3001-3017 EL CAMINO REAL

ARCHITECTURAL REVIEW BOARD - MAJOR PROJECT SUBMITTAL

PROJECT SITE

ADDRESS	3001-3017 El Camino Real Palo Alto, CA 94306
PARCEL APN	Lot 55 - 132-37-055 Lot 56 - 132-37-056 Lot 72 - 132-38-072
ZONING	CS
LOT SIZE	49,864 SF (1.14 AC)
BUILDING TYPE	(4) stories of Type VA over (1) story of Type IA

PROJECT DIRECTORY

OWNER:
El Camino PA, L.P.
C/O Charities Housing
1400 Parkmoor Ave., Suite 190
San Jose, CA 95126
Attn: Kathy Robinson
T: 408.550.8311
E: krobinson@charitieshousing.org

ARCHITECT:
David Baker Architects
461 2nd St, Loft C-127
San Francisco, CA 94107
Attn: Daniel Simons
T: 415.335.7064
E: danielsimons@dbarchitect.com

CIVIL ENGINEER:
Kier & Wright
3350 Scott Blvd., Bld 22
Santa Clara, CA 95054
Attn: Nektarios Matheou
T: 408.727.6665
E: nmatheou@kierwright.com

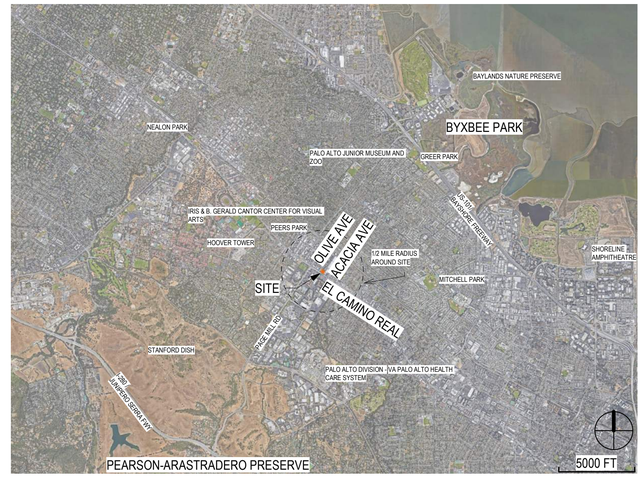
PLANNING CONSULTANT:
Rhoades Planning Group
2140 Shattuck Ave., Suite 705
Berkeley, CA 94704
Attn: Mark Rhoades
T: 510.545.4341
E: info@rhoadesplanninggroup.com

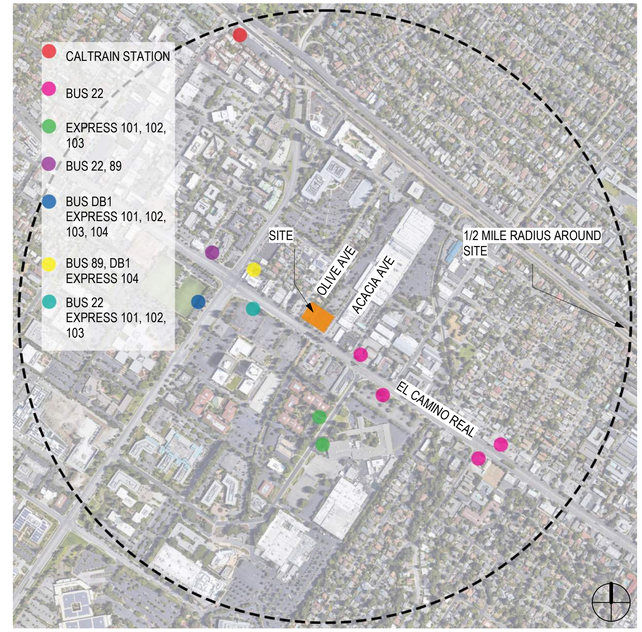
LIGHTING CONSULTANT:
KGM ARCHITECTURAL LIGHTINHG
270 Coral Circle,
El Segundo, CA 90245
Attn: Dan Weinreber
T: 310.606.8751
E: dweinreber@kgmlighting.com

LANDSCAPE CONSULTANT:
Form/Work Landscape Architects
2585 University Ave
San Diego, CA 92104
Attn: Michael Vail
T: 619.269.4423
E: mike@formwork-la.com

SHEET INDEX

VICINITY MAP





1" = 40'-0"

ZONING SETBACKS 3

PROJECT DESCRIPTION

3001-3017 El Camino Real is the result of a lot line adjustment to combine existing lots 55, 56, and a portion of 72 (see G001 for reference). The proposed Lot 55 is 49,864 square feet bounded by El Camino Real to the southwest, Olive Avenue to the northwest, and Acacia Avenue to the southeast. The project proposes using the State Density Bonus to construct a five story building with 100% affordable multi-family housing.

LOT AREA	49,864 SF (1.14 AC)
LOT COVERAGE	36,674 SF
FLOOR AREA	136,945 SF
CONSTRUCTION TYPE	(4) LEVELS TYPE V, OVER (1) LEVEL TYPE I

REFERENCES

Palo Alto Municipal Code - Supp. No. 52 - 8/2021

RESIDENTIAL UNIT COUNT

UNIT TYPE	COUNT	PERCENT	SIZE	AREA
STUDIO	20	16%	14' x 24'	336 SF
1 BEDROOM	44	34%	22' x 24'	528 SF
2 BEDROOM	31	25%	33' x 24'	792 SF
3 BEDROOM	34	26%	42' x 24'	1008 SF
TOTAL	**129**			

PARKING COUNT

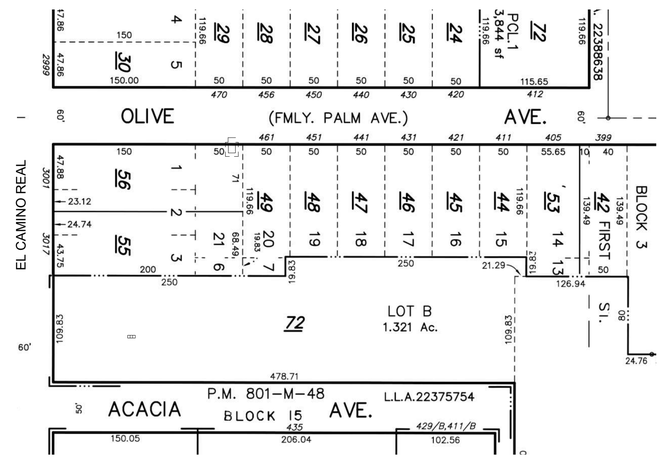
REQUIRED PARKING RATIO	.5

TYPE	COUNT
ADA (2 REG / 1 VAN)	5 (EVSE-READY)
EVSE-INSTALLED	1
PARKING LIFTS	97 (EVSE-READY)
TOTAL	**103 (EVSE-READY)**
PARKING RATIO:	**.80**

BICYCLE PARKING

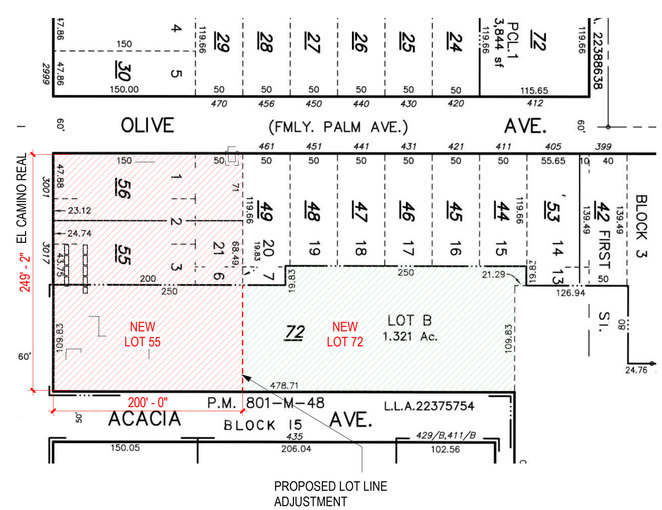
REQUIRED PARKING	129 LONG-TERM 13 SHORT-TERM

TYPE	COUNT
LONG-TERM	138
SHORT-TERM	14
TOTAL	**152**



1" = 80'-0"

LOT LINES - EXISTING 2



THE PROJECT COMBINES LOTS 55, 56, AND A PORTION OF LOT 72. THE NEW LOT 55 PROPOSES THE DEVELOPMENT OF 100% AFFORDABLE MULTI-FAMILY HOUSING USING THE STATE DENSITY BONUS.

1" = 80'-0"

LOT LINES - PROPOSED 1

DE PARK

THE NEW EASE OF PARKING

Digital Parking System on 2 levels in 2 rows with a Semi-Automatic Control

data sheet DE-611

DE-611 Independent parking system on two levels without a pit. This smart solution is a combination of the DE-61 system with another DE-61 system.

D2+2

EASY TO PLAN with space saving construction.

EASY TO INSTALL with minimized parts construction.

EASY TO USE due to barrier free construction.

1. THE FUNCTIONALITY OF DE-PARK DIGITAL

Our Digital Series have a combination of lifting and sliding platforms. There is one sliding platform less than lifting platforms per system. A system with up to 10 segments in 2 rows and 38 parking spaces is possible.
You can choose your parking space with one touch at the control panel.

The example shows 3 grids of 1 row with 5 parking places:
1 empty space is needed for the movement.

A) To get your parking space N°3 to the ground floor parking space N°5 lifts to the top position ...

B) A horizontal movement to the right by the sliding places N°2 and N°4 is followed ...

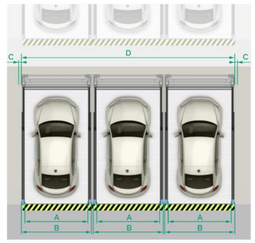
C) After the platforms reach their defined positions your lifting platform N°1 is lowered to the entrance level.

sliding lifting

2. WIDTH OF PARKING SPACE / SYSTEM (IN CM)

A = parking width
B = segment width
C = additional Space
D = system width 1)

1) Tolerance of dimensions on the construction site = 0 to + 3 cm



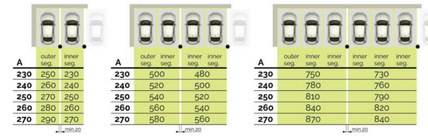
Parking width	Segment width	Additional space
A	B	C
230	250	10
240	260	10
250	270	10
260	280	10
270	290	10

Parking width A	System width D 2 seg. 6 cars	System width D 3 seg. 10 cars	System width D 4 seg. 14 cars	System width D 5 seg. 18 cars	System width D 6 seg. 22 cars	System width D 7 seg. 26 cars	System width D 8 seg. 30 cars	System width D 9 seg. 34 cars	System width D 10 seg. 38 cars
230	520	770	1020	1270	1520	1770	2020	2270	2520
240	540	800	1060	1320	1580	1840	2100	2360	2620
250	560	830	1100	1370	1640	1910	2180	2450	2720
260	580	860	1140	1420	1700	1980	2260	2540	2820
270	600	890	1180	1470	1760	2050	2340	2630	2920

PROPOSED 5- AND 6-SEGMENT DE-611 SYSTEMS USED IN TANDEM CONFIGURATION

METRIC AND IMPERIAL TYPICAL DIMENSIONS ARE REFLECTED IN PLANS (SEE A110)

3. PILLARS IN FRONT OF THE PARKING AREA



A	outer seg.	inner seg.
230	250	230
240	260	240
250	270	250
260	280	260
270	290	270

min.20

A	outer seg.	inner seg.	inner seg.	inner seg.
230	600	480		
240	520	500		
250	540	520		
260	560	540		
270	580	560		

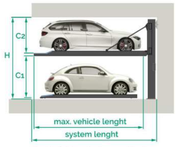
min.20

A	outer seg.	inner seg.	inner seg.	inner seg.	inner seg.
230	750			730	
240	780			760	
250	810			790	
260	840			820	
270	870			840	

min.20

4. DIMENSIONS (IN CM)

H = clear height
C1/C2 = vehicle height bottom / top 2)



The illustration refers to one of the two rows.

H	C1	C2		C1	C2		C1	C2
330	150	150		–			–	
340	160	150		–			–	
350	170	150	or	160	160		–	
360	180	150	or	170	160		–	
370	190	150	or	180	160	or	170	170
380	200	150	or	190	160	or	180	170

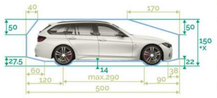
2) The vehicle height with roof rails, antenna and other height increases must not exceed the listed max. vehicle heights.

5. TECHNICAL DATA

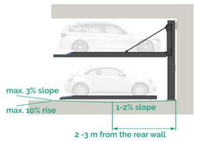
Height
In areas with higher ceilings, taller vehicles can be parked on the top platform accordingly.

System length
For a 500 cm car length a system length of 2 x 545 cm is necessary. A system length of 2 x 560 cm is recommended. This enables larger safety distances, if newer, longer vehicles are purchased.

Dimensions
- All dimensions are minimum finished dimensions in cm.
- Allow for tolerances to VOB Part C (DIN 18330, 18331) and additionally DIN 18202 (+ 30 mm / 0 mm).
- In case of partition walls 15x15 cm opening for hydraulik pipes are necessary in the installation. Do not close the opening after the installation.



Maximum vehicle weight
- 2000kg / 500kg wheel load
- 2600kg / 650kg wheel load



6. ACCESS CONDITIONS

With our innovative design the access to the parking place is very easy. Our flat profile over the complete platform provides higher comfort and driving safety. The light rise of the entrance to the parking place and the reduced side beam of the lifting platform allow an easy maneuvering and reduce the risk of wheel collision.

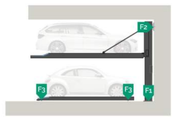
Maximum slope / rise
- Max. 3% slope 3)
- Max. 10% rise 3)

Drainage
- 1-2 % slope on the pit floor

3) In case of higher values, safe access of the vehicle cannot be guaranteed by DE-PARK.

7. ANCHORING

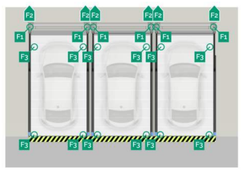
- Systems are anchored into the floor and rear wall. The hole depth is approximately 13 cm.
- The quality of the concrete in the structure (for the parking system) must be at least C20/25.
- The precise position of the load application points depends on the selected system. For precise values, please contact DE-PARK.



8. FORCES TO THE STRUCTURE

	2000 kg	2600 kg
F1	20 kN	25 kN
F2	20 kN	25 kN
F3	8 kN	10 kN

The force F2 can also be absorbed via the ceiling (ceiling fixation available upon request).



9. TYPE OF CONTROL

Interactive control unit:
Our system DE-61 is controlled digitally.
With one touch you can choose your parking place by using this control unit. You can view the progress of the provision on the screen.
If the optional gate is not chosen, then the system works with a dead man's control.

10. ELECTRICAL ELEMENTS

Connected load of unit: 2x 3 kW / 400 V / 50 Hz

- The control cabinet must be placed outside the moving range of the system.
We recommend positioning the cabinet near the system for a better overview of the system.
The space in front of the cabinet must be minimum 1.00 m for opening the door and the operator.

Services provided in the system:
- Operator terminal including operator presence control with raising and lowering.
- Emergency stop placed outside of the system's range of movement.

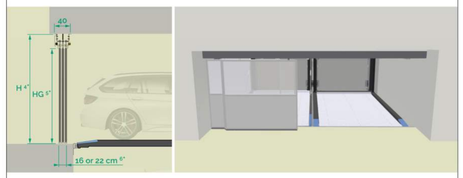
To be provided from customer for each row:

Item	Description
1	Electric meter
2	Fuse or automatic circuit breaker according to DIN VDE 0100 part 430, max. 16 A
3	According to local power supply regulations 3 PH + N + PE
4	Main switch lockable
5	Connection for the protective potential equalization DIN 60204
6	Protective bonding all 10m

11. GATES (OPTIONAL)

With our new innovative gates, we provide up to 50 cm wider entrance space than the requested parking space.

Operation of the gate:
Option A – manually operated.
Option B – electrical drive per touch screen at the control unit. Additional operation with a remote control is optional.



H 4) = Clear height: 225 cm
HG 5) = Entrance height: 200 cm

4) Other dimensions are available on request
5) Car height = HG - 5 cm tolerance
6) 16 cm – if gates are for 2 segments / 22 cm – if gates are for 3 segments

12. SYSTEM-RELATED REQUIREMENTS

Maintenance, cleaning & prevention
- The systems must be serviced and cleaned regularly. This applies more so if the systems and the platforms are exposed to aggressive substances such as salt, water, dirt, operating supplies, sand, etc.
- Adequate drainage must be ensured.

Ventilation
The garage must be adequately ventilated.

13. LEGAL REQUIREMENTS

Separating elements / Barriers
According to EN ISO 13857, separating elements or barriers must be installed in the pedestrian area / accessible areas around the parking system, including during installation.

Fire safety
The garage design must fulfil the regional fire safety provisions. The requirements can vary. Therefore the situation must be clarified and information obtained in advance by the customer and then agreed and coordinated.

Noise emissions
According to the noise insulation regulations for buildings to DIN 4109, a value of 30dB (A) must be complied with in occupied rooms and spaces. You receive a sound insulation package with the system for the required 30dB (A) insulation of the structure is also necessary. Sound reduction index min. Rw = 57dB.

14. REQUIREMENTS ON SITE

Ambient conditions
Temperature range from -5 to +40 °C. Relative humidity max. 80%.
Please contact DE-PARK in case of different conditions.

Lighting
The parking spaces must be adequately illuminated on site as specified.

15. CE AND CONFORMITY

The systems conform to ..
- EN 14010-2009-12 Safety of Machinery - Equipment for power driven parking of motor vehicles
- Machinery Directive 2006/42/EC

CE

Design changes
We reserve the right to continuously develop our product on the basis of technical progress and to make changes and/or modifications to parts, assemblies or overall, to processes and to standards with no advance notice.

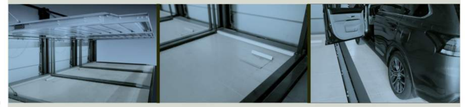
DE-PARK IS MAKING YOUR LIFE EASY:

GERMAN MADE WITH A SLIM & MODULAR DESIGN
EASY PLANNING AND SETUP

LOW MAINTENANCE CONSTRUCTION
EASY TO USE WITH LOW NOISE EMISSIONS

NO PILLARS IN THE ENTRY AND PEDESTRIAN AREA
EASY MANOEUVERING AND SENSORLESS POSITIONING

FLAT & CONTINUOUS PLATFORM
EASY TO CLEAN AND COMFORTABLE TO WALK ON



DE-PARK GmbH
Brühl 6
04109 Leipzig
Germany

Phone: 0049 (0)341 - 24700 131
Fax: 0049 (0)341 - 24700 132
Email: info@de-park.com
Web: www.de-park.com

David Baker Architects

Charities Housing

3001-3017 EL CAMINO REAL PARKING LIFT SYSTEM

22203

scale (printed at 22x34):

date: 01/20/2023

G003

LONG-TERM BIKE PARKING

Dero Decker

The Dero Decker takes bike parking to the next level – literally. By stacking bikes on a two-tiered system, capacity doubles. Unlike other two-tier systems our lift-assist top trays slide down inches from the ground, thus requiring only minimal lifting of the bike into the tray. The Dero Decker has a front wheel safety locking lever and tray dampers to provide safe lowering of upper trays. The near vertical lowered trays also reduce the required aisle space, giving the Dero Decker the smallest footprint on the market.

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Dero Decker

- Sturdy red handle grips
- Lift-assist trays
- Dampers for safe lowering of trays
- Spring loaded levers hold bikes firmly in place
- U-lock compatible
- Smallest footprint
- Smooth and silent operation
- Simple installation
- Low maintenance
- Specially designed fat bike trays available

FINISH OPTIONS

Galvanized

Powder Coat

White; Black; Light Gray RAL 7042; Deep Red RAL 3003; Yellow RAL 1023; CNH Bright Yellow; Orange RAL 2004; Beige RAL 1001; Iron Gray RAL 7011; Hunter Green RAL 6005; Light Green RAL 6018; Green RAL 6016; Sepia Brown RAL 8014; Blue RAL 5005; Sky Blue RAL 5015; Dark Purple; Flat Black; Wine Red RAL 3005; Bronze; Silver RAL 9007

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Dero Decker — **Submittal Sheet**

CAPACITY	4 Bikes per unit
MATERIALS	**Uprights:** 4" 11g square tube **Upright base:** 1/4" plate **Cantilevers:** 11g plate **Cantilever base:** 1/4" plate **Trays:** 11g plate
FINISHES	☐ **Galvanized** An after fabrication hot dipped galvanized finish is our standard option. ☐ **Powder Coat** Our powder coat finish assures a high level of adhesion and durability by following these steps: 1. Sandblast 2. Epoxy primer electrostatically applied 3. Final thick TGIC polyester powder coat
MOUNT OPTIONS	**Surface only** Each upright has one ¼" plate feet that accept 1/2" wedge anchors

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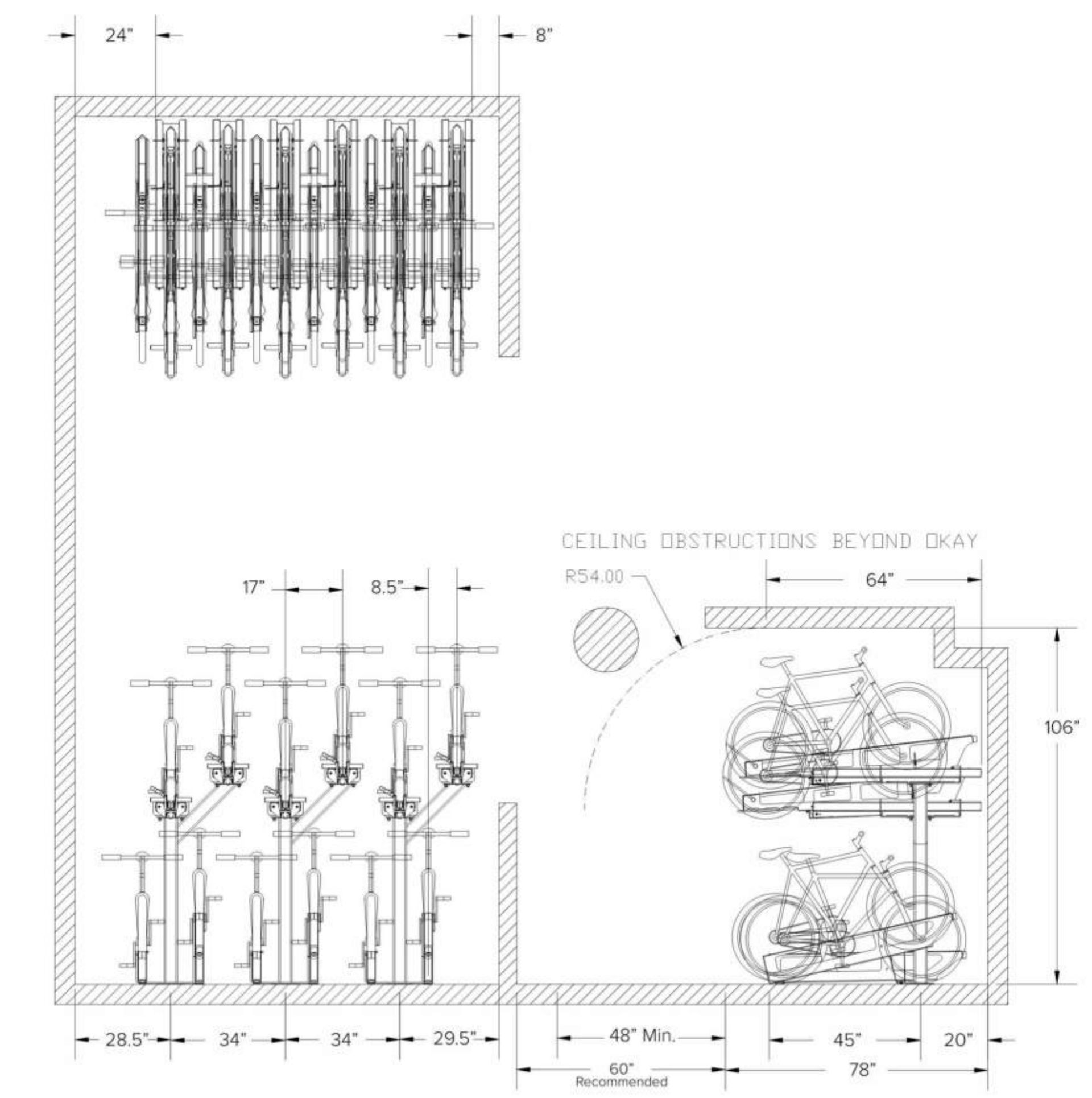
Dero Decker — **Setbacks** Single Sided



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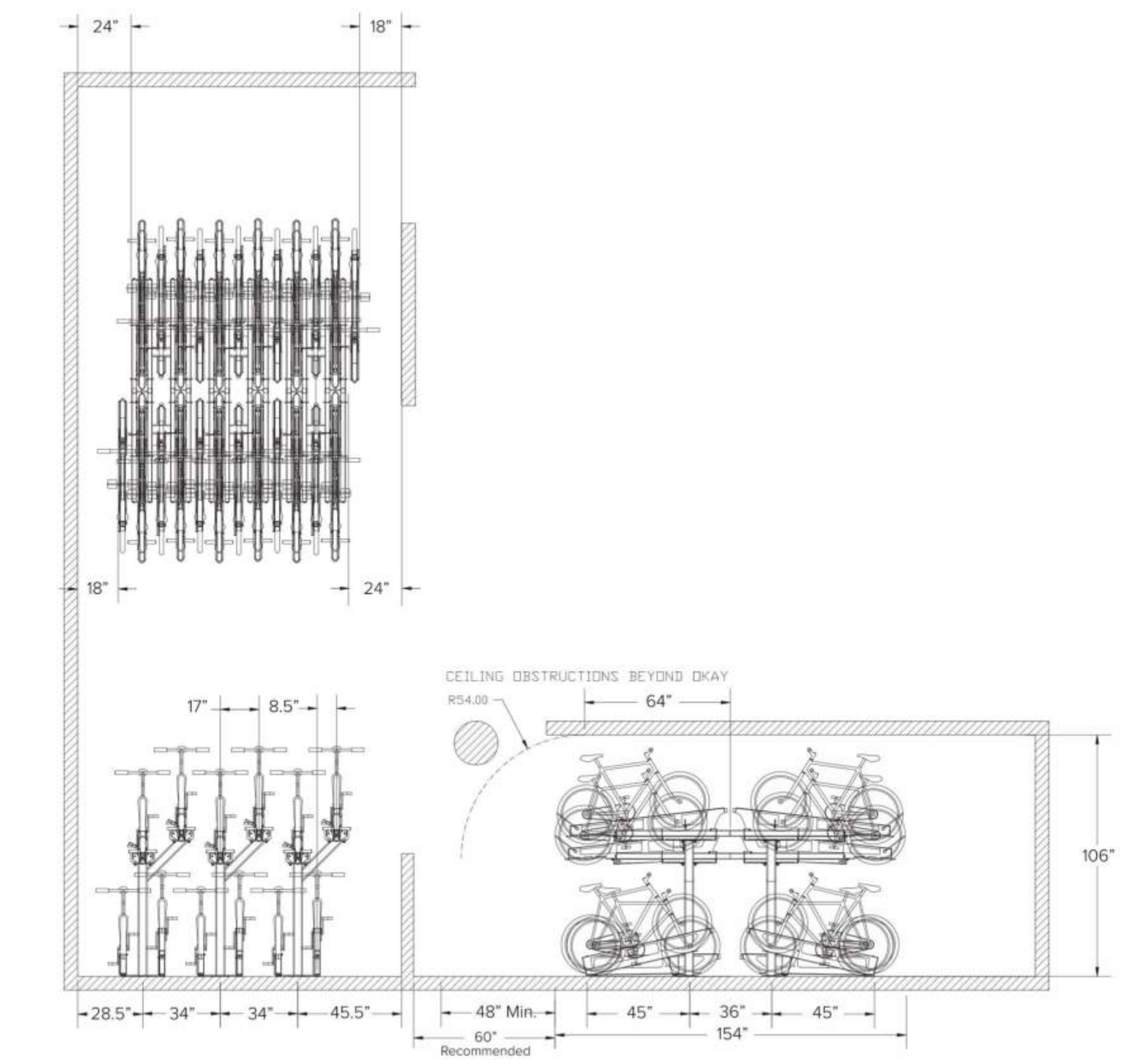
Dero Decker — **Setbacks** Double Sided



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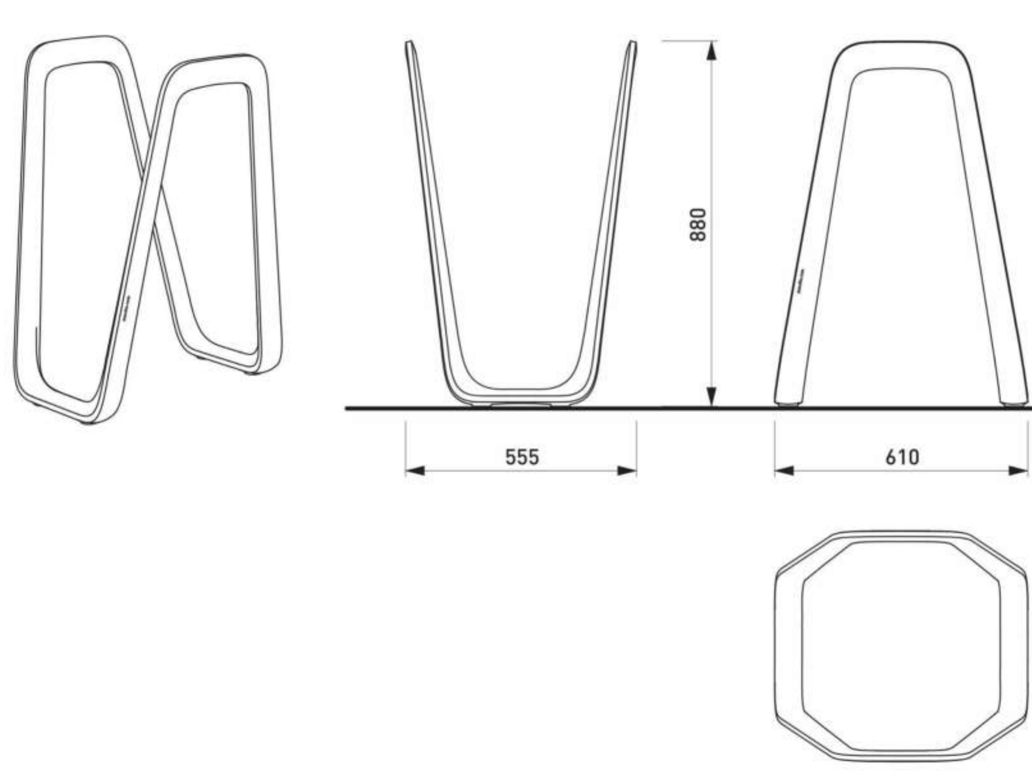
SHORT-TERM BIKE PARKING



ILLUSTRATIVE PHOTO

ELK110 - ELK

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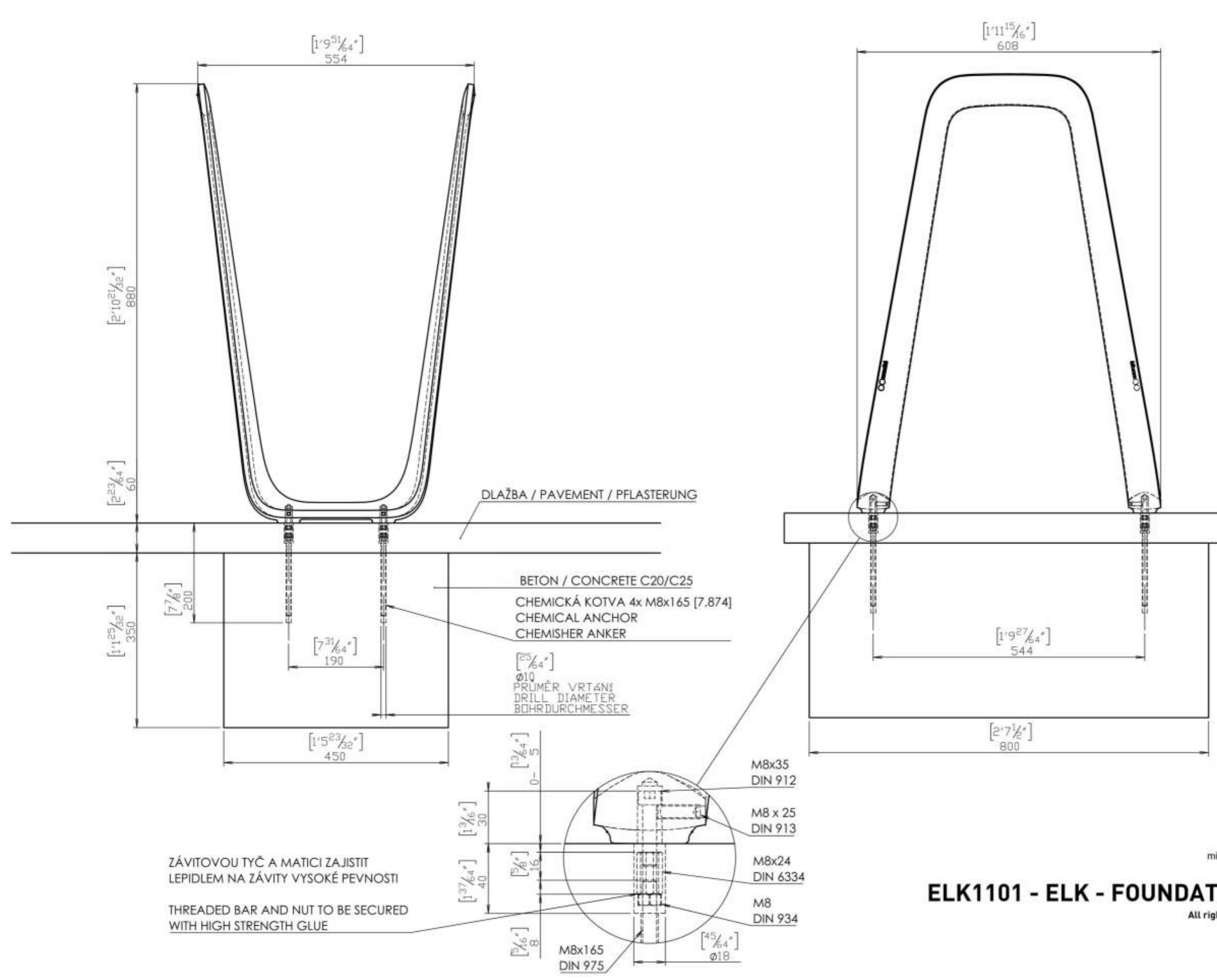

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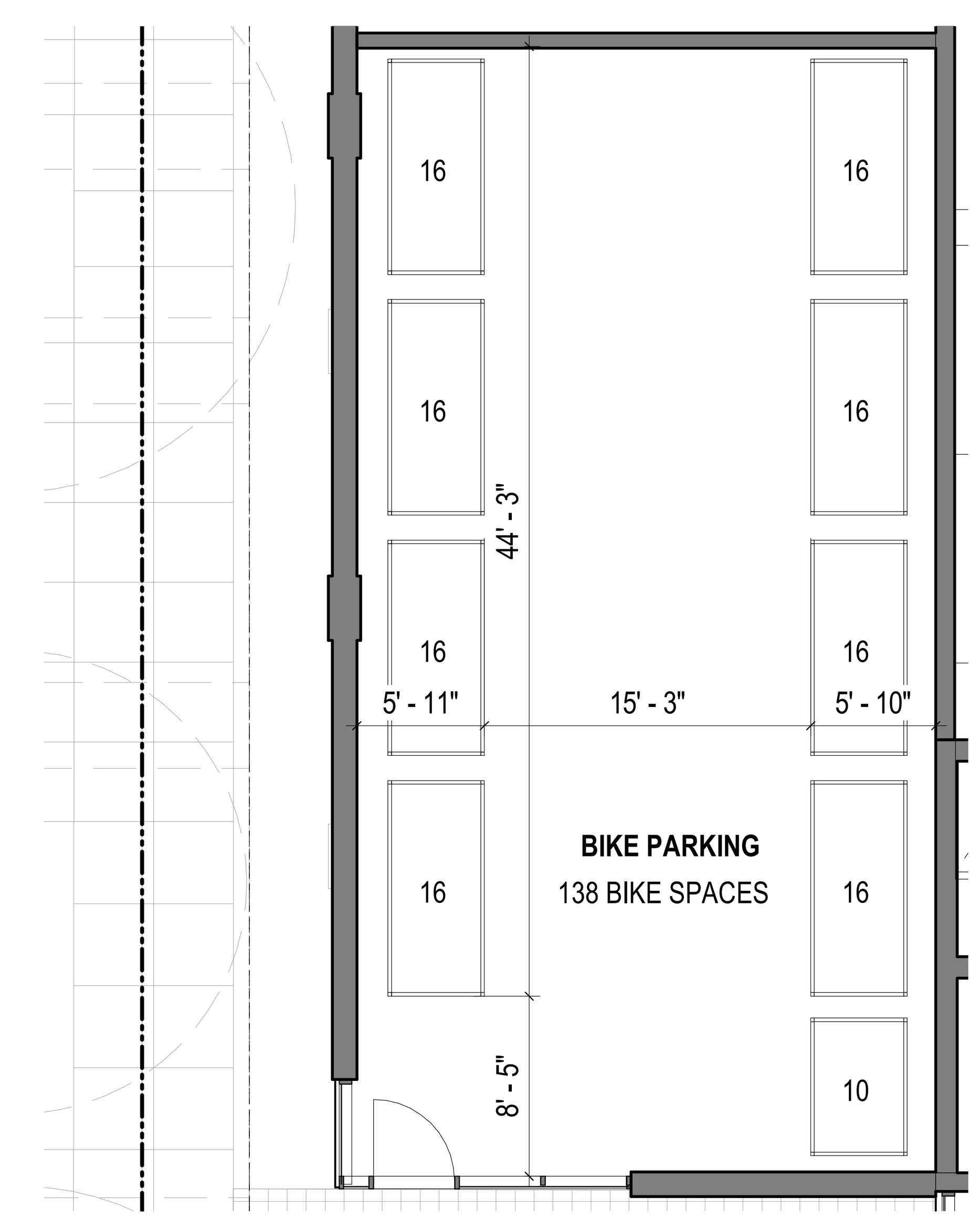


1/8" = 1'-0"

Level 1 | 1

Y	N/A	RESPON. PARTY

CHAPTER 3
GREEN BUILDING
SECTION 301 GENERAL

301.1 SCOPE. Buildings shall be designed to include the green building measures specified as mandatory in the application checklists contained in this code. Voluntary green building measures are also included in the application checklists and may be included in the design and construction of structures covered by this code, but are not required unless adopted by a city, county, or city and county as specified in Section 101.7.

301.1.1 Additions and alterations. [HCD] The mandatory provisions of Chapter 4 shall be applied to additions or alterations of existing residential buildings where the addition or alteration increases the building's conditioned area, volume, or size. The requirements shall apply only to and/or within the specific area of the addition or alteration.

Note: On and after January 1, 2014, residential buildings undergoing permitted alterations, additions, or improvements shall replace noncompliant plumbing fixtures with water-conserving plumbing fixtures. Plumbing fixture replacement is required prior to issuance of a certificate of final completion, certificate of occupancy or final permit approval by the local building department. See Civil Code Section 1101.1, et seq., for the definition of a noncompliant plumbing fixture, types of residential buildings affected and other important enactment dates.

301.2 LOW-RISE AND HIGH-RISE RESIDENTIAL BUILDINGS. [HCD] The provisions of individual sections of CALGreen may apply to either low-rise residential buildings high-rise residential buildings, or both. Individual sections will be designated by banners to indicate where the section applies specifically to low-rise only (LR) or high-rise only (HR). When the section applies to both low-rise and high-rise buildings, no banner will be used.

SECTION 302 MIXED OCCUPANCY BUILDINGS

302.1 MIXED OCCUPANCY BUILDINGS. In mixed occupancy buildings, each portion of a building shall comply with the specific green building measures applicable to each specific occupancy.

ABBREVIATION DEFINITIONS:

HCD	Department of Housing and Community Development
BSC	California Building Standards Commission
DSA-SS	Division of the State Architect, Structural Safety
OSHPD	Office of Statewide Health Planning and Development
LR	Low Rise
HR	High Rise
AA	Additions and Alterations
N	New

CHAPTER 4
RESIDENTIAL MANDATORY MEASURES
DIVISION 4.1 PLANNING AND DESIGN

SECTION 4.102 DEFINITIONS
4.102.1 DEFINITIONS
The following terms are defined in Chapter 2 *(and are included here for reference)*

FRENCH DRAIN. A trench, hole or other depressed area loosely filled with rock, gravel, fragments of brick or similar pervious material used to collect or channel drainage or runoff water.

WATTLES. Wattles are used to reduce sediment in runoff. Wattles are often constructed of natural plant materials such as hay, straw or similar material shaped in the form of tubes and placed on a downflow slope. Wattles are also used for perimeter and inlet controls.

4.106 SITE DEVELOPMENT
4.106.1 GENERAL. Preservation and use of available natural resources shall be accomplished through evaluation and careful planning to minimize negative effects on the site and adjacent areas. Preservation of slopes, management of storm water drainage and erosion controls shall comply with this section.

4.106.2 STORM WATER DRAINAGE AND RETENTION DURING CONSTRUCTION. Projects which disturb less than one acre of soil and are not part of a larger common plan of development which in total disturbs one acre or more, shall manage storm water drainage during construction. In order to manage storm water drainage during construction, one or more of the following measures shall be implemented to prevent flooding of adjacent property, prevent erosion and retain soil runoff on the site.

1. Retention basins of sufficient size shall be utilized to retain storm water on the site.
2. Where storm water is conveyed to a public drainage system, collection point, gutter or similar disposal method, water shall be filtered by use of a barrier system, wattle or other method approved by the enforcing agency.
3. Compliance with a lawfully enacted storm water management ordinance.

Note: Refer to the State Water Resources Control Board for projects which disturb one acre or more of soil, or are part of a larger common plan of development which in total disturbs one acre or more of soil.

(Website: https://www.waterboards.ca.gov/water_issues/programs/stormwater/construction.html)

4.106.3 GRADING AND PAVING. Construction plans shall indicate how the site grading or drainage system will manage all surface water flows to keep water from entering buildings. Examples of methods to manage surface water include, but are not limited to, the following:

1. Swales
2. Water collection and disposal systems
3. French drains
4. Water retention gardens
5. Other water measures which keep surface water away from buildings and aid in groundwater recharge.

Exception: Additions and alterations not altering the drainage path.

4.106.4 Electric vehicle (EV) charging for new construction. New construction shall comply with Sections 4.106.4.1, 4.106.4.2, or 4.106.4.3 to facilitate future installation and use of EV chargers. Electric vehicle supply equipment (EVSE) shall be installed in accordance with the *California Electrical Code*, Article 625.

Exceptions:
1. On a case-by-case basis, where the local enforcing agency has determined EV charging and infrastructure are not feasible based upon one or more of the following conditions:
   1.1 Where there is no commercial power supply.
   1.2 Where there is evidence substantiating that meeting the requirements will alter the local utility infrastructure design requirements on the utility side of the meter so as to increase the utility side cost to the homeowner or the developer by more than $400.00 per dwelling unit.
2. Accessory Dwelling Units (ADU) and Junior Accessory Dwelling Units (JADU) without additional parking facilities.

4.106.4.1 New one- and two-family dwellings and townhouses with attached private garages. For each dwelling unit, install a listed raceway to accommodate a dedicated 208/240-volt branch circuit. The raceway shall not be less than trade size 1 (nominal 1-inch inside diameter). The raceway shall originate at the main service or subpanel and shall terminate into a listed cabinet, box or other enclosure in close proximity to the proposed location of an EV charger. Raceways are required to be continuous at enclosed, inaccessible or concealed areas and spaces. The service panel and/or subpanel shall provide capacity to install a 40-ampere minimum dedicated branch circuit and space(s) reserved to permit installation of a branch circuit overcurrent protective device.

4.106.4.1.1 Identification. The service panel or subpanel circuit directory shall identify the overcurrent protective device space(s) reserved for future EV charging as "EV CAPABLE". The raceway termination location shall be permanently and visibly marked as "EV CAPABLE".

4.106.4.2 New multifamily dwellings. If residential parking is available, ten (10) percent of the total number of parking spaces on a building site, provided for all types of parking facilities, shall be electric vehicle charging spaces (EV spaces) capable of supporting future EVSE. Calculations for the required number of EV spaces shall be rounded up to the nearest whole number.

