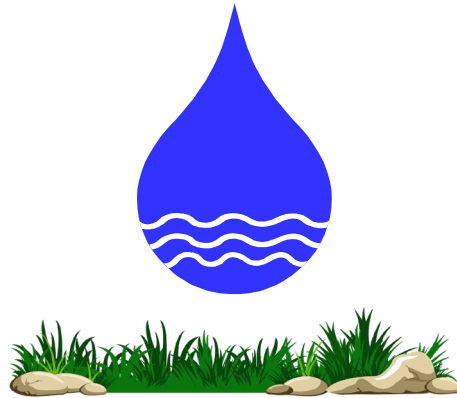


Preliminary Stormwater Control Plan

GREEN VALLEY -3 APARTMENTS



February 25, 2022

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TABLE OF CONTENTS

I.	PROJECT DESCRIPTION	1
II.	OPPURTUNITIES AND CONSTRAINTS.....	2
III.	GUIDELINE AND STANDARDS	2
IV.	STORM DRAIN DESIGN	2
V.	DRAINAGE MANAGEMENT AREAS	2
VI.	SOURCE CONTROLS	3
VII.	OPERATION AND MAINTENANCE	4

ATTACHMENTS

LID FEASIBILITY WORKSHEET

POST-CONSTRUCTION STORMWATER CONTROL PLAN (EXHIBIT)

I. PROJECT DESCRIPTION

This report represents the Stormwater Control Plan for the Green Valley 3 Apartments project, located northeast of the intersection of Business Center Drive and Green Valley Road in the City of Fairfield, CA. See Figure 1 – Vicinity Map.

Figure 1 – Vicinity Map



The project proposes to develop a multi-family residential development on approximately 5.78 acres of undeveloped land. The project site is located within a partially developed business park consisting of two existing office buildings and a hotel that is currently under construction. Single-family residential properties are located north of the project site.

The project site has been rough graded previously and is relatively flat. Generally sloping from north to south at approximately 0.0050 ft/ft. A detention basin serving the residential properties north of the project site drains through private 24-inch and 36-inch pipes that run through the property. The existing storm drain pipe will be used to connect to and convey runoff from the proposed storm drain system.

Runoff from the site is conveyed to a regional detention basin located South of Business Center Drive through the existing storm drain system, eliminating the need for onsite hydromodification.

II. OPPURTUNITIES AND CONSTRAINTS

The development of the site will require a majority of the site to be covered with impervious surfaces. Roof drains will be disconnected were possible allowing runoff to surface flow to bio-retention basins located throughout the site, areas that cannot surface drain to bio-retention basins will drain to inlets and will be conveyed to bio-retention basins through underground pipes prior to entering to the underground storm drain system.

Interceptor trees and landscaping used to disconnect impervious surfaces will be installed throughout the site to promote infiltration and slow the rate of discharge from the site.

III. GUIDELINES AND STANDARDS

The storm drain system has been designed in compliance with the Fairfield Suisun Stormwater Guidelines C.3 Manual.

IV. STORM DRAIN DESIGN

The site grading plan and proposed storm drain system has been designed to convey runoff to bio-retention basins located throughout the site. The basins have been sized to cover a minimum area equivalent to four percent of the contributing shed's impervious area. Underdrains and overflow risers will be installed in the basins to allow 6-inches of ponding and convey excess runoff offsite through the private onsite storm drain system. Runoff from the site is conveyed to a regional detention basin located south of Business Center Drive, ultimately discharges to Grizzly Bay.

V. DRAINAGE MANAGEMENT AREAS

DMA #1: DMA #1 is comprised of approximately 30,715 square feet of building roof area, 37,140 square feet of pavement and 10,845 square feet of landscaping. Runoff from DMA #1 will surface drain and piped to Bio-Retention Basin #1.

DMA #2: DMA #2 is comprised of 8,950 square feet of building roof area, 8,930 square feet of pavement and 2,245 square feet of landscaping. Runoff from DMA #2 will surface drain to Bio-retention Basin #2.

DMA #3: DMA #3 is comprised of 3,555 square feet of building roof area, 8,295 square feet of pavement and 1,350 square feet of landscaping. Runoff from DMA #2 will surface drain to Bio-retention Basin #3.

