencies with increased management authority over groundwater resources. Groundwater is a valuable natural resource within California and AB 3030 ensures safe production and quality by encouraging local agencies to work cooperatively to manage groundwater resources within their jurisdictions (Water Code Section 10750).

### Regional Water Quality Control Board/Cal Poly Water Quality Management Plan

Water quality standards for receiving waters are set by the RWQCB in the Water Quality Control Plan, Central Coast Basin. In effort to comply with water quality goals, the University adopted and maintains a Water Quality Management Plan which was approved by the Central Coast RWQCB. This plan monitors for pollution in surface waters, groundwater, and the wastewater that leaves the campus. The plan also addresses permit requirements including Storm Water Pollution Prevention Plans and storm water runoff monitoring and the use of BMPs in service and construction activities. The University has generally been in conformance with adopted standards, with limited exceedances.

The BMPs that are implemented on campus are derived from existing permits, the Central Coast Region Basin Plan, Natural Resources Conservation Service and EPA's 1993 publication, "Guidance Specifying Management Measures for Sources of Nonpoint Pollution in Coastal Waters." In addition the plan utilizes CASQAs Stormwater Handbooks (2009) for construction, industrial/commercial, and municipal BMPs to expand the current water quality management operations on campus. The most recent WQMP is from 2015 and is expected to be updated within 5 years.

## Local Regulations

### Cal Poly Water Quality Management Plan

In July 2003, the Regional Water Quality Control Board approved Waste Discharge Requirement (WDR) for the University which adopted the Cal Poly Water Quality Management Plan hereafter referred to as WQMP. The WQMP was developed and implemented for campus-wide use by the Facility Services Department. As a stand-alone resource management and implementation tool, it is intended to meet various permitting requirements of the Regional Board, and to maintain and improve the quality of water passing through the campus. As of September 2003, the Environmental Health & Safety office oversees the management and implementation of the WQMP.

The WQMP represents a voluntary and cooperative implementation approach between Cal Poly and the RWQCB to address water quality management issues and permit requirements. It seeks to meet permit/waste discharge requirements specified by the Regional Board.

The WQMP directs the use of BMPs in service and construction activities to manage water resources owned by the University. Water quality management issues are addressed in Point, Nonpoint, and Stormwater Pollution Prevention Programs of the WQMP. To assure water quality objectives are being implemented the WQMP calls for monitoring BMPs, identifying any problems associated with implementation, solving implementation problems, and reporting results to the Regional Board.

## Cal Poly Master Plan 2035 Principles

The following "Guiding Principles" were developed early on in the process by the Master Plan professional team with input from campus leadership, including the college deans, and based largely on the current (2001) Master Plan. Guiding Principles can be thought of both as starting points for the plan process as well as overarching directives relevant to all or most Master Plan topics. They are categorized as GP (General Principle), MPP (Master Plan Principle), IP (Implementation Program), or OR (Other Recommendation). The following principles were identified as being relevant to hydrology and water quality:

**OR 23** Cal Poly should be the model for Low Impact Design principles.

**IP 6** Cal Poly should investigate the use of reclaimed water and the use of grey water systems; turf should be limited to high use areas only.

**S 02** Cal Poly should preserve and enhance the viability of agriculture and natural habitat systems on its holdings by providing adequate land area including appropriate buffers, connectivity or corridors between related natural communities, and linear continuity along streams.

**GP 14** Land uses should be suitable to their locations considering the environmental features of the proposed sites.

## Slack and Grand Residential Neighborhood

The regulatory setting for the Slack and Grand Residential Neighborhood is the same as the regulatory setting for the Master Plan. Please refer to the Regulatory Setting discussions above.

# Impact Criteria

The project will result in a significant impact on hydrology and/or water quality if it will:

- Violate any water quality standards or waste discharge requirements;
- Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level;
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on-or off site;
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on-or-off site;
- Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff;
- Otherwise substantially degrade water quality;

- Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map;
- Place within a 100-year flood hazard area structures which would impeded or redirect flood flows;
- Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam; or,
- Be subject to inundation by seiche, tsunami, or mudflow.

# Environmental Impact

## Flood Hazard

The National Flood Insurance Rate Maps identifies 100-year flood hazard areas along Brizzolara Creek and Stenner Creeks (Figure 40).[53] All development pursuant to the Master Plan will be designed to avoid the 100-year flood hazard areas to the extent feasible. Therefore, impacts related to flooding will be less than significant.

## Water Quality

***Construction-Related Impacts:*** Construction activities within Cal Poly campus could result in adverse short-term impacts to water quality and runoff being transported to Brizzolara and Stenner Creeks as well as unnamed channels. Grading, excavation and construction activities will result in the disturbance of surface soils, which could lead to the exposure soils in surface runoff. Soils that are exposed to runoff could cause erosion and increased sedimentation and pollutants in stormwater. The potential for pollutants to be released is present given the types of materials used during construction, such as fuels, oils, paints, and solvents. Construction-related pollutants could be transported and eventually affect offsite surface waters and underground aquifers, potentially reducing water quality.

Cal Poly will be required to comply with the State's Construction General Permit 2009-0009-DWQ[54], which includes the development and implementation of a SWPPP and compliance with BMPs to manage construction-related stormwater runoff. Standard BMPs include sedimentation, erosion and dust control.

Cal Poly holds National Pollutant Discharge Elimination System (NPDES) 2013 General Permit No. CAS000004, Waste Discharge Requirements for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems[55], which applies to all construction on campus. Cal Poly will continue to comply with the requirements of this permit, including the following construction-related BMPs:

[53] Federal Emergency Management Agency (FEMA). 2017. Flood Map Service Center (MSC). Available at: https://msc.fema.gov/portal. Accessed March 2017.
[54] State Water Resources Control Board (SWRCB). 2010. 2009-0009-DWQ Construction General Permit (effective July 1, 2010). Available at: http://www.waterboards.ca.gov/water_issues/programs/stormwater/constpermits.shtml. Accessed March 2017.
[55] State Water Resources Control Board (SWRCB). 2013. Order No. 2013-0001-DWQ National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS000004. Available at: http://www.swrcb.ca.gov/water_issues/programs/stormwater/docs/phsii2012_5th/order_final.pdf. Accessed March 2017.

- Construction Site Runoff Control Program. This provision is required to prevent construction related discharges of pollutants and impacts on receiving waters. This provision applies to all projects that result in a total land disturbance of either one acre or more or that result in a total land disturbance of less than one acre if part of a larger common plan or development or scale.
- Compliance with current federal and state requirements, including those of the NPDES and the SWRCB will ensure construction-related water quality impacts are less than significant.

***Operational-Related Impacts:*** Development pursuant to the Master Plan will increase the amount of impervious surface area within the campus. However, new construction will be primarily located on existing surface parking lots, and old, sprawling, one and two story buildings will be replaced with smaller footprint buildings, therefore minimizing overall increase to impervious surface area on campus. Surface runoff will likely increase as well as the potential for additional sources of operational-related pollutants (e.g., vehicle use, building maintenance products, landscaping products) that could contribute to the pollutant load in runoff. All development will be subject to requirements of the NPDES 2013 General Permit No. CAS000004. Cal Poly will be required to comply with Non-Traditional Small MS4 Permittee Provisions of this Permit, which include the following tasks and reporting requirements:

- Pollution Prevention/Good Housekeeping for Permittee Operations Program. This provision requires the implementation of a program to reduce or prevent the amount of pollutant runoff from operations and requires implementations of appropriate BMPs for preventing or reducing the amount of storm water pollution generated by operations.
- Map of Permittee-Owned or Operated Facilities. This provision requires the preparation and submission of a facilities map that identifies the storm water drainage systems corresponding to each of the facilities as well as the receiving waters to which these facilities discharge.
- Storm Water Pollution Prevention Plans. This provision requires the development and implementation of SWPPPs for pollutant hot spots at high priority sites which includes stormwater BMPs to minimize the discharge of pollutants in stormwater. At a minimum, the SWPPP shall address the following:
    - Facility information
    - Purpose of the document
    - Key contacts
    - Site map with drainage identified
    - Identification of significant materials that are handled and stored at the facility that may be exposed to stormwater
    - Description of potential pollutant sources
    - BMPs employed by the facility
    - Spill control and cleanup, response to spills
- Strom Drain System Assessment and Prioritization. This provision requires the development and implementation of procedures to assess and prioritize the MS4 storm drain system, including but not limited to catch basins, pipe and pump infrastructure, above-ground conveyances, including receiving waterbodies within the Permittee's urbanized area and detention basins.

- Maintenance of Storm Drain System. This provision requires the maintenance of all high priority storm drain systems annually prior to the rainy season. This includes storm drain inspections, cleaning, maintenance of surface drainage structures, and disposal of waste materials.
- Permittee Operations and Maintenance Activities. This provision requires the assessment for potential to discharge pollutants in storm water and inspect all BMPs on a quarterly basis.
- Pesticide, Herbicide, and Fertilizer Application and New Landscape Design and Maintenance Management. This provision requires the implementation of a program that focuses on pollution prevention, source control BMPs, landscape design and maintenance to reduce the amount of pesticides, herbicides and fertilizers used during operations. This provision includes the following;
    - Implementation of integrated pest management measure that rely on non-chemical solutions.
    - Limiting or replacing herbicide and pesticide use (e.g., conducting manual weed and insect removal).
    - Limiting or eliminating the use of fertilizers, including prohibiting application within 5 feet of pavement, 25 feet of a storm drain inlet or 50 feet of a water body.
    - Collecting and properly disposing of unused pesticides, herbicides and fertilizers.
    - Minimize irrigation run-off.
- Post Construction Stormwater Management Program. This provision requires compliance with the following:
    - Site Design Measures to reduce project site runoff: including stream setbacks and buffers, soil quality improvement and maintenance, tree planting and preservation, rooftop and impervious area drainage rerouting into rain barrels, cisterns, or permeable areas instead of the storm sewer, porous pavement to allow runoff to pass through it, green roofs, vegetated swales to treat and attenuate storm water runoff, and the use of rain barrels and cisterns to collect and store storm water runoff from a roof or other impervious surface.
    - Low Impact Development (LID) standards for projects that are 5,000 square feet or more. Site design measures should be based on the goal of infiltration, evapotranspiration and/or harvesting/reuse of the 85th percentile rainfall event to the extent possible. Treatment of runoff of the 85th percentile 24-hour storm runoff event that cannot be infiltrated on site should follow USEPA guidance. Otherwise, the requirements include the following:
        - The use of source control measure for pollutant-generating activities and sources such as accidental spills and leaks, pest control, fuel dispensing areas, etc.
        - Use of controls to evapotranspire, infiltrate, harvest/use and biotreat storm water based on volume and flow criteria.
        - Site design measure should be used to reduce the amount of runoff to the extent technically feasible. Any remaining runoff from impervious DMAs may then be directed to a bioretention facility as specified.
        - Storm Water Treatment Measures and Baseline Hydromodification Management Measures.

    - Alternative Post-Construction Storm Water Management Program (for multi-benefit projects)
    - Operation and Maintenance of post-construction Stormwater Management Measures.
- Program Effectiveness Assessment and Improvement. This provision requires the development of a Program Effectiveness Assessment and Improvement plan that tracks short and long-term progress of the stormwater program.

Cal Poly will continue to implement its own WQMP for the treatment of point and non-point source water pollution. This program includes several on-campus stormwater management measures including the annual cleaning and vacuuming of all catch basins, drainage inlets and area drains every October and the installation of storm-inceptors.

Implementation of the identified mitigation measure requiring a 25-foot riparian buffer in any campus development adjacent to Brizzolara Creek and Stenner Creek will also serve to avoid impacts to creeks. Therefore, impact related to water quality are considered less than significant.

## Groundwater

Cal Poly pumps groundwater from seven agricultural wells located on campus for irrigation and other non-potable uses. The Master Plan does not include the construction of additional wells or changes to the existing wells. Agricultural water use will continue at the 2015 level of 117 AFY throughout the implementation of the Master Plan. For more detailed information regarding water use, refer to Section 3.13, Water Supply.

Groundwater recharge resulting from infiltration of precipitation depends on the type and amount of pervious surface area within a watershed. Campus development pursuant to the Master Plan will increase impervious surfaces within the campus. While this increase could reduce infiltration to the groundwater basin, the expansion of open spaces, new landscaping and enhanced riparian habitats associated with Brizzolara Creek and Stenner Creek will likely improve infiltration and groundwater recharge. Implementation of Low Impact Development (LID) standards as provided in the 2013 NPDES General Permit No. CAS000004 will also improve infiltration and groundwater recharge. Therefore, impact associated with groundwater is expected to be less than significant.

## Drainage and Runoff

Most of the surface water on Cal Poly land sheet flows to existing storm drainage infrastructure while the remainder flows into Brizzolara Creek and Stenner Creek. Build-out of the Master Plan will increase the amount of impervious surfaces and increase quantities of stormwater runoff. Development pursuant to the Master Plan will not alter the course of Brizzolara or Stenner Creeks.

Compliance with existing regulations including the development and implementation of a SWPPP, which includes BMPs for controlling stormwater during construction and post-construction, will also minimize impacts related to runoff, sedimentation, erosion, and flooding. Future campus development with new facilities and improvements will be required to develop a

drainage plan prior to construction and use LID principles in new stormwater infrastructure, such as on-site retention, detention, and infiltration. Master Plan development within the vicinity of the Brizzolara and Stenner Creeks will be required to comply with the use of the identified 25-foot buffers. Therefore, impacts related to controlling stormwater flows will be less than significant.

## Inundation

The Cal Poly campus is located 12 miles inland and is not subject to coastal erosion or flooding due to earthquake-induced waves such as a tsunami. Whale Rock Reservoir is located approximately 15 miles northwest of the campus. Therefore, development within the campus pursuant to the Master Plan is not located in an area at risk of dam or levee failure.

Development pursuant to the Master Plan will be located at a sufficient distance from existing campus reservoirs and will not be subject to a seiche from Drumm, Indonesian, Shepard, or Smith Reservoirs. A seich is a standing wave oscillating in a body of water, typically caused by strong winds and rapid changes in atmospheric pressure that can sometimes lead to inundation of surrounding land if strong enough.

Mudflows are considered rivers of liquid or mud flowing on the surface of normally dry land as when earth is carried by a current of water. Given that all new facilities developed pursuant to the Master Plan will be located outside of the delineated flood hazard area along Brizzolara and Stenner Creeks to the extent feasible, the risk of mudflow is considered low. Therefore, impact associated with inundation by seiche, tsunami, mudflow, or dam/levee failure is considered to be less than significant.

## Slack and Grand Residential Neighborhood

The Slack and Grand residential neighborhood is not located within a FEMA 100-year flood zone. Therefore, the potential for the site to be affected by flooding is negligible.

The residential development at Slack and Grand has the potential to temporarily alter water quality during construction and will increase the area of impervious surface onsite, which could contribute to increased pollutant load if appropriate BMP's are not implemented. The development of the site will also modify the existing unnamed drainage on site. The existing drainage course will be recreated with pools and ponds that reduce the velocity and help to improve water quality. The proposed basins will be sized to adequately address the necessary onsite retention and post construction storm water mitigations requirements as imposed by the state.

New stormwater drainage infrastructure will be required on all such specific sites on campus to control stormwater runoff associated with new, expanded, or modified surfaces and drainages. Development of these sites, including development of the Slack and Grand Residential Neighborhood, will require the development of a site-specific drainage plan prior to construction and implementation of the drainage plan on the sites of new facilities. This will provide for runoff associated with modified surfaces and drainages, particularly with new development, to be managed and controlled in a manner that will not cause flooding or erosion or siltation. Surficial

seepage was also evident along sections of the eastern portion of the site (Earth Systems Pacific 2017). This seepage could lead to shallow, 1-2 feet, and surficial slumping. This risk could be reduced by grading, retention, or installations of drains.

Due to its distance from the ocean and elevation, the potential for the site to be affected by a tsunami event is considered to be negligible.

# Mitigation Measures

3.6-1 During the design review phase of each future development project on the campus, the Campus will verify that the stormwater BMPs were evaluated for the proposed project and those determined to be appropriate were incorporated into the proposed project. The Campus will also verify that post-development runoff from the project site will approximate pre-development runoff volumes.

3.6-2 Prior to the commencement of construction activities associated with new development that will modify existing drainage and/or require the construction of new drainage infrastructure to collect and control runoff, the University will prepare a drainage plan and supportive hydrologic analysis demonstrating compliance with the following or equitable measures to maximize groundwater recharge and maintain existing rain event flow rates and patterns:

- Off-site runoff will not exceed existing flow rates during storm events.
- If required to maintain the current flow rate, detention/retention basins will be installed to reduce local increases in runoff, particularly on frequent runoff events (up to 10-year frequency).
- If proposed, drainage discharge points will include erosion protection and be designed such that flow hydraulics exiting the site mimics the natural condition as much as possible.
- Drainage from impervious surfaces (e.g., roads, driveways, buildings) will be directed to a common drainage basin.
- Where feasible, grading and contouring will be done in a way to direct surface runoff towards the above-referenced basins (and/or closed depressions.

3.6-3 During the initial site design phase of any facility adjacent to riparian areas, a 25-foot buffer will be established from the outer extent of Brizzolara and Stenner Creeks and their tributaries, or other riparian vegetation. Development of new parking areas, structures or other hardscapes, and utility infrastructure within this buffer will be prohibited, except as needed for pedestrian bridges, road crossings, and similar improvements which will be designed in compliance with Mitigation Measures 3.6-1 and 3.6-2. In addition, the University will incorporate LID principles in all designs for facilities and improvements that are located adjacent to Brizzolara and Stenner Creeks and their tributaries.

3.6-4 All development pursuant to the Master Plan will comply with current federal and State requirements, including those of the NPDES and the SWCRB. Cal Poly will continue to implement the campus-wide WQMP. In addition to compliance with these regulations, required permits, and continued implementation of the water quality management plan in campus development, all new campus development will be required to implement mitigation measures which require a 25-foot buffer along Brizzolara Creek and Stenner Creeks, and preparation and implementation of a drainage plan and supportive hydrologic analysis demonstrating compliance with specific measures to maximize groundwater recharge and maintain existing rain event flow rates and patterns.

### Slack and Grand Residential Neighborhood

Implementation of Mitigation Measures 3.6-1 through 3.6-4 are recommended to avoid and minimize potential impacts to hydrology and water quality for the Slack and Grand Residential Neighborhood project.

## Level of Impact After Mitigation

Compliance with existing regulations and requirements and implementation of mitigation measures Mitigation Measures 3.6-1 through 3.6-4 will reduce impacts related to hydrology and water quality to a less-than-significant level. No additional mitigation is required.

### Slack and Grand Residential Neighborhood

Upon implementation of mitigation measures Mitigation Measures 3.6-1 through 3.6-4 and compliance with existing regulations and requirements, impacts related to hydrology and water quality will be reduced to a less-than-significant level. No additional mitigation is required.

## Cumulative Impact

The cumulative context for the evaluation of hydrology and water quality impacts includes development on Cal Poly campus in combination with existing development and anticipated development in San Luis Obispo County that has the potential to impact Stenner and Brizzolara Creek watersheds or the underlying groundwater aquifers.

Cumulative development within and adjacent to Cal Poly will increase development intensity in the region as well as alter the existing hydrologic environment. Cumulative impacts include an increase of impervious surfaces, a decrease in percolation to the groundwater basin, and the need for additional stormwater infrastructure. On-going construction activities could also release sediment and other point and non-point source pollutants into the waterways, thus, adversely affecting water quality and the beneficial uses of the creeks.

Development pursuant to the Master Plan as well as all new development not related to Cal Poly or the Master Plan throughout the city and county of San Luis Obispo will be required to comply

with State and federal requirements, including those of the NPDES and the SWRCB. Cal Poly will continue to implement its Water Quality Master Plan. In addition, since impacts related to hydrology and water quality can also be site-specific in nature, mitigation measures Mitigation Measures 3.6-1 through 3.6-4 will be applied to individual facility development on Cal Poly campus to minimize the potential for significant impacts to hydrology and water quality. New development will also comply with Master Plan principles IP 6, S 02, GP 14, and OR23. Compliance with these programs and implementation of the identified mitigation measures will reduce impacts to a less-than-significant level.

Cumulative development also has the potential result in a decrease in percolation to the groundwater basin due to the increase in impervious surfaces and associated runoff. Cal Poly-specific development will be required to comply with Master Plan policies specific to the use of LID principles as well as State and federal requirements. As such, impacts associated with groundwater recharge will be less than significant. No cumulative impact related to development within the 100-year flood hazard area is anticipated.

## Slack and Grand Residential Neighborhood

Cumulative impacts associated with the Slack and Grand Neighborhood are addressed above.

# 3.7 Traffic and Circulation

This section summarizes the findings and conclusions of the Transportation Impact Study (TIS) prepared for the Campus Master Plan and finalized in September 2017. The detailed TIS study is included in Appendix E of this EIR, and the study appendices are provided under separate cover.

## Environmental Setting

The Cal Poly campus is located approximately 2 miles north of the City of San Luis Obispo's downtown core. The campus is bounded by State Route 1 (Highway 1) and California Boulevard to the west, Slack Street to the south, Stenner Creek Road to the north, and forested hills to the east (Figure 1 in Chapter 2.0, Project Description).

### Roadway Network

#### Off-Campus Roadways

The roadway system in the vicinity of Cal Poly campus is discussed below.

***U.S. Highway 101 (US 101)*** is a north-south freeway that runs from Port Angeles in Washington State through Oregon and north and central California, terminating in Los Angeles. In San Luis Obispo County US 101 is classified as a Principal Arterial. It is the main route connecting the City of San Luis Obispo to the cities of Paso Robles, Templeton, and Atascadero to the north and to the cities of Arroyo Grande, Grover Beach, Oceano, Pismo Beach and Nipomo to the south. During weekday peak periods, US 101 carries a significant amount of commuter traffic traveling to San Luis Obispo and between communities north and south of the city. Per 2015 Caltrans traffic count data, US 101 carries an Annual Average Daily Traffic (AADT) of 52,800 vehicles and a peak month ADT of 58,000 vehicles between the its junction with Hwy 1 and the California Boulevard interchange.

***State Route 1 (Hwy 1),*** also known as the Pacific Coast Highway, is a north-south state highway that runs from Orange County to Mendocino County. In northern San Luis Obispo County, Hwy 1 connects the coastal towns of San Simeon, Cambria, Cayucos, and Morro Bay to San Luis Obispo. In the City of San Luis Obispo it is an arterial named Santa Rosa Street. Hwy 1 is the western boundary of the Cal Poly campus where it is a divided 4-lane arterial. Per 2015 Caltrans traffic count data, Hwy 1 carries an Annual Average Daily Traffic (AADT) of 32,800 vehicles, and a peak month ADT of 35,500 vehicles between US 101 and Foothill Boulevard.

***Grand Avenue*** is a north-south residential arterial that connects Cal Poly at Slack Street to US 101 through a series of stop-controlled intersections. North of Slack Street, Grand Avenue narrows to a 2-lane roadway as it enters the Cal Poly campus. Grand Avenue is the most important entrance to Cal Poly in terms of number of vehicles (approximately 11,200 vehicles/day entering or leaving, 39% of all vehicles entering of leaving the campus).

***California Boulevard*** is a north-south arterial road connecting Cal Poly to US 101 and Monterey Street. It has a 3- or 4-lane cross section for most of its length, narrowing to 2-lanes once it enters the Cal Poly campus at Campus Way. California Boulevard is second most important entrance to Cal Poly in terms of number of vehicles (approximately 9,700 vehicles/day entering or leaving, 34% of all vehicles entering of leaving the campus).

***Highland Drive*** is a 2-lane arterial that connects the Cal Poly campus to Hwy 1. It is the third most important entrance to Cal Poly in terms of number of vehicles (approximately 7,400 vehicles/day entering or leaving, 25% of all vehicles entering of leaving the campus). West of Hwy 1 it serves a collector-distributor function for a residential neighborhood.

***Stenner Creek Road*** is a 2-lane rural road that provides access to several Cal Poly agriculture facilities and to the San Luis Obispo water treatment plant. It connects to the academic core via Mount Bishop Road. Stenner Creek Road is paved only for its southern-most 0.8 miles (from the treatment plant entrance to Hwy 1). It is the least important gateway to the campus, currently serving approximately 300 vehicles/day entering or leaving, or 2% of all vehicles entering or leaving the campus.

***Foothill Boulevard*** is a 2-to-4 lane undivided arterial street with signalized intersections at California Boulevard and Santa Rosa Street. Foothill Boulevard is a major route to Cal Poly, via California Boulevard, from locations south and west of the campus.

## On-Campus Roadways

The existing on-campus roadway circulation system is discussed below.

***North Perimeter Road*** is a 2-lane road that is the only route through campus for most motorized vehicles (there are other routes, such as South Perimeter Road, which are open only to State-owned or emergency vehicles). Perimeter Road runs in a curve from Grand Avenue north then west to University Drive.

***University Drive*** is a short 2-lane connector between North Perimeter Road and Highland Drive.

***Village Drive*** is a 2-lane access road connecting Poly Canyon Village to North Perimeter Road and to Via Carta.

***Via Carta*** is a 2-lane road providing access to various facilities north of the academic core. The portion of Via Carta in the academic core is closed to traffic.

***Mount Bishop Road*** is a 2-lane rural road providing access to outlying facilities in the northwest portion of the campus.

# Existing Conditions

## Study Intersections

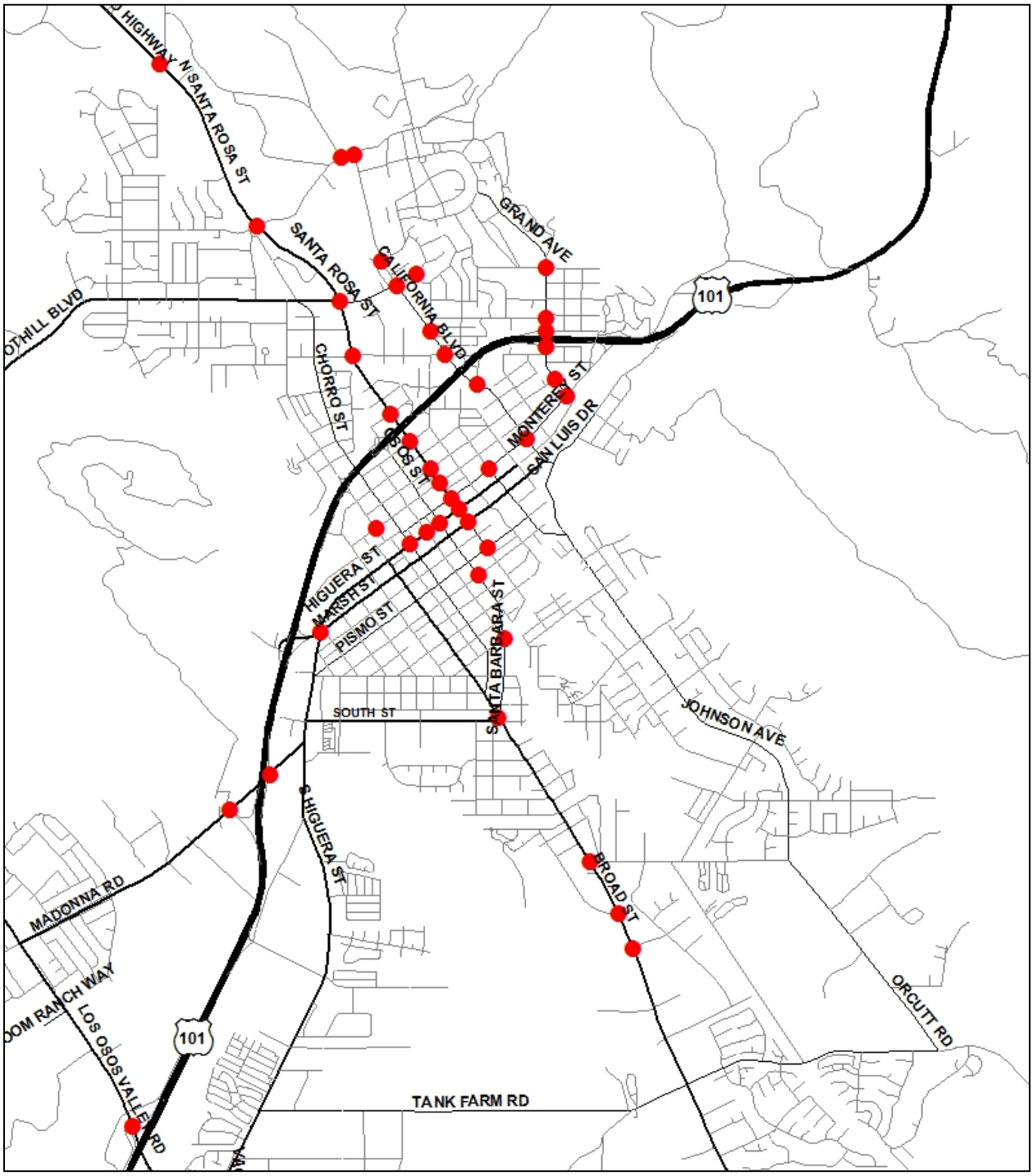
Traffic operational conditions at intersections are described in terms of Level of Service (LOS). LOS ranges from LOS A, which indicates that vehicles experience little delay in passing through the intersection, to LOS F, which indicates that vehicles are likely to encounter long queues and stop-and-go conditions. LOS D is considered a minimum performance target LOS for intersection operations[56].

The study focuses on the area in the vicinity of the campus and on the routes that vehicles will take to or from the campus on the City of San Luis Obispo public street network. A total of 43 intersections were selected for the analysis (18 stop-controlled and 25 signalized intersections) based on existing and projected vehicular trip distribution of Cal Poly-related traffic. The locations of the study intersections are shown in Figure 41. Existing AM and PM peak-hour turning movement data were collected at each of the existing study intersections. Table 12 summarizes the results of the intersection LOS analysis for existing conditions. As shown, the following intersections are currently operating below the target LOS D:

- Intersection #17, Santa Rosa Street/Walnut Street, during the PM peak hour
- Intersection #19, California Boulevard/Taft Street, during the PM peak hour
- Intersection #37, US 101 SB Ramps/Madonna Road, during the AM peak hour
- Intersection #41, Broad Street/Rockview Place, during the PM peak hour

[56] The California State University Transportation Impact Study Manual

**Figure 41. Study Intersections**



## Table 12. Existing Year 2017 Intersection Level of Service

| Study ID | Intersection Name | Control Type | AM Peak Hour | | PM Peak Hour | |
|---|---|---|---|---|---|---|
| | | | Average Delay | HCM LOS | Average Delay | HCM LOS |
| 1 | Hwy 1/Stenner Creek Rd | TWSC | 27.1 | D | 21.7 | C |
| 2 | Santa Rosa St/Highland Dr | Signalized | 33.7 | C | 36.8 | D |
| 3 | Mt Bishop Rd/Highland Dr | TWSC | 21.6 | C | 16.4 | C |
| 4 | California Blvd/Highland Dr | AWSC | 15.7 | C | 14.4 | B |
| 5 | California Blvd/Campus Wy | AWSC | 10.5 | B | 15.0 | B |
| 6 | Santa Rosa St/Foothill Blvd | Signalized | 51.1 | D | 45.4 | D |
| 7 | California Blvd/Foothill Blvd | Signalized | 30.5 | C | 22.2 | C |
| 8 | Carpenter St/Foothill Blvd | TWSC | 14.2 | B | 16.6 | C |
| 9 | Grand Ave/Slack St | AWSC | 33.0 | D | 12.6 | B |
| 10 | Grand Ave/Fredericks St | TWSC | 11.1 | B | 12.8 | B |
| 11 | Grand Ave/US-101 SB Ramps | TWSC | 14.5 | B | 10.9 | B |
| 12 | Grand Ave/US-101 NB Ramps | Signalized | 18.6 | B | 8.8 | A |
| 13 | Grand Ave/Mill St | TWSC | 12.5 | B | 13.6 | B |
| 14 | Grand Ave/Monterey St | Signalized | 7.5 | A | 7.6 | A |
| 15 | Santa Rosa St/Murray Ave | Signalized | 23.6 | C | 50.6 | D |
| 16 | Santa Rosa St/Olive St | Signalized | 6.4 | A | 7.4 | A |
| 17 | Santa Rosa St/Walnut St | Signalized | 21.8 | C | 61.0 | **E** |
| 18 | California Blvd/Hathway Ave | TWSC | 28.2 | D | 20.7 | C |
| 19 | California Blvd/Taft St | TWSC | 24.6 | C | 61.6 | **F** |
| 20 | California Blvd/US-101 NB Ramps | TWSC | 21.4 | C | 29.3 | D |
| 21 | Santa Rosa St/Mill St | Signalized | 5.5 | A | 6.2 | A |
| 22 | Santa Rosa St/Palm St | Signalized | 5.5 | A | 3.8 | A |
| 23 | Santa Rosa St/Monterey St | Signalized | 5.9 | A | 6.7 | A |
| 24 | Santa Rosa St/Higuera St | Signalized | 4.8 | A | 5.6 | A |
| 25 | Johnson Ave/Monterey Ave | Signalized | 12.0 | B | 10.3 | B |
| 26 | California Blvd/Monterey St | Signalized | 23.6 | C | 31.2 | C |
| 27 | Broad St/Palm St | AWSC | 9.2 | A | 9.2 | A |
| 28 | Chorro St/Higuera St | Signalized | 11.7 | B | 11.8 | B |
| 29 | Morro St/Higuera St | Signalized | 17.7 | B | 19.0 | B |
| 30 | Osos St/Higuera St | Signalized | 11.4 | B | 12.3 | B |
| 31 | Santa Rosa St/Marsh St | Signalized | 13.8 | B | 13.0 | B |
| 32 | Santa Rosa St/Pismo St | AWSC | 10.8 | B | 12.0 | B |
| 33 | Osos St/Buchon St | Signalized | 14.3 | B | 8.7 | A |
| 34 | Higuera St/Marsh St | Signalized* | 16.1 | B | 16.9 | B |
| 35 | Santa Barbara Ave/Upham St | Signalized | 8.1 | A | 8.4 | A |
| 36 | Broad St/South St/Santa Barbara Ave | Signalized | 43.9 | D | 36.2 | D |
| 37 | US-101 SB Ramps/Madonna Rd | Signalized | 70.7 | **E** | 40.8 | D |
| 38 | US-101 NB Ramps/Madonna Rd | Signalized | 16.6 | B | 22.7 | C |
| 39 | Los Osos Valley Rd/US-101 SB Ramps | Signalized | 28.4 | C | 35.8 | D |
| 40 | Broad St/Orcutt Rd | Signalized | 46.0 | D | 37.8 | D |
| 41 | Broad St/Rockview Pl | TWSC | 27.3 | D | 79.7 | **F** |
| 42 | Broad St/Capitolio Wy | TWSC | 15.7 | C | 24.0 | C |
| 43 | Hwy 1/Project Driveway | N/A | Does not exist in this scenario | | | |

*Intersection LOS was calculated using HCM 2000 Method, because of non-standard lane groups or phasing that do not conform to the HCM 2010 computational engine.
TWSC Intersection LOS is based on maximum approach delay.

## Study Freeway Segments

The freeway segment LOS was analyzed using the methodology outlined in the Highway Capacity Manual (2010). A total of 10 freeway segments were analyzed. Table 13 summarizes the results of the freeway LOS analysis for existing conditions. As shown, all of the study freeway segments are operating at the target LOS D or better under the existing conditions.

**Table 13. Existing Year 2017 Freeway Segment Level of Service**

| | ID | Freeway Segment | Analysis Type | # of Lanes | AM Peak Hour | | | PM Peak Hour | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Volume | Density | LOS | Volume | Density | LOS |
| US-101 NB | 1 | Marsh St to Broad St | Basic | 2 | 2,942 | 25.2 | C | 3,545 | 32.1 | D |
| | 2 | Broad St to Osos St | Weaving | 2+Aux | 2,770 | 19.0 | B | 3,454 | 23.9 | C |
| | 3 | Osos St to Toro St | Weaving | 2+Aux | 2,203 | 14.4 | B | 3,076 | 20.6 | C |
| | 4 | Toro St to California Blvd | Weaving | 2+Aux | 1,987 | 13.1 | B | 2,742 | 17.7 | B |
| | 5 | California Blvd to Grand Ave | Weaving | 2+Aux | 1,586 | 10.2 | B | 2,715 | 17.6 | B |
| US-101 SB | 6 | Grand Ave to Taft St | Weaving | 2+Aux | 2,275 | 14.8 | B | 1,440 | 9.1 | A |
| | 7 | Taft St to Montalban St | Weaving | 2+Aux | 2,108 | 13.2 | B | 2,107 | 14.7 | B |
| | 8 | Lemon St to Olive St | Weaving | 2+Aux | 2,235 | 14.3 | B | 2,671 | 18.3 | B |
| | 9 | Olive St to Broad St | Weaving | 2+Aux | 2,490 | 16.7 | B | 3,191 | 22.3 | C |
| | 10 | Broad St to Marsh St | Basic | 2 | 2,522 | 21.3 | C | 3,294 | 28.9 | D |

## Pedestrian Facilities

The major pedestrian facilities in the vicinity of Cal Poly are shown in Figure 42. As shown, the facilities include sidewalks, multi-use paths, and sidewalk ramps and crossings.

## Bicycle Facilities

The existing and planned bicycle facilities in the vicinity of Cal Poly are shown in Figure 43. The campus is connected to the city bike facility network via a Class 1 separated bike path along California Boulevard and by Class 2 bike paths along Grand Avenue and Highland Boulevard. Bicycles can also enter the campus from the neighborhood south of campus using a bike path along Via Carta, which is closed to motorized traffic.

**Figure 42. Existing Pedestrian Facilities in the Vicinity of Cal Poly**

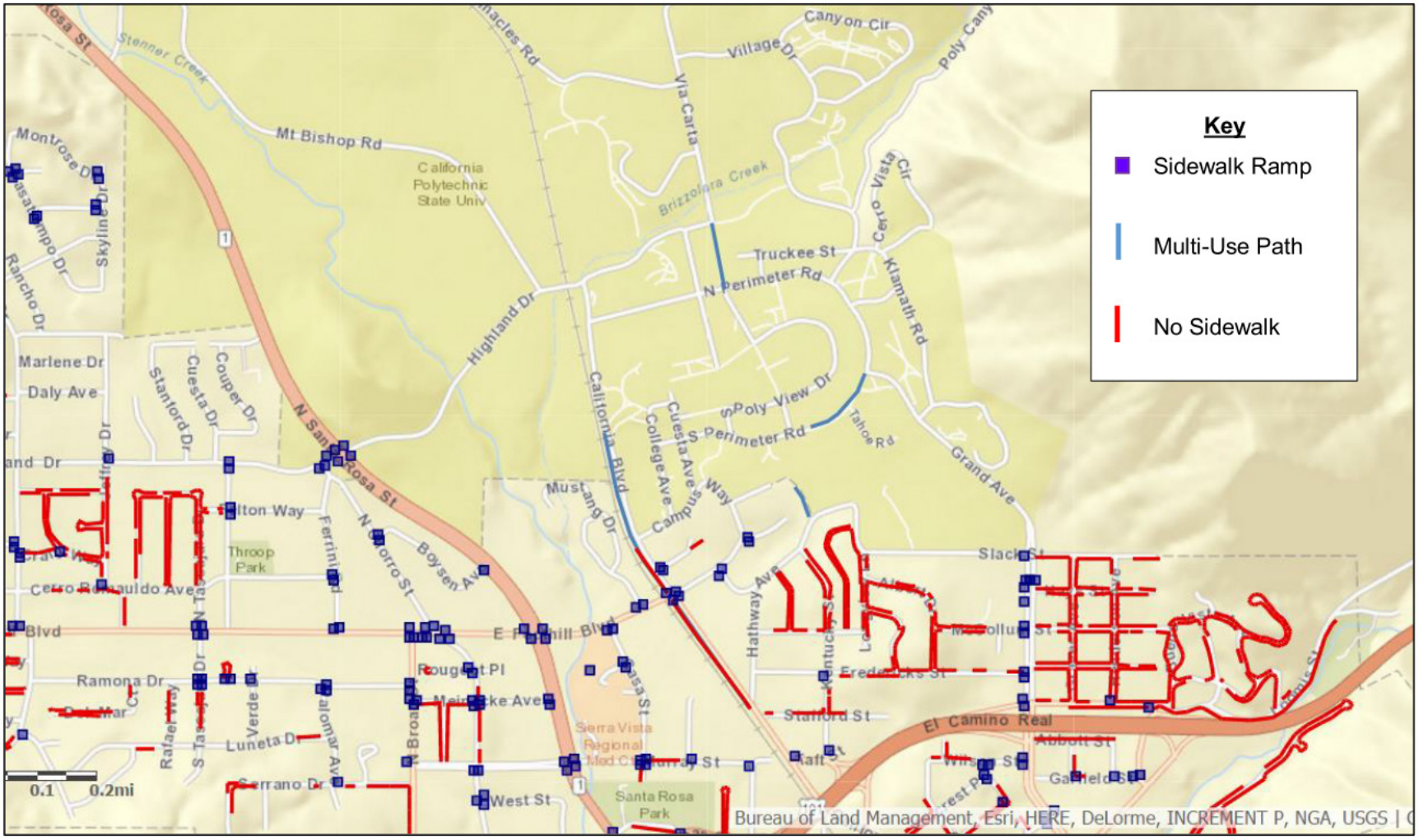
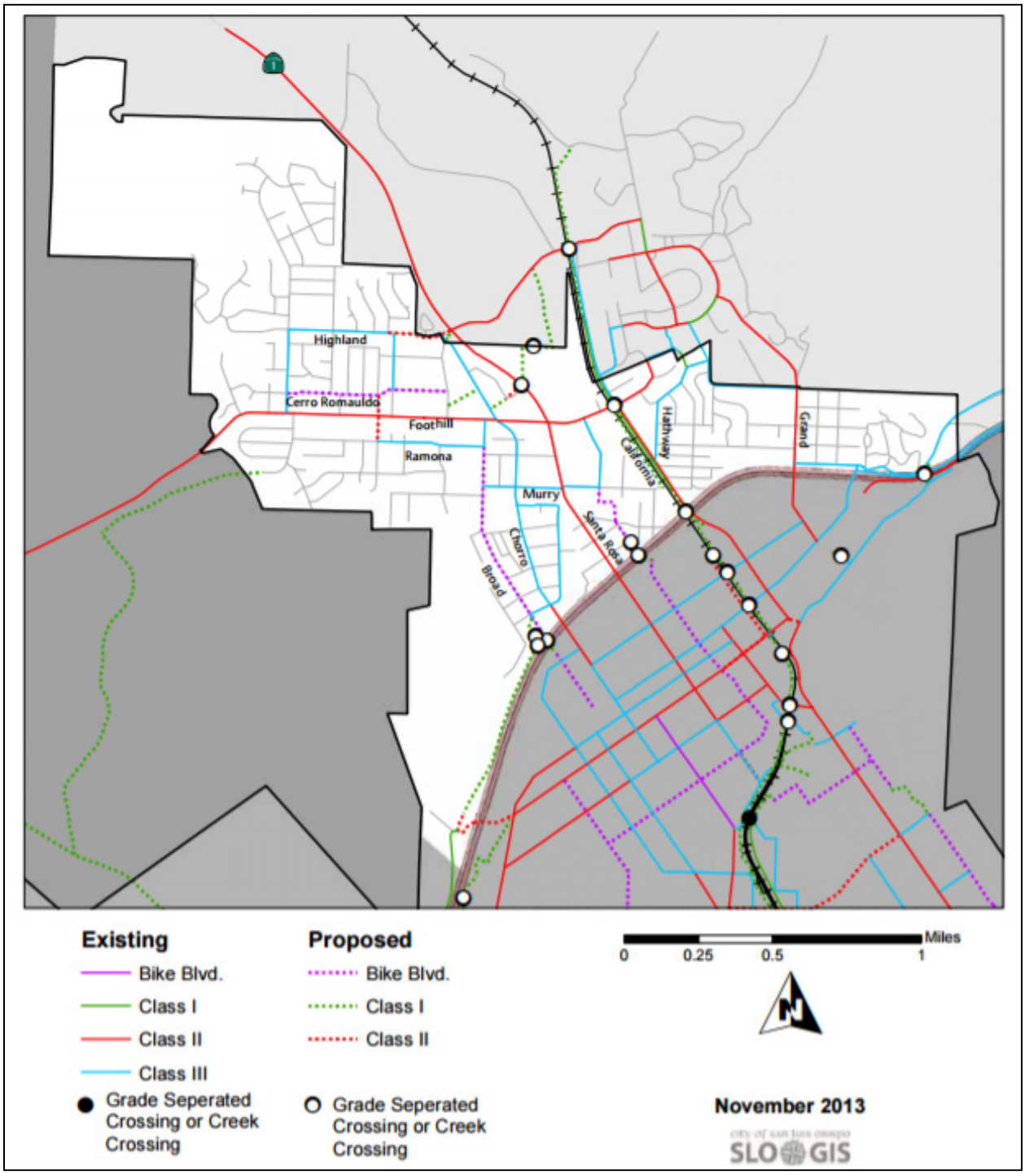


**Figure 43. Existing and Planned Bicycle Facilities In and Near Cal Poly**



## Transit

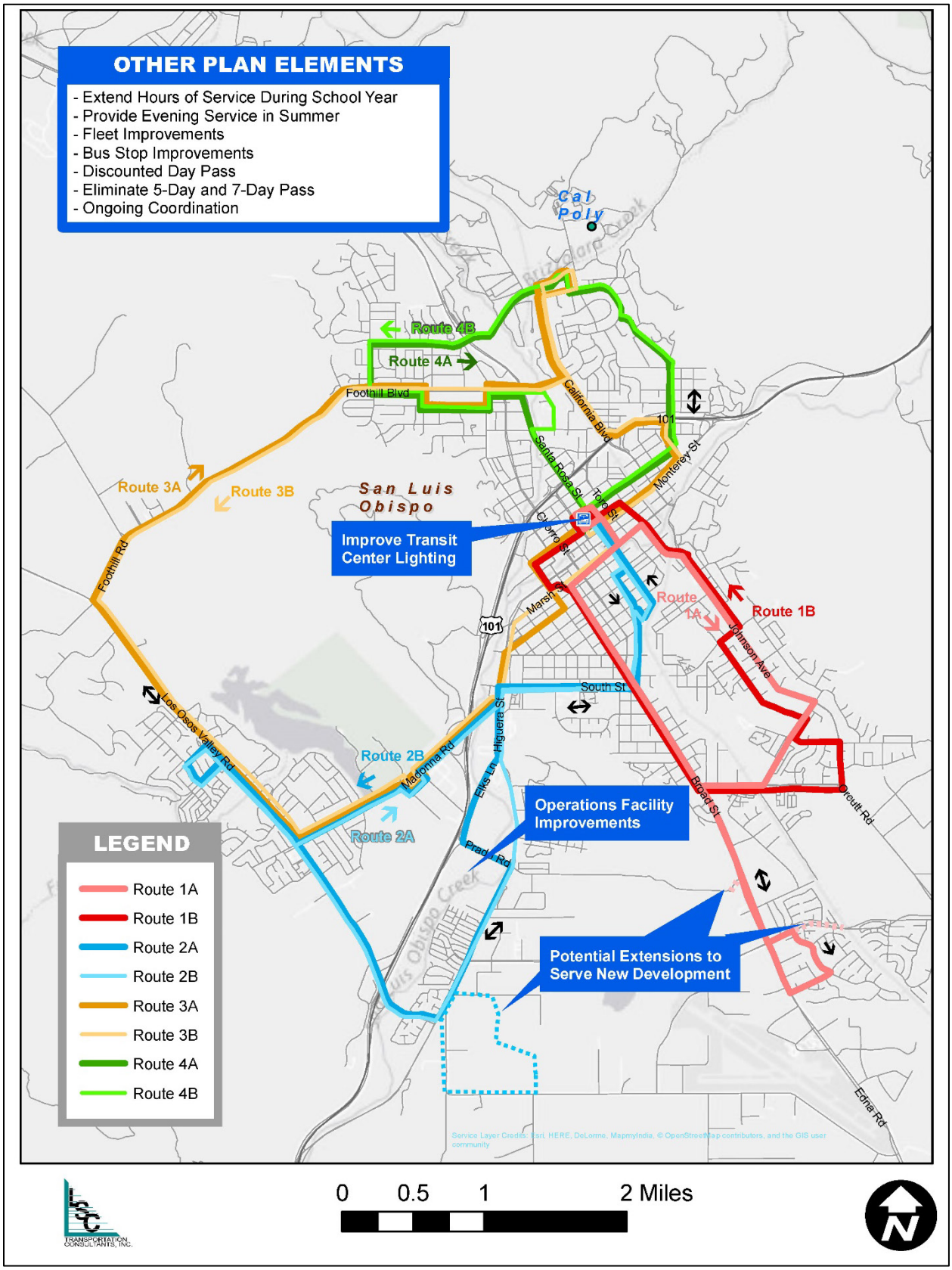
Cal Poly operates a transit center in front of the Kennedy Library for all public buses serving the campus. Public transit in the City of San Luis Obispo is primarily the responsibility of the San Luis Obispo Transit (SLO Transit). SLO Transit operates four fixed-route bus services in the vicinity of the campus (Figure 44). The fixed-route public transit services currently serving the Cal Poly SLO campus are:

- Route 4 runs in a loop connecting the campus with residential areas along Foothill and Los Osos Valley Road and the shopping areas on Madonna Street and downtown San Luis Obispo. It enters the campus via Foothill and leaves via Grand Avenue. It runs every 30 minutes Monday-through Friday from 6:40 AM to 6:25 PM, then hourly until 10:44 PM. It also offers weekend service hourly from 8:10 AM to 6:05 PM.
- Route 6a runs in a loop between the campus and the residential neighborhoods west of Hwy 1. It enters the campus via Foothill Boulevard and California Avenue and exits via Highland Drive. It runs every 30 minutes Monday-through Friday from 7:00 AM to 8:00 PM, then hourly until 10:30 PM. It also offers Saturday service hourly from 9:10 AM to 5:10 PM.
- Route 6b runs in a loop between the campus and downtown San Luis Obispo. It enters the campus via California Boulevard and exits via Grand Avenue. It runs every 30 minutes Monday-through Friday from 7:00 AM to 8:00 PM, then hourly until 10:30 PM. It also offers Saturday service hourly from 8:45 AM to 6:00 PM.
- Kennedy Library Tripper connects the campus to Downtown and the Ramona Drive neighborhood. It is in service weekday mornings Monday-through Friday and operates hourly from 7:25 AM until 8:25 AM.

Cal Poly pays an annual subsidy to SLO Transit and in exchange Cal Poly students, faculty, and staff ride free on SLO Transit buses. Cal Poly riders took nearly 600,000 trips in 2015, which constituted 58% of total ridership on SLO Transit. In September 2016 the City adopted a Short-Range Transit Plan that will restructure the routes to enhance service quality in key corridors, provide new connections, and improve service efficiency. Overall, the route network will be reconfigured into a series of four bi-directional routes with A/B designations used to differentiate the direction of travel. The "A" routes will operate largely clockwise and the "B" routes largely counterclockwise. The 2035 scenarios in this study assume that the proposed changes are in place in 2035.

SLO Transit implemented new routes, schedules, and fares. These system-wide changes, illustrated in Figure 44, are in response to the 2017–2021 Short Range Transit Plan (SRTP) adopted by City Council on September 20, 2016

**Figure 44. SLO Transit 2017–2021 Short-Range Transit Plan**



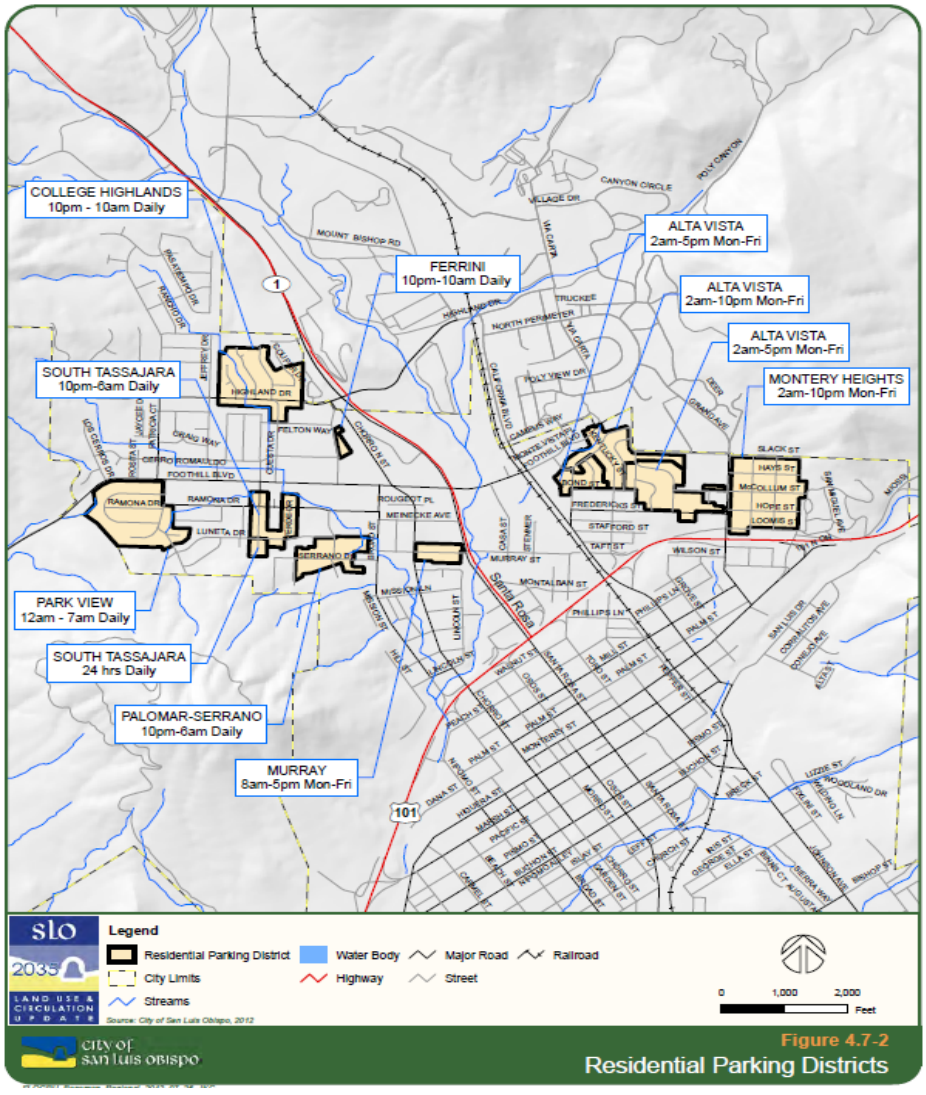
In addition to SLO Transit, the campus is also served by San Luis Obispo Regional Transit Authority as follows:

- Route 10 connects Cal Poly to Pismo Beach, Arroyo Grande, Nipomo, Santa Maria and Orcutt. Service to Cal Poly runs once a day, northbound arriving at 7:19 AM and southbound departing at 4:17 PM.
- Route 12 connects the cities of Los Osos and Morro Bay to Cuesta College and downtown San Luis Obispo, with a once-a-day side trip to the Cal Poly transit center. The side trip arrives at Cal Poly at 7:35 AM and departs for the return trip at 5:20 PM.

## Off-Campus Parking

The City operates a residential parking permit system that prohibits non-residents, such as Cal Poly students or campus visitors, from parking in the neighborhoods south and west of campus. The restrictions are shown in Figure 45.

**Figure 45. Off Campus Parking Restrictions**



## Slack and Grand Residential Neighborhood

Currently, the site of Slack and Grand Residential Neighborhood is undeveloped and does not generate vehicular, bicycle, pedestrian, or transit trips. As indicated in Table 12, the intersection of Grand Avenue/Slack Street is currently operating at LOS D in the AM peak hour and LOS B in the PM peak hour.

# Regulatory Setting

Traffic is regulated at the state and local levels through regulations, policies, and/or local ordinances. Local policies are commonly adaptations of federal and state guidelines, based on prevailing local conditions or special requirements.

Projects on campuses within the CSU system are subject to the requirements of the CSU Transportation Impact Study Manual (TSM). The TSM provides guidance to CSU campuses in the preparation of transportation impact studies. Project impacts are evaluated pursuant to the requirements of the CSU TSM. In addition, the project freeway impacts were evaluated according to the Caltrans standards as identified in the Caltrans Guide for the Preparation of Traffic Impact Studies (December 2002).

# Impact Criteria

## Roadway Segments or Intersections

The California State University Transportation Impact Study Manual defines the significance criteria for the transportation-related impacts of the proposed project. For roadway segment or intersections, a significant impact will occur when:

***Off-Site Traffic Operations***

- A roadway segment or intersection operates at LOS D or better under a no project scenario and the addition of project trips causes overall traffic operations on the facility to operate at LOS E or F.
- A roadway segment or intersection operates at LOS E or F under a no project scenario and the project adds both 10 or more peak hour trips and 5 seconds or more of peak hour delay, during the same peak hour.
- If an intersection operates at a very poor LOS F (control delay of 120 seconds or more), the significance criterion shall be an increase in v/c ratio of 0.02 or more.

The City of San Luis Obispo has established[57] the following policies and programs that are relevant to this study.

[57] City of San Luis Obispo 2035 General Plan, Chapter 4 – Circulation.

***Under "Traffic Reduction Policies"***

***2.1.1 Multi-level Programs:*** *The City shall support county-wide and community-based efforts aimed at substantially reducing the number of vehicle trips and parking demand.*

***2.1.3. Work-based Trip Reduction:*** *The City shall encourage employers within the city limits and work with the county to work with employers outside of the City limits to participate in trip reduction programs.*

***Under "Traffic Reduction Programs"***

***2.2.4. Incentives for Educational Institutions:*** *The City shall continue to work with Cal Poly, Cuesta College, and other educational institutions to provide incentives to all students, faculty and staff to use alternative forms of transportation.*

***Under "Traffic Management Policies"***

***7.1.2. Street Network:*** *... Where feasible, roundabouts shall be the City's preferred intersection control alternative due to the vehicle speed reduction, safety, and operational benefits of roundabouts.*

## Freeways

Caltrans has established guidelines for analyzing impacts on the state highway system. These guidelines require that a project's impacts be analyzed when a project:

- Generates over 100 peak hour trips assigned to a State highway facility
- Generates 50 to 100 peak hour trips assigned to a State highway facility – and, affected State highway facilities are experiencing noticeable delay; approaching unstable traffic flow conditions (LOS C or D).
- Generates 1 to 49 peak hour trips assigned to a State highway facility – the following are examples that may require a full traffic impact study (TIS) or some lesser analysis:
    a. Affected State highway facilities experiencing significant delay; unstable or forced traffic flow conditions (LOS E or F).
    b. The potential risk for a traffic incident is significantly increased (i.e., congestion related collisions, non-standard sight distance considerations, increase in traffic conflict points, etc.).

## Bicycle and Pedestrian

The California State University Transportation Impact Study Manual specifies that the following information should be provided regarding potential for bicycle and pedestrian impacts:

- A qualitative description of existing bicycle and pedestrian facilities in the project vicinity, including identifying the location and type of bicycle facilities, presence of sidewalks, and the level of usage.

- A summary of policies from area general plans or master plan related to bicycle and pedestrian travel.
- Evaluation of how the project affects the current and planned bicycle and pedestrian facilities in the study area, and whether the project creates any significant conflicts with applicable bicycle and pedestrian policies – which is the impact criteria for the project.
- A map showing existing and planned bicycle facilities in the study area.

The City has established the following policies and programs that are relevant to the traffic study:

> ***Under "Bicycle Transportation Policies"***
>
> ***4.1.2. Campus and School Site Trips:*** *The City shall encourage the use of bicycles by students and staff traveling to local educational facilities.*
>
> ***4.1.13. Campus Coordination:*** *The City shall consider the Cal Poly and Cuesta Master Plans to better coordinate the planning and implementation of safe and convenient bicycle access and facilities to local college campuses.*
>
> ***Under "Bicycle Transportation Programs"***
>
> ***4.2.1. Bike Share:*** *The City shall evaluate a bike share program in coordination with Cal Poly and other educational institutions.*
>
> ***4.2.3. Campus Master Plans:*** *The City shall work with Cal Poly and Cuesta College to de-emphasize the use of automobiles and promote the use of alternative forms of transportation in their master plans.*
>
> ***Under "Walking Policies"***
>
> ***5.1.3. New Development:*** *New development shall provide sidewalks and pedestrian paths consistent with City policies, plans, programs and standards. When evaluating transportation impact, the City shall use a Multimodal Level of Service analysis.*
>
> ***Under "Multi-Modal Circulation Policies"***
>
> ***6.1.2. Multimodal Level of Service (LOS) Objectives, Service Standards, and Significance Criteria:*** *The City shall strive to achieve level of service objectives and shall maintain level of service minimums for all four modes of travel; Pedestrians, Bicyclists, Transit, & Vehicles and the Highway Capacity manual.*

## Transit

The CSU Transportation Impact Study Manual specifies that the TIS should provide the following information regarding the potential for transit impacts:

- A qualitative description of transit service and route connectivity in the project area, including campus shuttle service, local bus service, and regional bus or rail service

- Evaluation of the project's consistency with applicable transit policies and identification of conflicts with existing and planned routes and LOS, which is the impact criterion for the project. Examples of conflicts include a project transit demand that will exceed the existing or planned service capacity or a required change in bus routing due to the physical or operational requirements of the project that lengthens transit trip times or headways.
- A map showing transit routes within two miles of the project site.

The City has established the following policies and programs that are relevant to this traffic analysis:

> ***Under "Transit Policies"***
>
> ***3.1.4. Campus Service:*** *The City shall continue to work with Cal Poly to maintain and expand the "fare subsidy program" for campus affiliates. The City shall work with Cuesta College and other schools to establish similar programs.*

The City's guide for transportation impact analysis states that transit LOS analysis should be conducted at segments scoped in the traffic study that have current or planned transit service. The City considers impacts to be significant if the project traffic causes minimum LOS standards to be exceeded or further degrades already exceeded LOS standards and there is contextual significance to the impact.

## Vehicle Miles Traveled

The traffic analysis also considers vehicle miles traveled (VMT) based on Senate Bill 743 (SB 743). Under SB 743, the focus of transportation analysis shifted from LOS analysis to VMT.

# Environmental Impact

## Campus Parking

Table 14 provides a summary of existing and Master Plan parking spaces, excluding those associated with the five residential neighborhoods. As discussed in more detail below, the Master Plan includes the provision of additional student housing on campus, along with restrictions on freshmen and sophomore students bringing vehicles on campus. This will reduce the number of off-campus students and the associated vehicle trips and need for parking, which in turn will enable the University to increase enrollment while maintaining the current ratios for faculty and staff, unrestricted on-campus students, and off-campus students without any net increase in on-campus parking. Only a minor reduction in the parking ratio for restricted on-campus students will be required.

