Water Quality Technical Report
(WQTR)

For

LATITUDE 2 CONDOMINIUMS

Preparation Date: January 27, 2015
Revised Date: June 15, 2015

Prepared for:

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Prepared by:

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The selection, sizing, and preliminary design of stormwater treatment and other control measures in this plan have been prepared under the direction of the following Registered Civil Engineer and meet the requirements of Regional Water Quality Control Board Order R9-2007-0001 and subsequent amendments.

Roger Chung, P.E., C65388_____ _1/27/15_____
Name, RCE # Date

Project Information:

Project Name:	Latitude 2 Condominiums
Project Location/Address:	Northeast corner of Centre City Parkway and W. Washington Ave in Escondido, CA
Permit Number (Land Development Projects):	
Applicant:	N.C.A. Real Estate
Applicant's Address:	14 Corporate Plaza, Suite 100 Newport Beach, CA 92660
Plan Prepared By (Leave blank if same as applicant):	VA Consulting, Inc.
Preparer's Address:	46 Discovery, Suite 250 Irvine, CA 92618
Date:	January 27, 2015

The purpose of the WQTR is to describe how the project will minimize the short and long-term impacts on receiving water quality. Projects that meet the criteria for a priority development project are required to prepare a WQTR.

Project Stages	Does the WQTR need revisions?		If YES, Provide Revision Date	County Reviewer
	YES	NO		
Preliminary engineering/ Entitlements				
Final Engineering				

Complete of the following checklists and attachments will fulfill the requirements of a WQTR for the project listed above.

STEP 1
PRIORITY DEVELOPMENT PROJECT DETERMINATION

TABLE 1: IS THE PROJECT IN ANY OF THESE CATEGORIES?

Yes ☒	No ☐	A	Housing subdivisions of 10 or more dwelling units. Examples: single-family homes, multi-family homes, condominiums, and apartments.
Yes ☐	No ☒	B	Commercial—greater than one acre (total disturbed area). Any development other than heavy industry or residential. Examples: hospitals; laboratories and other medical facilities; educational institutions; recreational facilities; municipal facilities; commercial nurseries; multi-apartment buildings; car wash facilities; mini-malls and other business complexes; shopping malls; hotels; office buildings; public warehouses; automotive dealerships; airfields; and other light industrial facilities.
Yes ☐	No ☒	C	Heavy industry—greater than one acre (total disturbed area). Examples: manufacturing plants, food processing plants, metal working facilities, printing plants, and fleet storage areas (bus, truck, etc.).
Yes ☐	No ☒	D	Automotive repair shops. A facility categorized in any one of Standard Industrial Classification (SIC) codes 5013, 5014, 5541, 7532-7534, or 7536-7539.
Yes ☐	No ☒	E	Restaurants. Any facility that sells prepared foods and drinks for consumption, including stationary lunch counters and refreshment stands selling prepared foods and drinks for immediate consumption (SIC code 5812), where the land area for development is greater than 5,000 square feet. Restaurants where land development is less than 5,000 square feet shall meet all SUSMP requirements except for structural treatment BMP and numeric sizing criteria requirements and hydromodification requirements.
Yes ☐	No ☒	F	Hillside development greater than 5,000 square feet. Any development that creates 5,000 square feet of impervious surface and is located in an area with known erosive soil conditions, where the development will grade on any natural slope that is twenty-five percent or greater.
Yes ☐	No ☒	G	Environmentally Sensitive Areas (ESAs). All development located within or directly adjacent to or discharging directly to an ESA (where discharges from the development or redevelopment will enter receiving waters within the ESA), which either creates 2,500 square feet of impervious surface on a proposed project site or increases the area of imperviousness of a proposed project site to 10% or more of its naturally occurring condition. "Directly adjacent" means situated within 200 feet of the ESA. "Discharging directly to" means outflow from a drainage conveyance system that is composed entirely of flows from the subject development or redevelopment site, and not commingled with flows from adjacent lands.
Yes ☒	No ☐	H	Parking lots 5,000 square feet or more or with 15 or more (paved) parking spaces and potentially exposed to urban runoff.
Yes ☐	No ☒	I	Street, roads, highways, and freeways. Any paved surface that is 5,000 square feet or greater used for the transportation of automobiles, trucks, motorcycles, and other vehicles.
Yes ☐	No ☒	J	Retail Gasoline Outlets (RGOs) that are: (a) 5,000 square feet or more or (b) a projected Average Daily Traffic (ADT) of 100 or more vehicles per day.

To use the table, review each definition A through K. If any of the definitions match, the project is a Priority Development Project. Note some thresholds are defined by square footage of impervious area created; others by the total area of the development. Please see special requirements for previously developed sites and project exemptions on page 6 of the County SUSMP.

STEP 2
PROJECT STORMWATER QUALITY DETERMINATION

Total Project Site Area _3.88 acres__ (Acres or ft^2)
Estimated amount of disturbed area: _3.88 acres_ (Acres or ft^2)
(If >1 acre, you must also provide a WDID number from the SWRCB)
WDID: _____

Complete A through C and the calculations below to determine the amount of impervious surface on your project before and after construction.
A. Total size of project site: _3.88 acres__ (Acres or ft^2)

B. Total impervious area (including roof tops) before construction _0.74 acres_ (Acres or ft^2)

C. Total impervious area (including roof tops) after construction _3.00 acres (Acres or ft^2)

Calculate percent impervious before construction: B/A = _19_%
Calculate percent impervious after construction: C/A = _77_%

Please provide detailed descriptions regarding the following questions:

TABLE 2: PROJECT SPECIFIC STORMWATER ANALYSIS

1.	Please provide a brief description of the project.
Latitude 2 Condominiums (Project) is located on the northeast corner of the intersection of Centre City Parkway and West Washington Avenue. The proposed project is a multi-family residential development that will consist of 112 units arranged in 6 buildings, a leasing office, fitness center, pool area and parking lots throughout the project area and off-site street improvements. The project will be constructed on approximately 3.88 acres.	
2.	Describe the current and proposed zoning and land use designation.
Based on the City of Escondido's General Plan, the current land use designation of the project site is mixed use development. The designation accommodates for developments that horizontally distributes a mix of land uses, which may include residential, commercial, office and/or buildings that may include vertically integrated land uses. The proposed land use designation of the project site is High Density Multi-Family Residential Urban V and zoning will be R-5-30.	
3.	Describe the pre-project and post-project topography of the project. (Show on Plan)
In the pre-project condition, the site is undeveloped and covered mainly by native grasses and medium trees. The elevations of the project site ranges from 649 feet (ft) to 641 ft from east to west. The north half of the project drains from the northeast corner towards the southwesterly direction. The south half of the project drains from the southeast corner towards the northwesterly direction. Runoff off from this project site is conveyed by the reinforced concrete box (RCB) in Centre City Parkway. In the post-project condition, the multi-family residential development will consist of 6 buildings, a leasing office, fitness center, pool area and parking lots. Most of the site will be impervious due to the buildings and parking lots with some pervious areas such as landscaping. The elevations of the project site ranges from 649.1 feet (ft) to 646.7 ft from west to east. On-site runoff will be treated by the proposed nine cisterns, that are located underneath the street and parking lots throughout the project site, and the bioretention basin area, which is west of the project. The treated runoff will drain into the proposed 6.5'W x 3'H RCB that runs through the middle of the project site from east to west. The proposed RCB will connect to the existing 8'W x 4'H RCB that runs across Centre City Parkway.	
4.	Describe the soil classification, permeability, erodibility, and depth to groundwater for LID and Treatment BMP consideration. (Show on Plan) If infiltration BMPs are proposed, a Geotechnical Engineer must certify infiltration BMPs in Attachment E.
The soils on site consists of alluvium deposits of stiff clayey silt/clay, firm to stiff clayey silt, soft to stiff sandy silt with varying amounts of clay, stiff to hard silty sand/sandy silt with varying amounts of clay, medium dense to very dense silty sand with trace clay, medium dense silty sand/sand. Per the county of San Diego Soil Hydrology Group Map, the site contains Soil Type D. The infiltration rate within the site ranged from 0.34-0.62 in/hr. Since the site will be improved with buildings, parking lots and landscaped areas, soil erodibility will not be an issue. Free groundwater was encountered at an approximate depth of 14 feet to 15 feet. Historically, the highest groundwater is estimated to be at a depth of 10 feet below ground surface based on regional ground water well data. An infiltration system shall be located at minimum distances of 10 feet from any foundations and 10 feet from property lines.	
5.	Describe if contaminated or hazardous soils are within the project area. (Show on Plan)
There are no known contaminated or hazardous soils within the project area.	
6.	Describe the existing site drainage and natural hydrologic features. (Show on Plan).
Currently, the site is undeveloped and covered mainly by native grasses and medium trees. The north half of the project drains from the northeast corner towards the southwesterly direction. The south half of the project drains from the southeast corner towards the northwesterly direction. Runoff off from this project site is conveyed by the 8'W x 4'H reinforced concrete box (RCB) that runs across Centre City Parkway.	

7.	Describe site features and conditions that constrain, or provide opportunities for stormwater control, such as LID features.	
Since there is a high percentage of improved and impervious area within the project area, a proposed cistern with bioretention will treat on-site runoff.		
8.	Is this project within the environmentally sensitive areas as defined on the maps in Appendix A of the County of San Diego Standard Urban Storm Water Mitigation Plan for Land Development and Public Improvement Projects?	
YES ☐		NO ☒
9.	Is this an emergency project? If yes, please provide a description below.	
YES ☐		NO ☒

CHANNELS & DRAINAGES

Complete the following checklist to determine if the project includes work in channels.

