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STORMWATER CONTROL PLAN (SWCP)

CITY OF PINOLE

PROJECT NAME & OWNER

PINOLE SHORES PHASE II
GRP SHORES, LLC

PROJECT LOCATION

PINOLE SHORES BUSINESS PARK, PHASE II
830 – 848 SAN PABLO AVENUE

PREPARED FOR

JOHN DIEMER
GRP SHORES, LLC
2350 N. UNIVERSITY DRIVE #848300
PEMBROKE PINES, FLORIDA 33024

PREPARED BY

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PREPARED: DECEMBER 7, 2021

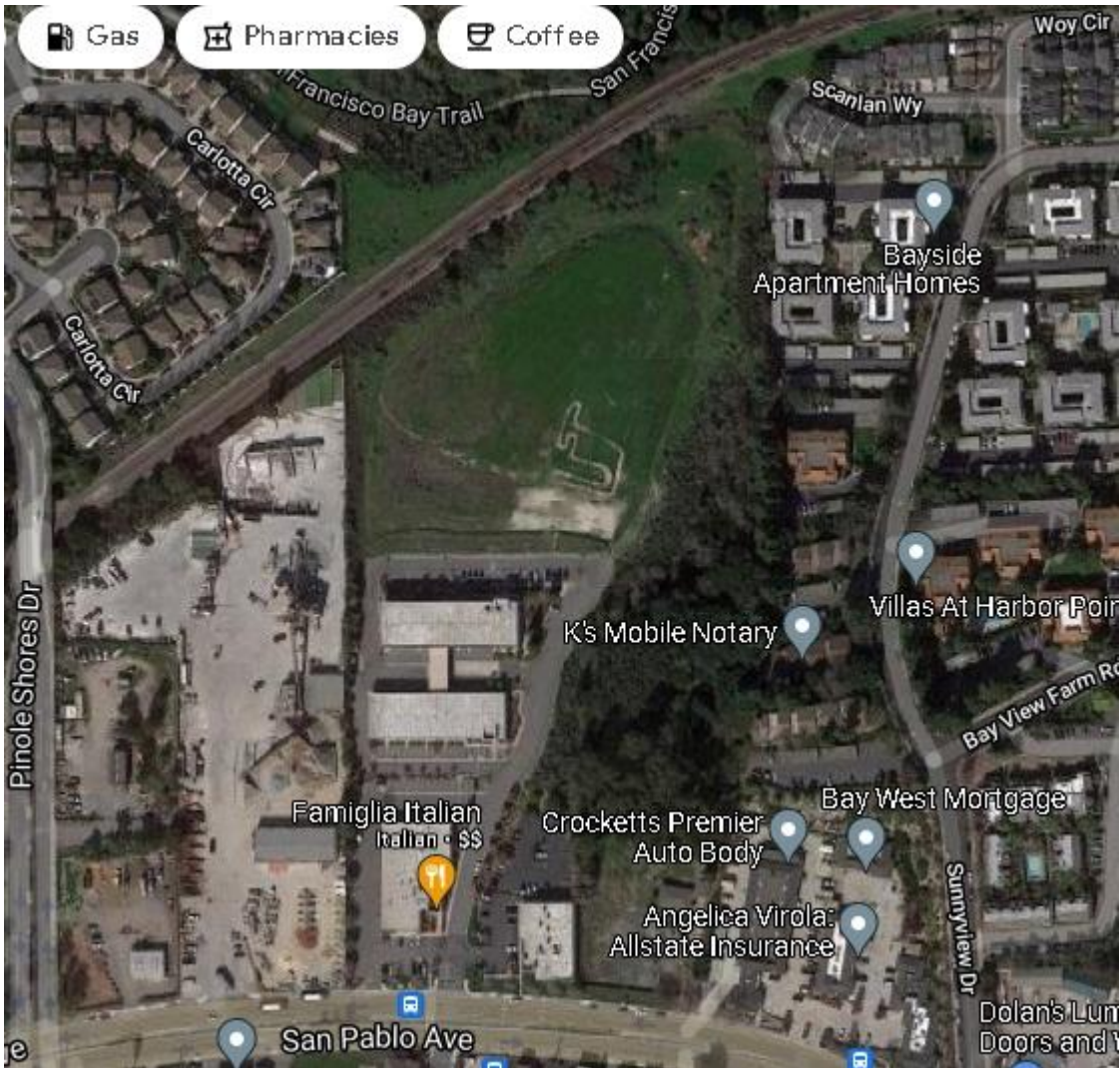


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Project Name/Number	One Corp Pinole Shores Phase II
Application Submittal Date	December 8, 2021
Project Location	830 - 848 San Pablo Avenue, Pinole, CA
Name of Developer/Owner	GRP SHORES, LLC
Project Phase No.	2 of 2
Project Type and Description	Phase 2 – Building #1 – 37,482 square feet & Building #2 – 80,461 square feet
Project Watershed	San Francisco Bay
Total Project Site Area (acres)	7.37 Acres
Total Area of Land Disturbed (acres)	6.10 Acres
Total New Impervious Surface Area (sq. ft.)	234,245 square feet
Total Replaced Impervious Surface Area	0 sf
Total Pre-Project Impervious Surface Area	0 sf
Total Post-Project Impervious Surface Area	234,245 square feet
50% Rule	Applies
Project Density	N/A
Applicable Special Project Categories	None
Percent LID and non-LID treatment	100% of stormwater runoff of impervious surfaces will be treated by on-site Bioretention facilities
HMP Compliance	Applies – more than one acre of impervious surfaces

II. SETTING

A. Project Location & Description

The Project Site is located at 830 - 848 San Pablo Avenue, at the intersection of San Pablo Avenue and Meadow Avenue in Pinole, California. The subject parcel is bounded by BNSF Railroad to the north, Sugar City Building Materials property to the west and multi-family parcels to the east. The area of the subject parcel, Assessor's Parcel Numbers 402-230-015 thru 018 & 020, is 320,959 square feet, 7.37 acres, and is irregular in shape. The zoning for the subject parcels is Office Industrial Mixed Use (OIMU) with a "Three Corridors Specific Plan Area" overlay as well as being zoned for Planned Development. Phase 1 of the Pinole Shores Business Park was constructed more than a decade ago and features four existing buildings on the southern half of the Business Park. Phase 2 of the Business Park contains the Project Site and will feature two new buildings: Building 1 will contain approximately 37,482 square feet, featuring two dock high doors and building 2 will contain 80,461 square