**Table 14. Existing and Future Campus Parking**

| Person Type | Existing | | | Master Plan Build Out | | | Change in Number of Spaces |
|---|---|---|---|---|---|---|---|
| | People | Spaces | Spaces/ person | People | Spaces | Spaces/ person | |
| | (A) | (B) | (C)=(B)/(A) | (D) | (E) | (F)=(E)/(D) | (G)=(E)-(B) |
| Faculty/Staff | 3,172 | 1,597 | 0.503 | 3,905 | 1,966 | 0.503 | 369 |
| Unrestricted On-Campus Students | 2,700 | 1,929 | 0.714 | 2,700 | 1,929 | 0.714 | 0 |
| Restricted On-Campus Students | 4,488 | 368 | 0.082 | 12,300 | 907 | 0.074 | 539 |
| Off-Campus Students | 13,756 | 3,324 | 0.242 | 10,000 | 2,416 | 0.242 | -908 |
| State Use (mainly for internal trips) | | 209 | | | 209 | | 0 |
| Total | | 7,427 | | | 7,427 | | 0 |

Note: The term "Restricted" refers to freshmen and sophomore students who will be prohibited from having cars on campus except with special permission. "Unrestricted" refers to upper division students in Poly Canyon Village who will be provided parking spaces at the ratio of 0.7 spaces per bed, with parking fees being used to regulate demand (this is a continuation of the current practice).

The residential neighborhoods will be designed to meet their individual parking needs at levels similar to or exceeding the parking provided at apartment complexes in San Luis Obispo. Parking in the residential neighborhoods will be by permit restricted to residents, visitors or customers and it will not serve as spill-over parking for off-campus students or visitors. Since these residential neighborhoods will have self-contained parking, they will not generate additional off-site or campus parking needs. For example, the Slack and Grand N1 neighborhood will provide parking at an overall ratio of 1.7 spaces per unit.

As the provision of additional on-campus student housing under Master Plan year 2035 buildout conditions and the consequent reduction in commuting by off-campus students will result in a net decrease in auto trips to and from campus, there will be no adverse effect on off-campus parking conditions. Even so, Cal Poly will continue to work with the Campus Parking and Transportation Advisory Committee (PTAC), an advisory body that reports to the Senior Vice President of Administration and Finance, who has ultimate responsibility and final authority for the parking and transportation programs on campus. The Committee will continue to consider and make recommendations related to campus parking and transportation programs including alternative transportation programs and programs provided by local transit agencies that directly impact campus and its constituents. Specifically, the Committee will continue to review existing transportation programs, explore and recommend new programs to improve campus parking, traffic flow and alternative transportation needs, recommend priorities for use of parking fines and forfeitures revenue, and to liaison with campus stakeholder groups.

# Trip Generation and Distribution

## Vehicles

The number of vehicle trips generated by the academic community (students, faculty, and staff) in the Master Plan were estimated using traffic counts taken at the parking lots for the Poly Canyon Village and the external gateways to the campus. The trip generation rates associated with campus were derived by dividing the trips from the traffic counts to and from the campus by the total number of existing residential and non-residential parking spaces on campus. As

shown in Table 15, the increase in on-campus student housing under full Master Plan year 2035 buildout conditions and the consequent reduction in commuting by off-campus students will result in a net decrease in auto trips to and from campus.

The number of trips generated by the residential neighborhoods were forecast using the trip generation rates established by the City of San Luis Obispo in its travel demand model. The project also includes a technology park on Mount Bishop Road that will operate with staff not already accounted for in the University faculty/staff positions. Trip generation for this facility was forecast using the "office" land use category in the Institute of Transportation Engineers (ITE) Trip Generation Manual, 9th Edition. The trip generation for the proposed residential neighborhoods and the technology park are summarized in Table 15.

In the analysis, all vehicular trips from the residential neighborhoods are treated as new, additional trips to the region. However, it is important to note that it is highly unlikely that those vehicular trips will be entirely additive to the traffic in the region. This is because the City of San Luis Obispo is a regional employment center with a severe jobs/housing imbalance. According to data from the U.S. Census Bureau[58], 77% of the people employed in San Luis Obispo live outside the city and commute into the city to work. Based on observed vehicle occupancy counts and other established vehicle count data, SLOCOG estimates that 19,400 to 23,400 people who live outside the city commute to work into San Luis Obispo daily. This lack of housing is projected to continue in the future with the City adding 5,972 jobs but only 1,647 housing units between 2015 and 2035[59]. Since the Master Plan's residential neighborhood apartments will be made available to the general rental housing market, including Cal Poly faculty and staff, their effect will most likely enable more people who currently live outside the city and commute to work at Cal Poly and in San Luis Obispo, to live on campus and next to San Luis Obispo.

Cal Poly will monitor the Master Plan traffic generation about every 2 years at the same time the City conducts its regular collections of traffic counts to monitor traffic volumes.

The City travel demand model was used to forecast the distribution of project trips to various parts of the City of San Luis Obispo and to/from places outside the city. The model forecasts that approximately 14% of the trips from the proposed residential neighborhoods will be internalized within the project. Those include interactions between residents and the on-site retail as well as work and other trips to the campus. Figure 46 shows the distribution of project traffic through the local and regional roadway system.

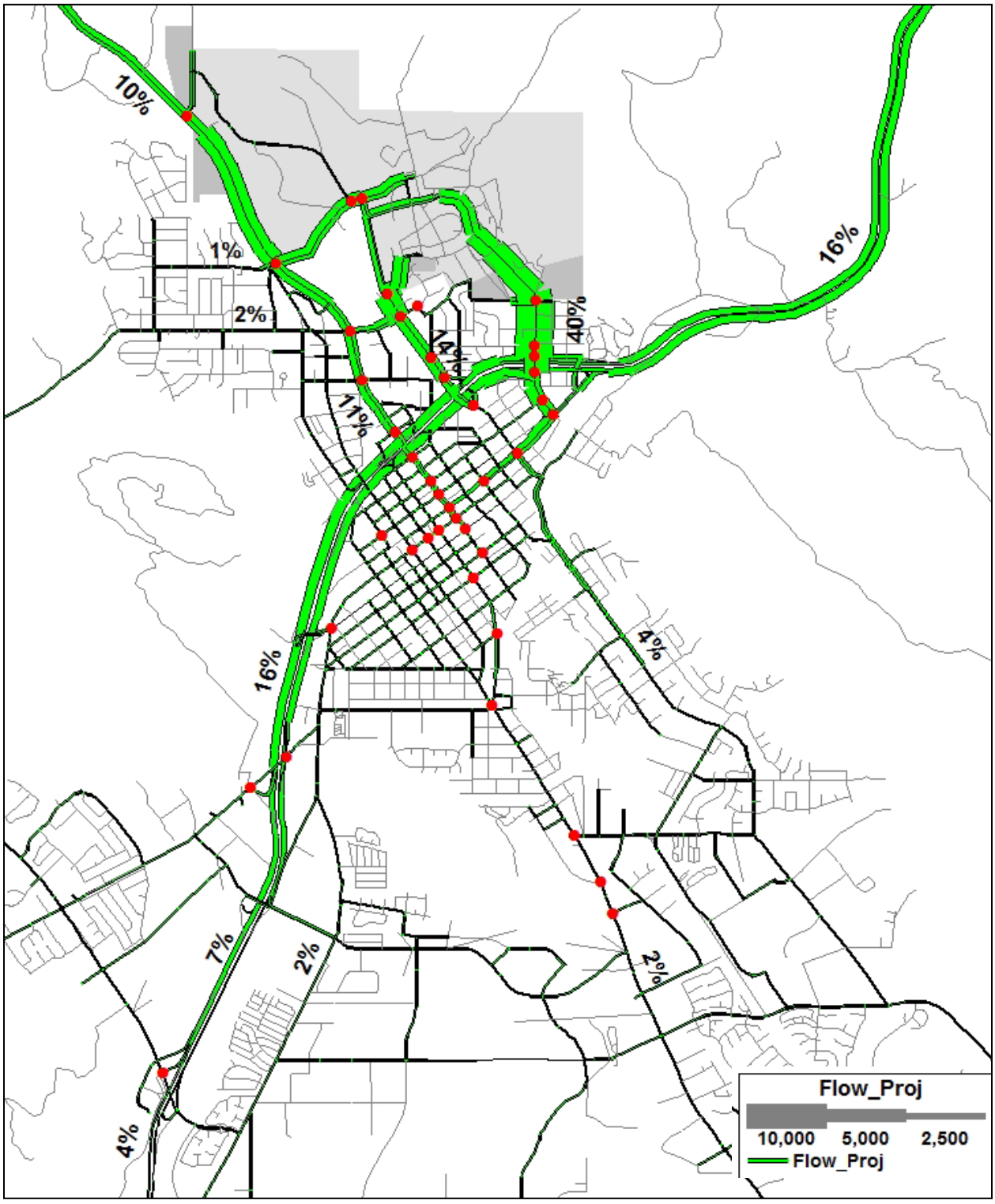
[58] U.S. Census Bureau. 2017. OnTheMap. U.S. Census Bureau, Center for Economic Studies. Available at: https://onthemap.ces.census.gov/.
[59] San Luis Obispo Council of Governments (SLOCOG). 2017. *2050 Regional Growth Forecast for San Luis Obispo County*. Adopted June 2017.

## Table 15. Trip Generation Summary

| Type | Units | No Project | | | | | | Initial Phase | | | | | | Buildout | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Land Use Amount | Trips | | | | | Land Use Amount | Trips | | | | | Land Use Amount | Trips | | | | |
| | | | Daily | AM Peak Hour | | PM Peak Hour | | | Daily | AM Peak Hour | | PM Peak Hour | | | Daily | AM Peak Hour | | PM Peak Hour | |
| | | | | In | Out | In | Out | | | In | Out | In | Out | | | In | Out | In | Out |
| ***Campus*** | | | | | | | | | | | | | | | | | | | |
| Residential Parking Spaces | Parking Spaces | 2,297 | 3,482 | 5 | 7 | 18 | 20 | 2,903 | 4,400 | 38 | 56 | 138 | 156 | 2,836 | 4,299 | 37 | 54 | 135 | 153 |
| Other (non-residential) Parking Spaces | Parking Spaces | 4,921 | 25,210 | 1,916 | 330 | 819 | 1,572 | 4,315 | 22,108 | 1,680 | 289 | 719 | 1,379 | 4,382 | 22,451 | 1,707 | 294 | 730 | 1,400 |
| ***Slack/Grand Neighborhood*** | | | | | | | | | | | | | | | | | | | |
| Apartments | DU | - | - | - | - | - | - | 420 | 3,958 | 57 | 276 | 151 | 128 | 420 | 3,958 | 57 | 276 | 151 | 128 |
| Medium Retail | KSF | - | - | - | - | - | - | 8.5 | 391 | 15 | 8 | 16 | 15 | 8.5 | 391 | 15 | 8 | 16 | 15 |
| ***Practice Track Neighborhood*** | | | | | | | | | | | | | | | | | | | |
| Apartments | DU | - | - | - | - | - | - | - | - | - | - | - | - | 300 | 2,827 | 41 | 197 | 108 | 92 |
| ***S. Perimeter Way Neighborhood*** | | | | | | | | | | | | | | | | | | | |
| Apartments | DU | - | - | - | - | - | - | - | - | - | - | - | - | 150 | 1,414 | 20 | 99 | 54 | 46 |
| Medium Retail | KSF | - | - | - | - | - | - | - | - | - | - | - | - | 2.8 | 130 | 5 | 3 | 5 | 5 |
| ***Hwy 1 near Cal Fire Neighborhood*** | | | | | | | | | | | | | | | | | | | |
| Apartments | DU | - | - | - | - | - | - | - | - | - | - | - | - | 400 | 3,770 | 54 | 263 | 144 | 122 |
| ***Stenner Creek Neighborhood*** | | | | | | | | | | | | | | | | | | | |
| Apartments | DU | - | - | - | - | - | - | - | - | - | - | - | - | 200 | 1,885 | 27 | 131 | 72 | 61 |
| ***Technology Park Facility*** | | | | | | | | | | | | | | | | | | | |
| General Office | KSF | - | - | - | - | - | - | 25 | 266 | 19 | 3 | 4 | 17 | 25 | 266 | 19 | 3 | 4 | 17 |
| ***Total Trips*** | | | **28,692** | **1,921** | **337** | **837** | **1,592** | | **31,123** | **1,809** | **631** | **1,028** | **1,695** | | **41,391** | **1,982** | **1,327** | **1,418** | **2,039** |
| Campus | | | 28,692 | 1,921 | 337 | 837 | 1,592 | | 26,508 | 1,718 | 345 | 857 | 1,535 | | 26,750 | 1,743 | 348 | 865 | 1,553 |
| Neibhborhoods | | | 0 | 0 | 0 | 0 | 0 | | 4,349 | 72 | 283 | 167 | 143 | | 14,375 | 220 | 975 | 549 | 469 |
| Technology Park Facility | | | 0 | 0 | 0 | 0 | 0 | | 266 | 19 | 3 | 4 | 17 | | 266 | 19 | 3 | 4 | 17 |
| ***Total Net New Trips*** | | | | | | | | | **2,431** | **-112** | **294** | **191** | **103** | | **12,699** | **61** | **990** | **581** | **447** |

Note: DU = Dwelling Unit; KSF = Thousand square feet

**Figure 46. Project Trip Distribution**



## Bicycles

The City travel demand model was used to forecast the number of bicycle trips that will be generated by the project over the course of a typical school day. The model does not provide information on the path that these trips would take or the time of day in which they would occur. When the time-of-departure assumptions that the model has for car trips is applied to the bike trips, the project is expected to generate about 117 trips in the AM peak hour and 90 trips in the PM peak hour, with the remaining trips taking place during off-peak hours. The total daily bicycle trips generated by the project are summarized in Table 16.

**Table 16. Daily Bicycle Trips**

| Trip Destination > Trip Origin | Cal Poly Academic Core | Foothill Blvd Retail Area | Down-town SLO | Residential Area South of Campus | Residential Are West of Hwy 1 | Rest of City | Total |
|---|---|---|---|---|---|---|---|
| Stenner Creek Neighborhood | 27 | 8 | 30 | 4 | 5 | 67 | 142 |
| Hwy 1 near Cal Fire Neighborhood | 79 | 18 | 64 | 9 | 11 | 138 | 319 |
| S. Perimeter Way Neigborhood | 97 | 7 | 27 | 4 | 4 | 55 | 193 |
| Practice Track Neighborhood | 185 | 10 | 62 | 10 | 6 | 115 | 387 |
| Slack/Grand Neighborhood | 190 | 12 | 88 | 14 | 8 | 162 | 474 |
| Academic Core | 0 | 3 | 25 | 2 | 2 | 57 | 89 |
| Total | 578 | 57 | 297 | 43 | 35 | 595 | 1,605 |

The route used by future bicyclists is difficult to predict because person preferences, environmental factors (shade, noise, slopes, etc.), and safety concerns regarding nearby cars varies between bicyclists far more than car drivers, who are less exposed to the environment. Where possible, bicyclists tend to favor less-busy streets where capacity is not an issue.

The only non-speculative routing that could be identified for project-related bicycle trips were the trips from the project neighborhoods to the campus academic core. The trips between the academic core and the South Perimeter Way neighborhood, the Practice Track neighborhood, and the Slack/Grand neighborhood will all be internal to the campus, leaving only the trips from the Stenner Creek neighborhood and the Hwy 1 neighborhood. Bike trips from the Stenner Creek neighborhood were assumed to travel along Mt. Bishop Road. Bike trips from the Hwy 1 neighborhood were assumed to travel south on Hwy 1 to Highland Drive for the trip to campus and to use a new route through the neighborhood west of Hwy 1 for the return route.

## Pedestrians

A process similar to the one described for bicycle trips was used to forecast project-related pedestrian trips. This resulted in a forecast of a small increase in peak-hour pedestrian traffic.

## Slack and Grand Residential Neighborhood

As indicated in Table 17, the Slack and Grand Residential Neighborhood will generate approximately 4,349 daily trips, as follows:

**Table 17. Slack and Grand Residential Neighborhood Trip Generation**

| Type | Unit | Daily Trips | AM Peak Hour | | PM Peak Hour | |
|---|---|---|---|---|---|---|
| | | | Inbound | Outbound | Inbound | Outbound |
| ***Slack/Grand Neighborhood*** | | | | | | |
| Apartments | 420 | 3,958 | 57 | 276 | 151 | 128 |
| Medium Retail | 8.5 | 391 | 15 | 8 | 16 | 15 |

In the analysis, all vehicular trips from the residential neighborhoods are treated as new, additional trips to the region. However, it is important to note that it is highly unlikely that those vehicular trips will be entirely additive to the traffic in the region. The Slack and Grand Residential Neighborhood apartments will be made available to the general rental housing market, and as it is anticipated that a number of these apartments will be occupied by Cal Poly faculty and staff, graduate students and others affiliated with the University, and its effect will most likely enable more people who currently live outside the city and commute to work at Cal Poly campus and/or in the City of San Luis Obispo, to live on campus and in closer proximity to the City San Luis Obispo.

## Impact Analysis – Near-Term (2021) No Project Conditions

The Near-Term (2021) No Project scenario was based on interpolating the Existing and 2035 No Project scenarios.

### Intersection Level of Service

Intersection LOS analysis was conducted for the Near-Term (2021) No Project scenario and the LOS results are summarized in Table 18. Under this condition, the following 8 intersections will not operate below the minimum target LOS D during the peak hours:

- Intersection #6 Santa Rosa Street/Foothill Boulevard (AM and PM peak hours)
- Intersection #9 Grand Avenue/Slack Street (AM peak hour)
- Intersection #17 Santa Rosa Street/Walnut Street (PM peak hour)
- Intersection #19 California Boulevard/Taft Street (PM peak hour)
- Intersection #20 California Boulevard/US 101 Northbound Ramps (PM peak hour)
- Intersection #37 US 101 Southbound Ramps/Madonna Road (AM peak hour)
- Intersection #41 Broad Street/Rockview Place (AM and PM peak hours)
- Intersection #42 Broad Street/Capitolio Way (PM peak hour)

Four of these intersections (#17, #19, #37, and #41) do not meet the target LOS under Existing Conditions. Intersections #6, #9, #20, and #42 are projected to be new deficiencies under 2021 No Project conditions.

**Table 18. Near-Term (2021) No Project Intersection Level of Service**

| Study ID | Intersection Name | Control Type | AM Peak Hour | | PM Peak Hour | |
|---|---|---|---|---|---|---|
| | | | Average Delay | HCM LOS | Average Delay | HCM LOS |
| 1 | Hwy 1/Stenner Creek Rd | TWSC | 30.9 | D | 23.2 | C |
| 2 | Santa Rosa St/Highland Dr | Signalized | 35.7 | D | 37.2 | D |
| 3 | Mt Bishop Rd/Highland Dr | TWSC | 21.7 | C | 16.2 | C |
| 4 | California Blvd/Highland Dr | AWSC | 15.3 | C | 14.2 | B |
| 5 | California Blvd/Campus Wy | AWSC | 10.5 | B | 15.2 | C |
| 6 | Santa Rosa St/Foothill Blvd | Signalized | 57.7 | **E** | 55.8 | **E** |
| 7 | California Blvd/Foothill Blvd | Signalized | 29.7 | C | 22.5 | C |
| 8 | Carpenter St/Foothill Blvd | TWSC | 14.2 | B | 17.0 | C |
| 9 | Grand Ave/Slack St | AWSC | 35.2 | **E** | 13.0 | B |
| 10 | Grand Ave/Fredericks St | TWSC | 11.4 | B | 12.7 | B |
| 11 | Grand Ave/US-101 SB Ramps | TWSC | 16.1 | C | 11.6 | B |
| 12 | Grand Ave/US-101 NB Ramps | Signalized | 20.3 | C | 9.0 | A |
| 13 | Grand Ave/Mill St | TWSC | 12.9 | B | 14.0 | B |
| 14 | Grand Ave/Monterey St | Signalized | 7.7 | A | 8.2 | A |
| 15 | Santa Rosa St/Murray Ave | Signalized | 26.5 | C | 53.4 | D |
| 16 | Santa Rosa St/Olive St | Signalized | 7.3 | A | 9.0 | A |
| 17 | Santa Rosa St/Walnut St | Signalized | 30.7 | C | 74.4 | **E** |
| 18 | California Blvd/Hathway Ave | TWSC | 30.1 | D | 21.2 | C |
| 19 | California Blvd/Taft St | TWSC | 30.1 | D | 52.4 | **F** |
| 20 | California Blvd/US-101 NB Ramps | TWSC | 21.7 | C | 46.2 | **E** |
| 21 | Santa Rosa St/Mill St | Signalized | 5.5 | A | 6.4 | A |
| 22 | Santa Rosa St/Palm St | Signalized | 5.8 | A | 3.7 | A |
| 23 | Santa Rosa St/Monterey St | Signalized | 5.7 | A | 6.9 | A |
| 24 | Santa Rosa St/Higuera St | Signalized | 4.8 | A | 5.7 | A |
| 25 | Johnson Ave/Monterey Ave | Signalized | 11.8 | B | 10.4 | B |
| 26 | California Blvd/Monterey St | Signalized | 24.0 | C | 41.7 | D |
| 27 | Broad St/Palm St | AWSC | 9.4 | A | 9.5 | A |
| 28 | Chorro St/Higuera St | Signalized | 11.7 | B | 11.8 | B |
| 29 | Morro St/Higuera St | Signalized | 17.4 | B | 18.0 | B |
| 30 | Osos St/Higuera St | Signalized | 11.8 | B | 12.7 | B |
| 31 | Santa Rosa St/Marsh St | Signalized | 14.1 | B | 13.2 | B |
| 32 | Santa Rosa St/Pismo St | AWSC | 11.4 | B | 12.8 | B |
| 33 | Osos St/Buchon St | Signalized | 15.3 | B | 8.8 | A |
| 34 | Higuera St/Marsh St | Signalized* | 18.1 | B | 14.9 | B |
| 35 | Santa Barbara Ave/Upham St | Signalized | 8.8 | A | 9.4 | A |
| 36 | Broad St/South St/Santa Barbara Ave | Signalized | 46.5 | D | 40.4 | D |
| 37 | US-101 SB Ramps/Madonna Rd | Signalized | 68.9 | **E** | 38.7 | D |
| 38 | US-101 NB Ramps/Madonna Rd | Signalized | 16.6 | B | 21.4 | C |
| 39 | Los Osos Valley Rd/US-101 SB Ramps | Signalized | 28.7 | C | 41.0 | D |
| 40 | Broad St/Orcutt Rd | Signalized | 29.2 | C | 40.6 | D |
| 41 | Broad St/Rockview Pl | TWSC | 85.6 | **F** | 174.2 | **F** |
| 42 | Broad St/Capitolio Wy | TWSC | 25.2 | D | 35.0 | **E** |
| 43 | Hwy 1/Project Driveway | N/A | Does not exist in this scenario | | | |

*Intersection LOS was calculated using HCM 2000 Method, because of non-standard lane groups or phasing that do not conform to the HCM 2010 computational engine.
TWSC Intersection LOS is based on maximum approach delay.

## Freeway Level of Service

The LOS results for the study freeway segments under Near-Term (2021) No Project conditions are shown in Table 19. Under this condition, one study location will operate below the minimum target LOS during the peak hours:

- US 101 Northbound between Marsh Street and Broad Street (PM peak hour)

**Table 19. Near-Term (2021) No Project Freeway Level of Service**

| | ID | Freeway Segment | Analysis Type | # of Lanes | AM Peak Hour | | | PM Peak Hour | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Volume | Density | LOS | Volume | Density | LOS |
| US-101 NB | 1 | Marsh St to Broad St | Basic | 2 | 2,990 | 25.6 | C | 3,800 | 35.9 | E |
| | 2 | Broad St to Osos St | Weaving | 2+Aux | 2,870 | 19.8 | B | 3,730 | 26.1 | C |
| | 3 | Osos St to Toro St | Weaving | 2+Aux | 2,320 | 15.4 | B | 3,420 | 23.5 | C |
| | 4 | Toro St to California Blvd | Weaving | 2+Aux | 2,050 | 13.5 | B | 3,120 | 20.5 | C |
| | 5 | California Blvd to Grand Ave | Weaving | 2+Aux | 1,670 | 10.7 | B | 3,170 | 21.1 | C |
| US-101 SB | 6 | Grand Ave to Taft St | Weaving | 2+Aux | 2,760 | 18.4 | B | 1,600 | 10.1 | B |
| | 7 | Taft St to Montalban St | Weaving | 2+Aux | 2,550 | 16.4 | B | 2,270 | 15.8 | B |
| | 8 | Lemon St to Olive St | Weaving | 2+Aux | 2,670 | 17.6 | B | 2,860 | 19.8 | B |
| | 9 | Olive St to Broad St | Weaving | 2+Aux | 2,880 | 19.6 | B | 3,370 | 23.8 | C |
| | 10 | Broad St to Marsh St | Basic | 2 | 2,950 | 25.2 | C | 3,470 | 31.1 | D |

## Pedestrian Conditions

The City travel demand model provides a generalized estimate of the growth of bicycle and pedestrian trip making. Consistent with City guidelines, peak hour intersection pedestrian volumes were estimated by applying the forecast citywide percentage increase in pedestrian trips to the existing pedestrian intersection movement counts. Using this methodology, a 5% increase in pedestrian volumes is forecasted in comparison with the existing volumes. Since the existing volumes are small, a 5% increase is less than one person per hour in nearly every case.

## Bicycle Conditions

As with the pedestrian forecasts and consistent with City guidelines, peak hour bicycle volumes were estimated by applying the forecast citywide percentage increase in bicycle trips to the existing bicycle intersection movement counts. Using this methodology, a 7% increase in bicycle volumes is forecasted in comparison with the existing volumes.

## Transit Conditions

Under Near-Term (2021) No Project conditions the transit route configuration from the City's Short-Range Transit Plan would replace the current transit routes, as illustrated in Figure 44. No other changes to the transit system are expected.

# Near-Term (2021) Plus Project Conditions

The Near-Term (2021) Plus Project scenario represents the portion of Campus Master Plan buildout that may occur within the next five years (i.e. the period 2016 to 2021). The components of the Near-Term Project are:

- Slack and Grand Residential Neighborhood, consisting of 420 units in two- to five-story apartment buildings plus 8,500 square feet of neighborhood retail space.
- New student housing for freshmen students, providing up to 1,000 beds for the freshmen students in dormitory-style housing. This new student housing facility will be located on the site of the existing R1 and K-1 parking lots.
- New student housing for sophomore students, providing up to 1,500 beds for the sophomore students in dormitory-style housing. The new student housing will be located in the North Campus.
- An increase in overall enrollment by 1,067 students, estimated through straight-line interpolation of the student headcount in the Existing and Project Build-Out conditions.
- A decrease in off-campus students by 2,908 students. The near-term number of off-campus students was estimated by subtracting the near-term total number of on-campus students from the near-term student headcount. This includes students that will be housed in the Student Housing South new facilities that is currently being completed.
- An increase in faculty and staff employment by 193 persons, estimated through straight-line interpolation of the student headcount in the Existing and Project Build-Out conditions.
- A Technology Park Facility, an approximately 25,000-square-foot new facility that will be located adjacent to the existing Technology Park facility of similar size and function. It will provide customized research and office space.

## Intersection Level of Service

Intersection LOS analysis was conducted for the Near-Term (2021) Plus Project scenario and the LOS results are summarized in Table 20 and Table 21. Under this condition, the following 7 intersections will not meet the target LOS during the peak hours:

- Intersection #6, Santa Rosa Street/Foothill Boulevard, during the AM and PM peak hours
- Intersection #17, Santa Rosa Street/Walnut Street, during the PM peak hour
- Intersection #19, California Boulevard/Taft Street, during the PM peak hour
- Intersection #20, California Boulevard/Hwy 101 NB Ramps, during the PM peak hour
- Intersection #37, US 101 SB Ramps/Madonna Road, during the AM peak hour
- Intersection #41, Broad Street/Rockview Place, during the AM and PM peak hours
- Intersection #42, Broad Street/Capitolio Way, during the PM peak hour

These are the same intersections that will not meet the target LOS under 2021 Near-Term No Project conditions.

## Table 20. Near-Term (2021) Plus Project Intersection Level of Service (AM Peak Hour)

| Study ID | Intersection Name | Control Type | LOS Standard | 2021 No Project | | 2021 Near-Term Project | | Change from Acceptable to Unacceptable LOS? | Unacceptable LOS and Project Adds 10 trips and adds 5 Seconds of Delay? | V/C Ratio | | LOS F and Project Adds 10 trips and 5 Seconds of Delay and Increases V/C Ratio by .02? |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Average Delay | HCM LOS | Average Delay | HCM LOS | | | 2021 No Project | 2021 Near Term Project | |
| 1 | Hwy 1/Stenner Creek Rd | TWSC | D | 30.9 | D | 31.9 | D | No | No | | | No |
| 2 | Santa Rosa St/Highland Dr | Signalized | D | 35.7 | D | 33.5 | C | No | No | | | No |
| 3 | Mt Bishop Rd/Highland Dr | TWSC | D | 21.7 | C | 19.0 | C | No | No | | | No |
| 4 | California Blvd/Highland Dr | AWSC | D | 15.3 | C | 13.7 | B | No | No | | | No |
| 5 | California Blvd/Campus Wy | AWSC | D | 10.5 | B | 10.1 | B | No | No | | | No |
| 6 | Santa Rosa St/Foothill Blvd | Signalized | D | 57.7 | **E** | 59.9 | **E** | No | No | | | No |
| 7 | California Blvd/Foothill Blvd | Signalized | D | 29.7 | C | 31.1 | C | No | No | | | No |
| 8 | Carpenter St/Foothill Blvd | TWSC | D | 14.2 | B | 15.6 | C | No | No | | | No |
| 9 | Grand Ave/Slack St | AWSC | D | 35.2 | **E** | 26.2 | D | No | No | | | No |
| 10 | Grand Ave/Fredericks St | TWSC | D | 11.4 | B | 13.1 | B | No | No | | | No |
| 11 | Grand Ave/US-101 SB Ramps | TWSC | D | 16.1 | C | 14.7 | B | No | No | | | No |
| 12 | Grand Ave/US-101 NB Ramps | Signalized | D | 20.3 | C | 15.3 | B | No | No | | | No |
| 13 | Grand Ave/Mill St | TWSC | D | 12.9 | B | 13.3 | B | No | No | | | No |
| 14 | Grand Ave/Monterey St | Signalized | D | 7.7 | A | 9.4 | A | No | No | | | No |
| 15 | Santa Rosa St/Murray Ave | Signalized | D | 26.5 | C | 25.9 | C | No | No | | | No |
| 16 | Santa Rosa St/Olive St | Signalized | D | 7.3 | A | 7.3 | A | No | No | | | No |
| 17 | Santa Rosa St/Walnut St | Signalized | D | 30.7 | C | 33.4 | C | No | No | | | No |
| 18 | California Blvd/Hathway Ave | TWSC | D | 30.1 | D | 32.5 | D | No | No | | | No |
| 19 | California Blvd/Taft St | TWSC | D | 30.1 | D | 30.2 | D | No | No | | | No |
| 20 | California Blvd/US-101 NB Ramps | TWSC | D | 21.7 | C | 25.9 | D | No | No | | | No |
| 21 | Santa Rosa St/Mill St | Signalized | E | 5.5 | A | 5.5 | A | No | No | | | No |
| 22 | Santa Rosa St/Palm St | Signalized | E | 5.8 | A | 5.8 | A | No | No | | | No |
| 23 | Santa Rosa St/Monterey St | Signalized | E | 5.7 | A | 6.0 | A | No | No | | | No |
| 24 | Santa Rosa St/Higuera St | Signalized | E | 4.8 | A | 4.7 | A | No | No | | | No |
| 25 | Johnson Ave/Monterey Ave | Signalized | E | 11.8 | B | 12.4 | B | No | No | | | No |
| 26 | California Blvd/Monterey St | Signalized | E | 24.0 | C | 24.5 | C | No | No | | | No |
| 27 | Broad St/Palm St | AWSC | E | 9.4 | A | 9.4 | A | No | No | | | No |
| 28 | Chorro St/Higuera St | Signalized | E | 11.7 | B | 11.7 | B | No | No | | | No |
| 29 | Morro St/Higuera St | Signalized | E | 17.4 | B | 17.7 | B | No | No | | | No |
| 30 | Osos St/Higuera St | Signalized | E | 11.8 | B | 11.8 | B | No | No | | | No |
| 31 | Santa Rosa St/Marsh St | Signalized | E | 14.1 | B | 14.3 | B | No | No | | | No |
| 32 | Santa Rosa St/Pismo St | AWSC | E | 11.4 | B | 11.1 | B | No | No | | | No |
| 33 | Osos St/Buchon St | Signalized | E | 15.3 | B | 15.3 | B | No | No | | | No |
| 34 | Higuera St/Marsh St | Signalized* | E | 18.1 | B | 18.1 | B | No | No | | | No |
| 35 | Santa Barbara Ave/Upham St | Signalized | E | 8.8 | A | 8.8 | A | No | No | | | No |
| 36 | Broad St/South St/Santa Barbara Ave | Signalized | E | 46.5 | D | 47.7 | D | No | No | | | No |
| 37 | US-101 SB Ramps/Madonna Rd | Signalized | D | 68.9 | **E** | 69.0 | **E** | No | No | | | No |
| 38 | US-101 NB Ramps/Madonna Rd | Signalized | D | 16.6 | B | 16.6 | B | No | No | | | No |
| 39 | Los Osos Valley Rd/US-101 SB Ramps | Signalized | D | 28.7 | C | 28.8 | C | No | No | | | No |
| 40 | Broad St/Orcutt Rd | Signalized | D | 29.2 | C | 29.2 | C | No | No | | | No |
| 41 | Broad St/Rockview Pl | TWSC | D | 85.6 | **F** | 85.6 | **F** | No | No | 0.52 | 0.53 | No |
| 42 | Broad St/Capitolio Wy | TWSC | D | 25.2 | D | 24.4 | C | No | No | | | No |

**Table 21. Near-Term (2021) Plus Project Intersection Level of Service (PM Peak Hour)**

| Study ID | Intersection Name | Control Type | LOS Standard | Change from Acceptable to Unacceptable LOS? | LOS E and Project Adds 10 trips and adds 5 Seconds of Delay? | V/C Ratio | | LOS F and Project Adds 10 trips and 5 Seconds of Delay and Increases V/C Ratio by .02? |
|---|---|---|---|---|---|---|---|---|
| | | | | | | 2021 No Project | 2021 Near Term Project | |
| 1 | Hwy 1/Stenner Creek Rd | TWSC | D | No | No | | | No |
| 2 | Santa Rosa St/Highland Dr | Signalized | D | No | No | | | No |
| 3 | Mt Bishop Rd/Highland Dr | TWSC | D | No | No | | | No |
| 4 | California Blvd/Highland Dr | AWSC | D | No | No | | | No |
| 5 | California Blvd/Campus Wy | AWSC | D | No | No | | | No |
| 6 | Santa Rosa St/Foothill Blvd | Signalized | D | No | No | | | No |
| 7 | California Blvd/Foothill Blvd | Signalized | D | No | No | | | No |
| 8 | Carpenter St/Foothill Blvd | TWSC | D | No | No | | | No |
| 9 | Grand Ave/Slack St | AWSC | D | No | No | | | No |
| 10 | Grand Ave/Fredericks St | TWSC | D | No | No | | | No |
| 11 | Grand Ave/US-101 SB Ramps | TWSC | D | No | No | | | No |
| 12 | Grand Ave/US-101 NB Ramps | Signalized | D | No | No | | | No |
| 13 | Grand Ave/Mill St | TWSC | D | No | No | | | No |
| 14 | Grand Ave/Monterey St | Signalized | D | No | No | | | No |
| 15 | Santa Rosa St/Murray Ave | Signalized | D | No | No | | | No |
| 16 | Santa Rosa St/Olive St | Signalized | D | No | No | | | No |
| 17 | Santa Rosa St/Walnut St | Signalized | D | No | No | | | No |
| 18 | California Blvd/Hathway Ave | TWSC | D | No | No | | | No |
| 19 | California Blvd/Taft St | TWSC | D | No | No | | | No |
| 20 | California Blvd/US-101 NB Ramps | TWSC | D | No | No | | | No |
| 21 | Santa Rosa St/Mill St | Signalized | E | No | No | | | No |
| 22 | Santa Rosa St/Palm St | Signalized | E | No | No | | | No |
| 23 | Santa Rosa St/Monterey St | Signalized | E | No | No | | | No |
| 24 | Santa Rosa St/Higuera St | Signalized | E | No | No | | | No |
| 25 | Johnson Ave/Monterey Ave | Signalized | E | No | No | | | No |
| 26 | California Blvd/Monterey St | Signalized | E | No | No | | | No |
| 27 | Broad St/Palm St | AWSC | E | No | No | | | No |
| 28 | Chorro St/Higuera St | Signalized | E | No | No | | | No |
| 29 | Morro St/Higuera St | Signalized | E | No | No | | | No |
| 30 | Osos St/Higuera St | Signalized | E | No | No | | | No |
| 31 | Santa Rosa St/Marsh St | Signalized | E | No | No | | | No |
| 32 | Santa Rosa St/Pismo St | AWSC | E | No | No | | | No |
| 33 | Osos St/Buchon St | Signalized | E | No | No | | | No |
| 34 | Higuera St/Marsh St | Signalized* | E | No | No | | | No |
| 35 | Santa Barbara Ave/Upham St | Signalized | E | No | No | | | No |
| 36 | Broad St/South St/Santa Barbara Ave | Signalized | E | No | No | | | No |
| 37 | US-101 SB Ramps/Madonna Rd | Signalized | D | No | No | | | No |
| 38 | US-101 NB Ramps/Madonna Rd | Signalized | D | No | No | | | No |
| 39 | Los Osos Valley Rd/US-101 SB Ramps | Signalized | D | No | No | | | No |
| 40 | Broad St/Orcutt Rd | Signalized | D | No | No | | | No |
| 41 | Broad St/Rockview Pl | TWSC | D | No | No | 0.76 | 0.76 | No |
| 42 | Broad St/Capitolio Wy | TWSC | D | No | No | | | No |

As summarized in Table 20 and Table 21, the project will not have a significant impact on any of the study intersections during the AM or PM peak hours as it will not result in an exceedance of thresholds of significance for intersection impacts, which are: a roadway segment or intersection operates at LOS D or better under a no project scenario and the addition of project trips causes overall traffic operations on the facility to operate at LOS E or F; a roadway segment or intersection operates at LOS E or F under a no project scenario and the project adds both 10 or more peak hour trips and 5 seconds or more of peak hour delay, during the same peak hour; if an intersection operates at a very poor LOS F (control delay of 120 seconds or more), the significance criterion shall be an increase in v/c ratio of 0.02 or more.

## Freeway Level of Service

The LOS for the study freeway segments under Near-Term (2021) Plus Project conditions are shown in Table 22.

**Table 22. Near-Term (2021) Plus Project Freeway Level of Service**

| | ID | Freeway Segment | Analysis Type | # of Lanes | AM Peak Hour | | | PM Peak Hour | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Volume | Density | LOS | Volume | Density | LOS |
| US-101 NB | 1 | Marsh St to Broad St | Basic | 2 | 2,950 | 25.2 | C | 3,840 | 36.5 | E |
| | 2 | Broad St to Osos St | Weaving | 2+Aux | 2,830 | 19.4 | B | 3,790 | 26.6 | C |
| | 3 | Osos St to Toro St | Weaving | 2+Aux | 2,270 | 15.0 | B | 3,510 | 24.2 | C |
| | 4 | Toro St to California Blvd | Weaving | 2+Aux | 1,990 | 13.0 | B | 3,190 | 20.9 | C |
| | 5 | California Blvd to Grand Ave | Weaving | 2+Aux | 1,630 | 10.4 | B | 3,240 | 21.8 | C |
| US-101 SB | 6 | Grand Ave to Taft St | Weaving | 2+Aux | 2,820 | 19.0 | B | 1,630 | 10.3 | B |
| | 7 | Taft St to Montalban St | Weaving | 2+Aux | 2,600 | 16.7 | B | 2,280 | 15.9 | B |
| | 8 | Lemon St to Olive St | Weaving | 2+Aux | 2,730 | 18.0 | B | 2,870 | 19.9 | B |
| | 9 | Olive St to Broad St | Weaving | 2+Aux | 2,950 | 20.1 | C | 3,380 | 23.8 | C |
| | 10 | Broad St to Marsh St | Basic | 2 | 3,000 | 25.7 | C | 3,460 | 31.0 | D |

Comparisons of LOS results between the Near-Term (2021) No Project and Near-Term (2021) Plus Project conditions show that one freeway segment is forecast to be significantly impacted (AM and PM peak hour results summarized in Table 23 and Table 24):

- US 101 Northbound between Marsh Street and Broad Street (PM peak hour)

**Table 23. Near-Term (2021) Plus Project Freeway Impact Determination (AM Peak Hour)**

| | ID | Freeway Segment | No Project | | Plus Project | | Change in Volume | Significant Impact? |
|---|---|---|---|---|---|---|---|---|
| | | | Volume | LOS | Volume | LOS | | |
| | | | (A) | | (B) | | (C)=(B)-(A) | |
| US-101 NB | 1 | Marsh St to Broad St | 2,990 | C | 2,950 | C | -40 | No |
| | 2 | Broad St to Osos St | 2,990 | C | 2,950 | C | -40 | No |
| | 3 | Osos St to Toro St | 2,320 | B | 2,270 | B | -50 | No |
| | 4 | Toro St to California Blvd | 2,050 | B | 1,990 | B | -60 | No |
| | 5 | California Blvd to Grand Ave | 1,670 | B | 1,630 | B | -40 | No |
| US-101 SB | 6 | Grand Ave to Taft St | 2,760 | B | 2,820 | B | 60 | No |
| | 7 | Taft St to Lemon St | 2,550 | B | 2,600 | B | 50 | No |
| | 8 | Lemon St to Olive St | 2,670 | B | 2,730 | B | 60 | No |
| | 9 | Olive St to Broad St | 2,880 | B | 2,950 | C | 70 | No |
| | 10 | Broad St to Marsh St | 2,950 | C | 3,000 | C | 50 | No |

**Table 24. Near-Term (2021) Plus Project Freeway Impact Determination (PM Peak Hour)**

| | ID | Freeway Segment | No Project | | Plus Project | | Change in Volume | Significant Impact? |
|---|---|---|---|---|---|---|---|---|
| | | | Volume | LOS | Volume | LOS | | |
| | | | (A) | | (B) | | (C)=(B)-(A) | |
| US-101 NB | 1 | Marsh St to Broad St | 3,800 | E | 3,840 | E | 40 | Yes |
| | 2 | Broad St to Osos St | 3,730 | C | 3,790 | C | 60 | No |
| | 3 | Osos St to Toro St | 3,420 | C | 3,510 | C | 90 | No |
| | 4 | Toro St to California Blvd | 3,120 | C | 3,190 | C | 70 | No |
| | 5 | California Blvd to Grand Ave | 3,170 | C | 3,240 | C | 70 | No |
| US-101 SB | 6 | Grand Ave to Taft St | 1,600 | B | 1,630 | B | 30 | No |
| | 7 | Taft St to Montalban St | 2,270 | B | 2,280 | B | 10 | No |
| | 8 | Lemon St to Olive St | 2,860 | B | 2,870 | B | 10 | No |
| | 9 | Olive St to Broad St | 3,370 | C | 3,380 | C | 10 | No |
| | 10 | Broad St to Marsh St | 3,470 | D | 3,460 | D | -10 | No |

## Pedestrian Conditions

Under the Near-Term (2021) Plus Project conditions, the Master Plan will not result in any disruptions to existing or planned pedestrian facilities off campus or significantly conflict with applicable non-automotive transportation plans, guidelines, policies, or standards. The Master Plan provides for an enhanced pedestrian and bike circulation system with new and improved pedestrian and bicycle paths throughout the campus. Additional parking for bicycles located near major activity centers will also be installed at the campus. The planned system increases safety by creating a pedestrian-only core area of the campus and eliminating conflicts between pedestrians, bicycles, and cars. In addition, parking will be moved to outer areas of campus thus reducing pedestrian and bike conflicts with vehicles. Therefore, the Master Plan will not have a significant impact on pedestrian conditions in near term.

## Bicycle Conditions

The Master Plan will not result in any disruptions to existing or planned bicycle facilities or significantly conflict with applicable non-automotive transportation plans, guidelines, policies, or standards. The Master Plan's provision of additional student housing on campus will result in substitution of bicycle trips for car trips that otherwise would have been made if the students were living off-campus, is consistent with the City of San Luis Obispo General Plan. Also, the Master Plan provides for an enhanced pedestrian and bike circulation system with new and improved pedestrian and bicycle paths throughout the campus. Additional parking for bicycles located near major activity centers will also be installed at the campus. The planned system increases safety by creating a pedestrian-only core area of the campus and eliminating conflicts between pedestrians, bicycles, and cars. In addition, parking will be moved to outer areas of campus thus reducing pedestrian and bike conflicts with vehicles. Therefore, the Master Plan will not have a significant impact on bicycle conditions.

## Transit Conditions

Under the Near-Term (2021) Plus Project conditions, faculty and staff positions will increase by 193, and off-campus students will decrease by 2,908, resulting in an overall decrease in university-related transit trips during the peak hours. The increase of 2,500 on-campus students will only increase transit usage during off-peak hours since on-campus students will be using transit for shopping and recreation trips in the evenings outside of peak hours since they are likely going to be on campus during the morning and afternoon peak hours. The Near-Term (2021) Plus Project conditions will not change or disrupt any transit plans or operations.

Moreover, the Master Plan calls for a multi-modal transit center in the vicinity of the proposed Creekside Village near the terminus of Highland Drive at University Road. A new transit stop is envisioned near the southeast corner of campus at the Performing Arts Center to serve the new residential neighborhood and student housing. An additional stop is planned at the southwest corner of campus. While the Master Plan indicates that transit routes will bring riders to strategic locations at the edge of the campus thereby eventually eliminating the need for buses to regularly enter the Campus Core, any changes to the current routes, as well as the precise locations and designs of the transit center and future stops will be determined in cooperation with the City and SLO Regional Transit Authority. Therefore, the Master Plan will not have a significant impact on transit conditions.

## Vehicle Miles Traveled (VMT)

Regional VMT for the Near-Term (2021) Plus Project conditions was estimated using data from 3,961 responses to Cal Poly's 2015 Transportation Survey, which asked people about how far they travelled to and from the campus. Table 25 summarizes the VMT calculations under the Near-Term (2021) Plus Project conditions. As shown, the reduction of the number of students living off-campus will result in a 17.1% decrease in VMT associated with the university, even if faculty/staff positions increase.

**Table 25. Near-Term (2021) Plus Project Vehicle Miles Traveled**

| | Average Travel Distance (1-way) | Existing People | Existing VMT | Near-Term People | Near-Term VMT |
|---|---|---|---|---|---|
| | (A) | (B) | (C)=(A)*(B)*2 | (D) | (E)=(A)*(D)*2 |
| Faculty/Staff | 14.1 | 3,172 | 89,450 | 3,365 | 94,893 |
| Off-Campus Students | 18.6 | 13,756 | 511,723 | 10,848 | 403,546 |
| Total | | | 601,174 | | 498,439 |
| Change | | | | | -17.1% |

Table 25 is based on the very conservative assumption that the additional 193 faculty and staff would living in housing that is geographically distributed the same way as are the homes of current faculty and staff. In fact, it is expected that a number of the 420 apartments in the Grand/Slack neighborhood will be occupied by faculty and staff, so the number of faculty and staff living off-campus is likely to decrease, rather than the increase as shown in Table 25. Accordingly, Table 25 presents a "worst case" scenario of the VMT reduction that will result from the Near-Term Project.

## Slack and Grand Residential Neighborhood

As indicated in Table 20 and Table 21, the Master Plan, including the development of Slack and Grand Residential Neighborhood, will not result in a significant traffic impact at any of study intersections.

As indicated in Table 23 and Table 24, the Master Plan, including the development of Slack and Grand Residential Neighborhood, is forecast to result in a significant impact at one freeway segment—the US 101 Northbound between Marsh Street and Broad Street in PM peak hour.

As discussed previously, the Master Plan, including the development of Slack and Grand Residential Neighborhood, will not change or disrupt any transit plans or operations and will therefore not have a significant impact on transit conditions.

As discussed previously, the Master Plan, including the development of Slack and Grand Residential Neighborhood will not result in any disruptions to existing or planned pedestrian or bicycle facilities or significantly conflict with applicable non-automotive transportation plans, guidelines, policies, or standards, and will therefore not have a significant impact on pedestrian or bicycle conditions. The neighborhood's site is located at south-east edge of campus and has ready access to bike lanes, sidewalks and striped pedestrian crossings into campus.

As discussed previously, the neighborhood will provide needed housing for an area that is suffering from a jobs-housing imbalance and therefore it is projected to result in a reduction of VMTs associated with commute works trips. In addition, it is further expected that a number of the 420 apartments in the Slack and Grand Residential Neighborhood will be occupied by Cal Poly faculty and staff, so the number of faculty and staff living off-campus is likely to decrease, rather than the increase. Therefore, it is expected that the actual VMT reduction will be substantially greater than that shown in Table 25, which presents a "worst-case" scenario of the VMT reduction that will result from the Near-Term 2021 Project.

# Year 2035 No Project Conditions

## Intersection Level of Service

Intersection LOS analysis was conducted for the Year 2035 No Project scenario[60] and the LOS results are summarized in Table 26. Under this condition, the following 10 intersections will not operate at the minimum target LOS during the peak hours:

- **Intersection #1**, Highway 1/Stenner Creek Road, during the AM and PM peak hours
- **Intersection #9**, Grand Avenue/Slack Street, during the AM peak hour
- **Intersection #15**, Santa Rosa Street/Murray Avenue, during the PM peak hour
- Intersection #17, Santa Rosa Street/Walnut Street, during the PM peak hour
- Intersection #19, California Boulevard/Taft Street, during the AM and PM peak hours
- **Intersection #20**, California Boulevard/Highway 101 NB Ramps, during the PM peak hour
- **Intersection #26**, California Boulevard/Monterey Street, during the PM peak hour
- **Intersection #40**, Broad Street/Orcutt Road, during the PM peak hour
- Intersection #41, Broad Street/Rockview Place, during the AM and PM peak hours
- **Intersection #42**, Broad Street/Capitolio Way, during the AM and PM peak hours

Three of these intersections do not meet the target LOS under existing conditions. Additional intersections projected to operate below the target LOS under No Project conditions, i.e. at LOS E or F by 2035, are identified in bold font.

[60] The year 2035 traffic conditions include the future projected traffic growth in the area, including adopted plans for future land uses and transportation facilities, forecasted using the calibrated City of San Luis Obispo travel demand model.

## Table 26. Year 2035 No Project Intersection Level of Service

| Study ID | Intersection Name | Control Type | AM Peak Hour | | PM Peak Hour | |
|---|---|---|---|---|---|---|
| | | | Average Delay | HCM LOS | Average Delay | HCM LOS |
| 1 | Hwy 1/Stenner Creek Rd | TWSC | 35.8 | **E** | 84.6 | **F** |
| 2 | Santa Rosa St/Highland Dr | Signalized | 43.1 | D | 49.3 | D |
| 3 | Mt Bishop Rd/Highland Dr | TWSC | 22.1 | C | 17.6 | C |
| 4 | California Blvd/Highland Dr | AWSC | 15.4 | C | 14.5 | B |
| 5 | California Blvd/Campus Wy | AWSC | 10.6 | B | 14.8 | B |
| 6 | Santa Rosa St/Foothill Blvd | Signalized | 51.6 | D | 51.4 | D |
| 7 | California Blvd/Foothill Blvd | Signalized | 28.3 | C | 34.8 | C |
| 8 | Carpenter St/Foothill Blvd | TWSC | 14.7 | B | 17.7 | C |
| 9 | Grand Ave/Slack St | AWSC | 39.3 | **E** | 13.6 | B |
| 10 | Grand Ave/Fredericks St | TWSC | 11.6 | B | 13.1 | B |
| 11 | Grand Ave/US-101 SB Ramps | TWSC | 17.9 | C | 11.7 | B |
| 12 | Grand Ave/US-101 NB Ramps | Signalized | 19.4 | B | 8.8 | A |
| 13 | Grand Ave/Mill St | TWSC | 13.8 | B | 17.0 | C |
| 14 | Grand Ave/Monterey St | Signalized | 8.3 | A | 9.4 | A |
| 15 | Santa Rosa St/Murray Ave | Signalized | 43.7 | D | 80.0 | **F** |
| 16 | Santa Rosa St/Olive St | Signalized | 10.0 | A | 20.3 | C |
| 17 | Santa Rosa St/Walnut St | Signalized | 92.5 | **F** | 133.6 | **F** |
| 18 | California Blvd/Hathway Ave | TWSC | 34.2 | D | 28.7 | D |
| 19 | California Blvd/Taft St | TWSC | 57.2 | **F** | 54.7 | **F** |
| 20 | California Blvd/US-101 NB Ramps | TWSC | 23.0 | C | 107.0 | **F** |
| 21 | Santa Rosa St/Mill St | Signalized | 7.3 | A | 6.6 | A |
| 22 | Santa Rosa St/Palm St | Signalized | 14.4 | B | 3.6 | A |
| 23 | Santa Rosa St/Monterey St | Signalized | 11.2 | B | 8.1 | A |
| 24 | Santa Rosa St/Higuera St | Signalized | 4.9 | A | 6.0 | A |
| 25 | Johnson Ave/Monterey Ave | Signalized | 12.1 | B | 10.7 | B |
| 26 | California Blvd/Monterey St | Signalized | 26.4 | C | 96.0 | **F** |
| 27 | Broad St/Palm St | AWSC | 9.7 | A | 9.7 | A |
| 28 | Chorro St/Higuera St | Signalized | 12.0 | B | 13.0 | B |
| 29 | Morro St/Higuera St | Signalized | 16.8 | B | 16.8 | B |
| 30 | Osos St/Higuera St | Signalized | 12.8 | B | 14.8 | B |
| 31 | Santa Rosa St/Marsh St | Signalized | 15.4 | B | 14.3 | B |
| 32 | Santa Rosa St/Pismo St | AWSC | 13.2 | B | 18.0 | C |
| 33 | Osos St/Buchon St | Signalized | 20.3 | C | 9.1 | A |
| 34 | Higuera St/Marsh St | Signalized* | 20.4 | C | 31.7 | C |
| 35 | Santa Barbara Ave/Upham St | Signalized | 11.1 | B | 15.0 | B |
| 36 | Broad St/South St/Santa Barbara Ave | Signalized | 47.9 | D | 42.5 | D |
| 37 | US-101 SB Ramps/Madonna Rd | Signalized | 49.3 | D | 32.2 | C |
| 38 | US-101 NB Ramps/Madonna Rd | Signalized | 14.2 | B | 17.3 | B |
| 39 | Los Osos Valley Rd/US-101 SB Ramps | Signalized | 38.7 | D | 54.7 | D |
| 40 | Broad St/Orcutt Rd | Signalized | 32.7 | C | 95.9 | **F** |
| 41 | Broad St/Rockview Pl | TWSC | >180 | **F** | >180 | **F** |
| 42 | Broad St/Capitolio Wy | TWSC | 161.1 | **F** | >180 | **F** |
| 43 | Hwy 1/Project Driveway | N/A | Does not exist in this scenario | | | |

*Intersection LOS was calculated using HCM 2000 Method, because of non-standard lane groups or phasing that do not conform to the HCM 2010 computational engine.
TWSC Intersection LOS is based on maximum approach delay.

## Freeway Level of Service

The LOS for the study freeway segments under Year 2035 No Project conditions are shown in Table 27. Segments 1 and 2 would be a single segment in 2035 because of the planned permanent closure of the Broad Street northbound ramps for safety reasons. Under this condition, the following additional two study locations will not operate at target LOS during the peak hours:

- US 101 Northbound between Marsh Street and Osos Street (PM peak hour)
- US 101 Southbound between Broad Street and Marsh Street (AM and PM peak hours)

**Table 27. Year 2035 No Project Freeway Segment Level of Service**

| | ID | Freeway Segment | Analysis Type | # of Lanes | AM Peak Hour | | | PM Peak Hour | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Volume | Density | LOS | Volume | Density | LOS |
| US-101 NB | 1 | Marsh St to Broad St | Basic | 2 | 3,140 | 27.2 | D | 4,520 | 51.5 | F |
| | 2 | Broad St to Osos St | Basic | 2 | 3,140 | 27.2 | D | 4,520 | 51.5 | F |
| | 3 | Osos St to Toro St | Weaving | 2+Aux | 2,640 | 18.1 | B | 4,400 | 32.6 | D |
| | 4 | Toro St to California Blvd | Weaving | 2+Aux | 2,230 | 14.6 | B | 4,190 | 29.1 | D |
| | 5 | California Blvd to Grand Ave | Weaving | 2+Aux | 1,890 | 12.1 | B | 4,430 | 31.6 | D |
| US-101 SB | 6 | Grand Ave to Taft St | Weaving | 2+Aux | 4,100 | 29.0 | D | 2,060 | 13.0 | B |
| | 7 | Taft St to Montalban St | Weaving | 2+Aux | 3,770 | 26.0 | C | 2,720 | 18.9 | B |
| | 8 | Lemon St to Olive St | Weaving | 2+Aux | 3,870 | 27.8 | C | 3,380 | 24.2 | C |
| | 9 | Olive St to Broad St | Weaving | 2+Aux | 3,960 | 28.3 | D | 3,880 | 28.0 | D |
| | 10 | Broad St to Marsh St | Basic | 2 | 4,140 | 42.1 | E | 3,970 | 38.8 | E |

## Pedestrian Conditions

The San Luis Obispo travel demand model provides a generalized estimate of the growth of bicycle and pedestrian trip making. Consistent with City guidelines, peak hour intersection pedestrian volumes were estimated by applying the forecasted citywide percentage increase in pedestrian trips to the existing bicycle and pedestrian intersection movement counts. Using this methodology, a 19% increase in pedestrian volumes is forecasted in comparison with the existing volumes.

## Bicycle Conditions

As with the pedestrian forecasts and consistent with City guidelines, peak hour bicycle volumes were estimated by applying the forecast citywide percentage increase in bicycle trips to the existing bicycle intersection movement counts. Using this methodology, a 28% increase in bicycle volumes is forecasted in comparison with the existing volumes.

- US 101 Southbound Ramps at Madonna Road (Northbound – AM and PM peak hours)

## Transit Conditions

Under 2035 No Project conditions, no other changes to the transit system are anticipated.

# Year 2035 Plus Project Conditions

## Intersection Level of Service

Intersection LOS analysis was conducted for the Year 2035 Plus Project scenario and the LOS results are summarized in Table 28 and Table 29. As shown, under Year 2035 Plus Project conditions, impact will be significant at the following six study intersections:

- Intersection #1, Hwy 1/Stenner Creek Road, during the AM peak hour
- Intersection #6, Santa Rosa Street/Foothill Boulevard, during the AM peak hour
- Intersection #9, Grand Avenue/Slack Street, during the AM peak hour
- Intersection #19, California Boulevard/Taft Street, during the AM peak hour
- Intersection #41, Broad Street/Rockview Place, during the AM peak hour
- Intersection #43, Hwy 1/Project Driveway, during the AM and PM peak hours

As discussed previously, four of these intersections (#1, #9, #19, and #41) are projected to operate below target LOS under Year 2035 No Project conditions. Two additional intersections (#6 and #43) are projected to operate below target LOS under Year 2035 Plus Project conditions. The residential neighborhoods are the components of the Master Plan that will result in a net increase in traffic to and from the campus and thus in the impacts identified above.

