CALIFORNIA COASTAL COMMISSION
NORTH COAST DISTRICT OFFICE
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W21a

MEMORANDUM

Date: April 12, 2011

To: Commissioners and Interested Parties

From: Peter M. Douglas, Executive Director
Robert S. Merrill, District Manager – North Coast District
James R. Baskin AICP, Coastal Program Analyst – North Coast District

Subject: **Addendum to Commission Meeting for Wednesday, April 13, 2011**
North Coast District Item W21a, CDP No. 1-07-018
(City of Arcata)

STAFF NOTE

The staff is making certain changes to the staff recommendation on Coastal Development Permit Application No. 1-07-018, primarily revising one of the special conditions that, as currently written, would require the applicant, prior to issuance of the coastal development permit, to submit and obtain the Executive Director's approval of a final landscaping plan. Staff is modifying Special Condition No. 4 to instead defer submittal and approval of the landscaping plan to prior to commencement of the second phase of the project's construction when the installation of the subject landscaping would be undertaken. This change would allow the City to have extra time to prepare the landscaping plan so that it may complete its bidding solicitation process and commence the first phase of the project's construction to meet pending funding deadlines.

Staff continues to recommend that the Commission approve the project with the special conditions included in the staff recommendations of April 1, 2011 as modified by the revisions described below.

I. REVISIONS TO STAFF RECOMMENDATION

The revisions to the staff report dated April 1, 2011, namely the modification to the language of Special Condition No. 4 as presented below.

Text to be deleted is shown in ~~**bold double-strikethrough**~~, text to be added appears in **bold double-underline**.

- **Revise Special Condition No. 4 on pages 8-10 to read as follows:**

4. Landscaping Plan

A. **PRIOR TO ~~ISSUANCE OF COASTAL DEVELOPMENT PERMIT NO. 1-07-018~~ COMMENCEMENT OF THE SECOND PHASE OF CONSTRUCTION AND PRIOR TO THE INSTALLATION OF LANDSCAPING**, the applicant shall submit for the review and written approval of the Executive Director, final landscaping plans for the development. The plan shall be prepared by a licensed landscape architect.

1. The plan shall be consistent with the other conditions of this permit and the requirements of the LCP regarding street landscaping, and demonstrate that:

a. Only native plant species obtained from local genetic stocks shall be planted as part of the project landscaping. If documentation is provided to the Executive Director prior to planting that demonstrates that native vegetation from local genetic stock is not available, native vegetation obtained from genetic stock outside of the local area may be used;

b. No plant species listed as problematic and/or invasive by the California Native Plant Society, the California Invasive Plant Council, or as may be identified from time to time 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 governments of the State of California or the United States shall be planted within the property;

c. Rodenticides containing any anticoagulant compounds, including, but not limited to, Bromadiolone or Diphacinone shall not be used;

d. All planting will be completed within 60 days after completion of construction; and

e. All required plantings will be maintained in good growing conditions through-out the life of the project, and whenever necessary, shall be replaced with new plant materials to ensure continued compliance with the landscape plan.

2. The plan shall include, at a minimum, the following components:

a. A map showing the type, size, and location of all plant materials that will be on the developed site, the irrigation system, topography of the developed site, and all other landscape features, and

b. A schedule for installation of plants, requiring the use of native plants only and specifically prohibiting the installation of plant species listed as problematic and/or invasive by the California Native Plant Society, the California Invasive Plant Council, or as may be identified from time to time by the State of California;

c. Provisions for on-going maintenance and replacement of plants as may be needed from time-to-time; and

d. Prohibitions against the use of rodenticides containing any anticoagulant compounds, including, but not limited to, Bromadiolone or Diphacinone; and

B. The permittee 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 plan shall occur without a Commission amendment to the coastal development permit unless the Executive Director determines that no amendment is legally required.

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W21a

Filed: February 16, 2011
49th Day: April 6, 2011
180th Day: August 15, 2011
Staff: James R. Baskin AICP
Staff Report: April 1, 2011
Hearing Date: April 13, 2011
Commission Action:

STAFF REPORT: REGULAR CALENDAR

APPLICATION NO.: **1-07-018**

APPLICANT: **City of Arcata**

PROJECT DESCRIPTION: *Samoa Boulevard Gateway Project,* entailing: (1) replacement of existing roadside curbs, gutters, and sidewalks with new "A-6" curbing, variable width landscaping strips, minimum six-foot-wide sidewalks, and detectable surface ADA-compliant crosswalk ramp treatments; (2) replacement of existing concrete median traffic islands with colored stamped concrete and landscaped surfaces and installing public art sculptures; (3) installing two new CDOT Type "GO" drop inlets within the new roadside curbing; (4) configuring the two new and four existing drop inlets with FloGard® +PLUS catch basin insert filters; (5) installing new colored and patterned DecoMark® crosswalk surfacing; (6) replacing one private residence's concrete driveway entry approach and apron; (7) replacing travel and bike lane and turn pocket delineation striping; and (8) replacing existing and installing new traffic control and informational signage.

PROJECT LOCATION: Along two portions of Samoa Boulevard/State Route 255 (STA 30+00 to 33+00 and STA 55+00 to

	59+00) adjacent to and above the public trust lands corresponding to the historically tidally-influenced, submerged, and overflow lands associated with Jolly Giant Creek/Butchers Slough and Humboldt Bay, between "I" and Union Streets within the City of Arcata, Humboldt County.
LOCAL APPROVALS RECEIVED:	City of Arcata Coastal Development Permit No. 101-098-CDP, issued January 31, 2011.
OTHER APPROVALS REQUIRED:	None required.
SUBSTANTIVE FILE DOCUMENTS:	(1) *Traffic Impacts of 4-Lane to 2-Lane Conversion of Samoa Blvd* (Caltrans District 1 Traffic Operations Office, October 2002); (2) *Traffic Impact Study for City of Arcata Highway 255/Samoa Boulevard Pedestrian, Bicycle, and Gateway Improvements Project* (Winzler and Kelly Consulting Engineers, June 2009); (3) *Humboldt Bat First Flush Report 2004* (Community Clean Water Institute, June, 2005); (4) *Historic Properties Survey Report Highway 255 Gateway Improvements Caltrans District 1, Humboldt County, CA* (Leslie S. Heald, December 2002); and (5) City of Arcata LCP.

SUMMARY OF STAFF RECOMMENDATION:

Staff recommends approval with special conditions of the proposed *Samoa Boulevard Gateway Project*. The proposed project involves reducing the traveled way from four vehicular lanes to two and the construction of a series of pedestrian, bicycle, and vehicular circulation improvements within and across the traveled way of State Route 255 as it becomes "Samoa Boulevard" passing through the southern side of the City of Arcata. In addition, the project entails the installation of various stormwater runoff management and water quality facilities, medians, roadside landscaping, and new and/or replacement striping and signage.

Only a relatively small portion of the development, two segments totaling approximately 700 lineal feet of the overall 4,950-lineal-foot project area, is located within the Commission original / retained permit jurisdiction. The two segments are situated along and above the streets that traverse the tidally influenced Jolly Giant Creek / Butcher's

Slough watercourse and through previously filled or reclaimed areas along the former intertidal margins of Humboldt Bay. The majority of the development is situated within the certified and delegated permit jurisdictional area of the City of Arcata who has recently issued a companion coastal development permit for those portions of the project. Although portions of the work would be conducted adjacent to coastal streams and seasonal emergent scrub-shrub wetlands, none of the *Samoa Boulevard Gateway Project* development would be undertaken within environmentally sensitive habitat areas.

The proposed pedestrian, bicycling, and vehicular circulation improvements are intended to rehabilitate the current stark streetscape environment on one of the City's major thoroughfares. The project would dramatically improve the ability for non-motorized transit on the highway by providing greater ability for pedestrians and cyclists to pass safely along and across the street by providing clearly delineated and appropriately sized bike lanes, crossings, and sidewalk amenities. The improvements would also reduce traffic conflicts by more clearly delineating turning pockets, lane merges, and shifts, and providing cautionary and informational signage.

To minimize impacts to sensitive aquatic and wetland biological resources and water quality, a suite of water quality best management practices would be incorporated into the construction of the project. These actions include the use of impact minimization scheduling, staging, and logistics, sediment containment barriers, spill prevention and cleanup measures, and waste treatment and disposal protocols. Detailed project plans are provided as Exhibit No. 6.

Staff believes that the proposed transportation improvement project is consistent with all applicable policies of Chapter 3 of the Coastal Act. The development would upgrade lateral and vertical coastal access facilities consistent with the public access policies of Chapter 3. Furthermore, staff believes that the associated hardscape and vegetative planting amenities would improve the aesthetic character of this urbanized corridor in a manner more befitting its qualities as a transitional zone between the built environment of the City's central business and commercial-industrial districts and the more natural bayland areas to the south. Moreover, staff believes that with the requirements of recommended Special Condition Nos. 1 through 4, potential significant adverse impacts to sensitive fish and wildlife species, water quality, and intertidal biological communities associated with the construction activities in proximity to the Jolly Giant/ Butcher's Slough watercourse will be avoided and minimized as required by Section 30230, 30231, 30232, and 30240. Included among these conditions are requirements that the City implement as proposed certain permanent water quality best management practices be included, namely the installation of drop-inlet filtration media, initiating a regular stormwater drainage facility maintenance program, and the application of public educational curb stenciling. These actions will serve to both enhance and partially restore the water quality of this degraded urban stream.

The Motion to adopt the Staff Recommendation of Approval with Conditions is found below on pages 4 and 5.

STAFF NOTES:

1. Jurisdiction and Standard of Review

The proposed development is bisected by the retained coastal development permit jurisdiction of the Commission and the coastal development permit jurisdiction of the City of Arcata. The portions of the proposed vehicular, bicycle, and pedestrian transportation improvements project within and adjacent to the waters of the Jolly Giant Creek/Butcher's Slough and the filled or reclaimed former intertidal margins of Humboldt Bay are located in areas subject to the public trust within the Coastal Commission's area of original or retained jurisdiction. The portions of the development outside of these areas are within the coastal development permit jurisdiction of the City of Arcata. The City approved a coastal development permit for the development which was not appealed to the Commission. The standard of review that the Commission must apply to the portion of the development within its jurisdiction is the Chapter 3 policies of the Coastal Act.

I. MOTION, STAFF RECOMMENDATION AND RESOLUTION:

The staff recommends that the Commission adopt the following resolution:

MOTION:

I move that the Commission approve Coastal Development Permit No. 1-07-018 pursuant to the staff recommendation.

STAFF RECOMMENDATION OF APPROVAL:

Staff recommends a **YES** vote. Passage of this motion will result in approval of the permit as conditioned and adoption of the following resolution and findings. The motion passes only by affirmative vote of a majority of the Commissioners present.

RESOLUTION TO APPROVE THE PERMIT:

The Commission hereby approves a coastal development permit for the proposed development and adopts the findings set forth below on grounds that the development as conditioned will be in conformity with the policies of Chapter 3 of the Coastal Act. Approval of the permit complies with the California Environmental Quality Act because feasible mitigation measures and/or alternatives have been incorporated to substantially lessen any significant adverse effects of the development on the environment.

II. STANDARD CONDITIONS: See Appendix A.

III. SPECIAL CONDITIONS:

1. Timing of Construction

Construction activities authorized by this permit, shall be conducted during the period of April 15 through October 1, or for such additional time that the Executive Director may permit for good cause and in consultation with all relevant resource protection agencies, to minimize impacts to sensitive fish and wildlife species; and

2. Construction Responsibilities

The permittee shall comply with the following construction-related requirements:

a. No construction materials, equipment, debris, or waste shall be placed or stored where it may be subject to wave, wind, or rain erosion and dispersion. Construction materials shall be stored only in approved designated staging and stockpiling areas;

b. Any and all debris resulting from construction activities shall be removed from the project area on a daily basis and disposed of at an appropriate location(s).

c. No debris, soil, silt, sand, bark, slash, sawdust, rubbish, cement or concrete, oil or petroleum products, or other organic or earthen material from any grading and construction activities shall be allowed to enter into or be placed where it may be washed by rainfall or runoff into coastal waters;

d. Any fueling and maintenance of construction equipment shall occur within upland areas outside of environmentally sensitive habitat areas or within designated staging areas, and at a minimum of 100 feet landward from the Mean High High Water (MHHW) line of Butcher's Slough or Ordinary High Water (OHW) line of Jolly Giant Creek. Mobile fueling of construction equipment and vehicles on and around the construction site shall be prohibited. Mechanized heavy equipment

and other vehicles used during the construction process shall not be stored or re-fueled within 50 feet of drainage courses and other coastal waters;

e. Temporary staging and storage of construction machinery, equipment, debris, and other materials during the construction period shall occur at property owned by the City of Arcata, the California Department of Transportation, or at staging areas specifically authorized by this permit;

f. Construction vehicles shall be maintained and washed in confined areas specifically designed to control runoff and located more than 100 feet away from the mean high tide line/ ordinary high water line;

g. Fuels, lubricants, and solvents shall not be allowed to enter the coastal waters. Hazardous materials management equipment including oil containment booms and absorbent pads shall be available immediately on-hand at the project site, and a registered first-response, professional hazardous materials clean-up/remediation service shall be locally available on call. Any accidental spill shall be rapidly contained and cleaned up;

h. If rainfall is forecast during the time construction activities are being performed: (i) all exposed soils materials and excavated areas shall be covered with minimum 10-mil plastic sheeting, secured with sand bagging or other appropriate materials, and (ii) any other exposed soil areas shall be promptly mulched before the onset of precipitation;

i. To minimize the entrainment and entry of hydrocarbon-tainted runoff into coastal waters, asphaltic concrete paving operations shall be performed during dry-weather periods when the National Weather Service's Northwestern California forecast for the Eureka sub-area of the Redwood Coast predicts a less than 50 percent chance of precipitation for the timeframe in which the paving work is to be conducted;

j. The removal, disposal, and application of pavement striping and other markings shall be performed consistent with all applicable Caltrans Standards Special Provisions adopted for such activities.

k. At the end of the construction period, the permittee shall inspect the project area and ensure that no debris, trash, or construction materials remain on the streambanks, wetlands, or in coastal waterways.

3. <u>Final Sedimentation & Stormwater Runoff Control Plan</u>

A. **PRIOR TO ISSUANCE OF COASTAL DEVELOPMENT PERMIT NO. 1-07-018**, the applicant shall submit, for the review and written approval of the

Executive Director, a final detailed Sedimentation & Stormwater Runoff Control Plan that addresses all phases of development and construction activities authorized under this coastal development permit.

(1) The Sedimentation and Run-off Control Plan shall be consistent with the preliminary "Best Management Practices Plan Jolly Giant Creek and Adjacent Areas – Highway 255/Samoa Boulevard Pedestrian, Bicycle and Gateway Improvements," dated February 4, 2011, as prepared for the project by the City of Arcata, and as modified by the City's revised project description submitted March 29, 2011, and the requirements of Special Condition Nos. 1 and 2 and the other conditions of this permit, and demonstrate that:

(a) Run-off from the project site shall not increase sedimentation in coastal waters;

(b) Run-off from the project site shall not result in pollutants entering coastal waters;

(c) Best Management Practices (BMPs) shall be used to prevent the entry of polluted stormwater runoff into coastal waters during the construction of the authorized structures, including, but not limited to, the use of relevant best management practices (BMPs) as detailed in the "California Storm Water Best Management Practice Handbooks (Construction and Municipal), developed by Camp, Dresser, & McKee *et al*. for the Storm Water Quality Task Force (e.g., BMP Nos. EC-1–*Scheduling*, SE-1–*Silt Fence* &/or SE-9–*Straw Bale Barrier*, NS-9–*Vehicle & Equipment Fueling*, NS-10–*Vehicle & Equipment Maintenance & Repair*; NS-14–*Material Over Water*, NS-15–*Demolition Adjacent to Water*, WM-1–*Material Delivery & Storage*, WM-3–*Stockpile Management*, WM–*Spill Prevention & Control*, WM-6–*Hazardous Waste Management*, WM-9–*Concrete Waste Management*, SC-11–*Spill Prevention, Control, & Cleanup*, and/or others, as appropriate; see www.cabmphandbooks.com); and

(d) On-going Best Management Practices (BMPs) shall be used to prevent the entry of polluted stormwater runoff into coastal waters during the economic design life of the authorized structures, including, but not limited to, the use of relevant best management practices (BMPs) as detailed in the "California Storm Water Best Management Practice Handbooks (Construction and Municipal), developed by Camp, Dresser, & McKee *et al*. for the Storm Water Quality Task Force (e.g., BMP Nos. TC-50–*Water Quality Inlets*, MP-52–*Drain Inserts*, SD-13–*Storm Drain Signage*, SC-70–*Road*

and Street Maintenance, and/or others, as appropriate; see www.cabmphandbooks.com). Maintenance for the stormwater drop inlet and drain insert filter components shall meet or exceed the annual maintenance recommended by the equipment's manufacturer (Hydro International, PLC), as follows:

- Three system inspections
- Three insert cleanings
- One change and disposal of filter media and oil absorbent pouches.

(2) The Sedimentation and Run-off Control Plan shall include, at a minimum, the following components:

(a) A schedule for the installation and maintenance of appropriate construction source control best management practices (BMPs) to prevent entry of stormwater run-off into the construction site and the entrainment of excavated materials into run-off leaving the construction site; and

(b) A schedule for installation, use and maintenance of appropriate BMPs to prevent the entry of polluted stormwater run-off from the completed development into coastal waters.

B. The permittee 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 coastal development permit, unless the Executive Director determines that no amendment is legally required.

4. <u>Landscaping Plan</u>

A. **PRIOR TO ISSUANCE OF COASTAL DEVELOPMENT PERMIT NO. 1-07-018**, the applicant shall submit for the review and written approval of the Executive Director, final landscaping plans for the development. The plan shall be prepared by a licensed landscape architect.

1. The plan shall be consistent with the other conditions of this permit and the requirements of the LCP regarding street landscaping, and demonstrate that:

a. Only native plant species obtained from local genetic stocks shall be planted as part of the project landscaping. If documentation is provided to the Executive Director prior to planting that demonstrates that native

vegetation from local genetic stock is not available, native vegetation obtained from genetic stock outside of the local area may be used;

b. No plant species listed as problematic and/or invasive by the California Native Plant Society, the California Invasive Plant Council, or as may be identified from time to time 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 governments of the State of California or the United States shall be planted within the property;

c. Rodenticides containing any anticoagulant compounds, including, but not limited to, Bromadiolone or Diphacinone shall not be used;

d. All planting will be completed within 60 days after completion of construction; and

e. All required plantings will be maintained in good growing conditions through-out the life of the project, and whenever necessary, shall be replaced with new plant materials to ensure continued compliance with the landscape plan.

2. The plan shall include, at a minimum, the following components:

a. A map showing the type, size, and location of all plant materials that will be on the developed site, the irrigation system, topography of the developed site, and all other landscape features, and

b. A schedule for installation of plants, requiring the use of native plants only and specifically prohibiting the installation of plant species listed as problematic and/or invasive by the California Native Plant Society, the California Invasive Plant Council, or as may be identified from time to time by the State of California;

c. Provisions for on-going maintenance and replacement of plants as may be needed from time-to-time; and

d. Prohibitions against the use of rodenticides containing any anticoagulant compounds, including, but not limited to, Bromadiolone or Diphacinone; and

B. The permittee 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 plan shall occur without a

Commission amendment to the coastal development permit unless the Executive Director determines that no amendment is legally required.

5. Encroachment Permit

PRIOR TO ISSUANCE OF COASTAL DEVELOPMENT PERMIT NO. 1-07-018, the applicant shall submit to the Executive Director for review and written approval, evidence of an encroachment permit from the California Department of Transportation. The encroachment permit or exemption shall evidence the ability of the applicant to develop within State properties, including public street rights-of-way, as conditioned herein.

IV. FINDINGS & DECLARATIONS

The Commission hereby finds and declares as follows:

A. Project Setting and Description.

1. Project Setting

State Route 255 is a western alternate route of U.S. Route 101 between Eureka and Arcata that extends along the western shoreline of Arcata Bay, the northern lobe of Humboldt Bay, and crosses the middle reach of Humboldt Bay via a series of bridge crossings. Highway 255 also provides road access to the communities of Samoa, Fairhaven, and Manila through a series of intersecting collector and local streets. Upon entering the City of Arcata, the route becomes part of the City's street grid as a four lane, median-divided arterial known as "Samoa Boulevard" (see Exhibit Nos. 1-3). The portions of Highway 255/ Samoa Boulevard within the Commission's permit jurisdiction that are the subject of this permit application comprise the roughly 300-lineal foot road segment within and above the public trust lands corresponding to the historically tidally-influenced, submerged, and overflow lands associated with Jolly Giant Creek/Butchers Slough situated between "G" and "I" Streets ("Western Project Area"), and the approximately 400-lineal-foot segment of the eastern approach and abutment of the U.S. 101 overpass at the SR255/US101 interchange that once was within the intertidal wetland margins of Arcata Bay ("Eastern Project Area") (see Exhibit No. 4).

Land uses surrounding the Western Project Area comprise a mixture of commercial-industrial development, including several light manufacturing firms and professional offices, a small restaurant and grocery/delicatessen, an auto rental agency, a plumbing supply/contracting firm, and a single-family residence. The setting around the Eastern Project Area comprises open areas associated with the SR255/US101 over-crossing, Adjoining land uses include a regional California Highway Patrol station, the City-owned

Campbell Creek/Gannon Slough restoration site, and the playfields within the Arcata Community Park.

Jolly Giant / Butcher's Slough

The Western Project Area spans Jolly Giant Creek / Butcher's Slough, which drains approximately 1.7 square miles of rural and urban landscape and is Arcata's primary watershed. Originating east of the city in the Arcata Community Forest, the watercourse flows for six miles before discharging into Arcata Bay. The stream has undergone significant realignment and other modifications as the area was developed as a mining supply port and later a lumber production hub beginning in the 1850s. The majority of the creek past the Humboldt State University campus, beneath Highway 101, and through the City's urbanized core is culverted and enclosed below street level. Such confined streams typically exhibit declining water quality because of their lack of exposure to air, sunlight, soil, and vegetation to filter and process entrained pollutants.

The vegetation along the Jolly Giant Creek / Butchers Slough watercourse in the Western Project Area vicinity is comprised of a mixture of ruderal species that are generally found along disturbed streams, including salt grass (*Distichlis spicata*), Himalayan blackberry (*Rubus discolor*), creeping buttercup (*Ranunculus repens*), coyote brush (*Baccharis pilularis*), pampas grass (*Cortaderia jubata*), and rushes (*Juncus* sp.). Given the dominance of invasive pioneering plant species and the relatively low level of fish and wildlife species use of the stream as compared to other coastal streams of this size, the habitat value of this streambank area can be considered to be severely degraded. Notwithstanding this degraded condition, Jolly Giant Creek/Butcher's Slough provides cover and forage to a variety of fish species such as the *coho* salmon (*Oncorhynchus kisutch*), a federally-listed endangered species, listed as endangered federally, threatened in California, steelhead (*Oncorhynchus mykiss*) a state-listed threatened species, the federally-listed tidewater goby (*Eucyclogobius newberryi*), and coastal cutthroat trout (*Oncorhynchus clarki*).