feet, featuring seven dock high doors. Access to the Project Site will be from the main driveway on San Pablo Avenue at the northern extension of Meadow Avenue. The main access road being served by the main driveway runs north to the Project Site. The preliminary design of Phase II will incorporate a looped main access road around both proposed Phase II buildings, connecting to the northerly east-west access road of Phase I. The approximate area of new and existing impervious construction is 234,245 square feet.

B. Existing Site Features and Description

The Project Site has been vacant for more than a decade since the construction of Phase I of the Pinole Shores Business Park. Approximately half of the Project Site, 3.7 acres, in the middle portion of the property is fairly level, sloping approximately 1.5% from the southern property line down to the northern portion of the property. The existing topography on the west, north and east sides of the level middle portion of the property slopes approximately 3:1 or flatter, downhill towards the respective property lines. The elevation of the existing east-west row of parking along the south property line of the Project Site is approximately elevation 78. The high point of the Project Site at the southwest corner of the site is approximately elevation 90 and the low point is at approximately elevation 37 near the northeast corner of the Project Site.

During construction of the Phase I improvements, storm drainage and sanitary sewer improvements were installed along the unimproved Phase II loop road. The phase II improvements will connect proposed sanitary sewer laterals into this existing sanitary sewer main along the east side of the loop road.

All Phase I storm drainage improvements along the unimproved Phase II loop road are still intact. Several of these structures will be utilized for the new Phase II improvements.

Phase I underground utility improvements, such as PG&E gas and electric, as well as EBMUD water mains were not installed in the Phase II Project Site. These utilities were installed up to the common property line between the two phases and will need to be extended into Phase II to service the two proposed buildings.

An updated geotechnical investigation will be performed for the proposed Phase II project and will include a review of on-site soils, and design grading & foundation recommendations. The geotechnical investigation will likely reveal the site contains clayey soils. This soil type has a very low infiltration rate.