TABLE 3: CHANNEL& DRAINAGE ANALYSIS

No.	CRITERIA	YES	NO	N/A	COMMENTS
1.	Will the project include work in channels?	☐	☒	☐	If YES go to 2 If NO go to 13.
2.	Will the project increase velocity or volume of downstream flow?	☐	☐	☒	If YES go to 6.
3.	Will the project discharge to unlined channels?	☐	☐	☒	If YES go to. 6.
4.	Will the project increase potential sediment load of downstream flow?	☐	☐	☒	If YES go to 6.
5.	Will the project encroach, cross, realign, or cause other hydraulic changes to a stream that may affect downstream channel stability?	☐	☐	☒	If YES go to 8.
6.	Review channel lining materials and design for stream bank erosion.	☐	☐	☒	Continue to 7.
7.	Consider channel erosion control measures within the project limits as well as downstream. Consider scour velocity.	☐	☐	☒	Continue to 8.
8.	Include, where appropriate, energy dissipation devices at culverts.	☐	☐	☒	Continue to 9.
9.	Ensure all transitions between culvert outlets/headwalls/wingwalls and channels are smooth to reduce turbulence and scour.	☐	☐	☒	Continue to 10.
10.	Include, if appropriate, detention facilities to reduce peak discharges.	☐	☐	☒	Continue to 11.
11.	“Hardening“ natural downstream areas to prevent erosion is not an acceptable technique for protecting channel slopes, unless pre-development conditions are determined to be so erosive that hardening would be required even in the absence of the proposed development.	☐	☐	☒	Continue to 12.
12.	Provide other design principles that are comparable and equally effective.	☐	☐	☒	Continue to 13.
13.	End (proposed drainage will be a storm drain pipe connected to an existing culvert)	☒	☐	☐	No work in channels

TEMPORARY CONSTRUCTION BMPS

Please check the construction BMPs that may be implemented during construction of the project. The applicant will be responsible for the placement and maintenance of the BMPs incorporated into the final project design.

☒ Silt Fence	☒ Desilting Basin
☒ Fiber Rolls	☒ Gravel Bag Berm
☒ Street Sweeping and Vacuuming	☒ Sandbag Barrier
☒ Storm Drain Inlet Protection	☒ Material Delivery and Storage
☒ Stockpile Management	☒ Spill Prevention and Control
☒ Solid Waste Management	☒ Concrete Waste Management
☒ Stabilized Construction Entrance/Exit	☒ Water Conservation Practices
☐ Dewatering Operations	☒ Paving and Grinding Operations
☐ Vehicle and Equipment Maintenance	☒ Any minor slopes created incidental to construction and not subject to a major or minor grading permit shall be protected by covering with plastic or tarp prior to a rain event, and shall have vegetative cover reestablished within 180 days of completion of the slope and prior to final building approval.

EXCEPTIONAL THREAT TO WATER QUALITY DETERMINATION

Complete the checklist below to determine if a proposed project will pose an "exceptional threat to water quality," and therefore require Advanced Treatment Best Management Practices during the construction phase.

TABLE 4: EXCEPTIONAL THREAT TO WATER QUALITY DETERMINATION

No.	CRITERIA	YES	NO	INFORMATION
1.	Is all or part of the proposed project site within 200 feet of waters named on the Clean Water Act (CWA) Section 303(d) list of Water Quality Limited Segments as impaired for sedimentation and/or turbidity? Current 303d list may be obtained from the following site: http://www.waterboards.ca.gov/water_issues/programs/tmdl/2010state_ir_reports/category5_report.shtml	☐	☒	If YES, continue to 2. If NO, go to 5.
2.	Will the project disturb more than 5 acres, including all phases of the development?	☐	☒	If YES, continue to 3. If NO, go to 5.
3.	Will the project disturb slopes that are steeper than 4:1 (horizontal: vertical) with at least 10 feet of relief, and that drain toward the 303(d) listed receiving water for sedimentation and/or turbidity?	☐	☒	If YES, continue to 4. If NO, go to 5.
4.	Will the project disturb soils with a predominance of USDA-NRCS Erosion factors k f greater than or equal to 0.4? http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm	☐	☒	If YES, continue to 6. If NO, go to 5.
5.	Project is not required to use Advanced Treatment BMPs.	☐	☒	Document for Project Files by referencing this checklist.
6.	Project poses an "exceptional threat to water quality" and is required to use Advanced Treatment BMPs	☐	☐	Advanced Treatment BMPs must be consistent with WPO section 67.811(b)(20)(D) Performance criteria

Exemption potentially available for projects that require advanced treatment: Project proponent may perform a Revised Universal Soil Loss Equation, Version 2 (RUSLE 2), Modified Universal Soil Loss Equation (MUSLE), or similar analysis that demonstrates (to the County official's satisfaction) that advanced treatment is not required.

STEP 3
HYDROMODIFICATION DETERMINATION

The following questions provide a guide to collecting information relevant to hydromodification management plan (HMP) issues. If the project is exempt from the HMP criteria, please provide the supporting documentation in Attachment H. Please reference the full descriptions of the HMP exemptions located in Figure 1-1 of the County SUSMP.

TABLE 5: HYDROMODIFICATION DETERMINATION

QUESTIONS		YES	NO	Information
1.	Will the project reduce the pre-project impervious area and are the unmitigated post-project outflows (outflows without detention routing) to each outlet location less as compared to the pre-project condition?	☐	☒	If NO, continue to 2. If YES, go to 7.
2.	Would the project site discharge runoff directly to an exempt receiving water, such as the Pacific Ocean, San Diego Bay, an exempt reservoir, or a tidally-influenced area?	☐	☒	If NO, continue to 3. If YES, go to 7.
3.	Would the project site discharge to a stabilized conveyance system, which has the capacity for the ultimate Q_{10}, and extends to the Pacific Ocean, San Diego Bay, a tidally-influenced area, an exempt river reach or reservoir?	☐	☒	If NO, continue to 4. If YES, go to 7
4.	Does the contributing watershed area to which the project discharges have an impervious area percentage greater than 70 percent?	☐	☒	If NO, continue to 5. If YES, go to 7.
5.	Is this an urban infill project which discharges to an existing hardened or rehabilitated conveyance system that extends beyond the “domain of analysis,” where the potential for cumulative impacts in the watershed are low, and the ultimate receiving channel has a "Low” susceptibility to erosion as defined in the SCCWRP channel assessment tool?	☐	☒	If NO, continue to 6. If YES, go to 7.
6.	Project is required to manage hydromodification impacts.	☒	☐	Reference Appendix G “Hydromodification Management Plan” of the County SUSMP.
7.	Project is not required to manage hydromodification impacts.	☐	☐	Hydromodification Exempt. Keep on file.

STEP 4
POLLUTANTS OF CONCERN DETERMINATION

WATERSHED

Please check the watershed(s) for the project.

☐ San Juan 901	☐ Santa Margarita 902	☐ San Luis Rey 903	☒ Carlsbad 904
☐ San Dieguito 905	☐ Penasquitos 906	☐ San Diego 907	☐ Sweetwater 909
☐ Otay 910	☐ Tijuana 911	☐ Whitewater 719*	☐ Clark 720*
☐ West Salton 721*	☐ Anza Borrego 722*	☐ Imperial 723*	

http://www.waterboards.ca.gov/sandiego/water_issues/programs/basin_plan/index.shtml
*Projects located fully within these watersheds require only a Minor SWMP.

HYDROLOGIC SUB-AREA NAME AND BASIN NUMBER(S)

Basin Number	Sub-Area Name
904.62	Escondido HSA

http://www.waterboards.ca.gov/sandiego/water_issues/programs/basin_plan/index.shtml

RECEIVING WATERS that each project discharge point proposes to discharge to.

RECEIVING WATERS (river, lake, reservoir, etc.)	Hydrologic Unit Basin Number	Impairment(s) listed [303(d) listed waters or waters with established TMDLs]. List the impairments identified in Table 7.	Distance to Project
Escondido Creek	904.62	DDT (Dichlorodiphenyltrichloroethane), Enterococcus, Fecal Coliform, Manganese, Phosphate, Selenium, Sulfates, Total Dissolved Solids, Total Nitrogen as N, Toxicity	1425 ft
San Elijo Lagoon	904.61	Eutrophic, Indicator Bacteria, Sedimentation/Siltation	12.4 mi
Pacific Ocean Shoreline, San Elijo HAS, at Cardiff State Beach at San Elijo Lagoon	904.60	Total Coliform	13.7 mi

http://www.waterboards.ca.gov/water_issues/programs/tmdl/docs/303dlists2006/epa/r9_06_303d_reqtmdls.pdf

GROUND WATERS

Ground Waters	Hydrologic Unit Basin Number	MUN	AGR	IND	PROC	GWR	FRESH
Escondido Creek	904.62	●	●	●			
San Elijo Lagoon	904.61	○	●	●			

http://www.waterboards.ca.gov/sandiego/water_issues/programs/basin_plan/index.shtml
+ Excepted from Municipal ● Existing Beneficial Use ○ Potential Beneficial Use

PROJECT ANTICIPATED AND POTENTIAL POLLUTANTS

Using Table 6, identify pollutants that are anticipated to be generated from the proposed priority project categories. Pollutants associated with any hazardous material sites that have been remediated or are not threatened by the proposed project are not considered a pollutant of concern.

