RECEIVED
November 06, 2020
City of Goleta
Current Planning Division

Stormwater Control Plan
for
Goleta Valley Cottage Hospital
Hollipat Parking Lot

334 S. Patterson Ave.

CITY OF GOLETA, CA

October 27, 2020

FLOWERS & ASSOCIATES, INC.
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W.O. 1987

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I. Project Data

Table 1. Project Data

Project Name/Number	334 S. Patterson Ave.: W.O. 1987
Application Submittal Date	October 27, 2020
Project Location	APN 065-090-028 (City of Goleta)
Project Phase No.	NA
Project Type and Description	Parking lot
Total Project Site Area	Approx. 4.15 ac., 180,739 s.f.
Total New Impervious Surface Area	Approx. 82,623 sf
Total Replaced Impervious Surface Area	Approx. 0 sf
Total Pre-Project Impervious Surface Area	Approx. 0 sf
Total Post-Project Impervious Surface Area	Approx. 82,623 sf
Net Impervious Area	Approx. 82,623 sf (new + replaced)
Watershed Management Zone(s)	1
Design Storm Frequency and Depth	95th percentile/24 hr. storm , 2.2 inches
Urban Sustainability Area	NA

II. Setting

II.A. Project Location and Description

See Figure 1, “Vicinity Map” and Exhibit 2 (attached), Stormwater Control Plan”. The proposed project is within the City of Goleta, CA.

The project consists of a previously constructed temporary parking lot, proposed improvements assume the temporary parking lot to be permanent with a new stormwater quality facility. The project area is defined by an existing zoning line on the easterly side, beyond which the easterly portion of the existing parking lot is to be removed and restored to natural grade and drainage patterns. The project is also bounded on the northerly and westerly sides by Hollister Avenue and Patterson Avenue, respectively and on the southerly and southwesterly boundaries by Hollipat Center Drive.

The project site is on a relatively flat slope toward the south with stormwater primarily sheet flowing southwesterly and southeasterly until reaching perimeter swales leading to the southerly vegetated area. Drainage continues through two 3-inch x 12-inch rectangular curb face opening into Hollipat Center Drive, then into Patterson Ave. where it reaches a drainage inlet and storm drain leading to Maria Ignacio Creek.