C. Opportunities and Constraints for Stormwater Control

Treatment of stormwater runoff from the Phase II Project Site is to be provided. The total post-project impervious surface area will be approximately 234,245 square feet. This project will require stormwater management facilities that provide hydrograph modification benefits because the project will be creating more than one acre of impervious surfacing. There is an existing Mechanical Stormwater Vault in the northeast corner of the proposed Phase II loop road. This vault was installed as part of the Phase I improvements and provides stormwater quality for the Phase I improvements. The Phase II improvements will not rely on this Mechanical Stormwater Vault. However, this vault will remain in place to continue to provide stormwater quality for the Phase I improvements.

Disposal of runoff to deep infiltration is not feasible on this site due to the low permeability of the clay soils.

III. LOW IMPACT DEVELOPMENT DESIGN STRATEGIES

A. Optimization of Site Layout

1. Limitation of development envelope. The Project Site is defined by the proposed loop road that was designed as part of the Phase I improvements of the Pinole Shores Business Park. Storm Drain and Sanitary Sewer improvements were installed within the proposed loop road during the Phase I improvements. Phase II improvements will be installed within the development envelope that is defined by proposed loop road. Existing slopes on the west, north and east sides of the proposed development will be maintained.
2. Preservation of natural drainage features. There are no natural drainage features on the subject parcel. There is an existing drainage swale east of the Project Site on an adjacent parcel but will not be impacted by this development.
3. Setbacks from creeks, wetlands, and riparian habitats. There are no wetlands or riparian habitats on the subject parcel.
4. Minimization of Imperviousness. The proposed total impervious area (including roofs, concrete walkways and asphalt concrete paving) is 234,245 square feet or 73% of the 7.37 acres of the subject parcel. The architectural design attempts to create a compact site of new improvements towards the center of the parcel within the development envelope created by the proposed loop road designed in Phase I.
5. Use of drainage as a design element. The project design and grading set out to maximize the total area that receives stormwater treatment.

B. Use of Permeable Pavements

Due to soil constraints listed above, permeable pavements will not be incorporated into the Project Site.

No stormwater runoff from impervious areas will be directed to pervious areas of the Project Site.

D. Bioretention or other Integrated Management Practices

Seventeen Integrated Management Practice (IMP) facilities are proposed for the Project Site. All are In-Ground Vegetated Flow-Through Planter Bioswales.

IV. DOCUMENTATION OF DRAINAGE DESIGN

A. Descriptions of each Drainage Management Area

1. Table of Drainage Management Areas

<i>DMA Name</i>	<i>Surface Type</i>	<i>Area (square feet)</i>
<i>DMA A1</i>	<i>Concrete/Asphalt</i>	<i>4,800</i>
<i>DMA A2</i>	<i>Landscaping</i>	<i>180</i>
<i>DMA B1</i>	<i>Roof</i>	<i>6,600</i>
<i>DMA C1</i>	<i>Roof</i>	<i>11,440</i>
<i>DMA D1</i>	<i>Roof</i>	<i>11,440</i>
<i>DMA E1</i>	<i>Concrete/Asphalt</i>	<i>4,195</i>
<i>DMA E2</i>	<i>Landscaping</i>	<i>390</i>
<i>DMA F1</i>	<i>Roof</i>	<i>10,600</i>
<i>DMA G1</i>	<i>Roof</i>	<i>16,320</i>
<i>DMA H1</i>	<i>Concrete/Asphalt</i>	<i>16,420</i>
<i>DMA H2</i>	<i>Landscaping</i>	<i>3,550</i>
<i>DMA I1</i>	<i>Roof</i>	<i>20,640</i>
<i>DMA J1</i>	<i>Concrete/Asphalt</i>	<i>34,140</i>
<i>DMA J2</i>	<i>Landscaping</i>	<i>1,635</i>
<i>DMA K1</i>	<i>Roof</i>	<i>22,400</i>
<i>DMA K2</i>	<i>Concrete/Asphalt</i>	<i>9,655</i>
<i>DMA K3</i>	<i>Landscaping</i>	<i>2,240</i>
<i>DMA L1</i>	<i>Roof</i>	<i>4,010</i>
<i>DMA M1</i>	<i>Roof</i>	<i>5,450</i>
<i>DMA N1</i>	<i>Roof</i>	<i>3,120</i>
<i>DMA O1</i>	<i>Concrete/Asphalt</i>	<i>52,965</i>
<i>DMA O2</i>	<i>Landscaping</i>	<i>6,244</i>

DMA A1: Totaling 4,800 square feet. This is new asphalt concrete pavement at the south/southwest side of Building #2. DMA A1 drains to IMP A – Bioretention Facility.

