

**MARINWOOD APTS-
STORMWATER CONTROL
PLAN**

APRIL 12, 2024

**121,155,175 & 197
MARINWOOD
AVENUE**

**APN 165-471-64; 165-471-65;
165-471-69; 165-471-70**

SAN RAFAEL, CA 94903

**PREPARED FOR-
MARINWOOD PROPCO, L.P.
400 GALLERIA PARKWAY, #1450
ATLANTA , GA 95476
(415) 810-1496**

PROJECT #: 2023014.00



15 Third Street, Santa Rosa, CA 95401
Tel: 707 542 6451 Fax: 707 542 5212

PROJECT DATA FORM

PROJECT NAME/NUMBER	MARINWOOD APARTMENTS
APPLICATION SUBMITTAL DATE	APRIL 12, 2024
PROJECT LOCATION	121, 155, 175 & 197 MARINWOOD AVE, SAN RAFAEL, CA 94903
PROJECT PHASE NO.	HOUSING COMPLIANCE REVIEW: FORM BASED
PROJECT TYPE AND DESCRIPTION	CONSTRUCT 125 AFFORDABLE APARTMENTS SURROUNDING AN EXISTING MARKET WHICH WILL REMAIN.
TOTAL PROJECT SITE AREA	220,321 SF
TOTAL NEW AND REPLACED IMPERVIOUS SURFACE AREA	123,585 SF
TOTAL PRE-PROJECT IMPERVIOUS SURFACE AREA	153,909 SF
TOTAL POST-PROJECT IMPERVIOUS SURFACE AREA	158,359 SF

INTRODUCTION

121, 155, 175, & 197 Marinwood Ave (Project) are located ~400 feet southwest of the Miller Creek Road overpass of Highway 101 within the County of Marin. The Project totals 5.06 acres of parking and a central existing market. The existing storm drain on site contributes to Miller Creek which is located 600 feet to the south. The property is bound by the Casa Marinwood subdivision to the West, Miller Creek Road to the North, Highway 101 to the East and a bus depot to the South. This project triggers BASMAA stormwater low impact development requirements due to creating/replacing greater than 5,000 square feet of impervious surface. The proposed buildout of the site will reconfigure existing parking, construct 1 residential building to the North of the market and 3 Residential buildings to the South of the Market.

EXISTING CONDITIONS

This site currently contains an existing ~15,000 square foot market within the center of the property which is surrounded by parking which formerly facilitated additional buildings throughout the project site which have been subsequently been demolished. The site is generally flat and flows from the center of the property out towards the perimeter of the project. One of the previous buildings on site was a laundromat which through their operations had contaminated some of the underlying soils through the middle of the property, the current owner of the property is completing soil remediation which is anticipated to be cleared by the Regional Water Quality Control Board prior to commencement of construction. There are two storm drain systems on the east side of the

property which distribute to CALTRANS property on the east side. There is one storm drain system on the west side of the property which distributes to Miller Creek to the south. There is an existing cell tower on the southeast corner of the property and overhead utility lines within a PG&E Overhead Utility easement on the east side of the property which cuts across the north half of the property. An existing water main cuts across the northeast side of the property.

PROPOSED CONDITIONS

This project will preserve the existing market and paving on the west and east sides of it. Existing paving within the development footprint will be removed. Existing drainage patterns will be maintained with slight adjustments to tributary areas to accommodate the proposed development. The 3 drainage systems throughout the property will be expanded and reconfigured to accommodate the proposed development. The overhead utilities along the eastern property line are within an Overhead Utility easement which will allow bioretention facilities to be placed away from the buildings within the easement. All runoff from new impervious surface will be conveyed to rain gardens for capture and treatment prior to overflowing to the area drains to satisfy BASMAA requirements.

OPPORTUNITIES AND CONSTRAINTS

As the site contains contaminated soils which are currently being remediated, it is assumed that this will be cleared by the Regional Board by the time building permits are ready for issuance. As such, this report and plan set assumes that no special considerations will be required for bioretention facilities, should no infiltration be allowed within certain areas of the project then the bioretention planters will be encased in concrete to provide stormwater treatment but prevent infiltration along with any special considerations required by the Regional Board. As the site drains from the center out towards the perimeter property line, there is insufficient depth of storm drain to allow grading of the property to direct surface drainage out of the contaminated zone without compromising the existing market or encroaching into Caltrans Right of Way. The site is Hydrologic soil group C which has very limited infiltration possibility on site and planters have been sized for treatment.

Hydrologic Soil Group

The USDA soil map for the project indicates that the site is under laid with an unknown Hydrologic Soil Group soils. As the property directly to the west has Hydrologic Soil Group C soils, HSG C was chosen for this report. See the Reference section of this report for the USDA web soil survey excerpts.

LID DESIGN STRATEGIES

Optimization of Site Layout

As the site is working around the existing market and existing parking lot and with the existing grading on site, there were limited opportunities for the placement of bioretention facilities. To minimize earthwork on site, the existing grading concept was followed and kept to drain away from the center of the project site where bioretention will be placed along the perimeter as needed.

Preservation of natural drainage features

The overall existing drainage patterns will be maintained, the project will drain from the center of the property to the easterly and westerly property lines.

Setbacks from creeks, wetlands, and riparian habitats

Miller Creek sits on the south side of the project within the County of Marin. There are no setbacks from Miller Creek on this property and there were no encountered wetlands on this property.

Minimization of Imperviousness

To maintain needed circulation across the site, there were limited opportunities to reduce asphalt paving through the project, concrete pathways are kept to a minimum for routing purposes but cannot be changed to pervious paving due to maintenance and accessibility requirements across the site.

Use of drainage as a design element

Bioretention planters are used to convey drainage through treatment soil at each inlet.

Use of Permeable Pavements

Permeable Pavements are not implemented for maintenance and accessibility requirements.

Dispersal of Runoff to Pervious Areas

Runoff from the project site will be directed across pervious areas as feasible and .

Stormwater Control Measures

Bioretention planters will be utilized at each inlet.

DMA Type	Surface Type	DMA Type	Area (Square Feet)
AC/Concrete	Impervious	Drains to Bioretention	103,903
Rooftop	Impervious	Drains to Bioretention	54,456
Gravel/DG	Pervious	Drains to Bioretention	1,823
Landscape	Pervious	Drains to Bioretention	51,823

STORMWATER FACILITY MAINTENANCE

The 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. Funding for BMP maintenance and replacement will be facilitated by the property owner. Expected maintenance shall include bi-annual inspection for sedimentation, trash accumulation and ponded water. As there will be no subdrain installed within the BMP, maintenance will require drawdown testing to confirm bioretention soil permeability meets a minimum 5 in/hr.

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. BMP's shall drawdown drainage to prevent ponding within 72 hours and sufficient subsurface drainage has been placed to pick up any overflowing drainage within the BMP, at the east side of the property any excess drainage will overtop down to existing inlets at the east side of the property.

**PROPOSED IMPERVIOUS QUANTITIES
STORMWATER TREATMENT SIZING**

155 Marinwood Avenue
 San Rafael, CA
 Prepared by Carlile Macy
 April 12, 2024

Proposed Conditions

Surface Type	Concrete	Rooftop	Gravel/DG	Open
Impervious Value	1.00	1.00	0.10	0.10

Combined BMP Facility	Impervious Surface		Pervious Surface		Area Attributes		Total Facility Impervious ft ²	Total Facility Pervious ft ²	% Impervious	Self Treating*	Self Retaining*	Areas draining to Self-Retaining*	Areas draining to Bioretention Facility	Min. Bioretention Size** ft ²	Actual Bioretention Size ft ²
	AC/Concrete DMA ft ²	Rooftop DMA ft ²	Gravel/DG DMA ft ²	Landscape DMA ft ²	Total Facility Area ft ²	Total Facility Area acres									
A	17480	9188	0	3182	29850	0.69	26668	3182	89%	No	No	No	Yes	1079	1166
B	4307	0	0	2116	6423	0.15	4307	2116	67%	No	No	No	Yes	181	182
C	2886	0	0	918	3804	0.09	2886	918	76%	No	No	No	Yes	119	120
D	0	2861	0	1403	4264	0.10	2861	1403	67%	No	No	No	Yes	120	120
E	0	2814	0	3687	6501	0.15	5047	3687	58%	No	No	No	Yes	217	225
F	1838	2861	0	2872	7571	0.17	4699	2872	62%	No	No	No	Yes	199	210
G	6314	0	0	187	6501	0.15	6314	187	97%	No	No	No	Yes	253	262
H	875	2315	0	5146	8336	0.19	3190	5146	38%	No	No	No	Yes	148	150
I	1667	0	0	2977	4644	0.11	1667	2977	36%	No	No	No	Yes	79	80
J	8656	0	0	245	8901	0.20	8656	245	97%	No	No	No	Yes	347	347
K	1396	0	0	303	1699	0.04	1396	303	82%	No	No	No	Yes	57	60
L	2619	0	0	244	2863	0.07	2619	244	91%	No	No	No	Yes	106	108
M	0	3803	0	4467	8270	0.19	3803	4467	46%	No	No	No	Yes	170	170
N	371	3803	0	1812	5986	0.14	4174	1812	70%	No	No	No	Yes	174	175
O	5362	0	0	594	5956	0.14	5362	594	90%	No	No	No	Yes	217	218
P	11675	3886	0	3353	18914	0.43	15561	3353	82%	No	No	No	Yes	636	700
Q	7128	0	0	1404	8532	0.20	7128	1404	84%	No	No	No	Yes	291	297
R	546	1398	0	1253	3197	0.07	1944	1253	61%	No	No	No	Yes	83	85
S	159	1476	0	2422	4057	0.09	1635	2422	40%	No	No	No	Yes	75	75
T	1560	1042	0	310	2912	0.07	2602	310	89%	No	No	No	Yes	105	105
U	1312	1123	0	640	3075	0.07	2435	640	79%	No	No	No	Yes	100	105
V	0	1125	0	3321	4446	0.10	1125	3321	25%	No	No	No	Yes	58	60
W	0	1965	0	2051	4016	0.09	1965	2051	49%	No	No	No	Yes	87	90
X	1939	3145	1823	3820	10727	0.25	5084	5643	47%	No	No	No	Yes	226	234
Y	3272	0	0	102	3374	0.08	3272	102	97%	No	No	No	Yes	131	132
Total	81362	42805	1823	48829			124167	50652							

