

CALIFORNIA COASTAL COMMISSION

SOUTH CENTRAL COAST AREA
89 SOUTH CALIFORNIA ST., SUITE 200
VENTURA, CA 93001
(805) 585-1800



W12b

Addendum

DATE: December 7, 2009
TO: Commissioners and Interested Parties
FROM: South Central Coast District Staff
SUBJECT: Agenda Item W12b, Wednesday, December 9, 2009, Notice of Impending Development 4-09 (Main Campus Infrastructure Renewal Project)

The purpose of this addendum is to modify Special Condition 3A(b), Operations Maintenance Responsibilities. The applicant has requested that construction equipment, materials, and activities be utilized within 100 feet of the Campus Lagoon in order for the following:

1. the installation of a new concrete storm water outlet structure at the new storm water drainage outfall;
2. the construction of a new storm water treatment system for runoff from the Central and East Central drainage areas; and
3. the construction of a Storm Water Filtration Marsh adjacent to the Campus Lagoon that includes construction of vegetated storm water basins and swales to provide enhanced bio-filtration for runoff water before it enters the Lagoon resulting in the enhancement of approximately 22,406 sq. ft. of habitat

As a result, Special Condition 3A(b) will be amended as follows:

Construction equipment, materials, or activity shall not be placed/occur within any ESHA, wetlands or their buffers, or in any location which would result in impacts to wetlands or other sensitive habitat except for the construction of the new concrete storm water outlet structure, the construction of the new storm water treatment system for runoff from the Central and East Central drainage areas, and for the construction of the new Storm Water Filtration Marsh adjacent to the Campus Lagoon. These activities shall only occur within the buffer zone and not occur within any ESHA wetlands.

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W12b

DATE: November 19, 2009

TO: Commissioners and Interested Persons

FROM: Jack Ainsworth, Deputy Director
Steve Hudson, District Manager
Andrew D. Berner, Assistant Coastal Program Analyst

SUBJECT: **Notice of Impending Development (NOID) 4-09**, for the Main Campus Infrastructure Renewal Project for Public Hearing and Commission Action at the December 9-10, 2009, Commission Meeting in San Francisco.

SUMMARY AND STAFF RECOMMENDATION

The impending development involves the installation of approximately 37,450 linear feet of new and replacement natural gas, potable water, sewer, and storm drain utility lines and related improvements on Main Campus, comprised of: (1) the installation of approximately 19,970 linear feet of new natural gas pipelines; (2) installation and/or replacement of a total of 6,790 linear feet of new potable water pipelines; (3) replacement of 3,090 linear feet of sanitary sewer trunk pipelines and reconstruction of sewer manholes; and (4) installation of 7,600 linear feet of drainage pipeline designed to accommodate runoff from a 25-year storm; (5) relocation of the storm water drainage outfall into the Campus Lagoon; (6) installation of a new concrete storm water outlet structure at the new storm water drainage outfall; (7) storm water treatment system for runoff from the Central and East Central drainage areas; (8) construction of a Storm Water Filtration Marsh adjacent to the Campus Lagoon that includes construction of vegetated storm water basins and swales to provide enhanced bio-filtration for runoff water before it enters the Lagoon resulting in the enhancement of approximately 22,406 sq. ft. of habitat; (9) the replacement of 36,200 sq. ft. of impermeable concrete surfaces with 21,950 sq. ft. of permeable walk-ways, the construction of a bicycle roundabout, the construction of a rain garden, and landscaping improvements at the Campus Library Plaza; and (10) 45,527 cubic yards of grading (37,439 cubic yards excavation and 8,088 cubic yards fill).

Special conditions have been included herein to minimize impacts from the proposed project on biological resources and water quality, including requiring the applicant to: avoid construction and tree removal activities during bird breeding season; conduct pre-construction bird surveys should construction activities be necessary during bird breeding season; install fencing around sensitive habitat areas; implement erosion

control measures and best management practices; and install a storm water cleaning device to treat roadway runoff.

As conditioned, the proposed impending development would not have an adverse impact on sensitive habitats, water quality, or public access during or after construction and is therefore consistent with the policies of the certified UCSB Long Range Development Plan.

The required items necessary to provide a complete notice of impending development were received in the South Central Coast Office and the notice was deemed filed on November 13, 2009.

Staff is recommending that the Commission determine that the impending development is consistent with the certified University of California at Santa Barbara Long Range Development Plan (LRDP) with twelve (9) Special Conditions regarding:

1) Plans Conforming to Geotechnical Engineer's Recommendations; 2) Construction Monitoring; 3) Operations and Construction Responsibilities; 4) Landscaping Plan; 5) Interim Erosion Control Plans; 6) Drainage and Polluted Runoff Control Program; 7) Wetland/Upland Habitat Enhancement and Monitoring Program; 8) Construction Timing and Sensitive Bird Species Surveys; and 9) Removal of Excess Material. The project is consistent with all resource protection policies and provisions of the Long Range Development Plan. See associated Motion and Resolution below on page 4. The standard of review for the proposed NOID is consistency with the policies of the certified LRDP.

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I. PROCEDURAL ISSUES

Section 30606 of the Coastal Act and Article 14, §13547 through §13550 of the California Code of Regulations govern the Coastal Commission’s review of subsequent development where there is a certified LRDP. Section 13549(b) requires the Executive Director or his designee to review the notice of impending development (or development announcement) within ten days of receipt and determine whether it provides sufficient information to determine if the proposed development is consistent

with the certified LRDP. The notice is deemed filed when all necessary supporting information has been received.

Within thirty days of filing the notice of impending development, the Executive Director shall report to the Commission about the nature of the development and make a recommendation regarding the consistency of the proposed development with the certified LRDP. After public hearing, by a majority of its members present, the Commission shall determine whether the development is consistent with the certified LRDP and whether conditions are required to bring the development into conformance with the LRDP. No construction shall commence until after the Commission votes to render the proposed development consistent with the certified LRDP.

II. STAFF RECOMMENDATION: MOTIONS & RESOLUTIONS

A. NOID 4-09: APPROVAL AS CONDITIONED

MOTION I: *I move that the Commission determine that the development described in the Notice of Impending Development 4-09 (Main Campus Infrastructure Renewal Project), as conditioned, is consistent with the certified University of California at Santa Barbara Long Range Development Plan.*

STAFF RECOMMENDS A YES VOTE: Passage of this motion will result in a determination that the development described in the Notice of Impending Development 1-08 as conditioned, is consistent with the certified University of California at Santa Barbara Long Range Development Plan, and adoption of the following resolution and findings. The motion passes only by affirmative vote of a majority of the Commissioners present.

RESOLUTION I: TO DETERMINE DEVELOPMENT IS CONSISTENT WITH LRDP:

The Commission hereby determines that the development described in the Notice of Impending Development 4-09, as conditioned, is consistent with the certified University of California at Santa Barbara Long Range Development Plan for the reasons discussed in the findings herein.

III. SPECIAL CONDITIONS

1. Plans Conforming to Geotechnical Engineer's Recommendations

All recommendations contained in the applicable geotechnical reports shall be incorporated into all final design and construction plans, including grading and drainage. All final plans must be reviewed and approved by the geologic and geotechnical consultants and verified as incorporating the applicable recommendations of the consultants. In addition, prior to the commencement of development the University shall submit, for review and approval by the Executive Director, evidence of the

geologic and geotechnical consultant's review and approval of all final project plans related to construction of Storm water Infiltration Basin/Artificial Wetland.

2. Construction Monitoring

Prior to commencement of development, the University shall retain the services of an independent qualified biologist or environmental resource specialist with appropriate qualifications acceptable to the Executive Director to serve as the biological monitor. The biological monitor shall be present during the following:

- A. All grading, excavation, and construction activities related to the construction of the storm water drainage outfall into the Campus Lagoon;
- B. All grading, excavation, and construction activities related to the construction of the Storm Water Filtration Marsh and vegetated storm water basins and swales and all habitat enhancement activities.
- C. All tree and vegetation removal; and
- D. The installation of wetland buffer fencing, silt fencing and erosion control best management practices.

The University shall cease work should any sensitive species be identified anywhere within the construction area, if a breach in permit compliance occurs, if work outside the scope of the notice of impending development occurs, or if any unforeseen sensitive habitat issues arise. In such event, the biological monitor(s) shall direct the University to cease work and shall immediately notify the Executive Director. Project activities shall resume only upon written approval of the Executive Director. If significant impacts or damage occur to sensitive habitat or species, the University shall be required to submit a revised or supplemental program to adequately mitigate such impacts at a minimum 3:1 replacement ratio. The revised, or supplemental, enhancement program shall be processed as a new Notice of Impending Development.

3. Operations & Maintenance Responsibilities

It shall be the applicant's responsibility to assure that the following requirements are observed during all project operations:

- A. All construction plans and specifications for the project shall indicate that impacts to wetlands and environmentally sensitive habitat areas (ESHA) shall be avoided. Said plans shall clearly identify all wetlands and ESHA. The plan shall include the following requirements and elements:
 - (a) Protective fencing shall be used around all ESHA, wetland areas, and their associated buffers that may be disturbed during construction activities.

- (b) Construction equipment, materials, or activity shall not be placed/occur within any ESHA, wetlands or their buffers, or in any location which would result in impacts to wetlands or other sensitive habitat.
- (c) No construction materials, debris, or waste shall be placed or stored where it may enter sensitive upland habitat or wetlands, storm drain, receiving waters, or be subject to wind erosion and dispersion;
- (d) The plan shall include, at a minimum, a site plan that depicts the following components: limits of the staging area(s); construction corridor(s); construction site; location of construction fencing and temporary job trailers with respect to existing wetlands and sensitive habitat; and public access route through/around the site.
- (e) The plan shall indicate that construction equipment, materials or activity shall not occur outside the designated staging area(s), construction zone, or corridors identified on the site plan required by this condition.
- (f) During construction, washing of concrete trucks, paint, equipment, or similar activities shall occur only in areas where polluted water and materials can be contained for subsequent removal from the site. Wash water shall not be discharged to the storm drains, street, drainage ditches, creeks, or wetlands. Areas designated for washing functions shall be at least 100 feet from any storm drain, water body or sensitive biological resources. The location(s) of the washout area(s) shall be clearly noted at the construction site with signs. In addition, construction materials and waste such as paint, mortar, concrete slurry, fuels, etc. shall be stored, handled, and disposed of in a manner which prevents storm water contamination.

B. The University shall undertake development in accordance with the approved final plans. Any proposed changes to the approved final plans shall be reported to the Executive Director to determine if a notice of impending development or amendment to the Long Range Development is required to authorize such work.

4. Final Landscaping Plan

Prior to commencement of construction activities, the University shall submit a final landscaping plan and tree removal list, prepared by a licensed landscape architect or a qualified resource specialist, for review and approval by the Executive Director. The plan shall incorporate the following criteria:

- A. All disturbed areas on the project site shall be planted and maintained for erosion control purposes within (60) days after construction of is completed. All landscaping shall consist primarily of native plants/shrubs and trees. All native plant species shall be of local genetic stock. No plant species listed as problematic and/or invasive by the California Native Plant Society, the California

Invasive Plant Council, or by the State of California shall be employed or allowed to naturalize or persist on the site. No plant species listed as a 'noxious weed' by the State of California or the U.S. Federal Government shall be utilized or maintained within the property.

- B. Plantings will be maintained in good growing condition throughout the life of the project and, whenever necessary, shall be replaced with new plant materials to ensure continued compliance with applicable landscape requirements.
- C. Rodenticides containing any anticoagulant compounds (including, but not limited to, Warfarin, Brodifacoum, Bromadiolone or Diphacinone) shall not be used.
- D. The University shall undertake development in accordance with the approved final plans. Any proposed changes to the approved final plans shall be reported to the Executive Director. No changes to the approved final plans shall occur without a Commission amendment to this notice of impending development unless the Executive Director determines that no amendment is legally required.

5. Interim Erosion Control Plans

Prior to commencement of construction activities, the University shall submit two (2) final sets of interim erosion control plans, prepared by a qualified engineer, for review and approval by the Executive Director. The plans shall incorporate the following criteria:

- A. The plan shall delineate the areas to be disturbed by grading or construction activities and shall include any temporary access roads, staging areas and stockpile areas. The natural areas on the site shall be clearly delineated on the project site with fencing or survey flags.
- B. The final erosion control plans shall specify the location and design of erosion control measures to be implemented during the rainy season (November 1 – May 1) if construction during this time is approved by the Executive Director. The University shall install or construct temporary sediment basins (including debris basins, desilting basins or silt traps), temporary drains and swales, sand bag barriers, silt fencing, stabilize any stockpiled fill with geo-fabric covers or other appropriate cover, install geo-textiles or mats on all cut or fill slopes and close and stabilize open trenches as soon as possible. Straw bales shall not be approved. These erosion measures shall be required on the project site prior to or concurrent with the initial grading operations and maintained throughout the development process to minimize erosion and sediment from runoff waters during construction. All sediment shall be retained on-site unless removed to an appropriate approved dumping location either outside the coastal zone or to a site within the coastal zone permitted to receive fill.
- C. The plan shall also include temporary erosion control measures should grading or site preparation cease for a period of more than 30 days, including but not limited to: stabilization of all stockpiled fill, access roads, disturbed soils and cut and fill slopes with geo-textiles and/or mats, sand bag barriers, silt fencing;

temporary drains and swales and sediment basins. The plans shall also specify that all disturbed areas shall be seeded with native grass species and include the technical specifications for seeding the disturbed areas. These temporary erosion control measures shall be monitored and maintained until grading or construction operations resume.

- D. Storm drain inlets shall be protected from sediment-laden waters by the use of inlet protection devices such as gravel bag barriers, filter fabric fences, block and gravel filters, and excavated inlet sediment traps.

6. Drainage and Polluted Runoff Control Program

Prior to commencement of construction activities, the University shall submit for the review and approval of the Executive Director, final drainage and runoff control plans, including supporting calculations. The plan shall be prepared by a licensed engineer and shall incorporate structural and non-structural Best Management Practices (BMPs) designed to control the volume, velocity and pollutant load of storm water leaving the developed site. The plan shall be reviewed and approved by the consulting engineering geologist to ensure the plan is in conformance with geologist's recommendations. In addition to the specifications above, the plan shall be in substantial conformance with the following requirements:

- A. Selected BMPs (or suites of BMPs) shall be designed to treat, infiltrate or filter the amount of storm water runoff produced by all storms up to and including the 85th percentile, 24-hour runoff event for volume-based BMPs, and/or the 85th percentile, 1-hour runoff event, with an appropriate safety factor (i.e., 2 or greater), for flow-based BMPs.
- B. Post-development peak runoff rates and average volumes shall not exceed pre-development conditions;
- C. Appropriate structural and non-structural BMPs (site design, source control and treatment control) shall be designed and implemented to minimize water quality impacts to surrounding coastal waters;
- D. Impervious surfaces, especially directly connected impervious areas, shall be minimized, and alternative types of pervious pavement shall be used where feasible;
- E. Irrigation and the use of fertilizers and other landscaping chemicals, including rodenticides, shall be minimized;
- F. Debris and other water pollutants removed from structural BMP(s) during clean-out shall be contained and disposed of in a proper manner;
- G. There shall be no net reduction in clean storm water runoff to the adjacent wetlands.

- H. Runoff shall be conveyed off site in a non-erosive manner.
- I. Energy dissipating measures shall be installed at the terminus of outflow drains.
- J. The plan shall include provisions for maintaining the drainage system, including structural BMPs, in a functional condition throughout the life of the approved development. Such maintenance shall include the following: (1) BMPs shall be inspected, cleaned and repaired when necessary prior to the onset of the storm season, no later than September 30th each year and (2) should any of the project's surface or subsurface drainage/filtration structures or other BMPs fail or result in increased erosion, the applicant/landowner or successor-in-interest shall be responsible for any necessary repairs to the drainage/filtration system or BMPs and enhancement of the eroded area. Should repairs or enhancement become necessary, prior to the commencement of such repair or enhancement work, the applicant shall submit a repair and enhancement plan to the Executive Director to determine if an amendment or new notice of impending development is required to authorize such work.
- K. The University shall undertake development in accordance with the approved final plans. Any proposed changes to the approved final plans shall be reported to the Executive Director. No changes to the approved final plans shall occur without a Commission amendment to this notice of impending development unless the Executive Director determines that no amendment is legally required.

7. Wetland/Upland Habitat Enhancement and Monitoring Program

Prior to commencement of construction activities, the University shall submit for the review and approval by the Executive Director, a final "Habitat Enhancement and Monitoring Program" for the proposed 22,406 sq. ft. of wetland/upland habitat enhancement and restoration in and around the outfall of storm water pipe 31. Planting shall be of native plant species indigenous to the area using accepted planting procedures and all native plant species shall be of local genetic stock. The program shall be prepared by a qualified biologist(s), ecologist(s), or resource specialist(s), hereafter, referred to as the Environmental Resource Specialist(s), with experience in the field of habitat restoration. The applicant shall provide the resource specialist's qualifications, for the review and approval of the Executive Director, prior to plan development. The Program shall provide, at a minimum, for the following:

A. Restoration Plan

- a. A baseline assessment of all native vegetation and habitat on site, including detailed documentation of existing conditions on site (including photographs taken from pre-designated sites annotated to a copy of the site plans. The plan shall delineate existing vegetation types, show the distribution and abundance of any sensitive species.

- b. A description of the goals of the restoration plan, including, as appropriate, topography, hydrology, vegetation types, sensitive species, and wildlife usage. The plan shall also document the performance standards, which provide a mechanism for making adjustments to the mitigation site when it is determined, through monitoring, or other means that the restoration techniques are not working and the necessary management and maintenance requirements, and provisions for timely remediation should the need arise.
- c. Native seeds shall also be collected in anticipation of future plantings. The plan shall specify the planting palette (seed mix and collected plants), planting design, source of plant material, and plant installation. The planting palette shall be made up exclusively of native plants that are appropriate to the habitat and region or grown from seeds or vegetative materials obtained from the site or from an appropriate nearby location so as to protect the genetic makeup of natural populations. Horticultural varieties shall not be used. Plantings shall be maintained in good growing condition throughout the life of the project and, whenever necessary, shall be replaced with new plant materials to ensure continued compliance with the revegetation requirements.
- d. Sufficient technical detail on the restoration design including, at a minimum, a planting program including a description of planned site preparation, method and location of exotic species removal, timing of planting, plant locations and elevations on the baseline map, and maintenance timing and techniques.
- e. Provisions for on-going habitat restoration maintenance and/or management for the term of this notice of impending development. At a minimum, semi-annual maintenance and/or management activities shall include, as necessary, periodic weeding of invasive and non-native vegetation and revegetation consistent with the approved restoration plan.
- f. Rodenticides containing any anticoagulant compounds (including, but not limited to, Warfarin, Brodifacoum, Bromadiolone or Diphacinone) shall not be used.
- g. The applicant shall commence implementation the final approved Habitat Restoration Plan upon issuance of the notice of impending development and complete the planting work within a one year period.

B. Monitoring

A monitoring program shall be implemented to monitor the project for compliance with the specified guidelines and performance standards and shall provide the following:

- a. Initial Monitoring Report: The University shall submit, upon completion of the initial revegetation, a written report prepared by a qualified resource specialist, for the review and approval of the Executive Director, documenting the completion of the initial revegetation work. This report shall also include photographs taken from pre-designated sites (annotated to a copy of the site plans) documenting the completion of the initial planting/revegetation work.
 - b. Interim Monitoring Reports: After initial revegetation is completed, the applicant shall submit, for the review and approval of the Executive Director, on an annual basis until the authorization for the approved development expires (10 years from the date of Commission action) a written monitoring report prepared by a monitoring resource specialist indicating the progress and relative success or failure of the restoration on the site. This report shall also include further recommendations and requirements for additional enhancement/restoration activities in order for the project to meet the criteria and performance standards. This report shall also include photographs taken from pre-designated sites (annotated to a copy of the site plans) indicating the progress of recovery at each of the sites. Each report shall be cumulative and shall summarize all previous results. Each report shall also include a "Performance Evaluation" section where information and results from the monitoring program are used to evaluate the status of the enhancement/restoration project in relation to the interim performance standards and final success criteria.
 - c. Final Report: Prior to the date that authorization for the approved development expires (5 years from the date of Commission action), a final detailed report on the restoration shall be submitted for the review and approval of the Executive Director. If this report indicates that the restoration project has, in part, or in whole, been unsuccessful, based on the performance standards specified in the restoration plan, the applicant(s) shall submit within 90 days a revised or supplemental restoration program to compensate for those portions of the original program which did not meet the approved success criteria. The revised or supplemental program shall be processed as an amendment to this NOID.
- C. The University shall undertake development in accordance with the final approved plans. Any proposed changes to the approved final plans shall be reported to the Executive Director. No changes to the approved final plans shall occur without a Coastal Commission - approved amendment to the notice of impending development, unless the Executive Director determines that no amendment is legally required.
- D. Herbicide Use

Herbicides shall not be used within any portion of a stream channel as measured from toe of bank to toe of bank. Herbicide use shall be restricted to the use of Glyphosate Aquamaster™ (previously Rodeo™) herbicide for the elimination of non-native and invasive vegetation located within the project site for purposes of habitat restoration only. The applicants shall remove non-native or invasive vegetation by hand and the stumps may be painted with Glyphosate Aquamaster™ herbicide. Herbicide application by means of spray shall not be utilized. No use of any herbicide shall occur during the rainy season (November 1 – March 31) unless otherwise allowed by the Executive Director for good cause. In no instance shall herbicide application occur if wind speeds on site are greater than 5 mph or 48 hours prior to predicted rain. In the event that rain does occur, herbicide application shall not resume again until 72 hours after rain.