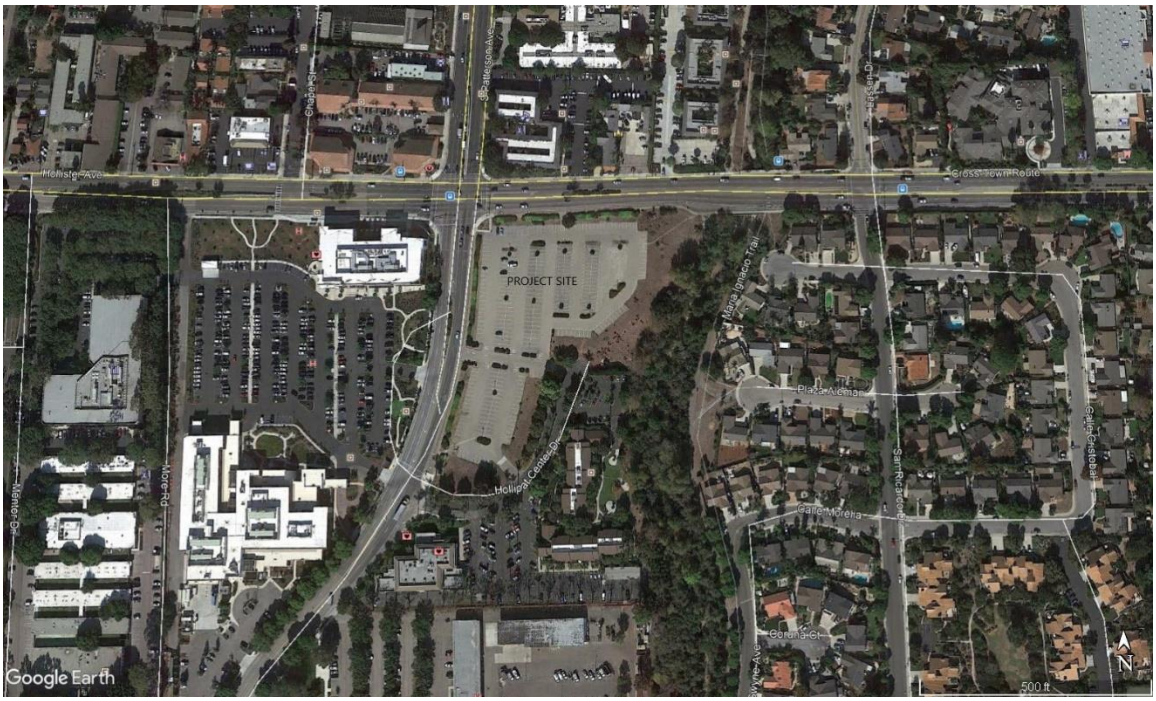


Figure 1. Vicinity Map

The project proposes to generally maintain existing drainage patterns.

The project proposes to create / replace greater than 22,500 square feet and is therefore classified as a Tier 4 project type.

II.B. Opportunities and Constraints for Stormwater Control

It is proposed to control stormwater onsite though the incorporation of permeable asphalt concrete and a new bioretention basin.

The project site currently has approximately 13,803 square feet of permeable asphalt concrete which reduces runoff and promotes infiltration.

Stormwater generated on the project site follows the existing topography toward the easterly and westerly vegetated swales, where pretreatment will occur, and into the proposed bioretention basin for treatment, storage and infiltration. A new overflow structure and storm drain are to be constructed to discharge drainage out of the basin at a calculated rate and the existing rectangular curb face drainage outlets will continue to be utilized for discharge off the project site.

II.C. Low Impact Development Design Strategies to be implemented onsite:

- Usage of permeable materials.
- Dispersal of runoff to proposed pervious areas – landscaping, bioswales and bioretention basins.
- Stormwater Control Measures – discharge parking lot drainage to pre-treatment swales and bioretention facilities.

III. Documentation of Drainage Design

III.A. Descriptions of each Drainage Management Area

The Drainage Management Areas (DMAs) for the entire project are divided into 1 tributary area as shown on Exhibit 2, "Stormwater Control Plan" as the entire parking lot drains to the southerly area where the proposed bioretention basin is located. The total project area is approximately 180,739 sq.ft including landscaped areas, while the parking lot portion is approximately 96,426 sq.ft. Water quality calculations exclude the permeable asphalt concrete portion leaving a treatment area of 82,623 sq.ft.

See Exhibit 2 and Table 2 below.

DMA Name	Surface Type	Area (square feet)
1. Parking Lot	Asphalt concrete	82,623

Table 2. Drainage Management Areas (DMAs)

III.B. Onsite Storm Water Control Measures (SCMs)

Onsite impervious surface (DMA 1) will drain to stormwater control measures (SCM 1) consisting of approximately 7,800 square feet of bioretention basin.

The bioretention basins will utilize 24-inch depth of the sand/compost planting medium specified in the "Stormwater Technical Guide, Compliance with Stormwater Post-Construction Requirements in Santa Barbara County" designed to filter runoff at a rate of at least 5 inches per hour for treatment. Additionally, it is proposed to utilize Atlantix Raintank Storage Units, which have a depth of approximately 18" and a porosity of approximately 95% which will be placed on a minimum 6-inch Class 2 permeable rock base for stormwater storage. Subsoils below the treatment soil, raintank storage and rock section are hydrologic soil group A and are assumed to have a minimum infiltration rate of 1.5-inches/hr.

The project SCM has been designed to result in no post project peakflow increase for the 2-100 year storms. Detention routing analysis for design storm peakflows through the proposed SCM's yields the following discharge rates, which are compared to the pre-project discharge rates for the same areas.