DMA A2: Totaling 180 square feet. This is new landscaping along the south/southwest side of Building #2. DMA A2 drains to IMP A – Bioretention Facility.

DMA B1: Totaling 6,600 square feet. This is roof area in the southwest portion of Building #2. DMA B1 drains to IMP B – Bioretention Facility.

DMA C1: Totaling 11,440 square feet. This roof area in the southwest portion of Building #2 (east of DMA B1). DMA C1 drains to IMP C1 & C2 – Bioretention Facilities.

DMA D1: Totaling 11,440 square feet. This roof area in the southeast portion of Building #2 (east of DMA C1). DMA D1 drains to IMP D1 & D2 – Bioretention Facilities.

DMA E1: Totaling 4,195 square feet. This is new asphalt concrete pavement at the south/southeast side of Building #2. DMA E1 drains to IMP E – Bioretention Facility.

DMA E2: Totaling 390 square feet. This is new landscaping along the south/southeast side of Building #2. DMA E2 drains to IMP E – Bioretention Facility.

DMA F1: Totaling 10,650 square feet. This roof area in the southeast portion of Building #2. DMA F1 drains to IMP F – Bioretention Facility.

DMA G1: Totaling 16,320 square feet. This roof area in the northeast portion of Building #2. DMA G1 drains to IMP G – Bioretention Facility.

DMA H1: Totaling 16,420 square feet. This is new asphalt concrete pavement at the west/northwest side of Building #2. DMA H1 drains to IMP H – Bioretention Facility.

DMA H2: Totaling 3,550 square feet. This is new landscaping along the west/northwest side of Building #2. DMA H2 drains to IMP H – Bioretention Facility.

DMA I1: Totaling 20,640 square feet. This is roof area in the northwest portion of Building #2. DMA I1 drains to IMP I – Bioretention Facility.

DMA J1: Totaling 34,140 square feet. This is new asphalt concrete pavement at the north side of Building #2 and west/southwest side of Building #1. DMA J1 drains to IMP J – Bioretention Facility.

DMA J2: Totaling 1,635 square feet. This is new landscaping along the north side of Building #2 and west/southwest side of Building #1. DMA J2 drains to IMP H – Bioretention Facility.

DMA K1: Totaling 22,400 square feet. This is roof area in the south portion of Building #1. DMA K1 drains to IMP K – Bioretention Facility.

DMA K2: Totaling 9,655 square feet. This is new asphalt concrete pavement at the northwest side of Building #1. DMA K2 drains to IMP K – Bioretention Facility.

DMA K3: Totaling 3,200 square feet. This is new landscaping along the northwest side of Building #1. DMA K3 drains to IMP K – Bioretention Facility.

DMA L1: Totaling 4,010 square feet. This is roof area in the north/northwest portion of Building #1. DMA L1 drains to IMP L – Bioretention Facility.

DMA M1: Totaling 5,450 square feet. This is roof area in the north/northeast portion of Building #1. DMA M1 drains to IMP M – Bioretention Facility.

DMA N1: Totaling 3,120 square feet. This is roof area in the east portion of Building #1. DMA N1 drains to IMP N – Bioretention Facility.

DMA O1: Totaling 52,965 square feet. This is new asphalt concrete pavement along the east side of Building #2 and the north and east sides of Building #1. DMA O1 drains to IMP O – Bioretention Facility.

DMA O2: Totaling 8,920 square feet. This is new landscaping along the east side of Building #2 and the north and east sides of Building #1. DMA O2 drains to IMP O – Bioretention Facility.

DMA X1: Totaling 56,812 square feet. This Self-Treating area is the undeveloped existing ground surface on the west, north and east sides of the proposed loop road.

