WAVERLEY RESIDENCES

160 - 164 WAVERLEY ST, PALO ALTO, CA 94301

PROJECT TEAM

OWNER
Mc-Z WAVERLEY LLC
361 LYTTON AVE, SUITE 200
PALO ALTO, CA 94301

ARCHITECT & OWNER'S REPRESENTATIVE
HEATHER YOUNG ARCHITECTS
81 ENCINA AVENUE, SUITE 100
PALO ALTO, CA 94301
TEL: 650.459.3200
CONTACT: HEATHER YOUNG
EMAIL: HEATHER@HYARCHS.COM

CIVIL ENGINEER
LEA & BRAZE
2495 INDUSTRIAL PARKWAY WEST
HAYWARD, CA 94545
TEL: 510.887.4086
CONTACT: JOHN HALBOM
EMAIL: JHALBOM@LEABRAZE.COM

GEOTECHNICAL ENGINEER
ROMIG ENGINEERS
1390 EL CAMINO REAL, 2ND FLOOR
SAN CARLOS, CA 94070
TEL: 650.591.5224
CONTACT: JONATHAN FONE
EMAIL: JONATHAN@ROMIGENGINEERS.COM

LANDSCAPE ARCHITECT
MARA YOUNG
836 18TH AVENUE
MENLO PARK, CA 94025
TEL: 650.327.2644
CONTACT: MARA YOUNG
EMAIL: MARAYOUNG@GMAIL.COM

CAL GREEN SPECIAL INSPECTOR
LATHEM HOME RATING
765 N. RENGSTORFF AVENUE
MOUNTAIN VIEW, CA 94043
TEL: 650.450.1827
CONTACT: KATE LATHEM
EMAIL: KATE_LATHEM@SBCGLOBAL.NET

ZONING COMPLIANCE TABLE

MINIMUM SITE SPECIFICATIONS [1]	RM-20 REQUIRED			
SITE AREA (SF)	8,500			
SITE WIDTH (FT)	70			
SITE DEPTH (FT)	100	PROPOSED		COMMENTS
SUBSTANDARD LOT SPECIFICATIONS [1]				
SITE AREA (SF)	LESS THAN 8,500 SF AND/OR LESS THAN 70 FT IN WIDTH	12,500		SUBSTANDARD WIDTH
SITE WIDTH (FT)		50		
MINIMUM SETBACKS - MULTI FAMILY BUILDINGS [1]				
FRONT YARD (FT)	20	20		CONFORMS
INTERIOR SIDE YARD (FT)	6	6'-1 1/2"		CONFORMS
INTERIOR REAR YARD (FT)	10	34'-8"		CONFORMS
MINIMUM SETBACKS - DETACHED ADU [2]				
INTERIOR SIDE YARD (FT)	4	4		CONFORMS
INTERIOR REAR YARD (FT)	4	4		CONFORMS
MAXIMUM HEIGHT (SF) - MULTI FAMILY BUILDINGS [1]	30	SEE ELEVATIONS		CONFORMS
DAYLIGHT PLANES - MULTI FAMILY BUILDINGS [1]				
INITIAL HEIGHT (FT)	10	10		CONFORMS
ANGLE (DEGREES)	45	45		CONFORMS
MAXIMUM FLOOR AREA RATIO (FAR) (SF) [1,4,5]				
MULTI FAMILY BUILDINGS BASE	**0.5:1**	6,250	6,542	CONFORMS UNDER SB 478
ADU			748	EXEMPT SF
MAXIMUM LOT COVERAGE (SF) [1, 4]				
MULTI FAMILY BUILDINGS BASE	**35%**	4,375	4,638	CONFORMS UNDER SB 478
ADDITIONAL AREA PERMITTED TO BE COVERED BY COVERED PATIOS OR OVERHANGS OTHERWISE IN COMPLIANCE WITH ALL APPLICABLE LAWS:	**5%**	625	586	CONFORMS
ADU			748	EXEMPT SF
MAXIMUM RESIDENTIAL DENSITY (UNITS) [1]				
MAXIMUM NUMBER OF UNITS PER ACRE	**20**	5.74 UNITS	4	CONFORMS
MINIMUM NUMBER OF UNITS PER ACRE	**11**	3.16 UNITS	4	CONFORMS
MINIMUM SITE OPEN SPACE (SF) [1, 6]	**35%**	4,375	5,500	CONFORMS
MINIMUM USABLE OPEN SPACE (SF PER UNIT) [1,6]	**150**	600	3,822	CONFORMS
MINIMUM COMMON OPEN SPACE (SF PER UNIT) [1,6]	**75**	300	562	CONFORMS
MINIMUM PRIVATE OPEN SPACE (SF PER UNIT) [1,6]	**50**	200	3,260	CONFORMS
LANDSCAPE REQUIREMENTS [7]				
LANDSCAPING		18.40.130 (a)(b)(e)	COMPLIANT	CONFORMS
PARKING [8,9]				
VEHICLE		2 PER UNIT = 6	6	CONFORMS
BICYCLE		3 LT + 1 ST = 4	3 LT + 1 ST = 4	CONFORMS
NOISE ORDINANCE [10]		< 110 dBA	< 110 dBA	CONFORMS

[1] PAMC 18.13.040 TABLE 2
[2] PAMC 18.09, ADU AND JADU FAR (800 SF MAX) AND LOT COVERAGE SHALL BE EXEMPT AS PER PAMC 18.09.040 TABLE 2 FOOTNOTE (4)
[3] AS PER THE DEFINITION OF "SITE" IN 18.04.030 (133 AND 84) AND "LOT COVERAGE" IN 18.04.030 (86) (B)
[4] UNDER SB 478 AND PAMC 18.13.045 THE MAXIMUM FAR IS 1.0:1 ON A SITE WITH 3-7 PROPOSED UNITS AND LOT COVERAGE REQUIREMENT CANNOT PRECLUDE A PROJECT FROM REACHING MAX FAR
[5] PARKING FACILITIES INCLUDING ONE OR MORE PARKING SPACES, DRIVEWAYS, AISLES, TURNING AND MANEUVERING AREAS, CLEARANCES ARE EXEMPT FROM FAR IN MULTI-FAMILY PROJECTS. PAMC 18.04.030(65)(B)(i)
[6] SUBJECT TO THE LIMITATIONS OF SECTION 18.13.040(e). USABLE OPEN SPACE IS INCLUDED AS PART OF THE MINIMUM SITE OPEN SPACE; REQUIRED USABLE OPEN SPACE IN EXCESS OF THE MINIMUM REQUIRED FOR COMMON AND PRIVATE OPEN SPACE MAY BE USED AS EITHER COMMON OR PRIVATE USABLE OPEN SPACE; LANDSCAPING MAY COUNT TOWARDS TOTAL SITE OPEN SPACE AFTER USABLE OPEN SPACE REQUIREMENTS ARE MET.
[7] PAMC 18.40.130
[8] PAMC 18.52, LT = LONG TERM, ST = SHORT TERM
[9] 18.09 ADU NOT REQUIRED TO BE PARKED
[10] CHAPTER 9.10.060 (1) & (2): NO INDIVIDUAL PIECE OF EQUIPMENT SHALL PRODUCE A NOISE LEVEL EXCEEDING 110 dBA AT A DISTANCE OF 25 FT. THE NOISE LEVEL AT ANY POINT OUTSIDE OF THE PROPERTY PLANE OF THE PROJECT SHALL NOT EXCEED 110 dBA.

FIRE DEPARTMENT REQUIREMENTS

1) SPIRAL STAIR FROM ROOF TERRACE TO SECOND FLOOR SHALL HAVE A 36" CLEAR TREAD WIDTH TO FACILITATE EMERGENCY EGRESS FROM ROOFTOP.

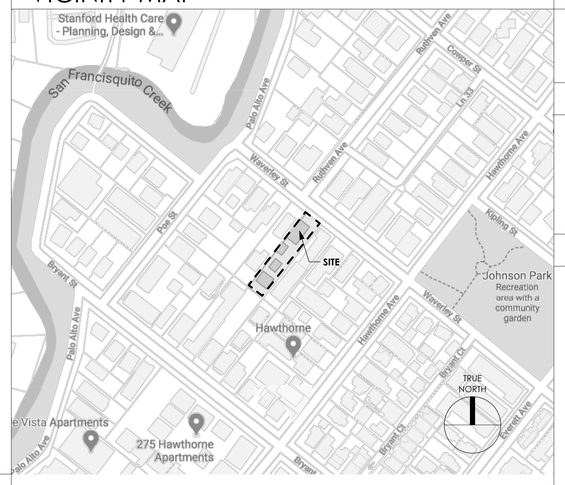
2) BUILDINGS SHALL HAVE FULL COVERAGE SPRINKLERS INCLUDING BATHROOMS, CLOSETS, UNDER BALCONIES AND EXTERIOR STAIRS.

3) NEW FIRE HYDRANT TO BE PROVIDED ON THE CORNER OF WAVERLEY AND RUTHVEN. SEE SITE PLAN ON SHEET A-13 FOR LOCATION.

4) ELEVATOR REQUIRED TO HAVE ENOUGH WEIGHT CAPACITY TO CARRY 3 PEOPLE.

