Preliminary Stormwater Control Plan Deer Creek Village – Residential A.P.N. 007–380–034 (Ptn.) Petaluma, CA

October 1, 2018

MGP VIII Properties, LLC

Prepared by: CSW | Stuber-Stroeh Engineering Group, Inc. (415) 883-9850 Wayne Leach Scott Salas File No. 5.967.11

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Attachments

Stormwater Control Plan Exhibit

Appendices

This Stormwater Control Plan was prepared using the template dated July 11, 2014.

I. Project Data

Project Name/Number	Deer Creek Residential
Application Submittal Date	October 1, 2018
Project Location	North McDowell Blvd.; APN 007-380-034 (Ptn.)
Project Phase No.	Not Applicable
Project Type and Description	The proposed development is a 3-story multifamily residential project with 129 units. Three buildings include a below ground parking garage and surface parking for the remaining.
Total Project Site Area (acres)	4.31 acres
Total New and Replaced Impervious Surface Area	3.11 acres
Total Pre-Project Impervious Surface Area	1.19 acres
Total Post-Project Impervious Surface Area	3.11 acres

II. Setting

II.A. Project Location and Description

The site is located in Petaluma northeast of Highway 101. It is near the southeast corner of Rainier Avenue and N. McDowell Boulevard in the Deer Creek Village Shopping Center. Surrounding uses include single family detached residential, light industrial and retail. The site is currently a partially developed retail property with parking and undeveloped building pads. It has a Mixed Use Land Use Designation and Mixed Use 1B (MU1B) Zoning Designation. The proposed project will include five multistory residential buildings with surface parking and below grade parking under three of the buildings.

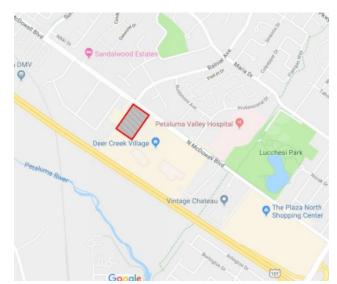


Figure 1 Location of Project

II.B. Existing Site Features and Conditions

The site is a 4.31 acre rectangular shaped property that is generally flat. Rainier Avenue extension is located along the northwest boundary of the site, N. McDowell Boulevard is located along the northeast boundary, and intermittent creek (Deer Creek) is located along the south east edge of the site, and a dog park is located along the southwest edge of the site. The site is separated by a main driveway running southeasterly from Rainier Avenue across Deer Creek to the adjacent retail center. It was previously permitted for retail development and currently has paved parking and compacted building pads on the northeast portion of the site and compacted base rock parking and large building pad on the southwest portion of the site. Drainage from the site flows from the building pads into existing storm drain facilities that discharge into the adjacent creek.



Figure 2 Existing Site Conditions

II.C. Opportunities and Constraints for Stormwater Control

Opportunities include an existing creek and setback area and adjacent open space/dog park. Constraints include the existing driveway that divides the site, surrounding infrastructure including existing and proposed roadways and highway improvements, building setback requirements and height constraints, mixed use land use designation, and low permeable soils.

III. Low Impact Development Design Strategies

III.A. Optimization of Site Layout

The property is an infill development site with existing impervious pavement and compacted surfaces covering the majority of the site. The proposed project will include five multilevel residential buildings with below grade parking under three of the buildings and surface parking. The existing creek and associated setback will be preserved. Bioretention planters will treat roof runoff and parking and other hardscape areas. The existing driveway dividing the site will be maintained.

III.B. Use of Permeable Pavements

Conventional concrete and asphalt pavement are to be used in areas of removal and replacement so they match existing surfaces. Other portions of existing pavement will be removed altogether and replaced by the new building footprint. Onsite parking will be located within a below ground floor garage and surrounding surface parking.

III.C. Dispersal of Runoff to Pervious Areas

With the exception of limited landscape and bioretention areas around the perimeter and the creek, the surrounding area are impervious developed surfaces. These areas are to remain undisturbed.

III.D. Stormwater Control Measures

Runoff from all impervious areas on the site, including roofs, hardscape, and paved areas will be routed to a number of existing bioretention facilities and some to be constructed on site (see Exhibit). The new facilities will be designed and constructed to the criteria in the BASMAA Post Construction Manual (July 2014), including the following features:

- Each layer built flat and to the elevations specified in the plans. For areas where longitudinal slope exceeds 1%, check dams will be installed:
 - Bottom of Gravel Layer (BGL)
 - Top of Gravel Layer (TGL)
 - Top of Soil Layer (TSL)
 - o Overflow Weir
 - o Facility Rim
- 12 inches of Class 2 permeable, Caltrans specification 68-2.02F(3)
- 18 inches sand/compost mix meeting BASMAA specifications

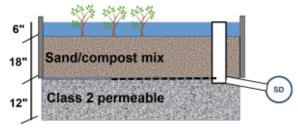


Figure 3 Biortention Cross-Section (Schematic)

- PVC SDR 35 pipe underdrain, installed with the invert at the top of the Class 2 permeable layer and connected to the overflow structure at that same elevation
- 6-inch-deep reservoir between top of soil elevation and overflow weir elevation
- Vertical cutoff walls to protect adjacent pavement
- Plantings selected for water conservation
- Irrigation system on a separate zone, with drip emitters and "smart" irrigation controllers
- Sign identifying the facility as a stormwater treatment facility.

The buildings, walks, parking lot and graded areas will all drain to bioretention facilities.