TABLE 6: ANTICIPATED AND POTENTIAL POLLUTANTS GENERATED BY LAND USE TYPE

	General Pollutant Categories								
PDP Categories	Sediments	Nutrients	Heavy Metals	Organic Compounds	Trash & Debris	Oxygen Demanding Substances	Oil & Grease	Bacteria & Viruses	Pesticides
Detached Residential Development	X	X			X	X	X	X	X
Attached Residential Development	X	X			X	P(1)	P(2)	P	X
Commercial Development 1 acre or greater	P(1)	P(1)		P(2)	X	P(5)	X	P(3)	P(5)
Heavy industry /industrial development	X		X	X	X	X	X		
Automotive Repair Shops			X	X(4)(5)	X		X		
Restaurants					X	X	X	X	
Hillside Development >5,000 ft²	X	X			X	X	X		X
Parking Lots	P(1)	P(1)	X		X	P(1)	X		P(1)
Retail Gasoline Outlets			X	X	X	X	X		
Streets, Highways & Freeways	X	P(1)	X	X(4)	X	P(5)	X		

X = anticipated
P = potential
(1) A potential pollutant if landscaping exists on-site.
(2) A potential pollutant if the project includes uncovered parking areas.
(3) A potential pollutant if land use involves food or animal waste products.
(4) Including petroleum hydrocarbons.
(5) Including solvents.

PROJECT POLLUTANTS OF CONCERN SUMMARY TABLE

Please summarize the identified project pollutants-of-concern by checking the appropriate boxes in the table below and list any surface water impairments identified. Pollutants anticipated to be generated by the project, which are also causing impairment of receiving waters, shall be considered the primary pollutants of concern. For projects where no primary pollutants of concern exist, those pollutants identified as anticipated shall be considered secondary pollutants of concern.

TABLE 7: PROJECT POLLUTANTS OF CONCERN

Pollutant Category	Anticipated (X)	Potential (P)	Surface Water Impairments (determined by your receiving waters impairments on page 10)
Sediments	X		Sedimentation/Siltation, Toxicity
Nutrients	X		Phosphate, Total Nitrogen as N, Eutrophic
Heavy Metals	X		Manganese, Selenium
Organic Compounds			
Trash & Debris	X		
Oxygen Demanding Substances		P	Sulfates
Oil & Grease	X		
Bacteria & Viruses		P	Indicator Bacteria, Total Coliform, Fecal Coliform, Enterococcus
Pesticides	X		DDT (Dichlorodiphenyltrichloroethane), Total Dissolved Solids

STEP 5
LID AND SITE DESIGN STRATEGIES
Each numbered item below is a Low Impact Development (LID) requirement of the WPO. Please check the box(s) under each number that best describes the LID BMP(s) and Site Design Strategies selected for this project. LID BMPs selected on this table will be typically represented as a self-retaining area, self-treating area, pervious pavement and greenroof, which, should be delineated in the Drainage Management Area map in Attachment C.

TABLE 8: LID AND SITE DESIGN

1. Conserve natural Areas, Soils, and Vegetation
☐ Preserve well draining soils (Type A or B)
☐ Preserve Significant Trees
☐ Preserve critical (or problematic) areas such as floodplains, steep slopes, wetlands, and areas with erosive or unstable soil conditions
☐ Other. Description:
2. Minimize Disturbance to Natural Drainages
☐ Set-back development envelope from drainages
☐ Restrict heavy construction equipment access to planned green/ open space areas
☐ Other. Description:
3. Minimize and Disconnect Impervious Surfaces (see 5)
☐ Clustered Lot Design
☒ Items checked in 5
☐ Other. Description:
4. Minimize Soil Compaction
☐ Restrict heavy construction equipment access to planned green/ open space areas
☐ Re-till soils compacted by construction vehicles/equipment
☐ Collect & re-use upper soil layers of development site containing organic materials
☐ Other. Description:
5. Drain Runoff from Impervious Surfaces to Pervious Areas
<u>LID Street & Road Design</u>
☐ Curb-cuts to landscaping
☐ Rural Swales
☐ Concave Median
☐ Cul-de-sac Landscaping Design
☒ Other. Description: Roof drains disconnected from storm drain collection system where possible.
<u>LID Parking Lot Design</u>
☐ Permeable Pavements
☐ Curb-cuts to landscaping
☐ Other. Description:
<u>LID Driveway, Sidewalk, Bike-path Design</u>
☐ Permeable Pavements
☒ Pitch pavements toward landscaping

☐ Other. Description:
LID Building Design
☒ Cisterns & Rain Barrels
☒ Downspout to swale or landscaping
☐ Vegetated Roofs
☐ Other. Description:
LID Landscaping Design
☐ Soil Amendments
☐ Reuse of Native Soils
☒ Smart Irrigation Systems
☒ Street Trees
☐ Other. Description:
6. Minimize erosion from slopes
☐ Disturb existing slopes only when necessary
☐ Minimize cut and fill areas to reduce slope lengths
☐ Incorporate retaining walls to reduce steepness of slopes or to shorten slopes
☐ Provide benches or terraces on high cut and fill slopes to reduce concentration of flows
☐ Rounding and shaping slopes to reduce concentrated flow
☒ Collect concentrated flows in stabilized drains and channels
☐ Other. Description:

STEP 6
SOURCE CONTROL
Please complete the checklist on the following pages to determine Source Control BMPs. Below is instruction on how to use the checklist. (Also see instructions on page 60 of the SUSMP)

1. Review Column 1 and identify which of these potential sources of stormwater pollutants apply to your site. Check each box that applies and list in Table 9.
2. Review Column 2 and incorporate all of the corresponding applicable BMPs in your Source Control Exhibit in Attachment B.
3. Review Columns 3 and 4 and incorporate all of the corresponding applicable permanent controls and operational BMPs into Table 9.
4. Use the format in Table 9 below to summarize the project Source Control BMPs. Incorporate all identified Source Control BMPs in your Source Control Exhibit in Attachment B.

TABLE 9: PROJECT SOURCE CONTROL BMPS

Potential source of runoff pollutants	Permanent source control BMPs	Operational source control BMPs
A. On-site storm drain inlets	Mark all inlets with the words "No Dumping! Flows to Bay" or similar where feasible.	Maintain and periodically repaint or replace inlet markings. Provide stormwater pollution prevention information to new site owners, lessees, or operators. See applicable operational BMPs in Fact Sheet SC-44, "Drainage System Maintenance," in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com Include the following in lease agreements: "Tenant shall not allow anyone to discharge anything to storm drains or to store or deposit materials so as to create a potential discharge to storm drains."
D1. Need for future indoor & structural pest control	Note building design features that discourage entry of pests.	Provide Integrated Pest Management information to owners, lessees, and operators.
D2. Landscape/ Outdoor Pesticide Use Note: Should be consistent with project landscape plan (if applicable).	Where landscaped areas are used to retain or detain stormwater, specify plants that are tolerant of saturated soil conditions. To insure successful establishment, select plants	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

	appropriate to site soils, slopes, climate, sun, wind, rain, land use, air movement, ecological consistency, and plant interactions.	Handbooks at www.cabmphandbooks.com Provide IPM information to new owners, lessees and operators.
E. Pools, spas, ponds, decorative fountains, and other water features.		See applicable operational BMPs in Fact Sheet SC-72, "Fountain and Pool Maintenance," in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com
G. Refuse areas	State how site refuse will be handled and provide supporting detail to what is shown on plans. State that signs will be posted on or near dumpsters with the words "Do not dump hazardous materials here" or similar.	State how the following will be implemented: Provide adequate number of receptacles. Inspect receptacles regularly; repair or replace leaky receptacles. Keep receptacles covered. Prohibit/prevent dumping of liquid or hazardous wastes. Post "no hazardous materials" signs. Inspect and pick up litter daily and clean up spills immediately. Keep spill control materials available on-site. See Fact Sheet SC-34, "Waste Handling and Disposal" in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com
P. Plazas, sidewalks, and parking lots.		Plazas, sidewalks, and parking lots shall be swept regularly to prevent the accumulation of litter and debris. Debris from pressure washing shall be collected to prevent entry into the storm drain system. Washwater containing any cleaning agent or degreaser shall be collected and discharged to the sanitary sewer and not discharged to a storm drain.

Describe your specific Source Control BMPs in an accompanying narrative, and explain any special conditions or situations that required omitting Source Control BMPs or substituting alternatives.

The proposed project is a multi-family residential development with 112 units, as well as, a swimming pool, club room, leasing office, fitness center, parking lots, refuse areas and landscaping on site.