8. Construction Timing and Sensitive Bird Species Surveys

For any construction or tree removal activities between March 1 and August 15, the University shall retain the services of a qualified biologist or environmental resource specialist (hereinafter, “environmental resources specialist”) to conduct raptor and other sensitive bird species surveys and monitor project operations. At least two (2) weeks prior to commencement of any project operations, the applicants shall submit the name and qualifications of the environmental resources specialist, for the review and approval of the Executive Director. The environmental resources specialist shall ensure that all project construction and operations shall be carried out consistent with the following:

- A. The University shall ensure that a qualified environmental resource specialist, with experience in conducting bird surveys shall conduct bird surveys 30 calendar days prior to construction and/or tree removal activities to detect any active bird nests in all trees within 500 feet of the project (including, but not limited to, eucalyptus trees). A follow-up survey must be conducted 3 calendar days prior to the initiation of clearance/construction and nest surveys must continue on a monthly basis throughout the nesting season or until the project is completed, whichever comes first.
- B. If an active nest of any federally or state listed threatened or endangered species, species of special concern, or any species of raptor is found within 300 ft. of the project (500 ft. for raptors), the University shall retain the services of a qualified biologist with experience conducting bird and noise surveys, to monitor bird behavior and construction noise levels. The biological monitor shall be present at all relevant construction meetings and during all significant construction activities (those with potential noise impacts) to ensure that nesting birds are not disturbed by construction related noise. The biological monitor shall monitor birds and noise every day at the beginning of the project and during all periods of significant construction activities. Construction activities may occur only if construction noise levels are at or below a peak of 65 at the nest (s) site. If construction noise exceeds a peak level of 65 dB at the nest (s) site, sound mitigation measures such as sound shields, blankets around smaller equipment, mixing concrete batches off-site, use of mufflers, and minimizing the use of back-up alarms shall be employed. If these sound mitigation measures do not reduce

noise levels, construction within 300 ft. (500 ft for raptors) of the nesting trees shall cease and shall not recommence until either new sound mitigation can be employed or nesting is complete.

- C. If an active nest of a federally or state-listed threatened or endangered species, bird species of special concern, or any species of raptor is found, UCSB will notify the appropriate State and Federal Agencies within 24 hours, and appropriate action specific to each incident will be developed. UCSB will notify the California Coastal Commission by e-mail within 24 hours and consult with the Commission regarding determinations of State and Federal agencies.
- D. The environmental resource specialist shall be present during all tree removal activities. The environmental resource specialist shall require the University to cease work should any breach in compliance occur, or if any unforeseen sensitive habitat issues arise. The environmental resource specialist(s) shall immediately notify the Executive Director if activities outside of the scope of Notice of Impending Development 4-09 occur. If significant impacts or damage occur to sensitive habitats or to wildlife species, the applicants shall be required to submit a revised or supplemental program to adequately mitigate such impacts. Any native vegetation which is inadvertently or otherwise destroyed or damaged during implementation of the project shall be replaced in kind at a 3:1 or greater ratio. The revised, or supplemental, program shall be processed as an amendment to this NOID.

9. Removal of Excess Material

Prior to commencement of construction activities, the University shall provide evidence to the Executive Director of the location of the disposal site for all excess excavated material from the site. If the disposal site is located in the Coastal Zone, the disposal site must have a valid NOID for the disposal of fill material. If the disposal site does not have a NOID, such a NOID will be required prior to the disposal of material.

IV. FINDINGS FOR APPROVAL OF THE NOTICE OF IMPENDING DEVELOPMENT, AS SUBMITTED

The following findings support the Commission's approval of the Notice of Impending Development, as submitted. The Commission hereby finds and declares as follows:

A. PROJECT DESCRIPTION & BACKGROUND

1. Overview

The Infrastructure Renewal Project is for the replacement of existing and installation of new segments of natural gas, potable water, sewer and storm drain pipelines at various locations throughout the UCSB Main Campus. The proposed project is necessary to address existing deficiencies in the University's utility system. The University has indicated that the improvements will not serve to increase infrastructure capacity on

campus but are necessary to maintain current operational levels of service. Specifically, the University has indicated that the proposed infrastructure system improvements are necessary to resolve the following concerns:

- Many of the pipelines that provide the “backbone” of the Main Campus infrastructure system were installed in the 1950’s and have exceeded their useful service life.
- Certain utility pipelines are in need of substantial maintenance and service requirements.
- Improvements to undersized and/or deteriorated pipelines are required to address regulatory requirements and fire/life safety-related issues.
- Aspects of the existing infrastructure system can no longer meet the demands of existing development located on the Main Campus.

In addition to the replacement of existing deteriorated or undersized infrastructure, new pipeline segments have been proposed to increase the reliability of existing infrastructure distribution and collection systems. The new pipeline segments would provide looped service lines that are less likely to result in service disruptions due to pipeline maintenance or repair.

The Infrastructure Renewal Project would result in the installation of approximately 37,450 linear feet of new and replacement natural gas, potable water, sewer and storm drain utility lines to improve on-campus distribution and service reliability. The majority of the new infrastructure pipelines (19,970 linear feet) would be for the improvement of the natural gas distribution system. Most of the proposed potable water, sewer and storm drain pipeline improvements would replace deteriorated or inadequate “trunk” lines, which are the major distribution/collection lines in the campus-wide infrastructure network. It is anticipated that the infrastructure improvements to be provided by the proposed Project would be installed over a period of approximately six years.

Most of the new proposed utility line segments and segments of existing lines to be replaced are located in existing roadways, parking lots, pedestrian corridors or other open areas on the UCSB Main Campus. In some cases, existing lines would be relocated to avoid replacing lines under existing buildings and to consolidate the location of pipelines in a common corridor. The general locations of proposed pipeline installation corridors are shown in Exhibit 3 and depict the location of pipelines included in the proposed Project.

In addition to the replacement and installation of identified utility lines, the proposed project would result in the replacement of service lateral lines that connect existing buildings to the trunk line system. Reasons for replacing service laterals include: the removal of pipelines that are constructed of materials that have resulted in maintenance problems (i.e., cast iron), the replacement of shut-off valves that no longer operate properly; and the relocation of service laterals to connect a building to a relocated trunk line or the trunk line located closest to the building.

In addition, the project includes the construction of a new enhancement Storm water Filtration Basin/Artificial Marsh near the San Nicolas Residence Hall which will serve to improve the quality of storm water runoff and increase infiltration. The Basin would be approximately 22,406 sq. ft. in size and would include planting with native wetland vegetation. The project also includes replacing approximately 36,200 sq. ft. of impermeable concrete with 21,950 sq. ft. of permeable paving, an expanded lawn, and the construction of a “rain garden” (a low-irrigation garden which would utilize native, drought-tolerant vegetation, storm water runoff-collection swales) in order to maximize storm water infiltration and reduce the amount of impermeable surface at the Campus Library Plaza.

The Infrastructure Renewal Project will also require the removal of 30 non-native trees and replace them with 51 new trees. In total, this project proposes 45,527 cu. yds of grading (37,439 cu. yds. excavation, 8,088 cu. yds. fill).

The approximate earthwork quantities for each utility are:

Utility	Linear feet	Cut (cu. yds.)	Fill (cu. yds.)	Export (cu. yds.)
Natural Gas	19,970	11,834	1,572	10,263
Potable Water	6,790	5,093	844	4,248
Sewer	3,090	4,705	1,640	3,065
Storm Drain	7,600	15,807	4,032	11,774

- Gas line trenches will be approximately 3-feet wide and 4.5-feet deep on average.
- Water line trenches will be approximately 3-feet wide and 4.5-feet deep on average.
- Sewer line trenches will be approximately 3-feet wide and vary between 10 and 20 feet deep.
- Storm water line/drain trenches will vary between 2 to 5-feet wide depending on line size. Depth varies greatly between 5 and 31-feet.

The University proposes to backfill all new pipelines located within roadways approximately 12 inches above the pipe zone (top of pipe) with a cement slurry. In the past, there have been problems with trench settlement when replacing utilities in existing roads utilizing earthen backfill material only. Thus, cement slurry will be utilized (which is self compacting) in order to minimize settlement. Although grading for the project will be primarily limited to trenching activities and will not result in any significant landform alteration, the project will still require the export of approximately 29,351 cu. yds. of excavated material.

In this case, the impending development will not result in any potential significant impacts to public access or public views. Moreover, the proposed improvements to the Main Campus natural gas, potable water, sewer, and storm drain infrastructure systems have been identified based on assessments of existing conditions and the identification

of existing operation deficiencies. The proposed project would provide improved operations for the existing storm drain and sanitary sewer systems by eliminating pipeline bottlenecks and improving flow capacities. New and replacement potable water and natural gas pipelines would improve service capacity to areas of the Main Campus and enhance system looping. All proposed infrastructure improvements would be located on the Main Campus and would not increase the University's potable water allocations from the Goleta Water District, or its allocated waste water flow treatment capacity at the Goleta Sanitary District treatment plant.

2. Natural Gas

This project component includes the replacement of existing natural gas distribution pipelines, service lines, and the installation of new pipelines that would provide looped distribution systems on the Main Campus. Proposed construction corridors are depicted in Exhibit 4.

The Infrastructure Renewal Project would result in the installation of approximately 19,970 linear feet of natural gas pipelines. Medium Density Polyethylene (MDPE) pipe would be used for underground installations, and carbon steel pipes would be used for any above ground locations. The proposed project would also install gas main shutoff valves that can be used to isolate damaged segments of pipeline.

Pipes located in roadways and parking lots would be buried at least two feet below grade, and pipes located in other areas would be installed at least eighteen inches below grade. Yellow warning tape would be provided above the piping and copper tracer wire would be placed above plastic pipes for locating purposes. All proposed natural gas distribution systems would comply with the requirements of Title 49, Parts 191 and 192 of the Transportation of Natural and Other Gas by Pipeline regulations (49CFR192). All existing gas lines that are replaced by the proposed project would either be removed or abandoned in place by capping the ends of the existing pipe.

3. Potable Water

The proposed Project would improve the Campus' potable water distribution system by dividing large pipeline loops into smaller systems, which would increase flow pressure and system redundancy; and by repairing pipelines that are old and in very poor condition. For example, pipe corrosion has caused system pressure losses which have been historically overcome by operating the entire distribution system with higher than normal system pressure, resulting in increased energy usage to operate system pressure booster pumps.

The Infrastructure Renewal Project would replace mostly 10-inch cast iron pipe with 12-inch PVC pipe. In total, the Infrastructure Renewal Project would install or replace approximately 6,790 linear feet of new potable water pipelines. Proposed water lines would be installed approximately three feet below existing grade. All existing potable water lines that are replaced would either be removed or abandoned in place by

capping the ends of the existing pipe. Proposed construction corridors for new and replacement potable water pipelines are depicted in Exhibit 5.

4. Sanitary Sewer

This project component includes the replacement of existing sanitary sewer pipelines and the reconstruction of selected existing sewer manholes. The proposed project would also result in the replacement of existing service lateral pipelines that connect existing buildings to the sanitary sewer trunk collection system. Proposed construction corridors for new and replacement sanitary sewer trunk pipelines are depicted in Exhibit 6.

The proposed project would result in the installation of approximately 3,090 linear feet of sanitary sewer trunk pipelines. A pipeline replacement project would be to remove existing trunk line “bottlenecks,” such as one in the “Pardall Corridor”, where the existing pipeline goes from 12 to 10 to 18 inches. The size of the proposed pipelines vary including the use of high density polyethylene (HDPE), polyvinyl chloride (PVC) and ductile iron pipes, and would typically be buried approximately three feet below the ground surface. All existing sewer lines that are replaced by the proposed project would either be removed or abandoned in place by capping the ends of the existing pipe.

Sewer system lateral lines that would be replaced in conjunction with the proposed project would be located between existing buildings and an adjacent trunk line. Generally, new service laterals would be provided to connect the building to a relocated trunk line or the trunk line located closest to the building. Service lateral lines that are damaged, impacted by roots or made of cast iron may also be replaced as necessary. Deteriorated manholes included in the proposed project would either be reconstructed or lined with a PVC coating, and are generally located along construction corridors where new pipelines are proposed.

5. Storm Drains

The proposed project would upgrade existing storm water drainage systems located throughout the campus, but primarily in the Central, East Central and Humanities and Social Sciences Building storm drain areas located in the Central Campus drainage basin; and the Event Center storm drain area located in the West Campus drainage basin (Exhibit 2). New drainage systems would also be provided around Campbell Hall, in the vicinity of the Public Safety Building, and three existing drain lines that presently discharge into the Campus Lagoon would be replaced. In general, proposed drain lines would be sized and designed to accommodate runoff from a 25-year storm, and approximately 7,400 linear feet of drainage pipeline would be installed. Construction corridors for the proposed drainage pipelines are depicted in Exhibit 7.

The main drainage pipelines for the Central and East Central drainage areas would be replaced to address existing drainage deficiencies in the central portion of the Main Campus. The main trunk line for the Central drainage area is located in the Library Mall Project area (Corridor 11) and the main trunk lines for the East Central drainage area

are located in the Parking Lot No. 7/Noble Hall Corridor (Corridor 13) and in UCEN Road (Corridor 27). Water collected by these drainage systems is presently conveyed to the Campus Lagoon through a pipe located south of and adjacent to the UCEN Building. However, due to the expansion of the University Center (UCEN) in the early 1980's, the existing lagoon discharge pipe is located under buildings and difficult to access pedestrian areas. As a result, access to the pipe is now severely constrained and it is no longer feasible to replace the existing pipe. Therefore, the proposed Project would redirect runoff from the Central and East Central drainage areas to a new Campus Lagoon discharge point located southeast of the San Nicolas Residence Hall building (Corridor 31). The new discharge line would begin in an area near the UCEN and extend southward generally along or adjacent to the alignment of Channel Islands Road (Corridors 12 and 29). The new pipe that would extend into the lagoon would be 42 inches in diameter and would replace and follow the alignment of an existing 12-inch line.

Portions of the Campbell Hall area (Corridor 17) are topographically depressed and do not provide an overland escape route for runoff water. To address existing drainage problems, a new drainage system for this area would be provided. Runoff from Campbell Hall would continue to be directed to the Central Campus drainage area (Exhibit 2).

Other proposed drainage improvements include the installation of replacement drainage lines in Ocean Road (Corridor 6), which are located in the northern portion of the Events Center drainage area and the installation of a replacement drainage pipeline segment in the Campus Green area (Corridor 15).

In general, the proposed storm drain lines would be constructed of reinforced concrete or HDPE pipe, and would be buried at various depths depending upon site conditions and engineering requirements to attain adequate pipe gradient. All existing drainage pipelines that are replaced by the proposed project would either be removed or abandoned in place by capping the ends of the existing pipe.

No storm water treatment is presently provided for runoff from the Central or East Central drainage areas. The proposed project would include a treatment system, such as a Continuous Deflective Separation[®] (CDS) unit, as part of the Corridor 31 improvements. The water pollution control equipment would be located in the vicinity of the De la Guerra Commons Building, at least 100 feet from the edge of the Campus Lagoon.

6. San Nicolas Storm water Infiltration Basin/Artificial Wetland Enhancement Project

The proposed project also includes construction of enhancement approximately 22,406 sq. ft. (approximately ½ acre) Storm water Infiltration Basin/Artificial Wetland which would involve the planting of wetland plant species to create an artificial wetland/restoration storm water filtration system (Exhibit 8). Construction of the basin would include approximately 1,777 cu. yds. of grading (1,761 cu. yds. of cut and 16 cu.

yds. of fill. The Storm water Infiltration Basin /Artificial Wetland would be located in an existing disturbed area that does not contain any native and/or wetland vegetation. Construction of the storm water treatment system/artificial wetland would be achieved through the grading of a previously disturbed slope adjacent to the Lagoon, removal of non-native plants, the planting of native wetland vegetation, and construction of vegetated pools and swales to provide enhanced bio-filtration for runoff water before it enters the lagoon. The proposed 42-inch lagoon discharge drainage pipe in Corridor 31 is to be provided with a "splitter" that would divert low volume flows to the Enhancement Project's bio-filtration system. The water quality benefits that may be provided by diverting low volume runoff flows from the central portion of the Main Campus through the Storm water Infiltration Basin/Artificial Wetland Enhancement bio-filtration system would be in addition to the mechanical filter device that is to be provided as part of the Infrastructure Renewal component of this project.

Storm water is currently discharged into the lagoon from two existing storm drains enhancement adjacent to the proposed Storm water Infiltration Basin/Artificial Wetland area. One outlet is located near the top of the slope at the San Nicolas Residence Hall area (adjacent to the De La Guerra Dining Commons) and discharges storm water to the lagoon through a 12-inch diameter pipe. The second pipe, also 12-inches in diameter, outfalls within a small existing willow woodland on the shore of the lagoon. With the exception of the small willow woodland area, the site is dominated by non-native Kikuyu grass and also contains invasive pampas grass, castor bean, myoporum, and other large patches of non-native vegetation. The site has very sandy soils and is saturated most of the year from a combination of piped storm water and sub-surface flow. Excess water sheet flows down the slope and crosses over the emergency access road then to the lagoon. The area near the shore of the lagoon is currently vegetated with nonnative vegetation such as castor bean and kikuyu grass and some native fresh water marsh and riparian species (Willows and *Juncus textiles* "basket rush"). It appears that these fresh water plant species are viable in this location due to the fresh water input from the storm drain located in the center of the patch of willows. One invasive California pepper tree and two non-native Pink Melaleuca trees are also growing near the lagoon edge where the concrete storm outfall box is proposed to be located. There are no wetlands or environmentally sensitive habitat area within the proposed project area although the adjacent lagoon itself is designated as environmentally sensitive habitat area in the certified LRDP. Portions of the proposed development, including the reconfigured outfall and Storm water Infiltration Basin/Artificial Wetland would be located within the 100 ft. buffer from the Campus Lagoon.

The Storm water Infiltration Basin/Artificial Wetland enhancement will receive dry season flows and the first portion of first-flush storm water via an 8-foot diversion line off the new 48-inch storm drain line. Sandstone weirs will be placed to slow and percolate water. The Storm water Infiltration Basin/Artificial Wetland enhancement will also continue to receive water from the adjacent roadway and lawn areas surrounding De la Guerra Dining Commons. The dry season flows, which typically contain the highest concentrations of pollutants, will be naturally cleansed through biological processes in the enhancement area. The low point elevation has been set to coincide

with the average depth of the water table to allow establishment of various native vegetation types. Having natural groundwater will also dilute the incoming dry season flows as well as first-flush storm flows.

The plants proposed for the Storm water Infiltration Basin/Artificial Wetland enhancement include species from local wetland and transitional plant communities. Upland areas surrounding the basin would be planted with native Coastal Sage Scrub and, Riparian Woodland plant species. All plants proposed will be propagated from local genetic stock. The site will be cleared of invasive and non-native plants prior to grading and habitat enhancement planting. The slightly varied grading contours will allow a wider species diversity to establish in and around the wetland, increasing habitat value of the lagoon area.

The Storm water Infiltration Basin/Artificial Wetland enhancement is designed to maintain a consistent maximum water level, and will include a drain to maintain constant slow water movement. The water leaving the wetland during non-storm periods will be conducted through a drain pipe to an existing stand of bulrush formed around an existing swale adjacent to the lagoon.

The drain outfall will have several small rock-lined pools to absorb water energy, aerate the water, and dissipate it through the existing willow stand and bulrush swale. This process will improve the habitat quality of this area by supplying additional freshwater to support a more diverse native plant community. The water will also be further cleansed as it passes through on its way to the lagoon.

Water from the main storm drain heading to the lagoon will enter a pre-cast concrete box. This box serves to dissipate the energy of storm water flows, thereby causing fewer disturbances from erosion processes both on land and in the shallow lagoon. The box also substantially decreases the amount of disturbance for grading that would be required for a traditional pipe headwall and rock energy dissipation structure. Flows of 5 cubic feet per second or less will exit the box to the west and supply fresh water to the existing willow stand. Additional willows and plants from the Coastal Sage Scrub Rhus Series will be planted around the box to increase habitat value and screen the box from the path and adjacent areas. Flows above 5 cubic feet per second will spill out of the box towards the lagoon over an area of rock planted with bulrush. This will dissipate additional energy from the high water flows, thereby reducing the disturbance to the lagoon bottom that could cause turbidity. The site for the outfall box was selected to reduce environmental impacts to the surrounding fallen trees that serve as bird roosting sites, and to the mature willow stand that has evolved around the existing 12ft. storm drain from San Nicolas residence hall. The existing 12ft. pipe will remain in place to deliver freshwater and sustain the existing willows.

7. Library Plaza Landscape Plan and “Rain Garden”

The landscape design for the Library Plaza area proposes to reduce the amount of impermeable surfaces on campus through the removal of approximately 36,200 sq. ft.

of impermeable concrete plaza adjacent to the library and construction and planting of a new “rain garden” (a low-irrigation garden which would utilize native, drought-tolerant vegetation, storm water runoff-collection swales, and public seating areas, benches, and permeable-surface walkways) as shown on Exhibit 10. This component of the project is intended to reduce the amount of storm water runoff leaving campus by increasing ground water infiltration and improve water quality while also increasing the aesthetic character of a heavily used area of campus.

In addition, several utility lines will be installed through the library plaza, requiring the removal of concrete in this area. The plaza currently consists of large expanses of concrete, some of which are not used by students. The 36,200 sq. ft. of existing paved areas will be replaced with 21,950 sq. ft of permeable paving, an expanded lawn, and the construction of a “rain garden” (a low-irrigation garden which would utilize native, drought-tolerant vegetation, storm water runoff-collection swales) in order to maximize storm water infiltration and reduce the amount of impermeable surface at the Campus Library Plaza. The permeable pavers will be installed on top of a permeable crushed rock base that has been designed to hold three to four inches of rainfall in order to allow that water to percolate to the groundwater table. Should this reservoir fill, water will either overflow to the rain garden or enter the storm drain system. All removed concrete will be taken to a local concrete recycling facility. The system is designed to receive water from the future library addition plaza, and potentially the roof drains from the addition. New sycamore trees will provide summer shade and winter sunshine for the plaza.

All planting, including the lawns, will be irrigated with reclaimed water and are proposed to be linked to the campus central control weather station to increase water conservation and irrigation efficiency.