POST Qs	(cfs)					
Storm yr	2	5	10	25	50	100
SCM 1 (post)	0	0	0	0.10	0.37	0.54
Pre	0.03	0.12	0.43	1.24	2.00	2.81
Post<Pre	Y	Y	Y	Y	Y	Y

Table 3. Self Treating Areas

Refer to report entitled; "Preliminary Drainage Analysis, Goleta Valley Cottage Hospital, Hollipat Parking Lot" dated October 27, 2020 for detailed calculations.

III.C. Storm Water Calculator and Site Constraints

Regional Water Quality Control Board, Central Coast Region, Storm Water Control Measure Sizing Calculator, using SBUH Model, was utilized to determine sizing of the site's storm water control measures (see Exhibit 2 attached, "Central Coast Region Storm Water Control Measure Sizing Calculator").

It is important to note that the SCM Calculator input includes the area of the DMA's, as well as other input variables, and uses this information and the area of the proposed corresponding SCM to yield a minimum required storage volume and corresponding rock depth below underdrain (if applicable) to achieve required storage volume. Therefore, within this analysis, there is no additional calculation of the volume and verification of said volume is based on the area of the SCM and the corresponding construction detail.

The SCM Calculator indicates a rock depth of 2.4-feet to achieve a minimum required storage volume of 6,398 cubic feet. As indicated in the Preliminary Drainage Analysis referenced above, the total available storage volume in the basin is 19,340 cubic feet, which is far in excess of the required 6,398 cubic feet.

The site water quality design measures are summarized in the tables below.

III.D. Tabulation and Sizing Calculations

Table 4. Information Summary for LID Facility/Storm Water Control Measure

Total Project Area (Square Feet)	180,739 sf +/-
Design Storm Depth	2.2 inches (95th percentile)
Applicable Requirements	Tier 4
Storm Water Control Measure(s)	7,800 +/- sf bioretention basin

Table 5. LID/Storm Water Control Measures Sizing and Volumes

LID/SCM	Area
Bioretention Basins	7,800 +/- sq.ft , 19,340 +/- cu.ft.

IV. Source Control Measures

Site activities and potential sources of pollutants

Table 6. Source Control Table

Potential source of runoff pollutants	Permanent source control BMPs	Operational source control BMPs
Landscaping Pesticide Use/Building and Grounds Maintenance	Final Landscape Plans shall: Preserve existing native trees, shrubs, and ground cover to the maximum extent possible. Design landscaping to minimize irrigation and runoff, to promote surface infiltration where appropriate, and to minimize the use of fertilizers and pesticides that can contribute to stormwater pollution. Where landscaped areas are used to retain or detain stormwater, specify plants that are tolerant of saturated soil conditions. Consider using pest-resistant plants, especially adjacent to hardscape. To ensure successful establishment, select plants appropriate to site soils, slopes, climate, sun, wind, rain, land use, air movement, ecological consistency, and plant interactions.	Maintain landscaping using minimum or no pesticides. See applicable operational BMPs in Fact Sheet SC-41, "Building and Grounds Maintenance," in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com Provide IPM information to new owners, lessees and operators.

Outdoor Storage of Equipment or Materials	Include a detailed description of materials to be stored, storage areas, and structural features to prevent pollutants from entering storm drains. Where appropriate, reference documentation of compliance with the requirements of programs for: Hazardous Waste Generation, Hazardous Materials Release Response and Inventory, California Accidental Release (CalARP), Aboveground Storage Tank, Uniform Fire Code Article 80 Section 103(b) & (c) 1991, Underground Storage Tank	See the Fact Sheets SC-31 "Outdoor Liquid Container Storage" and SC-33, "Outdoor Storage of Raw Materials" in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com
Vehicle/Equipment Repair and Maintenance	No vehicle repair or maintenance will be done outdoors. No floor drains allowed in these areas. No tanks, containers or sinks to be used for parts cleaning or rinsing or, if there are, note the agency from which an industrial waste discharge permit will be obtained and that the design meets that agency's requirements.	No person shall dispose of, nor permit the disposal, directly or indirectly of vehicle fluids, hazardous materials, or rinse water from parts cleaning into storm drains. No vehicle fluid removal shall be performed outside a building, nor on asphalt or ground surfaces, whether inside or outside a building, except in such a manner as to ensure that any spilled fluid will be in an area of secondary containment. Leaking vehicle fluids shall be contained or drained from the vehicle immediately. No person shall leave unattended drip parts or other open containers containing vehicle fluid, unless such containers are in use or in an area of secondary containment.