Since, 1991 there have been several efforts made to restore the stream and remedy the damage from its urbanization. To date, over 570 feet of surface channel upstream of the Western Project Area has been "day-lighted" and/or has had bank and in-stream restoration work performed on it to improve water quality. In addition, beginning in the early-2000s, the Jolly Giant / Butcher's Slough Enhancement Project reestablished over-bank and floodplain areas lost to channelization, returned hydrologic complexity to the stream by increasing channel sinuosity on artificially straightened reaches creating off-channel refugia alcoves, replaced large wood vegetation cover elements within the stream channel and along the banks, and re-established the native riparian corridor vegetation on denuded reaches or those dominated by invasive, exotic plants along a reach of the stream beginning approximately 825 feet south the Western Project Area (see Coastal Development Permit No. 1-02-020, City of Arcata, Applicant).

Further to the south, the slough enters the Arcata Marsh and Wildlife Sanctuary, where the watercourse winds around a restored freshwater log pond, before passing through a series of railroad underdrains and entering Arcata Bay between the City's municipal wastewater treatment plant and the tertiary treatment ponds of the marsh complex. Comprising some 307 acres of bayfront marshes, mudflats, and grasslands, combination of treated, fresh, and saltwater marshes provide habitat to over 270 species of birds throughout the year, including visitations by hundreds of migratory waterfowl.

Gannon Slough Area Emergent Wetlands

Habitat conditions in proximity to the Eastern Project Area are limited to emergent wetlands along the roadside drainages at the foot of the filled highway on- and off-ramps. Vegetative cover in these areas is primarily composed of a mixture of emergent hydrophytes, containing a variety of obligate to facultative wetland species including rushes (*Juncus* sp.), panicled bulrush (*Scirpus microcarpus*) and Himalayan blackberry (*Rubus discolor*), together with copses of more mesic arroyo willow (*Salix lasiolepis*).

2. Project Description

The *Highway 255 / Samoa Boulevard Pedestrian, Bicycle and Gateway Improvements Project* entails a variety of improvements to be made along a roughly one-mile-long segment of State Route 255 / Samoa Boulevard / Fourth Street as it passes through the City of Arcata as a surface street and as an elevated crossing of U.S. Highway 101. The improvements include re-delineation of the roadway for the creation of bicycle, acceleration/deceleration, merge, and turning lanes, grading and paving for new textured crosswalks and patterned concrete median treatments, curbing, gutters, sidewalks, and street side landscaping, and installing various other amenities for improving vehicular circulation, pedestrian crossing safety, stormwater drainage, and area aesthetics. The portion of the "gateway" project within the Commission's permitting jurisdictional area entails eight components as follows:

- Replacing the existing roadside curbs, gutters, and sidewalks with new "A-6" curbing, variable width landscaping strips, minimum six-foot-wide sidewalks, and detectable surface ADA-compliant crosswalk ramp treatments;

- Replacing the existing Portland cement concrete median traffic islands with colored stamped concrete and landscaped surfaces and installing public art sculptures;

- Installing two new CDOT Type "GO" drop inlets within the new roadside curbing;

- Configuring the two new and four existing drop inlets with FloGard® +PLUS catch basin insert filters;

- Installing new colored and patterned DecoMark® crosswalk surfacing;
- Replacing one private residence's concrete driveway entry approach and apron;
- Removing and replacing travel and bike lane and turn pocket delineation striping; and
- Removing and replacing existing and installing new traffic control and informational signage.

As part of the project proposal, the applicant's have included a water quality "best management practices plan" for avoiding and reducing impacts to sensitive coastal resources from erosion and stormwater runoff entrained sediment and other pollutants, and the accidental release of hazardous substances. In addition, following discussions with Commission staff, the City amended the permit application to include additional water quality protection measures, including the use of drop inlet filtration inserts and establishing a routine stormwater drainage facilities maintenance program. Detailed project and water quality pollution prevention plans are included as Exhibit No. 6.

Construction Period / Sequence

The *Gateway* project would be built out in two construction phases, each of approximately four months in length, spanning over two years. The sequence of construction is based upon the on the types of improvements being installed. The work would progress from first installing the upgrades to the street cross-section, namely the curbs, gutters, drop inlets, landscaping strips, and sidewalks. Consecutively, or possibly concurrently, the median resurfacing work and driveway installation would be undertaken. Once all the in-street hardscaping improvements have been installed, and the limited "shear-in" repair paving to integrate the gutters and drop curbs into the traveled lane grades is completed, the work would shift to installing and/or reconfiguring the crosswalk treatments, road-embedded traffic control detection sensor loops, and restriping the vehicle and bike lanes, turning pockets, and merge and fog lines. Finally, the new informational and warning signage would be placed and the median public art objects installed.

Seasonal Constraints/ Water Quality Best Management Practices

To minimize risks to adjacent environmentally sensitive fish species, the construction season would be limited to the "dry season" period of April 15 and October 15. In addition, to avoid and minimize the potential impacts, the applicant has included within the project design a preliminary erosion and runoff control plan that identifies a variety of established water quality best management practices to be incorporated during the construction phase, including measures for street sweeping and vacuuming, storm drain inlet protection, potable water irrigation of revegetation, vehicle and equipment cleaning,

fueling, and maintenance protocols, material delivery standards, stockpile management, spill prevention and control measures, and solid waste management actions. In addition, the applicant proposes to include permanent water quality BMPs for on going stormwater management entailing the installation of filter inserts within the new and existing drop inlets, public education curb stenciling of the creek crossing and inlets, and establishing a routine drainage system maintenance program (see Exhibit No. 6).

Construction Equipment

Equipment needed for the project includes various rubber-tired and tracked vehicles, including excavators, back-hoes, dump-trucks, concrete delivery vehicles, plate and vibratory compactors, trenching and planning machines, paver finishers, pavement rollers, and sprayer rigs.

Staging

The applicant proposes to use portions of two City-owned property as a staging area for construction equipment and materials: the former Little Lakes Industries lumber mill site south of the Western Project Area along South "I" Street, and the City corporation yard off of South "G" Street. The proposed staging areas consist of an asphaltic-concrete surfaced area. The perimeters of the staging areas will be secured with respect to water quality management and spill prevention devices and practices being in place as part of the proposed project BMPs.

B. Capacity of Public Works Facilities.

1. Applicable Coastal Act Policies and Standards

Coastal Act Section 30254 states, in applicable part:

> *New or expanded public works facilities shall be designed and limited to accommodate needs generated by development or uses permitted consistent with the provisions of this division; …Where existing or planned public works facilities can accommodate only a limited amount of new development, services to coastal dependent land use, essential public services and basic industries vital to the economic health of the region, state, or nation, public recreation, commercial recreation, and visitor-serving land uses shall not be precluded by other development.*

2. Consistency Analysis

Section 30254 directs that the design of public works facilities, including state highway transportation facilities, not exceed functional capacities adequate for serving their intended purpose beyond that demanded by the development or uses they accommodate. In situations where service capacities are limited, either currently or at some future,

planned-for time, the provisions of such facilities will be prioritized or allocated so as not to preclude coastal dependent uses, essential public services, and base industries of regional, state-wide or national importance, public recreation, and visitor-serving accommodations.

The *Samoa Boulevard Gateway Improvement Project* comprises a series of vehicular, bicycle, and pedestrian transit improvements within the existing developed state highway right-of-way. The project is not intended to otherwise expand the through capacity of the roadway or upgrade the relative levels of service at the various intersections in the project area. However, the project does include some changes in the lane configuration of the highway, where portions of the current median-divided four-lane layout would be reduced to one lane in each direction to provide room for the new on-road bike lanes and wider sidewalks, or to extend the start of the taper on the east-bound portion of the highway coming off of the U.S. 101 overpass to give additional area for motorists to merge over before sharing the roadway with traffic entering from northbound Highway 101.

Traffic studies conducted for the project found that, without certain traffic mitigations, the originally proposed traveled way modifications within the portions of the project within the Commission's jurisdiction, including the lane reconfigurations between I and G Streets and the reconfiguration of the merge taper for east-bound traffic past the crest of the overpass, would significantly change the through capacity of the affected roadway segments and/or the levels of service (LOS) at the associated intersections.[1] LOS D conditions were anticipated for eastbound and westbound Samoa Boulevard between G and H Streets due to traffic volumes exceeding the capacity of the limited queuing gaps that would be available along that segment after the reduction from two to one through lane each way. However, the traffic study states that this congestion could be managed by coordination of the signal lights between K and G Streets, a routine traffic control measure, which would raise intersection functionality to an acceptable LOS C for the affected segment. This traffic mitigation measure has been incorporated into the project.

Therefore, the Commission finds that the proposed roadway and street side improvements comprise planned expanded public works facilities that have been designed and limited to accommodate needs generated by development or uses permitted consistent with the

---

[1] The Commission notes that the traffic impact study also reveals that adverse traffic conditions could result at a location within the City's permit jurisdiction if appropriate mitigation measures were not included. The proposed reduction from two lanes to one lane of westbound SR255 coming down from the crest of the U.S.101 overpass could result in movement conflicts by adding a second lane merge maneuver in a road segment where average vehicular speeds would vary markedly and queuing gaps were simultaneously being reduced. The study recommended that the existing two-lane configuration be maintained and the merge not start until "F" Street, well past the converging off ramp. The applicant subsequently amended the project design as recommended by the traffic consultant.

Coastal Act and would not preclude service to coastal dependent land use, essential public services and basic industries vital to the economic health of the region, state, or nation, public recreation, commercial recreation, and visitor-serving land uses consistent with Coastal Act Section 30254.

C. Protection of Marine Resources, Coastal Water Quality, and Environmentally Sensitive Habitat Areas.

1. Applicable Coastal Act Policies and Standards

Section 30230 of the Coastal Act states the following:

> *Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.*

Section 30231of the Coastal Act states the following (emphasis added):

> *The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.* [Emphasis added.]

Section 30232 of the Coastal Act states the following:

> *Protection against the spillage of crude oil, gas, petroleum products, or hazardous substances shall be provided in relation to any development or transportation of such materials. Effective containments and cleanup facilities and procedures shall be provided for accidental spills that do occur.*

Section 30240 states, in applicable part:

> *(a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values…*
>
> *(b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.*

Coastal Act Section 30412(b) states, in applicable part:

> *The State Water Resources Control Board and the California regional water quality control boards are the state agencies with primary responsibility for the coordination and control of water quality. The State Water Resources Control Board has primary responsibility for the administration of water rights pursuant to applicable law. The commission shall assure that proposed development and local coastal programs shall not frustrate this section. The commission shall not… modify, adopt conditions, or take any action in conflict with any determination by the State Water Resources Control Board or any California regional water quality control board in matters relating to water quality or the administration of water rights.*

2. Consistency Analysis

Coastal Act Sections 30230 and 30231 require, in part, that marine resources and coastal waters and wetlands be maintained and, where feasible, enhanced. These policies also call for restoration of marine resources, coastal waters, streams, wetlands, and estuaries where feasible. Additionally, Section 30230 calls for special protection to be given to areas and species of special biological significance. Coastal Act Section 30232 requires protection against the spillage of crude oil, gas, petroleum products and hazardous substances and requires that effective containments and cleanup procedures be provided for accidental spills that do occur. Section 30240 requires that environmentally sensitive habitat areas be protected against any significant disruption of habitat values, including form development adjacent to such areas, and that the adjacent development be sited and designed to prevent significantly degrading impacts, and be compatible with the continuance of both the proximate sensitive habitat and recreational areas in the project vicinity.

As mentioned above in Findings Section IV.B.1 *Project Setting* above, the Western Project Area lies in close proximity to the Jolly Giant Creek / Butcher's Slough watercourse and seasonal wetlands adjoin the Eastern Project Area. Both of these areas comprise environmentally sensitive habitat areas, with the tidally-influenced Jolly Giant Creek riparian corridor also containing brackish riverine characteristics supportive of a mixture of marine and freshwater plant and animal species.

The Commission must evaluate whether the project components are consistent with the limitations imposed and the protections required under Coastal Act Sections 30230, 30231, 30232, and 30240. When read together as a suite of regulatory directives, these policies set forth a number of different limitations on the location and design of development projects with respect to their potential adverse effects on marine and freshwater aquatic biological resources, water quality, and wetlands and other environmentally sensitive habitat and recreational areas. For analysis purposes, the limitations applicable to the subject project can be grouped into four general categories as discussed below.

Maintenance, Enhancement, and Restoration of Biological Productivity & Functional Capacity

Any proposed development or uses in or near marine resources, coastal wetlands, and other aquatic environments must maintain and enhance, and, where feasible restore the biological productivity and functional capacity of the habitat area in terms of biological productivity, functional capacity, and water quality. As discussed further below, many of the water quality best management practices proposed as part of the development, or imposed as conditions of permit approval, will serve to protect the aquatic habitat from sedimentation and the accidental release of hazardous substances during the construction phase of the project. In addition, many of the proposed roadway and streetside improvements will serve to reduce stormwater volumes originating within the project area and decrease the loading of contaminants through reduction of the amount of impermeable surface area and the installation of landscaped strips to provide for biofiltration of roadway and sidewalk runoff.

Jolly Giant Creek and other neighboring Arcata watersheds have been the subject of several environmental analyses as part of the various habitat restoration studies conducted by government agencies, private non-profit organizations, and academic institutions. Most recently, in October 2010, a series of biochemical measurements were taken along the watercourse from its headwaters, at various locations along its route through town, and at its confluence with Arcata Bay. This study found that the general water quality became increasing degraded as it passed through the urban corridor upstream of the Western Project Area, in terms of fecal and total coliform bacteria content, turbidity, and dissolved oxygen content (see Exhibit No. 7). These contaminants cumulatively adversely affect the quality of the aquatic environment of the environmentally sensitive areas within the reaches of Butcher's Slough as it becomes part of the marsh and wildlife sanctuary, and in turn, Arcata Bay, below the project site.

Pollutants and debris entrained in runoff coming off of the City streets and other impervious surfaces that enter the creek through the existing stormwater drainage inlets in the project area contribute to the degraded conditions within lower Jolly Giant Creek / Butcher's Slough. Runoff from an approximately two-acre area is drained along gutters,

into the drop inlets, and through sub-grade pipelines to the stream in the Western Project Area.

To address the degraded aquatic habitat conditions within lower Jolly Giant Creek, the City has included in the gateway project a stormwater facilities upgrade component. In addition to the installation of two new drop inlets to better capture and convey roadside drainage, the City proposes to install a set of FloGard® +PLUS catch basin insert filters into the new drop inlets and the four existing drop inlets within the Western Project Area. In addition, as a public educational measure, the City would stencil these inlets with information as to the facilities being the entry point for materials which will enter coastal streams and, in turn, Humboldt Bay. Finally, the City has included provision for a routine program of inlet maintenance to be initiated with the installation of these facilities. All of these measures would be consistent with provisions of the City's Storm Water Management Plan as approved by the North Coast Regional Water Quality Control Board (see Exhibit No. 8).

Special Condition No. 3 requires the submittal for the review and approval of the Executive Director of a stormwater runoff control plan that incorporates the proposed drop inlet filters and stenciling provisions. The condition specifically requires that the drop inlet filters be maintained in accordance with the manufacturer's maintenance recommendations to ensure that the filters will remain effective over time in removing pollutants from the collected stormwater runoff. The Commission finds that the proposed stormwater treatment improvements, as conditioned to include: (a) the installation of new drop inlets and the provisioning of the new and existing inlets with filter insets; (b) public educational curb stenciling of the drain inlets; and (c) the establishment of a routine drainage system maintenance program, will maintain, enhance, and partially restore the biological productivity, functional capacity, and quality of coastal waters comprising the lower Jolly Giant Creek / Butcher's Slough watercourse as required by Coastal Act Section 30230 and 30231.

Prevention of Runoff Impacts to Water Quality from Construction Activities

The Western Project Area lies up gradient from the Jolly Giant Creek/Butcher's Slough Enhancement Area, the Arcata Marsh and Wildlife Sanctuary, and Arcata Bay. Excavation of the site to remove Portland cement- and asphaltic-concrete pavement for construction of the proposed street improvements, would expose demolition debris and loosened soil materials to stormwater runoff. Stormwater runoff flowing across the site could entrain loose soil materials that could in turn enter drop inlet drains to eventually discharge into Butchers Slough and Arcata Bay, adversely affecting water quality.

Therefore, the Commission attaches Special Condition Nos. 1 through 3. **Special Condition No. 1** limits the construction of the project improvements to the dry season months of the year to minimize pollutant entrainment in stormwater runoff. **Special Condition No. 2** requires that efforts be taken to ensure that in the handling and storage of construction materials, demolition debris, and other wastes, no such materials are

allowed to enter the waters of Butchers Slough or Humboldt Bay. Special Condition No. 2 further requires that all debris and waste be removed for the project site and disposed of in an upland location outside of the coastal zone or at an approved disposal facility. **Special Condition No. 3** requires approval of final erosion and runoff plans prior to permit issuance, incorporating various erosion and runoff control measures. The plans are required to ensure that appropriate best management practices (BMPs) to control runoff and prevent spills are implemented in light of expected precipitation events or construction mishaps. These BMPs include such measures as timing the construction to occur during times with low probability of storm events, use of earthen diking, straw bales and debris fencing barriers to intercept and divert any stormwater runoff that may occur away from the excavation area, mulching and re-seeding the area upon completion of demolition- and construction-related ground disturbing activities, and training of employees in the use of BMPs.

Accidental Releases of Hazardous Materials

As discussed above, Coastal Act Section 30232 requires protection against the spillage of crude oil, gas, petroleum products and hazardous substances and requires that effective containments and cleanup procedures be provided for accidental spills that do occur. The applicant has proposed to prepare a hazardous materials management plan to address the transport, handling, and storage of fuels and other equipment fluids, with emphasis on preventing releases to the ocean or beach, and to address spill prevention, cleanup, and disposal. To date, however, no such plan has been prepared.

Given that the proposed construction methods and activities will be located within and adjacent to coastal waters and beaches and thus could cause an increase in sediment and other pollutants entering coastal waters and other sensitive habitats through either the release of polluted runoff from the project site and/or leaky equipment contaminating coastal waters and beaches, the Commission finds it necessary to attach Special Condition Nos. 1, 2, and 3, as described below.

- **Special Condition No. 1** in part requires that all construction activities within coastal waters authorized under the permit shall be conducted during dry-season periods only to minimize the introduction of suspended sediment in stormwater runoff and associated water quality impacts.

- **Special Condition No. 2** requires adherence to various construction responsibilities including, but not limited to, the following: (a) no construction materials, equipment, debris, or waste shall be placed or stored where it may be subject to wave, wind, or rain erosion and dispersion; (b) any and all debris resulting from construction activities shall be removed from the project areas on a daily basis and disposed of at an appropriate location(s); (c) any fueling and maintenance of construction equipment shall occur within upland areas outside of environmentally sensitive habitat areas or within designated staging areas, mobile

fueling of construction equipment and vehicles on and around the construction site shall be prohibited, and mechanized heavy equipment and other vehicles used during the construction process shall not be stored or re-fueled within 50 feet of drainage courses and other coastal waters; (d) construction vehicles shall be maintained and washed in confined areas specifically designed to control runoff and located more than 100 feet away from the mean high tide line/ordinary high high water line; (e) during construction, all trash shall be properly contained, removed from the work site, and disposed of on a regular basis to avoid contamination of habitat during restoration activities; (f) hazardous materials management equipment including oil containment booms and absorbent pads shall be available immediately on-hand at the project site, and a registered first-response, professional hazardous materials clean-up/remediation service shall be locally available on call; and (g) at the end of the construction period, the permittee shall inspect the project area and ensure that no debris, trash, or construction material remain.

- **Special Condition No. 3** requires submittal of a final Sedimentation and Runoff Control Plan, which shall demonstrate that: (a) run-off from the project site shall not increase sedimentation in coastal waters; (b) run-off from the project site shall not result in pollutants entering coastal waters; and (c) Best Management Practices (BMPs) shall be used to prevent the entry of polluted stormwater runoff into coastal waters during both the construction of the authorized structures and for the life of the development.

Protection of Native Vegetation and Raptor Wildlife Resources

The Commission finds that the ESHA located near the site could be adversely affected if non-native, invasive plant species were introduced in landscaping at the site. Introduced invasive exotic plant species could physically spread into the ESHA and displace native wetland vegetation, thereby disrupting the values and functions of the ESHAs. To ensure that the ESHA near the site is not significantly degraded by any future landscaping that would contain invasive exotic species, the Commission attaches Special Condition No. 4. **Special Condition No. 4** requires the applicant prior to issuance of the coastal development permit to prepare and submit for the review and approval of the Executive Director a final landscaping plan. The plan is required to limit landscape plantings to native species obtained, whenever feasible, from locally derived genetic stocks. In addition, Special Condition No. 4 requires that the landscaping plan include specific prohibitions against certain bio-accumulating rodenticides to prevent their uptake by raptor predators in the area.

Conclusion

The Commission finds that as conditioned, all feasible mitigation measures have been provided to minimize adverse environmental effects consistent with Sections 30230,

30231, 30232, and 30240 of the Coastal Act. In addition, The Commission finds that as conditioned to require: (1) limiting the construction activities to specified dry-season times of the years; (2) adherence to various construction responsibilities to protect coastal resources; (3) submittal of a final sedimentation and runoff control plan, hazardous materials management plan, and debris disposal plan; and (3) submittal of a final landscaping plan specifying the use of native, locally obtained plants together with prohibitions on the use of bio-accumulating rodenticides, the proposed development is consistent with Coastal Act Sections 30230, 30231, 30232, and 30240.

D. Archaeological and Paleontological Resources.

1. Applicable Coastal Act Policies and Standards

Coastal Act Section 30244 states:

> *Where development would adversely impact archaeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required.*

2. Consistency Analysis

The proposed project area is located within the ethnographic territory of the Wiyot Indians, who lived almost exclusively in villages along the protected shores of Humboldt Bay and near the mouths of the Eel and Mad Rivers. The relatively larger and sedentary populations of these villages engaged in an economy of salmon fishing, marine-mammal hunting, shellfish gathering, and seasonal excursions inland for acorns.

The majority of the project roadway and street side improvements within the Commission's jurisdictional area would be conducted within the existing developed roadway prism or improved roadside. Only very minor areas along the periphery of these already significantly disturbed areas would be subject to further grading where archaeological resources might be subject to impacts.