Also included in the Library Plaza plan is the installation of a bicycle roundabout on the southern side of the Davidson Library (Exhibit 11). The “T” intersection in an existing separated bicycle path will be replaced with a large bicycle roundabout to increase bicycle traffic flow on campus. A separated bicycle way will also be refurbished where sever heaving has taken place. The channeling of pedestrian flow will be improved across the Bikeway at four locations. These pedestrian crossings will include American Disability Act truncated dome (tactile warning) areas to support path crossings for those with visual impairments. The pedestrian crossing areas will also include pedestrian refuge areas in the median-area to facilitate safe crossing of the bicycle path, one lane at a time.

B. CONSISTENCY ANALYSIS

The standard of review for a Notice of Impending Development is consistency with the certified Long Range Development Plan (LRDP). UCSB’s LRDP was certified by the Commission in 1990 and contains policies and provisions that identify areas for campus development while protecting coastal resources including environmentally sensitive habitat areas, water quality, geologic stability and public access.

1. Environmentally Sensitive Habitat Area

The certified LRDP requires the protection of environmentally sensitive habitat areas (ESHA) against any significant disruption of habitat values. No development may be permitted within ESHA, except for uses that are dependent on the resource. Coastal Act Section 30230, which has been included in the certified LRDP, states that marine resources shall be maintained, enhanced and where feasible restored and that special protection shall be given to areas and species of special biological significance. Section 30231 of the Coastal Act, which has also been included in the certified LRDP, states, in part, that the quality of coastal waters, streams, and wetlands shall be maintained and where feasible restored. Section 30233 of the Coastal Act, included in the certified LRDP, states, in part, that the diking, filling, or dredging of wetland areas shall not be allowed with the exception of development for incidental public services, enhancement purposes, and nature study or aquaculture. Further, Section 30240 of the Coastal Act, which has been included in the certified LRDP, states that environmentally sensitive habitat areas (ESHAs) shall be protected and that only uses dependent upon such resources shall be allowed in such areas. Section 30240 also requires that development in areas adjacent to ESHA shall be sited and designed to prevent impacts which would significantly degrade such areas.

In addition, the LRDP contains several policies which require the protection of ESHA and wetland areas. For instance, Policy 30231.1 requires that identified Campus wetlands and coastal waters be protected from increased sedimentation or contamination from new development. Policy 30231.2 requires that new development be designed to minimize soil erosion and to direct runoff away from coastal waters and wetlands. Subpart (l) of Policy 30231.2 of the LRDP also requires that development adjacent to the 100 ft. buffer surrounding campus wetlands shall not result in adverse effects to campus wetlands. Further, Policy 30231.3 of the LRDP requires that the area surrounding campus wetlands shall be reserved as open-space buffer.

Wetland Buffer

Section 30240 of the Coastal Act, which has been included in the certified LRDP, requires that existing environmentally sensitive habitat areas, such as wetland areas, shall be protected against any significant disruption of habitat values, and that development in areas adjacent to significant habitat areas shall be sited and designed to prevent adverse effects which would degrade such areas. The Commission notes that unless adequate buffer areas are provided for, new development will result in adverse effects from contaminated and increased runoff, increased erosion, displacement of habitat, and disturbance to wildlife dependent upon such resources. Applications for proposed development that have come before the Commission have typically provided for a 100 ft. open-space buffer between new development and ESHA and wetland areas, and when not proposed by the applicant, such buffer areas have been required by the Commission to protect those resources. Buffer areas are undeveloped lands surrounding resource areas, such as wetlands, to be protected. These areas act to protect the wetland or ESHA resource from the direct effects of nearby disturbance (both acute and chronic), and provide the necessary habitat for

organisms that spend only a portion of their life in the wetland such as amphibians, reptiles, birds, and mammals. In addition, Policy 30231.3 of the LRDP requires that the area surrounding wetlands shall be preserved as open space buffer and Policy 30231.2(l) of the LRDP requires that “new development adjacent to the required 100-foot building setback surrounding the upland limit of the wetland shall not result in significant adverse impacts” to the wetland.

The Commission notes that development, if constructed immediately adjacent to ESHA and wetland areas without any open-space buffer, will result in adverse effects to sensitive habitat resources, including impacts from contaminated and increased runoff, increased erosion, and displacement of habitat. The Commission further notes that the provision of a 100 ft. open-space buffer between the proposed development and the existing significant habitat resources on site will serve to minimize both the direct and indirect adverse effects to ESHA and wetland areas located adjacent to the proposed development.

The certified LRDP designates ESHA within 100 feet of a portion of the project area. Although the majority of Infrastructure Renewal Project will be located within the developed core of the campus more than 100 ft. from any ESHA or wetland areas, the proposed relocation of the storm water drainage outfall into the Campus Lagoon and construction of the Storm water Infiltration Basin/Artificial Wetland will be located approximately 30 ft. from the Campus Lagoon, which is designated ESHA pursuant to the LRDP. During heavy rainfall, the retention area will expand and overflow into the Lagoon.

The project includes relocation of an existing drainage outfall line that would discharge into the Campus lagoon which the enhancement will serve to improve existing willow habitat and establish additional native plant habitat. Water from the main storm drain heading to the lagoon will enter a pre-cast concrete box. This box serves to dissipate the energy of storm water flows, thereby causing fewer disturbances from erosion processes both on land and in the shallow lagoon. The box also substantially decreases the amount of disturbance for grading that would be required for a traditional pipe headwall and rock energy dissipation structure. Flows of 5 cubic feet per second or less will exit the box to the west and supply fresh water to the existing willow stand. Additional willows and plants from the Coastal Sage Scrub Rhus Series will be planted around the box to increase habitat value and screen the box from the path and adjacent areas. Flows above 5 cubic feet per second will spill out of the box towards the lagoon over an area of rock planted with bulrush. This will dissipate additional energy from the high water flows, thereby reducing the disturbance to the lagoon bottom that could cause turbidity. The site for the outfall box was selected to reduce environmental impacts to the surrounding fallen trees that serve as bird roosting sites, and to the mature willow stand that has evolved around the existing 12ft. storm drain from San Nicolas residence hall. The existing 12ft. pipe will remain in place to deliver freshwater and sustain the existing willows.

The proposed 22,406 sq. ft. (approximately ½ acre) Storm water Infiltration Basin/Artificial Wetland would involve the planting of wetland plant species to create an

artificial wetland/storm water filtration system. Construction of the basin would include approximately 1,777 cu. yds. of grading (1,761 cu. yds. of cut and 16 cu. yds. of fill. The Storm water Infiltration Basin/Artificial Wetland would be located in an existing disturbed area that does not contain any native and/or wetland vegetation. Construction of the storm water treatment system/artificial wetland would be achieved through the grading of a previously disturbed slope adjacent to the Lagoon, removal of non-native plants, the planting of native wetland vegetation, and construction of vegetated pools and swales to provide enhanced bio-filtration for runoff water before it enters the lagoon. The proposed 42-inch lagoon discharge drainage pipe in Corridor 31 is to be provided with a "splitter" that would divert low volume flows to the Enhancement Project's bio-filtration system. The water quality benefits that may be provided by diverting low volume runoff flows from the central portion of the Main Campus through the Storm water Infiltration Basin/Artificial Wetland bio-filtration system would be in addition to the mechanical filter device that is to be provided as part of the Infrastructure Renewal component of this project.

In past Commission actions, the Commission has typically required that new development be located at least 100 feet from wetland areas, including storm water management systems. However, in this unique case, there is no alternative location where the storm water management system could be relocated in order to provide a 100 foot buffer. The Commission's biologist has determined that the presence of the reconfigured storm water infiltration basins in the wetland buffer is acceptable, in this case, because the nature and intensity of the Storm water Infiltration Basin/Artificial Wetland would still be conducive to wildlife movement and native habitats such that no fuel modification is required; no lighting would be necessary now or in the future; construction disturbance and noise would occur only during initial development except for periodic maintenance of the basins to maintain capacity; and the proposed habitat enhancement of the remaining buffer would enhance the currently degraded habitat to provide a significant connection with the large contiguous undeveloped habitat area comprised of the Campus Lagoon and surrounding open space and buffer areas. Additionally, the storm water management system itself will benefit receiving wetlands by improving the overall quality of runoff that that ultimately drains to the Campus Lagoon complex, and will itself provide some limited wetland function as a result of the establishment of low marsh, transitional marsh, and high marsh habitats. Furthermore, staff notes that there is no alternative location in the vicinity that would accommodate this structure and therefore the water quality benefits would be lost.

The University is proposing to restore and enhance all portions of the site within the wetland buffer. This will serve to offset the reduction in the wetland buffer as well as the direct and indirect impacts associated with the densely populated Main Campus. The planting of native vegetation will provide a long-term barrier that will help protect the wetlands from erosion and disturbance of wildlife. Enhancement activities include the removal of non-native plant species, the removal of existing dirt spoils and restorative grading, and planting native species.

For the above reasons, the Commission finds that the presence of the reconfigured storm water management system partially within the wetland buffer will be consistent

with Policy 30231.3 and Policy 30231.2(*l*) of the LRDP and Section 30240(b) of the Coastal Act because it will allow for the preservation of the wetlands and open space, and will not result in adverse impacts to the adjacent lagoon wetland. However, to ensure that the project is designed in a manner that will ensure geologic stability and will not result in any potential increased erosion on site or increased sedimentation of the adjacent wetland, **Special Condition One (1)** requires that all recommendations contained in the applicable geotechnical reports shall be incorporated into all final design and construction plans, including grading and drainage. All final plans must be reviewed and approved by the geologic and geotechnical consultants and verified as incorporating the applicable recommendations of the consultants. Prior to the commencement of development the University shall submit, for review and approval by the Executive Director, evidence of the geologic and geotechnical consultant's review and approval of final project plans for the Storm water Infiltration Basin/Artificial Wetland.

The Commission further finds that the proposed enhancement of the existing degraded habitat area adjacent to the lagoon is an integral part of the project proposal, in order to offset the reduced wetland buffer as a result of the Storm water Infiltration Basin/Artificial Wetland and the direct and indirect impacts associated with a densely populated campus. Therefore to ensure consistency with Policy 30231.3 and Policy 30231.2(*l*) of the LRDP, the Commission finds that **Special Condition Seven (7)**, Wetland/Upland Habitat Enhancement and Monitoring Program, is necessary to guarantee that the habitat enhancement is successfully implemented. Pursuant to Special Condition 7, the University shall submit a final Habitat Enhancement, Enhancement, and Monitoring Program prepared by a qualified biologist or environmental resource specialist. Among other requirements, Special Condition 7 requires that all areas of the site within the 100 ft. wetland buffer be restored and enhanced consistent with the proposed habitat enhancement plan.

Furthermore, Special Condition 7 requires the on-going habitat enhancement maintenance/management and specific maintenance requirements for the storm water management system. The Plan shall contain detailed information regarding the implementation of enhancement activities, such as timing, methods, and location of removal, planting, etc. Maintenance (including mowing or other plant cutting or removal) of the storm water management system shall be limited to the minimum necessary to maintain the function and capacity of the system. Access to the bio-swale system will not require maintenance equipment or personnel to enter the wetland buffer at any time, except for within the actual footprint of the basins.

The success of the habitat enhancement shall be monitored for five years, with interim reports submitted to the Executive Director. The reports shall describe the implementation of the approved enhancement program in narrative and photographs and report any problems in the implementation and their resolution. At the end of the five year monitoring period, if the enhancement and enhancement project has in part, or in whole, been unsuccessful, the University shall submit a revised or supplemental program to compensate for those portions of the original program which did not meet the approved success criteria.

Further, the Commission finds that the presence of a qualified biologist is necessary to ensure that there is no encroachment into sensitive resource areas during construction, other than the bio-swale and habitat enhancement activities approved pursuant to this NOID. Therefore, **Special Condition Four (4)** has been required to ensure that an independent qualified biologist or environmental resource specialist shall be present on site during any grading and construction activity related to the construction of the Storm water Infiltration Basin/Artificial Wetland and the reconfiguration of the storm water drainage outlets at the lagoon. Additionally, the biological monitor shall be present during all tree and vegetation removal, installation of wetland buffer fencing, silt fencing and erosion control best management practices; and all habitat enhancement activities and bio-swale construction,

Tree Removal & Sensitive Bird Species

LRDP Policy 30251.7 requires trees to be retained to the maximum extent feasible to preserve existing native and significant stands of trees. Preservation of healthy, mature stands of trees is important for the protection of habitat areas and the scenic and visual qualities of the area. Such trees can prevent the erosion of hillsides and stream banks, moderate water temperatures in streams through shading, provide food and habitat, including nesting, roosting, and burrowing to a wide variety of wildlife species, contribute nutrients to watersheds, and are important scenic elements in the landscape. Due to past development impacts, or other historical land uses, individual trees exist that may not be part of a larger intact habitat area. In such cases, native or significant stands of trees must still be protected. Native trees that are not part of a larger, intact habitat may nonetheless provide nesting or roosting habitat for raptors and other birds that are rare, threatened, endangered, fully protected, or species of special concern. It is critical to such species that the tree habitat be protected.

The impending development consists of the installation of approximately 37,450 linear feet of new and replacement natural gas, potable water, sewer, and storm drain utility lines on the Main Campus of UCSB. In addition, the project would result in the unavoidable removal of 30 non-native trees. All of these trees were classified as healthy during an observation conducted on October 22 and 23, 2009 by Dr. Lisa Stratton, Director of Ecosystem Management at the Cheadle Center for Biodiversity and Ecological Enhancement. During her field analysis, Dr. Stratton did not observe any nests in any of the trees to be removed and states that, "in most cases it would have been difficult for the tree to support nests for raptors or other sensitive bird species due to their short stature and/or airy canopy structure." It is important to note, however, that October is not considered a prime nesting time and as a result, it was unlikely any new nests would be observed.

The University proposes to replace the loss of 30 non-native trees by planting 51 replacement trees. Specifically, the habitat enhancement plantings associated with the Storm water Infiltration Basin/Artificial Wetland Enhancement component of this project will include the removal of all non-native vegetation and the planting of 22 new native trees on site, including 7 specimens of Arroyo Willow (*Salix lasiolepis*), 3 White Alder

(*Alnus rhombifolia*), 3 Western Sycamore (*Platanus racemosa*), 2 Cottonwood (*Populus balsamifera ssp.trichocarpa*), and 7 Sandbar Willow (*Salix exigua*) at the edge of the Campus Lagoon.

Of the 29 trees proposed to be replaced on Main Campus, 15 are native and 14 are non-native, non-invasive trees. These 14 proposed non-native, noninvasive trees are identical species to the currently existing trees, were not reported to support roosting, and are in the dense development envelope of Main Campus. Although in past actions, the Commission has typically required use of native plant species only for some campus landscaping projects, in this case, the 14 non-native, noninvasive trees will be located within the developed center of campus and will not be located within, or near, any environmentally sensitive habitat areas. Additionally, the proposed horticultural tree species will be consistent with the existing landscaping on Main Campus. **Special Condition Four (4)** has been included to require that all plant and tree replacement species be primarily native and of local genetic stock. Special Condition 4 further requires that no plant species listed as problematic and/or invasive by the California Native Plant Society, the California Invasive Plant Council, or by the State of California shall be employed or allowed to naturalize or persist on the site.

In this case, the submitted biological analysis for the project indicates that none of the trees to be removed constitute nesting habitat for any raptor or sensitive bird species. However, due to the fact that all of the trees proposed for removal still have the potential to provide habitat for sensitive bird species, it is necessary to ensure that nesting bird species are protected during construction activities. Thus, in order to avoid any potential adverse impacts to raptor or sensitive bird species, **Special Condition Eight (8)** requires that should construction activities occur between March 1 and August 15 (bird breeding season), a qualified environmental resource specialist shall conduct pre-construction bird surveys to determine whether nesting or breeding behavior is occurring and prohibit any construction activities within 500 feet of any nesting or breeding birds. Further, **Special Condition Eight (8)** requires that a qualified environmental resource specialist be present during all tree removal activities. If significant impacts or damage occur to sensitive habitats or to wildlife species, the applicants shall be required to submit a revised or supplemental program to adequately mitigate such impacts. Any native vegetation which is inadvertently or otherwise destroyed or damaged during implementation of the project shall be replaced in kind at a 3:1 or greater ratio.

Landscaping and Erosion Control

As noted previously, Section 30240 of the Coastal Act, which has been included in the certified LRDP, requires that existing environmentally sensitive habitat areas, such as wetland areas, shall be protected against any significant disruption of habitat values, and that development in areas adjacent to significant habitat areas shall be sited and designed to prevent adverse effects which would degrade such areas.

The proposed project includes the planting of 51 trees and the enhancement of 22,406 sq. ft. of habitat. The Commission recognizes that the use of non-native and invasive

plant species within new development can cause adverse on-site and off-site impacts upon natural habitat areas. Non-native and invasive plant species can directly colonize adjacent natural habitat areas. In addition, the seeds from non-native and invasive plant species can be spread from the developed area into natural habitat areas via natural dispersal mechanisms such as wind or water runoff and animal consumption and dispersal. These non-native and invasive plants can displace native plant species and the wildlife which depends upon the native plants. Non-native and invasive plants often can also reduce the biodiversity of natural areas because, absent the natural controls which may have existed in the plant's native habitat, non-native plants can spread quickly and create a monoculture in place of a diverse collection of plant species.

For the above reasons, the placement of any non-native invasive plant species within the development (which could potentially spread to the natural habitat areas) is a threat to the biological productivity of adjacent natural habitat and would not be compatible with the continuance of those habitat areas. Therefore, the Commission must ensure that the University uses native trees and plants to the maximum extent feasible and avoids any and all invasive plant species. Consequently, the Commission requires the University to submit final landscape plans, pursuant to **Special Condition Four (4)**, that confirm that no invasive species shall be planted anywhere on-site. Furthermore, **Special Condition Seven (7)** requires that all invasive plant species shall be removed from the habitat enhancement area and project impact areas.

The Commission notes that increased erosion on site would subsequently result in a potential increase in the sedimentation of the Campus Lagoon (given that the majority of the storm water runoff from Main Campus drains to the lagoon). The Commission finds that the minimization of site erosion will minimize the project's potential individual and cumulative contribution to sedimentation of coastal waters, including the lagoon. Erosion can best be minimized by ensuring that all disturbed areas of the site are landscaped with native plants, compatible with the surrounding environment. Therefore, **Special Condition Seven (7)** also requires that the Wetland/Upland Habitat Enhancement Program previously discussed shall also provide that all enhancement areas shall be planted and maintained with native plant species compatible with the surrounding ESHA and wetland areas on site. Special Condition 7 also requires that the Wetland/Upland Habitat Enhancement Program be implemented in a timely manner. **Special Condition Two (2)** has been required to ensure that an independent qualified biologist or environmental resource specialist shall be present on site during any grading and construction activity for those portions of the project that would occur adjacent to the lagoon, including the construction of the Storm water Infiltration Basin/Artificial Wetland. The presence of the biologist is necessary to ensure that there is no encroachment into sensitive resource areas during construction. **Special Condition Three (3)** requires that protective fencing shall be used around all ESHA and wetland areas which may be disturbed during construction activities. Furthermore, Special Condition 3 requires the University to submit final construction and staging plans which show that the construction zones, construction staging areas, and construction corridors avoid impacts to wetlands, wetland buffers, and native habitat, consistent with this notice of impending development.

Additionally, interim erosion control measures implemented during construction will serve to minimize the potential for adverse impacts to adjacent wetlands from drainage runoff during construction. Therefore, the Commission finds that **Special Condition Five (5)** is necessary to ensure the proposed developments will not adversely impact sensitive habitats. Construction related impacts are discussed in further detail below.

Construction Impacts

Project staging, including the equipment access corridors, has the potential to adversely impact neighboring wetlands and native habitats. To ensure that project staging is minimized and resource issues are addressed, **Special Condition Three (3)** requires that all construction plans shall clearly identify all wetlands and native and any associated buffers in and around the construction zone. Additionally, construction related disturbances may undermine the habitat value of the wetland complex through improper storage or placement of materials or equipment or through improper release of debris, waste or chemicals. To address the potential adverse impacts during construction, the Commission finds it necessary to provide a framework of the University's responsibilities that would apply during the construction phase of the project, as described in **Special Condition Three (3)**. Further, **Special Condition Five (5)** outlines the University's responsibilities including parameters for placement and storage of construction materials, debris, or waste to ensure that it will not be subject to erosion nor degrade wetland habitat.

In addition, stockpiling of excavated soil and use of equipment storage and staging areas could result in erosion and sedimentation impacts to the surrounding sensitive habitat. Ground disturbance associated with over-excavation, stockpiling of the excavated material, construction staging areas, and grading associated with the proposed projects each have the potential to result in erosion and sedimentation impacts. To ensure that erosion and sedimentation are minimized consistent with Coastal Act policies, the Commission finds it necessary to require an interim erosion control plan be submitted to the Executive Director for review and approval as provided in **Special Condition Five (5)**. The Commission further finds that the interim erosion control plan shall include protective fencing to delineate the construction zone and that silt fencing, sandbags, and/or other best management practices are necessary during both the rainy season and the dry season.

Therefore, the Commission finds that the notice of impending development, as conditioned, is consistent with the applicable policies of the LRDP with regards to ESHA protection.

2. Water Quality

The Commission recognizes that new development has the potential to adversely impact coastal water quality through the removal of vegetation, increase of impervious surfaces, increase of runoff, erosion, and sedimentation, introduction of pollutants such as chemicals, petroleum, cleaning products, pesticides, and other pollutant sources. The University's certified LRDP incorporates by reference Coastal Act Sections 30230

and 30231 of the Coastal Act which mandate that marine resources and coastal water quality shall be maintained and where feasible restored, protection shall be given to areas and species of special significance, and that uses of the marine environment shall be carried out in a manner that will sustain biological productivity of coastal waters. Coastal Act Section 30253, also incorporated into the certified LRDP, requires among other things that erosion be minimized and site stability ensured.

In addition, Policy 30231.2 of the LRDP states, in part, that projects shall be designed to minimize soil erosion and, where possible, to direct surface runoff away from coastal waters and wetlands. Policy 30231.3 provides, in part, that drainage and runoff shall not adversely affect the Campus wetlands and that pollutants shall not be allowed to enter the area through drainage systems.