Notes:
1. Construction documents are intended to demonstrate the project's capability and capacity for facilitating future EV charging.
2. There is no requirement for EV spaces to be constructed or available until EV chargers are installed for use.

4.106.4.2.1 Electric vehicle charging space (EV space) locations. Construction documents shall indicate the location of proposed EV spaces. Where common use parking is provided at least one EV space shall be located in the common use parking area and shall be available for use by all residents.

4.106.4.2.1.1 Electric Vehicle Charging Stations (EVCS) When EV chargers are installed, EV spaces required by Section 4.106.2.2, Item 3, shall comply with at least one of the following options:

1. The EV space shall be located adjacent to an accessible parking space meeting the requirements of the *California Building Code*, Chapter 11A, to allow use of the EV charger from the accessible parking space.
2. The EV space shall be located on an accessible route, as defined in the *California Building Code*, Chapter 2, to the building.

Exception: Electric vehicle charging stations designed and constructed in compliance with the *California Building Code*, Chapter 11B, are not required to comply with Section 4.106.4.2.1.1 and Section 4.106.4.2.2, Item 3.

Note: Electric Vehicle charging stations serving public housing are required to comply with the *California Building Code*, Chapter 11B.

4.106.4.2.2 Electric vehicle charging space (EV space) dimensions. The EV space shall be designed to comply with the following:

1. The minimum length of each EV space shall be 18 feet (5486 mm).
2. The minimum width of each EV space shall be 9 feet (2743 mm).
3. One in every 25 EV spaces, but not less than one EV space, shall have an 8-foot (2438 mm) wide minimum aisle. A 5-foot (1524 mm) wide minimum aisle shall be permitted provided the minimum width of the EV space is 12 feet (3658 mm).
   a. Surface slope for this EV space and the aisle shall not exceed 1 unit vertical in 48 units horizontal (2.083 percent slope) in any direction.

4.106.4.2.3 Single EV space required. Install a listed raceway capable of accommodating a 208/240-volt dedicated branch circuit. The raceway shall not be less than trade size 1 (nominal 1-inch inside diameter). The raceway shall originate at the main service or subpanel and shall terminate into a listed cabinet, box or enclosure in close proximity to the proposed location of the EV space. Construction documents shall identify the raceway termination point. The service panel and/or subpanel shall provide capacity to install a 40-ampere minimum dedicated branch circuit and space(s) reserved to permit installation of a branch circuit overcurrent protective device.

4.106.4.2.4 Multiple EV spaces required. Construction documents shall indicate the raceway termination point and proposed location of future EV spaces and EV chargers. Construction documents shall also provide information on amperage of future EVSE, raceway method(s), wiring schematics and electrical load calculations to verify that the electrical panel service capacity and electrical system, including any on-site distribution transformer(s), have sufficient capacity to simultaneously charge all EVs at all required EV spaces at the full rated amperage of the EVSE. Plan design shall be based upon a 40-ampere minimum branch circuit. Required raceways and related components that are planned to be installed underground, enclosed, inaccessible or in concealed areas and spaces shall be installed at the time of original construction.

4.106.4.2.5 Identification. The service panel or subpanel circuit directory shall identify the overcurrent protective device space(s) reserved for future EV charging purposes as "EV CAPABLE" in accordance with the *California Electrical Code*.

4.106.4.3 New hotels and motels. All newly constructed hotels and motels shall provide EV spaces capable of supporting future installation of EVSE. The construction documents shall identify the location of the EV spaces.

Notes:
1. Construction documents are intended to demonstrate the project's capability and capacity or facilitating future EV charging.
2. There is no requirement for EV spaces to be constructed or available until EV chargers are installed for use.

4.106.4.3.1 Number of required EV spaces. The number of required EV spaces shall be based on the total number of parking spaces provided for all types of parking facilities in accordance with Table 4.106.4.3.1. Calculations for the required number of EV spaces shall be rounded up to the nearest whole number.

TABLE 4.106.4.3.1	
TOTAL NUMBER OF PARKING SPACES	**NUMBER OF REQUIRED EV SPACES**
0-9	0
10-25	1
26-50	2
51-75	4
76-100	5
101-150	7
151-200	10
201 and over	6 percent of total

4.106.4.3.2 Electric vehicle charging space (EV space) dimensions. The EV spaces shall be designed to comply with the following:

1. The minimum length of each EV space shall be 18 feet (5486mm).
2. The minimum width of each EV space shall be 9 feet (2743mm)

4.106.4.3.3 Single EV space required. When a single EV space is required, the EV space shall be designed in accordance with Section 4.106.4.2.3.

4.106.4.3.4 Multiple EV spaces required. When multiple EV spaces are required, the EV spaces shall be designed in accordance with Section 4.106.4.2.4.

4.106.4.3.5 Identification. The service panels or sub-panels shall be identified in accordance with Section 4.106.4.2.5.

4.106.4.3.6 Accessible EV spaces. In addition to the requirements in Section 4.106.4.3, EV spaces for hotels/motels and all EVSE, when installed, shall comply with the accessibility provisions for the EV charging stations in the *California Building Code*, Chapter 11B.

DIVISION 4.2 ENERGY EFFICIENCY

4.201 GENERAL
4.201.1 SCOPE. For the purposes of mandatory energy efficiency standards in this code, the California Energy Commission will continue to adopt mandatory standards.

DIVISION 4.3 WATER EFFICIENCY AND CONSERVATION

4.303 INDOOR WATER USE
4.303.1 WATER CONSERVING PLUMBING FIXTURES AND FITTINGS. Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall comply with the sections 4.303.1.1, 4.303.1.2, 4.303.1.3, and 4.303.4.4.

Note: All noncompliant plumbing fixtures in any residential real property shall be replaced with water-conserving plumbing fixtures. Plumbing fixture replacement is required prior to issuance of a certificate of final completion, certificate of occupancy, or final permit approval by the local building department. See Civil Code Section 1101.1, et seq., for the definition of a noncompliant plumbing fixture, types of residential buildings affected and other important enactment dates.

4.303.1.1 Water Closets. The effective flush volume of all water closets shall not exceed 1.28 gallons per flush. Tank-type water closets shall be certified to the performance criteria of the U.S. EPA WaterSense Specification for Tank-type Toilets.

Note: The effective flush volume of dual flush toilets is defined as the composite, average flush volume of two reduced flushes and one full flush.

4.303.1.2 Urinals. The effective flush volume of wall mounted urinals shall not exceed 0.125 gallons per flush. The effective flush volume of all other urinals shall not exceed 0.5 gallons per flush.

4.303.1.3 Showerheads.

4.303.1.3.1 Single Showerhead. Showerheads shall have a maximum flow rate of not more than 1.8 gallons per minute at 80 psi. Showerheads shall be certified to the performance criteria of the U.S. EPA WaterSense Specification for Showerheads.

4.303.1.3.2 Multiple showerheads serving one shower. When a shower is served by more than one showerhead, the combined flow rate of all the showerheads and/or other shower outlets controlled by a single valve shall not exceed 1.8 gallons per minute at 80 psi, or the shower shall be designed to only allow one shower outlet to be in operation at a time.

Note: A hand-held shower shall be considered a showerhead.

4.303.1.4 Faucets.

4.303.1.4.1 Residential Lavatory Faucets. The maximum flow rate of residential lavatory faucets shall not exceed 1.2 gallons per minute at 60 psi. The minimum flow rate of residential lavatory faucets shall not be less than 0.8 gallons per minute at 20 psi.

4.303.1.4.2 Lavatory Faucets in Common and Public Use Areas. The maximum flow rate of lavatory faucets installed in common and public use areas (outside of dwellings or sleeping units) in residential buildings shall not exceed 0.5 gallons per minute at 60 psi.

4.303.1.4.3 Metering Faucets. Metering faucets when installed in residential buildings shall not deliver more than 0.2 gallons per cycle.

4.303.1.4.4 Kitchen Faucets. The maximum flow rate of kitchen faucets shall not exceed 1.8 gallons per minute at 60 psi. Kitchen faucets may temporarily increase the flow above the maximum rate, but not to exceed 2.2 gallons per minute at 60 psi, and must default to a maximum flow rate of 1.8 gallons per minute at 60 psi.

Note: Where complying faucets are unavailable, aerators or other means may be used to achieve reduction.

4.303.2 STANDARDS FOR PLUMBING FIXTURES AND FITTINGS. Plumbing fixtures and fittings shall be installed in accordance with the *California Plumbing Code*, and shall meet the applicable standards referenced in Table 1701.1 of the *California Plumbing Code*.

NOTE:
THIS TABLE COMPILES THE DATA IN SECTION 4.303.1, AND IS INCLUDED AS A CONVENIENCE FOR THE USER.

TABLE - MAXIMUM FIXTURE WATER USE	
FIXTURE TYPE	**FLOW RATE**
SHOWER HEADS (RESIDENTIAL)	1.8 GMP @ 80 PSI
LAVATORY FAUCETS (RESIDENTIAL)	MAX. 1.2 GPM @ 60 PSI MIN. 0.8 GPM @ 20 PSI
LAVATORY FAUCETS IN COMMON & PUBLIC USE AREAS	0.5 GPM @ 60 PSI
KITCHEN FAUCETS	1.8 GPM @ 60 PSI
METERING FAUCETS	0.2 GAL/CYCLE
WATER CLOSET	1.28 GAL/FLUSH
URINALS	0.125 GAL/FLUSH

4.304 OUTDOOR WATER USE
4.304.1 OUTDOOR POTABLE WATER USE IN LANDSCAPE AREAS. Residential developments shall comply with a local water efficient landscape ordinance or the current California Department of Water Resources' Model Water Efficient Landscape Ordinance (MWELO), whichever is more stringent.

NOTES:
1. The Model Water Efficient Landscape Ordinance (MWELO) is located in the *California Code Regulations*, Title 23, Chapter 2.7, Division 2. MWELO and supporting documents, including water budget calculator, are available at: https://www.water.ca.gov/

DIVISION 4.4 MATERIAL CONSERVATION AND RESOURCE EFFICIENCY

4.406 ENHANCED DURABILITY AND REDUCED MAINTENANCE
4.406.1 RODENT PROOFING. Annular spaces around pipes, electric cables, conduits or other openings in sole/bottom plates at exterior walls shall be protected against the passage of rodents by closing such openings with cement mortar, concrete masonry or a similar method acceptable to the enforcing agency.

4.408 CONSTRUCTION WASTE REDUCTION, DISPOSAL AND RECYCLING
4.408.1 CONSTRUCTION WASTE MANAGEMENT. Recycle and/or salvage for reuse a minimum of 65 percent of the non-hazardous construction and demolition waste in accordance with either Section 4.408.2, 4.408.3 or 4.408.4, or meet a more stringent local construction and demolition waste management ordinance.

Exceptions:
1. Excavated soil and land-clearing debris.
2. Alternate waste reduction methods developed by working with local agencies if diversion or recycle facilities capable of compliance with this item do not exist or are not located reasonably close to the jobsite.
3. The enforcing agency may make exceptions to the requirements of this section when isolated jobsites are located in areas beyond the haul boundaries of the diversion facility.

4.408.2 CONSTRUCTION WASTE MANAGEMENT PLAN. Submit a construction waste management plan in conformance with Items 1 through 5. The construction waste management plan shall be updated as necessary and shall be available during construction for examination by the enforcing agency.

1. Identify the construction and demolition waste materials to be diverted from disposal by recycling, reuse on the project or salvage for future use or sale.
2. Specify if construction and demolition waste materials will be sorted on-site (source separated) or bulk mixed (single stream).
3. Identify diversion facilities where the construction and demolition waste material collected will be taken.
4. Identify construction methods employed to reduce the amount of construction and demolition waste generated.
5. Specify that the amount of construction and demolition waste materials diverted shall be calculated by weight or volume, but not by both.

4.408.3 WASTE MANAGEMENT COMPANY. Utilize a waste management company, approved by the enforcing agency, which can provide verifiable documentation that the percentage of construction and demolition waste material diverted from the landfill complies with Section 4.408.1.

Note: The owner or contractor may make the determination if the construction and demolition waste materials will be diverted by a waste management company.

4.408.4 WASTE STREAM REDUCTION ALTERNATIVE [LR]. Projects that generate a total combined weight of construction and demolition waste disposed of in landfills, which do not exceed 3.4 lbs./sq.ft. of the building area shall meet the minimum 65% construction waste reduction requirement in Section 4.408.1

4.408.4.1 WASTE STREAM REDUCTION ALTERNATIVE. Projects that generate a total combined weight of construction and demolition waste disposed of in landfills, which do not exceed 2 pounds per square foot of the building area, shall meet the minimum 65% construction waste reduction requirement in Section 4.408.1

4.408.5 DOCUMENTATION. Documentation shall be provided to the enforcing agency which demonstrates compliance with Section 4.408.2, items 1 through 5, Section 4.408.3 or Section 4.408.4..

Notes:
1. Sample forms found in "A Guide to the California Green Building Standards Code (Residential)" located at www.hcd.ca.gov/CALGreen.html may be used to assist in documenting compliance with this section.
2. Mixed construction and demolition debris (C & D) processors can be located at the California Department of Resources Recycling and Recovery (CalRecycle).

4.410 BUILDING MAINTENANCE AND OPERATION
4.410.1 OPERATION AND MAINTENANCE MANUAL. At the time of final inspection, a manual, compact disc, web-based reference or other media acceptable to the enforcing agency which includes all of the following shall be placed in the building:

1. Directions to the owner or occupant that the manual shall remain with the building throughout the life cycle of the structure.
2. Operation and maintenance instructions for the following:
   a. Equipment and appliances, including water-saving devices and systems, HVAC systems, photovoltaic systems, electric vehicle chargers, water-heating systems and other major appliances and equipment.
   b. Roof and yard drainage, including gutters and downspouts.
   c. Space conditioning systems, including condensers and air filters.
   d. Landscape irrigation systems.
   e. Water reuse systems.
3. Information from local utility, water and waste recovery providers on methods to further reduce resource consumption, including recycle programs and locations.
4. Public transportation and/or carpool options available in the area.
5. Educational material on the positive impacts of an interior relative humidity between 30-60 percent and what methods an occupant may use to maintain the relative humidity level in that range.
6. Information about water-conserving landscape and irrigation design and controllers which conserve water.
7. Instructions for maintaining gutters and downspouts and the importance of diverting water at least 5 feet away from the foundation.
8. Information on required routine maintenance measures, including, but not limited to, caulking, painting, grading around the building, etc.
9. Information about state solar energy and incentive programs available.
10. A copy of all special inspections verifications required by the enforcing agency or this code.

4.410.2 RECYCLING BY OCCUPANTS. Where 5 or more multifamily dwelling units are constructed on a building site, provide readily accessible area(s) that serves all buildings on the site and are identified for the depositing, storage and collection of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics, organic waster, and metals, or meet a lawfully enacted local recycling ordinance, if more restrictive.

Exception: Rural jurisdictions that meet and apply for the exemption in Public Resources Code Section 42649.82 (a)(2)(A) et seq. are note required to comply with the organic waste portion of this section.

DIVISION 4.5 ENVIRONMENTAL QUALITY

SECTION 4.501 GENERAL
4.501.1 Scope
The provisions of this chapter shall outline means of reducing the quality of air contaminants that are odorous, irritating and/or harmful to the comfort and well being of a building's installers, occupants and neighbors.

SECTION 4.502 DEFINITIONS
5.102.1 DEFINITIONS
The following terms are defined in Chapter 2 *(and are included here for reference)*

AGRIFIBER PRODUCTS. Agrifiber products include wheatboard, strawboard, panel substrates and door cores, not including furniture, fixtures and equipment (FF&E) not considered base building elements.

COMPOSITE WOOD PRODUCTS. Composite wood products include hardwood plywood, particleboard and medium density fiberboard. "Composite wood products" does not include hardboard, structural plywood, structural panels, structural composite lumber, oriented strand board, glued laminated timber, prefabricated wood I-joists or finger-jointed lumber, all as specified in California Code of regulations (CCR), title 17, Section 93120.1.

DIRECT-VENT APPLIANCE. A fuel-burning appliance with a sealed combustion system that draws all air for combustion from the outside atmosphere and discharges all flue gases to the outside atmosphere.

AIA California

2019 CALIFORNIA GREEN BUILDING STANDARDS CODE
RESIDENTIAL MANDATORY MEASURES, SHEET 1 (January 2020, Includes August 2019 Supplement)

Y = YES
N/A = NOT APPLICABLE
RESPON. PARTY = RESPONSIBLE PARTY (ie: ARCHITECT, ENGINEER, OWNER, CONTRACTOR, INSPECTOR ETC.)

MAXIMUM INCREMENTAL REACTIVITY (MIR). The maximum change in weight of ozone formed by adding a compound to the "Base Reactive Organic Gas (ROG) Mixture" per weight of compound added, expressed to hundredths of a gram (g O^3/g ROC).
Note: MIR values for individual compounds and hydrocarbon solvents are specified in CCR, Title 17, Sections 94700 and 94701.

MOISTURE CONTENT. The weight of the water in wood expressed in percentage of the weight of the oven-dry wood.

PRODUCT-WEIGHTED MIR (PWMIR). The sum of all weighted-MIR for all ingredients in a product subject to this article. The PWMIR is the total product reactivity expressed to hundredths of a gram of ozone formed per gram of product (excluding container and packaging).
Note: PWMIR is calculated according to equations found in CCR, Title 17, Section 94521 (a).

REACTIVE ORGANIC COMPOUND (ROC). Any compound that has the potential, once emitted, to contribute to ozone formation in the troposphere.

VOC. A volatile organic compound (VOC) broadly defined as a chemical compound based on carbon chains or rings with vapor pressures greater than 0.1 millimeters of mercury at room temperature. These compounds typically contain hydrogen and may contain oxygen, nitrogen and other elements. See CCR Title 17, Section 94508(a).

4.503 FIREPLACES
4.503.1 GENERAL. Any installed gas fireplace shall be a direct-vent sealed-combustion type. Any installed woodstove or pellet stove shall comply with U.S. EPA New Source Performance Standards (NSPS) emission limits as applicable, and shall have a permanent label indicating they are certified to meet the emission limits. Woodstoves, pellet stoves and fireplaces shall also comply with applicable local ordinances.

4.504 POLLUTANT CONTROL
4.504.1 COVERING OF DUCT OPENINGS & PROTECTION OF MECHANICAL EQUIPMENT DURING CONSTRUCTION. At the time of rough installation, during storage on the construction site and until final startup of the heating, cooling and ventilating equipment, all duct and other related air distribution component openings shall be covered with tape, plastic, sheet metal or other methods acceptable to the enforcing agency to reduce the amount of water, dust or debris which may enter the system.

4.504.2 FINISH MATERIAL POLLUTANT CONTROL. Finish materials shall comply with this section.

4.504.2.1 Adhesives, Sealants and Caulks. Adhesives, sealant and caulks used on the project shall meet the requirements of the following standards unless more stringent local or regional air pollution or air quality management district rules apply:

1. Adhesives, adhesive bonding primers, adhesive primers, sealants, sealant primers and caulks shall comply with local or regional air pollution control or air quality management district rules where applicable or SCAQMD Rule 1168 VOC limits, as shown in Table 4.504.1 or 4.504.2, as applicable. Such products also shall comply with the Rule 1168 prohibition on the use of certain toxic compounds (chloroform, ethylene dichloride, methylene chloride, perchloroethylene and tricloroethylene), except for aerosol products, as specified in Subsection 2 below.
2. Aerosol adhesives, and smaller unit sizes of adhesives, and sealant or caulking compounds (in units of product, less packaging, which do not weigh more than 1 pound and do not consist of more than 16 fluid ounces) shall comply with statewide VOC standards and other requirements, including prohibitions on use of certain toxic compounds, of *California Code of Regulations*, Title 17, commencing with section 94507.

4.504.2.2 Paints and Coatings. Architectural paints and coatings shall comply with VOC limits in Table 1 of the ARB Architectural Suggested Control Measure, as shown in Table 4.504.3, unless more stringent local limits apply. The VOC content limit for coatings that do not meet the definitions for the specialty coatings categories listed in Table 4.504.3 shall be determined by classifying the coating as a Flat, Nonflat or Nonflat-High Gloss coating, based on its gloss, as defined in subsections 4.21, 4.36, and 4.37 of the 2007 California Air Resources Board, Suggested Control Measure, and the corresponding Flat, Nonflat or Nonflat-High Gloss VOC limit in Table 4.504.3 shall apply.

4.504.2.3 Aerosol Paints and Coatings. Aerosol paints and coatings shall meet the Product-weighted MIR Limits for ROC in Section 94522(a)(2) and other requirements, including prohibitions on use of certain toxic compounds and ozone depleting substances, in Sections 94522(e)(1) and (f)(1) of *California Code of Regulations*, Title 17, commencing with Section 94520; and in areas under the jurisdiction of the Bay Area Air Quality Management District additionally comply with the percent VOC by weight of product limits of Regulation 8, Rule 49.

4.504.2.4 Verification. Verification of compliance with this section shall be provided at the request of the enforcing agency. Documentation may include, but is not limited to, the following:

1. Manufacturer's product specification.
2. Field verification of on-site product containers.

TABLE 4.504.1 - ADHESIVE VOC LIMIT[1,2]	
(Less Water and Less Exempt Compounds in Grams per Liter)	
ARCHITECTURAL APPLICATIONS	**VOC LIMIT**
INDOOR CARPET ADHESIVES	50
CARPET PAD ADHESIVES	50
OUTDOOR CARPET ADHESIVES	150
WOOD FLOORING ADHESIVES	100
RUBBER FLOOR ADHESIVES	60
SUBFLOOR ADHESIVES	50
CERAMIC TILE ADHESIVES	65
VCT & ASPHALT TILE ADHESIVES	50
DRYWALL & PANEL ADHESIVES	50
COVE BASE ADHESIVES	50
MULTIPURPOSE CONSTRUCTION ADHESIVE	70
STRUCTURAL GLAZING ADHESIVES	100
SINGLE-PLY ROOF MEMBRANE ADHESIVES	250
OTHER ADHESIVES NOT LISTED	50
SPECIALTY APPLICATIONS	
PVC WELDING	510
CPVC WELDING	490
ABS WELDING	325
PLASTIC CEMENT WELDING	250
ADHESIVE PRIMER FOR PLASTIC	550
CONTACT ADHESIVE	80
SPECIAL PURPOSE CONTACT ADHESIVE	250
STRUCTURAL WOOD MEMBER ADHESIVE	140
TOP & TRIM ADHESIVE	250
SUBSTRATE SPECIFIC APPLICATIONS	
METAL TO METAL	30
PLASTIC FOAMS	50
POROUS MATERIAL (EXCEPT WOOD)	50
WOOD	30
FIBERGLASS	80

1. IF AN ADHESIVE IS USED TO BOND DISSIMILAR SUBSTRATES TOGETHER, THE ADHESIVE WITH THE HIGHEST VOC CONTENT SHALL BE ALLOWED.

2. FOR ADDITIONAL INFORMATION REGARDING METHODS TO MEASURE THE VOC CONTENT SPECIFIED IN THIS TABLE, SEE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT RULE 1168.

TABLE 4.504.2 - SEALANT VOC LIMIT	
(Less Water and Less Exempt Compounds in Grams per Liter)	
SEALANTS	**VOC LIMIT**
ARCHITECTURAL	250
MARINE DECK	760
NONMEMBRANE ROOF	300
ROADWAY	250
SINGLE-PLY ROOF MEMBRANE	450
OTHER	420
SEALANT PRIMERS	
ARCHITECTURAL	
NON-POROUS	250
POROUS	775
MODIFIED BITUMINOUS	500
MARINE DECK	760
OTHER	750

TABLE 4.504.3 - VOC CONTENT LIMITS FOR ARCHITECTURAL COATINGS[2,3]	
GRAMS OF VOC PER LITER OF COATING, LESS WATER & LESS EXEMPT COMPOUNDS	
COATING CATEGORY	VOC LIMIT
FLAT COATINGS	50
NON-FLAT COATINGS	100
NONFLAT-HIGH GLOSS COATINGS	150
SPECIALTY COATINGS	
ALUMINUM ROOF COATINGS	400
BASEMENT SPECIALTY COATINGS	400
BITUMINOUS ROOF COATINGS	50
BITUMINOUS ROOF PRIMERS	350
BOND BREAKERS	350
CONCRETE CURING COMPOUNDS	350
CONCRETE/MASONRY SEALERS	100
DRIVEWAY SEALERS	50
DRY FOG COATINGS	150
FAUX FINISHING COATINGS	350
FIRE RESISTIVE COATINGS	350
FLOOR COATINGS	100
FORM-RELEASE COMPOUNDS	250
GRAPHIC ARTS COATINGS (SIGN PAINTS)	500
HIGH TEMPERATURE COATINGS	420
INDUSTRIAL MAINTENANCE COATINGS	250
LOW SOLIDS COATINGS[1]	120
MAGNESITE CEMENT COATINGS	450
MASTIC TEXTURE COATINGS	100
METALLIC PIGMENTED COATINGS	500
MULTICOLOR COATINGS	250
PRETREATMENT WASH PRIMERS	420
PRIMERS, SEALERS, & UNDERCOATERS	100
REACTIVE PENETRATING SEALERS	350
RECYCLED COATINGS	250
ROOF COATINGS	50
RUST PREVENTATIVE COATINGS	250
SHELLACS	
CLEAR	730
OPAQUE	550
SPECIALTY PRIMERS, SEALERS & UNDERCOATERS	100
STAINS	250
STONE CONSOLIDANTS	450
SWIMMING POOL COATINGS	340
TRAFFIC MARKING COATINGS	100
TUB & TILE REFINISH COATINGS	420
WATERPROOFING MEMBRANES	250
WOOD COATINGS	275
WOOD PRESERVATIVES	350
ZINC-RICH PRIMERS	340

1. GRAMS OF VOC PER LITER OF COATING, INCLUDING WATER & EXEMPT COMPOUNDS

2. THE SPECIFIED LIMITS REMAIN IN EFFECT UNLESS REVISED LIMITS ARE LISTED IN SUBSEQUENT COLUMNS IN THE TABLE.

3. VALUES IN THIS TABLE ARE DERIVED FROM THOSE SPECIFIED BY THE CALIFORNIA AIR RESOURCES BOARD, ARCHITECTURAL COATINGS SUGGESTED CONTROL MEASURE, FEB. 1, 2008. MORE INFORMATION IS AVAILABLE FROM THE AIR RESOURCES BOARD.

TABLE 4.504.5 - FORMALDEHYDE LIMITS[1]	
MAXIMUM FORMALDEHYDE EMISSIONS IN PARTS PER MILLION	
PRODUCT	**CURRENT LIMIT**
HARDWOOD PLYWOOD VENEER CORE	0.05
HARDWOOD PLYWOOD COMPOSITE CORE	0.05
PARTICLE BOARD	0.09
MEDIUM DENSITY FIBERBOARD	0.11
THIN MEDIUM DENSITY FIBERBOARD[2]	0.13

1. VALUES IN THIS TABLE ARE DERIVED FROM THOSE SPECIFIED BY THE CALIF. AIR RESOURCES BOARD, AIR TOXICS CONTROL MEASURE FOR COMPOSITE WOOD AS TESTED IN ACCORDANCE WITH ASTM E 1333. FOR ADDITIONAL INFORMATION, SEE CALIF. CODE OF REGULATIONS, TITLE 17, SECTIONS 93120 THROUGH 93120.12.

2. THIN MEDIUM DENSITY FIBERBOARD HAS A MAXIMUM THICKNESS OF 5/16" (8 MM).

DIVISION 4.5 ENVIRONMENTAL QUALITY (continued)

4.504.3 CARPET SYSTEMS. All carpet installed in the building interior shall meet the testing and product requirements of at least one of the following:

1. Carpet and Rug Institute's Green Label Plus Program.
2. California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers" Version 1.1, February 2010 (also known as Specification 01350).
3. NSF/ANSI 140 at the Gold level.
4. Scientific Certifications Systems Indoor Advantage™ Gold.

4.504.3.1 Carpet cushion. All carpet cushion installed in the building interior shall meet the requirements of the Carpet and Rug Institute's Green Label program.

4.504.3.2 Carpet adhesive. All carpet adhesive shall meet the requirements of Table 4.504.1.

4.504.4 RESILIENT FLOORING SYSTEMS. Where resilient flooring is installed , at least 80% of floor area receiving resilient flooring shall comply with one or more of the following:

1. Products compliant with the California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers," Version 1.1, February 2010 (also known as Specification 01350), certified as a CHPS Low-Emitting Material in the Collaborative for High Performance Schools (CHPS) High Performance Products Database.
2. Products certified under UL GREENGUARD Gold (formerly the Greenguard Children & Schools program).
3. Certification under the Resilient Floor Covering Institute (RFCI) FloorScore program.
4. Meet the California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers", Version 1.1, February 2010 (also known as Specification 01350).

4.504.5 COMPOSITE WOOD PRODUCTS. Hardwood plywood, particleboard and medium density fiberboard composite wood products used on the interior or exterior of the buildings shall meet the requirements for formaldehyde as specified in ARB's Air Toxics Control Measure for Composite Wood (17 CCR 93120 et seq.), by or before the dates specified in those sections, as shown in Table 4.504.5

4.504.5.1 Documentation. Verification of compliance with this section shall be provided as requested by the enforcing agency. Documentation shall include at least one of the following:

1. Product certifications and specifications.
2. Chain of custody certifications.
3. Product labeled and invoiced as meeting the Composite Wood Products regulation (see CCR, Title 17, Section 93120, et seq.).
4. Exterior grade products marked as meeting the PS-1 or PS-2 standards of the Engineered Wood Association, the Australian AS/NZS 2269, European 636 3S standards, and Canadian CSA 0121, CSA 0151, CSA 0153 and CSA 0325 standards.
5. Other methods acceptable to the enforcing agency.

4.505 INTERIOR MOISTURE CONTROL
4.505.1 General. Buildings shall meet or exceed the provisions of the *California Building Standards Code*.

4.505.2 CONCRETE SLAB FOUNDATIONS. Concrete slab foundations required to have a vapor retarder by California Building Code, Chapter 19, or concrete slab-on-ground floors required to have a vapor retarder by the California Residential Code, Chapter 5, shall also comply with this section.

4.505.2.1 Capillary break. A capillary break shall be installed in compliance with at least one of the following:

1. A 4-inch (101.6 mm) thick base of 1/2 inch (12.7mm) or larger clean aggregate shall be provided with a vapor barrier in direct contact with concrete and a concrete mix design, which will address bleeding, shrinkage, and curling, shall be used. For additional information, see American Concrete Institute, ACI 302.2R-06.
2. Other equivalent methods approved by the enforcing agency.
3. A slab design specified by a licensed design professional.

4.505.3 MOISTURE CONTENT OF BUILDING MATERIALS. Building materials with visible signs of water damage shall not be installed. Wall and floor framing shall not be enclosed when the framing members exceed 19 percent moisture content. Moisture content shall be verified in compliance with the following:

1. Moisture content shall be determined with either a probe-type or contact-type moisture meter.Equivalent moisture verification methods may be approved by the enforcing agency and shall satisfy requirements found in Section 101.8 of this code.
2. Moisture readings shall be taken at a point 2 feet (610 mm) to 4 feet (1219 mm) from the grade stamped end of each piece verified.
3. At least three random moisture readings shall be performed on wall and floor framing with documentation acceptable to the enforcing agency provided at the time of approval to enclose the wall and floor framing.

Insulation products which are visibly wet or have a high moisture content shall be replaced or allowed to dry prior to enclosure in wall or floor cavities. Wet-applied insulation products shall follow the manufacturers' drying recommendations prior to enclosure.

4.506 INDOOR AIR QUALITY AND EXHAUST
4.506.1 Bathroom exhaust fans. Each bathroom shall be mechanically ventilated and shall comply with the following:

1. Fans shall be ENERGY STAR compliant and be ducted to terminate outside the building.
2. Unless functioning as a component of a whole house ventilation system, fans must be controlled by a humidity control.
   a. Humidity controls shall be capable of adjustment between a relative humidity range less than or equal to 50% to a maximum of 80%. A humidity control may utilize manual or automatic means of adjustment.
   b. A humidity control may be a separate component to the exhaust fan and is not required to be integral (i.e., built-in)

Notes:
1. For the purposes of this section, a bathroom is a room which contains a bathtub, shower or tub/shower combination.
2. Lighting integral to bathroom exhaust fans shall comply with the *California Energy Code*.

4.507 ENVIRONMENTAL COMFORT
4.507.2 HEATING AND AIR-CONDITIONING SYSTEM DESIGN. Heating and air conditioning systems shall be sized, designed and have their equipment selected using the following methods:

1. The heat loss and heat gain is established according to ANSI/ACCA 2 Manual J - 2011 (Residential Load Calculation), ASHRAE handbooks or other equivalent design software or methods.
2. Duct systems are sized according to ANSI/ACCA 1 Manual D - 2014 (Residential Duct Systems), ASHRAE handbooks or other equivalent design software or methods.
3. Select heating and cooling equipment according to ANSI/ACCA 3 Manual S - 2014 (Residential Equipment Selection), or other equivalent design software or methods.

Exception: Use of alternate design temperatures necessary to ensure the system functions are acceptable.

CHAPTER 7
INSTALLER & SPECIAL INSPECTOR QUALIFICATIONS

702 QUALIFICATIONS
702.1 INSTALLER TRAINING. HVAC system installers shall be trained and certified in the proper installation of HVAC systems including ducts and equipment by a nationally or regionally recognized training or certification program. Uncertified persons may perform HVAC installations when under the direct supervision and responsibility of a person trained and certified to install HVAC systems or contractor licensed to install HVAC systems. Examples of acceptable HVAC training and certification programs include but are not limited to the following:

1. State certified apprenticeship programs.
2. Public utility training programs.
3. Training programs sponsored by trade, labor or statewide energy consulting or verification organizations.
4. Programs sponsored by manufacturing organizations.
5. Other programs acceptable to the enforcing agency.

702.2 SPECIAL INSPECTION [HCD]. When required by the enforcing agency, the owner or the responsible entity acting as the owner's agent shall employ one or more special inspectors to provide inspection or other duties necessary to substantiate compliance with this code. Special inspectors shall demonstrate competence to the satisfaction of the enforcing agency for the particular type of inspection or task to be performed. In addition to other certifications or qualifications acceptable to the enforcing agency, the following certifications or education may be considered by the enforcing agency when evaluating the qualifications of a special inspector:

1. Certification by a national or regional green building program or standard publisher.
2. Certification by a statewide energy consulting or verification organization, such as HERS raters, building performance contractors, and home energy auditors.
3. Successful completion of a third party apprentice training program in the appropriate trade.
4. Other programs acceptable to the enforcing agency.

Notes:
1. Special inspectors shall be independent entities with no financial interest in the materials or the project they are inspecting for compliance with this code.
2. HERS raters are special inspectors certified by the California Energy Commission (CEC) to rate homes in California according to the Home Energy Rating System (HERS).

[BSC] When required by the enforcing agency, the owner or the responsible entity acting as the owner's agent shall employ one or more special inspectors to provide inspection or other duties necessary to substantiate compliance with this code. Special inspectors shall demonstrate competence to the satisfaction of the enforcing agency for the particular type of inspection or task to be performed. In addition, the special inspector shall have a certification from a recognized state, national or international association, as determined by the local agency. The area of certification shall be closely related to the primary job function, as determined by the local agency.

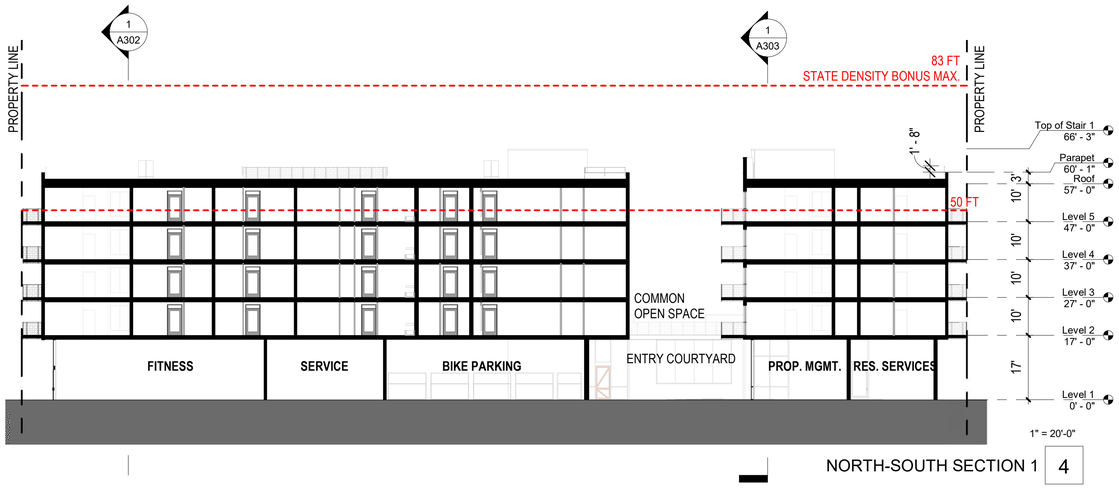
Note: Special inspectors shall be independent entities with no financial interest in the materials or the project they are inspecting for compliance with this code.

703 VERIFICATIONS
703.1 DOCUMENTATION. Documentation used to show compliance with this code shall include but is not limited to, construction documents, plans, specifications, builder or installer certification, inspection reports, or other methods acceptable to the enforcing agency which demonstrate substantial conformance. When specific documentation or special inspection is necessary to verify compliance, that method of compliance will be specified in the appropriate section or identified applicable checklist.

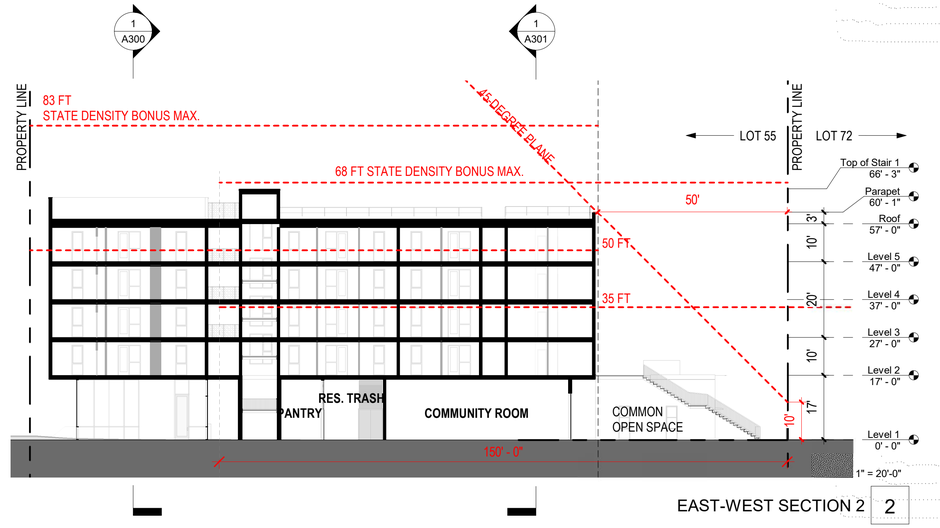
DISCLAIMER: THIS DOCUMENT IS PROVIDED AND INTENDED TO BE USED AS A MEANS TO INDICATE AREAS OF COMPLIANCE WITH THE 2016 CALIFORNIA GREEN BUILDING STANDARDS (CALGREEN) CODE. DUE TO THE VARIABLES BETWEEN BUILDING DEPARTMENT JURISDICTIONS, THIS CHECKLIST IS TO BE USED ON AN INDIVIDUAL PROJECT BASIS AND MAY BE MODIFIED BY THE END USER TO MEET THOSE INDIVIDUAL NEEDS. THE END USER ASSUMES ALL RESPONSIBILITY ASSOCIATED WITH THE USE OF THIS DOCUMENT, INCLUDING VERIFICATION WITH THE FULL CODE.