Fire Sprinkler Test Water	Provide a means to drain fire sprinkler test water to the sanitary sewer.	See the note in Fact Sheet SC-41, "Building and Grounds Maintenance," in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com
Driveways, Patios Sidewalks, Parking Areas, Loading Docks and Trash Enclosure		Sweep plazas, sidewalks, parking lots, loading docks and trash enclosure area regularly to prevent accumulation of litter and debris. Collect debris from pressure washing to prevent entry into the storm drain system. Collect wash water containing any cleaning agent or degreaser and discharge to the sanitary sewer not to a storm drain.

V. Stormwater Facility Maintenance

Ownership and Responsibility for Maintenance in Perpetuity

OWNER:
PROPERTY ADDRESS:
APN:

THIS AGREEMENT is made and entered into in _____, California, this _____day of _____, by and between _____, hereafter referred to as "**Owner**" and the City of Goleta, a municipal corporation, State of California hereinafter referred to as "**City**";

WHEREAS, the Owner owns real property ("Property") in the City of Goleta, State of California, more specifically described in Exhibit "A" and depicted in Exhibit "B", each of which exhibits is attached hereto and incorporated herein by this reference;

WHEREAS, at the time of initial approval of development project known as within the Property described herein, the City required the project to employ on-site control measures to minimize pollutants in urban runoff;

WHEREAS, the Owner has chosen to install Bioretention and Infiltration Basins, hereinafter referred to as **"Stormwater Quality Facility",** as the on-site control measures to minimize pollutants in urban runoff;

WHEREAS, said Stormwater Quality Facility has been installed in accordance with plans and specifications accepted by the City;

WHEREAS, said Stormwater Quality Facility, with installation on private property and draining only private property, is a private facility with all maintenance or replacement, therefore, the sole responsibility of the Owner in accordance with the terms of this Agreement;

WHEREAS, the Owner is aware that periodic and continuous maintenance, including, but not necessarily limited to, filter material replacement and sediment removal, is required to assure peak performance of Stormwater Quality Facility and that, furthermore, such maintenance activity will require compliance with all Local, State, or Federal laws and regulations, including those pertaining to confined space and waste disposal methods, in effect at the time such maintenance occurs;

NOW THEREFORE, it is mutually stipulated and agreed as follows:

1. Owner hereby provides the City or City's designee complete access, of any duration, to the Stormwater Quality Facility and its immediate vicinity at any time, upon reasonable notice, or in the event of emergency, as determined by City's Director of Public Works no advance notice, for the purpose of inspection, sampling, testing of the Stormwater Quality Facility, and in case of emergency, to undertake all necessary repairs or other preventative measures at

owner's expense as provided in paragraph 3 below. City shall make every effort at all times to minimize or avoid interference with Owner's use of the Property.