As described previously, the impending development involves the installation of approximately 37,450 linear feet of new and replacement natural gas, potable water, sewer, and storm drain utility lines on Main Campus, comprised of: (1) the installation of approximately 19,970 linear feet of new natural gas pipelines; (2) installation and/or replacement of a total of 6,790 linear feet of new potable water pipelines; (3) replacement of 3,090 linear feet of sanitary sewer trunk pipelines and reconstruction of sewer manholes; and (4) installation of 7,600 linear feet of drainage pipeline designed to accommodate runoff from a 25-year storm; (5) relocation of the storm water drainage outfall into the Campus Lagoon from a location south of the UCEN to a location southeast of the San Nicolas Residence Hall building; (6) installation of a new concrete storm water outlet structure at the new storm water drainage outfall; (7) storm water treatment system for runoff from the Central and East Central drainage areas; (8) installation of a Storm water Infiltration Basin/Artificial Wetland adjacent to the Campus Lagoon that includes construction of vegetated storm water basins and swales to provide enhanced bio-filtration for runoff water before it enters the Lagoon resulting in the enhancement of approximately 22,406 sq. ft. of habitat; (9) installation of a bicycle roundabout and a rain garden with landscaping improvements at the Library Plaza; and (10) 45,527 cu. yds. (37,439 cu. yds. cut, 8,088 cu. yds. fill) of grading.

The majority of the proposed utility line segments included in the Infrastructure Renewal Project would be located in existing roadways, parking lots, pedestrian corridors on the UCSB Main Campus. In some case, existing lines would be relocated to avoid replacing lines under existing buildings and to consolidate the location of pipelines in a common corridor.

Potential sources of pollutants such as chemicals, petroleum, cleaning agents and pesticides associated with new development, as well as other accumulated pollutants from rooftops and other impervious surfaces result in potential adverse effects to water quality to coastal waters. Such cumulative impacts can be minimized through the implementation of drainage and polluted runoff control measures. In addition to ensuring that runoff is conveyed from the site in a non-erosive manner, such measures should also include opportunities for runoff to infiltrate into the ground. Methods such as vegetated filter strips, gravel filters, and other media filter devices allow for infiltration.

Due to the fact that the University is not proposing to increase its potable water allocations from the Goleta Water District, or its allocated waste water flow treatment capacity at the Goleta Sanitary District treatment plant and there is no proposed increase in impervious surface area, there is limited water quality impacts associated with the proposed pipeline improvements. The University is also proposing to reduce the amount of impermeable surface, install a rain garden, and a habitat enhancement project with then intentions of improving water quality and general campus aesthetics.

The project also includes removal of 36,200 sq. ft. of existing impermeable concrete area at the outdoor Library Plaza and replacement with either planting areas or permeable pavers. The permeable pavers will be installed on top of a permeable crushed rock base that will hold three to four inches of rainfall, and allow that water to percolate to the groundwater table. Should this reservoir fill, water will either overflow to the rain garden or enter the storm drain system. A decorative concrete banding will hold the pavers in place, and will also be installed on the permeable base, essentially making the new hard-scape areas fully permeable. The water from the lawns will percolate down through the sand to clean excess nitrates, phosphorus, and other nutrients. During larger storm events, the grassy swales will conduct water to a rain garden for a short detention period and cleansing prior to entering the storm drain.

In addition, the project also include construction of an approximately 22,406 sq. ft. (approximately ½ acre) Storm water Infiltration Basin/Artificial Wetland which would involve the planting of wetland plant species to create an artificial wetland/storm water filtration system (Exhibit 8). Construction of the basin would include approximately 1,777 cu. yds. of grading (1,761 cu. yds. of cut and 16 cu. yds. of fill. The Storm water Infiltration Basin /Artificial Wetland would be located in an existing disturbed area that does not contain any native and/or wetland vegetation. Construction of the storm water treatment system/artificial wetland would be achieved through the grading of a previously disturbed slope adjacent to the Lagoon, removal of non-native plants, the planting of native wetland vegetation, and construction of vegetated pools and swales to provide enhanced bio-filtration for runoff water before it enters the lagoon. The proposed 42-inch lagoon discharge drainage pipe in Corridor 31 is to be provided with a “splitter” that would divert low volume flows to the Enhancement Project’s bio-filtration system. The water quality benefits that may be provided by diverting low volume runoff flows from the central portion of the Main Campus through the Storm water Infiltration Basin/Artificial Wetland bio-filtration system would be in addition to the mechanical filter device that is to be provided as part of the Infrastructure Renewal component of this project.

Despite these proposed improvements, the proposed project may still result in potential adverse impacts to water quality due to increased erosion and sedimentation if all necessary best management practices are not implemented. The Commission finds that interim erosion control measures employed during construction and post construction landscaping will serve to minimize the potential for adverse impacts to water quality resulting from drainage runoff during construction and in the post-development stage consistent with LRDP Policy 30231.2. **Special Conditions 1 through 6**, fully implemented, will ensure that site grading and construction, erosion

control, drainage management (including Best Management Practices), and landscaping are undertaken to achieve optimal control of erosion, protect long-term site stability, and to protect water quality that would otherwise be impaired by uncontrolled urban runoff. Without the protective requirements of these special conditions, uncontrolled construction practices (particularly grading) could increase short and long term erosion rates and sediment pollution of coastal waters, and unmitigated increases in hard-scape could add volume and velocity of urban runoff. In addition, the landscape requirements of Special Condition 4, fully implemented, will control erosion through timely replanting and through selection of appropriate landscaping species. Additionally, Special Condition 3 includes a number of measures to protect the adjacent wetland from erosion and sedimentation including protective fencing; designated construction corridors and access; and proper placement and disposal of construction materials, equipment, and debris.

Policy 30231.3 provides, in part, that drainage and runoff shall not adversely affect the Campus wetlands and that pollutants shall not be allowed to enter the area through drainage systems. As a result, the University has proposed a storm water treatment system, such as a Continuous Deflective Separation (CDS) unit, as part of the Corridor 31 improvements. Storm water treatment is not presently provided for runoff from the Central or East Central drainage areas and therefore adds to water quality improvements. There are however, two other storm water outfalls (not associated with this project) that drain to the Campus Lagoon. As a result, **Special Conditions 1 through 6** have been added to ensure minimal impacts on Campus wetlands.

Consistent with LRDP Policy 30231.3, the Commission requires **Special Condition Three (3)** to outline appropriate provisions for washing of concrete trucks, paint, equipment, or similar activities. Such activities shall occur only in areas where polluted water and materials can be contained for subsequent removal from the site. Wash water shall not be discharged to the storm drains, street, drainage ditches, creeks, or wetlands. Areas designated for washing functions shall be at least 100 feet from any storm drain, water body or sensitive biological resources. The location(s) of the washout area(s) shall be clearly noted at the construction site with signs. In addition, construction materials and waste such as paint, mortar, concrete slurry, fuels, etc. shall be stored, handled, and disposed of in a manner which prevents storm water contamination.

For the above reasons, the Commission finds that the notice of impending development, as conditioned, is consistent with the applicable policies of the LRDP with regards to water quality.

3. Geologic Stability

The LRDP contains several policies to ensure that new development minimize risks to life and property and assure structural stability and integrity consistent with Section 30253 of the Coastal Act which has been included in the certified LRDP. Policy 30253.12 requires that surface and sub-surface drainage pipes shall be designed to minimize bluff erosion and to prohibit the installation of new drainage devices over bluff

faces if drainage can be directed landward of the bluff face. In addition, Policy 30253.1 of the LRDP requires that new buildings shall not be located on or near any faults. Further, Policy 30253.2 of the LRDP requires that subsurface and geotechnical studies be conducted to ensure structural and geologic stability.

As required by Policy 30253.2 of the LRDP, the University has submitted documents, prepared by Penfield and Smith, assessing existing conditions for the proposed development.

Most of the UCSB campus is relatively level, which minimizes the potential for slope stability-related impacts. There is abundant evidence, however, of slope failures associated with the ocean bluffs located along the east and south sides of the Main Campus. As a result of natural processes, the bluffs erode landward at a rate of approximately three to eight inches per year, typically in response to wave action during winter storms and localized drainage that erodes the top of the bluff. Other activities, such as foot traffic and the addition of water to the top of the bluff, can accelerate the rate of bluff erosion. None of the proposed construction corridors would be located on an Ocean Bluff. The proposed construction corridors along Lagoon Road (Corridors 22 and 23), which run parallel to the Main Campus east bluffs, would provide a setback from the bluff edge of at approximately 50 to 100 feet.

New infrastructure pipelines that would be provided by the Infrastructure Renewal Project would be located at least 1,000 feet south of the south branch of local fault lines. Therefore, this potentially active fault would not result in ground rupture impacts that could significantly impact the proposed infrastructure facilities.

Infrastructure improvements provided by the proposed Project would not result in the development of any structures for human occupancy, and would replace existing utilities that presently cross the Campus fault. Therefore, the Project would not result in an increased risk of loss, injury, or death in the unlikely event of movement along the Campus fault. Therefore, the replacement infrastructure lines across or adjacent to the fault would not result in a significant potential ground rupture impact.

In order to ensure the stability and geotechnical safety of the site, the University has submitted engineered project plans by Penfield & Smith for the impending development. However, a specific analysis of the geologic stability of the proposed infiltration basin adjacent to the Campus Lagoon has not been submitted. Therefore, **Special Condition One (1)** requires all recommendations contained in the applicable geotechnical reports be incorporated into all final design and construction plans, including grading and drainage. Further, Special Condition 1 requires, all final plans must be reviewed and approved by the geologic and geotechnical consultants and verified as incorporating the applicable recommendations of the consultants. In addition, prior to the commencement of development the University shall submit, for review and approval by the Executive Director, evidence of the geologic and geotechnical consultant's review and approval of all final project plans related to construction of Storm water Infiltration Basin/Artificial Wetland.

Additionally, **Special Condition Five (5)** requires the University to submit interim erosion control plans which provide for the stabilization of all temporary stockpiled fill and disturbed areas on site and to utilize all best management practices including, but not limited to, the installation of temporary sediment basins (including debris basins, desilting basins or silt traps), temporary drains and swales, sand bag barriers, silt fencing during construction activity to minimize erosion on the project site.

Therefore, the Commission finds that the notice of impending development, as conditioned, is consistent with the applicable policies of the LRDP with regards to geologic stability.

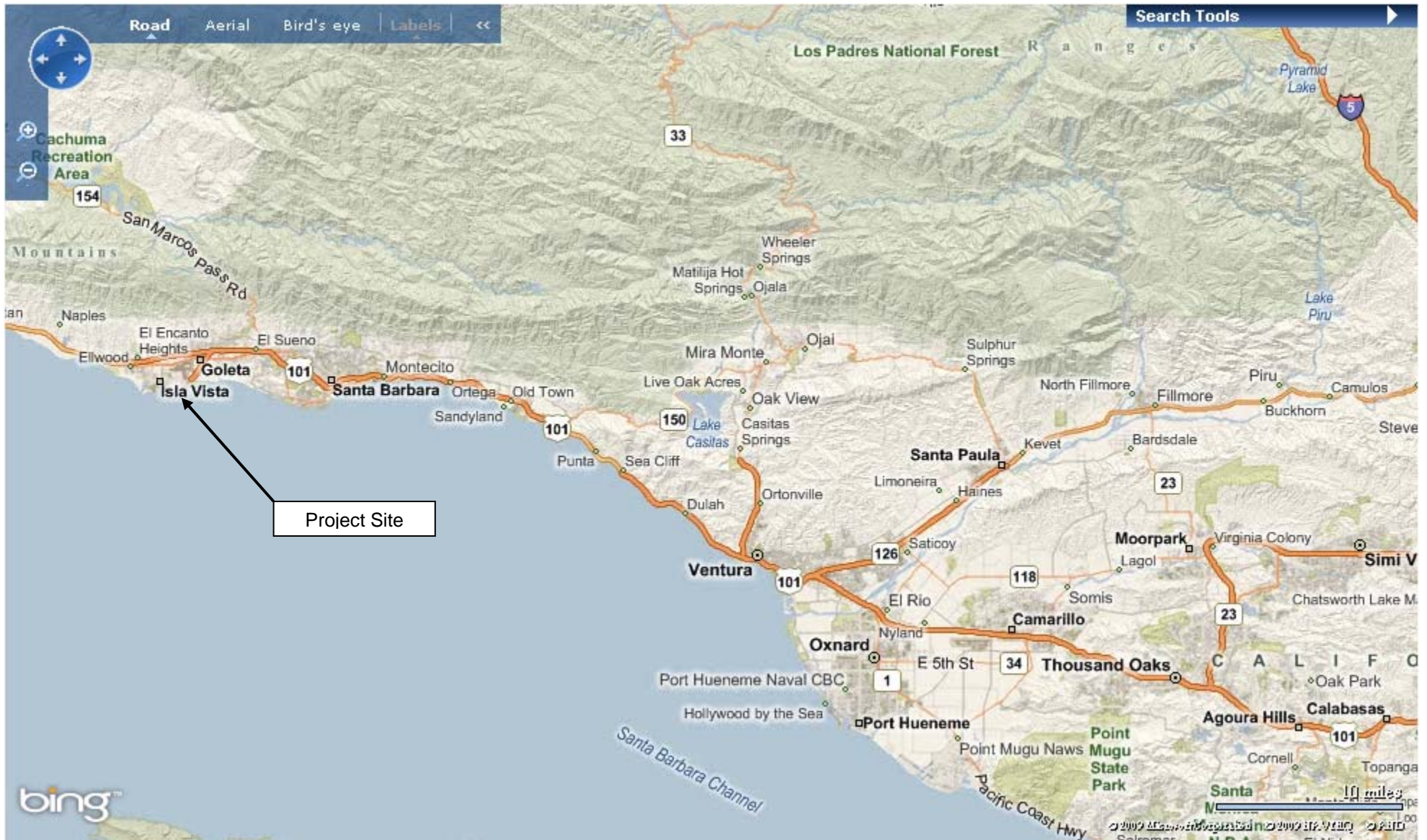


Exhibit No. 1
UCSB NOID 4-09
Vicinity Map

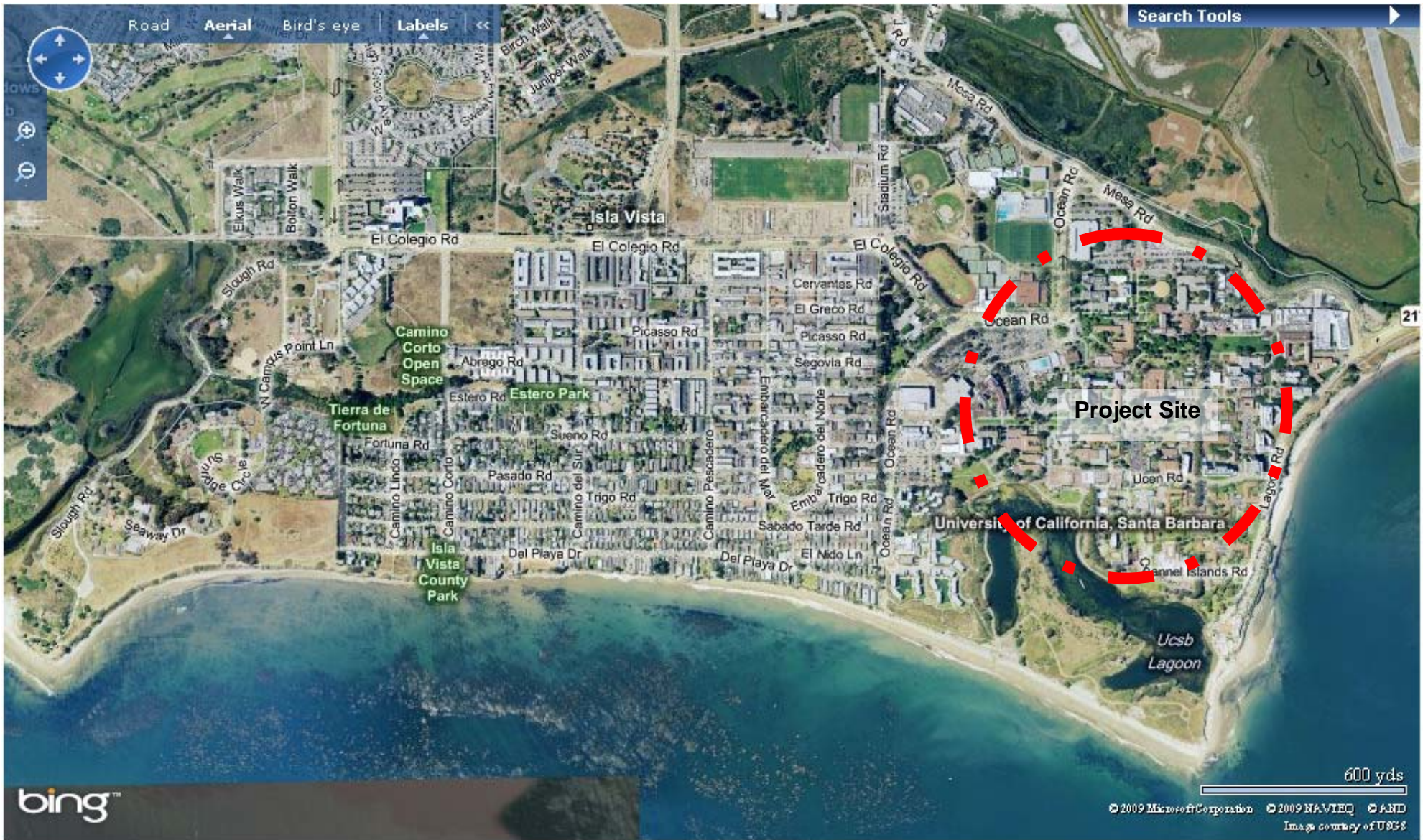
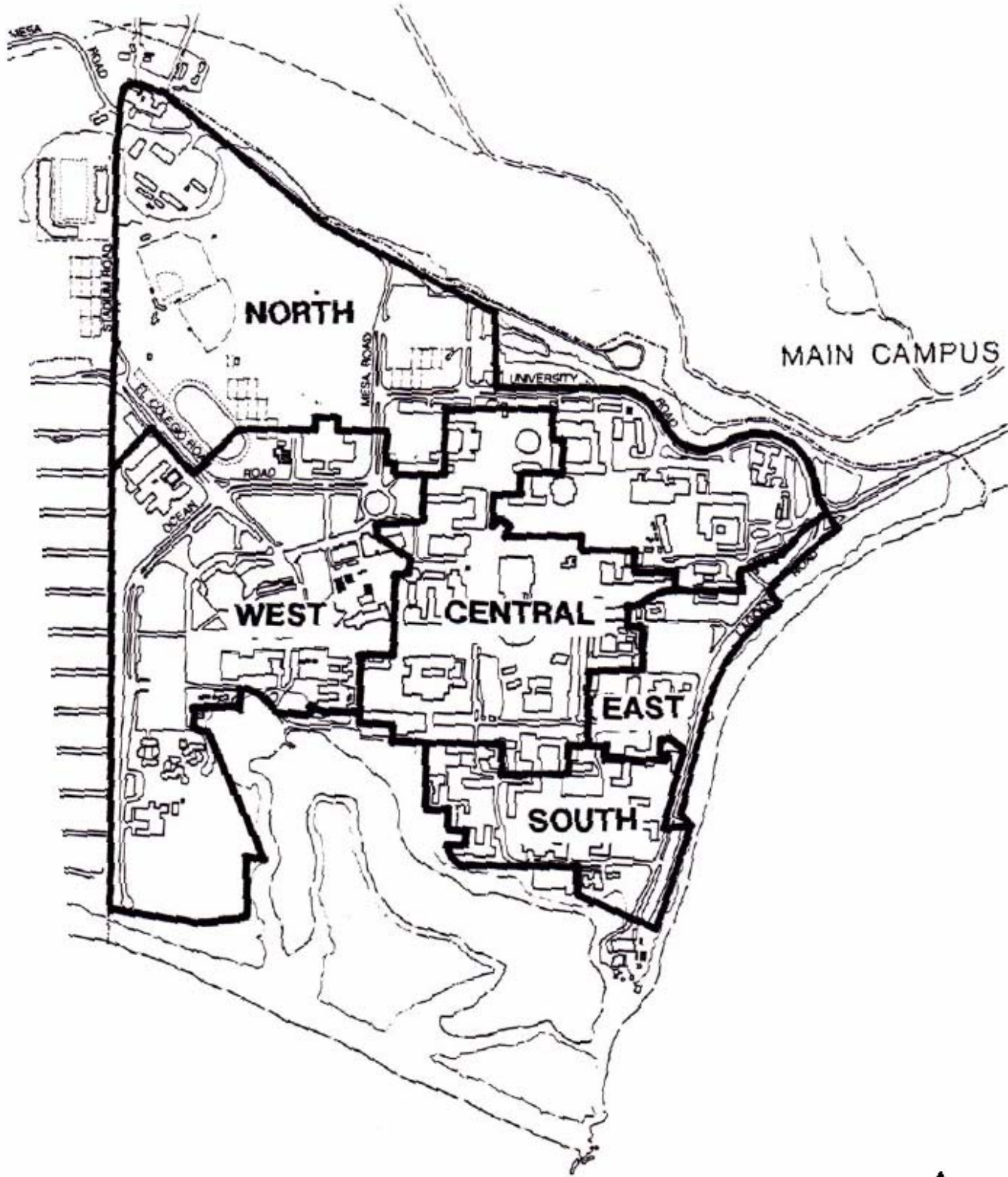