B. Integrated Management Practice Descriptions

Integrated Management Practice (IMP) facilities – Flow Through Planters - are proposed for the Project Site. The Planters will incorporate the following features:

- Surrounded by a concrete curb/wall on all 4 sides
- Each layer built flat, level, and to the elevations specified in the plans:
 - o Bottom of Gravel Layer (BGL)
 - o Top of Gravel Layer (TGL)
 - o Top of Soil Layer (TSL)
 - o Overflow Grate
 - o Facility Rim
- 12 inches, minimum, Class 2 permeable drain rock, Caltrans specification 68-2.02F(3).
- 18 inches sand/compost mix meeting the specifications approved by the Regional Water Quality Control Board in April 2016.
- 6 in. dia. PVC SDR 35 perforated pipe underdrain, installed with the invert at the bottom of the Class 2 permeable layer with holes facing down, and connected to the overflow structure
- 6-inch-deep reservoir between top of soil elevation and overflow grate elevation
- Concrete drop inlet with frame overflow structure, with grate set to specified elevation
- Plantings selected for water conservation
- Irrigation system with drip emitters and “smart” irrigation controllers

C. Tabulation and Sizing Calculations

Information Summary for IMP Design

Total Project Area (Square feet)	320,959
Mean Annual Precipitation	21 inches
IMPs Designed For:	Treatment plus flow control

Areas Draining to IMPs

IMP Type: Flow-Through Planter – IMP A

Soil Type: D

DMA Name	DMA Area (sq ft)	Post-Project Surface Type	DMA Runoff Factor	DMA Area x Runoff Factor	IMP Sizing			
A1	4,800	Concrete or Asphalt	1.00	4,800	IMP Sizing	Minimum Area or Volume	Proposed Area or Volume	
A2	180	Landscape	0.70	126				
Total				4,926				
					0.050	0.965	238	238
					0.042	0.965	200	200
					0.055	0.965	261	262
					Maximum Underdrain Flow (cfs)			0.01
					Orifice Diameter (in)			0.59

Area
Surface Volume
Subsurface Volume

IMP Type: Flow-Through Planter – IMP B

Soil Type: D

DMA Name	DMA Area (sq ft)	Post-Project Surface Type	DMA Runoff Factor	DMA Area x Runoff Factor	IMP Sizing			
B1	6,600	Conventional Roof	1.00	6,600	IMP Sizing	Minimum Area or Volume	Proposed Area or Volume	
Total				6,600				
					0.050	0.965	318	320
					0.042	0.965	267	268
					0.055	0.965	350	351
					Maximum Underdrain Flow (cfs)			0.01
					Orifice Diameter (in)			0.68

Area
Surface Volume
Subsurface Volume

IMP Type: Flow-Through Planter – IMP C1 & C2

Soil Type: D

DMA Name	DMA Area (sq ft)	Post-Project Surface Type	DMA Runoff Factor	DMA Area x Runoff Factor	IMP Sizing			
C1	11,440	Conventional Roof	1.00	11,440	IMP Sizing	Minimum Area or Volume	Proposed Area or Volume	
Total				11,440				
					0.050	0.965	552	575
					0.042	0.965	464	465
					0.055	0.965	607	608
					Maximum Underdrain Flow (cfs)			0.02
					Orifice Diameter (in)			0.90

Area
Surface Volume
Subsurface Volume

IMP Type: Flow-Through Planter – IMP D1 & D2

Soil Type: D

DMA Name	DMA Area (sq ft)	Post-Project Surface Type	DMA Runoff Factor	DMA Area x Runoff Factor	IMP Sizing						
D1	11,440	Conventional Roof	1.00	11,440	IMP Sizing Factor	Rain Adjustment Factor	Minimum Area or Volume	Proposed Area or Volume			
Total				11,440							
Area				0.050					0.965	552	575
Surface Volume				0.042					0.965	464	465
Subsurface Volume				0.055	0.965	607	608				
Maximum Underdrain Flow (cfs)								0.02			
Orifice Diameter (in)								0.90			

IMP Type: Flow-Through Planter – IMP E

Soil Type: D

DMA Name	DMA Area (sq ft)	Post-Project Surface Type	DMA Runoff Factor	DMA Area x Runoff Factor	IMP Sizing			
E1	4,195	Concrete or Asphalt	1.00	4,195	IMP Sizing Factor	Rain Adjustment Factor	Minimum Area or Volume	Proposed Area or Volume
E2	390	Landscape	0.70	273				
Total				4,468				
Area				0.050				
Surface Volume				0.042	0.965	181	182	
Subsurface Volume				0.055	0.965	237	238	
Maximum Underdrain Flow (cfs)								0.01
Orifice Diameter (in)								0.57