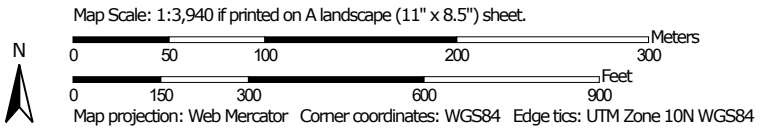
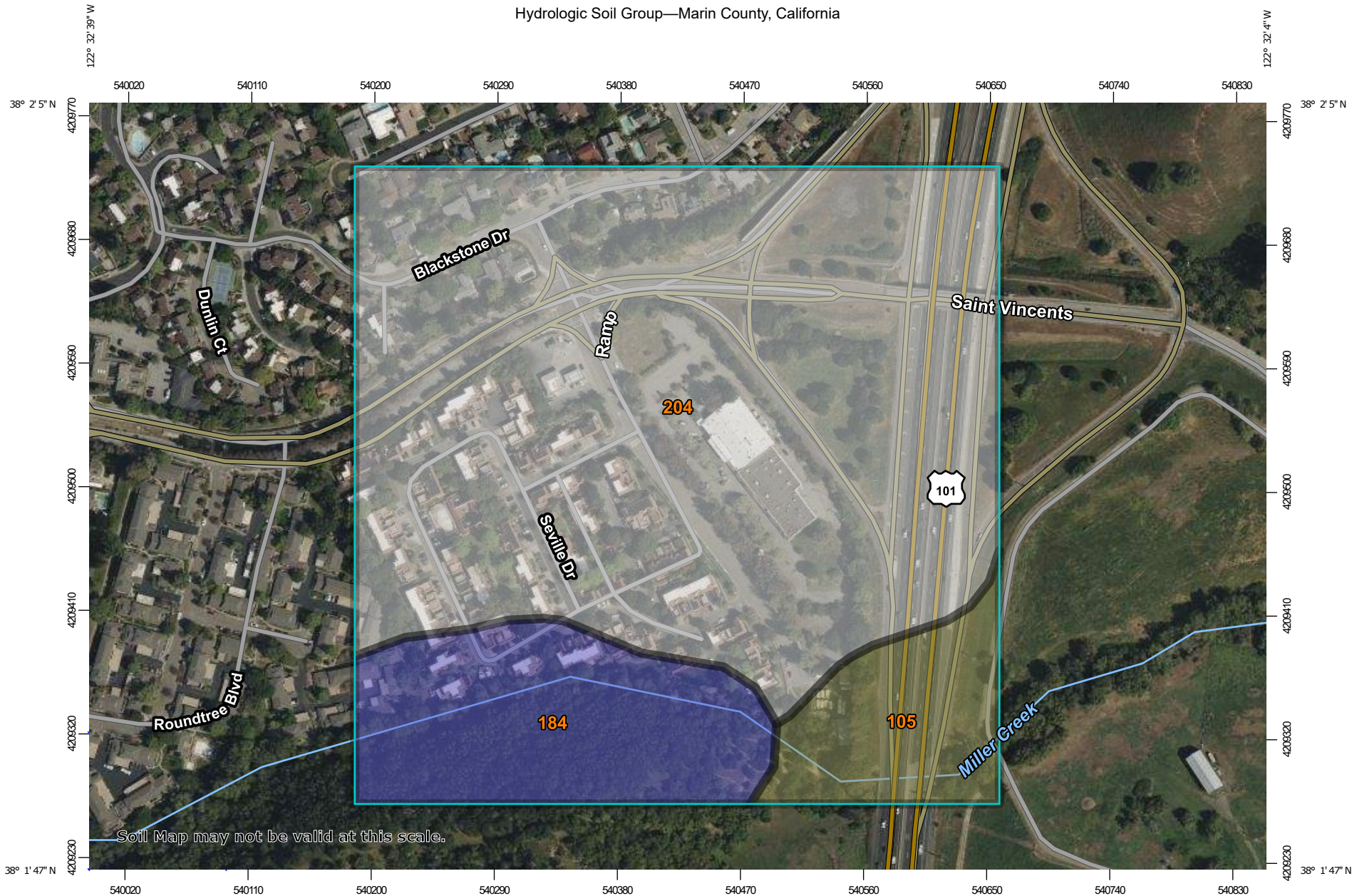
*Reasonably expect 1" of rain to soak into the ground.

** Minimum Bioretention Size = [(Impervious x 1.0) + (Pervious x 0.1)] * 0.04
































*** BMP DRAWDOWN - Underlying soils of Hydrologic Soil Group C = 0.05 in/hr for drawdown. 72 hours x 0.05 in/hr = 3.75 inches max ponding height for vector control = 0.3'

**REFERENCE
MATERIAL
USDA SOIL REPORT
HYDROLOGIC SOIL GROUP**

Hydrologic Soil Group—Marin County, California



MAP LEGEND

Area of Interest (AOI)		 C
Area of Interest (AOI)		 C/D
		 D
		 Not rated or not available
Soils		
Soil Rating Polygons		
 A		
 A/D		
 B		
 B/D		
 C		
 C/D		
 D		
 Not rated or not available		
Soil Rating Lines		
 A		
 A/D		
 B		
 B/D		
 C		
 C/D		
 D		
 Not rated or not available		
Soil Rating Points		
 A		
 A/D		
 B		
 B/D		
Water Features		
 Streams and Canals		
Transportation		
 Rails		
 Interstate Highways		
 US Routes		
 Major Roads		
 Local Roads		
Background		
 Aerial Photography		

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL:
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Marin County, California
 Survey Area Data: Version 17, Sep 11, 2023

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Mar 26, 2022—Apr 25, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
105	Blucher-Cole complex, 2 to 5 percent slopes	C/D	4.7	8.7%
184	Tocaloma-Saurin association, very steep	B	8.8	16.2%
204	Xerorthents-Urban land complex, 0 to 9 percent slopes		40.8	75.1%
Totals for Area of Interest			54.3	100.0%

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

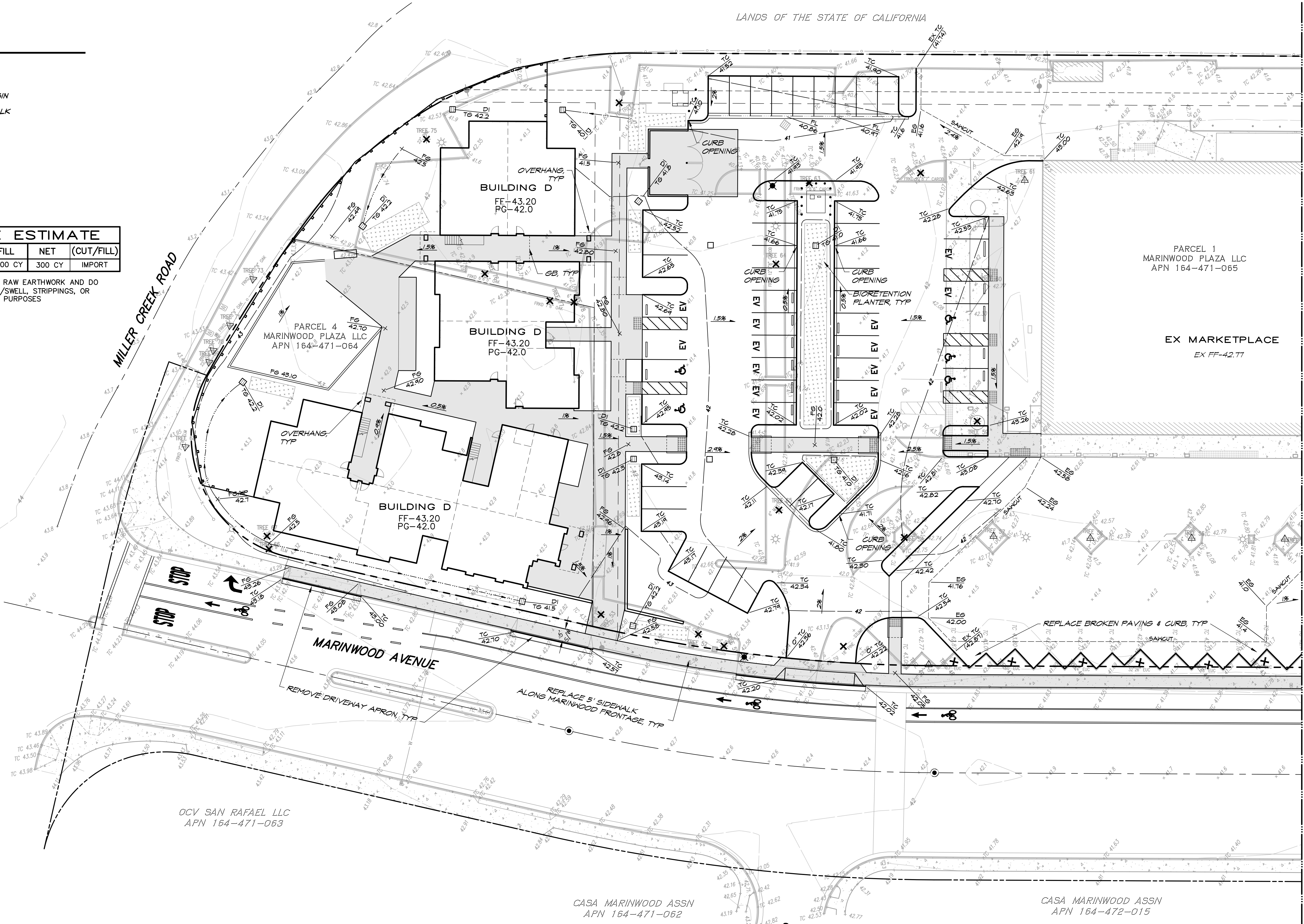
**REFERENCE
MATERIAL
GRADING AND UTILITY PLANS**

SYMBOL LEGEND

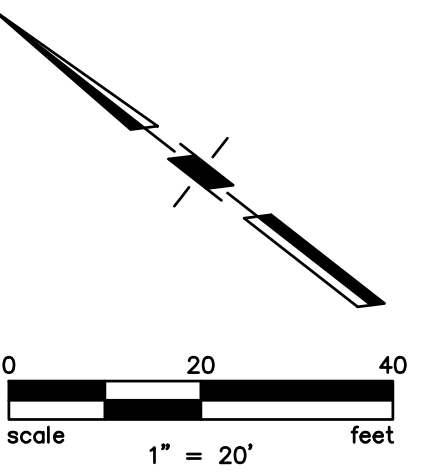
- DRAIN INLET
- JUNCTION BOX
- FIELD DRAIN
- BIORETENTION BASIN
- CONCRETE SIDEWALK
- DG PAVEMENT
- SWALE
- SAVE TREE
- REMOVE TREE