DMA #4: DMA #4 is comprised of 37,440 square feet of building roof area, 35,660 square feet of pavement and 16,400 square feet of landscaping. Runoff from DMA #4 will surface drain to Bio-Retention Basin #4.

Table 1 – DMA Summary

DMA SUMMARY TABLE

DMA Name	AREA (SF)	POST-PROJECT SURFACE TYPE	RUNOFF (RO) FACTOR	PRODUCT AREA x RO FACTOR (SF)	TREATMENT AREA REQUIRED (SF) [A]	SELF-RETAINING DMA	RECEIVING SELF-RETAINING DMA (SF) [B]	Ratio [A]/[B]
DMA 1 (BIO-RETENTION - 4% OF IMPERVIOUS AREA)								
B1	30,715	BUILDING ROOF	1	30,715	1229	1	2,760	44.51%
P1	37,140	PAVEMENT	1	37,140	1486	1	2,760	53.83%
L1	10,845	LANDSCAPING	0.1	1,085	43	1	2,760	1.57%
TOTALS:				68,940	2758		2,760	99.91%
DMA 2 (BIO-RETENTION - 4% OF IMPERVIOUS AREA)								
B2	8,950	BUILDING ROOF	1	8,950	358	2	825	43.39%
P2	8,930	PAVEMENT	1	8,930	357	2	825	43.30%
L2	2,245	LANDSCAPING	0.1	225	9	2	825	1.09%
TOTALS:				18,105	724		825	87.78%
DMA 3 (BIO-RETENTION - 4% OF IMPERVIOUS AREA)								
B3	3,555	BUILDING ROOF	1	3,555	142	2	655	21.71%
P3	8,295	PAVEMENT	1	8,295	332	2	655	50.66%
L3	1,350	LANDSCAPING	0.1	135	5	2	655	0.82%
TOTALS:				11,985	479		655	73.19%
DMA 4 (BIO-RETENTION - 4% OF IMPERVIOUS AREA)								
B4	37,440	BUILDING ROOF	1	37,440	1498	2	3,800	39.41%
P4	35,660	PAVEMENT	1	35,660	1426	2	3,800	37.54%
L4	16,400	LANDSCAPING	0.1	1,640	66	2	3,800	1.73%
TOTALS:				74,740	2990		3,800	78.67%

VI. SOURCE CONTROLS

Inlets will be stamped with “Flows to Bay” or similar text to prevent non-stormwater discharge to the system. The proposed swimming pool and the covered level of the structure will be plumbed to drain to the sanitary sewer and landscaping will be designed to minimize irrigation and fertilization.