IMP Type: Flow-Through Planter – IMP F

Soil Type: D

DMA Name	DMA Area (sq ft)	Post-Project Surface Type	DMA Runoff Factor	DMA Area x Runoff Factor	IMP Sizing						
F1	10,650	Conventional Roof	1.00	10,650	IMP Sizing Factor	Rain Adjustment Factor	Minimum Area or Volume	Proposed Area or Volume			
Total				10,650							
Area				0.050					0.965	514	520
Surface Volume				0.042					0.965	432	432
Subsurface Volume				0.055	0.965	565	566				
Maximum Underdrain Flow (cfs)								0.02			
Orifice Diameter (in)								0.87			

IMP Type: Flow-Through Planter – IMP G
Soil Type: D

DMA Name	DMA Area (sq ft)	Post-Project Surface Type	DMA Runoff Factor	DMA Area x Runoff Factor	IMP Sizing						
G1	16,320	Conventional Roof	1.00	16,320	IMP Sizing Factor	Rain Adjustment Factor	Minimum Area or Volume	Proposed Area or Volume			
Total				16,320							
Area				0.050					0.965	787	795
Surface Volume				0.042					0.965	661	662
Subsurface Volume				0.055	0.965	866	867				
Maximum Underdrain Flow (cfs)								0.03			
Orifice Diameter (in)								1.07			

IMP Type: Flow-Through Planter – IMP H
Soil Type: D

DMA Name	DMA Area (sq ft)	Post-Project Surface Type	DMA Runoff Factor	DMA Area x Runoff Factor	IMP Sizing			
H1	16,420	Concrete or Asphalt	1.00	16,420	IMP Sizing Factor	Rain Adjustment Factor	Minimum Area or Volume	Proposed Area or Volume
H2	3,550	Landscape	0.70	2,485				
Total				18,905				
Area				0.050				
Surface Volume				0.042	0.965	766	767	
Subsurface Volume				0.055	0.965	1,003	1,004	
Maximum Underdrain Flow (cfs)								0.04
Orifice Diameter (in)								1.19

IMP Type: Flow-Through Planter – IMP I
Soil Type: D

DMA Name	DMA Area (sq ft)	Post-Project Surface Type	DMA Runoff Factor	DMA Area x Runoff Factor	IMP Sizing						
I1	20,640	Conventional Roof	1.00	20,640	IMP Sizing Factor	Rain Adjustment Factor	Minimum Area or Volume	Proposed Area or Volume			
Total				20,640							
Area				0.050					0.965	996	1,010
Surface Volume				0.042					0.965	836	837
Subsurface Volume				0.055	0.965	1,095	1,096				
Maximum Underdrain Flow (cfs)								0.04			
Orifice Diameter (in)								1.21			

IMP Type: Flow-Through Planter – IMP J

Soil Type: D

DMA Name	DMA Area (sq ft)	Post-Project Surface Type	DMA Runoff Factor	DMA Area x Runoff Factor	IMP Sizing			
J1	34,140	Concrete or Asphalt	1.00	34,140	IMP Sizing Factor	Rain Adjustment Factor	Minimum Area or Volume	Proposed Area or Volume
J2	1,635	Landscape	0.70	1,145				
Total				35,285	0.050	0.965	1,702	1,703
Area					0.042	0.965	1,430	1,430
Surface Volume					0.055	0.965	1,872	1,873
Subsurface Volume					Maximum Underdrain Flow (cfs)		0.07	
					Orifice Diameter (in)		1.59	

IMP Type: Flow-Through Planter – IMP K

Soil Type: D

DMA Name	DMA Area (sq ft)	Post-Project Surface Type	DMA Runoff Factor	DMA Area x Runoff Factor	IMP Sizing			
K1	22,400	Conventional Roof	1.00	22,400	IMP Sizing Factor	Rain Adjustment Factor	Minimum Area or Volume	Proposed Area or Volume
K2	9,655	Concrete or Asphalt	1.00	9,655				
K3	3,200	Landscape	0.70	2,240	Total			
Total				34,295	0.050	0.965	1,654	1,665
Area					0.042	0.965	1,390	1,390
Surface Volume					0.055	0.965	1,820	1,820
Subsurface Volume					Maximum Underdrain Flow (cfs)		0.07	
					Orifice Diameter (in)		1.58	