Exhibit No. 1
UCSB NOID 4-09
Vicinity Map



Not to Scale

Source: UCSB, 1992

Exhibit No. 2
UCSB NOID 4-09
Main Campus Drainage Basin

Infrastructure Renewal Phase I- Composite

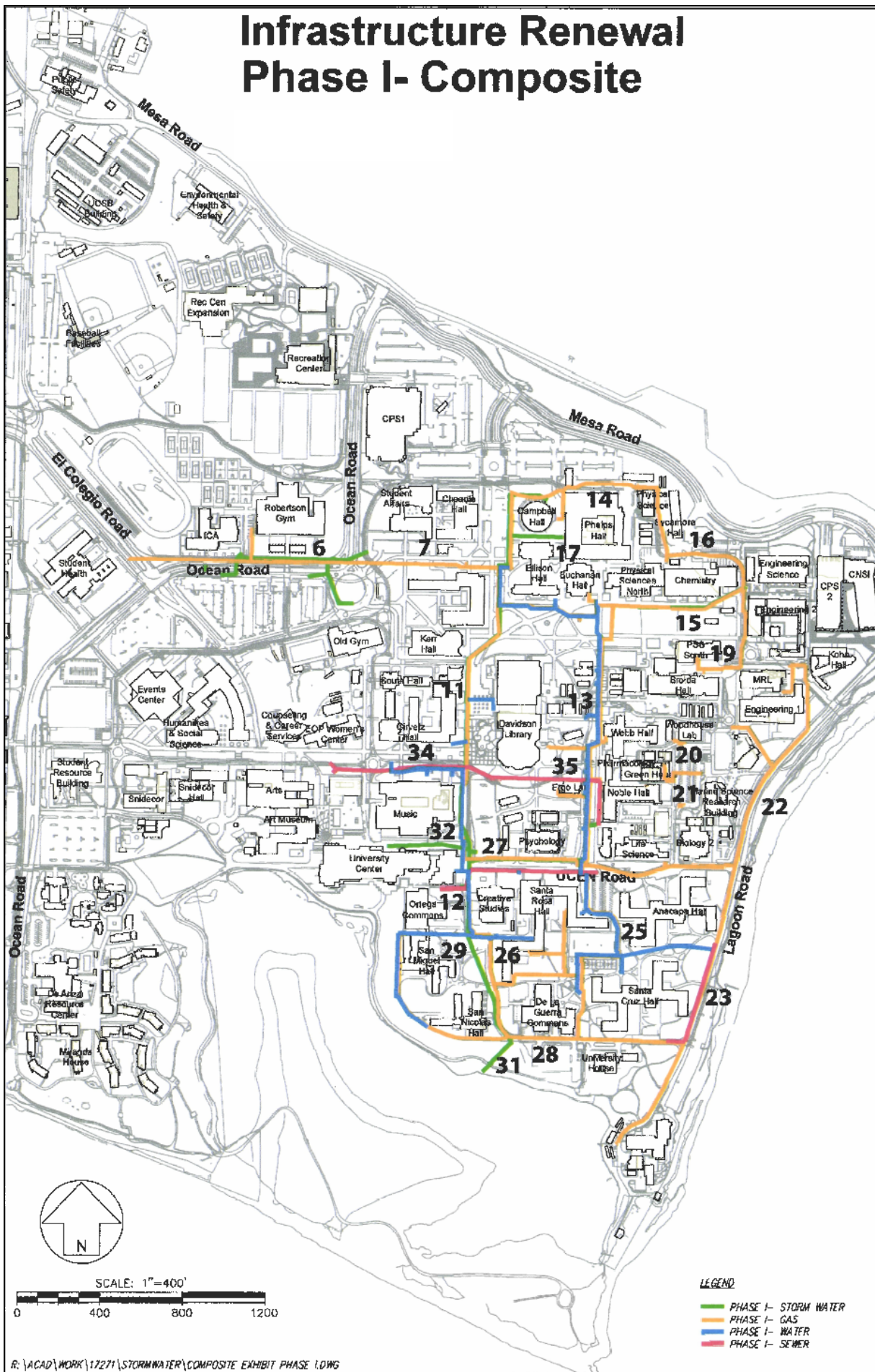


Exhibit No. 3
UCSB NOID 4-09
Proposed Construction Corridors
Phase I

Infrastructure Renewal Natural Gas

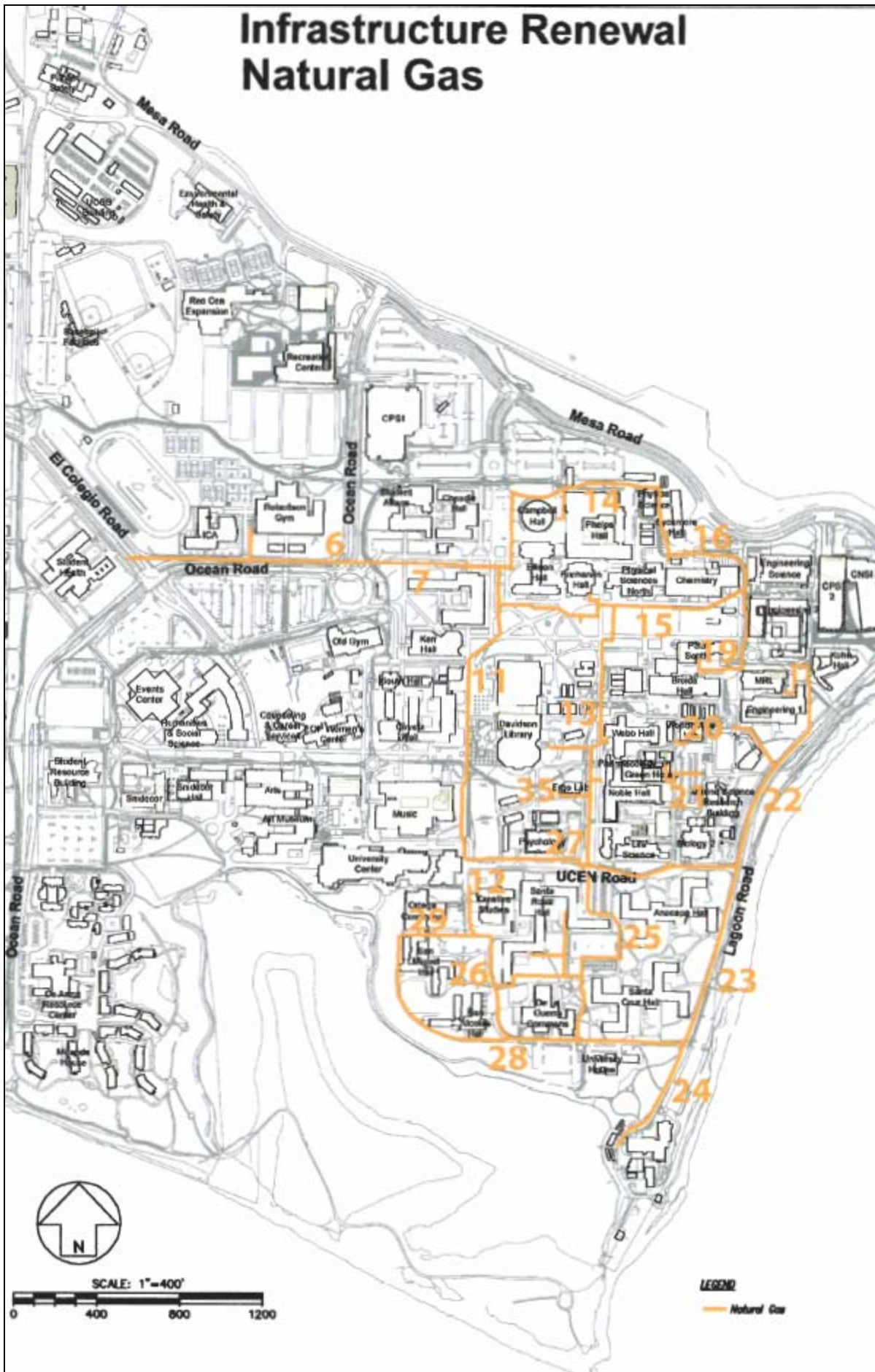


Exhibit No. 4
 UCSB NOID 4-09
 Proposed Natural Gas Pipeline
 Improvements Phase I

Infrastructure Renewal Phase I- Water

Project # 986080

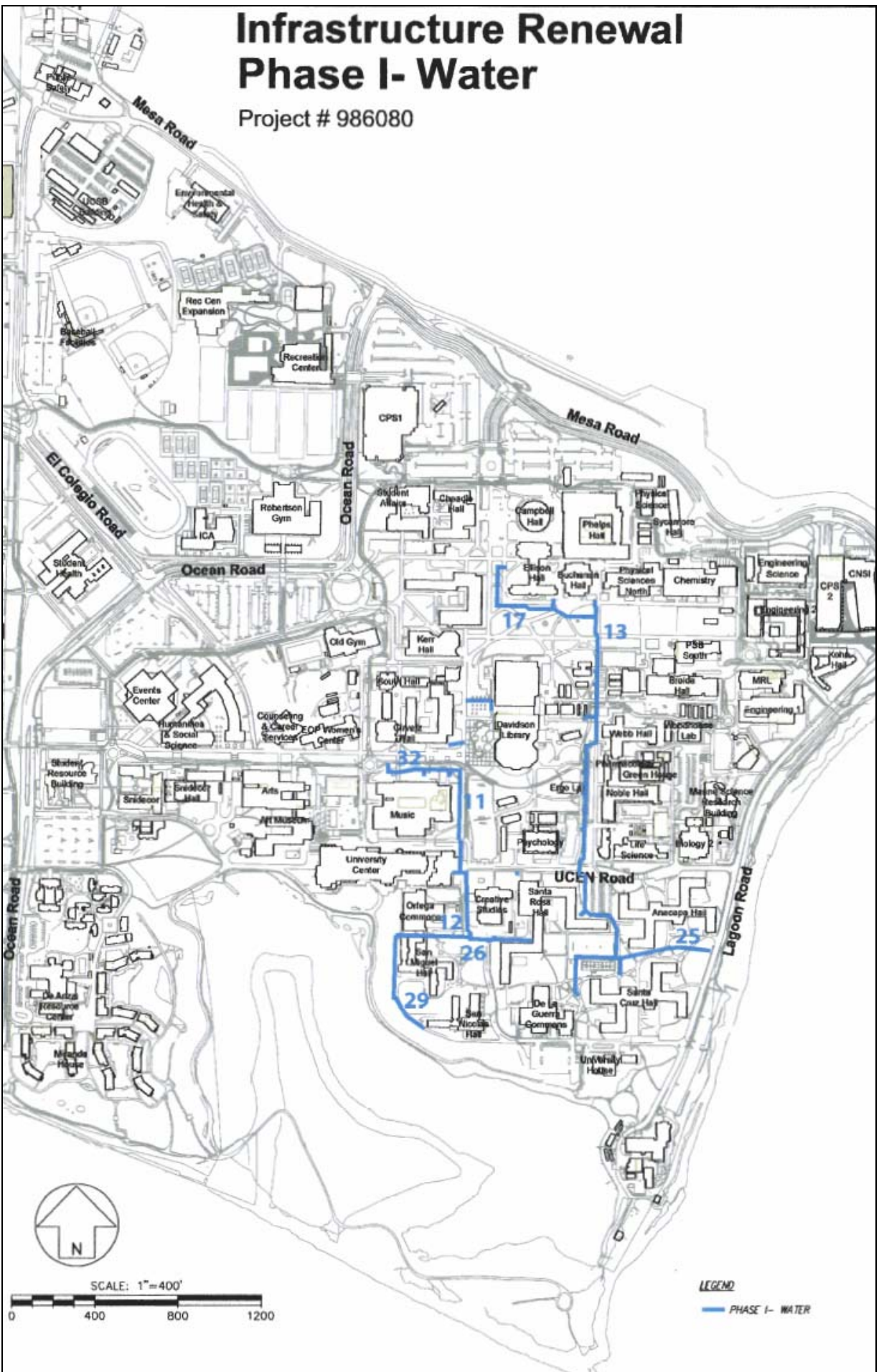


Exhibit No. 5
UCSB NOID 4-09
Proposed Potable Water Pipeline
Improvements Phase I

Infrastructure Renewal Phase I- Sanitary Sewer

Project # 986080

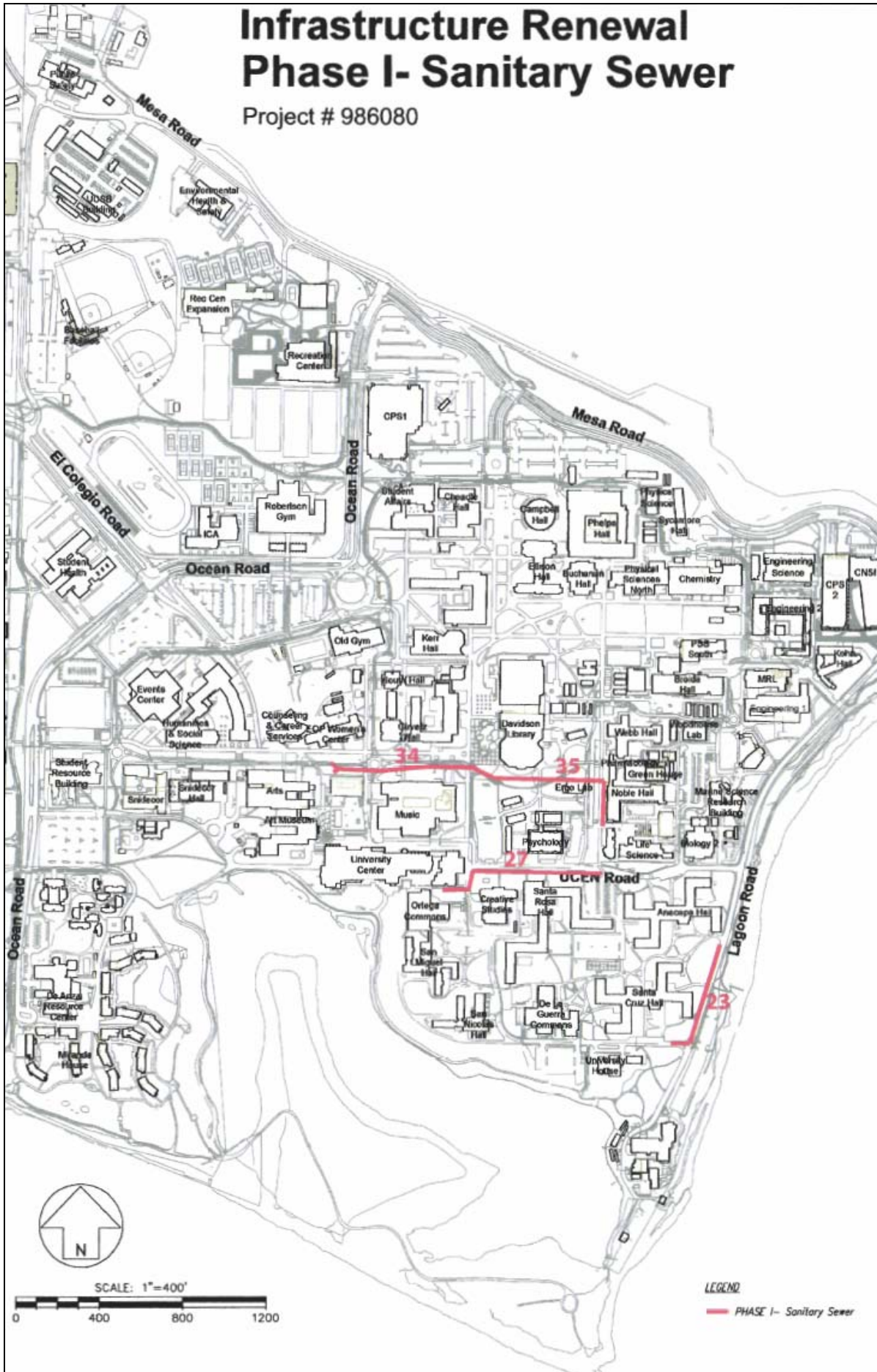
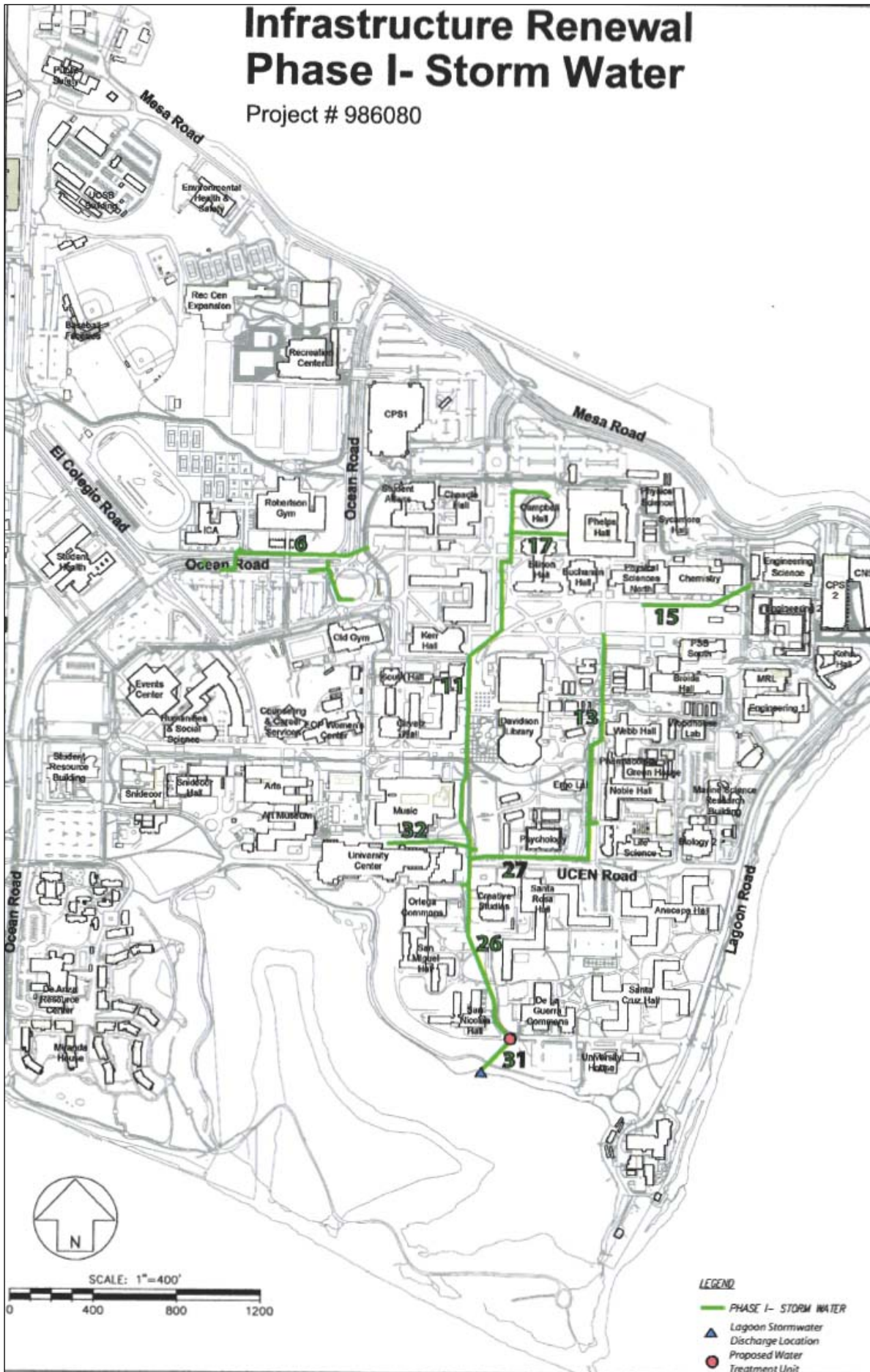


Exhibit No. 6
UCSB NOID 4-09
Proposed Sewer Pipeline Improvements Phase I

Infrastructure Renewal Phase I- Storm Water

Project # 986080

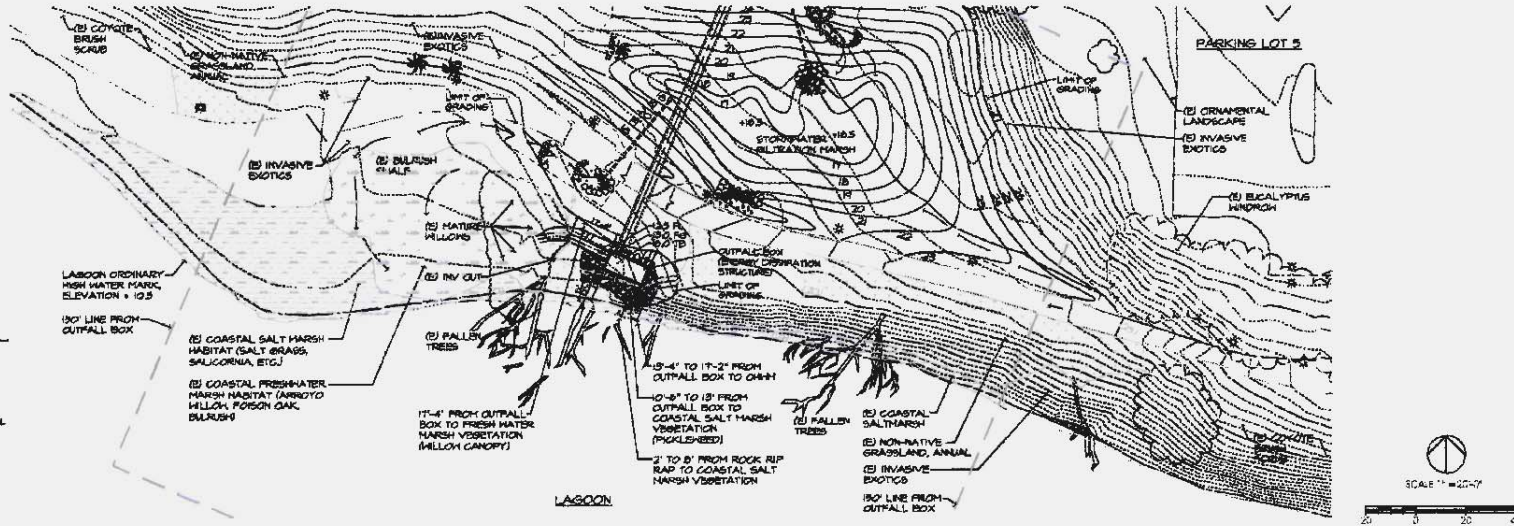


- LEGEND**
- PHASE I- STORM WATER
 - ▲ Lagoon Stormwater Discharge Location
 - Proposed Water Treatment Unit