ZONING SUMMARY

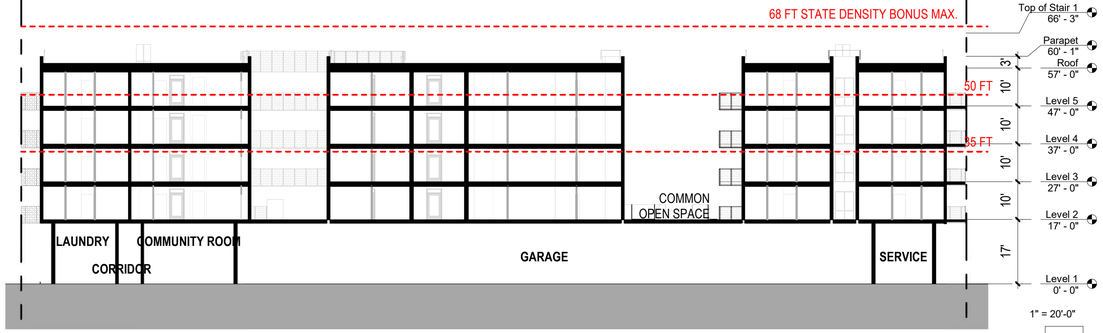
ITEM	REQUIREMENT	PROPOSED	STATUS	SECTION
Zoning	CS - Service Commercial	Multiple-family Residential	Complying	PAMC § 18.16(d)
Density Bonus	If the project provides 80% or more units to lower income households and up to 20% of units to moderate-income households, the development may increase its otherwise allowed height by three stories or 33 feet and the jurisdiction must grant the developer four incentives or concessions. In addition, if the development is within ½ mile of a major transit stop, unlimited density is allowed within the building envelope.	100% affordable project within 1/2 mile of major transit.	Complying	Gov. Code § 65915(b)(1)(G)
Floor Area Ratio (FAR)	Floor Area Ratio maximum of 0.6:1 from residential development standards.	Floor Area Ratio would exceed 0.6:1 limit and is proposed at 2.7: 1.	**Density Bonus Concession/ Incentive (1)**	PAMC § 18.15.030(d)(ii), 18.16.060(b), Gov. Code § 65915(f)3)(D)(ii)
Setbacks	Front (Olive): 0-10 ft to create 12' sidewalk Rear (Acacia): 10 ft for residential portion Interior Side Yard if abutting residential district: 10 ft Street Side Yard: 5 ft	Does not comply at rear setback. Project has 5 ft setback at Acacia Avenue. All other setbacks comply.	**Density Bonus Concession/ Incentive (2)**	PAMC § 18.16.060 Table 4
Build-to-Lines	50% of frontage built to setback 33% of side street built to setback	Complying with build-to-line requirements.	Complying	PAMC § 18.16.060 Table 4
Permitted Setback Encroachments	Balconies, awnings, porches, stairways, and similar elements may extend up to 6' into the setback. Cornices, eaves, fireplaces, and similar architectural features (excluding flat or continuous walls or enclosures of interior space) may extend up to 4' into the front and rear setbacks and up to 3' into interior side setbacks	Complying with all permissible encroachments.	Complying	PAMC § 18.16.060 Table 4
Site Coverage	Maximum site coverage 50%	Project exceeds 50% maximum site coverage. Project proposes 74% site coverage.	**Density Bonus Concession/ Incentive (3)**	Gov. Code § 65915(d)(1)
Landscape/Open Space	30%	Combined ground floor and podium level open spaces exceed 30%.	Complying	PAMC § 18.16.060 Table 4
Usable Open Space	150 sf / unit	Project provides 12,917 SF of usable open space, or approximately 100 SF/unit.	**Density Bonus Concession/ Incentive (4)**	Gov. Code § 65915(d)(1)
Building Height	50 feet standard, or 35 feet within 50 feet of abutting residential district. Density bonus allows for 3 stories 33 feet increase to these heights, resulting in maximum height of 83 feet standard and 68 feet within 50 feet of residential district.	Project height (59') falls below allowable density bonus limits (83'). Project only requesting 9' over current 50' height standard instead of 33' allowed per Density Bonus.	**Complying using Density Bonus**	Gov. Code § 65915(d)(2)(D)
Daylight Plane for lot lines abutting one or more residential zoning districts	Daylight plane height and slope shall be identical to those of the most restrictive residential zoning district abutting the lot line. 45 degree plane measure from 10 FT above rear and side lot lines for sites abutting R-1	Project does not encroach into 45-degree plane.	Complying	PAMC § 18.16.060 Table 4
Multi-family Parking	If a development includes at least 20 percent low-income units for housing developments, is located within one-half mile of a major transit stop, and the residents of the development have unobstructed access to the major transit stop from the development, then, upon the request of the developer, a city, county, or city and county shall not impose a vehicular parking ratio, inclusive of parking for persons with a disability and guests, that exceeds 0.5 spaces per unit. If a development includes at least 40 percent moderate-income units for housing developments, is located within one-half mile of a major transit stop, as defined in subdivision (b) of Section 21155 of the Public Resources Code, and the residents of the development have unobstructed access to the major transit stop from the development, then, upon the request of the developer, a city, county, or city and county shall not impose a vehicular parking ratio, inclusive of parking for persons with a disability and guests, that exceeds 0.5 spaces per bedroom.	Project proposes .82 parking ratio, exceeding .5 density bonus minimum.	**Complying under Density Bonus**	Gov. Code § 65915(p)(2)(A)
Bike Parking	1 per unit (long-term), 1 per 10 units guest parking (short term)	Total long term: 129, total short term: 13	Complying	PAMC § 18.52.040(c) Table 1



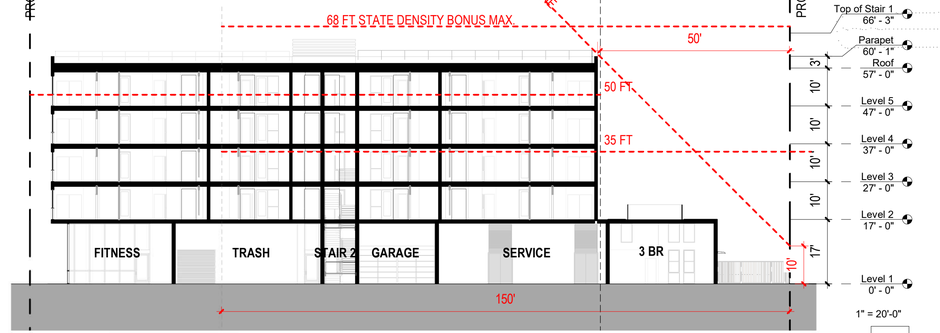
NORTH-SOUTH SECTION 1 4



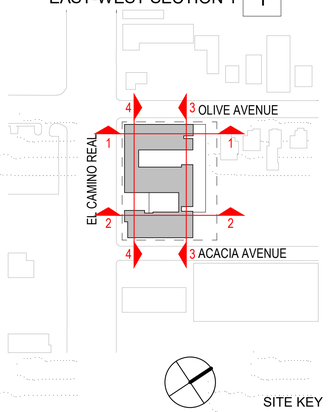
EAST-WEST SECTION 2 2



NORTH-SOUTH SECTION 2 3



EAST-WEST SECTION 1 1



SITE KEY

David Baker Architects

Charities Housing

3001-3017 EL CAMINO REAL

ZONING DIAGRAMS - SECTIONS

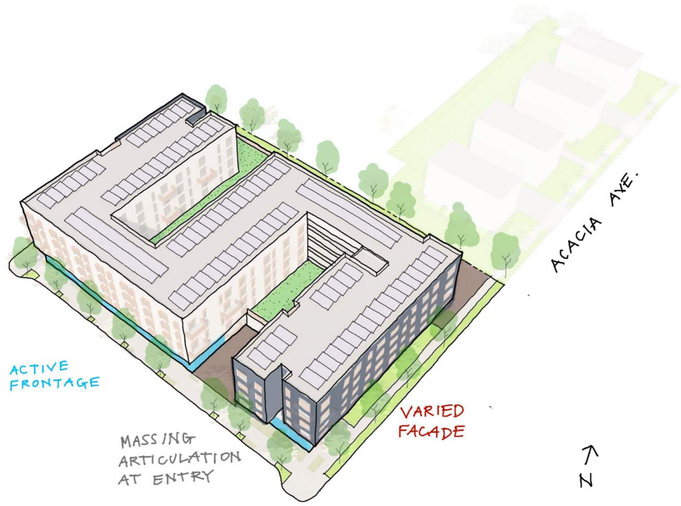
0' 10' 20'

scale (printed at 22x34): As indicated

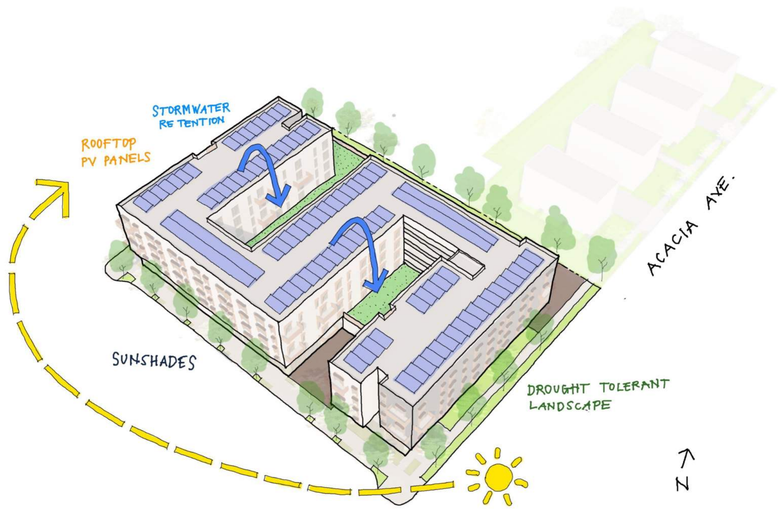
date: 01/20/2023

22203

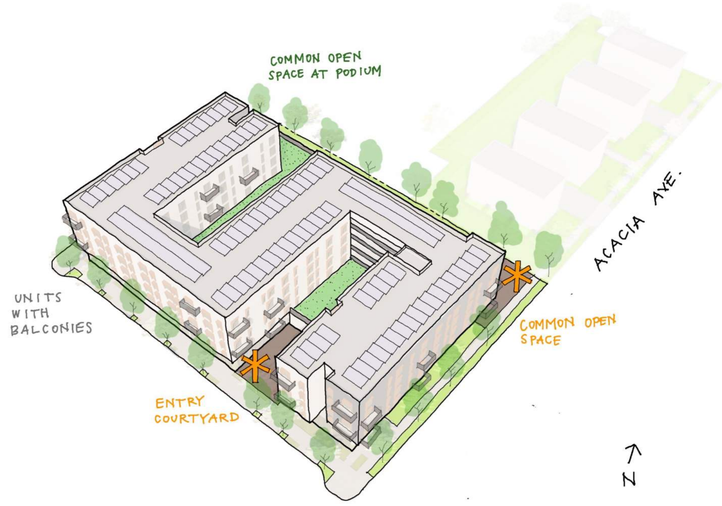
G011



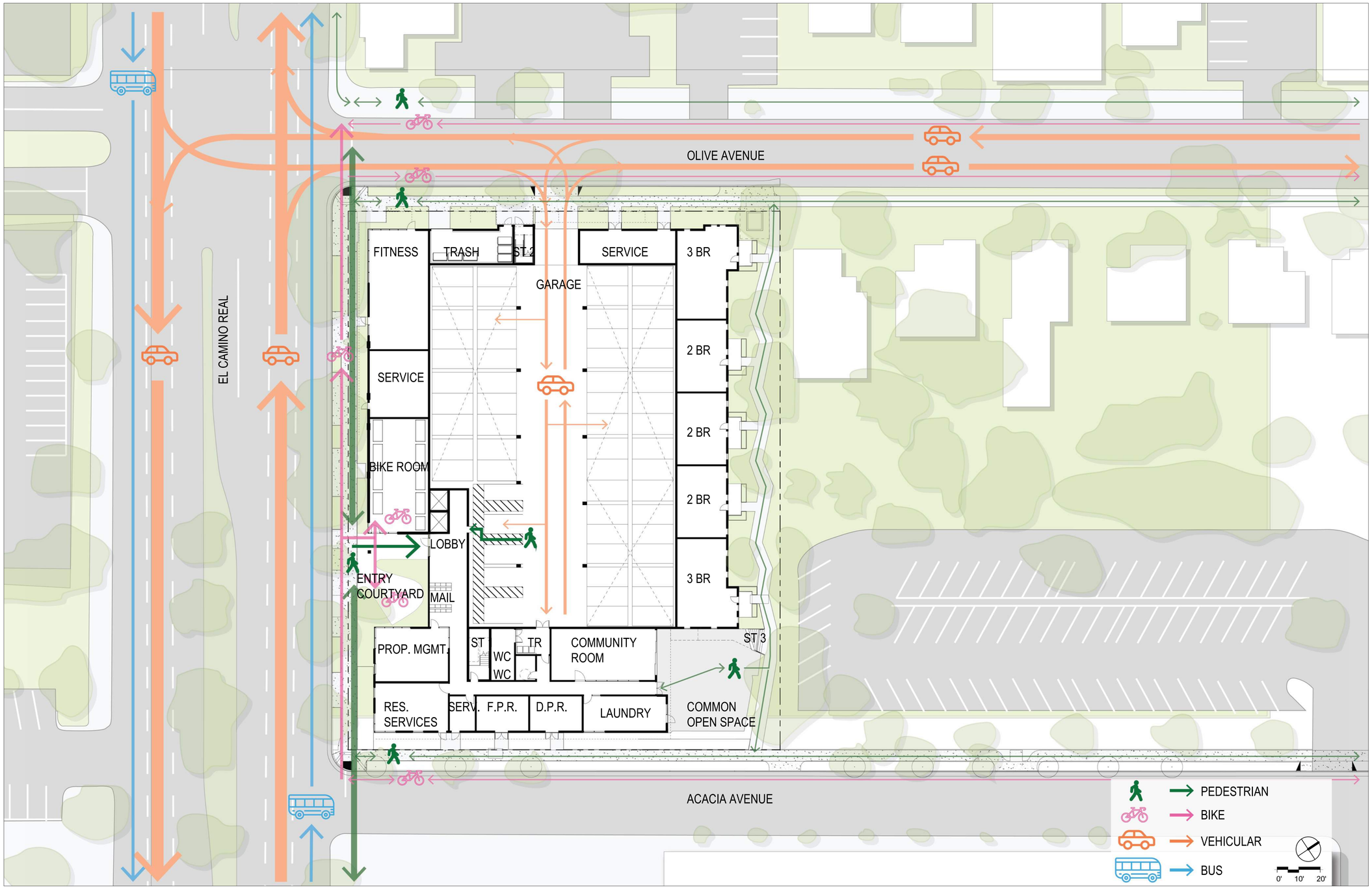
MASSING AND PUBLIC INTERFACE



SUSTAINABILITY



OPEN SPACE



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3001-3017 EL CAMINO REAL

CIRCULATION PLAN DIAGRAM

22203

scale (printed at 22x34):

date: 01/20/2023

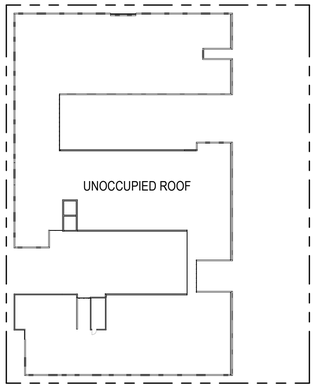
G016

PEDESTRIAN MEWS - LOOKING EAST

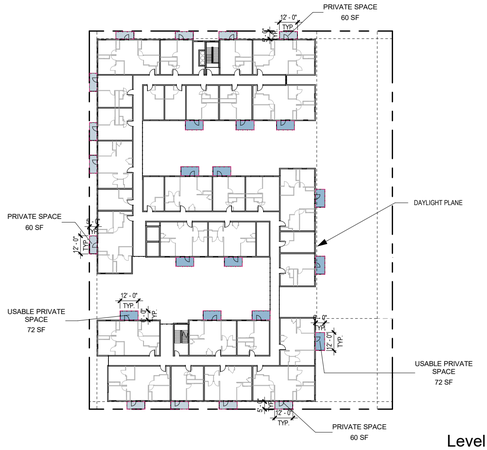
ENTRY COURTYARD AT EL CAMINO REAL

NORTHWEST CORNER - GARAGE ENTRY AND PEDESTRIAN MEWS AT GROUP FLOOR UNITS

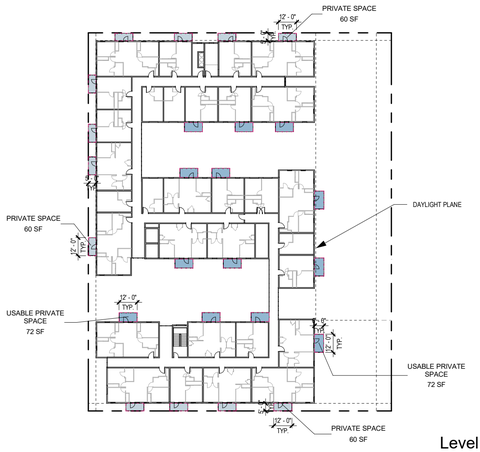
SOUTHEAST CORNER - BUILDING ENTRY AND EL CAMINO REAL FRONTAGE



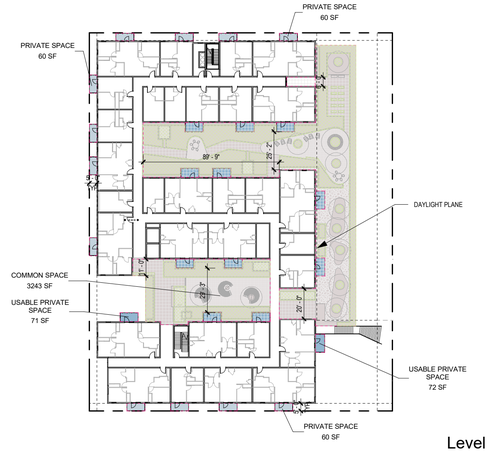
Roof 6



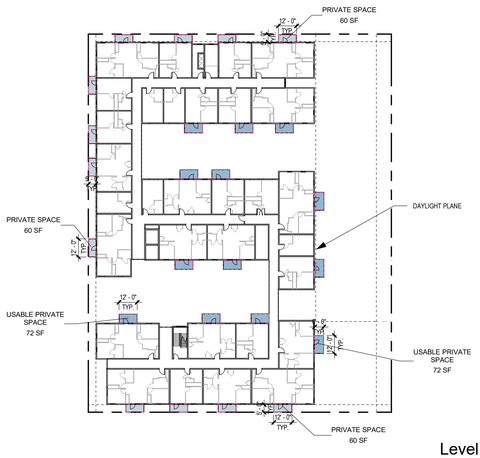
Level 3 3



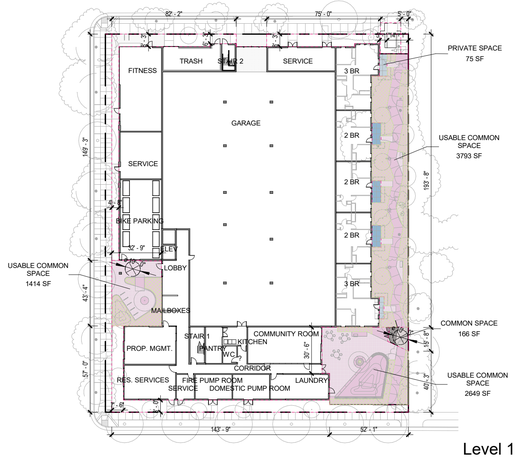
Level 5 5



Level 2 2



Level 4 4



Level 1 1

MINIMUM LANDSCAPE/OPEN SPACE COVERAGE
PER PALO ALTO MUNICIPAL CODE CHAPTER 18.16.060 DEVELOPMENT STANDARDS, TABLE 4, **30% MINIMUM LANDSCAPE/OPEN SPACE COVERAGE REQUIRED**.

USABLE OPEN SPACE (PRIVATE AND/OR COMMON)
PER PALO ALTO MUNICIPAL CODE CHAPTER 18.16.060 DEVELOPMENT STANDARDS, TABLE 4, 1**50 SQ FT PER UNIT USABLE OPEN SPACE REQUIRED**.

OCCUPANCY	GROSS FLOOR AREA
Level 1	
COMMON SPACE	166 SF
USABLE COMMON SPACE	7,856 SF
	8,022 SF

30% OF 8,022 SF = 2,406 SF
LANDSCAPE 3,355 SF - **COMPLIES**

OCCUPANCY	GROSS FLOOR AREA
Level 2	
COMMON SPACE	12,149 SF
	12,149 SF

30% OF 12,149 SF = 3,644 SF
LANDSCAPE 5,707 SF - **COMPLIES**

REQUIRED USABLE OPEN SPACE:
(1) MAY BE ANY COMBINATION OF PRIVATE AND COMMON OPEN SPACES;
(2) DOES NOT NEED TO BE LOCATED ON THE GROUND (BUT ROOFTOP GARDENS ARE NOT INCLUDED AS OPEN SPACE EXCEPT AS PROVIDED BELOW);
(3) MINIMUM PRIVATE OPEN SPACE DIMENSION SIX FEET; AND
(4) MINIMUM COMMON OPEN SPACE DIMENSION TWELVE FEET.

PODIUM OPEN SPACE IS NOT CONSIDERED USABLE BECAUSE IT IS NOT ON LEVEL 3 OR ABOVE PER 18.40.230. 60% OF PODIUM OPEN SPACE AS ROOF GARDEN WOULD BE 6,222 SF

FOR CN AND CS SITES ON EL CAMINO REAL AND CC(2) SITES THAT DO NOT ABUT A SINGLE- OR TWO-FAMILY RESIDENTIAL USE OR ZONING DISTRICT, ROOFTOP GARDENS MAY QUALIFY AS USABLE OPEN SPACE AND MAY COUNT AS UP TO 60% OF THE REQUIRED USABLE OPEN SPACE FOR THE RESIDENTIAL COMPONENT OF A PROJECT. IN ORDER TO QUALIFY AS USABLE OPEN SPACE, THE ROOFTOP GARDEN SHALL MEET THE REQUIREMENTS SET FORTH IN SECTION 18.40.230.

18.40.230 ROOFTOP GARDENS
(B) THE ROOFTOP GARDEN SHALL BE LOCATED ON THE THIRD OR HIGHER STORY.

MINIMUM LANDSCAPE/OPEN SPACE COVERAGE

OCCUPANCY	GROSS FLOOR AREA
COMMON SPACE	12,316 SF
PRIVATE SPACE	3,003 SF
USABLE COMMON SPACE	7,856 SF
USABLE PRIVATE SPACE	4,018 SF
	27,193 SF

LOT AREA = 49,864 SF (1.14 AC)

30% of 49,864 = 14,959.2
PROJECT COMPLIES.

USABLE OPEN SPACE (PRIVATE AND/OR COMMON)

OCCUPANCY	GROSS FLOOR AREA
USABLE COMMON SPACE	7,856 SF
USABLE PRIVATE SPACE	4,018 SF
	11,874 SF

11,874/129 UNITS = 92 SF/UNIT PROVIDED

129 UNITS X 150 SF/UNIT = 19,350 SF USABLE OPEN SPACE REQUIRED
PROJECT DOES NOT COMPLY.

OPEN SPACE DIAGRAM LEGEND

- COMMON SPACE
- USABLE COMMON SPACE
- PRIVATE SPACE
- USABLE PRIVATE SPACE
- LANDSCAPE
- AREA BOUNDARY LINE
- DOES NOT COMPLY WITH OPEN SPACE REQUIREMENTS

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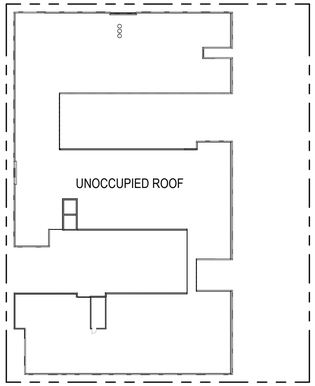
3001-3017 EL CAMINO REAL

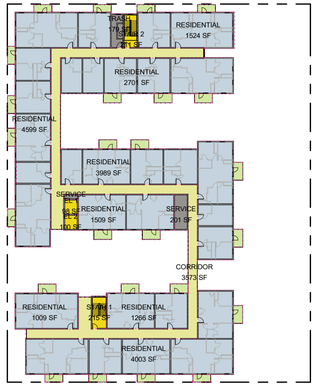
CODE ANALYSIS - OPEN SPACE DIAGRAM

22203
scale (printed at 22x34): 1" = 50'-0"
date: 01/20/2023

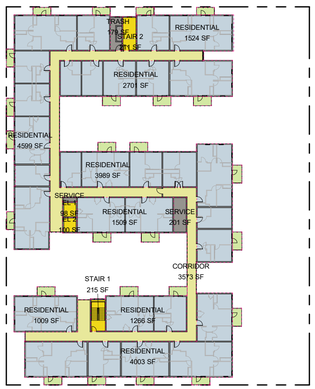
G600



Roof 6

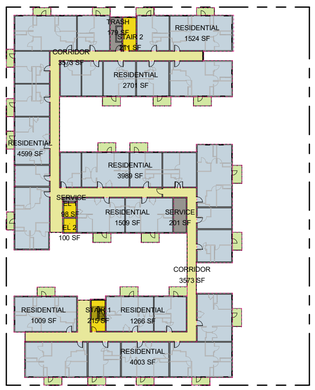


Level 3 3



Level 5 5

Level 2 2



Level 4 4

Level 1 1

OCCUPANCY	GROSS FLOOR AREA
Level 1	
CIRCULATION	1,913 SF
COMMON	5,564 SF
GARAGE / BIKE ROOM	20,012 SF
GREEN / OPEN SPACE	10,664 SF
RESIDENTIAL	4,674 SF
SERVICE / TRASH	3,569 SF
SIDEWALK	1,060 SF
STAIRS / ELEVATOR	674 SF
	48,131 SF
Level 2	
CIRCULATION	3,794 SF
GREEN / OPEN SPACE	14,149 SF
RESIDENTIAL	20,388 SF
SERVICE / TRASH	412 SF
STAIRS / ELEVATOR	813 SF
	39,556 SF
Level 3	
CIRCULATION	3,573 SF
GREEN / OPEN SPACE	1,662 SF
RESIDENTIAL	20,600 SF
SERVICE / TRASH	410 SF
STAIRS / ELEVATOR	623 SF
	26,869 SF
Level 4	
CIRCULATION	3,573 SF
GREEN / OPEN SPACE	1,662 SF
RESIDENTIAL	20,600 SF
SERVICE / TRASH	410 SF
STAIRS / ELEVATOR	623 SF
	26,869 SF
Level 5	
CIRCULATION	3,573 SF
GREEN / OPEN SPACE	1,662 SF
RESIDENTIAL	20,600 SF
SERVICE / TRASH	410 SF
STAIRS / ELEVATOR	623 SF
	26,869 SF
	168,293 SF

- CIRCULATION
- COMMERCIAL
- COMMON
- GARAGE / BIKE ROOM
- GREEN / OPEN SPACE
- RESIDENTIAL
- SERVICE / TRASH
- SIDEWALK
- STAIRS / ELEVATOR
- AREA BOUNDARY LINE

David Baker Architects

Charities Housing

3001-3017 EL CAMINO REAL

GROSS FLOOR AREA DIAGRAM

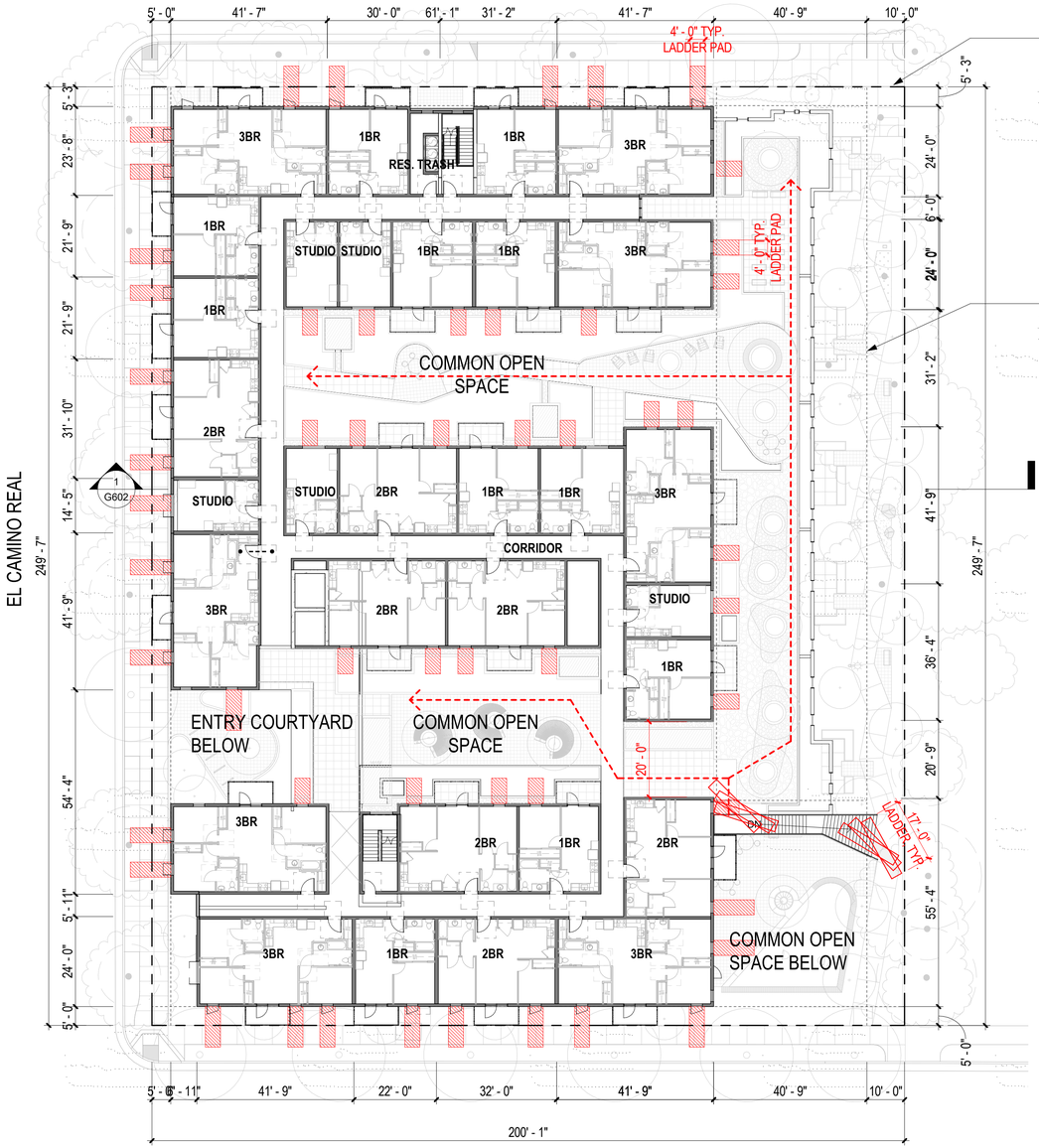
22203

scale (printed at 22x34): 1" = 50'-0"

date: 01/20/2023

G601

OLIVE AVENUE



ACACIA AVENUE

1" = 20'-0"

FIRE ACCESS DIAGRAM 2

1" = 20'-0"

EAST-WEST SECTION 1

FIRE PROTECTION
1. ALL AREAS ARE TO BE PROTECTED BY AN AUTOMATIC FIRE SPRINKLER SYSTEM PER 2019 CBC 903.2.8 AND THE NFPA 13.
2. PROVIDE STANDPIPES PER 2016 CBC SECTION 905 AND NFPA 14
3. PROVIDE FIRE ALARM SYSTEM PER 2016 CBC 907.2.9 & 907.2.10.1.2 AND NFPA 72
4. PROVIDE FIRE PUMP SYSTEM PER NFPA 20
5. FIRE WALLS SHALL BE CONSTRUCTED IN ACCORDANCE WITH 2016 CBC SECTION 706.
6. BUILDING IS SEPARATED BY A 3-HR HORIZONTAL SEPARATION AT THE POIDUM PER CBC 510.2

LEGEND:
17' LADDER
LADDER PADS

NOTES:
FOR CORRIDORS: 44" MIN PROVIDED PER TABLE 1020.2 - @ 0.15"
FOR DOORS: 32" MIN CLEAR REQUIRED PER 1010.1.1 - 34" CLR PROVIDED TYP. = @ 0.15"
FOR STAIRS: 44" MIN CLEAR REQUIRED PER 1011.2 - 34" CLR PROVIDED TYP. = @ 0.2"

NOTES:
TWO ACCESSIBLE MEANS OF EGRESS IS PROVIDED. PER CBC 2022 SEC 1009.2.1 EXCEPTION 1, WHERE THE BUILDING IS PROVIDED WITH A HORIZONTAL EXIT THE ELEVATOR DOES NOT REQUIRED TO BE PART OF THE ACCESSIBLE MEAN OF EGRESS.

4 STORIES OF TYPE V/A OVER ONE LEVEL OF TYPE I/A

BUILDING IS EQUIPPED THROUGHOUT WITH AN AUTOMATIC SPRINKLER SYSTEM INSTALLED IN ACCORDANCE WITH 903.3.1.1

Per CBC 2022 table 504.4, type V/A buildings of R-2 occupancy are allowed to have 4 stories. The building is equipped throughout with an automatic sprinkler system withouht increasing height and area.

ALLOWABLE BUILDING AREA

$A_a = [A_t + (NS \times I_f)] \times S_a$

Aa = Allowable Area
At = Tabular allowable area factor in accordance with Table 506.2
NS =Tabular allowable area factor in accordance with Table 506.2 for a nonsprinklered building
If = Area factor increase due to frontage
Sa = Multiplier (per 506.2.3 equals 2)
F = Building perimeter that fronts on a public way or open space having a width of 20 feet or more
P = Perimeter of entire building (feet)
W = (Width: weighted average) = Calculated width of public way or open space (feet)
= (L1 × w1 + L2 × w2 + L3 × w3…)/F

AREA 1
7,600 SF PER FLOOR — ALLOWABLE AREA PER STORY 19,200 SF
30,400 SF TOTAL BLDG AREA TYPE V — TOTAL ALLOWABLE AREA 76,800 SF: ***COMPLIES***

AREA 2
17,400 SF PER FLOOR PER AREA — ALLOWABLE AREA PER STORY 19,200 SF
69,600 SF TOTAL BLDG AREA TYPE V — TOTAL ALLOWABLE AREA 81,600 SF: ***COMPLIES***

ALLOWABLE BUILDING AREA 1
At = SM (without height increase) = 36,000 SF (SPRINKLERS USED WITHOUT HEIGHT INCREASE)

Ns = 12,000 SF

I_f **= [F/P - 0.25] W/30**

Where
F = 144'+56'+52'+144' = 396' (ALL THE FRONTAGES HAVE A WIDTH OF AT LEAST 30')
P = 144'+56'+98'+32'+54'+38'+62'+52'+58 = 594'
W = [(120'*30)+(24'*20)+(56'*30)] / 396' = 15'
I_f = [F/P -0.25] x W/30 = ((396' / 594') - 0.25) x (15' / 30) = 0.208 ~0.2 (rounded down)

$A_a = [A_t + (NS \times I_f)] \times S_a$

A_a = [36,000 + (12,000 X 0.2)] x 2 = 76,800 SF

A_a = TOTAL TYPE V/A AREA SHALL NOT EXCEED 76,800 SF

EVERY SINGLE STORY OF TYPE V SHALL NOT EXCEED 19,200 SF

ALLOWABLE BUILDING AREA 2
At = SM (without height increase) = 36,000 SF (SPRINKLERS USED WITHOUT HEIGHT INCREASE)

Ns = 12,000 SF

I_f **= [F/P - 0.25] W/30**

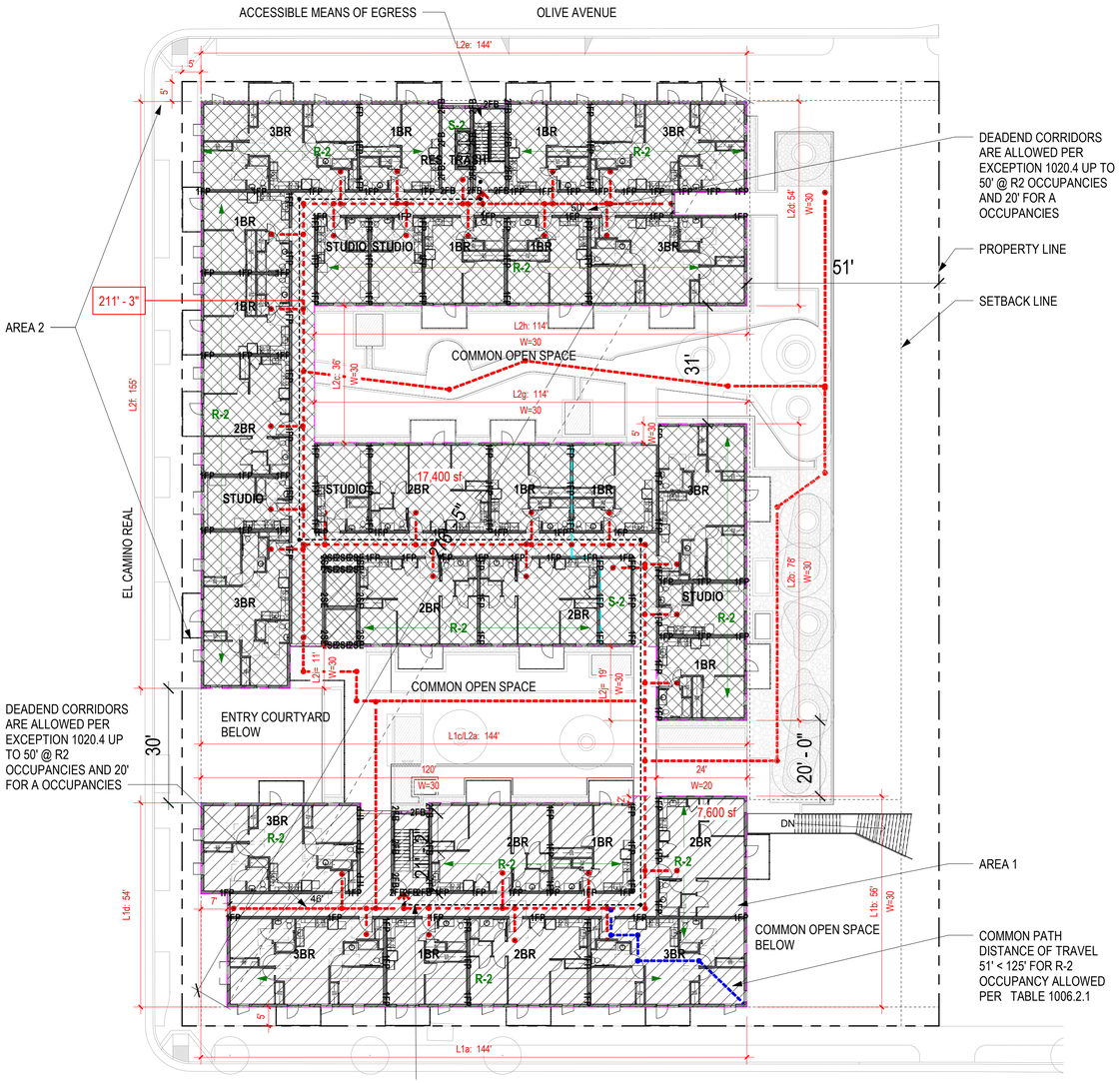
Where
F = 144'+78'+36'+54'+144'+155'+114'+114' = 839' (ALL THE FRONTAGES HAVE A WIDTH OF AT LEAST 30')
P = 144'+78'+36'+54'+144'+155'+114'+114'+11'+19'+5' = 874'
W = [(120'*30)+(24'*20)+(78'*30)+(36'*30)+(54'*20)+(114'*30)+(114'*30)] / 839' = 19'
I = [F/P -0.25] x W/30 = ((835' / 874') - 0.25) x (19' / 30) = 0.44 ~0.4 (rounded down)

$A_a = [A_t + (NS \times I_f)] \times S_a$

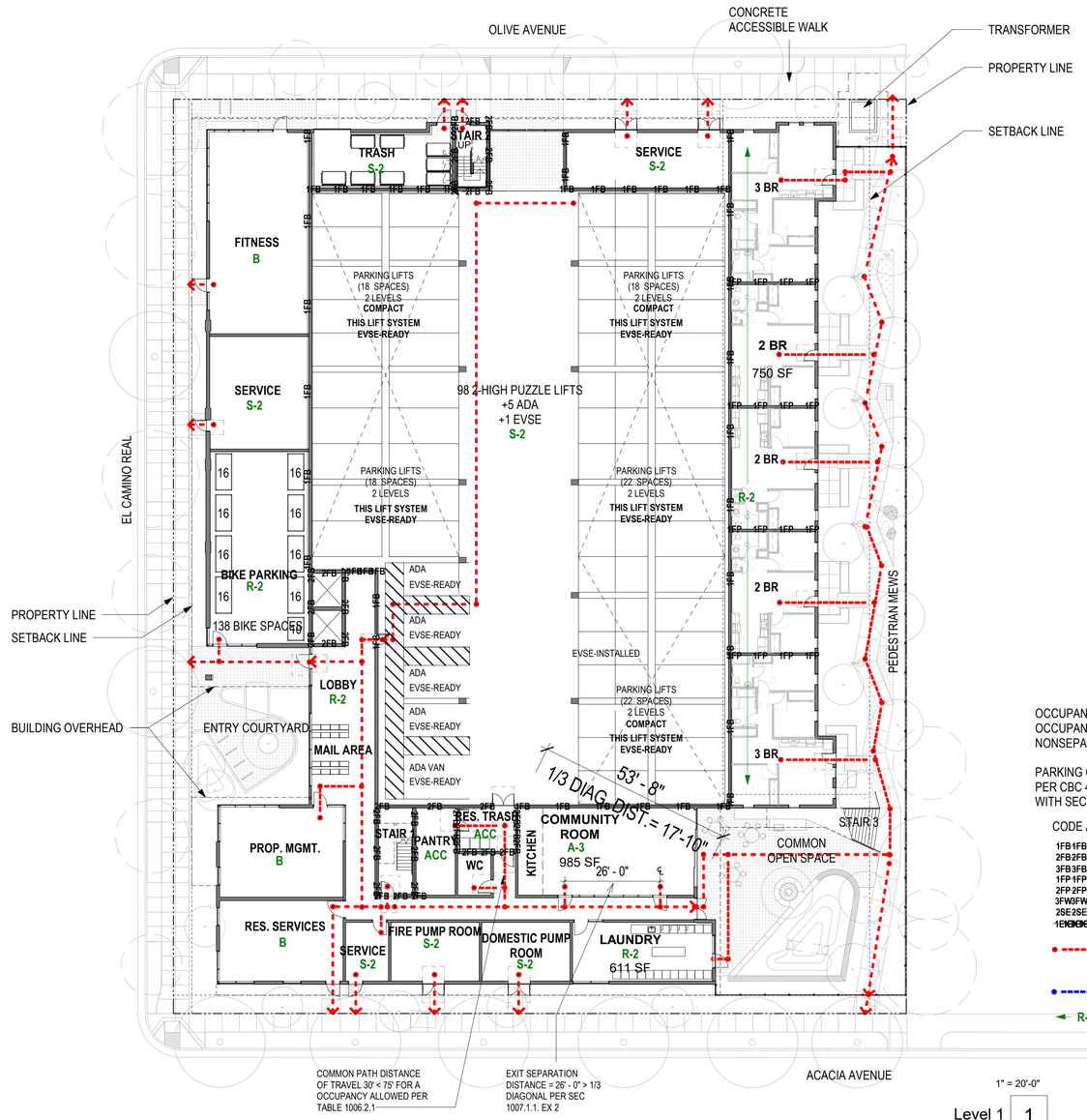
A_a = [36,000 + (12,000 X 0.4)] x 2 = 81,600 SF

A_a = TOTAL TYPE V/A AREA SHALL NOT EXCEED 81,600 SF

EVERY SINGLE STORY OF TYPE V SHALL NOT EXCEED 19,200 SF



1" = 20'-0"
Level 2 2



OCCUPANCY SEPARATIONS
OCCUPANCIES ON TYPE I LEVELS ARE NONSEPARATED PER CBC 508.3

PARKING GARAGE TO BE SEPARATED PER CBC 406.4.6 IN ACCORDANCE WITH SECTION 508.1.