As part of the environmental impact analysis conducted for the project, the whole of the project area was visually reconnoitered by a local cultural resources specialist accompanied by a representative of the Wiyot Tribe, the local tribal historical preservation officer (THPO). The site walk-over resulted in the discovery of no archaeological resources. Furthermore, based on an extensive records search, all to known prehistoric site of human habitation cultural resource sites are known to occur in the immediate vicinity of the project areas, the closest being over 1,200 feet to the northeast from the Eastern Project Area. Based upon the field and records examinations, and the consultation between the principal investigator and the THPO, no concerns were identified with respect to potential adverse impacts to archaeological and/or need to mitigation measures to avoid or reduce such impacts. Therefore, the Commission finds

the development as proposed and conditioned herein consistent with Coastal Act Section 30244.

E. Protection of Visual Resources.

1. Applicable Coastal Act Policies and Standards:

Section 30251 of the Coastal Act states, in applicable part, the following:

> *The scenic and visual qua1ities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas and, where feasible, to restore and enhance visual qua1ity in visually degraded areas. New development in highly scenic areas…shall be subordinate to the character of its setting.*

2. Consistency Analysis:

Section 30251 of the Coastal Act requires that the scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance, and requires in applicable part that permitted development be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, and to be visually compatible with the character of surrounding areas.

The project area is not located within a designated highly scenic area. The proposed installation of the roadway and street side facility upgrades and amenities will not result in significant blockage of views to and along the ocean as most of these improvements will be at grade or near the ground. The new median public art installations in the Western Project Area and safety signage in the Eastern Project Area would rise above the roadway grade to seven- to eight-foot heights and could affect views along the route and towards the open bay land areas to the south, respectively. However, this view blockage effect is relatively minor. Therefore, the Commission finds that with this relatively minor increase in view obstruction, the adverse impact on views would not be significant and numerous opportunities to view the ocean and scenic areas would remain open to the public at locations within the project area. Additionally, the project will not result in the alteration of natural landforms and will require only a minimal amount of grading. Similarly, the proposed upgrades and modifications to State Route 255 / Samoa Boulevard would be compatible with the character of the surroundings in that they would approximate the size, bulk, and outward appearance of the existing roadway and streetside improvements.

Therefore, the Commission finds that as conditioned, the proposed project is consistent with the visual resource policies of Section 30251 of the Coastal Act, as the project is compatible with the visual character of the surrounding area, will not result in the alteration of natural landforms, and will not result in significant additional blockage of views to and along the coast.

F. Public Recreation and Access.

Coastal Act Section 30604(c) requires that every coastal development permit issued for new development between the nearest public road and the sea "shall include a specific finding that the development is in conformity with the public access and recreation policies of [Coastal Act] Chapter 3." Portions of the proposed project are located seaward of the first through public road.

Coastal Act Sections 30210, 30211, and 30212 require the provision of maximum public access opportunities, with limited exceptions.

Coastal Act Section 30210 requires in applicable part that maximum public access and recreational opportunities be provided when consistent with public safety, private property rights, and natural resource protection. Section 30211 requires in applicable part that development not interfere with the public's right of access to the sea where acquired through use (i.e., potential prescriptive rights or rights of implied dedication). Section 30212 requires in applicable part that public access from the nearest public roadway to the shoreline and along the coast be provided in new development projects, except in certain instances, such as when adequate access exists nearby or when the provision of public access would be inconsistent with public safety.

In applying Sections 30210, 30211 and 30212, the Commission is limited by the need to show that any denial of a permit application based on these sections, or any decision to grant a permit subject to special conditions requiring public access, is necessary to avoid or offset a project's adverse impact on existing or potential public access.

2. Consistency Analysis

Primary objectives of the development are to provide road safety enhancements to facilitate improved coastal access, recreational, and nature study opportunities in the Arcata Bay area. The project comprises an on-road segment of the "Inland Route" of the California Coastal Trail around Humboldt Bay, as set forth in the Coastal Conservancy's "SB 908 Report."[2] In addition to facilitating vehicular access to the coast, the development would also serve to further regional non-vehicular transportation plan goals by providing Class II bike lane and sidewalk facilities along Highway 255 for pedestrian and bike traffic traveling through the urbanized Arcata area. In addition, the various

[2] *Completing the California Coastal Trail*, Coastal Conservancy, January 2003

crosswalk improvements in the Western Project Area would increase the safety and convenience for cyclists and pedestrians traversing SR255/Samoa Boulevard in transit to or from the Arcata Marsh and Wildlife Sanctuary.

Thus, the development would enhance coastal access facilities and foster expanded use of existing recreational amenities. Therefore, the Commission finds that the proposed project as conditioned, which includes substantial new public access facilities, is consistent with the public access and coastal recreation policies of the Coastal Act.

G. California Environmental Quality Act (CEQA).

The City of Arcata served as the lead agency for the project for CEQA purposes. The City found the subject roadway and street side upgrades qualified for "Class 2" categorical exemption to environmental review, pursuant to Section 15302 of the CEQA Guidelines (14 CCR §§15000) as repair, maintenance, replacement, and/or reconstruction of existing structures.

Section 13906 of the California Code of Regulation requires Coastal Commission approval of a coastal development permit application to be supported by findings showing that the application, as modified by any conditions of approval, is consistent with any applicable requirements of the California Environmental Quality Act (CEQA). Public Resources Code Section 21080.5(d)(2)(A) of CEQA prohibits a proposed development from being approved if there are feasible alternatives or feasible mitigation measures available, which would significantly lessen any significant effect that the activity may have on the environment.

The Commission incorporates its findings on conformity with Coastal Act policies at this point as if set forth in full. These findings address and respond to all public comments regarding potential significant adverse environmental effects of the project that were received prior to preparation of the staff report. As discussed herein in the findings addressing the consistency of the proposed project with the Coastal Act, the proposed project has been conditioned in order to be found consistent with the policies of the Coastal Act. As specifically discussed in these above findings which are hereby incorporated by reference, mitigation measures which will minimize all adverse environmental impact have been required. These required mitigation measures include requirements that limit construction activities to avoid impacts to environmentally sensitive habitat areas and to conduct the project work during periods of time when stormwater impacts to such areas would be minimized. As conditioned, there are no feasible alternatives or feasible mitigation measures available, beyond those required, which would substantially lessen any significant adverse impact that the activity would have on the environment. Therefore, the Commission finds that the proposed project, as conditioned to mitigate the identified impacts, can be found consistent with the requirements of the Coastal Act and to conform to CEQA.

V. EXHIBITS

1. Regional Location Map
2. Vicinity Topographic Map
3. Project Site(s) Location Aerial Photo
4. Excerpt, Post-Certification Permit and Appeal Jurisdictional Map – *City of Arcata*
5. Project Site Photographs
6. Project Site Plans
7. Excerpts, Jolly Giant Creek / Butcher's Slough Water Quality Studies
8. Excerpts, *City of Arcata Storm Water Management Program*
9. Agency Review Correspondence

APPENDIX A

STANDARD CONDITIONS

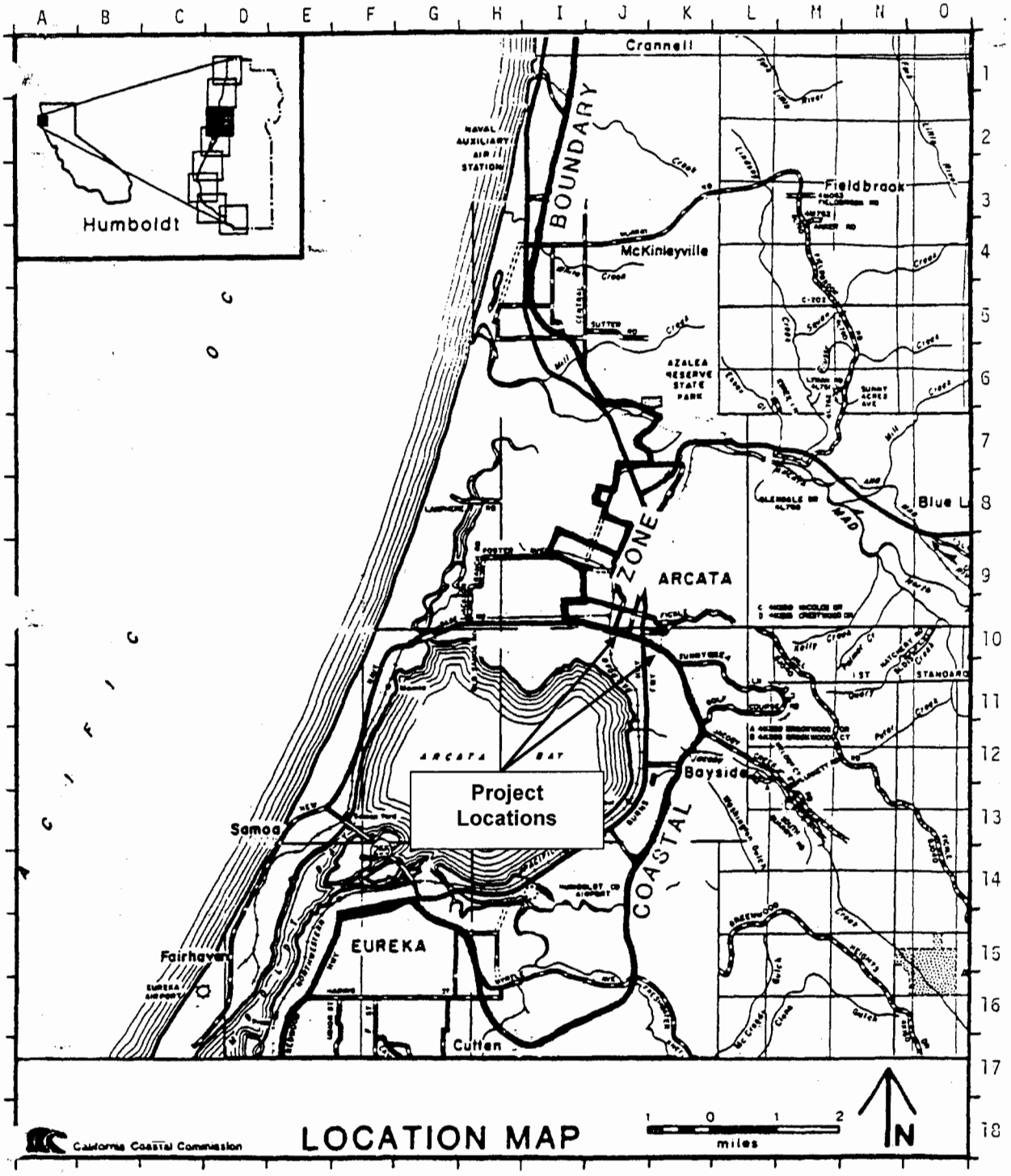
1. Notice of Receipt and Acknowledgment. The permit is not valid and development shall not commence until a copy of the permit, signed by the permittee or authorized agent, acknowledging receipt of the permit and acceptance of the terms and conditions, is returned to the Commission office.

2. Expiration. If development has not commenced, the permit will expire two years from the date on which the Commission voted on the application. Development shall be pursued in a diligent manner and completed in a reasonable period of time. Application for extension of the permit must be made prior to the expiration date.

3. Interpretation. Any questions of intent of interpretation of any condition will be resolved by the Executive Director or the Commission.

4. Assignment. The permit may be assigned to any qualified person, provided assignee files with the Commission an affidavit accepting all terms and conditions of the permit.

5. Terms and Conditions Run with the Land. These terms and conditions shall be perpetual, and it is the intention of the Commission and the permittee to bind all future owners and possessors of the subject property to the terms and conditions.



County of Humboldt

EXHIBIT NO. 1

APPLICATION NO.

1-07-018

CITY OF ARCATA

LOCATION MAP

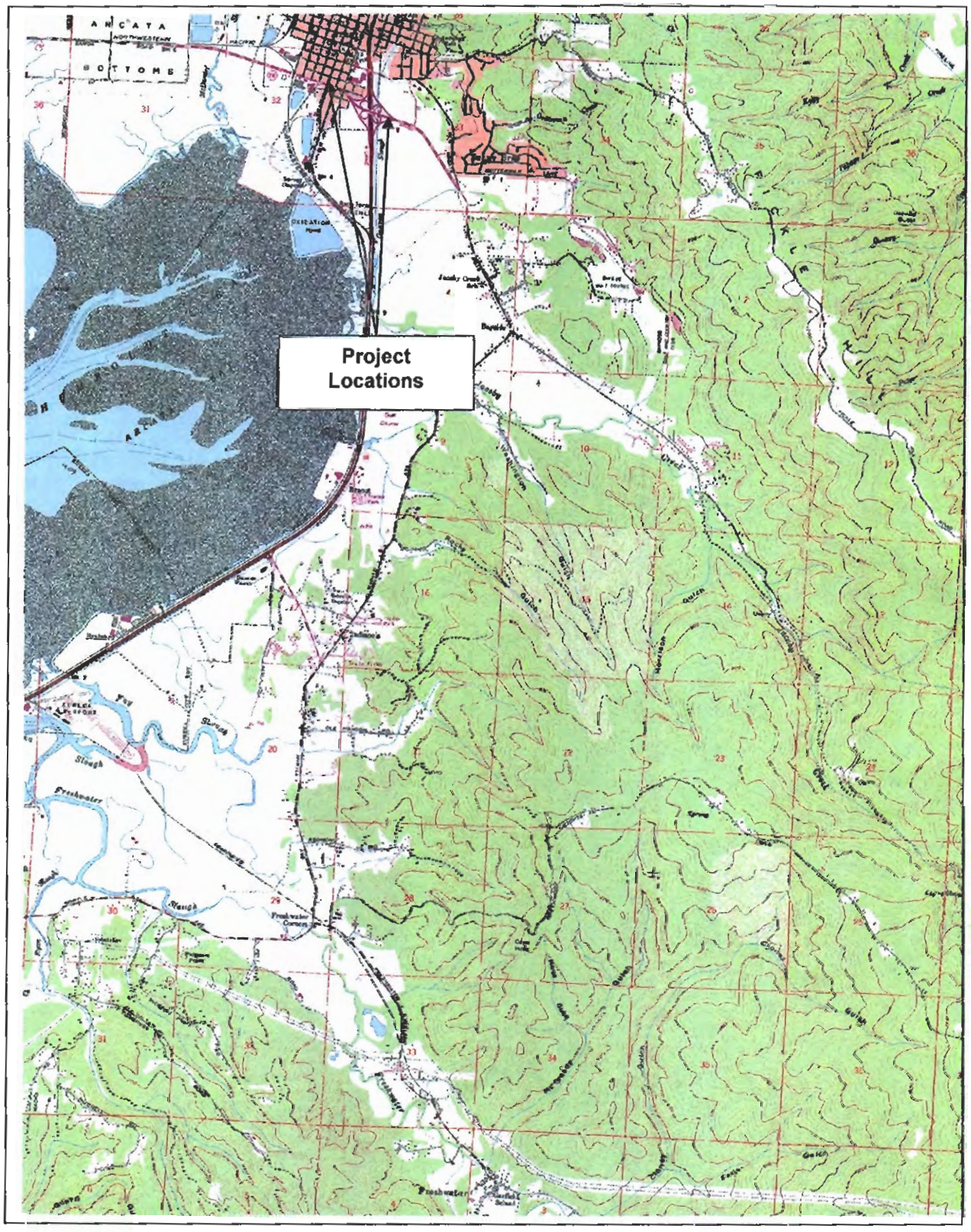


EXHIBIT NO. 2

APPLICATION NO.

1-07-018

CITY OF ARCATA

VICINITY MAP

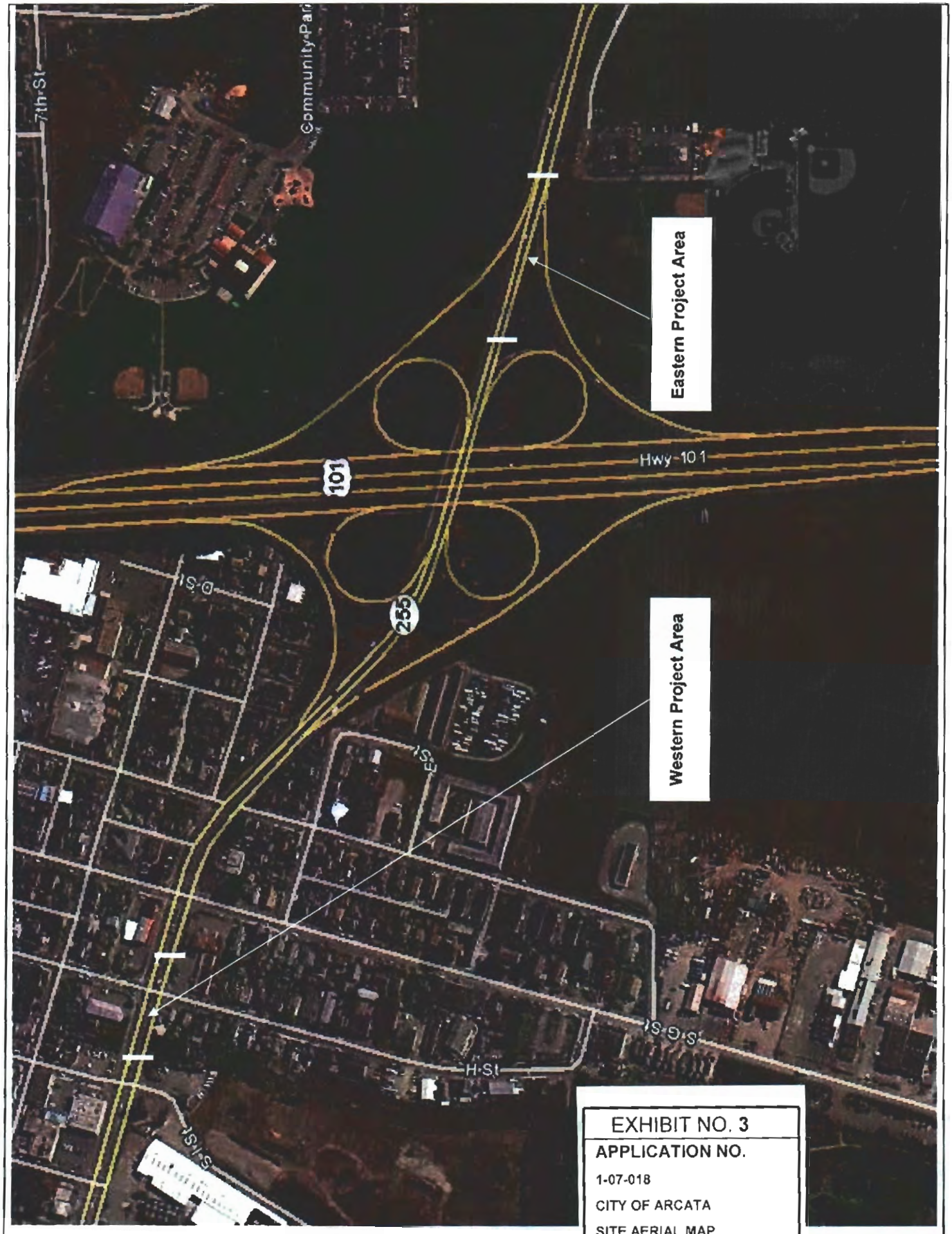


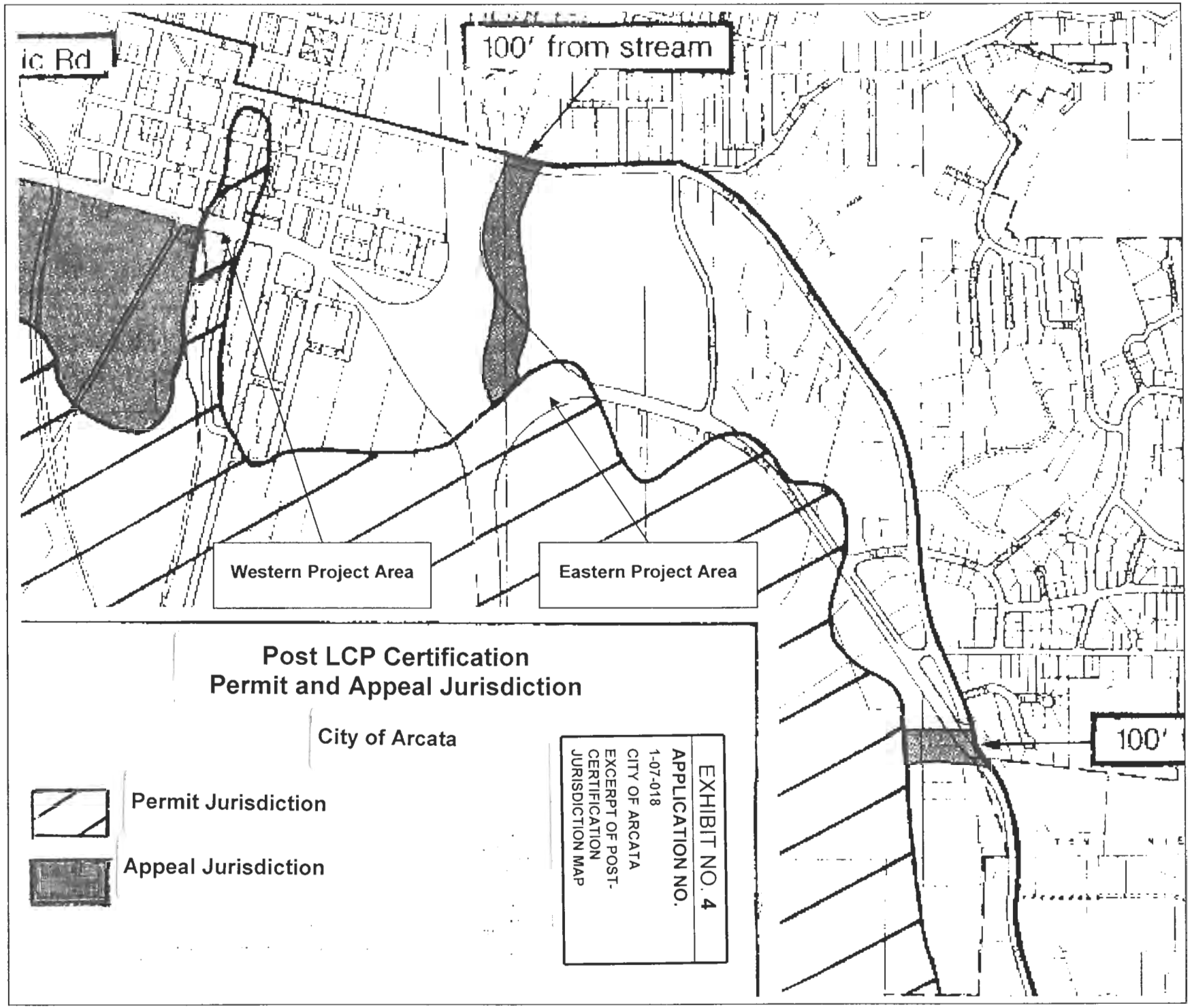
EXHIBIT NO. 3

APPLICATION NO.