EARTHWORK ESTIMATE				
	CUT	FILL	NET	(CUT/FILL)
OVERALL	1,200 CY	1,500 CY	300 CY	IMPORT

NOTE: EARTHWORK NUMBERS ARE RAW EARTHWORK AND DO NOT ACCOUNT FOR SHRINK/SWELL, STRIPPINGS, OR COMPACTION. NOT FOR BID PURPOSES



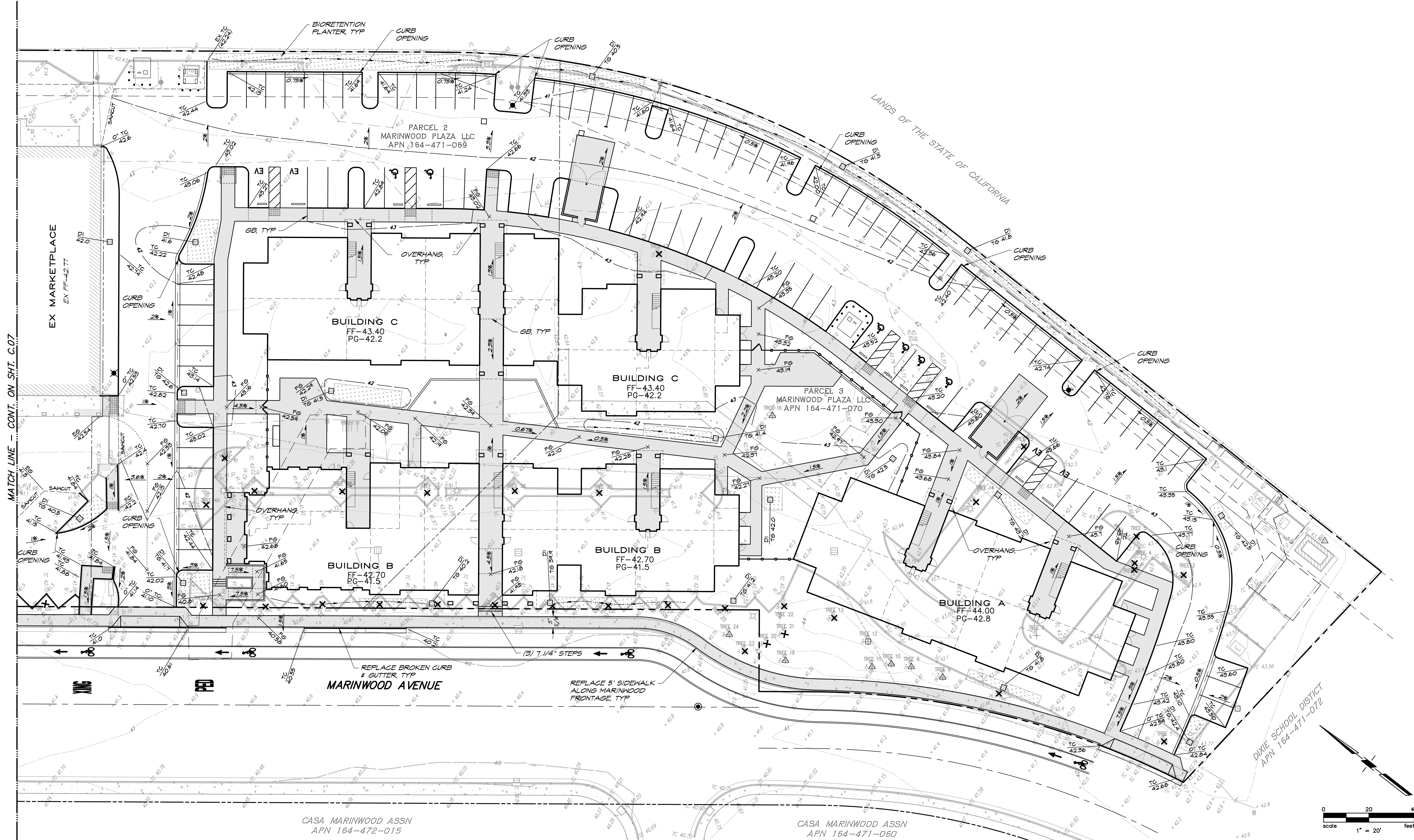
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PRELIMINARY GRADING PLAN - NORTH

MARINWOOD APTS. | MARIN COUNTY, CA

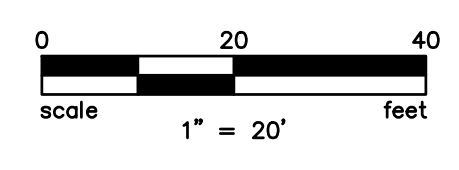
C.07



MATCH LINE - CONT. ON SHT. C.07

CASA MARINWOOD ASSN
APN 164-472-015

CASA MARINWOOD ASSN
APN 164-471-060



PRELIMINARY GRADING PLAN - SOUTH

MARINWOOD APTS. | MARIN COUNTY, CA

C.08

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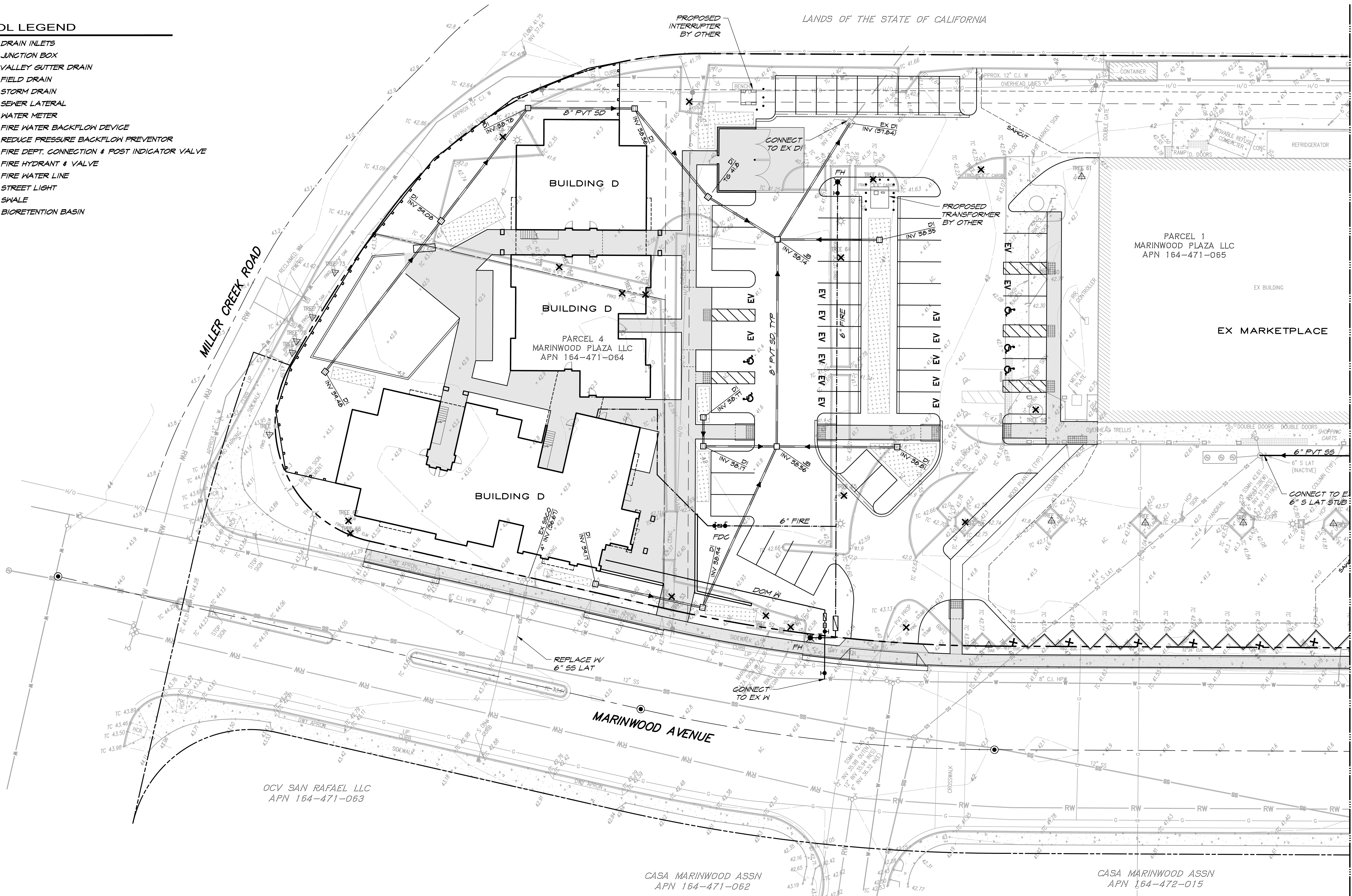
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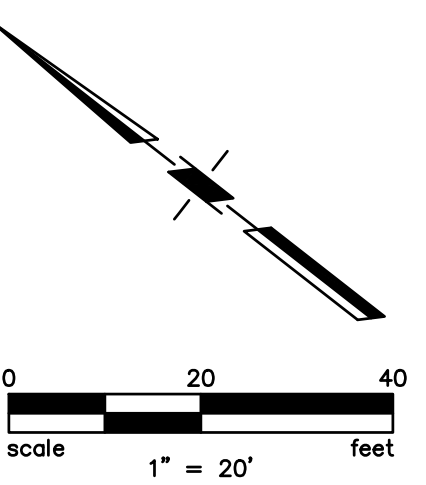
SYMBOL LEGEND

- ○ DRAIN INLETS
- JUNCTION BOX
- VALLEY GUTTER DRAIN
- FIELD DRAIN
- STORM DRAIN
- SEWER LATERAL
- WATER METER
- ▨ FIRE WATER BACKFLOW DEVICE
- ▨ REDUCE PRESSURE BACKFLOW PREVENTOR
- FIRE DEPT. CONNECTION & POST INDICATOR VALVE
- FIRE HYDRANT & VALVE
- FW FIRE WATER LINE
- ★ STREET LIGHT
- SWALE
- ▨ BIORETENTION BASIN

LANDS OF THE STATE OF CALIFORNIA



MATCH LINE - CONT. ON SHT. C-10



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PRELIMINARY UTILITY PLAN - NORTH