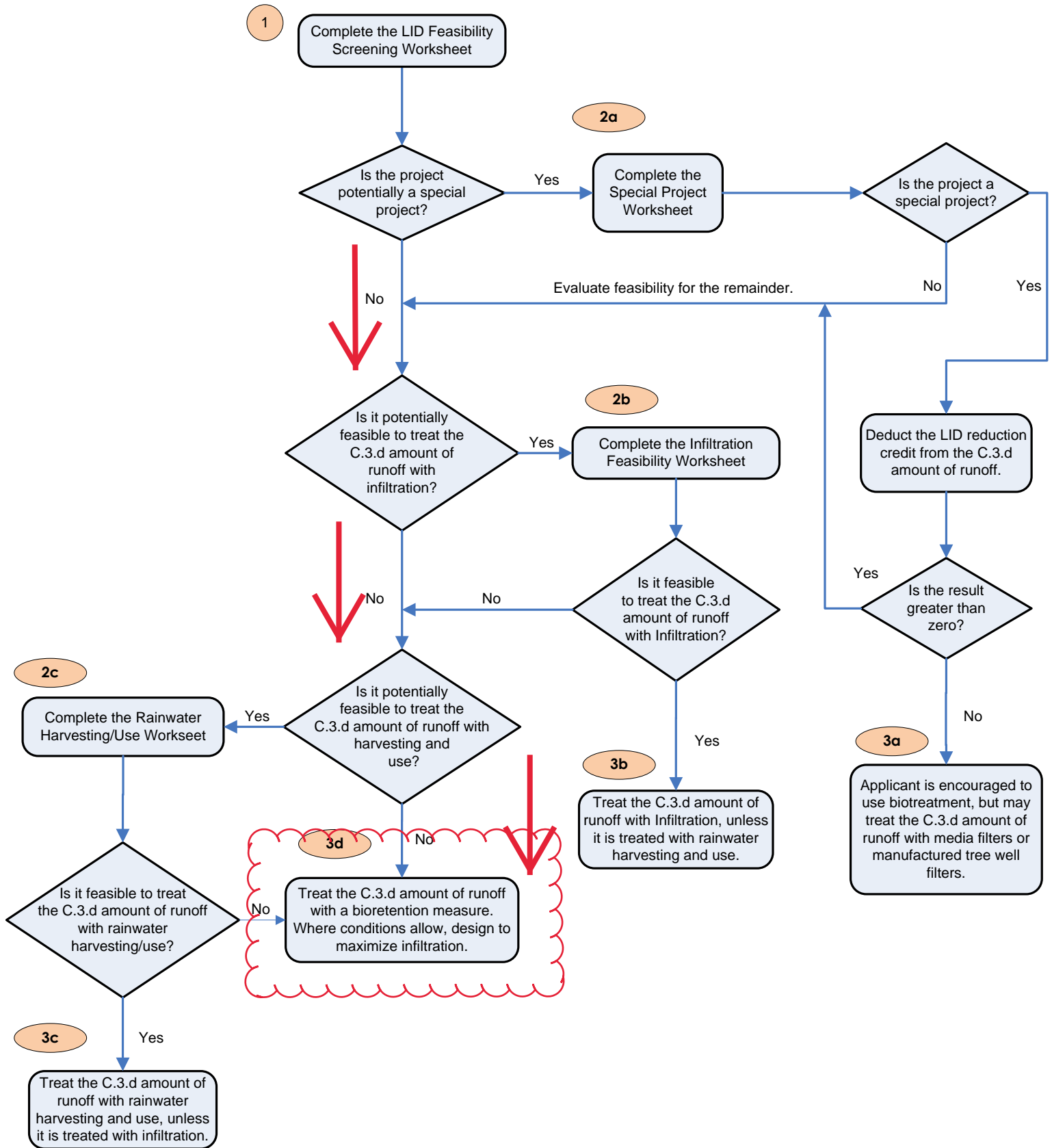
VII. OPERATION AND MAINTENANCE

The onsite bio-retention basins and associated storm drain will be private facilities. It will be the responsibility of the property owner to maintain the basins and associated storm drain system to operate as designed. Maintenance will include regular landscape maintenance which includes trimming grasses, replanting plants as needed and ensuring proper irrigation. Inspection of the overflow risers and repair as needed will be required. Inspection should be conducted every 3 months at a minimum and repaired or maintained as needed.

ATTACHMENTS

1. LID Feasibility Worksheet
2. Post-Construction Stormwater Control Plan (Exhibit)

LID FEASIBILITY WORKSHEETS FLOW CHART



Preliminary Storm Water Control Plan

SITE LEGEND

- ASPHALT PAVEMENT - IMPERVIOUS
0.664 ACRES 28.8%
- LANDSCAPE AREA - PERVIOUS
0.765 ACRES 33.2%
- BUILDING AREA - IMPERVIOUS
1.320 ACRES 57.2%
- PARKING GARAGE AREA - IMPERVIOUS
0.398 ACRES 17.2%
- CONCRETE SIDEWALK - IMPERVIOUS
0.483 ACRES 21.0%
- CONCRETE PAVEMENT - IMPERVIOUS
0.262 ACRES 11.4%
- BIO-RETENTION BASIN AREA - PERVIOUS
0.182 ACRES 8.0%
- UNDEVELOPED NATIVE AREA - PERVIOUS
0.519 ACRES 22.8%
- OVERLAND FLOW DIRECTION

EXISTING

PERVIOUS AREA (VACANT): 5.329 ACRES 92.2 %
 IMPERVIOUS SURFACE (PAVEMENT): 0.433 ACRES 7.8 %
 TOTAL AREA: 5.762 ACRES 100 %