2. Owner shall use its best efforts diligently to maintain the Stormwater Quality Facility in a manner assuring peak performance at all times. All reasonable precautions shall be exercised by Owner and Owner's representative or contractor in the removal and extraction of material(s) from the Stormwater Quality Facility and the ultimate disposal of the material(s) in a manner consistent with all relevant laws and regulations in effect at the time. As may be requested from time to time by the City, the Owner shall provide the City with documentation identifying the material(s) removed, the quantity, and disposal destination.
3. In the event Owner, or its successors or assigns, fails to accomplish the necessary maintenance contemplated by this Agreement, within five (5) days of being given written notice by the City, the City is hereby authorized to cause any maintenance necessary to be done and charge the entire cost and expense to the Owner or Owner's successors or assigns, including administrative costs, attorney's fees and interest thereon at the maximum rate authorized by the Civil Code from the date of the notice of expense until paid in full.
4. The City may require the owner to post security in form and for a time period satisfactory to the city of guarantee the performance of the obligations state herein. Should the Owner fail to perform the obligations under the Agreement, the City may, in the case of a cash bond, act for the Owner using the proceeds from it, or in the case of a surety bond, require the sureties to perform the obligations of the Agreement. As an additional remedy, the Director may withdraw any previous storm water related approval with respect to the property on which a Stormwater Quality Facility has been installed until such time as Owner repays to City its reasonable costs incurred in accordance with paragraph 3 above.
5. This agreement shall be recorded in the City of Goleta, at the expense of the Owner and shall constitute notice to all successors and assigns of the title to said Property of the obligation herein set forth, and also a lien in such amount as will fully reimburse the City, including interest as herein above set forth, subject to foreclosure in event of default in payment.
6. In event of legal action occasioned by any default or action of the Owner, or its successors or assigns, then the Owner and its successors or assigns agree(s) to pay all costs incurred by the City in enforcing the terms of this Agreement, including reasonable attorney's fees and costs, and that the same shall become a part of the lien against said Property.
7. It is the intent of the parties hereto that burdens and benefits herein undertaken shall constitute covenants that run with said Property and constitute a lien there against.
8. The obligations herein undertaken shall be binding upon the heirs, successors, executors, administrators and assigns of the parties hereto. The term "Owner" shall include not only the present Owner, but also its heirs, successors, executors, administrators, and assigns. Owner shall notify any successor to title of all or part of the Property about the existence of this Agreement. Owner shall provide such notice prior to such successor obtaining an interest in all or part of the Property. Owner shall provide a copy of such notice to the City at the same time such notice is provided to the successor.
9. Time is of the essence in the performance of this Agreement.
10. Any notice to a party required or called for in this Agreement shall be served in person, or by deposit in the U.S. Mail, first class postage prepaid, to the address set forth below. Notice(s)

shall be deemed effective upon receipt, or seventy-two (72) hours after deposit in the U.S. Mail, whichever is earlier. A party may change a notice address only by providing written notice thereof to the other party.

IN WITNESS THEREOF, the parties hereto have affixed their signatures as of the date first written above.

APPROVED AS TO FORM:

_____

City Attorney

OWNER:

_____

Name: _____

Title: _____

CITY OF: _____

Name: _____

Title: _____

OWNER: _____

Name: _____

Title: _____

ATTEST: _____

_____

City Clerk Date

NOTARIES ON FOLLOWING PAGE…

VI. Construction Checklist

Table 7.

Stormwater Control Plan Page #	BMP Description	See Plan Sheet #s
Pgs. 3-5 and pg. 13	Bioretention and Infiltration Basins	Site Improvement Plan, Sheet C-1. Storm Water Control Plan (Exhibit 2),

VII. Certifications

The preliminary design of stormwater treatment facilities and other stormwater pollution control measures in this plan are in accordance with the current edition of the County of Santa Barbara Project Clean Water's Stormwater Technical Guide.