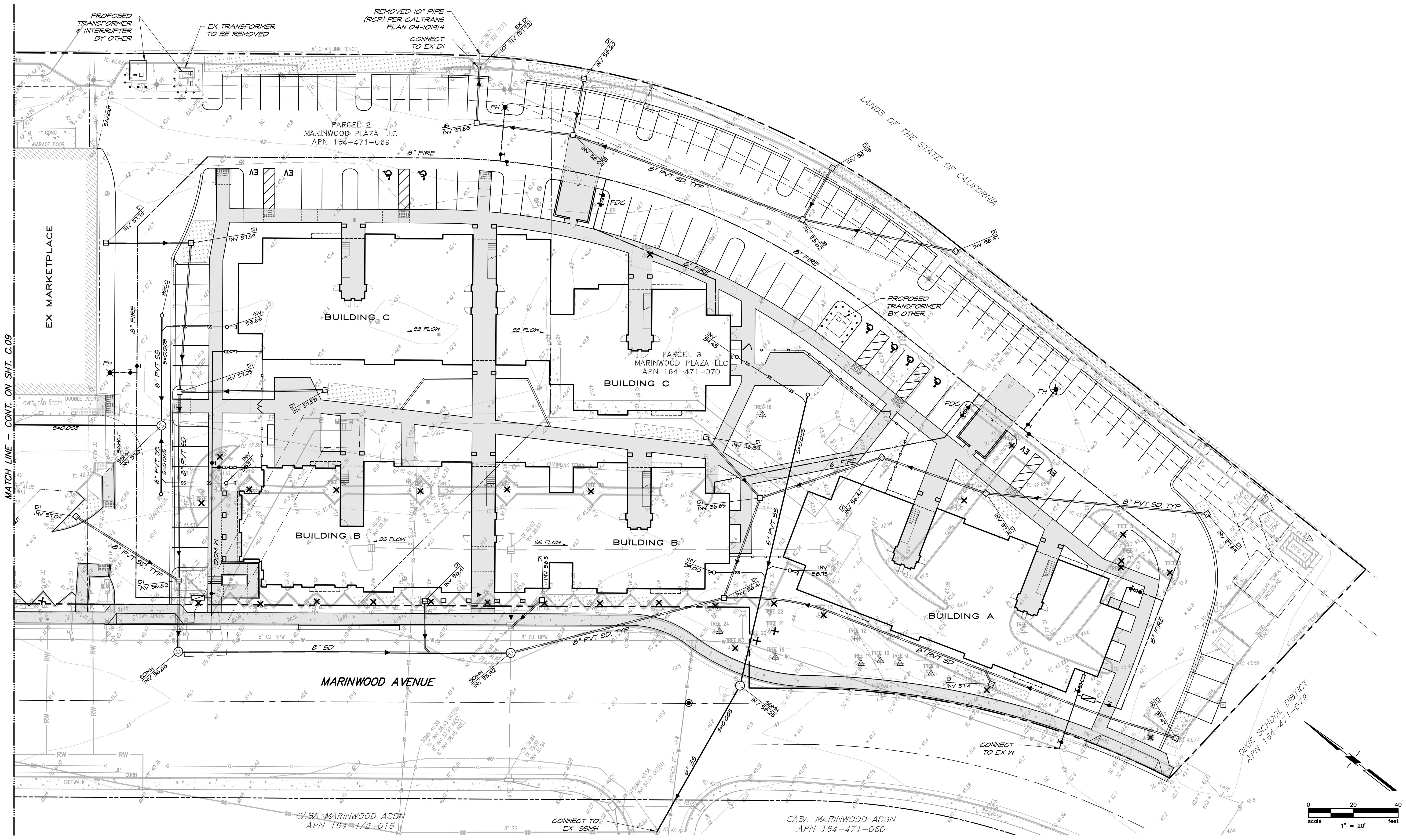
MARINWOOD APTS. | MARIN COUNTY, CA

C.09

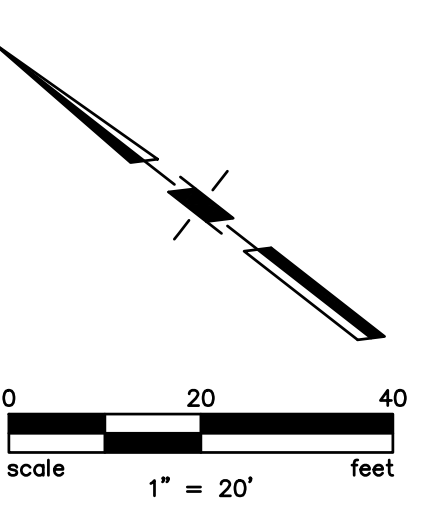
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MATCH LINE - CONT. ON SHIT. C.09



PRELIMINARY UTILITY PLAN - SOUTH

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C.10

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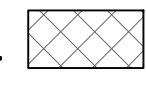
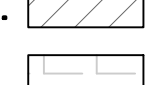
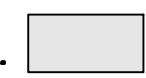

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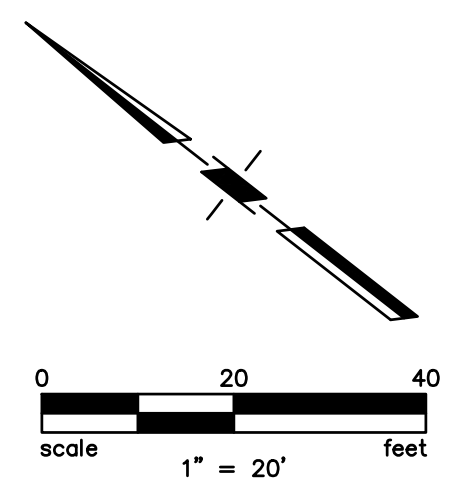
EXHIBIT

LEGEND

- TRIBUTARY AREA 
- HISTORICAL ROOF 
- EXISTING ROOF 
- EXISTING ASPHALT 
- EXISTING CONCRETE 



MATCH LINE - CONT. ON SHT. C.08



PRELIMINARY EXISTING HYDROLOGY - NORTH

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SHT 1

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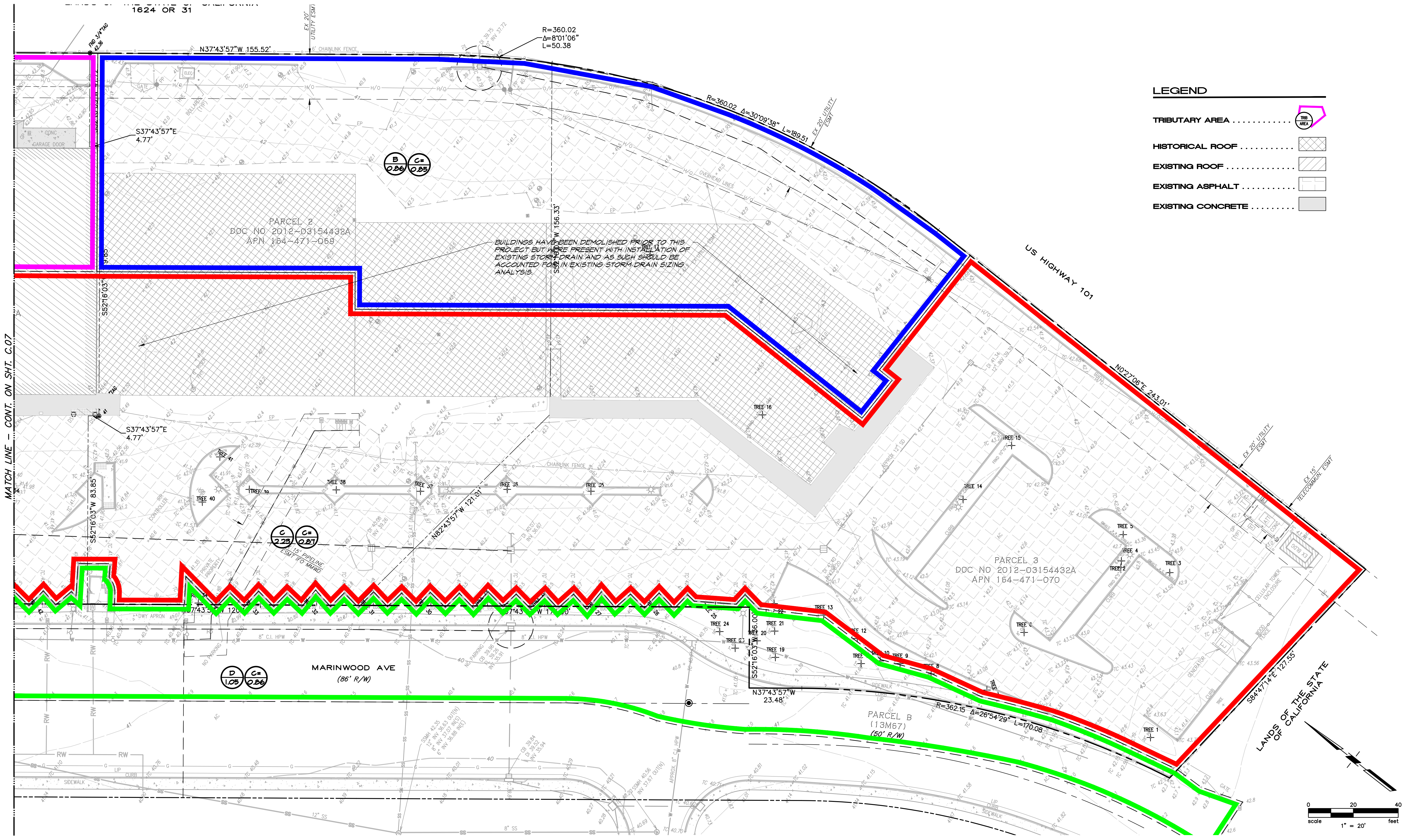
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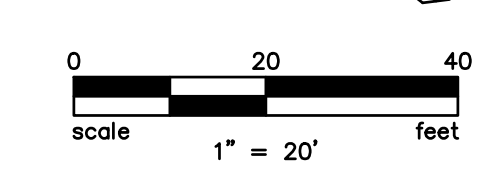
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LEGEND

- TRIBUTARY AREA
- HISTORICAL ROOF
- EXISTING ROOF
- EXISTING ASPHALT
- EXISTING CONCRETE

MATCH LINE - CONT. ON SHT. C.07



PRELIMINARY EXISTING HYDROLOGY - SOUTH

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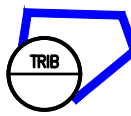

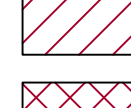
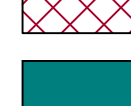


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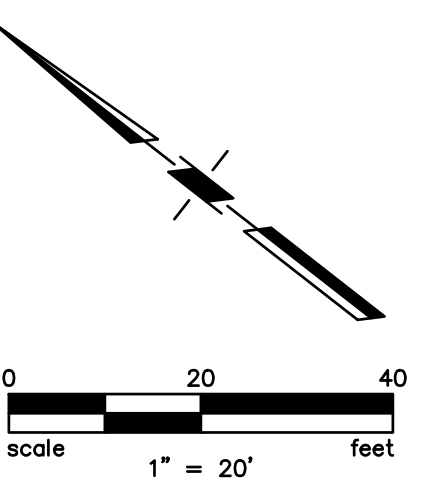
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LEGEND