IMP Type: Flow-Through Planter – IMP L

Soil Type: D

DMA Name	DMA Area (sq ft)	Post-Project Surface Type	DMA Runoff Factor	DMA Area x Runoff Factor	IMP Sizing			
L1	4,010	Conventional Roof	1.00	4,010	IMP Sizing Factor	Rain Adjustment Factor	Minimum Area or Volume	Proposed Area or Volume
Total				4,010				
Area					0.050	0.965	193	205
Surface Volume					0.042	0.965	162	163
Subsurface Volume					0.055	0.965	213	213
					Maximum Underdrain Flow (cfs)		0.01	
					Orifice Diameter (in)		0.53	

IMP Type: Flow-Through Planter – IMP M

Soil Type: D

DMA Name	DMA Area (sq ft)	Post-Project Surface Type	DMA Runoff Factor	DMA Area x Runoff Factor	IMP Sizing						
M1	5,450	Conventional Roof	1.00	5,450	IMP Sizing Factor	Rain Adjustment Factor	Minimum Area or Volume	Proposed Area or Volume			
Total				5,450							
Area				0.050					0.965	263	265
Surface Volume				0.042					0.965	221	221
Subsurface Volume				0.055	0.965	289	290				
Maximum Underdrain Flow (cfs)								0.01			
Orifice Diameter (in)								0.62			

IMP Type: Flow-Through Planter – IMP N

Soil Type: D

DMA Name	DMA Area (sq ft)	Post-Project Surface Type	DMA Runoff Factor	DMA Area x Runoff Factor	IMP Sizing						
N1	3,120	Conventional Roof	1.00	3,120	IMP Sizing Factor	Rain Adjustment Factor	Minimum Area or Volume	Proposed Area or Volume			
Total				3,120							
Area				0.050					0.965	151	168
Surface Volume				0.042					0.965	126	127
Subsurface Volume				0.055	0.965	166	166				
Maximum Underdrain Flow (cfs)								0.01			
Orifice Diameter (in)								0.47			

IMP Type: Flow-Through Planter – IMP O

Soil Type: D

DMA Name	DMA Area (sq ft)	Post-Project Surface Type	DMA Runoff Factor	DMA Area x Runoff Factor	IMP Sizing			
O1	52,965	Concrete or Asphalt	1.00	52,965	IMP Sizing Factor	Rain Adjustment Factor	Minimum Area or Volume	Proposed Area or Volume
O2	8,920	Landscape	0.70	6,244				
Total				59,209				
Area				0.050				
Surface Volume				0.042	0.965	2,399	2,400	
Subsurface Volume				0.055	0.965	3,142	3,143	
Maximum Underdrain Flow (cfs)								0.12
Orifice Diameter (in)								2.09

V. SOURCE CONTROL MEASURES

A. Site Activities and potential sources of pollutants

The following activities planned for the project have potential to allow pollutants to enter runoff:

- 1) On-site drain inlets
- 2) Refuse disposal
- 3) Landscape maintenance
- 4) Fertilizers and pesticides used in landscaping area

To further reduce the potential to enter runoff, permanent and operational BMP's will be implemented as described in the following Table.

B. Source Control Table

<i>Potential source of runoff pollutants</i>	<i>Permanent source control BMPs</i>	<i>Operational source control BMPs</i>
On-site drain inlets	Inlets that could be accessed from paved areas, sidewalks and landscaped areas will be marked with a "No Dumping – Drains to Bay	<ul style="list-style-type: none"> • Inlet markings will be inspected annually and replaced or renewed as needed • Owners will receive stormwater pollution prevention information to be provided by the City • Bioretention and related structures and features will be inspected and maintained as specified in the BMP Operation and Maintenance Plan
Refuse areas	All dumpsters will be marked with a "Do not dump Hazardous Materials here" or similar	<ul style="list-style-type: none"> • Adequate litter receptacles will be provided throughout the project site • Groundskeeping crew or contractor will inspect and clean up daily. Spills will be cleaned up using dry methods
Landscaping/outdoor pesticide use	<ul style="list-style-type: none"> • Landscaping will be designed to minimize required irrigation and runoff, to promote surface infiltration, and to minimize the use of fertilizers and pesticides that can contribute to storm water pollution • Plants will be selected appropriate to site soils, slopes, climate, sun, wind, rain, land use, air movement, ecological consistency, and plant management 	<ul style="list-style-type: none"> • All site landscaping is to be maintained by a professional landscaping contractor. Contract to state that landscaping is to be maintained using IPM principles, with minimal or no use of pesticides • Owners will receive integrated pest management information