The owner shall:

- Mark all inlets with the words "No Dumping! Flows to Bay" or similar where feasible.
- Maintain and periodically repaint or replace inlet markings.
- Provide stormwater pollution prevention information to new site owners, lessees, or operators.
- Include the following in lease agreements: "Tenant shall not allow anyone to discharge anything to storm drains or to store or deposit materials so as to create a potential discharge to storm drains."
- Select building design features that discourage entry of pests.
- Provide Integrated Pest Management information to owners, lessees, and operators.
- Where landscaped areas are used to retain or detain stormwater, specify plants that are tolerant of saturated soil conditions.
- To insure 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.
- State that signs will be posted on or near dumpsters with the words "Do not dump hazardous materials here" or similar.
- Provide adequate number of receptacles. Inspect receptacles regularly; repair or replace leaky receptacles. Keep receptacles covered. Prohibit/prevent dumping of liquid or hazardous wastes. Post "no hazardous materials" signs. Inspect and pick up litter daily and clean up spills immediately. Keep spill control materials available on-site.
- Plazas, sidewalks, and parking lots shall be swept regularly to prevent the accumulation of litter and debris. Debris from pressure washing shall be collected to prevent entry into the storm drain system. Washwater containing any cleaning agent or degreaser shall be collected and discharged to the sanitary sewer and not discharged to a storm drain.
- Follow applicable operational BMPs in Fact Sheet SC-44, "Drainage System Maintenance," in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com
- Follow applicable operational BMPs in Fact Sheet SC-41, "Building and Grounds Maintenance," in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com
- Follow applicable operational BMPs in Fact Sheet SC-72, "Fountain and Pool Maintenance," in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com
- Follow Fact Sheet SC-34, "Waste Handling and Disposal" in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com

Since the project is a multi-family residential development, there are no interior floor drains, elevator shaft sump pumps, interior parking garages, food services on site, industrial processes, outdoor storages for equipment or materials, cleaning, repairing and maintenance of vehicles/equipment, fuel dispensing areas, lading docks, fire sprinkler test water and miscellaneous drain or wash water.

IF THESE SOURCES WILL BE ON THE PROJECT SITE …	… THEN YOUR STORMWATER CONTROL PLAN SHOULD INCLUDE THESE SOURCE CONTROL BMPs		
1 **Potential Sources of Runoff Pollutants – List in Table 9**	**2** **Permanent Controls—Show on Source Control Exhibit, Attachment B**	**3** **Permanent Controls—List in Table 9 and Narrative**	**4** **Operational BMPs—Include in Table 9 and Narrative**
☒ A. On-site storm drain inlets	☒ Locations of inlets.	☒ Mark all inlets with the words "No Dumping! Flows to Bay" or similar where feasible.	☒ Maintain and periodically repaint or replace inlet markings. ☒ Provide stormwater pollution prevention information to new site owners, lessees, or operators. ☒ See applicable operational BMPs in Fact Sheet SC-44, "Drainage System Maintenance," in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com ☒ Include the following in lease agreements: "Tenant shall not allow anyone to discharge anything to storm drains or to store or deposit materials so as to create a potential discharge to storm drains."
☐ B. Interior floor drains and elevator shaft sump pumps		☐ State that interior floor drains and elevator shaft sump pumps will be plumbed to sanitary sewer.	☐ Inspect and maintain drains to prevent blockages and overflow.
☐ C. Interior parking garages		☐ State that parking garage floor drains will be plumbed to the sanitary sewer.	☐ Inspect and maintain drains to prevent blockages and overflow
☒ D1. Need for future indoor & structural pest control		☒ Note building design features that discourage entry of pests.	☒ Provide Integrated Pest Management information to owners, lessees, and operators.

IF THESE SOURCES WILL BE ON THE PROJECT SITE …	… THEN YOUR STORMWATER CONTROL PLAN SHOULD INCLUDE THESE SOURCE CONTROL BMPs		
1 **Potential Sources of Runoff Pollutants – List in Table 9**	**2** **Permanent Controls—Show on Source Control Exhibit, Attachment B**	**3** **Permanent Controls—List in Table 9 and Narrative**	**4** **Operational BMPs—Include in Table 9 and Narrative**
☒ D2. Landscape/ Outdoor Pesticide Use Note: Should be consistent with project landscape plan (if applicable).	☐ Show locations of native trees or areas of shrubs and ground cover to be undisturbed and retained. ☐ Show self-retaining landscape areas, if any. ☒ Show stormwater treatment facilities.	State that final landscape plans will accomplish all of the following: ☐ 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 insure 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.

IF THESE SOURCES WILL BE ON THE PROJECT SITE …	… THEN YOUR STORMWATER CONTROL PLAN SHOULD INCLUDE THESE SOURCE CONTROL BMPs		
1 **Potential Sources of Runoff Pollutants – List in Table 9**	**2** **Permanent Controls—Show on Source Control Exhibit, Attachment B**	**3** **Permanent Controls—List in Table 9 and Narrative**	**4** **Operational BMPs—Include in Table 9 and Narrative**
☒ E. Pools, spas, ponds, decorative fountains, and other water features.	☒ Show location of water feature and a sanitary sewer cleanout in an accessible area within 10 feet.	☐ If the local municipality requires pools to be plumbed to the sanitary sewer, place a note on the plans and state in the narrative that this connection will be made according to local requirements.	☒ See applicable operational BMPs in Fact Sheet SC-72, "Fountain and Pool Maintenance," in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com
☐ F. Food service	☐ For restaurants, grocery stores, and other food service operations, show location (indoors or in a covered area outdoors) of a floor sink or other area for cleaning floor mats, containers, and equipment. ☐ On the drawing, show a note that this drain will be connected to a grease interceptor before discharging to the sanitary sewer.	☐ Describe the location and features of the designated cleaning area. ☐ Describe the items to be cleaned in this facility and how it has been sized to insure that the largest items can be accommodated.	☐ See applicable operational BMPs in Fact Sheet SC-72, "Fountain and Pool Maintenance," in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com

IF THESE SOURCES WILL BE ON THE PROJECT SITE …	… THEN YOUR STORMWATER CONTROL PLAN SHOULD INCLUDE THESE SOURCE CONTROL BMPs		
1 **Potential Sources of Runoff Pollutants – List in Table 9**	**2** **Permanent Controls—Show on Source Control Exhibit, Attachment B**	**3** **Permanent Controls—List in Table 9 and Narrative**	**4** **Operational BMPs—Include in Table 9 and Narrative**
☒ G. Refuse areas	☒ Show where site refuse and recycled materials will be handled and stored for pickup. See local municipal requirements for sizes and other details of refuse areas. ☒ If dumpsters or other receptacles are outdoors, show how the designated area will be covered, graded, and paved to prevent run-on and show locations of berms to prevent runoff from the area. ☐ Any drains from dumpsters, compactors, and tallow bin areas shall be connected to a grease removal device before discharge to sanitary sewer.	☒ State how site refuse will be handled and provide supporting detail to what is shown on plans. ☒ State that signs will be posted on or near dumpsters with the words "Do not dump hazardous materials here" or similar.	State how the following will be implemented: ☒ Provide adequate number of receptacles. Inspect receptacles regularly; repair or replace leaky receptacles. Keep receptacles covered. Prohibit/prevent dumping of liquid or hazardous wastes. Post "no hazardous materials" signs. Inspect and pick up litter daily and clean up spills immediately. Keep spill control materials available on-site. See Fact Sheet SC-34, "Waste Handling and Disposal" in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com
☐ H. Industrial processes	☐ Show process area	☐ If industrial processes are to be located on site, state: "All process activities to be performed indoors. No processes to drain to exterior or to storm drain system."	☐ See Fact Sheet SC-10, "Non-Stormwater Discharges" in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com

IF THESE SOURCES WILL BE ON THE PROJECT SITE …	… THEN YOUR STORMWATER CONTROL PLAN SHOULD INCLUDE THESE SOURCE CONTROL BMPs		
1 **Potential Sources of Runoff Pollutants – List in Table 9**	**2** **Permanent Controls—Show on Source Control Exhibit, Attachment B**	**3** **Permanent Controls—List in Table 9 and Narrative**	**4** **Operational BMPs—Include in Table 9 and Narrative**
☐ I. Outdoor storage of equipment or materials. (See rows J and K for source control measures for vehicle cleaning, repair, and maintenance.)	☐ Show any outdoor storage areas, including how materials will be covered. Show how areas will be graded and bermed to prevent run-on or run-off from area. ☐ Storage of non-hazardous liquids shall be covered by a roof and/or drain to the sanitary sewer system, and be contained by berms, dikes, liners, or vaults. ☐ Storage of hazardous materials and wastes must be in compliance with the local hazardous materials ordinance and a Hazardous Materials Management Plan for the site.	☐ 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 local Hazardous Materials 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

IF THESE SOURCES WILL BE ON THE PROJECT SITE …	… THEN YOUR STORMWATER CONTROL PLAN SHOULD INCLUDE THESE SOURCE CONTROL BMPs		
1 **Potential Sources of Runoff Pollutants – List in Table 9**	**2** **Permanent Controls—Show on Source Control Exhibit, Attachment B**	**3** **Permanent Controls—List in Table 9 and Narrative**	**4** **Operational BMPs—Include in Table 9 and Narrative**
☐ J. Vehicle and Equipment Cleaning	☐ Show on drawings as appropriate: (1) Commercial/industrial facilities having vehicle /equipment cleaning needs shall either provide a covered, bermed area for washing activities or discourage vehicle/equipment washing by removing hose bibs and installing signs prohibiting such uses. (2) Multi-dwelling complexes shall have a paved, bermed, and covered car wash area (unless car washing is prohibited on-site and hoses are provided with an automatic shut-off to discourage such use). (3) Washing areas for cars, vehicles, and equipment shall be paved, designed to prevent run-on to or runoff from the area, and plumbed to drain to the sanitary sewer. (4) Commercial car wash facilities shall be designed such that no runoff from the facility is discharged to the storm drain system. Wastewater from the facility shall discharge to the sanitary sewer, or a wastewater reclamation system shall be installed.	☐ If a car wash area is not provided, describe measures taken to discourage on-site car washing and explain how these will be enforced.	Describe operational measures to implement the following (if applicable): ☐ Washwater from vehicle and equipment washing operations shall not be discharged to the storm drain system. ☐ Car dealerships and similar may rinse cars with water only. ☐ See Fact Sheet SC-21, "Vehicle and Equipment Cleaning," in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com