PERSPECTIVE VIEW

VICINITY MAP



PROJECT DESCRIPTION

REMOVAL OF THREE STRUCTURES AND A 3-CAR CARPORT. CONSTRUCTON OF TWO NEW STRUCTURES CONTAINING THREE APARTMENT FLATS. EACH FLAT IS 3 BEDROOM, 3 -1/2 BATH AND HAS TWO COVERED PARKING SPACES. BUILDING 1 HAS AT GRADE PARKING FOR ALL FLATS WITH A SECOND FLOOR APARTMENT ABOVE. A GROUND FLOOR HOME OFFICE AND A ROOF TERRACE. BUILDING 2 HAS A GROUND FLOOR FLAT WITH A FRONT AND REAR YARD AND A SECOND FLOOR FLAT WITH A ROOF TERRACE. A DETACHED ADU (ACCESSORY DWELLING UNIT) IS INCLUDED AT THE REAR OF THE PROPERTY.

PROJECT DATA

APN	020-12-011
ZONING	RM-20 (MULTI FAMILY DISTRICT)
BUILDINGS	TWO
UNITS	THREE UNITS + 1 ADU
PARKING	6 COVERED SPACES
FLOOD ZONE	X
HISTORICAL CATEGORY	NONE
FLOOR AREAS	SEE SHEET A-10

DRAWING INDEX

REQUIRED AREA FOR CITY STAMPS

hya
HEATHER YOUNG ARCHITECTS
81 Encina Avenue, Suite 100
Palo Alto, CA 94301
650-459-3200 / hyarchs.com

WAVERLEY RESIDENCES

160 - 164 WAVERLEY ST, PALO ALTO, CA 94301

ISSUANCES

REV	DATE	DESCRIPTION
	14 DEC 2020	ARB SUBMITTAL
	12 MAR 2021	ARB RESUBMITTAL
	06 MAY 2021	ARB RESUBMITTAL
	09 AUG 2021	ARB RESUBMITTAL
	10 OCT 2021	ARB RESUBMITTAL
	18 MAR 2022	ARB RESUBMITTAL

TITLE SHEET

A-1

4.1 Planning and Design		Code Section	Y	N	Plan Sheet, Spec or Attachment Reference	Compliance Path Verification: Plan Check CORR	Plan Check INITIAL	Rough GB Inspection IVR # 152 CORR	Rough GB Inspection IVR # 152 INITIAL	Final Inspection IVR # 153 Part 1	Final Inspection IVR # 153 Part 1	Final Inspection IVR # 153 Part 2	Final Inspection IVR # 153 Part 2
Mandatory	**Mandatory**	Storm water drainage and retention during construction (less than one acre)	4.106.2	X		..							
	Tier 2 Mand.	Topsoil protection - Tier 2 requirements	PAMC 16.14.070/ A4.106.2.3	X		..							
	Mandatory	Grading and paving	4.106.3	X		..							
	Tier 2 Mand.	Water permeable surfaces for 30% - Tier 2 requirements	A4.106.4	X		..							
	Tier 2 Mand.	Cool roof for reduction of heat island effect -Tier 2 requirements	PAMC 16.14.070/ A4.106.5	X		..							
	Tier 2 Mand.	Electric vehicle (EV) charging for residential structures (Locally amended)	PAMC 16.14.420 / A4.106.8	X		..							
	Mandatory	EV Charging: New single family residences	PAMC 16.14.420/ A4.106.8.1	X									
	Mandatory	EV Charging: New multi-family residential structures	PAMC 16.14.420/ A4.106.8.2	X									
	Mandatory	EV Charging: New Hotels	PAMC 16.14.420/A4.106.8.3	X									
	Mandatory	Bicycle Parking [MF] (locally amended)When an addition or change of use results in increased parking	PAMC 18.54.060/ A4.106.9	X									
Electives (choose 4)	**Elective**	Site selection	A4.103.1	X		..							
	Elective	Community connectivity	A4.103.2	X		..							
	Elective	Supervision and education by a Special Inspector (Locally amended)	PAMC 16.14.090/ A4.104.1	X		..							
	Elective	Deconstruction (Locally amended, Mandatory on or after July 1, 2020)	PAMC 16.14.130/ A4.105.1	X		..							
	Elective	Reuse of existing materials (Locally amended)	PAMC 16.14.130/ A4.105.2	X		..							
	Elective	Soil analysis	A4.106.2.1	X		..							
	Elective	Soil protection	A4.106.2.2	X		..							
	Elective	Landscape design	A4.106.3	X		..							
	Elective	Vegetated roof	A4.106.6	X		..							
	Elective	Reduction of heat island effect for nonroof areas	A4.106.7	X		..							
	Elective	Light pollution reduction (Locally amended)	PAMC 16.14.170/ A4.106.10	X		..							
	Elective	Innovative concepts and local environmental conditions	A4.108.1	X		..							
PAMC 16.17 Energy Reach Code													
Mandatory	**Mandatory**	**Effective April 1, 2020:** All-Electric Design with performance approach specified within the 2019 California Energy Code shall be used to demonstrate the energy budget calculated for the proposed design building is no greater than the energy budget calculated for the Standard Design Building. Exception: Detached newly constructed Accessory Dwelling Units, ADU's	PAMC 16.17.110/ 2016 Title 24, Part 6		X	Palo Alto Building Inspector will verify Title 24 Energy Compliance in the Field.	..							
4.3 Water Efficiency and Conservation													
Mandatory	**Mandatory**	Indoor Water Use: Water closets (1.28 gpf)	4.303.1.1	X		..							
	Mandatory	Indoor Water Use: Urinals (Wall Mounted 0.125 gpf, all others 0.5 gpf)	4.303.1.2	X		..							
	Mandatory	Indoor Water Use: Single showerhead (1.8 gpm at 80 psi)	4.303.1.3.1	X		..							
	Mandatory	Indoor Water Use: Multiple showerheads serving one shower (1.8 gpm at 80 psi)	4.303.1.3.2	X		..							
	Mandatory	Indoor Water Use: Residential lavatory faucets (1.2 gpm at 60 psi)	4.303.1.4.1	X		..							
	Mandatory	Indoor Water Use: [MF] Lavatory faucets in common and public use areas (0.5 gpm at 60 psi)	4.303.1.4.2	X		..							
	Mandatory	Indoor Water Use: Metering faucets (0.2 gallons per cycle)	4.303.1.4.3	X		..							
	Mandatory	Indoor Water Use: Kitchen faucets (1.8 gpm at 60 psi)	4.303.1.4.4	X		..							
	Mandatory	Indoor Water Use: Standards for plumbing fixtures and fittings (Meet 2019 Plumbing Code)	4.303.2	X		..							
	Mandatory	Outdoor potable water use in landscape areas (MWELO)	4.304.1	X		..							
	Mandatory	Recycled water supply systems [N]	4.305.1	X		..							
	Tier 2 Mand.	Recycled water for landscape irrigation [MF only][AA] (when landscape >1,000 sq. ft)	PAMC 16.14.230/ A4.305.3	X		..							
Electives (choose 3)	**Elective**	Kitchen faucets (1.5 gpm at 60 psi)	A4.303.1	X		..							
	Elective	Alternate water sources for nonpotable applications	A4.303.2	X		..							
	Elective	Appliances	A4.303.3	X		..							
	Elective	Nonwater supplied urinals and waterless toilets	A4.303.4	X		..							
	Elective	Hot water recirculation systems	A4.303.5	X		..							
	Elective	Rainwater catchment systems	A4.304.1	X		..							
	Elective	Potable water elimination	A4.304.2	X		..							
	Elective	Irrigation metering device (locally amended)	PAMC 16.14.230/ A4.304.3	X		..							
	Elective	Graywater (Locally amended, Whole house graywater system counts as 3 electives)	PAMC 16.14.230/ A4.305.1	X		..							
	Elective	Recycled water piping (Locally amended)	PAMC 16.14.230/ A4.305.2	X		..							
	Elective	Recycled water for landscape irrigation (Locally amended)	PAMC 16.14.230/ A4.305.3	X		..							
	Elective	Innovative concepts and local environmental conditions	A4.306.1	X		..							
4.4 Material Conservation and Resource Efficiency													
Mandatory	**Tier 2 Mand.**	Recycled content - 15% - Tier 2 requirements	PAMC 16.14.070 / A4.405.3.1	X		..							
	Mandatory	Rodent proofing fill annular spaces around pipes, cables, conduits or other openings to protect against rodents	4.406.1	X		..							
	Mandatory	Enhanced construction waste reduction (80% Diversion w/ job valuation >$25,000 or meet state standards of 65%)	PAMC 16.14.260/ 4.408.1	X		..							
	Mandatory	Construction waste management plan in Green Halo	A4.408.2	X		..							
	Mandatory	Waste management company	A4.408.3	X		..							
	Mandatory	Operation and maintenance manual provided to the building owner	A 4.410.1	X		..							
	Mandatory	Recycling by occupants (≥ 5 multi-family units)	A 4.410.2	X		..							
Electives (choose 4)	**Elective**	Reduction in cement use - 25%	PAMC 16.14.250/ A4.403.2	X		..							
	Elective	Efficient framing techniques - Lumber size	A4.404.1	X		..							
	Elective	Efficient framing techniques - Dimensions and layouts	A4.404.2	X		..							
	Elective	Efficient framing techniques - Building systems	A4.404.3	X		..							
	Elective	Efficient framing techniques - Pre-cut materials and details	A4.404.4	X		..							
	Elective	Prefinished building materials	A4.405.1	X		..							
	Elective	Concrete floors	A4.405.2	X		..							
	Elective	Use of building materials from rapidly renewable sources	A4.405.4	X		..							
	Elective	Drainage around foundations	A4.407.1	X		..							
	Elective	Roof drainage	A4.407.2	X		..							
	Elective	Flashing details	A4.407.3	X		..							
	Elective	Material protection	A4.407.4	X		..							
	Elective	Door protection	A4.407.6	X		..							
	Elective	Roof overhangs	A4.407.7	X		..							
	Elective	Innovative concepts and local environmental conditions	A4.411.1	X		..							