IV. Documentation of Drainage Design

IV.A. Descriptions of Each Drainage Management Area

- IV.A.1. Drainage Management Areas
- Table 2. Drainage management Areas (DMAs) as shown on the exhibit.

DMA Name	Surface Type	Area (SF)
DMA-1	Roof	0
	Pavement	8,401
	Landscape	1,667

	Treatment	526
DMA-2	Roof	4,892
	Pavement	7,020
	Landscape	2,896
	Treatment	1,044
DMA-3	Roof	11,666
	Pavement	3,095
	Landscape	1,051
	Treatment	1,051
DMA-4	Roof	0
	Pavement	9,406
	Landscape	2,074
	Treatment	585
DMA-5	Roof	8,680
	Pavement	959
	Landscape	2,069
	Treatment	600
DMA-6	Roof	0
	Pavement	8,888
	Landscape	471
	Treatment	0
DMA-7	Roof	5,688
	Pavement	11,709
	Landscape	4,381

	Treatment	1,308
DMA-8	Roof	21,331
	Pavement	29,275
	Landscape	9,455
	Treatment	3,816
DMA-9	Roof	5,646
	Pavement	2,371
	Landscape	3,476
	Treatment	1,031
ST1	Landscape	7653
NT1	Landscape/Pavement	1194
NT2	Pavement/Pavement	773
NT3	Pavement	653
NT4	Pavement	870
NT5	Pavement	640
NT6	Pavement	84
NT7 Pavement		80

IV.A.2. Drainage Management Area Descriptions

DMA 1, totaling 8401 square feet of pavement and concrete area, and 1667 square feet of landscaped area. DMA 1 drains to the bioretention area identified as BIO 1. Runoff will enter the facility through curb cuts.

DMA 2, totaling 4892 square feet of roof area, 7020 square feet of pavement and concrete area, and 2896 square feet of landscaped area. DMA 2 drains to the bioretention area identified as BIO 2. Runoff will enter the facility through rain water leaders and curb cuts.

DMA 3, totaling 11666 square feet of roof area, 3095 square feet of pavement and concrete area, and 1051 square feet of landscaped area. DMA 3 drains to the bioretention area identified as BIO 3. Runoff will enter the facility through rain water leaders.

DMA 4, totaling 9406 square feet of pavement and concrete area, and 2074 square feet of landscaped area. DMA 4 drains to the bioretention area identified as BIO 4. Runoff will enter the facility through curb cuts.

DMA 5, totaling 8680 square feet of roof area, 959 square feet of pavement and concrete area, and 2069 square feet of landscaped area. DMA 5 drains to the bioretention area identified as BIO 5. Runoff will enter the facility through rain water leaders.

DMA 6, totaling 8888 square feet of pavement and concrete area, and 471 square feet of landscaped area. DMA 6 drains to an existing storm drain system that drains through Dual-Vortex Hydrodynamic Separator. Runoff will enter the facility through an existing storm drain system.

DMA 7, totaling 5688 square feet of roof area, 11709 square feet of pavement and concrete area, and 4381 square feet of landscaped area. DMA 7 drains to the bioretention area identified as BIO 7. Runoff will enter the facility through rain water leaders, sidewalk underdrains, and curb cuts.

DMA 8, totaling 21331 square feet of roof area, 29275 square feet of pavement and concrete area, and 9455 square feet of landscaped area. DMA 8 drains to the bioretention area identified as BIO 8. Runoff will enter the facility through rain water leaders, sidewalk underdrains, and curb cuts.

DMA 9, totaling 5646 square feet of roof area, 2371 square feet of pavement and concrete area, and 3476 square feet of landscaped area. DMA 9 drains to the bioretention area identified as BIO 9. Runoff will enter the facility through rain water leaders.

IV.B. Tabulation and Sizing Calculations

Total Project Area (Square Feet)	176,528
DMA NAme	Area (square feet)
DMA 1	10594
DMA 2	15852
DMA 3	16863
DMA4	12065
DMA5	12308
DMA6	9359
DMA7	23086
DMA8	63877
DMA9	12524

IV.B.1. Information Summary for Bioretention Facility Design

IV.B.2. Self-Treating Areas

DMA Name	Area (square feet)
ST1	7653

DMA NAME	DMA AREA (SF)	POST- PROJECT SURFACE	DMA RUNOFF FACTOR	DMA AREA X RUNOFF	IMP NAME BIO AREA 1			
		TYPE		FACTOR				
DMA 1	0	ROOF	1.0	0	IMP		PRO.	
	8,401	PAVEMENT	1.0	8,401	SIZING FACTOR		1	IMP SIZE
	1,667	LANDSCAPE	0.1	167		(SF)	(SF)	
TOTAL>			8,568	0.04	343	526		

IV.B.3. Areas Draining to Bioretention Facilities

DMA NAME	DMA AREA (SF)	POST- PROJECT SURFACE	DMA RUNOFF FACTOR	DMA AREA X RUNOFF	IMP NAME BIO AREAS 2A thru 20		
		TYPE		FACTOR			ru 2C
DMA 2	4,892	ROOF	1.0	4,892	IMP		PRO. IMP SIZE
	7,020	PAVEMENT	1.0	7,020	SIZING FACTOR		
	2,896	LANDSCAPE	0.1	290		(SF)	(SF)
TOTAL>			12,202	0.04	488	1044	