CODE ANALYSIS DIAGRAM LEGEND

1FB1FB1FB	1 HR FIRE BARRIER
2FB2FB2FB	2 HR FIRE BARRIER
3FB3FB3FB	3 HR FIRE BARRIER
1FP1FP1FP	1 HR FIRE PARTITION
2FP2FP2FP	2 HR FIRE PARTITION
3FW3FW3FW	3 HR FIREWALL
2SE2SE2SE	2 HR SHAFT ENCLOSURE
1EXTEXTEXT	1 HR EXTERIOR WALL

ACCESSIBLE ROUTE AND EXIT PATH
COMMON PATH OF TRAVEL
R-2 OCCUPANCY

1" = 20'-0"
Level 1 1

David Baker Architects
Charities Housing

3001-3017 EL CAMINO REAL

LIFE SAFETY/EXIT ACCESS CODE DIAGRAMS

0' 10' 20'
scale (printed at 22x34): 1" = 20'-0"
date: 01/20/2023
22203

G603

1. LOOKING EAST FROM EL CAMINO REAL TOWARDS AT WEST SIDE OF SITE
03/2022

2. LOOKING NORTH FROM EL CAMINO REAL AT SOUTH SIDE OF SITE
05/2022

3. LOOKING NORTHWEST FROM ACACIA AVE AT SOUTHEAST SIDE OF SITE
02/2022

4. LOOKING WEST FROM ACACIA AVE AT EAST SIDE OF SITE
02/2022

5. LOOKING SOUTH FROM OLIVE AVE AT NORTH SIDE OF SITE
01/2020

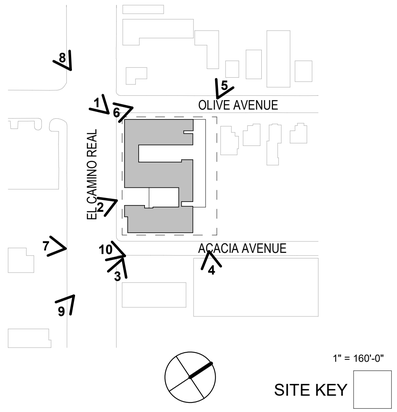
6. VIEW OF OLIVE AVENUE NORTH
03/2022

7. VIEW OF EL CAMINO REAL & ACACIA AVENUE WEST
03/2022

8. VIEW OF EL CAMINO REAL EAST
03/2022

9. 7. VIEW OF EL CAMINO REAL & ACACIA AVENUE SOUTH
03/2022

10. VIEW OF ACACIA AVENUE NORTH
05/2022



David Baker Architects

Charities Housing

3001-3017 EL CAMINO REAL

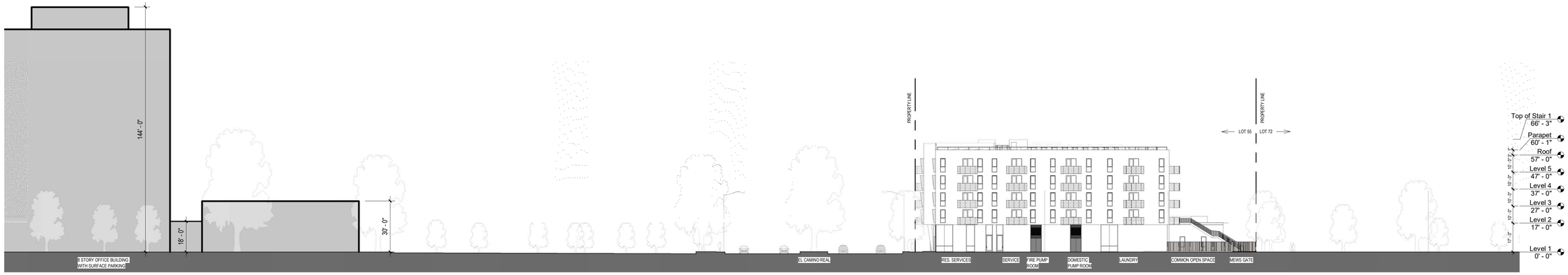
EXISTING SITE PHOTOS

22203

scale (printed at 22x34): 1" = 160'-0"

date: 01/20/2023

G700

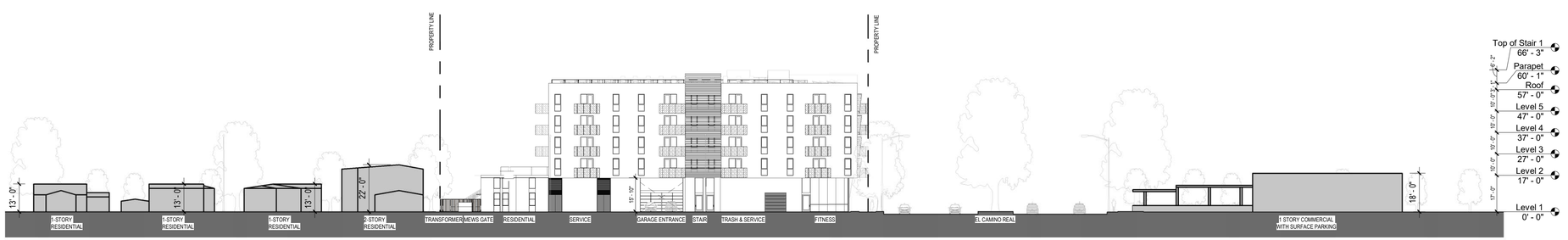


1" = 30'-0"

SOUTHEAST ELEVATION 3

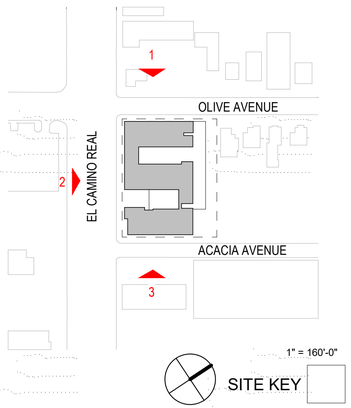
1" = 30'-0"

SOUTHWEST ELEVATION 2



1" = 30'-0"

NORTHWEST ELEVATION 1



1" = 160'-0"

SITE KEY

3001-3017 EL CAMINO REAL

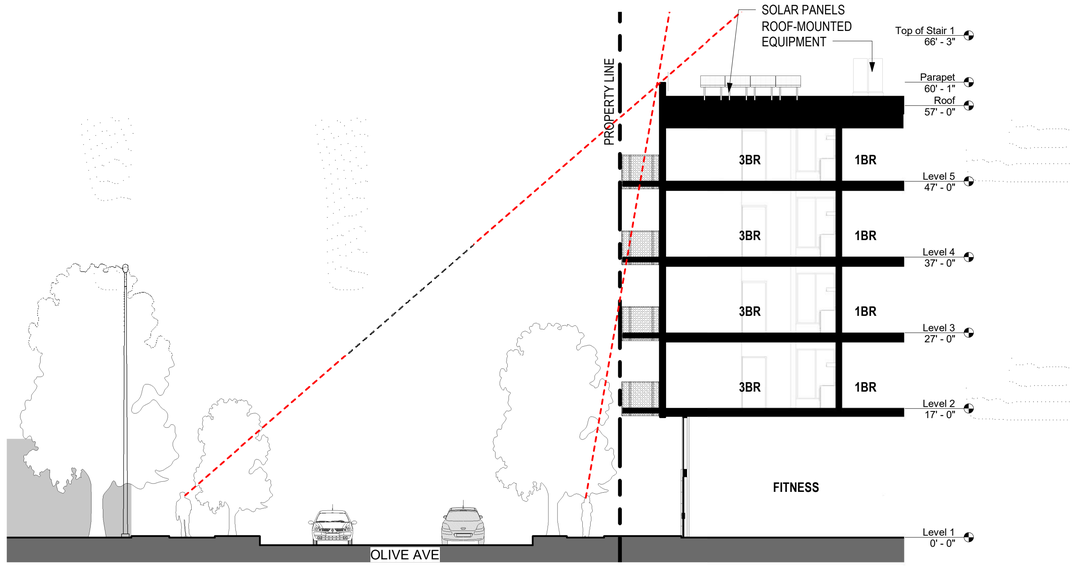
STREETSCAPE ELEVATIONS

22203

scale (printed at 22x34): As indicated

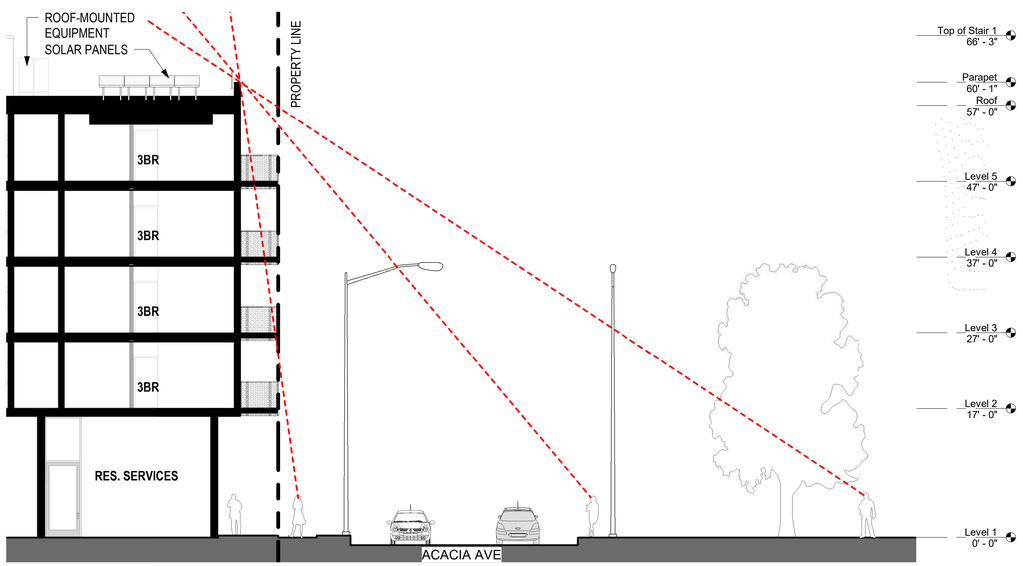
date: 01/20/2023

G701



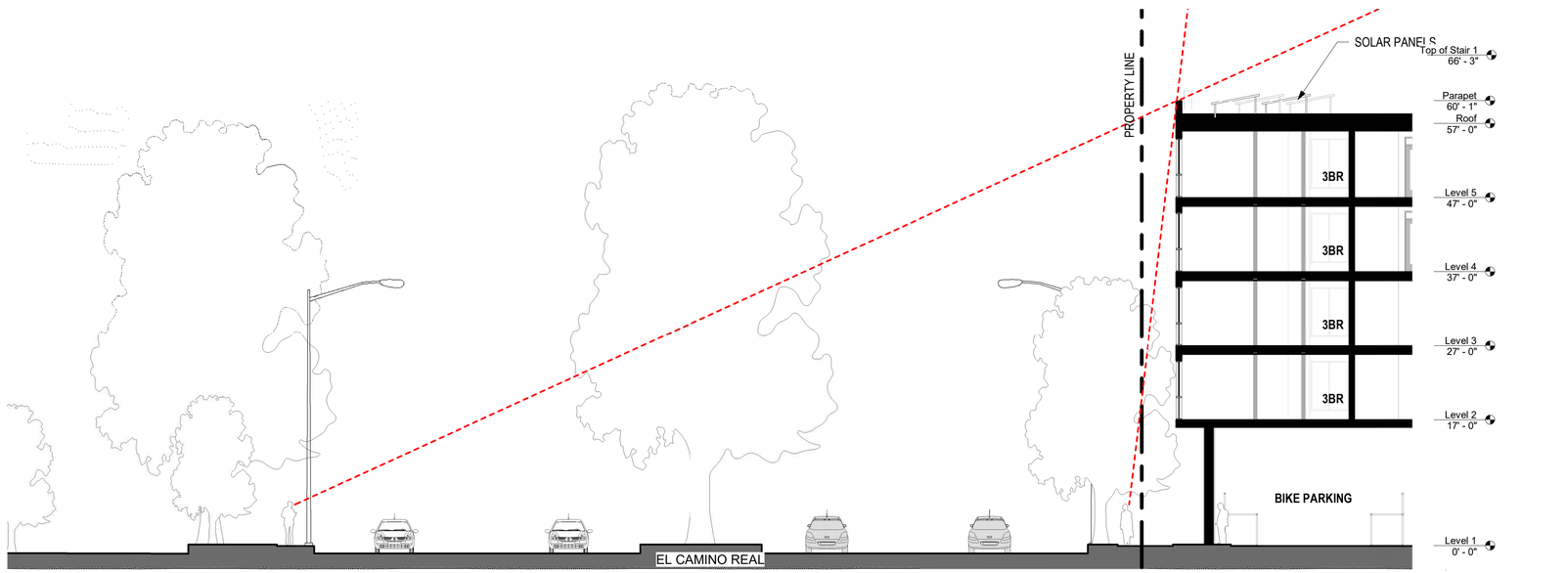
1" = 10'-0"

NORTH-SOUTH SECTION 3



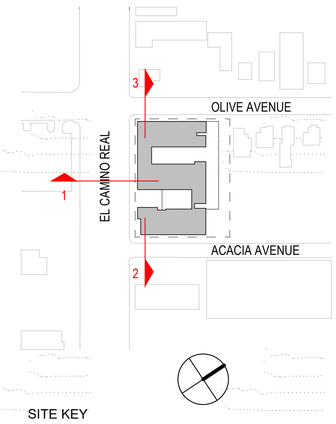
1" = 10'-0"

NORTH-SOUTH SECTION 2



1" = 10'-0"

EAST-WEST SECTION 2 1



SITE KEY

David Baker Architects

Charities Housing

3001-3017 EL CAMINO REAL

BUILDING SECTIONS - ROW VIEW SECTIONS

0' 10' 20'

22203

scale (printed at 22x34): As indicated

date: 01/20/2023

G702

City of Palo Alto
Tree Protection - It's Part of the Plan!

Make sure your crews and subs do the job right!

Fenced enclosures around trees are essential to protect them by keeping the foliage canopy and branching structure clear from contact by equipment, materials and activities, preserving roots and soil conditions in an intact and non-compacted state, and identifying the Tree Protection Zone (TPZ) in which no soil disturbance is permitted and activities are restricted, unless otherwise approved. **An approved tree protection report must be added to this sheet when project activity occurs within the TPZ of a regulated tree.**
For detailed information on Palo Alto's regulated trees and protection during development, review the **City Tree Technical Manual** (TTM) found at www.cityofpaloalto.org/trees/.

TREE DISCLOSURE STATEMENT

CITY OF PALO ALTO
Planning Division, 250 Hamilton Avenue
Palo Alto, CA 94301
(650) 329-2441
http://www.cityofpaloalto.org

Palo Alto Municipal Code, Chapter 8.10.040, requires disclosure and protection of certain trees located on private and public property, and that they be shown on submitted and approved site plans. A completed *tree disclosure statement* must accompany all permit applications that include exterior work, all demolition or grading permit applications, or other development activity.

PROPERTY ADDRESS: 3001 - 3017 El Camino Real, Palo Alto

Are there Regulated † trees on or adjacent to the property? ☑YES ☐NO (If no, proceed to Section 4)

[Sections 1- 4 MUST be completed by the applicant. Please circle and/or check where applicable.]

1. Where are the trees? Check those that apply. **(Plans must be submitted showing all trees over 4" diameter)**
   - ☐ On the property
   - ☐ On adjacent property overhanging the project site
   - ☑ In the City planter strip or right-of-way easement within 30' of property line (Street Trees)*

*Street trees † **require special protection by a fenced enclosure**, per the attached instructions. Prior to receiving any permit, you must provide an authorized Street Tree Protection Verification form. Contact Public Works Operations at (650) 496-5953 for inspection of type I, II or III fencing (see attached Detail #605) required for all street trees.

2. Are there any Protected † or Designated † Trees? ☑**YES** (Check where applicable) ☐ **NO**
   - ☐ Protected Tree (s)
   - ☑ Designated Tree (s)
   - ☑ On or overhanging the property

3. Is there activity or grading within the dripline? (radius 10 times the trunk diameter) of these trees? ☑YES ☐NO

*If Yes, a **Tree Preservation Report** must be prepared by an ISA certified arborist and submitted for staff review (see TTM , Section 6.25). Attach this report to Sheet T-1,:Tree Protection, its Part of the Plan!", per Site Plan Requirements.*

4. Are the Site Plan Requirements** completed? ☑YES ☐NO

**Plans. Protection of Regulated trees during development require the following: (1) Plans must show the measured trunk diameter and canopy dripline; (2) Plans must denote, as a bold dashed line, a fenced enclosure area out to the dripline, per Sheet T-1 and Detail #605 - http://www.cityofpaloalto.org/trees/forms.htm (See also TTM †, Section 2.15 for area to be fenced)

I, the undersigned, agree to the conditions of this disclosure. I understand that knowingly or negligently providing false or misleading information in response to this disclosure requirement constitutes a violation of the Palo Alto Municipal Code Section 8.10.040, which can lead to criminal and/or civil legal action.

Signature: Kathy A Robinson Print: Kathy Robinson Date: 9/29/20
(Prof. Owner or Agent)

FOR STAFF USE:

Protective Fencing
Sections 5-6 must be **completed by staff** for the issuance of any development permit (demolition, grading or building permit).

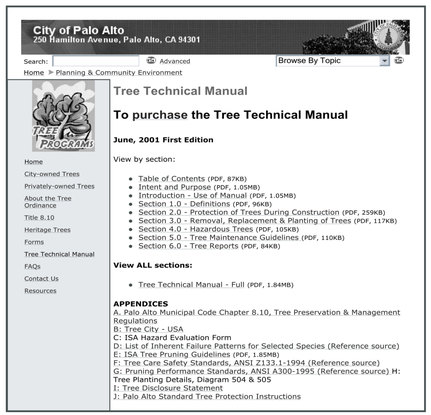
5. Protected Trees. The specified tree fencing is in place. A written statement is attached verifying that protective fencing is correctly in place around protected and/or designated trees. ☑YES ☐NO
(N/A if there are no protected trees, check here ☐

6. Street Trees. A signed Public Works Street Tree Protection Verification form is attached. ☑YES ☐NO
(N/A if there are no street trees, check here ☐).

† Regulated Trees – a) Street trees – trees on public property; b) Protected trees – Coast Live Oaks or Valley Oaks which are 11.5" in diameter or larger, Coast Redwoods which are 18" in diameter or larger, when measured 54" above natural grade, and Heritage trees are trees designated by City Council; and c) Designated Trees – commercial or non-residential property trees, which are part of an approved landscape plan.

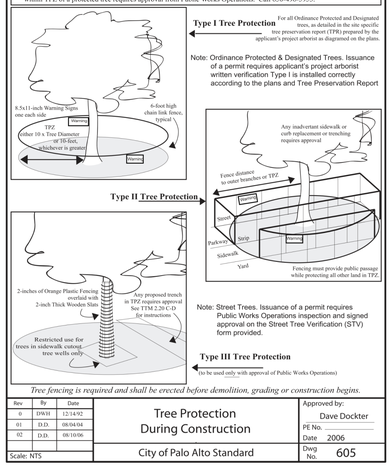
Palo Alto Tree Technical Manual (TTM) contains instructions for all requirements on this form, available at www.cityofpaloalto.org/trees/technical-manual.html

S:\PLAN\PLADV\Advance Planning\Arborist\Tree Program Information\Tree Disclosure Statement(TDS)\Tree Disclosure StatementFinal_3107.doc Revised 03/04/07



For written specifications associated with illustrations below, see Public Works Specifications Section 31
Detailed specifications are found in the Palo Alto Tree Technical Manual (TTM) (www.cityofpaloalto.org/trees/)

Tree Protection Zone (TPZ) shown in gray (radius of TPZ equals 10-times the diameter of the tree or 10-feet, whichever is greater).
- Restricted activity area -- see Tree Technical Manual Sec 2.15(E).
- Restricted trenching area -- see Tree Technical Manual Sec 2.20(C-D), any proposed trench or form work within TPZ of a protected tree requires approval from Public Works Operations. Call 650-496-5953.



Tree fencing is required and shall be erected before demolition, grading or construction begins.

Rev	By	Date		
0	DWD	12/14/92	Tree Protection During Construction	Approved by: Dave Dockter
01	D.D.	08/04/04		PE No.
02	D.D.	08/10/06		Date 2006
			City of Palo Alto Standard	Dwg No. 605
Scale: NTS				

APPENDIX J

PALO ALTO
STREET TREE PROTECTION INSTRUCTIONS
--SECTION 31--

31-1 General
- **a.** **Tree protection has three primary functions.** 1) to keep the foliage canopy and branching structure clear from contact by equipment, materials and activities; 2) to preserve roots and soil conditions in an intact and non-compacted state and 3) to identify the Tree Protection Zone (TPZ) in which no soil disturbance is permitted and activities are restricted, unless otherwise approved.
- **b.** **The Tree Protection Zone (TPZ)** is a restricted area around the base of the tree with a radius of ten-times the diameter of the tree's trunk or ten feet; whichever is greater, enclosed by fencing.

31-2 Reference Documents
- **a.** **Detail 605** – Illustration of situations described below.
- **b.** **Tree Technical Manual (TTM) Forms** (http://www.cityofpaloalto.org/trees/)
  1. Trenching Restriction Zones (TTM, Section 2.20(C))
  2. Arborist Reporting Protocol (TTM, Section 6.30)
  3. Site Plan Requirements (TTM, Section 6.33)
  4. Tree Disclosure Statement (TTM, Appendix J)
- **c.** **Street Tree Verification (STV) Form** (http://www.cityofpaloalto.org/trees/forms)

31-3 Execution
- **a.** **Type I Tree Protection:** The fence shall enclose the entire TPZ of the tree(s) to be protected throughout the life of the construction project. In some parking areas, if fencing is located on paving or concrete that will not be demolished, then the posts may be supported by an appropriate grade level concrete base, if approved by Public Works Operations.
- **b.** **Type II Tree Protection:** For trees situated within a planting strip, only the planting strip and yard side of the TPZ shall be enclosed with the required chain link protective fencing in order to keep the sidewalk and street open for public use.
- **c.** **Type III Tree Protection:** To be used only with approval of Public Works Operations. Trees situated in a tree well or sidewalk planter pit, shall be wrapped with 2-inches of orange plastic fencing from the ground to the first branch and overlaid with 2-inch thick wooden slats bound securely (slats shall not be allowed to dig into the bark). During installation of the plastic fencing, caution shall be used to avoid damaging any branches. Major limbs may also require plastic fencing as directed by the City Arborist.
- **d.** **Size, type and area to be fenced.** All trees to be preserved shall be protected with six (6') foot high chain link fences. Fences are to be mounted on two-inch diameter galvanized iron posts, driven into the ground to a depth of at least 2-feet at no more than 10-foot spacing. Fencing shall extend to the outer branching, unless specifically approved on the STV Form.
- **e.** **"Warning" signs.** A warning sign shall be weather proof and prominently displayed on each fence at 20-foot intervals. The sign shall be minimum 8.5-inches x 11-inches and clearly state in half inch tall letters: "WARNING - Tree Protection Zone - This fence shall not be removed and is subject to a fine according to PAMC Section 8.10.110."
- **f.** **Duration**. Tree fencing shall be erected before demolition; grading or construction begins and remain in place until final inspection of the project, except for work specifically allowed in the TPZ. Work or soil disturbance in the TPZ requires approval by the project arborist or City Arborist (in the case of work around Street Trees). Excavations within the public right of way require a Street Work Permit from Public Works.
- **g.** **During construction**
  1. All neighbors' trees that overhang the project site shall be protected from impact of any kind.
  2. The applicant shall be responsible for the repair or replacement plus penalty of any publicly owned trees that are damaged during the course of construction, pursuant to Section 8.04.070 of the Palo Alto Municipal Code.
  3. The following tree preservation measures apply to all trees to be retained:
     - **a.** No storage of material, topsoil, vehicles or equipment shall be permitted within the TPZ.
     - **b.** The ground under and around the tree canopy area shall not be altered.
     - **c.** Trees to be retained shall be irrigated, aerated and maintained as necessary to ensure survival.

END OF SECTION

City of Palo Alto 2004 Standard Drawings and Specifications
Street Tree Verification of Protection, PWE, Section 31 Revised 08/06

Table 2-2 Palo Alto Tree Technical Manual

CONTRACTOR & ARBORIST INSPECTION SCHEDULE

Reference the Palo Alto Tree Technical Manual is available at www.cityofpaloalto.org/environment/

ALL CHECKED ITEMS APPLY TO THIS PROJECT:

1. ☑ **Inspection of Protective Tree Fencing**. For Public Trees, the Street Tree Verification Form shall be signed by the City Arborist. For Protected Trees, the project site arborist shall provide an initial Monthly Tree Activity Report form with a photograph verifying that he has conducted a field inspection of the trees and that the correct type of protective fencing is in place around the designated tree protection zone (TPZ) prior to issuance of a demolition, grading, or building permit. (See TTM, Verification of Tree Protection, Section 1.39).
2. ☑ **Pre-Construction Meeting**. Prior to commencement of construction, the applicant or contractor shall conduct a pre-construction meeting to discuss tree protection with the job site superintendent, grading operators, project site arborist, City Arborist, and, if a city maintained irrigation system is involved, the Parks Manager (Contract 650-496-6963).
3. ☑ **Inspection of Rough Grading or Trenching**. Contractor shall ensure the project site arborist performs an inspection during the course of rough grading or trenching adjacent to or within the TPZ to ensure trees will not be injured by compaction, cut or fill, drainage and trenching, and if required, inspect aeration systems, tree wells, drains and special paving. The contractor shall provide the project arborist at least 24 hours advance notice of such activity.
4. ☑ **Monthly Tree Activity Report Inspections**. The project site arborist shall perform a minimum monthly activity inspection to ensure and advise on conditions, tree health and retention or, immediately if there are *any revisions* to the approved plans or protection measures. The Tree Technical Manual Monthly Tree Activity Report format shall be used and sent to the Planning Dept. landscape reviewr staff no later than 14 days after issuance of building permit date. Fax to (650) 329-2154. (See TTM, Monthly Tree Activity Inspection Report, Addendum 11 & section 1.17).
5. ☑ **Special activity within the Tree Protection Zone**. Work in the TPZ area (see also #7 below) requires the direct onsite supervision of the project arborist (see TTM, Trenching, Excavation & Equipment, Section 2.20 C).
6. ☐ **Landscape Architect Inspection**. For discretionary development projects, prior to temporary or final occupancy the applicant or contractor shall arrange for the Landscape Architect to perform an on site inspection of all plant stock; quality of the materials and planting (see TTM, Planting Quality, Section 5.20.1.A) and that the irrigation is functioning consistent with the approved construction plans. The Planning Dept. landscape reviewr staff shall be in receipt of written verification of Landscape Architect approval prior to scheduling the final inspection, unless otherwise approved.
7. ☐ **List Other** (please describe as called out in the site Tree Preservation Report, Sheet T-1, T-2, etc.)
   - * _____
   - * _____

City of Palo Alto
Tree Department
Public Works Operations
PO Box 10250 Palo Alto, CA 94303
650/496-5953 FAX: 650/852-9289
treeprotection@CityofPaloAlto.org

Verification of Street Tree Protection

Applicant Instructions: Complete upper portion of this form. Mail or FAX this form along with signed Tree Disclosure Statement to Public Works Dept. Public Works Tree Staff will inspect and notify applicant.

APPLICATION DATE:	
ADDRESS/LOCATION OF STREET TREES TO BE PROTECTED:	
APPLICANT'S NAME:	
APPLICANT'S ADDRESS:	
APPLICANT'S TELEPHONE & FAX NUMBERS:	

This section to be filled out by City Tree Staff

1. The Street Trees at the above address(es) are adequately protected. The type of protection used is:	YES ☐ NO* ☐ * If NO, go to #2 below
Inspected by:	
Date of Inspection:	
2. The Street Trees at the above address are **NOT** adequately protected. The following modifications are required: Indicate how the required modifications were communicated to the applicant.	

Subsequent Inspection

Street trees at above address were found to be adequately protected:	YES ☐ NO* ☐ * If NO, indicate in "Notes" below the disposition of case.
Inpsected by:	
Date of Inspection:	
Notes: List City street trees by species, site, condition and type of tree protection installed. Also note if pictures were taken. Use back of sheet if necessary.	

Return approved sheet to Applicant for demolition or building permit issuance.
S:\PWD\OPS\Tree\DS\STreeProtect 5/1706

City of Palo Alto Tree Technical Manual ADDENDUM 11

Arborist Firm Data Here mm/dd
RCA/ISA Certified Arborist #WE-000
Contract Call #:

Monthly Tree Activity Report- *Construction Site*

Inspection Date: _____ **Inspection #**_____	**Site address:** Palo Alto, CA	**Contractor-Main Site Contact Information**	#1: Job site superintendent Company: Email: Job site Office: Cell: Mail:
		Also present:	• _____ • _____
Distribution:	1. City of Palo Alto 2. Others	**Attn: Dave Dockter**	Dave.dockter@cityofpaloalto.org 650-329-2440

Provide the requested minimum information with each report, customize as necessary. To be completed by project site arborist. Send monthly to city arborist at above address until project completion. Use additional sheets as needed.

1. Assignment Activity (Demolition/grading/sewer/trenching/foundation/list relevant visits)
   a. Pre-construction meeting requirement with sub-contractors
   b. Inspect to verify that tree protection measures are in place
   c. Determine if field adjustments, watering or plan revisions may be needed
2. Field Observations (general site-wide and list by individual tree number)
   a. Tree Protection Fences (TPF) are …
   b. Trenching has/will occur …
3. Action Items (list site-wide, by tree number and date to be satisfied) and Date Due
   a. Tree Protection Fence (TPF) needs adjusting (tree # x, x, x)
   b. Root zone buffer material (wood chips) can be installed next
   c. Schedule sewer trench, foundation dig with …
4. Photographs (use often)
5. Tree Location Map (mandatory 8.5 x 11 sheet)
6. Recommendations, notes or monitor items for project/staff/schedule
   •
7. Past visits (list carry-over items satisfied/still outstanding)
   •

Respectfully submitted,

Project site arborist
Consultant contact information (Include email, cell#, and mailing)
Cc:

Enter Date CPA Monthly Tree Activity Report: Type site address here Page #1 of 1

---WARNING---
Tree Protection Zone

This fencing shall not be removed without City Arborist approval (650-496-5953)

Removal without permission is subject to a $500 fine per day*

Palo Alto Municipal Code Section 8.10.110

City of Palo Alto Tree Protection Instructions are located at http://www.city palo-alto.ca.us/trees/technical-manual.html

SPECIAL INSPECTIONS **PLANNING DEPARTMENT**
TREE PROTECTION INSPECTIONS MANDATORY

PAMC 8.10 PROTECTED TREES. CONTRACTOR SHALL ENSURE PROJECT SITE ARBORIST IS PERFORMING REQUIRED TREE INSPECTION AND SITE MONITORING. PROVIDE WRITTEN MONTHLY TREE ACTIVITY REPORTS TO THE PLANNING DEPARTMENT LANDSCAPE REVIEW STAFF BEGINNING 14 DAYS AFTER BUILDING PERMIT ISSUANCE.

BUILDING PERMIT DATE: _____

DATE OF 1ST TREE ACTIVITY REPORT: _____

CITY STAFF: _____

REPORTING DETAILS OF THE MONTHLY TREE ACTIVITY REPORT SHALL CONFORM TO SHEET T-1 FORMAT, VERIFY THAT ALL TREE PROTECTION MEASURES ARE IMPLIMENTED AND WILL INCLUDE ALL CONTRACTOR ACTIVITY, SCHEDULED OR UNSCHEDULED, WITHIN A TREE PROTECTION ROOT ZONE. NON-COMPLIANCE IS SUBJECT TO VIOLATION OF PAMC 8.10.080. REFERENCE: PALO ALTO TREE TECHNICAL MANUAL, SECTION 2.00 AND ADDENDUM 11.

Apply Tree Protection Report on sheet(s) T-2

Use addtional "T" sheets as needed

Project Data

T-1

All other tree-related reports shall be added to the space provided on this sheet (adding as needed)
Include this sheet(s) on Project Sheet Index or Legend Page.
A copy of T-1 can be downloaded at
http://www.cityofpaloalto.org/civica/filebank/blobdload.asp?BlobID=6460

Special Tree Protection Instruction Sheet
City of Palo Alto

T-1

3001-3017 EL CAMINO REAL | TREE PROTECTION - COVER | 22203 | scale (printed at 22x34): | date: 01/20/2023 | T-1

City of Palo Alto
Tree Protection - It's Part of the Plan!

Make sure your crews and subs do the job right!

Fenced enclosures around trees are essential to protect them by keeping the foliage canopy and branching structure clear from contact by equipment, materials and activities, preserving roots and soil conditions in an intact and non-compacted state, and identifying the Tree Protection Zone (TPZ) in which no soil disturbance is permitted and activities are restricted, unless otherwise approved. **An appoved tree protection report must be added to this sheet when project activity occurs within the TPZ of a regulated tree.**
For detailed information on Palo Alto's regulated trees and protection during development, review the **City Tree Technical Manual** (TTM) found at www.cityofpaloalto.org/trees/.

ARBOR RESOURCES
professional consulting arborists and tree care

TREE PROTECTION REPORT

3001 & 3017 EL CAMINO REAL
PALO ALTO, CA
(22PLN-00229)

Submitted to:

Charities Housing
1400 Parkmoor Avenue, Suite 190
San Jose, CA 95126

Prepared by:

David L. Babby
Registered Consulting Arborist® #399
Board-Certified Master Arborist® #WE-4001B

Prior: March 18, 2022
Current: September 23, 2022

p.o. box 25295, san mateo, california 94402 • email: arborresources@comcast.net
office: 650.654.3351 • cell: 650.274.3656 • licensed contractor #796763

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TABLE

EXHIBITS

1.0 INTRODUCTION

Charities Housing is planning to construct a five-story building containing 129 multi-family housing units at 3001 and 3017 El Camino Real, Palo Alto (22PLN-00229). The project site consists of two vacant buildings and a parking lot, and is bordered by El Camino Real to the south, Acacia Avenue to the east, and Olive Avenue to the west. As part of their planning submittal to the City of Palo Alto (CPA), Charities Housing has retained me to prepare this *Tree Protection Report*, and specific tasks assigned to execute are as follows (this report serves to update my prior 3/18/22 report prepared for this project):

- Visit the site on 3/9/22, 3/11/22, 3/12/22 and 9/16/22 to identify 25 trees which have trunks located within or adjacent to the work area. These trees account for those within the property, overhanging from neighboring properties, and along adjoining street frontages up to 30 feet from the property boundary.
- Determine each tree's trunk diameter pursuant to the City's *Tree Technical Manual*[1] and the *Guide for Plant Appraisal, 10th Edition*;[2] diameters are rounded to the nearest inch, and those listed with >one diameter are formed by multiple trunks.
- Obtain photos; see Exhibit C (#33 & 54-56 on 9/16/22, all others in March 2022).
- Estimate each tree's height and average canopy spread (rounded to the nearest fifth).
- Ascertain each tree's health, structural integrity and form, and assign an overall condition percent (100%=best, 0%=worst) and description (e.g. good, fair, poor or dead).
- Rate each tree's suitability for preservation (e.g. high, moderate or low).
- Utilize the numbering pattern established (by others) on the topo survey, and plot those numbers onto the site map in Exhibit B (base map is a copy of the *Topographic & Boundary Survey* prepared by Kier & Wright, dated May 2018).
- Affix round metal tags with corresponding, engraved numbers onto accessible trees (includes all but inaccessible trunks of #54 thru 56).
- Identify which are defined by the PAMC as protected and/or street trees.
- Review the 7/7/22 *Existing Landscape Plan* (L002), prepared by form/work landscape architecture, to ascertain the proposed tree disposition and replacements.
- Provide design guidelines and protection measures to help avoid or mitigate potential impacts to retained trees, as well as conform with City requirements.
- Prepare a written report presenting the above information, and submit via email as a PDF document.

[1] Available for viewing at www.cityofpaloalto.org/civica/filebank/blobdload.asp?BlobID=6436.
[2] Authored by the Council of Tree & Landscape Appraisers, and published by the International Society of Arboriculture (ISA).

2.0 TREE COUNT AND COMPOSITION

Twenty-five (25) trees of 10 various species were inventoried for this report. They are sequentially numbered and tagged as #1-15, 18, 21-25, 33 and 54-56, and the table below identifies their common names, assigned numbers, counts and overall percentages.

Table 1 - Tree Count and Composition

NAME	TREE NUMBER(S)	COUNT	% OF TOTAL
Aleppo pine	25	1	4%
Aristocrat callery pear	10-12, 14 & 18	5	20%
Canary Island date palm	56	1	4%
London plane tree	1 thru 9	9	36%
Pepper tree	13	1	4%
Purple Robe locust	15	1	4%
Queen palm	54 & 55	2	8%
Silver dollar gum	21, 22 & 24	3	12%
Tree-of-Heaven	23	1	4%
Trident maple	33	1	4%
	Total	**25**	**100%**

Specific information regarding each tree is presented within the table in Exhibit A. The trees' assigned numbers and approximate locations can be viewed on the site map in Exhibit B, and photographs are presented in Exhibit C.

As illustrated in Table 1, the most frequently encountered species is London plane tree (at 36%), followed by Aristocrat pear (at 20%) and silver dollar gum (at 12%). All 25 trees are considered ornamental and not native to the local geographical region.

Eleven (11) trees are located within the public right-of-way and regulated by the CPA as street trees (see Section 3.0 for additional information); they include #1-9, 15 and 33. Trees #1-6 align El Camino Real, #7-9 and 15 align Olive Avenue, and #33 is along Acacia Avenue. Of these, #15 along the street frontage of 461 Olive Avenue, #33 is in front of the northern neighboring parking lot, and all others align street frontages of the project site.

Trees #10-14, 18 and 23 are located onsite and within the project boundary. Trees #21, 22, 24, 25 and 54-56 are located offsite on adjoining northern properties; #21, 22, 24 and 25 occupy a planter adjacent to the neighboring parking lot, whereas #54 thru 56 are within the backyard of 461 Olive Avenue.

Based on the species and/or trunk diameters of inventoried trees, none are defined by the CPA as protected trees (refer to Section 3.0 for additional information).

Street trees #15 and 33 are included due to being within the public right-of-way and within 30 feet from the property boundary. Neighboring trees #21, 22, 24, 25 and 54-56 are included due their canopies overhanging the project site.

Trees #15, 33 and 54-56 are not shown on the topo. I identify their locations on the map in Exhibit B (end of the red arrows), but note those locations are only roughly approximate and should not be construed as being surveyed.

There topo identifies three Photinia shrubs, and are exempt from inclusion due to not being trees. Of these, two remain and one has been removed; their locations can be viewed on the map in Exhibit B between trees #14 and 18. several tree locations shown on the plans but have been removed at some point since the topo survey was prepared. I denote them on the map in Exhibit B; one is near #20, another is near #32, and a third is near #52.

3.0 REGULATED TREES

The PAMC regulates specific types of trees on public and private property for the purpose of avoiding their removal or disfigurement without first being reviewed and permitted by the CPA. Three categories within the status of regulated trees include protected trees (PAMC 8.10), street trees (PAMC 8.04.020), and designated trees. Additional Information regarding regulated trees can be viewed on page xiii of the City's *Tree Technical Manual*.

None are defined as protected trees. The species and threshold for this designation include coast live and valley oaks having trunk diameters ≥11.5 inches, and coast redwoods with trunk diameters ≥18 inches. Note that although a new and expanded definition for protected trees was recently codified by the CPA, this definition applies due to the project's pre-application being approved prior to the code change.

As previously mentioned, trees #1-9, 15 and 33 have trunks situated within the public right-of-way, and as such, are defined as street trees.

The designated tree category can be enacted by the CPA to apply to a existing trees planted on a commercial or planned development site, for either designated tree landscape or to mitigate tree removal. Based on CPA comments for this project, all onsite trees are assigned this category and include #10-14, 18 and 23.

4.0 SUITABILITY FOR TREE PRESERVATION

Each tree has been assigned either a high, moderate or low suitability for preservation rating as a means to cumulatively measure its health, structural integrity, anticipated life span, remaining life expectancy, location, size, particular species, tolerance to construction impacts, growing space, and safety to property and persons within striking distance. Descriptions of these ratings are presented below, and the high category comprises 11 trees (44%), the moderate category 8 (or 32%), and the low category 6 (or 24%).

High: Applies to #1-6, 8, 9 and 54-56.

These London planes are street trees and appear healthy and structurally stable; have no obvious, significant health issues or structural defects; present a good potential for contributing long-term to the site; and require only periodic or regular care and monitoring to maintain their longevity and structural integrity.

Moderate: Applies to #7, 10, 13, 15, 21, 22, 24 and 33.

These trees contribute to the site, but at levels less than those assigned a high suitability; might have health and/or structural issues which may or may not be reasonably addressed and properly mitigated; and frequent care is typically required for their remaining lifespan.

Low: Applies to #11, 12, 14, 18, 23 and 25.

These trees have significant health and/or structural issues expected to worsen regardless of tree care measures employed (i.e. beyond likely recovery). As a general guideline, they should be removed regardless of future site improvements, and any which are retained require frequent monitoring and care throughout their remaining lifespans to minimize risk to any persons or property within striking distance.

5.0 PROPOSED TREE DISPOSITION

5.1 Tree Disposition Summary

The landscape plan reviewed depicts the following tree disposition:

- **Remove** (7 in total): #10-14, 18 and 23.
- **Retain in Place** (18 in total): #1-9, 15, 21-24, 33 and 54-56.

Table 2 below also summarizes each tree's proposed disposition, as well as lists their common name, trunk diameter and canopy spread. For planned removals, the CPA standards to mitigate canopy loss is identified within the last column, and further information regarding replacements is discussed in Section 5.2 of this report.

Table 2 - Tree Disposition Table

TREE #	COMMON NAME	DISPOSITION		DIAM (in.)	CAN (ft.)	REPLACEMENTS (for removals)
		RETAIN	RMV			
1	London plane tree	X	-	16	45	N/A
2	London plane tree	X	-	15	40	N/A
3	London plane tree	X	-	16	55	N/A
4	London plane tree	X	-	13	50	N/A
5	London plane tree	X	-	12	35	N/A
6	London plane tree	X	-	10	30	N/A
7	London plane tree	X	-	9	25	N/A
8	London plane tree	X	-	7	30	N/A
9	London plane tree	X	-	11	40	N/A
10	Aristocrat callery pear	-	X	16	35	four of 24" box size
11	Aristocrat callery pear	-	X	13	35	four of 24" box size
12	Aristocrat callery pear	-	X	15	30	four of 24" box size
13	Pepper tree	-	X	16	30	four of 24" box size
14	Aristocrat callery pear	-	X	10	25	three of 24" box size
15	Purple Robe locust	X	-	4	20	N/A

Project Data

T-2

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Special Tree Protection Instruction Sheet
City of Palo Alto

T-2

3001-3017 EL CAMINO REAL

TREE PROTECTION - ARBORIST REPORT

22203

scale (printed at 22x34):

date: 01/20/2023

T-2

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For detailed information on Palo Alto's regulated trees and protection during development, review the **City Tree Technical Manual** (TTM) found at www.cityofpaloalto.org/trees/.

Table 2 continued:

TREE #	NAME	DISPOSITION		DIAM (in.)	CAN (ft.)	REPLACEMENTS (for removals)
		RETAIN	RMV			
18	Aristocrat callery pear		X	16	35	four of 24" box size
21	Silver dollar gum	X	-	12	20	N/A
22	Silver dollar gum	X	-	17	35	N/A
23	Tree-of-Heaven	-	X	11,8,7,6	30	four of 24" box size
24	Silver dollar gum	X	-	10	30	N/A
25	Aleppo pine	X	-	16	30	N/A
33	Trident maple	X	-	2	10	N/A
54	Queen palm	X	-	~10	35	N/A
55	Queen palm	X	-	~10	35	N/A
56	Canary Island date palm	X	-	~25	35	N/A

LEGEND
RMV = Remove
DIAM = Diameter (trunk)
CAN = Canopy spread (average)
in. = inches
ft. = feet
CPA = City of Palo Alto

5.2 Proposed Removals and Mitigation

The seven trees proposed for removal, namely #10-14, 18 and 23, align the northern boundary and directly conflict with site grading, drainage, and the future pathway providing pedestrian access from Olive Avenue to Acacia Avenue. Of these, #13 (pepper tree) is considered in overall fair condition, whereas all others are found to be in overall poor condition.

The minimum mitigation for these removals is listed within Table 2, and combined, they total 27 trees of 24-inch box size pursuant to Table 3-1 of the CPA *Tree Technical Manual*;[1] a copy is shown on Table 3 (next page).

[1] The basis of Table 3-1's replacement sizes and amounts considers the growth of one 24-inch box size tree at a rate equivalent to 9 feet of canopy spread over the course of 10 years.

Should available future planting space be insufficient to reasonably accommodate this amount, alternative sizes can be applied and are specified within the last column of Table 3-1. Depositing an in-lieu fee into the CPA's Forestry Fund might also serve to mitigate any difference.

Table 3 - CPA Tree Replacement Standard

TABLE 3-1
Tree Canopy – Replacement Standard

COLUMN 1	COLUMN 2	COLUMN 3
Canopy of the Removed Tree (eq Diameter Canopy)	Replacement Trees	Alternative Tree
4'-9"	Two 24" Box Size or more	One 36" Box Size
10'-27"	Three 24" Box Size	Two 36" Box Size
28'-40"	Four 24" Box Size	Two 48" Box Size
40'-56'	Six 24" Box Size	Two 48" Box & Two 36" Box Size
56'-60'	Two 24" Box & Two 36" Box & Two 48" Box Size	...
60'+	...	...

5.3 Retained Trees

The 18 trees proposed for retention include #1-9, 15, 21-24, 33 and 54-56. These account for all existing street trees aligning El Camino Real and Olive Avenue, the small street tree maple beyond the site and along Acacia Avenue, and all offsite trees on the adjoining northern parking lot and residential property. Recommendations to help achieve sufficient protection are presented within the next section of this report.

6.0 TREE PROTECTION MEASURES

Recommendations presented within this section serve as measures to help mitigate or avoid impacts to trees being retained. They should be incorporated into the project plans; carefully followed throughout demolition, construction and landscaping; and are subject to revision upon reviewing future project plans. I (hereinafter, "project arborist") should be consulted in the event any cannot be feasibly implemented. Please note, unless otherwise stated, all referenced distances from trunks are intended to be from the closest edge, face of, their outermost perimeter.

6.1 Design Guidelines

1. Consider each Tree Protection Zone (TPZ) as follows, the linear distances of which project in all directions from the trunk: where within existing planters, a minimum distance of 10 times the trunk diameter, and where beyond planters, a minimum distance of 5 times the trunk diameter. The TPZ is the area where the following activities, and not necessarily limited to, should be avoided: trenching, soil scraping, compaction, mass and finish-grading, overexcavation, subexcavation, tilling, ripping, swales, bioswales, storm drains, dissipaters, equipment cleaning, removal of underground utilities and vaults, altering existing water/drainage flows, stockpiling and dumping of materials, and equipment and vehicle operation. Where an impact encroaches slightly within a setback, it can be reviewed on a case-by-case basis by the project arborist to determine appropriate mitigation measures.

2. Per City requirements, incorporate this report into the project plan set, following the CPA T-1 sheet, and copy onto T-2, T-3, etc. until its entirety is shown (and in a manner which all report text can be clearly read on the plan sheets).

3. On all architectural, civil, landscape and electrical site-related plans, show the trunk locations, trunk diameters (circles to scale), and assigned numbers of all inventoried trees (see site map in Exhibit B). Also, add notes instructing that contractors comply with recommendations presented in this report and on Sheet T-1, and to contact the project arborist prior to permitted work being performed within a TPZ.

4. Add the following onto a tree disposition plan or tree protection plan (or equivalent): notes listed in item #3; for trees proposed for removal, place an "X" across their trunks; and identify the Tree Protection Zones (TPZs).

5. For purposes of identifying potential impacts and any possible mitigation measures, the CPA requires all design changes occurring near retained trees are reviewed by the project arborist prior to resubmitting plans.

6. Abandon any underground portions of existing and unused lines, pipes and manholes, etc. within a TPZ to avoid causing root loss/damage (prescribe they are cut off at existing soil grade versus being dug up). Add this provision onto the demolition plan.

7. Route underground utilities and services beyond TPZs. Where this is not feasible, consider the following alternative trenching or installation methods (listed in order of least to most impactful): directionally bore by at least 4 feet below grade, tunnel using a pneumatic air device (e.g. an AirSpade®), or manually dig with a shovel (i.e. no jackhammer); these assume pipe bursting, an optimal method, does not apply to this project. For boring, establish access pits and above-ground infrastructure (e.g. splice boxes, meters and vaults) beyond TPZs.

8. Ensure specifications by the geotechnical, soils and structural engineers do not require compaction, overexcavation, subexcavation or fill within a TPZ. Shoring utilized to achieve these setbacks, if applicable (such as a pile driver or drill rig), shall not be used where significant damage to a tree's canopy would occur; this can be determined on a case-by-case basis.

9. Any new walkway or sidewalk proposed on existing unpaved ground within a TPZ should be designed and built entirely above existing soil grade and surface roots (i.e. a no-dig design), including for base material, edging and forms. Also, direct compaction of soil shall be avoided (levels comparable to foot-tamping are acceptable), and soil fill used to bevel the top of walk to existing grade should not exceed 18 to 24 inches from a walk's edge, not be compacted, nor placed closer than 5 feet from a tree's trunk. Tensar® BX Geogrid *(www.tensarcorp.com)* is a material which can help address these limited excavation and compaction requirements.

10. For any retaining or landscape wall within a TPZ, utilize a pier and above-grade beam system, establish the beam spanning between footings to be above-grade (i.e. a no-dig design except for footings), and avoid fill and compaction between footings.

11. Design any new bioswales, storm drains and swales well-beyond TPZs.

12. All electrical routes should be designed and represented on the electrical site plan to be beyond TPZs.

13. Any new light poles should be established beyond tree canopies, or at a minimum, only where minor branch clearance is needed. The proximity of tree trunks should also be considered, and placed as far from them as possible.