## Table 28. Year 2035 Plus Project Intersection Level of Service (AM Peak Hour)

| Study ID | Intersection Name | Control Type | 2035 No Project | | 2035 Plus Project | | LOS Changes from D or Better to E or F? | LOS E or F and Project Adds 10 trips and adds 5 Seconds of Delay? | V/C Ratio | | LOS F w/ Delay >120s and Project Adds 10 trips and 5 Seconds of Delay and Increases V/C Ratio by .02? |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Average Delay | HCM LOS | Average Delay | HCM LOS | | | 2035 No Project | 2035 Plus Project | |
| 1 | Hwy 1/Stenner Creek Rd | TWSC | 35.8 | **E** | >180 | **F** | No | **Yes** | | | No |
| 2 | Santa Rosa St/Highland Dr | Signalized | 43.1 | D | 49.3 | D | No | No | | | No |
| 3 | Mt Bishop Rd/Highland Dr | TWSC | 22.1 | C | 22.6 | C | No | No | | | No |
| 4 | California Blvd/Highland Dr | AWSC | 15.4 | C | 14.3 | B | No | No | | | No |
| 5 | California Blvd/Campus Wy | AWSC | 10.6 | B | 10.7 | B | No | No | | | No |
| 6 | Santa Rosa St/Foothill Blvd | Signalized | 51.6 | D | 73.9 | **E** | **Yes** | No | | | No |
| 7 | California Blvd/Foothill Blvd | Signalized | 28.3 | C | 31.2 | C | No | No | | | No |
| 8 | Carpenter St/Foothill Blvd | TWSC | 14.7 | B | 18.0 | C | No | No | | | No |
| 9 | Grand Ave/Slack St | AWSC | 39.3 | **E** | 54.6 | **F** | No | **Yes** | | | No |
| 10 | Grand Ave/Fredericks St | TWSC | 11.6 | B | 15.4 | C | No | No | | | No |
| 11 | Grand Ave/US-101 SB Ramps | TWSC | 17.9 | C | 16.5 | C | No | No | | | No |
| 12 | Grand Ave/US-101 NB Ramps | Signalized | 19.4 | B | 16.2 | B | No | No | | | No |
| 13 | Grand Ave/Mill St | TWSC | 13.8 | B | 17.5 | C | No | No | | | No |
| 14 | Grand Ave/Monterey St | Signalized | 8.3 | A | 9.6 | A | No | No | | | No |
| 15 | Santa Rosa St/Murray Ave | Signalized | 43.7 | D | 50.9 | D | No | No | | | No |
| 16 | Santa Rosa St/Olive St | Signalized | 10.0 | A | 11.1 | B | No | No | | | No |
| 17 | Santa Rosa St/Walnut St | Signalized | 92.5 | **F** | 83.1 | **F** | No | No | 0.71 | 0.73 | No |
| 18 | California Blvd/Hathway Ave | TWSC | 34.2 | D | 29.7 | D | No | No | | | No |
| 19 | California Blvd/Taft St | TWSC | 57.2 | **F** | 95.0 | **F** | No | **Yes** | | | No |
| 20 | California Blvd/US-101 NB Ramps | TWSC | 23.0 | C | 25.7 | D | No | No | | | No |
| 21 | Santa Rosa St/Mill St | Signalized | 7.3 | A | 7.3 | A | No | No | | | No |
| 22 | Santa Rosa St/Palm St | Signalized | 14.4 | B | 16.1 | B | No | No | | | No |
| 23 | Santa Rosa St/Monterey St | Signalized | 11.2 | B | 12.2 | B | No | No | | | No |
| 24 | Santa Rosa St/Higuera St | Signalized | 4.9 | A | 4.9 | A | No | No | | | No |
| 25 | Johnson Ave/Monterey Ave | Signalized | 12.1 | B | 13.1 | B | No | No | | | No |
| 26 | California Blvd/Monterey St | Signalized | 26.4 | C | 28.6 | C | No | No | | | No |
| 27 | Broad St/Palm St | AWSC | 9.7 | A | 10.0 | A | No | No | | | No |
| 28 | Chorro St/Higuera St | Signalized | 12.0 | B | 12.1 | B | No | No | | | No |
| 29 | Morro St/Higuera St | Signalized | 16.8 | B | 18.4 | B | No | No | | | No |
| 30 | Osos St/Higuera St | Signalized | 12.8 | B | 13.2 | B | No | No | | | No |
| 31 | Santa Rosa St/Marsh St | Signalized | 15.4 | B | 15.5 | B | No | No | | | No |
| 32 | Santa Rosa St/Pismo St | AWSC | 13.2 | B | 12.9 | B | No | No | | | No |
| 33 | Osos St/Buchon St | Signalized | 20.3 | C | 19.4 | B | No | No | | | No |
| 34 | Higuera St/Marsh St | Signalized* | 20.4 | C | 20.1 | C | No | No | ` | | No |
| 35 | Santa Barbara Ave/Upham St | Signalized | 11.1 | B | 11.4 | B | No | No | | | No |
| 36 | Broad St/South St/Santa Barbara Ave | Signalized | 47.9 | D | 50.2 | D | No | No | | | No |
| 37 | US-101 SB Ramps/Madonna Rd | Signalized | 49.3 | D | 46.0 | D | No | No | | | No |
| 38 | US-101 NB Ramps/Madonna Rd | Signalized | 14.2 | B | 14.3 | B | No | No | | | No |
| 39 | Los Osos Valley Rd/US-101 SB Ramps | Signalized | 38.7 | D | 39.3 | D | No | No | | | No |
| 40 | Broad St/Orcutt Rd | Signalized | 32.7 | C | 32.9 | C | No | No | | | No |
| 41 | Broad St/Rockview Pl | TWSC | >180 | **F** | >180 | **F** | No | No | 2.69 | 2.92 | **Yes** |
| 42 | Broad St/Capitolio Wy | TWSC | 161.1 | **F** | 149.9 | **F** | No | No | 1.17 | 1.13 | No |
| 43 | Hwy 1/Project Driveway | TWSC | Does Not Exist | | >180 | **F** | **Yes** | No | | | No |

## Table 29. Year 2035 Plus Project Intersection Level of Service (PM Peak Hour)

| Study ID | Intersection Name | Control Type | 2035 No Project | | 2035 Plus Project | | LOS Changes from D or Better to E or F? | LOS E or F and Project Adds 10 trips and adds 5 Seconds of Delay? | V/C Ratio | | LOS F w/ Delay >120s and Project Adds 10 trips and 5 Seconds of Delay and Increases V/C Ratio by .02? |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Average Delay | HCM LOS | Average Delay | HCM LOS | | | 2035 No Project | 2035 Plus Project | |
| 1 | Hwy 1/Stenner Creek Rd | TWSC | 84.6 | F | 84.6 | F | No | No | | | No |
| 2 | Santa Rosa St/Highland Dr | Signalized | 49.3 | D | 51.6 | D | No | No | | | No |
| 3 | Mt Bishop Rd/Highland Dr | TWSC | 17.6 | C | 17.6 | C | No | No | | | No |
| 4 | California Blvd/Highland Dr | AWSC | 14.5 | B | 14.5 | B | No | No | | | No |
| 5 | California Blvd/Campus Wy | AWSC | 14.8 | B | 14.8 | B | No | No | | | No |
| 6 | Santa Rosa St/Foothill Blvd | Signalized | 51.4 | D | 50.8 | D | No | No | | | No |
| 7 | California Blvd/Foothill Blvd | Signalized | 34.8 | C | 34.7 | C | No | No | | | No |
| 8 | Carpenter St/Foothill Blvd | TWSC | 17.7 | C | 17.7 | C | No | No | | | No |
| 9 | Grand Ave/Slack St | AWSC | 13.6 | B | 13.6 | B | No | No | | | No |
| 10 | Grand Ave/Fredericks St | TWSC | 13.1 | B | 13.1 | B | No | No | | | No |
| 11 | Grand Ave/US-101 SB Ramps | TWSC | 11.7 | B | 26.9 | D | No | No | | | No |
| 12 | Grand Ave/US-101 NB Ramps | Signalized | 8.8 | A | 8.7 | A | No | No | | | No |
| 13 | Grand Ave/Mill St | TWSC | 17.0 | C | 17.0 | C | No | No | | | No |
| 14 | Grand Ave/Monterey St | Signalized | 9.4 | A | 9.0 | A | No | No | | | No |
| 15 | Santa Rosa St/Murray Ave | Signalized | 80.0 | F | 80.0 | F | No | No | | | No |
| 16 | Santa Rosa St/Olive St | Signalized | 20.3 | C | 20.3 | C | No | No | | | No |
| 17 | Santa Rosa St/Walnut St | Signalized | 133.6 | F | 133.6 | F | No | No | 0.85 | 0.85 | No |
| 18 | California Blvd/Hathway Ave | TWSC | 28.7 | D | 28.7 | D | No | No | | | No |
| 19 | California Blvd/Taft St | TWSC | 54.7 | F | 54.7 | F | No | No | | | No |
| 20 | California Blvd/US-101 NB Ramps | TWSC | 107.0 | F | 107.0 | F | No | No | | | No |
| 21 | Santa Rosa St/Mill St | Signalized | 6.6 | A | 6.6 | A | No | No | | | No |
| 22 | Santa Rosa St/Palm St | Signalized | 3.6 | A | 3.6 | A | No | No | | | No |
| 23 | Santa Rosa St/Monterey St | Signalized | 8.1 | A | 8.0 | A | No | No | | | No |
| 24 | Santa Rosa St/Higuera St | Signalized | 6.0 | A | 6.0 | A | No | No | | | No |
| 25 | Johnson Ave/Monterey Ave | Signalized | 10.7 | B | 10.7 | B | No | No | | | No |
| 26 | California Blvd/Monterey St | Signalized | 96.0 | F | 93.0 | F | No | No | | | No |
| 27 | Broad St/Palm St | AWSC | 9.7 | A | 9.7 | A | No | No | | | No |
| 28 | Chorro St/Higuera St | Signalized | 13.0 | B | 13.0 | B | No | No | | | No |
| 29 | Morro St/Higuera St | Signalized | 16.8 | B | 16.8 | B | No | No | | | No |
| 30 | Osos St/Higuera St | Signalized | 14.8 | B | 14.8 | B | No | No | | | No |
| 31 | Santa Rosa St/Marsh St | Signalized | 14.3 | B | 14.3 | B | No | No | | | No |
| 32 | Santa Rosa St/Pismo St | AWSC | 18.0 | C | 18.0 | C | No | No | | | No |
| 33 | Osos St/Buchon St | Signalized | 9.1 | A | 9.1 | A | No | No | | | No |
| 34 | Higuera St/Marsh St | Signalized* | 31.7 | C | 31.7 | C | No | No | | | No |
| 35 | Santa Barbara Ave/Upham St | Signalized | 15.0 | B | 15.0 | B | No | No | | | No |
| 36 | Broad St/South St/Santa Barbara Ave | Signalized | 42.5 | D | 42.6 | D | No | No | | | No |
| 37 | US-101 SB Ramps/Madonna Rd | Signalized | 32.2 | C | 32.2 | C | No | No | | | No |
| 38 | US-101 NB Ramps/Madonna Rd | Signalized | 17.3 | B | 17.3 | B | No | No | | | No |
| 39 | Los Osos Valley Rd/US-101 SB Ramps | Signalized | 54.7 | D | 54.7 | D | No | No | | | No |
| 40 | Broad St/Orcutt Rd | Signalized | 95.9 | F | 96.0 | F | No | No | | | No |
| 41 | Broad St/Rockview Pl | TWSC | >180 | F | >180 | F | No | No | | | No |
| 42 | Broad St/Capitolio Wy | TWSC | >180 | F | >180 | F | No | No | | | No |
| 43 | Hwy 1/Project Driveway | TWSC | Does Not Exist | | 173.7 | F | Yes | No | | | No |

## Freeway LOS

The LOS for the study freeway segments under Year 2035 Plus Project conditions are shown in Table 30.

**Table 30. Year 2035 Plus Project Freeway Level of Service**

| | ID | Freeway Segment | Analysis Type | # of Lanes | AM Peak Hour | | | PM Peak Hour | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Volume | Density | LOS | Volume | Density | LOS |
| US-101 NB | 1 | Marsh St to Osos St | Basic | 2 | 3,110 | 26.9 | D | 4,570 | 53.0 | **F** |
| | 2 | Broad St to Osos St | Basic | 2 | 3,110 | 26.9 | D | 4,570 | 53.0 | **F** |
| | 3 | Osos St to Toro St | Weaving | 2+Aux | 2,580 | 17.6 | B | 4,470 | 33.2 | D |
| | 4 | Toro St to California Blvd | Weaving | 2+Aux | 2,180 | 14.2 | B | 4,290 | 29.9 | D |
| | 5 | California Blvd to Grand Ave | Weaving | 2+Aux | 1,830 | 11.6 | B | 4,530 | 32.8 | D |
| US-101 SB | 6 | Grand Ave to Taft St | Weaving | 2+Aux | 4,090 | 29.4 | D | 2,130 | 13.5 | B |
| | 7 | Taft St to Montalban St | Weaving | 2+Aux | 3,800 | 26.3 | C | 2,770 | 19.3 | B |
| | 8 | Lemon St to Olive St | Weaving | 2+Aux | 3,950 | 28.8 | D | 3,410 | 24.5 | C |
| | 9 | Olive St to Broad St | Weaving | 2+Aux | 4,020 | 28.5 | D | 3,900 | 28.0 | C |
| | 10 | Broad St to Marsh St | Basic | 2 | 4,240 | 44.3 | **E** | 4,000 | 39.3 | **E** |

Comparison of the LOS results between the Year 2035 No Project and Year 2035 Plus Project conditions shows a significant impact on the following freeway segments (AM and PM peak hour results are summarized in Table 31 and Table 32):

- US 101 Northbound between Marsh Street and Osos Street (PM peak hour)
- US 101 Southbound between Broad Street and Marsh Street (AM and PM peak hours)

**Table 31. Year 2035 Plus Project Freeway Impact Determination (AM Peak Hour)**

| | ID | Freeway Segment | No Project | | Plus Project | | Change in Volume | Significant Impact? |
|---|---|---|---|---|---|---|---|---|
| | | | Volume | LOS | Volume | LOS | | |
| | | | (A) | | (B) | | (C)=(B)-(A) | |
| US-101 NB | 1 | Marsh St to Broad St | 3,140 | D | 3,110 | D | -30 | No |
| | 2 | Broad St to Osos St | 3,140 | D | 3,110 | D | -30 | No |
| | 3 | Osos St to Toro St | 2,640 | B | 2,580 | B | -60 | No |
| | 4 | Toro St to California Blvd | 2,230 | B | 2,180 | B | -50 | No |
| | 5 | California Blvd to Grand Ave | 1,890 | B | 1,830 | B | -60 | No |
| US-101 SB | 6 | Grand Ave to Taft St | 4,100 | D | 4,090 | D | -10 | No |
| | 7 | Taft St to Lemon St | 3,770 | C | 3,800 | C | 30 | No |
| | 8 | Lemon St to Olive St | 3,870 | C | 3,950 | D | 80 | No |
| | 9 | Olive St to Broad St | 3,960 | D | 4,020 | D | 60 | No |
| | 10 | Broad St to Marsh St | 4,140 | **E** | 4,240 | **E** | 100 | **Yes** |

**Table 32. Year 2035 Plus Project Freeway Impact Determination (PM Peak Hour)**

| | ID | Freeway Segment | No Project | | Plus Project | | Change in Volume | Significant Impact? |
|---|---|---|---|---|---|---|---|---|
| | | | Volume | LOS | Volume | LOS | | |
| | | | (A) | | (B) | | (C)=(B)-(A) | |
| US-101 NB | 1 | Marsh St to Broad St | 4,520 | **F** | 4,570 | **F** | 50 | **Yes** |
| | 2 | Broad St to Osos St | 4,520 | **F** | 4,570 | **F** | 50 | **Yes** |
| | 3 | Osos St to Toro St | 4,400 | D | 4,470 | D | 70 | No |
| | 4 | Toro St to California Blvd | 4,190 | D | 4,290 | D | 100 | No |
| | 5 | California Blvd to Grand Ave | 4,430 | D | 4,530 | D | 100 | No |
| US-101 SB | 6 | Grand Ave to Taft St | 2,060 | B | 2,130 | B | 70 | No |
| | 7 | Taft St to Montalban St | 2,720 | B | 2,770 | B | 50 | No |
| | 8 | Lemon St to Olive St | 3,380 | C | 3,410 | C | 30 | No |
| | 9 | Olive St to Broad St | 3,880 | D | 3,900 | C | 20 | No |
| | 10 | Broad St to Marsh St | 3,970 | **E** | 4,000 | **E** | 30 | **Yes** |

## Pedestrian Conditions

As the Master Plan will not significantly disrupt existing or planned pedestrian facilities or significantly conflict with applicable non-automotive transportation plans, guidelines, policies, or standards, it will not have a significant impact on pedestrian conditions.

## Bicycle Conditions

As the Master Plan will not disrupt any existing or planned bicycle facilities, and the network of on-campus bicycle facilities provided for in the Master Plan is more extensive that that found in the City's Bicycle Transportation Plan, and the Master Plan's provision of additional student housing on campus resulting in substitution of bicycle trips for car trips that otherwise would have been made if the students were living off-campus, is consistent with City of San Luis Obispo General Plan policies promoting alternative forms of transportation, it will not result in a significant impact.

## Transit Conditions

Under the Year 2035 Plus Project conditions, faculty and staff positions are estimated to increase by 733, and off-campus students to decrease by 3,756, resulting in an overall decrease in university-related transit trips during the peak hours. The full buildout of the Master Plan includes a transit center in the middle of campus that will be supportive of the revised routing in SLO Transit's new plan. The Master Plan also includes two new on-campus bus loops in addition to those in SLO Transit's Short Range Transit Plan, one routed along Cuesta Avenue and College Avenue and the other on Pacheco Way. Since the transit center and additional stops can be considered enhancements to transit facilities, the Master Plan will not disrupt or conflict with transit plans or operations, and will not have a significant impact on transit conditions.

## Vehicle Miles Traveled

Regional VMT for the Year 2035 Plus Project conditions was estimated using data from Cal Poly's 2015 Transportation Survey, which asked people about how far they travelled to and from the campus. Table 33 summarizes the VMT calculations under the Year 2035 Plus Project conditions. As shown, the reduction in the number of students living off-campus as a result of providing additional on-campus student housing will result in a 19.8% decrease in VMT associated with the university.

**Table 33. Campus Master Plan's Change in Vehicle Miles Traveled**

| | Average Trip Distance (1-way)* | Existing People | Existing VMT | CMP Buildout People | CMP Buildout VMT |
|---|---|---|---|---|---|
| | (A) | (B) | (C)=(A)*(B) | (D) | (E)=(A)*(D) |
| Faculty/Staff | 14.1 | 3,172 | 89,450 | 3,905 | 110,121 |
| Off-Campus Students | 18.6 | 13,756 | 511,723 | 10,000 | 372,000 |
| Total | | | 601,174 | | 482,121 |
| Change | | | | | -19.8% |

As this VMT estimate is based on the very conservative assumption that the additional 733 faculty and staff would living in housing that is geographically distributed the same way as is housing of current faculty and staff. Since a number of the 1,470 apartments in the proposed residential neighborhoods would likely be taken up by faculty and staff, the VMT reduction could in fact be substantially greater that shown in Table 33 which presents a very conservative assumption of the VMT reduction that will result from full buildout of the Master Plan.

## Slack and Grand Residential Neighborhood

As discussed previously and as indicated in Table 26, under the Year 2035 No Project Conditions, the intersection of Grand Avenue/Slack Street is projected to operate at LOS E during the AM peak hour and LOS B during the PM peak hour. As indicated in Table 33 and Table 34, the addition of traffic generated by the Slack and Grand neighborhood will result in a significant traffic impact, LOS F, at this intersection during the PM peak traffic hour. The addition of traffic from this neighborhood will also contribute to a significant impact at the intersections of California Boulevard/Taft Street and Broad Street/Rockview Place.

As indicated in Table 28 and Table 29, the Master Plan, including the development of Slack and Grand Residential Neighborhood, is forecast to result in a significant impact at the following freeway segments:

- US 101 Northbound between Marsh Street and Osos Street (PM peak hour)
- US 101 Southbound between Broad Street and Marsh Street (AM and PM peak hours)

As discussed previously, the Master Plan, including the development of the Slack and Grand Residential Neighborhood, will not change or disrupt any transit plans or operations and will therefore not have a significant impact on transit conditions.

As discussed previously, the Master Plan, including the development of Slack and Grand Residential Neighborhood, will not result in any disruptions to existing or planned pedestrian or bicycle facilities or significantly conflict with applicable non-automotive transportation plans, guidelines, policies, or standards and therefore, will not have a significant impact on pedestrian or bicycle conditions.

As discussed previously, the neighborhood will provide needed housing for an area that is suffering from a jobs-housing imbalance and therefore it is projected to result in a reduction of VMTs associated with commute works trips. In addition, it is further expected that that a number of the 420 apartments in the Slack and Grand Residential Neighborhood will be occupied by Cal Poly faculty and staff, so the number of faculty and staff living off-campus is likely to decrease, rather than the increase. Therefore, it is expected that the actual vehicle miles traveled (VMT) reduction under 2035 Plus Project conditions will be greater than that shown in Table 33, which presents a very conservative scenario of the VMT reduction that will result from the Master Plan, including the Slack and Grand neighborhood.

# Mitigation Measures

## Intersections

In accordance with the City's "roundabout first" policy, possible use of a roundabout instead of a traffic signal to mitigate project impacts was analyzed, and the results of the analysis are summarized in Table 34.

**Table 34. Horizon Year 2035 Intersection Mitigation Measures**

| Study ID | Intersection Name | Control Type | 2035 Without Mitigation | | | | Potential Mitigation | 2035 With Mitigation | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | AM Peak Hour | | PM Peak Hour | | | AM Peak Hour | | PM Peak Hour | |
| | | | Average Delay | HCM LOS | Average Delay | HCM LOS | | Average Delay | HCM LOS | Average Delay | HCM LOS |
| 1 | Hwy 1/Stenner Creek Rd | TWSC | >180 | F | 84.6 | F | Signalize | 9.5 | A | 6.0 | A |
| 6 | Santa Rosa St/Foothill Blvd | Signalized | 73.9 | E | 50.8 | D | Add 2nd EB Through Lane* | 53.2 | D | 49.4 | D |
| 9 | Grand Ave/Slack St | AWSC | 54.6 | F | 13.6 | B | Signalize | 8.7 | A | 5.4 | A |
| 19 | California Blvd/Taft St | TWSC | 95.0 | F | 54.7 | F | Roundabout | 17.5 | C | 15.7 | C |
| 41 | Broad St/Rockview Pl | TWSC | >180 | F | >180 | F | Signalize | 11.5 | B | 9.4 | A |
| 43 | Hwy 1/Project Driveway | TWSC | >180 | F | 173.7 | F | Signalize | 15.2 | B | 9.0 | A |

* The City has identified operational improvements for this intersection in their CIP. Any mitigation would need to be consistent with the CIP.

3.7-1 **Santa Rosa Street/Foothill Boulevard:** At the time of development of the N4 and N5 Residential Neighborhoods, through contractual agreement(s) with the University the developer(s) will contribute fair share to the following mitigation measure:

- Add second eastbound through lane

With this measure, the operations at the intersection will improve to LOS D in the AM and PM peak hours. However, this improvement may be infeasible due to right-of-way constraints. The City has also studied a variety of potential improvements for this intersection, including additional lanes and grade separation, and reached the conclusion that site right-of-way constraints may preclude improvements. Therefore, the impact at this intersection is considered significant and unavoidable.

However, in the event that the City implements operational improvements other than adding a second eastbound through lane, then at the time of development of the N4 and N5 Residential Neighborhoods, through contractual agreement(s) with the University, the developer(s) will contribute fair share to the towards such operational improvements.

3.7-2 **Highway 1/Stenner Creek Road:** At the time of development of the N5 Residential Neighborhood, through contractual agreement (s) with the University the developer(s) the developer(s) will fund the following mitigation measure:

- Install traffic signal at intersection

With this measure, the operations at the intersection will improve to LOS A in the AM and PM peak hours and the impact will be reduced to a less-than-significant level.

3.7-3 **Highway 1/N4 Neighborhood Driveway:** At the time of development of the N4 Residential Neighborhood, through contractual agreements with the University the developers will fund the following mitigation measure:

- Install traffic signal at intersection

With this measure, the operations at the intersection will improve to LOS B in the AM peak hour and LOS A in the PM peak hour, and the impact will be reduced to a less-than-significant level.

In the event that a roundabout is installed at the Highway 1/Stenner Creek Road intersection, then it may be preferable to prohibit northbound left-turns at this direction and have vehicles U-turn at Stenner Creek Road instead.

3.7-4 **Grand Avenue/Slack Street:** At the time of development of the Slack and Grand Residential Neighborhood, through contractual agreement (s) with the University the developer(s) will fund the following mitigation measure:

- Install traffic signal at intersection

With this measure, the operations at the intersection will improve to LOS A in the AM and PM peak hours, and the impact will be reduced to a less-than-significant level.

3.7-5 **California Boulevard/Taft Street:** At the time of development, through contractual agreements with the University, the developer(s) of the Slack and Grand Residential Neighborhood and N2 Residential Neighborhood will:

- Contribute fair share mitigation to the roundabout improvement

The roundabout is a planned City improvement currently in a design phase that will result in LOS C, and with this measure the impact will be reduced to a less-than-significant level.

3.7-6 **Broad Street/Rockview Place:** At the time of development of each residential neighborhood, through contractual agreements with the University the developers will contribute fair share to the following mitigation measure:

- Install traffic signal at intersection

As indicated in Table 34, the analysis found that a roundabout will not provide an acceptable level of service at this location. Installing a traffic signal will improve the operation of the intersection to LOS B in the AM peak hour and LOS A in the PM peak hour, and the impact will be reduced to a less-than-significant level. However, the location does not satisfy peak-hour signal warrants. This typically occurs when the turning movement that is being delayed has only a low volume of vehicles per hour. The City may consider allowing eastbound vehicles to turn right and then make a U-turn downstream rather than installing a signal for the low volume of turning traffic, since the City is considering putting several roundabouts on Broad Street, which would facilitate U-turns.

## US 101 Freeway

US 101 is a state highway facility under the control of Caltrans. Freeway improvements are under Caltrans' responsibility and as such, the University cannot guarantee implementation of the recommended improvements. Therefore, the freeway segment impacts are considered significant and unavoidable even with the mitigation measures of adding one mainline lane for a total of three mainline lanes at each of the segments that would result in LOS D and LOS C, as summarized in Table 35.

**Table 35. Horizon Year 2035 Freeway Mitigation Measures**

| ID | Freeway Segment | Period | 2035 Without Mitigation | | | | Recommended Mitigation | 2035 With Mitigation | |
|---|---|---|---|---|---|---|---|---|---|
| | | | No Project | | Plus Project | | | Plus Project | |
| | | | Density | LOS | Density | LOS | | Density | LOS |
| 1* | US-101 NB, Marsh St to Broad St | PM Peak Hr | 51.5 | F | 53.00 | F | Add one mainline lane for a total of 3 | 26.2 | D |
| 2* | US-101 NB, Broad St to Osos St | PM Peak Hr | 51.5 | F | 53.00 | F | Add one mainline lane for a total of 3 | 26.2 | D |
| 10** | US-101 SB, Broad St to Marsh St | AM Peak Hr | 42.1 | E | 44.30 | E | Add one mainline lane for a total of 3 | 24 | C |
| | | PM Peak Hr | 38.8 | E | 39.3 | E | | 22.6 | C |

Notes:
* Northbound sections 1 and 2 will form a single section once the NB Broad Street ramps are removed.
** Impacts occur at this location in both the AM and PM peak hours. The measure identified in the table would mitigate the impacts in both periods.

3.7-7 **US 101 Northbound, Marsh Street to Broad Street:** With the following mitigation measure, the operations at the segment will improve to LOS D in the PM peak hour.

- Add one mainline lane for a total of three.

3.7-8 **US 101 Northbound, Broad Street to Osos Street:** With the following mitigation measure, the operations at the segment will improve to LOS D in the PM peak hour.

- Add one mainline lane for a total of three.

3.7-9 **US 101 Southbound, Broad Street to Marsh Street:** With the following mitigation measure, the operations at the segment will improve to LOS C in the AM and PM peak hour.

- Add one mainline lane for a total of three.

## Slack and Grand Residential Neighborhood

The implementation of the identified mitigation measures discussed previously will reduce the Slack and Grand Residential Neighborhood traffic impact to a less-than-significant level at the affected intersections. These measures include funding installation of a traffic signal at the intersection of Grand Avenue/Slack Street; contributing fair share mitigation to the roundabout improvement at the intersection of California Boulevard/Taft Street; and contributing fair share mitigation to the installation of traffic signal at the intersection of Broad Street/Rockview Place.

As previously discussed, the impact from contributing traffic to the identified three US 101 freeway segments will be significant and unavoidable.

# Level of Impact After Mitigation

The traffic study evaluated the increase in project traffic relative to cumulative traffic growth under the Year 2035 conditions, where background traffic volumes reflect the increased traffic resulting future growth in the study area. The LOS analyses therefore, presents the cumulative traffic impacts in the study area. As identified in the traffic study, implementation of identified mitigation measures will reduce the Master Plan impacts, including impacts associated with the Slack and Grand Residential Neighborhood, at the identified affected intersections to less-than-significant levels. Impacts at identified three US 101 freeway segments are under Caltrans control and the freeway improvements are under Caltrans' responsibility. Caltrans identified improvements to these segments of the freeway in its Transportation Planning Fact Sheet, US 101 in San Luis Obispo County, September 2009, as part of "General Recommendations" to widen Segments 4 and 5A to 6-lane freeway after implementation of several other measures, including encouraging alternative modes, implementing ITS components, constructing system-wide operational improvements, enhancing intermodal facilities, facilitating goods movement, and similar measures. The widening of the freeway to 6 lanes in not included in the current Regional Transportation Plan (RTP), it is not included in the SLOCOG's US 101 long-term Corridor Mobility Master Plan, and it is not funded. Therefore, the University cannot guarantee implementation of the recommended improvements within the 2035 planning horizon and impacts, including those of the Slack and Grand Residential Neighborhood, on the identified freeway segments are considered significant and unavoidable.

# Cumulative Impact

The traffic analysis summarized above addresses both cumulative and project-specific transportation impacts of the Master Plan, including the Slack and Grand Residential Neighborhood, as each of the scenarios analyzed accounts for both the future growth in traffic and the project's traffic generation.

# 3.8 Air Quality and Greenhouse Gases

This section examines the potential air quality and greenhouse gas impacts associated with the campus development pursuant to the Master Plan, including the development of the Slack and Grand Residential Neighborhood. Air quality worksheets are provided in Appendix F.

## Environmental Setting

San Luis Obispo County constitutes a land area of approximately 3,316 square miles with varied vegetation, topography, and climate. From a geographical and meteorological standpoint, the County can be divided into three general regions: the Coastal Plateau, the Upper Salinas River Valley, and the East County Plain. Air quality in each of these regions is characteristically different, although the physical features that divide them provide only limited barriers to the transport of pollutants between regions. Approximately 75% of the county population and a corresponding portion of the commercial and industrial facilities are located within the Coastal Plateau. Due to higher population density and closer spacing of urban areas, emissions of air pollutants per unit area are generally higher in this region than in other regions of the county.

The Cal Poly campus is located within the San Luis Obispo County Coastal Plateau region, which is the most populous and urbanized region. This region is part of the Central Coast Air Basin, and the campus is located within the San Luis Obispo County Air Pollution Control District (SLOAPCD).

### Air Pollution Control Efforts

Both the federal and state governments have set health-based ambient air quality standards for the following six pollutants:

- Sulfur dioxide ($SO_2$)
- Lead (Pb)
- Carbon monoxide (CO)
- Particulate Matter
    - Respirable particulate matter ($PM_{10}$)
    - Fine particulate matter ($PM_{2.5}$)
- Nitrogen dioxide ($NO_2$)
- Ozone ($O_3$)

Standards for these pollutants have been designed to protect the most sensitive persons from illness or discomfort with a margin of safety. The California standards are more stringent than federal standards, especially in the case of $PM_{10}$ and $SO_2$. Table 36 outlines current federal and state ambient air quality standards, as well as the sources and health effects of these pollutants.

**Table 36. Air Pollution Standards, Sources, and Effects[61,62]**

| Air Pollutant | State Standards | National Standards (Primary) | Sources | Health Effect |
|---|---|---|---|---|
| Ozone (O3) | 0.09 ppm, 1-hr. avg.<br>0.07 ppm, 8-hr. avg. | 0.07 ppm, 8-hr. avg. | Produced when gases or vapors created by cars, solvents, factories, and pesticides mix and react in the presence of sunlight. | Breathing difficulties, lung tissue damage, coughing and chest pains. |
| Particulate Matter ($PM_{10}$) | 50 $\mu g/m^3$, 24-hr. avg.<br>20 $\mu g/m^3$, AAM | 150 $\mu g/m^3$, 24-hr. avg. | Power plants, dust, construction, burning, cars, industry, and equipment. | Coughs, phlegm, wheezing, asthma, cancer, lung damage, heart attacks, and premature death. |
| Fine Particulate Matter ($PM_{2.5}$) | 12 $\mu g/m^3$, AAM | 12.0 $\mu g/m^3$, AAM<br>35$\mu g/m^3$, 24-hr avg. | Power plants, dust, construction, burning, cars, industry, and equipment. | Coughs, phlegm, wheezing, asthma, cancer, lung damage, heart attacks, and premature death. |
| Carbon Monoxide (CO) | 9.0 ppm, 8-hr. avg.<br>20 ppm, 1-hr. avg. | 9 ppm, 8-hr. avg.<br>35 ppm, 1-hr. avg. | Cars, heavy construction and farming equipment, and residential heating. | Chest pain in heart patients, headaches, and reduced mental alertness. |
| Nitrogen Dioxide ($NO_2$) | 0.030 ppm, AAM<br>0.18 ppm, 1-hr. avg. | 0.053 ppm, AAM<br>188 $\mu g/m^3$, 1-hr avg. | Cars, heavy construction and farming equipment, and residential heating. | Lung irritation and damage. |
| Sulfur Dioxide ($SO_2$) | 0.25 ppm 1-hr. avg.<br>0.04 ppm, 24-hr avg. | 0.03 ppm, AAM<br>0.14 ppm, 24-hr. avg.<br>196 $\mu g/m^3$, 1-hr. avg. | Coal or oil burning power plants and industries, refineries, and diesel engines. | Constricts air passages and reacts with lung tissue. Increases lung disease and breathing problems for asthmatics. |
| Lead (Pb) | 1.5 $\mu g/m^3$, 30 day avg. | 1.5 $\mu g/m^3$, calendar quarter<br>0.15 $\mu g/m^3$, Rolling 3-Month avg. | Metal smelters, resource recovery, leaded gasoline, and deterioration of lead paint. | Learning disabilities, brain and kidney damage. |

[61] California Air Resources Board (CARB). 2016. Ambient Air Quality Standards. May 2016 Available at: http://www.arb.ca.gov/research/aaqs/aaqs2.pdf.
[62] San Luis Obispo County Air Pollution Control District (SLOAPCD). 2017a. San Luis Obispo County Air Pollution Control District Homepage. Available at: http://www.slocleanair.org/air-quality/health.php.

| Air Pollutant | State Standards | National Standards (Primary) | Sources | Health Effect |
|---|---|---|---|---|
| Visibility-Reducing Particles | Extinction coefficient of 0.23 per km, visibility of 10 miles or more due to particles when relative humidity is less than 70%. | No Federal Standards | | Visibility impairment on days when relative humidity is less than 70%. |

Notes:
ppm = parts per million by volume
µg/m3 = micrograms per cubic meter
AAM = annual arithmetic mean

# Monitored Air Quality

SLOAPCD operates eight air quality monitoring stations within San Luis Obispo County: Atascadero, Carrizo Plains, CDF, Grover Beach, Mesa, Morro Bay, Nipomo Regional Park, and Red Hills. The California Air Resources Board (CARB) operates two additional stations in the cities of San Luis Obispo (San Luis Obispo – Higuera Street station) and Paso Robles (Paso Robles station). SLOACPD also operates a monitoring station, the California Department of Parks and Recreation's special purpose monitoring station, located within the Oceano Dunes State Vehicular Recreation Area (ODSVRA)[63].

The San Luis Obispo County (in whole or in part) is designated as "non-attainment" for $O_3$ and $PM_{10}$ under California standards (Table 37). Under federal standards, eastern San Luis Obispo County is designated as "non-attainment" for $O_3$. The county is in attainment for all other federal and state standards.[64]

**Table 37. Air Quality Standards Attainment Status in San Luis Obispo County[65]**

| Pollutant | State | Federal |
|---|---|---|
| $O_3$ | Non-attainment | Non-Attainment in eastern San Luis Obispo County<br>Attainment in western San Luis Obispo County |
| $PM_{10}$ | Non-attainment | Unclassified*/Attainment |
| $PM_{2.5}$ | Attainment | Unclassified*/Attainment |
| CO | Attainment | Unclassified* |
| $NO_2$ | Attainment | Unclassified* |

[63] San Luis Obispo County Air Pollution Control District (SLOAPCD). 2017b. *2017 Ambient Air Monitoring Network Plan*. June 2017. Available at: http://www.slocleanair.org/images/cms/upload/files/2017-network-plan-FINAL.pdf.
[64] San Luis Obispo County Air Pollution Control District (SLOAPCD). 2016. *2015 Annual Air Quality Report San Luis Obispo County*. September 2016.
[65] San Luis Obispo County Air Pollution Control District (SLOAPCD). 2017c. *San Luis Obispo County Attainment Status*. Available at: http://www.slocleanair.org/images/cms/upload/files/AttainmentStatus22February2017.pdf.

| Pollutant | State | Federal |
|---|---|---|
| $SO_2$ | Attainment | Unclassified* |
| Lead | Attainment | No Attainment Information |
| Visibility Reducing Particles | Attainment | No Federal Standards |
| Suflates | Attainment | |
| Hydrogen Sulfide | Attainment | |
| Vinyl Chloride | No Attainment Information | |

* Unclassified (EPA/Federal definition): Any area that cannot be classified on the basis of available information as meeting or not meeting the national primary or secondary ambient air quality standard for the pollutant.

The closest air quality monitoring station to the campus is the San Luis Obispo – Higuera monitoring station, located approximately 3.5 miles south of the campus. The monitoring results at this station are summarized in Table 38. As shown, at this monitoring station the standards have rarely been exceeded.

**Table 38. Monitoring Results at San Luis Obispo – Higuera Monitoring Station[66]**

| Year | Ozone ($O_3$) | | | Suspended Particulates ($PM_{10}$) | | Fine Particulates ($PM_{2.5}$) | |
|---|---|---|---|---|---|---|---|
| | Days Federal | Days State | Days State | Days Federal | Days State | Days Federal Standard Exceeded | Days State Standard Exceeded |
| | 8-hour Standard Exceeded | 8-hour Standard Exceeded | 1-Hour Standard Exceeded | 24-hour Standard Exceeded | 24-hour Standard Exceeded | | |
| 2010 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2011 | 0 | 0 | 0 | * | * | 0 | 0 |
| 2012 | 0 | 0 | 0 | * | * | 0 | 0 |
| 2013 | 0 | 0 | 0 | * | 3 | 0 | 0 |
| 2014 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| 2015 | 0 | 0 | 0 | * | * | * | * |

* There was insufficient (or no) data available to determine the value.

[66] California Air Resources Board (CARB). 2017. Air Quality Trend Summaries – Data for 2010–2015 from ARB Number 40836. Available at: https://www.arb.ca.gov/adam/trends/trends1.php.

For the remainder of San Luis Obispo County, most of the county experienced low levels of ozone pollution in 2015. Ozone levels exceeding both federal and state standards were measured on a few days in the rural eastern portion of the county. That area was designated as a nonattainment zone for the federal ozone standard in May 2012, but air quality there continues to improve, with 2015 recording the fewest number of standard exceedances since monitoring began there.

In October 2015, the federal 8-hour ozone standard was lowered from 75 to 70 parts per billion (ppb); only 1 day in 2015 exceeded the old standard, while 4 days exceeded the new standard. By comparison, in 2014 there were 3 days which exceeded the old standard and 10 which would have exceeded the new standard. Smoke from wildfires can often adversely affect air quality. The Cuesta Fire began on August 16, 2015, and eventually burned almost 2,500 acres in the area east of the Cuesta Grade on US 101 and south of Santa Margarita. The highest 1-hour ozone concentrations at Red Hills and Carrizo Plain in 2015 occurred on August 18th and are directly attributable to this fire. Elevated $PM_{10}$ and $PM_{2.5}$ concentrations were also observed in San Luis Obispo, Atascadero, and Paso Robles during this fire.

South County air quality continues to be impacted by dust blown from the ODSVRA along the coast. While the federal $PM_{10}$ standard was not exceeded at any site in 2015, numerous exceedances of the more stringent state $PM_{10}$ standard were recorded at all three monitoring sites located on the Nipomo Mesa (Mesa2, CDF, and Nipomo Regional Park). In addition, the federal 24-hour $PM_{2.5}$ standard was exceeded once at the CDF monitoring site. Generally, there were fewer exceedances of the particulate matter standards at these sites in 2015 compared with 2013 and 2014; this is likely due to 2015 being less windy than previous years rather than mitigations that were in place on the ODSRVA this year. One day exceeded the state 24-hour $PM_{10}$ standard at Atascadero this year. This was caused by construction and debris removal in the immediate vicinity of the station and is not representative of ambient air conditions in the area that day. There were no exceedances of the standards for $NO_2$ or $SO_2$ at any stations this year.

## Greenhouse Gas and Climate Change

Climate change refers to any significant change in measures of climate, such as temperature, precipitation, or wind, lasting for decades or longer.[67] Climate change may result from natural factors, such as volcanoes, but is predominantly a result of human activity, including the burning of fossil fuels and land use changes such as deforestation and urbanization.

Human activities release carbon dioxide ($CO_2$) and other compounds, cumulatively termed greenhouse gas (GHG) emissions. GHGs are effective in trapping infra-red radiation which otherwise would have escaped the atmosphere, thereby warming the atmosphere, the oceans, and earth's surface.[67] The main GHGs include $CO_2$, methane ($CH_4$), and nitrous oxide ($N_2O$).[67]

According to the 2013 Emissions Inventory prepared by CARB: "California's gross emissions of greenhouse gases decreased by 6% from 478.4 million tons of $CO_2$e [carbon dioxide equivalent] in 2001 to 448.1 million in 2011, with a maximum of 489.2 million tons in 2004. During the

[67] U.S. Environmental Protection Agency (USEPA). 2017. Climate Change: Basic Information. Available at: https://19january2017snapshot.epa.gov/climatechange/climate-change-basic-information_.html.

same period, California's population grew by 9% from 34.5 to 37.6 million people. As a result, California's per capita GHG emissions have decreased over the last 11 years from 13.9 to 11.9 tons of $CO_2e$ per person. In 2011, emissions continued to decrease for the transportation and electric power sectors. Emissions from all other sectors remained relatively flat or increased slightly from 2010…"

According to CARB, transportation remains the largest source of GHG emissions with 37% of the inventory. Over 92% of emissions in the transportation sector can be attributed to on-road vehicles, including passenger vehicles and heavy-duty trucks and buses. Other sources include power, industrial, commercial, residential, and agricultural land uses.

The potential effects of future climate change on California resources include:

- Air temperature rise;
- Sea level rise;
- Decreased water resources, including snowpack;
- Forest changes, including increased wildfire;
- Ecosystems composition changes;
- Increased water demand/crop changes for agriculture; and,
- Increased allergen production.[67]

# Project Setting

Current conditions are considered the environmental setting or baseline. As discussed elsewhere, the campus is comprised of an urban-like densely developed Campus Core with a variety of academic and support facilities. The Residential East Campus is comprised of student housing generally parallel to and adjacent to the Campus Core, with undeveloped hillsides to the east. The North Campus area includes student housing, teaching and support facilities adjacent to the Campus Core, with increased agricultural teaching and other facilities extend to the north. The West Campus contains a variety of campus support facilities and is largely undeveloped.

Campus operations, including vehicle traffic, contribute to existing emissions and pollutant levels in the area. The University has a multi-pronged approach to the reduction of air quality impacts associated with operations. These include, but are not limited to:

- Increased on-campus housing
- Development of on-campus amenities and other opportunities to reduce off-campus shopping trips
- Continued bus/transit subsidies for students to SLO Transit
- Improved bus shelters and signage/information
- Improved bicycle facilities, including new pathways along the Union Pacific Railroad (UPRR) and California Boulevard, bicycle racks, improved striping, and signage on campus
- Closure of South Perimeter Drive to vehicle traffic
- Improved pedestrian pathways and signage on campus

Continued development of on-campus student housing and retaining the current level of parking are consistent with previous efforts to reduce vehicle trips and air emissions associated with campus operations.

## Slack and Grand Residential Neighborhood

The site of the Slack and Grand Residential Neighborhood is currently undeveloped, and is only intermittently used by Cal Poly for horse grazing. Therefore, the site does not generate air pollutant emissions or GHG. The closest sensitive uses to the site include existing school facilities accommodating a private elementary school (Charles E. Teach Elementary School), SLO Classical Academy High School, and Monart Art School located diagonally across from the site to the southwest of the intersection of Grand Avenue and Slack Street at the distance of approximately 260 feet, and single-family residential development across Slack Street at the distance of approximately 95 feet.

# Regulatory Setting

## Federal Policies and Regulations

Air quality protection at the national level is provided through the Federal Clean Air Act (Federal CAA) and subsequent Federal CAA Amendments. The current version was signed into law on November 15, 1990. These amendments represent the fifth major effort by the U.S. Congress to improve air quality. The 1990 Federal CAA standards are generally less stringent than the California Clean Air Act (California CAA). However, unlike the California law, the Federal CAA set statutory deadlines for attaining federal standards. The 1990 Federal CAA added several new sections to the law, including requirements for the control of toxic air contaminants, reductions in pollutants responsible for acid deposition, development of a national strategy for stratospheric ozone and global climate protection, and requirements for a national permitting system for major pollution sources.

## State Policies and Regulations

The California CAA requires all areas of the state to achieve and maintain the California ambient air quality standards by the earliest practicable date. These standards are generally more stringent than the Federal CAA standards; thus, emission controls to comply with the state law will generally be sufficient to comply with the federal standards as well. The California CAA requires that all Air Quality Pollution Control and Air Quality Management Districts (APCD and AQMD) adopt and enforce regulations to achieve and maintain the state ambient air quality standards for the area under their jurisdiction. Pursuant to the requirements of the law, SLOAPCD has adopted the Clean Air Plan (CAP) for San Luis Obispo County, which undergoes subsequent updates as required. The California Global Warming Solutions Act of 2006 (AB 32, Health and Safety Code Section 38500 et seq.) requires CARB to design and implement emission limits, regulations, and other measures. These will reduce, by 2020, statewide GHG emissions in a technologically feasible and cost-effective manner to 1990 levels (representing a 25% reduction Senate Bill [SB] 1368 [Public Utilities Code Section 8340 et seq.]).

Also, pursuant to SB 97 and the CEQA Guidelines, the analysis and mitigation of GHG emissions is part of the CEQA process.

## Local Policies and Regulations

The 2001 San Luis Obispo County CAP is used by SLOAPCD to address attainment of national and State ozone standards for the entire county. The CAP is a comprehensive planning document intended to provide guidance to the SLOAPCD and other local agencies how to attain and maintain the state standards for ozone. The CAP presents a detailed description of the sources and pollutants which impact the jurisdiction, future air quality impacts to be expected under current growth trends, and an appropriate control strategy for reducing ozone precursor emissions, thereby improving air quality.

Local efforts to quantify and reduce GHG emissions have primarily been undertaken by the SLOAPCD. Many of the programs currently implemented by SLOAPCD to reduce emissions and exposure to criteria and toxic air pollutants may also reduce GHG emissions. These programs include:

- ***Rules and Regulations*: Numerous** rules adopted by the County Board of Supervisors and implemented by SLOAPCD to address criteria pollutant emissions also have the side benefit of reducing GHGs. For instance, several SLOAPCD rules address conventional emissions from combustion sources such as boilers, heaters, and engines that often result in equipment modifications or replacement that improves the energy efficiency of those units and reduces fossil fuel use. Similarly, rules that regulate or prohibit open burning activities reduce $CO_2$ emissions from that activity. SLOAPCD Rule 426 regulates landfill emissions of methane.
- ***Clean Fuels:*** SLOAPCD is actively involved in and supports the efforts of the Central Coast Clean Cities Coalition (C5), a local nonprofit coalition which promotes the use of cleaner alternative fuel technologies. With over 40% of the GHG emissions coming from mobile sources, these efforts are an essential tool in reducing fossil fuel use and associated $CO_2$ emissions.
- ***Development Review*:** Through the CEQA review process, SLOAPCD evaluates impacts from land use development projects and recommends measures to reduce emissions. Mitigation measures focus on reducing emissions from motor vehicles and improving energy efficiency, both of which directly reduce criteria pollutants and GHGs. Such strategies include incorporation of energy efficiency measures (increased insulation, high efficiency appliances and lighting, passive and active solar systems, etc.) that go beyond current building standards, and including Smart Growth principles into the project design to reduce vehicle trips and increase the viability of alternative transportation.
- ***Grant Programs*:** Many emission reduction projects funded through the various grant programs administered by SLOAPCD result in replacement or retrofit of older, high emission engines with cleaner and more efficient engines that simultaneously reduce fuel use, thus reducing $CO_2$ emissions. Conversion of stationary and mobile diesel engines to natural gas or electric motors also serves to reduce $CO_2$ emissions.
- ***Transportation Choices Program*:** In partnership with San Luis Obispo Regional Rideshare, Ride-On, and SLOAPCD, the Transportation Choices Program (TCP) is a free program offered to businesses and organizations throughout San Luis Obispo County to

reduce employee and student commute trips and promote the use of alternative transportation.

- ***Pollution Prevention:*** The Pollution Prevention Program promotes the use of, and publicly recognizes small businesses which successfully employ, pollution prevention and emission reduction techniques as part of routine operating procedures. Many of the businesses so recognized have incorporated operational changes that reduce their emissions through efficiency improvements that also reduce fuel and product use and save energy.
- ***Public Outreach:*** SLOAPCD implements a number of outreach campaigns to promote a variety of clean air programs, including backyard burning reduction programs, clean car awareness, pollution prevention, energy efficiency, and transportation alternatives, all of which promote community consciousness and lifestyle choices that can help reduce our impacts on climate change.

# CSU Sustainability Policy

In May 2014, the CSU Board of Trustees, with Governor Brown in attendance, adopted the first CSU system-wide Sustainability Policy. The policy aims to further reduce the environmental impact of construction and operation of buildings and to integrate sustainability across the curriculum. The CSU Sustainability Policy established goals to:

- Reduce GHG emissions to 1990 levels by 2020
- Reduce GHG emissions 80% below 1990 levels by 2040
- Procure 33% of energy supply from renewable sources by 2020
- Increase on-site energy generation from 44 to 80 megawatts by 2020
- Reduce per-capita landfill waste 50% by 2016 and 80% by 2020
- Reduce water use 10% by 2016 and 20% by 2020
- Promote use of alternative fuels and transportation programs
- Procure goods that are recycled, recyclable, or reusable
- Procure 20% local/organic/free trade food by 2020
- Integrate sustainability across the curriculum

## CSU Policies and Regulations

Air quality is addressed in the CSU system on several fronts, including the campus Master Plan, transportation planning, and operations. The University does not set its own standards for air quality emissions, and instead relies on standards and thresholds established by SLOAPCD. The campus Master Plan addresses air quality by following principles such as compactness and sustainability in the allocation of land use.

The Campus Administrative Policies include policies which address air quality, such as:

> ***151.2[5] Sustainability:*** *Practice Institutional Ecology – Use a wide array of sustainable practices, related to water conservation, energy conservation, alternative transportation, and new building construction.*

***362.1 Environmental Compliance Program:*** *The University shall comply with applicable federal, state, and local laws and regulations related to environmental protection and pollution control.*

***362.1.1 Hazardous Waste Control:*** *All hazardous waste materials shall be handled, stored, managed, and disposed in compliance with applicable federal and state laws and regulations.*

***362.1.3 Air Pollution Control:*** *All stationary sources of air pollution (engines, boilers, spray booths, etc.) shall have a permit or exemption issued by the San Luis Obispo County Air Pollution Control District prior to installation and operation. The University shall implement transportation control measures consistent with its Trip Reduction Plan in response to the San Luis Obispo County Air Pollution Control Board's Clean Air Plan.*

# Impact Criteria

## Air Quality Thresholds

According to the 2012 SLOCAPCD CEQA Air Quality Handbook,[68] a project's impact may be considered to be significant if one or more of the following special conditions cannot be met:

- Consistency with the most recent CAP for San Luis Obispo County;
- Consistency with a plan for the reduction of GHG emissions that has been adopted by the jurisdiction in which the project is located and that, at a minimum, complies with CEQA Guidelines Section 15183.5;
- Comparison of predicted ambient criteria pollutant concentrations resulting from the project to State and Federal health standards, when applicable;
- Comparison of calculated project emissions to SLOAPCD emission thresholds;
- The evaluation of special conditions which apply to certain projects; or,
- Construction emissions would exceed the SLOAPCD thresholds.

The handbook defines thresholds for long-term operational and short-term construction-related emissions. Depending on the level of exceedance of a defined threshold, the SLOAPCD has established varying levels of mitigation. Table 39 shows the threshold criteria for air pollutants and GHG established by SLOAPCD to determine a project's significance and appropriate mitigation level for long-term operational emissions (i.e., vehicular, area, and energy source emissions). Table 40 outlines the thresholds for short-term construction-related emissions. Emissions that equal or exceed the designated threshold levels within San Luis Obispo County are considered potentially significant and need to be mitigated.

[68] San Luis County Air Pollution Control District (SLOAPCD). 2012. *CEQA Air Quality Handbook*. April 2012.

**Table 39. SLOAPCD Thresholds of Significance for Operational Emissions[68]**

| Criteria Pollutant | Threshold | |
|---|---|---|
| | **Daily (lbs/day)** | **Annual (tons/year)** |
| Ozone Precursors (reactive organic gases and nitrogen oxides [ROG + $NO_X$]) | 25 | 25 |
| Diesel Particulate Matter (DPM) | 1.25 | N/A |
| Fugitive Particulate Matter ($PM_{10}$) | 25 | 25 |
| Carbon Monoxide (CO) | 550 | N/A |
| Greenhouse Gases ($CO_2$, $CH_2$) | Consistency with Qualified Greenhouse Gas Reduction<br>OR<br>1,150 MT $CO_2e$/year<br>OR<br>4.9 $CO_2e$/service population/year (residents and employees) | |

**Table 40. SLOAPCD Thresholds of Significance for Construction Operations[67]**

| Pollutant | Threshold | | |
|---|---|---|---|
| | **Daily (lbs/day)** | **Quarterly Tier 1 (tons)** | **Quarterly Tier 2 (tons)** |
| ROG + $NO_X$ (Combined) | 137 | 2.5 | 6.3 |
| DPM | 7 | 0.13 | 0.32 |
| Fugitive Particulate Matter ($PM_{10}$), Dust | n/a | 2.5 | n/a |
| Greenhouse Gases ($CO_2$, $CH_4$, $N_2O$, hydrofluorocarbon [HFC], chlorofluorocarbons [CFC], sulfur hexafluoride [$F_6S$]) | Amortized and Combined with Operational Emissions | | |

Note:
Daily and quarterly emission thresholds are based on the California Health & Safety Code and the CARB Carl Moyer Guidelines.
Projects with a grading area greater than 4 acres can exceed the 2.5 ton $PM_{10}$ quarterly threshold.

Impact is also considered to be significant if the project will:

- Expose sensitive receptors to substantial air pollutant concentrations

## Greenhouse Gases and Climate Change Thresholds

Based on SLOAPCD CEQA Air Quality Handbook guidelines, the thresholds of significance for a project's amortized construction plus operational-related GHG emissions are:

1. For land use development projects, the threshold is in compliance with a qualified GHG Reduction Strategy; or annual emissions less than 1,150 metric tons per year (MT/yr) of $CO_2e$; or 4.9 MT $CO_2e$/service population (SP)/year (residents + employees). Land use development projects include residential, commercial and public land uses and facilities.

Lead agencies may use any of the three options above to determine the significance of a project's GHG emission impact to a level of certainty.

2. For stationary-source projects, the threshold is 10,000 MT/yr of $CO_2e$. Stationary-source projects include land uses that would accommodate processes and equipment that emit GHG emissions and would require an APCD permit to operate.

While climate change is global in nature, an individual project could be found to contribute to a potentially significant cumulative impact. Projects that result in GHG emissions above the SLOAPCD's thresholds may be cumulatively considerable and require mitigation.

# Environmental Impact

## Long-Term Operational Impact

The Master Plan provides guidance for development of new facilities and improvements within Cal Poly's main campus needed to fulfill academic program demands, while addressing physical and environmental constraints and opportunities, to support a future enrollment of 22,500 FTE students over the next 20 years. To do so, the Master Plan provides that most new development will occur within the Campus Core and the immediately surrounding areas, including additional on-campus housing facilities in the North Campus and East Campus. The Master Plan also contemplates the development of new recreation, agriculture, support facilities, and residential neighborhoods, but otherwise protects natural environmental features and agricultural lands that form the character of campus.

Long-term operational emissions were analyzed using the California Emissions Estimator Model (CalEEMod Version 2016.3.1). Based on requirements outlined in the SLOAPCD CEQA Air Quality Handbook, annual emissions were calculated for $O_3$ precursors (reactive organic gases [ROG] + nitrogen oxides [$NO_X$]), $PM_{10}$, and GHG. Similarly, daily emissions were calculated for ozone precursors, diesel particulate matter (DPM), $PM_{10}$, CO, and GHG. Overall operational emissions include mobile emissions from the vehicular trips, area and energy emissions from energy usage, and volatile organic compound (VOC) emissions from materials such as architectural coatings and household products.

As shown in Table 41, the operational air quality analysis for the Master Plan assumes a "worst-case" scenario in estimating vehicular emissions associated with the Master Plan. The Master Plan provides for campus development over a 20-year period to accommodate a gradual growth in student enrollment to 22,500 FTE students. The campus development includes significant new student housing facilities—for a total on-campus housing for 15,000 students—which reduces commute trips and associated mobile emissions. In addition, the Master Plan contemplates the development of new residential neighborhoods that provide up to 1,470 apartments for faculty, staff, non-traditional students, and general public, and technology park uses.

In the analysis, all vehicular trips from the residential neighborhoods—with their associated mobile emissions—are treated as new, additional trips to the region that will result in new additional mobile emissions. However, it is important to note that it is highly unlikely that those

vehicular trips will be entirely additive to the traffic in the region. This is because the City is a regional employment center with a severe jobs/housing imbalance. According to data from the U.S. Census Bureau,[69] 77% of the people employed in San Luis Obispo live outside the city and commute into the city to work. Based on observed vehicle occupancy counts and other established vehicle count data, SLOCOG estimates that 19,400 to 23,400 people who live outside the city commute to work into San Luis Obispo daily. This lack of housing is projected to continue in the future with the City adding 5,972 jobs but only 1,647 housing units between 2015 and 2035.[70] Since the Master Plan's residential neighborhoods apartments will be made available to the general rental housing market (with a number of apartments anticipated to be occupied by the University faculty, staff, and non-traditional students), their effect will most likely enable more people who currently live outside the city and commute to work in San Luis Obispo, to live on campus and in closer proximity to the city. This will reduce mobile emissions from the commuting pattern associated with the city's jobs/housing imbalance, consistent with the objective of improving jobs/housing balance opportunities within the communities.

Table 41 summarizes this "worst-case" scenario's—with all trips treated as new additional trips to the region—daily operational emissions of $O_3$ precursors, CO, and $PM_{10}$, and Table 42 summarizes the annual operational emissions of $O_3$ precursors and $PM_{10}$. As shown, the $O_3$ precursors and $PM_{10}$ emissions under this "worst-case" scenario will exceed the daily operational thresholds, and the $O_3$ precursors will exceed the annual operational threshold.

**Table 41. Unmitigated Daily Operational Emissions (pounds per day)**

| | **Ozone Precursors (ROG + $NO_X$)** | **Carbon Monoxide (CO)** | **Fugitive Particulate Matter ($PM_{10}$)** |
|---|---|---|---|
| ***SLOAPCD Threshold*** | ***25*** | ***550*** | ***25*** |
| ***University Enrollment and Facilities*** | | | |
| Area | 29.09 | 2.28 | 0.01 |
| Energy | 7.51 | 5.69 | 0.51 |
| Mobile | -7.29 | -13.97 | -7.71 |
| *University Enrollment and Facilities Subtotal* | *29.31* | *-6.00* | *-7.19* |
| ***Residential Neighborhoods*** | | | |
| Area | 39.28 | 121.23 | 0.67 |
| Energy | 4.59 | 1.75 | 0.33 |
| Mobile | 80.98 | 186.47 | 60.28 |
| *Residential Neighborhoods Subtotal* | *124.84* | *309.45* | *61.28* |
| ***Technology Park*** | | | |
| Area | 2.08 | 0.01 | 0.00 |
| Energy | 0.47 | 0.36 | 0.03 |
| Mobile | 1.10 | 2.28 | 1.35 |

[69] U.S. Census Bureau. 2017. OnTheMap. U.S. Census Bureau, Center for Economic Studies. Available at: https://onthemap.ces.census.gov/.
[70] San Luis Obispo Council of Governments (SLOCOG). 2017. *2050 Regional Growth Forecast for San Luis Obispo County*. Adopted June 2017.

| | Ozone Precursors (ROG + $NO_X$) | Carbon Monoxide (CO) | Fugitive Particulate Matter ($PM_{10}$) |
|---|---|---|---|
| *Technology Park Subtotal* | *3.65* | *2.65* | *1.38* |
| ***Master Plan 2035 Buildout*** | | | |
| **Master Plan Total** | **157.80** | **306.10** | **55.47** |
| ***Exceeds Threshold?*** | ***Yes*** | ***No*** | ***Yes*** |

Note:
Unmitigated winter emissions reported.
Emissions are rounded to the nearest hundredth.

## Table 42. Unmitigated Annual Operational Emissions (tons per year)

| | Ozone Precursors (ROG + $NO_X$) | Fugitive Particulate Matter ($PM_{10}$) |
|---|---|---|
| ***SLOAPCD Threshold*** | ***25*** | ***25*** |
| ***University Enrollment and Facilities*** | | |
| Area | 5.30 | 0.00 |
| Energy | 1.37 | 0.09 |
| Mobile | -1.33 | -1.37 |
| *University Subtotal* | *5.34* | *-1.28* |
| ***Residential Neighborhoods*** | | |
| Area | 7.08 | 0.11 |
| Energy | 0.84 | 0.06 |
| Mobile | 14.69 | 10.69 |
| *Residential Neighborhoods Subtotal* | *22.61* | *10.86* |
| ***Technology Park*** | | |
| Area | 0.38 | 0.00 |
| Energy | 0.09 | 0.01 |
| Mobile | 0.20 | 0.24 |
| *Technology Park Subtotal* | *0.67* | *0.25* |
| ***Master Plan 2035 Buildout*** | | |
| **Master Plan Total** | **28.62** | **9.83** |
| ***Exceeds Threshold?*** | ***Yes*** | ***No*** |

Note:
Greenhouse gases are reported in metric tons/year.
Unmitigated winter emissions reported.
Emissions are rounded to the nearest hundredth.

## Diesel Particulate Matter

The unmitigated long-term daily operational diesel particulate matter (DPM) emissions associated with the Master Plan were calculated and are summarized in Table 43. As shown, the Master Plan will not result in exceedance of SLOAPCD's threshold for DPM.

**Table 43. Unmitigated Diesel Particulate Matter Emissions (pounds per day)**

| | **DPM** |
|---|---|
| ***SLOCAPCD Threshold*** | ***1.25*** |
| **Master Plan Total** | **0.85** |
| ***Exceeds Threshold?*** | ***No*** |

Note:
Unmitigated winter emissions reported
4% of vehicle fleet is diesel powered, USDOT, October 2015 (https://www.rita.dot.gov/bts/sites/rita.dot.gov.bts/files/DieselFactSheet.pdf), this assumption was applied to the total number of trips generated by the Master Plan's implementation (14,642 trips x 4% = 586 diesel-powered trips)
Used exhaust $PM_{2.5}$ as a proxy for DPM.
Emissions are rounded to the nearest hundredth.

# Short-Term Construction Impact

Air pollutants emitted by construction activities include $O_3$ precursors, $PM_{10}$, and DPM. To account for "worst-case" peak day construction emissions, the highest number of equipment pieces on any given day is used in the model and all equipment pieces are assumed to operate full 8 hours a day, even though in practice, not all this equipment will be in use simultaneously for 8 hours during any single construction day. Modifications were made to the model to account for local conditions, as recommended in the SLOAPCD CEQA Air Quality Handbook, and to account for aspects of site design and campus features. Model outputs were compared to applicable thresholds to determine level of impact severity.

As defined in the SLOAPCD CEQA Air Quality Handbook, the daily threshold is used for small and short-term projects with construction that are expected to be completed in less than one quarter of the year; and the quarter threshold is used for larger and longer-term projects with construction expected to last for more than a quarter, such as the Master Plan. Because the Master Plan has year 2035 buildout horizon, the quarterly emissions analysis was conducted. The construction emissions analysis was conducted based on the scenario with a year with the high construction activities that accounts for a potential overlap in some construction activities associated with development of the initial facilities within the first 5 years of the Master Plan, including the Slack and Grand Residential Neighborhood, new student housing, University Union renovation and expansion, and other academic and support facilities. The results of the analysis are summarized in Table 44. As shown, under such scenarios, construction year emissions will exceed the SLOAPCD quarterly significance thresholds.