1-07-018

CITY OF ARCATA

SITE AERIAL MAP


ic Rd
100' from stream
Western Project Area
Eastern Project Area
100'
Post LCP Certification
Permit and Appeal Jurisdiction
City of Arcata
Permit Jurisdiction
Appeal Jurisdiction
EXHIBIT NO. 4
APPLICATION NO.
1-07-018
CITY OF ARCATA
EXCERPT OF POST-
CERTIFICATION
JURISDICTION MAP

Photograph No. 1: Western Project Area – View East from I Street

Photograph No. 2: Western Project Area – View West from Half-block G/H Streets

EXHIBIT NO. 5
APPLICATION NO.
1-07-018
CITY OF ARCATA
PROJECT PHOTOS (1 of 2)

Photograph No. 3: Eastern Project Area – View East from US101/SR255 Overpass

Photograph No. 4: Eastern Project Area – View West from SR255 Near NB US101 Onramp

Samoa Boulevard Pedestrian, Bicycle and Gateway Improvements Project
(CDP Application No. 1-07-018)

ATTACHMENT A: Project Narrative

There are two areas of the project that are within the California Coastal Commission's jurisdiction. The first area is located in the eastern section of the cloverleaf at Highways 255 and 101. The project within this area involves only adding signage within the current road prism.

The other portion of the project site within the Coastal Commission's jurisdiction is the area adjacent to Jolly Giant Creek and east to beyond "H" Street. The project in this area involves replacing existing sidewalks, creating landscaping areas on both sides of Highway 255, and a small portion of "G" Street.

Overview

This project involves approximately a one-mile segment of Highway 255 (also known as Samoa Boulevard) that lies within Arcata city limits, extending generally from the U.S. Highway 101 overcrossing west to approximately 400 feet past the unused NCRA railroad tracks. The areas adjacent to this corridor historically were industrial in nature, and the highway served mainly light to medium manufacturing and forest product businesses which no longer exist. The project area is in the Arcata Redevelopment District.

The area between F Street and the railroad tracks consists of a four-lane roadway with turn pockets, concrete medians, and portions of narrow 4 to 5 foot-wide sidewalk on the north and south sides of the highway. There are three signalized intersections at G, H and K Streets, and these signals are owned and maintained by Caltrans. The project limits will be mostly within Caltrans jurisdiction, with a very minor portion of work taking place in City of Arcata right-of-way. There will be no right-of-way adjustments or acquisitions with this project, and no work performed on private property.

The two main goals of the proposed project are to 1) greatly enhance the corridor's pedestrian, bicycle, and ADA access facilities, and 2) establish a "gateway" feature to the City by employing landscaping, art, lighting and specialty signage. The project will increase non-motor vehicle access and mobility throughout the corridor, improve pedestrian facilities by installing a 6 foot- wide contiguous sidewalk on both sides of the roadway, bring all curb ramps and slopes into conformance with the ADA and add Class II bicycle lanes and widened shoulder areas.

The project is adjacent to Jolly Giant Creek and the seasonal wetlands bordering Samoa Boulevard southeast of the Hwy 101 over crossing, and any project-related impacts at both locations are expected to be negligible. The work to occur over and around Jolly Giant Creek involves the construction of landscaping areas and bioswales for storm water pre-treatment. The work near the seasonal wetlands only involves installation/removal of highway signage and pavement markings.

This project was awarded American Recovery and Reinvestment Act of 2009 (ARRA) funding in December 2009 through a competitive grant administered by Caltrans and the Federal Highway Administration. The project is considered fully funded for construction and construction engineering.

Grading

All existing lines and grades will generally be preserved. Because of this, the project involves relatively minor amounts of grading, the majority limited to sub-base preparation for sidewalk, curb/gutter, median and bulb-out construction. There will be minor grading involved to prepare landscape planting areas. The proposed volumetric amount of grading will be less than 200 cubic yards.

EXHIBIT NO. 6
APPLICATION NO.
1-07-018
CITY OF ARCATA
PROJECT DESCRIPTION AND PLANS (1 of 16)

Paving/ Permeable Surfacing

An asphalt overlay on the order of 2" in thickness will be applied over the roadway areas (after bulb-outs and curb ramps are completed), which will serve to provide a smooth roadway surface and correct existing storm water drainage issues. With the addition of widened sidewalks, planters, bulb-outs and the lane drop, there will be a net reduction of asphalt paving and an overall increase of permeable area.

Overall, the project includes the construction/reconstruction of approximately 2,850 linear feet of 6 foot-wide Portland cement (PCC) sidewalk. The remainder of the existing sidewalk will remain unaltered. The existing concrete medians will be reconstructed in approximately the same location, and will be narrower to accommodate emergency vehicles.

Traffic and Traffic Control Facilities

As part of the Caltrans encroachment permit process, the City of Arcata retained a consultant, Winzler & Kelly, to perform a thorough traffic study to evaluate the proposed project for traffic-related impacts. The consultant worked closely with Caltrans Traffic Operations officials during the study, ensuring that it was performed to Caltrans' satisfaction. The study report (included with this submittal) concluded that "Under Existing, Baseline, Baseline Plus Project, Cumulative Growth, and Cumulative Growth Plus Project conditions all study intersections are expected to operate acceptably at a level of service "C" or better, with the exception of the southbound "I" Street approach which is expected to operate at LOS "E" or better in the Cumulative Growth Plus Project condition". The City of Arcata has no established minimum LOS level, and the projected LOS impacts are very minor compared to existing conditions.

Working with Caltrans, it has been determined that no traffic signal heads will need to be repositioned for this project. One travel lane will be dropped in each direction between "G" and "K" Streets; therefore several detection loops in the right lanes will need to be deactivated at the signalized intersections of H and K Streets. These changes are being coordinated with Caltrans as part of the permit process.

The content of the existing directional and warning signs will remain generally unchanged. There will be the addition of high-visibility and electronic flashing (pedestrian operated) crossing signs at the "F" Street and "L" Street (Rails with Trails) crossings. All sign placement will conform to the FWHA's MUTCD-California Version. All signage is being reviewed by Caltrans as part of the encroachment permit process.

As part of the coastal access and aesthetic components of the project, the City is developing a standard signage convention to be used for directing visitors to locations such as the Plaza, the Arcata Marsh and Wildlife Refuge, and the Marsh Interpretive Center. This signage scheme shall eventually be used throughout the City, especially in other gateway areas. The details of the new signage are currently being developed through the Arcata Community Development Department, and the installation of these features shall be addressed under a separate encroachment permit through Caltrans.

Landscaping

A major component of this project is the improvement of the visual conditions along the corridor. New landscaping will be accommodated by the addition of small landscaped areas in two of the existing medians, and at planter areas parallel to the roadway and at bulb-outs. Where feasible, the planters will serve the dual purpose of storm water pre-treatment using "bioswale" and "rain garden" concepts. A portion of storm water that falls on surrounding streets, parking lots and sidewalks will be directed through these landscaped areas, and will be pre-treated before entering existing stormdrain facilities. The total increase of planting/permeable area is approximately 6,950 square feet.

The project's landscaping plan regarding species and placement was developed by the Arcata Community Development Department in concurrence with Caltrans' Landscape Architect.

2916

ADA and Coastal Access

The existing ADA-access conditions along the Samoa Blvd. corridor vary from marginally compliant to inaccessible. This project will provide enhanced ADA access at each pedestrian crossing, and along all sidewalk lengths. There will be a total addition of 27 ADA-compliant pedestrian and driveway ramps.

This project will provide direct connectivity to the concurrent Arcata Rails with Trails Project and the trail improvements at McDaniels slough ("Q" Street). This project will also serve as the southern terminus of the "I" Street Bicycle Boulevard. Because of the proximity to South "I" Street, this project will greatly facilitate pedestrian and cyclist access to the Arcata Marsh, and its associated access to Humboldt Bay.

Parking

There is currently no on-street parking allowed along Samoa Boulevard, and this will remain unchanged. Existing parking lot access to vehicles will remain unchanged, although improved with the reconstruction of driveway aprons. There will be no net gain/loss of available parking spaces as part of this project, but directional signage to coastal access parking areas will be enhanced.

Project Schedule

The construction duration is approximately three to four months, and the work would take place during late spring and summer months. If all permit issues can be resolved in early 2010, it is hoped that the first phase may commence as early as July 2010.

Historical Resources

Leslie Heald, Historic Preservation Consultant, was retained in December 2002 to perform a historic property survey for the project (report is included with this submittal). Among her findings, she states as follows: "Due to the limited nature of the project, it will have only visual effects on these [listed earlier] historic resources and will not impact them physically in any way. The visual changes that will take place, such as narrowing traffic lanes, will help to return the area to an appearance more closely approximating its historic configuration. A finding of no adverse effect on historic resources is recommended."

Jolly Giant Creek

Samoa Boulevard crosses over Jolly Giant Creek. The extent of the work in this area will be limited to the roadway prism over the culvert through which the creek runs. Some of the existing drain inlets along Samoa Boulevard ultimately empty into Jolly Giant Creek, and the addition of bioswales will provide pre-treatment to storm water prior to reaching the creek. No structural work is proposed to the culvert itself, and construction will be limited to the addition of planting areas and associated curb work. Storm water BMP's conforming to City of Arcata and Caltrans standards will be in place for the duration of construction.

Roadside Wetlands East of Highway 101

The extent of work in the areas adjacent to the roadway southeast of the highway 101 overcrossing is limited to signage installation and roadway markings as shown in the plans. No impacts to the seasonal wetlands in this area are foreseen.

Samoa Boulevard Pedestrian, Bicycle and Gateway Improvements Project
City of Arcata CDP File No. 101-098
California Coastal Commission CDP Application No. 1-07-018
Best Management Practices with Analysis of Potential Environmental Impacts

Summary

The Samoa Gateway roadway improvements project involves repaving roadways, addition/rehabilitation of sidewalks and landscaped areas, and placement of signs. All of the work will occur in the existing right of way, and the majority (>90%) of the work will occur in existing paved areas. None of the newly surfaced areas impact sensitive recourses. All of the resurfaced areas will have no new impact as they are already surfaced areas. The project will have a net reduction in potential impacts due to its incorporation of bioswales and other features that will "pre-treat" stormwater, increase infiltration, and reduce direct runoff into creeks and wetlands adjacent to Samoa Boulevard. The bioswales will be added to areas that are currently paved with asphalt, so overall there will be a net reduction in the amount of impermeable surface. Additionally, all new and existing drain inlets (DI's) will receive the City standard catch basin filter insert (see below for make and model number), and will be routinely maintained as part of Arcata's stormdrain filter cleaning schedule. Vault-type filtration chambers would not be feasible for this project due to constraints of available land, Caltrans permit conditions, and excavation depth limits outlined in our environmental document. The Arcata standard filter inserts provide excellent treatment, provided they are regularly maintained.

Potential construction phase impacts are primarily related to sediment and contaminant-laden sediment transport resulting from the demolition of existing roads, sidewalks, and associated features (driveway aprons, curbs, etc). The demolition will require saw cutting, grinding, and minor amounts of grading. These activities have the potential to generate fines that could impact the creek and wetland. In addition, the construction phase will involve the use of heavy equipment, fuels, and other related materials common to mechanized construction activities. Movement of regulated materials into creeks and wetlands could impact these resources.

The potential construction phase impacts will be avoided by careful and thorough implementation of best management practices (BMPs). The City requires the highest level of BMPs necessary to contain sediments and other material spills on-site. The majority of City-used BMPs are based on CalTrans standards, and they are evaluated, maintained, and adjusted to improve effectiveness on a regular schedule throughout the construction phase. Overall, the City's standards for BMPs are derived from the California Department of Transportation Standard Plans & Specifications, the Green Book, and Arcata's own stormwater construction requirements, all of which are incorporated into the project's plans by reference and detail.

The following lists potential impacts and the BMP or other measure incorporated into the project to prevent adverse environmental impacts. Details for BMPs are included in the plan set. Specific locations for particular BMPs are identified on the attached BMP plan. The implementation of this plan, and the permanent stormwater management designs, will be sufficient to prevent significant impacts to the environment.

Impact Assessment

Drain Inlets (DI) – DIs along Samoa Boulevard drain directly to Jolly Giant Creek. These obviously have a potential for facilitating the transport of sediments and sediment borne contaminants to the creek. All

DIs will be protected using one or more appropriate BMPs such as Caltrans SC-10 (Types 1-3). This BMP measure is designed to filter/settle out sediments from water entering the DI.

For permanent DI protection, the City of Arcata will install its standard drain inlet filter insert: "Drainage Protection Systems' FloGard +Plus Catch Basin Insert Filter" appropriately sized for each individual DI. This insert will be installed by City of Arcata forces immediately following contracted construction activities. Ongoing maintenance will be conducted by Humboldt County Employment Services staff on a rotating schedule, supervised by City of Arcata staff.

Construction Adjacent to wetlands and Creeks – grading and other earth disturbing activities have the potential to transport sediment into these sensitive resources. Silt fencing, straw waddles, and sandbags may be used to prevent impacts to these resources (Caltrans BMPs SS-7, SC-9, etc). The proposed protection measures around Jolly Giant Creek and the wetland adjacent to the road are detailed in the BMP plan sheet.

Timing of Construction – construction will generally be limited to dry weather periods. While construction may occur in light rain, the City will increase monitoring of BMPs to ensure impacts are avoided.

Precipitation – when rain is forecast within 24 hours, the site will be evaluated prior for the need of additional/more robust BMPs. All sources of contamination will be stored in weather proof storage. All exposed soil will be tarped or mulched with weed seed free straw. If an event of an inch or greater occurs, BMPs will be continually monitored by City staff to ensure effectiveness. New BMPs will be installed as necessary.

MSDS and regulated materials – Materials Safety Data Sheets (MSDS) will be available for all materials on site. All materials will be stored in weather proof storage.

Equipment – Some mobile construction equipment such as backhoes, rollers and pavers will be stored at nearby City-owned property (corporation yard, parking lots) and curbside on City streets, where available. Other equipment will be transported to and from the work site daily. All equipment will be inspected daily for spills and leaks. Any equipment with the potential for spill will not be allowed on site. No refueling will occur on site.

Grinding – There will be some asphalt grinding (cold-planing) associated with this project, where old asphalt is removed and transported off-site for recycling or reuse. Sediment transport by both wind and water are potential impacts associated with grinding. As asphalt grindings behave similar to earthen construction spoils, impacts associated with grinding will be addressed by the BMP s mentioned above. Grinding will affect the existing striping by removing it. Thermoplastic striping is a very common highway construction material that is melted to apply and create adhesion to the asphalt surface, and is typically hardened within a few minutes once applied. Typical MSDS sheets for thermoplastic striping material list elemental chromium and elemental lead (as encapsulated lead chromate) as contents in very small amounts for yellow-colored material. The environmental hazard is considered very low, as the chromium and lead occur in encapsulated form. These materials do not affect biological resources. While the striping will be grinded and mixed with the asphalt, the BMPs listed above will prevent their entering the creek or wetlands. In addition, the waste from the grinding is removed by the grinding machine and placed directly on the transport truck. Hence, the potential for impact associated with grinding is minimal and is effectively managed through BMPs.

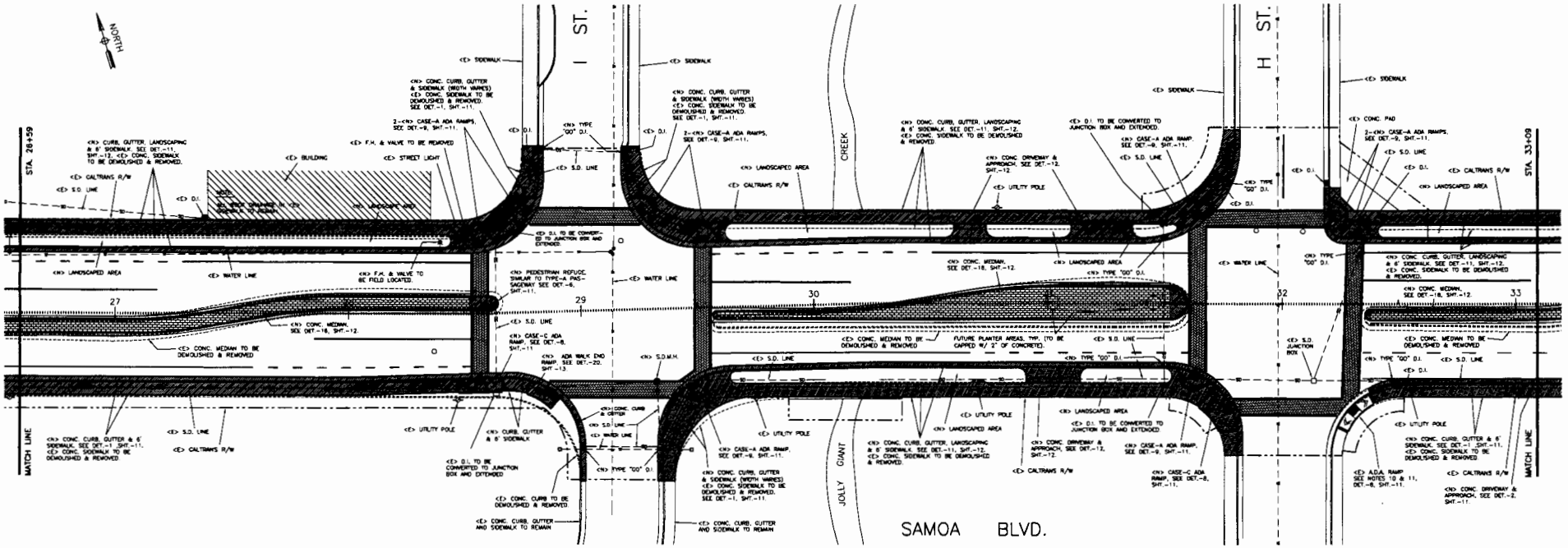
Grading – The extent of grading for the project is minimal, and will be generally limited to that which is necessary to prepare the ground for new curb, gutter and sidewalk. All grading is located outside of sensitive areas. The DI protections should be sufficient to protect any incidental transport of sediments from grading.

Saw Cutting – The existing Portland cement sidewalks, gutters, and curbs will be saw cut with wet cutting techniques over portions of the project. Very little cutting will occur adjacent to sensitive areas, but no transport of materials will occur due to the methods applied. The wet cut technique prevents cement dust from becoming airborne. For small cuts, the amount of water used does not generate off site flow levels. For larger cuts, the saw cutter is followed by a laborer operating a shop vac. All spoils from cutting are managed daily in a waste receptacle designed for the purpose.

Asphalt Paving – All paving will occur in existing paved areas over prepared surfaces. No new areas will be disturbed for paving roadways.

Portland Cement – New and replaced sidewalks, driveway aprons, curbs, and gutters will be installed along 2,850 feet of the project. Silt fencing, straw waddles, and sandbags will be used to prevent impacts to sensitive resources (Caltrans BMPs SS-7, SC-9, etc). In addition, concrete cleanout areas and disposal will be used to prevent impacting creek or stormwater systems.

Newly impacted areas – All work will occur within the existing right of way. However, some new ground will be disturbed by the project. This work will take the form of sidewalk infill between existing segments. None of these areas are sensitive, and the construction associated with these areas will not impact sensitive areas. The standard BMPs on the site will prevent incidental transport of sediments.



PLAN VIEW – SAMOA BLVD. & H ST. & I ST.