4.5 Environmental Quality		Code Section	Y	N	Plan Sheet, Spec or Attachment Reference	Compliance Path Verification: Plan Check CORR	Plan Check INITIAL	Rough GB Inspection IVR # 152 CORR	Rough GB Inspection IVR # 152 INITIAL	Final Inspection IVR # 153 Part 1	Final Inspection IVR # 153 Part 1	Final Inspection IVR # 153 Part 2	Final Inspection IVR # 153 Part 2
Mandatory	**Mandatory**	Fireplaces shall be direct-vent sealed combustion type (all-electric on of after April 1, 2020)	4.503.1	X		..							
	Mandatory	Covering of duct openings, protection of mechanical equipment during construction	4.504.1	X									
	Mandatory	Adhesives, sealants and caulks - Table 4.504.1 and 4.504.2 for VOC limits	4.504.2.1	X		..							
	Mandatory	Paints and coatings - Table 4.504.3 for VOC limits	4.504.2.2	X		..							
	Mandatory	Aerosol paints and coatings	4.504.2.3	X		..							
	Mandatory	Verification - documentation to verify complaint VOC limit on finish materials	4.504.2.4	X									
	Mandatory	Carpet systems compliant with VOC limits	4.504.3	X									
	Mandatory	Carpet cushion	4.504.3.1	X		..							
	Mandatory	Carpet systems: Carpet adhesive - Table 4.504.1 for VOC limits	4.504.3.2	X		..							
	Tier 2 Mand.	Resilient flooring systems for 100% - Tier 2 requirements	PAMC 16.14.070/ A4.504.2	X		..							
	Mandatory	Composite wood products	4.504.5	X		..							
	Mandatory	Concrete slab foundations - vapor retarder required	4.505.2	X		..							
	Mandatory	Capillary break for slab-on-grade foundations	4.505.2.1	X		..							
	Mandatory	Moisture content of building materials ≤ 19% for wall and floor framing	4.505.3	X		..							
	Mandatory	Bathroom exhaust fans (when required) shall be provided with the following:	4.506.1	X		..							
		1. ENERGY STAR fans ducted to outside of building.		X									
		2. Humidity controlled OR functioning as a component of a whole-house ventilation system		X									
		3. Humidity controls with manual or automatic means of adjustment for relative humidity range of ≤ 50% to 80% max		X									
	Mandatory	Heating and air conditioning system design	4.507.2	X		..							
	Mandatory	Indoor Air Quality Management Plan	PAMC 16.14.410	X									
Electives (1)	**Elective**	Compliance with formaldehyde limits	PAMC 16.14.265/ A4.504.1	X									
	Elective	Thermal insulation	PAMC 16.14.270/ A4.504.1	X									
	Elective	Construction filters [HR]	A4.506.2	X									
	Elective	Direct-vent appliances	A4.506.3	X		..							
	Elective	Innovative concepts and local environmental conditions.	A4.509.1	X		..							

Legend:

Y - Yes; the measure is in the scope of work
N - No; the measure is not in the scope of work
PAMC - Palo Alto Municipal Code; locally amended
[N] - New Construction
[MF] - Multi-family dwellings
[AA] - Additions and alterations
[HR] - High-rise building

ADU Exception:
Free standing detached Accessory Dwelling Units of new construction shall meet the following:
1. California Green Building Standards Code Mandatory plus Tier 2 prerequisite requirements.
2. No Planning and Design electives.
3. Two (2) Water Efficiency and Conservation electives.
4. Two (2) Material Conservation and Resource Efficiency electives.

The Green Building Survey is a required project submittal. The survey can be found at the following link. The online survey shall be completed and a Green Building Survey Report will be sent in an email. Include a copy of the survey report on a separate page in this plan set. Please indicate the reference page here _____.

Special Inspector Acknowledgement

The project will be verified by a COMMERCIAL GREEN BUILDING SPECIAL INSPECTOR

I have reviewed the project plans and specifications, and they are in conformance with the CALGreen mandatory and elective measures claimed. I have reviewed and understand the after-construction requirements below.

Kate D. Latham

Signature (Green Building Special Inspector)

Kate Latham

Print Name

kate@lathamhomerating.com | 650-450-1827

Phone or Email

August 9, 2021

Certified Energy Analyst Acknowledgement

The project will be verified by a CERTIFIED ENERGY ANALYST

REQUIREMENT EFFECTIVE ON APRIL 1, 2020

The Certificate of Compliance shall be prepared and signed by a Certified Energy Analyst and the energy budget for the Proposed Design shall be no greater than the Standard Design Building.

I am a Certified Energy Analyst with the California Association of Building Energy Consultants as of the date of submission of a Certificate of Compliance as required under Section 10-103 of the Building Energy Efficiency Standards for Residential and Non-Residential Buildings.

Signature (Certified Energy Analyst)

Print Name

Phone or Email

Date

SECTION TO BE COMPLETED AFTER CONSTRUCTION

After construction is complete submit the following at the City Development Center to schedule your final inspection:

- ☐ Construction debris receipts from an approved facility using Green Halo.
- ☐ If HERS testing was required per the homes energy report, attach the completed forms.
- ☐ If there were alterations during construction that impacted the energy report (i.e. R values, U factors, Equipment Types) rerun the report and attach it.

I certify that:

- ☐ CALGreen inspections were performed throughout construction.
- ☐ The home has met the CALGreen measures as claimed on this sheet. Those required for landscaping may be excluded from this confirmation if verified within 6 months of final inspection.
- ☐ Through a combination of onsite inspections and confirmation from the Contractor there have been no alterations that impacted the energy report for the home, unless the new report is provided as an attachment.

Signature (Green Building Special Inspector)

Sign only after project is complete

Print Name

CITY STAMPS ONLY

Project Address: 160-164 Waverley

2019 **RESIDENTIAL CHECKLIST - CALGREEN + TIER 2**

CITY OF PALO ALTO

Title 24, Part 11, California Green Building Code (CALGreen) http://www.bsc.ca.gov/Home/CALGreen.aspx
City of Palo Alto Development Center Green Building Requirements https://www.cityofpaloalto.org/gov/depts/ds/green_building/default.asp
City of Palo Alto Green Building Ordinance 5481 (PAMC 16.14 Amendments) http://library.amlegal.com/nxt/gateway.dll/California/paloalto_ca/paloaltomunicipalcode?f=templates$fn=default.htm$3.0$vid=amlegal:paloalto_ca

2019 RESIDENTIAL GREEN BUILDING APPLICATION **CALGREEN + TIER 2**

Version 05/20

Application: This plan sheet is for residential new construction of any size.

GB-1
Tier 2

HEATHER YOUNG ARCHITECTS
81 Encina Avenue, Suite 100
Palo Alto, CA 94301
650-459-3200 / hyarchs.com

WAVERLEY RESIDENCES

160 - 164 WAVERLEY ST, PALO ALTO, CA 94301

ISSUANCES

REV	DATE	DESCRIPTION
	14 DEC 2020	ARB SUBMITTAL
	12 MAR 2021	ARB RESUBMITTAL
	06 MAY 2021	ARB RESUBMITTAL
	09 AUG 2021	ARB RESUBMITTAL
	10 OCT 2021	ARB RESUBMITTAL
	18 MAR 2022	ARB RESUBMITTAL