**Table 44. Estimated Peak Quarterly Criteria Air Pollutant Emissions from Construction (tons per quarter)**

| | Ozone Precursors (ROG + $NO_X$) | Diesel Particulate Matter (DPM) | Fugitive Particulate Matter ($PM_{10}$) |
|---|---|---|---|
| ***SLOCAPCD Quarterly Tier 1 Threshold*** | ***2.50*** | ***0.13*** | ***2.50*** |
| **Master Plan Total** | **5.23** | **1.05** | **3.79** |
| ***Exceeds Threshold?*** | ***Yes*** | ***Yes*** | ***Yes*** |

Note:
Unmitigated winter emissions reported.
Used exhaust $PM_{2.5}$ as a proxy for DPM.
Emissions are rounded to the nearest hundredth.
Divided annual emissions into four quarters to determine peak quarterly emissions.

## Greenhouse Gases

The project's GHG emissions analysis was conducted based on total annual MT $CO_2e$ and per service population MT $CO_2e$. As shown in Table 45, while total annual GHG emissions are projected to exceed the 1,150 MT $CO_2e$/year significance threshold, the amount of $CO_2e$ per service population per year is well below the SLOAPCD threshold of 4.9 MT $CO_2e$/yr.

The thresholds for total annual MT $CO_2e$ is largely a reflection of the gross square footage at full buildout. The per service population threshold reflects efficiencies associated with increased density, such as reduced trips. Based on the population density of campus student housing and other campus development, the threshold based on $CO_2e$ per service population is a more representative metric by which to evaluate the campus Master Plan. Therefore, using the threshold based on $CO_2e$ per service population as the quantifying methodology, impacts will be less than significant.

**Table 45. Unmitigated $CO_2e$ Emissions (metric tons per year)[67]**

| | $CO_2e$ |
|---|---|
| Project Emissions (Amortized Construction and Operational) | 16,424 |
| MT $CO_2e$ Annual Threshold | 1,150 |
| ***Exceeds Threshold?*** | ***Yes*** |
| MT $CO_2e$ per Service Population per year | 0.633 |
| MT $CO_2e$ per Service Population per year Threshold (Efficiency Threshold) | 4.9 |
| ***Exceeds Threshold?*** | ***No*** |

Note:
Project emissions are the sum of the amortized $CO_2e$ construction emissions and operational $CO_2e$ emissions.
Because the Master Plan has a year 2035 buildout horizon with a mixture of different types of land uses, the total emissions from construction could not be reasonably estimated/quantified and amortized based on the 25 or 50 years of project life. Therefore, emissions from peak construction year was added to total operational emissions for project GHG calculations.
$CO_2e$ emission include emissions of $CO_2$, $CH_4$, $N_20$, HFC, CFC, and $F_6S$.
The service population is assumed to be the 22,500 FTE students + 3,088 residents

### Naturally Occurring Asbestos

Asbestos can occur naturally in certain rock formations, such as those that include serpentinite or ultramafic rock. As the campus is located in an area that the SLOAPCD has identified as an area where Naturally Occurring Asbestos (NOA) may be present, the University will continue to require that prior to any construction activities a geologic evaluation is conducted to determine if the area disturbed is exempt from the regulation. An exemption request must be filed with SLOAPCD. If the site is not exempt from the requirements of the regulation, the applicant must comply with all requirements outlined in the Asbestos Airborne Toxic Control Measures. This may include development of an Asbestos Dust Mitigation Plan and an Asbestos Health and Safety Program for approval by SLOAPCD.

## Consistency with San Luis Obispo County Clean Air Plan

The San Luis Obispo County CAP is a comprehensive planning document intended to provide guidance to SLOAPCD and other local agencies regarding how to attain and maintain the state standards for ozone and particulate matter. The CAP presents a detailed description of the sources and pollutants which impact the jurisdiction, future air quality impacts to be expected under current growth trends, and an appropriate control strategy for reducing emissions, thereby improving air quality. Local efforts to quantify and reduce GHG emissions have primarily been undertaken by SLOAPCD. Many of the programs currently implemented by SLOAPCD to reduce emissions and exposure to criteria and toxic air pollutants could also reduce GHG emissions.

The campus Master Plan is consistent with the CAP's goals and objectives. The Master Plan was guided by overarching sustainability principles and the goal of wise resource management is reflected in features and policies throughout the Master Plan. This includes requiring that new facilities and campus infrastructure be environmentally responsible, energy efficient, and showcase advancements in sustainable technology. New buildings will continue to be designed to meet LEED (Leadership in Energy and Environmental Design) standards. Energy systems will continue to be continually monitored, maintained, and updated to assure that Cal Poly runs in the most efficient manner possible. Outdated technology and systems will continue to be upgraded or replaced as needed, from the simplest valve or faucet in a bathroom, to the complex lighting in the Performing Arts Center.

The Master Plan includes areas for renewable energy sources such as solar and wind energy generation, water reclamation, and for waste composting, which is especially important at a university with hands-on, Learn by Doing agricultural programs. All of these Master Plan principles and measures will reduce air pollutant emissions and GHG.

Moreover, the Master Plan is also consistent with the CAP's Land Use and Circulation Management Strategies, including planning compact communities; providing for mixed land use; balancing jobs and housing; promoting walking, bicycling, and transit use; and parking management.

The Master Plan incorporates "smart growth" measures, such as the compact form around the core and mixed uses, approaches that reduce the reliance on cars and that improve the efficiency

of infrastructure and energy use. The Master Plan provides for increased housing on-campus that will reduce commuting and the associated mobile emissions, and the Master Plan also emphasizes a pronounced shift away from cars toward active transportation modes including walking, bikes, and transit. This includes provision of substantial new student housing that will result in accommodating 15,000 students on campus and in reducing student commuting and the associated mobile emissions, as well as provision of residential neighborhoods, including Slack and Grand neighborhood, that provide up to 1,470 apartments for faculty, staff, non-traditional students, and general public with amenities such neighborhood retail, day care, playground areas, and other. Provision of this residential housing on campus is anticipated to reduce vehicular emissions associated with the City's severe jobs/housing imbalance. According to data from the U.S. Census Bureau, 77% of the people employed in San Luis Obispo live outside the city and commute into the city.[69] This lack of housing is projected to continue in the future with the City adding 5,972 jobs but only 1,647 housing units between 2015 and 2053.[70] Since the Master Plan's residential neighborhoods apartments will be made available to the general rental housing market, their effect most likely will be to enable more people who currently live outside the city and commute to work in San Luis Obispo, to live in close proximity to San Luis Obispo. This will reduce mobile emissions from the existing commuting patterns associated with the city's jobs/housing imbalance and remain consistent with the objective of improving jobs/housing balance opportunities within the communities.

The Master Plan includes numerous improvements to pedestrian and bicycle access, routes, and facilities on campus further facilitating walking and bicycling. Cal Poly also will continue to pay annual subsidy to SLO Transit so Cal Poly students, faculty, and staff ride free on SLO Transit buses. Cal Poly riders took nearly 600,000 trips in 2015, which constituted 58% of total ridership on SLO Transit.

The Master Plan also includes a key parking management strategy of keeping the amount of parking to a minimum by keeping the amount of parking on campus the same as it is currently, and not increasing parking in the future.

The campus has also undertaken many other sustainably oriented endeavors, catalogued every two years in the Biennial Progress Report for Sustainability for Cal Poly Facilities Management and Development, since 2006. Indicators measuring improvements in sustainability efforts include:

- Energy use
- Transportation
- Water resources
- Land use and development
- Greenhouse gases
- Solid waste and recycling
- Curriculum and research

These indicators are monitored by the University to ensure that Cal Poly meets, and in some places, exceeds, the CSU system's Sustainability Policy goals to:

- Reduce GHG emissions to 1990 levels by 2020, and to 80% below 1990 levels by 2040

- Increase self-generation of energy from 44 to 80 megawatts by 2020
- Source energy to 33% renewables by 2020
- Reduce per capita waste going to the landfills to 80% by 2020
- Reduce water use by 20% by 2020
- Purchase at least 20% percent of food from sustainable sources (local, organic, free trade)
- Integrate Sustainability across the curriculum

All these programs and actions are supportive of and consistent with the CAP as they reduce emissions of criteria pollutants and GHG.

Furthermore, the CAP's transportation control measure designed to reduce vehicle trips and vehicle miles traveled, which primarily targets the student populations of college campuses requires the development of individual programs tailored to meet the trip reduction needs of each campus, detailed in separate agreements with each campus. Cal Poly and the District have reached a cooperative agreement that is consistent with the program for college campuses, and the following Program Requirements for College Campuses: (1) Appoint a Transportation Coordinator Responsibilities are to implement and administer the trip reduction program at the school site and act as designated contact person to the APCD; (2) Create an On-Site Transportation Information Center that could be as simple as a bulletin board, or as elaborate as a small office, depending on school size and needs. Information presented could include rideshare posters; transit maps and schedules; agency phone numbers; "Riders Wanted" notices (to advertise for carpool and vanpool riders); the school Transportation Coordinator's name and phone number; and information on air quality, traffic, commuting costs, bicycling, telelearning, and any other relevant information. Cal Poly has already submitted a Trip Reduction Plan to SLOAPCD and has already made significant progress in implementing a student trip reduction program. The University has appointed a full-time "Commuter Services Coordinator" for the campus, designated a transportation information center, and has developed and implemented a Trip Reduction Plan, including transit subsidies, bicycle and pedestrian facility improvements, and telecommuting programs. Cal Poly also conducts an annual Average Vehicle Ridership survey to verify program effectiveness and an annual report on program progress and effectiveness.[71]

# Slack and Grand Residential Neighborhood

## Operational Impact

The Slack and Grand Residential Neighborhood (N1) is planned to provide 420 multi-family residential units, with amenities that include neighborhood retail primarily serving future residents.

As shown in Table 46, the operational air quality analysis for the Slack and Grand Residential Neighborhood assumes a "worst-case" scenario in estimating mobile (vehicular) emissions whereby all vehicular trips from the neighborhood—with their associated mobile emissions—are treated as new, additional trips to the region that will result in new additional mobile emissions. As discussed previously, it is important to note that it is highly unlikely that those vehicular trips

[71] 2001 Clean Air Plan and Transportation Control Measures.

will be entirely additive to the traffic in the region. This is because the city of San Luis Obispo is a regional employment center with a severe jobs/housing imbalance. According to data from the U.S. Census Bureau, 77% of the people employed in San Luis Obispo live outside the city and commute into the city to work.[69] Based on observed vehicle occupancy counts and other established vehicle count data, SLOCOG estimates that 19,400 to 23,400 people who live outside the city commute to work into San Luis Obispo daily. This lack of housing is projected to continue in the future with the City adding 5,972 jobs but only 1,647 housing units between 2015 and 2035.[70]

The Slack and Grand Residential Neighborhood apartments are intended primarily for University faculty and staff, and in addition, this housing may be offered to non-traditional students such as graduate students, veterans, and those with families, and possibly alumni or retirement housing. Another possibility is housing for retired members of the community. As this housing will be market-rate units it will also be made available to the greater San Luis Obispo community. Thus, this housing will most likely enable more people who currently live outside the city and commute to work at Cal Poly and in the city of San Luis Obispo, to live at Cal Poly campus and in closer proximity to the city of San Luis Obispo. This will reduce mobile emissions from the commuting pattern associated with the city's jobs/housing imbalance, consistent with the objective of improving jobs/housing balance opportunities within the communities.

Table 46 summarizes this "worst-case" scenario's—with all trips treated as new additional trips to the region—daily operational emissions of ozone precursors, CO, and $PM_{10}$, and Table 47 summarizes the annual operational emissions of ozone precursors and $PM_{10}$. As shown, under this "worst-case" scenario only the daily operational threshold for ozone precursors emissions will be exceed; no annual thresholds will be exceeded.

**Table 46. Slack and Grand Residential Neighborhood Unmitigated Daily Operational Emissions (pounds per day)**

| | **Ozone Precursors (ROG + $NO_X$)** | **Carbon Monoxide (CO)** | **Fugitive Particulate Matter Dust (PM10)** |
|---|---|---|---|
| ***SLO APCD Threshold*** | ***25*** | ***550*** | ***25*** |
| Area | 11.35 | 34.73 | 0.19 |
| Energy | 1.31 | 0.50 | 0.09 |
| Mobile | 40.43 | 89.16 | 21.90 |
| **Total** | **53.09** | **124.39** | **22.18** |
| ***Exceeds Threshold?*** | ***Yes*** | ***No*** | ***No*** |

**Table 47. Slack and Grand Residential Neighborhood Unmitigated Annual Operational Emissions (tons per year)**

| | Ozone Precursors (ROG + $NO_X$) | Fugitive Particulate Matter Dust (PM10) |
|---|---|---|
| ***SLO APCD Threshold*** | ***25*** | ***25*** |
| Area | 2.05 | 0.03 |
| Energy | 0.24 | 0.02 |
| Mobile | 7.34 | 3.88 |
| **Total** | **9.62** | **3.93** |
| ***Exceeds Threshold?*** | ***No*** | ***No*** |

## Greenhouse Gases

The Slack and Grand Residential Neighborhood's GHG emissions are the sum of the amortized $CO_2e$ construction emissions and operational $CO_2e$ emissions. As discussed previously, this analysis of GHG emissions represents the "worst-case" scenario where all vehicular trips from the neighborhood with their associated mobile emissions are treated as new, additional trips to the region that will result in new additional mobile emissions. This scenario means that none of the following will be a future resident of the Slack and Grand Residential Neighborhood: Cal Poly staff, faculty, or nontraditional student, such as a graduate student; veterans; those with families; Cal Poly alumni or retiree; and not a single person who works in the city but lives elsewhere and commutes to work in the city. As a result, this "worst-case" scenario leads to mobile emissions that account for 72% to 99% of all operational emissions of the Slack and Grand Residential Neighborhood. In turn, this leads to a very high estimate of GHG emissions since these emissions are the sum of operational emissions and construction amortized emissions. When comparing such emissions to population of approximately 966 future residents of the Slack and Grand Residential Neighborhood, those emissions exceed the threshold of per service population per year as shown in Table 48, and under this "worst-case" scenario, the GHG impact is shown as being significant. Furthermore, the Slack and Grand Residential Neighborhood is just one component of the campus Master Plan, and the campus Master Plan as a whole will not exceed the per service population per year GHG emissions threshold as a result of providing additional student housing and other components of campus development that reduce vehicular trips and mobile emissions per Master Plan's service population.

**Table 48. Slack and Grand Residential Neighborhood Unmitigated $CO_2e$ Emissions (metric tons per year)**

| **Unmitigated** | **$CO_2e$** |
|---|---|
| Project Emissions (Amortized Construction and Operational) | 5,037 |
| MT $CO_2e$ Annual Threshold | 1,150 |
| ***Exceeds Threshold?*** | ***Yes*** |
| MT $CO_2e$ per Service Population per year | 5.214 |
| MT $CO_2e$ per Service Population per year Threshold | 4.9 |

| Unmitigated | $CO_2e$ |
|---|---|
| *Exceeds Threshold?* | *Yes* |

### Diesel Particulate Matter

The unmitigated long-term daily operational DPM emissions associated with the Slack and Grand Residential Neighborhood are summarized in Table 49. As shown, these emissions will not result in exceedance of the SLOAPCD's threshold for DPM.

**Table 49. Slack and Grand Residential Neighborhood Unmitigated DPM Emissions (pounds per day)**

| | DPM |
|---|---|
| *SLOCAPCD Threshold* | *1.25* |
| Total | 0.09 |
| *Exceeds Threshold?* | *No* |

## Construction Impact

The construction of the Slack and Grand Residential Neighborhood is anticipated to begin in 2018. All construction, including site grading, installation of utilities, and construction of apartment buildings, will be completed within 42 months. Table 50 summarizes the estimated peak quarterly emissions associated with construction activities at the site. As shown, the emissions will result in exceedance of the SLOAPCD's threshold for ROG + NOx and DPM. Mitigation measures have been identified to reduce this impact.

**Table 50. Slack and Grand Residential Neighborhood Estimated Peak Quarterly Criteria Air Pollutant Emissions from Construction (tons per quarter)**

| | Ozone Precursors (ROG + $NO_X$) | Diesel Particulate Matter (DPM) | Fugitive Particulate Matter ($PM_{10}$) |
|---|---|---|---|
| *SLOCAPCD Threshold* | *2.50* | *0.13* | *2.50* |
| Total Emissions | 3.21 | 0.30 | 0.53 |
| *Exceeds Threshold?* | *Yes* | *Yes* | *No* |
| Note: All construction equipment assumed to be diesel-powered; used exhaust $PM_{2.5}$ as a proxy for DPM. | | | |

### Naturally Occurring Asbestos

Asbestos can occur naturally in certain rock formations, such as those that include serpentinite or ultramafic rock. There are no NOA-bearing rock formations (serpentinite or ultramafic rock) on site of the Slack and Grand Residential Neighborhood. The site is underlain predominantly by ancient landslide debris and relatively shallow sandstone bedrock which are not asbestos-bearing geologic units. Therefore, the potential for NOA to underlie the site is considered to be very

low.[72] Pursuant to the SLOAPCD's NOA Air Toxic Control Measure, the University will file an NOA exemption form with the APCD.

# Mitigation Measures

## Operational Emissions

Under the "worst-case" scenario analyzed, all vehicular trips from the residential neighborhoods, providing up to 1,470 apartments on campus with their associated mobile emissions, are treated as new, additional trips to the region that will result in new additional mobile emissions. Under this scenario, as shown, the residential neighborhoods account for the highest rate of emissions for all the criteria pollutants.

It is important to note that it is highly unlikely that the vehicular trips and their mobile emissions will be entirely additive to the traffic in the region. The city is a regional employment center with a severe jobs/housing imbalance; approximately 77% of the people employed in San Luis Obispo live outside of the city.[69] This lack of housing is projected to continue in the future with the City adding 5,972 jobs but only 1,647 housing units between 2015 and 2053. Since the Master Plan's residential neighborhood apartments will be made available to the general rental housing market their effect will most likely enable more people to work and live in the city. This will reduce mobile emissions from the existing commuting pattern associated with the city's jobs/housing imbalance. In addition, the campus is well served by public transportation systems, including buses, providing alternative transportation options for students, employees, and visitors going to and from the campus. The University also implements numerous programs and policies to improve air quality in the region supportive of and consistent with the CAP, as discussed previously.

While the Master Plan improves job/housing balance opportunities with the provision of housing on campus, design and building of the compact university community in the campus' urban core to prevent sprawl, and increases in density within that core, under the "worst-case" scenario analyzed the operational air pollutant emissions are shown to be in excess of SLOAPCD annual threshold amounts for ROG + $NO_X$ and daily threshold amounts for ROG + $NO_X$ and $PM_{10}$.

Therefore, the following mitigation measures will be implemented to reduce operational emissions.

3.8-1 The University will continue to exceed Title 24 energy saving requirements on campus by 15% or more on all new or renovation projects by applying a range of techniques and measures that may include planting trees to provide shade and shadow to buildings; use of energy-efficient lighting in buildings and parking lots; use of light-colored roofing materials; installing energy-efficient appliances; installing automatic lighting on/off controls; use of insulation and double-paned glass windows; connecting buildings to central air and water heating and cooling systems, and/or other measures.

[72] Earth Systems Pacific. 2017. *Geologic Hazards Report, Slack Street and Grand Avenue Apartments, Grand Avenue and Slack Street, San Luis Obispo, California*. April 2017.

3.8-2 Use low VOC paint for interior and exterior architectural coatings.

The University will also implement the following mitigation measures based on the SLOAPCD CEQA Air Quality Handbook to reduce stationary emissions to the extent feasible.

3.8-3 Provide shade tree planting in parking lots to reduce evaporation emissions from parked vehicles with a goal of up to 50% tree coverage within 10 years of construction using low ROG emitting, low maintenance native drought resistant trees, to the extent feasible.

3.8-4 Pave and maintain the roads and parking areas.

3.8-5 Increase number of connected bicycle routes/lanes in the vicinity of the project.

3.8-6 On sites of 0.5 acre or less, orient up to 75% of all site lines to create easy due south orientation of future structures, to the extent feasible.

3.8-7 Plant drought tolerant, native shade trees along southern exposures of buildings to reduce energy used to cool buildings in summer.

3.8-8 Utilize green building materials (materials which are resource efficient, recycled, and sustainable) available locally, if possible.

3.8-9 Install high efficiency heating and cooling systems.

3.8-10 Orient up to 75% or more of campus facilities to be aligned north/south to reduce energy used to cool buildings in summer, to the extent feasible.

3.8-11 Design building to include roof overhangs that are sufficient to block the high summer sun, but not the lower winter sun, from penetrating south facing windows (passive solar design).

3.8-12 Utilize high efficiency gas or solar water heaters.

3.8-13 Utilize built-in energy efficient appliances (i.e., Energy Star®).

3.8-14 Utilize double-paned windows.

3.8-15 Utilize energy efficient interior lighting.

3.8-16 Install energy-reducing programmable thermostats.

3.8-17 Use roofing material with solar reflectance values meeting the USEPA/ Department of Energy Energy Star® rating to reduce summer cooling needs.

## Construction Emissions

The following mitigation measures will be implemented to reduce construction emissions associated with campus development.

3.8-18 All construction equipment will be equipped with clean Tier 3 and most advanced clean Tier 4 engines, to the maximum extent feasible.

3.8-19 Architectural coatings will meet VOC limits, including the limit of 50 g/L for residential interiors and exteriors and 100 g/L for non-residential interiors and exteriors. As appropriate, the schedule for architectural coatings application will be extended, limiting the daily coating activity.

3.8-20 Most current SLOAPCD standard construction dust mitigation measures will be implemented through construction activity. These measures include watering down exposed areas, covering stockpiles, sweeping adjacent streets, installing wheel washers on equipment, covering haul trucks, among other dust suppression and emissions reduction measures.

3.8-21 A haul route plan will be prepared for construction of each facility and/or improvement for review and approval by the University that designates haul routes as far as possible from sensitive receptors.

To minimize impact on sensitive receptors proximate to a construction site, including diesel particulate emissions associated with idling of heavy equipment during construction, the following additional measures will be implemented.

3.8-22 Staging and queuing areas will be located as distant as possible from sensitive receptors.

3.8-23 Diesel equipment idling greater than 5 minutes will not be permitted. Signs specifying the 5-minute idling limitations will be installed on-site for the duration of construction.

3.8-24 Material stockpiles and mobile equipment staging, construction vehicle parking maintenance areas will be located as far as practicable from sensitive uses.

3.8-25 Equipment will be electrified when feasible.

3.8-26 Gasoline-powered equipment will be substituted in place of diesel-powered equipment, where feasible.

3.8-27 Alternatively, natively fueled construction equipment, such as compressed natural gas (CNG), liquefied natural gas (LNG), propane, or biodiesel, will be used on-site where feasible.

# Level of Impact After Mitigation

## Operational Emissions

As shown in Table 51 and Table 52, even with implementation of the identified mitigation measures, operational emissions under the scenario analyzed will continue to exceed daily and annual thresholds for ROG + NOx, and a daily threshold for $PM_{10}$. Therefore, the long-term operational emissions impacts are considered significant and unavoidable even though the Master Plan provides more student housing together with new residential housing on campus that reduces commute trips and associated mobile emissions; improves job/housing balance opportunities; results in design and building of compact university community in the campus' core to prevent sprawl; and reduces stationary emissions through implementation of comprehensive sustainability programs, policies, and campus design and planning features.

**Table 51. Mitigated Daily Operational Emissions (pounds per day)**

| | **Ozone Precursors (ROG + $NO_X$)** | **Carbon Monoxide (CO)** | **Fugitive Particulate Matter ($PM_{10}$)** |
|---|---|---|---|
| ***SLOAPCD Threshold*** | ***25*** | ***550*** | ***25*** |
| ***University Enrollment and Facilities*** | | | |
| Area | 27.42 | 2.28 | 0.01 |
| Energy | 6.54 | 4.95 | 0.45 |
| Mobile | -7.29 | -13.97 | -7.71 |
| *University Enrollment and Facilities Subtotal* | *26.67* | *-6.74* | *-7.25* |
| ***Residential Neighborhoods*** | | | |
| Area | 36.91 | 121.23 | 0.67 |
| Energy | 4.10 | 1.56 | 0.30 |
| Mobile | 80.98 | 186.47 | 60.28 |
| *Residential Neighborhoods Subtotal* | *121.98* | *309.26* | *61.25* |
| ***Technology Park*** | | | |
| Area | 1.96 | 0.01 | 0.00 |
| Energy | 0.40 | 0.31 | 0.03 |
| Mobile | 1.10 | 2.28 | 1.35 |
| *Technology Park Subtotal* | *3.46* | *2.60* | *1.38* |
| ***Master Plan 2035 Buildout*** | | | |
| **Master Plan Total** | **152.11** | **305.12** | **55.38** |
| ***Exceeds Threshold?*** | ***Yes*** | ***No*** | ***Yes*** |

Note: Emissions are rounded to the nearest hundredth.

**Table 52. Mitigated Annual Operational Emissions (tons per year)**

| | Ozone Precursors (ROG + $NO_X$) | Fugitive Particulate Matter ($PM_{10}$) |
|---|---|---|
| ***SLOAPCD Threshold*** | ***25*** | ***25*** |
| ***University Enrollment and Facilities*** | | |
| Area | 5.00 | 0.00 |
| Energy | 1.19 | 0.08 |
| Mobile | -1.33 | -1.37 |
| *University Subtotal* | *4.86* | *-1.29* |
| ***Residential Neighborhoods*** | | |
| Area | 6.65 | 0.11 |
| Energy | 0.75 | 0.05 |
| Mobile | 14.69 | 10.69 |
| *Residential Neighborhoods Subtotal* | *22.09* | *10.85* |
| ***Technology Park*** | | |
| Area | 0.36 | 0.00 |
| Energy | 0.07 | 0.01 |
| Mobile | 0.20 | 0.24 |
| *Technology Park Subtotal* | *0.63* | *0.25* |
| ***Master Plan 2035 Buildout*** | | |
| **Master Plan Total** | **27.58** | **9.81** |
| ***Exceeds Threshold?*** | ***Yes*** | ***No*** |

Note: Emissions are rounded to the nearest hundredth.

# Construction Emissions

Implementation of the identified mitigation measures will reduce construction-related emissions. As the existing regional fleet of construction equipment is comprised of a mix of older (Tier 2 and even Tier 1) equipment with some new Tier 3 and Tier 4 equipment, utilizing all Tier 3 and Tier 4 equipment would reduce emissions. As shown in Table 53, this is because Tier 4 engine emissions are substantially lower than Tier 3 engines emissions, by as much as 97% for particulate matter levels and as much as 91% for NOx levels. This difference is even larger when comparing Tier 4 engines to even older Tier 2 and Tier 1 engines. The average Tier 3 engines' particulate matter emissions are 13% lower than Tier 2 engines, and Tier 3 engines' NOx emissions are 39% to 44% lower than Tier 2 engines. However, since it cannot be assured that it is feasible to obtain all Tier 3 and Tier 4 equipment for construction of every facility and

improvement on campus, construction air quality impact, albeit reduced, must be considered significant and unavoidable.

**Table 53. OFFROAD Emission Comparison Based on Engine Tier[73]**

| Tier | Low Horsepower | High Horsepower | CO (g/bhp-hr)* | NOx (g/bhp-hr) | PM10 (g/bhp-hr) | PM2.5 (g/bhp-hr) | ROG (g/bhp-hr) |
|---|---|---|---|---|---|---|---|
| Tier 3 over Tier 1 | 25 | 49 | 0% | -12% | -42% | -42% | -83% |
| | 50 | 74 | -46% | -58% | -65% | -65% | -90% |
| | 75 | 119 | -46% | -58% | -65% | -65% | -90% |
| | 120 | 174 | -46% | -65% | -59% | -59% | -85% |
| | 175 | 299 | -62% | -61% | -19% | -19% | -68% |
| | 300 | 599 | -62% | -61% | -19% | -19% | -68% |
| | 600 | 750 | -62% | -61% | -19% | -19% | -68% |
| | 751 | 2000 | -62% | -61% | -19% | -19% | -68% |
| Tier 3 over Tier 2 | 25 | 49 | 0% | 0% | 0% | 0% | 0% |
| | 50 | 74 | 0% | -42% | 0% | 0% | -48% |
| | 75 | 119 | 0% | -42% | 0% | 0% | -48% |
| | 120 | 174 | 0% | -44% | -13% | -13% | -37% |
| | 175 | 299 | 0% | -44% | 0% | 0% | 0% |
| | 300 | 599 | 0% | -39% | 0% | 0% | 0% |
| | 600 | 750 | 0% | -39% | 0% | 0% | 0% |
| | 751 | 2000 | 0% | -39% | 0% | 0% | 0% |
| Tier 4 over Tier 1 | 25 | 49 | 0% | -48% | -98% | -98% | -93% |
| | 50 | 74 | -46% | -58% | -99% | -99% | -90% |
| | 75 | 119 | -46% | -96% | -99% | -99% | -95% |
| | 120 | 174 | -46% | -96% | -97% | -97% | -93% |
| | 175 | 299 | -68% | -96% | -93% | -93% | -84% |
| | 300 | 599 | -68% | -96% | -93% | -93% | -84% |
| | 600 | 750 | -68% | -96% | -93% | -93% | -84% |
| | 751 | 2000 | -62% | -62% | -85% | -85% | -84% |
| Tier 4 over Tier 2 | 25 | 49 | 0% | -41% | -97% | -97% | -59% |
| | 50 | 74 | 0% | -42% | -96% | -96% | -48% |
| | 75 | 119 | 0% | -95% | -96% | -96% | -74% |
| | 120 | 174 | 0% | -94% | -94% | -94% | -68% |
| | 175 | 299 | -15% | -94% | -91% | -91% | -50% |
| | 300 | 599 | -15% | -93% | -91% | -91% | -50% |
| | 600 | 750 | -15% | -93% | -91% | -91% | -50% |

[73] Calculations based on emission factors presented in CalEEMod User's Guide (version 2016.3.1), Appendix D, Table 3.2 OFFROAD Emission Factor Based on Engine Tier.

| Tier | Low Horsepower | High Horsepower | CO (g/bhp-hr)* | NOx (g/bhp-hr) | PM10 (g/bhp-hr) | PM2.5 (g/bhp-hr) | ROG (g/bhp-hr) |
|---|---|---|---|---|---|---|---|
| | 751 | 2000 | 0% | -41% | -82% | -82% | -50% |
| Tier 4 over Tier 3 | 25 | 49 | 0% | -41% | -97% | -97% | -59% |
| | 50 | 74 | 0% | 0% | -96% | -96% | 0% |
| | 75 | 119 | 0% | -91% | -96% | -96% | -50% |
| | 120 | 174 | 0% | -89% | -93% | -93% | -50% |
| | 175 | 299 | -15% | -89% | -91% | -91% | -50% |
| | 300 | 599 | -15% | -89% | -91% | -91% | -50% |
| | 600 | 750 | -15% | -89% | -91% | -91% | -50% |
| | 751 | 2000 | 0% | -3% | -82% | -82% | -50% |

* g/bhp-hr = grams per brake horsepower per hour

# Sensitive Receptors

The main concern about impact on sensitive receptors is diesel exhaust from construction equipment near schools, residential uses, and other sensitive receptors. Implementation of the identified mitigation measures requiring cleaner new construction equipment, imposing no idling restriction, and requiring truck routing away from sensitive uses will reduce the extent of the potential impact. However, as discussed above, to reduce construction emissions impact below the significance thresholds would require that all equipment for major construction, such as the residential neighborhoods, be exclusively Tier 4 equipment. However, since it cannot be assured that it is feasible to obtain every piece of Tier 4 equipment, construction impact on sensitive receptors, albeit reduced, must be considered significant and unavoidable.

# Slack and Grand Residential Neighborhood

## Operational Emissions

As discussed previously, the operational air quality analysis for the Slack and Grand Residential Neighborhood assumes a "worst-case" scenario in estimating mobile emissions associated with the neighborhood whereby all vehicular trips from the neighborhood—with their associated mobile emissions—are treated as new, additional trips to the region that will result in new additional mobile emissions, which means that no Cal Poly faculty, staff, nor any people who commute to work in the city will be residents of this neighborhood. Under this scenario, as illustrated in Table 54, even with incorporation of the identified mitigation measures, operational emissions will exceed significance threshold for ROG + $NO_X$, a significant, unavoidable impact.

**Table 54. Slack and Grand Residential Neighborhood Mitigated Daily Operational Emissions (pounds per day)**

| | Ozone Precursors (ROG + $NO_X$) | Carbon Monoxide (CO) | Fugitive Particulate Matter Dust (PM10) |
|---|---|---|---|
| ***SLO APCD Threshold*** | ***25*** | ***550*** | ***25*** |
| Area | 11.35 | 34.73 | 0.19 |
| Energy | 1.17 | 0.45 | 0.08 |
| Mobile | 40.43 | 89.16 | 21.90 |
| **Total** | **52.95** | **124.33** | **22.17** |
| ***Exceeds Threshold?*** | ***Yes*** | ***No*** | ***No*** |

## Construction Emissions

As discussed previously, implementation of the identified mitigation measures will reduce construction-related emissions. However, only if each and every piece of construction equipment were Tier 4 equipment would the impact be reduced to a level below significance, since the reductions in particulate matter and NOx with Tier 4 engines are as great as 96% when compared to emissions from Tier 3 equipment, and much greater when compared to even older (Tier 2) equipment (as shown in Table 53). However, since it cannot be assured that it is feasible to obtain all Tier 4 equipment for construction of every facility and improvement on campus, construction air quality impacts, albeit reduced, must be considered significant and unavoidable.

## Sensitive Receptors

As discussed previously, the main concern about impact on sensitive receptors is diesel exhaust from construction equipment near existing school facilities located diagonally across from the site to the southwest of the intersection of Grand Avenue and Slack Street, and residential uses to the east across Slack Street. Implementation of the identified mitigation measures requiring cleaner new construction equipment, imposing no idling restriction, and requiring truck routing away from sensitive uses will reduce the extent of the potential impact on these uses. However, as discussed above, to reduce construction emissions impacts below the significance thresholds would require that all equipment be exclusively Tier 4 equipment. However, since it cannot be assured that it is feasible to obtain every piece of Tier 4 equipment, construction impacts on sensitive receptors, albeit reduced, must be considered significant and unavoidable.

# Cumulative Impact

The implementation of the Master Plan, including the development of the Slack and Grand Residential Neighborhood, together with future growth within the surrounding areas and the region over the next 20 years, will result in additional vehicle trips and the resultant mobile air pollutant emissions and in stationary emissions within the Central Coast Air Basin. Operational emissions, primarily from vehicular trips that may be associated with the Master Plan's

residential neighborhoods if all those trips were new additional trips to the area, will exceed the SLOAPCD daily threshold amounts of ROG + NOx and $PM_{10}$.

County-wide implementation of the CAP, implementation of Climate Action Plans by local jurisdictions and regional growth management policies, a reasonable jobs/housing balance, new technologies (e.g., in vehicle emission control equipment and fuel), and programs to encourage alternative modes of transportation, including public transit, will work toward attaining long-term air pollutant and GHG emissions reductions. Even with full implementation of the measures, because the project's operational air quality impact will remain significant with mitigation, the cumulative impact is considered significant and unavoidable.

The cumulative construction-related impact is also considered to be potentially significant since construction of larger Master Plan components, such as the Slack and Grand Residential Neighborhood and other residential neighborhoods, will exceed SLOAPCD threshold amounts and will remain significant with mitigation. Also, if construction of the Master Plan facilities and improvements coincides with construction of future developments potentially occurring within the off-campus areas in the city or county, the cumulative construction impact will be significant.

## Slack and Grand Residential Neighborhood

Cumulative impacts associated with the Slack and Grand Neighborhood are addressed above.

# 3.9 Noise

This section examines the potential noise impacts associated with the campus development pursuant to the Master Plan, including the development of the Slack and Grand Residential Neighborhood.

## Environmental Setting

Sound levels are expressed on a logarithmic scale of decibels (abbreviated as dB), in which a change of 10 units on the decibel scale reflects a 10-fold increase in sound energy. A 10-fold increase in sound energy roughly translates to a doubling of perceived loudness.

In evaluating human response to noise, acousticians compensate for people's response to varying frequency or pitch components of sound. The human ear is most sensitive to sounds in the middle frequency range used for human speech, and is less sensitive to lower and higher-pitched sounds. The "A" weighting scale is used to account for this sensitivity. Thus, most community noise standards are expressed in decibels on the "A"-weighted scale, abbreviated dBA. Zero on the decibel scale is set roughly at the threshold of human hearing. Common sounds in the environment include office background noise at about 50 dBA; human speech at 10 feet at about 60 to 70 dBA; cars driving by at 50 feet at 65 to 70 dBA; trucks at 50 feet at 75 to 80 dBA; and aircraft overflights directly overhead a mile from the runway at about 95 to 100 dBA.

The community noise environment consists of wide varieties of sounds, some near and some far away, which vary over the 24-hour day. People respond to the 24-hour variation in noise but are most sensitive to noise at night. California standards for community noise use the Community Noise Equivalent Level (CNEL), in which a 5-dB penalty is added to the evening 7:00 PM to 10:00 PM period, and a 10-dB penalty to the night 10:00 PM to 7:00 AM period.

### Noise-Sensitive Uses

Some land uses are considered more sensitive to noise than others. Noise-sensitive land uses include homes, schools, day care facilities, hospitals, and similar uses. Commercial and industrial uses generally are not considered noise sensitive because people do not rest or sleep there. The Cal Poly campus is bounded by State Route 1 (Highway 1) and California Boulevard to the west, Slack Street to the south, Stenner Creek Road to the north, and forested hills to the east. The existing residential areas in the campus' vicinity are generally located south of Slack Street and Foothill Boulevard, and west of Highway 1. Educational facilities in the vicinity located to the southwest of the intersection of Grand Avenue and Slack Street include Charles E. Teach Elementary School, SLO Classical Academy High School, and Monart Art School. Residential areas towards the west are buffered from the campus by Cal Poly Technology Park and Highway 1.

# Existing Traffic Noise Levels

Traffic on local streets is the major source of noise in the study area. Five 24-hour noise measurements and five 15-minute measurements were taken in the project vicinity to ascertain the existing noise levels (Figure 47).

The main access routes to the campus include Grand Avenue, Slack Street, Foothill Boulevard, Highland Drive, and Stenner Creek Road. These access routes are connected by two major regional highways, Highway 1 and US 101. Noise analyses were conducted at 9 roadway segments based on the field measurements. The results of noise measurements along these roadways indicate that under the existing conditions, noise levels in the campus vicinity range from 49.9 to 70.8 dBA, as summarized in Table 55.

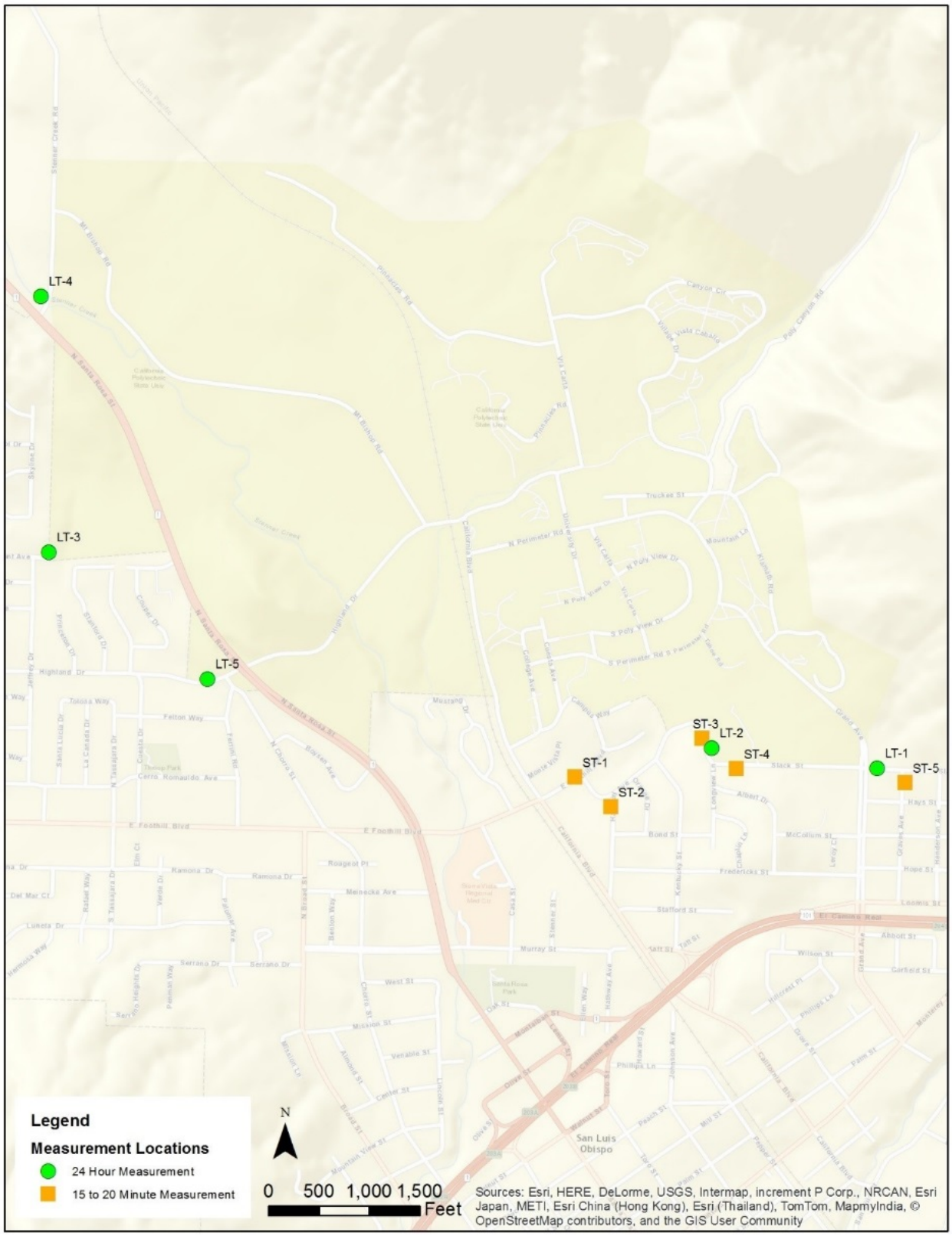
**Table 55. Existing Noise Levels**

| Roadway | Location | Existing Ldn*, dBA |
|---|---|---|
| Grand Avenue | Fredericks Street to Slack Street | 59.4 |
| Slack Street | East of Grand Avenue | 49.9 |
| Slack Street | Grand Avenue to Longview Lane | 60.4 |
| Slack Street | Longview Lane to Hathway Avenue | 59.0 |
| Hathway Avenue | Slack Street to Foothill Boulevard | 57.9 |
| Foothill Boulevard | Carpenter Street to California Boulevard | 57.3 |
| Highland Avenue | Highway 1/Santa Rosa Street to Cuesta Drive | 65.9 |
| Jeffrey Drive | at Westmont Avenue | 50.7 |
| Highway 1/Santa Rosa Street | at Stenner Creek Road | 70.8 |

* Ldn is a 24-hour average noise level with 10-dB penalty added to the night period from 10:00 PM to 7:00 AM

As shown, existing noise levels at three locations exceed 60 dBA. These three locations are Slack Street between Grand Avenue and Longview Lane, Highway Avenue between Highway 1/ Santa Rosa Street and Cuesta Drive, and Highway 1/Santa Rosa Street at Stenner Creek Road.

**Figure 47. Noise Measurement Locations**



# Campus Activity Noise

Contributors to the existing campus activity noise environment include general activity noise of students attending classes, students residing in housing facilities on campus, and amplified sound at the outdoor sports facilities and facilities that stage special events, including fire department exercises, drilling for the Grizzly Academy, tours, graduation ceremonies, and other campus events. All of these sources can be characterized as sporadic noise events of limited duration. Noise associated with special events can vary widely in terms of intensity of noise level and perceived nuisance.

## Noise Management on Campus

Several entities within the University have responsibility for noise management, including, but not limited to, University (Campus) Police, Housing Services, and Campus Policies, discussed below.

### University (Campus) Police

Campus police is responsible for responding to noise events, and management of special events, including parking, traffic management, and event planning.

### Housing Services

The housing department is responsible for the daily operation of the various housing complexes throughout the campus. Housing staff includes residential assistants and other staff who live in University residential halls and set guidelines for residents. Residents sign a Housing License, which includes agreement to comply with the "University Housing Resident Handbook" and the University's Student Code of Conduct. Both the handbook and the code of conduct include rights to sleep and study, and outline a system of Incident Reporting for students who are in violation of guidelines and standards. Housing Regulations include 19.b: Noise. Because the on-campus housing facilities are student communities, it is important to acknowledge and respect the rights and needs of others. This is especially true in reference to sound. All Cal Poly residential communities operate under continuous 24-hour Courtesy Hours, meaning that regardless of the time of day, any amplified sound or activity loud enough to be heard outside a room should be curtailed. All Licensees agree to observe courtesy hours as stated in the "University Housing Resident Handbook", whereby "the right to quiet supersedes the right to make noise".

### Campus Policies

General Policy, Section 141.3.2.1 of the "Campus Administrative Policies" states that: Outdoor events and activities that involve amplified music or speech are limited to the hours of: 7:00 AM to 10:00 PM, Monday through Sunday, and University scheduling protocols must be followed (see Sections 144.4 and 141.3.2.2) Outdoor events and activities that do not require use of amplified sound (for speech or music) may be held between 7:00 AM and midnight, Monday through Sunday. Use of the University's scheduling protocols is encouraged, to facilitate coordination with other events and among potential campus service providers. Regardless of the time they are held, events and activities must be conducted in a manner consistent with Section

141.3.1 (General Limitations) and in conformity with any additional guidelines pertinent to a particular venue.

General Policy, Section 141.3.1 states that: "All campus events and activities shall be conducted consistent with Federal and State law, with existing University policies, with the orderly conduct of University business, with preservation of the campus learning environment, with the preservation of public safety, with maintenance of University property and with the free flow of pedestrian and vehicular traffic. Entrances to campus facilities shall not be obstructed. No individual or group shall abridge, halt or disrupt the right of others to present their views. In addition, plans for outdoor events and activities should address potential impacts on residential communities, on and off campus."

## Slack and Grand Residential Neighborhood

The site of the Slack and Grand Residential Neighborhood is currently undeveloped, and is intermittently used by the Cal Poly for horse grazing. The closest sensitive uses to the site include existing school facilities accommodating Charles E. Teach Elementary School, SLO Classical Academy High School, and Monart Art School located diagonally across from the site to the southwest of the intersection of Grand Avenue and Slack Street at the distance of approximately 260 feet, and single-family residential development across Slack Street at the distance of approximately 95 feet.

# Regulatory Setting

## Federal Regulations

### Congressional: The Federal Noise Control Act of 1972

This law states that controlling noise protects the health and welfare of the Nation's population. It recognizes that transportation vehicles, machinery, and appliances are noise sources, and responsibility for controlling these noise sources rests with state and local governments. Moreover, the federal government will coordinate and adopt standards for inter-state commerce projects (e.g., airports).

### Federal Highway Administration: 23 CFR 772

Federal code provides uniform procedures to evaluate highway noise and implement abatement measures. Interpretation of what constitutes 'substantial noise' is left to the states.

## State Regulations

### California Government Code

The State General Plan Guidelines requires that local governments identify major noise sources and areas containing noise-sensitive land uses. Noise must be quantified by preparing generalized noise exposure contours for current and projected conditions. Contours may be

prepared in terms of either the Community Noise Equivalent Level (CNEL) or day-night average sound level (Ldn).

### California Building Code

Per section 1207.11 of the CBC, interior noise levels in habitable rooms shall not exceed 45 dB when measured as a CNEL or Ldn. Habitable rooms include rooms used for living, sleeping, eating, or cooking. This applies to residential occupancy only. Additionally, where the exterior sound level exceeds 60 CNEL or Ldn, mechanical ventilation is required (VK 2013).

## Local Regulations

The University does not maintain its own standards for exposure to noise. Both the County and City of San Luis Obispo have established standards for exterior and interior exposure to noise for different land use categories, including residences. These standards are similar, and are based on generally accepted thresholds for noise tolerance associated with various land uses.

Chapter 4 of the City's General Plan specifies that the standard for exterior noise levels at residential locations should not exceed a CNEL of 60 dBA while the interior noise levels should not exceed CNEL of 45 dBA. This exterior noise level falls within the range of acceptable conditions (55 to 70 dBA) set by the California Department of Health Services. Nuisance noise is addressed on campus by campus police, and in the vicinity of campus through the City of San Luis Obispo police department. The City's municipal code (Chapter 9.12 and 9.13) sets forth standards for nuisance noise and remedies for the public. The City limits nighttime noise levels to 50 dBA between 10:00 PM and 7:00 AM for residential neighborhoods. Limits on repetitive noise such as music, speech, TV turned up loud, and power tools during these hours are further reduced to 45 dBA.

Chapter 9.12 also sets guidelines for construction noise. The City's regulations generally restrict construction noise to between the hours of 7:00 AM and 7:00 PM, and suggest efforts to reduce construction noise levels to 85 dBA in areas of mixed residential and commercial use where feasible. Construction activities are otherwise generally exempted from exterior noise standards set forth in other sections of the code.

The University is not required to comply with the City's regulations; however, the University attempts to maintain a "good neighbor" policy where possible.

# Impact Criteria

The project will result in a significant noise impact if it will:

- Expose persons to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
- Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project; or,

- Result in a temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.

# Environmental Impact

Potential noise impacts were evaluated based upon review of the Master Plan proposed land uses and facilities, traffic study prepared for the Master Plan, and review of information for initial facilities anticipated to be developed earliest within the Master Plan development framework.

The Federal Interagency Committee on Noise (FICON) established significance criteria for noise impacts using a sliding scale based on the existing Ldn noise levels. The Ldn is a 24-hour average noise level with 10-dB penalty added to the night period from 10:00 PM to 7:00 AM The level of significance under the criteria changes with increasing noise exposure, such that smaller changes in ambient noise levels result in significant impacts at higher existing noise levels. These criteria, considered applicable to all noise sources that use the Ldn or CNEL noise exposure metrics are shown in Table 56. These criteria are used to evaluate the Master Plan project noise impacts.

**Table 56. Noise Impact Significance Criteria**

| Existing Ldn | Significant Impact[74] |
|---|---|
| Below 60 dBA | +5.0 dBA or more |
| 60–65 dBA | +3.0 dBA or more |
| Above 65 dBA | +1.5 dBA or more |

Traffic, day-to-day activities within the campus, and sport and other events are the major sources of long-term noise associated with the campus.

## Traffic Noise

Based on data in the traffic study prepared for the Master Plan, analyses were conducted to identify the future traffic noise levels with and without the project. Future traffic noise levels and the contribution of the project-generated traffic to these future noise levels were calculated for 9 study street segments. The results of the analysis illustrating the changes in noise levels due to the project and future traffic growth in the city and county are summarized in Table 57.

[74] Federal Government's Method of Assessing Noise Impacts. July 14, 2000.

## Table 57. Change in Noise Levels

| Roadway | Location | Existing Ldn, dBA | Future Ldn, dBA (Future Without Project) | Future Ldn, dBA (Future With Project) | Δ in Ldn, dBA (Future Without Project) | Δ in Ldn, dBA (Future With Project) | Δ in Ldn, dBA (Due to Project) | Significant Project Impact? |
|---|---|---|---|---|---|---|---|---|
| Grand Avenue | Fredericks Street to Slack Street | 59.4 | 59.7 | 61.0 | 0.3 | 1.6 | 1.3 | No |
| Slack Street | East of Grand Avenue | 49.9 | 52.8 | 53.9 | 2.9 | 4 | 1.1 | No |
| Slack Street | Grand Avenue to Longview Lane | 60.4 | 62.4 | 63.1 | 2 | 2.7 | 0.7 | No |
| Slack Street | Longview Lane to Hathway Avenue | 59.0 | 61.0 | 61.7 | 2 | 2.7 | 0.7 | No |
| Hathway Avenue | Slack Street to Foothill Boulevard | 57.9 | 57.9 | 59.1 | 0 | 1.2 | 1.2 | No |
| Foothill Boulevard | Carpenter Street to California Boulevard | 57.3 | 57.3 | 58.1 | 0 | 0.8 | 0.8 | No |
| Highland Avenue | Highway 1/Santa Rosa Street to Cuesta Drive | 65.9 | 65.0 | 64.6 | -0.9 | -1.3 | -0.4 | No |
| Jeffrey Drive | at Westmont Avenue | 50.7 | 50.7 | 50.7 | 0 | 0 | 0 | No |
| Highway 1/ Santa Rosa Street | at Stenner Creek Road | 70.8 | 72.7 | 72.7 | 1.9 | 1.9 | <0.1 | No |

Note: Ldn is a 24-hour average noise level with 10-dB penalty added to the night period from 10:00 PM to 7:00 AM

As shown, the noise level at the study roadway segment along Grand Avenue, between Fredericks Street to Slack Street, is projected to increase from 59.4 dBA to 61.0 dBA as a result of the future growth, including the project. The project's contribution to the increase in noise levels will be 1.3 dBA. Based on the significance criteria, the project-related impact and project's contribution to cumulative impact at this study segment is not projected to be significant.

There are three study roadway segments along Slack Street. Based on the analysis, noise levels ranging from 53.9 dBA to 63.1 dBA are projected along these segments as a result of future growth, including the project. The project's contribution to the increase in the noise levels ranges from 0.7 dBA to 1.1 dBA. Based on the significance criteria, the project-related impact and project's contribution to cumulative impact is not projected to be significant at any of these study roadway segments.

The noise level along Hathway Avenue, between Slack Street and Foothill Boulevard, is projected to increase from 57.9 dBA to 59.1 dBA as a result of the future growth, including the project. The project's contribution to the increase in noise level will be 1.2 dBA. Based on the significance criteria, the project-related impact and project's contribution to cumulative impact at this study segment is not projected to be significant.

The noise level along Foothill Boulevard, between Carpenter Street and California Boulevard, is projected to increase from 57.3 dBA to 58.1 dBA as a result of the future growth, including the project. The project's contribution to the increase in noise levels will be 0.8 dBA. Based on the significance criteria, the project-related impact and cumulative impact at this study segment is not projected to be significant.

The noise level along Highland Avenue, between Highway 1/Santa Rosa Street and Cuesta Drive, is projected to decrease from 65.9 to 64.6 dBA. The reduction in noise levels is due to the overall reduction in vehicular traffic projected along this segment with the development under the Master Plan that will provide more housing on campus (see Section 3.6, Traffic and Circulation, and Appendix E). As the project will contribute to the decrease in the noise levels along this segment, no adverse impact will result.

The noise level at Jeffrey Drive and Westmont Avenue is projected to continue at 50.7 dBA. Based on the significance criteria, the project-related impact and project's contribution to cumulative impact at this study location is not projected to be significant.

The noise level at Highway 1/Santa Rosa Street and Stenner Creek Road is projected to increase from 70.8 dBA to 72.7 dBA as a result of the future growth. As the project's contribution to the increase in noise levels will be negligible, less than 0.1 dBA, the project-related impact and the project's contribution to a cumulative impact at this study location is not projected to be significant.

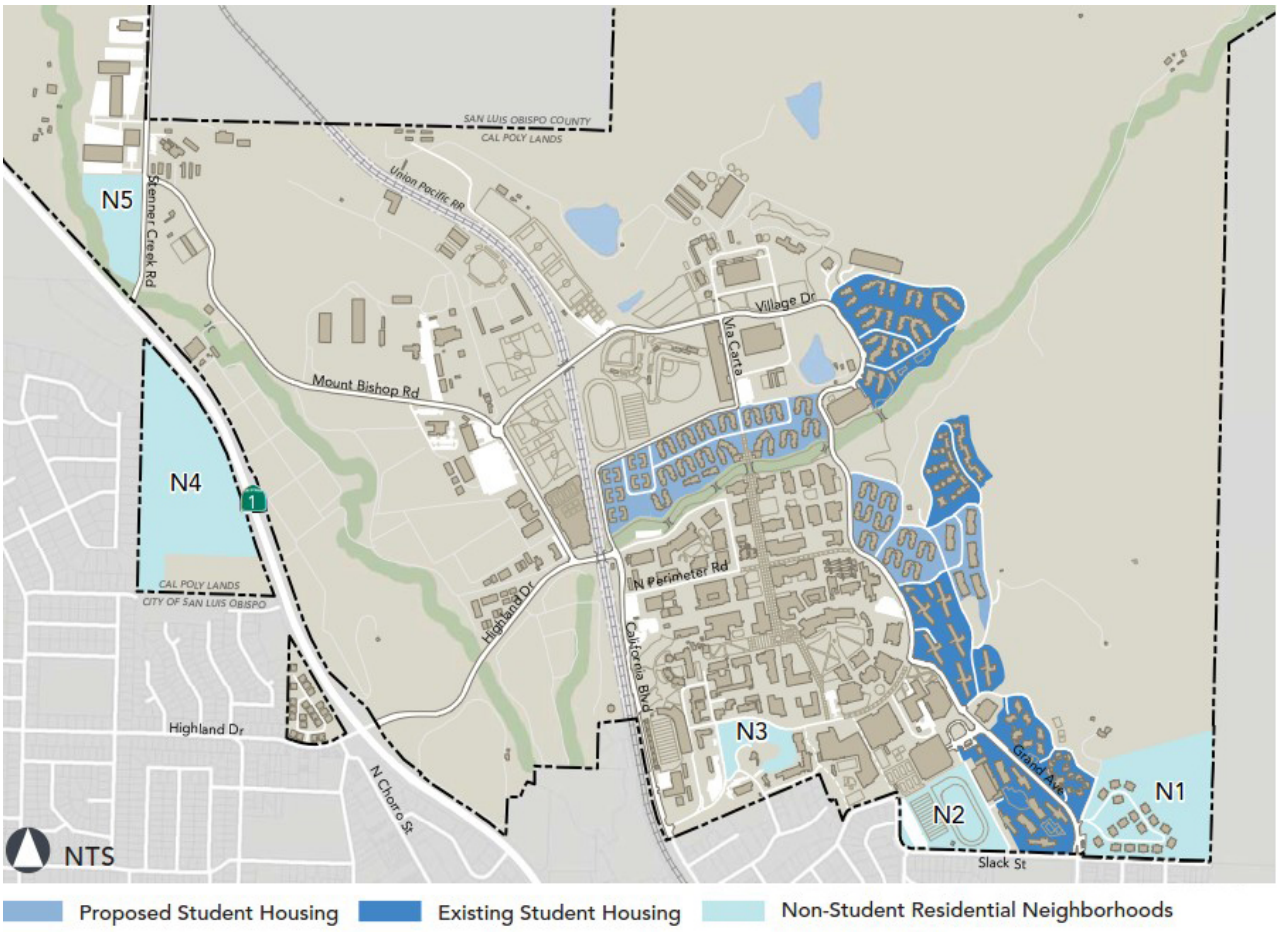
## Campus Activity Noise

The campus' noise from day to day activities of students attending classes and engaged in the academic programs is contained within the campus' facilities, including classrooms, laboratories,

library dining facilities, and within campuses interior open spaces. Activities of students living in student housing facilities on campus also generate noise often at levels, particularly at night, that are greater than housing occupied by non-students.

The Master Plan includes a range of new student housing facilities, including traditional dormitories, discipline-based living and learning facilities, and suites and apartment complexes. To ensure that students have access to a full range of support services, the new housing will include space for support amenities in or next to the future student residential communities. The Master Plan also designates five locations as residential neighborhoods providing housing primarily for non-students with an emphasis on the provision of faculty and staff housing. Figure 48 illustrates the existing and planned housing on campus.

**Figure 48. Student Housing and Residential Neighborhoods**




## Student Housing

The Master Plan provides for 6,800 student beds in new student dormitories and apartments. The new student housing facilities will be located within the north and east campus areas, adjacent to existing student housings and academic buildings, as shown in Figure 48. Noise associated with this new student housing will contribute to the existing noise levels within these areas of the

campus due to additional student presence and activity within these student residential areas, and other residential sources of noise including stationary sources (such as rooftop heating, ventilation, and air conditioning equipment) in new housing facilities. As the noise within these areas will continue to be associated with typical residential and academic activities on campus, and the new student housing facilities will be located deeply within the interior of the campus and far away from the surrounding residential neighborhoods, there will be no significant noise impact on the existing neighborhoods in the campus vicinity.

### Residential Neighborhoods

The five "residential neighborhoods" will provide apartment-style housing intended primarily for University faculty and staff. In addition, this housing may be offered to older students such as graduate students, veterans, and those with families, and possibly alumni or retirement housing. Another possibility is housing for retired members of the community. The housing will be market-rate units made available to the greater San Luis Obispo community with priority given to fulfilling campus housing needs first.

As shown in Figure 48, two of the residential neighborhoods, N1 and N2, are located north of Slack Street in relative close proximity to existing single-family residential neighborhoods. The Slack and Grand Residential Neighborhood (N1) would also include a small restaurant, café or retail space and is discussed further below. As the future residents of these neighborhoods will primarily be faculty, staff, and community members, the anticipated ambient noise levels associated with day-to-day activities will be similar to noise generated by residents of any other residential neighborhoods with apartment-style units. These residential neighborhoods will not generate substantive ambient noise over existing conditions once operational. Noise emitted from these sites will generally be typical of residences, and include voices, services such as maintenance, and outdoor activity. This type of noise is consistent with existing activities in adjacent areas, including existing student residences, urban residential development across Slack Street and Longview Avenue, and the Campus Core. Therefore, no significant noise impact on the existing off-campus residential neighborhoods is anticipated.

Another residential neighborhood, N3, is located near the Campus Core southwest of Perimeter Road and Cuesta Avenue, in the southern portion of the Campus Core planning area. There are existing residential neighborhoods south of Campus Way. As the future residents of this neighborhood will primarily be faculty, staff, and community members, the anticipated ambient noise levels associated with day-to-day activities will be similar to noise generated by residents of any other residential neighborhood with apartment-style units. In addition, the proposed location is buffered by the University's Health Center and Smith Alumni Center, reducing overall noise impact on the off-campus southern residential areas. Therefore, no significant noise impact on the existing off-campus residential neighborhoods is anticipated.

The fourth residential neighborhood, N4, is located across Highway 1 and west of the main campus area. This location is surrounded by off-campus residential uses to the west and south. As the future residents of this neighborhood will primarily be faculty, staff, and community members, the anticipated ambient noise levels associated with day-to-day activities of this residential neighborhood will be similar to noise generated by residents of other residential neighborhoods with apartment-style units. This residential neighborhood will not generate substantive ambient noise over existing conditions once operational. Noise emitted from the site

will generally be typical of residences, and include voices, services such as maintenance, and outdoor activity. This type of noise is consistent with existing activities in adjacent areas. Therefore, no significant noise impact on the existing off-campus residential neighborhoods is anticipated.

The fifth residential neighborhood, N5, is located north of the intersection of Highway 1 and Stenner Creek Road. As this location is separated from off-campus areas by Highway 1, there are no residential areas or any other noise-sensitive uses adjacent or nearby this neighborhood's location, and therefore there will be no significant noise impact.