- TRIBUTARY AREA 
- BIORETENTION OUTLINE 
- PROPOSED ROOF 
- EXISTING ROOF 
- ASPHALT 
- CONCRETE 



MATCH LINE - CONT. ON SHT. C.08



PRELIMINARY PROPOSED HYDROLOGY - NORTH

MARINWOOD APTS. | MARIN COUNTY, CA

SHT 1

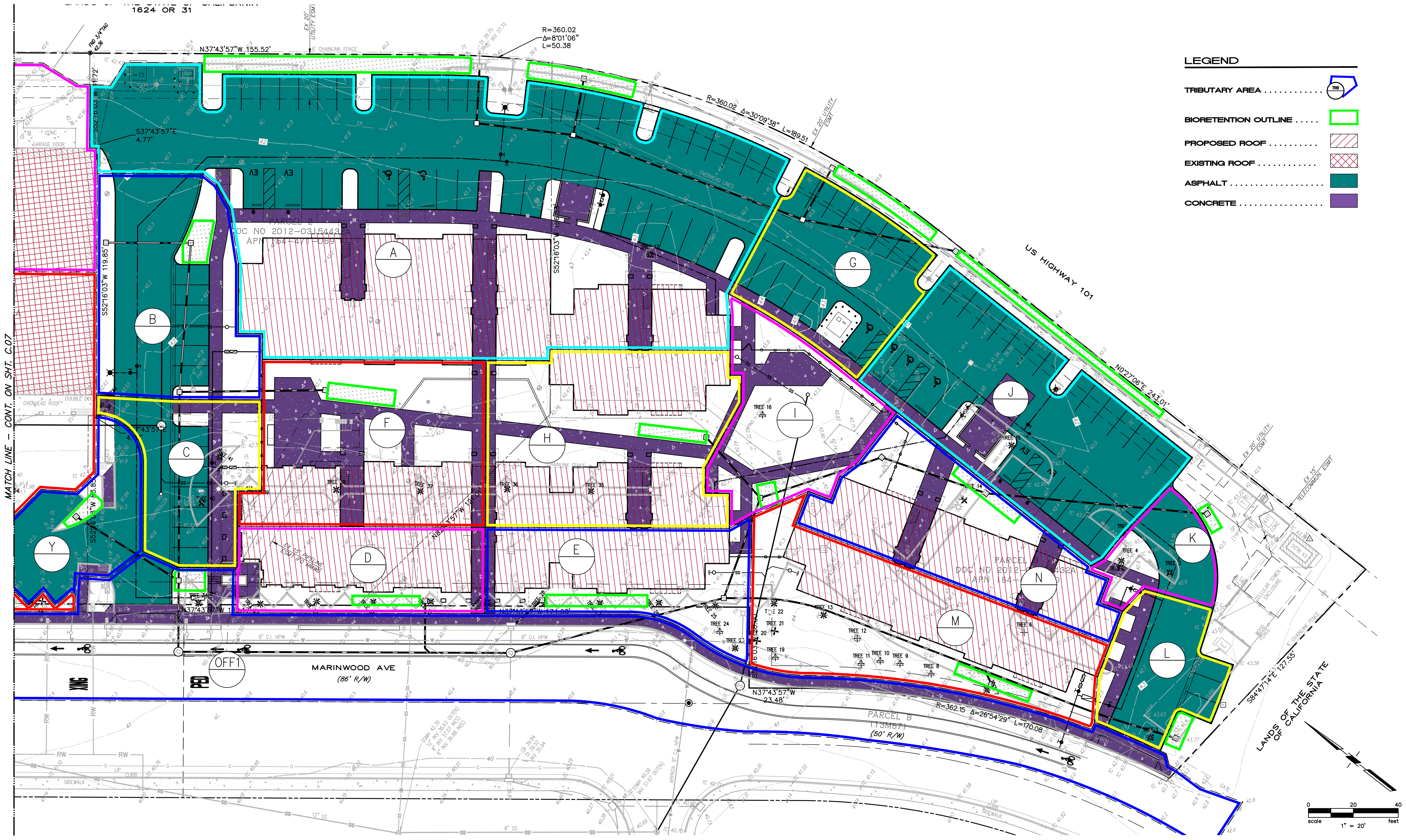
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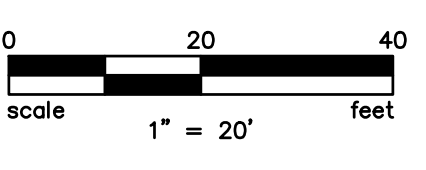
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LEGEND

- TRIBUTARY AREA
- BIORETENTION OUTLINE
- PROPOSED ROOF
- EXISTING ROOF
- ASPHALT
- CONCRETE



PRELIMINARY PROPOSED HYDROLOGY - SOUTH

MARINWOOD APTS. | MARIN COUNTY, CA SHT 2

CIVIL ENGINEERS • URBAN PLANNERS • LAND SURVEYORS • LANDSCAPE ARCHITECTS

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PROJECT No. 2023014.00

APRIL 2024

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TREE REMOVALS & REPLACEMENTS

EXISTING TREES PROTECTED:

COAST LIVE OAK / QUERCUS AGRIFOLIA (PROTECTED)	(3)
LONDON PLANE TREE / PLATANUS X ACERIFOLIA	(4)
CHINESE ELM / ULMUS PARVIFOLIA	(1)
VALLEY OAK / QUERCUS LOBATA	(3)
TOTAL TREES PROTECTED:	12

EXISTING TREES REMOVED:

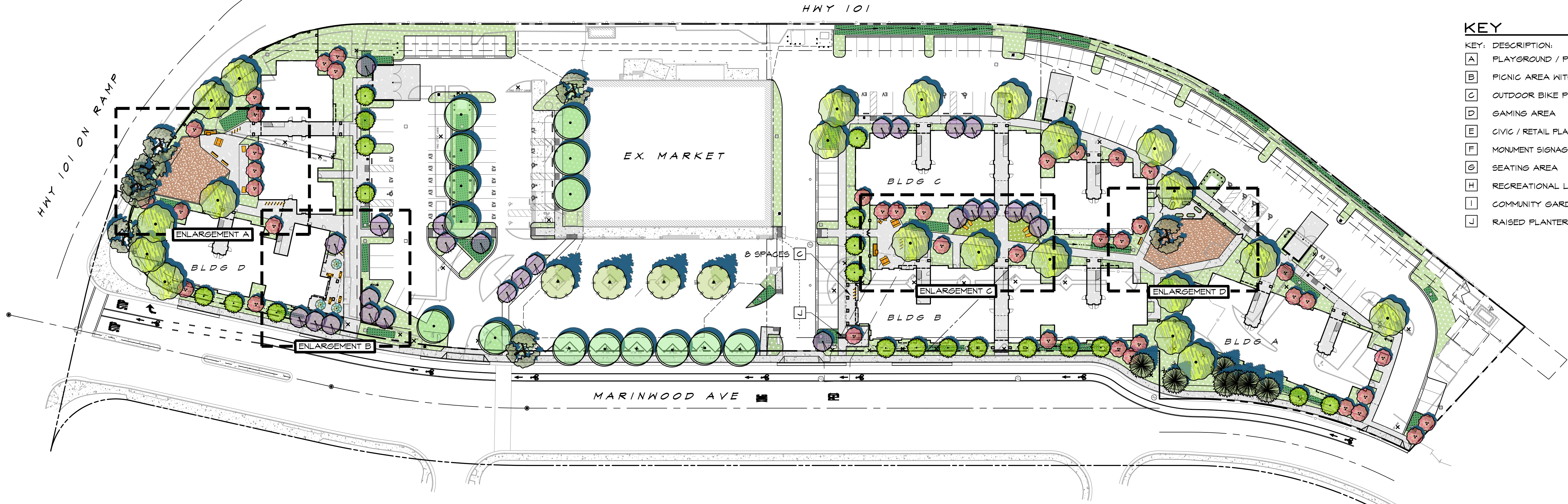
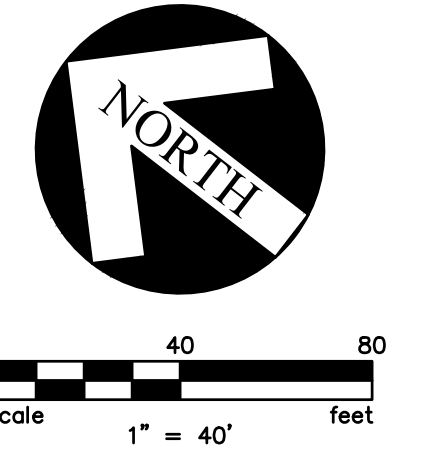
ARIZONA CYPRESS / CUPRESSUS ARIZONICA	(1)
NORCAL WALNUT / JUGLANS HINDSII	(4)
TOYON / HETEROMELES ARBUTIFOLIA	(1)
CHINESE ELM / ULMUS PARVIFOLIA	(3)
STRAWBERRY TREE / ARBUTUS UNEDO	(1)
MAYTEN / MAYTENUS BOARIA	(1)
CAROB / CERATONIA SILIQUA	(1)
CANARY ISLAND PINE / PINUS CANARIENSIS	(2)

TOTAL TREES REMOVED: 66

COAST LIVE OAK / QUERCUS AGRIFOLIA (PROTECTED)	(6)
LONDON PLANE TREE / PLATANUS X ACERIFOLIA	(4)
COAST REDWOOD / SEQUOIA SEMPERVIRENS	(5)
RED IRON BARK / EUCALYPTUS SIDEROXYLON	(7)

REPLACEMENT TREES:

SMALL DECIDUOUS / FLOWERING ORNAMENTAL TREES	(69)
COLUMNAR DECIDUOUS TREES	(21)
CANOPY / SHADE TREES	(22)
STREET TREES	(16)
TOTAL REPLACEMENT TREES:	128



KEY

KEY: DESCRIPTION:

A	PLAYGROUND / PLAY AREA
B	PICNIC AREA WITH BUILT-IN BBQ
C	OUTDOOR BIKE PARKING
D	GAMING AREA
E	CIVIC / RETAIL PLAZA
F	MONUMENT SIGNAGE ON LOW WALL
G	SEATING AREA
H	RECREATIONAL LAWN / PET RELIEF AREA
I	COMMUNITY GARDEN
J	RAISED PLANTER AT ENTRY STAIRS / RAMP

CONCEPTUAL DESIGN NOTES

- ALL UN-PAVED AREAS AND LANDSCAPE AREAS, EXCEPT GROUNDCOVER AREAS, SHALL BE TOP-DRESSED WITH A MINIMUM 3" LAYER OF ORGANIC MULCH.
- PLANTING SHALL CONSIST OF AT MINIMUM 10% NATIVE SPECIES.
- ALL TREES PLANTED WITHIN 4' OF BUILDINGS, WALL, CURBS, OR PAVEMENTS SHALL BE INSTALLED WITH ROOT BARRIERS.
- ALL TREES SHALL BE PLANTED FROM MINIMUM 15 GALLON CONTAINERS.
- LANDSCAPE SHALL COMPLY WITH THE COUNTY'S WATER EFFICIENT LANDSCAPE ORDINANCE.
- A MINIMUM OF ONE FOOT DEPTH OF NON-MECHANICALLY COMPACTED SOIL SHALL BE AVAILABLE FOR WATER ABSORPTION AND ROOT GROWTH IN PLANTED AREAS. RIP AND / OR ROTOTILL AS NEEDED.