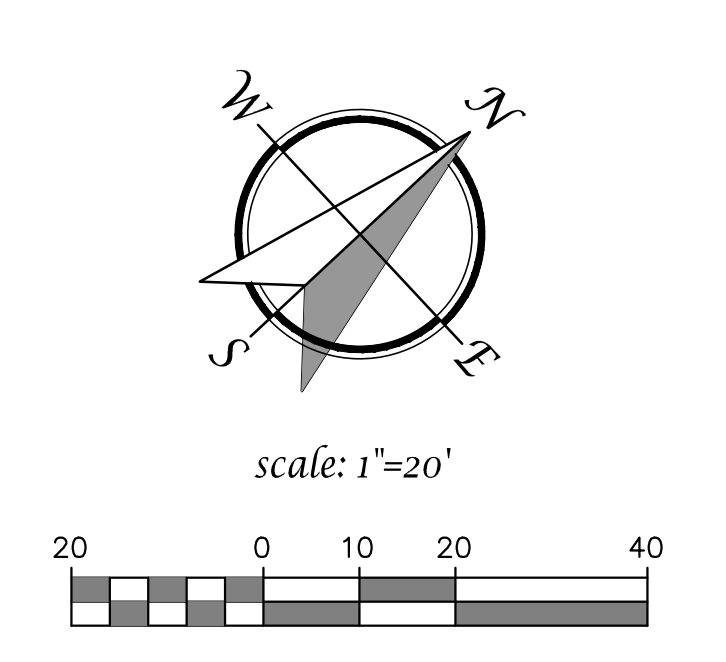
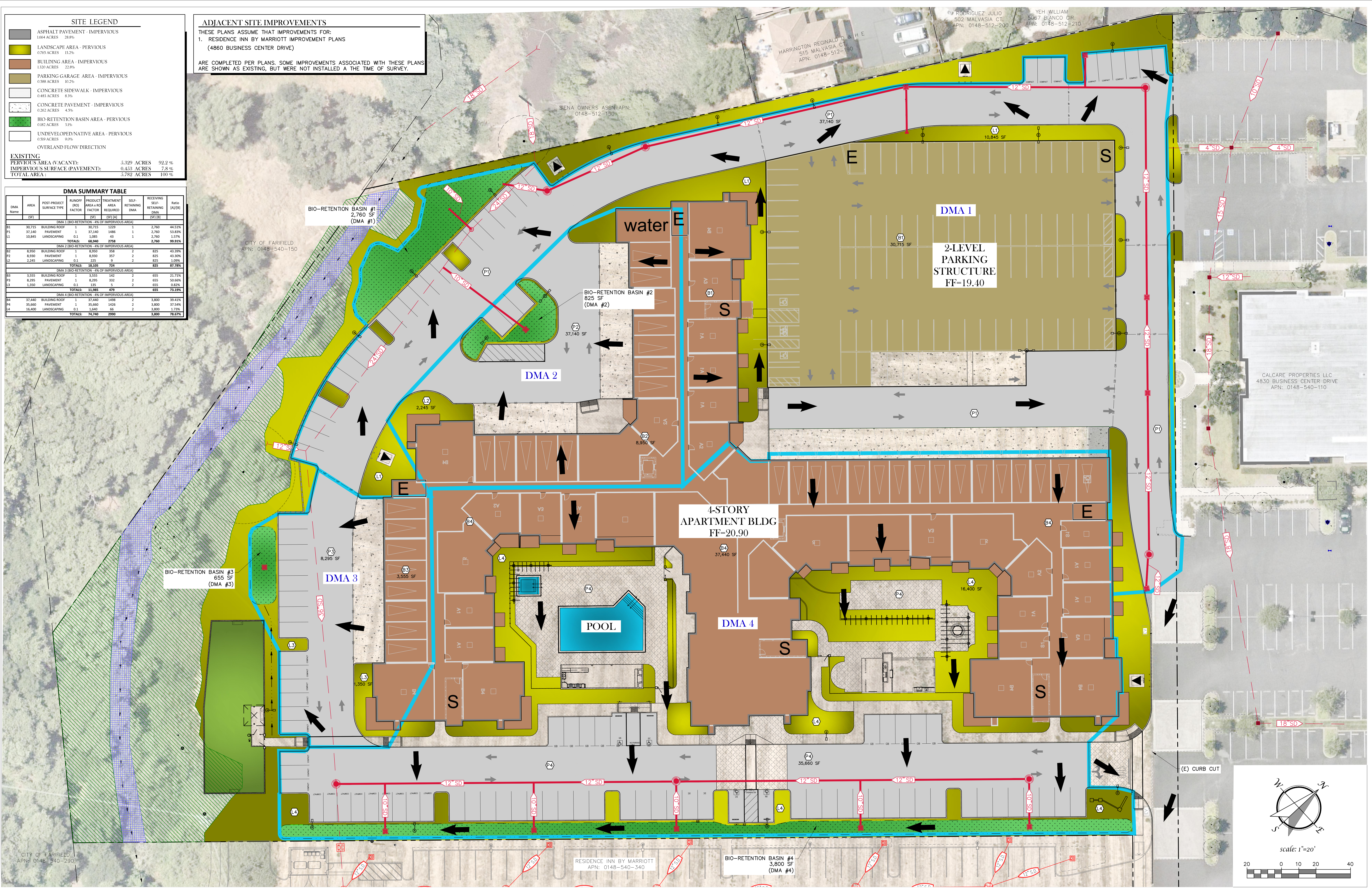
ADJACENT SITE IMPROVEMENTS