14. The future staging area and route(s) of access should be shown on the final site plan and avoided on unpaved areas beneath or near canopies.

15. The erosion control design should represent silt fence and/or straw rolls at locations beyond TPZs, and at a minimum, not against a tree's trunk. Where within a TPZ, the material should not be embedded into the ground by more than 2 inches, nor require the severance of surface or shallow roots.

16. Avoid specifying the use of herbicides use within a TPZ; where used on site, they should be labeled for safe use near trees. Also, do not prescribe liming to occur within 50 feet from a tree.

17. The landscape design should conform to the following additional guidelines:
    a. Avoid prescribing tilling, ripping, surface scraping or compaction within TPZs.
    b. Irrigation should not strike within 12 inches from trunks of existing trees, nor applied against trunks of new trees.
    c. Plant material be installed no closer than 12 to 24 inches from tree trunks.
    d. If applicable, any new street tree(s) should be designed to be at least 10 feet from an existing or new utility (per CPA guidelines).
    e. All new trees should be installed, including necessary irrigation, by an experienced California state-licensed landscape contractor (C-27) or tree service

company (D-49), and performed to professional industry standards. Only if necessary to stand upright, they should be double-staked (no cross-brace) with rubber tree ties or equivalent, and the support stakes cut below the first main lateral branch. All nursery stakes shall be removed. Root crowns of new trees shall be visible and absent of encircling roots.

f. Irrigation and lighting features (e.g. main line, laterals, valve boxes, wiring and controllers) should not require trenching inside TPZs, including header/lateral lines. In the event this is not feasible, they may require being installed in a radial direction to, and terminate a specific distance from, a trunk (versus crossing past it). In certain instances, a pneumatic air device may be needed to avoid root damage, and any Netafim tubing placed on grade.
g. Irrigation for new trees should be supplied through an automatic timer, separate from other plant material, and supplied by one to two bubblers (minimum two for a 48-inch box). The bubblers should be placed and staked on the rootball's surface (not against a trunk, in a sleeve or on mulch), at around 1/2 to 1/3 the distance between the trunk and rootball edge. Additionally, an 8-inch tall circular berm formed by soil should established around a rootball's perimeter, and a 3-inch layer of mulch spread over their tops, kept 1-inch from the trunks' bases.
h. Ground cover beneath canopies of existing trees should be comprised of a 3-inch layer of coarse wood chips or other high-quality mulch (gorilla hair, rock, stone, gravel, black plastic or other synthetic ground cover should be avoided). Mulch should kept off the trees' trunks or visible root collars.
i. Bender board or other edging material proposed beneath the canopies should be established on top of existing soil grade (such as by using vertical stakes).

6.2 Before Demolition, Grading and Construction

18. Several weeks prior to mobilizing equipment, conduct a site meeting between the general contractor, applicable subcontractors, and project arborist for the purpose of reviewing tree fencing and locations, removals, pruning, mulch placement, supplemental water, trench routes, routes of access, staging, and other items and protection measures presented in this report.

19. The project arborist must also regularly inspect the project site as outlined on page 2-14 of the *Tree Technical Manual* (Section 2.30 Inspection Schedule), and verify conformance to tree protection measures. Inspections shall occur at least once per month and continue through final inspection, and additional site visits are necessary to observe/advise regarding tree care and/or services. A summary of pertinent observations and recommendations shall coincide with each inspection.

20. Avoid interrupting any existing irrigation. In the event interruption does occur, supplemental with potable water, and discuss the methodology, frequency and amount with the project arborist beforehand.

21. Install tree protection prior to mobilizing equipment to the site. For offsite trees, construction fencing along or inside the property line can also serve as sufficient tree protection. For street trees #7-9, 15 and 33 (#15 and/or 33 may not need fencing due to their location), install Type II Protection to enclose the entire planter strip within their TPZs; this consists of 5- to 6-foot tall chain link mounted onto 2-inch diameter steel posts driven into the ground up against adjacent sidewalks and curbs. For street trees #1 thru 6, utilize Modified Type III Protection (aka trunk wrap), which consists of wrapping a single straw wattle horizontally around the trunk at roughly 10 feet high and another around its base (loosely); placing boards (2"x4") vertically around the outside, from ground to 10 feet high; then wrapping orange-plastic fencing around the boards two to three times and tying together. All protection shall remain in place until otherwise instructed by the project arborist, and Sheet T-1 for additional information.

22. Affix warning signs every 10± feet of fencing near trees, and one onto the trunk wrap of each street tree #1 thru 6. The signs shall be at least 8-½ by 11 inches in size, and refer to Sheet T-1 for a CPA template.

23. Manually spread, and replenish as needed, a 3- to 4-inch (max) layer of coarse wood chips (¼- to ¾-inch in size) over exposed ground within designated-fenced areas for street trees. The wood chips shall be derived from a tree-service company and approved by the project arborist beforehand.

24. A root zone buffer shall be installed where fencing cannot be installed to enclose unpaved ground within a TPZ. It shall consist of a 6- to 12-inch layer of coarse wood chips mentioned above, and spread over unpaved ground and surface roots; at the contractor's discretion, sheets of plywood could be laid on top and tied together for a more level, steadier walking surface. Alternative buffers can also be reviewed.

25. Prior to grading and utility installation, review the staked locations with the project arborist where within or near a TPZ. Also, identify the precise locations of where underground utilities within TPZs will be capped (i.e. where being abandoned).

26. All pruning shall be performed under direction of the project arborist, conducted in accordance with the most recent ANSI A300 standards, and performed by a California licensed tree-service contractor (D-49) with an ISA certified arborist in a supervisory role. Note that for pine #25, the section of canopy overhanging the site requires pruning prior to demolition.

27. For tree #33, determine if its rootball is stable (through gently pushing and pulling on the trunk), and if so, manually remove the wooden support stake and ties.

28. Fertilization may benefit a tree's health, vigor and appearance. If applied, however, soil samples should first be obtained to identify the pH levels and nutrient levels so a proper fertilization program can be established. I further recommend any fertilization is performed under the direction and supervision of a certified arborist, and in accordance with the most recent ANSI A300 Fertilization standards.

6.3 During Demolition, Grading and Construction

29. Where within the assigned TPZs, all work must performed under the presence of and direct supervision by the project arborist; by foot-traffic only without the travel or operation of heavy equipment, including small tractors; and any approved excavation manually conducted using hand tools only (no jackhammers) and/or utilizing a pneumatic air device operated by a tree service.

30. The removal of any existing plant material and ivy within a TPZ must be manually performed.

Project Data

T-3

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Special Tree Protection Instruction Sheet
City of Palo Alto

T-3

3001-3017 EL CAMINO REAL

TREE PROTECTION - ARBORIST REPORT

22203
scale (printed at 22x34):
date: 01/20/2023

T-3

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For detailed information on Palo Alto's regulated trees and protection during development, review the **City Tree Technical Manual** (TTM) found at www.cityofpaloalto.org/trees/.

31. Take great care in removing the existing chain link fencing to avoid damaging adjacent trunks and branches.

32. Great care is needed during demolition and construction to avoid excavating into the ground and disturbing roots within TPZs, and equipment shall not travel over newly exposed ground/roots during the process. Additionally, equipment and truck operators must also be aware of existing trees (both along the street and onsite) to avoid damaging limbs, branches and trunks, as well as the scorching of foliage. Contact the project arborist well in advance of a potential conflict (wrap protection around limbs may be necessary before potential damage occurs).

33. For trees impacted by root loss, apply potable water to unpaved ground beneath their canopies every 2 to 3 weeks or as determined by the project arborist. Further review and discussion regarding the methodology, frequency and amounts can be provided closer to construction (species and location dependent). Various application methods include automatic irrigation, periodically flooding the planter areas at a slow discharge rate, using soaker hoses, or through deep-root injection. Note that should dewatering of the site be required, supplement water for all trees will become necessary (not just for those impacted).

34. Digging for bollards or fence posts within a TPZ shall be manually performed using a shovel or post-hole digger. For any root encountered during the process with a diameter ≥2 inches, shift the hole over by 12 inches and repeat the process.

35. Spoils generated during demolition, excavation and trenching must not be piled or spread over unpaved ground within a TPZ. If necessary, temporarily pile on existing pavement, plywood or a tarp.

36. Any authorized digging within a TPZ should retain and protect roots encountered with diameters of ≥2 inches. Once exposed, cover with wet burlap and keep continually moist until they can be assessed by the project arborist. If authorized by the project arborist and/or CPA arborist for cutting, cleanly severe at 90° to the angle of root growth against the cut line using sharp tools (e.g. loppers or handsaw), and then immediately after, the cut end shall be either buried with soil or kept continually

moist by burlap until the dug area is backfilled. Roots encountered with diameters less than the 2-inch threshold can be cleanly severed at a 90° angle to the direction of root growth.

37. All electrical and irrigation routes shall be staked, reviewed and approved by the project arborist prior to trenching occurring within a TPZ.

38. Avoid using tree trunks as winch supports for moving or lifting heavy loads, or for tying rope, cables, chains, signs or other items around.

39. Dust accumulating on trunks and canopies during dry weather periods may need to be periodically washed away (e.g. every three to four months).

40. Where beneath canopies, avoid disposing harmful products (such as cement, paint, chemicals, oil and gasoline) anywhere on site that allows drainage within or near TPZs; do not wash any equipment; and avoid applying herbicides (if applied, they should be labeled for safe use near trees). Do not apply lime w/in 50 ft from a trunk.

7.0 ASSUMPTIONS AND LIMITING CONDITIONS

- All information presented herein covers only the inventoried trees listed in Exhibit A, and reflects their size, condition, and areas viewed from the project site, adjoining streets and sidewalks on 3/9/22, 3/11/22, 3/12/22 and 9/15/22. I hold no opinion towards other trees on or surrounding the project area.
- The documented condition and suitability ratings of dormant trees are subject to change once they can be observed following their annual regrowth of leaves.
- Observations were performed visually from the ground without probing, coring, dissecting or excavating.
- I cannot provide a guarantee or warranty, expressed or implied, that deficiencies or problems of any trees or property in question may not arise in the future.
- No assurance can be offered that if all my recommendations and precautionary measures (verbal or in writing) are accepted and followed, that the desired results may be achieved.
- I cannot guarantee or be responsible for the accuracy of information provided by others.
- I assume no responsibility for the means and methods used by any person or company implementing the recommendations provided in this report.
- The information provided herein represents my opinion. Accordingly, my fee is in no way contingent upon the reporting of a specified finding, conclusion or value.
- Numbers shown on the site map in Exhibit B are solely intended to represent a tree's roughly approximate location and should not be construed as surveyed points.
- This report is proprietary to me and may not be copied or reproduced in whole or part without prior written consent. It has been prepared for the sole and exclusive use of the parties to who submitted for the purpose of contracting services provided by David L. Babby.
- If any part of this report or copy thereof be lost or altered, the entire evaluation shall be invalid.

Prepared By: Date: September 23, 2022

David L. Babby
Registered Consulting Arborist® #399
Board-Certified Master Arborist® #WE-4001B
CA Licensed Tree Service Contractor #796763 (C61/D49)

EXHIBIT A:

TREE INVENTORY TABLE

(four sheets)

ARBOR RESOURCES
professional consulting arborists and tree care

TREE INVENTORY TABLE

TREE/ TAG NO.	TREE NAME	SIZE: Trunk Diameter (in.)	SIZE: Height (ft.)	SIZE: Canopy Spread (ft.)	CONDITION: Overall Percentage (100%=Best, 0%=Worst)	CONDITION: Overall Description (Good/Fair/Poor/Dead)	Suitability for Preservation (High/Moderate/Low)	Proposed for Removal (Y or N)	REGULATED: Protected Tree (Y or N)	REGULATED: Street Tree (Y or N)
1	London plane tree (*Platanus × hispanica*)	16	45	45	60%	Fair	High	N	N	Y
Comments: Has outgrown its 5' long by 2.8' wide planter. Adjacent curb is cracked and raised. Base abuts a narrow 2.5' wide sidewalk, which has been raised in past.										
2	London plane tree (*Platanus × hispanica*)	15	45	40	50%	Fair	High	N	N	Y
Comments: Has outgrown its 5' long by 2.8' wide planter. Adjacent curb is cracked and raised, and base abuts a narrow 2.5' wide sidewalk. Large crack in sidewalk. Dead branch suspended in its canopy, which is elevated and asymmetrical.										
3	London plane tree (*Platanus × hispanica*)	16	45	55	60%	Fair	High	N	N	Y
Comments: Has outgrown its 5' long by 2.8' wide planter. Adjacent curb is cracked. Base abuts and grows by a few inches over adjacent sidewalk, which has a large crack. Elevated canopy.										
4	London plane tree (*Platanus × hispanica*)	13	45	50	60%	Fair	High	N	N	Y
Comments: Has outgrown its 5' long by 2.8' wide planter. Base grows over sidewalk by nearly 6". Canopy is elevated.										
5	London plane tree (*Platanus × hispanica*)	12	35	35	50%	Fair	High	N	N	Y
Comments: Within a 4' long by 2.3' wide planter. Adjacent curb is crack. Canopy is elevated.										
6	London plane tree (*Platanus × hispanica*)	10	30	30	60%	Fair	High	N	N	Y
Comments: Within a 4' long by 2.3' wide planter. Adjacent sidewalk is raised at multiple locations. Elevated canopy. Leans slightly towards street.										
7	London plane tree (*Platanus × hispanica*)	9	35	25	40%	Poor	Moderate	N	N	Y
Comments: Within a 4.5' wide, continuous planter strip. Asymmetrical canopy grows away from building. High canopy.										

Site: 3001 and 3017 El Camino Real, Palo Alto
Prepared for: Charities Housing
Prepared by: David L. Babby, RCA #399 *1 of 4* *September 23, 2022*

ARBOR RESOURCES
professional consulting arborists and tree care

TREE INVENTORY TABLE

TREE/ TAG NO.	TREE NAME	SIZE: Trunk Diameter (in.)	SIZE: Height (ft.)	SIZE: Canopy Spread (ft.)	CONDITION: Overall Percentage (100%=Best, 0%=Worst)	CONDITION: Overall Description (Good/Fair/Poor/Dead)	Suitability for Preservation (High/Moderate/Low)	Proposed for Removal (Y or N)	REGULATED: Protected Tree (Y or N)	REGULATED: Street Tree (Y or N)
8	London plane tree (*Platanus × hispanica*)	7	30	30	60%	Fair	High	N	N	Y
Comments: Within a 4.5' wide, continuous planter strip. Elevated canopy formed by a central leader.										
9	London plane tree (*Platanus × hispanica*)	11	40	40	50%	Fair	High	N	N	Y
Comments: Within a 4.5' wide, continuous planter strip. Elevated canopy.										
10	Aristocrat callery pear (*Pyrus c. 'Aristocrat'*)	16	35	35	40%	Poor	Moderate	Y	N	N
Comments: Canopy is infected with fireblight, conditions applying to all pears inventoried for this report. Surface roots extend up to 8' from trunk. Crown is formed by six leaders and partly beneath high-voltage wires. Excessive limb weight over site. Deadwood.										
11	Aristocrat callery pear (*Pyrus c. 'Aristocrat'*)	13	35	35	30%	Poor	Low	Y	N	N
Comments: Top of crown is sparse and declining. Large deadwood and excessive limb weight. Surface roots extend up to 8-9' from trunk.										
12	Aristocrat callery pear (*Pyrus c. 'Aristocrat'*)	15	40	30	30%	Poor	Low	Y	N	N
Comments: Leans slightly N and has a high and declining canopy with large deadwood in lower crown. Within finger planter. A narrow, weak attachment where four leaders emerge. Roots form mound in parking lot up to 12' from trunk.										
13	Pepper tree (*Schinus molle*)	16	40	30	60%	Fair	Moderate	Y	N	N
Comments: Leans NW. Trunk bifurcates at 6' high. Asymmetrical canopy. Fence wall is 10" from base. Crowded-growing conditions.										
14	Aristocrat callery pear (*Pyrus c. 'Aristocrat'*)	10	30	25	30%	Poor	Low	Y	N	N
Comments: Has a mostly one-sided canopy away from #13's and neighboring property. Deadwood.										

Site: 3001 and 3017 El Camino Real, Palo Alto
Prepared for: Charities Housing
Prepared by: David L. Babby, RCA #399 *2 of 4* *September 23, 2022*

ARBOR RESOURCES
professional consulting arborists and tree care

TREE INVENTORY TABLE

TREE/ TAG NO.	TREE NAME	SIZE: Trunk Diameter (in.)	SIZE: Height (ft.)	SIZE: Canopy Spread (ft.)	CONDITION: Overall Percentage (100%=Best, 0%=Worst)	CONDITION: Overall Description (Good/Fair/Poor/Dead)	Suitability for Preservation (High/Moderate/Low)	Proposed for Removal (Y or N)	REGULATED: Protected Tree (Y or N)	REGULATED: Street Tree (Y or N)
15	Purple Robe locust (*Robinia 'Purple Robe'*)	4	25	20	50%	Fair	Moderate	N	N	Y
Comments: Added to map, its trunk's center being 2.5' from PL. In front of 461 Olive Ave., and beneath high-voltage, phone and cable wires. Grass throughout planter. Has a few old wounds at union of two remaining leaders. Asymmetrical canopy.										
18	Aristocrat callery pear (*Pyrus c. 'Aristocrat'*)	16	35	35	30%	Poor	Low	Y	N	N
Comments: Leans N w/ a pronounced buttress root along the opposite side. Canopy is mostly one-sided. Weak attachments between multiple leaders.										
21	Silver dollar gum (*Eucalyptus polyanthemos*)	12	30	20	40%	Poor	Moderate	N	N	N
Comments: Offsite. Canopy is thin and sparse (with small stubs throughout), and reduced in past. Formed by multiple leaders.										
22	Silver dollar gum (*Eucalyptus polyanthemos*)	17	50	35	40%	Poor	Moderate	N	N	N
Comments: Offsite. Asymmetrical canopy reduced in past. Formed by multiple leaders.										
23	Tree-of-Heaven (*Ailanthus altissima*)	11, 8, 7, 6	35	30	30%	Poor	Low	Y	N	N
Comments: Invasive species. Multiple trunks represent suckers and form an inherently weak structure. Crowded-growing conditions beneath #22.										
24	Silver dollar gum (*Eucalyptus polyanthemos*)	10	35	30	40%	Poor	Moderate	N	N	N
Comments: Offsite. One-sided canopy grows away from #23's. Trunk gently sweeps E.										
25	Aleppo pine (*Pinus halepensis*)	16	35	30	30%	Poor	Low	N	N	N
Comments: Offsite. Has a pronounced, ~45° SE lean, and buttress roots opposite the lean are large. Low and extended canopy with excessive limb weight overhangs site, and is partly beneath high-voltage wires. Has a mostly one-sided canopy growing away from #24.										

Site: 3001 and 3017 El Camino Real, Palo Alto
Prepared for: Charities Housing
Prepared by: David L. Babby, RCA #399 *3 of 4* *September 23, 2022*

ARBOR RESOURCES
professional consulting arborists and tree care

TREE INVENTORY TABLE

TREE/ TAG NO.	TREE NAME	SIZE: Trunk Diameter (in.)	SIZE: Height (ft.)	SIZE: Canopy Spread (ft.)	CONDITION: Overall Percentage (100%=Best, 0%=Worst)	CONDITION: Overall Description (Good/Fair/Poor/Dead)	Suitability for Preservation (High/Moderate/Low)	Proposed for Removal (Y or N)	REGULATED: Protected Tree (Y or N)	REGULATED: Street Tree (Y or N)
33	Trident maple (*Acer buergerianum*)	2	10	10	40%	Poor	Moderate	N	N	Y
Comments: Added to map, its trunk being 23' from PL. Has a mostly one-sided canopy due to past pruning. Single stake bound to trunk. Multiple leaders emerge from trunk at 4' high.										
54	Queen palm (*Syagrus romanzoffiana*)	~10	30	35	80%	Good	High	N	N	N
no tag	Comments: Offsite. Trunk inaccessible, and is not visible behind fence. Has a dead frond hanging from bottom of canopy.									
55	Queen palm (*Syagrus romanzoffiana*)	~10	30	35	80%	Good	High	N	N	N
no tag	Comments: Offsite. Trunk inaccessible, and is not visible behind fence. Has a dead frond hanging from bottom of canopy.									
56	Canary Island date palm (*Phoenix canariensis*)	~25	25	35	80%	Good	High	N	N	N
no tag	Comments: Offsite. Trunk inaccessible, and is not visible behind fence. Canopy overhangs site by ~3'.									

Site: 3001 and 3017 El Camino Real, Palo Alto
Prepared for: Charities Housing
Prepared by: David L. Babby, RCA #399 *4 of 4* *September 23, 2022*

Project Data

T-4

All other tree-related reports shall be added to the space provided on this sheet (adding as needed)
Include this sheet(s) on Project Sheet Index or Legend Page.
A copy of T-1 can be downloaded at
http://www.cityofpaloalto.org/civica/filebank/blobdload.asp?BlobID=6460

Special Tree Protection Instruction Sheet
City of Palo Alto

T-4

3001-3017 EL CAMINO REAL

TREE PROTECTION - ARBORIST REPORT

22203

scale (printed at 22x34):

date: 01/20/2023

T-4

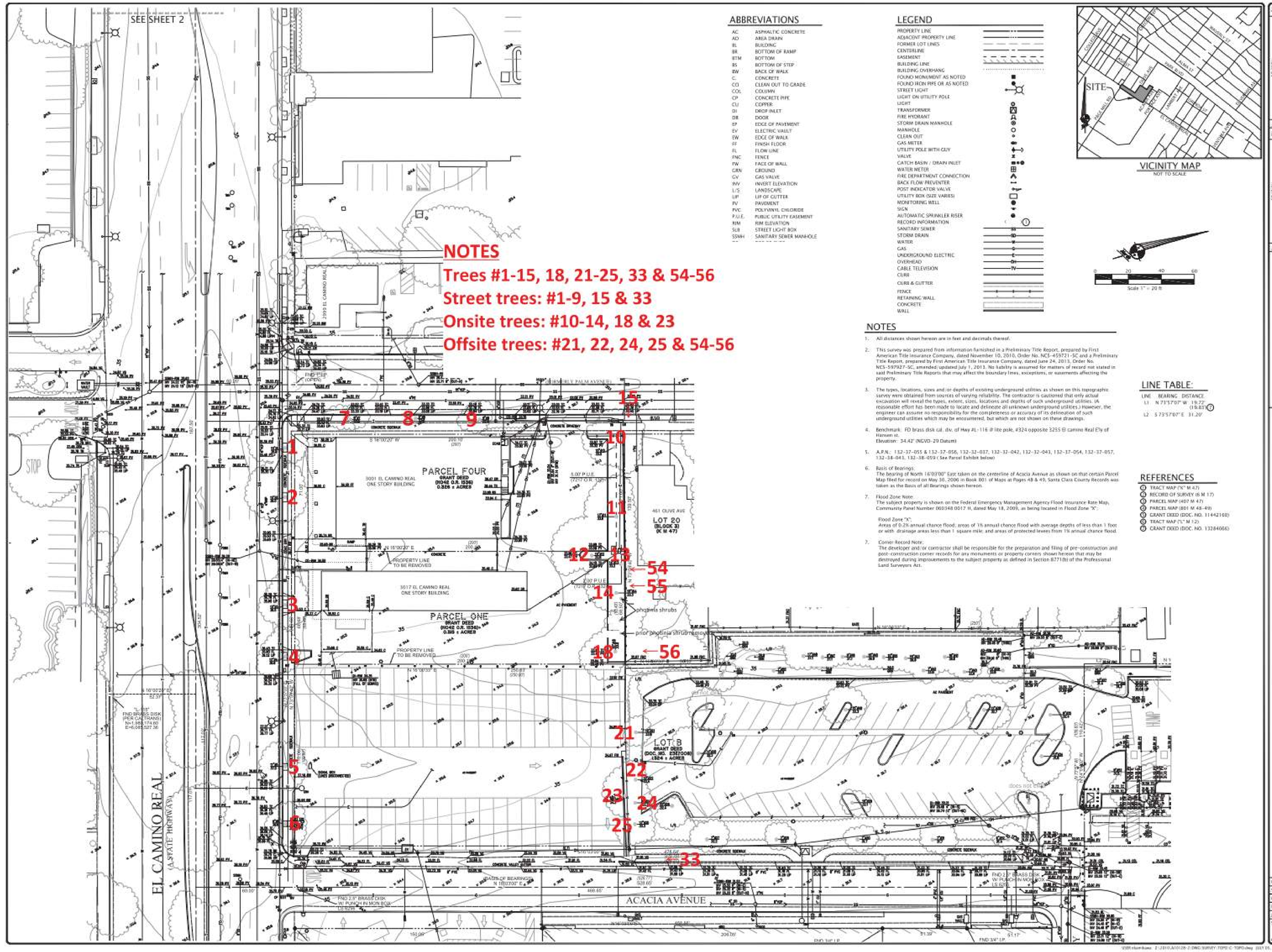
David L. Babby, Registered Consulting Arborist® *September 23, 2022*

EXHIBIT B:

SITE MAP

(one sheet)

3001 & 3017 El Camino Real, Palo Alto
Charities Housing



ABBREVIATIONS

AC	ASPHALTIC CONCRETE
AD	AREA DRAIN
BL	BUILDING
BR	BOTTOM OF RAMP
BTM	BOTTOM
BS	BOTTOM OF STEP
BW	BACK OF WALK
C	CONCRETE
CO	CLEAN OUT TO GRADE
COL	COLUMN
CP	CONCRETE PIPE
CU	COPPER
DI	DROP INLET
DR	DOOR
EP	EDGE OF PAVEMENT
EV	ELECTRIC VAULT
EW	EDGE OF WALK
FF	FINISH FLOOR
FL	FLOW LINE
FNC	FENCE
FW	FACE OF WALL
GRN	GROUND
GV	GAS VALVE
INV	INVERT ELEVATION
L/S	LANDSCAPE
LIP	LIP OF GUTTER
PV	PAVEMENT
PVC	POLYVINYL CHLORIDE
P.U.E.	PUBLIC UTILITY EASEMENT
RIM	RIM ELEVATION
SLB	STREET LIGHT BOX
SSMH	SANITARY SEWER MANHOLE

LEGEND

PROPERTY LINE
ADJACENT PROPERTY LINE
FORMER LOT LINES
CENTERLINE
EASEMENT
BUILDING LINE
BUILDING OVERHANG
FOUND MONUMENT AS NOTED
FOUND IRON PIPE OR AS NOTED
STREET LIGHT
LIGHT ON UTILITY POLE
LIGHT
TRANSFORMER
FIRE HYDRANT
STORM DRAIN MANHOLE
MANHOLE
CLEAN OUT
GAS METER
UTILITY POLE WITH GUY
VALVE
CATCH BASIN / DRAIN INLET
WATER METER
FIRE DEPARTMENT CONNECTION
BACK FLOW PREVENTER
POST INDICATOR VALVE
UTILITY BOX (SIZE VARIES)
MONITORING WELL
SIGN
AUTOMATIC SPRINKLER RISER
RECORD INFORMATION
SANITARY SEWER
STORM DRAIN
WATER
GAS
UNDERGROUND ELECTRIC
OVERHEAD
CABLE TELEVISION
CURB
CURB & GUTTER
FENCE
RETAINING WALL
CONCRETE WALL

VICINITY MAP
NOT TO SCALE

NOTES

1. All distances shown hereon are in feet and decimals thereof.
2. This survey was prepared from information furnished in a Preliminary Title Report, prepared by First American Title Insurance Company, dated November 10, 2010, Order No. NCS-459721-SC and a Preliminary Title Report, prepared by First American Title Insurance Company, dated June 24, 2013, Order No. NCS-597927-SC, amended/updated July 1, 2013. No liability is assumed for matters of record not stated in said Preliminary Title Reports that may affect the boundary lines, exceptions, or easements affecting the property.
3. The types, locations, sizes and/or depths of existing underground utilities as shown on this topographic survey were obtained from sources of varying reliability. The contractor is cautioned that only actual excavation will reveal the types, extent, sizes, locations and depths of such underground utilities. (A reasonable effort has been made to locate and delineate all unknown underground utilities.) However, the engineer can assume no responsibility for the completeness or accuracy of its delineation of such underground utilities which may be encountered, but which are not shown on these drawings.
4. Benchmark: FD brass disk cut, dtv. of Hwy #1--116 @ lite pole, #324 opposite 3255 El camino Real E'ly of Hansen st.
Elevation: 34.42' (NGVD -29 Datum)
5. A.P.N.: 132-37-055 & 132-37-056, 132-32-037, 132-32-042, 132-32-043, 132-37-054, 132-37-057, 132-38-043, 132-38-059 (See Parcel Exhibit below)
6. Basis of Bearings:
The bearing of North 16°03'00" East taken on the centerline of Acacia Avenue as shown on that certain Parcel Map filed for record on May 30, 2006 in Book 801 of Maps at Pages 48 & 49, Santa Clara County Records was taken as the Basis of all Bearings shown hereon.
7. Flood Zone Note:
The subject property is shown on the Federal Emergency Management Agency Flood Insurance Rate Map, Community Panel Number 06085B 0017 H, dated May 18, 2009, as being located in Flood Zone "X".
Flood Zone "X":
Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas of protected levees from 1% annual chance flood.
8. Corner Record Note:
The developer and/or contractor shall be responsible for the preparation and filing of pre-construction and post-construction corner records for any monuments or property corners shown hereon that may be destroyed during improvements to the subject property as defined in Section 8771(b) of the Professional Land Surveyors Act.

LINE TABLE:

LINE	BEARING	DISTANCE
L1	N 73°57'07" W	19.27' (19.83') (2)
L2	S 73°57'07" E	31.20'

REFERENCES

(1) TRACT MAP ("C" M 47)
(2) RECORD OF SURVEY (6 M 17)
(3) PARCEL MAP (407 M 47)
(4) PARCEL MAP (801 M 48-49)
(5) GRANT DEED (DOC. NO. 11442160)
(6) TRACT MAP ("L" M 12)
(7) GRANT DEED (DOC. NO. 13284066)

KIER & WRIGHT
CIVIL ENGINEERS & SURVEYORS, INC.
3350 Scott Boulevard, Building 22 • (408) 727-6665
Santa Clara, California 95054 • (408) 727-5625

CALIFORNIA

TOPOGRAPHIC & BOUNDARY SURVEY
THE SOBRATO ORGANIZATION
3001 EL CAMINO REAL
PALO ALTO

DATE	MAY, 2018
SCALE	1" = 20'
DESIGNER	RMA
DRAFTER	CCB
JOB	A10126-2
SHEET	1
OF	2 SHEETS

3001-3017 EL CAMINO REAL | TREE PROTECTION - PLAN

22203
scale (printed at 22x34): 1" = 60'-0"
date: 01/20/2023

T-5

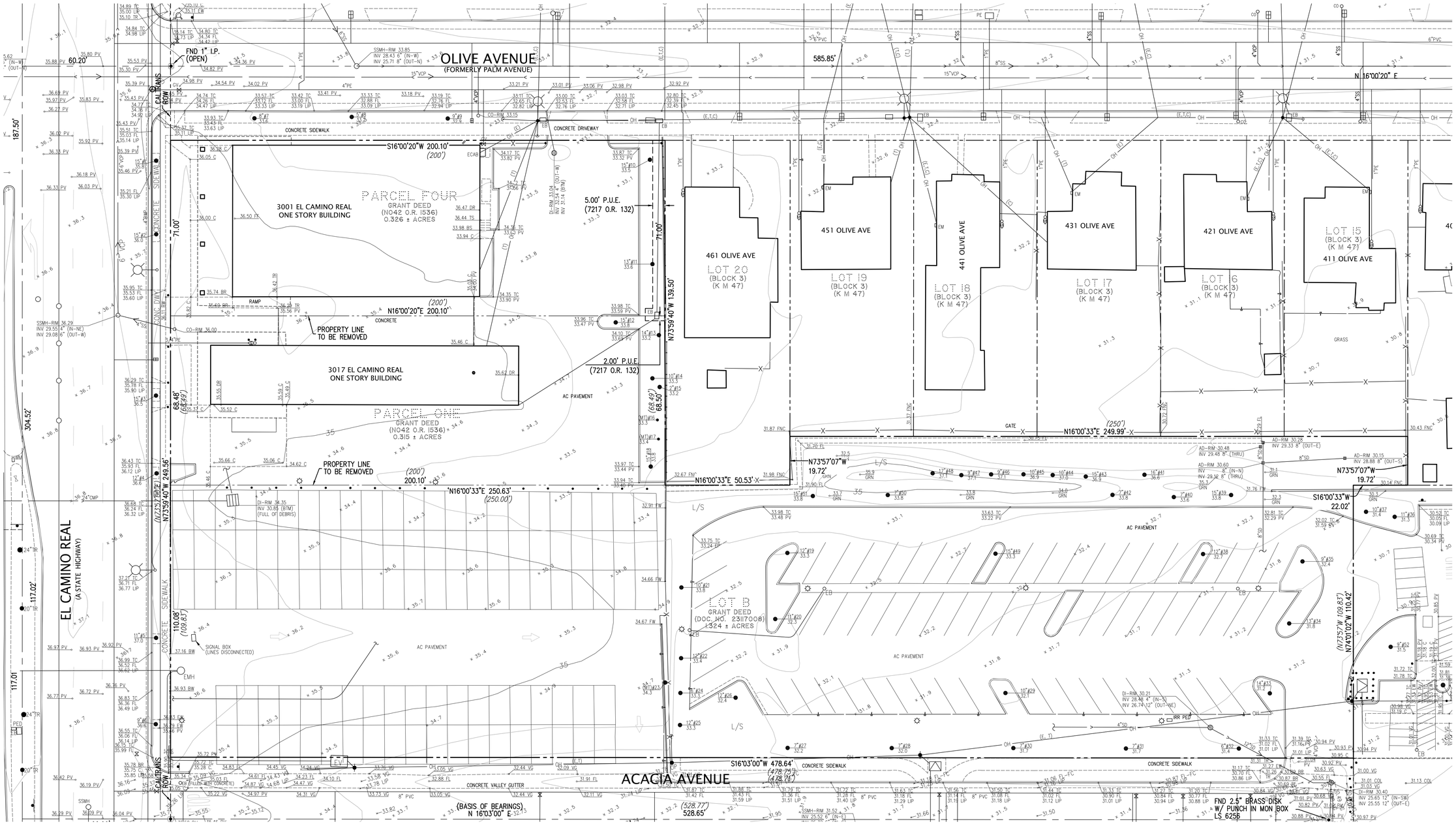
EXHIBIT C:

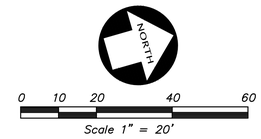
PHOTOGRAPHS

(four sheets)

Photo Index

3001-3017 EL CAMINO REAL | TREE PROTECTION - PHOTOS | 22203 | scale (printed at 22x34): | date: 01/20/2023 | T-6





LEGEND

- PROPERTY LINE
- ADJACENT PROPERTY LINE
- FORMER LOT LINES
- CENTERLINE
- EASEMENT
- BUILDING LINE
- BUILDING OVERHANG
- FOUND MONUMENT AS NOTED
- FOUND IRON PIPE OR AS NOTED
- STREET LIGHT
- LIGHT ON UTILITY POLE
- LIGHT
- TRANSFORMER
- FIRE HYDRANT
- STORM DRAIN MANHOLE
- MANHOLE
- CLEAN OUT
- GAS METER
- UTILITY POLE WITH GUY
- VALVE
- CATCH BASIN / DRAIN INLET
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- BACK FLOW PREVENTER
- POST INDICATOR VALVE
- UTILITY BOX (SIZE VARIES)
- MONITORING WELL
- SIGN
- AUTOMATIC SPRINKLER RISER
- RECORD INFORMATION
- SANITARY SEWER — SS
- STORM DRAIN — SD
- WATER — W
- GAS — G
- UNDERGROUND ELECTRIC — E
- OVERHEAD — OH
- CABLE TELEVISION — TV
- CURB
- CURB & GUTTER
- FENCE — X
- CONCRETE
- WALL

ABBREVIATIONS

AC	ASPHALTIC CONCRETE
AD	AREA DRAIN
BL	BUILDING
BR	BOTTOM OF RAMP
BTM	BOTTOM
BS	BOTTOM OF STEP
BW	BACK OF WALK
C.	CONCRETE
CO	CLEAN OUT TO GRADE
COL	COLUMN
CP	CONCRETE PIPE
CU	COPPER
DI	DROP INLET
DR	DOOR
EP	EDGE OF PAVEMENT
EV	ELECTRIC VAULT
EW	EDGE OF WALK
FF	FINISH FLOOR
FL	FLOW LINE
FNC	FENCE
FW	FACE OF WALL
GRN	GROUND
GV	GAS VALVE
INV	INVERT ELEVATION
L/S	LANDSCAPE
LIP	LIP OF GUTTER
PV	PAVEMENT
PVC	POLYVINYL CHLORIDE
P.U.E.	PUBLIC UTILITY EASEMENT
RIM	RIM ELEVATION
SLB	STREET LIGHT BOX
SSMH	SANITARY SEWER MANHOLE
TC	TOP OF CURB
TR	TOP OF RAMP
TS	TOP OF SLAB
VG	VALLEY GUTTER

NOTES

1. ALL DISTANCES SHOWN HEREON ARE IN FEET AND DECIMALS THEREOF.
2. THIS SURVEY WAS PREPARED FROM INFORMATION FURNISHED IN A PRELIMINARY TITLE REPORT, PREPARED BY FIRST AMERICAN TITLE INSURANCE COMPANY, DATED JUNE 15, 2018, ORDER NO. NCS-597927-M-SC, UPDATED JUNE 15, 2018. NO LIABILITY IS ASSUMED FOR MATTERS OF RECORD NOT STATED IN SAID PRELIMINARY TITLE REPORTS THAT MAY AFFECT THE BOUNDARY LINES, EXCEPTIONS, OR EASEMENTS AFFECTING THE PROPERTY.
3. THE TYPES, LOCATIONS, SIZES AND/OR DEPTHS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS TOPOGRAPHIC SURVEY WERE OBTAINED FROM SOURCES OF VARYING RELIABILITY. THE CONTRACTOR IS CAUTIONED THAT ONLY ACTUAL EXCAVATION WILL REVEAL THE TYPES, EXTENT, SIZES, LOCATIONS AND DEPTHS OF SUCH UNDERGROUND UTILITIES. (A REASONABLE EFFORT HAS BEEN MADE TO LOCATE AND DELINEATE ALL UNKNOWN UNDERGROUND UTILITIES.) HOWEVER, THE ENGINEER CAN ASSUME NO RESPONSIBILITY FOR THE COMPLETENESS OR ACCURACY OF ITS DELINEATION OF SUCH UNDERGROUND UTILITIES WHICH MAY BE ENCOUNTERED, BUT WHICH ARE NOT SHOWN ON THESE DRAWINGS.
4. BENCHMARK: FD BRASS DISK CAL. DIV. OF HWY #L-116 @ LITE POLE, #324 OPPOSITE 3255 EL CAMINO REAL E'LY OF HANSEN ST.
   ELEVATION: 34.42' (NGVD-29 DATUM)
5. A.P.N.: 132-37-055, 132-37-056 & 132-38-072
6. BASIS OF BEARINGS:
   THE BEARING OF NORTH 16°03'00" EAST TAKEN ON THE CENTERLINE OF ACACIA AVENUE AS SHOWN ON THAT CERTAIN PARCEL MAP FILED FOR RECORD ON MAY 30, 2006 IN BOOK 801 OF MAPS AT PAGES 48 & 49, SANTA CLARA COUNTY RECORDS WAS TAKEN AS THE BASIS OF ALL BEARINGS SHOWN HEREON.
7. FLOOD ZONE NOTE:
   THE SUBJECT PROPERTY IS SHOWN ON THE FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAP, COMMUNITY PANEL NUMBER 060348 0017 H, DATED MAY 18, 2009, AS BEING LOCATED IN FLOOD ZONE "X";

   FLOOD ZONE "X";
   AREAS OF 0.2% ANNUAL CHANCE FLOOD; AREAS OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE; AND AREAS OF PROTECTED LEVEES FROM 1% ANNUAL CHANCE FLOOD.
7. CORNER RECORD NOTE:
   THE DEVELOPER AND/OR CONTRACTOR SHALL BE RESPONSIBLE FOR THE PREPARATION AND FILING OF PRE-CONSTRUCTION AND POST-CONSTRUCTION CORNER RECORDS FOR ANY MONUMENTS OR PROPERTY CORNERS SHOWN HEREON THAT MAY BE DESTROYED DURING IMPROVEMENTS TO THE SUBJECT PROPERTY AS DEFINED IN SECTION 8771(B) OF THE PROFESSIONAL LAND SURVEYORS ACT.