IRRIGATION CONCEPT STATEMENT

- ALL PLANTINGS SHALL BE IRRIGATED BY AN AUTOMATIC, WATER CONSERVING IRRIGATION SYSTEM, DESIGNED AND INSTALLED TO MEET THE REQUIREMENTS OF THE COUNTY'S WATER EFFICIENT LANDSCAPE ORDINANCE.
- IRRIGATION SYSTEM SHALL BE DIVIDED INTO DISTINCT "HYDROZONES" BASED ON PLANT WATER USE REQUIREMENTS, SOLAR EXPOSURES, AND APPLICATION TYPE.
- TREES IRRIGATION SHALL BE CONTROLLED BY A DEDICATED VALVE, SEPARATE FROM SHRUBS AND GROUND COVERS.
- TREES SHALL BE IRRIGATED WITH POINT-SOURCE, BUBBLER DISTRIBUTION DEVICES.
- SHRUBS AND GROUND COVER PLANTINGS SHALL BE IRRIGATED BY POINT-SOURCE, DRIP DISTRIBUTION DEVICES.

PLANT PALETTE

SYMBOL: LATIN NAME / COMMON NAME:	SIZE, WATER USE, NATIVE:	SYMBOL: LATIN NAME / COMMON NAME:	SIZE, WATER USE, SPACING, NATIVE:
EXISTING TREES		SHRUBS AND ACCENT PLANTS	
SEQUOIA SEMPERVIRENS / COASTAL REDWOOD	15 GAL. MIN, LOW, NO	ACACIA COGNATA / RIVER WATTLE	5 GAL., LOW, 5' O.C., NO
QUERCUS SPP. / OAKS	15 GAL. MIN, VERY LOW, YES	ARCTOSTAPHYLOS X 'GREENSPHERE' / GREENSPHERE MANZANITA	5 GAL., LOW, 25' O.C., YES
PLATANUS SPP. / PLANE TREES	15 GAL. MIN, MODERATE, NO	ASPIDISTRA ELATIOR / CAST IRON PLANT	5 GAL., LOW, 3' O.C., NO
		COPROSMA REPENS 'MARBLE QUEEN' / MARBLE QUEEN MIRROR PLANT	5 GAL., MODERATE, 3' O.C., NO
SMALL DECIDUOUS / FLOWERING ORNAMENTAL TREES		HELLEBORUS ARGUTIFOLIUS 'SILVER LACE' / SILVER LACE HELLEBORE	5 GAL., LOW, 15' O.C., NO
ARBUTUS VAR. / DWARF STRAWBERRY TREE	15 GAL. MIN, LOW, NO	RIBES AUREUM, SANGUINEUM, ETC. / CURRANT VARIETIES	5 GAL., LOW, 15' O.C., YES
CERCIS OCCIDENTALIS / WESTERN REDBUD	15 GAL. MIN, VERY LOW, YES	NESTINGIA FRUTICOSA / COASTAL ROSEMARY	5 GAL., LOW, 3' O.C., NO
ACCA SELLOWIANA / PINEAPPLE GUAVA	15 GAL. MIN, MODERATE, NO	CEANOTHUS 'CENTENNIAL', JULIA PHELPS, ETC. / CALIFORNIA LILAC VAR.	5 GAL., LOW, 6' O.C., YES
ACER PALMATUM VAR. / JAPANESE MAPLE SPECIES	15 GAL. MIN, MODERATE, NO		
CORNUS FLORIDA / FLOWERING DOGWOOD	15 GAL. MIN, MODERATE, NO	GRASSES, PERENNIALS, AND GROUNDCOVERS	
CHITALPA TASHKENTENSIS / CHITALPA	15 GAL. MIN, LOW, NO	CHONDROPETALUM TECTORUM / SMALL CAPE RUSH	1 GAL., LOW, 3' O.C., YES
		LOMANDRA LONGIFOLIA 'BREEZE' / BREEZE MAT RUSH	1 GAL., LOW, 3' O.C., YES
COLUMNAR DECIDUOUS TREES		MUHLENBERGIA CAPILLARIS 'PINK CLOUD' / PINK CLOUD PINK MUHLY GRASS	1 GAL., LOW, 4' O.C., YES
MAGNOLIA G. 'LITTLE GEM' / DWARF SOUTHERN MAGNOLIA	15 GAL. MIN, MODERATE, NO	FESTUCA MAIREI, CALIFORNICA, RUBRA, ETC. / FESTUCA VARIETIES	1 GAL., LOW, 3' O.C., YES
AGONIS FLEXUOSA / PEPPERMINT TREE	15 GAL. MIN, LOW, NO	CAREX TUMICOLA / FOOTHILL SEDGE	1 GAL., LOW, 3' O.C., YES
ACER RUBRUM 'BOWHALL' / BOWHALL MAPLE	15 GAL. MIN, MODERATE, NO	HEUCHERA MAXIMA / ISLAND ALUM ROOT	1 GAL., LOW, 2' O.C., YES
GINKGO BILOBA 'PRINCETON SENTRY'	115 GAL. MIN, MODERATE, NO	IRIS DOUGLASSIANA / DOUGLAS IRIS	1 GAL., LOW, 15' O.C., YES
QUERCUS ROBAR 'FASTIGATA' UPRIGHT ENGLISH OAK	115 GAL. MIN, MODERATE, NO	MIMULUS SPP. / NATIVE AND HYBRID MONKEYFLOWER VARIETIES	1 GAL., LOW, 2' O.C., YES
		SMALL SUCCULENTS (AEONIUM, DUDLEYA, ECHEVERIA, SEDUM, ETC.)	1 GAL., LOW, 3' O.C., YES
CANOPY / SHADE TREES		BULBINE FRUTESCENS / BULBINE	1 GAL., LOW, 15' O.C., YES
QUERCUS AGRIFOLIA / COAST LIVE OAK	15 GAL. MIN, VERY LOW, YES	SALVIA 'BEE'S BLISS', 'POZO BLUE', SONOMENSIS, ETC. / SALVIA VARIETIES	1 GAL., LOW, 3' O.C., YES
QUERCUS ENGELMANNII / ENGELMANN OAK	15 GAL. MIN, LOW, YES	BACCHARIS PILULARIS 'PIGEON POINT' / COYOTE BUSH	5 GAL., LOW, 3' O.C., YES
QUERCUS KELLOGGII / BLACK OAK	15 GAL. MIN, LOW, YES	EPILOBIUM CANUM SPP. / CALIFORNIA FUSCHIA VARIETIES	1 GAL., LOW, 15' O.C., YES
QUERCUS LOBATA / VALLEY OAK	15 GAL. MIN, LOW, YES		
		STORMWATER TREATMENT	
STREET TREES		PLANTINGS LIMITED TO THE APPROVED L.I.D. PLANT LIST	
PLATANUS ACERIFOLIA SPP. / LONDON PLANE TREES	15 GAL. MIN, MODERATE, NO	CAREX TUMULICOLA / FOOTHILL SEDGE	1 GAL., LOW, 3' O.C., YES
ULMUS PARVIFOLIA / CHINESE ELM	15 GAL. MIN, LOW, NO	FESTUCA RUBRA 'MOLATE' / MOLATE RED FESCUE	1 GAL., LOW, 3' O.C., YES

SITE LEGEND

SYMBOL:	DESCRIPTION:
[Pattern]	CONCRETE PAVEMENTS, PLAIN
[Pattern]	PLAY AREA
[Pattern]	RECREATIONAL LAWN
[Pattern]	STORMWATER TREATMENT AREAS
[Line]	LOW, STONE WALL
[Symbol]	BUILT-IN BARBECUE GRILLS
[Symbol]	PICNIC TABLES
[Symbol]	OUTDOOR FURNITURE
[Symbol]	BENCHES
[Symbol]	BIKE RACKS
[Symbol]	RAISED PLANTERS
[Symbol]	CORNHOLE SET
[Symbol]	CAFE SEATING WITH SHADE UMBRELLAS
[Symbol]	4' GARDEN FENCE AND ACCESS GATES
[Symbol]	6' METAL FENCE AND PEDESTRIAN GATES
[Symbol]	6' WOOD PRIVACY FENCE