THESE PLANS ASSUME THAT IMPROVEMENTS FOR:
 1. RESIDENCE INN BY MARRIOTT IMPROVEMENT PLANS
 (4860 BUSINESS CENTER DRIVE)

ARE COMPLETED PER PLANS. SOME IMPROVEMENTS ASSOCIATED WITH THESE PLANS ARE SHOWN AS EXISTING, BUT WERE NOT INSTALLED AT THE TIME OF SURVEY.

DMA SUMMARY TABLE

DMA Name	AREA (SF)	POST-PROJECT SURFACE TYPE	RUNOFF COEFFICIENT	PRODUCT AREA (SF)	TREATMENT AREA (SF)	SELF-RETAINING DMA (SF)	RECEIVING DMA (SF)	Ratio (A/R)
DMA 1 (BIO-RETENTION - % OF IMPERVIOUS AREA)								
B1	30,715	BUILDING ROOF	1	30,715	1,279	1	2,760	44.51%
P1	37,140	PAVEMENT	1	37,140	1,486	1	2,760	53.89%
L1	10,845	LANDSCAPING	0.1	1,085	43	1	2,760	1.97%
TOTALS:	68,940			68,940	2,768		2,760	99.93%
DMA 2 (BIO-RETENTION - % OF IMPERVIOUS AREA)								
B2	8,990	BUILDING ROOF	1	8,990	358	2	825	43.39%
P2	8,990	PAVEMENT	1	8,990	367	2	825	43.30%
L2	2,245	LANDSCAPING	0.1	225	9	2	825	3.09%
TOTALS:	18,195			18,195	724	825	825	87.78%
DMA 3 (BIO-RETENTION - % OF IMPERVIOUS AREA)								
B3	3,555	BUILDING ROOF	1	3,555	142	2	655	21.71%
P3	8,295	PAVEMENT	1	8,295	332	2	655	50.66%
L3	1,350	LANDSCAPING	0.1	135	5	2	655	0.82%
TOTALS:	13,195			13,195	479	825	825	73.19%
DMA 4 (BIO-RETENTION - % OF IMPERVIOUS AREA)								
B4	37,440	BUILDING ROOF	1	37,440	1,458	2	3,800	39.41%
P4	35,660	PAVEMENT	1	35,660	1,426	2	3,800	37.54%
L4	16,400	LANDSCAPING	0.1	1,640	66	2	3,800	3.73%
TOTALS:	74,740			74,740	2,950	3,800	3,800	78.67%



GREEN VALLEY - 3 APARTMENTS

C4.0

Fairfield, California

Proposed By: **AGS**
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