REFERENCES

1. TRACT MAP ("K" M 47)
2. RECORD OF SURVEY (6 M 17)
3. PARCEL MAP (407 M 47)
4. PARCEL MAP (801 M 48-49)
5. GRANT DEED (DOC. NO. 11442160)
6. TRACT MAP ("L" M 12)
7. GRANT DEED (DOC. NO. 13284066)

David Baker Architects

Charities Housing

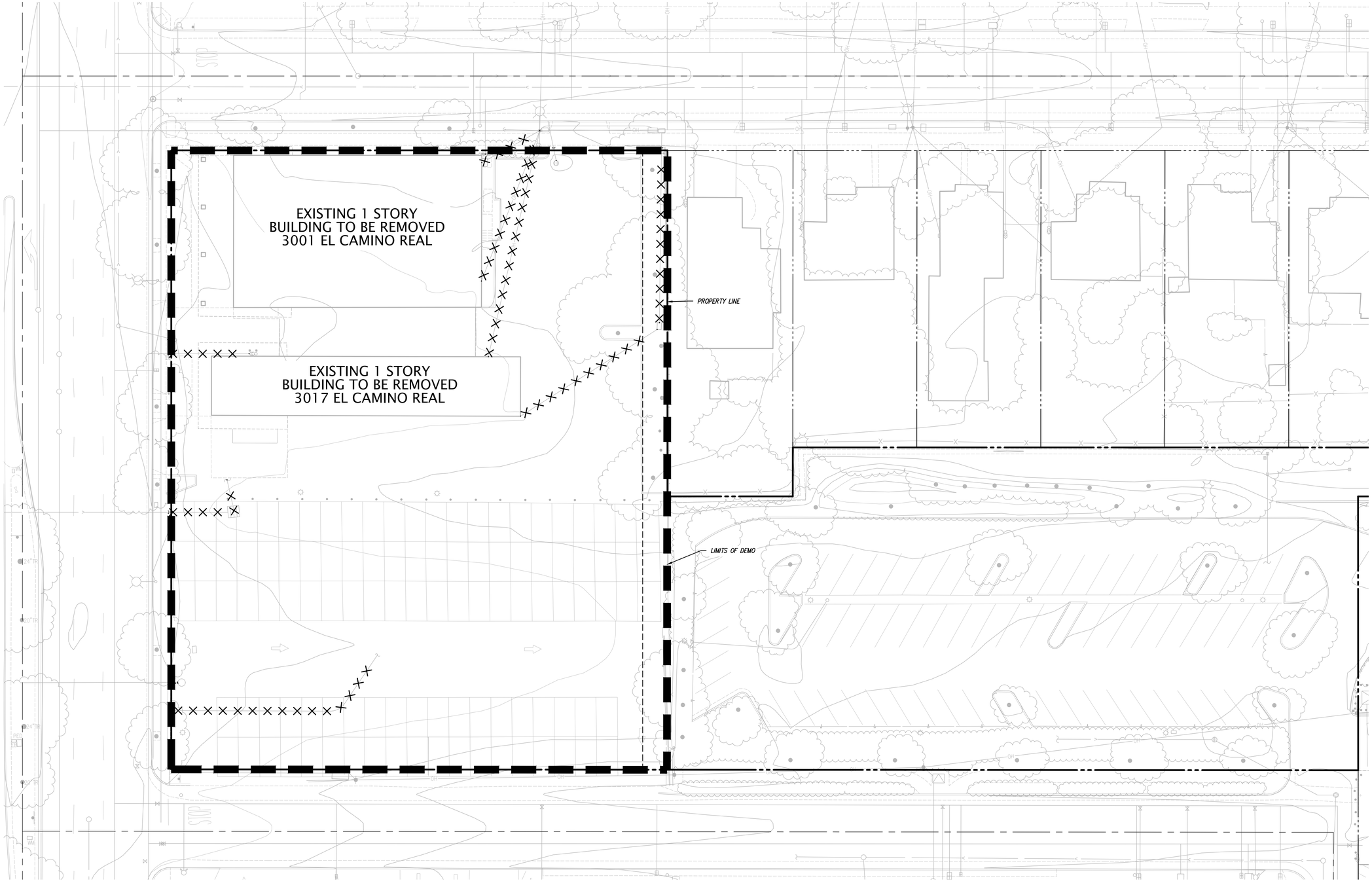
3001-3017 EL CAMINO REAL

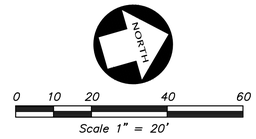
KIER+WRIGHT
3350 Scott Boulevard, Building 22
Santa Clara, California 95054
Phone: (408) 727-6665
www.kierwright.com

TOPOGRAPHIC SURVEY

A10128-10
scale: AS NOTED
date: 01/20/2023

C1.0





LEGEND

UNDERGROUND UTILITIES TO BE REMOVED

NOTES

1. ALL EXISTING HARDSCAPE WITHIN THE SITE IS TO BE REMOVED
2. ALL EXISTING STRUCTURES ON SITE TO BE DEMOLISHED
3. ALL UTILITIES ON SITE TO BE REMOVED PER CITY STANDARDS
4. SEE LANDSCAPE PLANS, TREE PROTECTION PLAN FOR TREES TO BE REMOVED

David Baker Architects

Charities Housing

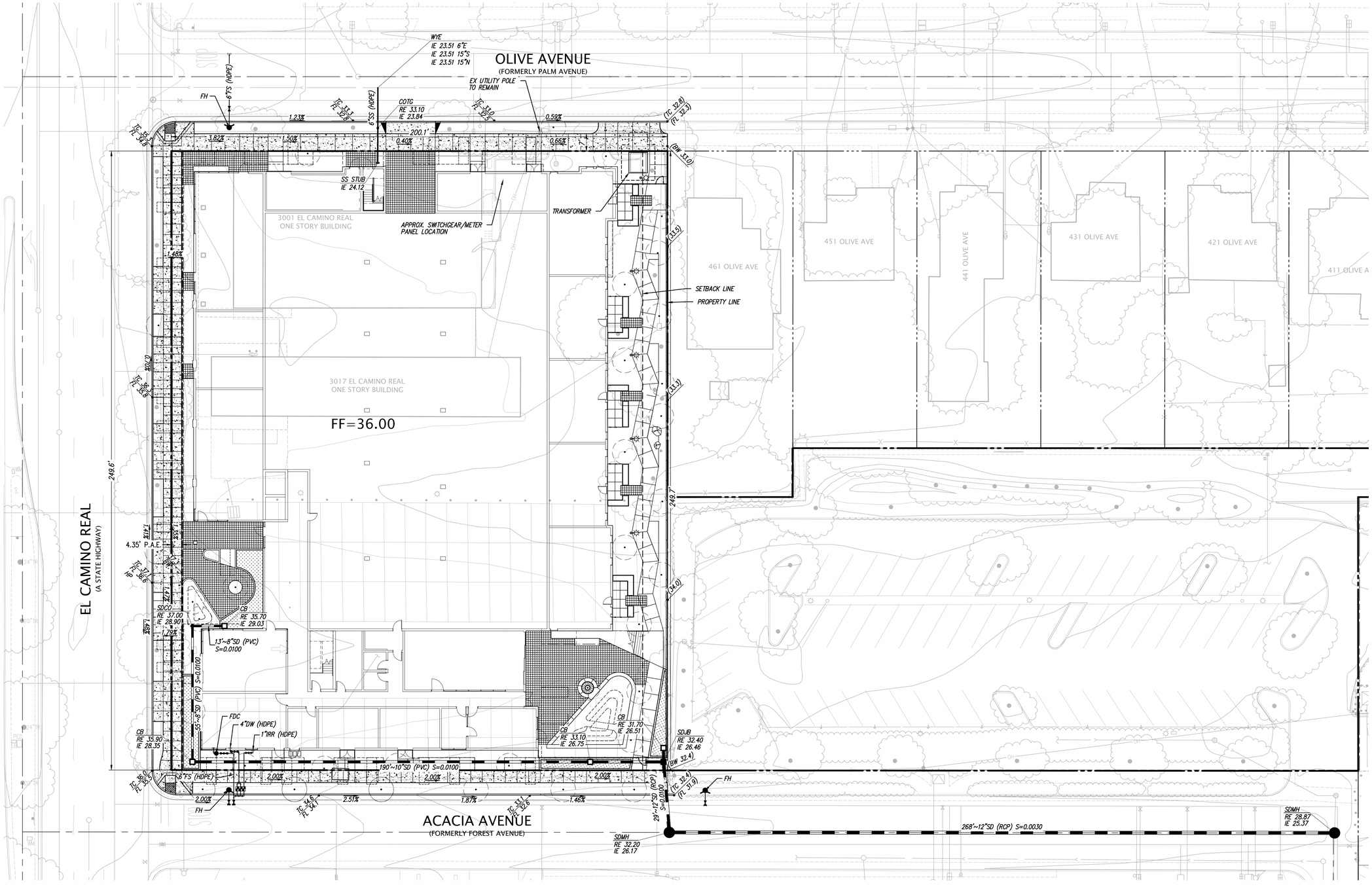
3001-3017 EL CAMINO REAL

KIER+WRIGHT
3350 Scott Boulevard, Building 22
Santa Clara, California 95054
Phone: (408) 727-6665
www.kierwright.com

PRELIMINARY DEMOLITION PLAN

A10128-10
scale: AS NOTED
date: 01/20/2023

C2.0



LEGEND

- AREA DRAIN
- STORM DRAIN CATCH BASIN
- STORM DRAIN JUNCTION BOX
- STORM DRAIN MANHOLE
- FL FLOW LINE
- FF FINISHED FLOOR
- PV PAVEMENT
- RE RIM ELEVATION
- 23.8 SPOT ELEVATION
- X"SD STORM DRAIN LINE
- TC TOP OF CURB

NOTES

1. THIS PROJECT HAS NO GAS SERVICE
2. ALL WATER, FIRE SERVICE, AND SEWER LATERALS SHALL BE INSTALLED BY C.P.A.U.

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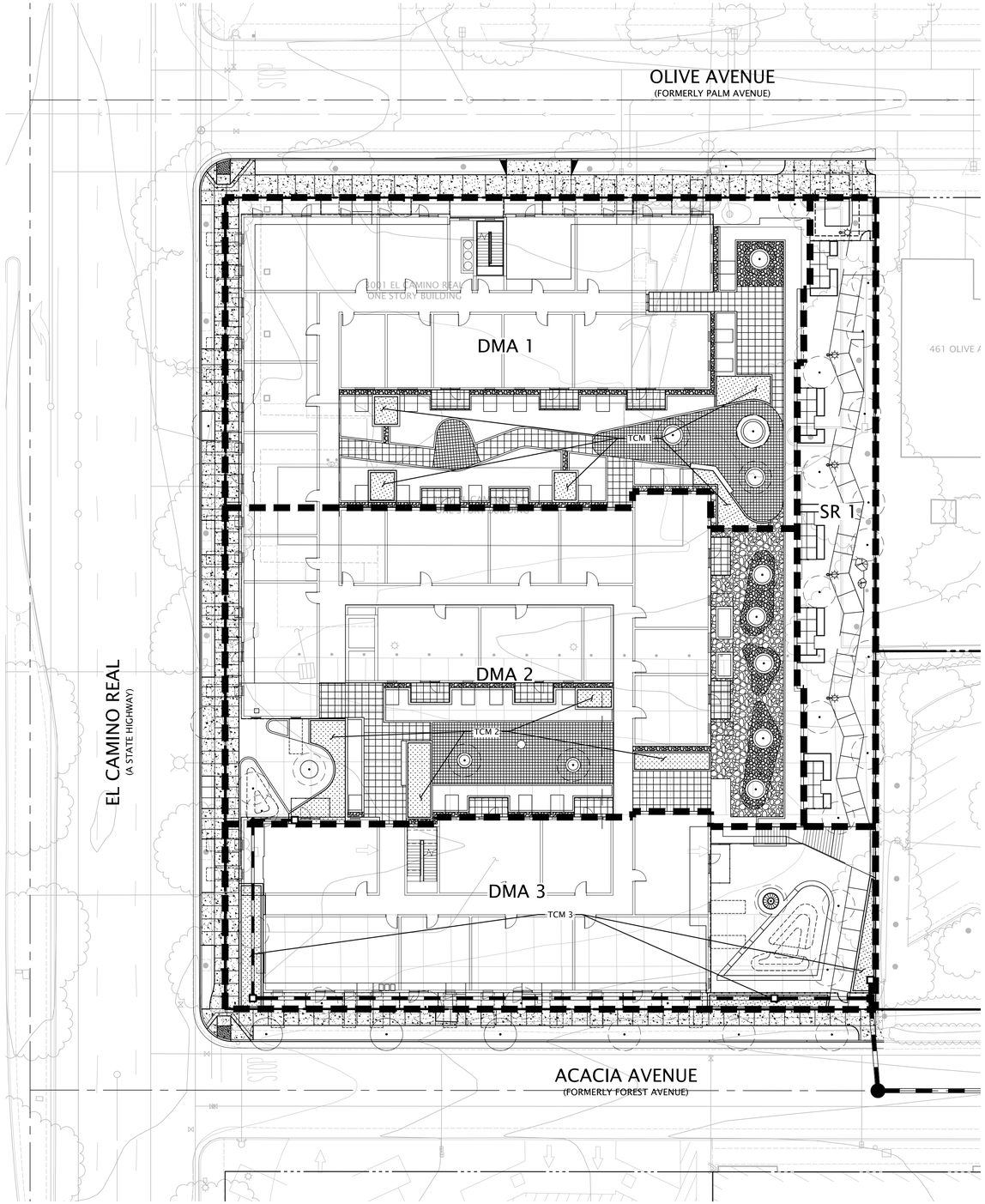
PRELIMINARY SITE AND UTILITIES PLAN

A10128-10
scale: AS NOTED
date: 01/20/2023

C3.0



BIOTREATMENT SUMMARY TABLE

AREA	TCM	TREATMENT TYPE	TOTAL AREA (SQ. FT.)	TREATMENT AREA REQ. (SQ. FT.)	TREATMENT AREA PROVIDED (SQ. FT.)	PONDING DEPTH (IN.)
*DMA 1	1	BIOTREATMENT POND	17,000	417	443	6
*DMA 2	2	BIOTREATMENT POND	16,959	464	614	6
*DMA 3	3	BIOTREATMENT POND	11,576	275	481	6

*BIOTREATMENT SIZING BASED ON COMBINATION FLOW-VOLUME METHOD

SELF-RETAINING SUMMARY TABLE

AREA	TREATMENT TYPE	TOTAL AREA (SQ. FT.)	IMPERVIOUS AREA (SQ. FT.)	PERVIOUS AREA (SQ. FT.)	PONDING DEPTH (IN.)
SR 1	SELF-RETAINING AREA**	4,428	2,031	2,397	3

**MAXIMUM RATIO OF IMPERVIOUS:PERVIOUS AREA FOR SELF-RETAINING AREAS IS 2:1

STORMWATER CONTROL NOTES

1. *STORMWATER BEST MANAGEMENT PRACTICES (BMPS) ASSOCIATED WITH REFUSE MANAGEMENT (INCLUDING ACTIONS RELATED TO REFUSE PICK-UP AND THE ENCLOSURE ITSELF) SHALL BE FOLLOWED TO ENSURE POLLUTION PREVENTION AND PREVENTING POTENTIAL DISCHARGES TO THE CITY'S STORM DRAIN SYSTEM. STORMWATER BMPS INCLUDE, BUT ARE NOT LIMITED TO, POWER WASHING THE PAVEMENT ON BOTH THE PRIVATE PROPERTY AND IN THE RIGHT-OF-WAY AND SIDEWALK A MINIMUM OF ONCE PER YEAR BEFORE THE WET SEASON BEGINS ON OCTOBER 1ST; UTILIZING A POWER WASHING CONTRACTOR THAT IS A RECOGNIZED SURFACE CLEANER BY THEBAY AREA STORMWATER MANAGEMENT AGENCIES ASSOCIATION (BASMAA); DISPOSING OF WASH WATER ACCORDING TO THE RECOGNIZED SURFACE CLEANER CERTIFICATION REQUIREMENTS; AND REMOVING ANY POTENTIAL TRASH BUILD-UP ON A REGULAR BASIS.*

2. *FOR ALL C.3 FEATURES, VENDOR SPECIFICATIONS REGARDING INSTALLATION AND MAINTENANCE SHOULD BE FOLLOWED AND PROVIDED TO CITY STAFF. COPIES MUST BE SUBMITTED TO PAM BOYLE RODRIGUEZ AT PAMELA.BOYLERODRIGUEZ@CITYOFPALOALTO.ORG*

3. *STAFF FROM STORMWATER PROGRAM (WATERSHED PROTECTION DIVISION) MAY BE PRESENT DURING INSTALLATION OF STORMWATER TREATMENT MEASURES. CONTACT PAM BOYLE RODRIGUEZ, STORMWATER PROGRAM MANAGER, AT (650) 329-2421 BEFORE INSTALLATION.*

NORTH

0 10 20 40 60

Scale 1" = 20'

LEGEND

- TRIBUTARY AREA LIMITS
- LANDSCAPE AREA
- IMPERVIOUS ROOFTOP DRAINING TO BIO-SWALE
- IMPERVIOUS PAVEMENT DRAINING TO BIO-SWALE
- BIO-RETENTION TREATMENT AREA
- CONCRETE AREA

DMA — DRAINAGE MANAGEMENT AREA

TCM — TREATMENT CONTROL MEASURE

Worksheet for Calculating the Combination Flow and Volume Method

1.0 Project Information

1-1	Project Name:	Project Name
1-2	City application ID:	Project City
1-3	Site Address or APN:	Site Name
1-4	Tract or Parcel Map No:	Parcel Number
1-5	Site Mean Annual Precip. (MAP)[1]	16.0 Inches
	Refer to the Mean Annual Precipitation Map in Appendix D of the C.3 Technical Guidance to determine the MAP, in inches, for the site.	Click here for map
1-6	Applicable Rain Gauge[2]	San Jose Airport (SCVURPPP)
	MAP adjustment factor is automatically calculated as:	1.15

(The "Site Mean Annual Precipitation (MAP)" is divided by the MAP for the applicable rain gauge, shown in Table 5.2, below.)

These calculations are based on the combination flow and volume hydraulic sizing method provided in the Alameda, San Mateo, and Santa Clara County C.3 Technical Guidance Manuals. The steps presented below are explained in Chapter 5, Section 5.5 of the guidance manuals.

2.0 Calculate Percentage of Impervious Surface for Drainage Management Area (DMA)

2-1	Name of DMA:	DMA 1

For items 2-2 and 2-3, enter the areas in square feet for each type of surface within the DMA.

	Type of Surface	Area of surface type within DMA (Sq. Ft)	Adjust Pervious Surface	Effective Impervious Area	
2-2	Impervious Surface	13,881	1.0	13,881	
2-3	Pervious Surface*	3,119	0.1	312	*Self-Treating and Self-Retaining not included
	Total DMA Area (square feet) =	17,000			
2-4	*Total Effective Impervious Area (EIA)*			14,193	Square feet

3.0 Calculate Unit Basin Storage Volume in Inches

Table 5-2: Unit Basin Storage Volumes (in inches) for 80 Percent Capture Using 48-Hour Drawdowns

Applicable Rain Gauge	Mean Annual Precipitation (in)	Unit Basin Storage Volume (in) for Applicable Runoff Coefficients [Calculated for 100% Imperviousness]
San Jose Airport (SCVURPPP)	13.9	0.58
Paris Ariz (SCVURPPP)	13.7	0.62
Paris Ariz (SMCWPPP)	14.6	0.64
Gilroy (SCVURPPP)	18.2	1.00
Morgan Hill (SCVURPPP)	19.5	1.00
Boulder Creek (SMCWPPP)	55.9	2.04
La Honda (SMCWPPP)	24.4	0.86
Half Moon Bay (SMCWPPP)	25.92	0.82
San Francisco (SMCWPPP)	21	0.73
San Francisco Airport (SMCWPPP)	20.1	0.85
San Francisco Oceanside (SMCWPPP)	19.3	0.72
Oakland Airport (OAKPAC)	18.35	1.00

3-1	*Unit basin storage volume from Table 5.2:*	0.58	Inches
	(The coefficient for this method is 1.00, due to the conversion of any landscaping to effective impervious area)		
3-2	*Adjusted unit basin storage volume:*	0.67	Inches
	(The unit basin storage volume is adjusted by applying the MAP adjustment factor.)		
3-3	*Required Capture Volume (in cubic feet):*	790	Cubic feet
	(The adjusted unit basin sizing volume [inches] is multiplied by the size of the DMA and converted to feet)		

4.0 Calculate the Duration of the Rain Event

4-1	Rainfall Intensity	0.2	Inches per hour
4-2	Divide Item 3-2 by Item 4-1	3.34	Hours of Rain Event Duration

5.0 Preliminary Estimate of Surface Area of Treatment Measure

5-1	4% of DMA impervious surface	568	Square feet
5-2	3% of DMA impervious surface	426	Square feet
5-3	Volume of treated runoff for area in Item 5-2	592	Cubic feet (Item 5-2 * 5 inches per hour * 1/12 * Item 4-2)

6.0 Initial Adjustment of Depth of Surface Ponding Area

6-1	Subtract Item 5-3 from Item 3-3	197	Cubic feet (Amount of runoff to be stored in ponding area)
6-2	Divide Item 6-1 by Item 5-2	0.5	Feet (Depth of stored runoff in surface ponding area)
6-3	Convert Item 6-2 from ft to inches	5.6	Inches (Depth of stored runoff in surface ponding area)
6-4	If ponding depth in Item 6-3 meets your target depth of 6"-12", then Item 7-1 is equal to Item 5-2. If not, continue to Step 7-1.		

7.0 Optimize Size of Treatment Measure

7-1	Enter actual treatment area larger or smaller than Item 5-2 based off plans	417	Sq.ft. (enter larger area if you need less ponding depth; smaller for more depth.)
7-2	Volume of treated runoff for area in Item 7-1	580	Cubic feet (Item 7-1 * 5 inches per hour * 1/12 * Item 4-2)
7-3	Subtract Item 7-2 from Item 3-3	210	Cubic feet (Amount of runoff to be stored in ponding area)
7-4	Divide Item 7-3 by Item 7-1	0.50	Feet (Depth of stored runoff in surface ponding area)
7-5	Convert Item 7-4 from feet to inches	6.0	Inches (Depth of stored runoff in surface ponding area)
	If the ponding depth in Item 7-5 meets target, stop here. If not, repeat Steps 7-1 through 7-5 until you obtain target depth. If the slope of the drainage area > 1%,		
7-6	then 11" will be the max ponding depth (slopes >1% will increase the ponding depth by 0.2 inches).		

Worksheet for Calculating the Combination Flow and Volume Method

1.0 Project Information

1-1	Project Name:	Project Name
1-2	City application ID:	Project City
1-3	Site Address or APN:	Site Name
1-4	Tract or Parcel Map No:	Parcel Number
1-5	Site Mean Annual Precip. (MAP)[1]	16.0 Inches
	Refer to the Mean Annual Precipitation Map in Appendix D of the C.3 Technical Guidance to determine the MAP, in inches, for the site.	Click here for map
1-6	Applicable Rain Gauge[2]	San Jose Airport (SCVURPPP)
	MAP adjustment factor is automatically calculated as:	1.15

(The "Site Mean Annual Precipitation (MAP)" is divided by the MAP for the applicable rain gauge, shown in Table 5.2, below.)

These calculations are based on the combination flow and volume hydraulic sizing method provided in the Alameda, San Mateo, and Santa Clara County C.3 Technical Guidance Manuals. The steps presented below are explained in Chapter 5, Section 5.5 of the guidance manuals.

2.0 Calculate Percentage of Impervious Surface for Drainage Management Area (DMA)

2-1	Name of DMA:	DMA 2

For items 2-2 and 2-3, enter the areas in square feet for each type of surface within the DMA.

	Type of Surface	Area of surface type within DMA (Sq. Ft)	Adjust Pervious Surface	Effective Impervious Area	
2-2	Impervious Surface	15,664	1.0	15,664	
2-3	Pervious Surface	1,295	0.1	130	
	Total DMA Area (square feet) =	16,959			
2-4	*Total Effective Impervious Area (EIA)*			15,794	Square feet

3.0 Calculate Unit Basin Storage Volume in Inches

Table 5-2: Unit Basin Storage Volumes (in inches) for 80 Percent Capture Using 48-Hour Drawdowns

Applicable Rain Gauge	Mean Annual Precipitation (in)	Unit Basin Storage Volume (in) for Applicable Runoff Coefficients [Calculated for 100% Imperviousness]
San Jose Airport (SCVURPPP)	13.9	0.58
Paris Ariz (SCVURPPP)	13.7	0.62
Paris Ariz (SMCWPPP)	14.6	0.64
Gilroy (SCVURPPP)	18.2	1.00
Morgan Hill (SCVURPPP)	19.5	1.00
Boulder Creek (SMCWPPP)	55.9	2.04
La Honda (SMCWPPP)	24.4	0.86
Half Moon Bay (SMCWPPP)	25.92	0.82
San Francisco (SMCWPPP)	21	0.73
San Francisco Airport (SMCWPPP)	20.1	0.85
San Francisco Oceanside (SMCWPPP)	19.3	0.72
Oakland Airport (OAKPAC)	18.35	1.00

3-1	*Unit basin storage volume from Table 5.2:*	0.58	Inches
	(The coefficient for this method is 1.00, due to the conversion of any landscaping to effective impervious area)		
3-2	*Adjusted unit basin storage volume:*	0.67	Inches
	(The unit basin storage volume is adjusted by applying the MAP adjustment factor.)		
3-3	*Required Capture Volume (in cubic feet):*	879	Cubic feet
	(The adjusted unit basin sizing volume [inches] is multiplied by the size of the DMA and converted to feet)		

4.0 Calculate the Duration of the Rain Event

4-1	Rainfall Intensity	0.2	Inches per hour
4-2	Divide Item 3-2 by Item 4-1	3.34	Hours of Rain Event Duration

5.0 Preliminary Estimate of Surface Area of Treatment Measure

5-1	4% of DMA impervious surface	632	Square feet
5-2	3% of DMA impervious surface	474	Square feet
5-3	Volume of treated runoff for area in Item 5-2	659	Cubic feet (Item 5-2 * 5 inches per hour * 1/12 * Item 4-2)

6.0 Initial Adjustment of Depth of Surface Ponding Area

6-1	Subtract Item 5-3 from Item 3-3	220	Cubic feet (Amount of runoff to be stored in ponding area)
6-2	Divide Item 6-1 by Item 5-2	0.5	Feet (Depth of stored runoff in surface ponding area)
6-3	Convert Item 6-2 from ft to inches	5.6	Inches (Depth of stored runoff in surface ponding area)
6-4	If ponding depth in Item 6-3 meets your target depth of 6"-12", then Item 7-1 is equal to Item 5-2. If not, continue to Step 7-1.		

7.0 Optimize Size of Treatment M 25

7-1	Enter an area larger or smaller than Item 5-2	464	Sq.ft. (enter larger area if you need less ponding depth; smaller for more depth.)
7-2	Volume of treated runoff for area in Item 7-1	645	Cubic feet (Item 7-1 * 5 inches per hour * 1/12 * Item 4-2)
7-3	Subtract Item 7-2 from Item 3-3	233	Cubic feet (Amount of runoff to be stored in ponding area)
7-4	Divide Item 7-3 by Item 7-1	0.50	Feet (Depth of stored runoff in surface ponding area)
7-5	Convert Item 7-4 from feet to inches	6.0	Inches (Depth of stored runoff in surface ponding area)
	If the ponding depth in Item 7-5 meets target, stop here. If not, repeat Steps 7-1 through 7-5 until you obtain target depth. If the slope of the drainage area > 1%,		
7-6	then 11" will be the max ponding depth (slopes >1% will increase the ponding depth by 0.2 inches).		

Worksheet for Calculating the Combination Flow and Volume Method

1.0 Project Information

1-1	Project Name:	Project Name
1-2	City application ID:	Project City
1-3	Site Address or APN:	Site Name
1-4	Tract or Parcel Map No:	Parcel Number
1-5	Site Mean Annual Precip. (MAP)[1]	16.0 Inches
	Refer to the Mean Annual Precipitation Map in Appendix D of the C.3 Technical Guidance to determine the MAP, in inches, for the site.	Click here for map
1-6	Applicable Rain Gauge[2]	San Jose Airport (SCVURPPP)
	MAP adjustment factor is automatically calculated as:	1.15

(The "Site Mean Annual Precipitation (MAP)" is divided by the MAP for the applicable rain gauge, shown in Table 5.2, below.)

These calculations are based on the combination flow and volume hydraulic sizing method provided in the Alameda, San Mateo, and Santa Clara County C.3 Technical Guidance Manuals. The steps presented below are explained in Chapter 5, Section 5.5 of the guidance manuals.

2.0 Calculate Percentage of Impervious Surface for Drainage Management Area (DMA)

2-1	Name of DMA:	DMA 3

For items 2-2 and 2-3, enter the areas in square feet for each type of surface within the DMA.

	Type of Surface	Area of surface type within DMA (Sq. Ft)	Adjust Pervious Surface	Effective Impervious Area	
2-2	Impervious Surface	9,101	1.0	9,101	
2-3	Pervious Surface	2,475	0.1	248	
	Total DMA Area (square feet) =	11,576			
2-4	*Total Effective Impervious Area (EIA)*			9,349	Square feet

3.0 Calculate Unit Basin Storage Volume in Inches

Table 5-2: Unit Basin Storage Volumes (in inches) for 80 Percent Capture Using 48-Hour Drawdowns

Applicable Rain Gauge	Mean Annual Precipitation (in)	Unit Basin Storage Volume (in) for Applicable Runoff Coefficients [Calculated for 100% Imperviousness]
San Jose Airport (SCVURPPP)	13.9	0.58
Paris Ariz (SCVURPPP)	13.7	0.62
Paris Ariz (SMCWPPP)	14.6	0.64
Gilroy (SCVURPPP)	18.2	1.00
Morgan Hill (SCVURPPP)	19.5	1.00
Boulder Creek (SMCWPPP)	55.9	2.04
La Honda (SMCWPPP)	24.4	0.86
Half Moon Bay (SMCWPPP)	25.92	0.82
San Francisco (SMCWPPP)	21	0.73
San Francisco Airport (SMCWPPP)	20.1	0.85
San Francisco Oceanside (SMCWPPP)	19.3	0.72
Oakland Airport (OAKPAC)	18.35	1.00

3-1	*Unit Basin storage volume from Table 5.2:*	0.58	Inches
	(The coefficient for this method is 1.00, due to the conversion of any landscaping to effective impervious area)		
3-2	*Adjusted unit basin storage volume:*	0.67	Inches
	(The unit basin storage volume is adjusted by applying the MAP adjustment factor.)		
3-3	*Required Capture Volume (in cubic feet):*	520	Cubic feet
	(The adjusted unit basin sizing volume [inches] is multiplied by the size of the DMA and converted to feet)		

4.0 Calculate the Duration of the Rain Event

4-1	Rainfall Intensity	0.2	Inches per hour
4-2	Divide Item 3-2 by Item 4-1	3.34	Hours of Rain Event Duration

5.0 Preliminary Estimate of Surface Area of Treatment Measure

5-1	4% of DMA impervious surface	374	Square feet
5-2	3% of DMA impervious surface	280	Square feet
5-3	Volume of treated runoff for area in Item 5-2	390	Cubic feet (Item 5-2 * 5 inches per hour * 1/12 * Item 4-2)

6.0 Initial Adjustment of Depth of Surface Ponding Area

6-1	Subtract Item 5-3 from Item 3-3	130	Cubic feet (Amount of runoff to be stored in ponding area)
6-2	Divide Item 6-1 by Item 5-2	0.5	Feet (Depth of stored runoff in surface ponding area)
6-3	Convert Item 6-2 from ft to inches	5.6	Inches (Depth of stored runoff in surface ponding area)
6-4	If ponding depth in Item 6-3 meets your target depth of 6"-12", then Item 7-1 is equal to Item 5-2. If not, continue to Step 7-1.		

7.0 Optimize Size of Treatment M 25

7-1	Enter an area larger or smaller than Item 5-2	275	Sq.ft. (enter larger area if you need less ponding depth; smaller for more depth.)
7-2	Volume of treated runoff for area in Item 7-1	382	Cubic feet (Item 7-1 * 5 inches per hour * 1/12 * Item 4-2)
7-3	Subtract Item 7-2 from Item 3-3	138	Cubic feet (Amount of runoff to be stored in ponding area)
7-4	Divide Item 7-3 by Item 7-1	0.50	Feet (Depth of stored runoff in surface ponding area)
7-5	Convert Item 7-4 from feet to inches	6.0	Inches (Depth of stored runoff in surface ponding area)
	If the ponding depth in Item 7-5 meets target, stop here. If not, repeat Steps 7-1 through 7-5 until you obtain target depth. If the slope of the drainage area > 1%,		
7-6	then 11" will be the max ponding depth (slopes >1% will increase the ponding depth by 0.2 inches).		

David Baker Architects

Charities Housing

3001-3017 EL CAMINO REAL

KIER+WRIGHT
3350 Scott Boulevard, Building 22
Santa Clara, California 95054
Phone: (408) 727-6665
www.kierwright.com

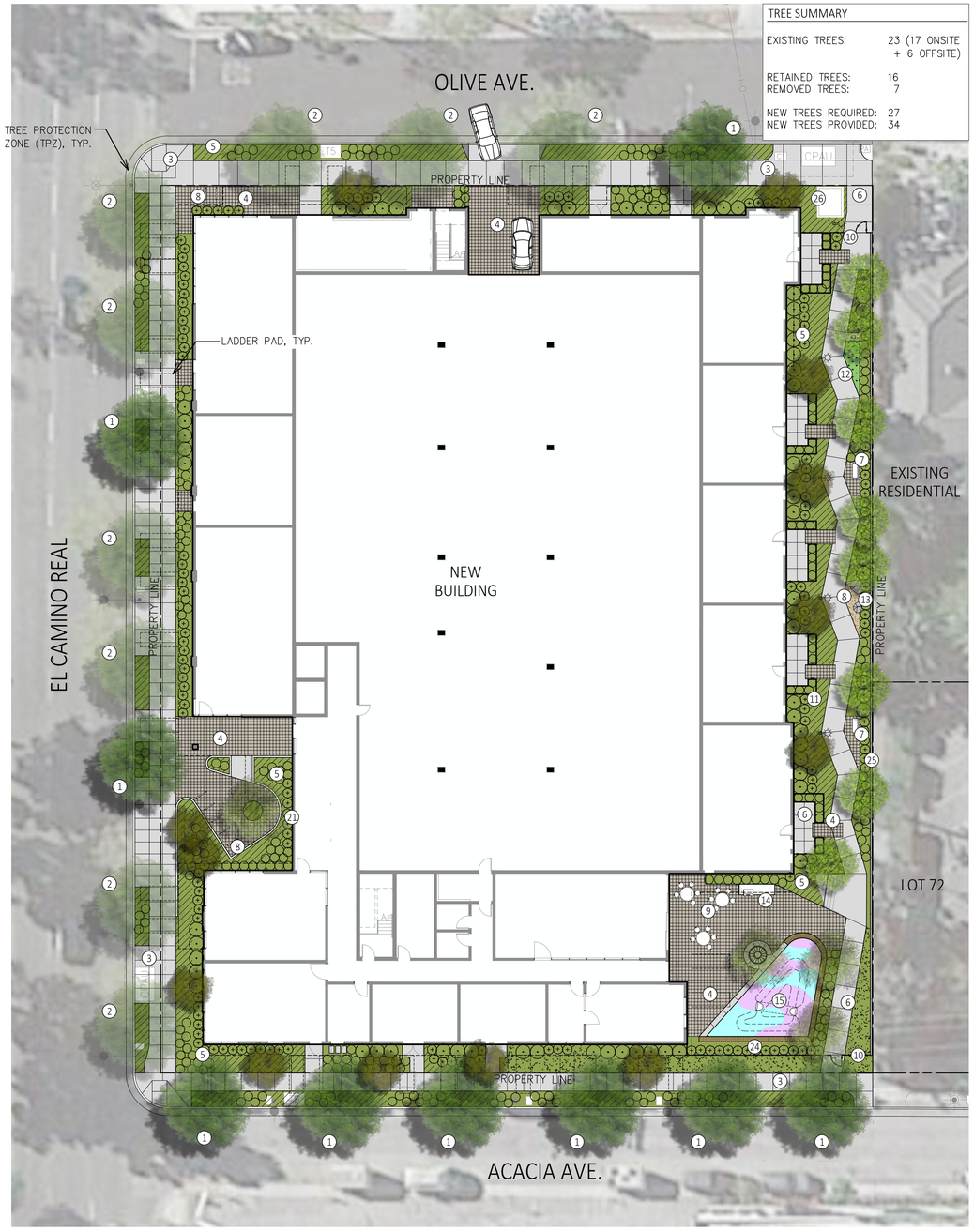
PRELIMINARY STORM WATER QUALITY CONTROL PLAN

A10128-10

scale: AS NOTED

date: 01/20/2023

C4.0



TREE SUMMARY	
EXISTING TREES:	23 (17 ONSITE + 6 OFFSITE)
RETAINED TREES:	16
REMOVED TREES:	7
NEW TREES REQUIRED:	27
NEW TREES PROVIDED:	34

A CONCEPTUAL LANDSCAPE PLAN - LEVEL 1
1"=20'-0"

NORTH

B CONCEPTUAL LANDSCAPE PLAN - LEVEL 2
1"=20'-0"

NORTH

LANDSCAPE ELEMENTS KEY

1. NEW STREET TREE, TYP.
2. EXISTING TREE, TYP. SEE L002.
3. NEW CONCRETE CITY SIDEWALK.
4. ENHANCED PAVING: MULTI-COLORED.
5. WATER-WISE LANDSCAPING. SEE PLANT LEGEND ON L003.
6. CONCRETE PAVING.
7. DECORATIVE BENCH.
8. DECORATIVE BICYCLE RACKS (7 RACKS = 14 SHORT-TERM PARKING).
9. PICNIC TABLE AND BENCHES.
10. DECORATIVE METAL FENCE. MAX. 6 FT. HEIGHT.
11. RAISED METAL PLANTERS AT LEVEL 1 UNIT PATIOS.
12. PET-RELIEF AREA.
13. LANDSCAPE BOULDERS.
14. BBQ COUNTER.
15. BERMED PLAY AREA WITH TUNNEL.
16. RESIDENT GARDEN AREA.
17. RESIDENT SEATING AREA.
18. RAISED CONCRETE PLANTER WITH BUILT-IN SEATWALL WITH WOOD SLATS.
19. DECORATIVE LARGE FORMAT ROOF BALLAST PATTERNS.
20. RAISED STORMWATER PLANTERS AT PODIUM.
21. VERTICAL HANGING GREENERY FROM PLANTER ABOVE.
22. DECORATIVE WOOD SEATING WITH SHADE TREE OR TABLE.
23. PAVING AT PODIUM.
24. SEATWALL WITH WOOD SLATS.
25. SOLID PERIMETER FENCE: MAX. 6 FT. HEIGHT.
26. TRANSFORMER.

LANDSCAPE DESIGN INTENT

THE LANDSCAPE DESIGN IS INTENDED TO PROVIDE AN ATTRACTIVE AND RESPONSIBLE LIVING ENVIRONMENT FOR THE PROJECT RESIDENTS; AN AESTHETICALLY-PLEASING PLACE TO CALL HOME THAT BOTH THE RESIDENTS AND NEIGHBORS CAN TAKE PRIDE IN.

THE LANDSCAPE DESIGN PROVIDES MULTIPLE OUTDOOR SPACES FOR RESIDENTS TO ENJOY. AREAS FOR BOTH PASSIVE AND ACTIVE RECREATION, RELAXATION, AND SOCIALIZATION TAKE ADVANTAGE OF OPENINGS CREATED BY THE BUILDING FORMS.

REPEATING FORMS AND GEOMETRIES PROVIDE A COMMON/COHESIVE LANGUAGE AS ONE MOVES FROM LEVEL-TO-LEVEL AND COURTYARD-TO-COURTYARD WHILE THE UTILIZATION OF WATER-FRIENDLY PLANTINGS WITH VARYING FORMS AND HUES PROVIDES THE VISUAL AND TEXTURAL INTEREST AT A PEDESTRIAN SCALE.

WATER-USE STATEMENT

PROJECT SHALL COMPLY WITH ALL LOCAL AND STATE WATER CODES, INCLUDING AB 1881 (MWELO). IRRIGATION SYSTEM WILL UTILIZE LOW-VOLUME APPLICATIONS METHODS AND EFFICIENT WEATHER-BASED CONTROL TECHNOLOGIES. PLANT SELECTIONS SHALL REFLECT WATER-SAVING GOALS AND BE GROUPED IN SIMILAR HYDROZONES.

BAY-FRIENDLY GUIDELINES (HTTP://RESCAPECA.ORG):
- DO NOT USE CHEMICALS FERTILIZERS, PESTICIDES, HERBICIDES OR COMMERCIAL SOIL AMENDMENT. USE ORGANIC MATERIALS REVIEW INSTITUTE (OMRI) MATERIALS AND COMPOST.
- AVOID COMPACTING SOIL IN AREAS THAT WILL BE UNPAVED.

FOR GUIDANCE REFER TO THE BAY-FRIENDLY LANDSCAPE GUIDELINES:

HTTP://WWW.STOPWASTE.ORG/RESOURCE/BROCHURES/BAY-FRIENDLY-LANDSCAPE-GUIDELINES-SUSTAINABLE-PRACTICES-LANDSCAPE-PROFESSIONAL

AVOID COMPACTING SOIL IN AREAS THAT WILL BE UNPAVED.

FOR EXISTING TREE PLAN, SEE SHEET L002.

form/work
2585 UNIVERSITY AVE.
SAN DIEGO, CA 92104
T: 619.269.4423
LANDSCAPE ARCHITECTURE

Charities Housing

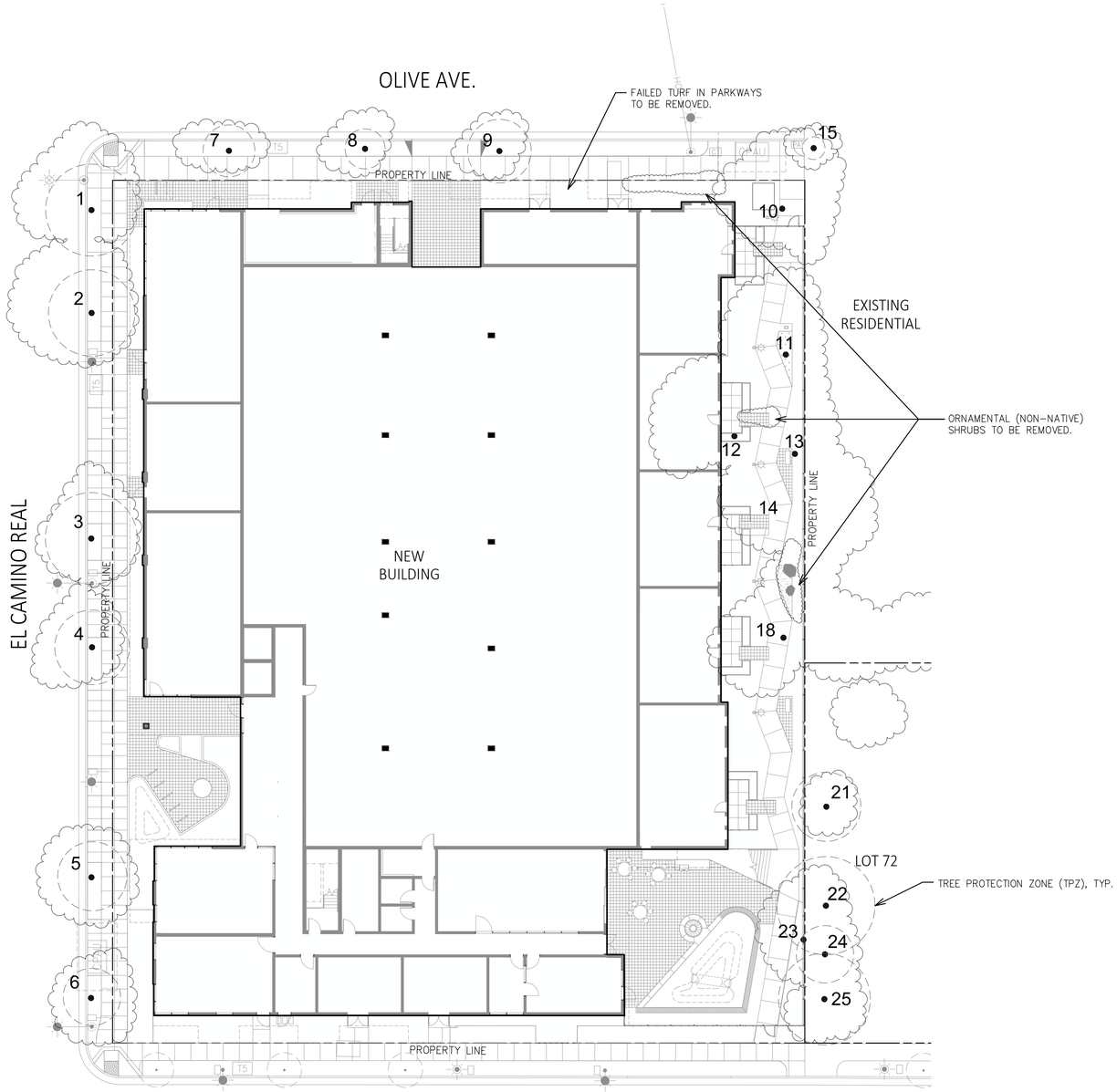
3001-3017 EL CAMINO REAL

CONCEPTUAL LANDSCAPE PLAN

0' 10' 20'
scale (printed at 22x34): 1" = 20'-0"
date: 01/20/2023

22203

L001



A EXISTING LANDSCAPE PLAN
1"=20'-0"

NORTH

EXISTING TREE LEGEND

#	REMOVE?	SPECIES
1	NO	LONDON PLANE TREE (PLATANUS X HISPANICA)
2	NO	LONDON PLANE TREE (PLATANUS X HISPANICA)
3	NO	LONDON PLANE TREE (PLATANUS X HISPANICA)
4	NO	LONDON PLANE TREE (PLATANUS X HISPANICA)
5	NO	LONDON PLANE TREE (PLATANUS X HISPANICA)
6	NO	LONDON PLANE TREE (PLATANUS X HISPANICA)
7	NO	LONDON PLANE TREE (PLATANUS X HISPANICA)
8	NO	LONDON PLANE TREE (PLATANUS X HISPANICA)
9	NO	LONDON PLANE TREE (PLATANUS X HISPANICA)
10	YES	ARISTOCRAT CALLERY PEAR (PYRUS C. 'ARISTOCRAT')
11	YES	ARISTOCRAT CALLERY PEAR (PYRUS C. 'ARISTOCRAT')
12	YES	ARISTOCRAT CALLERY PEAR (PYRUS C. 'ARISTOCRAT')
13	YES	PEPPER TREE (SCHINUS MOLLE)
14	YES	ARISTOCRAT CALLERY PEAR (PYRUS C. 'ARISTOCRAT')
18	YES	ARISTOCRAT CALLERY PEAR (PYRUS C. 'ARISTOCRAT')
23	YES	TREE-OF-HEAVEN (AILANTHUS ALTISSIMA)
15, 21, 22, 24, 25		EXISTING, OFFSITE, TO REMAIN. INCLUDED DUE TO PROXIMITY TO PROPOSED DEVELOPMENT.

EXISTING TREE NOTES

1) PLAN IS BASED ON TREE REPORT PREPARED BY DAVID L. BABBY CONSULTING ARBORIST (PREPARED MARCH 18, 2022). SEE SHEETS T-1 THROUGH T-5.
2) TREE NUMBERING REFLECTS & MATCHES NUMERICAL IDENTIFICATION SYSTEM USED IN THE REPORT REFERENCED ABOVE.
3) REFER TO TREE REPORT FOR DETAILED REVIEW AND ANALYSIS OF EXISTING TREES.