### Sport and Event Facilities

The Master Plan provides for enhancement of existing sport and event facilities on campus, including the field expansion and addition of approximately 4,000 seats to the existing Spanos Stadium at the western border of the Campus Core to better house home football games, home soccer games, and graduation ceremonies. The provision of this additional seating will result additional spectators noise within the stadium during sport games and events and traffic noise from additional spectators' trips to and from the stadium. The stadium is separated from the closest off campus uses by California Boulevard and the Union Pacific Railroad track line. The closest off campus use to the stadium is Mustang Village complex, located to the southwest of railroad tracks which houses Cal Poly students. Nonetheless, even though the Master Plan does not contemplate a modification to the stadium's existing audio equipment, due to the area's topography the existing residential neighborhoods to the west are located above campus with no intervening buildings or other features acting as noise barriers, and therefore noise associated with additional spectators attending evening events at the stadium, albeit occurring only at the times that events are held at the stadium, is considered a potentially significant impact.

A new indoor sports and event arena with approximately 5,500 seats is also planned at Via Carta north of Brizzolara Creek to house men's and women's basketball games, women's volleyball games, and other campus events. As the arena is an indoor facility located deep within the campus interior, noise from the events held at the arena will not be audible at the off-campus residential neighborhoods and noise impacts will be less than significant.

## Short-term and Intermittent Construction Noise

Construction activities associated with new facilities and improvements on campus will result in a temporary increase in ambient noise levels in the vicinity of each individual construction site. During the construction period, noise from heavy equipment, power and air tools, compressors, trucks, and other noises from loading and unloading will occur with varying frequency and intensity. Noise levels associated with typical construction equipment at a distance of 50 feet from the noise source are illustrated in Table 58. These temporary noise levels will not be continuous but will vary as different pieces of equipment are used for varying lengths of time throughout the construction period.

Noise levels fall substantially with increasing distance from the noise source, both as a result of spherical spreading of sound energy and absorption of sound energy by the air. Spherical spreading of sound waves reduces the noise of a point source by 6 dB for each doubling of

distance from the noise source. Absorption by the atmosphere typically accounts for a loss of 1 dB for every 1,000 feet. Thus, high levels of construction noise usually are limited to the immediate vicinity of construction activities. Nonetheless, since construction of some new facilities and improvements could be audible at the nearby residence halls, academic facilities, other campus sensitive uses, and the nearby off-campus neighborhoods mitigation measures have been identified to reduce this impact.

**Table 58. Noise from Construction Equipment at Distance of 50 Feet**

| Equipment Description | Equipment Usage Factor (%) | Standard $L_{max}$ at 50 feet (dBA) | Actual Measured $L_{max}$ at 50 feet (dBA)[75] |
|---|---|---|---|
| Backhoe | 40 | 80 | 78 |
| Compactor (ground) | 20 | 80 | 83 |
| Concrete Mixer Truck | 40 | 85 | 79 |
| Crane | 16 | 85 | 81 |
| Dozer | 40 | 85 | 82 |
| Drum Mixer | 50 | 80 | 80 |
| Dump Truck | 40 | 84 | 76 |
| Excavator | 40 | 85 | 81 |
| Flat Bed Truck | 40 | 84 | 74 |
| Front End Loader | 40 | 80 | 79 |
| Grader | 40 | 85 | n/a |
| Paver | 50 | 85 | 77 |
| Pickup Truck | 40 | 55 | 75 |
| Pneumatic Tools | 50 | 85 | 85 |
| Roller | 20 | 85 | 80 |
| Soil Mix Drill Rig | 50 | 80 | n/a |
| Tractor | 40 | 84 | n/a |
| Vacuum Street Sweeper | 10 | 80 | 82 |

# Slack and Grand Residential Neighborhood

## Long-term Noise

Vehicular trips and general day-to-day activities of the residents at the 420-unit Slack and Grand neighborhood will generate noise.

[75] FHWA Construction Noise Handbook.

### Traffic Noise

As shown in Table 57, the noise level at the study roadway segment along Grand Avenue, between Fredericks Street to Slack Street, is projected to increase from 59.4 dBA to 61.0 dBA as a result of the future growth, including the project. The project's contribution to the increase in noise levels will be 1.3 dBA. Based on the significance criteria, the project-related impact and project's contribution to cumulative impact at this study segment is not projected to be significant.

There are three study roadway segments along Slack Street. Based on the analysis, noise levels ranging from 53.9 dBA to 63.1 dBA are projected along these segments as a result of future growth, including the project. The project's contribution to the increase in the noise levels ranges from 0.7 dBA to 1.1 dBA. Based on the significance criteria, the project-related impact and project's contribution to cumulative impact is not projected to be significant at any of these study roadway segments.

Therefore, no significant traffic noise impact is anticipated on the existing off-campus residential neighborhoods south of Slack Street and school facilities to the southwest, across the intersection of Grand Avenue and Slack Street.

### Day-to Day Activity Noise

The amenities provided on site include open space courtyards, day care facility, neighborhood-scale retail which may include a café, and/or a similar retail (totaling approximately 8,500 square feet) primarily for future residents and their families. This retail is anticipated to consist of two small establishments, one located on the ground floor of apartment buildings along Slack Street and the other along Grand Avenue. As these amenities serving the residents will operate between the hours of 6 AM and 9 PM, consistent with the City of San Luis Obispo standard, and day-to-day activities of the future residents of this neighborhood will be similar to activities by residents of other residential neighborhoods with apartment-style units, no significant long-term noise impact is anticipated.

### Construction Noise

If approved, construction of the Slack and Grand Residential Neighborhood is anticipated to begin in 2018. All construction, including site grading, installation of utilities, and construction of apartment buildings will be completed within 42 months. The construction activities will generate noise from construction equipment (see Table 51), including tractors, rubber backhoes, loaders, tired dozers, forklifts, trucks, and other pieces of equipment operating at the site during different construction phases. Haul trucks and trucks transporting equipment to the site will also generate noise. As construction noise will be audible at the closest sensitive uses – the off-campus residential neighborhoods south of Slack Street and school facilities to the southwest, across the Grand Avenue and Slack Street intersection, mitigation measures have been identified to reduce this significant impact.

# Mitigation Measures

Long-term traffic noise, campus activity noise, and noise associated with new student housing on campus will be less than significant. However, there are no feasible mitigation measures to reduce noise generated by additional spectators attending events at the expanded Spanos Stadium.

To reduce short-term and intermittent noise impact associated with construction of facilities and improvements on campus pursuant to the Master Plan, including the construction of the Slack and Grand Residential Neighborhood, the following measures will be implemented:

3.9-1 Construction hours will be consistent with the City of San Luis Obispo regulations which limit construction to the hours between 7:00 AM and 7:00 PM Monday through Saturday. No construction will take place on Sundays or legal holidays.

3.9-2 Muffled construction equipment will be used wherever possible.

3.9-3 The contractor will ensure that each piece of operating equipment is in good working condition and that noise suppression features, such as engine mufflers and enclosures, are working and fitted properly.

3.9-4 Material stockpiles and mobile equipment staging, construction vehicle parking maintenance areas will be located as far as practicable from noise sensitive uses.

3.9-5 Electricity-powered equipment will be used instead of pneumatic or internal combustion-powered equipment, where practicable.

3.9-6 Stationary noise sources such as generators or pumps will be located as far away from noise sensitive uses as feasible.

3.9-7 If a sustained high-noise construction activity takes place within 100 feet from classrooms or other noise sensitive uses on campus or off campus, measures will be taken to limit the amount of noise affecting the sensitive receptor. These measures may include scheduling the activity when classes are not in session or the sensitive receptor is not use, providing a temporary barrier of no less than 8 feet in height made of wood or other similar materials and placed strategically along the construction site's boundaries; and/or other commonly utilized noise attenuation measures.

3.9-8 A haul route plan will be prepared for construction of each facility and/or improvement for review and approval by the University that designates haul routes as far as possible from sensitive receptors.

3.9-9 A telephone number and name of a contact person for registering comments or complaints will be posted on the University website.

# Level of Impact After Mitigation

Noise impact associated with additional spectators attending events at the expanded Spanos Stadium is considered a potentially significant and unavoidable impact as there are no feasible mitigation measures to reduce spectator-generated noise.

The implementation of the identified mitigation measures will reduce noise associated with construction of new facilities and improvements within campus, however the impact of noise from construction activity on the closest uses in the vicinity of the campus' individual construction sites, albeit reduced and intermittent, could remain significant and unavoidable.

## Slack and Grand Residential Neighborhood

The implementation of the identified mitigation measures, including limiting construction activity to the hours between 7:00 AM and 7:00 PM Monday through Saturday and no construction on Sundays and legal holidays; providing a temporary barrier of no less than 8 feet in height made of wood or other similar materials and placed strategically along the construction site's boundaries, and other measures will reduce noise impact associated with construction of Slack and Grand Residential Neighborhood. However, even with incorporation of these measures, the impact of noise from construction activity on the closest residential neighborhoods and school facilities to the south and southeast of the site, albeit reduced, is considered significant and unavoidable.

# Cumulative Impact

The campus Master Plan, including the Slack and Grand Residential Neighborhood component, is not projected to result in a significant long-term noise impact. However, construction activities associated with the Master Plan, including the development of Slack and Grand Residential Neighborhood, will result in significant, albeit short-term and intermittent, noise impact even with full implementation of the identified mitigation measures. Potential overlap of construction of some campus facilities or improvements with construction of some of potential future development over the next 20 years in the surrounding off campus area may occur. If so, the combined construction noise effects could be cumulatively significant even with full implementation of the mitigation measures identified in this EIR, as well as those required of the future development within the City and County in the surrounding off campus areas pursuant to the City and County requirements.

## Slack and Grand Residential Neighborhood

Cumulative impacts associated with the Slack and Grand Neighborhood are addressed above.

# 3.10 Population and Housing

This section discusses the potential impacts associated with the Master Plan as it relates to housing and population in the City of San Luis Obispo and the County of San Luis Obispo region.

## Environmental Setting

### Population

#### Campus Population

Based on Fall 2015 headcount data, Cal Poly has an existing campus population of 24,116, including 20,944 students and 3,172 faculty and staff. Cal Poly students and faculty/staff living off campus in the City of San Luis Obispo comprise a significant portion of the City's population and influence housing demand in the City. Approximately 12,462 Cal Poly students lived off campus in 2013[76] and 13,756 lived off campus in 2015.[77] The Cal Poly students who live off campus either live in the City of San Luis Obispo or in other communities throughout the county.

The Master Plan describes the vision and goals for future campus development to accommodate a headcount enrollment cap of 25,000 students (22,500 FTE students) and 3,905 regular faculty, staff, and management employees by the year 2035. As detailed below, the Master Plan proposes a modest average growth in student population of 1.25% per year over the Master Plan's 2035 term.

### Regional Population

As part of its regional planning functions, the San Luis Obispo Council of Governments (SLOCOG) develops regional population, employment and housing forecasts for the County and the county communities. The City and County's General Plan Housing Elements incorporate projected population and housing estimates from SLOCOG into their overall planning efforts.

As of 2016, the City of San Luis Obispo had a population of 46,117 and the County of San Luis Obispo had a population of 277,977 residents.[78]

[76] City of San Luis Obispo. 2015. *General Plan Housing Element, Appendix A*. January 2015. Available at: http://www.slocity.org/home/showdocument?id=5204. Accessed in April, 2017.
[77] WSP. 2017. *Transportation Impact Study for the Cal Poly Campus Master Plan*. February 2017. (Appendix E).
[78] California Department of Finance. 2016. Demographics. Population and Housing Estimates. Available at: http://www.dof.ca.gov/Forecasting/Demographics/Estimates/. Accessed April 2017.

## City of San Luis Obispo

While City limits do not incorporate the Cal Poly Campus, it is estimated that Cal Poly and Cuesta students comprise more than one third the City's population. As illustrated in Table 59, the City's population has been, and is projected to continue to grow at a slower rate than the county as a whole. The City's population grew at an average annual rate of 0.2% from 2000 to 2010 (reaching 45,119 residents), and 0.4% from 2010 to 2015 (reaching 45,950 residents). The 2050 SLOCOG Regional Growth Forecast[79] projects a continuation of this relatively slow growth rate between 2015 and 2035, with City's population growing at an average annual rate of 0.5% to 50,659 residents by 2035.

The City's 2014 General Plan Land Use and Circulation update estimates the population to reach 48,550 by 2035.[80] The City's General Plan Land Use and Housing Elements include policies to accommodate future City population of 57,200. At a 0.5% annual growth rate, the City anticipated that this residential capacity would be reached by the year 2057.[81]

**Table 59. City and County Population Growth**

| | City | County[79] |
|---|---|---|
| 2000 | 44,179 | 246,681 |
| 2010 | 45,119 | 269,637 |
| Increase (2000–2010) | 940 | 22,956 |
| 2000–2010 Average Annual Growth Rate | 0.2% | 0.9% |
| 2015 | 45,950 | 276,375 |
| Increase (2010–2015) | 831 | 6,738 |
| 2010–2015 Average Annual Growth Rate | 0.4% | 0.5% |
| Projected 2035 | 50,659 | 312,346 |
| Increase 2015–2035 | 4,709 | 35,971 |
| 2015-2035 Average Annual Growth Rate | 0.5% | 0.7% |

## County of San Luis Obispo

Between 2000 and 2010, the County of San Luis Obispo population grew at an average annual rate of about 0.9%. By 2010, the County had a population of 269,637 persons. As of 2015, the County of San Luis Obispo population was 276,375 persons.

The San Luis Obispo County is projected to reach a population of 312,346 by 2035, representing an average annual growth rate of approximately 0.7% between 2015 and 2035.

[79] SLOCOG. 2017. *2050 Regional Growth Forecast for SLO County*. Adopted June 2017.
[80] City of San Luis Obispo. 2014. *2035 General Plan Land Use and Circulation Update, Chapter 2.0: SLO Today*. June 2014. Available at: http://www.slocity.org/home/showdocument?id=6733. Accessed April 2017.
[81] City of San Luis Obispo. 2015. *General Plan Housing Element*. January 2015. Available at: http://www.slocity.org/home/showdocument?id=5204. Accessed April 2017.

# Housing

## Campus Housing

### Student Housing

Cal Poly currently has the largest on-campus housing program of the California State University system, with a total of 8,200 beds to be available by Fall 2018. Existing housing for freshmen students include the following facilities: Student Housing South (under construction and scheduled to be open for student use in Fall 2018), North Mountain Halls, South Mountain Halls, Sierra Madre Towers, and Yosemite Towers. Existing housing for sophomore and upperclassmen students includes Cerro Vista and Poly Canyon Village. By 2018, Cal Poly will provide housing for approximately 40% of all undergraduates. This accomplishment and proposed future housing development on campus are consistent with the Master Plan Goal 5: House more students in residential communities on campus. The following housing-related Master Plan Guiding Principles establish guidelines for future housing development on campus:

- GP09: The percentage of students living in on-campus housing should be increased and Cal Poly should continue to develop into a livable residential campus, where academic facilities, housing, recreation, social places, and other support facilities and activities are integrated.
- UL01: Housing for first-year students should generally be dormitory style, in proximity to other first year housing, campus dining, and other support services.
- UL02: New student housing not oriented primarily to first-year students should emphasize apartment style living.
- UL04: As Cal Poly becomes even more of a residential campus, entertainment, recreation, and social facilities should be provided to support a 24-hour community.
- UL05: Residential environments should support learning, including study space, internet infrastructure, and learning support within residential complexes. Such environments are particularly important to undergraduate students living away from home for the first time.

These principles contribute to University's overarching theme of providing a rich living-learning experience to students to promote academic success. The advantages of transitioning the Cal Poly campus into more of a living-learning community are manifold. First, there is substantial evidence that students who live on-campus, especially in their early years of college life, perform better academically and are more likely to graduate, and in a timely way. Studies suggest that on-campus living is often especially valuable for those who are among the first in their families to attend college, for students from more diverse social and economic backgrounds, and for students in Science, Technology, Engineering and Mathematics (STEM disciplines).

It is estimated that approximately 13,756 Cal Poly students (or 65%) lived off campus in 2015. Based on regional commute patterns, it is estimated that approximately 3,164 out of 13,756 students that live off campus live in the City of San Luis Obispo and 10,592 live in other communities throughout the County.

### Faculty/Staff Housing

Historically, Cal Poly faculty/staff have primarily lived off campus. On campus housing for faculty and staff was constructed in 2005 with the opening of Bella Montaña, a residential complex offering 69 condominium style, for-sale units. This residential complex is located across from the campus, west of Highway 1, on the northwest corner of Highland Drive and North Santa Rosa Street. The Bella Montaña community was developed by the Cal Poly Corporation, a nonprofit corporation, to allow university faculty and staff to live more affordably in San Luis Obispo. Bella Montaña homes are condominiums on leased land, an arrangement that enables the homes to be sold at below market prices and ensure the homes remain owned by persons affiliated with Cal Poly. Approximately 56 of the 69 Bella Montaña homes are currently owned by Cal Poly-related staff and faculty.[82] The remaining 13 units are owned by members of the public.[82] Members of the general public can view and inquire about available units, if any, on the Bella Montaña website. The distribution of existing on-campus housing is summarized in Table 60.

**Table 60. Existing On-Campus Housing**

| Population | Existing Housing | |
|---|---|---|
| | **Beds** | **Units** |
| Undergraduates | 8,200 | n/a |
| Faculty/Staff | 0 | 56 |
| Non-Cal Poly Population | 0 | 13 |
| TOTAL | 8,200 | 69 |

With the exception of the 56 faculty/staff that live on campus in Bella Montaña, the majority of Cal Poly faculty/staff live off campus (approximately 3,116 persons). Based on commute data, it is assumed that approximately 2,400 faculty/staff commute in from outside of the City of San Luis Obispo and that 717 faculty/staff reside within the City.

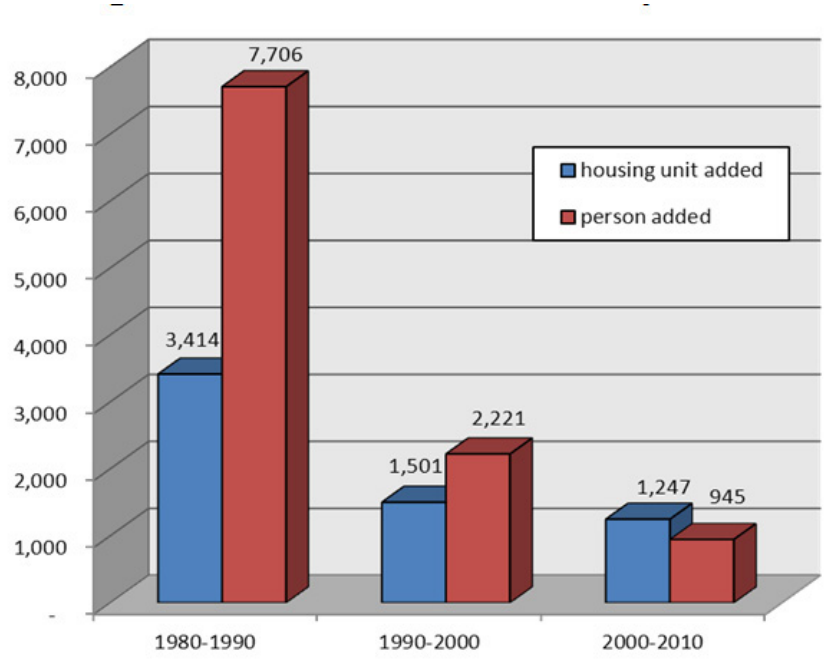
# Regional Housing

## City of San Luis Obispo

Table 61 illustrates the on-going trend in housing and population growth within the City of San Luis Obispo. In the 1980s and 1990s, the City's housing stock grew slower than the population. However, in the 2000s, housing units added generally increased faster than population growth rates. Between 2000 and 2010, there were 1,247 housing units added compared to 945 new residents. Between 2000 and 2013, the City added about 1,362 residents and the City's housing stock grew by 1,389 units.

[82] Personal communication with Cal Poly, March 28, 2017.

**Table 61. Housing Stock Profile and Population Growth**




## Housing Vacancy Rates

The housing vacancy rate is one measure of general housing availability. A low vacancy rate, less than 5%, suggests that households will have difficulty finding housing within their price range. Conversely, a high vacancy rate may indicate a high number of housing units that are undesirable for occupancy, a high number of seasonal units, or an oversupply of housing. By maintaining a "healthy" vacancy rate of between 5% and 8%, housing consumers have a wider choice of housing types and prices to choose from. As vacancy rates drop, shortages generally raise housing costs and limit choices. Since the 1990s, the city's vacancy rate remained at just over 5%; however, from 2001 to 2003, the State Department of Finance figures show the rate dropped steeply to 3.5%. In 2010, the vacancy rate for the city rose to 7.3%. By comparison, in the 1990s, the County of San Luis Obispo vacancy rate hovered at around 11%. In 2010, the county vacancy rate dropped to 7.6%. The city's consistent low vacancy rate reflects the high demand for student rental housing near college campuses (i.e., Cuesta College and Cal Poly University).

## Renter Occupied vs. Owner Occupied

In 2010, there were 21.4% more renters than owners in the City. The city also estimates that between 2003 and 2013, an average of 95 dwellings were built each year. In 2010, 11,646 occupied housing units, or 61%, of City units were renter-occupied, a significantly higher proportion than in the county and state. Between 2000 and 2010, the City saw a 2% increase in renter occupied housing units. This shift is consistent with housing tenure trends during the period for the county and state.

## Household Size

A household by definition consists of all the people occupying a dwelling unit, whether or not they are related. While the number of city households has slowly increased, average household size declined by 1.3% as described in the City's Housing Element. The current household size for the City is 2.25 persons per household. The declining household size reflects the aging of the city's residents and the relatively high cost of housing. As homeowners age and become "empty nesters," they often cannot afford to "shift down" and buy smaller housing that better meets their needs and budget. In San Luis Obispo, it is not uncommon for a three- and four-bedroom house to be occupied by one or two persons. As average households grow smaller, the existing housing stock accommodates fewer people, exacerbating housing needs, particularly for families and large households. In San Luis Obispo, there is a higher percentage (60%) of non-family households than family-households. Non-family households and one person households are more common in the City of San Luis Obispo than family and larger households due to the student population in the City.

## University-Related Housing Market

San Luis Obispo's housing market is strongly influenced by student enrollment at both Cal Poly University and Cuesta College. Owner-occupied City housing units saw a 2% decrease since 2000 even with the increase in the percentage of students living on-campus at Cal Poly. Another indicator that reflects the high percentage of student households in the City is the median household income, which was $42,461, compared with $56,967 for the County and $57,708 Statewide. Many students are nominally classified as lower income, although they often have significant financial resources through parental support. In addition, median City housing costs were higher than both the County and State. This reflects the trend that student households often outcompete non-student households for rental units within the City, and property owners can rent units at a higher price.

Historically, additional campus housing has been developed to keep up with increased student enrollment and continue to increase the percentage of students living on campus overall (Table 62). By 2018, Cal Poly will provide housing for approximately 40% of all undergraduates with a total of 8,200 beds provided on campus. The on-campus student housing proposed by the Master Plan is designed to continue this trend and to accommodate future student enrollment increases. The majority of the students live off campus in single-family or multi-family rental units in the City of San Luis Obispo. Under City zoning regulations, up to five adult students can live in a house and share rental costs.

**Table 62. On-campus Beds and Percent of Students Living On-Campus**

**Cal Poly, San Luis Obispo: On-Campus Beds, 2000-2015**

| Year | On-Campus Beds | Student Enrollment (Fall) | Percent of Students Living On-Campus |
|---|---|---|---|
| 2000 | 3,737 | 16,877 | 22.1% |
| 2001 | 3,737 | 18,079 | 20.7% |
| 2002 | 3,737 | 18,453 | 20.3% |
| 2003 | 3,737 | 18,303 | 20.4% |
| 2004 | 4,540 | 17,582 | 25.8% |
| 2005 | 4,540 | 18,475 | 24.6% |
| 2006 | 4,540 | 18,722 | 24.2% |
| 2007 | 4,540 | 19,777 | 23.0% |
| 2008 | 4,540 | 19,471 | 23.3% |
| 2009 | 5,868 | 19,325 | 30.4% |
| 2010 | 7,200 | 18,360 | 39.2% |
| 2011 | 7,200 | 18,762 | 38.4% |
| 2012 | 7,200 | 18,679 | 38.5% |
| 2013 | 7,200 | 19,703 | 36.5% |
| 2014 | 7,200 | 20,186 | 35.7% |
| 2015 | 7,200 | 20,944 | 34.4% |
| Change (2000 to 2015): | 3,463 | 4,067 | |
| Percent Change (2000 to 2015): | 92.7% | 24.1% | |

*Sources: California Polytechnic State University, San Luis Obispo, Institutional Planning and Analysis; CSU Statistical Abstract (2000-2016); SLOCOG Regional Building Permit Data Summary Report (2016).*

## San Luis Obispo Housing Needs, 2014–2019

The City's *General Plan Housing Element 2015* presents the City's plan for development of more housing between 2014 and 2019. The Housing Element contains objectives for single-family and multi-family housing units, both rental and for-sale units. The number of housing units is based on the Regional Housing Needs Allocation (RHNA) assigned by the SLOCOG in the County's Regional Housing Needs Plan (RHNP). The primary goal of SLOCOG's Regional Housing Needs Plan (RHNP) is to quantify each jurisdiction's responsibility for accommodating its fair share of the regional housing need. The RHNP does not address all of the local housing needs of each jurisdiction, just the share of the regional new housing construction need. Other local needs must also be addressed in each jurisdiction's housing element, such as housing overpayment and overcrowding, housing preservation, and the housing needs of farmworkers,

students and other special needs groups. The RHNA for San Luis Obispo for the 2014 – 2019 period is 1,144 housing units. Based on the programs and strategies outlined in the City's 2015 Housing Element and the fact that there is sufficient zoned land that is suitable and available for housing development, the City anticipates to meet RHNA goal of 1,144 units for the period of 2014 to 2019.

Despite the housing market's downturn in 2008 and 2009, there is a continuing disparity between household income and housing costs which forces many to seek housing outside the City. Currently, 77% of the City of San Luis Obispo's workforce lives outside of the City and commutes in for work.[11] The Housing Element outlines a policy to encourage and support employer/employee financing programs and partnerships to increase housing opportunities specifically targeted towards the local workforce to address the current shortage of workforce housing. The Master Plan would potentially help alleviate this issue by providing affordable housing for faculty and staff members.

## Future Housing Projections

According to the 2050 SLOCOG Regional Growth Forecast,[79] the City of San Luis Obispo is projected to increase the number of housing units to 22,534 by 2035. As illustrated in Table 63, the growth in housing in the City of San Luis Obispo has been, and is projected to continue to be, slower than in the County.

**Table 63. City and County Housing Growth**

| | City | County[79] |
|---|---|---|
| 2010 | 20,553 | 117, 315 |
| 2015 | 20,887 | 119,697 |
| Increase | 334 | 2,382 |
| 2010–2015 Average Annual Growth Rate | 0.3% | 0.4% |
| Projected 2035 | 22, 534 | 135,129 |
| Increase | 1,647 | 15,432 |
| 2015–2035 Average Annual Growth Rate | 0.4% | 0.6% |

While the city of San Luis Obispo appears mostly "built out," significant areas of developable land remain that could help meet existing and future housing needs. A residential capacity inventory conducted by the City in 2013 indicates that San Luis Obispo has approximately 725 acres of vacant, underutilized, or blighted property that can accommodate approximately 3,477 dwelling units. Much of this capacity is located within the City's Margarita and Orcutt Specific Plan areas.[81] As such, it is expected the City would be able to meet the projected growth of 1,647 housing units by 2035.

Future housing development on the Cal Poly campus is not included in the City's RHNA allocation. However, the City anticipates that housing developed by Cal Poly on campus land has been and will continue to play a key role in meeting City housing needs and plans to work with

Cal Poly to address expanding campus housing programs to reduce pressure on the City's housing supply.

### County of San Luis Obispo

The 2000 Census identified 92,739 households in the County of San Luis Obispo. In 2010, there were 102,016 occupied housing units in the County, representing an increase of approximately 10%.[81] The population of the County in 2010 was 269,637 residents.[83] Similar to the City, the County is also experiencing a decrease in household size. In 2000, the average number of persons per household was approximately 2.55 and in 2010, the average number of persons per household had decreased to 2.48.[83]

As shown in Table 63, the County is projected to increase the number of housing units to reach 135,129 by 2035.

## Slack and Grand Residential Neighborhood

The proposed N1 Residential Neighborhood is located in the northeast corner of intersection of Slack Street and Grand Avenue. This near term Master Plan project will add 420 new beds to the university's on-campus housing stock, specifically for faculty and staff members. The units will provide a mix of studio, one-, two-, and three-bedroom units. A priority system will be used to make sure that University-related housing needs are fulfilled first, before making units available to the general market in a community where reasonably priced apartment-style housing is needed. The project will also feature a parking garage, community gardens, vehicle charging stations, a playground, small-scale retail commercial venues, and a transit bus stop pullout.

# Regulatory Setting

## State

### California Housing Element Law

California's Housing Element Law (Government Code Sections 65580 through 65589.8) recognized that early attainment of decent housing and a suitable living environment for every Californian, including farmworkers, was a "priority of the highest order". The law was enacted to ensure that counties and cities recognize their proportionate responsibilities in contributing to the attainment of state housing goals, to establish the requirement that all counties and cities adopt housing elements to help meet state goals, to recognize that each locality is best capable of determining what efforts it is required to take to contribute to attainment of state housing needs, and to encourage and facilitate cooperation between local governments to address regional housing needs.

[83] County of San Luis Obispo. 2014. *County of San Luis Obispo General Plan, Housing Element 2014–2019. Adopted June 17, 2014*. Available at: http://www.slocounty.ca.gov/Departments/Planning-Building/Forms-Documents/Plans/General-Plan/Housing-Element.aspx. Accessed April 2017.

# Local

## Cal Poly Master Plan 2035 Principles

The following "Guiding Principles" were developed early on in the process by the Master Plan professional team with input from campus leadership, including the college deans, and based largely on the current (2001) Master Plan. Guiding Principles can be thought of both as starting points for the plan process as well as overarching directives relevant to all or most Master Plan topics. They are categorized as GP (General Principle), MPP (Master Plan Principle), IP (Implementation Program), TC (Transportation and Circulation), S (Sustainability), UL (University Life), or OR (Other Recommendation). The following principles were identified as being relevant to population and housing:

**GP 09** The percentage of students living in on-campus housing should be increased and Cal Poly should continue to develop into a livable residential campus, where academic facilities, housing, recreation, social places, and other support facilities and activities are integrated.

**IP 03** Cal Poly should consider potential impacts – including but not limited to traffic, parking, noise and glare – on nearby single-family residential neighborhoods, in its land use planning, building and site design, and operations.

**IP 21** On-campus housing should be designed to accommodate bicycle parking that is indoors or otherwise protected from the elements.

**UL 01** Housing for first-year students should generally be dormitory-style, in proximity to other first-year housing, campus dining and other support services.

**UL 02** New student housing not oriented primarily to first-year students, should emphasize apartment style living.

**UL 03** Support services and facilities such as retail, food outlets, study and workspaces, and recreational amenities should be incorporated into new housing where possible.

**UL 05** Residential environments should support learning, including study space, Internet infrastructure and learning support within residential complexes. Such environments are particularly important to undergraduate students living away from home for the first time.

**OR 13** Faculty and staff housing should be considered for appropriate on-campus sites, but off campus options may also be suitable.

**TC 04** On-campus residential developments should be provided convenient access to public transportation stops and improved transit access to off-campus amenities.

**TC 11** On-campus residential neighborhoods should be designed with convenient access to the core of campus, including safe and convenient pedestrian and bicycle paths;

consideration should be given to a shuttle service or other intra-campus alternatives when residential developments are beyond convenient walking distance.

### City of San Luis Obispo Housing Element

Even though the City of San Luis Obispo has no regulatory authority over CSU lands, it is important to note the City's Housing Element (2015) contains several polices related to the development of housing under the Cal Poly Master Plan, including the following:

- Policy 8.4. Encourage Cal Poly University to continue to develop on-campus student housing to meet existing and future needs and to lessen pressure on City housing supply and transportation systems.
- Policy 8.5. Strengthen the role of on-campus housing by encouraging Cal Poly University to require freshman and sophomore students to live on campus.
- Policy 8.7. Encourage Cal Poly University to develop and maintain faculty and staff housing, consistent with the General Plan.
- Policy 8.18. Jointly develop and implement a student housing plan and continue to support "good neighbor programs" with Cal Poly State University, Cuesta College and City residents. The programs should continue to improve communication and cooperation between the City and schools, set on-campus student housing objectives and establish clear, effective standards for student housing in residential neighborhoods.
- Policy 10.2. Cal Poly State University and Cuesta College should actively work with the City and community organization to create positive environments around the Cal Poly Campus by A) Establishing standards for appropriate student densities in neighborhoods near Campus; B) Promoting homeownership for academic faculty and staff in Low-Density Residential neighborhoods in the northern part of the City.
- Policy 10.5. Work with Cal Poly to address the link between enrollment and the expansion of campus housing programs at Cal Poly University to reduce pressure on the City's housing supply.
- Policy 10.6. Work with other jurisdictions to advocate for State legislation that would 1) provide funding to help Cal Poly University provide adequate on-campus student housing and 2) allow greater flexibility for State universities and community colleges to enter into public-private partnerships to construct student housing.

## Slack and Grand Residential Neighborhood

The regulatory setting for the Slack and Grand Residential Neighborhood is the same as the regulatory setting for the Master Plan. Please refer to the Regulatory Setting discussions above.

# Impact Criteria

Based on thresholds identified in Appendix G of the State CEQA guidelines, the project will result in a significant impact on population and/or housing if it will:

- Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure);
- Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere; or,
- Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.

# Environmental Impact

The Cal Poly student population is projected to increase from 20,944 headcount students to 25,000 by Fall 2035. Total regular faculty, staff, and management employees are expected to increase from 3,172 to 3,905 by Fall 2035. This represents a 1.25% growth in campus population over the Master Plan's term.

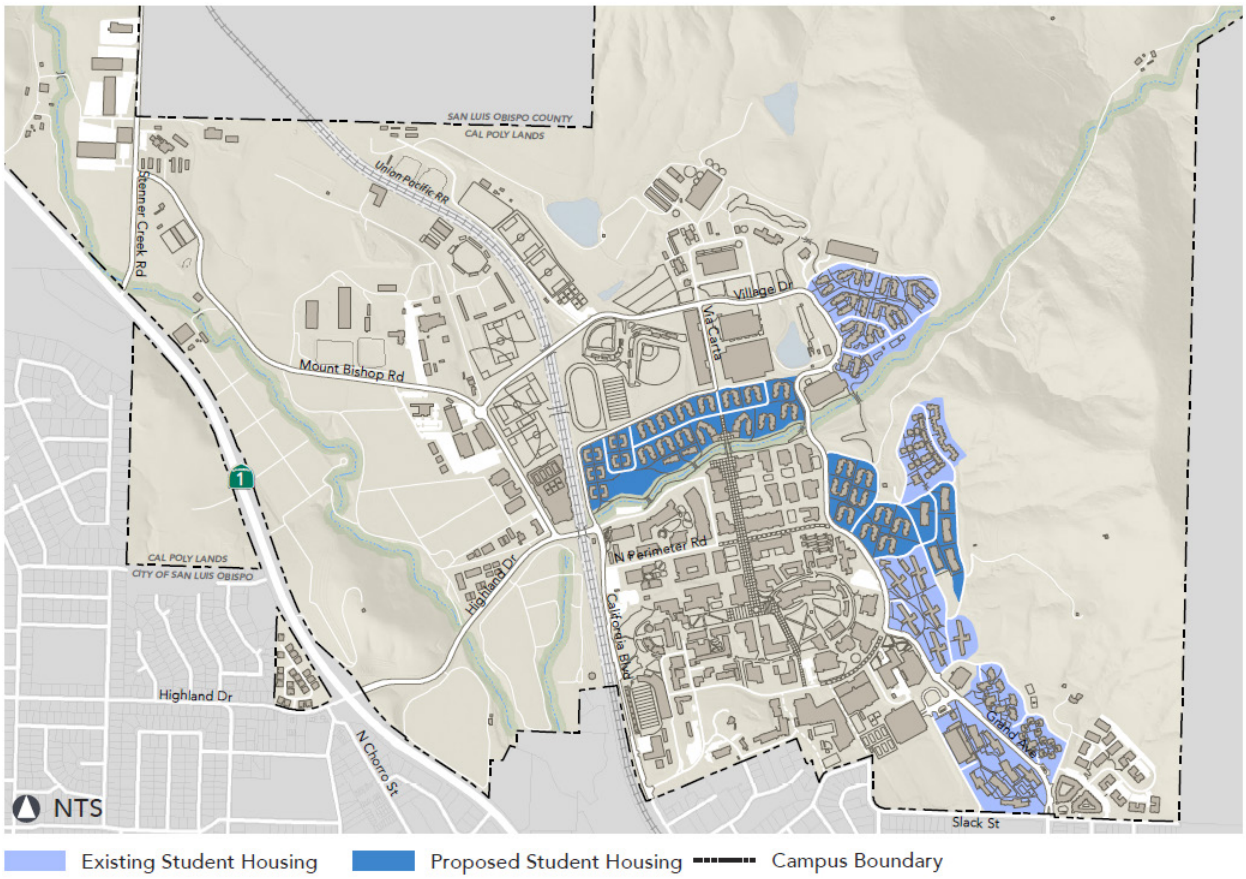
A vast majority of the proposed Master Plan academic and related support facilities are intended to meet the current campus population's academic needs. The campus currently has a shortage of teaching, lab and related support space, and many of its facilities are in need of replacement or renovation in order to meet current standards. Thus, the proposed Master Plan academic and related support facilities would enable but not induce population or enrollment growth as they are primarily intended to serve existing student population levels. To the extent the proposed Master Plan facilities would serve a growth in campus population, it would be in accordance with the anticipated 1.25% annual enrollment growth over the Master Plan's 2035 term.

With respect to housing needs, the Master Plan proposes to substantially increase on-campus housing in order to allow more students faculty and staff to reside on campus (Figure 49). To meet the overarching project objective of housing all first year, second year, and 30% of upper division students on campus, the Master Plan provides an additional 6,800 student beds, for a total of 15,000 student beds on campus by 2035. The provision of housing on campus will allow Cal Poly to house approximately 63% of all undergraduate students on campus. Given that approximately 23,750 out of the 25,000 students will be undergraduates, it is estimated that 14,963 undergraduates (63%) will live on campus while 8,787 (or 37%) will live off campus. New student housing on campus will result in a significant reduction in the number of students living off campus compared to the number of students living off campus in 2015 (Table 64).

**Table 64. On-Campus and Off-Campus Students (Undergraduate)**

| Student Population | 2015 | 2035 | % Change |
|---|---|---|---|
| Living off Campus | 13,756 | 8,811 | - 35% |
| Living on Campus | 8,200 | 15,000 | + 82% |

**Figure 49. Existing and Proposed Student Housing**

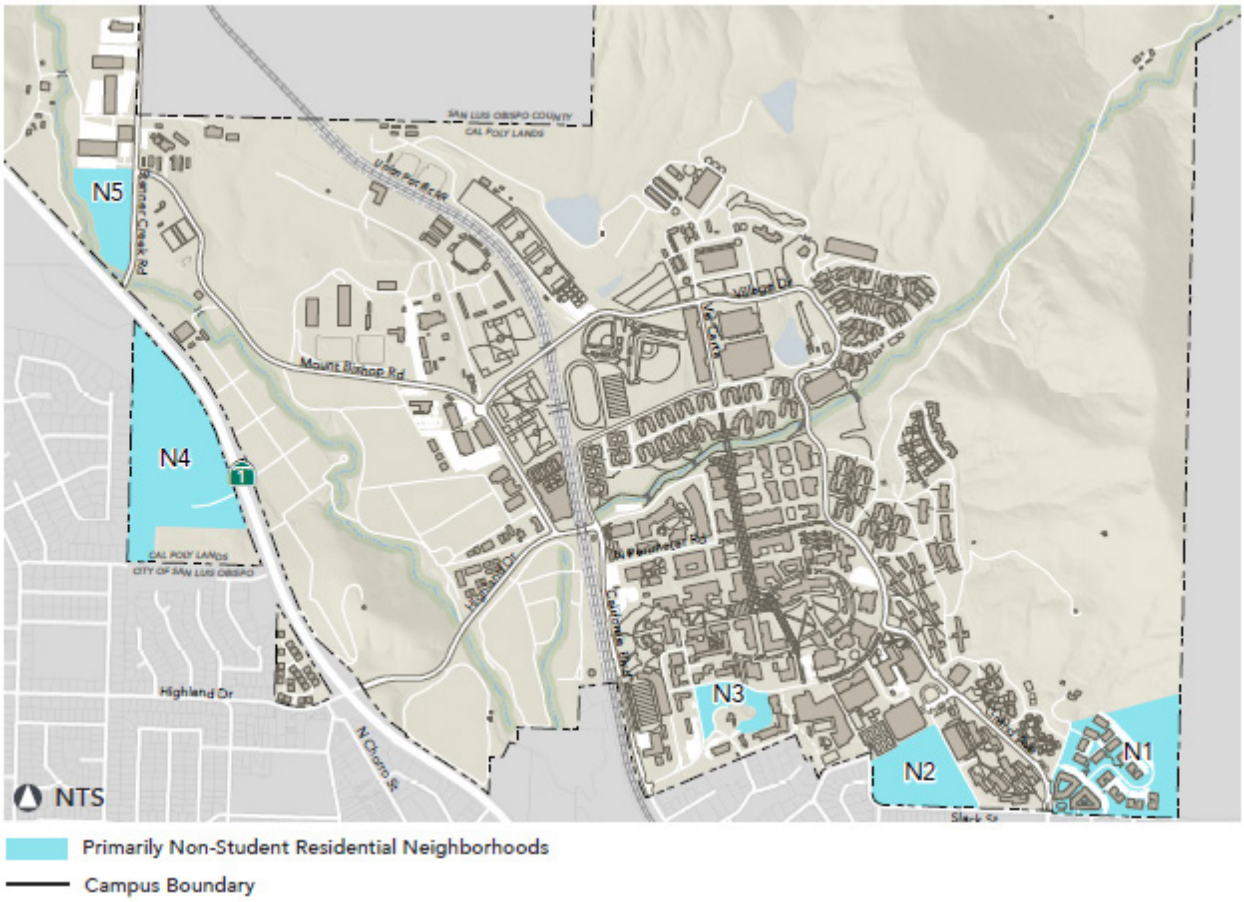



New student housing will reduce the number of students seeking off campus housing, which will help reduce pressure on the local housing supply and eliminate a key source of competition in the local housing market. The reduction of the number of students living off campus will make more units available for the non-student population and could help moderate rental costs. Also, the overall reduction of students living off-campus helps to eliminate potential compatibility issues associated with undergraduate students living in residential neighborhoods such as noise and available parking spaces. Decreasing the total number of students living off campus will also alleviate traffic and associated vehicle emissions. Therefore, the provision of new on-campus student housing is considered a beneficial impact of the Master Plan.

The Master Plan also provides for five on-campus locations for development of "residential neighborhoods" providing apartment-style housing intended for use by faculty and staff, alumni, graduate students, students with families, other non-traditional students, and the general public (a similar concept to the Bella Montana development). A priority system will be used to make sure that University-related housing needs are fulfilled first, before making units available to the general market in a community where reasonably priced apartment-style housing is needed. Providing housing opportunities for the University faculty and staff is vital for Cal Poly to be able successfully recruit, and retain, staff and faculty, and generating funding to support Cal Poly academic goals. Providing housing for faculty and staff on campus would also help alleviate the

shortage of affordable workforce housing in the City. The five residential neighborhoods are sited on the edges of campus and will serve as "buffers" between the campus and nearby off-campus neighborhoods. The buildout of the residential neighborhoods (Figure 50) will result in a total of up to 1,470 apartment units.

**Figure 50. Proposed Residential Neighborhoods.**




These neighborhoods include the following:

- N1 Residential Neighborhood: This residential neighborhood (referred to as "Slack and Grand") will be located at the northeast corner of intersection of Slack Street and Grand Avenue and will provide 420 apartment units. The units will provide a mix of studio, one-, two-, and three-bedroom units. As discussed earlier in this report, this is a near term Master Plan project.
- N2 Residential Neighborhood: This residential neighborhood (referred to as "The Track Site") will be located north of Slack Street and east of Longview Lane and will provide 300 apartment units.
- N3 Residential Neighborhood: This residential neighborhood (referred to as "University House") will be located adjacent to the Health Center and will include 150 apartment units.

- N4 Residential Neighborhood: This residential neighborhood (referred to as "Stenner") will be located southwest of the intersection of Stenner Creek Road and Mt. Bishop Road and will provide 200 apartment units.
- N5 Residential Neighborhood: This residential neighborhood will be located west of and adjacent to Highway 1 and north of the existing Cal Fire Station and will provide 400 apartment units.

Development of all five residential neighborhoods could conceivably exceed the demand of faculty, staff and graduate/non-traditional students. However, since it is not possible to determine how many of the future residents of these neighborhoods will be affiliated with the University, it is conservatively assumed that all of the units in these neighborhoods will be conventional market-rate units available to the general public. Based on the 2.25 persons per household for the City of San Luis Obispo, it is estimated that these units will result in 3,308 residents living on campus.

High and constant demand for student housing, low levels of housing production, and a desirable location and climate, have all contributed to high housing prices and rents in San Luis Obispo, effectively exporting a significant share of the local workforce to neighboring communities, and creating an acute jobs/housing imbalance in San Luis Obispo. According to data from the U.S. Census Bureau,[84] 77% of the people employed in San Luis Obispo live outside the City and commute into the City to work. Based on observed vehicle occupancy counts and other established vehicle count data, SLOCOG estimates that 19,400 to 23,400 people who live outside the City commute daily to work into San Luis Obispo. This lack of housing is projected to continue in the future with the City adding 5,972 jobs but only 1,647 housing units between 2015 and 2035.[79] The additional 1,470 residential apartments, pursuant to the Master Plan, will increase the number of housing units made available for the non-student population. This is considered a beneficial impact as it will enable more people who work on campus or in the City of San Luis Obispo to live on campus and in closer proximity to the jobs within the City of San Luis Obispo, helping to reduce the City's acute jobs/housing imbalance in which leads to other beneficial environmental effects, including a reduction in vehicular emissions, vehicle trips, and vehicle miles traveled in comparison with existing commute patterns.

Furthermore, development of additional student housing on Cal Poly campus is considered essential for the City of San Luis Obispo. The City's Housing Element contains several policies that emphasize working closely with Cal Poly to increase student and faculty housing options on campus to alleviate pressure on the City's housing supply and transportation systems. The City is anticipating a population increase of 1,647 by the year 2035, and the County an increase of 15,432 (Table 63). Cal Poly expects a gradual growth in student enrollment to add 1,556 full time students by 2035. The Master Plan would result in the addition of 6,800 students living on campus, which is well within the projected County population increase. The projected student population living off campus after implementation of the Master Plan is expected to be 8,811, a 35% decrease since 2015 and therefore would not negatively impact the City's population and housing projections (Table 63). Therefore, by providing additional housing on campus the Master Plan will result in an overall beneficial impact.

[84] U.S. Census Bureau. 2017. OnTheMap. U.S. Census Bureau, Center for Economic Studies. Available at: https://onthemap.ces.census.gov/. Accessed April 2017.

The corresponding residential population on and off campus will be well within the projected future population projections for both the county and City respectively.

The Master Plan will not directly or indirectly induce substantial population growth in the City or County of San Luis Obispo, as student, faculty and staff growth is well within applicable population growth projections, and all Master Plan facilities, including housing, will be located within the existing Cal Poly campus and thus would not necessitate the construction of new roads or other infrastructure that would induce substantial population growth beyond the campus' borders. Most of the Master Plan's facilities improvements, including housing, is intended to serve the existing population levels on campus, with only a modest 1.25% growth in student population over the Master Plan's 2035 term. Further, the Master Plan's provision of new student, faculty and staff housing on-campus will help meet City and County housing needs, including help to alleviate the City's current acute jobs-housing imbalance. The Master Plan would also not displace any existing housing, and thus would not necessitate the construction of replacement housing elsewhere.

## Slack and Grand Residential Neighborhood

The housing development at Slack Street and Grand Avenue will add 420 new beds to the university's on-campus housing stock, specifically for faculty and staff members. This increase in housing capacity for faculty and staff on campus will have a beneficial impact on the local housing market and rental vacancy rates in the City of San Luis Obispo and surrounding communities. By providing quality, affordable housing opportunities closer to where Cal Poly faculty and staff members work, the overwhelming demand for affordable housing in the City of San Luis Obispo will be reduced. The residential development will also boost the local economy and reduce the campus carbon footprint as the number of faculty and staff commuting from other communities is reduced. The Slack and Grand Residential Neighborhood is also expected to alleviate traffic congestion at the entrances to campus.

# Mitigation Measures

Impact will be beneficial and no mitigation is required.

## Slack and Grand Residential Neighborhood

Impact will be beneficial and no mitigation is required.

# Level of Impact After Mitigation

Impact will be beneficial and no mitigation is required.

## Slack and Grand Residential Neighborhood

Impact will be beneficial and no mitigation is required.

# Cumulative Impact

New housing on campus provided pursuant to the Master Plan will result in an overall reduction in the number of students living off campus by 35%, helping to reduce the City's acute jobs/housing imbalance. The Master Plan's provision of new residential neighborhoods on campus will result in the beneficial impact of increasing housing options for the University faculty and staff which is vital for Cal Poly to be able successfully recruit and retain staff and faculty, as well as for the non-student population by adding residential units to the local housing supply. Contrary to typical housing development projects, the addition of housing options for students on campus will not lead to a direct increase of the student population. Students' primary reason for moving into the San Luis Obispo community is to attend Cal Poly and the decision to attend is generally not influenced by the availability of housing options. Therefore, campus development pursuant to the Master Plan will not result in a significant contribution to the cumulative impact associated with future population and housing growth projected for the City and County.

## Slack and Grand Residential Neighborhood

Cumulative impacts associated with the Slack and Grand Neighborhood are addressed above.

# 3.11 Public Services and Recreation

This section examines the potential impacts to public services and recreation associated with short-term construction and long-term campus development proposed under the Cal Poly Master Plan, including the development of the Slack and Grand Residential Neighborhood, specifically related to campus police services, City of San Luis Obispo's (City) Fire Department (SLOFD) services, City's Police Department (SLOPD) services, CAL FIRE services, and City and County of San Luis Obispo parks, schools, and libraries.

## Environmental Setting

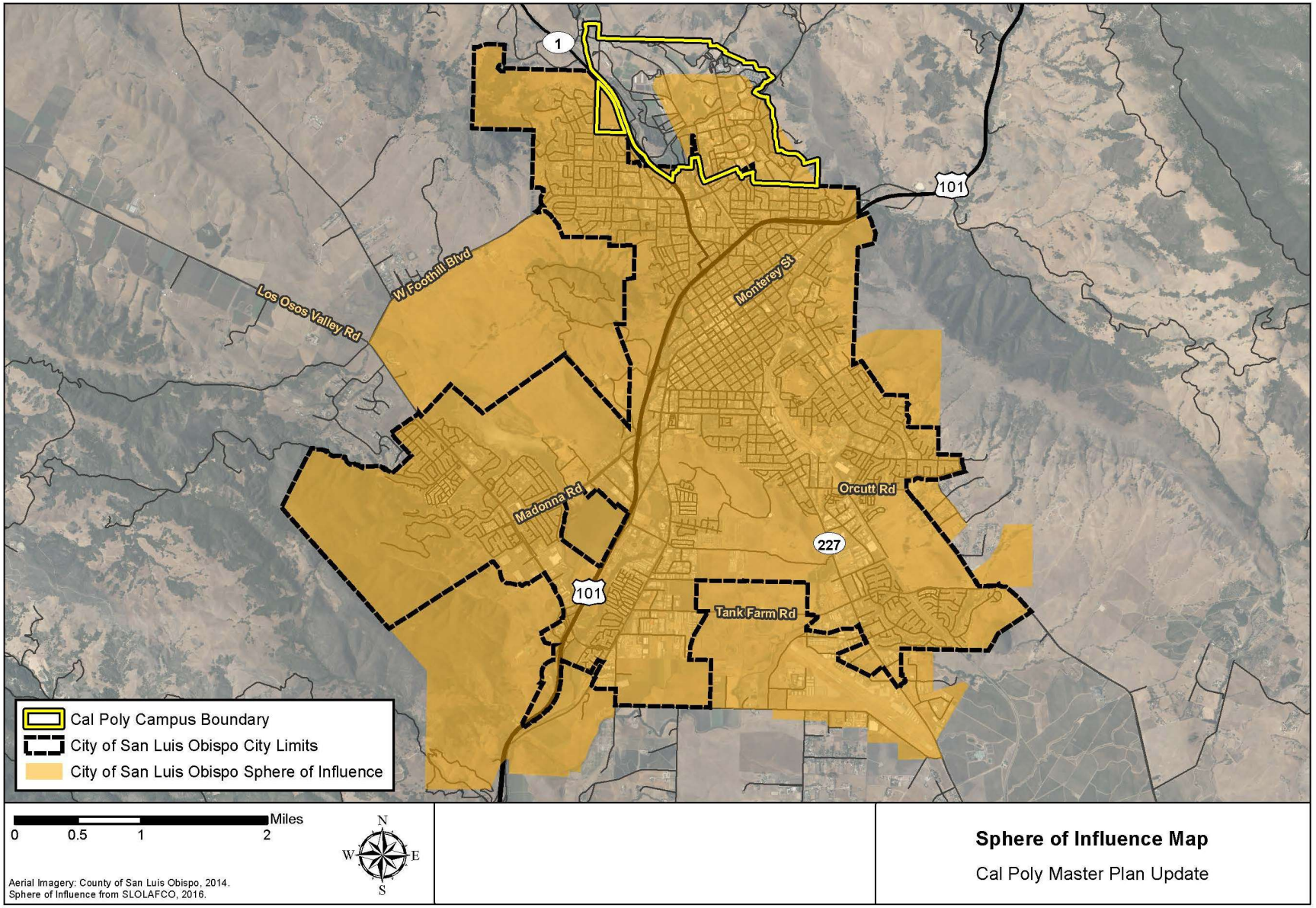
The Cal Poly campus is located within the unincorporated areas of San Luis Obispo County, just north of the City limits and consists of six parcels totaling 1,057 acres. The majority of the developed areas on campus are located within the City's sphere of influence (Figure 51). A discussion of the existing setting as it pertains to public services is provided below.

### Fire Protection

The Cal Poly campus includes land that is moderately-to-heavily developed with existing campus facilities and infrastructure located in an unincorporated portion of the County. The unincorporated areas of the County are served by CAL FIRE for delivery of fire protection services. In 1996, it was determined that Cal Poly required an increased level of fire protection service for the main campus which is characterized by dense development including high-rise academic buildings and residence halls housing approximately 7,000 full-time residents at the time that could not be provided to the level of service available from CAL FIRE. As a result, Cal Poly negotiated a Fire Services Agreement directly with the City to provide these crucial fire protection services to campus on a fee-for-service basis.[85] Since 1996, the City has tailored its services to best meet Cal Poly's unique demands through purchase of specialized equipment, on-campus training and inclusion of Cal Poly in its overall strategic fire service planning. The necessity of this Agreement has increased in proportion to Cal Poly's growing student population and facilities. Currently, the main campus supports approximately 8,200 full-time residents and additional academic and residential facilities to support the increasing campus population.

[85] Cal Poly. 2013. Agreement for Emergency Services between California Polytechnic State University and the City of San Luis Obispo. Adopted July 1, 2013.

**Figure 51. City Sphere of Influence Map**



Pursuant to the current Fire Services Agreement dated July 1, 2013, the SLOFD provides personnel, equipment, materials, and supervision required to respond to structure and other hostile fires, medical emergencies, disaster response, and other agreed upon incidents in the Service Area, which includes the main campus of the University. The Service Area is defined as the area bounded on the south by the city of San Luis Obispo (Slack Street, Longview Avenue, Via Carta, Foothill Blvd.); bounded on the west by the city of San Luis Obispo; out Highway 1 to Cheda Ranch Complex (included); to the north from the Cheda Ranch Complex to the UPRR right-of-way to the Tartaglia Ranch southern boundary, along the base of the foothills to Poly Canyon Road; and bounded on the east so as to include the facilities at the base of the foothills (Figure 52).

The SLOFD operates four stations with 52 full-time employees, and has a response time goal of 4 minutes.[86] The four SLOFD stations are strategically located throughout the city to provide the most efficient fire protection coverage (Figure 53). SLOFD Station No. 2 is located closest to campus and provides first response to Cal Poly in the event of a fire occurring within the Service Area on campus. Station No. 2 is located at 126 North Chorro Street, approximately 0.5 mile southwest of campus. The campus is also served by SLOFD Station No.1, which is located at 2160 Santa Barbara Avenue, approximately two miles south of campus. SLOFD Station No. 2 response times are 2 to 2.5 minutes, followed by Station No. 1 with a response time of 3 to 3.5 minutes. These response times reflect the time required to access the Campus Core. Response times to outlying buildings are expected to be slightly longer. The SLOFD is a full service fire department offering paramedic advanced life support, fire suppression, specialty rescue, and hazardous materials mitigation services. The demand for fire protection and emergency response services tends to correlate with the fluctuating population on campus throughout the year. According to the SLOFD, based on current data, the calls for service at the Cal Poly campus account for approximately 5% of all calls for emergencies that the SLOFD receives.

The current Agreement between Cal Poly and the City for fire protection services will expire on June 30, 2018.[87] Prior to the expiration of this contract, the parties agree to meet and discuss renewal of this Agreement.

University properties not included in this Service Area are outlying structures of the University and wildlands non-contiguous to the main campus of the University (Chorro Creek Ranch, Serrano Ranch, Peterson Ranch, and the structures up Poly Canyon). These areas are within the County's fire service jurisdiction and the County, in turn, contracts with CAL FIRE to provide management and personnel to deliver fire and rescue services in the unincorporated County areas outside of fire districts and Community Service Districts that provide their own fire protection. The contract covers the standards of service provided and reimbursement of CAL FIRE for personnel or other expenditures incurred on behalf of the County in the delivery of the services.

[86] City of San Luis Obispo Fire Department (SLOFD). 2017a. Fire Department Home Page. Available at: http://www.slocity.org/government/department-directory/fire-department. Accessed March 2017.
[87] California Department of Forestry and Fire Protection (CAL FIRE). 2012. *Service Level Analysis for CAL FIRE/San Luis Obispo County Fire: Consolidated Fire Protection Strategic Plan*. Available at http://www.calfireslo.org/Documents/Plans/FINALstratPlan(reduced).pdf. Accessed March 2017.