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PRELIMINARY LANDSCAPE PLAN

MARINWOOD APTS. | MARIN COUNTY, CA

L.01

PROJECT No. 2023014.00

APRIL 2024

Scientific name	Common name	Plant Categories	Light Preference			Size (feet)		Watering				Tolerances					High Performers		CA Native	Notes
			Sun	Part	Shade	Ht.	Width	L	M	H	Summer	Heat	Coast	Wind	Zone 1	Zone 2	Best for irrigated sites	Best for non-irrigated sites		
<i>Agrostis exarata</i>	Spike bentgrass	Grasses and Grass-like Plants	✓	✓		1	1.25		✓	✓	✓		✓		✓	✓				Moist sand dunes ;adapts to shady woodlands from San Diego to Sonoma County
<i>Bouteloua gracilis</i>	blue grama	Grasses and Grass-like Plants	✓			1.5	1	✓					✓		✓					Tolerates no summer water, good for non-irrigated remote sites. AKA= Mosquito Grass
<i>Bromus carinatus</i>	California brome	Grasses and Grass-like Plants	✓			2	1	✓			ok		✓		✓			✓		Good for erosion control ; not a good meadow grass
<i>Carex barbarea</i>	Santa Barbara sedge	Grasses and Grass-like Plants	✓	✓		3	2	✓	✓		✓	✓	✓	✓	✓	✓		✓		Stays green w/ summer H2O, moist to drought tolerant, spreading large statured sedge
<i>Carex divulsa</i>	grassland sedge	Grasses and Grass-like Plants	✓	✓	✓	1	1		✓		ok		✓	✓	✓	✓				Widely sold in CA as Carex tumulicola (Berkeley sedge). Native to Eurasia. Full sun along coast. Tolerates drought once established. Needs regular water in sun.
<i>Carex nudata</i>	California black sedge	Grasses and Grass-like Plants	✓	✓		2	2	✓	✓		✓	✓		✓	✓			✓		Turns orange in frost, showy black flower spikes
<i>Carex obnupta</i>	slough sedge	Grasses and Grass-like Plants	✓	✓		2	1		✓	✓	✓		✓	✓	✓			✓		Some salt tolerance, drought tolerant once established. Thick, graceful, bright green stands in wetlands.
<i>Carex pansa</i>	dune sedge	Grasses and Grass-like Plants	✓	✓		2	2		✓		✓	✓	✓	✓	✓	✓		✓		Native to Asilomar; Plug not seed planting; mow end of summer if desired.
<i>Carex praegracilis</i>	clustered field sedge	Grasses and Grass-like Plants	✓	✓		1.5	1.5		✓	✓	✓	✓	✓	✓	✓			✓		Lawn alternative, tolerates some foot traffic; summer dormant in warmer areas
<i>Chondropetalum tectorum</i>	small cape rush	Grasses and Grass-like Plants	✓	✓		4	3			✓	✓	✓		✓	✓					Native to S. Africa, drought tolerant
<i>Danthonia californica</i>	California oat grass	Grasses and Grass-like Plants	✓	✓		1.5	1.5		✓		✓			✓	✓			✓		Bunch grass, recommend plugs not seed to start, tolerates some foot traffic
<i>Distichlis spicata</i>	salt grass	Grasses and Grass-like Plants	✓			0.3	3		✓	✓	✓	✓	✓	✓	✓			✓		Looks like bermuda grass, withstands foot traffic, for soils with high salt
<i>Festuca californica</i>	California fescue	Grasses and Grass-like Plants	✓	✓	✓	2	2				ok	✓	✓	✓				✓		Use only in driest areas of basin
<i>Festuca idahoensis</i>	Idaho fescue	Grasses and Grass-like Plants	✓	✓		1	1	✓	✓		ok	✓	✓	✓		✓		✓		Can mow. Needs light summer water at hot sites
<i>Festuca rubra</i>	red fescue	Grasses and Grass-like Plants	✓	✓		1	1.5		✓	✓	ok	✓	✓	✓		✓		✓		Can mow. Lawn alternative; Water conservation LDS; Bio Strips; Infiltration basins
<i>Festuca rubra 'molate'</i>	molate fescue	Grasses and Grass-like Plants	✓	✓		1	1.5		✓	✓	ok	✓	✓	✓		✓		✓		Can mow. Lawn alternative
<i>Juncus effusus</i>	common rush	Grasses and Grass-like Plants	✓	✓		2.5	2.5		✓		ok		✓	✓	✓	✓		✓		Forms dense clumps
<i>Juncus pallidus</i>	giant rush	Grasses and Grass-like Plants	✓			4	2	✓			ok	✓	✓	✓	✓	✓				Evergreen, heat and drought tolerant.
<i>Juncus patens</i>	blue rush	Grasses and Grass-like Plants	✓			2	1		✓	✓	✓	✓		✓	✓	✓		✓		Plant from plugs; Irrigate occasionally summer
<i>Leymus triticoides</i>	creeping wildrye	Grasses and Grass-like Plants	✓	✓		3	1	✓	✓		ok	✓	✓	✓	✓	✓		✓		Can mow 4 x yr.. Sub-surface H2O best. Can be aggressive in moist areas.
<i>Muhlenbergia rigens</i>	deergrass	Grasses and Grass-like Plants	✓			3	3	✓	✓		ok	✓			✓			✓		Evergreen, forms mounds.
<i>Sisyrinchium bellum</i>	blue eyed grass	Grasses and Grass-like Plants	✓	✓		1	1		✓		ok		✓		✓	✓		✓		Needs occasional summer water, tolerates some foot traffic
<i>Achillea millefolium</i>	common yarrow	Herbaceous Perennials and Groundcovers	✓			1.5	1	✓			ok	✓			✓	✓		✓		Good for hot sites. Tolerates mowing, and can be used in a lawn replacement mix.
<i>Artemisia douglasiana</i>	mugwort	Herbaceous Perennials and Groundcovers	✓	✓	✓	3	3	✓	✓		ok	✓	✓	✓	✓	✓		✓		Rhizomatous
<i>Artemisia ludoviciana</i>	white sagebrush	Herbaceous Perennials and Groundcovers	✓	✓	✓	1.5	2	✓	✓		✓	✓	✓	✓	✓	✓		✓		Aromatic. Tolerates foot traffic and wide range of conditions
<i>Asclepias fascicularis</i>	narrowleaf milkweed	Herbaceous Perennials and Groundcovers	✓			3	2	✓	✓		ok	✓	✓		✓	✓		✓		Monarch butterfly host plant, deciduous
<i>Darmera peltata</i>	Indian rhubarb	Herbaceous Perennials and Groundcovers		✓	✓	3	5			✓	✓				✓			✓		Prefers cool summers. Native to N CA, S OR; found on stream banks and in woodlands.
<i>Epilobium canum</i>	California fuchsia	Herbaceous Perennials and Groundcovers	✓	✓		1	4	✓			ok	✓			✓			✓		dormant in winter, best with winter mowing
<i>Epipactis gigantea</i>	stream orchid	Herbaceous Perennials and Groundcovers	✓	✓	✓	3	1.5		✓	✓			✓	✓				✓		Goes dormant with drought, salt tolerant
<i>Fragaria chiloensis</i>	beach strawberry	Herbaceous Perennials and Groundcovers	✓	✓	✓	0.3	2	✓	✓		ok		✓	✓				✓		Evergreen groundcover, performs well as filler at the upper edges of facility.
<i>Heuchera micrantha</i>	alum root	Herbaceous Perennials and Groundcovers		✓	✓	2	1.5	✓	✓		✓			✓	✓			✓		Dainty white flowers
<i>Heuchera pilosissima</i>	hairy alum root	Herbaceous Perennials and Groundcovers		✓	✓	1.5	1.5	✓	✓		✓		✓		✓			✓		Tolerates sand, best at basin edges
<i>Iris douglasiana</i>	Douglas iris	Herbaceous Perennials and Groundcovers	✓	✓		1.5	2	✓	✓		ok	✓	✓	✓		✓		✓		Also, Iris hybrids
<i>Lilium pardalinum</i>	leopard lily	Herbaceous Perennials and Groundcovers	✓	✓		6	4	✓	✓				✓	✓				✓		Native to dry summer areas, deciduous
<i>Lobelia cardinalis</i>	cardinal flower	Herbaceous Perennials and Groundcovers		✓	✓	2	2		✓				✓	✓				✓		Not drought tolerant, requires regular water
<i>Lotus scoparius</i>	deerweed	Herbaceous Perennials and Groundcovers	✓			4	3	✓				✓		✓				✓		Short-lived, nitrogen fixer
<i>Mimulus aurantiacus</i>	common monkeyflower	Herbaceous Perennials and Groundcovers	✓	✓		3	3	✓			ok	✓			✓			✓		Drought tolerant, stress deciduous
<i>Mimulus cardinalis</i>	scarlet monkeyflower	Herbaceous Perennials and Groundcovers	✓	✓	✓	3	3		✓	✓	✓	✓			✓			✓		Aggressive seeder, needs summer water
<i>Mimulus guttatus</i>	seep monkeyflower	Herbaceous Perennials and Groundcovers	✓	✓		3	3		✓	✓	✓	✓			✓			✓		Attracts Bees, stress deciduous, needs summer water
<i>Mirabilis multiflora</i>	Giant four o'clock	Herbaceous Perennials and Groundcovers		✓	✓	2	4	✓			✓	✓			✓			✓		Best for hot sites, native to Southern California
<i>Oenothera hookeri</i>	Hooker's evening primrose	Herbaceous Perennials and Groundcovers	✓	✓		3	2	✓			ok	✓			✓	✓		✓		Easy to establish biennial, self seeds
<i>Polypodium californicum</i>	California Polypody fern	Herbaceous Perennials and Groundcovers		✓	✓	2	2	✓			✓		✓					✓		Summer dormant except at coast, spreads slowly by rhizomes, frost tender
<i>Prunella vulgaris</i>	self heal	Herbaceous Perennials and Groundcovers	✓	✓		0.5	2'	✓	✓		ok	✓	✓		✓			✓		Somewhat drought tolerant, long flowering
<i>Rudebeckia californica</i>	California coneflower	Herbaceous Perennials and Groundcovers	✓			3	2	✓	✓		ok	✓			✓	✓		✓		Native to dry summer areas, deciduous
<i>Scaevola 'mauve clusters'</i>	fan flower	Herbaceous Perennials and Groundcovers	✓	✓		1	4	✓				✓			✓			✓		Native to Australia, sensitive to frost
<i>Scutellaria austinae</i>	skullcap	Herbaceous Perennials and Groundcovers	✓			1	2	✓	✓		✓	✓			✓			✓		Dies back in drought
<i>Sisyrinchium californicum</i>	yellow eyed grass	Herbaceous Perennials and Groundcovers	✓	✓		1	1		✓		✓		✓	✓				✓		Can be drought tolerant
<i>Verbena lasiostachys</i>	Western vervain	Herbaceous Perennials and Groundcovers	✓	✓		2	2	✓			ok	✓			✓	✓		✓		Attracts butterflies, can be weedy pioneer species
<i>Verbena lilacina</i>	Cedros Island verbena	Herbaceous Perennials and Groundcovers	✓	✓		2	4	✓			ok	✓	✓		✓			✓		Drought tolerant, best with minimal irrigation, native to Baja CA
<i>Alyogyne huegelii</i>	blue hibiscus	Shrubs	✓			8	7	✓				✓			✓			✓		Very low water after second year, Sunset zones 15-17 & 20-24, prune to encourage flowering
<i>Baccharis pilularis consanguinea</i>	bush baccharis	Shrubs	✓			6	6	✓	✓		ok	✓	✓	✓	✓	✓		✓		Fast-growing, somewhat short-lived; deer proof
<i>Calycanthus occidentalis</i>	western spicebush	Shrubs	✓	✓		8	8	✓			✓		✓		✓			✓		Deer resistant, deciduous. Bright green leaves, good for hedgerow/screen. Riparian areas.
<i>Carpenteria californica</i>	bush anemone	Shrubs	✓	✓		6	4	✓	✓		ü	✓			✓			ü		Interior climate with occasional water otherwise low water needs
<i>Cornus sericera</i>	redtwig dogwood	Shrubs	✓	✓		5	4	✓			✓	✓			✓			✓		Deciduous, red stems for winter color, best with afternoon shade. Can cut to ground to maintain small size and red stems.
<i>Erigeron glaucus</i>	seaside daisy	Shrubs	✓			1	1.5				ok	✓	✓	✓				✓		Not good for dusty sites
<i>Lonicera hispidula</i>	California honeysuckle	Shrubs	✓	✓	✓	4	2		✓	✓	✓	✓			✓			✓		Climbing vine-like. Best in part shade. Attracts birds
<i>Lonicera involucrata</i>	twinberry honeysuckle	Shrubs	✓	✓	✓	6	3		✓	✓	✓	✓			✓			✓		Needs good drainage, Best in part shade. Attracts birds
<i>Mahonia pinnata</i>	California holly grape	Shrubs	✓	✓	✓	4	4	✓	✓		✓	✓			✓			✓		Slow but easy to grow
<i>Physocarpus capitatus</i>	pacific ninebark	Shrubs	✓	✓		8	8	✓	✓	✓	✓	✓			✓			✓		Part shade and summer water required in hot locations