FOR TREE RETAIN/REPLACEMENT SUMMARY, SEE SHEET L001.

form/work
2585 UNIVERSITY AVE.
SAN DIEGO, CA 92104
T: 619.269.4423
LANDSCAPE ARCHITECTURE

Charities Housing

3001-3017 EL CAMINO REAL

EXISTING LANDSCAPE PLAN

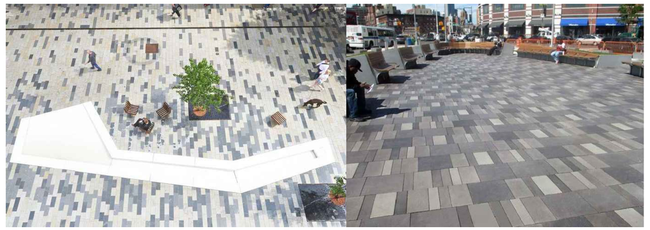
0' 10' 20'
scale (printed at 22x34): 1" = 20'-0"
date: 01/20/2023

22203

L002

DECORATIVE WOOD SEATING WITH SHADE TREE OR TABLE

DECORATIVE BICYCLE RACK

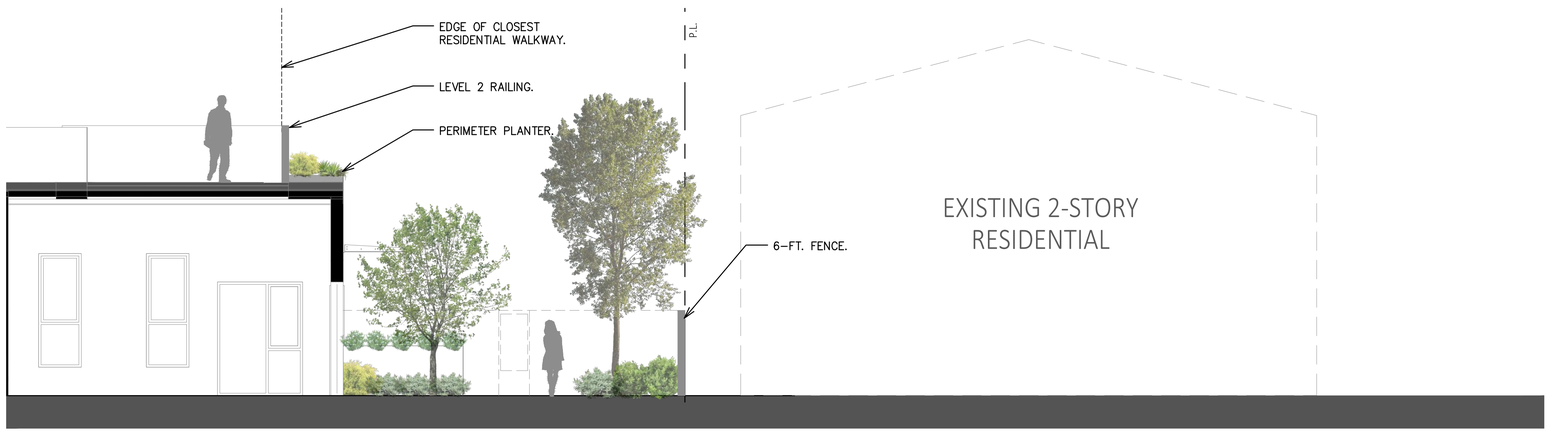


ENHANCED PAVING: MULTI-COLORED

PICNIC TABLES AND BENCHES

BERMED PLAY AREA WITH TUNNEL

DECORATIVE LARGE FORMAT ROOF BALLAST PATTERNS



LEVEL 2: CROSS-SECTION SCALE: 3/16" = 1'-0"

CANDIDATE PLANT LEGEND

SYMBOL	BOTANICAL NAME (COMMON NAME)	MIN. SIZE	WUCOLS
STREET TREE:			
	PLATANUS SPP. (LONDON PLANE) TO MATCH EXISTING	36" BOX	MOD
COURTYARD ACCENT TREES (SUCH AS):			
	CHIONANTHUS RETUSUS (CHINESE FRINGE TREE)	36" BOX	MOD
	X CHITALPA TASHKENTENSIS 'PINK DAWN' (PINK DAWN CHITALPA)	36" BOX	LOW
	ZELKOVA SERRATA 'JFS-KW1' (CITY SPRITE ZELKOVA)	36" BOX	MOD
SMALL ACCENT TREES (SUCH AS):			
	CERCIS CHINENSIS 'AVONDALE' (AVONDALE REDBUD)	24" BOX	MOD
	LEPTOSPERMUM S. 'PETERSONII' (LEMON SCENTED TEA TREE)	24" BOX	LOW
	CERCIS CANADENSIS 'TEXAS WHITE' (EASTERN REDBUD)	24" BOX	MOD
EVERGREEN PROPERTY LINE TREE (SUCH AS):			
	LYONOTHAMNUS F. SSP. ASPLENIFOLIUS (FERN-LEAF CATALINA IRONWOOD)	24" BOX	LOW
	TRISTANIOPSIS LAURINA (WATER GUM)	24" BOX	MOD
	LAURUS NOBILIS 'HUBBARD' (BAY LAUREL)	24" BOX	LOW
DROUGHT-TOLERANT PLANTING (SUCH AS):			
	WOODY SHRUBS (SUCH AS):		
	RHAMNUS C. 'EVE CASE' (DWF COFFEEBERRY)	5 GAL	LOW
	WESTRINGIA FRUITICOSA (COAST ROSEMARY)	5 GAL	LOW
	SMALLER ACCENT SHRUBS (SUCH AS):		
	GALVEZIA SPECIOSA 'FIRECRACKER' (FIRECRACKER SNAPDRAGON)	5 GAL	LOW
	YUCCA FILAMENTOSA 'COLOR GUARD' (COLOR GUARD YUCCA)	5 GAL	LOW
	ALOE 'SAFARI SUNSET' (ALOE SAFARI SUNSET)	5 GAL	LOW
	ACACIA COGNATA 'COUSIN ITT' (LITTLE RIVER WATTLE)	5 GAL	LOW
	PERENNIALS/ORNAMENTAL GRASSES (SUCH AS):		
	DIANELLA TASMANICA (FLAX LILY)	1 GAL	MOD
	ASPARAGUS D. 'MYERS' (MYER'S FERN)	1 GAL	MOD
	POLYSTICHUM MUNITUM (WESTERN SWORD FERN)	5 GAL	MOD
	HEUCHERA 'WENDY' (WENDY CORAL BELLS)	1 GAL	MOD
	AEONIUM 'MINT SAUCER' (GREEN AEONIUM)	1 GAL	LOW
	ACANTHUS SPINOSUS (BEAR'S BREECH)	5 GAL	MOD
	LOMANDRA C. 'LITTLE CON' (SMALL MAT RUSH)	1 GAL	LOW
	FESTUCA RUBRA 'MOLATE' (MOLATE RED FESCUE)	1 GAL	LOW
	GROUNDCOVERS (SUCH AS):		
	DYMONDIA MARGARETAE (SILVER CARPET)	1 GAL	LOW
	ROSEMARINUS OFFICINALIS (PROSTRATE ROSEMARY)	1 GAL	LOW
	MYOPORUM 'PUTAH CREEK' (CREEPING MYOPORUM)	1 GAL	LOW
	ERIGERION KARVINSKIANUS (MEXICAN DAISY)	1 GAL	LOW
STORMWATER TREATMENT PLANTINGS (SUCH AS):			
	CAREX PANSA (DUNE SEDGE)	1 GAL	MOD
	CAREX DIVULSA (BERKELEY SEDGE)	1 GAL	LOW
	JUNCUS PATENS (CALIFORNIA GREY RUSH)	1 GAL	LOW
	CHONDROPETALUM TECTORUM (SMALL CAPE RUSH)	1 GAL	LOW
VINES (SUCH AS):			
	BIGNONIA CAPREOLATA (CROSS VINE)	15 GAL	MOD

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SUPPLEMENTAL LANDSCAPE EXHIBITS

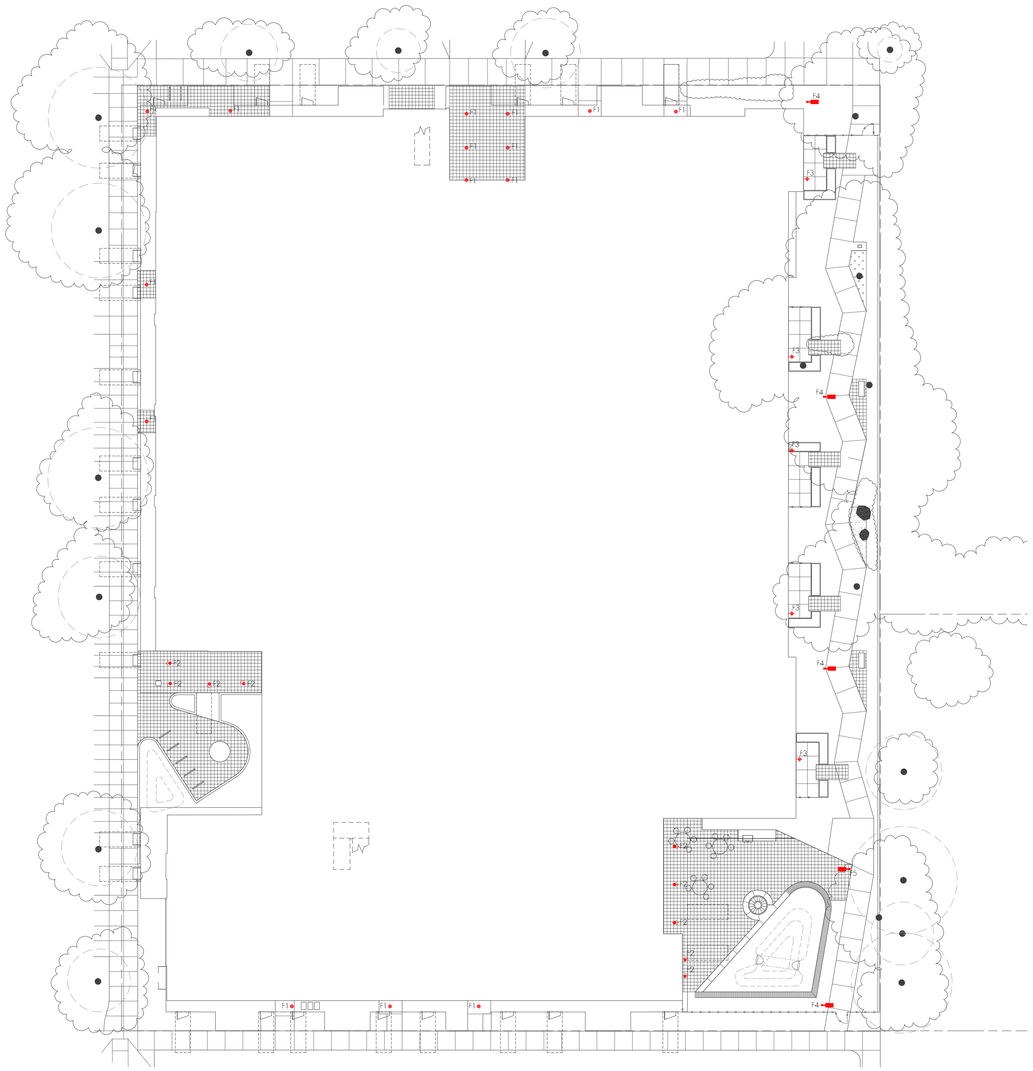
0' 10' 20'

22203

scale (printed at 22x34): 1" = 20'-0"

date: 01/20/2023

L003



LEGEND

- TYPE F1: RECESSED DOWNLIGHT
- TYPE F2: RECESSED DIRECTIONAL DOWNLIGHT
- TYPE F3: WALL MOUNTED SCONCE
- TYPE F4: POLE MOUNTED AREA LIGHT @ 9', TYPE II OPTIC
- TYPE F5: POLE MOUNTED AREA LIGHT @ 9', TYPE III OPTIC
- TYPE F6: WALL MOUNTED STEPLIGHT
- TYPE F7: RECESSED DOWNLIGHT

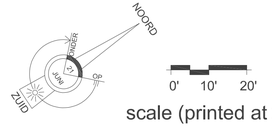
KGM KAPLAN GEHRING McCARROLL ARCHITECTURAL LIGHTING
270 CORAL CIRCLE EL SEGUNDO, CA 90245

David Baker Architects

Charities Housing

3001-3017 EL CAMINO REAL

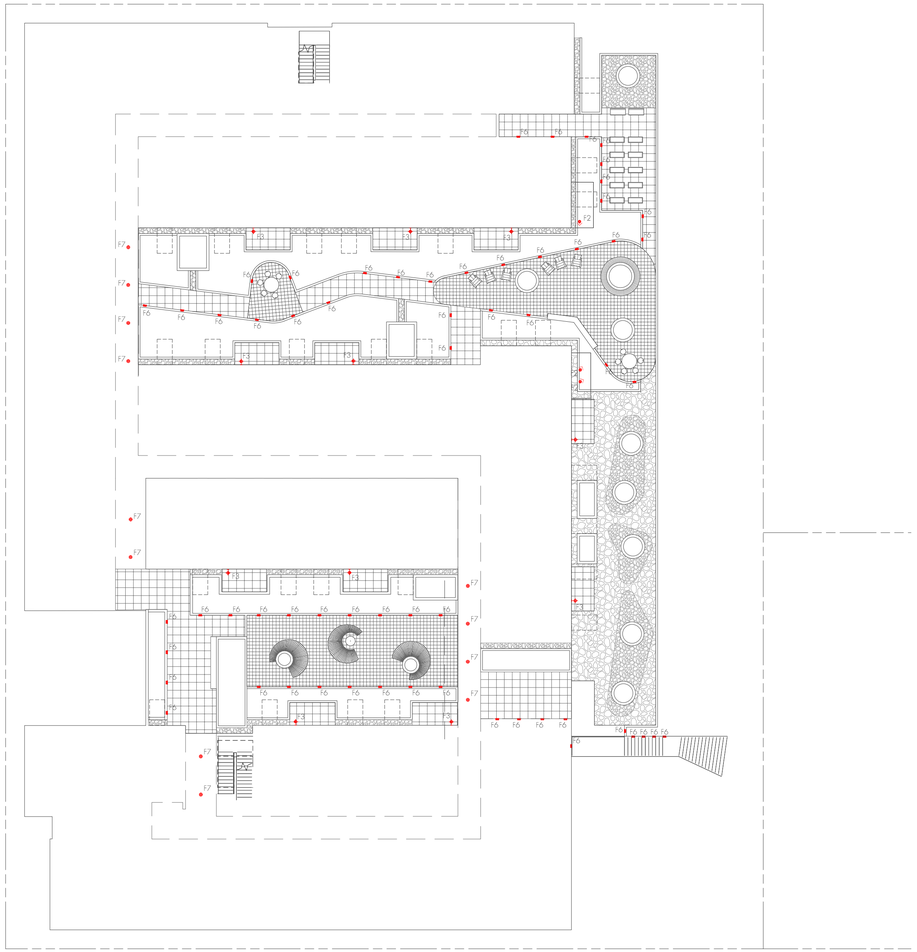
LIGHTING PLAN
LEVEL 1



scale (printed at 22x34): 1" = 20'-0"
date: 01/24/2023

22203

LT005



LEGEND

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- TYPE F6: WALL MOUNTED STEPLIGHT
- TYPE F7: RECESSED DOWNLIGHT

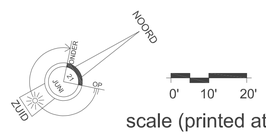
KGM KAPLAN GEHRING McCARROLL ARCHITECTURAL LIGHTING
270 CORAL CIRCLE EL SEGUNDO, CA 90245

David Baker Architects

Charities Housing

3001-3017 EL CAMINO REAL

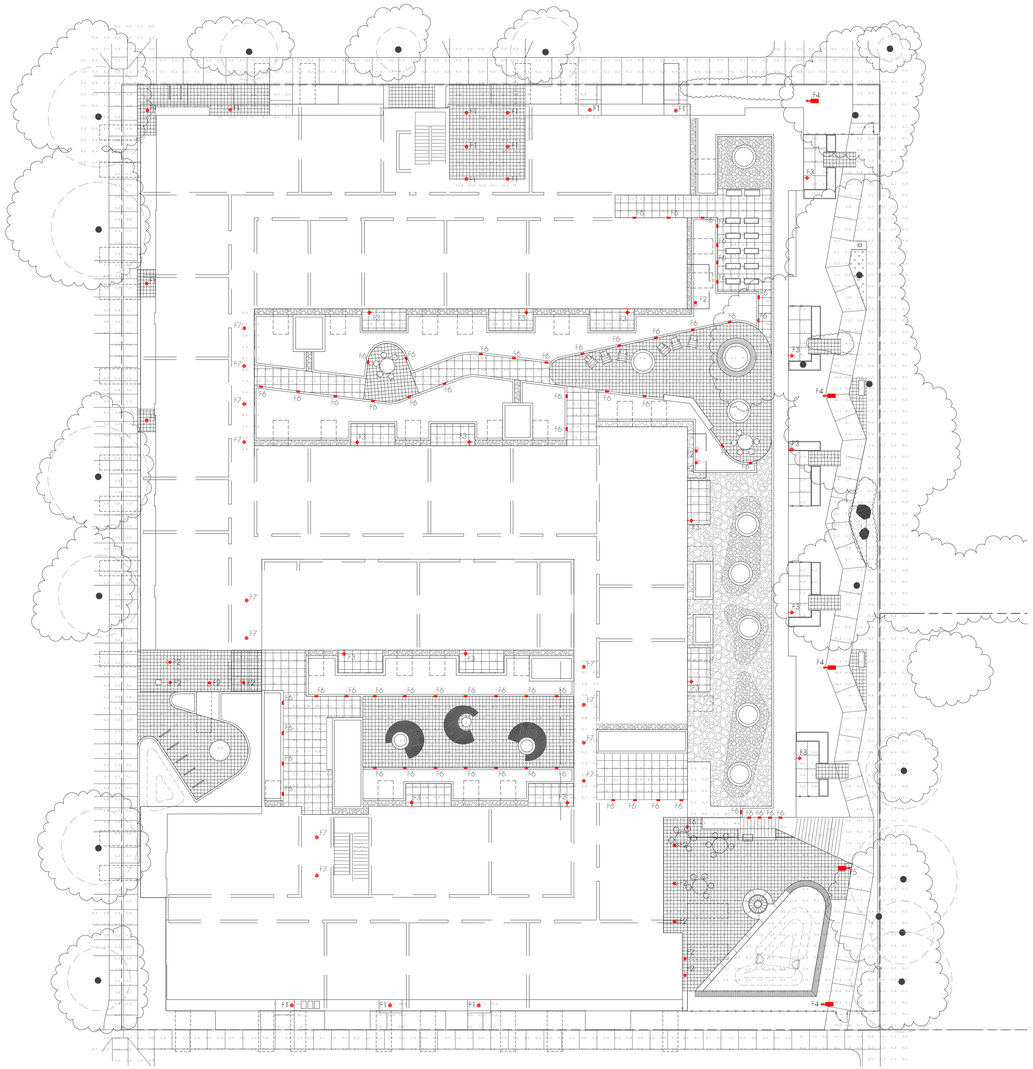
LIGHTING PLAN - LEVEL 2



scale (printed at 22x34): 1" = 20'-0"
date: 01/24/2023

22203

LT006



LEGEND

- TYPE F1: RECESSED DOWNLIGHT
- TYPE F2: RECESSED DIRECTIONAL DOWNLIGHT
- TYPE F3: WALL MOUNTED SCONCE
- TYPE F4: POLE MOUNTED AREA LIGHT @ 9', TYPE II OPTIC
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- TYPE F7: RECESSED DOWNLIGHT

KGM KAPLAN GEHRING McCARROLL ARCHITECTURAL LIGHTING
270 CORAL CIRCLE EL SEGUNDO, CA 90245

David Baker Architects

Charities Housing

3001-3017 EL CAMINO REAL

EXTERIOR LIGHTING CALCULATION

NOORD
ZUID
0' 10' 20'

scale (printed at 22x34): 1" = 20'-0"
date: 01/24/2023

22203

LT007

ALPHABET

Alphabet by Ledra Brands, Inc. | 88 Maxwell Irvine, CA 92618 | PH: 714.259.9959 FAX: 714.259.9969 | AlphabetLighting.com

JOB NAME

CONTACT

ORDERING CODE

ECO NU6" Round Downlight

LM-79

COB

eldoLED

DESCRIPTION

The EcoNU6RD is an economical and highly efficient spec grade 6" recessed downlight with thoughtful construction and pleasing aesthetics. Offered standard with premium dimming using EldoLED 1% flicker free drivers 120V-277V universal voltage. Also offered 347V. A minimalistic look is achieved with an ultrathin 1/16" trim that is only 5/16" wide. Color choices of both trim and bezel are offered for a customized look. Several beam angles available, plus an optional high-efficiency BrightView diffused lens for smooth light distribution and obscured LED image.

HOUSING

Electrocoated 16-gauge cold-rolled steel provides enhanced structural reinforcement and rust prevention. Superior, UL-certified, injection-molded commercial-grade Lexan™ (PC) is used for the frame and regressed bezel trim. Lexan provides unmatched durability and impact resistance, and is tested for UV resistance and water exposure in outdoor applications. The thermally-advanced, anodized heat sink uses 6063 aluminum alloy. Wet location rated is offered standard. A 90-minute constant-power IOTA emergency battery backup is available.

MOUNTING

An advanced mounting system allows for quick and secure installation with LED and driver serviceability from below the ceiling. The LED assembly uses die-cast aluminum mounting clamp grips (MCG) that swing out to tighten onto variable ceiling thicknesses. Integrated rubber feet on each MCG provide a non-slip vibration-resistant installation. The hidden MCG system is accessible from below ceiling by removing the snap-in lens/bezel assembly with either the included suction cup or a screwdriver blade. Integrated bar hangers feature integral toothed nails, T-bar mounting slots with locking holes, tabs for post positioning. Retrofit mounting option allows for installation from below ceiling by use of compact driver box. No risk damaging LED or bezel assembly during installation, these are installed during last steps. Fixture and driver are easily removed for servicing after install without damaging drywall.

MOUNTING DIMENSIONS	CEILING THICKNESS	CEILING CUTOUT
6in	1/8" to 2"	6-3/8" diameter

New Construction Bar Hangers (included)	Mounting Length: 14-3/4" to 28"
Extension Kit p/n: K20266 (ordered separately, 1 per fixture)	Extends a pair of Bar Hangers Total Mounting Length: 29" to 49"

LISTINGS

- ETLus Listed to UL1598, cETL Listed to CSA C22.2 #250.0
- IP65 with lens - Suitable for wet locations with lens - Suitable for damp locations without lens
- Non-conductive, Lexan dead-front construction
- Made in the USA - meets the requirements of the Buy American provision within the ARRA

RATINGS / CERTIFICATIONS	NC	RET	IC	ICAT	CP
Type non-IC	✓	✓			✓
Type IC			✓	✓	✓
Chicago Plenum (CCEA)					✓
Suitable for air handling plenums				✓	✓
Reduced airflow (with lens) ASTM E283	✓	✓	✓	✓	✓

LED INFO

- 90 CRI: SDCM = 2-step MacAdam Ellipse, Lumen Maintenance: L_{70} > 49,500 hrs
- 80 CRI: SDCM = 3-step MacAdam Ellipse, Lumen Maintenance: L_{70} > 49,500 hrs

ORDERING CODE

SERIES	NU6	
TYPE	RD	round downlight
LED	SW	static white
DELIVERED LUMENS	07LM	660 lm
	10LM	880 lm
	13LM	1080 lm
	15LM	1220 lm
	20LM	1650 lm
	25LM	2000 lm
	30LM	2500 lm
	40LM	3150 lm
	50LM	4000 lm
	Estimated Delivered Lumens = [Delivered Lumen Value] x [CCT Multiplier] x [Reflector Multiplier] Standard Configuration: 3000K 80CRI HE60	
CCT	22K	2200K
	27K	2700K
	30K	3000K
	35K	3500K
	40K	4000K
	50K	5000K

CCT	2200K	2700K	3000K	3500K	4000K	5000K
CRI	90+	90+	90+	90+	90+	90+
	80	80	80	80	80	80
CCT MULTIPLIER FOR LUMEN OUTPUT	0.85	0.93	1.00	1.03	1.07	1.10

CRI	80	80 CRI
	90	90 CRI
REFLECTOR & LM MULTIPLIER	HE40	40° high efficiency diffused lens (0.89)
	HE60	60° high efficiency diffused lens (1.00)
	SD30	30° semi-specular with clear lens (0.92)
	SD30	30° semi-specular with clear lens (0.89)
	SD45	45° semi-specular with clear lens (0.92)
	SD60	60° semi-specular with clear lens (0.92)
	D40	40° diffused with clear lens (0.86)
	D60	60° diffused with clear lens (0.91)
	WH70	70° brilliant white with clear lens (0.95)
		10° narrow beam angle, see page 2 for details
NO LENS OPTION	NL*	no lens
ACCESSORIES	HCL*	honeycomb louver
VOLTAGE	120	120V
	277	120V-277V
	347*	347V
DIMMING	10V*	standard 0-10V dimming to 1%
	DIM10*	eldoLED flicker free 0-10V dimming to 1%
	DIM1%2*	eldoLED flicker free 0-10V dimming to 0%
	DALI*	eldoLED flicker free DALI dimming to 1%
	DALI2*	eldoLED flicker free DALI dimming to 0%
	DMXZ	DMX dim to zero
	LTE*1,2	Lutron Hi-lume 2-Wire (Triac) dimming to 1%
	LUT*	Lutron Hi-lume Ecosystem dimming to 1%, Softon & Fade-to-Black, leading & trailing edge (Triac/ELV) dimming to 1%
	LUT0*	Lutron Hi-lume Ecosystem dimming to 0.1%, Softon & Fade-to-Black, leading & trailing edge (Triac/ELV) dimming to < 10%
	ELV*1,2	leading & trailing edge (Triac/ELV) dimming to 1%
	ELV1*1,2	leading & trailing edge (Triac/ELV) dimming to 1%
MOUNTING OPTIONS	NC	new construction with ceiling fitting plate
	IC*	insulation contact housing
	ICAT*	insulation contact/airtight housing
	CP*	chicago plenum housing
	RET	retrofit, no ceiling fitting plate
TRIM COLOR	BK	black
	WH	white
	MC	matte chrome
	BZ	bronze
	WT	wheat
BEZEL COLOR	BK	black
	WH	white
	BZ	bronze
	MC	matte chrome
	WT	wheat
ELECTRICAL OPTIONS	EM3*	emergency battery backup, 90 minutes at 7 watts to LED
	EM12*	emergency battery backup, 90 minutes at 12 watts to LED

ORDERING CODE

Follow the steps to specify your fixture, example:
NU6 - RD - SW - 30LM - 35K - 90 - HE40 - 120 - DIM10 - NC - WH - WH - EM7

SW (LED)	POWER
DELIVERED LM	W (80/90 CRI)
660	8
880	9
1080	12
1200	14
1650	17
2000	20
2500	26
3180	32
4025	43

Power Factor ≥ 0.9

NOTES:
1. LTE/DIM not available in 2200K or 5000K.
2. ICAT/CP not available in 50LM.
3. "No lens" option available for 5530, 5540, 5560, D40, D60, or WH70 and is damp-location rated.
4. Driver uses liquid/mmc dimming curve as standard. For linear dimming curve add "LIN" after dimming code, i.e. DIM10LIN.
5. Triac/ELV dimming and LTE available in 120V only.
6. For integrated test switch add "ITS" after emergency backup code, i.e. EM12ITS. Test switch is mounted in the bezel of the fixture.
7. LUT not available in 50LM.
8. ELV not available in 22K, 30LM, 40LM, or 50LM.
9. 10K dimming not available in ELV,10 and 10LM.
10. DIM10 offered in 347V using a dedicated 347V Osram 0-10V 1% Driver except for 50LM. For 50LM and all other dimming options 347V is offered using a miniature Step-Down Transformer integrated with the Electrical Box. Triac and ELV dimming are not available.
11. HCL not available with lens. Multiply delivered lumens by (0.79) and beam spread by (0.80) when honeycomb louver is chosen.
12. Eco ELV1 and LTE not available in DYLM or 50LM.

TYPE F1

ALPHABET

ECO NU4

Round Adjustable

NSF AT airtight DF deadfront PR damp rated wet rated

Trim | Trimless | Trimless Millwork

COB eldoLED

PROJECT INFORMATION			
JOB NAME		TYPE	
ORDERING CODE			

20° - 55° BEAM
(Note: Specifications are subject to change without notice)

9mm COB PERFORMANCE DATA

LED LIGHT ENGINE	NOMINAL DELIVERED LUMENS	SYSTEM WATTAGE
10LM	880LM @30K/80CRI	9W
15LM	1280LM @30K/80CRI	13W
20LM	1670LM @30K/80CRI	17W
25LM	2020LM @30K/80CRI	22W
30LM	2410LM @30K/80CRI	27W
35LM	2840LM @30K/80CRI	34W
40LM	3180LM @30K/80CRI	40W
10LM	740LM @30K/90CRI	9W
15LM	1080LM @30K/90CRI	13W
20LM	1410LM @30K/90CRI	17W
25LM	1710LM @30K/90CRI	22W
30LM	2030LM @30K/90CRI	27W
35LM	2410LM @30K/90CRI	34W
40LM	2710LM @30K/90CRI	40W
Notes	Delivered lumens based on 35D optic with no lens, (see page 2)	

15° BEAM
(Note: Specifications are subject to change without notice)

6mm COB PERFORMANCE DATA

LED LIGHT ENGINE	NOMINAL DELIVERED LUMENS	SYSTEM WATTAGE
10LM	870LM @30K/80CRI	11W
15LM	1220LM @30K/80CRI	19W
20LM	1550LM @30K/80CRI	31W
10LM	730LM @30K/90CRI	11W
15LM	1025LM @30K/90CRI	19W
20LM	1310LM @30K/90CRI	31W
Notes	Delivered lumens based on 15D optic with no lens, (see page 2)	

9.5° BEAM
(Note: Specifications are subject to change without notice)

4.5mm COB PERFORMANCE DATA

LED LIGHT ENGINE	NOMINAL DELIVERED LUMENS	SYSTEM WATTAGE
10LM	705LM @30K/80CRI	17.5W
10LM	595LM @30K/90CRI	17.5W
Notes	Delivered lumens based on 9D optic with SBL lens, (see page 2)	

FEATURES

- True 40° Tilt with <5% beam disruption (clipping)
- Zero ceiling line obstruction at Full Tilt
- Concentric Tilt Tracking ensures minimal light loss
- 9° - 55° optical beam control
- UGR <5
- Multiple mounting, glare control options, trims, and finishes available

DIMMING AND CONTROLS

- eldoLED flicker free 0-10V dimming to 0% and 1%
- eldoLED flicker free DALI dimming to 0% and 1%
- DMX dim to zero
- Lutron Hi-lumen 2-Wire (Triac and Eco System) dimming to 0.1% and 1%
- Leading & trailing edge (Triac/ELV) dimming to 1%
- Casambi bluetooth dimming to 0.1%
- NLight control interface dimming to 0%

CONSTRUCTION

- Shatter proof acrylic bezel lens
- Lexan Optimized for wireless signal controls
- Electrocoated 16-gauge cold-rolled steel construction
- Accommodates ceiling thickness from 0.4" to 2.0"

LED

- 90 CRI: SDCM = 2-step MacAdam Ellipse, Lumen Maintenance: L_{70} > 66,000 hrs
- 80 CRI: SDCM = 2-step MacAdam Ellipse, Lumen Maintenance: L_{70} > 66,000 hrs

LISTING

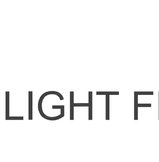
- ULus Listed to UL1598 & UL2108; cUL Listed to CSA C22.2 #250.0
- IP65 with lens - Suitable for wet locations with lens - Suitable for damp locations without lens
- Dead-front construction (Shower Approved)
- Made in the USA - meets the requirements of the Buy American provision within the ARRA
- NSF/ANSI-2 with lens
- 5 Year Limited warranty

ELECTRICAL

- 120V only Triac/ELV, 120V-277V
- Power factory ≥ 0.9
- 2kV driver input surge protection
- Remote emergency test switch
- 7W, 10W (T20 CEC) and 12W EM 90min battery
- Max. ambient installation temperature 95°F (35°C)

FIXTURE HEIGHT

TRIMMED



TRIMLESS

MILLWORK

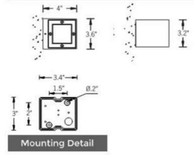
TYPE F2

UGI-31621

Gino 2 Type I, II, III, IV & V Downlight

LIGMAN LIGHTING USA

6w LED 310 - 444 Lumens
IP65 - Suitable For Wet Locations
IK07 - Impact Resistant
Weight 2.2 lbs



Mounting Detail

Construction

Aluminum
Less than 0.1% copper content – Marine Grade 6060 extruded & LM6 Aluminum High Pressure die casting provides excellent mechanical strength , clean detailed product lines and excellent heat dissipation.

Pre paint
8 step degrease and phosphate process that includes deoxidizing and etching as well as a zinc and nickel phosphate process before product painting.

Memory Retentive -Silicon Gasket
Provided with special injection molded "fit for purpose" long life high temperature memory retentive silicon gaskets. Maintains the gaskets exact profile and seal over years of use and compression.

Thermal management
LM6 Aluminum is used for its excellent mechanical strength and thermal dissipation properties in low and high ambient temperatures. The superior thermal heat sink design by Ligman used in conjunction with the driver, controls thermals below critical temperature range to ensure maximum luminous flux output, as well as providing long LED service life and ensuring less than 10% lumen depreciation at 50,000 hours.

Surge Suppression
Standard 10kv surge suppressor provided with all fixtures.

BUG Rating
B0 - U0 - G0

Finishing
All Ligman products go through an extensive finishing process that includes fettling to improve paint adherence.

Paint
UV Stabilized 4.9Mil thick powder coat paint and baked at 200 Deg C.
This process ensures that Ligman products can withstand harsh environments.
Rated for use in natatoriums.

Hardware
Provided Hardware is Marine grade 316 Stainless steel.

Anti Seize Screw Holes
Tapped holes are infused with a special anti seize compound designed to prevent seizure of threaded connections, due to electrolysis from heat, corrosive atmospheres and moisture.

Crystal Clear Low Iron Glass Lens
Provided with tempered, impact resistant crystal clear low iron glass ensuring no green glass tinge.

Optics & LED
Precise optic design provides exceptional light control and precise distribution of light. LED CRI > 80

Lumen - Maintenance Life
L80 /B10 at 50,000 hours (This means that at least 90% of the LED still achieve 80% of their original flux)

Façade-mounted building and area lighting range. Sleek, compact and expansive luminaire family with lighting packages and optics to address any need.

A range of small, square and rectangular wall mounted luminaires with options of upward or downward light distributions. Ideally suited to illuminate the wall and surfaces in front of wall and for light accents on vertical surfaces using high efficiency LED's. The Gino is suitable for indoor and outdoor applications and provides a clean, visually appealing solution for small, unobtrusive wall mounted luminaires.

This luminaire is available in 2 different sizes and in combinations of down, up or up/down light distributions. The Gino 1 and Gino 2 have a decorative spike option for added lighting effects. The Gino 1 and 2 mounts over a 3" octagonal junction box, a 4" j-box cover plate is available upon request. Clear lens standard.

Additional Options (Consult Factory For Pricing)

SCDT
Surface Conduit Decorative Trim

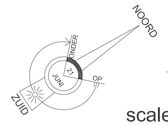
TYPE F3

KGM KAPLAN GEHRING McCARROLL ARCHITECTURAL LIGHTING
270 CORAL CIRCLE EL SEGUNDO, CA 90245

David Baker Architects

Charities Housing

3001-3017 EL CAMINO REAL LIGHT FIXTURES



0' 10' 20'

scale (printed at 22x34): 1" = 20'-0"
date: 01/24/2023

22203

LT008

ULI-21241

Light Linear PT 8 Single Head Streetlight

microVos TECHNOLOGY

LIGMAN LIGHTING USA

55w LED
6193 Lumens

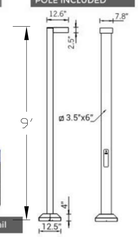
Weight 52.4 lbs

IP65
Suitable for wet locations

IK08
Impact Resistant (Vandal Resistant)

EPA - 0.50

POLE INCLUDED



Mounting Detail

Construction

Aluminum
Less than 0.1% copper content – Marine Grade 6060 extruded & LM6 Aluminum High Pressure die casting provides excellent mechanical strength , clean detailed product lines and excellent heat dissipation.

Pre paint
8 step degrease and phosphate process that includes deoxidizing and etching as well as a zinc and nickel phosphate process before paint application.

Memory Retentive -Silicon Gasket
Provided with special injection molded "fit for purpose" long life high temperature memory retentive silicon gaskets. Maintains the gaskets exact profile and seal over years of use and compression.

Thermal management
LM6 Aluminum is used for its excellent mechanical strength and thermal dissipation properties in low and high ambient temperatures. The superior thermal heat sink design by Ligman used in conjunction with the driver, controls thermals below critical temperature range to ensure maximum luminous flux output, as well as providing long LED service life and ensuring less than 10% lumen depreciation at 50,000 hours.

Surge Suppression
Standard 10kv surge suppressor provided with all fixtures.

BUG Rating
B1 - U0 - G1

Finishing.
All Ligman products go through an extensive finishing process that includes fettling to improve paint adherence.

Paint
UV Stabilized 4.9Mil thick powder coat paint and baked at 200 Deg C.
This process ensures that Ligman products can withstand harsh environments.
Rated for use in natatoriums.

Hardware
Provided Hardware is Marine grade 316 Stainless steel.

Anti Seize Screw Holes
Tapped holes are infused with a special anti seize compound designed to prevent seizure of threaded connections, due to electrolysis from heat, corrosive atmospheres and moisture.

Crystal Clear Low Iron Glass Lens
Provided with tempered, impact resistant crystal clear low iron glass ensuring no green glass tinge.

Optics & LED
Precise optic design provides exceptional light control and precise distribution of light. LED CRI > 80

Lumen - Maintenance Life
L80 /B10 at 50,000 hours (This means that at least 90% of the LED still achieve 80% of their original flux)

Public realm contemporary column family. Stylish but technically precise area lighting solutions as part of a large flexible family.

Light Linear PT is an elegant minimalistic lighting column that is suitable for both modern and classic architecture. Ideal for creating visual guidance with exceptional visual comfort. The dual sealed optical chamber with integrated heat sinks houses a range of field interchangeable optically controlled LED's, providing Type II, III, IV & V distribution, as well as variations of this for precise light distribution requirements.

An example of this, is using a combination of Type II and Type IV distribution optics inside the same fixture. This product range is available in 54w, 80w, 106w & 152w options, as a single & double head styles. Customer specific wattages can be provided, contact the factory for more information.

This luminaire complies to Dark Sky requirements.
The sleek and minimalistic shape provides distinctive lighting effects by night and decorative urban effect during the day. Suitable for use in pedestrian precincts, building surrounds, shopping centers, squares, parks and parking lots.

This product range is complemented with high performance optics in the bollard and wall mounted luminaires, to provide a consistent range of design aesthetics for the project. See website for more information. Poles can be provided with GFCI boxes positioned to specific heights specified by the customer. A flat low profile hand hole cover with vandal resistant screws is provided for easy installation.

Internal house side shields are available as an option.
Available with a selection of integral electronic drivers and dimming electronic drivers as well as a provision to install wireless lighting controls to integrate with building management systems, as well as pole mounted occupancy sensors [contact the factory for more information] Easy access to the luminaire for maintenance. (WATT-ADJ) This luminaire is provided with a programmable driver so that specific wattage requirements can be achieved. These settings are done at the factory during assembly. (See options on page 2)

Additional Options (Consult Factory For Pricing)

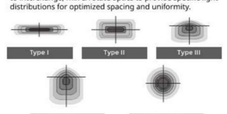
OS
Occupancy Sensor

A90991
Zhaga Book 18

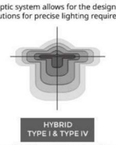
A90891
NEMA 7

microVos TECHNOLOGY

Ligman's micro Variable Optical System provides the ability to interchange, mix & rotate optics to provide specific light distributions for optimized spacing and uniformity.



The variable optic system allows for the designer to create hybric distributions for precise lighting requirements.



HYBRID
TYPE I & TYPE IV

TYPE F4/F5

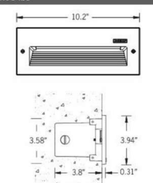
URA-40581

Rado 5 Recessed

(LLT# # URA-40582)

LIGMAN LIGHTING USA

11w LED 319 Lumens • 17w LED 447 Lumens
IP65 • Suitable For Wet Locations
IK09 • Impact Resistant (Vandal Resistant)
Weight 3 lbs



Construction

Aluminum Casting
Less than 0.1% copper content – Marine Grade 6060 extruded & LM6 Aluminum High Pressure die casting provides excellent mechanical strength , clean detailed product lines and excellent heat dissipation.

Pre paint
8 step degrease and phosphate process that includes deoxidizing and etching as well as a zinc and nickel phosphate process before product painting.

Memory Retentive -Silicon Gasket
Provided with special injection molded "fit for purpose" long life high temperature memory retentive silicon gaskets. Maintains the gaskets exact profile and seal over years of use and compression.

Thermal management
LM6 Aluminum is used for its excellent mechanical strength and thermal dissipation properties in low and high ambient temperatures. The superior thermal heat sink design by Ligman used in conjunction with the driver, controls thermals below critical temperature range to ensure maximum luminous flux output, as well as providing long LED service life and ensuring less than 10% lumen depreciation at 50,000 hours.

Surge Suppression
Standard 10kv surge suppressor provided with all fixtures.

BUG Rating
B0 - U0 - G1

Finishing.
All Ligman products go through an extensive finishing process that includes fettling to improve paint adherence.

Paint
UV Stabilized 4.9Mil thick powder coat paint and baked at 200 Deg C. This process ensures that Ligman products can withstand harsh environments. Rated for use in natatoriums.

Inspired by Nature Finishes
The Inspired by nature finishing is a unique system of decorative powder coating. Our metal decoration process can easily transform the appearance of metal or aluminum product into a wood grain finish.

This patented technology enables the simulation of wood grain, and even marble or granite finish through the use of decorative powder coating.

The wood grain finish is so realistic that it's almost undistinguishable from real wood, even from a close visual inspection. The system of coating permeates the entire thickness of the coat and as a result, the coating cannot be removed by normal rubbing, chipping, or scratching.

The Coating Process
After pre treatment the prepared parts are powder coated with a specially formulated polyurethane powder. This powder provides protection against wear, abrasion, impact and corrosion and acts as the relief base color for the finalized metal decoration.

The component is then wrapped with a sheet of non-porous film with the selected decoration pattern printed on it using special high temperature inks.

This printed film transfer is vacuum-sealed to the surface for a complete thermo-print and then transferred into a customized oven. The oven transforms the ink into different forms within the paint layer before it becomes solid. Finally, the film is removed, and a vivid timber look on aluminum remains.

Wood grain coating can create beautiful wood-looking products of any sort. There are over 300 combinations of designs currently in use. Wood grains can be made with different colors, designs, etc.

Our powder coatings are certified for indoor and outdoor applications and are backed by a comprehensive warranty. These coatings rise to the highest conceivable standard of performance excellence and design innovation.

Added Benefits
- Resistance to salt-acid room, accelerated aging
- Boiling water, lime and condensed water resistant
- Anti-Graffiti, Anti-Slip, Anti-Microbial, Anti-Scratch
- Super-durable (UV resistant)
- TGIC free (non-toxic)

Hardware
Provided Hardware is Marine grade 316 Stainless steel.

Anti Seize Screw Holes
Tapped holes are infused with a special anti seize compound designed to prevent seizure of threaded connections, due to electrolysis from heat, corrosive atmospheres and moisture.

Crystal Clear Low Iron Glass Lens
Provided with tempered, impact resistant crystal clear low iron glass ensuring no green glass tinge.

Optics & LED
Precise optic design provides exceptional light control and precise distribution of light. LED CRI > 80

Lumen - Maintenance Life
L80 /B10 at 50,000 hours (This means that at least 90% of the LED still achieve 80% of their original flux)

Sturdy classic wall-recessed pathway and stair luminaire. Simple pleasing aesthetic and sturdy construction, perfect for retrofit applications with its multiple sizes offered.

A range of rectangular and square wall recessed luminaires, with an indirect optical system, offering high vandal resistance. Suitable for indoor or outdoor applications. The recessed LED eliminates all discomfort glare as light is directed to the ground providing illumination where it is needed and minimizing light spill.
This luminaire is provided with a powdercoated high pressure die-cast aluminum back box and can be pre shipped to the jobsite for concrete pour or masonry applications.
This fixture is suitable for lighting footpaths, stairs, squares and entrances.

The Rado range has a matching bollard offering to complement the recessed product. See bollard section on the Ligman website.

All Ligman fixtures can be manufactured using a special pre-treatment and coating process that ensures the fixture can be installed in natatoriums as well as environments with high concentrations of chlorine or salt and still maintain the 5 year warranty. For this natatorium rated process please specify NAT in options.

CITY OF FLAGSTAFF & TURTLE FRIENDLY COMPLIANT

Narrow-Spectrum Amber LEDs
Peak wavelength between 585 & 595 nanometers and a full width of 50% power no greater than 15 nanometers.