GREEN BUILDING CHECKLIST

A-2

		4.1 Planning and Design	Code Section	Y	N	Plan Sheet, Spec or Attachment Reference	Compliance Path Verification: Plan Check CGBR	Plan Check INITIAL	Rough GB Inspection IVR ≠ 152 CGBR	Rough GB Inspection IVR ≠ 152 INITIAL	Final Inspection IVR ≠ 153 Part 1 CGBR	Final Inspection IVR ≠ 153 Part 1 INITIAL	Final Inspection IVR ≠ 153 Part 2 CGBR	Final Inspection IVR ≠ 153 Part 2 INITIAL
Mandatory	Mandatory	Storm water drainage and retention during construction (less than one acre)	4.106.2	X			..							
Mandatory	Tier 2 Mand.	Topsoil protection - Tier 2 requirements	PAMC 16.14.070/ A4.106.2.3	X			..							
Mandatory	Mandatory	Grading and paving	4.106.3	X			..							
Mandatory	Tier 2 Mand.	Water permeable surfaces for 30% - Tier 2 requirements	A4.106.4		X		..							
Mandatory	Tier 2 Mand.	Cool roof for reduction of heat island effect -Tier 2 requirements	PAMC 16.14.070/ A4.106.5	X			..							
Mandatory	Tier 2 Mand.	Electric vehicle (EV) charging for residential structures (Locally amended)	PAMC 16.14.420 / A4.106.8		X		..							
Mandatory	Mandatory	EV Charging: New single family residences	PAMC 16.14.420/ A4.106.8.1		X									
Mandatory	Mandatory	EV Charging: New multi-family residential structures	PAMC 16.14.420/ A4.106.8.2		X									
Mandatory	Mandatory	EV Charging: New Hotels	PAMC 16.14.420/A4.106.8.3		X									
Mandatory	Mandatory	Bicycle Parking [MF] (locally amended)When an addition or change of use results in increased parking	PAMC 18.54.060/ A4.106.9		X									
Electives (choose 4)	Elective	Site selection	A4.103.1		X		..							
Electives (choose 4)	Elective	Community connectivity	A4.103.2		X		..							
Electives (choose 4)	Elective	Supervision and education by a Special Inspector (Locally amended)	PAMC 16.14.090/ A4.104.1		X		..							
Electives (choose 4)	Elective	Deconstruction (Locally amended, Mandatory on or after July 1, 2020)	PAMC 16.14.130/ A4.105.1		X		..							
Electives (choose 4)	Elective	Reuse of existing materials (Locally amended)	PAMC 16.14.130/ A4.105.2		X		..							
Electives (choose 4)	Elective	Soil analysis	A4.106.2.1		X		..							
Electives (choose 4)	Elective	Soil protection	A4.106.2.2		X		..							
Electives (choose 4)	Elective	Landscape design	A4.106.3		X		..							
Electives (choose 4)	Elective	Vegetated roof	A4.106.6		X		..							
Electives (choose 4)	Elective	Reduction of heat island effect for nonroof areas	A4.106.7		X		..							
Electives (choose 4)	Elective	Light pollution reduction (Locally amended)	PAMC 16.14.170/ A4.106.10		X		..							
Electives (choose 4)	Elective	Innovative concepts and local environmental conditions	A4.108.1		X		..							
PAMC 16.17 Energy Reach Code														
Mandatory	Mandatory	**Effective April 1, 2020:** All-Electric Design with performance approach specified within the 2019 California Energy Code shall be used to demonstrate the energy budget calculated for the proposed design building is no greater than the energy budget calculated for the Standard Design Building. Exception: Detached newly constructed Accessory Dwelling Units, ADU's	PAMC 16.17.110/ 2016 Title 24, Part 6		X	Palo Alto Building Inspector will verify Title 24 Energy Compliance in the Field.	..							
4.3 Water Efficiency and Conservation														
Mandatory	Mandatory	Indoor Water Use: Water closets (1.28 gpf)	4.303.1.1	X			..							
Mandatory	Mandatory	Indoor Water Use: Urinals (Wall Mounted 0.125 gpf, all others 0.5 gpf)	4.303.1.2		X		..							
Mandatory	Mandatory	Indoor Water Use: Single showerhead (1.8 gpm at 80 psi)	4.303.1.3.1	X			..							
Mandatory	Mandatory	Indoor Water Use: Multiple showerheads serving one shower (1.8 gpm at 80 psi)	4.303.1.3.2		X		..							
Mandatory	Mandatory	Indoor Water Use: Residential lavatory faucets (1.2 gpm at 60 psi)	4.303.1.4.1	X			..							
Mandatory	Mandatory	Indoor Water Use: [MF] Lavatory faucets in common and public use areas (0.5 gpm at 60 psi)	4.303.1.4.2		X		..							
Mandatory	Mandatory	Indoor Water Use: Metering faucets (0.2 gallons per cycle)	4.303.1.4.3		X		..							
Mandatory	Mandatory	Indoor Water Use: Kitchen faucets (1.8 gpm at 60 psi)	4.303.1.4.4	X			..							
Mandatory	Mandatory	Indoor Water Use: Standards for plumbing fixtures and fittings (Meet 2019 Plumbing Code)	4.303.2	X			..							
Mandatory	Mandatory	Outdoor potable water use in landscape areas (MWELO)	4.304.1		X		..							
Mandatory	Mandatory	Recycled water supply systems [N]	4.305.1		X		..							
Mandatory	Tier 2 Mand.	Recycled water for landscape irrigation [MF only][AA] (when landscape >1,000 sq. ft)	PAMC 16.14.230/ A4.305.3		X		..							
Electives (choose 3)	Elective	Kitchen faucets (1.5 gpm at 60 psi)	A4.303.1	X			..							
Electives (choose 3)	Elective	Alternate water sources for nonpotable applications	A4.303.2		X		..							
Electives (choose 3)	Elective	Appliances	A4.303.3	X			..							
Electives (choose 3)	Elective	Nonwater supplied urinals and waterless toilets	A4.303.4		X		..							
Electives (choose 3)	Elective	Hot water recirculation systems	A4.303.5		X		..							
Electives (choose 3)	Elective	Rainwater catchment systems	A4.304.1		X		..							
Electives (choose 3)	Elective	Potable water elimination	A4.304.2		X		..							
Electives (choose 3)	Elective	Irrigation metering device (locally amended)	PAMC 16.14.230/ A4.304.3		X		..							
Electives (choose 3)	Elective	Graywater (Locally amended, Whole house graywater system counts as 3 electives)	PAMC 16.14.230/ A4.305.1		X		..							
Electives (choose 3)	Elective	Recycled water piping (Locally amended)	PAMC 16.14.230/ A4.305.2		X		..							
Electives (choose 3)	Elective	Recycled water for landscape irrigation (Locally amended)	PAMC 16.14.230/ A4.305.3		X		..							
Electives (choose 3)	Elective	Innovative concepts and local environmental conditions	A4.306.1		X		..							
4.4 Material Conservation and Resource Efficiency														
Mandatory	Tier 2 Mand.	Recycled content - 15% - Tier 2 requirements	PAMC 16.14.070 / A4.405.3.1	X			..							
Mandatory	Mandatory	Rodent proofing fill annular spaces around pipes, cables, conduits or other openings to protect against rodents	4.406.1	X			..							
Mandatory	Mandatory	Enhanced construction waste reduction (80% Diversion w/ job valuation >$25,000 or meet state standards of 65%)	PAMC 16.14.260/ 4.408.1	X			..							
Mandatory	Mandatory	Construction waste management plan in Green Halo	A4.408.2	X			..							
Mandatory	Mandatory	Waste management company	4.408.3	X			..							
Mandatory	Mandatory	Operation and maintenance manual provided to the building owner	4.410.1	X			..							
Mandatory	Mandatory	Recycling by occupants (≥ 5 multi-family units)	4.410.2		X		..							
Electives (choose 4)	Elective	Reduction in cement use - 25%	PAMC 16.14.250/ A4.403.2	X			..							
Electives (choose 4)	Elective	Efficient framing techniques - Lumber size	A4.404.1		X		..							
Electives (choose 4)	Elective	Efficient framing techniques - Dimensions and layouts	A4.404.2		X		..							
Electives (choose 4)	Elective	Efficient framing techniques - Building systems	A4.404.3		X		..							
Electives (choose 4)	Elective	Efficient framing techniques - Pre-cut materials and details	A4.404.4		X		..							
Electives (choose 4)	Elective	Prefinished building materials	A4.405.1	X			..							
Electives (choose 4)	Elective	Concrete floors	A4.405.2		X		..							
Electives (choose 4)	Elective	Use of building materials from rapidly renewable sources	A4.405.4		X		..							
Electives (choose 4)	Elective	Drainage around foundations	A4.407.1		X		..							
Electives (choose 4)	Elective	Roof drainage	A4.407.2		X		..							
Electives (choose 4)	Elective	Flashing details	A4.407.3		X		..							
Electives (choose 4)	Elective	Material protection	A4.407.4		X		..							
Electives (choose 4)	Elective	Door protection	A4.407.6		X		..							
Electives (choose 4)	Elective	Roof overhangs	A4.407.7		X		..							
Electives (choose 4)	Elective	Innovative concepts and local environmental conditions	A4.411.1		X		..							

		4.5 Environmental Quality	Code Section	Y	N	Plan Sheet, Spec or Attachment Reference	Compliance Path Verification: Plan Check CGBR	Plan Check INITIAL	Rough GB Inspection IVR ≠ 152 CGBR	Rough GB Inspection IVR ≠ 152 INITIAL	Final Inspection IVR ≠ 153 Part 1 CGBR	Final Inspection IVR ≠ 153 Part 1 INITIAL	Final Inspection IVR ≠ 153 Part 2 CGBR	Final Inspection IVR ≠ 153 Part 2 INITIAL
Mandatory	Mandatory	Fireplaces shall be direct-vent sealed combustion type (all-electric on of after April 1, 2020)	4.503.1		X		..							
Mandatory	Mandatory	Covering of duct openings, protection of mechanical equipment during construction	4.504.1		X	Assuming no HVAC ducts								
Mandatory	Mandatory	Adhesives, sealants and caulks - Table 4.504.1 and 4.504.2 for VOC limits	4.504.2.1	X			..							
Mandatory	Mandatory	Paints and coatings - Table 4.504.3 for VOC limits	4.504.2.2	X			..							
Mandatory	Mandatory	Aerosol paints and coatings	4.504.2.3	X			..							
Mandatory	Mandatory	Verification - documentation to verify complaint VOC limit on finish materials	4.504.2.4	X			..							
Mandatory	Mandatory	Carpet systems compliant with VOC limits	4.504.3	X										
Mandatory	Mandatory	Carpet cushion	4.504.3.1		X		..							
Mandatory	Mandatory	Carpet systems: Carpet adhesive - Table 4.504.1 for VOC limits	4.504.3.2		X		..							
Mandatory	Tier 2 Mand.	Resilient flooring systems for 100% - Tier 2 requirements	PAMC 16.14.070/ A4.504.2		X		..							
Mandatory	Mandatory	Composite wood products	4.504.5	X			..							
Mandatory	Mandatory	Concrete slab foundations - vapor retarder required	4.505.2		X		..							
Mandatory	Mandatory	Capillary break for slab-on-grade foundations	4.505.2.1		X		..							
Mandatory	Mandatory	Moisture content of building materials ≤ 19% for wall and floor framing	4.505.3	X			..							
Mandatory	Mandatory	Bathroom exhaust fans (when required) shall be provided with the following:	4.506.1	X			..							
		1. ENERGY STAR fans ducted to outside of building.			X									
		2. Humidity controlled OR functioning as a component of a whole-house ventilation system			X									
		3. Humidity controls with manual or automatic means of adjustment for relative humidity range of ≤ 50% to 80% max			X									
Mandatory	Mandatory	Heating and air conditioning system design	4.507.2	X			..							
Mandatory	Mandatory	Indoor Air Quality Management Plan	PAMC 16.14.410		X									
Electives (1)	Elective	Compliance with formaldehyde limits	PAMC 16.14.265/ A4.504.1		X									
Electives (1)	Elective	Thermal insulation	PAMC 16.14.270/ A4.504.1	X										
Electives (1)	Elective	Construction filters [HR]	A4.506.2		X									
Electives (1)	Elective	Direct-vent appliances	A4.506.3		X		..							
Electives (1)	Elective	Innovative concepts and local environmental conditions.	A4.509.1		X		..							