	<ul style="list-style-type: none"> Plantings for swales will be selected to be appropriate to anticipated soil and moisture conditions 	
Interior floor drains/interior parking garage	<ul style="list-style-type: none"> Interior floor/parking garage drains will be plumbed to sanitary sewer 	<ul style="list-style-type: none"> Inspect and maintain drains to prevent blockages and overflow
Sidewalks and parking lots		<ul style="list-style-type: none"> Sweep sidewalks and parking lots 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 a storm drain

C. Features, Materials, and Methods of Construction of Source Control BMP's

VI. STORM WATER FACILITY MAINTENANCE

A. Ownership and Responsibility for Maintenance in Perpetuity

All stormwater treatment facilities in this plan will be owned and maintained in perpetuity by the property owner, General Realty. The contractor, if different from the property owner, accepts responsibility for interim operation and maintenance of the facilities until such time as this responsibility is formally transferred to the property owner.

The property owner, General Realty, is required to provide a Stormwater Control Operation and Maintenance (O&M) Plan for review of the City of Pinole, and record an Operation and Maintenance Agreement, including and necessary rights-of-way, prior to issuance of a building permit. Additionally, the property owner will be required to annex into any financing mechanisms formed to ensure that all costs associated with the perpetual Operation & Maintenance, administration and reporting of these water quality features (including costs associated with all required City of Pinole administration and reporting) are paid for by the property owner.

B. Summary of Maintenance Requirements for each Stormwater Facility

Bioretention and related facilities remove pollutants primarily by filtering runoff slowly through an active layer of soil. Routine maintenance is needed to ensure that flow is unobstructed, that erosion is prevented, and that soils are held together by plant roots and are biologically active. Typical routine maintenance consists of the following:

- 1) Inspect inlets, exposure of soils, or other evidence of erosion. Clear any obstructions and remove any accumulations of sediment. Examine rock or other material used as a splash pad and replenish if necessary.
- 2) Inspect outlets for erosion or plugging.
- 3) Examine the vegetation to insure that it is healthy and dense enough to provide filtering and to protect soils from erosion. Replenish mulch as necessary, remove fallen leaves and debris, prune large shrubs or trees, and mow turf areas. Confirm that irrigation is adequate and not excessive. Replace dead plants and remove invasive vegetation.
- 4) Observe soil at the bottom of the bioretention planter or filter for uniform percolation throughout. If portions of the swale or filter do not drain within 48 hours after the end of the storm, the soil should be tilled and replanted. Remove any debris or accumulations of sediment.

- 5) Abate any potential vectors by filling in the ground and around swale and by ensuring that there are no areas where water stands longer than 48 hours following a storm. If mosquito larvae are present and persistent contact the County Vector Control District for information and advice. Mosquito larvicides should be applied only when absolutely necessary and then only by a licensed individual or contractor.

VII. CONSTRUCTION PLAN C.3 CHECKLIST

STORMWATER CONTROL PLAN REFERENCE	BMP DESCRIPTION	PLAN SHEET NUMBER
CCCo IMP Summary Report Bioretention Detail & Exhibit	Vegetated Flow-Through Planter Bioswale Detail	Civil Sheets C2.01 & C2.02
Source Control Table V.B.	On-site drain inlets to be marked With "no dumping" message	Stormwater Control Plan
Source Control Table V.B.	Plant selection to minimize irrigation, minimize use of fertilizers and pesticides, and for pest resistance.	Landscape Plans
Source Control Table V.B.	Adequate litter receptacles throughout project area	Architectural Plans

VIII. OWNER'S CERTIFICATION

The selection, sizing, and preliminary design of stormwater treatment and other control measures in this plan meet the requirements of Regional Water Quality Control Board Order R2-2015-0049.