SCALE: 1"=20'

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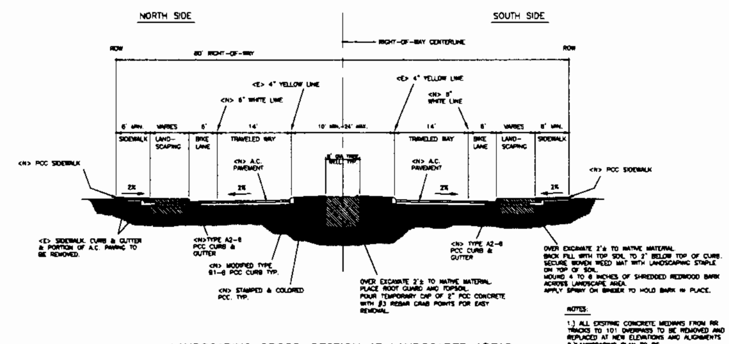
REVISIONS		
DATE	ITEM	

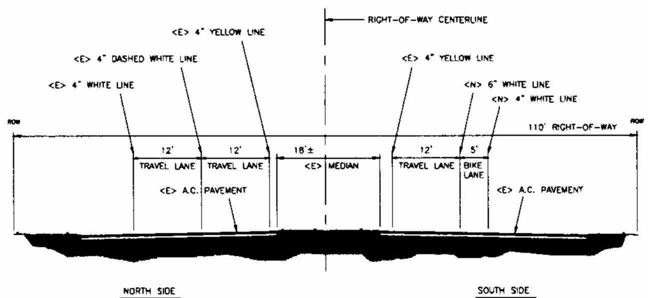
IMPROVEMENT PLAN
STA. 26+59 TO 33+09
HIGHWAY 255/SAMOA BOULEVARD PEDESTRIAN, BICYCLE AND GATEWAY IMPROVEMENTS

DESIGN BY: RCC/MK	CITY OF ARCATA
DRAWN BY: MCH	APPROVED BY: DATE:
CHECKED BY: RCC	SHEET 4 OF 31
DATE: 3/28/2011	R.C. GLASS R.C.E. 58487
FILE NAME: SAMOA_GATEWAY_2011.dwg	SCALE: 1"=20'



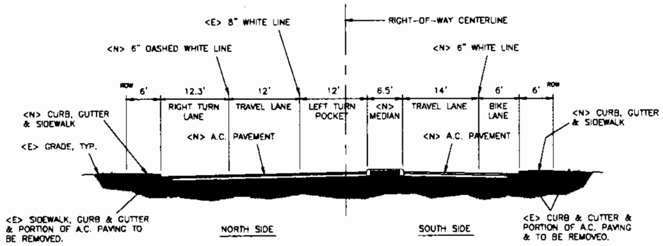
LANDSCAPING CROSS-SECTION AT LANDSCAPED AREAS

SCALE: 1"=10'



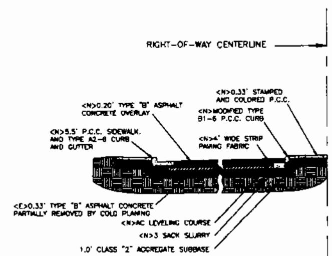
TYP. CROSS-SECTION STA. 7+09 to 20+06 – HIGHWAY 255
TO BE RESTRIPED

SCALE: 1"=10'



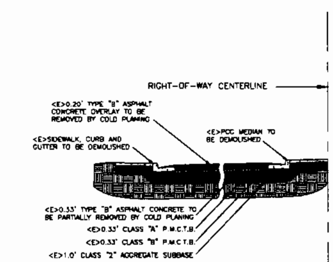
TYP. CROSS-SECTION STA. 23+47 TO 24+10 – HIGHWAY 255

SCALE: 1"=10'



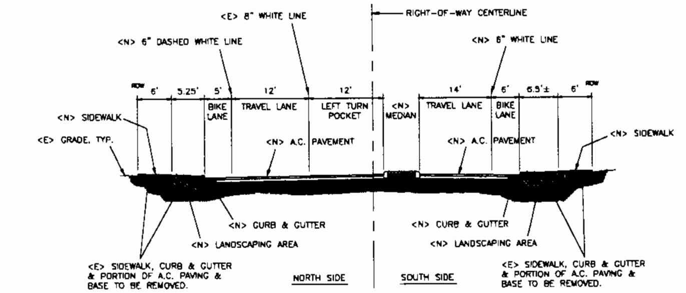
<N> ROAD STRUCTURE TYP. BOTH SIDES
CROSS-SECTION STA. 20+09 to 45+33

NOT TO SCALE



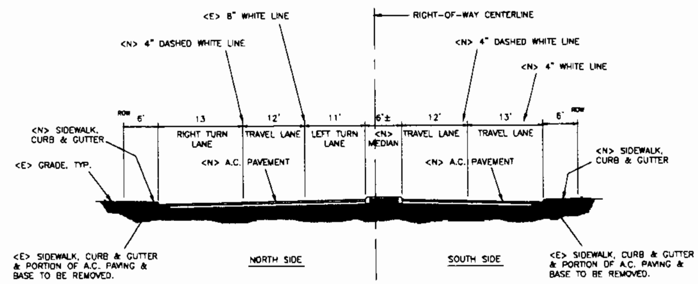
<E> ROAD STRUCTURE TYP. BOTH SIDES
CROSS-SECTION STA. 20+09 to 45+33

NOT TO SCALE



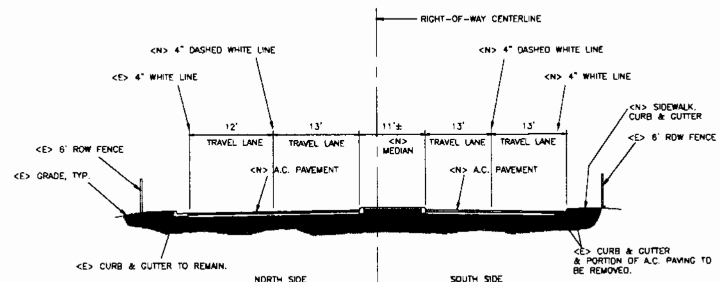
TYP. CROSS-SECTION STA. 29+58 TO 30+00 – HIGHWAY 255

SCALE: 1"=10'



TYP. CROSS-SECTION STA. 35+48 TO 36+78 – HIGHWAY 255

SCALE: 1"=10'



TYP. CROSS-SECTION STA. 39+00 TO 41+50 – HIGHWAY 255

SCALE: 1"=10'

REGISTERED PROFESSIONAL ENGINEER R. CHARLES CLASS EXP. 6-30-2011 No. 56487 CIVIL STATE OF CALIFORNIA

REVISIONS	
DATE	ITEM

CROSS-SECTIONS

HIGHWAY 255/SAMOA BOULEVARD PEDESTRIAN, BICYCLE AND GATEWAY IMPROVEMENTS

DESIGN BY: RCC/MK
DRAWN BY: MEH
CHECKED BY: RCC
DATE: 03/17/2011

CITY OF ARCATA

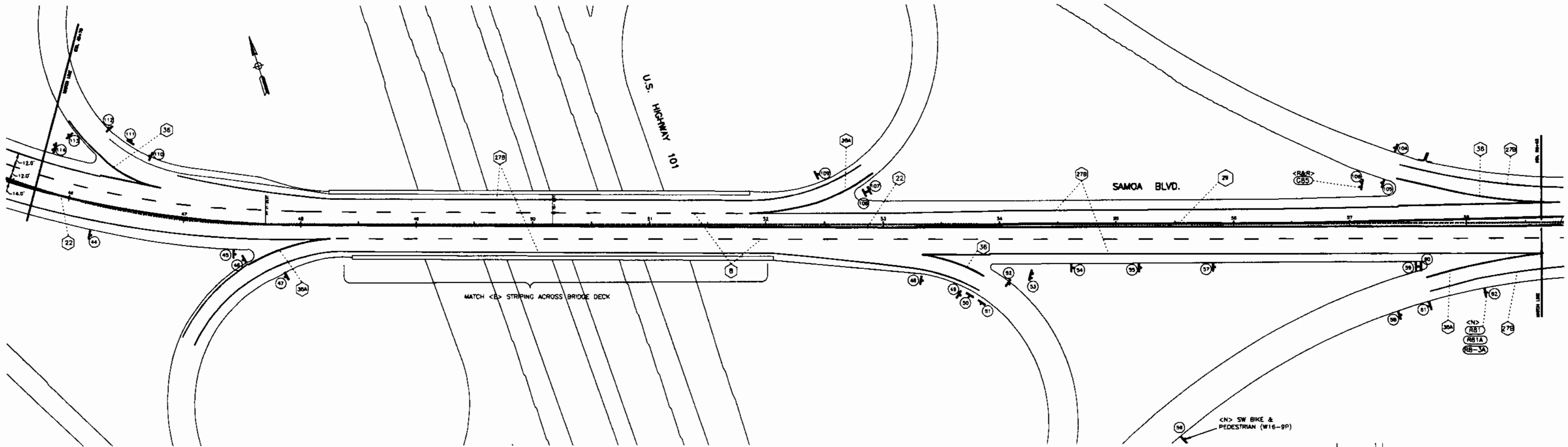
APPROVED BY: DATE:

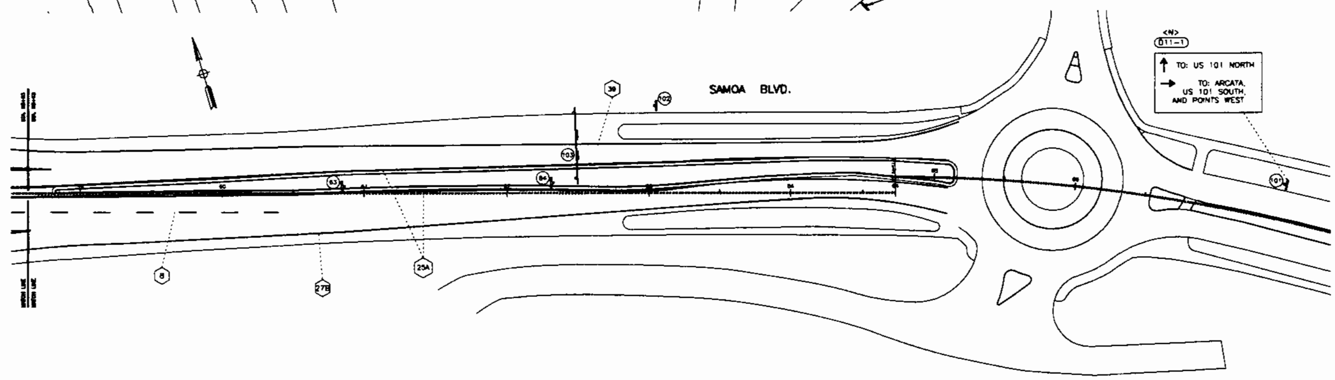
R.C. CLASS R.C.E. 56487

SHEET 7 of 25

SCALE: 1"=10'

8 of 16





Signpost ID Number	STA.	Action	Number of Signs	MUTCD Identification	Description	Install Size
44	46+25	<E>	1	R2-4	25 MPH Ahead	existing-will remain
45	47+44	<E>	1	W4-1	Merging Traffic Sym	existing-will remain
46	47+53	<E>	2	R5-1a	Wrong Way Package	existing-will remain
47	47+88	<E>	2	R5-1a	Wrong Way Package	existing-will remain
48	53+34	<E>	1	W13-7	Ramp 25 MPH	existing-will remain
49	53+70	<E>	1	G92	Freeway Entrance	existing-will remain
50	53+74	<E>	1	R5-1a	Wrong Way Package	existing-will remain
51	53+84	<E>	1	R3-2	No Left Turn Sym	existing-will remain
52	54+09	<E>	1	G92	Freeway Entrance	existing-will remain
53	54+27	<E>	1	G85-6	101 Crescent City	existing-will remain
54	54+61	<E>	1		Lane Ends Merge Left	existing-will remain
55	55+20	<E>	1	R2-1	25 MPH	existing-will remain
56	55+56	<N>	1	SW11-2	Peds and Bikes	36x36
		<N>	1	W16-9P	Ahead	24x12
57	55+82	<E>	1	W4-1	Lane Ends Sym	existing-will remain
		<E>			Do Not Pass	existing-will remain
58	57+44	<N>	1	W4-2	Merge Left	36x36
59	57+58	<E>	1	W4-1	Merging Traffic Sym	existing-will remain
60	57+60	<E>	2	R5-1	Wrong Way Package	existing-will remain
61	57+68	<E>	2	R5-1	Wrong Way Package	existing-will remain
62	58+17	<N>	1	R81	Bike Lane	18x24
		<N>	1	R81A	Begin	12x6
		<N>	1	R8-3A	No Parking Sym	12x12
63	60+85	<E>	1	R2-1	Speed Limit	existing-will remain
64	62+33	<E>	1	W3-2	Yield Ahead	existing-will remain

Signpost ID Number	STA.	Action	Number of Signs	MUTCD Identification	Description	Install Size
101	67+46	<N>	1	D11-1	Bike Route	18x12
		<N>	1	Special	Bike Guide Sign	18x5
102	63+03	<E>	1	S32	Adopt a Highway	existing-will remain
			1	S32-1	Litter Pick-up Sym	existing-will remain
103	62+50	<E>	1	G24-4	Eureka Arcata	existing-will remain
			1	G24-3	Crescent City	existing-will remain
104	57+38	<E>	2	G92	Freeway Entrance	existing-will remain
105	57+26	<E>	2	G92	Freeway Entrance	existing-will remain
106	57+11	<E>	1	G85-6	101 Crescent City	existing-will remain
107	52+85	<E>	1	W4-1	Merging Traffic Sym	existing-will remain
108	52+40	<E>	2	R5-1	Wrong Way Package	existing-will remain
109	52+44	<E>	2	R5-1	Wrong Way Package	existing-will remain
110	46+61	<E>	1	W13-2	Ramp 25 MPH	existing-will remain
111	46+43	<E>	1	R3-2	No Left Turn Sym	existing-will remain
112	46+10	<E>	2	G92	Freeway Entrance	existing-will remain
113	45+84	<E>	2	G92	Freeway Entrance	existing-will remain
114	45+76	<E>	1	G85-6	101 Eureka	existing-will remain

LEGEND

- SIGN POST NUMBER
- PAVEMENT DELINEATION DETAIL NUMBER
- ROAD SIDE SIGN NUMBER
- CROSSWALK
- TYPE III (L) ARROW EXISTING
- TYPE I ARROW
- TYPE III (R) ARROW
- RAILROAD CROSSING SYMBOL BY OTHERS
- BIKE LANE SYMBOL
- THERMOPLASTIC DECORATIVE CROSSWALK

- <N> NEW
- <R> REMOVE
- <R&R> REMOVE AND REPLACE
- <M> MOVE
- POSTS TO REMAIN
- (R5-1B) & (R9-3C) IN BACK OF ALL (R81) SIGNS, TYP.
- NEW SIGN
- EXISTING SIGN TO BE REMOVED
- EXISTING SIGN TO REMAIN

REGISTERED PROFESSIONAL ENGINEER R. CHARLES CLASS No. 56487 EXP. 6-30-2011 CIVIL STATE OF CALIFORNIA

REVISIONS	
DATE	ITEM

STRIPING & SIGNAGE PLAN
STA. 45+70 TO 64+72
HIGHWAY 255/SAMOA BOULEVARD PEDESTRIAN, BICYCLE AND GATEWAY IMPROVEMENTS

DESIGN BY: RCC/MK
DRAWN BY: MEN
CHECKED BY: RCC
DATE: 6/30/2010

CITY OF ARCATA

APPROVED BY: DATE:
R.C. CLASS R.C.E. 56487

SHEET 10 of 25

SCALE: 1"=40'

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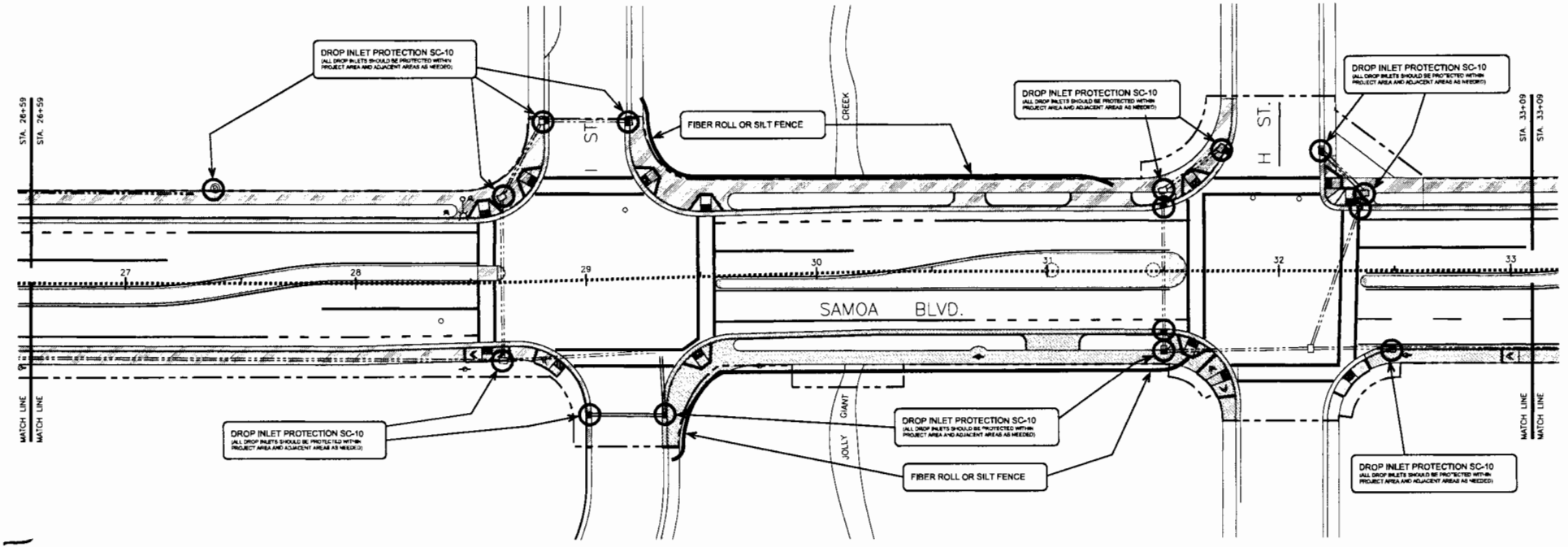


BEST MANAGEMENT PRACTICES PLAN FOR JOLLY GIANT CREEK AND ADJACENT AREAS

SCALE: 1"=20'

10 of 16

REVISIONS	
DATE	ITEM

BEST MANAGEMENT PRACTICES PLAN
JOLLY GIANT CREEK AND ADJACENT AREAS
HIGHWAY 255/SAMOA BOULEVARD PEDESTRIAN,
BICYCLE AND GATEWAY IMPROVEMENTS

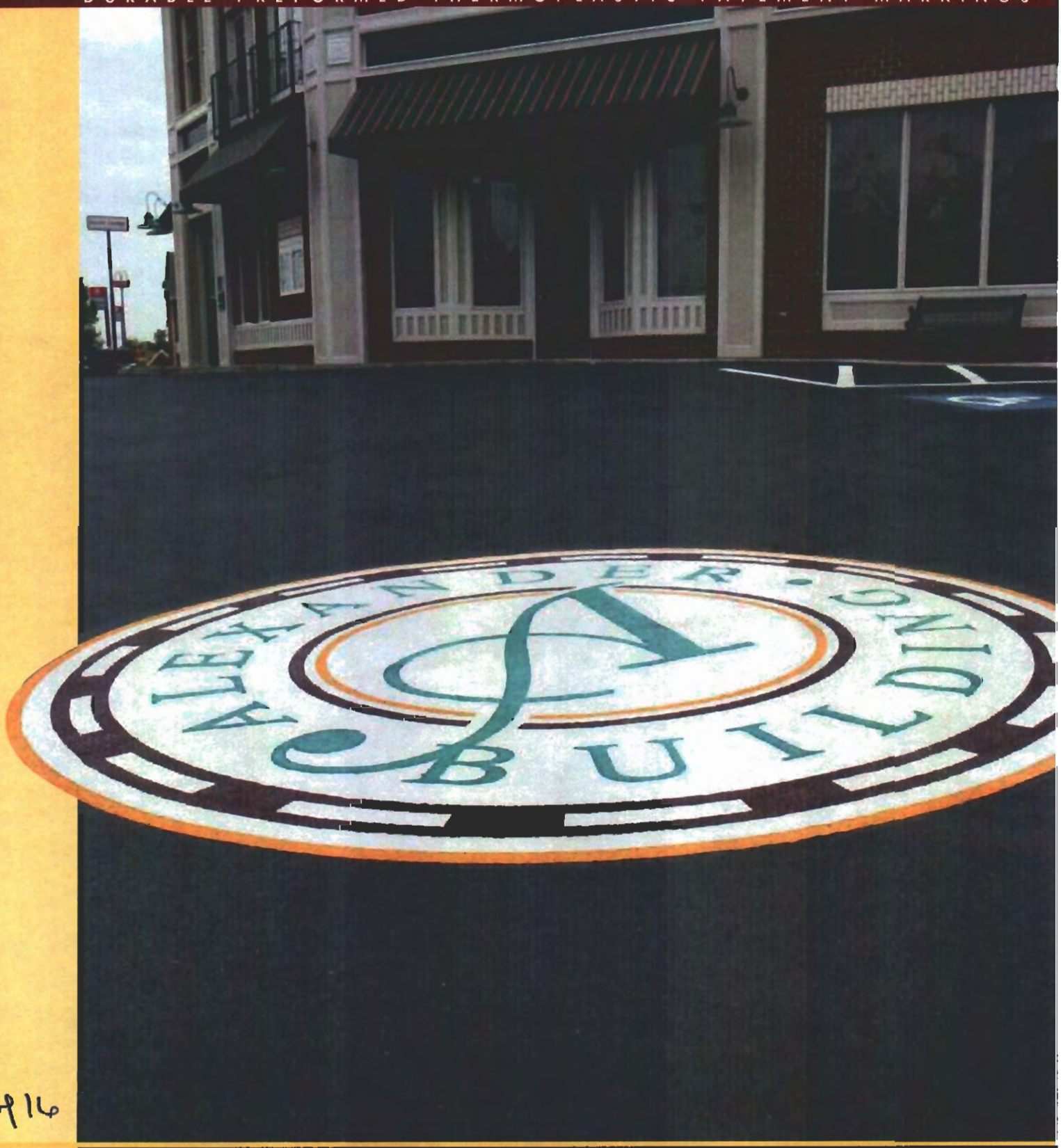
DESIGN BY: RCE/MK
DRAWN BY: MEN
CHECKED BY: RCE
DATE: 2/1/2011
R.E. CLASS R.C.E. 39487
SCALE: 1"=20'

CITY OF ARCATA
APPROVED BY: DATE:
SHEET 2X of 27

Custom Logos and Horizontal Surface Signage

DecoMark® BY FLINT

DURABLE PREFORMED THERMOPLASTIC PAVEMENT MARKINGS



11416

STREETSCAPES • HARDSCAPES • PARKING LOTS • WALKWAYS

White
Yellow
Orange
Purple
Red
Green
Lt. Green
Blue
Lt. Blue
Brown Stone
Cinnamon
Sand
Salmon
Brick Red
SYG
Grey
Black

DecoMark® BY FLINT

SURFACE SIGNAGE • LOGOS • HARDSCAPES • STREETSCAPES

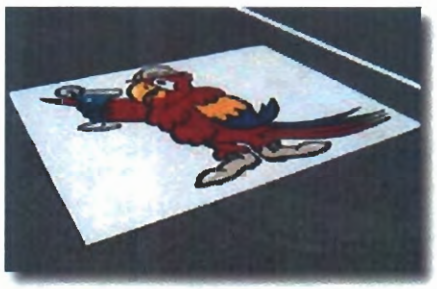
Maximize traffic guidance, reduce sign clutter, increase brand awareness, enhance community pride, and promote school spirit with durable preformed thermoplastic surface signage that is engineered to last 6 to 8 times longer than paint, and even longer in areas with only pedestrian traffic. DecoMark® design and color possibilties are virtuolly endless.

Whether a project requires a basic two-color directional message or a multi-colored custom logo, each design begins with a CAD drawing linked directly to a stringent manufacturing process. Each step of production ensures quality, accuracy, and the best performance and value. At the time of installation, the applicator will find pre-cut sheets of interconnected material with a complete set of application instructions and a diagram for proper layout. Available in 90-mil and 125-mil thicknesses, the sheets of DecoMark® material are easily lifted and positioned onto an asphalt or concrete surface for application with a propane heat torch or large heater.

Designed with safety, durability and aesthetics in mind, DecoMark® is the horizontal surface signage solutian that provides an extensive number of uses:

- Custom Logos
- Trail Markings
- Tall Lane Markings
- Directional Markings
- Informational Markings
- Streets and Highways
- University Campuses and Business Parks
- Parking Lots
- Driveways
- Sidewalk/Walkway Accents





To see additional installations, visit our photo gallery at www.flinttrading.com

◀ *Standard colors shown at left. Custom colors are also ovoiloble requiring a minimum purchase. Call (336) 475-6600 for details.*

12016

FAST AND EASY INSTALLATION

- Fast, safe and cost-effective with an industrial propane heat torch such as the Magnum or Flint 2000EX® Heat Torch
- Does not require expensive capital equipment, customized tools, templates, or grids
- Surface applied; does not alter or impair the substrate
- Oil and gas impervious; compatible with all asphalt surfaces
- Can be applied on fresh asphalt and concrete as soon as the surface sets
- Preheating of the pavement to a specific temperature prior to application is not required.
- Regularly-spaced heat indicators in the surface of material provide a visual cue during application that the material has reached a molten state indicating satisfactory adhesion and proper embedment of glass beads and skid-resistant material has been achieved.

- The work area can be open for traffic within minutes after the application is complete.

HIGH SKID/SLIP RESISTANT FOR SAFETY

- Added at time of manufacturing, ViziGrip® ensures visibility and skid resistance are maximized, especially where loss of traction in wet conditions is of major concern.
- The material is flush to the surface so there are no tripping hazards.