Legend:

Y - Yes; the measure is in the scope of work
N - No; the measure is not in the scope of work
PAMC - Palo Alto Municipal Code; locally amended
[N] - New Construction
[MF] - Multi-family dwellings
[AA] - Additions and alterations
[HR] - High-rise building

ADU Exception:
Free standing detached Accessory Dwelling Units of new construction shall meet the following:
1. California Green Building Standards Code Mandatory plus Tier 2 prerequisite requirements.
2. No Planning and Design electives.
3. Two (2) Water Efficiency and Conservation electives.
4. Two (2) Material Conservation and Resource Efficiency electives.

The Green Building Survey is a required project submittal. The survey can be found at the following link. The online survey shall be completed and a Green Building Survey Report will be sent in an email. Include a copy of the survey report on a separate page in this plan set. Please indicate the reference page here _____.

Special Inspector Acknowledgement

The project will be verified by a COMMERCIAL GREEN BUILDING SPECIAL INSPECTOR

I have reviewed the project plans and specifications, and they are in conformance with the CALGreen mandatory and elective measures claimed. I have reviewed and understand the after-construction requirements below.

Kate D. Latham

Signature (Green Building Special Inspector)

Kate Latham

Print Name

kate@lathamhomerating.com | 650-450-1827

Phone or Email

March 1, 2022

Certified Energy Analyst Acknowledgement

The project will be verified by a CERTIFIED ENERGY ANALYST

REQUIREMENT EFFECTIVE ON APRIL 1, 2020

The Certificate of Compliance shall be prepared and signed by a Certified Energy Analyst and the energy budget for the Proposed Design shall be no greater than the Standard Design Building.

I am a Certified Energy Analyst with the California Association of Building Energy Consultants as of the date of submission of a Certificate of Compliance as required under Section 10-103 of the Building Energy Efficiency Standards for Residential and Non-Residential Buildings.

Signature (Certified Energy Analyst)

Print Name

Phone or Email

Date

SECTION TO BE COMPLETED AFTER CONSTRUCTION

After construction is complete submit the following at the City Development Center to schedule your final inspection:

- ☐ Construction debris receipts from an approved facility using Green Halo.
- ☐ If HERS testing was required per the homes energy report, attach the completed forms.
- ☐ If there were alterations during construction that impacted the energy report (i.e. R values, U factors, Equipment Types) rerun the report and attach it.

I certify that:

- ☐ CALGreen inspections were performed throughout construction.
- ☐ The home has met the CALGreen measures as claimed on this sheet. Those required for landscaping may be excluded from this confirmation if verified within 6 months of final inspection.
- ☐ Through a combination of onsite inspections and confirmation from the Contractor there have been no alterations that impacted the energy report for the home, unless the new report is provided as an attachment.

Signature (Green Building Special Inspector)

Sign only after project is complete

Print Name

CITY STAMPS ONLY

Project Address: 162 Waverley Street, ADU

2019 **RESIDENTIAL CHECKLIST - CALGREEN + TIER 2**

CITY OF PALO ALTO

Title 24, Part 11, California Green Building Code (CALGreen) http://www.bsc.ca.gov/Home/CALGreen.aspx
City of Palo Alto Development Center Green Building Requirements https://www.cityofpaloalto.org/gov/depts/ds/green_building/default.asp
City of Palo Alto Green Building Ordinance 5481 (PAMC 16.14 Amendments) http://library.amlegal.com/nxt/gateway.dll/California/paloalto_ca/paloaltomunicipalcode?f=templates$fn=default.htm$3.0$vid=amlegal:paloalto_ca

2019 RESIDENTIAL GREEN BUILDING APPLICATION **CALGREEN + TIER 2**

Version 05/20

Application: This plan sheet is for residential new construction of any size.

GB-1
Tier 2

hya
HEATHER YOUNG ARCHITECTS
81 Encina Avenue, Suite 100
Palo Alto, CA 94301
650-459-3200 / hyarchs.com

WAVERLEY RESIDENCES

160 - 164 WAVERLEY ST, PALO ALTO, CA 94301

ISSUANCES

REV	DATE	DESCRIPTION
	14 DEC 2020	ARB SUBMITTAL
	12 MAR 2021	ARB RESUBMITTAL
	06 MAY 2021	ARB RESUBMITTAL
	09 AUG 2021	ARB RESUBMITTAL
	10 OCT 2021	ARB RESUBMITTAL
	18 MAR 2022	ARB RESUBMITTAL

GREEN BUILDING CHECKLIST - ADU

A-3

ENVIRONMENTAL ASSESSMENT WORKSHEET

City of Palo Alto
Department of Planning & Development Services

GENERAL INFORMATION: **Date Filed**_____

1. Address of Project: 160-164 WAVERLEY STREET
2. Assessor's Parcel Number: 120-12-011 Book #:_____ Page #:_____
3. Application Number(s):_____
4. Applicant:

   Name HEATHER YOUNG ARCHITECTS Telephone 650.459.3200

   Address 81 ENCINA AVENUE Fax # _____

   PALO ALTO, CA 94301 E-mail KARLEE@HYARCHS.COM
5. Owner:

   Name Mc-Z WAVERLEY LLC, ZACH TRAILER Telephone 650.906.8008

   Address 361 LYTTON AVENUE Fax # _____

   PALO ALTO, CA 94301 E-mail ZTRAILER@ZACHTRAILER.COM
6. Current Zoning: RM-20 Comprehensive Plan Designation _____
7. Application for:

   Site and Design_____ Parcel Map_____ ARB Review X

   Use Permit_____ Zone Change_____ EIA, EIR_____

EXISTING SITE:

8. State all known or suspected prior uses, operations, or other activities on the site over the past 20 years THREE DETACHED SINGLE FAMLY RESIDENCES
9. Size of site: Gross 12,500 Net_____
10. Site is owned X Rented _____ ~~by applicant~~. BY OWNER
11. Existing use of property: RESIDENTIAL
    *Attach photographs of project site, also include an aerial photo of the project site.
12. Number of existing structures 4 Current Use RESIDENTIAL
13. Size of existing structures UNKNOWN Condition UNKNOWN
14. Will any structure be demolished for this project Yes X No_____
15. Total square footage to be demolished UNKNOWN
16. Total number of building occupants for existing use UNKNOWN
17. Number of parking spaces 4 % compact spaces 0 # Bicycle spaces 0
18. If current use is residential:

    Number of owner-occupied units 0
    Number of renter-occupied units 3

PROPOSED PROJECT:

19. Project description REMOVAL OF ALL STRUCTURES ON SITE. 2 NEW 2-STORY STRUCTURES CONTAINING 3 RESIDENTIAL FLATS, EACH WITH 3 BERDOOM AND 3-1/2 BATH. AT GRADE GARAGE PARKING FOR 6 VEHICLES. A DETACHED ADU (ACCESSORY DWELLING UNT) IS INCLUDED AT THE REAR OF THE PROPERTY.
20. Future tenant if known UNKNOWN RESIDENTIAL TENANTS
21. Number of structures proposed 2 + 1 ADU Size (in square feet) 6,542 + 748 (ADU)
22. Number of floors and building height 2 FLOORS, VARIES FAR 0.52
23. Percentage of site to be covered (including bricks and pavers) 4,638 (Lot Cov) + 2,100 (paving) = 53%
24. Estimated number of employees per shift N/A
25. If the proposed project is residential:

    Total number of units 3 +1 ADU Number of units per acre 4

    Expected sales price or monthly rent per dwelling unit ~ $ 7,500/month

    List kinds and size of community buildings NONE

    Area of private open space 3,260 SF Area of common open space 562 SF

    Provision of low/moderate income units:

    1) Number of units provided for: Sale NONE Rent NONE

    2) Sale and / or rental price N/A
26. Total number of vehicles expected daily for proposed project 6
27. Number of proposed parking spaces 6 Percentage compact spaces 0%

    Number of bicycle spaces 3 LONG TERM + 1 GUEST
28. Are there any toxic wastes to be discharged? Yes_____ No X

    (If yes, please complete a Sewer Discharge Questionnaire, which is furnished by the Building Department)
29. Has the facility in the past or will the operation of the proposed facility involve the storage or use of Hazardous materials? Yes_____ No X

    (If yes, please complete a Hazardous Materials Disclosure checklist, which is furnished by the Fire Department)

30. Expected amount of water usage (except for residential developments of fewer than 4 units not located in the foothills)

    Domestic 200 gal/day Peak use 200 gal/day

    Commercial NONE gal/day Peak use N/A gal/day
31. Daily sewer discharge (over 30 fixtures only) N/A
32. Expected energy use:

    Gas NONE therms Electric 10000 KWH Peak electric demand 20 kW

    Uses and equipment sizes

    A. Space heating:

       Gas NONE BTUH_____ Solar 8 kW

       Electric Yes KW 10 Heat pump Yes Tons 6

       Other_____

    B. Air conditioning:

       Number of units 4 Total tonnage 8

    C. Water heating:

       Gas NONE BTUH_____ Solar 8 kW

       Electric Yes KW 20 Heat Pump Yes Tons 1

       Other_____

       Type: Central system_____ Individual system_____

       Recirculating Loop? Yes yes No_____

    D. Other:

       Indoor lighting Yes KW 3 Outdoor lighting Yes KW 1

       Cooking Yes KW 30 Refrigeration Yes Tons or ft 12 ft.