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1 **Potential Sources of Runoff Pollutants – List in Table 9**	**2** **Permanent Controls—Show on Source Control Exhibit, Attachment B**	**3** **Permanent Controls—List in Table 9 and Narrative**	**4** **Operational BMPs—Include in Table 9 and Narrative**
☐ K. Vehicle/Equipment Repair and Maintenance	☐ Accommodate all vehicle equipment repair and maintenance indoors. Or designate an outdoor work area and design the area to prevent run-on and runoff of stormwater. ☐ Show secondary containment for exterior work areas where motor oil, brake fluid, gasoline, diesel fuel, radiator fluid, acid-containing batteries or other hazardous materials or hazardous wastes are used or stored. Drains shall not be installed within the secondary containment areas. ☐ Add a note on the plans that states either (1) there are no floor drains, or (2) floor drains are connected to wastewater pretreatment systems prior to discharge to the sanitary sewer and an industrial waste discharge permit will be obtained.	☐ State that no vehicle repair or maintenance will be done outdoors, or else describe the required features of the outdoor work area. ☐ State that there are no floor drains or if there are floor drains, note the agency from which an industrial waste discharge permit will be obtained and that the design meets that agency's requirements. ☐ State that there are 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.	In the SUSMP report, note that all of the following restrictions apply to use the site: ☐ No person shall dispose of, nor permit the disposal, directly or indirectly of vehicle fluids, hazardous materials, or rinsewater 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 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.

IF THESE SOURCES WILL BE ON THE PROJECT SITE …	… THEN YOUR STORMWATER CONTROL PLAN SHOULD INCLUDE THESE SOURCE CONTROL BMPs		
1 **Potential Sources of Runoff Pollutants – List in Table 9**	**2** **Permanent Controls—Show on Source Control Exhibit, Attachment B**	**3** **Permanent Controls—List in Table 9 and Narrative**	**4** **Operational BMPs—Include in Table 9 and Narrative**
☐ L. Fuel Dispensing Areas	☐ Fueling areas[1] shall have impermeable floors (i.e., portland cement concrete or equivalent smooth impervious surface) that are: a) graded at the minimum slope necessary to prevent ponding; and b) separated from the rest of the site by a grade break that prevents run-on of stormwater to the maximum extent practicable. ☐ Fueling areas shall be covered by a canopy that extends a minimum of ten feet in each direction from each pump. [Alternative: The fueling area must be covered and the cover's minimum dimensions must be equal to or greater than the area within the grade break or fuel dispensing area[1].] The canopy [or cover] shall not drain onto the fueling area.		☐ The property owner shall dry sweep the fueling area routinely. ☐ See the Business Guide Sheet, "Automotive Service—Service Stations" in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com

[1] The fueling area shall be defined as the area extending a minimum of 6.5 feet from the corner of each fuel dispenser or the length at which the hose and nozzle assembly may be operated plus a minimum of one foot, whichever is greater.

IF THESE SOURCES WILL BE ON THE PROJECT SITE …	… THEN YOUR STORMWATER CONTROL PLAN SHOULD INCLUDE THESE SOURCE CONTROL BMPs		
1 **Potential Sources of Runoff Pollutants – List in Table 9**	**2** **Permanent Controls—Show on Source Control Exhibit, Attachment B**	**3** **Permanent Controls—List in Table 9 and Narrative**	**4** **Operational BMPs—Include in Table 9 and Narrative**
☐ M. Loading Docks	☐ Show a preliminary design for the loading dock area, including roofing and drainage. Loading docks shall be covered and/or graded to minimize run-on to and runoff from the loading area. Roof downspouts shall be positioned to direct stormwater away from the loading area. Water from loading dock areas should be drained to the sanitary sewer where feasible. Direct connections to storm drains from depressed loading docks are prohibited. ☐ Loading dock areas draining directly to the sanitary sewer shall be equipped with a spill control valve or equivalent device, which shall be kept closed during periods of operation. ☐ Provide a roof overhang over the loading area or install door skirts (cowling) at each bay that enclose the end of the trailer.		☐ Move loaded and unloaded items indoors as soon as possible. ☐ See Fact Sheet SC-30, "Outdoor Loading and Unloading," in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com
☐ N. 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

IF THESE SOURCES WILL BE ON THE PROJECT SITE …	… THEN YOUR STORMWATER CONTROL PLAN SHOULD INCLUDE THESE SOURCE CONTROL BMPs		
1 **Potential Sources of Runoff Pollutants – List in Table 9**	**2** **Permanent Controls—Show on Source Control Exhibit, Attachment B**	**3** **Permanent Controls—List in Table 9 and Narrative**	**4** **Operational BMPs—Include in Table 9 and Narrative**
☐ O. Miscellaneous Drain or Wash Water ▪ Boiler drain lines ▪ Condensate drain lines ▪ Rooftop equipment ▪ Drainage sumps ▪ Roofing, gutters, and trim.		☐ Boiler drain lines shall be directly or indirectly connected to the sanitary sewer system and may not discharge to the storm drain system. ☐ Condensate drain lines may discharge to landscaped areas if the flow is small enough that runoff will not occur. Condensate drain lines may not discharge to the storm drain system. ☐ Rooftop mounted equipment with potential to produce pollutants shall be roofed and/or have secondary containment. ☐ Any drainage sumps on-site shall feature a sediment sump to reduce the quantity of sediment in pumped water. ☐ Avoid roofing, gutters, and trim made of copper or other unprotected metals that may leach into runoff.	

IF THESE SOURCES WILL BE ON THE PROJECT SITE …	… THEN YOUR STORMWATER CONTROL PLAN SHOULD INCLUDE THESE SOURCE CONTROL BMPs		
1 **Potential Sources of Runoff Pollutants – List in Table 9**	**2** **Permanent Controls—Show on Source Control Exhibit, Attachment B**	**3** **Permanent Controls—List in Table 9 and Narrative**	**4** **Operational BMPs—Include in Table 9 and Narrative**
☒ P. Plazas, sidewalks, and parking lots.			☒ Plazas, sidewalks, and parking lots shall be swept regularly to prevent the accumulation of litter and debris. Debris from pressure washing shall be collected to prevent entry into the storm drain system. Washwater containing any cleaning agent or degreaser shall be collected and discharged to the sanitary sewer and not discharged to a storm drain.

STEP 7
LID AND TREATMENT CONTROL SELECTION

A treatment control BMP and/or LID IMP must be selected to treat the project pollutants of concern identified in Table 7 "Project Pollutants of Concern". A treatment control facility with a high or medium pollutant removal efficiency for the project's most significant pollutant of concern shall be selected. It is recommended to use the design procedure in Chapter 4 of the SUSMP to meet NPDES permit LID requirements, treatment requirements, and flow control requirements. If your project does not utilize this approach, the project will need to demonstrate compliance with LID, treatment and hydromodification flow control requirements. Review Chapter 2 "Selection of Stormwater Treatment Facilities" in the SUSMP to assist in determining the appropriate treatment facility for your project.

Will this project be utilizing the unified LID design procedure as described in Chapter 4 of the Local SUSMP? (If yes, please document in Attachment D following the steps in Chapter 4 of the County SUSMP)	
Yes ☒	No ☐
If this project is not utilizing the unified LID design procedure, please describe how the alternative treatment facilities will comply with applicable LID criteria, stormwater treatment criteria, and hydromodification management criteria.	
N/A	

- Indicate the project pollutants of concern (POCs) from Table 7 in Column 2 below.

TABLE 10: GROUPING OF POTENTIAL POLLUTANTS of Concern (POCs) by fate during stormwater treatment

Pollutant	Check Project Specific POCs	Coarse Sediment and Trash	Pollutants that tend to associate with fine particles during treatment	Pollutants that tend to be dissolved following treatment
Sediment	☒	☒	☒	
Nutrients	☒		☒	☒
Heavy Metals	☒		☒	
Organic Compounds	☐		☒	
Trash & Debris	☒	☒		
Oxygen Demanding	☒		☒	
Bacteria	☒		☒	
Oil & Grease	☒		☒	
Pesticides	☒		☒	

- Indicate the treatment facility(s) chosen for this project in the following table.

TABLE 11: GROUPS OF POLLUTANTS and relative effectiveness of treatment facilities

Pollutants of Concern	Bio-retention Facilities (LID)	Settling Basins (Dry Ponds)	Wet Ponds and Constructed Wetlands	Infiltration Devices (LID)	Media Filters	Higher-rate biofilters	Higher-rate media filters	Trash Racks & Hydro-dynamic Devices	Vegetated Swales
Coarse Sediment and Trash	High	High	High	High	High	High	High	High	High
Pollutants that tend to associate with fine particles during treatment	High	High	High	High	High	Medium	Medium	Low	Medium
Pollutants that tend to be dissolved following treatment	Medium	Low	Medium	High	Low	Low	Low	Low	Low

- Please check the box(s) that best describes the Treatment Control BMP(s) and/or LID IMP selected for this project. Please check if the treatment facility is designed for water quality or hydromodification flow control. Check both boxes if the facility is designed for both water quality and hydromodification flow control.

TABLE 12: PROJECT TCBMPS - BMPs designed to treat stormwater (e.g., LID and hydromod) shall be considered TCBMPs.