**Figure 52. Fire Hazard Severity Zone Map**

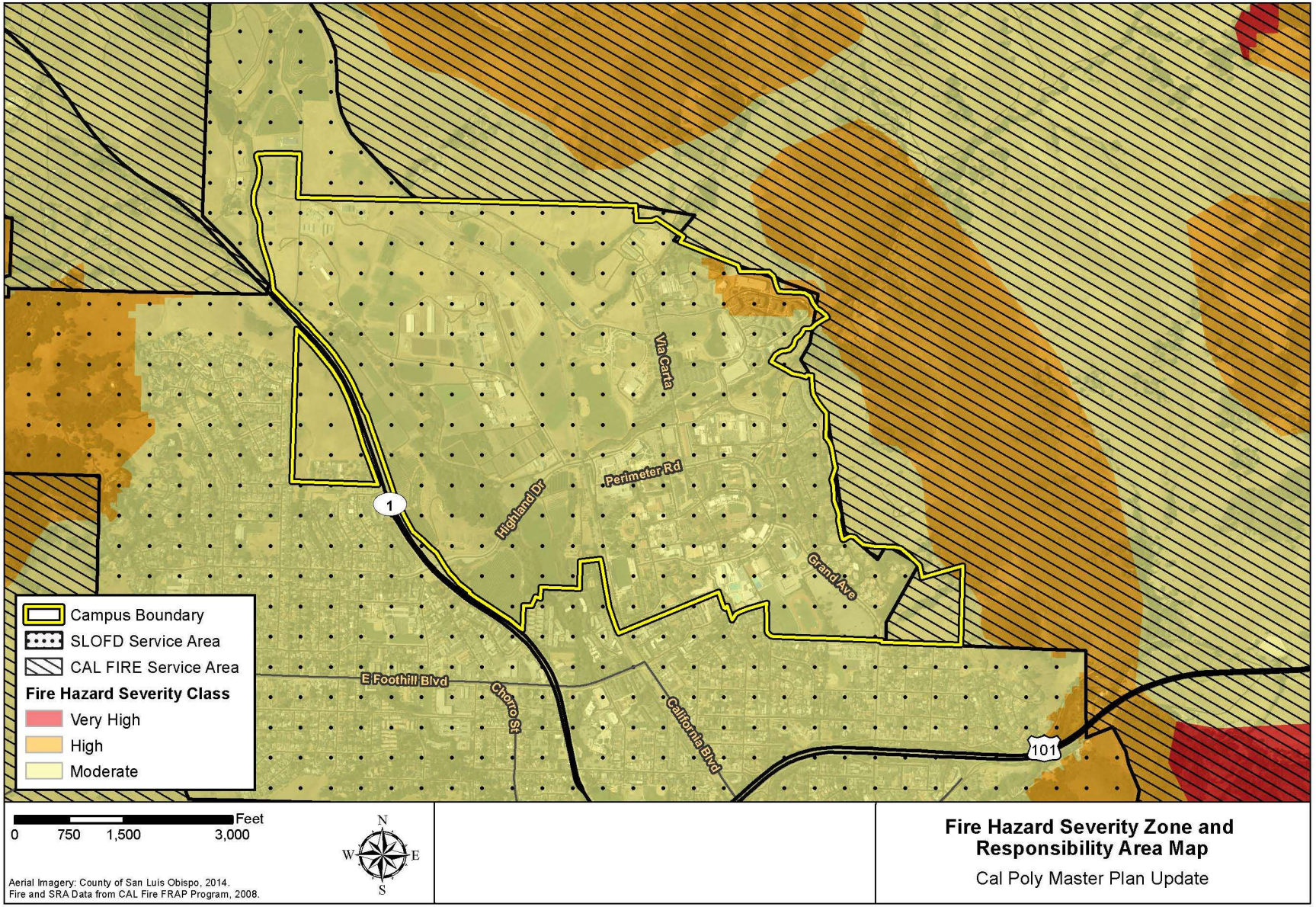
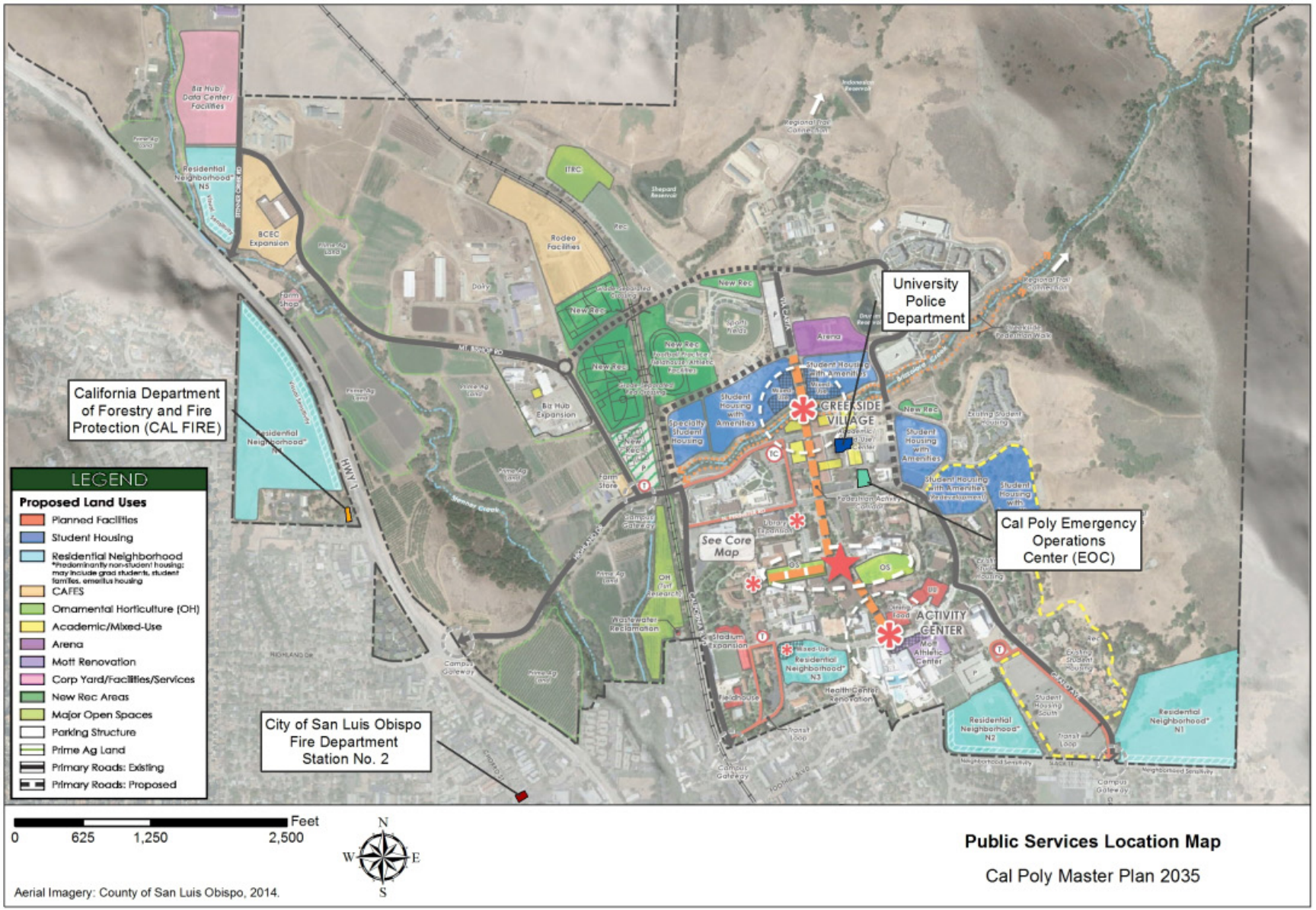


**Figure 53. Public Services Location Map**



Emergency response times are estimated to be between 0 and 5 minutes for the developed portions of campus and approximately 5 to 10 minutes for undeveloped hillsides. According to CAL FIRE's fire hazard severity zone maps, the majority of campus has a moderate fire hazard severity class and the undeveloped land to the north and east of campus has a high fire hazard severity rate (Figure 40).[88]

The campus is served by the CAL FIRE Headquarters facility, located at 635 North Santa Rosa Street in San Luis Obispo, includes administrative offices, the Emergency Command Center, a warehouse, and a fire station with a CAL FIRE wildland engine and a County-owned engine. The CAL FIRE Headquarters facility is located on land owned by Cal Poly in the West Campus Planning Area pursuant to a long-term property lease dating back to 1935 (Figure 53).

There is currently an automatic aid agreement between the SLOFD, San Luis Obispo County Fire Department, and CAL FIRE, whereby whichever responder is closest to the emergency incident will respond, regardless of jurisdictional lines. As discussed below, these automatic aid agreements ensure complete and timely response to any fires on or near the campus.

The SLOFD and CAL FIRE have adopted an "automatic mutual aid" doctrine that provides an enhanced form of mutual aid for first response to new emergencies. Mutual aid provided for under the State Master Mutual Aid Agreement was created to provide assistance under extraordinary times when a jurisdiction had exhausted its own resources on a major emergency or series of emergencies. Mutual aid response was rare and first response from another agency would not be provided, even if they were closer. In the automatic aid model adopted by the SLOFD and CAL FIRE, the closest fire station responds to a new emergency regardless of jurisdictional lines. This allows for enhanced service without increasing the number of fire stations or firefighters by utilizing existing resources regionally rather than just within jurisdictional boundaries. Typically, cross-jurisdictional, automatic aid first response occurs several times daily.

Cal Poly maintains a comprehensive fire safety program involving response, testing, drills, procedures, and inspection. Cal Poly's Facilities Department works closely with the California State Fire Marshal to ensure that the buildings on campus meet the CAL FIRE Code requirements. The Fire and Life Safety Division of CAL FIRE is the main entity within the Office of the State Fire Marshal responsible for the application of laws and regulations related to fire prevention, life safety, fire protection systems, building construction and protection. This is achieved through code compliance inspections and plan review of State-Owned and State-Occupied buildings and institutions. The Fire and Life Safety Division supports CAL FIRE through their requests for assistance, training and code interpretation as well as partnering in the code development process and the resolution to code-related issues within the various jurisdictions.

[88] City of San Luis Obispo. 2000. *City of San Luis Obispo General Plan, Safety Element*. Adopted July 5, 2000. Available at: http://www.slocity.org/home/showdocument?id=6645. Accessed March 2017.

# Police Protection

Cal Poly is located in a moderately urbanized setting with a relatively low crime rate. Crime levels on campus tend to mimic those in the surrounding area. Historically, most crimes associated with on-campus student housing involve burglary and petty theft. Crime statistics for the years 2013 through 2015 are summarized in Table 65 below.

**Table 65. Crime Statistics for Cal Poly (2013–2015)[89]**

| Crime Category | 2013 | 2014 | 2015 |
|---|---|---|---|
| Murder/non-negligent manslaughter | 0 | 0 | 0 |
| Negligent manslaughter | 0 | 0 | 0 |
| Sex offenses (Forcible) | 6 | - | - |
| Rape | - | 11 | 7 |
| Fondling | - | 3 | 0 |
| Sex offenses (Non-forcible) | 0 | - | - |
| Incest | - | 0 | 0 |
| Statutory rape | - | 0 | 0 |
| Robbery | 1 | 0 | 0 |
| Aggravated assault | 1 | 1 | 1 |
| Burglary | 2 | 11 | 7 |
| Motor vehicle theft | 15 | 8 | 7 |
| Arson | 0 | 2 | 2 |

The University Police Department (UPD), located in the Campus Core planning area, provides police protection services to the entire campus (Figure 41). The mission of the UPD is to promote a safe and secure learning environment by working cooperatively with the campus community to enforce the laws, preserve the peace, maintain order, and provide exceptional professional services to the campus community[90]. The UPD is responsible for responding to and handling all calls for service, as well as processing, investigating, and prosecuting all crimes committed on property and grounds owned, operated and controlled or administered by the California State University.

In addition to police patrol, the UPD provides the following services:

- Bicycle patrol
- 9-1-1 communications
- Investigations

[89] United States Department of Education. 2017. Campus Safety and Security – California Polytechnic State University-San Luis Obispo, OPE ID: 00114300. Available at: https://ope.ed.gov/campussafety/#/institution/search. Accessed March 2017.
[90] California Polytechnic State University, University Police Department (UPD). 2017. University Police Department Home Page. Available at: https://afd.calpoly.edu/police/. Accessed March 2017.

- Campus safety reports
- Escort van service and mustang patrol (safe walking escort)
- Property registration
- Housing resources
- Special events/event security

The UPD patrol officers work with numerous allied agencies including the SLOPD, the San Luis Obispo County Sheriff's Department, Parole Services, and the Narcotics and Gang Task Forces to solve crimes and provide agency assistance known as Mutual Aid. In and around campus neighborhoods, the UPD works closely with SLOPD by proactively patrolling the campus throughout the academic school year and at major events to deter disorderly conduct.

The SLOPD Station is located approximately 1 mile southwest of campus at 1042 Walnut Street. The SLOPD consists of 84.5 employees, 59 of which are sworn police officers. The UPD has a mutual aid agreement with the SLOPD and the County Sherriff's Department. In case of an on-campus emergency, either of these law enforcement agencies can be called upon for back-up assistance. If additional aid is needed, the California Highway Patrol can be called in.

As discussed previously, the population on the Cal Poly campus fluctuates on an annual and daily basis. The demand for police protection and emergency response services tends to correlate with the fluctuating population on campus throughout the year.

## Emergency Operations Center

The Cal Poly Emergency Operations Center (EOC) is the coordination center of campus-wide efforts in an event of a disaster. It is located in the Old Fire House (Building 74) at the UPD office in the Campus Core and is staffed with Emergency Managers. The EOC is not open to the public.

Cal Poly has a Campus Emergency Management Plan that is designed to coordinate the use of University and community resources to protect life and campus facilities immediately following a major disaster[91]. The plan clearly defines the emergency management command structure as well as the priorities and responsibilities for each position within the structure. It is activated whenever an emergency affecting the campus cannot be managed through normal channels. Examples of the types of emergencies where the plan may be activated include:

- Earthquakes
- Hazardous materials release
- Floods
- Fires and explosions
- Extended power outages
- Pandemic flu

[91] California Polytechnic State University. 2013. *Campus Emergency Management Plan*. Available at: https://afd.calpoly.edu/emergency/docs/emergencyplan.pdf. Accessed in March 2017.

The President or his designee must authorize activation of the Campus Emergency Management Plan. Upon activation of the Plan, the Emergency Operations Director, or his designee, will commend activation of the EOC.

## Libraries

Cal Poly has one main library on campus, the Robert E. Kennedy Library, located southwest of the intersection of North Perimeter Road and University Drive in the Campus Core. Cal Poly has developed a master plan for Kennedy Library, to meet the University's student and faculty needs. The benefits of the master plan are both structural and programmatic with the intent of upgrading the facility to provide the services and support Cal Poly students and faculty need to be successful

The closest regional library to campus is the San Luis Obispo Public Library located approximately 1.25 miles southwest of the campus at 995 Palm Street in San Luis Obispo.[92] The San Luis Obispo Library serves as the Regional Library for the Coastal Region of the county library system.

## Schools

The Cal Poly campus is located within the San Luis Coastal Unified School District and in an area served by Bishops Peak Elementary School, Pacheco Elementary School, Teach Elementary School, Laguna Middle School, and San Luis Obispo High School. According to the County of San Luis Obispo's 2014-2016 Resource Summary Report,[93] the San Luis Coastal Unified School District was under enrollment capacity at elementary, middle, and high schools between 2014 and 2016 (Table 66). However, elementary school enrollment has generally trended upward over the past 10 years and, while it has remained below capacity in the past, Bishop Peak School has operated at or near capacity for the 2013–2014 and 2014–2015 school years and could exceed capacity within 5 years. Therefore, elementary schools within the District were identified as Level of Severity II in the County's 2014–2016 Resource Summary Report. Middle school enrollment has trended slightly upward over the past 10 years, but is expected to remain below capacity for the next seven or more years. High school enrollment in the district has trended slowly downward over the past 10 years and is expected to remain below capacity for the next seven or more years.

[92] San Luis Obispo Library. 2017. County of SLO Public Libraries Home Page. Available at http://www.slolibrary.org/. Accessed March 2017.

[93] County of San Luis Obispo. 2017. *2014–2016 Resource Summary Report*. Adopted May 16, 2017. Available at: http://www.slocounty.ca.gov/Departments/Planning-Building/Forms-Documents/Informational/Planning-Informational-Documents/Resource-Summary-Report.aspx. Accessed in October 2017.

**Table 66. San Luis Coastal Unified School District Capacity and Enrollment**

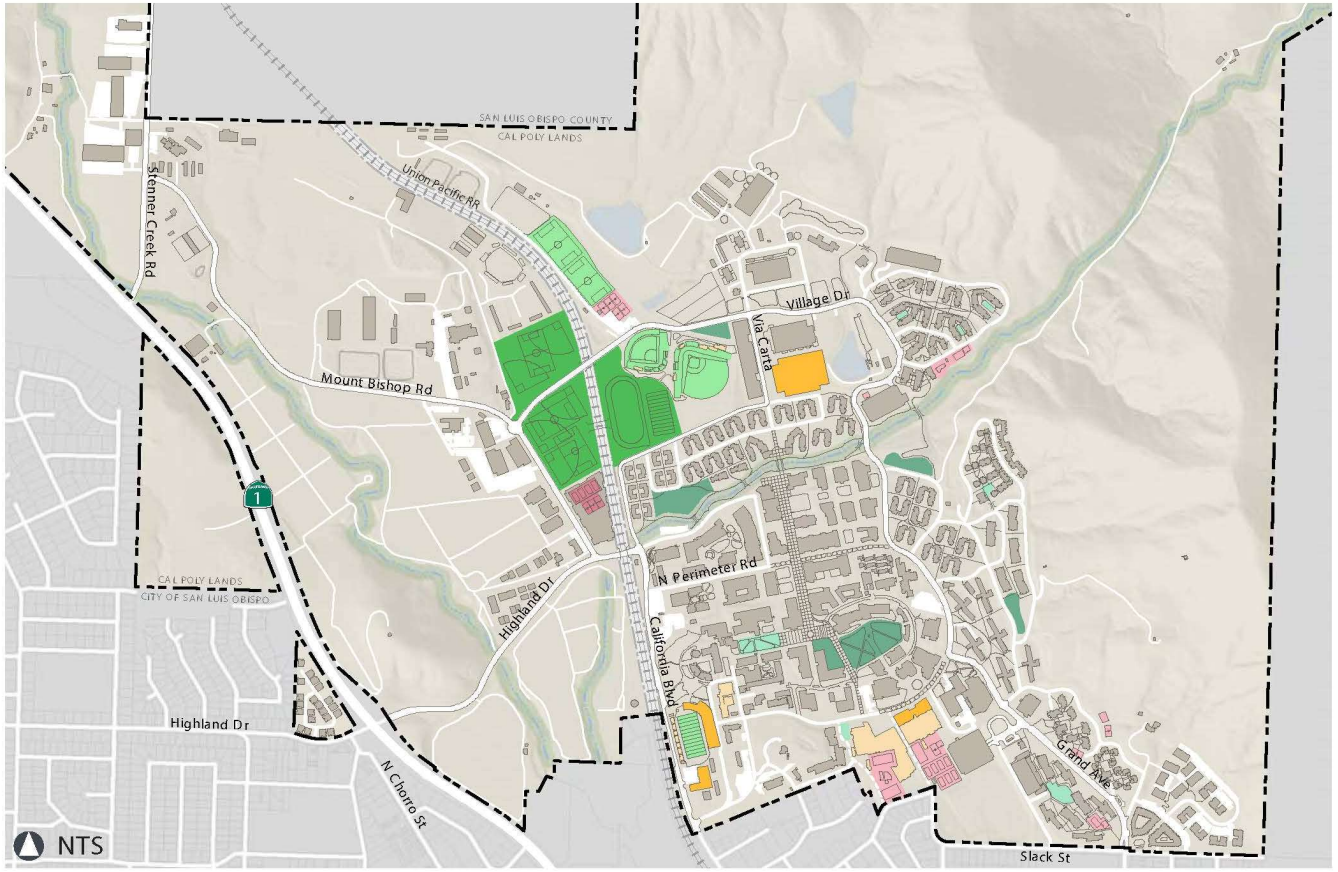
| School Level | School Year 2014–2015 | | | School Year 2015–2016 | | |
|---|---|---|---|---|---|---|
| | Enrollment | Capacity[1] | Percent of Capacity | Enrollment | Capacity[1] | Percent of Capacity |
| Elementary[2] | 3,996 | 4,624 | 86% | 4,021 | 4,524[3] | 87% |
| Middle School | 1,271 | 2,191 | 58% | 1,295 | 2,191[2] | 59% |
| High School | 2,362 | 3,574 | 66% | 2,398 | 3,574 | 67% |

[1] Maximum Practical Capacity: The maximum number of students each school could theoretically accommodate by adding relocatable classrooms, but without increasing the capacity of core facilities.
[2] The Level of Severity criteria for schools are "triggered" when enrollment is projected to exceed school facility capacity in five years (LOS II).
[3] Projection based on 5-year cohort enrollment projection for 2019/20. From San Luis Coastal Unified School District Enrollment Projections Capacity Analysis 2014/15 Update, Table 5.

# Recreation

Numerous recreational facilities exist on campus, including the recently renovated Recreation Center, track and field facilities, tennis courts, the Aquatic Center, outdoor recreation fields, the Sports Complex, trails, and open space areas. Recreational and athletic facilities on campus are important to support the needs of the student population and the instructional programs involved with physical education and intercollegiate sports. In some instances, design standards differ for intercollegiate athletic facilities. However, intramural recreation, physical education, and athletics can share many multipurpose outdoor fields and indoor facilities. Many of Cal Poly's indoor athletic facilities are aging. The Natatorium has been filled in and converted to office space, and Crandall Gym is badly in need of repair. The Mott Athletic Center continues to house the basketball and other indoor athletic programs in an obsolete facility, although the competition swimming pool has recently been rebuilt. The Bob Janssen softball and Baggett baseball fields for athletics were built in 2001 as part of the larger Sports Complex north of Brizzolara Creek. The recreational playing fields are artificial turf, which will require repair or replacement in the foreseeable future. In contrast, the Recreation Center, built with student funds in 1993, was fully renovated and expanded in 2012 and accommodates the most up-to-date facilities and exercise equipment, an indoor track, an Olympic-size recreational swimming pool and large leisure pool. Poly Canyon Village has a small multi-purpose indoor facility and recreational pool that is open to all students, not just residents. Locations of on-campus recreational facilities are shown on Figure 54.

## Figure 54. On-Campus Recreational Facilities Map (Existing and Proposed)




Source: Cal Poly Master Plan, 2017.

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**Cal Poly Recreational Facilities**

Cal Poly Master Plan Update

The City of San Luis Obispo also supports numerous recreational facilities. City recreation facilities consist of mini-parks, neighborhood parks, community parks, joint use sites (such as school playgrounds), non-joint use sites, recreation centers and special facilities, including: Jack House, Swim Center, Senior Center, Recreation Center, Golf Course, historic adobes, and community gardens. Locations of these facilities in relation to the Cal Poly campus are shown in Figure 43.[94] Based on the Parks and Recreation Element in the City's General Plan, the City supports approximately 121.95 acres of park facilities, 27 acres of other special recreation areas, 2,486 acres of open space and recreational trails, 2,664.58 acres of miscellaneous open space parcels, and 8 joint use recreational facilities. The City's General Plan identifies the following unmet City recreational needs as including:

1. Athletic fields
2. Multi-use community center and therapy pool
3. Mini-parks – Purple Sage Lane, Eto Street
4. Multi-use trails for recreational use and connect to facilities
5. Lighted tennis courts
6. Neighborhood parks – in Broad Street area near US 101 and Foothill Blvd.
7. Upgrading and replacement of playground equipment
8. Specialty facilities such as disc golf, dog parks, BMX parks
9. Mini-parks in underserved areas where neighborhood parks do not adequately meet needs – Marsh & Santa Rosa Streets, Terrace Hill, Royal Way
10. Bocce ball facility

According to the Parks and Recreation Element of the County of San Luis Obispo's General Plan, there are roughly 23 parks, 3 golf courses, and 8 Special Places (natural areas, coastal access, and historic facilities) currently operated by County Parks. Urban Regional Parks account for 644 acres, Rural Regional Parks for 11,398 acres, and mini, neighborhood and community parks for 214 acres. Within the County's unincorporated areas there are very few neighborhood parks. Many of the County's community parks, such as Los Osos Community Park and San Miguel Park, are below ten acres in size and provide the only park facilities in that community. Due to the limited availability of funding for parkland acquisition and maintenance, "community park" status at a particular park often evolved by need rather than original design. By contrast, some of the County's community and regional parks also serve dual functions. For example, regional parks located within or directly adjacent to an urban area often provide a mix of park uses. The nearest County park to the Cal Poly campus is Cuesta Park, which encompasses approximately 5 acres located at 2400 Loomis Street in San Luis Obispo. The County utilizes the 1983 National Recreation and Park Association (NRPA) standards to assess deficiencies in recreational resources. Table 56 applies the 1983 NRPA Standards to the County's current inventory.

[94] City of San Luis Obispo. 2001. *City of San Luis Obispo General Plan, Parks and Recreation Element*. Adopted April 3, 2001. Available at: http://www.slocity.org/home/showdocument?id=6647. Accessed March 2017.

**Table 67. County of San Luis Obispo Recreational Facilities[95]**

| Facility Type | 1983 NRPA Standard (acres/1,000 pop) | 2000 population | Calculated Need (acres) | Existing Acreage (2003) | Deficiency (acres) |
|---|---|---|---|---|---|
| Neighborhood Park | 1–2 acres | 103,990 | 104-208 | 134 | 490-906 |
| Community Park | 5–8 acres | 103,990 | 520-832 | | |
| Regional Metropolitan Park (Urban) | 5–10 acres | 246,681 | 1,233-2,466 | 644 | 589-1,822 |
| Regional Park Reserve (Rural) | Variable | 246,681 | N/A | 11,398 | N/A |

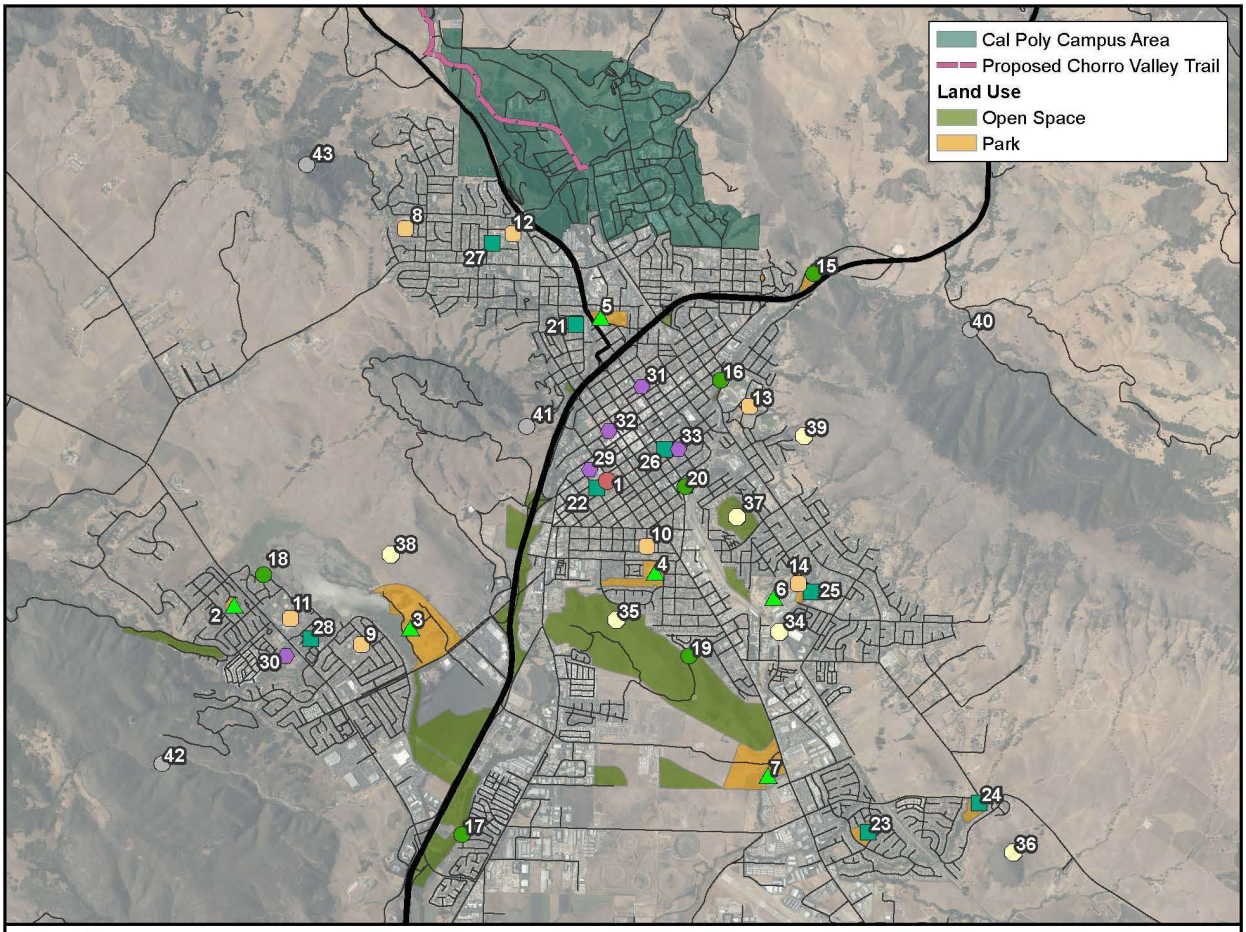
Notes:
Natural Area acreage is not included in these figures.
Populations are for urban areas (103,990) and county wide (246,681).

SLOCOG has prepared a feasibility study and implementation plan for a multipurpose trail, the Chorro Valley Trail, which is proposed to run through the Campus Core and to adjacent County lands.[96] All of the proposed trail alignments extend from the Campus Core north through the West Campus Planning area in a generally northwest-southeast direction, as shown in Figure 55.

Parks are also provided by state and federal agencies. These parks tend to be passive in nature, and thus do not provide organized recreational facilities or improvements such as soccer fields or tennis courts, but they do provide important areas for nature appreciation and often coastal access. State agencies such as the California Department of Parks and Recreation (State Parks) provide large, typically passive parks. These parks include items such as trails, camping, access to historic facilities, and/or nature appreciation throughout San Luis Obispo County and the State of California. Examples of State Parks facilities within San Luis Obispo County include Hearst San Simeon State Historical Monument, Montaña de Oro State Park, Oceano Dunes State Vehicular Recreational Area, and Morro Bay State Park. Locations of nearby off-campus recreational facilities are shown on Figure 55.

[95] County of San Luis Obispo. 2006. *San Luis Obispo County General Plan, Parks and Recreation Element*. Adopted December 19, 2006.
[96] San Luis Obispo Council of Governments (SLOCOG). 2014. *Chorro Valley Trail Study*. August 2014. Available at: https://www.dropbox.com/s/8u0t5dy16t7r2i9/Chorro%20Valley%20Trail%20Study%20for%20Web.pdf?dl=0. Accessed March 2017.

## Figure 55. Off-Campus Recreational Facilities Map




**Office**
1. Parks & Recreation Offices - 1341 Nipomo Street

**Community Park**
2. Laguna Hills Park - 890 Mirada Drive
3. Laguna Lake Park - 504 Madonna Rd
4. Meadow Park & Neighborhood Center - 2333 Meadow Street
5. Santa Rosa Park, Softball Field, Skate Park & Multi-use Court Santa Rosa & Oak St
6. Sinsheimer Park, Stadium, Softball Field, Tennis Court & Pool 900 Southwood Drive
7. Damon Garcia Sports Complex - 680 Industrial Way

**Joint Use Facility**
8. Bishop Peak/Teach Elementary School - 451 Jaycee Street
9. C. L. Smith Elementary - 1375 Balboa Street
10. Hawthorne Elementary - 2125 Story Street
11. Laguna Jr High School - 11050 Los Osos Valley Rd
12. Pacheco Elementary - 375 Ferrini Drive
13. San Luis Obispo High School - 1350 California
14. Sinsheimer Elementary School - 2755 Augusta Street

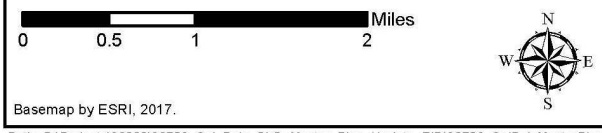
**Mini Park**
15. Buena Vista Park - 100 Block of Buena Vista
16. Ellsford Park - San Luis Dr near California St
17. Las Praderas Park - Las Praderas and Mariposa Dr
18. Priolo-Martin Park - 890 Vista Del Collados
19. Stoneridge Park - 535 Bluerock Drive
20. Triangle Park - 1701 Osos Street

**Neighborhood Park**
21. Anholm Park - 870 Mission Street
22. Emerson Park - 1316 Beach Street
23. French Park - 1040 Fuller Street
24. Islay Hill Park - 1511 Tank Farm Road
25. Johnson Park - 2875 Augusta or 1020 Southwood
26. Mitchell Park - 1400 Osos Street
27. Throop Park - 510 Cerro Romauldo
28. Vista Lago Park - 1269 Vista Lago

**Recreational Center/ Special Features**
29. Jack House & Gardens - 536 Marsh Street
30. Laguna Lake Golf Course - 11175 Los Osos Valley Rd
31. Ludwick Community Center - 864 Santa Rosa Street
32. Mission Plaza - 989 Chorro Street
33. Senior Citizens Center - 1445 Santa Rosa Street

**Open Space**
34. Railroad Recreation Trail
35. South Hills open Space
36. Islay Hills Open Space
37. Terrace Hill Open Space
38. Laguna Lake Open Space
39. Bowden Ranch Open Space

**Reserve**
40. Reservoir Canyon Natural Reserve
41. Cerro San Luis Natural Reserve
42. Irish Hills Natural Reserve
43. Bishop Peak Natural Reserve




Basemap by ESRI, 2017.

**Off-Campus Recreational Facilities**

Cal Poly Master Plan Update

Path: G:\Projects\38000\38756_Cal_Poly_SLO_Master_Plan_Update_EIR\38756_CalPolyMasterPlan_OffCampusRec.mxd

## Slack and Grand Residential Neighborhood

The proposed Slack and Grand Residential Neighborhood (N1) will be located in the northeast corner of the intersection of Slack Street and Grand Avenue. This near term Master Plan project site is designated as a moderate fire hazard severity class and is currently located within an unincorporated area that receives fire protection services from CAL FIRE. Emergency response times to the Slack and Grand Residential Neighborhood are estimated to be between 0 and 5 minutes. This neighborhood will be served by the UPD and the EOC. The closest library facilities are the same as those described above. The nearest recreational facilities to the proposed Slack and Grand Neighborhood include the existing track and football field located adjacent to the Student Housing South freshmen dorm complex, the Recreation Center and other Campus Core open space and recreation facilities. The nearest off-campus recreation facility is Buena Vista Park, located approximately 0.5 mile southeast from the proposed RN1 Neighborhood.

# Regulatory Setting

## State

### California Department of Forestry and Fire Protection

Under Title 14 of the California Code of Regulations (CCR), CAL FIRE has the primary responsibility for implementing wildfire planning and protection for State Responsibility Areas (SRAs). CAL FIRE develops regulations and issues fire-safe clearances for land within a fire district of the SRA. More than 31 million acres of California's privately owned wildlands are under CAL FIRE's jurisdiction.

CAL FIRE adopted Fire Hazard Severity Zone maps for State Responsibility Areas and Local Responsibility Areas (LRAs) in November 2007. Fire Hazard is a way to measure the physical fire behavior so that people can predict the damage a fire is likely to cause. Fire hazard measurement includes the speed at which a wildfire moves, the amount of heat the fire produces, and most importantly, the burning fire brands that the fire sends ahead of the flaming front. The project site is located within a LRA and is not considered a fire hazard severity zone.[97]

In addition to wildland fires, CAL FIRE's planning efforts involve responding to other types of emergencies that may occur on a daily basis, including residential or commercial structure fires, automobile accidents, heart attacks, drowning victims, lost hikers, hazardous material spills on highways, train wrecks, floods, and earthquakes. Through contracts with local government, CAL FIRE provides emergency services in 36 of California's 58 counties; this includes San Luis Obispo County.

[97] California Department of Forestry and Fire Protection (CAL FIRE). 2007. San Luis Obispo County Fire Hazard Severity Zone Map. Adopted November 2007. Available at: http://www.fire.ca.gov/fire_prevention/fhsz_maps_sanluisobispo. Accessed in October 2017.

## California Building Code

The University is required to comply with existing Fire and Building Code regulations intended to reduce risk of damage to property and persons for all new development. Applicable regulations address roofing and roof access, fire flow (water) infrastructure, design of hydrant systems, fire protection systems (sprinklers and alarms), fire extinguishers, and structure egress. New development must also comply with access requirements (primary and secondary), provide adequate fire lanes, and maintain defensible space.

# Master Plan Principles

The University provides public safety and recreation infrastructure and services on campus. The Master Plan includes the following principles related to public services and recreation:

**MPP 21** Entertainment, recreation, and social facilities should be provided to support a 24-hour community.

**MPP 23** The following types of services should be provided on campus: (1) services that are needed specifically by students (e.g., library, advising, bookstore); (2) services that benefit from or require knowledge of the campus and that require coordination with academics or other campus services (e.g., financial aid, academic assistance, disability resources, personal counseling for students); and (3) services used frequently by a considerable number of students, faculty and/or staff daily (e.g., food service, banking, health care).

**MPP 29** Recreational spaces and facilities should be provided to serve needs of the campus community. Existing deficiencies should be addressed to the extent practical, and facilities provided prior to or in conjunction with new on-campus housing or significant increases in student enrollment.

**MPP 30** Recreation and athletic facilities should be designed to meet specific standards when necessary for intercollegiate competitions.

**MPP 31** Recreation and athletic spaces should be designed for multiple users and a variety of activities, and be managed through mutual use agreements.

**MPP 32** Recreation and athletics field and facility design should incorporate space for spectators, ancillary facilities, and access to field maintenance equipment.

**MPP 33** Recreational and athletic facilities should be in close proximity to the population they are intended to serve.

**MPP 34** As expansion and academic core redevelopment is planned, leisure and programmed recreation should be incorporated.

**MPP 35** Future intercollegiate facilities and large programmable recreation facilities should be located outside of the academic core with adequate access.

**MPP 36** Public services and utilities should support the University efficiently, with the flexibility to meet changing needs, and designed for ease of maintenance and renovation.

**MPP 37** Support services should be sized and designed to accommodate peak periods, or demand managed so as to even out peaks, e.g., class schedules and exams spread out over the day and week, rotation of registration priorities.

**MPP 39** Development of campus facilities and utility infrastructure should incorporate strategies to minimize impacts on the environment.

**OR 17** Support services should be planned with a holistic approach using collaborative interactive processes to involve all parties delivering and receiving services.

**OR 18** Campus services and facilities must be designed to meet or exceed applicable legal guidelines such as access for those with physical or learning disabilities, fire safety, and emergency response systems.

## Slack and Grand Residential Neighborhood

The regulatory setting for the Slack and Grand Residential Neighborhood is the same as the regulatory setting for the Master Plan. Please refer to the Regulatory Setting discussions above.

# Impact Criteria

The project will result in a significant impact on public services and/or recreation if it will:

- Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for fire protection, police protection, schools, other public facilities;
- Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated; or,
- Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

# Environmental Impact

## Fire Protection and Prevention

Construction activities associated with the buildout of the Master Plan could result in temporary impacts to fire protection services. The presence of construction vehicles, equipment and

workers traveling to and from the campus could result in increased congestion on nearby streets, which could affect fire and emergency services response times. Additionally, construction activities that may require temporary street closures and/or detours could have adverse effects on SLOFD and/or CAL FIRE access and response times. However, the potential increase in traffic and need for street closures, restricted access, and/or detours will be temporary and intermittent and will vary according to the phase of construction for the individual Master Plan project. Furthermore, buildout of the Master Plan will be phased and will not require construction of all campus facilities and improvements simultaneously. Mitigation has been included that will require Cal Poly to notify SLOFD and CAL FIRE of construction schedules and campus road closures prior to commencement of construction activities to ensure emergency response times on campus will not increase compared to existing conditions (0 to 5 minutes for existing developed portions of campus and 5 to 10 minutes for undeveloped hillsides), as a result of construction activities. Given the temporary nature of construction activities, as well as implementation of this notification process, construction-related impacts on fire and emergency services response times will be less than significant with mitigation.

As with existing campus facilities, all new, expanded, and renovated buildings developed pursuant to the Master Plan will be designed consistent with the CBC, California Fire Code (CFC), and University Fire and Life Safety Standards, which are intended for building occupants to avoid injury and death during a fire or other emergency. Additionally, the Master Plan specifically states that campus services and facilities must be designed to meet or exceed applicable legal guidelines such as access for those with physical or learning disabilities, fire safety, and emergency response systems. All plans for new campus facilities, including access and internal site circulation plans, will be reviewed to ensure compliance with security objectives and emergency response mobilization goals, and to ensure adequate ingress/egress for emergency vehicles. New buildings and other facilities will be incorporated into Cal Poly's emergency response plans to ensure appropriate access for fire and emergency response.

SLOFD and CAL FIRE will continue to provide fire and medical emergency response services to Cal Poly and Cal Poly will continue to implement the Environmental Health & Safety Fire Drill & Building Evacuation Procedures. The Campus Building Evacuation Procedures have been prepared to ensure the orderly and complete evacuation of campus buildings in the event of an emergency and/or the activation of alarm system. All fire protection equipment housed at Cal Poly will continue to be maintained in accordance with state regulations, and will be inspected on a monthly basis in accordance with the University's Code of Safe Practice as required by Title 19 of the California Code of Regulations. Cal Poly will implement fire safety training and response procedures to facilitate fire suppression. All fires, no matter how trivial, will continue to be reported to Cal Poly University Police dispatch which accomplishes the following:

- The Fire Department will respond to any emergent/active fire and extinguish;
- An incident log will be entered; and,
- The State Fire Marshall will be notified of the fire, a legal requirement

All new buildings and other facilities will be designed to include all necessary ingress and egress for traffic circulation and emergency response – including the provision of unobstructed access of Fire Department apparatus which will have access to every building. All campus facilities and improvements will be developed in strict compliance with all applicable requirements for

construction, access, water mains, fire flows, hydrants, and safety requirements, as well as all specific fire and life safety requirements identified by the State Fire Marshall.

The future campus development contemplated under the Master Plan and gradual increase in students, faculty/staff, and on-campus residents over the 20-year planning horizon will contribute to an incremental increase in demand for fire and emergency services over time. According to the SLOFD's Fire Chief, the City has plans to expand and remodel Fire Stations 2 and 3, and to develop a new Fire Station 5 in order to serve existing and new development in the southern portion of the City. The expansion and remodel of Stations 2 and 3 is not associated with the demand associated with the build-out of the Master Plan; however, these stations will continue to support the University through the existing Agreement. While it is not expected that the campus would be served by Fire Station 5, its construction and operation would alleviate existing demand on Fire Stations 1 and 2, which are the primary responders to campus emergencies, and result in improved response times from these stations to campus. Based on discussions with the SLOFD's Fire Chief, at full Master Plan buildout, it is estimated that growth in campus facilities and population would not trigger the need for additional fire/life safety personnel or require additional expansion of any fire stations beyond those already planned by the City, including Fire Station 2 which is typically the first responder to campus. Accordingly, implementation of the Master Plan will not result in substantial adverse impacts associated with the provision of new or physically altered fire protection facilities. Therefore, operational impacts will be less than significant.

## Police Protection

The UPD is located in the core of the campus (Figure 53). It is bordered by, and primarily accessed via, California Boulevard to the west, Highland Drive to the north, and Grand Avenue to the east. The UPD will continue to be responsible for responding to and handling all calls for service, as well as processing, investigating and prosecuting all crimes committed on campus.

Construction activities associated with campus development pursuant to the Master Plan could result in temporary impacts associated the presence of construction vehicles, equipment, and workers traveling to and from the campus that could result in increased congestion on nearby streets, which could affect police and emergency services response times. Even though construction of planned facilities and improvements that may involve temporary street closures and/or detours will be temporary and intermittent, mitigation measures have been identified requiring Cal Poly to notify the UPD and SLOPD of construction schedules and campus road closures prior to commencement of construction activities to avoid potential impacts. Given the temporary nature of construction activities, as well as implementation of the notification process, construction-related impacts on police protection and emergency services response times will be less than significant with mitigation.

Buildout of the Master Plan could result in an increased demand for personal safety facilities, particularly related to the new residential neighborhoods, the new field house facility, the new pedestrian activity corridor along Via Carta, and new infrastructure (including redevelopment of Via Carta within the Campus Core). Personal safety facilities include lighting, telephones, and other design features that provide for the personal safety needs of students. The Master Plan specifically states that campus services and facilities will be designed to meet or exceed

applicable legal guidelines such as access for those with physical or learning disabilities, fire safety, and emergency response systems. Additionally, all plans for new campus facilities, including access and internal site circulation plans, will be reviewed by the UPD to ensure consistency with security objectives and police mobilization purposes, and to ensure adequate ingress/egress for emergency vehicles. New buildings and other facilities will be incorporated into the University's security and emergency response plans to ensure appropriate access for police and emergency response. New campus facilities may include passive and/or active security systems, and/or other measures, to minimize the need for new security personnel. With these procedures and implementation of the identified mitigation measures, potential impacts will be reduced to a less-than-significant level.

The UPD will continue to be responsible for responding to and handling all calls for service, as well as processing, investigating and prosecuting crimes committed within the campus. Cal Poly's Patrol Officers will continue to work with numerous allied agencies including the SLOPD, the San Luis Obispo Sheriff's Department, Parole Services, and the Narcotics and Gang Task Forces to solve crimes and provide agency assistance known as Mutual Aid. The UPD will continue to work closely with SLOPD proactive patrol to deter crimes and enhance enforcement efforts in and around campus neighborhoods throughout the academic school year and during major events.

The Master Plan buildout, including a gradual increase in student enrollment, provision of new facilities within the campus, and the development of new residential neighborhoods, is anticipated to result in an incremental increase in demand for police protection and emergency response services. However, as this anticipated gradual increase in demand will be minimized through enhanced operating procedures, continued campus safety training, and appropriate staffing of the UPD, which is assessed on an ongoing basis, it is not anticipated to require the provision of new police protection facilities or equipment. UPD staffing levels will increase commensurate with enrollment increases to accommodate increases in demand for service on campus. In addition, based on conversations with the City, Cal Poly has determined that the gradual increase in demand for SLOPD protection services would not require new or physically altered police facilities that could cause significant environmental impacts; therefore, operational impacts would be less than significant.

## Libraries and Schools

The Cal Poly's main library facility, the existing Robert E. Kennedy Library, is located within the Campus Core southwest of the intersection of North Perimeter Road and University Drive. The nearest schools to this area of campus include Charles E. Teach Elementary School and SLO Classical Academy High School, located southwest of the intersection of Slack Street and Grand Avenue.

Construction activities associated with the provision of new facilities and improvements, particularly within the southern border of the Campus Core and East Campus planning areas, has the potential to result in temporary impacts to off-campus schools and libraries. The presence of construction vehicles, equipment and workers traveling to and from the campus could result in increased congestion on nearby streets, which could affect travel and access to off-site schools. Additionally, some construction activities associated with buildout of the Master Plan have the

potential to deter use of the on-campus Robert E. Kennedy Library, which may result in a temporary increased use of the off-campus San Luis Obispo public library. However, as these impacts will be temporary they are expected to be less than significant.

New on-campus student housing facilities are intended to accommodate 65% of all of the Cal Poly's undergraduate students compared to existing housing facilities, which can only accommodate approximately 37% of the undergraduate students. Therefore, implementation of the Master Plan is anticipated to result in a beneficial effect on off-campus school and library facilities by developing new and expanded on-campus library and study facilities and reducing the number of undergraduate students living off-campus and potentially using off-campus facilities.

The Master Plan proposes an expansion of the Kennedy Library and other academic facilities which is intended to accommodate the increased demand for on-campus library resources related to the build-out and increased population of residents, faculty, and students on campus resulting from the build-out of the Master Plan. Therefore, impacts to on-campus school and library facilities and services would be less than significant.

The University will prioritize faculty, staff and non-traditional student occupancy of the residential neighborhoods; however, this EIR conservatively assumes that all of the residential neighborhood units will be made available to the general public, and could result in an additional 3,308 new local residents on campus over the 20-year planning horizon. This could, in turn, contribute to the increased demand on on-campus and off-campus library and school facilities. The potential increased demand on these facilities will occur gradually over the 20-year planning horizon and is expected to vary based on the actual population of the new on-campus residents.

The increase in residents living in on-campus residential neighborhoods has the potential to contribute to an increased demand on off-campus City library facilities. Although under worst case scenario conditions it is assumed that all 3,308 new residents would be from the general public, it is expected that the majority of these residents would be relocating from within the San Luis Obispo Public Library's service area. Additionally, residents that live in the proposed residential neighborhoods would be able utilize the expanded Kennedy Library on campus. Based on the availability of existing on- and off-campus library facilities, the provision of new and expanded library facilities on-campus, and the minimal anticipated increase in demand for off-campus library facilities, the project is not expected to contribute substantially to deterioration of off-campus library facilities. Therefore, impacts to on- and off-campus library facilities associated with the build-out of the Master Plan will be less than significant.

Buildout of the Master Plan would include the construction of 6,800 new student beds and a maximum of 1,470 new residential units on campus. The planned student housing does not include housing for the general public and therefore would not generate any school-age children; however, the new 1,470 residential neighborhood units could generate school-age children. Considering the available capacity for new students within the San Luis Coastal Unified School District (Table 66), and the fact that not all school-age children that live in the proposed residential neighborhoods are expected to be relocated into the school district, but rather moving within the same school district, buildout of the 1,470 residential neighborhood units is not anticipated to result the need for new or physically altered off-campus school facilities.

However, since the timing of the proposed residential neighborhood developments and ultimate composition of residents is unknown at this time, and elementary school enrollment is projected to exceed school facility capacity in five years (LOS II) within the San Luis Coastal Unified School District, it is conservatively assumed that buildout of the proposed residential apartments could potentially, under worst-case scenario conditions, contribute enough new school-age children to the San Luis Coastal Unified School District to significantly impact existing schools or result in the need for new or physically altered governmental facilities.

Level 1 Fees as authorized by Government Code Section 65995 allows school districts to collect fees on future development of no more than $3.48 (K-12) per square foot for residential construction. Government Code Section 66001 requires that a reasonable relationship exist between the amount and use of the fees and the development on which the fees are to be charged. As described in the 2016 San Luis Coastal Unified School District's Developer Fee Justification Study,[98] the San Luis Coastal School District meets the requirements for levying Level 1 residential developer fees in the amount of $3.48 per square foot on residential single-family (attached and detached) and multi-family homes within the District. Therefore, implementation of mitigation provided below will require future developers of the proposed residential neighborhoods to assess appropriate in-lieu school fees to mitigate potential impacts associated with the need for new or physically altered school facilities. Impacts will be less than significant with mitigation.

## Recreation

Implementation of the Master Plan will result in a gradual increase of 5,000 FTE students over the 20-year planning horizon, which will increase the population of students living on- and off-campus. This increase in population could increase the use of exiting neighborhood, regional, and other recreational facilities on- and off-campus, which could contribute to the deterioration of recreational facilities. Although implementation of the Master Plan will result in a gradual increase of 5,000 FTE students, it will also include new on-campus recreational facilities and new housing to accommodate 65% of all of the University's undergraduate students compared to existing housing facilities which can only accommodate approximately 37% of the undergraduate students. Therefore, many new campus residents would be located on-campus and more likely to utilize campus recreational facilities.

Development pursuant to the Master Plan will retain some of Cal Poly's existing recreational facilities, particularly those that are new or designated for renovation or expansion, including the Recreation Center, Mott Athletic Center, Spanos Stadium, and the softball and baseball fields. In addition, the Master Plan includes a new sports and events arena that could accommodate athletic events including tournaments, concerts and other indoor events that draw large audiences. While the existing Recreation Center was fully renovated and expanded in 2012 and is very popular, increasing the number of on-campus residents will require additional recreational outlets. New and expanded recreational facilities proposed under the Master Plan to accommodate the growing student enrollment include the Alex Spanos Stadium expansion, Mott Gym renovation, expansion of Dexter Lawn and Centennial Meadow, new field house, and

[98] San Luis Coastal Unified School District. 2016. *Developer Fee Justification Study*. Available at: http://www.slcusd.org/images/cms/files/sanluiscoastaldeveloperfee2016final.pdf. Accessed in October 2017.

others. Creekside Village is proposed to house a recreation center for students, faculty, and staff that could be a satellite facility to the existing Recreation Center. The new recreational facilities are intended to accommodate the increase in demand for recreational facilities correlated with the gradual increase in FTE students over the 20-year planning horizon. These existing and proposed new on-campus recreational facilities are adequate to meet the anticipated demand associated with growth under the Master Plan. Therefore, no significant adverse impacts to on-campus recreational facilities associated with build-out under the Master Plan would occur.

The environmental impacts associated with the proposed expansion of existing and development of new recreational facilities on campus have been programmatically evaluated throughout this EIR, including the potential for short-term construction related impacts (i.e., air quality emissions, conversion of agricultural soils, increased noise and traffic) and long-term operational impacts (i.e., additional traffic trips and noise). Therefore, potential impacts to recreational resources resulting from the construction of new or expanded on-campus recreational facilities associated with the build-out of the Master Plan are identified in each issue area of this EIR.

Although the recreational facilities proposed under the Master Plan are intended to accommodate the increased demand for recreational facilities associated with the increase in 5,000 FTE students and on-campus residents, this increase in the population on campus combined with the residents in the proposed residential neighborhoods, which may include off-campus populations, are considered to have the potential to contribute to impacts to off-campus recreational facilities and services. Impacts to off-campus recreational facilities are considered potentially significant; however, implementation of proposed mitigation would require future developers of the proposed residential neighborhoods to contribute fair share impact fees to compensate for impacts to off-campus recreational resources. To ensure construction proposed under the Master Plan will not result in adverse effects to off-campus recreational resources, mitigation has also been included to ensure Cal Poly will coordinate with the City and County prior to commencing any construction activities that could temporarily affect existing and/or future public recreational facilities. Therefore, impacts to off-campus recreational resources would be less than significant with mitigation.

## Slack and Grand Residential Neighborhood

The new Slack and Grand Residential Neighborhood (N1) will provide 420 units in three to four-story apartment buildings with a mix of studio, one-, two-, and three-bedroom units. At 2.25 persons per household, this neighborhood could add 945 new residents to this area of campus. Within this approximately 22-acre site, approximately 2.3 acres will be used for park/open space and a play area for the residents. Potential impacts to public services and recreation as a result of the proposed Slack and Grand Residential Neighborhood are described in the following sections.

### Fire Protection

The proposed Slack and Grand Residential Neighborhood (N1) is located within an undeveloped area of campus. Based on the Service Area associated with the current Agreement with the City, the N1 development would receive fire protection services from CAL FIRE. Impacts to fire protection services associated with the new Slack and Grand Residential Neighborhood will be consistent with the construction and operational impacts discussed above for overall Master Plan

development; therefore, construction impacts will be less than significant with mitigation and operational impacts will be less than significant.

### Police Protection

Impacts to police protection services associated with the new Slack and Grand Residential Neighborhood will be consistent with the construction and operational impacts discussed above; therefore, construction impacts will be less than significant with mitigation and operational impacts will be less than significant.

### Libraries and Schools

Impacts to on-campus and off-campus library and school facilities associated with the new Slack and Grand Residential Neighborhood will be consistent with the construction and operational impacts discussed above. Therefore, impacts to on-campus and off-campus library facilities and on-campus school facilities will be less than significant and impacts to off-campus school facilities will be less than significant with mitigation.

### Recreation

The proposed Slack and Grand Residential Neighborhood (N1) would include recreational amenities such as open space and courtyards for future residents and their families including a community playground. Therefore, on-site recreational facilities and additional proximate University recreational facilities are likely adequate to serve N1 populations. However, N1 populations may also increase demand on off-campus recreational facilities. Impacts to on-campus and off-campus recreational facilities associated with the new Slack and Grand Residential Neighborhood will be consistent with the impacts discussed above; therefore, impacts to on-campus recreational facilities will be less than significant and impacts to off-campus recreational facilities will be less than significant with mitigation.

## Mitigation Measures

In addition to compliance with all applicable existing regulations, the following measures will be implemented:

3.11-1 Prior to commencing any construction activities which could require on-campus street or lane closures, the University will notify the SLOFD, CAL FIRE, UPD, and City of San Luis Obispo Police Department of the construction activities and schedules which could impact emergency response operations and shall phase construction activities to ensure existing emergency response times (0 to 5 minutes for developed portions of campus and 5 to 10 minutes for undeveloped hillsides on campus) are not exceeded.

3.11-2 All proposals for traffic calming measures (speed humps/bumps, traffic circles, roundabouts, etc.) and new or modified access routes will be submitted to the

SLOFD and CAL FIRE for review prior to implementation to ensure such measures will not pose a barrier or cause a delay in emergency response times.

3.11-3 Prior to commencing any construction activities in campus areas located adjacent to undeveloped, less accessible unincorporated land with an increased (moderate to high) fire hazard, the University will prepare a Fire Protection Plan. The Fire Protection Plan will clearly assign and spell out the responsibility for site fire protection and the methods that will be employed to prevent the ignition of a wildfire. The Fire Protection Plan will be submitted to the SLOFD and CAL FIRE for approval prior to commencement of construction activities and will be implemented throughout construction activities. Additionally, all construction contractors and subcontractors will be made aware of wildlife risks and prevention responsibilities.

3.11-4 The University will notify the City of San Luis Obispo and the County of San Luis Obispo prior to commencing any construction activities that could temporarily affect existing and/or future public recreational facilities and will collaborate with the City and the County throughout the duration of such construction activities.

3.11-5 Prior to construction of any proposed residential neighborhood, Cal Poly and the developer of each residential neighborhood shall coordinate with the San Luis Coastal Unified School District to assess the need for, and facilitate the payment of, appropriate in-lieu school fees to reduce potential impact. The amount of in-lieu fees shall be determined as appropriate for each residential neighborhood through coordination and agreement among Cal Poly, each developer, and the San Luis Coastal Unified School District.

3.11-6 Prior to construction of any proposed residential neighborhood, Cal Poly and the developer of each residential neighborhood shall coordinate with the City of San Luis Obispo to assess the need for, and facilitate the payment of, appropriate in-lieu fees to reduce potential impact. The amount of in-lieu fees shall be determined as appropriate for each residential neighborhood through coordination and agreement among Cal Poly, each developer, and the City.

## Slack and Grand Residential Neighborhood

Potential impacts to public services and recreation will be consistent with those described above and will be reduced to a less-than-significant level through implementation of mitigation measures provided above. No additional mitigation measures are necessary.

# Level of Impact After Mitigation

Continued compliance with existing requirements and regulations and implementation of the identified mitigation measures will reduce potential impacts to public services and recreation to a less-than-significant level.

## Slack and Grand Residential Neighborhood

Continued compliance with existing requirements and regulations and implementation of the identified mitigation measures, will reduce potential impacts to public services and recreation to a less-than-significant level.

# Cumulative Impact

As part of its regional planning functions, SLOCOG develops and publishes regional population, employment, and housing forecasts for the County and its communities. Table 57 shows SLOCOG growth projections for the City and County prepared by Economics Research Associates, and Department of Finance projections for the State.

**Table 57. San Luis Obispo Population Projections, 2015-2030**

| Year | City | County | State[99] |
|---|---|---|---|
| 2015 | 44,668 | 275,590 | 38,801,063 |
| 2020 | 45,969 | 286,940 | 40,643,643 |
| 2025 | 46,704 | 296,851 | 42,451,760 |
| 2030 | 47,622 | 309,288 | 44,279,354 |
| **Annual Growth Rate** | 0.40% | 0.72% | 1.0% |

Cumulative growth within the City and County, combined with growth resulting from build-out of the Master Plan has the potential to result in cumulative impacts to public services. As discussed previously, new and expanded facilities and services proposed under the Master Plan are intended to accommodate the increased campus population proposed under the Master Plan. However, implementation of the Master Plan and proposed residential neighborhoods in particular, combined with regional population growth and other planned and proposed projects will place an increased demand on off-campus public services and recreation.

Enrollment growth at the campus is anticipated to be slower in the early years of the 20-year Master Plan horizon, followed by phased enrollment increases as planned new student housing and instructional facilities are completed. Build-out of the Master Plan will contribute to a cumulative incremental increase in demand for fire, police, and emergency response services and demand on public library, school, and recreational facilities. Mitigation has been identified to ensure potential on-campus and off-campus impacts are reduced through the payment of fair share in-lieu fees to support expanded public services and facilities that could be adversely impacted by build-out under the Master Plan. Compliance with applicable regulations, Master Plan Principles, and proposed mitigation would reduce the Master Plan's contribution to

[99] City of San Luis Obispo. 2015. *2014–2019 General Plan Housing Element*. Adopted January 20, 2015. Available at: http://www.slocity.org/government/department-directory/community-development/planning-zoning/general-plan. Accessed in October 2017.

cumulative impacts related to public services and recreation facilities. Therefore, cumulative impacts will be less than significant with mitigation.

## Slack and Grand Residential Neighborhood

Cumulative impacts associated with the Slack and Grand Neighborhood are addressed above.

# 3.12 Utilities and Services Systems

This section examines the potential impacts to utilities and service systems and energy use associated with the campus development pursuant to the Master Plan, including the development of the Slack and Grand Residential Neighborhood.

## Environmental Setting

### Water Supply Infrastructure

Refer to Section 3.13, Water Supply, for a discussion pertaining to water demand and supply associated with buildout of the Master Plan. In this section, the discussion of water supply is limited to water supply infrastructure. The following environmental setting pertaining to water supply infrastructure is based on information included in Cal Poly's Utility Infrastructure Systems Failure Analysis and Impact Assessment Draft Report.[100]

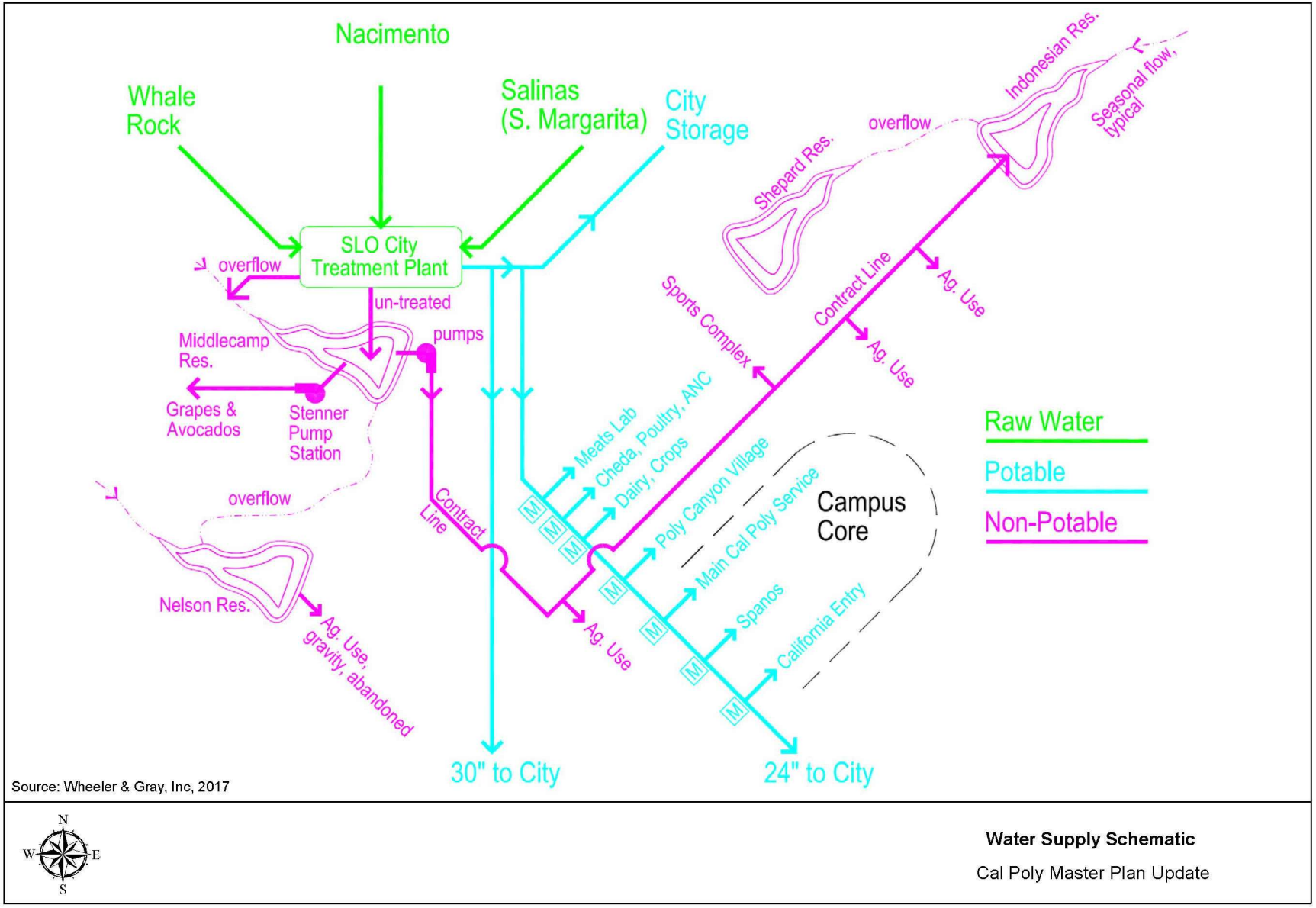
The University owns one-third rights to the Whale Rock Reservoir, which it shares with the City of San Luis Obispo and the State of California Men's Prison. Water is also provided to the University from the City water treatment plant from Santa Margarita Lake, Salinas Reservoir and Lake Nacimiento. Water from Whale Rock Reservoir is treated at the City of San Luis Obispo's Stenner Canyon Water Treatment Plant. The plant is designed to treat a maximum of 16 million gallons or 49.1 acre-feet (AF) per day. Cal Poly is currently entitled to 1,000 acre-feet per year (AFY) in treatment capacity at the plant.

Domestic water service is provided to the Cal Poly Academic Core by the City from four locations. The main connection is for the Academic Core located along California Boulevard just south of Highland Drive and runs through Pump House #1, which raises the pressure enough to reach the 500,000-gallon water tank located east of campus. Much of this 12-inch line that runs through campus is aging, asbestos-containing transite pipe that is beyond its useful service life. This line also travels through the two square "reservoirs" at the base of the hill next to the R1 parking lot. A schematic diagram of this system is shown in Figure 56.