       Motors_____ HP_____ x-ray_____ Computer_____
33. Air pollution emissions (Check applicable BAAQMD regulations).

    Commercial / Industrial only: Source N/A

    Type_____ Amount_____
34. Noise generation: eg. Generators, chitlers, HVAC, drive through speakers, etc.

    Source CONDENSING UNITS Amount (dBa) 48

    Please list outside noise sources that may affect the project: eg. Traffic, train etc._____

    Sound proofing/mitigation proposed NONE

    UNITS WILL COMPLY WITH STANDARDS, NOT LOCATED IN SETBACKS
35. Site drainage provisions SEE GRADING AND DRAINAGE PLAN
36. Amount of proposed grading (cubic yards) 90 Cut 130 Fill 40
37. Disposition of excavated material_____
38. Permits required from other agencies:

    Santa Clara Valley Water District N/A

    Bay Area Air Quality Management District N/A

    Army Corps of Engineers N/A

    Other_____

Environmental Setting:

39. Percent and direction of ground slope at site 0.6% TOWARDS STREET
40. Is this site within a special flood hazard area? Yes_____ No X
41. Existing site vegetation (please list, and indicate any to be removed)
    *Also include a tree disclodure statement. The size and location of all public, protected private, and heritage trees must be shown. (This form can be obtained at the Development Center or by calling (650) 617-314)_____

    SMALL FRUIT TREES

    SEE SITE PLAN AND ARBORIST REPORT
42. Existing animal and bird life on site NONE KNOWN
43. Detailed description of conditions and uses of adjacent properties_____

    SINGLE FAMILY AND MULTI-FAMILY

Prepared by HYA ARCHITECTS Date 03/18/2022

Note: More information may be required before the application for which this assessment has been prepared can be processed. Please call the Department of Planning & Development Services at (650) 329-2442 if you have any questions.

PLEASE RETURN COMPLETED WORKSHEET TO THE DEPARTMENT OF PLANNING & DEVELOPMENT SERVICES, DEVELOPMENT CENTER, 285 HAMILTON AVENUE, 1ST FLOOR.

hya
HEATHER YOUNG ARCHITECTS
81 Encina Avenue, Suite 100
Palo Alto, CA 94301
650-459-3200 / hyarchs.com

WAVERLEY RESIDENCES

160 - 164 WAVERLEY ST, PALO ALTO, CA 94301

ISSUANCES

REV	DATE	DESCRIPTION
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ENVIRONMENTAL ASSESSMENT WORKSHEET

A-4

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/.

Ray Morneau, Arborist ISA Certif. #WE-0132A 650.964.7664

9.0 Tree Disclosure Statement (next/final page)

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: 162 Waverley Street, Palo Alto, CA 94301

Are there Regulated trees on or adjacent to the property? XXYES **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
   - XX 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**XXX
   - ☐ 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** Likely 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** No, Still Pending

**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: Raymond J. Morneau (Prop. Owner or Agent) Print: Ray Morneau, Arborist WE-0132-A Date: 9/28/2020

FOR STAFF USE:

Protective Fencing
Sections 5-8 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

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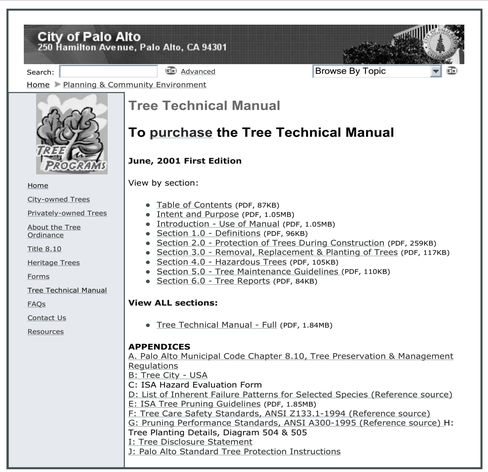
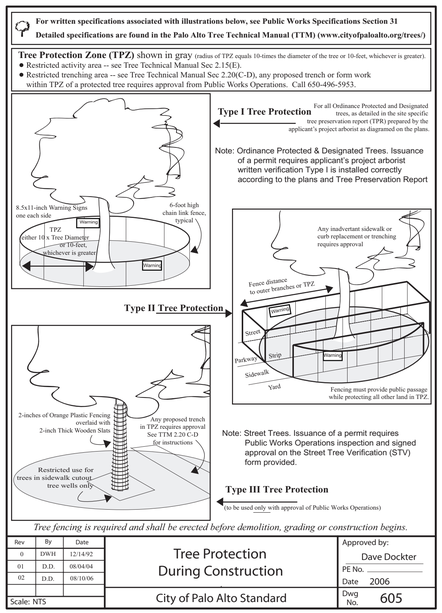




APPENDIX J

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 6.15)
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 (Contact 650-496-6962).
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 monitor 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 review 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 review 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.
Inspected 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\StTreeProtect 5/1706

City of Palo Alto Tree Technical Manual ADDENDUM 11

Arborist Firm Data Here
email:
RCA/ISA Certified Arborist #WE-000
Contact Cell #:

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

HEATHER YOUNG ARCHITECTS
81 Encina Avenue, Suite 100
Palo Alto, CA 94301
650-459-3200 / hyarchs.com

WAVERLEY RESIDENCES

160 - 164 WAVERLEY ST, PALO ALTO, CA 94301

ISSUANCES

REV	DATE	DESCRIPTION
	14 DEC 2020	ARB SUBMITTAL
	12 MAR 2021	ARB RESUBMITTAL
	06 MAY 2021	ARB RESUBMITTAL
	09 AUG 2021	ARB RESUBMITTAL
	10 OCT 2021	ARB RESUBMITTAL
	18 MAR 2022	ARB RESUBMITTAL

TREE PROTECTION

A-5

ISA Tree Risk Assessment Qualified
ISA Certified Arborist #WE-0132A
www.rmarborist.com
eMail: ray@rmarborist.com

Ray Morneau
• ARBORIST •

550 S. Shoreline Blvd.
Mountain View, CA 94041-1929
Tel: 650 964 7664
Mobile: 415 412 1127

Certified Arborist's Pre-Construction Tree Inventory & Tree Protection Report

Data Date: September 24-25, 2020 **Report Date: September 28, 2020**

Prepared for:
Zachary Trailer

APN:
120-120-11
(web searched, must verify)

Site:
Residential Project
162 Waverley Street
Palo Alto, CA 94301

Prepared by:
Ray Morneau
ISA Certified Arborist #WE-0132A
PNWISA Certified Tree Risk Assessor #1188

Outline

1.0 Assignment & Introduction

Assignment: I have been retained by Zachary Trailer to provide a pre-construction tree inventory and Arborist's Report for his project at 162 Waverley Street in Palo Alto.

Introduction: I am an ISA Certified Arborist with experience providing construction consultations, arborist's reports, and site monitoring in the City of Palo Alto. I have worked smoothly with this City's current Planning Division, as well as those from other jurisdictions.

I visited the site to measure and tag the trees (data date September 24-25, 2020). For a tree map for this report, I include a marked-up scan of a borrowed Google Maps image capture of the site, adding my tree numbers near their locations.

No Topo or Site Plan has been available yet, but can be incorporated by reference memo when the engineers and/or design professionals can provide such sheets to me.

The City of Palo Alto Planning Department continues to rely heavily on the 2016 edition (sixth printing!!) of their *Tree Technical Manual – Standards and Specifications* (TTM) digitally available with all current appendices at: https://www.cityofpaloalto.org/civicax/filebank/documents/51800

2.0 Executive Summary – with Extracted Tables, & Tree Map

I inspected the nine (9) trees associated with this site and present their data in my spreadsheets below.

This project will remove the three existing houses and carport to replace them with new housing. This may require removing all but the three municipal street trees (keeping #1, #8, and #9).

Care must be taken to retain as much of those three trees' root zones, trunk/branch structure, and foliage canopies by using tree-friendly techniques to avoid tree damage.

Similar requirements would be prompted for any of the other six trees here which the owners/designers/planners decide to also preserve. Layout of foundations, surface grading, and routing of utilities commonly raise conflict issues.

Care will be required for root zones over the entire lot since, as charted below, the Tree Technical Manual defines the "Tree Protection Zones (TPZs) as covering most of this property.

The project Landscape Architect can provide a thoughtfully, well-designed landscape plan.