TCBMP Type	Water Quality Treatment	Hydromodification Flow Control
Bioretention Facilites (LID)		
Bioretention area	☒	☒
Flow-through Planter		
Cistern with Bioretention	☒	☒
Basins		
Extended/dry detention basin with grass/vegetated lining		
Extended/dry detention basin with impervious lining		
Underground vault		
Cistern		
Infiltration Devices (LID)		
Infiltration basin		
Infiltration trench		
Other:		
Wet Ponds and Constructed Wetlands		
Wet pond/basin (permanent pool)		
Constructed wetland		
Vegetated Swales (LID [1])		
Vegetated Swale		
Media Filters		
Austin Sand Filter		
Delaware Sand Filter		
Multi-Chambered Treatment Train (MCTT)		
Higher-rate Biofilters		
Tree-pit-style unit		
Other:		
Higher-rate Media Filters		
Vault-based filtration unit with replaceable cartridges		
Other:		
Hydrodynamic Separator Systems		
Swirl Concentrator		
Other:		
Trash Racks		
Catch Basin Insert		
Catch Basin Insert w/ Hydrocarbon boom		
Other:		
Self-Retaining Areas (LID)		
Permeable Pavements		
Self-Retaining		
Vegetated Roof		

[1] Must be designed per SUSMP "Vegetated Swales" design criteria for water quality treatment credit (p. 102-103).

For design guidelines and calculations refer to Chapter 4 “Low Impact Development Design Guide” in the SUSMP. Please show all calculations and design sheets for all treatment control BMPs proposed in Attachment D.

- Create a Construction Plan WQTR Checklist for your project.

Instructions on how to fill out table

1. Number and list each measure or BMP you have specified in your WQTR in Columns 1 and Maintenance Category in Column 3 of the table. Leave Column 2 blank.
2. When you submit construction plans, duplicate the table (by photocopy or electronically). Now fill in Column 2, identifying the plan sheets where the BMPs are shown. List all plan sheets on which the BMP appears. This table must be shown on the front sheet of the grading and improvement plans.

Treatment Control BMPs[1]			
Description / Type	Sheet	Maintenance Category	Revisions
Cistern with Bioretention		1	None
Bioretention		1	None
[1] BMPs designed to treat stormwater (e.g., LID and hydromod) shall be considered TCBMPs.			

*BMP's approved as part of Stormwater Management Plan (SWMP) dated xx/xx/xx on file with DPW. Any changes to the above BMP's will require SWMP revision and Plan Change approvals.

- Please describe why the chosen treatment control BMP(s) was selected for this project. For projects utilizing a low performing BMP, please provide a feasibility analysis that demonstrates utilization of a treatment control BMP with a high or medium removal efficiency ranking is infeasible.

The bioretention with cistern was chosen because it has medium to high effectiveness in removing the pollutants of concern for this project and also requires less surface area for treatment and storage. It will also address hydromodification requirements. The treatment of the new impervious area associated with the off-site street improvements, the bioretention area is sized to capture the volume necessary for treatment of the new impervious surface area. The new impervious surface is located directly adjacent to the bioretention area and runoff from the new impervious surface will reach the bioretention first. Once the bioretention areas have reached their capacity, the obligation for treatment of the new impervious surface area (for both water quality and hydromodification) will have been achieved. The SUSMP requires that only the new impervious surface area be treated given that less than 50% of the street right-of-way is being affected by the project.

Please provide the sizing design calculations for each Drainage Management Area in Attachment D. Guidelines for design calculations are located in Chapter 4 of the County SUSMP. To assist in these calculations a BMP sizing calculator is available for use at the following location: http://www.projectcleanwater.org/html/wg_susmp.html

STEP 8
OPERATION AND MAINTENANCE

- Please check the box that best describes the maintenance mechanism(s) for this project. The recorded maintenance agreement shall be included in the Maintenance Plan for this project (Attachment F).

TABLE 13: PROJECT BMP CATEGORY

CATEGORY	SELECTED		BMP Description
	YES	NO	
First [1]	☒		A maintenance notification should be given to tenants prior to any maintenance of the cistern with bioretention.
Second [2]		☒	
Third [3]		☒	
Fourth [4]		☒	

Note:

1. A maintenance notification will be required.
2. A recorded maintenance agreement and access easement will be required.
3. The project will be required to establish or be included in a watershed specific Community Facility District (CFD) for long-term maintenance.
4. The developer would be required to dedicate the BMP (and the property on which it is located and any necessary access) to the County.

- Please list all individual Treatment Control BMPs (TCBMPs) incorporated into the project. Please attach the record plan sheets upon completion of project and amend the Major SWMP where appropriate. For each type of TCBMP provide an inspection sheet in Attachment F "Maintenance Plan". Replicate Table 14 in Attachment G once the TCBMP has been constructed.

TABLE 14: PROJECT SPECIFIC LID AND TCBMPS

Treatment Control BMPs (TCBMPs) [1,2] (List all from SWMP)		
Lot Number Or Location	**Description/Type**	**Sheet**
DMA 1	Cistern with Bioretention	
DMA 2	Bioretention	
DMA 3	Bioretention	
DMA 4	Bioretention	

[1] All Priority Development Projects (PDPs) require a TCBMP.
[2] BMPs designed to treat stormwater (e.g. LID and hydromod) shall be considered TCBMPs.

* For location of BMP's, see approved Record Plan dated _XX/XX/XX_, plan (TYPE) sheet _ (#) _

- Responsible Party for the Construction Phase:

Identify the parties responsible for maintenance during the construction phase of the BMPs identified above and Source Controls specified in Attachment B.

Developer's Name: _N.C.A. Real Estate_____
Address: __3 Corporate Plaza, Suite 230_____
City __Newport Beach_____ State ____CA _____ Zip__92660_____
Email Address: _____
Phone Number: _949-474-0122_____
Engineer of Work: _VA Consulting, Inc._____
Engineer's Phone Number: _949-474-1400_____

- Responsible Party for Ongoing Maintenance:

Identify the parties responsible for long-term maintenance of the BMPs identified above and Source Controls specified in Attachment B. Include the appropriate written agreement with the entities responsible for O&M in Attachment F. Please see Chapter 5 "Stormwater Facility Maintenance" of the County SUSMP for appropriate maintenance mechanisms.

Owner's Name: __Home Owners Association _____
Address: ___TBD_____
City _____ State _____Zip_____
Email Address: _____
Phone Number: _____
* Note: If a corporation or LLC, provide information for principal partner or Agent for Service of Process. If an HOA, provide information for the Board or property manager at time of project closeout.

- Funding Source:

Provide the funding source or sources for long-term operation and maintenance of each BMP identified above. Please see Chapter 5 "Stormwater Facility Maintenance" of the County SUSMP for the appropriate funding source options. By certifying the Major SWMP the applicant is certifying that the funding responsibilities have been addressed and will be transferred to future owners.

N.C.A. Real Estate will be responsible of being a funding source for operation and maintenance of the BMPs on-site until a Home Owners Association is formed. Once a Home Owners Association is formed, they will be responsible for funding and keeping up with the long-term operation and maintenance of all on-site BMPs. Annually, the HOA will provide the City with maintenance certification of all treatment and hydromodification facilities prior to July 1.

ATTACHMENTS

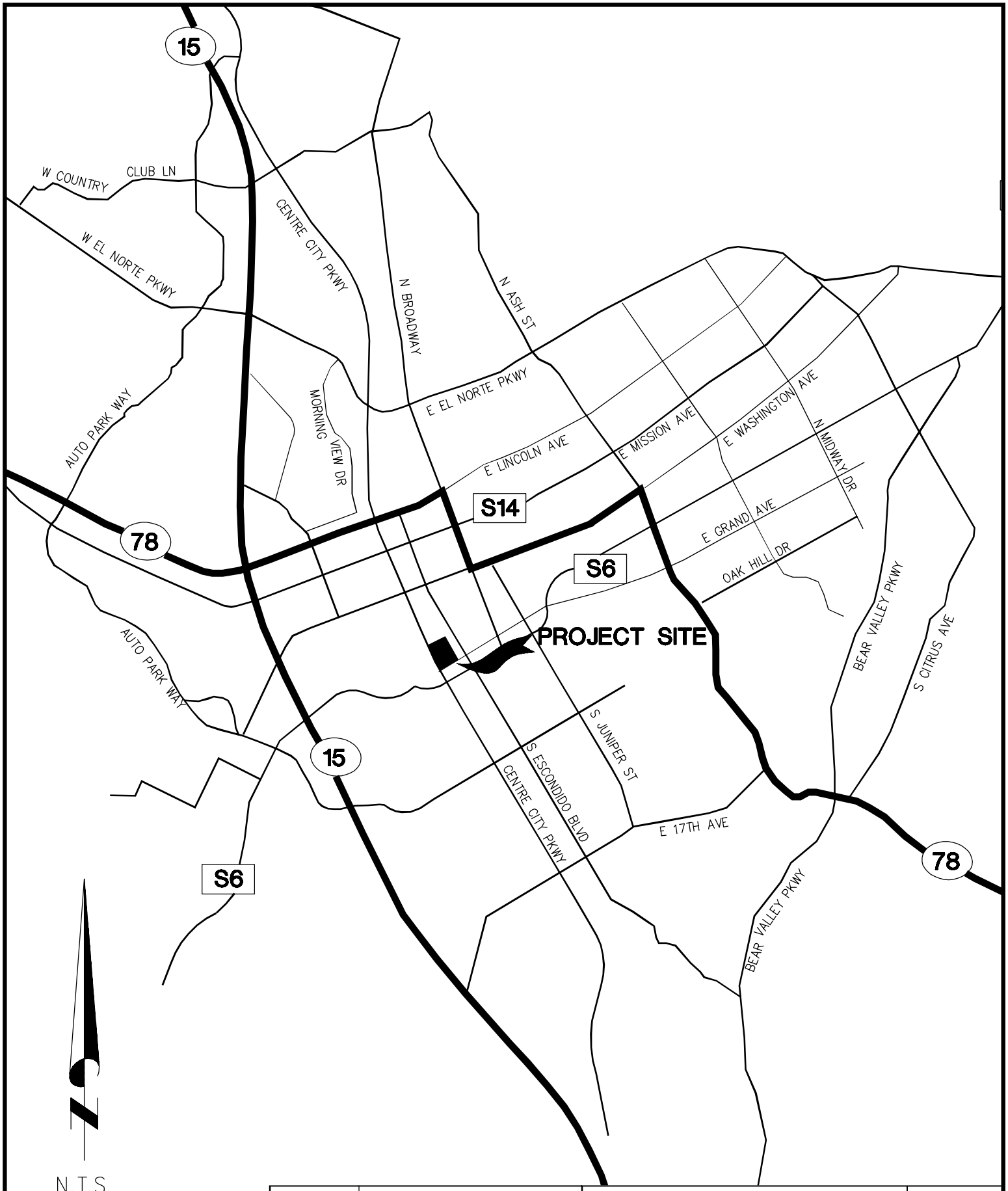
Please include the following attachments.