ENHANCED DURABILITY

- Engineered as a true heavy-duty intersection grade pavement marking material
- Provides optimum wear in adverse conditions
- Can last 6 to 8 times longer than painted surfaces

ACCESSIBILITY

- DecoMark® is surface-applied and has the same surface characteristics as the pavement. Therefore, there is no additional vibration level or rigid bumpy effect as with imprinted products.

MANUFACTURING CONTROL

- All DecoMark® preformed thermoplastic materials are made at Flint's manufacturing facility which is ISO 9001:2000 certified for design, development and manufacturing.

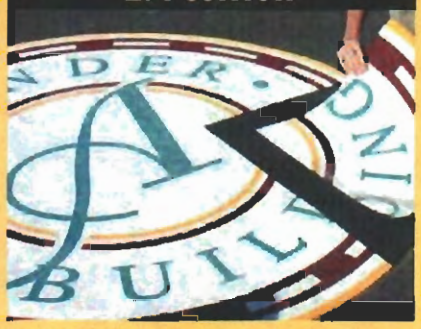
13041L0

First-time applicators should contact Flint Trading at (336) 475-6600 for product support and free on-site training.

1. PREPARE

Remove debris. Ensure no moisture is present and apply DecoMark® Sealer according to instructions provided.

2. POSITION



Position the DecoMark® material according to layout provided.

3. HEAT

Heat DecoMark® with a propane heat torch then chisel test to ensure proper bond.

Flint
TRADING INC.®

115 Todd Court

Thomasville, NC 27360

Phone: (336) 475-6600

Fax: (336) 475-7900

sales@flinttrading.com

www.flinttrading.com

VizíGrip® combines surface beads and abrasives which enhance skid resistance and nighttime visibility, U.S. Patent 6,217,254

DecoMark® Patent Pending

7500 0409

14916

Hydro FloGard®+Plus™ Catch Basin Insert

FloGard® is a registered trademark of KriStar Enterprises

Effective inlet control prevents pollutants from entering drainage systems

APPLICATIONS

- Sites with round or rectangular surface runoff inlets
- Curb inlets
- Wall-mounted curb inlets
- Streets, roadways & parking lots

ADVANTAGES

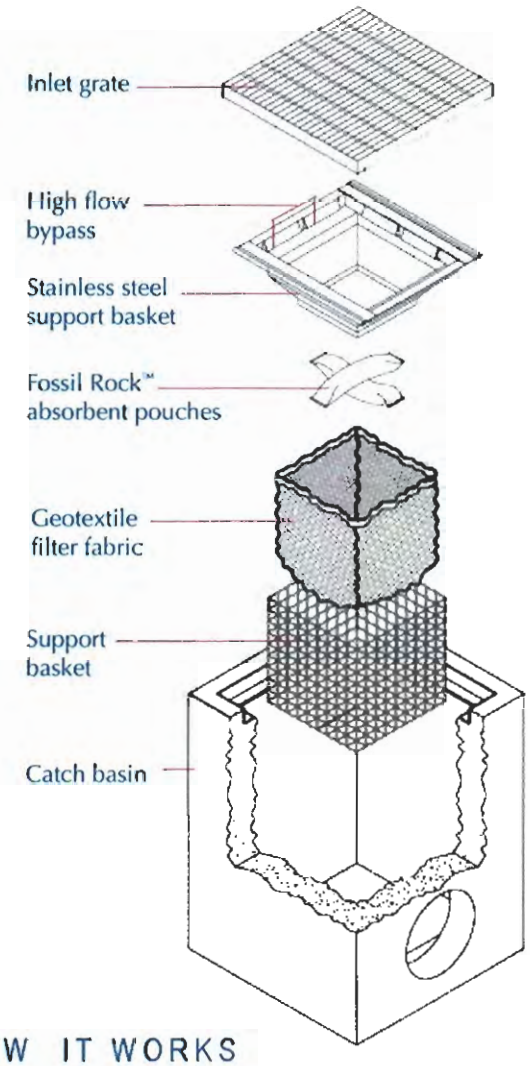
- Inlet control prevents pollutants from entering drainage system
- Dual high flow bypass prevents surface ponding
- Captures and retains sediments, floatable trash and debris
- Allows sustained maximum design flows under extreme wet weather conditions

MAINTENANCE

A structured maintenance program is recommended for all Hydro Inlet Control devices. Annual maintenance plans should include:

- 3 system inspections
- 3 **Hydro FloGard +Plus** cleanings
- 1 change and disposal of filter media and oil absorbent pouches

The **Hydro FloGard +Plus Catch Basin Insert** is a multi-purpose catch basin insert designed to prevent sediment, debris, trash and oils/grease from entering the stormdrain system.



HOW IT WORKS

Surface runoff flow enters the **Hydro FloGard +Plus** through the inlet grate or curb inlet. Litter, debris and sediments are captured and retained by geotextile filter fabric while hydrocarbons are absorbed by the Fossil Rock™ absorbent media pouches.

The dual high-flow bypass allows flows to bypass the device while retaining sediment, debris and trash throughout sustained maximum design flows during extreme weather conditions.

Hydro International

15916

Ph: 207.756.6200 • Fax: 207.756.6212 • Email: stormwaterinquiry@hil-tech.com
www.hydro-international.biz

Configurations

The **Hydro FloGard +Plus** is available in the following configurations:

- Rectangular frame mounted
- Round frame mounted
- Curb-mounted
- Wall-mounted
- Combination inlet

Curb inlet catch basin filter insert.

Rectangular - Frame Mounted Sizing

Model	Inlet Grate ID (in x in)	Grate OD* (in x in)	Solids Storage Capacity (cu ft)	Filtered Flow (cfs)	Total Bypass Capacity (cfs)
FGP-12F	12x 12	12 x 14	0.3	0.4	2.8
FGP-1530F	15 x30	15 x 35	2.3	1.6	6.9
FGP-16F	16 x16	16 x 19	0.8	0.7	4.7
FGP-1624F	16 x 24	16 x 26	1.5	1.2	5.0
FGP-18F	18 x 18	18 x 20	0.8	0.7	4.7
FGP-1820F	16 x 19	18 x 21	2.1	1.4	5.9
FGP-1824F	16 x 22	18 x 24	1.5	1.2	5.0
FGP-1836F	18 x 36	18 x 40	2.3	1.6	6.9
FGP-2024F	18 x 22	20 x 24	1.2	1.0	5.9
FGP-21F	22 x 22	22 x 24	2.2	1.5	6.1
FGP-2142F	21 x 40	24 x 40	4.3	2.4	9.1
FGP-2148F	19 x 46	22 x 48	4.7	2.6	9.8
FGP-24F	24 x 24	24 x 27	2.2	1.5	6.1
FGP-2430F	24 x 30	26 x 30	2.8	1.8	7.0
FGP-2436F	24 x 36	24 x 40	3.4	2.0	8.0
FGP-2448F	24 x 48	26 x 48	4.4	2.4	9.3
FGP-28F	28 x 28	32 x 32	2.2	1.5	6.3
FGP-2840F	24 x 36	28 x 40	4.2	2.3	8.7
FGP-30F	30 x 30	30 x 34	3.6	2.0	8.1
FGP-36F	36 x 36	36 x 40	4.6	2.4	9.1
FGP-3648F	36 x 48	40x 48	6.8	3.2	11.5
FGP-48F	48 x 48	48 x 54	9.5	3.9	14.2

** Dimensions shown are approximate. Submit exact measurements when ordering*

Round frame mounted catch basin filter insert.

Round - Frame Mounted Sizing

Model	Inlet Grate ID (in dia)*	Grate OD (in dia)*	Solids Storage Capacity (cu ft)	Filtered Flow (cfs)	Total Bypass Capacity (cfs)
FGP-RF15F	15	18	0.3	0.4	2.8
FGP-RF18F	18	20	0.3	0.4	2.8
FGP-RF20F	22	24	0.8	0.7	4.7
FGP-RF24F	24	26	0.8	0.7	4.7
FGP-RF36F	36	39	2.2	1.5	6.1

** Dimensions shown are approximate. Submit exact measurements when ordering*

Other models available. Sizing and design charts are available for **curb-mounted**, **wall-mounted** and **combination inlet** configurations at www.hydro-international.biz or call toll free 800-848-2706

Hydro International

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This information is subject to change without notice.

Certificate No. 961366

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Humboldt Bay First Flush Report 2004

Produced for the City of Eureka
by

Community Clean Water Institute

June 2005

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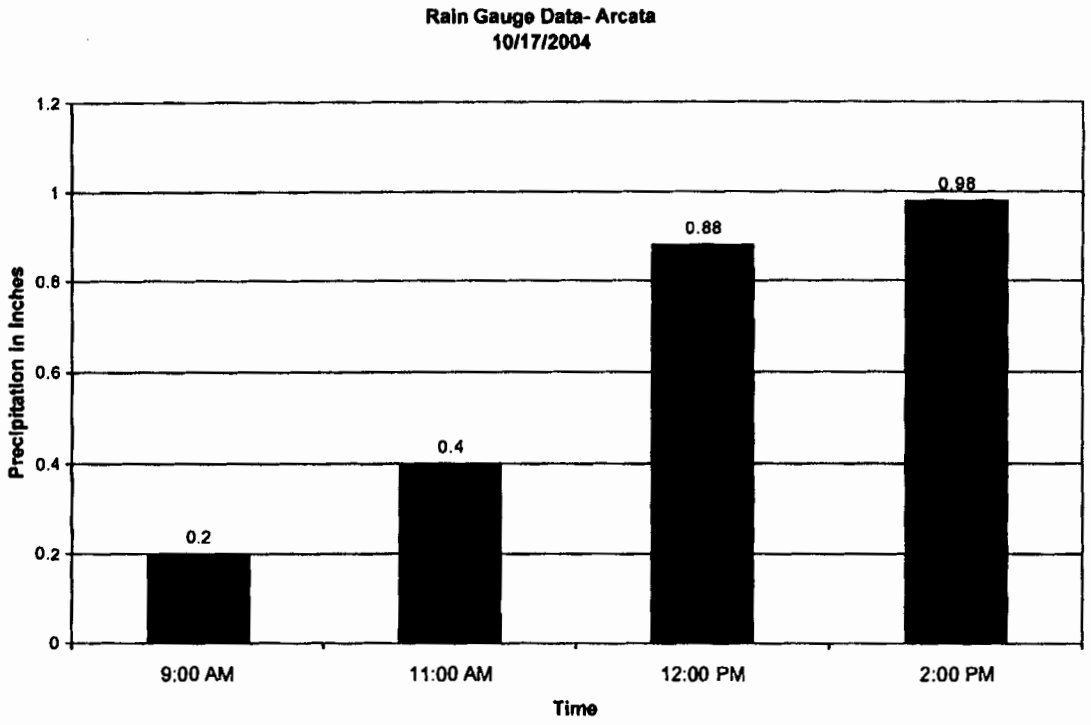
EXHIBIT NO. 7
APPLICATION NO.
1-07-018
CITY OF ARCATA
EXCERPTS OF JOLLY GIANT CREEK WATER QUALITY SURVEYS (1 of 14)

rain. At 10 AM it began to drizzle in Eureka. Teams were mobilized, and each team was at their site by noon.

2.3 Rain gauge data



Rain gauge data provided by Clark Fenton.

2.4 Site Locations

Sites were selected according to safety, accessibility, and ability to provide information useful for watershed characterization in First Flush conditions. Sites were chosen after consultations with technical advisors and other groups, which monitor water quality in Humboldt Bay. In Eureka, the stream sites were Cooper Gulch and 14th Street, and Martin Slough, upstream of the golf course. The Eureka manhole sites were Waterfront Drive at the intersections of P St. (T13B), L St. (T13C), C St. (T13E), Commercial Blvd. (T13F), Truesdale and Christie (T13N), and McCullens Ave. (T130) (See Appendix A). Manhole sites were taken from sites chosen by the Shellfish Technical Advisory Committee for the 2003 Fecal Coliform Study[1]. In addition, there were two stream sites in the City of Arcata, Jolly Giant Creek at Samoa Crossing (T5C), and Grotzman Creek near Bayside Road and Crescent Street (Grotzman).

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Site Name	Site Description	GPS Points	Datum
	Eureka sites		
Cooper Gulch and 14th Street	Cooper Gulch and 14th Street	-124.15343, 40.79597	WGS84
Martin Slough	Just upstream of Eureka golf course by Fairway Dr.	-124.16422, 40.76114	WGS84
	Eureka storm drains/manhole sites		
T13B	Waterfront Drive at P St.	-124.15912, 40.80611	NAD27
T13C	Waterfront Drive at L St.	-124.15908, 40.80606	NAD27
T13E	Waterfront Drive at C St.	-124.16884, 40.80500	NAD27
T13F	Waterfront Drive at Commercial St.	-124.17309, 40.80416	NAD27
T13N	Truesdale/ Christie	-124.19296, 40.77647	NAD27
T130	McCullens Ave.	-124.19069, 40.77444	NAD27
	Arcata Sites		
T5C	Jolly Giant Creek at H St. and Samoa	124.08894, 40.86530	WGS84
Grotzman Creek	Grotzman Creek near Bayside Road and Crescent Street	124.07250, 40.85647	WGS84

2.5 Parameter Descriptions

Conductivity
Conductivity is the ability of water to conduct an electrical current through dissolved ions in the water. Low Range values are measured in µmhos/cm, microsiemens per centimeter. High Range values are measured in mS/cm, millisiemens per centimeter. Conductivity is affected by the material of surrounding rocks. Clay soils increase conductivity because they ionize easily when washed into water, while granite bedrock decreases conductivity because it does not ionize as readily.[5] Evaporation increases the concentration of dissolved solids and salts, increasing conductivity.[6] Human factors that increase conductivity include failing sewage or septic systems which increase chloride, phosphate, and nitrate, and agricultural runoff with high levels of dissolved salts. Human factors that decrease conductivity include organic compounds like oil, phenol, alcohol, and sugar which are not very conductive. These compounds may get into the water through urban runoff.

pH
pH comes from the French phrase "puissance d'Hydrogène" meaning strength of the hydrogen and measures how acidic or basic the water is. The pH scale goes from 0 to 14 (7= neutral, <7 = acidic, >7=basic).

Temperature
Temperature is a measure of the average energy (kinetic) of water molecules, in Celsius or Fahrenheit. Temperature affects water chemistry and the functions of aquatic organisms. Natural elements affecting temperature include sunlight, stream velocity, water depth, inflow temperature, and turbidity of water. Human factors affecting temperature include removal of riparian vegetation, soil erosion, storm water runoff, alterations to stream flow, and cooling water discharges from industries.

Turbidity
Turbidity is a measure of the amount of suspended particles such as algae, sediment, or organic matter. Natural factors include algae and nutrient loading, sediment from erosion,

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2.9 Materials/Equipment

Parameter:	Equipment:
pH	Macherey-Nagel pH-Fix 0-14
Conductivity	(Oakton Conductivity Testr Low and High) Surface water volunteer teams used the Low Range meters. Manhole teams used both the Low Range and High Range meters. This is due to the close proximity of the manhole sites to Humboldt Bay and the resulting influx of saltwater, resulting in increased conductivity readings.
Temperature	Enviro-Safe Easy-Read Armor Case Pocket Thermometer NIST certified -5-50°C in .5°C
Turbidity	Hach 2100P Turbidimeter
Total Coliform and E.coli	IDEXX Colilert™ 24-hour media, Quantitrays, sealer, and incubator (35°C)
Stage	Collapsible measuring stick
Sample	Whirl-pak bags, lab issued sampling bottles

Additional equipment used:

Approximately 20 Buckets
2 Reel Pulleys for lowering bucket into manhole with rope
15 foot Rope
Gallon zip lock bags
Cooler
Ice
Clipboards
Rite in Rain Paper
Sharpie pens

3.0 Results

3.1 Data Inventory

Twenty-four field samples were collected. Surface water sites (COP, MART, GRO, & T5C) completed three rounds of sampling, while manhole sites (T13B, T13N, T13O, T13E, T13C & T13F) completed two rounds. This study includes six quality control samples and ten dry run samples in addition to the 24 field samples for a total of forty samples. Quality control samples consisted of two field blanks, three field duplicates, and one lab replicate.

3.2 Standards

In the data analysis graphs that follow we have included, when available, Soluble Threshold Limit Concentration (STLC) and US EPA Stormwater Benchmarks for each parameter to make the data more usable.[12] STLC is the concentration of a solubalized and extractable bioaccumulative or persistent substance which, if equaled or exceeded in a waste or waste

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extract determined pursuant to The Environmental Health Standards for the Management of Hazardous Waste renders the waste hazardous.[13]

STLCs for the metals tested are:

Cadmium: 1 mg/L
Chromium: 5 mg/L
Lead: 5 mg/L
Nickel: 20 mg/L
Zinc: 250 mg/L

The Stormwater Benchmarks are recommendations and not actual regulations, therefore are not enforceable. Still, they provide a context in which to analyze the data. The City of Eureka, as a Phase 2 City, will be covered by an NPDES Stormwater Permit from the Regional Water Quality Control Board in the near future, however, as of 2004, the City did not have set standards in a Stormwater Permit.

Stormwater Benchmarks:

TSS: 100 mg/L
Oil and Grease: 15 mg/L
Lead: 816 ug/L
Chromium: 50 ug/L
Zinc: 117 ug/L
Nickel: 1417 ug/L
Nitrate: 0.68 mg/L

The Total Coliform and E.coli graphs include California Department of Health draft guidelines for recreational waters which are also not enforceable.

CA Department of Health Guidelines:

Total Coliform: 10,000 MPN/100mL
E.coli: 235 MPN/100mL

3.3 Data Limitations

Data obtained from this First Flush study is meant to serve as a 'worst case scenario' water quality indicator of non-point source pollution loads. This does not mean that it actually was a worst case scenario, just that the data collected is not meant to represent typical water quality conditions. It is important to keep in mind that the data is from 10 locations in a large geographical area of the greater Humboldt Bay watershed. Gathering data at the same stations over multiple years makes the data more useful. All lab tests were performed within holding times, standard operating procedures followed, and quality assurance measures implemented.

3.4 Quality Assurance

Out of 30 field samples, 3 duplicates were collected in the field. Duplicate samples were collected at Grotzman (Rounds 2 & 3) and T13O (Round 1) at the same time as the initial sample and were subjected to identical handling and analysis. Grotzman-2 duplicate was tested for turbidity, oil and grease, TSS, Nitrate-N, Phosphate-P, and coliform bacteria. Grotzman-3 duplicate was tested for metals. T13O-1 duplicate was tested for turbidity, coliform bacteria, oil and grease, Nitrate-N, Phosphate-P, TSS, and metals. In the CCWI lab, one replicate from Grotzman-2 was analyzed for bacteria. CCWI only uses reportable data for Quality Assurance analysis. The relative percent difference (RPD) between the sample and duplicate sample result is calculated with the following formula:

$$RPD = \frac{(\text{Sample Value}) - (\text{Duplicate Value})}{(\text{Sample Value} + \text{Duplicate Value})/2} \times 100$$

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Relative Percent Difference

Site Name-Round	Turbidity	TSS	Nitrate -N	Phosphate -P	Total Coliform	E.coli
GRO-2	12.94	0	0	0	-5.12	40.96
GRO-3						
T13O-1	8.15	177	-1.55	-24	37.85	60.77

Site Name-Round	Cadmium	Chromium	Nickel	Lead	Oil & Grease	Zinc
GRO-2						
GRO-3	0	-3.23	-1.34	-5.71		0
T13O-1	NA	NA	NA		9.2	38.89

Precision assessment is performed on reportable data only. Zeros can occur when the initial and the duplicate results are the same (High Precision). Precision assessment is Not Applicable (NA) when results are Non Detect (ND).

Two field blanks of deionized water were taken into the field and analyzed with the same lab equipment for bacteria and turbidity in the CCWI lab to measure the level of background contamination from sampling containers or handling procedures. Composite sample collection by field teams was implemented to reduce variations between the individual sample containers collected.