Summary Charts

Overall Condition Chart

Percentage Range	Text Description	Quantity
0%	DEAD	0
1% to 25%	Very Poor	2
26% to 49%	Poor	2
50 % to 70%	Fair	1
71% to 90%	Good	4
91% to 100%	Excellent	0
		9

Overall Tree Frequency Chart

	City of Palo Alto Regulated Trees = 3				Not Reg-ulated	Total All Trees
	a. Street	b1. Protected: ³11.5"	b2. Protected: ³18"	c. Designated		
Total	3	0	0	0	6	9
On Parcel	1	0	0	0	6	7
Overhang	2	0	0	0	0	2
						9

Tree Summary Chart 162 Waverley. Palo Alto 9/28/2020

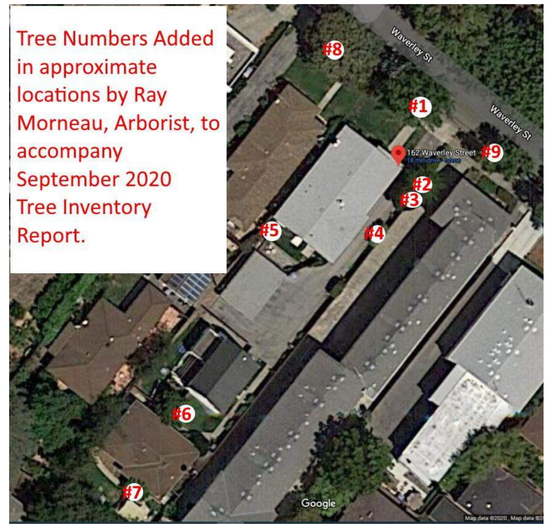
#	Name, Common	Diam.	Condition	Comments	Protected?
1	Sweetgum	26.4"	75% Good	Muni street tree in front planting strip with utilities.	Yes - ST
2	Silverthorn	12.2"	25% V. Pr.	Between existing driveway & fence; poor structure.	No
3	Douglas-fir	13.9"	25% V. Pr.	Between existing driveway & fence; poor structure.	No
4	Lemon	6.6"	40% Poor	Declining between existing driveway and fence.	No
5	Fig	9.8"	50% Poor	In back against side fence of #160.	No
6	Avocado	8.8"	77% Good	In back, side lawn of #164.	No
7	Orange	4.9"	77% Good	Existing foundation at 1'.	No
8	Hackberry	21.2"	70% Good	Municipal street tree within 30'; typ.; minor stresses.	Yes - ST
9	Sweetgum	18.9"	55% Fair	Municipal street tree within 30'; typ.; minor stresses.	Yes - ST

Sorted Alphabetically by Common Name

Persea americana	1	Avocado
Pseudotsuga menziezii	1	Douglas-fir
Ficus caria	1	Fig
Celtis sinensis	1	Hackberry, Oriental
Citrus limon	1	Lemon
Citrus sinensis	1	Orange
Eleagnus species	1	Silverthorn
Liquidambar styraciflua	2	Sweetgum
	9	

Sorted Alphabetically by Botanical Name

Celtis sinensis	1	Hackberry, Oriental
Citrus limon	1	Lemon
Citrus sinensis	1	Orange
Eleagnus species	1	Silverthorn
Ficus caria	1	Fig
Liquidambar styraciflua	2	Sweetgum
Persea americana	1	Avocado
Pseudotsuga menziezii	1	Douglas-fir
	9	



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WAVERLEY RESIDENCES

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	14 DEC 2020	ARB SUBMITTAL
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	09 AUG 2021	ARB RESUBMITTAL
	10 OCT 2021	ARB RESUBMITTAL
	18 MAR 2022	ARB RESUBMITTAL

ARBORIST REPORT

A-6

3.0a Tree Inventory Data

Tree Inventory Data: 160, 162, 164 Waverley Street, PA

Data date: September 24, 2020

Tree #	Botanical Name / Name, Common	dbh	Crown Radius	Height	% Vigor	% Structure	% Overall	Species Aptitude	Age / Longevity	Additional Comments	Protected ≥11.5", or ≥18", or Street Tree
1	*Liquidambar styraciflua* / Sweetgum	26.4"	25'	38'	65%	85%	75% Good	Mod.	Mature	Street tree in front planting strip between sidewalk and curb. Water meters in ground at 8' (+ a sewer cleanout); 11' to existing driveway apron; Moderate foliage branch endweights and some decline.	ST
2	*Elaeagnus species* / Silverthorn	12.2" @ 1'	16'	20'	60%	10%	25% V. Pr.	Low	Over-mature	Between side fence and existing asphalt driveway. Severely multi-stemmed throughout; side-pruned for clearance. THORNS!!	No
3	*Pseudotsuga menziesii* / *Douglas-fir*	13.9"	12'	22'	55%	10%	25% V. Pr.	Low	Over-mature	Between side fence and existing asphalt driveway. Multi-stemmed at 10'; side-pruned for clearance. Not sufficient room here for such a huge tree to mature!!!	No
4	*Citrus limon* / Lemon	6.6" @ 0'	5'	12'	40%	40%	40% Poor	Mod.	Over-mature	Declining screen tree alongside driveway; severely pruned; misshapen; 3-trunked from ground level; copious twiggy deadwood.	No
5	*Ficus carica* / Fig, Common	9.8" @ 0'	9'	10'	60%	40%	50% Poor	High	Semi-mature	In backyard of #160; against west side fence; vigorous; with surface roots; multi-stemmed from ground level (2", 3", 5" diameters).	No
6	*Persea americana* / Avocado	8.8" @ 4'	18'	28'	80%	75%	77% Good	Low	Mature	In back/side lawn of #164.	No
7	Citrus sinensis / Orange	4.9" @ 1'	6'	12'	85%	70%	77% Good	Mod.	Semi-mature	At back of house; 1' to foundation (#162). Multi-stemmed at 2' above ground.	No
8	Celtis sinensis / Hackberry, Oriental	21.2"	23'	42'	70%	70%	70% Good	Mod.	Mature	Neighbor's street tree in municipal planting strip between curb & sidewalk, 23' west of property line. Minor deadwood to 4" diameter. Foliage tips hang down to 5' over neighbor's lawn.	ST
9	Liquidambar styraciflua / Sweetgum	18.9"	10'	38'	60%	50%	55% Fair	Mod.	Mature	Neighbor's street tree in municipal planting strip between curb & sidewalk, 22' east of property line. Severely pruned by City; declining.	No
	9						*0*				
							"Excellent" =	4			
							"Good" =	1			
							"Fair" =	2			
							"Poor" =	2			
							"Very Poor" =	2			
							"Dead" =	9			
							TOTAL =				

3.0b Tree Inventory Legend: Headers

Observations were made and data gathered during my on-site inspection (Sept. 24-25, 2020). Further conclusions and protection measures were refined from office research, seminar information, and past experience based on those observations and data.

Unless otherwise defined as a limited inventory, all site trees larger than a minimum diameter (usually ≥4-inch) were numbered and inspected. The gathered data was entered into a Microsoft® Excel database.

The data is encapsulated into the accompanying "Tree Inventory Data" section. The categories are typically self-descriptive with only the following notes.

Tree Number:	I sequentially assigned tree numbers from 1 to 9. A 1"x3" aluminum tag is stapled to each tree at about eye level. I add a prefix "20" to identify each as linked with this inventory, thus differentiating it from any other numbering system.
Names:	We employ the initial common names from McMinn, if listed, otherwise from Sunset. Scientific/botanical names are included to minimize confusion. As applicable, we used McMinn's key and/or Sunset's descriptions.
DBH:	Diameter at Standard Height: This measurement is the trunk diameter measured at the standard height defined by the jurisdiction in which the tree trunk grows.
	DBH = Diameter at Breast Height: the industry standard is 54 inches above ground level, taken with a standard surveyor's diameter tape, recorded in inches.
	Multi-trunked tree's diameters are measured below the lowest branch swelling and/or individual stems at 54 inches, or an average, depending on which height measurement is deemed to produce the best representative figure.
Crown Radius:	The averaged radii's measurement is shown in feet.
Canopy Cover:	Estimated averaged radii of foliage canopy cover (crown's shadow at noon on the ground below).
Ht (Height):	Estimated distance foliage crown extends above grade, recorded in feet.
Vigor:	Rating for tree's growth and vitality as a blend of elements like leaf or bud size and color, twig growth (elongation), accumulation of deadwood, cavities, woundwood development, trunk expansion (growth "cracks"), etc.
Form:	Structure rating for tree's architecture as a composite of factors like branch attachment, lean and balance, effects of prior breakage, crossing-tangled-twisted limbs, codominant trunks and/or branches, decay and cavities, anchorage (roots), etc.