ATTACHMENT		COMPLETED	N/A
A	Project Location Map	☒	☐
B	Source Control Exhibit	☒	☐
C	Drainage Management Area (DMA) Exhibit	☒	☐
D	BMP Sizing Design Calculations (Water Quality and Hydromodification) and TCBMP/IMP Design Details	☒	☐
E	Geotechnical Certification Sheet	☒	☐
F	Maintenance Plan	☒	☐
G	Treatment Control BMP Certification (due at project completion)	☒	☐
H	HMP Study	☒	☐
I	Geomorphic Assessment	☐	☒
J	HMP Exemption Documentation	☐	☒
K	Addendum	☐	☒

Note: Attachments B and C may be combined.

ATTACHMENT A

Project Location Map



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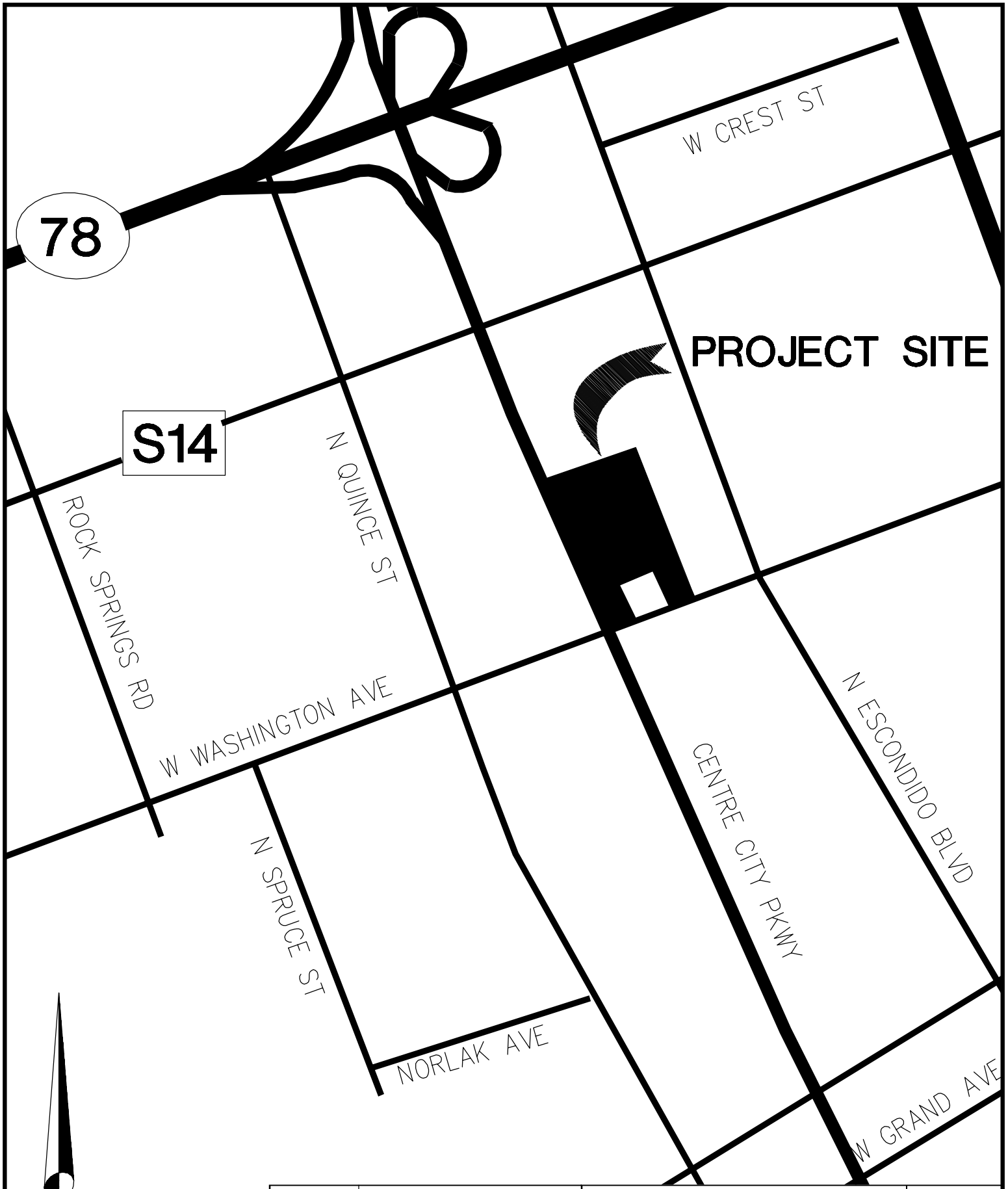
CITY OF ESCONDIDO
LATITUDE 2

VICINITY MAP

DATE
1/15

FIGURE
1

DWG: X:\Projects\1205_0100\Eng\CAD\Exhibits\EXH06-Vicinity Map\1205_0100-EXH06-Vicinity Map.dwg BY: jhernandez Jan 26, 2015 - 5:46:59pm



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CITY OF ESCONDIDO
LATITUDE 2

LOCATION MAP

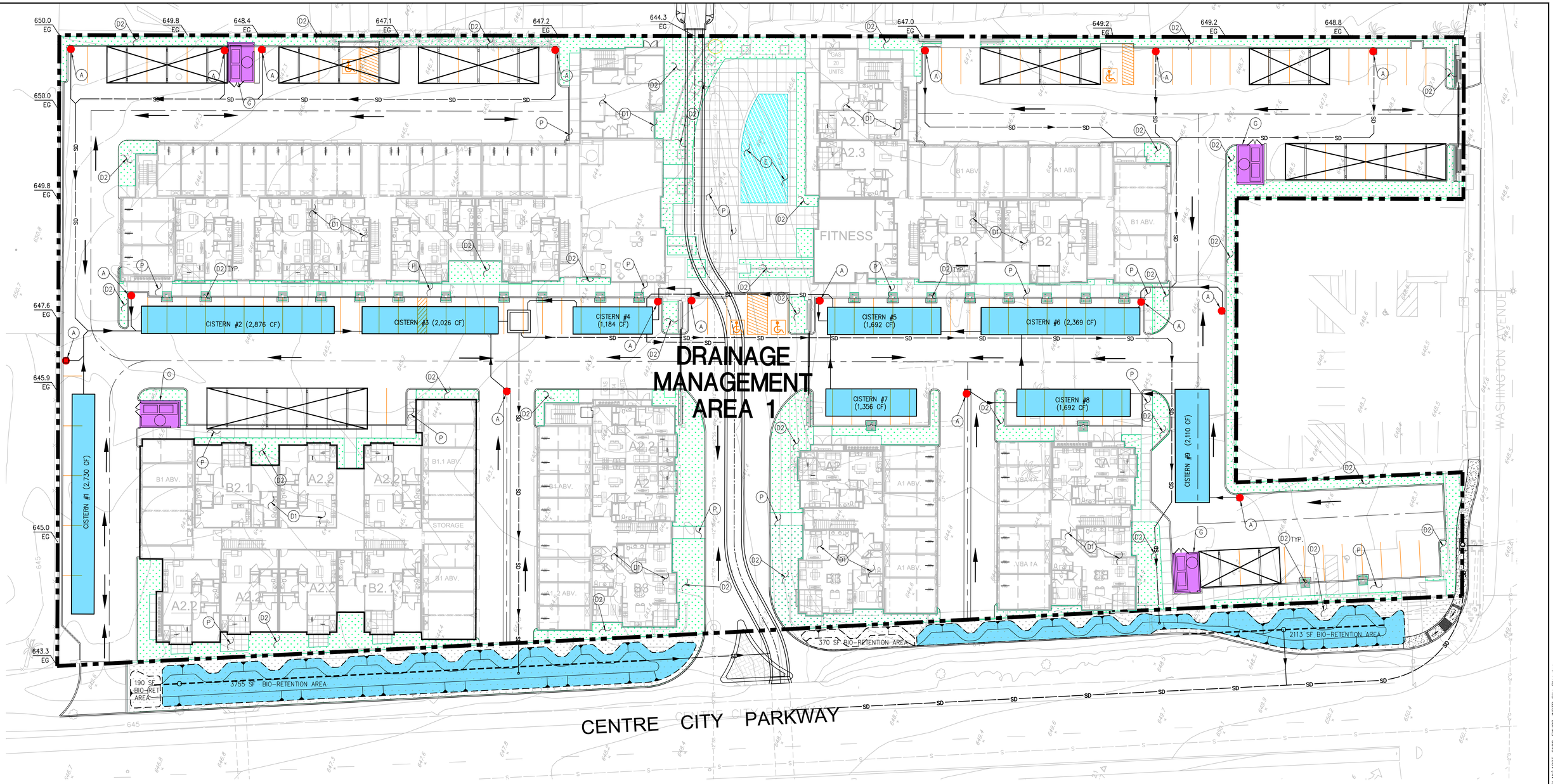
DATE
1/15

FIGURE
2

DWG: X:\Projects\1205_0100\Eng\CAD\Exhibits\EXH07-Location Map\1205_0100-EXH07-Location Map.dwg BY: jhernandez Jan 29, 2015 - 1:56:16pm