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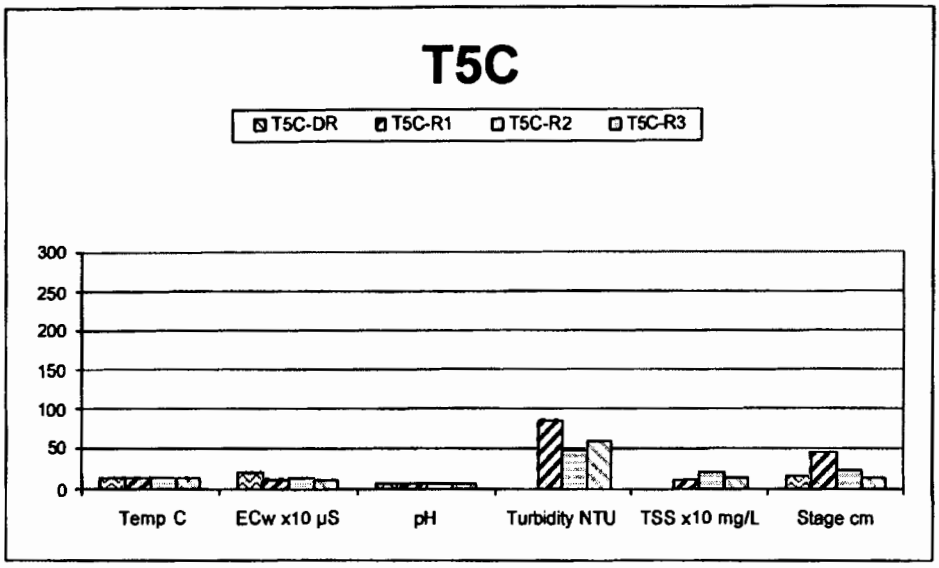
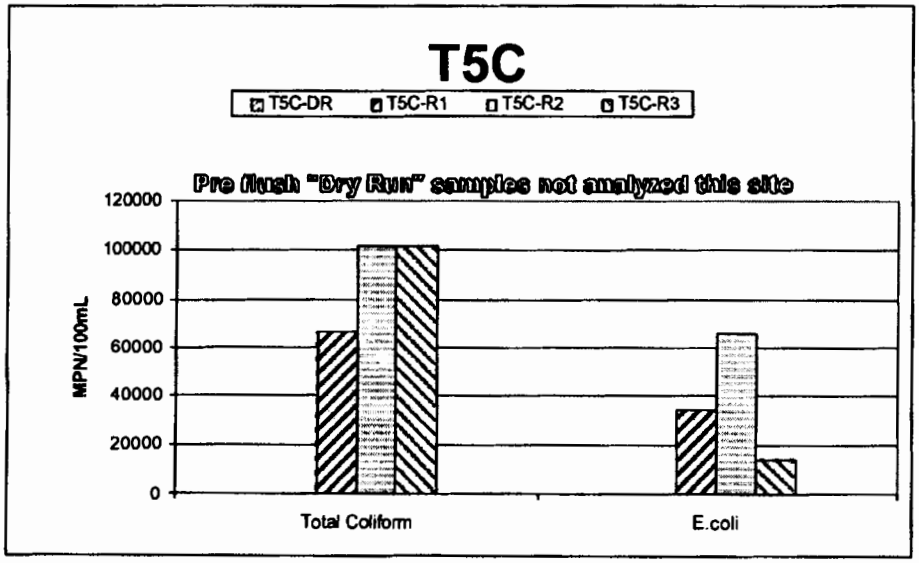
Station ID	Station visit ID	Collection Date	Collection Time	Conductivity (uS)	pH (pH)	Stage (cm)	Water Temperature (C)	Turbidity (NTU)	Cadmium (ug/L)	Chromium (ug/L)	Lead (ug/L)	Nickel (ug/L)	Nitrate as N (mg/L)	TSS (mg/L)	HEM-SG (mg/L)	Orthophosphate as P (mg/L)	Zinc (ug/L)
COP-Dry Run	Dry Run	10/10/2004	1:40 PM	190	7	12	13.5										
COP-1	R1	10/17/2004	11:45	100	7	43.1	14	184	ND	12	23	ND	0.72	180	ND	0.017	59
COP-2	R2	10/17/2004	12:20	100	7	77.5	14	55.1	ND	ND	17	ND	0.7	96	ND	0.041	52
COP-3	R3	10/17/2004	12:50	90	7	82.6	14	47.2	ND	ND	14	ND	0.71	57	ND	0.038	44
GRO-Dry Run	Dry Run	10/10/2004	6:05 PM	200	8	6	14										
GRO-1	R1	10/17/2004	12:30PM	80	7.5	17.78	14	112	ND	26	11	28	1.1	350	ND	0.057	77
GRO-2	R2	10/17/2004	1:00PM	90	7	17.78	14	107	ND	27	ND	29	1.1	410	ND	0.038	78
GRO-3	R3	10/17/2004	1:30PM	120	7	15.24	14	302	ND	61	17	74	1.2	800	ND	0.025	130
GRO-2 Dup	R2	10/17/2004	1:00PM					94					1.1	410	6.2	0.038	
GRO-3 Dup	R3	10/17/2004	1:30PM						ND	63	18	75					130
MAR-Dry Run	Dry Run	10/10/2004	2:45 PM	210	8	30	15.5										
MAR-01	R1	10/17/2004	1:50PM	190	8	85	14	66.3	ND	ND	ND	ND	1	67	ND	0.076	21
MAR-02	R2	10/17/2004	2:25PM	190	7	100	14	64.1	ND	ND	ND	ND	0.95	61	ND	0.06	ND
MAR-03	R3	10/17/2004	2:58PM	190	7	117	13	95.3	ND	11	ND	ND	0.93	92	ND	0.046	21
T13B-Dry Run	Dry Run	10/11/2004	8:30 AM	OR	8		17		ND	30	ND	46					330
T13B-1	R1	10/17/2004	12:35PM	0	8		16	18.1	ND	ND	ND	ND	0.29	36	ND	0.06	42
T13B-2	R2	10/17/2004	2:50PM	70	8		16	16.2	ND	ND	ND	ND	0.28	14	ND	0.062	45
T13C-Dry Run	Dry Run	10/11/2004	8:35 AM	OR	7		17		ND	ND	ND	ND					29
T13C-1	R1	10/17/2004	12:15PM	0.3	8		16	13	ND	ND	29	ND	0.56	14	ND	0.09	62
T13C-2	R2	10/17/2004	2:30PM	0	7		15	11.8	ND	ND	25	ND	0.88	14	ND	0.094	57
T13E-Dry Run	Dry Run	10/11/2004	9:00 AM	OR	8		17		ND	ND	ND	ND	3.4	27	ND	0.041	ND
T13E-1	R1	10/17/2004	1:00PM	0	8		15	17.8	ND	ND	74	ND	0.23	140	ND	0.13	440
T13E-2	R2	10/17/2004	3:10PM	0	8		18	20.6	ND	ND	22	ND	0.21	50	ND	0.071	110
T13F-Dry Run	Dry Run	10/11/2004	9:15 AM	OR	7		17		ND	ND	ND	ND	ND	7.6	ND	0.15	ND
T13F-1	R1	10/17/2004	1:15PM	100	9		16	16.8	ND	ND	ND	ND	ND	51	ND	0.063	67
T13F-2	R2	10/17/2004	3:15PM	110	8		16	15.5	ND	ND	ND	ND	0.11	19	ND	0.095	280
T13N-Dry Run	Dry Run	10/11/2004	9:40 AM	OR	8		17		ND	ND	ND	ND	3.4	21	ND	0.024	22
T13N-1	R1	10/17/2004	1:35PM	0	7		15.5	17.7	ND	14	69	35	0.24	98	ND	0.057	570
T13N-2	R2	10/17/2004	3:40PM	0.3	7		15	18.9	ND	ND	ND	ND	0.32	28	ND	0.047	100
T13O-Dry Run	Dry Run	10/11/2004	10:00 AM	OR	8		18		ND	ND	ND	ND	4.2	76	ND	0.016	ND
T13O-1	R1	10/17/2004	1:40PM	70	8		16	39.6	ND	ND	19	ND	0.64	1100	9.1	0.11	86
T13O-2	R2	10/17/2004	3:50PM	80	8		17	20.1	ND	ND	ND	ND	0.76	170	ND	0.14	45
T13O-1 Dup	R1	10/17/2004	1:40 PM					36.5	ND	ND	ND	ND	0.65	66	8.3	0.14	58
T5C-Dry Run	Dry Run	10/11/2004	4:00 PM	220	7	17	15										
T5C-1	R1	10/17/2004	12:15PM	130	8	45	14	85.8	ND	12	26	ND	0.52	110	ND	0.088	97
T5C-2	R2	10/17/2004	12:45PM	150	8	23	14	48	ND	42	84	55	0.71	220	ND	0.015	350
T5C-3	R3	10/17/2004	1:15PM	120	8	14	14	59	ND	13	21	ND	0.58	150	ND	0.012	79
Trip Blank		10/17/2004	2:30 PM					0.71									
Trip Blank		10/17/2004	2:35 PM					0.58									
Trip Blank-Dup		10/17/2004	2:35 PM					0.35									

Sample ID	Date Collected	Time Collected	Set up Date	Set up Time	Reading Date	Reading Time	MPN Total Coliform in tray	MPN Total coliform in sample	MPN E.coli in tray	MPN E.coli in sample	Result Unit	Dilution Factor
Cooper Gulch 14th St	10/17/2004	11:45AM	10/17/2004	11:00PM	10/18/2004	11:00PM	1011.1	>101110	214.2	21420	MPN/100	100
Cooper Gulch 14th St	10/17/2004	12:30PM	10/17/2004	11:00PM	10/18/2004	11:45PM	913.9	91390	184.2	18420	MPN/100	100
Cooper Gulch 14th St	10/17/2004	12:50PM	10/17/2004	11:00PM	10/18/2004	11:45PM	1011.1	>101110	191.8	19180	MPN/100	100
Grotzman	10/17/2004	1:00PM	10/17/2004	11:00PM	10/18/2004	11:00PM	960.6	96060	360.9	36090	MPN/100	100
Grotzman	10/17/2004	1:30PM	10/17/2004	11:00PM	10/18/2004	11:45PM	1011.1	>101110	141.4	14140	MPN/100	100
Grotzman	10/17/2004	12:30PM	10/17/2004	11:00PM	10/18/2004	11:45PM	1011.1	>101110	416	41600	MPN/100	100
Grotzman Dup	10/17/2004	1:00PM	10/17/2004	11:00PM	10/18/2004	11:45PM	1011.1	>101110	238.2	23820	MPN/100	100
Grotzman Rep	10/17/2004	1:00PM	10/17/2004	11:00PM	10/18/2004	11:45PM	829.7	82970	248.9	24890	MPN/100	100
Martin	10/17/2004	1:50PM	10/17/2004	11:00PM	10/18/2004	11:45PM	960.6	96060	75.4	7540	MPN/100	100
Martin	10/17/2004	2:25PM	10/17/2004	11:00PM	10/18/2004	11:45PM	629.4	62940	42.6	4260	MPN/100	100
Martin	10/17/2004	2:58PM	10/17/2004	11:00PM	10/18/2004	11:00PM	829.7	82970	41.6	4160	MPN/100	100
T13B	10/17/2004	12:35PM	10/17/2004	11:00PM	10/18/2004	11:00PM	791.5	79150	160.7	16070	MPN/100	100
T13B	10/17/2004	2:50PM	10/17/2004	11:00PM	10/18/2004	11:00PM	689.3	68930	249.5	24950	MPN/100	100
T13C	10/17/2004	12:15PM	10/17/2004	11:00PM	10/18/2004	11:45PM	272.3	108920	12.2	4880	MPN/100	400
T13C	10/17/2004	12:15PM	10/17/2004	11:00PM	10/18/2004	11:00PM	791.5	79150	52.1	5210	MPN/100	100
T13C	10/17/2004	2:30PM	10/17/2004	11:00PM	10/18/2004	11:00PM	829.7	82970	41.9	4190	MPN/100	100
T13E	10/17/2004	1:00PM	10/17/2004	11:00PM	10/18/2004	11:00PM	913.9	91390	67.7	6770	MPN/100	100
T13E	10/17/2004	3:10PM	10/17/2004	11:00PM	10/18/2004	11:45PM	1011.1	>101110	95	9500	MPN/100	100
T13F	10/17/2004	1:15PM	10/17/2004	11:00PM	10/18/2004	11:00PM	601.5	60150	11	1100	MPN/100	100
T13F	10/17/2004	unlabelled	10/17/2004	11:00PM	10/18/2004	11:00PM	658.6	65860	8.6	860	MPN/100	100
T13N	10/17/2004	1:35PM	10/17/2004	11:00PM	10/18/2004	11:45PM	755.5	75550	124	12400	MPN/100	100
T13N	10/17/2004	3:40PM	10/17/2004	11:00PM	10/18/2004	11:00PM	913.9	91390	151.5	15150	MPN/100	100
T13O	10/17/2004	1:40PM	10/17/2004	11:00PM	10/18/2004	11:45PM	1011.1	>101110	85	8500	MPN/100	100
T13O	10/17/2004	1:40PM	10/17/2004	11:00PM	10/18/2004	11:00PM	524.7	209880	8.6	3440	MPN/100	400
T13O	10/17/2004	12:50PM	10/17/2004	11:00PM	10/18/2004	11:45PM	960.6	96060	72.3	7230	MPN/100	100
T13O Dup	10/17/2004	1:40PM	10/17/2004	11:00PM	10/18/2004	11:00PM	689.3	68930	45.5	4550	MPN/100	100
T5C	10/17/2004	1:15PM	10/17/2004	11:00PM	10/18/2004	11:45PM	1011.1	>101110	142.1	14210	MPN/100	100
T5C	10/17/2004	12:15PM	10/17/2004	11:00PM	10/18/2004	11:00PM	665.3	66530	343.6	34360	MPN/100	100
T5C	10/17/2004	12:45PM	10/17/2004	11:00PM	10/18/2004	11:45PM	1011.1	>101110	658.6	65860	MPN/100	100
Trip Blank	10/17/2004	2:30PM	10/17/2004	11:00PM	10/18/2004	11:45PM			<1	<100	MPN/100	
Trip Blank	10/17/2004	2:35PM	10/17/2004	11:00PM	10/18/2004	11:00PM			<1	<100	MPN/100	100

T5C
Physical

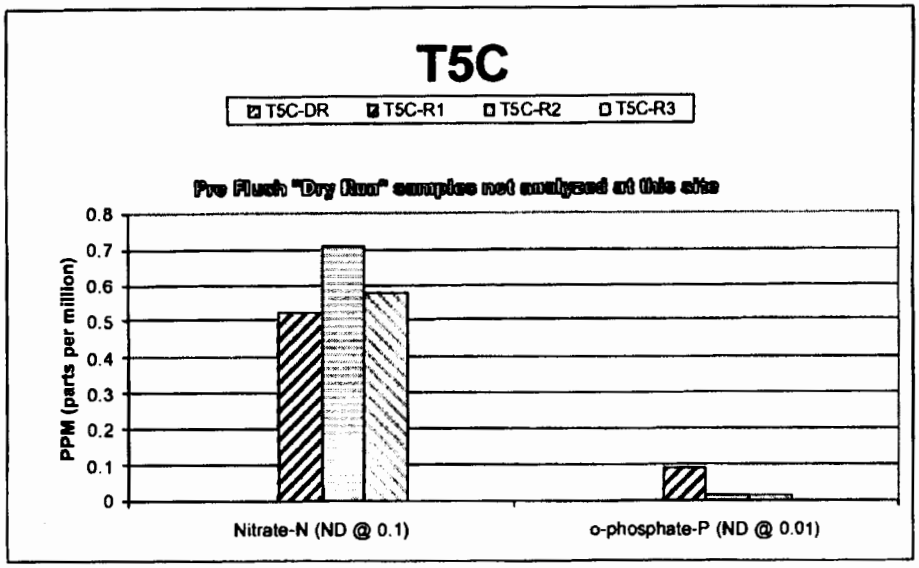


Coliform

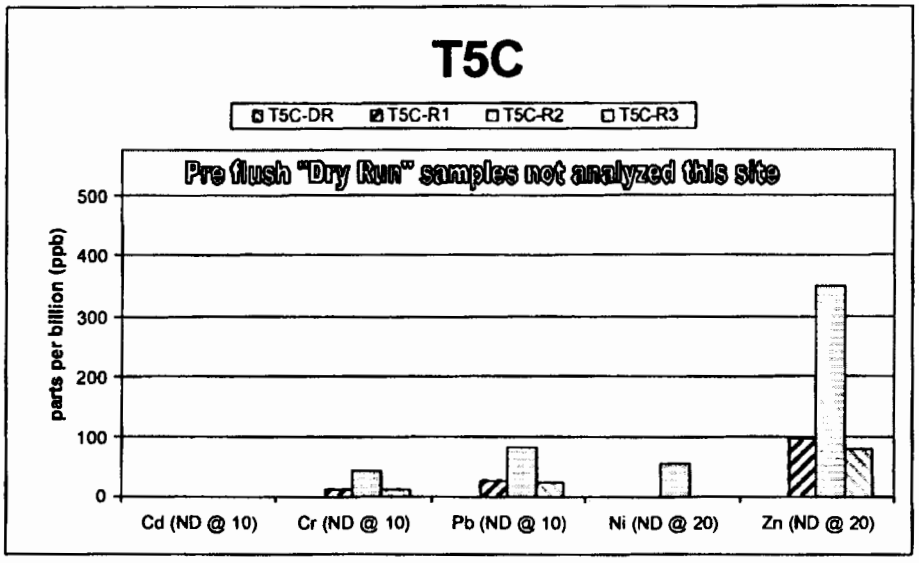


9914

Nutrients



Metals



10914

Lead

The sample obtained during Round 1 measured 11 ug/L in Lead concentration. Round 2 measured undetectable levels, and Round 3 measured 17 ug/L. All three samples tested were below the USEPA Stormwater Benchmark of 816 ug/L and the STLC limit of 5 mg/L.

Nickel

GRO had detectable levels of Nickel present in each sample taken, including the third round duplicate. Round 1 contained 28 ug/L, Round 2 contained 29 ug/L, and Round 3 and the duplicate measured 74 ug/L. Although the later samples contained the highest concentration of Nickel when compared to other test sites, the level present is still below the STLC limit of 20 mg/L and the USEPA Stormwater Benchmark of 1417 ug/L.

Zinc

The STLC limit of 250 mg/L was not met nor exceeded by any of the samples tested. Round 1 measured 77 ug/L, Round 2 measured 78 ug/L, and Round 3 measured 130 ug/L.

Jolly Giant Creek (Station ID T5C)

Reference Graphs pages 26-27

Conductivity

During the Dry Run, conductivity measured 220 us. During the First Flush event, Round 1 measured 130 uS, Round 2 rose to 150 uS and Round 3 declined to 120 uS. The amount of precipitation may have suddenly decreased between Rounds 2 and 3 in the Jolly Giant watershed.

Stage

From Round 1 to Round 2 the stage height fell from 45 cm to 23 cm, and Round 3 measured 14 cm. The change in stage height from Round 1 to 3 may indicate that the samples were taken at the later stage of the flush or in a low flow interim. The Dry Run measured a stage height of 17cm.

Total Coliform

Like the samples collected from all other sites, the concentration of Total Coliform was well above the CA Department of Health Draft Guidelines of 10,000 MPN/100mL. Rounds 2 and 3 measured concentrations of 101,110 MPN/100mL. Round 1 measured slightly lower with a concentration of 66,530 MPN/100mL.

e.Coli

The CA Department of Health Draft Guideline of 235 MPN/100mL was exceeded by all three samples tested for e.Coli. Round 1 had a concentration of 34,360 MPN/100mL, Round 2 measured 65,860 MPN/100mL before dropping to 14,210 MPN/100mL in Round 3.

11 of 14

pH

All three rounds resulted in a pH measurement of 8 compared to a pH of 7 measured during the Dry Run. The pH benchmark for the protection of most organisms is between 6.5 and 8.5. Although the pH level of 8 may be elevated it still falls within this benchmark.

Water temperature

The water temperature was constant at 14 °C throughout the sampling rounds. The stream temperature measured 15 °C during the Dry Run.

Turbidity

There was an overall decrease in turbidity between Rounds 1 and 3. Round 1 had a turbidity of 85.8 NTU, Round 2 declined to 48 NTU, and Round 3 increased slightly to 59 NTU. Prolonged turbidity above 25 NTU can impair salmonid navigation.

Oil & Grease

Each sample from T5C had non-detectable levels of oil and grease.

Total suspended solids (TSS)

Rounds 1 through 3 measured TSS concentrations above the USEPA Stormwater Benchmark of 100 mg/L. Round 1 had a concentration of 110 mg/L, Round 2 rose to 220 mg/L before declining to 150 mg/L in the third sampling round.

Nitrate (N)

The CA Drinking Water Standard of 1 mg/L was not met nor exceeded by any of the samples collected at T5C. Round 1 measured 0.52 mg/L, Round 2 rose to 0.71, and Round 3 measured 0.58 mg/L. Round 2 did exceed the USEPA Stormwater Benchmark of 0.68 mg/L.

Orthophosphate (P)

The concentration of Orthophosphate measured 0.088 mg/L in Round 1 and subsequently dropped to 0.015 mg/L in Round 2, and then to 0.012mg/L by Round 3. All samples tested from T5C did not meet nor exceed the USEPA recommendation of 0.1 mg/L for streams.

Cadmium

All samples collected from this site measured undetectable levels of Cadmium.

Chromium

Although the Chromium levels present in the samples collected from Jolly Giant were elevated when compared to many of the other testing sites, they were still below the STLC limit of 5 mg/L. Round 1 measured 12 ug/L, Round 2 rose to 42 ug/L, and Round 3 dropped to 13 ug/L.

Lead

12914

Samples collected remained below the USEPA Stormwater Benchmark of 816 ug/L as well as the STLC limit of 5 mg/L. Round 1 measured a concentration of 26 ug/L, Round 2 rose to 84 ug/L, and Round 3 dropped again to 21 ug/L. Round 2 measured the highest Lead concentration of any sample collected from all of the sites.

Nickel

Nickel concentration was low in the samples collected. Round 2 had a concentration of 55 ug/L, which is well below the USEPA Stormwater Benchmark of 1417 ug/L and the STLC limit of 20 mg/L. Round 1 and 3 had undetectable levels of Nickel.

Zinc

The USEPA Stormwater Benchmark of 117 ug/L was exceeded by the sample tested from Round 2, which measured 350 ug/L. Round 1 had a concentration of 97 ug/L and Round 3 measured 79 ug/L. All samples had lead concentrations well below the STLC limit of 250 mg/L.

Manhole Sites

Reference Graphs pages 28-39

Notes regarding these sites: Sites tested from manholes (stormdrains) differed slightly from above ground sites. Stage was not measured, since storm drains varied in size and depth. Conductivity varied wildly due to the proximity of Humboldt Bay and tidal influence. CCWI staff and interns tried to collect samples at around the same time as above ground teams. An employee from the City of Eureka Public Works Department assisted in removal of manhole lids. Due to time constraints, there were 2 rounds collected instead of 3. Below is a table of site names and locations:

Site Name:	**Eureka storm drains/manhole sites**
T13B	Waterfront Drive at P St.
T13C	Waterfront Drive at L St.
T13E	Waterfront Drive at C St.
T13F	Waterfront Drive at Commercial St.
T13N	Truesdale/ Christie
T130	McCullens Ave.

Conductivity

As mentioned above, conductivity varied due to the proximity of Humboldt Bay and tidal influence. During the "Dry Run" all manhole sites were over range (OR) of the conductivity meter, meaning they were greater than 1999 uS. Salt water from the Bay contributes to this high reading. During the storm event, as freshwater (rain) enters the storm drain, it lowers the conductivity reading. Readings during the flush event ranged from 0 to 110 uS. The readings of 0.3 mS were taken with the high-range conductivity meter, which measures in milliSiemens. This translates to 300 uS for the low range meter.

13414

Jolly Giant Watershed Investigation

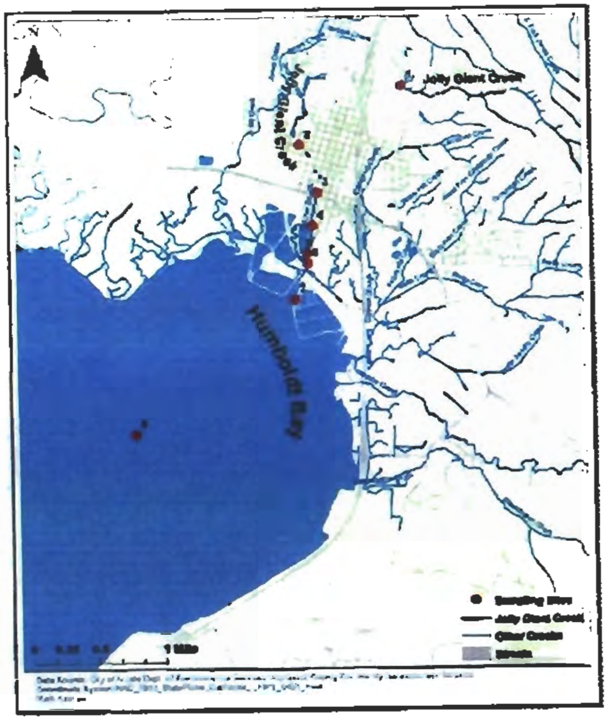
ENGINEERING

[redacted]

The Jolly Giant Creek watershed is 1.7 square miles of rural and urban landscape located in Arcata, California. The creek originates east of the city in the Arcata Community Forest and flows for six miles before discharging into Humboldt Bay. Prior to discharging into the bay the creek mixes with the effluent stream of the Arcata Wastewater Treatment Plant. The focus of this investigation is to monitor the water quality of the Jolly Giant Creek at various points throughout Arcata and to compare the discharge quality to the standards in the Arcata Wastewater Treatment Plant permit.