DMA NAME	DMA AREA (SF)	POST- PROJECT SURFACE	DMA RUNOFF FACTOR	DMA AREA X RUNOFF FACTOR	IMP NAME BIO AREAS 3A thru 3J		
		TYPE					nru 3J
DMA 3	11,666	ROOF	1.0	11,666	IMP SIZING FACTOR	IMP IMP SIZE SIZE	PRO.
	3,095	PAVEMENT	1.0	3,095			SIZE
	1,051	LANDSCAPE	0.1	105		(SF)	(SF)
TOTAL>			14,866	0.04	595	1051	

DMA NAME	DMA AREA (SF)	POST- PROJECT SURFACE	DMA RUNOFF FACTOR	DMA AREA X RUNOFF	IMP NAME		
		TYPE		FACTOR	BIO AREA	A 4	
DMA 4	0	ROOF	1.0	0	IMP SIZING FACTOR	MIN. PRO. IMP IMP SIZE SIZE (SF) (SF)	
	9,406	PAVEMENT	1.0	9,406			SIZE
	2,074	LANDSCAPE	0.1	207			(SF)
TOTAL>			9,613	0.04	385	585	

DMA NAME	DMA AREA (SF)	POST- PROJECT SURFACE	DMA RUNOFF FACTOR	DMA AREA X RUNOFF	IMP NAM	IMP NAME		
		TYPE		FACTOR	BIO AREAS 5A thru 5F			
DMA 5	8,680	ROOF	1.0	8,680	IMP SIZING FACTOR	IMP IMP	PRO.	
	959	PAVEMENT	1.0	959			SIZE	
	2,069	LANDSCAPE	0.1	207			(SF)	
TOTAL>			9,846	0.04	394	600		

DMA NAME	DMA AREA (SF)	POST- PROJECT SURFACE	DMA RUNOFF FACTOR	DMA AREA X RUNOFF	IMP NAME		
		TYPE		FACTOR	SEPARAT	DYNAMIC	
DMA 6	0	ROOF	1.0	0	IMP SIZING FACTOR	MIN. PRO. IMP IMP SIZE SIZE (SF) (SF)	
	8,888	PAVEMENT	1.0	8,888			SIZE
	471	LANDSCAPE	0.1	471			(SF)
TOTAL>				8,935	0.04	357	0

DMA NAME	DMA AREA (SF)	POST- PROJECT SURFACE	DMA RUNOFF FACTOR	DMA AREA X RUNOFF	IMP NAME		
		TYPE		FACTOR	BIO AREAS 7A thru 7E		
DMA 7	5,688	ROOF	1.0	5,688	IMP SIZING FACTOR	IMP IMP SIZE SIZE	PRO.
	11,709	PAVEMENT	1.0	11,709			SIZE
	4,381	LANDSCAPE	0.1	438		(SF)	(SF)
TOTAL>			8,935	0.04	713	1308	

DMA NAME	DMA AREA (SF)	POST- PROJECT SURFACE	DMA RUNOFF FACTOR	DMA AREA X RUNOFF	IMP NAM	MP NAME	
		TYPE		FACTOR	BIO AREAS 8A thru 8P		nru 8P
DMA 8	21,331	ROOF	1.0	21,331	IMP SIZING FACTOR	IMP IMP	PRO.
	29,275	PAVEMENT	1.0	29,275			SIZE
	9,455	LANDSCAPE	0.1	946			(SF)
TOTAL>			51,552	0.04	2,062	3,816	

DMA NAME	DMA AREA (SF)	POST- PROJECT SURFACE	DMA RUNOFF FACTOR	DMA AREA X RUNOFF	IMP NAME		
		TYPE		FACTOR	BIO AREAS 9A and 9B		
DMA 9	5,646	ROOF	1.0	5,646	IMP SIZING FACTOR		
	2,371	PAVEMENT	1.0	2,371			SIZE
3,476	LANDSCAPE	0.1	348		(SF) (SF	(SF)	
TOTAL>			8,365	0.04	335	1,031	

V. Source Control Measures

V.A. Site activities and potential sources of pollutants

On-site activities that could potentially produce stormwater pollutants include:

- On-site storm drain inlets.
- Interior floor drains.
- Interior parking garages.
- Landscape/Outdoor Pesticide/Building and Ground Maintenance. •
- Spas. •
- **Refuse** Areas •
- Fire Sprinkles Test Water.
- Plazas, sidewalks, and parking lots.

V.B. Potential Pollutant Sources and Source Control Measures

Table 3. Pollutant Sources and Source Control Measures

Potential source of runoff pollutants	Permanent source control BMPs	Operational source control BMPs
On-site storm drain inlets	All inlets will be marked with the words "No Dumping! Flows to Bay" or similar.	Markings will be regularly inspected and repainted or replaced as needed.
Interior parking garages	Parking garage floor drains will be plumbed to the sanitary sewer.	Inspect and maintain drains to prevent blockages and overflow.
Landscape/Outdoor Pesticide/Building and Ground	Existing native trees, shrubs, and ground cover to be retained where appropriate.	Landscaping will be maintained using minimum or no pesticides.
Maintenance	Landscaping to minimize irrigation and runoff, and to minimize and be selected for pest resistance, and will minimize the need for fertilizers and pesticides. Plants will be selected appropriate to site soils, slopes, climate, sun, wind, rain, land use, air movement, ecological	IPM information will be provided to new owners, lessees, and operators.

	consistency, and plant interactions.	
Spas	Spa to be plumbed to the sanitary sewer according to local requirements.	Spa water will be drained to the sanitary sewer.
Refuse Areas	Refuse and recycled materials will be handled in the refuse area shown on the Exhibit. The refuse area will be roofed.	All dumpsters will be posted with signs stating "Do not dump hazardous materials here" or similar.
Fire Sprinkles Test Water	Sanitary sewer cleanouts will be located in close proximity to allow for draining sprinkler test water to the sewer.	Test water will be drained to the sanitary sewer.
Plazas, sidewalks, and parking lots		Plazas, sidewalks, and parking lots will be swept regularly to prevent accumulation of litter and debris.
		Debris will be collected from pressure washing to prevent entry into the storm drain.
		Washwater containing any cleaning agent will be collected and discharged to the sanitary sewer.
		Trash receptacles to be emptied regularly.