Scientific name	Common name	Plant Categories	Light Preference			Size (feet)		Watering				Tolerances					High Performers		CA Native	Notes
			Sun	Part	Shade	Ht.	Width	L	M	H	Summer	Heat	Coast	Wind	Zone 1	Zone 2	Best for irrigated sites	Best for non-irrigated sites		
<i>Rhamnus californica</i>	California coffeeberry	Shrubs	✓	✓		12	8	✓			✓	✓		✓		✓	✓	✓	✓	'Eve Case' is compact with broad foliage. Syn. <i>Frangula californica</i>
<i>Rhamnus crocea</i>	redberry	Shrubs	✓	✓	✓	5	5	✓			✓	✓		✓		✓			✓	Pea sized fruits attract birds, stain concrete
<i>Rhododendron occidentale</i>	western azalea	Shrubs	✓	✓	✓	8	8		✓	✓	✓			✓		✓			✓	Summer deciduous
<i>Ribes aureum gracillimum</i>	golden current	Shrubs	✓	✓		4	3	✓	✓	✓	ok	✓		✓		✓			✓	Easy, fall color, deciduous
<i>Ribes divericatum</i>	coast black gooseberry	Shrubs		✓	✓	5	5	✓	✓		ok	✓	✓			✓			✓	Thorny, good for discouraging entry, deciduous
<i>Ribes sanguineum</i>	red flowering currant	Shrubs		✓	✓	5	5	✓	✓		✓	✓		✓		✓			✓	Needs good air movement to avoid white fly, more drought tolerant at coast
<i>Ribes speciosum</i>	fuchsia-flowered gooseberry	Shrubs	✓	✓	✓	4	4	✓	✓			✓	✓			✓			✓	Prefers only light summer water after 2nd year, stress deciduous
<i>Rosa californica</i>	California wild rose	Shrubs	✓	✓		3	6		✓	✓	ok	✓	✓	✓	✓	✓			✓	Hooked thorns, good for discouraging entry. Shade in interior, sun at coast
<i>Rosa gymnocarpa</i>	wood rose	Shrubs	✓	✓	✓	2	3		✓		ok	✓	✓			✓	✓		✓	Easy to grow, thorny
<i>Rubus parviflorus</i>	thimbleberry	Shrubs	✓	✓		8	5			✓	✓	✓		✓	✓				✓	Spreads readily in wet areas, prefers regular water
<i>Rubus spectabilis</i>	salmonberry	Shrubs		✓	✓	8	5		✓	✓	✓	✓	✓	✓	✓				✓	deciduous, soft spiny stems
<i>Rubus ursinus</i>	California blackberry	Shrubs		✓	✓	3	5		✓	✓	ok	✓	✓	✓	✓				✓	Thorny, good for discouraging entry. Harbors beneficial insects
<i>Symphoricarpos albus</i>	common snowberry	Shrubs	✓	✓	✓	4	4	✓	✓	✓	ok	✓				✓	✓		✓	Adaptable to many conditions, try <i>Symphoricarpos mollis</i> at coast
<i>Whipplea modesta</i>	whipplevine	Shrubs		✓	✓	0.5	3		✓	✓	✓		✓			✓			✓	Best for moist shady spots near coast
<i>Acer circinatum</i>	vine maple	Small Trees		✓	✓	20	10		✓	✓	✓					✓			✓	In wide riparian areas; top of slope. Avoid hot inland climates and coastal conditions/salt spray.
<i>Baccharis viminea</i>	seep-willow	Small Trees	✓			8	5	✓	✓	✓	✓	✓	✓	✓	✓				✓	Important plant for butterflies and beneficial insects.
<i>Chilopsis linearis</i>	desert-willow	Small Trees	✓			15	15		✓		✓	✓			✓	✓			✓	Does best inland
<i>Corylus cornuta v. californica</i>	California hazel	Small Trees		✓	✓	10	10		✓				✓	✓					✓	Deciduous, edible nut
<i>Fraxinus dipetala</i>	California ash	Small Trees	✓	✓		20	20				ok	✓			✓	✓			✓	drought tolerant, slow to establish, then fast
<i>Garrya elliptica</i>	coast silktassel	Small Trees	✓	✓		12	12	✓	✓		ok	✓	✓	✓	✓	✓			✓	Winter blooms. 'Evie' is compact variety. Best at coast. Afternoon shade inland, deer resistant
<i>Heteromeles arbutifolia</i>	toyon	Small Trees	✓	✓	✓	8	5	✓	✓		✓	✓	✓			✓			✓	Doesn't respond well to pruning low branches, no summer water at coast
<i>Laurus nobilis 'Saratoga'</i>	Grecian bay	Small Trees	✓	✓		20	20	✓				✓	✓		✓				✓	Specify 'standard' and prune for tree form, easy
<i>Myrica californica</i>	Pacific wax myrtle	Small Trees	✓	✓	✓	25	12	✓	✓				✓	✓					✓	Best at coast
<i>Sambucus mexicana</i>	elderberry	Small Trees	✓	✓		20	15	✓	✓						✓	✓			✓	Deciduous, edible fruit, attracts bees and birds, unripe fruits are poisonous but useful and common landscape plant
<i>Acer negundo</i>	box elder	Trees	✓	✓	✓	35	35	✓	✓		ok	✓	✓	✓	✓	✓			✓	Tough shade tree, deciduous
<i>Fraxinus latifolia</i>	Oregon ash	Trees	✓	✓	✓	70	40			✓	✓	✓		✓	✓				✓	Plant in moist areas with rich soil.
<i>Fraxinus velutina</i>	velvet ash	Trees	✓			30	45	✓	✓		ok	✓		✓		✓			✓	Withstands poor drainage and drought
<i>Pittosporum eugenioides</i>	tarata	Trees	✓	✓		40	15	✓	✓		✓	✓		✓		✓			✓	Shear to control height
<i>Platanus acerifolia</i>	London plane tree	Trees	✓	✓		80	30		✓			✓			✓				✓	Large tree, aggressive roots will lift pavement
<i>Platanus racemosa</i>	California sycamore	Trees	✓	✓		80	30		✓	✓	ok	✓			✓				✓	Asymmetrical shape and wide trunk when mature. Give lots of room.
<i>Populus fremontii</i>	cottonwood	Trees	✓	✓		80	30		✓			✓			✓				✓	Riparian species with limited drought tolerance. Aggressive roots will lift pavement. Give lots of room.
<i>Quercus agrifolia</i>	coast live oak	Trees	✓	✓		60	60	✓				✓	✓	✓	✓				✓	Large evergreen tree, tolerant and widespread, important for wildlife, no summer water
<i>Vitis californica</i>	California grape	Vine	✓	✓		10	1-3	✓	✓		✓	✓	✓	✓	✓				✓	Climbing vine. Best in full sun. Can be aggressive in moist area.

Plant Categories	
Grasses and Grass-like Plants	Grass refer to those species that are monocotyledonous plants with slender-leaved herbage.
Herbaceous Perennials and Groundcovers	Herbaceous refers to those species with soft upper growth rather than woody growth. Some species will die back to the roots at the end of the growing season and grow again at the start of the next season. This list only includes those that are perennial, i.e. live for several years.
Shrubs	Shrub is a horticultural distinction that refers to those species of woody plants which are distinguished from trees by their multiple stems and lower height. A large number of plants can be either shrubs or trees, depending on the growing conditions they experience.
Small Tree	Small trees refers to those species of woody plants with one main trunk and a distinct and elevated head with a maximum size of 25' tall and wide.
Tree	Tree refers to those species of woody plants with one main trunk and a rather distinct and elevated head with a size greater than 25' tall or wide.
Water Preference	
Water Preference-Low/Moderate/High	We have provided recommendations for irrigation. All plants should be watered with more frequency during the first two years after planting. After this establishment period, Low water use plants will only need supplemental irrigation at the hottest and driest sites. Plants with Moderate irrigation needs will be best with occasional supplemental water (once per week to once per month) and plants with High irrigation needs will be best with more frequent watering especially during periods of drought in the cooler seasons.
Water Preference-Summer Irrigation	Plants with a check in this column will not withstand a long period of summer drought without irrigation. Plants with an 'ok' in this column are tolerant of, but do not require, frequent summer irrigation. Plants with nothing in this column may not tolerate summer irrigation after establishment.
Stress Tolerance	
Tolerates Heat	A check in the heat column indicates that the plant will tolerate hot sites. It should not be confused with a plants preference for sun. Absence of the check indicates it should only be used in areas close to the Bay or other cool sites.
Tolerates Coast	The coast column indicates plants that perform well within 1,000 feet of the ocean or bay. Most of these plants tolerate some amount of salt air, fog, and wind.
Tolerates Wind	A check in the wind column means that the plant will tolerate winds of ten miles per hour or more.
Zone 1	Plants that tolerate Zone 1 are common riparian, wetland and bog plants capable of surviving in saturated soils for long durations throughout the year. Most of these plants are not drought tolerant and require some water throughout the growing season.
Zone 2	Plants that tolerate Zone 2 are common in riparian/upland transition areas, moist woodlands, and seasonal wetlands. They are capable of surviving in saturated soils for shorter durations especially in the winter or spring. Many of these plants tolerate summer drought but could benefit from some year-round moisture.
High Performers	
Best for irrigated sites	These plants have been used successfully in irrigated bioretention areas in the Bay Area.
Best for non-irrigated sites	These plants have been used successfully in non-irrigated bioretention areas in the Bay Area. Temporary irrigation for establishment is highly recommended.
Origin	
CA Native	Indicates native or cultivar of California native. Cultivars offer habitat benefits to native wildlife and are adapted to the local climate but have reduced genetic diversity.