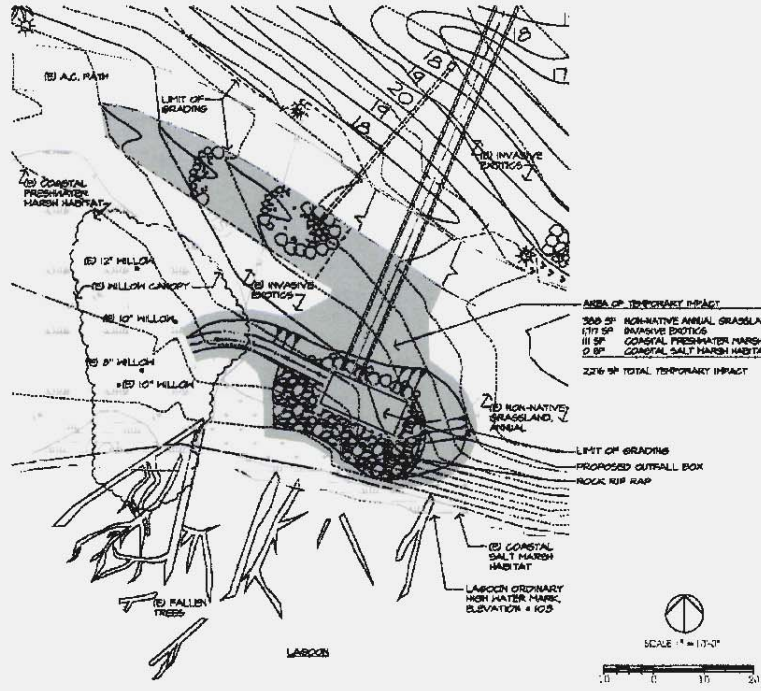
Exhibit No. 7
UCSB NOID 4-09
**Proposed Storm Drain Pipeline
Improvements Phase I**

EXISTING HABITAT TYPE KEY

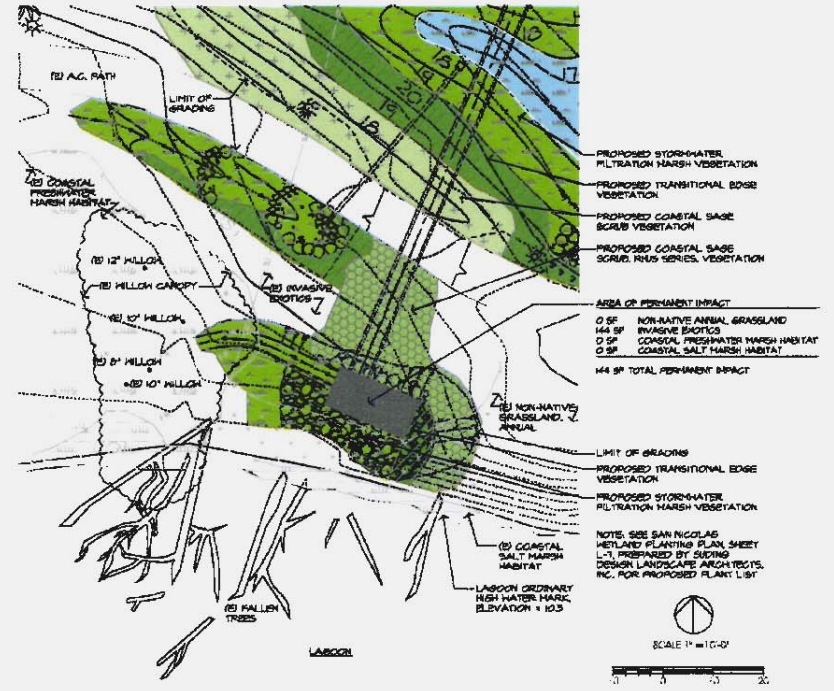
- COASTAL FRESHWATER MARSH
- COASTAL SALT MARSH
- COYOTE BRUSH SCRUB
- NON-NATIVE GRASSLAND-ANNUAL
- EUCALYPTUS WINDROW
- INVASIVE EXOTICS



PLANT COMMUNITIES AND SPECIES WITHIN 150' OF PROPOSED OUTFALL

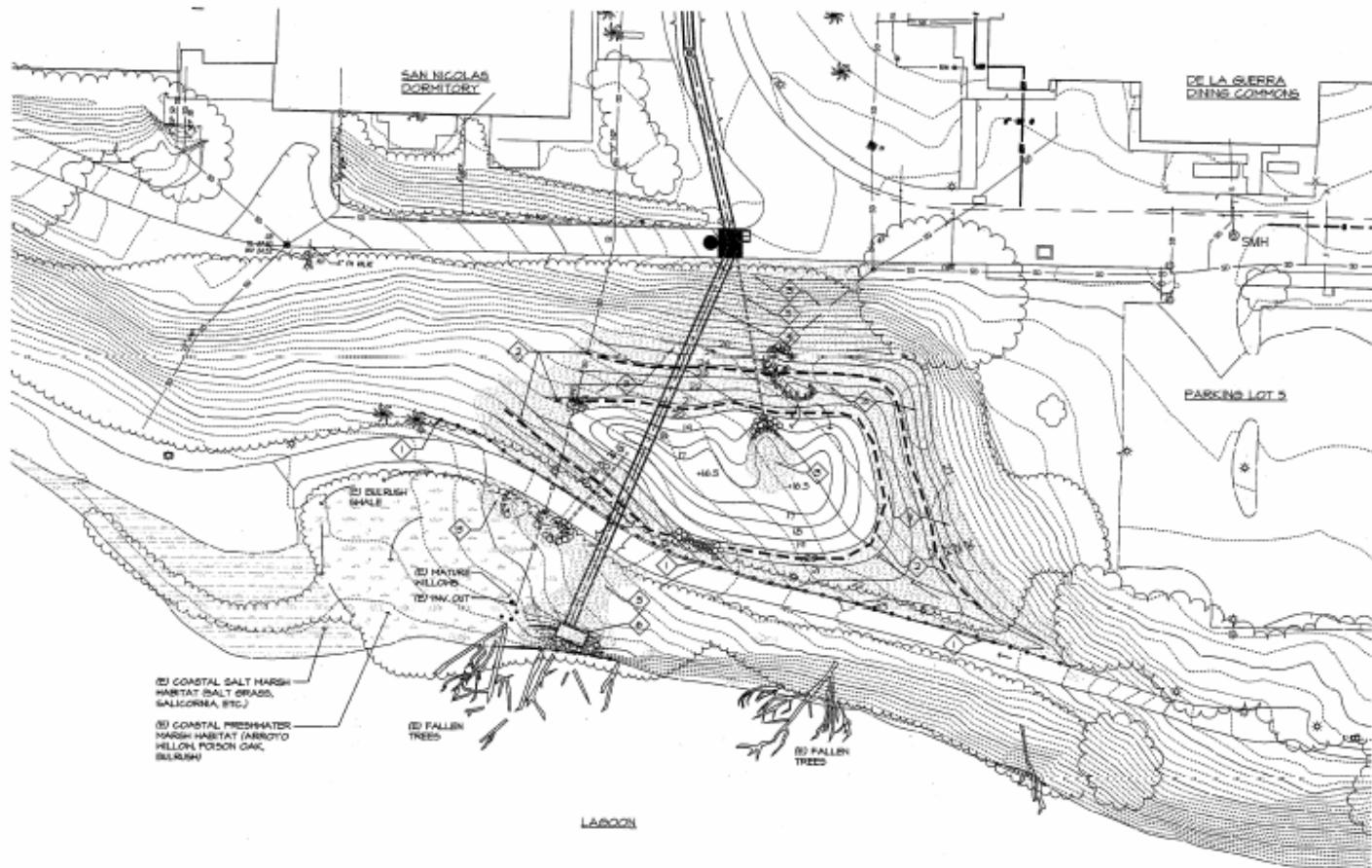


TEMPORARY IMPACTS



PERMANENT IMPACTS

<p>DATE: 07/15/2024 DRAWN: [redacted] CHECKED: [redacted]</p>	<p>PROJECT NO. 1904103 SHEET NO. 15 OF 24</p>	<p>CLIENT: UNIVERSITY OF CALIFORNIA SAN DIEGO PROJECT: SAN NICOLAS WETLAND RESTORATION AND ENHANCEMENT PROJECT</p>		<p>SCALE: 1" = 17'-0"</p>



CONSTRUCTION BEST MANAGEMENT PRACTICES

1. ERODED SEDIMENTS AND OTHER POLLUTANTS MUST BE RETAINED ON SITE AND MAY NOT BE TRANSPORTED FROM THE SITE VIA SHEET FLOW, GULLIES, AREA DRAINS, NATURAL DRAINAGE COURSES, OR RIND.
2. STOCKPILES OF EARTH AND OTHER CONSTRUCTION RELATED MATERIALS MUST BE PROTECTED FROM BEING TRANSPORTED FROM THE SITE BY THE FORCES OF WIND OR WATER.
3. FUELS, OILS, SOLVENTS, AND OTHER TOXIC MATERIALS MUST BE STORED IN ACCORDANCE WITH THEIR LISTINGS AND ARE NOT TO CONTAMINATE THE SOIL AND SURFACE WATERS. ALL APPROVED STORAGE CONTAINERS ARE TO BE PROTECTED FROM THE HEATHER. SPILLS MAY NOT BE HAULING INTO THE DRAINAGE SYSTEMS.
4. TRASH AND CONSTRUCTION RELATED SOLID WASTES MUST BE DEPOSITED INTO A COVERED RECEPTACLE TO PREVENT CONTAMINATION OF RAINWATER, AND DISPOSAL BY WIND.
5. ANY SLOPES WITH DISTURBED SOILS OR DENIED OF VEGETATION MUST BE STABILIZED SO AS TO PREVENT EROSION BY WIND AND WATER.

CONSTRUCTION TIMING

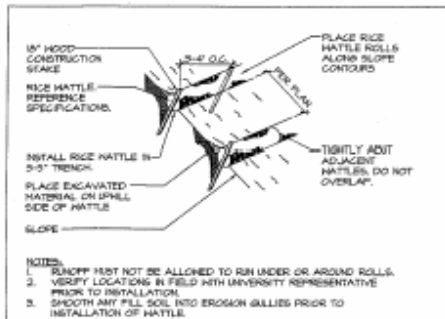
1. TREE WORK SHALL OCCUR BETWEEN AUGUST AND FEBRUARY TO AVOID SENSITIVE BIRD NESTING SEASONS.
2. GRADING AND CONSTRUCTION ACTIVITIES SHOULD OCCUR BETWEEN AUGUST 1ST AND NOVEMBER 1ST TO AVOID SENSITIVE BIRD NESTING SEASON AND THE RAINY SEASON. PLANTING OF NATIVE PLANTS SHOULD OCCUR IN WINTER, FROM NOVEMBER 1ST TO APRIL 1ST.

KEY NOTES

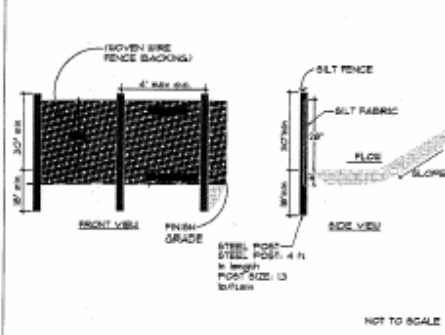
1. CONSTRUCT AND INSTALL SILT FENCES PER DETAIL 2 THIS SHEET.
2. INSTALL STRAW WATTLES ON SLOPE PER DETAIL 1 THIS SHEET.
3. INSTALL COCKY FIBER NETTING ON SLOPES PER SPECIFICATIONS.
4. NEW STORM DRAIN LINE PER CIVIL ENGINEER'S PLAN THIS SET.
5. NEW 4" LOW FLOW DIVERSION LINE PER CIVIL ENGINEER'S PLAN THIS SET.
6. NEW CURB/BOX PER CIVIL ENGINEER'S PLAN THIS SET.

NOTES

1. INSTALL 4" HOOD CHIP MULCH ON SLOPES TO BE PLANTED WITH RIPARIAN COASTAL SAGE SCRUB, AND COASTAL SAGE SCRUB RIND SERIES PLANTS.
2. HYDRALOX SLOPES WITH TAGOPFER, MULCH, AND BRUSH AFTER REBAR/CONCRETE WORK SPECIFICATIONS.
3. INSTALL COCKY FIBER NETTING ON SLOPES FOR EROSION CONTROL. INSTALL PLANTS THROUGH NETTING, AND PLACE MULCH ON TOP. NETTING IS MADE FROM NATURAL FIBERS AND WILL BIODEGRADE IN 18-24 MONTHS.



1 RICE WATTLE



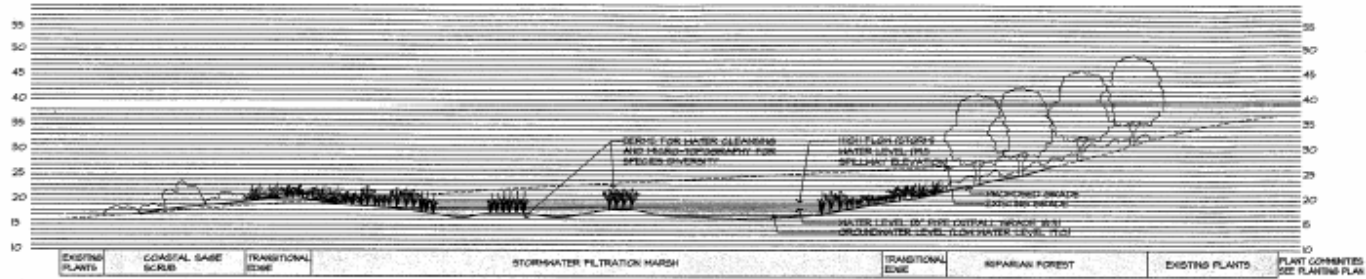
EROSION CONTROL MEASURES

SILT FENCE INSTALLATION NOTES:
 SILT FENCE SHALL BE INSTALLED DURING CONSTRUCTION AND REMOVED AFTER PLANT INSTALLATION IS COMPLETE. SILT FENCE SHOULD BE PLACED ALONG THE CONTOUR OF THE SLOPE, OR SLOPES WITH SPACES GREATER THAN 10 FEET. SILT FENCE SHOULD BE LOCATED AT LEAST 5 TO 10 FEET BEYOND THE TOP OF SLOPE. TURN THE ENDS OF THE SILT FENCE UPSLOPE SO THAT A CERTAIN DEPTH OF STORM WATER MAY BE RETAINED IN FRONT OF THE SILT FENCE. THE PROPOSED DEPTH SHOULD BE AT LEAST 1', BUT NO MORE THAN THE HEIGHT OF THE SILT FENCE. HAY OR STRAW BALES SHOULD BE STAKED IN PLACE AT THE END OF THE ROLL OF SILT FENCE AS AN EMERGENCY OVERFLOW. THIS WILL ALLOW DETAINED WATER EXCEEDING THE CAPACITY OF THE SILT FENCE TO BE FILTERED AND RELEASED GRADUALLY. REMOVE HAY OR STRAW BALES FROM SITE IMMEDIATELY FOLLOWING COMPLETION OF CONSTRUCTION. THE BOTTOM EDGE OF THE SILT FENCE MUST BE ENTRENCHED AND BACKFILLED TO BE EFFECTIVE. THE SILT FENCE SHOULD BE PURCHASED IN A CONTINUOUS ROLL CUT TO THE LENGTH OF THE BARRIER TO AVOID THE USE OF JOINTS. WHEN JOINTS ARE UNAVOIDABLE, FILTER CLOTH SHOULD BE SPliced TOGETHER ONLY AT SUPPORTING POINT WITH A MINIMUM 6" OVERLAP, AND SECURELY SEALED.

MAINTENANCE:
 SEDIMENT SHOULD BE REMOVED ONCE IT HAS ACCUMULATED TO ONE-HALF THE ORIGINAL HEIGHT OF THE BARRIER. SILT FENCE SHOULD REMAIN IN PLACE UNTIL DISTURBED AREAS HAVE BEEN PERMANENTLY STABILIZED. ALL SEDIMENT ACCUMULATED AT THE FENCE SHOULD BE REMOVED AND PROPERLY DISPOSED OF BEFORE THE FENCE IS REMOVED.

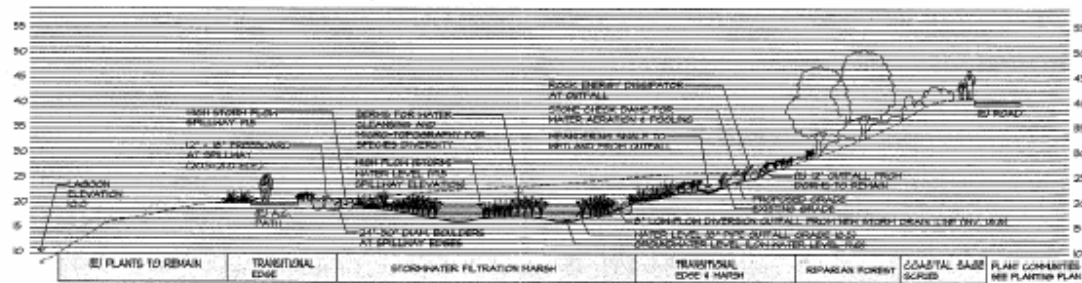
2 SILT FENCE

SOIL ON NO. 002 CONSTRUCTION SOIL ON NO. 002 SOIL ON NO. 002 SOIL ON NO. 002 SOIL ON NO. 002	DATE 08/21/2002 08/21/2002 08/21/2002 08/21/2002	SHEET NO. 100-0000-0000 100-0000-0000 100-0000-0000 100-0000-0000	PROJECT NO. 100-0000-0000 100-0000-0000 100-0000-0000 100-0000-0000	PERMITS 100-0000-0000 100-0000-0000 100-0000-0000 100-0000-0000	Perinfield & Smith Engineering, Surveying, Planning Construction, Management 1100 West Street, Suite 1000, San Francisco, CA 94104 Phone: (415) 941-8000 Fax: (415) 941-8000	CITY OF SAN FRANCISCO DEPARTMENT OF PUBLIC WORKS 100 MARKET STREET, SUITE 1000, SAN FRANCISCO, CA 94102 (415) 376-2000	SAN NICOLAS WETLAND EROSION CONTROL PLAN 100-0000-0000 100-0000-0000 100-0000-0000 100-0000-0000	SHEET NO. 100-0000-0000 100-0000-0000 100-0000-0000 100-0000-0000
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SECTION A-A

SCALE 1" = 10'-0"



SECTION B-B

SCALE 1" = 10'-0"

DESIGNER/ISSUED BY	DATE	REVISIONS
DESIGNED BY	DATE	
CHECKED BY	DATE	
IN CHARGE	DATE	
APPROVED BY	DATE	



DESIGNED BY: _____ CHECKED BY: _____
 DRAWN BY: _____
 DATE: _____

SAN NICOLAS WETLAND
 GRADING PLAN SECTION DIAGRAMS
 INFRASTRUCTURE RENOVATION PROJECT
 UNIVERSITY OF CALIFORNIA, SAN DIEGO

PROJECT NO.: 1101104
 SHEET: 6.3
 TOTAL SHEETS: 10.00

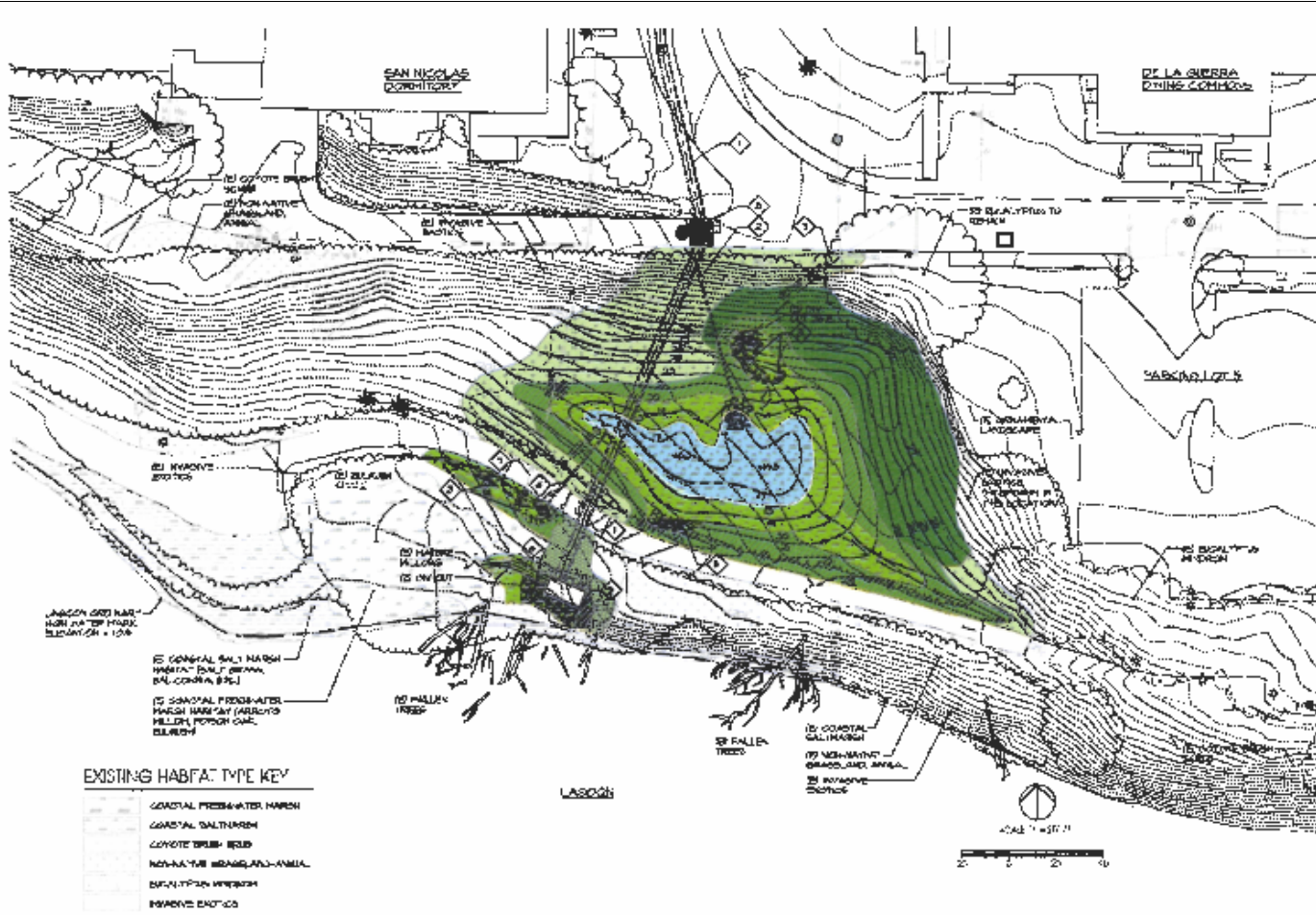
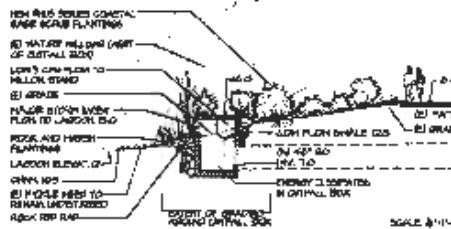
Exhibit No. 8
 UCSB NOID 4-09
 San Nicolas Enhancement
 Project Plans

MANAGEMENT GOALS AND STRATEGIES

- GOAL 10** REMOVE EXOTIC VEGETATION AND REPLACE WITH NATIVE SPECIES
- GOAL 11** REMOVE EXOTIC VEGETATION AND REPLACEMENT AND ESTABLISH NEW PLANT COMMUNITIES APPROPRIATE TO THE ECOSYSTEM
- GOAL 12** RESTORE NATURAL HYDROLOGIC PATTERNS TO THE AREA TO OBTAIN AND MAINTAIN WETLAND BUFFER PRIOR TO ENTERING THE LAGOON
- GOAL 13** MAINTAIN VEG. RESTORED AREAS

- SPECIFIC MANAGEMENT STRATEGIES:**
- A** REMOVE EXOTIC SPECIES INCLUDING PAMPAS GRASS, CANTON GRASS, KIKUYU GRASS, HYPOCHOERIS, AND OTHER LARGE PATCHES OF WEEDS.
 - B** GRADE HETEROGENEOUS TO OBTAIN AND MAINTAIN WETLAND BUFFER FROM THE ADJACENT BEACH, DUNE, SANDBAR AND VERTICALLY LOW FLOODS WILL BE CONDUCTED TO THE NEW-LOOK FLOOD BUFFER.
 - C** EXPAND THE DUNE TO THE SLOPE OF THE AREA.
 - D** CREATE A TWO-QUARTER HOUR INLET BOX TO OPERATE DURING HIGH FLOODS TO EXISTING MUD SANDBAR FOR PLANTATION AND RELEASE LARGE FLOOD OVER AREA AND VEGETATION TO THE LAGOON TO REDUCE IMPACT AND IMPACT TO THE LAGOON.
 - E** LOCATE PRE-CAST OUTFALL BOX ON LINER TO MINIMIZE DISTURBANCE TO EXISTING VEGETATION AND FALLEN TREES USED BY BIRDS.