VI. Stormwater Facility Maintenance

VI.A. Ownership and Responsibility for Maintenance in Perpetuity

Maintenance of Stormwater facilities will be the responsibility of the property owner and will be performed by the owner's contractors or employees as part of routine maintenance of buildings, grounds, and landscaping. The applicant commits to execute a standard agreement regarding the maintenance of Stormwater facilities prior to completion of construction. Applicant accepts responsibility for interim operation and maintenance of Stormwater treatment and flow-control facilities until such time as this responsibility is formally transferred to a subsequent owner.

VI.B.Summary of Maintenance Requirements for Each Stormwater Facility

The stormwater and bioretention facilities will be maintained on the following schedule at a minimum. Details of maintenance responsibilities and procedures will be included in a Stormwater Facility Operation and Maintenance Plan to be submitted for approval prior to the completion of construction.

At no time will synthetic pesticides or fertilizers be applied, nor will any soil amendments, other than aged compost mulch or sand/compost mix, be introduced.

Daily: The facilities will be examined for visible trash during regular policing of the site, and trash will be removed.

After Significant Rain Events: A significant rain event is one that produces approximately a half-inch or more rainfall in a 24-hour period. Within 24 hours after each such event, the following will be conducted:

The surface of the facility will be observed to confirm there is no ponding.

- Inlets will be inspected, and any accumulations of trash or debris will be removed.
- The surface of the mulch layer will be inspected for movement of material. Mulch will be replaced and raked smooth if needed.

Prior to the Start of the Rainy Season: In September or each year, the facility will be inspected to confirm there is no accumulation of debris that would block flow, and that growth and spread of plantings does not block inlets or the movement of runoff across the surface of the facility.

Annual Landscape Maintenance: In December – February of each year, vegetation will be cut back as needed, debris removed, and plants and mulch replaced as needed. The concrete work will be inspected for damage. The elevation of the top of soil and mulch layer will be confirmed to be consistent with the 6-inch reservoir depth.