ATTACHMENT B

Source Control Exhibit (also known as WQTR Site Plan)



SOURCE CONTROL BMPs

- (A) STENCIL ON-SITE INLETS: "NO DUMPING! FLOWS TO BAY"
- (D1) INDOOR & STRUCTURAL PEST CONTROL: PROVIDE IMP
- (D2) LANDSCAPE/OUTDOOR PESTICIDE USE: PROVIDE IMP
- (E) POOL: FOLLOW BMP FACT SHEET SC-27
- (G) REFUSE AREA: "DO NOT DUMP HAZARDOUS MATERIALS HERE" SIGNS TO BE POSTED
- (P) PLAZAS, SIDEWALKS, AND PARKING LOTS: SWEEP REGULARLY, COLLECT DEBRIS, COLLECT WASHWATER AND DISCHARGE TO SANITARY SEWER

LEGEND

- REFUSE AREA – TRASH ENCLOSURE
- STORM DRAIN INLET STENCILING
- PARKING STRIPING
- FLOW DIRECTION
- PROJECT BOUNDARY
- SD — STORM DRAIN
- LANDSCAPED AREA
- DMA 1 CISTERN / BIO-RETENTION AREA (5,868 SF)
- REINFORCED CONCRETE BOX
- CAR PORT
- BUILDING

DMA SOIL TYPE: D — 3.45 AC — 150,282 TOTAL AREA S.F.

DMA NAME	DMA AREA (SF)	POST PROJECT SURFACE TYPE	DMA RUNOFF FACTOR	DMA AREA X RUNOFF FACTOR	IMP SIZING FACTOR	MINIMUM AREA	MINIMUM VOLUME	HYDRO-MOD PROPOSED AREA	HYDRO-MOD PROPOSED VOLUME (CF)
DMA 1	150,282	IMPERVIOUS	1.0	150,282	0.035	5,259.87	18,034	5,868	18,034
TOTAL	150,282		TOTAL	150,282	0.035	5,259.87	18,034	5,868	18,034
COMPOSITE RUNOFF FACTOR			100%	SEE HMP CALCULATIONS FOR VOLUMES					

N

20 10 0 20 40 60

SCALE: 1"=20'

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CITY OF ESCONDIDO
LATITUDE 2

ON-SITE WQTR SITE PLAN

FIGURE 3

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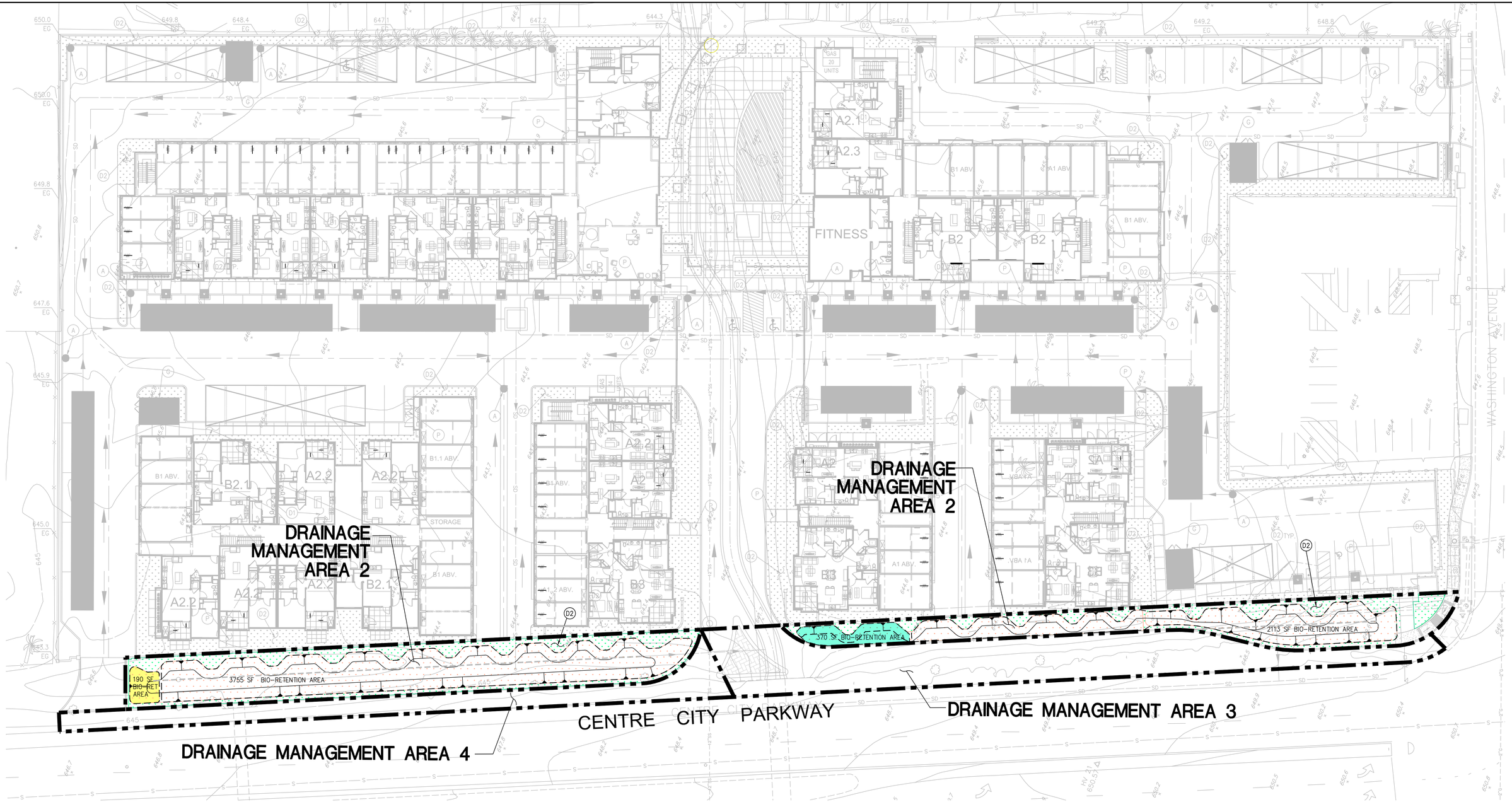

DMA SOIL TYPE: D				0.43 AC	18,654.33 TOTAL AREA S.F.				
DMA NAME	DMA AREA (SF)	POST PROJECT SURFACE TYPE	DMA RUNOFF FACTOR	DMA AREA X RUNOFF FACTOR	IMP SIZING FACTOR	MINIMUM AREA	MINIMUM VOLUME	HYDRO-MOD PROPOSED AREA	HYDRO-MOD PROPOSED VOLUME (CF)
DMA 2	10,273.67	PERVIOUS	0.1	1,027.37	0.065	67	96	70	96
DMA 3	5,656.60	IMPERVIOUS	1.0	5,656.60	0.065	368	528	370	962
DMA 4	2,724.06	IMPERVIOUS	1.0	2,724.06	0.065	177	254	190	660
TOTAL	18,654.33		TOTAL	9,408.03	0.065	612	878	630	1,718
COMPOSITE RUNOFF FACTOR			50.4%	SEE HMP CALCULATIONS FOR VOLUMES					

SOURCE CONTROL BMPs

(D2) LANDSCAPE/OUTDOOR PESTICIDE USE: PROVIDE IMP

LEGEND

- REINFORCED CONCRETE BOX
- PROJECT BOUNDARY
- SD — STORM DRAIN
- BIORETENTION AREA
- LANDSCAPED AREA
- DMA 3 BIO-RETENTION AREA (370 SF)
- DMA 4 BIO-RETENTION AREA (190 SF)

N

20 10 0 20 40 60

SCALE: 1"=20'

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CITY OF ESCONDIDO
LATITUDE 2

OFF-SITE WQTR SITE PLAN

FIGURE 4

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ATTACHMENT C

Drainage Management Area (DMA) Exhibit

(See WQTR Site Plan in Attachment B)

ATTACHMENT D

Sizing Design Calculations and TCBMP/LID Design Details
(Provide BMP Sizing Calculator results and/or continuous simulation modeling results, if applicable)

See Attachment H for BMP Calculations

ATTACHMENT E

Geotechnical Certification Sheet
(if applicable)

The design of stormwater treatment and other control measures proposed in this plan requiring specific soil infiltration characteristics and/or geological conditions has been reviewed and approved by a registered Civil Engineer, Geotechnical Engineer, or Geologist in the State of California.

__Clarence Jiang, G.E., RGE 2477____ _1/14/15_____
Name and registration # Date