The second line in the Academic Core area provides service to Spanos Stadium from a 4-inch connection along California Boulevard. There is also a 6-inch firewater connection in the same area that provides service to two fire hydrants along California Boulevard at the north and south ends of the stadium. The third line connects to the City's 24-inch main at the south end of the Academic Core at California Boulevard and Campus Way with a newer 12-inch C900 pipe. This serves the southwest side of the Academic Core, including the newly renovated Recreation Center. The last water connection for the Academic Core is a 12-inch pipe that does not provide water to any of the Academic Core area, and currently only serves the Poly Canyon Village complex.

[100] California Polytechnic State University, San Luis Obispo (Cal Poly). 2014. *Utility Infrastructure Systems Failure Analysis and Impact Assessment*. October 2014.

**Figure 56. Water Supply Schematic**



Outside of the Academic Core, the City Water Department also provides four non-potable water connections to the University's agricultural fields, the Sports Complex to the north, and the various open reservoirs in the area. These reservoirs include Shepard, Indonesian, Middlecamp and Nelson. The campus has approximately 120 fire hydrants, not counting the outlaying agricultural areas. Fire water for the University is provided directly through the domestic waterline system for fire hydrants and the buildings that have sprinklers. For this reason, water modeling and analysis is conducted for fire flow requirements, which guarantees there will be more than enough pressure for domestic use.

The Academic Core has two pump houses, a 1-million gallon double enclosed reservoir, 30,000-gallon tank and a 500,000-gallon tank for the domestic/fire water system. The locations of campus water supply infrastructure are shown on Figure 57.

## Wastewater

The campus's sanitary sewer collection and conveyance system was built as part of the original 1903 campus infrastructure and has been in service for over 100 years. Partly due to the rolling terrain of the campus and its surroundings there are numerous sewer lift stations, many located in the outlaying agricultural areas. The sewer system for the main campus is divided into five regions, based on the areas they serve and their points of connection to the City's sanitary sewer main (Figure 58). The first reach drains through an 8-inch connection, starting on the west side of the Academic Core, west of the railroad tracks, and serves the agricultural areas such as the Crops Unit, the Dairy Science Complex and Poultry Science. There are at least five lift stations with continuously running pumps in this reach.

The second connection to the City sanitary sewer main on California Boulevard, or Reach 2, drains the north end of campus, east of the railroad tracks to Poly Canyon Village student housing. Much of this sewer main on campus was replaced as part of the Poly Canyon project. Reach 2 connects into the City main with an 18-inch pipe that also serves the north and portions of the south sides of Highland Drive east of California Boulevard. There are three lift stations and two grease interceptors in this section. There is also approximately 1500 feet of outdated sewer line in this section that needs to be replaced.

Reach 2A also drains into the 18-inch City connection that serves Reach 2, but serves a northern portion of the Residential East Campus area. It drains most of the original "Bricks" student housing buildings, Cerro Vista, the Math and Science buildings and Kennedy Library. Reach 2A includes some of the oldest sewer pipe on campus, approximately 2,000 feet of which needs to be replaced as it has passed its useful service life.

Reach 3 covers one of the smaller sections of the Academic Core, serving a small group of buildings between Highland Drive and North Perimeter Road. These include the Engineering III and IV Buildings, Food Processing and the Ag Engineering Shop. There are 3 grease interceptors in this section.

**Figure 57. Existing Water Supply Infrastructure Map**

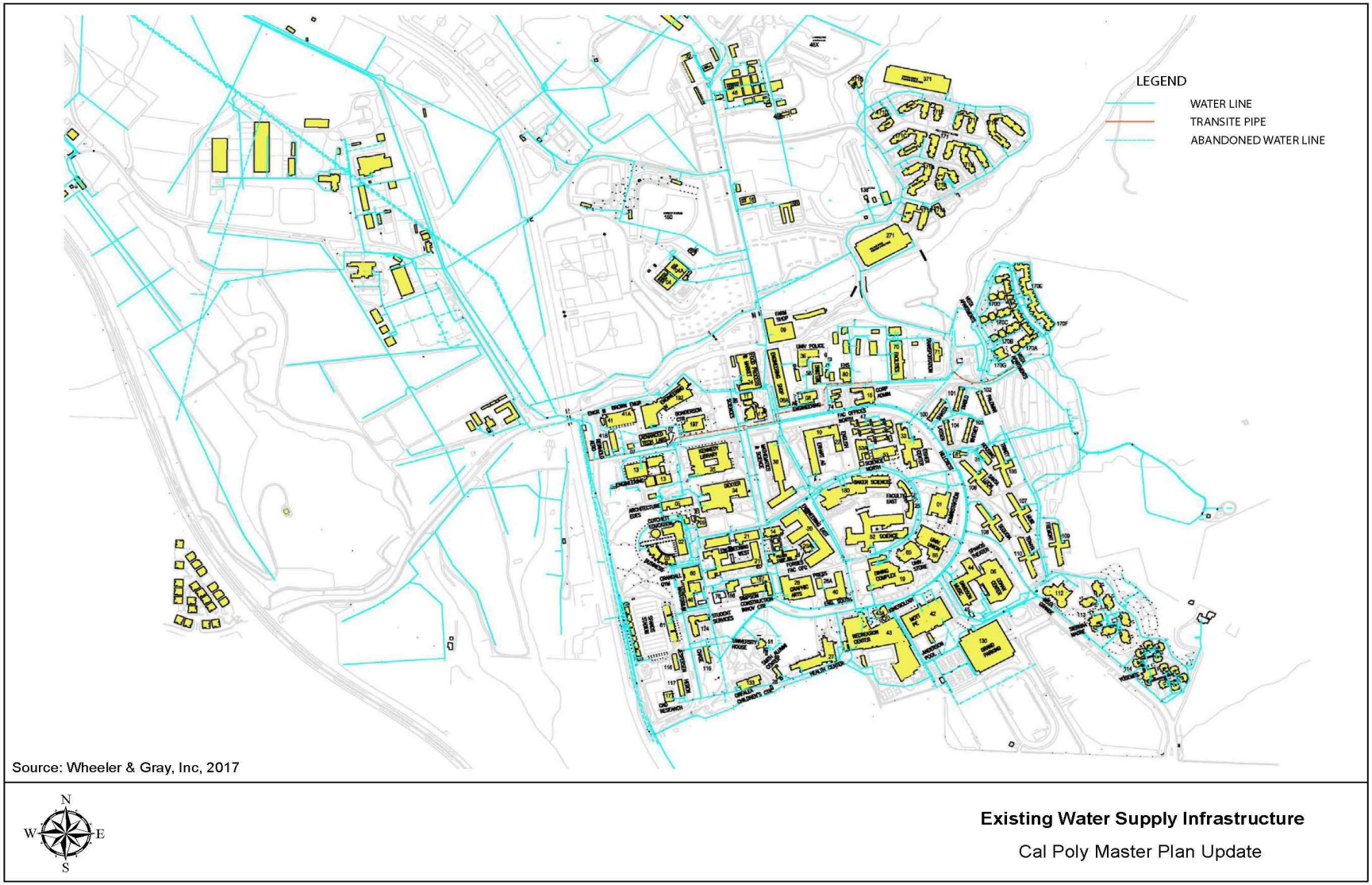
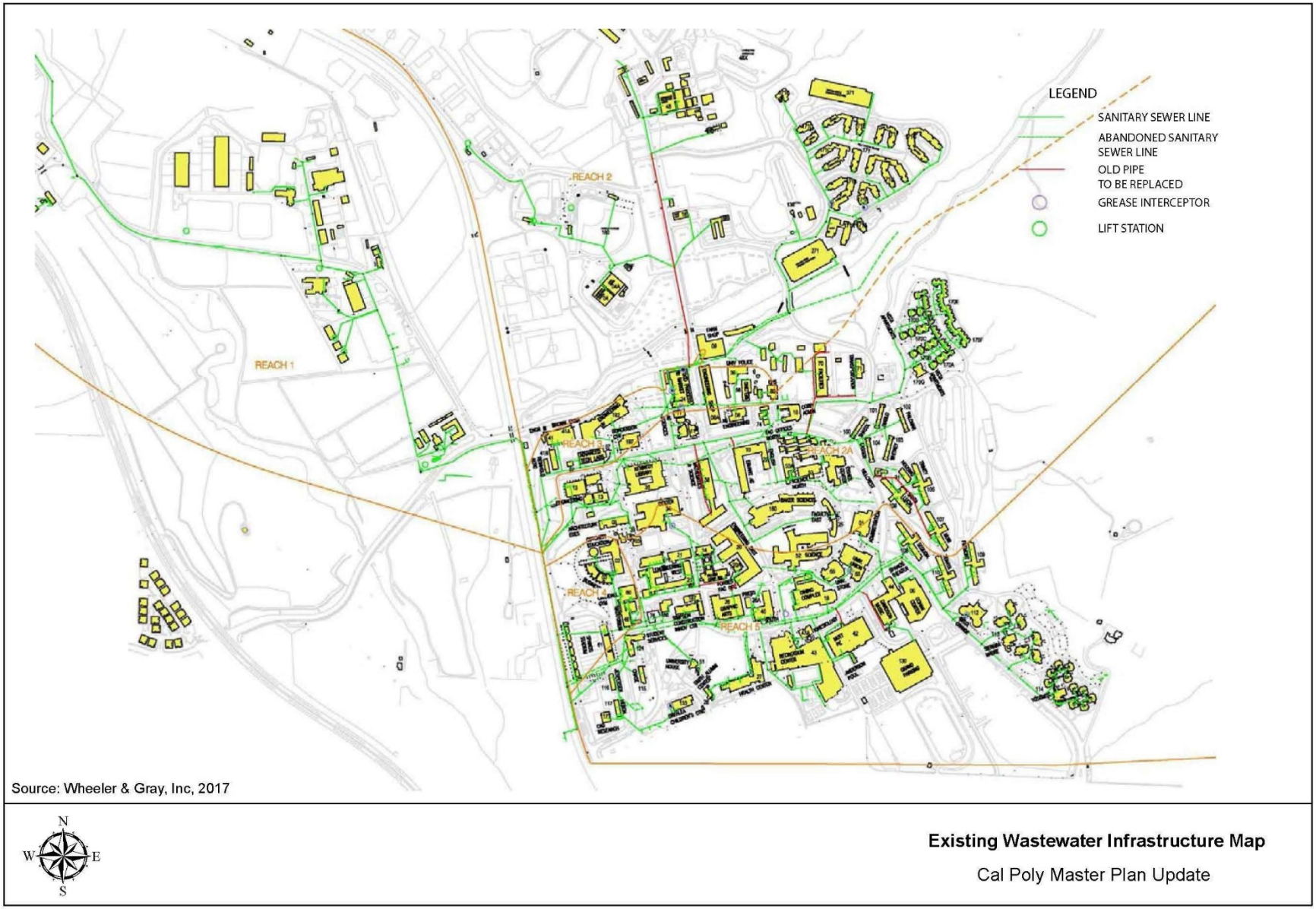


**Figure 58. Existing Wastewater Infrastructure Map**



Reach 4 serves another small area for sewer drainage at Spanos Stadium and Cotchett Education and Business, and Crandall Gym and Natatorium. This section connects to the City sanitary sewer main with an 8-inch pipe.

Reach 5 encompasses most of the south and southeast portions of the Academic Core area, including the southeastern portion. It connects to the City main with a 12-inch pipe south of the stadium, has one lift station and 5 grease interceptors, and approximately 400 feet of aging pipe in need of replacement. This section of sanitary sewer serves the buildings on both sides of South Perimeter Road including the newly renovated Recreation Center, the Dining Hall, University Union, the Performing Arts Center, Vista Grande, and student housing Fremont, Sierra Madre and Yosemite Halls. Reaches 2A and 5 also drain the interior of the Utilidor, the campus underground utility corridor.

All wastewater from the Cal Poly campus is discharged to the City's sewer collection and treatment system. Cal Poly, in partnership with the City of San Luis Obispo, has invested capital funds to purchase a capacity share of the City's wastewater treatment plant, and therefore receives a discounted rate for wastewater collection and treatment. Ongoing conservation efforts, such as installation of ultra-low flow plumbing fixtures, have resulted in significant reductions in sewer volumes even with campus development over the years.

The City of San Luis Obispo provides wastewater collection and treatment services to the campus through a contractual agreement.[101] The entire campus ties into a sewer main located near the intersection of California Street and Foothill Boulevard. The City meters wastewater flows and charges the University accordingly. A summary of wastewater flow data collected from on-campus flow meters from 2013 through 2016 is provided in Table 68.

**Table 68. Summary of Wastewater (Sewer) Flow Monitoring Results (October–November 2016)**

| Total Wastewater (Sewer) Flow | 2013 (HCF)* | 2014 (HCF) | 2015 (HCF) | 2016 (HCF)[102] |
|---|---|---|---|---|
| January | 12,305 | 12,681 | 11,426 | 13,136 |
| February | 13,288 | 13,549 | 11,012 | 11,393 |
| March | 13,556 | 11,420 | 9,158 | 9,994 |
| April | 13,565 | 14,379 | 11,813 | 11,367 |
| May | 16,213 | 15,420 | 11,178 | 11,985 |
| June | 4,977 | 7,540 | 5,473 | 4,993 |
| July | 2,081 | 2,015 | 1,936 | 1,334 |
| August | 2,637 | 1,587 | 1,451 | 1,820 |
| September | 4,413 | 6,966 | 6,807 | 5,091 |

[101] City of San Luis Obispo, Utilities Department. 2017. Wastewater Treatment. Available at: http://www.slocity.org/government/department-directory/utilities-department/wastewater/wastewater-treatment. Accessed March 2017.

[102] California Polytechnic State University, San Luis Obispo (Cal Poly). 2016. 2016 Drought Response Performance Monitoring (Years 2013–2016).

| Total Wastewater (Sewer) Flow | 2013 (HCF)* | 2014 (HCF) | 2015 (HCF) | 2016 (HCF)[102] |
|---|---|---|---|---|
| October | 16,244 | 14,301 | 11,716 | 11,374 |
| November | 11,897 | 10,757 | 9,608 | 9,430 |
| December | 6,064 | 6,613 | 4,932 | 7,875 |

* HCF = Hundred cubic feet

As shown, quantities of sewer wastewater generated on campus fluctuate throughout the year, demonstrating substantial reductions between June, September, and December, when students are typically on vacation.

The City owns and operates a Water Resource Recovery Facility (WRRF) located at 35 Prado Road, approximately 3.5 miles south from the campus. The WRRF manages and treats wastewater in accordance with the standards of the SWRCB to remove solids, reduce the amount of nutrients, and eliminate bacteria in the treated wastewater before it is discharged to San Luis Obispo Creek. The wastewater collection system is comprised of over 138 miles of main line, 9 lift stations, and various other assets. The collections team maintains and upgrades this system along with the city's stormwater collections system. The City's WRRF is responsible for treating all of the wastewater (sewage) within the City, Cal Poly, and the County airport. The facility currently treats 4.5 million gallons (mgd) of wastewater daily. Staffing of operators, laboratory analysts and maintenance technicians ensure the WRRF is operated and maintained in the most efficient manner possible and complies with federal, State, and local discharge requirements[101].

The existing plant's maximum capacity is 5.1 mgd. The total city-wide flow averages approximately 3.0-3.5 mgd during the dry season and droughts, and up to 20 mgd during the rainy season, necessitating storage prior to treatment. Cal Poly is allotted 475,000 gallons per day (gpd) per its capital share of the facility and is currently averaging flows at 206,000 gpd, less than half of its allotted capacity. The City is currently planning another upgrade to its facility that will increase the plant capacity from 5.1 mgd to 5.4 mgd. Construction of the upgrade is anticipated to commence in 2018.[103]

## Stormwater Drainage

Cal Poly is situated in the rolling hillside area of the City of San Luis Obispo; the Academic Core area covers approximately 400 acres of land. Located in an urban setting, the campus is within the Mediterranean climate that runs along the California coastline and experiences most of its rainy season in the winter months from October to March. Storm drainage can be a challenge during particularly heavy rainy seasons. Most of the Academic Core and North Campus areas drain to Brizzolara Creek, which runs across the north side of campus. Portions of the West Campus area drain to Stenner Creek.[104] Cal Poly, pursuant to the Clean Water Act and State and Regional Water Boards requirements, has developed an aggressive stormwater mitigation program through the implementation of the Water Quality Management Plan for Cal

[103] Personal Communication with Dave Hix, City Deputy Director of Wastewater. March 16, 2017.
[104]Cal Poly 2005

Poly Land in San Luis Obispo Creek and Chorro Creek Watersheds (WDR R3-2003-035). This program includes a contract to annually clean and vacuum all catch basins and drainage inlets and area drains every October. Cal Poly has also installed storm-interceptors as part of the Poly Canyon Student Housing complex, and approximately 10% of the existing drainage inlets have open bottoms. Based on Cal Poly's Utility Infrastructure Systems Failure Analysis and Impact Assessment, the existing storm drainage system is considered to operate under capacity (Figure 59).

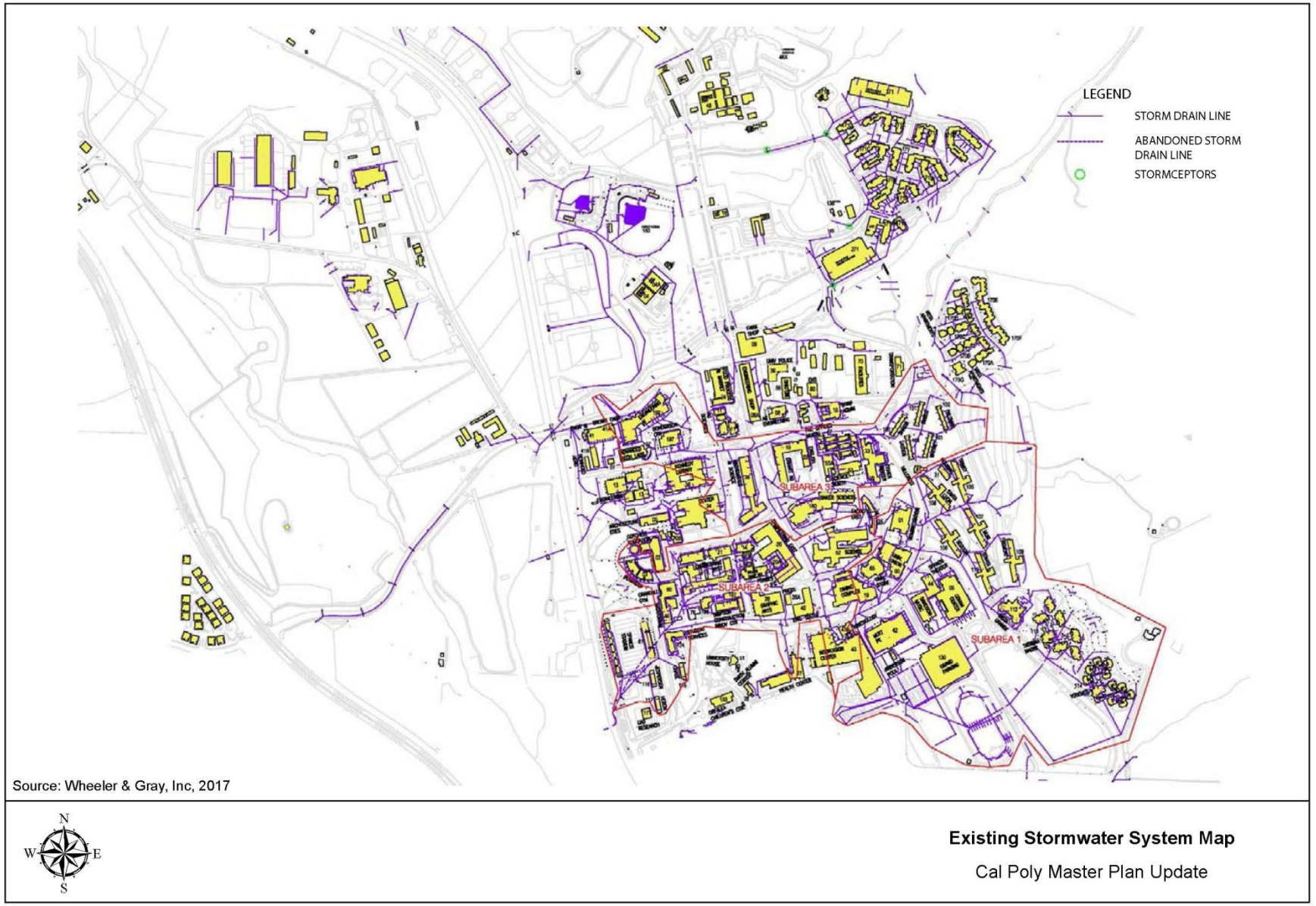
## Solid Waste and Recycling

Cal Poly is contracted with Waste Connections through both SLO Garbage and Coastal Roll-off for municipal solid waste and recycling collection. SLO Garbage charges a standard fee based on the container size and collection frequency. Coastal Roll-off charges Cal Poly based on the total tonnage of material transported to the Cold Canyon Landfill for disposal. Cal Poly does not have a contracted maximum disposal amount. Capacity and throughput limitations are monitored as part of Cold Canyon Landfill's permit compliance process. Cal Poly currently implements a Zero Waste Pilot Program at several locations around campus and operates an integrated waste management program that includes source use reduction, recycling, composting of food waste, green waste, and manure, resale of scrap metal and surplus equipment, and zero waste event catering.[105,106] Recycling containers are provided to faculty, staff, and students by Facility Services, and collection is conducted by Custodial Services and the campus Recycling Coordinator. Based on 2016 operations, Cal Poly generated a total of 29,827 tons of solid waste, of which approximately 26,986 tons was diverted from the landfill and recycled. A total of approximately 2,840 tons of solid waste was disposed of at the Cold Canyon Landfill in 2016.

San Luis Garbage is a municipal waste hauling company operating within the city. San Luis Garbage is assisted by South County Sanitary, Mission County Garbage, Morro Bay Garbage, and Coastal Roll-off hauling companies. Solid waste is disposed of at the Cold Canyon Landfill, located approximately 7 miles south of the City on State Route 227. Cold Canyon Landfill currently has a maximum permitted capacity of 23,900,000 cubic yards, a remaining capacity of 14,500,000 cubic yards, and an estimated closure date of December 31, 2040. According to the Integrated Waste Management Authority (IWMA) Annual Report dated September 2017,[107] the estimated closure date for the Cold Canyon Landfill is in 35 years, or in 2051, based on the current rate of disposal.

[105] California Polytechnic State University, Administration and Finance – Waste Management. 2017. Waste Management. Available at: https://afd.calpoly.edu/sustainability/campus_resources/waste. Accessed March 2017.
[106] California Polytechnic State University, Administration and Finance – Recycling. 2017. Solid Waste and Recycling. Available at: https://afd.calpoly.edu/facilities/services_recycling.asp. Accessed March 2017.
[107] Integrated Waste Management Authority (IWMA). 2017. Annual Report. Available at: http://www.iwma.com/wp-content/uploads/recyclist/userfiles/9-13-17_Board_Agenda.pdf. Accessed October 12, 2017.

**Figure 59. Existing Stormwater Infrastructure Map**



# Energy

Cal Poly continues to make progress on reducing energy consumption. Total energy use (electricity and natural gas combined) has dropped over 21% since 2000. The change in reported energy use between Cal Poly's 2012 Biennial Report and the 2016 Biennial Report was relatively flat despite a 9% increase in on-campus residency and increased cooling loads due to weather variation. In May 2014, the CSU Board of Trustees, adopted the first CSU system-wide Sustainability Policy. The policy aims to further reduce the environmental impact of construction and operation of buildings and to integrate sustainability across the campus' functions and operations. Cal Poly has already reduced GHG emissions from energy use to below 1990 levels, has made significant progress on reducing emissions from commuting, and has reduced its water use by 31% since 2013, 5 years ahead of the CSU mandate.

## Electricity

Electric service to the Cal Poly campus consists of a single service from Pacific Gas and Electric (PG&E). The service operates at 70kV and the campus is metered at this voltage. The 70-kilovolt (kV) service feeds two 70kV-12kV step-down transformers at Mustang Substation, which have a base rating of 10 megavolt amperes (MVA), and a fan-cooled rating of 12.5MVA. A tie circuit is installed at the 12kV substation switchgear; if one of the 70kV-12kV transformers is out of service, all campus feeders can be fed from the other transformer. Electric power is distributed to campus buildings through a network of 12kV and 4.16kV circuits. Six 4.16kV and five 12kV circuits are installed on campus. The 4.16kV circuits serve the northeast portion of campus, while the 12kV system serves the rest of the campus and Poly Canyon Village. A SCADA system is active on the campus distribution network which provides metering, status reporting, and also intended to perform fault detection and isolation in the event of a failed section of a feeder.

Most of the electricity used on campus is for lighting and HVAC (Heating, Ventilation, and Air Conditioning). Cal Poly purchases approximately 92% of its electricity needs from PG&E, and generates the other 8% on campus from a combination of solar photovoltaic (PV) and cogeneration. Cal Poly has implemented numerous energy conservation projects to reduce electrical usage, including fluorescent lighting retrofits, occupancy sensors, HVAC equipment upgrades, variable frequency drives for pumps and fans, and installation of digital energy management systems. In spite of the fact that the campus square footage has increased significantly in recent years, electricity use has remained relatively flat – indicating that conservation efforts have been able to offset growth. Electricity costs have escalated rapidly in recent years due to utility rate increases, more than doubling since 2002. Power supplied by PG&E is some of the cleanest in the nation, with over half of the electricity PG&E provides coming from sources that are renewable and/or emit no greenhouse gases. PG&E's 2015 power mix included 30% qualified renewables (biomass, geothermal, small hydro, solar PV, and wind), as defined by California's Renewable Portfolio Standard, 25% natural gas, 23% nuclear, 6% large hydro, and 17% unspecified.[108]

[108] Cal Poly. 2017. *Sustainability: 2016 Sixth Biennial Progress Report*. Cal Poly Administration and Finance – Energy Available at: https://afd.calpoly.edu/sustainability/docs/sustainability_reports/2016_sustainabilityreport.pdf. Accessed March 2017.

## Renewable Energy and Onsite Generation

CSU Executive Order 987 established a goal for all CSU campuses to procure or generate on site 20% of their electricity needs from renewable resources by 2010. The CSU also set a goal to increase on-site generation capacity from 26 megawatts (MW) to 50 MW by 2014. Of this 50 MW capacity, 10 MW are to be from renewable resources. To further reduce Cal Poly's greenhouse gas emissions, the University is currently installing a large solar PV system on 24 acres of Cal Poly sheep pasture bordering Highway 1. The single-axis tracking array, up to 5 MW in capacity, could generate up to 25% of Cal Poly's total electricity needs. The University is investigating opportunities for more solar systems, wind power, fuel cells, biomass systems, and cogeneration or combined heat and power systems.

### Solar

Cal Poly has successfully constructed multiple small solar PV systems across the campus, including a 5 kilowatt (kW) solar array on the roof of the BioResource and Agricultural Engineering Building, a 135 kW solar array on the roof of the Engineering West Building, and a 2.5 kW solar array on the roof of the Facilities Management and Development Building. In addition, as referenced above, the University is currently installing a 5 MW solar PV system on 24 acres of Cal Poly sheep pasture bordering Highway 1 which could generate up to 25% of Cal Poly's total electricity needs.

### Wind Power

As part of Cal Poly's efforts to reduce its environmental impact and greenhouse gas emissions, Facility Management and Development is evaluating opportunities to develop wind generation on campus land. Engineering studies are under way to evaluate potential sites, technologies, regulatory requirements, and funding sources, with the hopes of developing a wind farm on the Cal Poly campus that could generate a significant amount of the University's electricity needs while providing opportunities for teaching and research. There is already active wind power research under way within the College of Engineering at the Cal Poly Wind Power Research Center at Escuela Ranch.

### Fuel Cells

Similar to the statewide solar program, Cal Poly is participating in a California State Fuel Cell program, intended to install hydrogen fuel cells in state facilities using third party power purchase agreements.

### Biomass

With over 6,000 acres of land near the Academic Core area, diverse agricultural crops and livestock herds, a working dairy, and an active BioResource and Agricultural Engineering program, Cal Poly has unique resources and opportunities to utilize biomass as an energy source. A 2008 feasibility study determined that manure from campus livestock herds, waste byproducts from the Dairy Products Technology Center, food waste from Campus Dining, and green waste from the crops units and campus landscape operations could be consumed by an anaerobic digester, or other technology, and the resulting methane gas captured and re-used. Capturing methane from a digestion process to use as a fuel significantly reduces the greenhouse gas effects of the solid waste stream. These waste streams could be used as feed stock for a combined heat

and power system. Cal Poly continues to monitor technologies, regulatory requirements, and potential sources of funding for future opportunities.

## Cogeneration

Cal Poly has two cogeneration facilities in the student housing areas that provide combined heat and power to student dormitories and apartments. The Sierra Madre cogeneration system, constructed in 1984, is a 350 kW unit driven by a natural gas fired Caterpillar reciprocating engine. The system has been in operation for 25 years, generating approximately 1,900,000 kWh of electricity per year – enough to power 170 average homes. It has provided electricity for the Sierra Madre dorms and, when electricity demands are low, back feeds power into the campus distribution system for use in other dorm buildings. The system also provides space heating and domestic hot water for Sierra Madre and Yosemite dorms. This system is currently scheduled for replacement.

The Poly Canyon Village cogeneration system, completed in 2009, is a 500 kW system comprised of two 250 kW Stowell Distributed Power units, using natural gas fired reciprocating engines manufactured by Man. This cogeneration system produces 1,900,000 kWh of electricity per year – enough to power 170 average homes. The system also provides space heating, domestic hot water, and heating for a student recreation swimming pool.

Beyond the various efficiency improvements the campus has implemented, the following additional projects are planned or are underway to enhance overall energy efficiency, reduce the campus' carbon footprint, and accommodate anticipated growth:

- The University owned Mustang Substation has the space for moderate capacity increases. Physical space exists for a twin primary transformer that, together with the current primary transformer can provide ample capacity for growth.
- Campus energy audits identify recommended projects that could be developed in the future;
- There are potential opportunities at the Campus Central Heating and Cooling Plant to improve efficiency of generation and distribution of chilled and hot water through a Monitoring Based Commissioning (MBCx) process.

## Natural Gas

Natural gas is supplied to the campus by the Southern California Gas Company (SoCalGas) at four locations as noted below, each having a SoCalGas meter. SoCalGas is responsible for all piping, valves, etc., through the pressure reducing valve and meter. Distribution piping and appurtenances downstream of the meter is the responsibility of the University. Distribution pressure is 5 pounds per square inch gauge (psig).

The meter locations include:

1. Corner of California Boulevard and Campus Way – This metering station supports the main campus area, the Cerro Vista Apartments, Aero Hanger, Research Development Center, Baggett Stadium area, and the Environmental Horticultural Science Center area.

2. Corner of California Boulevard and Highland Drive – This metering station serves Poly Canyon Village.
3. Sierra Madre #3 – Meter at the building.
4. Outbuilding near Leprino Foods Dairy Innovation Institute – This meter serves Crop Science buildings, Corporation Warehouse/Tech Park area buildings, and the Leprino Foods Dairy Innovation Institute buildings.

Natural gas service to the campus has been historically reliable with no supply interruptions from SoCalGas. The majority of natural gas demand on campus is used for space heating, production of domestic hot water, cooking, and heating of swimming pools. Cal Poly has eight separate natural gas service accounts. Natural gas commodity procurement for the larger service accounts (greater than 250,000 therms per year usage) is provided by the California Department of General Services (DGS) as part of a managed portfolio including nearly all Cal State University and University of California campuses, California State administrative buildings, California Department of Corrections, and various cities, counties, and school districts. Natural gas service for the small accounts (less than 250,000 therms per year) is performed entirely by SoCalGas. All campus gas distribution systems (beyond the utility-owned meter) are maintained by the campus Plumbing Shop.

## Slack and Grand Residential Neighborhood

The existing setting for the proposed Slack and Grand Residential Neighborhood is consistent with the existing setting provided above; however, the location of the proposed N1 Neighborhood is currently undeveloped and would require new connections to the campus wastewater, stormwater, solid waste, and energy utility and service systems.

# Regulatory Setting

## Federal

### Clean Water Act

The Federal Water Pollution Control Act of 1972 and its 1977 amendments, collectively known as the Clean Water Act (CWA; United States Code [U.S.C.] Title 33, Section 1251 et. seq.), aims to restore and preserve the chemical, physical, and biological integrity of the nation's waterways by preventing pollution and giving assistance to publicly-owned treatment works for the improvement of wastewater treatment, and to protect the integrity of wetlands. The CWA regulates the water quality of all discharges into waters of the United States including wetlands and perennial and intermittent stream channels.

# State

## California Integrated Waste Management Act of 1989

California Integrated Waste Management Act (AB 939) requires all jurisdictions to divert 25% of waste stream by 1995, and 50% by 2000 through source reduction, recycling, and composting to limit reliance on landfills.

## California Department of Resources Recycling and Recovery

California Department of Resources Recycling and Recovery (CalRecycle), formerly California Integrated Waste Management Board (CIWMB), is the State agency designated to oversee, manage, and track California's 76 million tons of waste generated each year. It is one of the six agencies under the umbrella of the California Environmental Protection Agency. CalRecycle develops regulations to control and manage waste, for which enforcement authority is typically delegated to the local government. The board works jointly with local government to implement regulations and fund programs.

The Integrated Waste Management Act of 1989 (PRC 40050 et seq. or AB 939, codified in PRC 40000), administered by CalRecycle, requires all local and County governments to adopt a Source Reduction and Recycling Element to identify means of reducing the amount of solid waste sent to landfills. This law set reduction targets at 25% by the year 1995 and 50% by the year 2000. To assist local jurisdictions in achieving these targets, the California Solid Waste Reuse and Recycling Access Act of 1991 requires all new developments to include adequate, accessible, and convenient areas for collecting and loading recyclable and green waste materials.

## California Solid Waste Reuse Recycling Access Act of 1991

The California Solid Waste Reuse and Recycling Access Act of 1991 (California PRC Chapter 18) addressed the state's lack of adequate areas for collecting and loading recyclable materials, which resulted in a significant impediment to diverting solid waste from landfills. The act required state and local agencies to tackle issues related to access to solid waste collecting and loading areas to promote source-reduction, recycling, and composting programs. It also required local agencies to adopt ordinances pertaining to the provision of areas for collecting and loading recyclable materials from development projects.

## State Water Resources Control Board & Regional Water Quality Control Board

SWRCB and its nine RWQCBs are the principal state agencies with primary responsibility for the coordination and control of water quality. SWRCB enforces the water quality standards set forth in the CWA for the State of California on behalf of USEPA. Most SWRCB objectives are based on the California Code of Regulations (CCR) Title 22 State Drinking Water Standards.

Water quality standards for receiving waters are set by the RWQCB in the Water Quality Control Plan, Central Coast Basin. In part to comply with water quality goals, the University adopted and maintains a Water Quality Management Plan (2015) which was approved by the RWQCB. The

University monitors groundwater and creek flow for several parameters, including nitrates and biological oxygen demand (BOD). Although specific criteria fluctuate, the University has generally been in conformance with adopted standards, with limited exceedances.

## California Department of Water Resources

DWR is a department within the California Resources Agency. The DWR is responsible for the State of California's management and regulation of water usage.

## California Energy Commission

The California Energy Commission (CEC) regulates the provision of natural gas and electricity within the state. The CEC is the State's primary energy policy and planning agency. Created in 1974, the CEC has five major responsibilities: forecasting future energy needs and keeping historical energy data, licensing thermal power plants 50 megawatts (MW) or larger, promoting energy efficiency through appliance and building standards, developing energy technologies and supporting renewable energy, and planning for and directing the State response to energy emergencies.

## 2014 CSU Sustainability Policy

In May 2014, the CSU Board of Trustees, with Governor Brown in attendance, adopted the first CSU system-wide Sustainability Policy. The policy aims to further reduce the environmental impact of construction and operation of buildings and to integrate sustainability across the curriculum. The CSU Sustainability Policy established goals to:

- Reduce greenhouse gas emissions to 1990 levels by 2020;
- Reduce greenhouse gas emissions 80% below 1990 levels by 2040;
- Procure 33% of energy supply from renewable sources by 2020;
- Increase on-site energy generation from 44 to 80 MW by 2020;
- Reduce per-capita landfill waste 50% by 2016 and 80% by 2020;
- Reduce water use 10% by 2016 and 20% by 2020;
- Promote use of alternative fuels and transportation programs;
- Procure goods that are recycled, recyclable, or reusable;
- Procure 20% local/organic/free trade food by 2020; and,
- Integrate sustainability across the curriculum.

## California Building Code/California Plumbing Code

Water and wastewater system design parameters are regulated by the CBC and the California Plumbing Code (CPC). The University is required to construct and maintain facilities in compliance with existing code. The University coordinates with the Department of the State Architect, and the State Fire Marshal in determining code compliance.

### Master Plan Principles

The University provides extensive utility infrastructure on campus. The Master Plan includes the following principles related to utilities and service systems:

**MPP 37** Public services and utilities should support the University efficiently, with the flexibility to meet changing needs and designed for ease of maintenance and renovation.

**MPP 39** Development of campus facilities and utility infrastructure should incorporate strategies to minimize impacts on the environment.

**MPP 39** Development of campus facilities and their utility infrastructures support should consider sustainability, alternative sources, self-sufficiency, life-cycle costing and/or other strategies to minimize impacts on the environment.

**MPP 74** Public facilities and utility support structures should be concealed from view unless their visibility serves an explicit educational function.

**IP 5** Cal Poly should continue its program of retrofitting older buildings for energy and water efficiency.

**IP 7** Cal Poly should investigate the potential of becoming a climate action reserve.

**OR 19** Infrastructure development should maximize resource conservation, leverage current policy and practice in support of sustainable design, consider long-term return on energy investment, and establish a foundation for future revenue potential.

**OR 20** Cal Poly should strive to be a net zero campus by investing in renewable power and prioritizing on-campus generation.

**OR 21** Cal Poly should continue to exceed Title 24 Cal Green requirements in new construction.

**OR 22** Cal Poly should plan for solid waste management and in particular for recyclables, in all future development.

## Slack and Grand Residential Neighborhood

The regulatory setting for the Slack and Grand Residential Neighborhood is the same as the regulatory setting for the Master Plan. Please refer to the Regulatory Setting discussions above.

# Impact Criteria

The project will result in a significant impact on utilities and service systems if it will:

- Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board;
- 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;
- Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could have significant environmental effects;
- Result in a determination by the wastewater treatment provider which serves or may serve the project that has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments;
- Be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs;
- Not comply with federal, State, and local statutes and regulations related to solid waste;
- Use large amounts of fuel or energy in an unnecessary, wasteful, or inefficient manner;
- Constrain local or regional energy supplies, require additional capacity, or affect peak and base periods of electrical demand;
- Require or result in the construction of new electrical generation and/or transmission facilities, or expansion of existing facilities, the construction of which could cause significant environmental effects; or,
- Conflict with existing energy standards, including standards for energy conservation.

An impact will also be considered to be significant if the project will require upgrades to existing power infrastructure, the construction of which would cause significant environmental effects. Please refer to Section 3.13, Water Supply, for a discussion of impacts related to water supply and demand associated with buildout of the Master Plan.

# Environmental Impact

The Master Plan provides for implementation of the planned academic, administrative student housing and support facilities, residential neighborhoods, and the associated improvements phased over the 20-year period to accommodate a gradual growth in student enrollment and provides needed facilities supporting University's functions, its goals, and objectives. Potential impacts to utilities and service systems associated with buildout of the Master Plan are described below.

## Water Supply Infrastructure

Based on the water supply analysis included in Section 3.13, Water Supply, Cal Poly currently receives 792 acre feet per year (AFY) of water supply from Whale Rock Reservoir. Campus development pursuant to the Master Plan will result in approximately 491 AFY of increased water demand, totaling 1,283 AFY associated with build-out of the Master Plan. This would place an increased demand on water supply infrastructure on- and off-campus. This applies particularly to the new residential neighborhoods, which will create new permanent sources of water demand and contribute substantially to the demand on water supply infrastructure.

All new Master Plan development will tie into the campus water supply system (Figure 56 and Figure 57). Cal Poly will continue its program of retrofitting older buildings for water efficiency. Additionally, all new and/or expanded water infrastructure on campus, including new water line extensions to serve the proposed residential neighborhoods, would predominantly be located within existing disturbed areas and right-of-ways and are not anticipated to result in significant environmental impacts. This infrastructure will be designed to accommodate increased flows of water associated with buildout of the Master Plan and will be constructed in compliance with the CBC and the CPC. The University will coordinate with the Department of the State Architect and the State Fire Marshal to ensure code compliance.

At this time, the increase in water demand associated with the build-out of the Master Plan is not expected to result in the immediate need for expansion or replacement of existing on-campus water supply infrastructure. As water demand increases over the 20-year planning horizon of the Master Plan, Cal Poly would be responsible for any necessary water infrastructure upgrade or replacement projects on-campus to accommodate increased flows. Cal Poly regularly assesses infrastructure conditions and projected need through the preparation and implementation of the Utility Master Plan. Any necessary upgrade or replacement projects for on-campus infrastructure would be implemented by Cal Poly and are anticipated to be located within existing disturbed areas and rights-of-way and not result in significant environmental impacts.

The City will continue to provide water treatment services to the University through the existing contractual arrangement. Water from Whale Rock Reservoir will continue to be treated at the City's Stenner Canyon Water Treatment Plant. The plant is designed to treat a maximum of 16 million gallons or 49.1 AF per day. Cal Poly is currently entitled to 1,000 AFY in treatment capacity at the plant, which does not exceed the anticipated demand rate of 963 AFY of potable water supply. Therefore, buildout of the Master Plan is not anticipated to require new or physically altered water supply infrastructure off-campus. In the event that future increases in water demand exceed the capacity of off-campus City infrastructure, any infrastructure upgrade or replacement projects would be the responsibility of the City, and would be addressed through Cal Poly's continued payment of all legally required capital facilities fees, including connection fees and user fees, pursuant to and in compliance with the California Government Code Section 54999.

Mitigation has been included to address potential impacts associated with insufficient capacity in water supply infrastructure on campus for increased water demand associated with buildout of the Master Plan. Therefore, impacts would be less than significant with mitigation.

## Wastewater

The campus is moderately-to-heavily developed with existing campus facilities and infrastructure, including wastewater collection infrastructure. Wastewater collection infrastructure on campus is integrated in the campus Utilidor, which makes a loop along Mustang Way, Grand Avenue and North Perimeter Road. All wastewater is discharged to the City of San Luis Obispo's sewer collection and treatment system. The City of San Luis Obispo provides wastewater collection and treatment services to the University through a contractual agreement.[101]

Campus development pursuant to the Master Plan will result in an incremental increase in wastewater flow and place an increased demand on wastewater infrastructure on- and off-campus. This applies particularly to the new residential neighborhoods, which will create new permanent sources of wastewater and contribute substantially to the demand on wastewater infrastructure. As discussed in Section 3.13 Water Supply, buildout of the Master Plan would require approximately 963 AFY of potable water supply. Based on a factor of approximately 80 to 90% of consumed potable water supply becoming wastewater, it is estimated that buildout of the Master Plan would generate approximately 770 to 867 AFY of wastewater, or approximately 687,412 to 774,008 gpd. The residential neighborhoods would use approximately 210 AFY of water and thus, would generate approximately 168 to 189 AFY of wastewater,[109] or approximately 149,000 to 168,000 gpd.

All new Master Plan development will tie into the campus wastewater collection system (Figure 58). Cal Poly will continue its program of retrofitting older buildings for water efficiency. Additionally, all new and/or expanded wastewater infrastructure on campus, including a potential new wastewater reclamation facility (WRF) and new sewer line extensions to serve the proposed residential neighborhoods, will be designed to accommodate increased flows of wastewater associated with buildout of the Master Plan and will be constructed in compliance with the CBC and the CPC. The University will coordinate with the Department of the State Architect and the State Fire Marshal to ensure code compliance.

The WRF proposed under the Master Plan would be designed to reclaim and repurpose wastewater, and reduce the quantity of potable water used for non-potable purposes. The WRF would have a total capacity of 200 AFY, and a peak processing capacity of 400,000 gpd. The reclaimed treated water would be used in place of potable water for landscaping, cooling water towers, agricultural irrigation, and other non-potable uses on campus, thereby reducing the demand for potable water for these uses. The Cal Poly WRF would be a modular design that could be modified to accommodate campus growth and associated demand over time. If the on-campus WRF is constructed, it is expected to be capable of accommodating wastewater flows associated with the new residential neighborhoods. At this time, it is unknown if or when a new WRF will be constructed on campus. If the proposed WRF is constructed on campus, the facility would be constructed, operated, and maintained under a permit from the RWQCB and done so in a manner that is in compliance with all applicable waste discharge requirements and in a manner that is suitable/compatible with concentrations needed to also operate the City's WRRF.

The City of San Luis Obispo will continue to provide wastewater collection and treatment services to the University through the existing contractual arrangement. The entire campus is expected to tie into the City's sewer main located near the intersection of California and Foothill Boulevard, which will continue to be metered by the City and the University will continue to be charged accordingly for service. As discussed previously, Cal Poly has an existing allotment of 475,000 gpd per its capital share of the City's WRRF facility. Wastewater generation from campus varies significantly over the course of the year, with current flows averaging at 206,000 gpd, less than half of its allotted capacity, and recent daily flows in October 2017 exceeding 410,000 gpd. The maximum quantity of wastewater anticipated to be generated by the buildout of the Master Plan would be 774,008 gpd, which would exceed Cal Poly's existing capital share

[109] Based on a factor of 80% to 90% of consumed water becoming wastewater.

allotment in the City's WRRF facility. If constructed, operation of the proposed on-campus WRF would reduce the quantity of wastewater destined for the City's facility by approximately 400,000 gpd, maintaining flows of wastewater at levels of approximately 374,008 gpd, which would be within Cal Poly's allotment of 475,000 gpd. Therefore, the increase in wastewater generation associated with buildout of the Master Plan is considered a potentially significant impact that would be reduced to a less-than-significant level either through the construction and operation of an on-campus WRF, or by purchasing additional capacity in the City's facility, as required by the mitigation measure provided below.

The City's WRRF will be expanded to treat 5.4 million gallons per day with the City's WRRF project planned to begin construction in 2018. Additional capacity in the WRRF is planned to serve the buildout identified in the City's General Plan.

As wastewater generation increases over the 20-year planning horizon of the Master Plan, Cal Poly would be responsible for any necessary wastewater infrastructure upgrade or replacement projects on-campus to accommodate increased flows. Cal Poly regularly assesses infrastructure conditions and projected need through preparation and implementation of the Utility Master Plan. Any necessary upgrade or replacement projects for on-campus infrastructure would be implemented by Cal Poly and would generally be located within existing disturbed areas and right-of-ways and are not anticipated to result in significant environmental impacts. In the event that future increases in wastewater generation exceed the capacity of off-campus City infrastructure, any infrastructure upgrade or replacement projects would be the responsibility of the City, and would be addressed through Cal Poly's continued payment of all legally required capital facilities fees, including sewer connection fees and user fees, pursuant to and in compliance with the California Government Code Section 54999.

As discussed above, mitigation has been included to address potential impacts associated with insufficient capacity for increased wastewater demand associated with buildout of the Master Plan. Therefore, impacts would be less than significant with mitigation.

## Stormwater Drainage

Although the campus is already developed, new campus facilities and improvements could result in an increase in impervious surfaces, increases in the rate and volume of stormwater runoff, and modification of existing stormwater collection and drainage infrastructure. As such, future campus development could require the construction of new infrastructure to manage stormwater drainage. All construction of new facilities and improvements will be carried out in compliance with existing regulations, including implementation of a SWPPP, which includes BMPs for controlling stormwater, for all new development disturbing more than 1 acre. New development will require the construction of stormwater drainage infrastructure to control runoff associated with new, expanded, and modified impervious surfaces and drainages. Therefore, prior to construction of Master Plan facilities and improvements that will require new or modified drainage facilities, a drainage plan will be prepared to ensure drainage facilities will be capable of controlling drainage flows associated with that facility or improvement. Compliance with existing SWPPP requirements and implementation of the identified mitigation will ensure increased stormwater flows will be controlled and impact will be less than significant.

The Master Plan will require new infrastructure to manage storm drainage, particularly to service new development in the North Campus planning area. The environmental effects of constructing stormwater improvements are addressed in other sections of this EIR, including but not limited to Air Quality, Biological Resources, Cultural Resources, and Noise. It is anticipated that connections and extensions of the storm drain system would occur primarily within roadways or other areas that are already developed or disturbed and which are unlikely to have sensitive biological or cultural resources. Additionally, due to the limited ground disturbance needed for connections and extensions, construction-phase air quality and noise impacts would also be less than significant. The effects of increased storm water runoff from the development of the campus under the proposed Master Plan are also evaluated in Hydrology and Water Quality, and are found to be less than significant with mitigation. Therefore, the implementation of the proposed Master Plan would not result in the construction of new storm drain facilities that would cause significant environmental impacts. The impact related to the construction of storm drainage improvements would be less than significant.

All new stormwater infrastructure that will be constructed to serve the new facilities will be designed to comply with the Low Impact Development (LID) Guidelines established by the RWQCB. These guidelines generally require on-site retention and infiltration of stormwater. All new stormwater infrastructure will also be designed to comply with the University's 2015 Water Quality Management Plan, approved by the RWQCB. Water quality standards for receiving waters are set by the RWQCB in the Water Quality Control Plan, Central Coast Basin. In part to comply with water quality goals, the University adopted and maintains a Water Quality Management Plan[110] which was approved by the RWQCB.

The University monitors groundwater and creek flow for several parameters, including nitrates and biological oxygen demand (BOD). This program includes a contract to annually clean and vacuum all catch basins, drainage inlets, and area drains every October. The campus has also installed storm-interceptors as part of the Poly Canyon Village Student Housing complex and approximately 10% of the existing drainage inlets have open bottoms. Implementation of the identified mitigation measures will ensure that any increased stormwater flows will be controlled.

Further, with continued implementation of the University's Water Quality Management Plan, payment of all legally required capital facilities fees, including drainage connection fees and user fees, pursuant to and in compliance with the California Government Code Section 54999, and implementation of the identified mitigation, the Master Plan's stormwater and drainage impacts will be less than significant.

## Solid Waste

Construction activities associated with the Master Plan will result in the generation of solid waste in the form of construction waste. Any demolition debris or other construction debris will be collected via existing collection systems or by private contractors. Cal Poly will continue to contract with San Luis Garbage for collection of solid waste and recycling, and waste will

[110] California Polytechnic State University. 2015. *Water Quality Management Plan for Cal Poly Land in San Luis Obispo Creek and Chorro Creek Watersheds*. February 2015.

continue to be transported to Cold Canyon Landfill. Cold Canyon Landfill is projected to have available capacity beyond the 20-year Master Plan period; therefore, construction activities are not anticipated to result in a significant impact associated with solid waste.

Implementation of the Master Plan will result in an increased demand on the campus integrated waste management program. New development, particularly the new residential development, will require recycling, composting, trash receptacles, and collection services. Cal Poly will continue to operate the integrated waste management program that includes source-use reduction, recycling, composting of food waste, green waste, manure resale of scrap metal and surplus equipment, and zero waste event catering. Cal Poly will also continue to contract with San Luis Garbage for collection of solid waste and recycling. Recycling containers will be provided to faculty, staff, and students by Facility Services in all new facilities, and collection will be conducted by Custodial Services and the campus' Recycling Coordinator. The projected annual disposal quantity associated with buildout of the Master Plan is estimated to be approximately 7,622 tons.[111]

Cal Poly will continue to implement the Zero Waste Pilot Program at several locations around campus. Additionally, Cal Poly, as per Assembly Bill 75, has been mandated by the California Integrated Waste Management Board (CIWMB) to divert at least 50% of its solid waste from the landfill since 2004 and will continue to comply with this mandate. The campus has undertaken many other sustainably-oriented endeavors, catalogued every two years in the Biennial Progress Report for Sustainability for Cal Poly Facilities and Operations, since 2006. Indicators measuring improvements in sustainability efforts include solid waste and recycling, which are monitored by the University to ensure that Cal Poly meets, and in some cases, exceeds, the California State University system's 2014 Sustainability Policy, which aims to reduce per capita waste going to the landfills to 50% by 2016, by 80% by 2020, and move to zero waste. The University will continue to submit annual reports to the CIWMB documenting the tonnage of solid waste generated by campus, and the percentage diverted from the landfill by recycling, reuse, or resale. As per Assembly Bill 1016 in 2008, the CIWMB has changed the reporting methodology, and will track waste generation on a per-capita basis. The requirement for at least 50% diversion from landfill is still in effect.

The projected annual disposal quantity associated with buildout of the Master Plan based on the CSU Waste Management goal of 80% of CIWMB target (0.28 pound per FTE student per day) for current campus disposal, enrollment and on-campus housing growth, and residential neighborhood development would be approximately 2,546 tons per year. This disposal quantity would be approximately 294 tons per year less than the current quantity of solid waste disposed of at the Cold Canyon Landfill. Cal Poly would continue to be served by a landfill with sufficient permitted capacity to accommodate the projected needs associated with the Master Plan and Cal Poly would continue to comply with federal, state, and local statutes and regulations related to solid waste. Therefore, impacts associated with the Master Plan would be less than significant.

[111] Veium, E. 2017. *Master Plan EIR Solid Waste Impact Analysis*. Prepared on October 11, 2017.

# Energy

Cal Poly continues to invest in energy efficiency as the most cost-effective way to reduce greenhouse gas emissions and operating costs while modernizing aging buildings and infrastructure on a campus-wide basis to ensure compliance with the 2014 CSU Sustainability Policy.

Development pursuant to the Master Plan will result in an increased demand on energy, particularly related to the development of new housing. The Master Plan anticipates that future energy needs will be met through the same means as present, with increasing emphasis on using clean energy sources and on designing and retrofitting facilities for energy efficient operations.

Most of the electricity used on campus has been and will continue to be for lighting and HVAC. Cal Poly purchases approximately 92% of its electricity needs from PG&E, and generates the other 8% on campus from a combination of solar PV and cogeneration. Cal Poly has implemented numerous energy conservation projects to reduce electrical usage, including fluorescent lighting retrofits, occupancy sensors, HVAC equipment upgrades, variable frequency drives for pumps and fans, and installation of digital energy management systems.

By Governor's Executive Order S-20-04, Cal Poly and all state agencies are mandated to purchase energy star rated equipment and appliances whenever possible. Cal Poly requires Energy Star certification for all computers, monitors, printers, copiers, refrigerators, and other appliances and equipment. The Master Plan also requires that new facilities and campus infrastructure be environmentally responsible, energy efficient, and showcase advancements in sustainable technology. New buildings will continue to be designed to meet LEED (Leadership in Energy and Environmental Design) standards. Energy systems will be continually monitored, maintained, and updated to ensure that Cal Poly campus facilities operate in the most efficient manner possible. Outdated technology and systems will continue to be upgraded or replaced as needed, from the simplest valve or faucet in a bathroom, to the complex lighting in the Performing Arts Center.

The Master Plan incorporates "smart growth" measures such as the compact form around the core and mixed uses, approaches that reduce the reliance on cars and that improve the efficiency of infrastructure and energy use. The plan includes areas for renewable energy sources such as solar and wind energy generation, water reclamation, and for waste composting, which is especially important at a University with hands-on, learn-by-doing agricultural programs. Furthermore, and importantly, the Master Plan provides for additional housing on campus that will reduce commuting and its impacts; and also emphasizes a pronounced shift away from cars toward active transportation modes including walking, bikes and transit.

The University has undertaken many sustainability initiatives and projects, which are catalogued every 2 years in the Biennial Progress Report for Sustainability for Cal Poly Facilities and Operations, since 2006. Indicators measuring improvements in sustainability efforts, which include energy use, include:

- Reducing GHG emissions to 1990 levels by 2020, and to 80% below 1990 levels by 2040
- Increasing self-generation of energy from 44 to 80 MW by 2020

- Sourcing energy to 33% renewables by 2020
- Reducing per capita waste going to the landfills to 50% by 2016, and 80% by 2020
- Reducing water use by 10% by 2016, and 20% by 2020
- Purchasing at least 20% of food from sustainable sources (local, organic, free trade)
- Integrate Sustainability across the curriculum

These indicators are monitored by the University to ensure that Cal Poly meets, and in some places, exceeds, the California State University system's Sustainability Policy goals. To meet the campus' needs for electricity and additional heating capacity as new buildings are developed, Facility Services is evaluating opportunities to implement a fuel cell combined heat and power system at the campus central plant. Such a system will provide both electricity and hot water at very high efficiencies, will emit significantly less greenhouse gas than conventional sources, and will produce virtually zero emissions of air pollutants.

Facility Management and Development is also evaluating opportunities to develop wind generation on campus land to offset the energy demand. Engineering studies are under way to evaluate potential sites, technologies, regulatory requirements, and funding sources, with the hopes of developing a wind farm on the Cal Poly campus that could generate a significant amount of the University's electricity needs while providing opportunities for teaching and research. There is already active wind power research under way within the College of Engineering at the Cal Poly Wind Power Research Center at Escuela Ranch.

Beyond the various efficiency improvements the University has implemented, the following additional projects are planned or underway to enhance overall energy efficiency, reduce the campus' carbon footprint, and accommodate anticipated growth:

- The University owned Mustang Substation has the space for moderate capacity increases. Physical space exists for a twin primary transformer that, together with the current primary transformer can provide ample capacity for planned campus development.
- Campus energy audits identify recommended projects that could be developed in the future.
- There are potential opportunities at the Campus Central Heating and Cooling Plant to improve efficiency of generation and distribution of chilled and hot water through an MBCx process.

While the projected increase in student enrollment and provision of new facilities on campus, including new student housing, is anticipated to result in an incremental increase in demand for energy, implementation of the Master Plan will result in beneficial effects by implementing energy efficient building design compliant with or exceeding LEED standards, implementing smart growth measures, pursuing alternative renewable energy sources, and by monitoring and achieving the targets established by the Biennial Progress Report for Sustainability for Cal Poly Facilities and Operations. Accordingly, development under the Master Plan will not use large amounts of fuel or energy in an unnecessary, wasteful, or inefficient manner; constrain local or regional energy supplies, require additional capacity, or affect peak and base periods of electrical demand; require or result in the construction of new electrical generation and/or transmission facilities, or expansion of existing facilities, the construction of which could cause significant

environmental effects; or conflict with existing energy standards, including standards for energy conservation. Therefore, impact related to energy will be less than significant.

# Slack and Grand Residential Neighborhood

The residential neighborhood at Slack Street and Grand Avenue (N1) will provide 420 units in three to four-story apartment buildings. The units will provide a mix of studio, one-, two-, and three-bedroom units. Within this approximately 22-acre site, approximately 2.3 acres will be used for park/open space and a play area for the residents. Parking will be provided on the site at a ratio of 1.7 spaces per unit, with a total of 713 spaces.

## Water Supply Infrastructure

The proposed Slack and Grand Residential Neighborhood (N1) will require 60 AFY of new water supply and will require new water supply infrastructure connections to the campus water conveyance system, which will increase Cal Poly's water connections by approximately 2,422 drain fixture units (DFUs). Cal Poly will continue to be served by the City's treatment facility and utilize its permitted capacity. Flows will be metered consistent with the terms of Cal Poly's agreement with the City of San Luis Obispo regarding water rates. Impacts related to water supply infrastructure would be consistent with those discussed above for overall Master Plan build-out; therefore, impacts will be less than significant with mitigation.

## Wastewater

The proposed Slack and Grand Residential Neighborhood (N1) will require new sewer infrastructure connections to the campus sewer system, which will increase Cal Poly's sewer wastewater connections by approximately 2,422 DFUs. Cal Poly will continue to be serviced by the City's WRRF and utilize its permitted capacity. Main collection lines exist along Grand Avenue; therefore, the project will likely tie-in to the force main at Grand Avenue, which connects to the City tie-in at California Boulevard. Flows will be metered consistent with the terms of Cal Poly's agreement with the City of San Luis Obispo regarding water and sewer rates.

As discussed in Section 3.13 Water Supply, the residential neighborhoods proposed under the Master Plan would cumulatively require approximately 210 AFY, or 187,476 gpd, of water supply. The proposed Slack and Grand Residential Neighborhood is anticipated to require approximately 60 AFY, or 53,564.5 gpd of water supply. Based on a factor of approximately 80 to 90% of consumed potable water supply becoming wastewater, it is estimated that buildout of the Slack and Grand Residential Neighborhood would generate approximately 48 to 54 AFY, or 42,851.6 to 48,208.05 gpd of wastewater. Combined with the existing 206,000 gpd, the anticipated increase of 48,208.05 gpd of wastewater associated with the Slack and Grand Residential Neighborhood would not exceed the University's allotment of 475,000 gpd per its capital share in the City's WRRF.

As discussed previously, Cal Poly regularly assesses infrastructure conditions and projected need through the preparation of the Utility Master Plan. Any necessary upgrade or replacement projects for on-campus infrastructure would be implemented by Cal Poly and are anticipated to be located within existing disturbed right-of-ways and not result in significant environmental impacts. In the event that future increases in wastewater generation exceed the capacity of off-

campus City infrastructure, any infrastructure upgrade or replacement projects would be the responsibility of the City, and would be addressed through Cal Poly's continued payment of all legally required capital facilities fees, including sewer connection fees and user fees, pursuant to and in compliance with the California Government Code Section 54999. Therefore, impacts would be less than significant.

### Stormwater

The proposed N1 Neighborhood would be developed on existing undeveloped, pervious surfaces within the East Campus planning area. This would create new impervious surfaces, modify existing drainage patterns in the vicinity, and increase stormwater runoff. New stormwater drainage and collection facilities would be required to accommodate the increased runoff generated by the proposed development. The environmental impacts of the construction of these new facilities are analyzed in other portions of this EIR and were found to be less than significant. As discussed below, mitigation has been provided to ensure impacts associated with the development of new stormwater infrastructure will be less than significant.

### Solid Waste

Cal Poly estimates that the proposed Slack and Grand Residential Neighborhood will generate limited quantities of solid waste from construction activities and will generate approximately 9,682.4 yards of solid waste associated with residential land use during operation. Cal Poly will continue to operate the integrated waste management program that includes source-use reduction, recycling, composting of food waste, green waste, and manure, resale of scrap metal and surplus equipment, and zero waste event catering. Out of the 9,682.4 yards of total solid waste per year, approximately 4,841.2 yards of material will be destined for a landfill and approximately 4,841.2 yards of material will be recycled per year. Cal Poly will continue to contract with San Luis Garbage for collection of solid waste and recycling. Recycling containers will be provided to faculty, staff, and students by Facility Services for all new development, and collection will be performed by Custodial Services and the campus Recycling Coordinator.