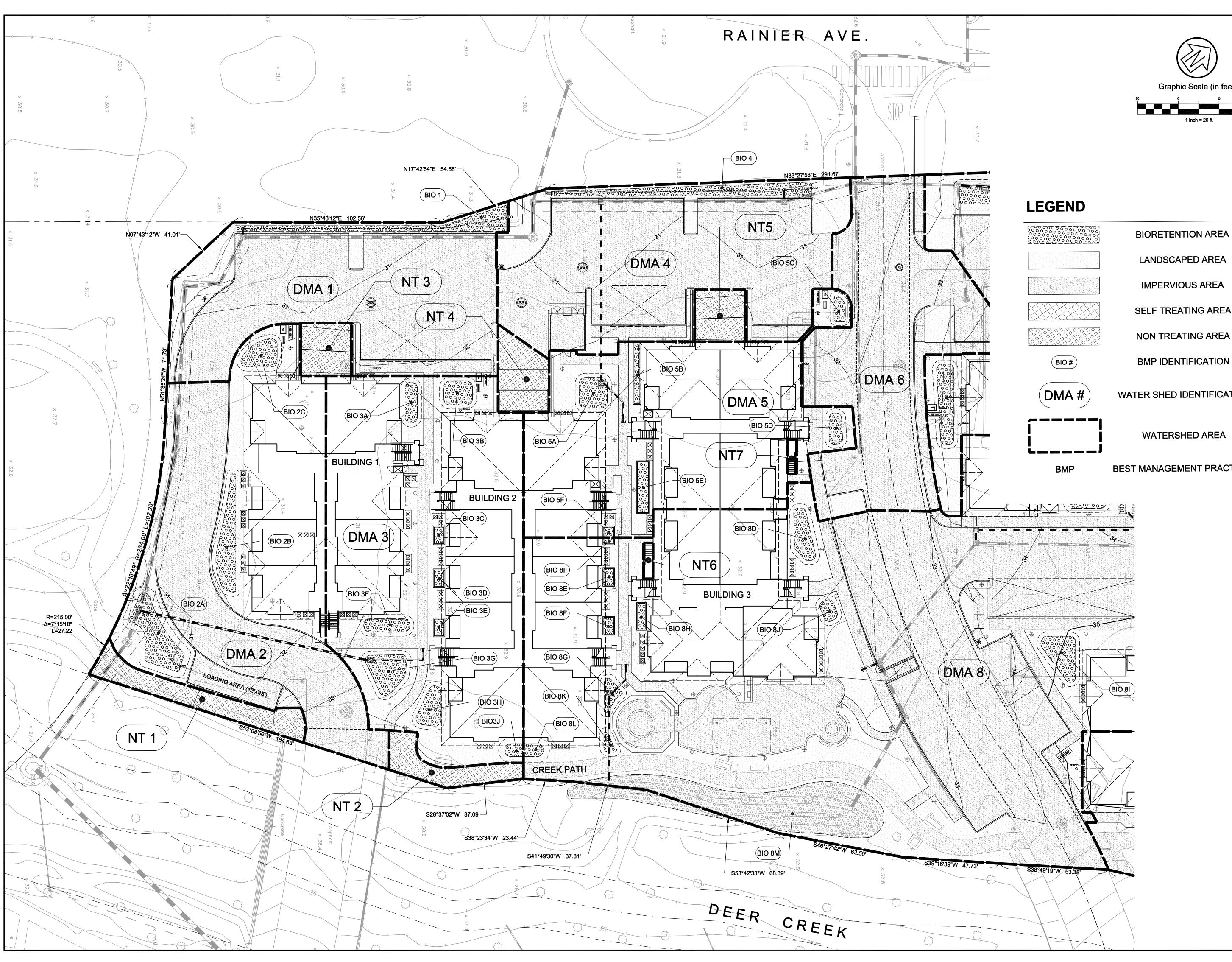
VII. Construction Checklist

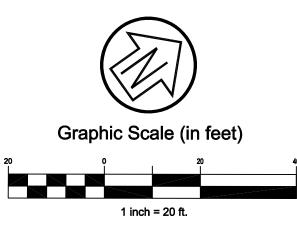
Table 4. Construction Checklist Table to be incorporated in Construction Drawings

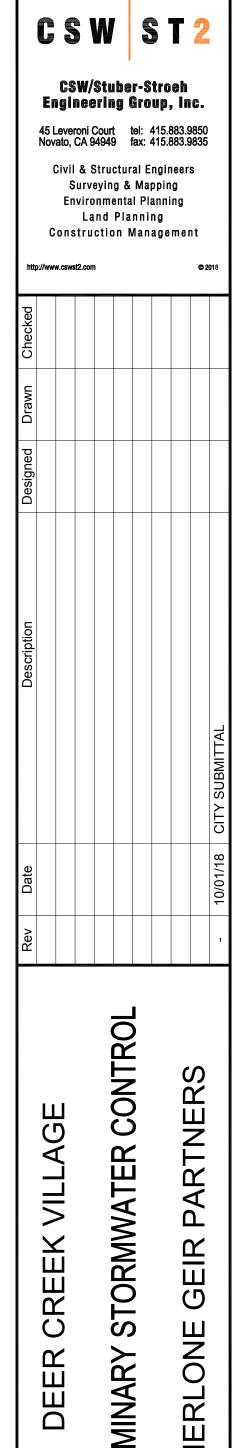
Stormwater Control Plan Page #	Source Control or Treatment Control Measure	See Plan Sheet #s
Exhibit	Each DMA drains to corresponding Bioretention Area; facility is designed as specified.	C3.1, C3.2, C3.3
Exhibit	All Bioretention Area overflows are marked with "No Dumping" message	C3.3

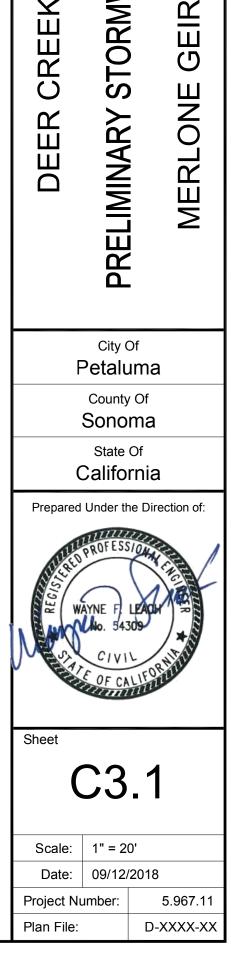
VIII. Certifications

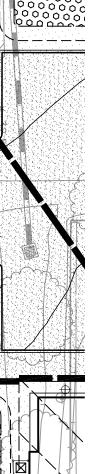
The preliminary design of stormwater treatment facilities and other stormwater pollution control measures in this plan are in accordance with the current edition of the BASMAA *Post-Construction Manual*