[redacted]

WATER QUALITY	STANDARD METHODS PROCEDURE	FIELD MEASUREMENT	INSTRUMENT USED
BOD₅	5210	Dissolved Oxygen	YSI-55
Ion Spectrometer	4110	Salinity	YSI-30
Nitrate	4500-NO₃	Turbidity	Hach 2100-P
Ammonia	4500-NH₃	pH	Hanna 8314
Phosphate	4500-PE		
Total Coliform	9222-B		
Fecal Coliform	9222-D		



[redacted]

The following is a list and description of the sampling sites used to complete the investigation. Refer to the map to locate the sites designated by the number. It should be noted that data from sites 1-3 were collected by another group. Data collected in Butcher Slough and the confluence of the creek and the effluent stream from the Arcata Wastewater Treatment Plant were collected during (or up to one hour before) low tide to eliminate tidal influence on results.

Site 1: Footbridge at Humboldt State University.*

Site 2: 11th and M Streets.*

Site 3: Samoa Blvd and H Street.*

Site 4: The location at the beginning of Butcher Slough was chosen to track the change in the quality of the creek after passing through downtown Arcata.

Site 5: This site precedes the Arcata Marsh Interpretive Center and was chosen to demonstrate how Jolly Giant Creek is affected by nearby water bodies.

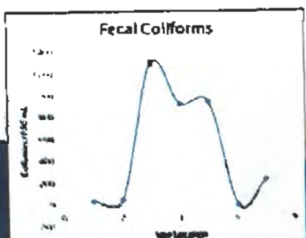
Site 6: This sampling site is located after the Arcata Marsh Interpretive Center and was chosen for consistent monitoring of the creek after passing through Butcher Slough.

Site 7: This site is located about five yards downstream of the confluence of the creek and the effluent from the Arcata Wastewater Treatment Plant and was chosen to observe the water quality after mixing with the effluent immediately before discharging into the bay.

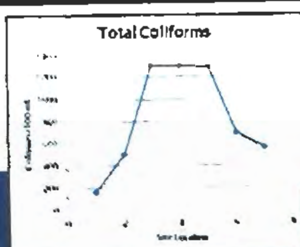
Site 8: The final testing site is one mile off shore in Humboldt Bay and was chosen to compare the water quality in the bay to the water being discharged from the stream.

*Data from these sites were collected by Andy Harris, Mario Barragan and Gwendolyn Ibe

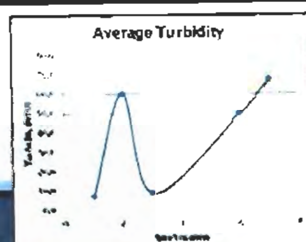
[redacted]



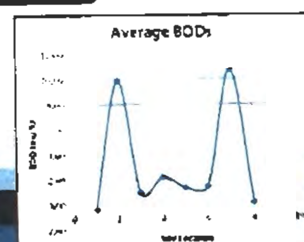
The fecal coliform test results showed under 200 fecal coliform colonies per 100 mL at site 1 & 2. At site 3 the results could not be quantified because the colonies were too numerous to count. Site 7 (confluence of Jolly Giant Creek and Arcata's Wastewater Treatment Plant effluent) showed an increase of about 200 fecal coliform colonies per 100 mL.



The total coliform test results ranged from under 200 total coliform colonies per 100 mL at site 1 to about 500 total coliform colonies per 100 mL at site 2. At sites 3, 4, & 5 the results could not be quantified because the colonies were too numerous to count. Results from site 7 showed a decrease of about 170 total coliform colonies per 100 mL.



The turbidity of Jolly Giant Creek is at around 7.3 NTUs at site 1 and then it greatly increases to about 60 NTUs at site 2 (at the Samoa Blvd site (site 3)). The stream's turbidity then increased in NTUs from site 3 to site 6 and continued after the stream combined with the effluent of the Arcata Wastewater Treatment Plant at site 7.



The BOD₅ rose to 10 mg/L at site 2 (11th & M St.) and then fell to below 2 mg/L at site 3. It should be noted that results under 2mg/L were too low to accurately measure with the available instruments. The BOD₅ was highest at the site 7, the confluence the creek and the outfall of the Arcata Wastewater Treatment Plant effluent.

- The total fecal coliform results warrant a further investigation of site 3. The high fecal coliform could result from a point source contamination or urban runoff.
- The total coliform results indicate that there should be a further investigation of sites 3, 4, and 5.
- The average turbidity of Jolly Giant Creek is at expected natural water values at sampling site 1, but then significantly increases at site 2. High urban activity around site 2 signifies the need for further monitoring of pollutants at these two sites.
- The average BOD₅ values of Jolly Giant Creek at site 2 where there is high urban activity, and site 7 where the effluent from the Arcata Wastewater Treatment Plant and the creek meet are higher than the other sites. Recommendations are made to further monitor these two sites. No average BOD₅ values at any site exceed the standards set by the *National Pollutant Discharge Elimination System* (NPDES).
- The increase in turbidity at site 2 should be investigated as it may be directly linked to the increase in total and fecal coliforms recorded at site 3.

ENGR 351 FALL 2010
Heidi Halverson, Mark Kasraie, Phil Zerkel

Last revised: 9/23/05

Staff Contact:
Mark Andre, 707 822-8184
Deputy Director Environmental Services
736 F Street Arcata, AC. 95521
mandre@arcatacityhall.org
Available online at
www.arcatacityhall.org

City of Arcata

Storm Water Management Program

City of Arcata
November 2005

EXHIBIT NO. 8
APPLICATION NO.
1-07-018 - CITY OF ARCATA
EXCERPTS OF CITY OF ARCATA STORM WATER MANAGEMENT PROGRAM
(1 of 5)

Year	BMP	Current Status	Implementation Details	Measurable Goal Target	Responsible Party
2-5	Parking lot BMPS-lots over 25 spaces in size.	Not yet implemented	Individual lots for industrial or commercial use are required to install on-site BMPs for each individual parking lot exceeding 25 spaces.. For these properties, the requirements for operation and maintenance of on-site BMPs will be the responsibility of the property owner. The property owner will be required to submit to the City every two years a letter indicating that the on-site BMP has been inspected and is working as designed.	Number of property owners in compliance. Hydrocarbon/trash reduction in creek monitoring sites below affected properties.	Property Owner-Monitored by Environmental Services Department

6.0 POLLUTION PREVENTION AND GOOD HOUSEKEEPING FOR MUNICIPAL OPERATIONS

The purpose of this minimum control measure for Municipal Operations/Good Housekeeping Practices is to assure that the City's delivery of public services occurs in a manner protective of storm water quality. In this way the City may serve as a model to the community.

Pollution Prevention/Good Housekeeping for Municipal Operations Element

The City of Arcata conducts numerous municipal operational and maintenance activities, some of which have the potential to result in discharges of pollutants in runoff or be sources of non-storm water discharges. The goal of the Municipal Operations Element is to reduce these discharges of pollutants in runoff and control non-storm water discharges.

The Municipal Operations Element evaluates activities to identify those that could be significant sources of pollutants in runoff, develops appropriate measures to reduce the discharge of pollutants from these sources to the maximum extent practicable (MEP), and identifies and controls discharges of non-storm water from facilities owned or operated by the City. This Program Element also conducts operation and maintenance activities that remove pollutants. City operations and maintenance activities provide for the collection and removal of significant quantities of pollutants from storm water runoff. The City's street sweeping program also will remove sediment and associated pollutants from roadways and gutters that would otherwise enter the storm drains. Furthermore, planning efforts provide the opportunity to incorporate water quality features in the design of regional detention basins to provide treatment and removal of pollutants as well as flood and drainage control.

Proposed activities include continued efforts to identify and improve municipal operations that are potentially significant sources of pollutants. Employee education, outreach and training are essential to ensure that municipal employees are aware of and able to implement the Municipal Operations Element. Areas of focus include: (1) equipment maintenance and washing; (2) pesticide and fertilizer application practices, (3) waste storage and disposal, (4) Contractor standards, i.e. paving operations on City streets. Development of fact sheets, performance standards, and procedure manuals for common municipal activities will help ensure that pollutant prevention practices are followed. Street sweeping and catch basin cleaning activities will be evaluated to determine effectiveness, and alternatives will be considered to improve pollutant removal. Proposed activities will help protect and improve the habitat of urban creeks. Drain inlet filters will be installed in areas of high potential for oils/greases such as the bus depot, City Hall parking lot, and downtown plaza.

6.1 Minimum Requirements

The State's General Permit states that the City must develop and implement an operations and maintenance plan the will prevent or reduce pollutants in runoff from municipal operations (*EPA Fact Sheet 2.8 – Pollution Prevention/Good Housekeeping, 01/00*).

The minimum requirements are:

- To consider municipal activities and identify those that may contribute pollutants to storm water;
- To select and implement Best Management Practices (BMPs) that will reduce or eliminate pollutants in storm water runoff from these activities to the Maximum Extent Practicable; and
- To train new and existing employees on the potential impacts to storm water from municipal activities and the implementation of BMPs to prevent and reduce these impacts.

6.2 Best Management Practices

On August 20, 2003 the City Council adopted a BMP Manual that included a subsection on Municipal Operations.

6.2.1 Municipal Activities and Potential Pollutants

Tables 6-1 and 6-2 summarize the City facilities and services and identifies those that may contribute pollutants to storm water.

Table 6-1 City Facilities

Facility	Potential Pollutant Sources	Responsible Division
City Hall	Parking lot, janitorial wastes, landscaping.	Public Works Parks Division (Maintenance), all City staff

Facility	Potential Pollutant Sources	Responsible Division
Community Center	Public recycling bins, staff picnic area, parking lot, landscaping.	Public Works, Parks and Rec, all City staff
Water & Maintenance Shop, including storage areas	Equipment storage, parking, trash bins, public-recycling bins (all shop maintenance conducted indoors).	Public Works/Environmental Services
Wastewater Treatment Plant	No potential storm water pollutants. Runoff is captured and treated at facility permitted under separate NPDES Industrial permit. This includes the vehicle washing station.	Public Works, Wastewater Division of Environmental Services
Community Forest	Sediment, timber operations, recreational use.	Natural Resources Division of Environmental Services
Various areas, grading.	Sediment	Depending on lead Dept./Division
Parking lots (4)	Vehicle wastes, litter.	Parks/Public Works
Restrooms (3) at Public Parking lots.	Janitorial wastes, litter.	Maintenance, Parks Division of Public Works
Streets and storm drains, including inlet filters	Vehicle wastes, litter, unknown material including illegal dumping.	Public Works

Table 6-2 City Activities

Activity	Potential Pollutant Sources	Responsible Division
Park maintenance	Over application of pesticides, fertilizers, spills during mobilization and storage, improper green waste disposal	Parks Division of Public Works
Trash removal and temporary storage	Trash that misses the bins, trash bin liquid discharges	Parks Division of Public Works
Janitorial service (in-house and contractor)	Improper disposal of wash water and other waste products into storm drain system	Parks Division of Public Works
Construction (contractors)	Improperly managed construction wastes, sediment runoff, staging area runoff (equipment leaks or spills).	Engineering of Public Works
Water pressure testing	Pollutants which may be	Public Works

Activity	Potential Pollutant Sources	Responsible Division
discharged into storm drain	present in gutters and storm drains, i.e., trash, organics, etc.	
Reservoir maintenance	Sediment mobilized from. plugging of outlet	Public Works
Fire hose testing –discharged into storm drain	Any pollutants present in street, gutters, & storm drains.	Fire Department

Development of Citywide Best Management Practices (BMPs)

BMP guidance material will be developed for all City facilities and activities with identified pollutant sources, shown above in Tables 6-1 and 6-2 (The guidance material will be used by City staff to (1) assure that water quality is being protected at municipal operations through the use of BMPs, (2) track implementation of BMPs, (3) develop a plan for future implementation of BMPs, and (4) prepare annual reports for internal purposes and for the annual monitoring report required under the NPDES permit.

The guidance material will contain a menu of suggested BMPs that either are or will be implemented by the City. Those BMPs that are appropriate to the City's municipal operations will be identified on a case-by-case basis. The menu approach for listing BMPs provides flexibility for similar activities at different locations, and allows the city to track implementation for reporting. For example, vehicle washing may be acceptable at the wastewater treatment plant where wash water is treated (eg., BMP# 1 Vehicle Washing), but another BMP such as using dry methods or containment may be appropriate at City Hall (eg., BMP #2 Vehicle Washing). The menu approach also allows flexibility when operations change. For example, a landscaped area of lawn (eg., BMP#1-4) could be replanted using a xeriscape design, in which little or no application of pesticides are necessary (eg., BMP#5). In this case, the activity remains the same (Landscaping) but the BMPs employed have changed.

The City's guidance material will also make excellent reference tools for public education, applicable to residential and commercial users of the storm drain system.

6.2.2 Purchasing and Contracts

The City will review contractual language for venders and contractors under service, and determine whether to include a requirement to employ the City's storm water Best Management Practices. Such services and contracts may include roadwork, vehicle maintenance, housekeeping, painting, and construction.

Contracts may be reworded to include specific language requiring contractors to obtain approval from the City for project-oriented BMPs or an activity-related Water Quality Plan (similar to a Storm Water Pollution Prevention Plan as required for construction activities under the Federal NPDES program). The contractor's approved BMPs or Water Quality Plan would describe how storm water conveyances would be protected from potential pollutants specific to the project

ATTACHMENT "E"

Morgan Kessler

From:	Ammerman, David A SPN [David.A.Ammerman@usace.army.
Sent:	Friday, January 08, 2010 9:46 AM
To:	Morgan Kessler; sbauer@dfg.ca.gov; katog@slc.ca.gov; Julie Class
Subject:	RE: Arcata Project

EXHIBIT NO. 9
APPLICATION NO.
1-07-018
CITY OF ARCATA
AGENCY CORRESPONDENCE (1 of 7)

Morgan -

Based on your e-mail description and review of your layout attachment of the project over Jolly Giant Creek it does not appear that a Corps permit would be required as there would appear to be no alteration of the creek bed or placement of fill below the Ordinary High Water mark of Jolly Giant Creek.
Hopefully this e-mail will suffice as an answer. However, if you wish to receive a formal letter from the Corps of Engineers stating a permit is not required then please send also a copy of a cross section of Jolly Giant Creek in relationship to the rest of the work.

Thank you for checking with us - David Ammerman, USACE, Eureka, 707-443-0855

-----Original Message-----
From: Morgan Kessler [mailto:mkessler@cityofarcata.org]
Sent: Thursday, January 07, 2010 2:34 PM
To: 'sbauer@dfg.ca.gov'; Ammerman, David A SPN; 'katog@slc.ca.gov'; Julie Neander; Karen Diemer; Doby Class
Subject: Arcata Project

RECEIVED
MAR 2 2 2010
CALIFORNIA
COASTAL COMMISSION

Hi all,

You are all receiving this email due to your agency's jurisdictional proximity to Arcata's Samoa Blvd. Gateway Bicycle & Pedestrian Improvements Project, specifically where it crosses Jolly Giant Creek. Attached, please find Sheet 4 of the construction plan set. While we believe the project will have no impact to Jolly Giant Creek, we are seeking opinion from your agency as to whether any sort of permitting will be needed.

The City of Arcata is partnered with Caltrans and has received Federal ARRA stimulus funding to complete this project. Also, we have been in consultation with the California Coastal Commission, and are working with Jim Baskin to secure a CDP Waiver.

This scope generally involves replacing sidewalk and adding a planted parkstrip and bicycle lane along Samoa Blvd. between "F" Street to the east and the old railroad tracks to the west. The addition of the parkstrip will reduce Samoa Blvd. from two travel lanes in each direction to one between the tracks and "G" Street. Please note that all work will be entirely within existing Caltrans and City of Arcata right-of-way.

Sheet 4 shows the project relative to Jolly Giant Creek. There is currently aging and distressed sidewalk over the box culvert through which the creek flows. For this project, we

are proposing to only replace the existing sidewalk across the culvert and add the parkstrip as shown in the drawings.
No work will be done outside of what currently exists, and it will be entirely over the box culvert. No construction activities will penetrate the culvert, nor encroach in areas adjacent to the culvert in the bed, bank, or channel of the creek. For the duration of the project, all DI's draining to Jolly Giant Creek will be protected per City of Arcata and Caltrans standards.

If you have any questions, please feel free to contact me.

Best,

Morgan

Morgan Kessler

Deputy Director of Public Works

City of Arcata Public Works Department

736 "F" Street, Arcata, CA 95521

mkessler@cityofarcata.org

707-825-2173 (voice)

707-825-2029 (Fax)

From: Martin Nelson
Sent: Thursday, January 07, 2010 1:34 PM
To: Morgan Kessler
Subject: SAMOA GATEWAY SHT.-4

Morgan Kessler

From: Scott Bauer [SBAUER@dfg.ca.gov]
Sent: Tuesday, January 12, 2010 9:53 AM
To: Morgan Kessler
Cc: Doby Class; Julie Neander; Karen Diemer; 'katog@slc.ca.gov'; 'David.A.Ammerman@usace.army.mil'
Subject: Re: Arcata Project

Good morning,

As long as there are no plans to widen the sidewalk or extend the culvert inlet upstream, DFG will not require a Streambed Alteration Agreement for the proposed work.

Sincerely,

Scott Bauer
Environmental Scientist
Coastal Conservation Planning
Department of Fish and Game
Northern Region
619 Second Street
Eureka, CA 95501

Telephone: (707) 441-2011
Fax: (707) 441-2021

>>> Morgan Kessler <mkessler@cityofarcata.org> 1/7/2010 2:33 PM >>>
Hi all,

You are all receiving this email due to your agency's jurisdictional proximity to Arcata's Samoa Blvd. Gateway Bicycle & Pedestrian Improvements Project, specifically where it crosses Jolly Giant Creek. Attached, please find Sheet 4 of the construction plan set. While we believe the project will have no impact to Jolly Giant Creek, we are seeking opinion from your agency as to whether any sort of permitting will be needed.

The City of Arcata is partnered with Caltrans and has received Federal ARRA stimulus funding to complete this project. Also, we have been in consultation with the California Coastal Commission, and are working with Jim Baskin to secure a CDP Waiver.

This scope generally involves replacing sidewalk and adding a planted parkstrip and bicycle lane along Samoa Blvd. between "F" Street to the east and the old railroad tracks to the west. The addition of the parkstrip will reduce Samoa Blvd. from two travel lanes in each direction to one between the tracks and "G" Street. Please note that all work will be entirely within existing Caltrans and City of Arcata right-of-way.

Sheet 4 shows the project relative to Jolly Giant Creek. There is currently aging and distressed sidewalk over the box culvert through which the creek flows. For this project, we are proposing to only replace the existing sidewalk across the culvert and add the parkstrip as shown in the drawings. No work will be done outside of what currently exists, and it will be entirely over the box culvert. No construction activities will penetrate the culvert, nor encroach in areas adjacent to the culvert in the bed, bank, or channel of the creek. For the duration of the project, all DI's draining to Jolly Giant Creek will be protected per City of Arcata and Caltrans standards.

If you have any questions, please feel free to contact me.

Best,

Morgan

Morgan Kessler
Deputy Director of Public Works
City of Arcata Public Works Department
736 "F" Street, Arcata, CA 95521
mkessler@cityofarcata.org
707-825-2173 (voice)
707-825-2029 (Fax)

From: Martin Nelson
Sent: Thursday, January 07, 2010 1:34 PM
To: Morgan Kessler
Subject: SAMOA GATEWAY SHT.-4

Morgan Kessler

From: Grace Kato [KATOG@slc.ca.gov]
Sent: Wednesday, February 10, 2010 12:13 PM
To: Julie Neander
Cc: Morgan Kessler
Subject: RE: FW: Arcata Project

Julie:
The State Lands Commission would have no objection to the project. Thank you for the clarification.
Grace

* * * In response to the Governor's Executive Order S-13-09, the Commission's offices will be closed the first three Fridays of each month beginning July 10, 2009 and ending June 30, 2010. * * *

Grace M. Kato
Public Land Management Specialist
California State Lands Commission
(916) 574-1227
katog@slc.ca.gov

>>> Julie Neander <jneander@cityofarcata.org> 2/10/2010 12:05 PM >>>
Hello Grace - Julie Neander with the City of Arcata - I believe that the project area that Morgan Kessler has contacted you about is far enough upstream that if is not in Harbor District jurisdiction which, in their Management Plan, is described as the region of Humboldt Bay that has been wetted by the tides.

The location on Jolly Giant creek that the project area crosses is all freshwater. The City does not need a formal determination letter - just a concurrence that the work the City is proposing is not contrary to State Lands policies - The project will not occur beyond existing City and Caltrans ROW and no new impervious surfacing is proposed in this area.

Thanks

Julie Neander
Environmental Programs Manager
City of Arcata
736 F Street
Arcata, CA 95521
707-825-2151
jneander@cityofarcata.org

-----Original Message-----
From: Morgan Kessler
Sent: Wednesday, January 27, 2010 9:06 AM
To: Julie Neander
Subject: FW: FW: Arcata Project

Hi Julie,

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Email below from Grace Kato, per our discussion.

Thanks,
Morgan

Morgan Kessler
Deputy Director of Public Works
City of Arcata Public Works Department
736 "F" Street, Arcata, CA 95521
mkessler@cityofarcata.org
707-825-2173 (voice)
707-825-2029 (Fax)

-----Original Message-----
From: Grace Kato [mailto:KATOG@slc.ca.gov]
Sent: Thursday, January 14, 2010 1:55 PM
To: Morgan Kessler
Subject: Re: FW: Arcata Project

Morgan:
Based on the information that has been provided the state's jurisdiction at this location has been granted to the Humboldt Bay Harbor Recreation and Conservation District. If you require a formal determination letter, please let me know as soon as possible. Thank you.
Grace

* * * In response to the Governor's Executive Order S-13-09, the Commission's offices will be closed the first three Fridays of each month beginning July 10, 2009 and ending June 30, 2010. * * *

Grace M. Kato
Public Land Management Specialist
California State Lands Commission
(916) 574-1227
katog@slc.ca.gov

>>> Morgan Kessler <mkessler@cityofarcata.org> 1/14/2010 12:33 PM >>>
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If you have any questions, please feel free to contact me.

Best,

Morgan

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Information from ESET NOD32 Antivirus, version of virus signature database 4810 (20100127)

The message was checked by ESET NOD32 Antivirus.

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