Cal Poly, as per AB 75, has been mandated by the CIWMB to divert at least 50 percent of its solid waste from the landfill since 2004 and will continue to comply with this mandate. Cal Poly will also continue to comply with the solid waste targets included in the Biennial Progress Report for Sustainability for Cal Poly Facilities and Operations which require Cal Poly to reduce per capita waste going to the landfills to 50% by 2016, and 80% by 2020. As discussed above, there is current capacity at the Cold Canyon Landfill to accommodate development under the Master Plan, including the N1 Residential Neighborhood. Therefore, impacts associated with solid waste will be less than significant.

### Energy

The proposed Slack and Grand Residential Neighborhood will be designed consistent with the CBC and LEED standards and will tie into existing utility connections. This development will place an increased demand of approximately 1,371 KVA on energy service; however, it will be designed to facilitate the energy targets established in the Biennial Progress Report for Sustainability for Cal Poly Facilities and Operations. Additionally, increased energy demand is expected to be met by PG&E and offset by on-campus renewable energy sources. Therefore, impacts associated with energy will be less than significant.

### Summary

Impacts to utilities and service systems associated with the new Slack and Grand Residential Neighborhood (N1) will be consistent with those discussed above; therefore, impacts will be less than significant with prescribed mitigation and additional mitigation is not necessary.

# Mitigation Measures

In addition to payment of all legally required capital facilities fees, including water, sewer, and drainage connection fees and user fees, pursuant to and in compliance with the California Government Code Section 54999, the following measures will be implemented:

3.12-1 Cal Poly will continue to assess the condition of on-campus water supply, wastewater, and stormwater infrastructure through the preparation and implementation of the Utility Master Plan and upgrade, repair, or replace any compromised or inadequate infrastructure as needed to meet Campus water supply, wastewater collection and treatment, and stormwater drainage demands.

3.12-2 Cal Poly will continue to monitor wastewater volumes and shall either purchase additional shares in the City's treatment plant prior to exceedance of current agreement limits, or offset the demand for increased capacity in the City's treatment plant through the construction of new treatment facilities on campus.

3.12-3 Prior to the commencement of construction activities associated with new development that will modify existing drainage and/or require the construction of new drainage infrastructure to collect and control runoff, Cal Poly will prepare a drainage plan and supportive hydrologic analysis demonstrating compliance with LID Guidelines established by the RWQCB and the University's 2015 WQMP, approved by the RWQCB.

## Slack and Grand Residential Neighborhood

Impacts to utilities and service systems would be consistent with those described above and would be reduced to levels that are less than significant through the implementation of mitigation measures provided above. No additional mitigation measures are necessary.

# Level of Impact After Mitigation

Impacts to utilities and service systems will be less than significant with implementation of the identified mitigation measures and continued compliance with applicable state and federal regulations.

## Slack and Grand Residential Neighborhood

Impacts to utilities and service systems will be less than significant with continued compliance with applicable state and federal regulations.

# Cumulative Impact

As part of its regional planning functions, SLOCOG develops and publishes regional population, employment, and housing forecasts for the County and its communities. Table 69 shows SLOCOG growth projections for the City and County prepared by Economics Research Associates, and Department of Finance projections for the State.

**Table 69. San Luis Obispo Population Projections, 2015–2030[112]**

| Year | City | County | State |
|---|---|---|---|
| 2015 | 44,668 | 275,590 | 38,801,063 |
| 2020 | 45,969 | 286,940 | 40,643,643 |
| 2025 | 46,704 | 296,851 | 42,451,760 |
| 2030 | 47,622 | 309,288 | 44,279,354 |
| Annual Growth Rate | 0.40% | 0.72% | 1.0% |

Cumulative growth within the City and County, combined with growth resulting from build-out of the Master Plan has the potential to result in cumulative impacts to utilities and service systems, which are discussed in further detail below.

## Water Supply Infrastructure

Combined with projected population project and pending and approved projects in the region, implementation of the Master Plan has the potential to contribute to cumulative impacts to water supply infrastructure through the cumulative increased demand for water supply. Future campus development pursuant to the Master Plan will generate demand for water and new connections for water supply infrastructure, potentially contributing to cumulative impacts on the City's water supply and treatment infrastructure. However, compliance with the Master Plan Principals, continued implementation of water conservation efforts on campus, payment of all legally required capital facilities fees and user fees pursuant to and in compliance with the California Government Code Section 54999 would reduce potential cumulative impacts related to water supply infrastructure associated with the buildout of the Master Plan to be less than significant.

## Wastewater

Implementation of the pending and approved projects listed in the cumulative development scenario would increase development on campus and in the immediate area, increasing the regional wastewater generation rate in the area. The City has not identified capacity constraints at the plant, in part due to increasing water conservation and improved collection infrastructure. Future campus development pursuant to the Master Plan will generate increased quantities of

[112] City of San Luis Obispo. 2015. *2014–2019 General Plan Housing Element*. Adopted January 20, 2015. Available at: http://www.slocity.org/government/department-directory/community-development/planning-zoning/general-plan. Accessed in October 2017.

wastewater, potentially contributing to cumulative impacts on the City's WRRF. However, development of the Master Plan's new wastewater reclamation facility on campus, continued reliance on Cal Poly's capital share of the City's WRRF, and implementation of proposed mitigation measures would reduce potential cumulative wastewater impacts associated with the buildout of the Master Plan to less than significant. Therefore, cumulative impacts will be less than significant with implementation of Mitigation Measure 3.12-1.

## Stormwater Drainage

Without mitigation, buildout of the Master Plan will result in an increase in the quantity of stormwater generated on and off campus, which could contribute to cumulative impacts to on-campus and off-campus stormwater infrastructure. Implementation of proposed mitigation measures would ensure no net increase in stormwater drainage levels would be generated on or off campus, and thus would not result in cumulative adverse impacts associated with buildout of the Master Plan. Therefore, cumulative impacts will be less than significant with implementation of Mitigation Measure 3.12.2.

## Solid Waste

As discussed previously, he projected annual disposal quantity associated with buildout of the Master Plan based on the CSU Waste Management goal of 80% of CIWMB target (0.28 lbs per FTE student per day) for current campus disposal, enrollment and on-campus housing growth, and residential neighborhood development would be approximately 2,546 tons per year. This disposal quantity would be approximately 294 tons per year less than the current quantity of solid waste disposed of at the Cold Canyon Landfill. Cal Poly would continue to be served by a landfill with sufficient permitted capacity to accommodate the projected needs associated with the Master Plan and Cal Poly would continue to comply with federal, state, and local statutes and regulations related to solid waste. Furthermore, the proposed Master Plan includes sustainability goals to reduce the Campus's solid waste generation and disposal. The extensive programs focused on reduction in demand would minimize the project's contribution to cumulative impacts. Therefore, buildout of the Master Plan would not contribute to cumulative impacts related to solid waste.

## Energy

Build-out of the Master Plan could contribute to the cumulative demand on PG&E for energy, combined with cumulative regional development. The Master Plan anticipates that future energy needs will be met through the existing energy sources, with increasing emphasis on using clean energy sources and on designing and retrofitting facilities for energy efficient operations. While the projected increase in student enrollment and provision of new facilities on campus, including new student housing, is anticipated to result in an increase in demand for energy, implementation of the Master Plan will result in beneficial effects by implementing energy efficient building design compliant with or exceeding LEED standards, implementing smart growth measures, pursuing alternative renewable energy sources, and by monitoring and achieving the targets established by the Biennial Progress Report for Sustainability for Cal Poly Facilities and Operations. Implementation of these measures will reduce the Master Plan's contribution to

cumulative impacts related to energy. Therefore, the Master Plan will not result in a significant contribution to a cumulative impact related to energy.

### Residual Impact

Cumulative impacts to utilities and service systems will be less than significant with implementation of the identified mitigation measures and continued compliance with applicable state and federal regulations.

## Slack and Grand Residential Neighborhood

Cumulative impacts to utilities and service systems will be less than significant with implementation of the identified mitigation measures and continued compliance with applicable state and federal regulations and CSU and campus policies.

### Residual Impact

Cumulative impacts to utilities and service systems will be less than significant with implementation of the identified mitigation measures and continued compliance with applicable federal and state regulations.

# 3.13 Water Supply

This section examines the potential impacts to water supply associated with the campus development pursuant to the Master Plan, including the development of the Slack and Grand Residential Neighborhood.

## Environmental Setting

Cal Poly obtains water for its operations from the Whale Rock Reservoir and two existing groundwater wells on campus. Cal Poly has water rights for both groundwater and surface water. Groundwater is pumped from agricultural wells located on University land and is limited by relatively shallow, low-capacity aquifers, especially during drought years. By SWRCB permit, Cal Poly has surface water rights to Brizzolara Creek on the Cal Poly campus and to Old Creek, which supplies Whale Rock Reservoir.

California recently underwent a 5-year severe drought, with the year 2015 being the hottest year on record. On January 17, 2014, California State Governor Jerry Brown declared a drought state of emergency, and on May 9, 2016, the Governor issued an order to continue water savings as drought persisted. The 2017 winter rains during the previous winter season, which was one of California's wettest winters on record, did not fully alleviate drought conditions in portions of central and southern California.[113] With California's long-term warming having substantially increased the number of hot years and its drought patterns becoming more common, the likelihood of future prolonged drought conditions and multiple cycles of severe drought has increased, elevating the importance of availability and reliability of future water supplies.

### Whale Rock Reservoir

Whale Rock Reservoir is the primary source of water supply for the campus. Whale Rock was created by constructing an earthen dam on Old Creek near the town of Cayucos in San Luis Obispo County. The dam was constructed by the State Department of Water Resources to provide water to the City, Cal Poly, and California Men's Colony (the three agencies that comprise the Whale Rock Commission). The Whale Rock Dam captures water from a 20.3-square-mile watershed and has a maximum storage capacity of 38,967 AF. The reservoir's water is delivered to the three agencies through 17.6 miles of 30-inch pipeline and two pumping stations. The reservoir's water storage level has increased from 12,578 AF, or 32.28% of total storage capacity in October 2016, to 29,901 AF, or about 76% capacity as of October 2017,[114] as a result of a series of storms during the 2017 winter season that was one of California's wettest winters on record.[115]

[113] As of April 4, 2017
[114] http://slocity.org/government/department-directory/utilities-department/water/water-sources/whale-rock-reservoir
[115] California's wettest winter on record is the winter of 1982-1983.

Cal Poly holds rights to 33.71% of the reservoir's water for its discretionary use. Using a modeling tool jointly developed by the City and Cal Poly, Cal Poly conducted a safe annual yield analysis of Whale Rock Reservoir. The model projected safe annual yield for the reservoir using actual operational data from 1982 to 2016 adjusted under a range of climate change scenarios from the USEPA and other sources. Assuming a conservative hot and dry climate change scenario, the model resulted in an estimated safe annual yield of 959 AFY for Cal Poly's share of Whale Rock Reservoir's water. Based on this safe annual yield projection, Cal Poly updated historical agreements with the College of Agriculture and Environmental Sciences (CAFES), with one-third water available to agriculture and two-thirds to all other campus uses. As a result, the new annual agricultural water allocation is 320 AFY and the annual allocation for all other campus uses in 639 AFY.

The City delivers water to the Cal Poly campus from both Whale Rock Reservoir and Salinas Reservoir. The City operates Whale Rock Reservoir based on the most economical way to deliver both treated water and raw water. Whale Rock water is generally used for domestic use, and untreated Salinas water is generally used for agricultural use. Both types of delivered water are applied against Cal Poly's Whale Rock water rights.

Water from Whale Rock Reservoir is treated at the Stenner Canyon Water Treatment Plant owned and operated by the City (addressed in Section 3.12, Utilities and Service Systems).

## Groundwater

Groundwater for the main campus is obtained from two campus wells extracting water from the San Luis Obispo Valley Groundwater Basin, Stenner Creek sub-basin. The San Luis Obispo Valley Groundwater Basin is situated in the San Luis and Edna Valleys in central to southwest San Luis Obispo County. A rise in bedrock south of the San Luis Obispo County Regional Airport has created two separate subsurface drainage systems or sub-basins (i.e., San Luis Valley and Edna Valley). The basin overlies an area of approximately 12,700 acres (19.9 square miles) and is part of the Central Coast Watershed. The Edna Valley Sub-basin (approximately 4,700 acres) is entirely within unincorporated San Luis Obispo County, while the San Luis Valley Sub-basin (approximately 8,000 acres) is within both unincorporated San Luis Obispo County and the city of San Luis Obispo.

In 2015, the state legislature approved an important new groundwater management law known as the Sustainable Groundwater Management Act (SGMA). SGMA requires that high- and medium-priority basins comply with the new law that provides for the preparation and implementation of groundwater sustainability plans for high- and medium-priority groundwater basins. Department of Water Resources designated San Luis Obispo Valley Edna Valley Basin as a medium-priority basin. The San Luis Obispo Valley Groundwater Basin, including Stenner Creek sub-basin, is not designated as a priority basin.

The non-potable well water is used for Cal Poly agricultural operations only. The estimated sustained yield of the San Luis Obispo Valley basin is 5,900 AFY and the basin extractions total approximately 5,800 AFY The groundwater in storage in the portion of the basin was estimated

to range from 15,000 to 18,000 AF during the period from 1969 through 1993, with the average for the entire period at 16,300 AF. [116]

## Cal Poly Water Use Reductions

Cal Poly campus uses water for agriculture, landscape, housing, academic, support, and other facilities. In response to California's recent 5-year severe drought, Cal Poly implemented a comprehensive drought response water management program to reduce water use on an ongoing basis. The program includes extensive retrofits of water fixtures, upgrades of irrigation systems, improved agricultural water use efficiency, and other water conservation measures. Evaluation of the program's performance shows that Whale Rock water use at Cal Poly was reduced from 1,106 AFY in 2013 to 858 AFY in 2015, a 22% reduction. Furthermore, the adjustment of the agricultural water allocation as previously described reduces ongoing annual Whale Rock water used by agriculture to 320 AFY or below.

Table 70 provides greater detail of Cal Poly's water use reductions between 2013 and 2015.

**Table 70. Cal Poly Water Use Reductions (2013–2015)**

| **Water Use** | **2013 (AF)** | **2015 (AF)** | **Reduction** |
|---|---|---|---|
| ***Whale Rock Water*** | | | |
| Agriculture (non-potable)117 | 474 | 362 | 24% |
| Sports Complex Fields (non-potable) | 79 | 56 | 29% |
| Campus Landscape (potable)118 | 269 | 186 | 31% |
| Buildings (potable) | 263 | 210 | 20% |
| Process Use – central plants, swimming pools (potable) | 20 | 43* | -116%1 |
| ***Groundwater*** | | | |
| Agriculture – well water | 97 | 120** | -24%2 |
| **Whale Rock Water Total** | **1,106** | **858** | **22%** |
| ***Cumulative Campus Total (Whale Rock and Groundwater)*** | ***1,203*** | ***978*** | ***19%*** |

* The process water use temporarily increased by 23 AFY in 2015 due to replacement, repairs, and maintenance of the existing water distribution systems for these facilities.
** Groundwater use increased due to operational changes at the crops unit whereby only groundwater is applied for food safety purposes.

[116] http://www.water.ca.gov/pubs/groundwater/bulletin_118/basindescriptions/3-9.pdf
[117] Non-potable water from Whale Rock Reservoir refers to untreated water that bypasses the treatment plant and is piped straight to campus.
[118] Potable water from Whale Rock Reservoir refers to water that is treated at the City's treatment plant before being piped to campus.

## Slack and Grand Residential Neighborhood

The site of the Slack and Grand Residential Neighborhood is currently undeveloped, and is only intermittently used by Cal Poly for horse grazing. No water use is currently associated with the proposed residential neighborhood's site.

# Regulatory Setting

## State Regulations

### Sustainable Groundwater Management Act

The SGMA provides for the preparation and implementation of groundwater sustainability plans for high- and medium-priority groundwater basins. SGMA requires the formation of locally-controlled groundwater sustainability agencies in the state's priority groundwater basins. SGMA also requires that groundwater sustainability agencies develop and implement a groundwater sustainability plan to meet the sustainability goal of the basin or sub-basin to ensure that it is operated within its sustainable yield, without causing undesirable results.

### Urban Water Management Planning Act

The Urban Water Management Planning Act requires urban water suppliers that provide water for municipal purposes to more than 3,000 connections, or supply more than 3,000 AF of water annually, to prepare an Urban Water Management Plan (UWMP) to support their long-term resource planning, and ensure adequate water supplies are available to meet existing and future water demands. The plan must assess the reliability of the water sources over a 20-year planning horizon and report progress on 20% reduction in per-capita urban water consumption by the year 2020. The plans must be prepared every 5 years and submitted to the Department of Water Resources.

The City adopted its 2015 UWMP on June 14, 2016, and it was subsequently submitted to the Department of Water Resources. The UWMP includes projected water supplies required to meet future demands through 2035.

## CSU Regulations

### CSU Sustainability Policy and Cal Poly Sustainability Goals

One of the main goals of the CSU Sustainability Policy is to reduce water use by 20% by 2020. Cal Poly has been working to meet this goal through a wide range of sustainability efforts to reduce water use, including through improving water efficiency throughout the domestic and agriculture/irrigation systems and through drought response water management programs. The campus' numerous sustainably oriented endeavors are catalogued every 2 years in the Biennial Progress Report for Sustainability for Cal Poly Facilities Management and Development, since 2006.

## Slack and Grand Residential Neighborhood

The regulatory setting for the Slack and Grand Residential Neighborhood is the same as the regulatory setting for the Master Plan. Please refer to the Regulatory Setting discussions above.

# Impact Criteria

An impact will be significant if the project will result in the need for new or expanded water supply entitlements due to insufficient water supplies available to serve the project from existing entitlements and resources. In addition, the University considers an impact significant if the project will generate demand for water that exceeds available supply.

# Environmental Impact

The Cal Poly Master Plan 2035 provides for an increase in student enrollment by 5,000 FTE students, from 17,500 FTE students to a total enrollment of 22,500 FTE students. These students will be supported by new and improved academic, student housing, student support, administrative, and other campus facilities, which will be built incrementally over time in phases. The following estimate of future water use associated with this change in student enrollment, including all planned facilities and improvements provided for in the Master Plan, is based on the following assumptions:

1. The drought response water management program will be further developed and maintained;

2. Agricultural water use from Whale Rock Reservoir will not exceed 320 AFY, and groundwater will continue to be used for agriculture at a level commensurate with groundwater supplies, and,

3. Current non-agricultural Whale Rock water use will remain at or below the adjusted 2015 level of 472 AFY.[119]

The estimate of total future campus water use is determined by the sum of the following components:

1. Existing campus water use;

2. Water use associated with the Student Housing South facilities with 1,475 beds, currently being completed and anticipated to open in 2018; and,

3. Water use associated with the enrollment of additional 5,000 FTEs and the associated new facilities, including up to 6,800 beds in new student housing, and development of residential neighborhoods on campus pursuant to the Master Plan.

[119] Based on adjusted 2015 water use with the process water use at a normal level of 20 AFY (the process water use temporarily increased by 23 AFY in 2015 due to replacement, repairs, and maintenance of the existing water distribution systems for these facilities).

## Existing Campus Water Use

Based on the previously stated assumptions, including agricultural water use not exceeding 320 AFY, existing campus water use from Whale Rock Reservoir is 792 AFY.

## Facilities Under Development Water Use

As illustrated in Table 71, water use associated with the Student Housing South facilities, which are currently being completed and are anticipated to open in 2018, is estimated at 28 AFY.

**Table 71. Total Future Campus Water Use**

| Use | AFY |
|---|---|
| ***Existing Whale Rock Reservoir Water Use*** | |
| Campus Facilities and Enrollment | 472 |
| Agriculture | 320 |
| *Subtotal* | *792** |
| ***Student Housing Under Development*** | |
| 1,475 beds | 28 |
| *Subtotal* | *28* |
| ***Master Plan Additional Water Use*** | |
| Campus Enrollment and Facilities | 253 |
| Residential Neighborhoods | 210 |
| *Subtotal* | *463* |
| **Total** | **1,283** |

* Based on adjusted 2015 water use with the process water use at a normal level of 20 AFY (the process water use temporarily increased by 23 AFY in 2015 due to replacement, repairs, and maintenance of the existing water distribution systems for these facilities) and with agricultural operations restricted to 320 AFY.

## Master Plan Additional Water Use

As illustrated in Table 72, the additional water use pursuant to the Master Plan is estimated at approximately 463 AFY, and includes the uses discussed below.

**Table 72. Master Plan Additional Water Use**

| Use | Units | Use Factor FY/Year | AFY |
|---|---|---|---|
| Campus Facilities | 5,000 FTE | 0.01245/FTE* | 62 |
| New Student Housing with Amenities | 6,800 beds | 0.028046/bed** | 191 |
| *Subtotal* | | - | *253* |

| Use | Units | AF/Resident/Year | Household Size | AFY |
|---|---|---|---|---|
| Residential Neighborhoods | 1,470 | 0.062 | 2.3 | 210 |
| *Subtotal* | | | | *210* |
| **Total** | | **-** | **-** | **463** |

* Based on 2016/2017 domestic water use which includes offices, academic, laboratory, University Union, recreation, and other campus facilities, and the use of synthetic turf in new sport fields.
** Based on 2016/2017 PCV housing water use per bed. This is an extremely conservative use factor since PCV is suite style apartments with a bathroom and kitchen in each suite, as well as three dining facilities, a market, pool, and office space – while the future student housing will include dormitory style rooms with common bathroom and a shared kitchen on each floor which will use 50% less water.

### Master Plan Student Enrollment and Campus Facilities and Operations

The Master Plan provides for 5,000 additional FTE student enrollment, supported by additional student housing with approximately 6,800 beds, and academic, administrative and other campus facilities. As summarized in Table 72, the water use associated with the change in campus enrollment and related facilities (other than agricultural irrigation) is conservatively estimated at approximately 253 AFY.

### Master Plan Residential Neighborhoods

The residential neighborhoods as proposed could provide up to 1,470 apartment units. Based on the City of San Luis Obispo's average water use of 0.062 AF per resident per year[120], and an average of 2.3 persons per household,[121] potable water use associated with residential neighborhoods is estimated at approximately 210 AFY. It is important to note this is a conservative estimate based on the average water use per resident across the city's entire building stock, while these residential apartments will be among the most water efficient in the area due to development to current code requirements and to Cal Poly's commitment to water conservation, including low water use sustainable landscaping.

## Future Whale Rock Reservoir Water Use

As summarized in Table 71, the total future Whale Rock Reservoir water use on campus with 22,500 FTE student enrollment level is conservatively estimated at approximately 1,283 AFY.

## Whale Rock Reservoir Water Supply

With a total future campus use of Whale Rock Reservoir's water conservatively estimated at 1,283 AFY and the reservoir's safe annual yield estimated at 959 AFY, there will be a water supply deficit of approximately 324 AFY (1,283 AFY–959 AFY). Therefore, without mitigation, implementation of the Master Plan will have a significant impact on water supply.

[120] Based on the City of San Luis Obispo 2016 water usage; http://projects.scpr.org/applications/monthly-water-use/city-of-san-luis-obispo
[121] 2010 US Census data

## Water Supply Opportunities

To make up for this deficit, Cal Poly is actively pursuing all feasible opportunities to obtain and secure additional water supply sources, including recycled water, purchase of water and capacity from the Nacimiento Reservoir's water right holders, and pursuing opportunities for additional water through State water project, among others.

## Master Plan Development Framework Initial Facilities

The facilities envisioned to be developed earliest, within the first 5 years of the Master Plan 2035 timeframe, include new student housing with up to 2,500 beds for freshmen and sophomores, initial academic facilities, and the Slack and Grand residential neighborhood. Enrollment growth at the campus is anticipated to be slower in the early years of the 2035 Master Plan horizon, followed by phased enrollment increases as planned new student housing and instructional facilities are completed. However, to provide a conservative estimate of potential use of water within the first 5 years of the Master Plan, student enrollment increase by one percent per year, or by 893 FTE students to approximately 18,393 FTE students, has been incorporated as a tool in estimating future water use for this time period.

Cal Poly's water use within this time framework will be approximately 961 AFY, as illustrated in Table 73.

**Table 73. 2018–2023 Master Plan Water Use**

| Use | Units | Use Factor AFY | AFY |
|---|---|---|---|
| ***University Enrollment and Operations*** | | | |
| Existing demand from Whale Rock Reservoir | | | 792 |
| Enrollment growth | 893 FTE | 0.01245/FTE | 11 |
| Student housing under construction (Student Housing South) | 1,475 | 0.01860/bed* | 28 |
| New student housing with amenities | 2,500 beds | 0.028046/bed** | 70 |
| *Subtotal* | | | *901* |
| ***Slack and Grand Residential Neighborhood*** | | | |
| Apartment-style housing | 420 | 0.062 AF/resident/year<br>2.3 residents per household | 60 |
| **Total** | | | **961** |

* Based on 2016/2017 Cerro Vista dormitory student housing water use per bed. This is a conservative use factor since Cerro Vista is suite style apartments with a kitchen in every suite while Student Housing South is a dormitory style rooms with common bathroom and a shared kitchen on each floor.
** Based on 2016/2017 PCV housing water use per bed. This an extremely conservative scenario since PCV is suite style apartments with a bathroom and kitchen in each suite, as well as three dining facilities, a market, pool, and office space.

As summarized in Table 73, the total demand from Whale Rock Reservoir will be approximately 961 AFY within the first 5 years of the Master Plan development. As the Whale Rock Reservoir's safe annual yield is conservatively estimated at 959 AFY, there will be a deficit in the reservoir's water supply of approximately 2 AFY during this period. Mitigation measures have been identified to reduce this impact.

## Groundwater

With future campus development, whereby the agricultural use of water from the Whale Rock Reservoir does not exceed 320 AFY, the use of groundwater for agricultural uses may intermittently increase while water conservation measures are being implemented. Intermittent increases in use are estimated at approximately 42 AFY. However, since groundwater will continue to be used for agriculture only at a level commensurate with groundwater supplies, no significant impact will result. As previously discussed, groundwater is obtained from two campus wells extracting water from the San Luis Obispo Valley Groundwater Basin, Stenner Creek sub-basin. This basin, including the Stenner Creek sub-basin, is not designated as a priority basin pursuant to the SGMA.

## Slack and Grand Residential Neighborhood

As indicated in Table 72, residential neighborhoods with a total 1,470 units, which includes the Slack and Grand Residential Neighborhood, are projected to use approximately 210 AFY of potable water. The Slack and Grand neighborhood with 420 apartment units will use approximately 60 AF of potable water per year. This amount is included in the projected water demand during the initial 5-year framework. As previously discussed, this will lead to a water supply deficit of approximately 2 AFY during this period. Mitigation measures have been identified to reduce this impact.

# Mitigation Measures

In addition to actively pursuing all feasible options and opportunities to obtain and secure additional water supply source(s) for future campus functions and operations, including recycled water; purchase of water and capacity from the Nacimiento Reservoir's water right holders; and pursuing opportunities for additional water through State Water Project, among others, the following measures will be implemented.

3.13-1 The water management programs will continue to be developed further and implemented until new water supply sources are secured and operational.

3.13-2 Additional conservation measures will be undertaken including, but not limited to:

- Smart landscape irrigation controls (Cal Sense) and low flow plumbing fixtures efficiency measures will be implemented within the first 5 years to reduce water use by 40 AFY.

- Use of available reclaimed water will be provided for by constructing a reclaimed water system to distribute reclaimed water for agriculture and landscape irrigation on campus.
- Retrofit of all existing buildings will continue until all buildings are equipped with low and ultra-low flow plumbing fixtures.
- Expansion of the wireless landscape irrigation control system will continue until all campus zones are served by the system.
- Additional irrigated turf areas on campus will be eliminated, and replanted with drought tolerant plant species.
- Agricultural operations will continue to implement automation and digital monitoring systems for soil moisture content, watering schedules and other functions, as well as program evaluation with respect to water use associated with different types and sizes of crops.

3.13-3 New development pursuant to the Master Plan will proceed to the extent supported by available water supplies. At the time that the available water supplies do not support additional development, no further development will be undertaken until such time that additional water supplies become available.

Cal Poly will implement this mitigation measure (i.e., 3.13-3) by monitoring campus water use and available water supplies on an annual basis. Future implementation of the Master Plan will be refined such that development will correspond to available water supplies. As part of this process, a finding of sufficiency of water supply will be required as part of the submittal of conceptual and schematic plans for all new facilities and improvements planned to be undertaken following the development of the identified initial facilities within the first 5 years of the Master Plan, and the finding will be used in the review and approval process of the plans.

3.13-4 As part of refining the phasing of incremental future development planned to be undertaken following the development of the identified initial facilities within the first 5 years of the Master Plan, to correspond to available water supplies based on annual reviews of information about the monitored water use and available water supplies, Cal Poly will use a priority system whereby campus academic, student housing, student support, administration, and other facilities necessary to support the gradual growth in student enrollment to 22,500 FTEs are considered first, before considering development of other uses on campus, until a new water supply source is secured and operational.

# Level of Impact After Mitigation

## Master Plan Development Framework Initial Facilities, including Slack and Grand Residential Neighborhood

Implementation of the mitigation measures listed above will produce more than sufficient conserved water for the first 5 years of development pursuant to the Master Plan. For example, the smart landscape irrigation controls (Cal Sense) and low-flow plumbing fixtures efficiency measures will reduce water use by 40 AFY during this initial phase. This will result in a surplus

of Whale Rock Reservoir water supply of approximately 38 AFY. Therefore, impacts associated with initial campus development will be less than significant within this time period.

## Master Plan 2035

Implementation of the identified mitigation measures will ensure that the campus development pursuant to the Master Plan proceeds in parallel with the available water supplies. The implementation of the identified additional smart landscape irrigation controls conservation measure alone is estimated to result in a reduction in the Whale Rock Reservoir water use by approximately 60 AFY, with approximately 40 AFY reduction through smart landscape irrigation controls (Cal Sense) and low-flow plumbing fixtures, and approximately 20 AFY through maintenance improvements of the remaining approximately 30 acres of irrigated landscape turf areas. With agricultural operations water use not exceeding 320 AFY and incremental implementation of all identified mitigation measures, the use of water will be further reduced. While these measures will conserve significant amounts of water, they will not offset completely projected water demand at full buildout. Therefore, full buildout will not occur until additional water supplies are made available.

As a result of this paced development, together with further reductions in water use that enhance wise and efficient use of available water resources, and the prohibition against development without confirmation of available water supplies, the Master Plan will not cause a significant impact on water supply.

# Cumulative Impact

Per the mitigation measures listed above, campus development pursuant to the Master Plan, including the development of the Slack and Grand Residential Neighborhood, will proceed in parallel with the available water supplies. All future off-campus development within the city and county will proceed consistent with the City and County General Plans, which provide for future development commensurate with the future water supply. The City UWMP addresses the water supply with respect to future growth within the city. Whale Rock Reservoir provides water to the City, Cal Poly, the California Men's Colony, and the town of Cayucos. The Whale Rock Commission oversees the reservoir operations and is made up of representatives from the City, California Men's Colony, and Cal Poly, as well as a representative from the State Department of Water Resources. The City provides the staff for oversight of daily operations and maintenance activities. City staff works closely with staff from the commission members relative to water planning issues. The City's UWMP preparation included agency coordination, including coordination with the Whale Rock Reservoir Commission.

To be conservative in its water planning, the City uses the 1% population growth rate and 117 gallons per capita per day, and this approach to projecting future water demand ensures the City's water needs will be accommodated. The General Plan Land Use Element, updated in 2014, included population projections from 2020 through 2035 and estimated that the City has an urban reserve capacity of 57,200 residents.[122] The future development in the City under 2035

[122] City of San Luis Obispo. 2016. *City of San Luis Obispo 2015 Urban Water Management Plan*. Adopted June 14, 2016.

General Plan buildout conditions projected to require 7,815 AFY, which will not exceed the total water supplies of 9,980 AFY available to the City.[123] With water supplies projected to be sufficient for future planned development within the city and the county, the campus Master Plan will not result in a significant cumulative impact.

## Slack and Grand Residential Neighborhood

Cumulative impacts associated with the Slack and Grand Neighborhood are addressed above.

[123]City of San Luis Obispo. 2014. *Draft Program Environmental Impact Report Land Use and Circulation Elements Update*. June 2014.

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# 4.0 Alternatives to the Project

The following discussion considers alternative scenarios to the Campus Master Plan 2035. Through comparison of these alternatives, the relative advantages of each can be weighed and analyzed.

The CEQA Guidelines state that an EIR need not consider every conceivable alternative to the project [Section 15126.6(a)], or an alternative whose effect cannot be reasonably ascertained and whose implementation is remote and speculative [Section 15126.6(f)(3)]. The Guidelines require that a range of alternatives be addressed "governed by 'a rule of reason' that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice." The discussion of alternatives must focus on alternatives that are potentially feasible and capable of achieving major project objectives while avoiding or substantially lessening any significant environmental effects of the project [CEQA Guidelines, Section 15126.6(f)].

The principal objective of the Master Plan is to support and advance the University's educational mission by guiding the physical development of the campus and its facilities over the next 20 years to accommodate gradual student enrollment growth while preserving and enhancing the quality of campus life.

- Enhance academic quality and student success through Learn by Doing.
- Increase the diversity of students, faculty and staff.
- Strengthen the campus' compact, cross-disciplinary Academic Core.
- House all freshmen and sophomore students plus 30% of upper division students in residential communities on campus.
- Provide housing opportunities on campus primarily for University faculty and staff to promote faculty and staff recruitment and retention, and to enhance faculty and staff connectivity with the campus. In addition, provide housing opportunities that may be offered to non-traditional students such as graduate students, veterans, and those with families, and possibly alumni or retirement housing, and for the greater San Luis Obispo community.
- Offer more vibrant evening and weekend events and activities on campus.
- Attain a modal shift from cars to more pedestrian, bicycle, and transit use.
- Reinforce campus-wide environmental sustainability.
- Phase enrollment growth in parallel with completion of new student housing and instructional facilities.
- Generate revenue from public and private sources to realize the Master Plan objectives and to further support and benefit the CSU's educational mission.

The EIR analysis indicates that the implementation of the Master Plan will result in significant and unavoidable impacts with regards to project-specific and cumulative air quality; short-term construction air quality and noise; traffic at one study intersection and three freeway segments along US 101; agricultural resources due to conversion of 28 acres of farmland to other campus uses; site-specific visual impact related to the Slack and Grand Residential Neighborhood and

cumulative aesthetic impact, and potential impact on cultural resources. All other impacts analyzed in this EIR were found to be either beneficial, less than significant, or can be mitigated to less-than-significant levels with mitigation measures identified in the EIR. Thus, the following analysis focuses on identifying alternatives that can reduce or avoid the identified significant and unavoidable impacts. Environmental effects after full implementation of mitigation measures are used as a basis for comparison.

# Alternatives Considered and Found to be Infeasible

The alternative of campus development that does not result in converting farmland to other campus uses alternative was considered and found not be feasible. Pursuant to the Master Plan, new sports fields and a new parking area to serve the Academic Core, sports fields, and adjacent new student housing are planned to be located north of Highland Drive, between Mount Bishop Road and the UPRR rail line. This area consists of approximately 16 acres of Prime Farmland, which will be converted to non-agricultural use. The Master Plan also includes a new Data Center, Business Park, and N5 Residential Neighborhood, and relocation of the Facilities Service Yard northwest of Stenner Creek Road, between Stenner Creek Road and State Route 1, to free up key space within the campus' academic core. This approximately 26-acre area includes approximately 12 acres of Farmland of Statewide Importance, which will be converted to non-agricultural use.

To substantially reduce this impact would require changing the Master Plan uses to preserve the affected farmlands on main campus, particularly as related to relocation of the parking and sports field areas within Prime Farmland. Such a change was determined infeasible because parking is intended to be within reasonable walking distance to classrooms and offices and should be accessible from the new and existing student housing, as supported by Guiding Principle 15 of the Master Plan. University Life Principles of the Master Plan also state that recreational facilities should be located near the populations they serve. In addition, other areas that are not prime agricultural land are primarily hillsides and not suitable for grading for parking or flat play fields. Relocation of the sports fields or parking to non-prime agricultural lands in close proximity to the main campus currently used for grazing would impact the academic programs of the College of Agriculture. Finally, the University is focusing new development within the Campus Core to emphasize infill development and "smart growth" principles in order to minimize intensive uses on the periphery of the campus and preserve the surrounding natural environment. As Cal Poly's land use configuration must balance the features and use of the land within the overarching teaching and learning needs and programs as a comprehensive polytechnic University, this is not considered a feasible alternative. For these reasons, this alternative is not considered further.

# Alternatives Considered

The following alternatives to the Campus Master Plan are considered further:

- Alternative 1: "No Project" (continuation of Current Master Plan alternative, required by CEQA)

- Alternative 2: Less Residential Neighborhoods Housing
- Alternative 3: Increased On-Campus Student Housing
- Alternative 4: Alternate Location for Slack and Grand Residential Units
- Alternative 5: Master Plan without Residential Neighborhoods

# Alternative 1: No Project – Continuation of Current Campus Master Plan

The "No Project" alternative, required to be evaluated in the EIR, considers "existing conditions…as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services" [CEQA Guidelines Section 15126.6(e)(2)]. Pursuant to this alternative, the current Master Plan would continue to be implemented.

## Campus Development

Pursuant to this alternative, development according to the current Master Plan (adopted in 2001) would continue, with student enrollment level at the campus capped at 17,500 FTE students. As most of the current Master Plan facilities have already been developed, this alternative would basically retain the existing conditions on campus. Existing facilities, including obsolete and inefficient buildings would not be renewed or replaced with the needed modern facilities, and no new on-campus housing for students, faculty, and staff would be provided. Also, no infrastructure improvements, enhanced open space and landscaping, enhanced pedestrian and bicycle circulation, sustainability features, and other improvements provided for in the Master Plan 2035 would be realized pursuant to this alternative.

## Environmental Effects

This alternative would eliminate new vehicle trips and the resultant mobile emissions associated primarily with the planned residential neighborhoods – but only under an unlikely scenario where not a single person who currently lives outside of San Luis Obispo and commutes to work in the City would live in new housing provided by these residential neighborhoods. Since the No Project alternative would not include new student housing to accommodate demand for on-campus housing, the potential for reduction in student commuting trips and in the associated VMT and mobile emissions would not be realized. Without any new academic, student housing, and other facilities and uses on campus, impacts related to the visual effect at the site of Grand and Slack residential neighborhood, conversion of farmland to other campus uses, additional traffic, and construction noise would also be avoided. However, this alternative would eliminate the Master Plan's beneficial effect of providing housing next to San Luis Obispo, which is characterized as having a severe jobs/housing imbalance with approximately 77% of the people employed in the city commuting from outside of the city to work, that will enable more people to live where they work.

Furthermore, in compliance with the State Legislative mandate expressed in the State Master Plan for Education, the CSU system is responsible to continue to accommodate all fully eligible graduates from California high schools and community college transfer students. Therefore, if no

student enrollment growth is accommodated at the Cal Poly campus, those 5,000 FTE students projected to seek enrollment at the Cal Poly campus would have to be accommodated at other universities elsewhere in the region. As a result, this alternative would relocate the environmental effects associated with accommodating those students elsewhere, including vehicular trips and the associated traffic impacts, exhaust emissions and the resultant air quality impacts, demand for fire and police protection services, water and other public utilities, construction noise, and others. Overall, these indirect effects of accommodating the students at another locations together with accommodating fewer students at the Cal Poly campus would likely result in either similar or greater overall environmental impacts than those associated with the Master Plan 2035.

Moreover, if the current Master Plan is not updated, some additional facilities and improvements would still be needed to provide an adequate level of support and academic facilities for the academic and other programs, including classroom space and on-campus housing, for the current Master Plan's 17,500 FTE student enrollment level. Accordingly, the current Master Plan would likely be updated in the future anyway to provide for replacement and rehabilitation of the existing campus buildings, and some new facilities.

### Relation to Campus Master Plan Objectives

The No Project alternative would not achieve the principal objective of the campus Master Plan 2035 to accommodate gradual student enrollment growth while preserving and enhancing the quality of campus life. This alternative would not achieve any of the other major Master Plan 2035 objectives, including enhancing academic quality and student success through Learn-by-Doing; strengthening the campus' compact, cross-disciplinary Academic Core; housing all freshmen and sophomore students plus 30% of upper division students in residential communities on campus; providing housing opportunities primarily for University faculty and staff, to promote faculty and staff recruitment and retention and to enhance faculty and staff connectivity with the campus, and which in addition may be offered to non-traditional students and the greater San Luis Obispo community; offering more vibrant evening and weekend events and activities on campus; attaining a modal shift from cars to more pedestrian, bicycle, and transit use; reinforcing campus-wide environmental sustainability, and generating revenue from public and private sources to realize the Master Plan objectives.

Most of all, the continuation of the current Master Plan is not feasible because it does not provide for the facilities and programs needed to support projected student enrollment that Cal Poly is responsible to accommodate. To adequately support future student enrollment requires providing facilities, improvements, and programs beyond those considered in the current Master Plan.

## Alternative 2: Less Residential Neighborhoods Housing

This alternative considers provision of less housing in the planned five residential neighborhoods on campus.

## Campus Development

A reduction in residential neighborhoods' provision of housing could potentially reduce some environmental impacts, but only under an unlikely scenario where not a single person who currently lives outside of San Luis Obispo and commutes to work in the City would live in new housing provided by these residential neighborhoods. The residential neighborhoods' emission levels are projected to be the highest among all of the campus land uses for ozone precursors (ROG + $NO_x$), $PM_{10}$, CO, and GHG. To reduce some of the unavoidable significant impacts on air quality to below SLOAPCD significance thresholds, the residential neighborhoods would have to be reduced by approximately 60%, from up to 1,470 units to about 588 units. Similarly, the residential neighborhoods also generate the net new additional vehicular trips from the campus. Other facilities and improvements provided for the Master Plan to accommodate gradual growth in student enrollment projected to reach 22,500 FTE students by 2035, would remain the same under this alternative.

## Environmental Effects

This alternative would reduce daily trips by approximately 68%, to approximately 4,100 daily trips. However, the study intersections identified as having significant impact under the Master Plan are projected to operate below the LOS standard of "D" under the "No Project" conditions due to ambient traffic growth and traffic generated by other future developments in the area. Even with the vehicular trip reduction, this alternative would still add trips to the study area and therefore, this would likely not be sufficient to avoid a significant impact and unavoidable impact at one study intersection. Similarly, this alternative would not measurably reduce the unavoidable significant impact at the three segments of US 101.

This alternative would reduce long-term emissions of some criteria pollutants to below the SLOAPCD's daily and annual thresholds, and reduce daily $PM_{10}$ and annual ozone precursors (ROG + $NO_x$) to a less-than-significant level. However, under this alternative, even though overall the residential neighborhoods would provide less housing and vehicular trips would be reduced, the reduction of the emissions would likely not be sufficient to avoid a significant impact associated with daily ozone precursors (ROG + $NO_x$); the magnitude of this significant impact would, however, be reduced. With less housing units being constructed, this alternative would also reduce the magnitude of the significant short-term and intermittent construction air quality and noise impacts.

However, with 60% fewer units, University faculty and staff, and the general public who would have been accommodated at the residential neighborhoods pursuant to the Master Plan would have significantly fewer options to live on campus and next to the City of San Luis Obispo. San Luis Obispo is the main employment center in the region but it lacks sufficient housing to accommodate people employed in the City. According to data from the U.S. Census Bureau[124], 77% of the people employed in San Luis Obispo live outside the city and commute into the city to work. Based on observed vehicle occupancy counts and other established vehicle count data, SLOCOG estimates that 19,400 to 23,400 people who live outside the city commute to work into

[124] U.S. Census Bureau. 2017. OnTheMap. U.S. Census Bureau, Center for Economic Studies. Available at: https://onthemap.ces.census.gov/.

San Luis Obispo daily. This lack of housing is projected to continue in the future with the City adding 5,972 jobs but only 1,647 housing units between 2015 and 2035.[125] Together with future regional growth within the County over the next 20 years, the resulting effect could be an overall increase in vehicular trips and traffic together with the increase VMTs and mobile emissions as more people might commute to the City to work. Therefore, this alternative could in fact result in greater significant and unavoidable air quality, GHG, and traffic impacts in comparison with the Master Plan.

With a total of 588 units under this alternative, if those units were to be distributed equally among the five residential neighborhoods, the visual impacts and impact on biological resources would be reduced as a result of fewer or smaller buildings at each location. However, such an average of less than 118 units per location would likely not be sufficient to create cohesive neighborhood communities with needed on-site amenities for the residents, or be economically viable.

Demand for police and fire protection services under this alternative would be proportionately reduced. As with the Master Plan, with enhanced operating procedures; incorporation of all required fire suppression and safety features in all new development, including the CBC, CFC, and University Fire and Life Safety Standards; and continued implementation of the University's safety and emergency response plans and emergency response training, it is not anticipated to require the provision of new fire or police facilities and the impact would not be significant.

Demand on utilities and service systems would be also proportionally reduced under this alternative, and with implementation of the identified mitigation measures would be less than significant. Demand on water supply would be proportionally reduced by approximately 126 acre feet per year, an approximately 39% reduction in demand in excess of the conservatively estimated Whale Rock reservoir's safe yield supply, and with implementation of mitigation measures, impacts would be less than significant.

The significant and unavoidable impact of converting 28 acres of farmland to other campus uses would remain the same under this alternative as under the Master Plan.

This alternative would substantially reduce the Master Plan's beneficial impact of increasing the number of housing units made available for University faculty and staff that is vital for Cal Poly to recruit, and retain, faculty and staff, as well as for the general non-student population, and enabling more people to live next to San Luis Obispo and work in San Luis Obispo.

## Relation to Master Plan Objectives

This alternative would significantly limit the achievement of the Master Plan objectives of provide housing opportunities primarily for University faculty and staff to promote faculty and staff recruitment and retention and to enhance faculty and staff connectivity with the campus, as well as generating revenue from public and private sources to realize all other Master Plan objectives and to further support and benefit the CSU's educational mission.

[125] San Luis Obispo Council of Governments (SLOCOG). 2017. *2050 Regional Growth Forecast for San Luis Obispo County*. Adopted June 2017.

With a limited potential of generating revenue, this alternative would substantially restrict the achievement of the Master Plan objectives of enhancing academic quality and student success through Learn-by-Doing; increasing diversity of students, faculty and staff; strengthening the campus' compact, cross-disciplinary Academic Core, reinforcing campus-wide environmental sustainability; housing all freshmen and sophomore students plus 30% of upper division students in residential communities on campus; providing housing opportunities primarily for University faculty and staff, and offering more vibrant evening and weekend events and activities on campus.

# Alternative 3: Increased On-Campus Student Housing

Under this alternative, more on-campus housing would be provided for the Cal Poly students.

## Campus Development

Pursuant to this alternative, approximately 12,300 new student beds would be provided on campus, or 5,500 more beds in comparison with the Master Plan. Pursuant to this alternative, on-campus housing would accommodate 100% of all University's undergraduate students. As with the Master Plan, the parking on campus would remain as it is currently, with no increase in parking spaces. Other facilities and improvements on campus would remain the same as in the Master Plan pursuant to this alternative to accommodate gradual growth in student enrollment that is projected to reach 22,500 FTE students by 2035.

## Environmental Effects

Provision of more on-campus housing would result in a proportional reduction in vehicular trips generated by 5,500 students who would otherwise have had to live off campus and commute to campus. With all undergraduate students housed on campus, VMT would be further reduced by 204,600 miles, resulting in a total VMT reduction of 54% over the existing conditions. This represents an approximately 34% greater reduction in comparison to the Master Plan, which would consequently result in a greater beneficial impact. As with the Master Plan, with no additional parking provided on campus, the additional student housing under this alternative would not generate new vehicle trips. However, due to the projected future poor operating condition, and the share of campus-generated trips from residential neighborhoods at the affected study intersections, this alternative would result in the same significant unavoidable impact on one affected study intersection and three segments on US 101.

While this alternative would not result in additional mobile emissions, the area emissions associated with operations of the additional student housing would increase and as with the Master Plan, the significant and unavoidable long term air quality impact would remain.

Pursuant to this alternative, with additional student housing the demand for fire and police protection services would increase. However, as with the Master Plan, with enhanced operating procedures; incorporation of all required fire suppression and safety features in all new development, including the CBC, CFC, and University Fire and Life Safety Standards; and continued implementation of the University's security and emergency response plans and

emergency response training, it is not anticipated to require the provision of new fire or police facilities and the impact would not be significant.

With additional student housing, demand for water and utilities and service systems would also increase. However, as with the Master Plan, with sustainability features, compliance with existing requirements, payment of all legally required capital facilities fees, and implementation of the identified mitigation measures impact would be less than significant.

With more student housing on campus, the magnitude of the significant unavoidable short-term construction-related air quality and noise impacts could be greater pursuant to this alternative. This alternative may also result in an additional aesthetic impact associated with constructing more or taller buildings to provide student housing and associated dining facilities and other amenities. This would result in a denser development that could affect the visual character of the main campus, including the existing campus open space and vistas.

Other impacts would be similar to those associated with the Master Plan, including the significant and unavoidable impact of converting 28 acres of farmland to other campus uses.

### Relation to Master Plan Objectives

This alternative would achieve all of the Master Plan's objectives, including enhancement of academic quality and student success through Learn-by-Doing, increasing diversity of students, faculty and staff, strengthening the campus' compact, cross-disciplinary Academic Core, reinforcing campus-wide environmental sustainability, as well as achieve University goals and generate revenue from public and private sources to realize the Master Plan objectives and to further support and benefit the CSU's educational mission.

Moreover, the provision of more student housing would achieve the Master Plan's objectives to a greater degree, particularly the objectives of housing more students in residential communities on campus, offering more vibrant evening and weekend events and activities on campus, and attaining a modal shift from cars to more pedestrian, bicycle, and transit use. However, since funding for additional student housing accommodating 5,500 more beds on campus over the life of the Master Plan is not in place, this alternative may not be fiscally viable at this time.

## Alternative 4: Alternate Location for Slack and Grand Residential Units

This alternative considers developing 420 residential units planned for the Slack and Grand Residential Neighborhood (N1) at the locations of other residential neighborhoods (N2, N3, N4, or N5) provided for by the Master Plan, to avoid the significant unavoidable aesthetic impact that is specific to the terrain characteristics of the Grand Avenue and Slack Street site.

### Campus Development

Pursuant to this alternative, the 420 residential units with the associated amenities planned for the Slack and Grand Residential Neighborhood would be located at either of the other four

Master Plan residential neighborhood locations. All other new facilities and improvements of the Master Plan would remain the same pursuant to this alternative.

## Environmental Effects

This alternative would result in environmental effects specific to each location, with some effects comparable to and other effects greater than those associated with current Slack and Grand location.

The N2 Residential Neighborhood site is located northeast of Slack Street and Longview Lane. To locate the 420-unit residential neighborhood on this site would require immediate relocation of the existing track and football practice field to the area north of Brizzolara Creek. The need to relocate these existing facilities within an immediate and compressed timeframe would conflict with the planned long-term term progression of campus development and result in the need to develop new facilities within the earliest phase of campus development, which may not be feasible. Additionally, to accommodate the housing together with its amenities, including the provision of recreational open space for the residents, on this smaller site would result in development of taller buildings on the site and the overall denser development that may result in a significant aesthetic impact at this location as well.

The N3 Residential Neighborhood site is located near the campus' academic core, southwest of Perimeter Road and Cuesta Avenue. The N3 site is relatively small and would not accommodate a 420-unit residential neighborhood and its amenities, including the provision of recreational open space for the residents. Due to this constraint, it is not considered a feasible alternate location.

The N4 Residential Neighborhood site is located across Highway 1 to the west of the main campus area. This site is located much farther away from the campus Academic Core in comparison with the Slack and Grand neighborhood site, with no connectivity to the core of the campus. Existing single-family and apartment complex residential development, and Cal Fire/San Luis Obispo County Fire Department headquarters station adjoin the site to the south. As with the Master Plan, locating 420 residential units would increase the traffic in that area, resulting in the same significant traffic impacts since main access to the neighborhood would be via Highway 1 and the access would be restricted to right-turn in and right-turn out only. With the additional traffic, this would result in an increase in traffic delay at this segment of the highway. Because of its location across from the main campus and distance from the campus academic core, locating residential units at this site that are intended to provide housing opportunities primarily for University faculty and staff and non-traditional students might also increase overall VMTs and the associated mobile emissions generated by residents, as well as reduce connectivity with the campus for residents working or studying at the University. Furthermore, as the site fronts onto Highway 1, a designated scenic highway, accommodating a cohesive neighborhood with recreational open space and other amenities for its residents while minimizing impact to views from the highway, might be constrained at this site.

The N5 Residential Neighborhood site is located north of the intersection of Highway 1 and Stenner Creek Road, next to Stenner Creek which runs north/south through the westernmost area of the campus. This site is located much farther away from the campus' core in comparison to

the Slack and Grand neighborhood location, providing limited connectivity to the Campus Core. Due to its hilly terrain and adjacency to Stenner Creek, locating a 420-unit residential neighborhood at this site would likely result in similar or greater impact on biological resources. With traffic generated by 420 apartments at the site, the increase in traffic at the intersection of Highway 1 and Stenner Creek Road could increase, exacerbating the identified significant traffic impact. Because of the distance to the Campus Core, locating 420 residential units at the site might also increase overall VMTs and the associated mobile emissions generated by residents working and/or studying at University. As this site has no connections to the existing utilities infrastructure systems, its development would involve construction of new systems and connections that would likely result in more extensive and lengthy construction activity together with the associated increase in a significant unavoidable construction-related air quality impact. This site also fronts onto Highway 1, a designated scenic highway. Thus, the site development potential might be constrained due to the necessity of providing a setback from Stenner Creek as well as minimizing impact to views from the highway, while also providing neighborhood amenities, including recreational open space for future residents.

Other impacts would be similar to those associated with the Master Plan, including the significant unavoidable impact of converting 28 acres of farmland to other campus uses.

### Relation to Master Plan Objectives

This alternative would achieve all the Master Plan's objectives, including enhancement of academic quality and student success through Learn-by-Doing, increasing diversity of students, faculty and staff, reinforcing campus-wide environmental sustainability, and generating revenue from public and private sources to realize the Master Plan objectives and to further support and benefit the CSU's educational mission. However, due to location, terrain, and/or other constraints of the sites resulting in similar or greater impacts, these are not considered feasible locations for the Grand and Slack residential neighborhood.

## Alternative 5: Master Plan without Residential Neighborhoods

This alternative considers the development of the campus pursuant to the Master Plan but without the planned residential neighborhoods on campus.

### Campus Development

All facilities and improvements provided for the Master Plan to accommodate gradual growth in student enrollment projected to reach 22,500 FTE students by 2035, would remain the same under this alternative.

### Environmental Effects

This alternative would eliminate additional daily trips from the campus, eliminating significant traffic impacts on the study intersections and the segments of US 101. With no net additional vehicular trips, this alternative would eliminate long-term mobile emissions of criteria pollutants.

While this alternative would not result in additional mobile emissions, the reduction of the emissions would likely not be sufficient to avoid a significant impact associated with the daily area emissions of ozone precursors (ROG + $NO_x$); the magnitude of this significant impact would, however, be vastly reduced. With no housing units being constructed, this alternative would also reduce the magnitude of the short-term and intermittent construction air quality and noise impacts.

However, the University faculty and staff, and the general public who would have been accommodated at the residential neighborhoods pursuant to the Master Plan would have no option to live on campus and next to the City of San Luis Obispo. San Luis Obispo is the main employment center in the region but it lacks sufficient housing to accommodate people employed in the City. According to data from the U.S. Census Bureau,[124] 77% of the people employed in San Luis Obispo live outside the city and commute into the city to work. Based on observed vehicle occupancy counts and other established vehicle count data, SLOCOG estimates that 19,400 to 23,400 people who live outside the city commute to work into San Luis Obispo daily. This lack of housing is projected to continue in the future with the City adding 5,972 jobs but only 1,647 housing units between 2015 and 2035.[125] Together with future regional growth within the County over the next 20 years, the resulting effect could be an overall increase in vehicular trips and traffic together with the increase VMTs and mobile emissions as more people might commute to the City to work. Therefore, this alternative could in fact result in greater significant and unavoidable air quality, GHG, and traffic impacts in comparison with the Master Plan with residential neighborhoods.

Without residential neighborhoods, the significant visual impacts associated with visual scale and views from scenic Highway 1 would also be eliminated. Demand for police and fire protection services and public utilities and service systems would be substantially reduced under this alternative, and would continue not to be significant. Demand on water supply would be proportionally reduced by approximately 126 acre-feet per year, an approximately 65% reduction in demand in excess of the conservatively estimated Whale Rock reservoir's safe yield supply, and with implementation of mitigation measures, the impact would be less than significant.

The significant and unavoidable impact of converting 28 acres of farmland to other campus uses would remain the same under this alternative as under the Master Plan.

This alternative would eliminate the Master Plan's beneficial impact of increasing the number of housing units made available for the non-student population, enabling more people to live next to San Luis Obispo and work in San Luis Obispo.

## Relation to Master Plan Objectives

This alternative would not achieve the Master Plan's objective of providing housing opportunities for the University faculty and staff that is vital for Cal Poly to recruit, and retain, faculty and staff. This alternative would also not achieve the objective of generating revenue through public-private partnerships necessary to realize all other Master Plan objectives, and to further support and benefit the CSU's educational mission. Therefore, this alternative would not achieve any of the major objectives of the Master Plan.

# Environmentally Superior Alternative

Among the alternatives considered, the Master Plan without Residential Neighborhoods Alternative would eliminate most of the significant unavoidable impacts, including those associated with aesthetics, air quality, and traffic, and could therefore be considered as environmentally superior.

However, this alternative would also eliminate a beneficial impact of providing housing for University faculty and staff, and the general public who would have been accommodated at the residential neighborhoods pursuant to the Master Plan. Under this alternative, University faculty and staff and the general public would have no option to live on campus and next to the City of San Luis Obispo. San Luis Obispo is the main employment center in the region but according to data from the U.S. Census Bureau,[124] 77% of the people employed in San Luis Obispo live outside the city and commute into the city to work. Based on observed vehicle occupancy counts and other established vehicle count data, SLOCOG estimates that 19,400 to 23,400 people who live outside the city commute to work into San Luis Obispo daily. This lack of housing is projected to continue in the future with the City adding 5,972 jobs but only 1,647 housing units between 2015 and 2035.[125]

Together with future regional growth within the County over the next 20 years, the resulting effect of this alternative could be an overall increase in vehicular trips and traffic together with the increase VMTs and mobile emissions as more people might commute to the City to work, which in fact could result in greater significant unavoidable air quality and traffic impacts that those associated with the Master Plan. Also, without providing housing opportunities for University faculty and staff on campus, the ability for Cal Poly to recruit and retain faculty and staff could be substantially impeded.

Furthermore, this alternative would not achieve the Master Plan objective of generating needed revenue through public-private partnerships to realize all other Master Plan objectives, and to further support and benefit the CSU's educational mission.

# 5.0 Long-Term Effects

## Growth-Inducing Impacts

The CEQA Guidelines [Section 15126.2(d)] require a discussion of "… ways in which the proposed project could foster economic or population growth … in the surrounding environment," including the project's potential to remove obstacles to population growth. For example, the extension of infrastructure may encourage or facilitate other activities that could significantly affect the environment.

In compliance with the State Legislative mandate expressed in the State Master Plan for Education, the CSU system is responsible for continuing to accommodate all fully eligible graduates from California high schools and community college transfer students. To do so, Cal Poly is responsible for accommodating the 22,500 FTE student enrollment stipulated in the Master Plan in response to future demand for higher education within California. The Master Plan is designed to accommodate additional students generated by growth within the San Luis Obispo region and beyond. The Master Plan's provision of residential neighborhoods with up to 1,470 apartments for faculty, staff, non-traditional students, and general public is anticipated to result in a beneficial effect of improving the existing City of San Luis Obispo's severe jobs/housing imbalance. According to data from the U.S. Census Bureau,[126] 77% of the people employed in San Luis Obispo live outside the city and commute into the city to work. Based on observed vehicle occupancy counts and other established vehicle count data, SLOCOG estimates that 19,400 to 23,400 people who live outside the city commute to work into San Luis Obispo daily. This lack of housing is projected to continue in the future with the City adding 5,972 jobs but only 1,647 housing units between 2015 and 2035.[127] Since the Master Plan's residential neighborhood apartments will be made available to the general rental housing market, their effect most likely will be to enable more people who currently live outside the city and commute to work in San Luis Obispo, to live in San Luis Obispo. This is consistent with the local and regional objectives of improving jobs/housing balance opportunities within the communities, and by itself will not result in a population growth beyond the population growth of 35,971 residents and 15,432 housing units projected for the San Luis Obispo county region from 2015 to 2035.[127]

## Significant Irreversible Effects

Implementation of the Master Plan will commit non-renewable resources during construction and operation. During construction, the use of building materials (e.g., aggregate, sand, cement, steel, glass, etc.) and energy resources (e.g., gasoline, diesel fuel, electricity) largely would be irreversible and irretrievable. Energy would be consumed in processing building materials and for transporting these materials and construction workers to the individual facility sites.

[126] U.S. Census Bureau. 2017. OnTheMap. U.S. Census Bureau, Center for Economic Studies. Available at: https://onthemap.ces.census.gov/.
[127] San Luis Obispo Council of Governments (SLOCOG). 2017. *2050 Regional Growth Forecast for San Luis Obispo County*. Adopted June 2017.

The new buildings at the campus pursuant to the Master Plan can be expected to have a life span of approximately 50 to 70 years. Resources consumed during buildout of the Master Plan, (such as fuel, building materials, water, etc.) will be used in quantities proportional to similar development in California. While Title 24 (Part 6 of the California Building Standards Code) energy conservation standards are mandatory and will be applied to the construction and operation of all campus facilities, the implementation of the Master Plan's comprehensive sustainability features and programs is anticipated to exceed these standards to a considerable degree. Students, faculty, and employees will consume motor fuel and water; however, these activities are part of normal operations and are not considered a wasteful use of resources. With the Master Plan's comprehensive sustainability features and programs, the use of nonrenewable resources will be substantially reduced, and the consumption of these resources will likely be smaller than, or comparable to, the use of resources for other major universities and colleges throughout the region and the country.

# 6.0 Preparers of the EIR

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#### *Sections Prepared*

- Summary
- 1.0 Introduction
- 2.0 Project Description
- 3.0 Environmental Impact and Mitigation Measures
- 3.7 Traffic and Circulation
- 3.8 Air Quality and Greenhouse Gases (GHG)
- 3.9 Noise
- 3.13 Water Supply
- 4.0 Alternatives to the Project
- 5.0 Long-Term Effects

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### *Sections Prepared*

- 3.1 Biological Resources
- 3.2 Cultural Resources
- 3.3 Agricultural Resources
- 3.4 Aesthetics
- 3.5 Geology and Soils
- 3.6 Hydrology and Water Quality
- 3.10 Population and Housing
- 3.11 Public Services and Recreation
- 3.12 Utilities and Services Systems
- 6.0 Preparers of the EIR