Exhibit 1

Central Coast Region

Storm Water Control Measure Sizing Calculator

Central Coast Region Stormwater Control Measure Sizing Calculator

Version: 3/28/2017

1. Project Information

Project name:	WO 1987: HolliPat Parking Lot
Project location:	Goleta
Tier 2/Tier 3:	Tier 3 - Retention
Design rainfall depth (in):	2.2
Total project area (ft2):	82623
Total DMA area (ft2):	82623
Total new impervious area (ft2):	82623
Total replaced impervious within a USA (ft2):	0
Total replaced impervious not in a USA (ft2):	0
Total pervious/landscape area (ft2):	0
Total SCM area (ft2):	84612

Check Total DMA and SCM areas to ensure they match total project area

2. DMA Characterization

Name	DMA Type	Area (ft2)	Surface Type	New, Replaced?	Connection
DMA-1	Drains to SCM	82623	Concrete or asphalt	New	SCM-1

DMA Summary Area	
Total DMA area (ft2):	82623
New impervious area (ft2):	82623
Replaced impervious within a USA (ft2):	0
Replaced impervious not in a USA (ft2):	0
Total pervious/landscape area (ft2):	0

3. SCM Characterization

Name	SCM Type	Safety Factor	SCM Soil Type	Infilt. Rate (in/hr)	Area (ft2)	Flow Control Orifice?	Reservoir Depth (in)
SCM-1	Bioretention	1	HSG A/B	0.75	7800	No	

Note: SCM areas in 'Project Information' and 'SCM Characterization' blocks differ by more than 2%. Please check.

4. Run SBUH Model

5. SCM Minimum Sizing Requirements

SCM Name	Min. Required Storage Vol. (ft3)	Depth Below Underdrain (ft)	Drain Time (hours)	Orifice Diameter (in)
SCM-1	6398	2.05	10.9	

Exhibit 2

334 S. Patterson Ave.

Storm Water Control Plan

PROPOSED 6" PIPE OUTLET TO EXISTING 3"X12" RECTANGULAR CURB FACE DISCHARGE (2)

PROPOSED 6" PIPE CULVERT UNDER DRIVEWAY

SCM-1
7,800 SF

MODIFIED EXISTING INLET AREAS

DMA-1
84,612 SF

LANDSCAPE AREAS, TYP.

PERMEABLE ASPHALT AREAS (13,803 SF)

PROPOSED 6' CONCRETE CROSS GUTTER FOR DRAINAGE

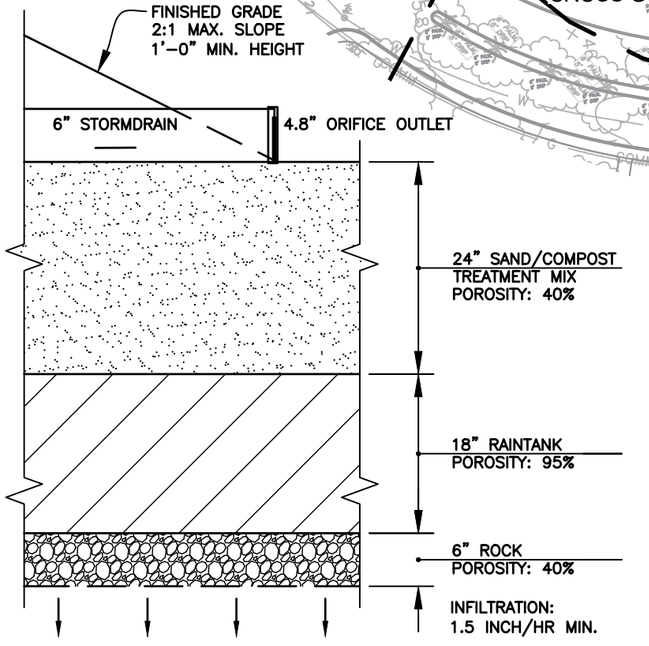
PROPOSED NATIVE EARTHEN SWALE

PROPOSED 6' CONCRETE CROSS GUTTER FOR DRAINAGE

PARKING LOT REMOVAL AND RESTORATION AREA

HOLLIPAT CENTER DRIVE

HOLLISTER AVENUE



TYPICAL DETENTION / TREATMENT SECTION

NOT TO SCALE

SCALE: 1" = 50'

STORM WATER CONTROL EXHIBIT

GOLETA VALLEY COTTAGE HOSPITAL
HOLLIPAT PARKING AMENDMENT

CITY OF GOLETA, CALIFORNIA

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