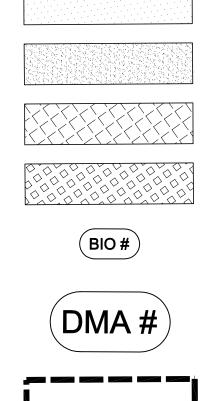










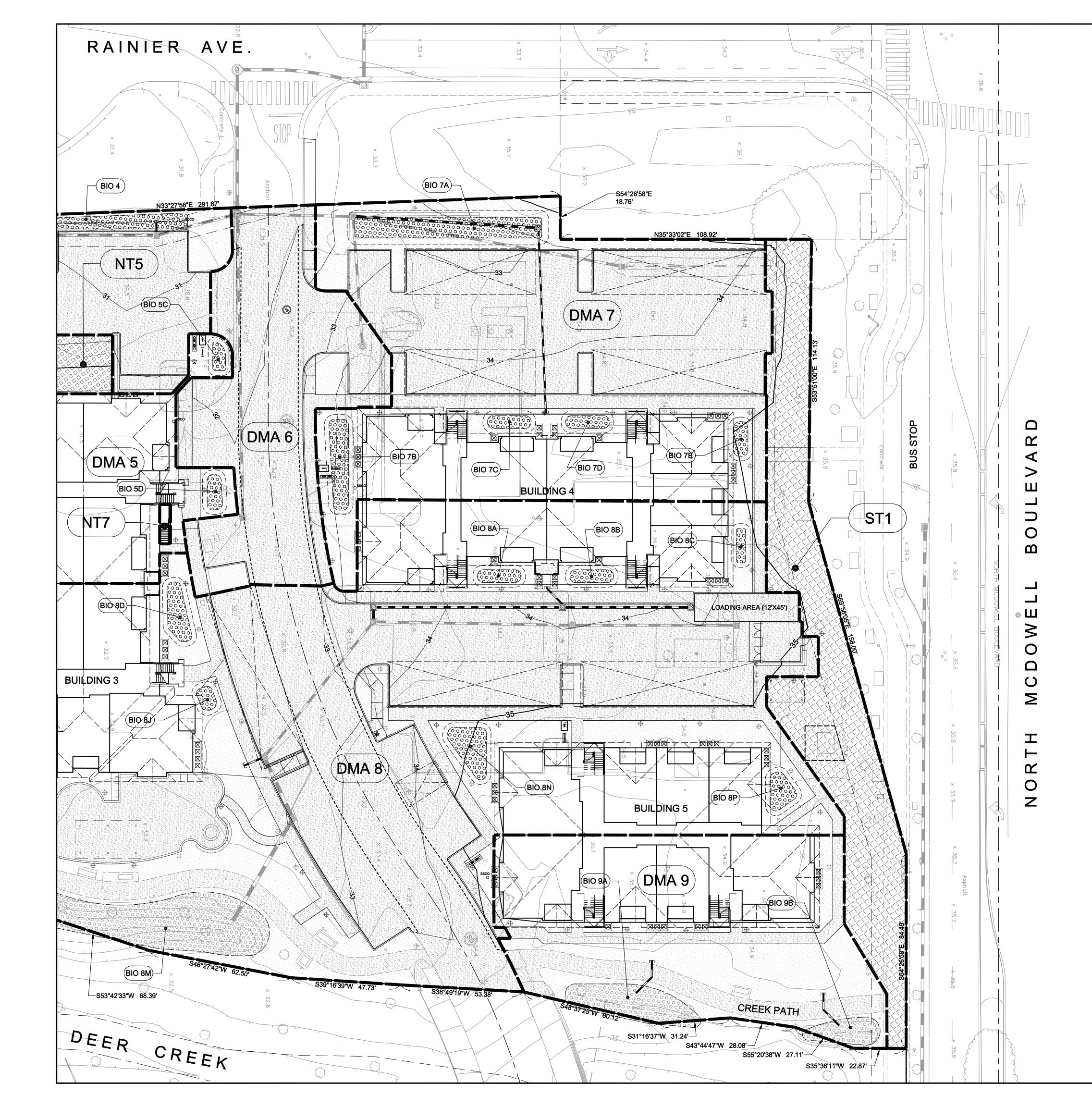


LANDSCAPED AREA
IMPERVIOUS AREA
SELF TREATING AREA
NON TREATING AREA
BMP IDENTIFICATION

WATER SHED IDENTIFICATION

WATERSHED AREA

BEST MANAGEMENT PRACTICES



Graphic Scale (in feet) 1 inch = 20 ft.

BIORETENTION AREA

LANDSCAPED AREA

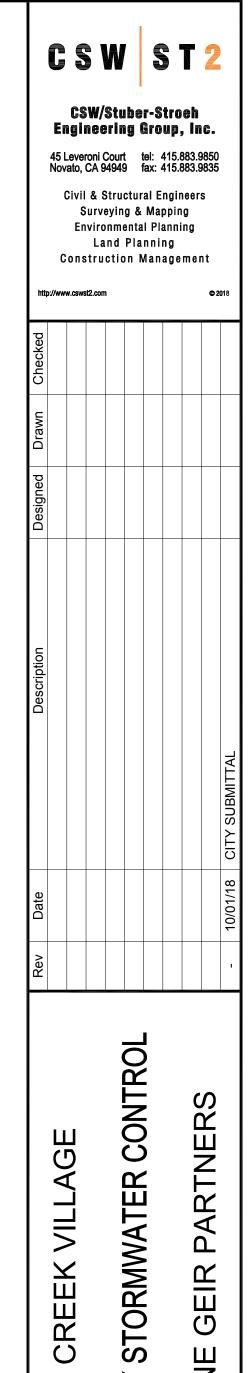
IMPERVIOUS AREA

SELF TREATING AREA

NON TREATING AREA

BMP IDENTIFICATION

WATER SHED IDENTIFICATION



LEGEND

BIO #
DMA #

BMP

BEST MANAGEMENT PRACTICES

WATERSHED AREA

MERLONE

PRELIMINARY

City Of

Petaluma

County Of

Sonoma

State Of California

Prepared Under the Direction of

C3.2

Scale: 1" = 20'

Project Number:

Plan File:

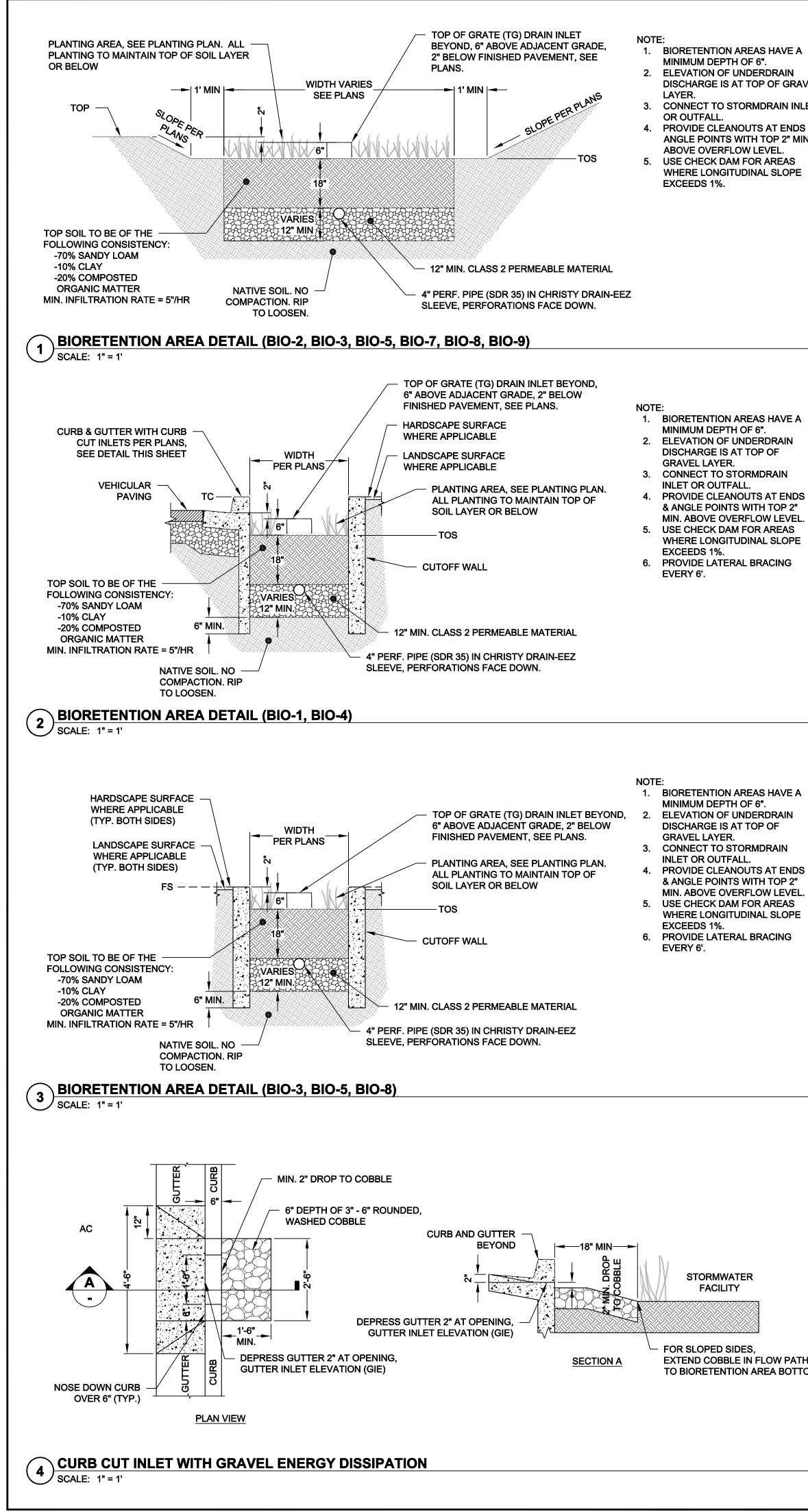
Date: 09/12/2018

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Sheet

DEER



1. BIORETENTION AREAS HAVE A MINIMUM DEPTH OF 6". 2. ELEVATION OF UNDERDRAIN DISCHARGE IS AT TOP OF GRAVEL

3. CONNECT TO STORMDRAIN INLET 4. PROVIDE CLEANOUTS AT ENDS & ANGLE POINTS WITH TOP 2" MIN. ABOVE OVERFLOW LEVEL.

WHERE LONGITUDINAL SLOPE

DMA	DMA AREA	POST- PROJECT SURFACE	DMA RUNOFF	DMA AREA X RUNOFF	IMP NAME		
NAME	(SF)	TYPE	FACTOR	FACTOR		BIO 1	
	0	ROOF	1.0	0			
DMA 1	8401	PAVEMENT	1.0	8401	IMP SIZING	MIN. IMP SIZE	PRO. IMP SIZE
	1667	LANDSCAPE	0.1	167	FACTOR	(SF)	(SF)
TOTAL >				8568	0.04	343	526

DMA NAME	DMA AREA (SF)	POST- PROJECT SURFACE TYPE	DMA RUNOFF FACTOR	DMA AREA X RUNOFF FACTOR	IMP NAME	O 2A THRU 2	2C	
	4892 7020	ROOF	1.0	4892				
DMA 2		PAVEMENT	1.0	7020	IMP SIZING	MIN. IMP SIZE	PRO. IMP SIZE	
	2896	LANDSCAPE	0.1	290	FACTOR	(SF)	(SF)	
TOTAL >			12202	0.04	488	1044		

DMA	DMA AREA	POST- PROJECT SURFACE	DMA RUNOFF	DMA AREA X RUNOFF	IMP NAME			
NAME	(SF)	TYPE	FACTOR	FACTOR	BI	O 3A THRU	3J	
	11666	ROOF	1.0	11666				
DMA 3	3095	PAVEMENT	1.0	3095	IMP SIZING	MIN. IMP SIZE	PRO. IMP SIZE	
	1051	LANDSCAPE	0.1	105	FACTOR	(SF)	(SF)	
TOTAL >		· · ·		14866	0.04	595	1051	