TYPE F6

RAYON LIGHTING

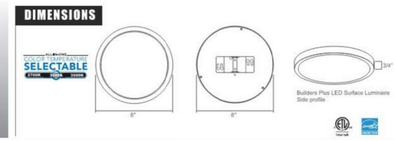
RBS7

7" BUILDERS PLUS ROUND LED SURFACE LUMINAIRE (0-10V)

PROJECT:
MODEL #:
LOCATION:
CONTACT:

7" ROUND LED SLIM SURFACE

DIMENSIONS



USE OF PRODUCT
The 7" Builders Plus LED Surface Luminaire Series is the Ideal for both remodel or new construction applications.

BUILDERS PLUS SLIM SURFACE FEATURES
Wattage: 15W
Lumen: 1000 lm
Color Temperature Selectable: 2700K, 3000K, 3500K
CRI: 90
LED Life: 50,000 Hours
Input voltage: AC 277V 50/60Hz
Warranty: 5 year limited warranty

COLOR TEMPERATURE SELECTABLE
This all-in-one CCT Shift LED surface mount luminaire allows for easy control between 2700K, 3000K, or 3500K with a simple switch on the fixture.

FRAME CONSTRUCTION
High quality plastic material with Edge-lit technology to produce a smooth uniform lighting effect. Suitable for most 4" junction box.

DIMMING
100%-10% Dimming capability, this fixture is compatible with industry standard 0-10V dimmers

CERTIFICATION:
- RBS wet location Listed
- ETL
- Energy Star

ORDERING INFO

RBS7	10	CTS	2	W
Series	Lumens	Color Temperature	Voltage	Finish
RBS7 - 7" Builder Plus ES9 Surface Luminaire	**10** - 1000 lm	**CTS** - Color temperature shift (2700K, 3000K, 3500K)	**2** - 277V (0-10V Dimming)	**W** - White

RAYON LIGHTING | www.rayonlighting.com | info@rayonlighting.com | tel: 323.446.2626 | fax:323.446.2606 | Specification and product availability subject to change without notice | 07/20

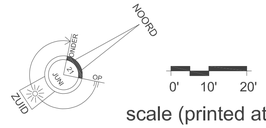
TYPE F7

KGM KAPLAN GEHRING McCARROLL ARCHITECTURAL LIGHTING
270 CORAL CIRCLE EL SEGUNDO, CA 90245

David Baker Architects

Charities Housing

3001-3017 EL CAMINO REAL LIGHT FIXTURES



scale (printed at 22x34): 1" = 20'-0"
date: 01/24/2023

22203

LT009

David Baker Architects

Charities Housing

3001-3017 EL CAMINO REAL

SITE PLAN

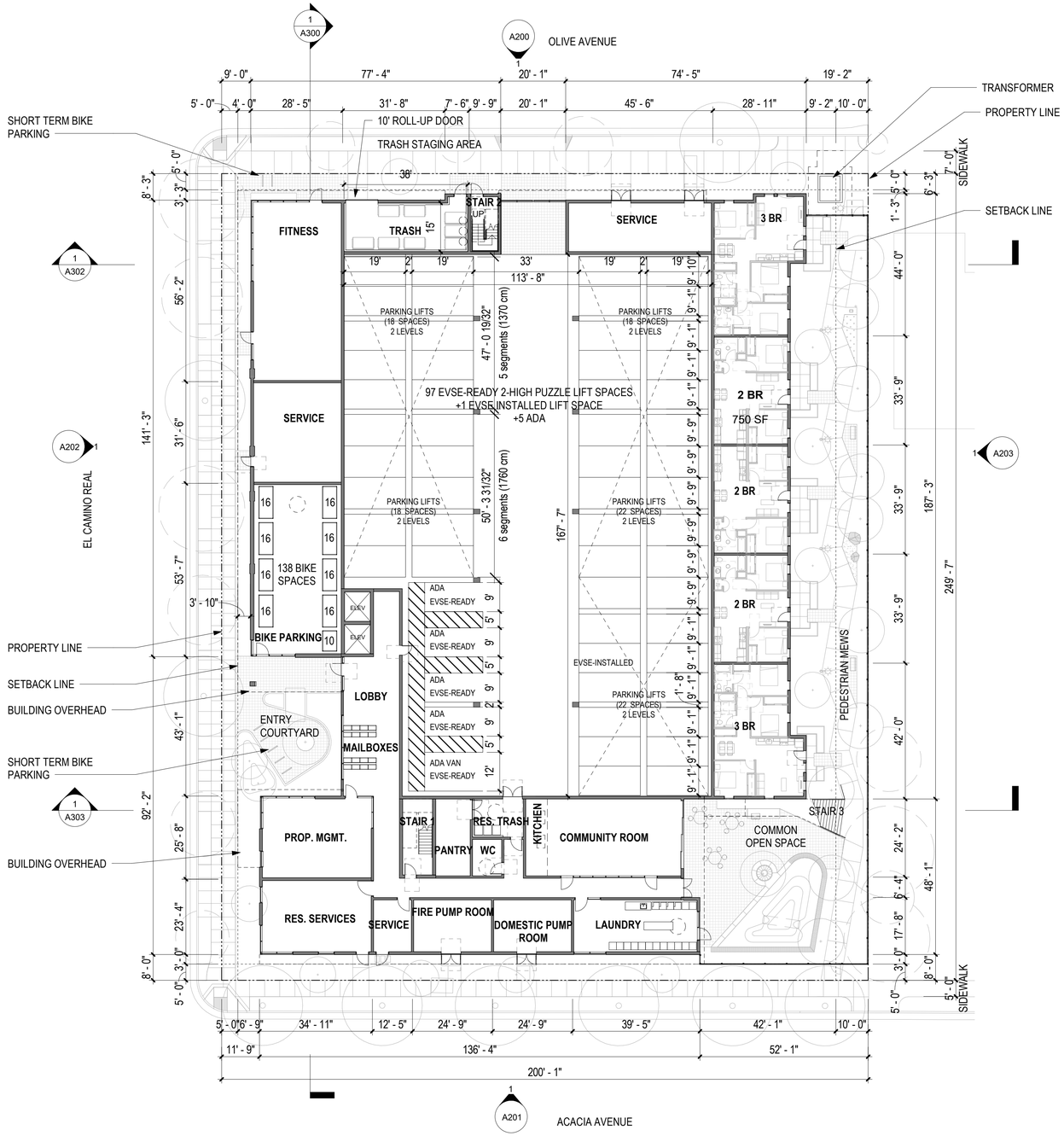
0' 10' 20' 40'

22203

scale (printed at 22x34): 1" = 40'-0"

date: 01/20/2023

A001



David Baker Architects

Charities Housing

3001-3017 EL CAMINO REAL

FLOOR PLAN - LEVEL 1

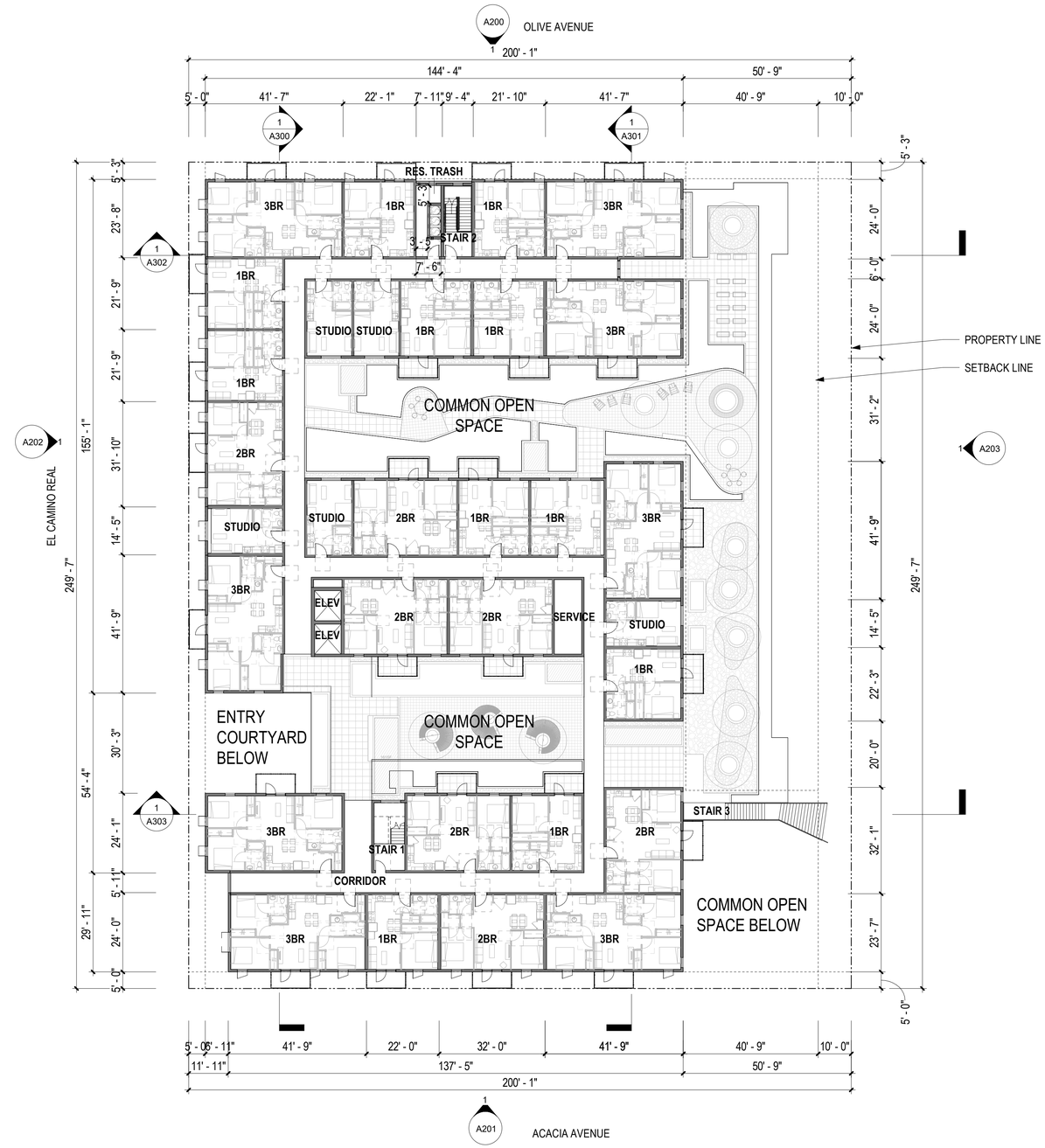
0' 10' 20'

scale (printed at 22x34): 1" = 20'-0"

date: 01/20/2023

22203

A110



David Baker Architects

Charities Housing

3001-3017 EL CAMINO REAL

FLOOR PLAN - LEVEL 2

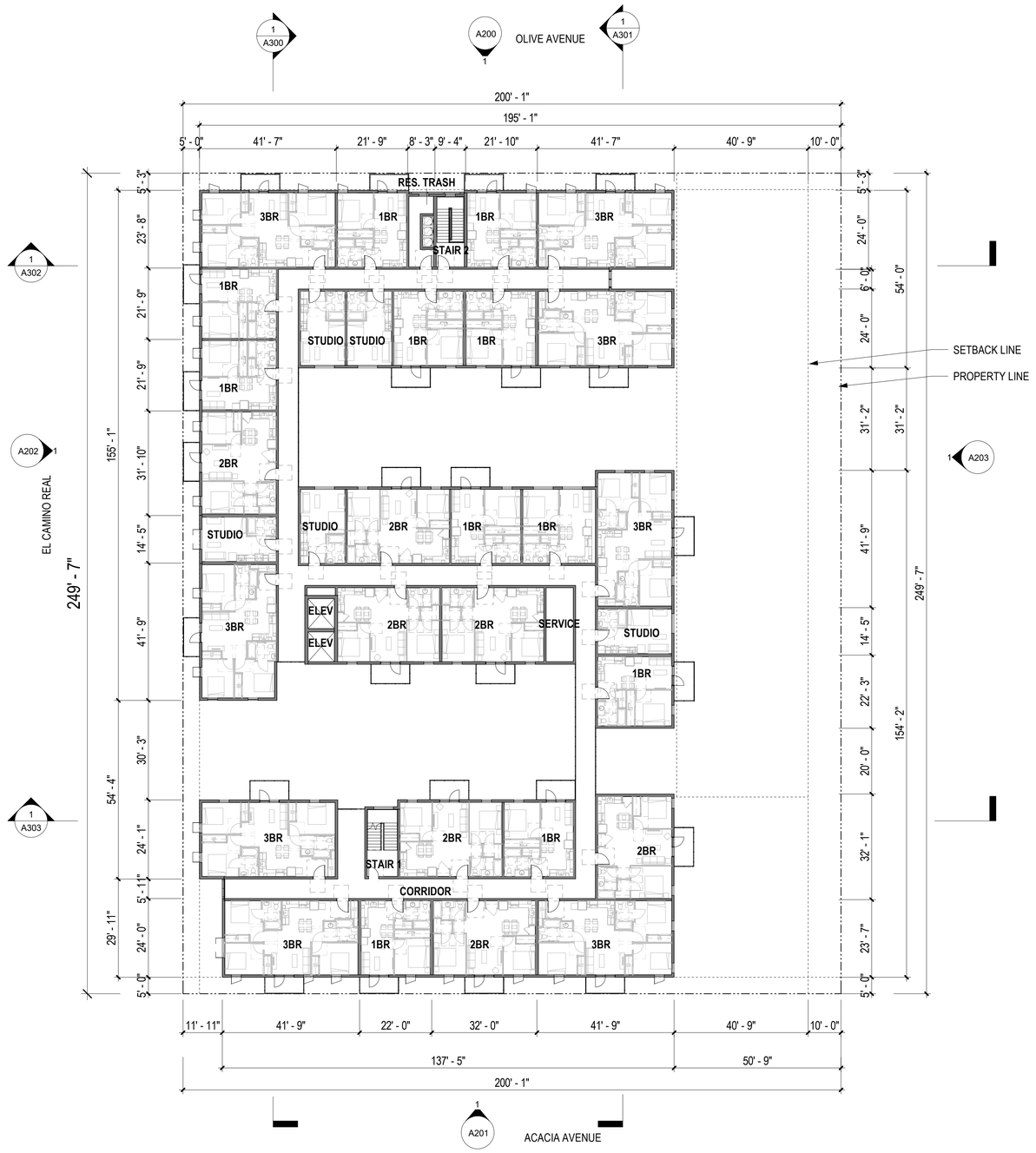
0' 10' 20'

scale (printed at 22x34): 1" = 20'-0"

date: 01/20/2023

22203

A120



David Baker Architects

Charities Housing

3001-3017 EL CAMINO REAL

FLOOR PLAN - LEVEL 3-5

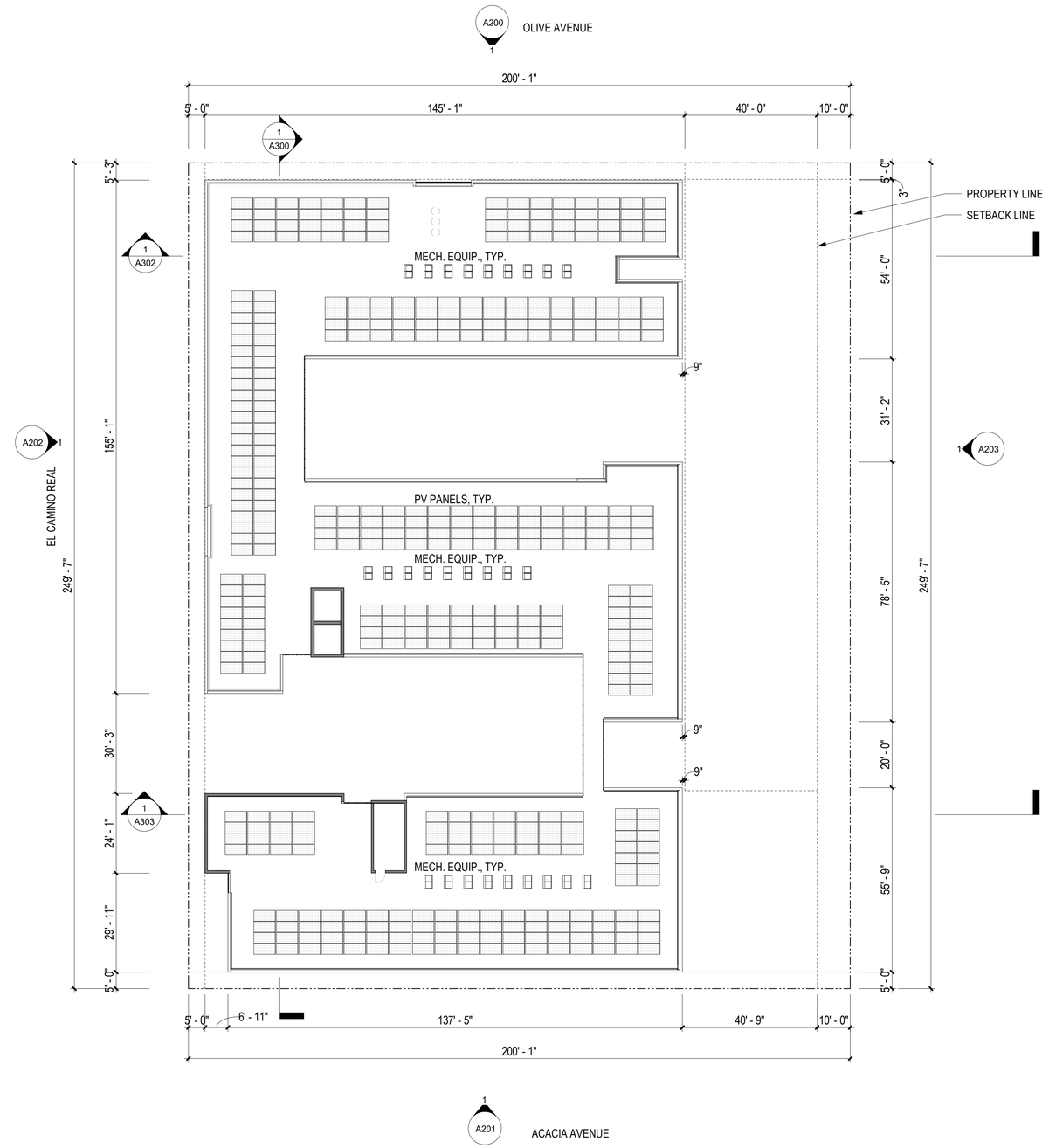
0' 10' 20'

22203

scale (printed at 22x34): 1" = 20'-0"

date: 01/20/2023

A130



David Baker Architects

Charities Housing

3001-3017 EL CAMINO REAL

ROOF PLAN

0' 10' 20'

scale (printed at 22x34): 1" = 20'-0"

date: 01/20/2023

22203

A190

1/8" = 1'-0"

WEST ELEVATION 1

MATERIAL LEGEND

C-1 CONCRETE

CP1 FIBER CEMENT CLADDING TYPE 1 (RANDOM BATTEN SIDING OR PANELS)

CP2 FIBER CEMENT CLADDING TYPE 2 (RANDOM BATTEN SIDING OR PANELS)

GL-1 STOREFRONT GLAZING

MT1 METAL RAILING

MT2 METAL RAILING PERFORATED

MT2 METAL SUNSHADE

WD-1 WOOD SIDING

WW-1 ALTERNATIVE MATERIAL

David Baker Architects

Charities Housing

3001-3017 EL CAMINO REAL

WEST (NW) ELEVATION

0' 10' 20'

scale (printed at 22x34): As indicated

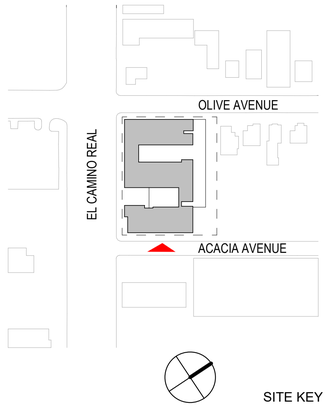
22203

date: 01/20/2023

A200

1/8" = 1'-0"

EAST ELEVATION 1



SITE KEY

MATERIAL LEGEND

C-1 CONCRETE

CP1 FIBER CEMENT CLADDING TYPE 1 (RANDOM BATTEN SIDING OR PANELS)

CP2 FIBER CEMENT CLADDING TYPE 2 (RANDOM BATTEN SIDING OR PANELS)

GL-1 STOREFRONT GLAZING

MT1 METAL RAILING

MT2 METAL RAILING PERFORATED

MT2 METAL SUNSHADE

WD-1 WOOD SIDING

WW-1 ALTERNATIVE MATERIAL

David Baker Architects

Charities Housing

3001-3017 EL CAMINO REAL

EAST (SE) ELEVATION

22203

scale (printed at 22x34): As indicated

date: 01/20/2023

A201

1/8" = 1'-0"

SOUTH ELEVATION 1

MATERIAL LEGEND

C-1 CONCRETE

CP1 FIBER CEMENT CLADDING TYPE 1 (RANDOM BATTEN SIDING OR PANELS)

CP2 FIBER CEMENT CLADDING TYPE 2 (RANDOM BATTEN SIDING OR PANELS)

GL-1 STOREFRONT GLAZING

MT1 METAL RAILING

MT2 METAL RAILING PERFORATED

MT2 METAL SUNSHADE

WD-1 WOOD SIDING

WW-1 ALTERNATIVE MATERIAL

SITE KEY

David Baker Architects

Charities Housing

3001-3017 EL CAMINO REAL

SOUTH (SW) ELEVATION

22203

scale (printed at 22x34): As indicated

date: 01/20/2023

A202

1/8" = 1'-0"

NORTH ELEVATION 1

MATERIAL LEGEND

C-1 CONCRETE

CP1 FIBER CEMENT CLADDING TYPE 1 (RANDOM BATTEN SIDING OR PANELS)

CP2 FIBER CEMENT CLADDING TYPE 2 (RANDOM BATTEN SIDING OR PANELS)

GL-1 STOREFRONT GLAZING

MT1 METAL RAILING

MT2 METAL RAILING PERFORATED

MT2 METAL SUNSHADE

WD-1 WOOD SIDING

WW-1 ALTERNATIVE MATERIAL

SITE KEY

David Baker Architects

Charities Housing

3001-3017 EL CAMINO REAL

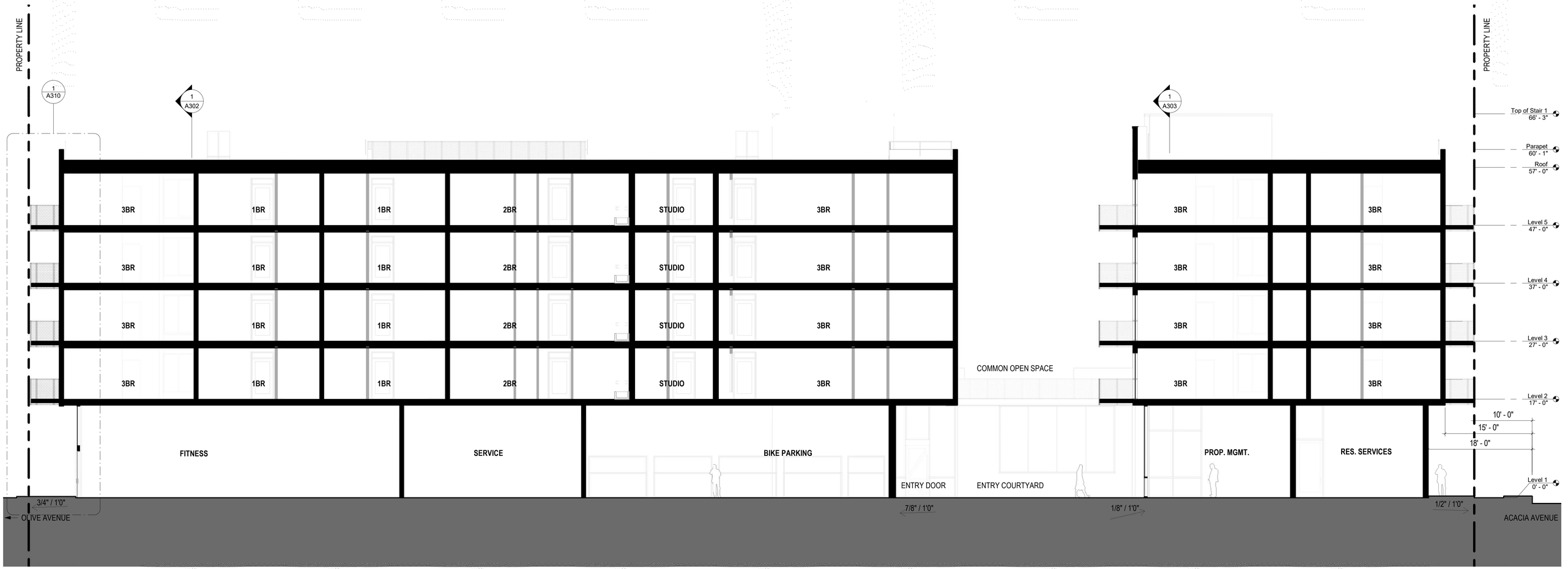
NORTH (NE) ELEVATION

22203

scale (printed at 22x34): As indicated

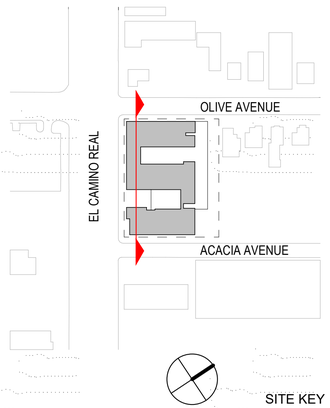
date: 01/20/2023

A203



1/8" = 1'-0"

NORTH-SOUTH SECTION 1 **1**



David Baker Architects

Charities Housing

3001-3017 EL CAMINO REAL

BUILDING SECTIONS - NORTH-SOUTH 01

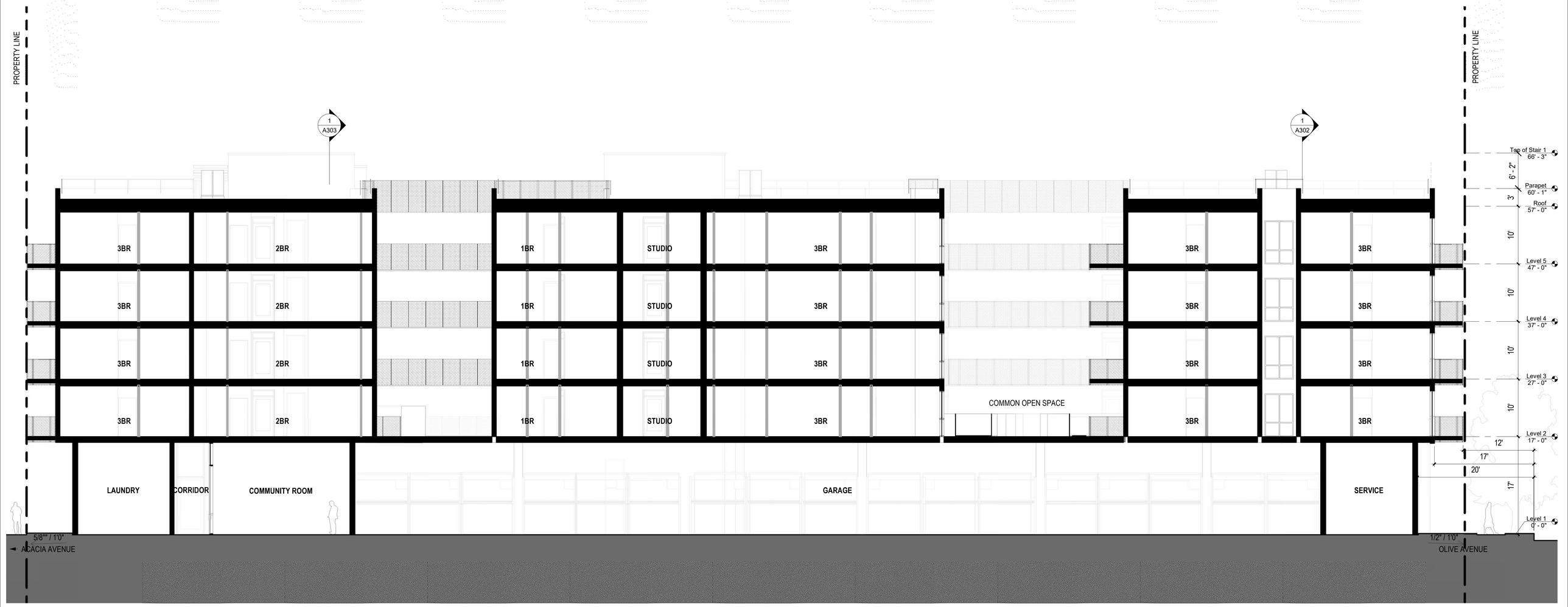
0' 10' 20'

22203

scale (printed at 22x34): As indicated

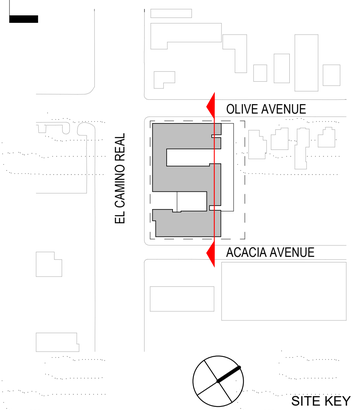
date: 01/20/2023

A300



1/8" = 1'-0"

NORTH-SOUTH SECTION 2 1



David Baker Architects

Charities Housing

3001-3017 EL CAMINO REAL

BUILDING SECTIONS - NORTH-SOUTH 02

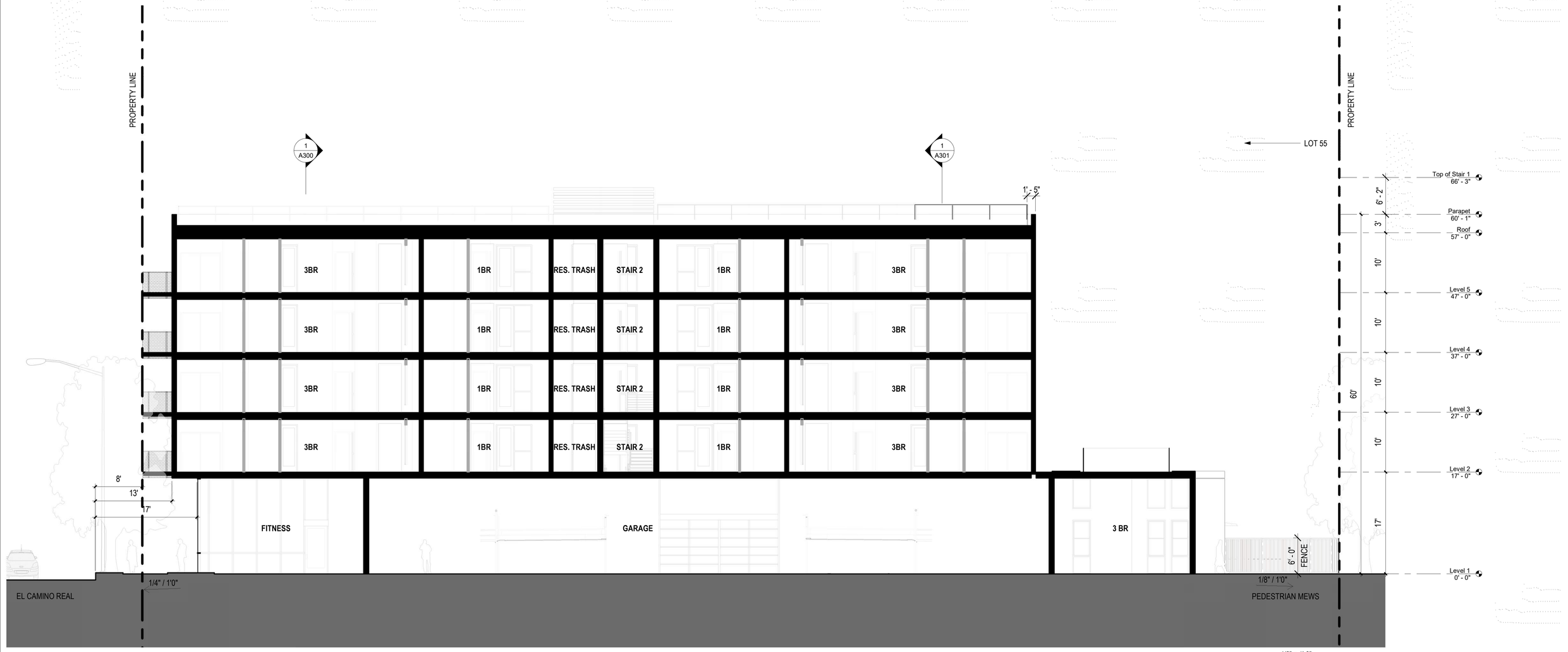
0' 10' 20'

22203

scale (printed at 22x34): As indicated

date: 01/20/2023

A301



David Baker Architects

Charities Housing

3001-3017 EL CAMINO REAL

BUILDING SECTIONS - EAST-WEST 01

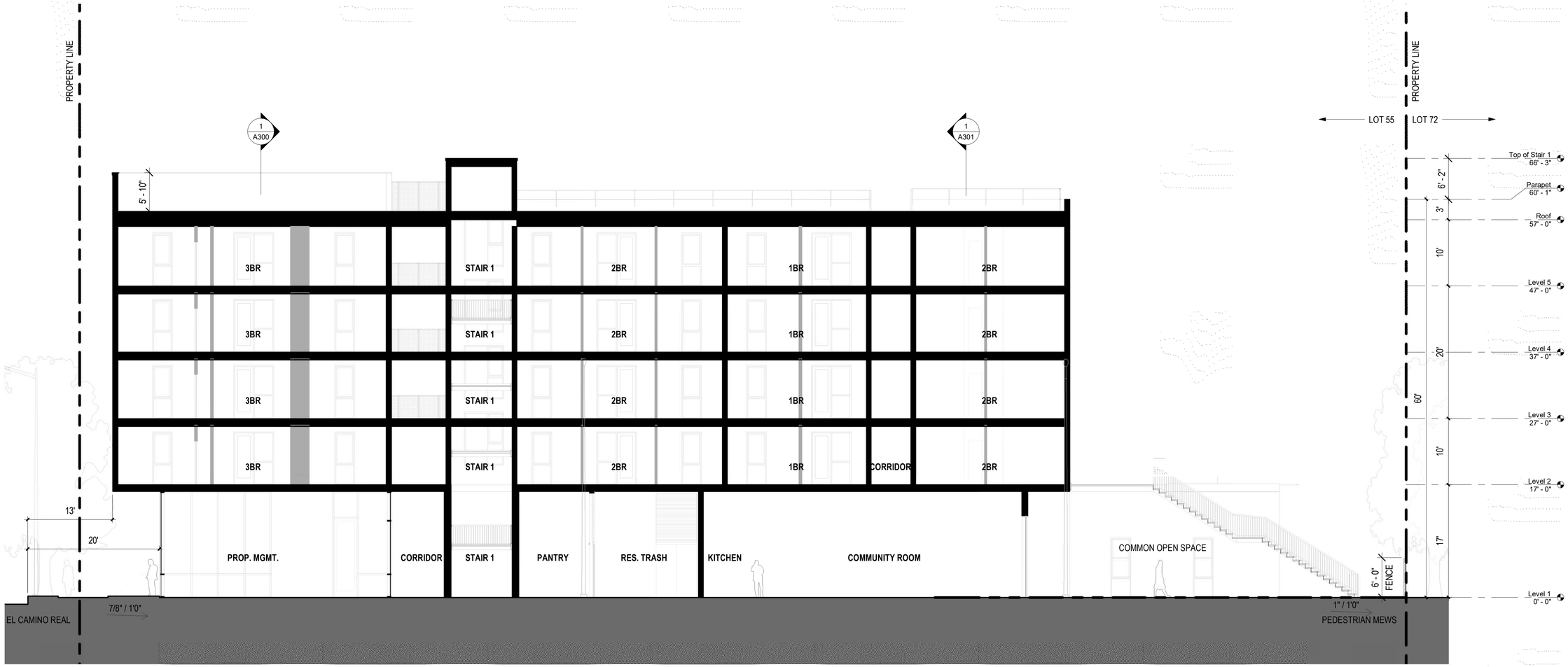
0' 10' 20'

22203

scale (printed at 22x34): As indicated

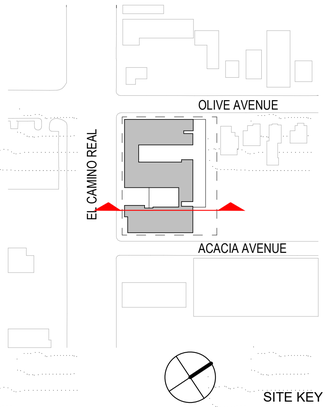
date: 01/20/2023

A302



1/8" = 1'-0"

EAST-WEST SECTION 2 1



David Baker Architects

Charities Housing

3001-3017 EL CAMINO REAL

BUILDING SECTIONS - EAST-WEST 02

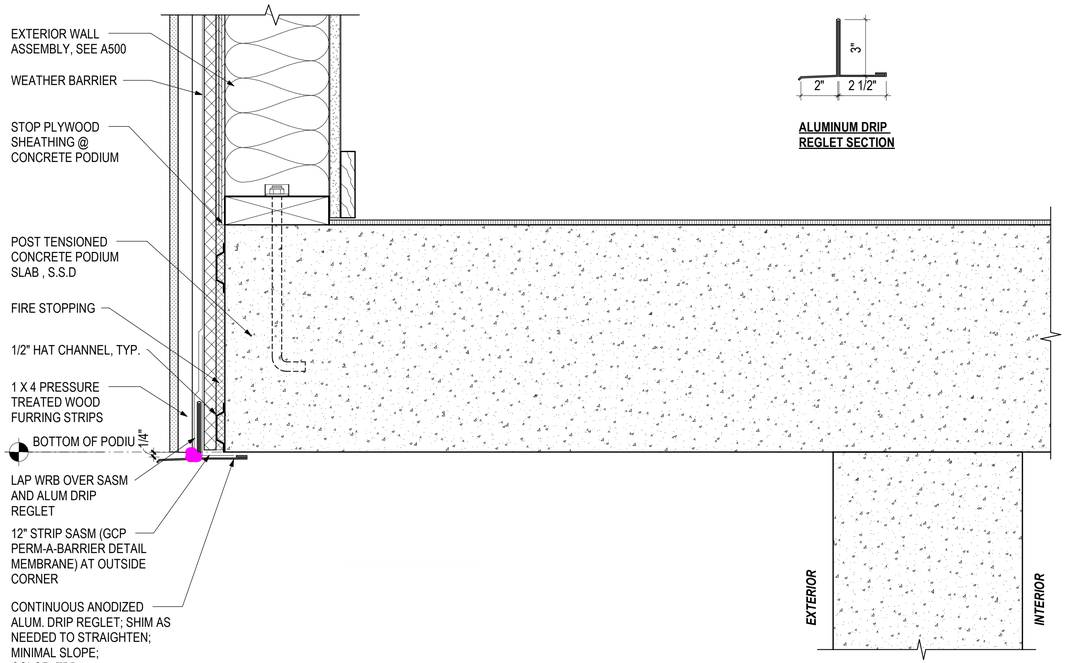
0' 10' 20'

22203

scale (printed at 22x34): As indicated

date: 01/20/2023

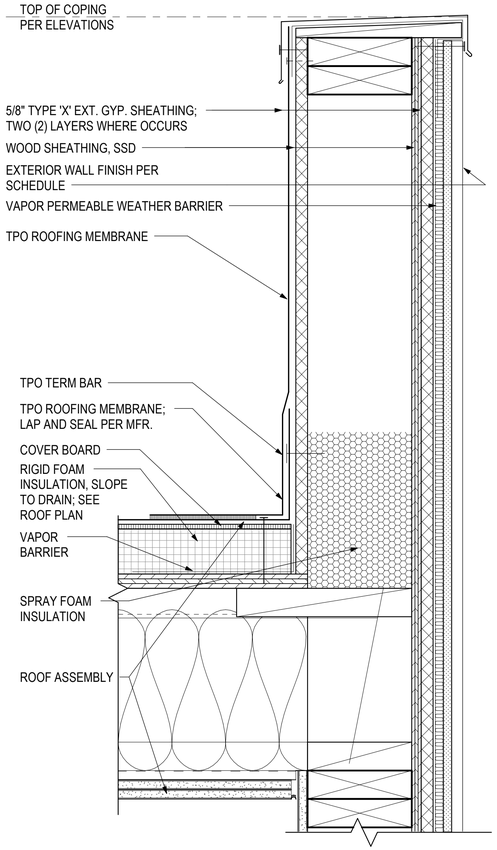
A303



ALUMINUM DRIP REGLET SECTION

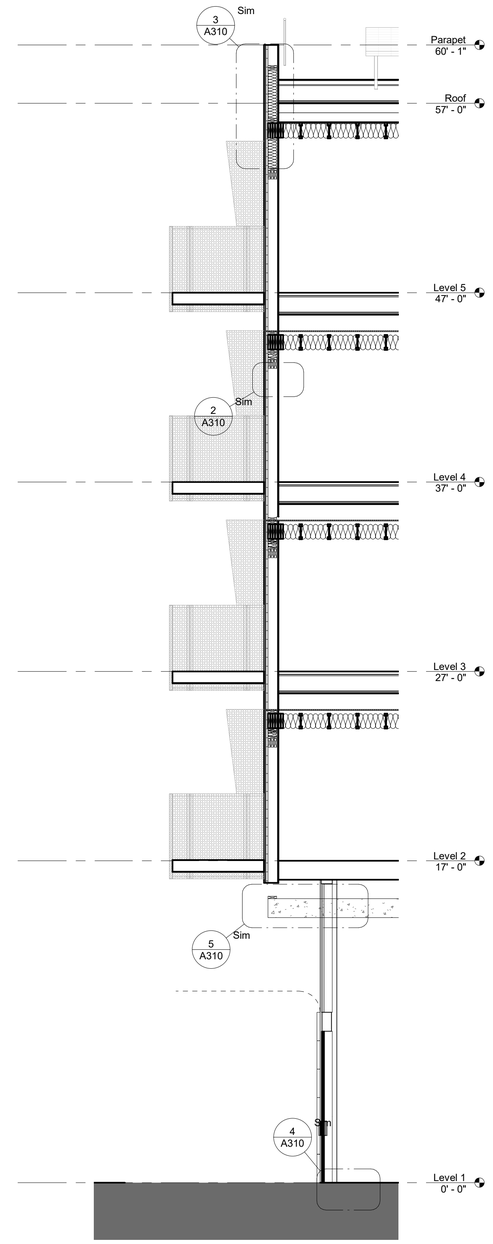
3" = 1'-0"

FIBER CEMENT PANEL WALL TO EDGE OF PODIUM SLAB 5



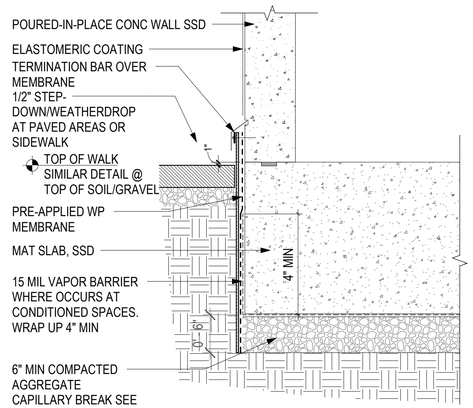
3" = 1'-0"

PARAPET OVER 18" HIGH 3



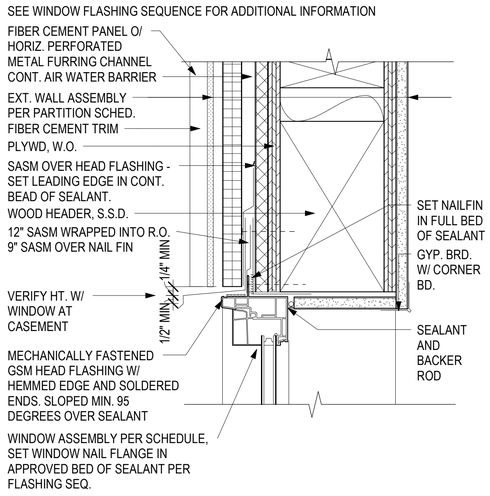
1/4" = 1'-0"

TYPICAL BUILDING SECTION 1



1" = 1'-0"

FOUNDATION AT GRADE 4



3" = 1'-0"

WINDOW - HEAD AT FIBER CEMENT 2

David Baker Architects

Charities Housing

3001-3017 EL CAMINO REAL

SECTION AND TYPICAL DETAILS

22203

scale (printed at 22x34): As indicated

date: 01/20/2023

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