LAGOON OUTFALL SECTION WITH PLANTING C-C



EXISTING HABITAT TYPE KEY

- COASTAL PRESERVE MARCH
- COASTAL SALTWATER
- COASTAL SANDWATER
- NON-NATIVE BRACKISH-ANIMAL
- SALTWATER WETLAND
- INVASIVE EXOTICS

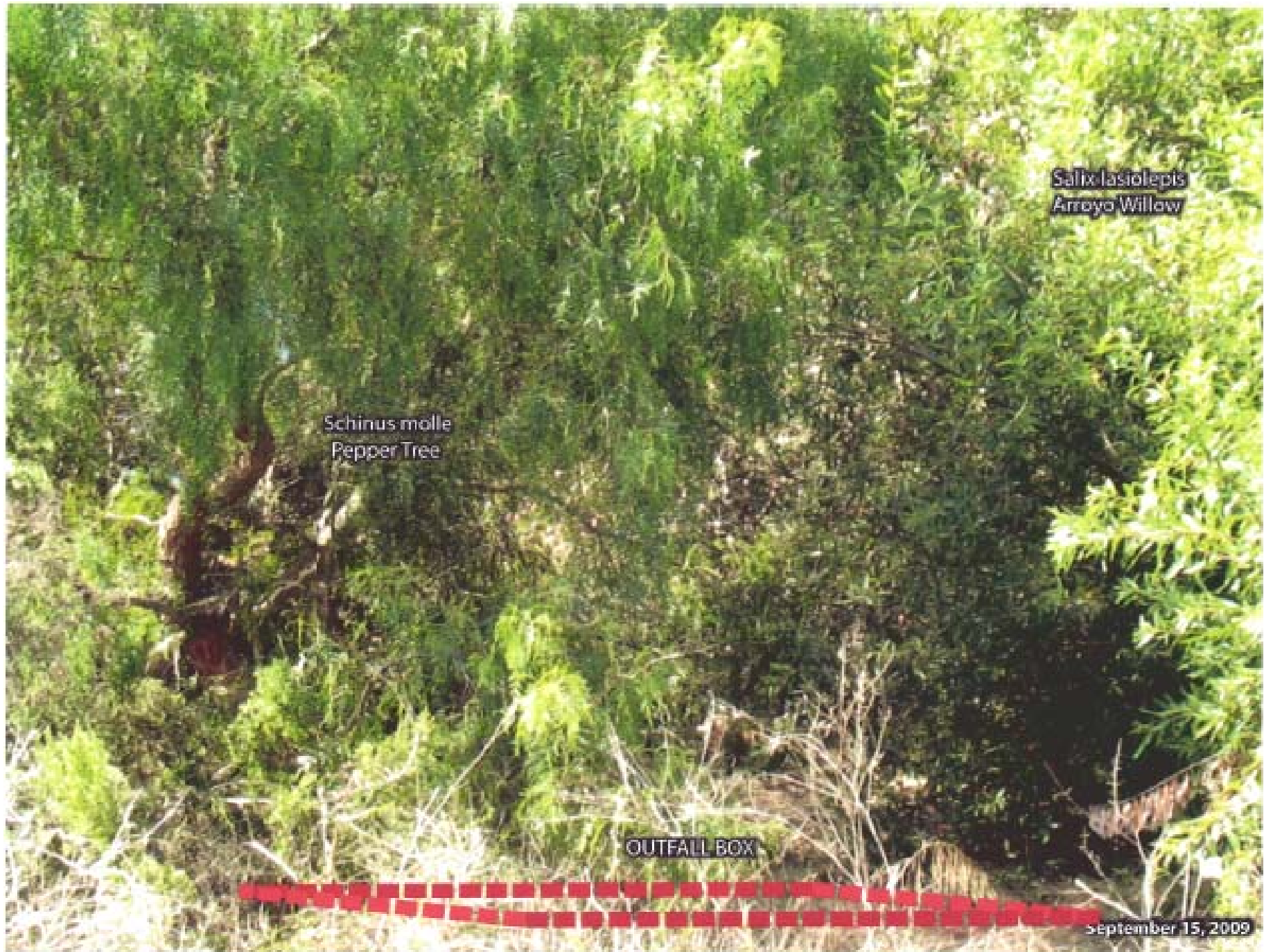
PLANT COMMUNITIES AND SPECIES

COASTAL SANDWATER		TRANSITIONAL WETLAND		COASTAL SANDWATER - DUNE/SLOPE		SANDWATER MARCHLAND	
<i>Salicornia virginica</i>	Common Name: <i>Coastal Sandbar</i>	<i>Salicornia virginica</i>	Common Name: <i>Coastal Sandbar</i>	<i>Salicornia virginica</i>	Common Name: <i>Coastal Sandbar</i>	<i>Salicornia virginica</i>	Common Name: <i>Coastal Sandbar</i>

- NOTES:**
- PLANTS SHALL BE COLLECTED AND PROPAGATED FROM LOCAL SOURCES WHEN FEASIBLE OR PURCHASED FROM REPUTABLE SUPPLIERS BASED ON SPECIFIC PLANTING SCHEDULE, AREA FOR PLANTING TYPE, AND PLANTING COVER RECOMMENDATIONS FOR PLANTING.
 - ALL PLANTS SHALL BE 1 GALLON OR 2 INCHES TREE SPECIES, WHICH SHALL BE 4 INCHES.
 - CONTRACTOR SHALL COORDINATE WITH UNIVERSITY REPRESENTATIVE REGARDING CONTRACT FOR SPECIFIC NATIVE PLANTS LISTED ON THIS PLAN. A 60-DAY PERIOD LEAD TIME IS REQUIRED FOR CONTRACTOR ORDER TO COLLECT AND PROPAGATE PLANT SPECIES. LEAD TIME SHALL INCLUDE PLANT SPECIES AND PLANTING SCHEDULE.

Project information including logos for "SUNSHINE DESIGN" and "FIELD OF DREAMS", various dates, and contact details for project management.

Exhibit No. 8
UCSB NOID 4-09
San Nicolas Enhancement Project Plans



Outfall Box location

Exhibit No. 9
UCSB NOID 4-09
San Nicolas Restoration Project at Corridor (31 Photo 1 of 4)



View west from lagoon access road

Exhibit No. 9
UCSB NOID 4-09
San Nicolas Restoration Project at Corridor 31 (Photo 2 of 4)



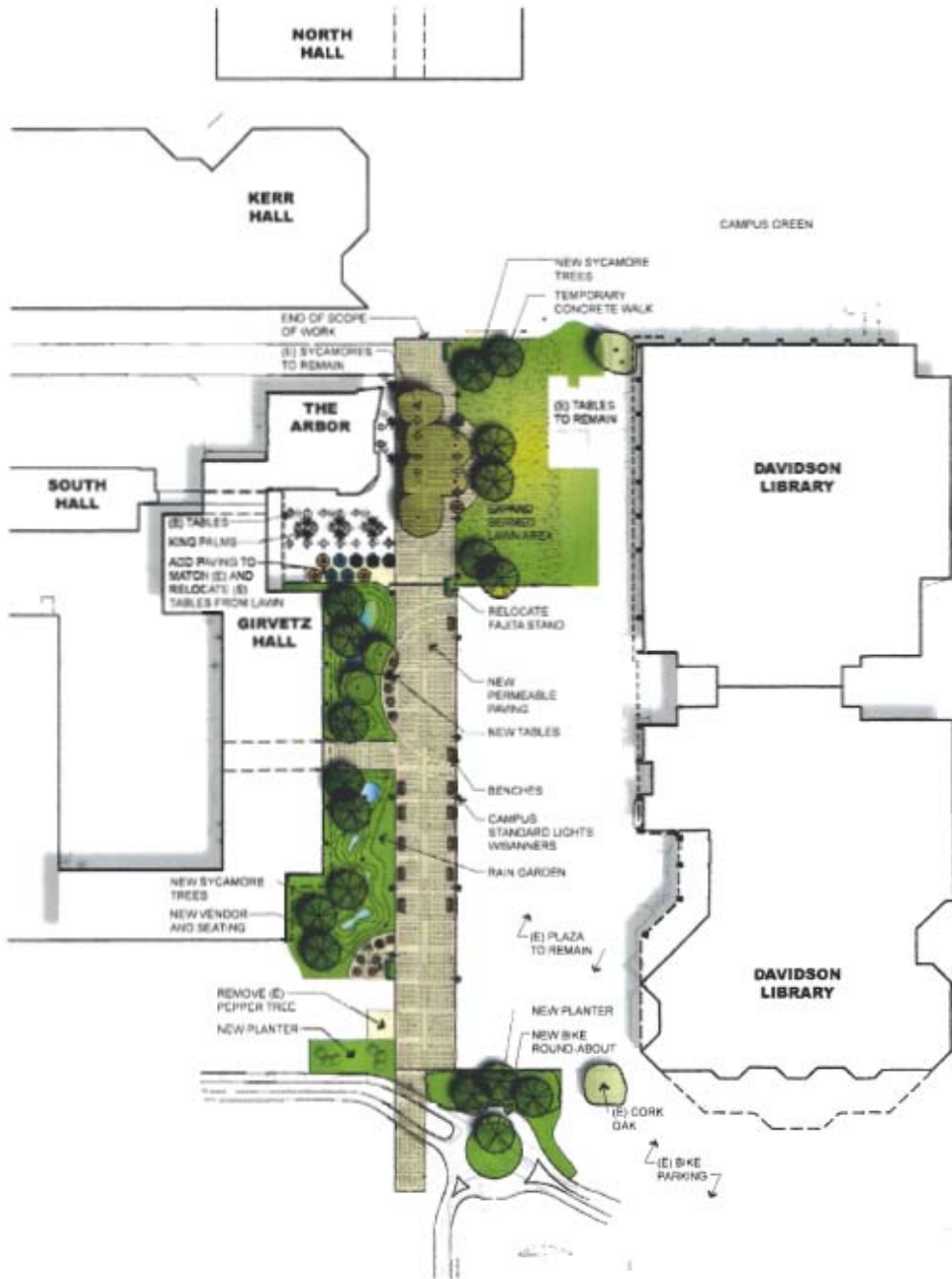
View south from bluff top

Exhibit No. 9
UCSB NOID 4-09
San Nicolas Restoration Project at Corridor 31 (Photo 3 of 4)



View north from Lagoon Island bluff top

Exhibit No. 9
UCSB NOID 4-09
San Nicolas Restoration Project at Corridor 31 (Photo 4 of 4)



 LUDING DESIGN
 LUDINGDESIGN.COM

12 East Main Street
 Santa Barbara, CA 93101
 Telephone: (805) 961-1100
 Fax: (805) 961-1105

Date:
 1-4-09
 1-8-09
 1-12-09

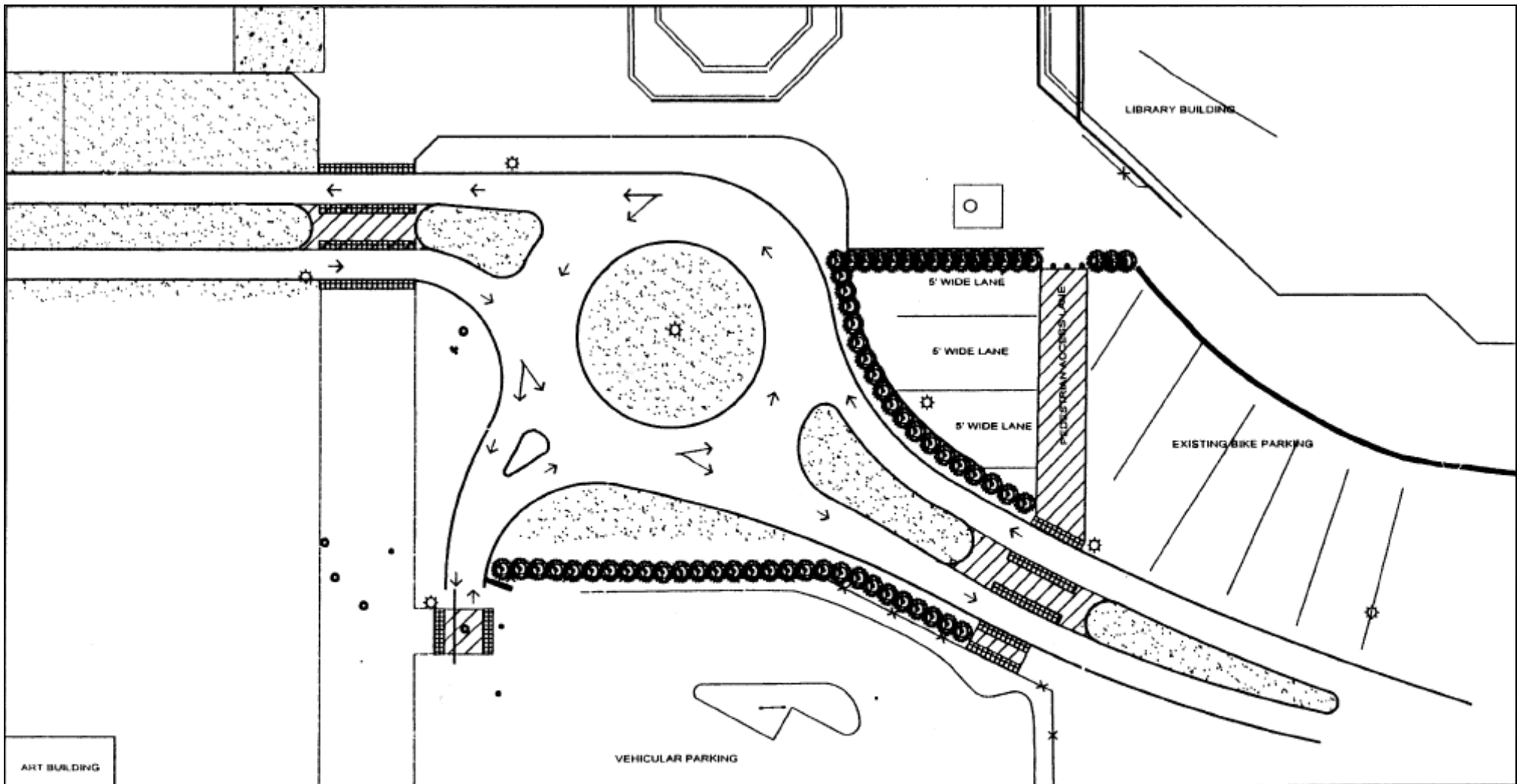
UCSB INFRASTRUCTURE RENEWAL
 University of California
 Santa Barbara, California



Drawn by: KJ
 Sheet:
 L-1
 OF 1
 1/28/09 10:07

LIBRARY PLAZA MASTERPLAN
 SCALE: 1/4" = 1'-0"

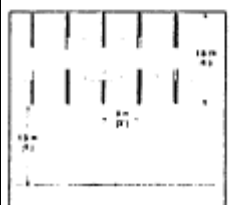
Exhibit No. 10
 UCSB NOID 4-09
 Library Plaza Master Plan



DAVIDSON LIBRARY BIKE PARKING

ORIGINAL SCALE: 1"=10'

FINAL CONCEPT PLAN
UCSB Pardall Roundabout and Bike Path
April 29, 2004



BIKE PARKING LAYOUT

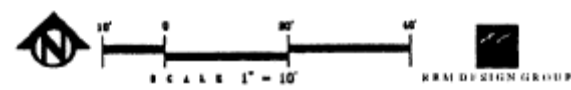


Exhibit No. 11
UCSB NOID 4-09
Davidson Library Bike Parking
Final Concept Plan

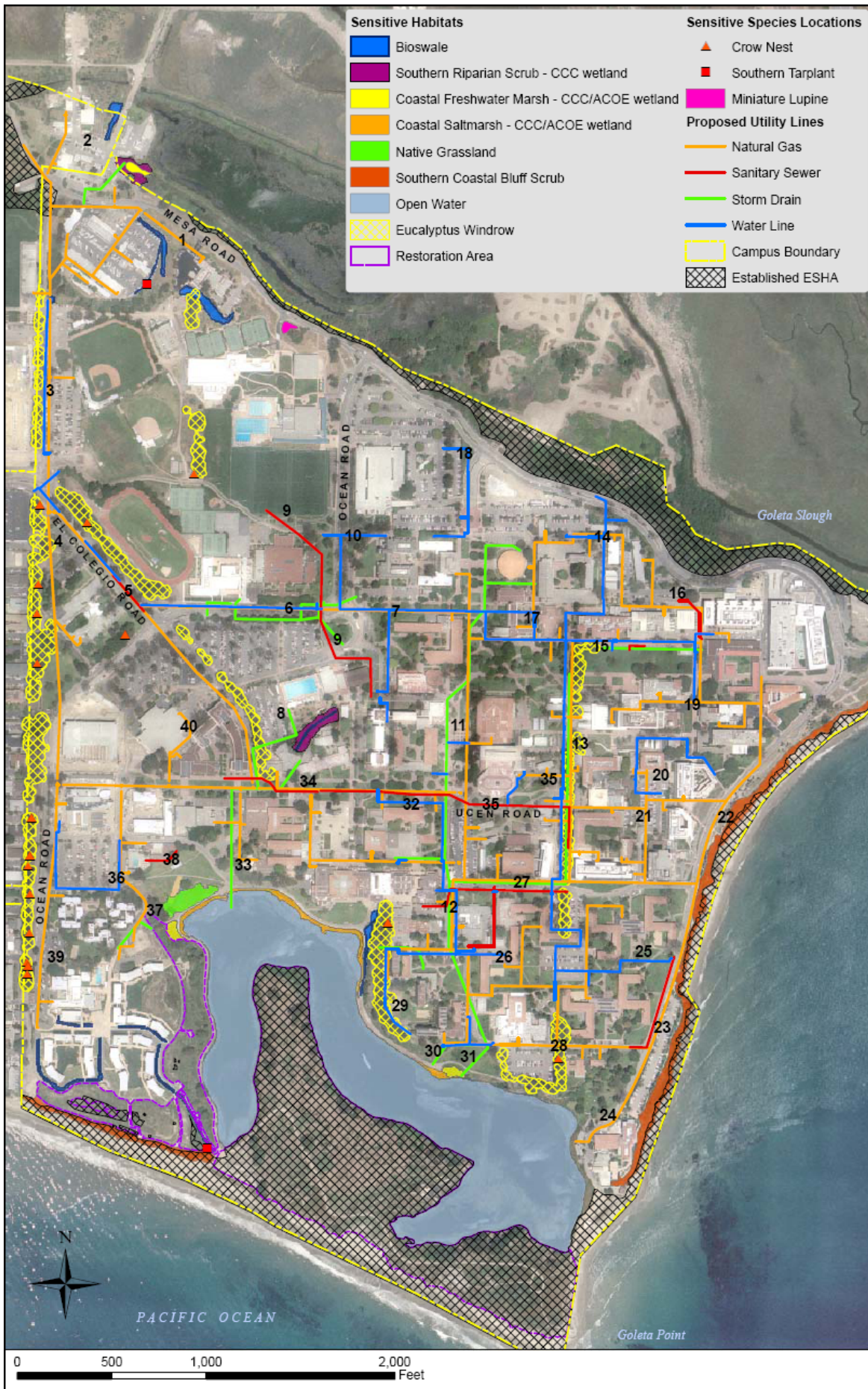


Exhibit No. 12
 UCSB NOID 4-09
 Biological Resources in Project
 Area (Phase I & II)