POST-DMA DMA PROJECT DMA AREA X IMP NAME AREA DMA SURFACE RUNOFF RUNOFF NAME (SF) TYPE | FACTOR | FACTOR BIO 4 0 ROOF 1.0 0 DMA 4 MIN. IMP PRO. IMP IMP 9406 PAVEMENT 1.0 9406 SIZE SIZE SIZING 207 (SF) (SF) 2074 LANDSCAPE 0.1 FACTOR TOTAL > 9613 0.04 585 385

DMA NAME	DMA AREA (SF)	POST- PROJECT SURFACE TYPE	DMA RUNOFF FACTOR	DMA AREA X RUNOFF FACTOR	IMP NAME BI	O 5A THRU	5F
	8680	ROOF	1.0	8680			
DMA 5	959	PAVEMENT	1.0	959	IMP SIZING	MIN. IMP SIZE (SF)	PRO. IMP SIZE
	2069	LANDSCAPE	0.1	207	FACTOR		(SF)
OTAL >				9846	0.04	394	600

DMA NAME	DMA AREA (SF)	POST- PROJECT SURFACE TYPE	DMA RUNOFF FACTOR	DMA AREA X RUNOFF FACTOR		IP NAME DUAL VORTEX HYDRODYNAMIC EPARATOR (KRISTAR DVS-48C)			
	0	ROOF	1.0	0					
DMA 6	8888	PAVEMENT	1.0	8888	IMP SIZING	MIN. IMP SIZE	PRO. IMP SIZE		
	471	LANDSCAPE	0.1	47	FACTOR	(SF)	(SF)		
TOTAL >		·		8935	0.04	357	0		

DMA NAME	DMA AREA (SF)	POST- PROJECT SURFACE TYPE	DMA RUNOFF FACTOR	DMA AREA X RUNOFF FACTOR	IMP NAME	P NAME BIO 7A THRU 7E			
	5688	ROOF	1.0	5688					
DMA 7	11709	PAVEMENT	1.0	11709	IMP SIZING	MIN. IMP SIZE	PRO. IMP SIZE		
	4381	LANDSCAPE	0.1	438	FACTOR	(SF)	(SF)		
TOTAL >				17835	0.04	713	1308		

DMA NAME	DMA AREA (SF)	POST- PROJECT SURFACE TYPE	DMA RUNOFF FACTOR	DMA AREA X RUNOFF FACTOR	IMP NAME	O 8A THRU	8P
	21331	ROOF	1.0	21331			
DMA 8	29275	PAVEMENT	1.0	29275	IMP SIZING	MIN. IMP SIZE	PRO. IMP SIZE
	9455	LANDSCAPE	0.1	946	FACTOR	(SF)	(SF)
TOTAL >		·		51552	0.04	2062	3816

DMA NAME	DMA AREA (SF)	POST- PROJECT SURFACE TYPE	DMA RUNOFF FACTOR	DMA AREA X RUNOFF FACTOR	IMP NAME	E BIO 9A THRU 9B			
	5646	ROOF	1.0	5646					
DMA 9	2371	PAVEMENT	1.0	23/1	MIN. IMP SIZE	PRO. IMP SIZE			
	3476	LANDSCAPE	0.1	348	FACTOR	(SF)	(SF)		
TOTAL >		·		8365	0.04	335	1031		

MINIMUM DEPTH OF 6". DISCHARGE IS AT TOP OF 3. CONNECT TO STORMDRAIN 4. PROVIDE CLEANOUTS AT ENDS & ANGLE POINTS WITH TOP 2" MIN. ABOVE OVERFLOW LEVEL. 5. USE CHECK DAM FOR AREAS WHERE LONGITUDINAL SLOPE

EXTEND COBBLE IN FLOW PATH TO BIORETENTION AREA BOTTOM

SELF TREATING SELF TREATING NAME SELF TREATING AREA (SF)			
ST 1	7653		

NOT TREATING								
NOT TREATING NAME	NOT TREATING AREA (SF)							
NT 1	1194							
NT 2	773							
NT 3	653							
NT 4	870							
NT 5	640							
NT 6	84							
NT 7	80							

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Designed Drawn Checked										
Description										10/01/18 CITY SUBMITTAL
Rev Date										- 10/01/18
				I PRFI MINARY STORMWATER CONTROL DETAILS						
City Of Petaluma County Of Sonoma State Of California Prepared Under the Direction of:										
SI	hee	et	C		3		3)		

NOTES:

- MARK STORM INLETS WITH THE WORDS "NO DUMPING! FLOWS TO 1. BAY" OR EQUIVALENT.
- 2. PLUMB INTERIOR FLOOR DRAINS TO SANITARY SEWER.
- 3. PROVIDE CONNECTION TO THE SANITARY SEWER TO FACILITATE DRAINING SPA.
- 4. DESIGN FOR DISCHARGE OF FIRE SPRINKLER TEST WATER TO LANDSCAPE OR SANITARY SEWER.
- 5. DRAIN CONDENSATE OF AIR CONDITIONING UNITS TO LANDSCAPING. LARGE AIR CONDITIONING UNITS MAY CONNECT TO THE SANITARY SEWER.
- 6. ROOF DRAINS SHALL DRAIN TO UNPAVED AREA WHERE PRACTICABLE.
- DRAIN BOILER DRAIN LINES, ROOF TOP EQUIPMENT, ALL WASHWATER 7 TO SANITARY SEWER.

Scale: AS SHOWN

Date: 09/12/2018

Project Number:

Plan File:

5.967.11

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