Campus Lagoon

**MAIN CAMPUS INFRASTRUCTURE PROJECT
Biological Resources Map**



0 50 100 Feet

- Storm Drain Pipe
- Coastal Freshwater Marsh
- Coastal Saltmarsh
- Coyote Bush Scrub
- Non-Native Grassland - Annual
- Eucalyptus Windrow
- Invasive Exotics
- Open Water
- Developed

TREE REMOVAL LIST

100% Submittal
 JOB NUMBER: 0607
 DATE: 10-15-2009

BY: KJT

Project Name: UCSB Infrastructure Utility Put-back, Landscape Portion

AREA	TREE BOTANICAL / COMMON NAME	QUANTITY REMOVED	REPLACEMENT QUANTITY	REPLACEMENT SIZE
MAIN CAMPUS				
STORM DRAINS				
STORM DRAIN A				
	5' tall <i>Washingtonia filifera</i> / Mexican Fan Palm	2 (multi)	0 - (volunteer/weeds)	
	24" <i>Pinus canariensis</i> / Canary Island Pine	1	1- <i>Eucalyptus maculata</i>	15 gallon
STORM DRAIN A-1, A-2, A-3 & A-4				
	<i>Eucalyptus citriodora</i> / Lemon Scented Gum	2	2	15 gallon
STORM DRAIN C				
	24" <i>Eucalyptus maculata</i> / Spotted Iron Gum	1	1	15 gallon
	18" & 24" <i>Eucalyptus citriodora</i> / Lemon Scented Gum	2	2	15 gallon
	2" <i>Ulmus parvifolia</i> / Evergreen Chinese Elm	3	3	24" box
WATER LINES				
WATER LINE A				
	12" <i>Pinus thunbergiana</i> / Black Pine	1	1- <i>Pinus canariensis</i>	15 gallon
WATER LINE C				
	18" <i>Pinus canariensis</i> / Canary Island Pine	1	1- <i>Eucalyptus maculata</i>	15 gallon
WATER LINE F				
	12" <i>Pinus canariensis</i> / Canary Island Pine	1	1	15 gallon
WATER LINE G & H				
	36" <i>Ficus microcarpa</i> / Indian Laurel Fig	1	1- <i>Eucalyptus maculata</i>	15 gallon
	12" <i>Quercus ilex</i> / Holly Oak	1	1 <i>Eucalyptus maculata</i>	15 gallon
	Totals:	16	14	

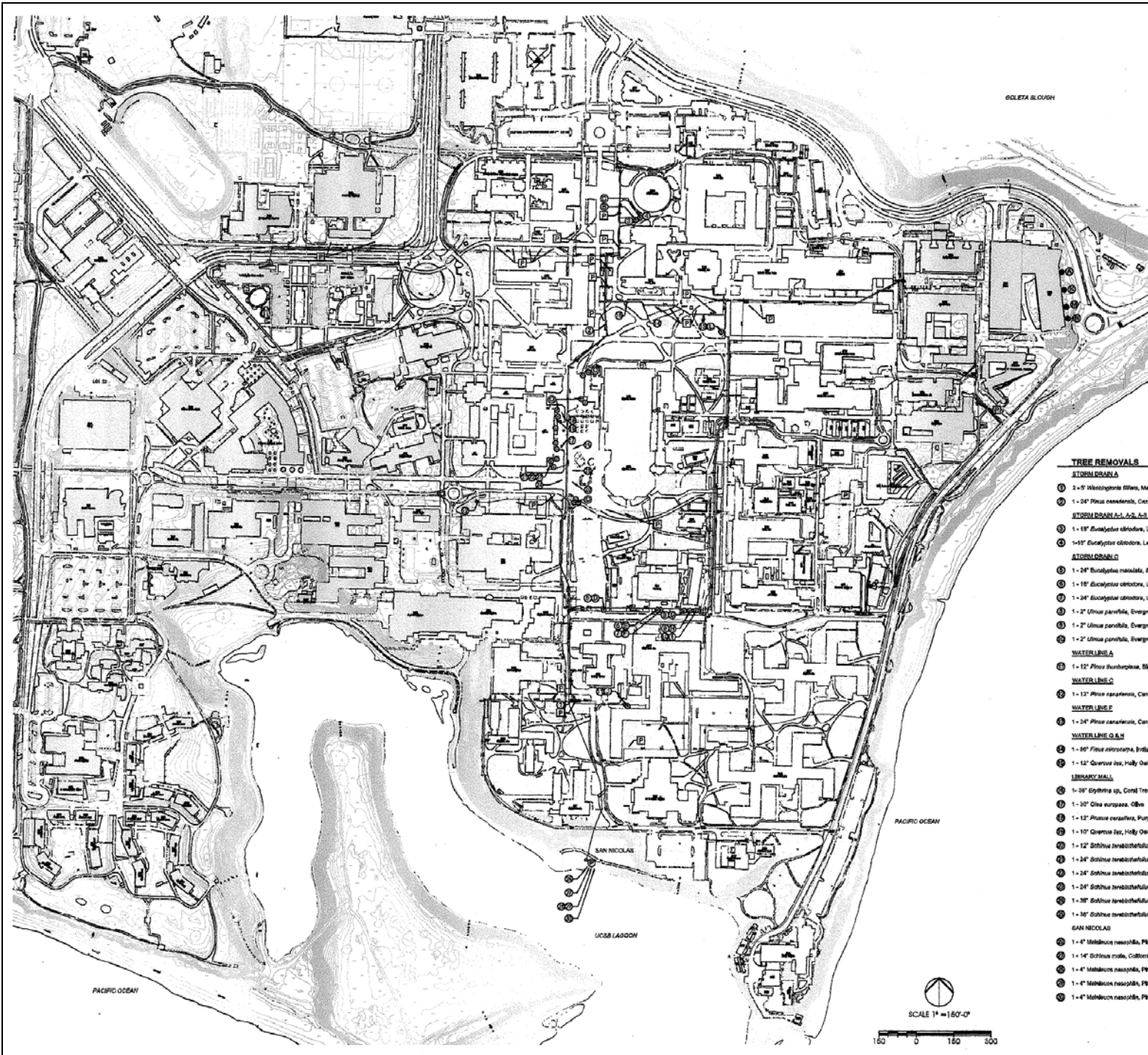
AREA	TREE BOTANICAL / COMMON NAME	QUANTITY REMOVED
LIBRARY MALL		
Trees to be Removed:		
	36" <i>Erythrina</i> sp., Coral Tree	1
	30" <i>Olea europaea</i> , Olive	1
	12" <i>Prunus cerasifera</i> , Purple Leaf Plum	1
	10" <i>Quercus ilex</i> , Holly Oak	1
	12" <i>Schinus terebinthifolius</i> , Brazillian Pepper	1
	24" <i>Schinus terebinthifolius</i> , Brazillian Pepper	3
	36" <i>Schinus terebinthifolius</i> , Brazillian Pepper	1
	38" <i>Schinus terebinthifolius</i> , Brazillian Pepper	1
	Total number to be removed:	10
Trees to be Planted:		
	<i>Platanus racemosa</i> , California Sycamore	15
	Total number to be planted:	15

SAN NICOLAS		
Trees to be Removed:		
	4" <i>Melaleuca nesophila</i> , Pink Melaleuca	4
	14" <i>Schinus molle</i> , California (Peruvian) Pepper	1
	Total to be removed:	5
NOTE: A variety of native trees will be planted in this area. Willows, <i>Salix lasiolepis</i> , will be planted where these trees were removed.		



CALIFORNIA
 COASTAL COMMISSION
 SOUTH CENTRAL COAST DISTRICT

Exhibit No. 14
UCSB NOID 4-09
Tree Removal List



GOLETA SLOUGH

UTILITY LEGEND

- Proposed Storm Drain
- Proposed Potable Water
- ... Proposed Sanitary Sewer
- · - Proposed Natural Gas

Reference Infrastructure Renewed Utility Plans prepared by Parkhill and Greth for UCSB.

TREE PRUNING

Trees to be pruned. Tree pruning is proposed for the health of the trees. In some cases, dead wood or weak limbs will be removed. In locations where roots under 2" are cut at utility trenches, an equal proportion of the tree crown will be trimmed to balance root structure and canopy. No more than 20% of any tree canopy will be trimmed. No topping or unacceptable tree pruning practices will be allowed.

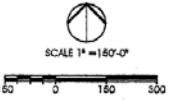
TREE REMOVALS

- STORM DRAIN A**
- 1 - 5' Washington Elm, Madroño Fern Palm
 - 1 - 24" Pinus canariensis, Canary Island Pine
- STORM DRAIN A-1, A-2, A-3, A-4**
- 1 - 18" Eucalyptus obliquata, Lemon Scented Gum
 - 1 - 18" Eucalyptus obliquata, Lemon Scented Gum
- STORM DRAIN B**
- 1 - 24" Eucalyptus maculata, Spotted Iron Gum
 - 1 - 18" Eucalyptus obliquata, Lemon Scented Gum
 - 1 - 24" Eucalyptus californica, Lemon Scented Gum
 - 1 - 2" Ulmus parvifolia, Evergreen Chinese Elm
 - 1 - 2" Ulmus parvifolia, Evergreen Chinese Elm
 - 1 - 2" Ulmus parvifolia, Evergreen Chinese Elm
- WATER LINE A**
- 1 - 12" Pinus bursiformis, Black Pine
- WATER LINE C**
- 1 - 12" Pinus canariensis, Canary Island Pine
- WATER LINE E**
- 1 - 24" Pinus canariensis, Canary Island Pine
- WATER LINE G & H**
- 1 - 36" Pinus mitis, Britan Laurel Fig
 - 1 - 12" Quercus ilex, Holly Oak
- LIBRARY MALL**
- 1 - 20" Erythraea sp., Coral Tree
 - 1 - 10" Citrus aurantium, Orange
 - 1 - 12" Pinus canariensis, Purple Leaf Pine
 - 1 - 10" Quercus ilex, Holly Oak
 - 1 - 12" Solihua javanica, Brazilian Pepper
 - 1 - 24" Solihua javanica, Brazilian Pepper
 - 1 - 24" Solihua javanica, Brazilian Pepper
 - 1 - 24" Solihua javanica, Brazilian Pepper
 - 1 - 36" Solihua javanica, Brazilian Pepper
 - 1 - 36" Solihua javanica, Brazilian Pepper
- SAN NICOLAS**
- 1 - 4" Malibuca nassopila, Pink Malibuca
 - 1 - 14" Citrus mellea, California (Pondera) Pepper
 - 1 - 4" Malibuca nassopila, Pink Malibuca
 - 1 - 4" Malibuca nassopila, Pink Malibuca
 - 1 - 4" Malibuca nassopila, Pink Malibuca

TREE REPLACEMENTS

- STORM DRAIN A**
- 1 - 15 gallon Eucalyptus maculata, Spotted Iron Gum
- STORM DRAIN A-1, A-2, A-3, A-4**
- 1 - 15 gallon Eucalyptus obliquata, Lemon Scented Gum
 - 1 - 15 gallon Eucalyptus obliquata, Lemon Scented Gum
- STORM DRAIN B**
- 1 - 15 gallon Eucalyptus maculata, Spotted Iron Gum
 - 1 - 15 gallon Eucalyptus obliquata, Lemon Scented Gum
 - 1 - 24" box Ulmus parvifolia, Evergreen Chinese Elm
 - 1 - 24" box Ulmus parvifolia, Evergreen Chinese Elm
 - 1 - 24" box Ulmus parvifolia, Evergreen Chinese Elm
- WATER LINE A**
- 1 - 15 gallon Pinus bursiformis, Black Pine
- WATER LINE C**
- 1 - 15 gallon Eucalyptus maculata, Spotted Iron Gum
- WATER LINE E**
- 1 - 15 gallon Pinus canariensis, Canary Island Pine
- WATER LINE G & H**
- 1 - 15 gallon Eucalyptus maculata, Spotted Iron Gum
 - 1 - 18 gallon Eucalyptus maculata, Spotted Iron Gum
- LIBRARY MALL**
- 15 - 15 gallon Pinus rostrata, California Sycamore

1 Habitat restoration will include multiple native tree species. Such as Redwoods, Amigo Willows, will be planted at the edge of the basin to replace these species.



TREE WORK EXHIBIT
10-18-09

INFRASTRUCTURE RENEWAL PROJECT
UNIVERSITY OF CALIFORNIA, SANTA BARBARA

SUDING DESIGN
Landscape Architects
10 East Hwy Street
Evanston, CA 94925
609.939.2002 ext. 200

Exhibit No. 15
UCSB NOID 4-09
Tree Removal Map



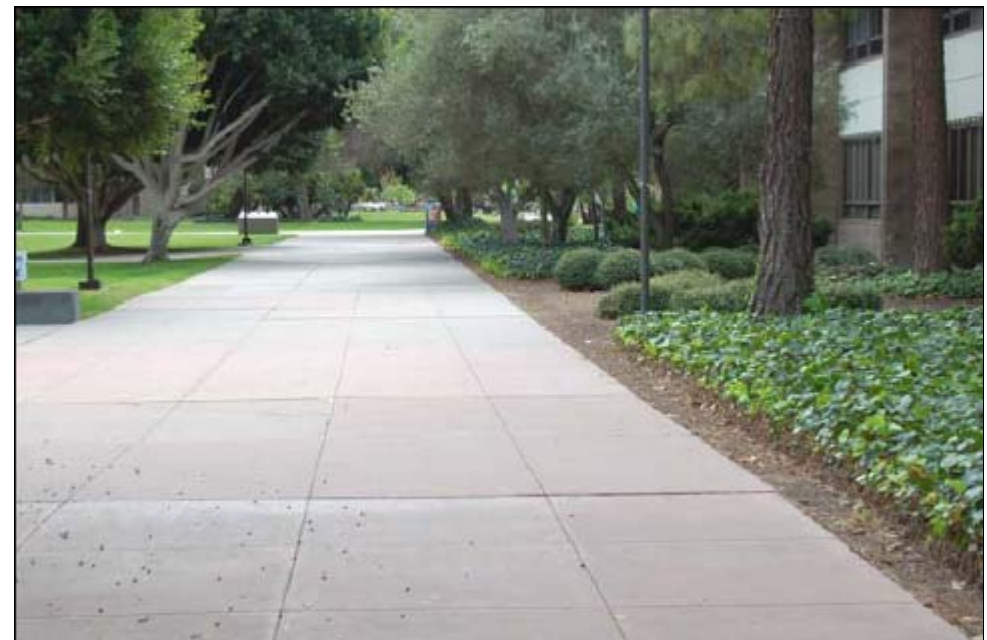
Corridor 6: View of Ocean Road looking west from campus bus loop



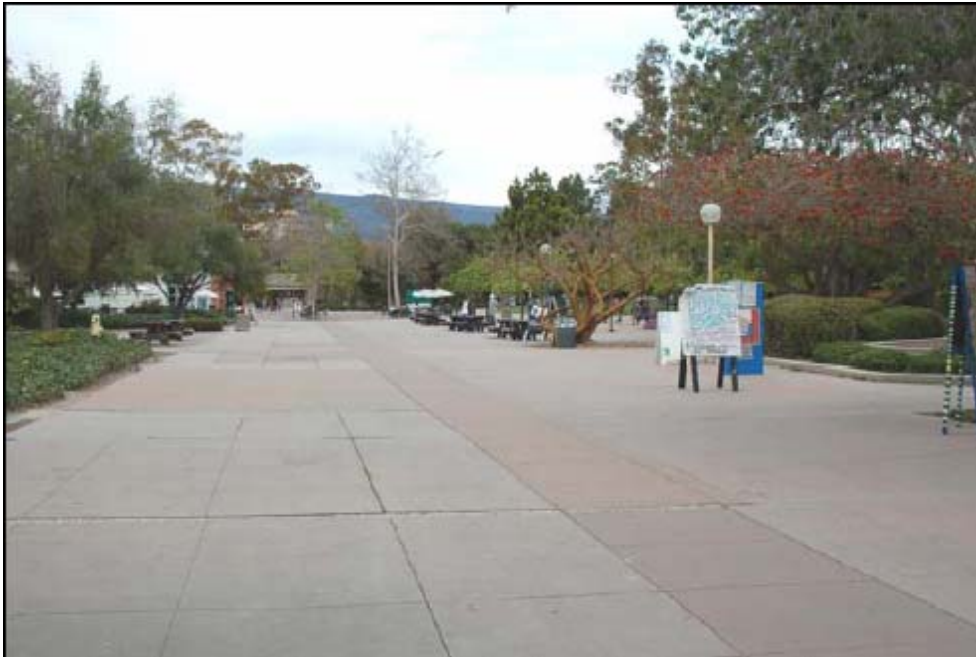
Corridor 7: View along the west side of Kerr Hall looking north



Corridor 7: View along north side of North Hall looking west



Corridor 11: View along the east side of North Hall looking south



Corridor 11: View of the Library Mall as seen from the south end of the Library Building looking north.



Corridor 12: View of Channel Islands Road looking south from the intersection of UCEN Road



Corridor 11: View of the Library Mall area as seen from the south end of the Library Building looking south.



Corridor 13: View of the north end of Parking Lot No. 7 looking south.



Corridor 13: View looking south along the Noble walkway as seen from the north end of Parking Lot No. 7



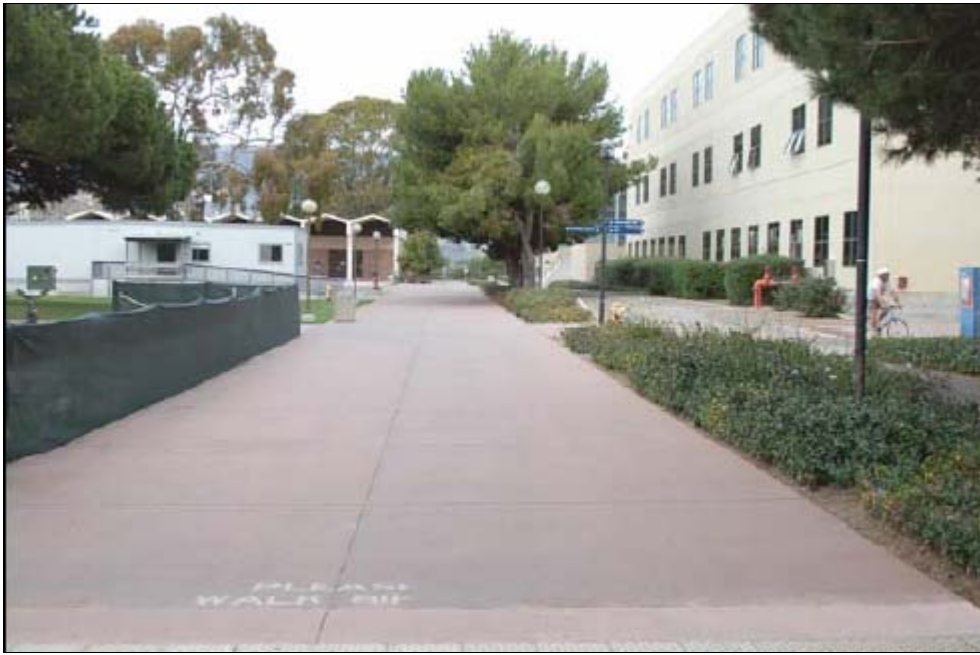
Corridor 14: View along the north side of Phelps Hall looking west.



Corridor 13: View looking north along the Noble Hall walkway as seen from the north end of Parking Lot No. 7.



Corridor 14: View along the east side of Phelps Hall looking south.



Corridor 15: Pedestrian path west of Engineering II and on east of the Campus Green.



Corridor 16: View along the north side of the Chemistry Building looking west.



Corridor 15: View looking west along the Campus Green from an area near the Chemistry Building.



Corridor 17: View of the west side of Campbell Hall as seen looking east from Cheadle Hall.



Corridor 19: View looking north of the pedestrian path between Kohn Hall and the Engineering II Building.



Corridor 20: View looking west along the pedestrian pathway along the south side of Broida Hall



Corridor 19: View looking west along the service driveway on the north side of the MRL Building.



Corridor 20: View looking east along the pedestrian pathway on the south side of Bren Hall



Corridor 21: View looking south along the Parking Lot No. 1 access drive. The access drive is west of the Biology II Building.



Corridor 22: View of Lagoon Road looking north from UCEN Road.



Corridor 21: View looking east along the pedestrian pathway located through Noble Hall.



Corridor 23: View of Lagoon Road looking south from UCEN Road.



Corridor 24: View looking north along Lagoon Road from an area north of the Marine Biotechnology Laboratory.



Corridor 25: View looking north Channel Islands Road of the area east of De la Guerra Commons.



Corridor 25: View looking west from Lagoon Rd. of the area between Anacapa and Santa Cruz Residence Halls.



Corridor 25: View of Parking Lot No. 2 looking north towards parking Lot No. 9



Corridor 26: View of Channel Islands Road looking south.



Corridor 28: View looking east-west segment of Channel Islands Road.



Corridor 27: View of UCen Rd. looking east from an area east of UCen.



Corridor 29: View of the area between San Miguel Residence Hall and the Ortega Commons looking west.



Corridor 29: View looking south along the service drive located west of the San Miguel Residence Hall.



Corridor 32: View looking west along the service access driveway on the south side of the Music Building.



Corridor 31: Proposed bioretention pond area south of San Nicolas Residence Hall.



Corridor 32: View looking north across the pedestrian plaza located east of the Art Museum and west of Storke Tower.



Corridor 34: View looking east of the portion of the Pardall Corridor.



Corridor 35: View looking west from the south side of the Library Building.



Corridor 34: View looking east of the western portion of the Pardall Corridor.