Overall Condition:	Percentage rating assessing the tree's overall vigor, recent growth, insects/diseases, and structural defects. Relative text rating included in the same cell as: Excellent, Good, Fair, Poor, Very Poor.
	This corresponds to the "Condition Percentage" factor in tree valuations per the Council of Tree and Landscape Appraisers (CTLA) system used by the International Society of Arboriculture. (CTLA, 1992.)
	It combines foliage, branches, limbs, trunk, and root ratings into a composite condition score. This rating is used in the calculation of these trees' appraised value required by the City of Palo Alto.
Species Aptitude:	Considers the species' tolerance to construction impacts and the tree's condition (vigor & structure), longevity/age, adaptability, and aesthetics
	This rating takes into account any announced intentions of changes in area/lot use. Degrees: High, Moderate, Low, Very Low.
	• High: Tree in great condition and any existing defects or stresses are minor or can be easily mitigated.
	• Moderate: Notable vigor and/or stability problems but which can be moderated with treatment &/or increased tree protection zone.
	• Low: Significant problems, including shorter life expectancy. Difficult to retain but potential with much larger tree protection zone.
	• VeryLow: Substantial existing problems, defects, stresses. Unlikely to survive impact of any project.
Protected ≥11.5", or ≥18"; Designated:	Notation of tree's status as a "Regulated Tree" per the Palo Alto Tree Technical Manual (pp. xiii, xiv). Some Palo Alto trees are "Protected": oaks 11.5-inch diameter or greater ("11.5"") and redwoods 18-inch diameter or greater ("18"").
	Others may be "Designated" ("D") for regulation by the City, including any tree that is part of a project on a modern discretionary development review site, likely only after these were developed.
	A third type of regulated tree would be "Street Trees" (ST) on many projects.
	(NB: as needed on non-Palo Alto sites, various "Heritage" or "Protected" or otherwise regulated trees can be defined to be recorded - and this column might be re-named appropriately.)
Age / Longevity:	Rates tree's relative age: Young (Long) / Semi-Mature / Mature / Over-Mature (Short).
Comments:	Notes; most obvious defects, insects, diseases or unique characteristics.

3.0c Tree Appraisal Calculations – with Summary & Legend

CTLA Appraised Value Summary

#	Name, Common	Diameter = dBh = Trunk diameter at 4.5' above ground level	Com BK* Species	Condition	Location %	Rounded-off Appraised Values
1	Sweetgum	26.4"	50%	75%	71%	$11,200
2	Silverthorn	12.2"	50%	25%	43%	$500
3	D-fir	13.9"	50%	25%	43%	$310
4	Lemon	6.8"	50%	40%	43%	$240
5	Fig	9.8"	50%	50%	55%	$820
6	Avocado	8.8"	30%	77%	65%	$440
7	Orange	4.9"	80%	77%	52%	$520
8	Hackberry	21.2"	50%	70%	71%	$4,010
9	Sweetgum	18.9"	50%	55%	71%	$4,230
					Grand Total =	$22,270

Appendix B: Appraised Value -- Data Sheet 1 of 1. Waverley 160, 162, 164: Sep. 24, 2020

1	Ln 2	Ln 3	Ln 4	..... Location.....		Ln 5	Ln 6	Ln 7	Ln 8	Ln 9	Ln 10	Ln 11	Ln 11.1	Ln 11.2	Ln 12	Ln 13	Ln 14	Ln 15
"Green Book" Page	Condition	Diameter	Location %	Site	Contribution	Placement	"Com BK" Group	"Com BK" Species	"Green Book" Replacement Cost	"Green Book" Installation Cost	Installed Tree Cost	Unit Tree Cost	(A)TAa	"dp" TAa	"dp" ATAa	TA_{tw}	Basic Tree Cost	Appraised Value	Rounded-off Appraised Values
20	75%	26.4	71%	80%	66%	66%	2	50%	2.24	$172.73	$172.73	$345.46	$77.04	$47,111	547.11	n/a	544.87	$ 42,322.24	$11,215.39	$11,200
12	25%	12.2	43%	50%	50%	30%	2	50%	2.24	$172.73	$172.73	$345.46	$77.04	116.84	116.84	n/a	114.60	$ 9,174.24	$ 496.94	$500
29	25%	13.9	43%	50%	50%	30%	4	50%	4.75	$172.73	$172.73	$345.46	$36.36	151.67	151.67	n/a	146.92	$ 5,687.47	$ 308.07	$310
10	40%	6.6	43%	50%	50%	30%	2	50%	2.24	$172.73	$172.73	$345.46	$77.04	34.19	34.19	n/a	31.95	$ 2,806.89	$ 243.26	$240
15	50%	9.8	55%	50%	60%	55%	2	50%	2.24	$172.73	$172.73	$345.46	$77.04	75.39	75.39	n/a	73.15	$ 5,980.94	$ 822.38	$820
23	77%	8.8	65%	50%	75%	70%	3	30%	3.8	$172.73	$172.73	$345.46	$45.46	60.79	60.79	n/a	56.99	$ 2,936.23	$ 440.87	$440
10	77%	4.9	52%	50%	70%	35%	2	80%	2.24	$172.73	$172.73	$345.46	$77.04	18.85	18.85	n/a	16.61	$ 1,625.09	$ 517.21	$520
8	70%	21.2	71%	80%	66%	66%	3	50%	3.8	$172.73	$172.73	$345.46	$45.46	352.81	352.81	n/a	349.01	$ 16,211.45	$ 4,009.63	$4,010
20	55%	18.9	71%	80%	66%	66%	2	50%	2.24	$172.73	$172.73	$345.46	$77.04	280.41	280.41	n/a	278.17	$ 21,775.68	$ 4,231.74	$4,230
																	Grand Total =			$22,270

Appendix B: Appraised Value -- Legend Sheet

Per the CTLA *Guide for Plant Appraisal* (9th ed, 2000), pp. 70-71, as the worksheet is reproduced in tablet-form and included as a page in this report.
CTLA = Council of Tree and Landscape Appraisers (a concensus group of seven green industry organizations: ISA, NAA, ASCA, ANLA, ALCA, ACF, and ASLA).
Note: the CTLA calls for the development of locally relevant species and nursery data by a Regional Plant Appraisal Committee.
Note: ISA is the publisher of the *GPA*, and local ISA chapters have developed the regional data -- in our area, the Western Chapter ISA (WC-ISA) (see "Green Book" below.).
Note: The 10th. edition of "The Guide" is copyrighted June 2019 ... but shrouded in controversy ... so the 9th. Edition is still widely used.

Ln # = Line number on worksheet published in *The Guide* ..
Tree # = per Tree Chart & Tree Map in this report.
"Green Book" = colloquial name for the Species *Classification & Group Assignment* (with a green cover); refers to standard publication required for local reference, published by WC-ISA
Condition = from Tree Chart in this report.
Diameter = from Tree Chart in this report.
Location = guided by the *Guide* , derived by averaging the ratings for **Site**, **Contribution**, and **Placement**.
"Green Bk" Group = Group assigned by the committee/authors of "Green Book".
"Green Bk" Species = **Species** classification assigned by the committee/authors of "Green Book".
"Green Bk" TA$_a$ = **Replacement** tree **trunk area** specified for the group assigned by the committee/authors of "Green Book".
"Green Book" Replacement Cost = Cost to acquire largest "commonly available" (48"-box) at local nursery, averaged out by "Green Book" committee.
"Green Book" Installation Cost = Cost, averaged out by "Green Book" committee, to transport from nursery to site, prep hole & plant, stake, water, overhead, profit, etc..
Installed Tree Cost = Sum of two previous lines (replacement + installation).
Unit Tree Cost = Calculated for each "Group" by "Green Book" committee.
(A)TA$_a$ = **(Adjusted) Trunk Area** of the **Appraised** tree. Could be from a chart in the *Guide* .. Or, as here, is more accurately calculated by one of the two following formulae.
TA$_a$ = **Trunk Area** of the **Appraised** tree. Calculated directly from the trunk **diameter** (hence trunk formula method) by the formula: d^2 X 0.785.
ATA$_a$ = **Adjusted Trunk Area** of **Appraised** tree, if over 30" dbh, adjusted by CTLA formula to compensate for the "rate-of-tree-value increase of a large tree being less than its rate of in
TA$_{inc}$ = **Trunk Area increase.** Arithmetic difference betw een the **Trunk Area** of the **Appraised** tree and the **Replacement** tree (Line 11 minus Line 6).
Note: if calculation for "Trunk Area Increase" yields a negative number (due to small tree size), then next column, "Basic Tree Cost", uses cost to acquire & plant a smaller specimen from a
Basic Tree Cost = Sum of the **Installed Tree Cost** plus the quotient derived from multiplying the **Unit Tree Cost** times the **Trunk Area Increase** (Ln 12 X Ln 10 ÷ Ln 9).
Appraised Value = Calculated by reducing the **Basic Tree Cost** by the **Species**, **Condition**, and **Location** factors (Ln 13 X Ln 5 X Ln 2 X Ln 4)
Rounded-off Appraised Value = **Appraised Value** rounded to nearest $10, if less than $5000. Else rounding to nearest $100, if equal to or more than $5000.
Note = for existing trees which are still smaller than the typical nursery's 24-inch-box specimen, the smaller nursery specimen's cost has been substituted into the "Basic Tree Cost" cell.

Not applicable - not a "tree" = for trees smaller than Ordinance-size.

n/a* = Palm tree values are calculated differently in our area [see next]

4.0 Tree Preservation Guidelines: General

As development of this property goes forward, the June 2001 publication (6th printing, revised 2016) of the *City of Palo Alto Tree Technical Manual -- Standards and Specifications* provides extensive detail that continues to govern trees on construction projects in Palo Alto. By municipal ordinance, this book is now the local tree law or "tree bible". Many construction situations involving trees are addressed. It is available from the Municipal Development Center, 285 Hamilton Avenue, Palo Alto, CA 94301 or on-line at: http://www.cityofpaloalto.org/civicax/filebank/documents/51800 (last accessed 09/09/2020).

To a large extent, this *Manual* provides Developers, Designers, Owners, Project Managers, and all on-site personnel with the information they need to develop, design, and work near trees. For the Project Arborist, it is a framework from which tree issues can be raised and clarified as necessary.

At the risk of duplicating material in the *Manual*, I have set out some particular Tree Preservation Guidelines in §6 and §7 below. Neither the *Manual* nor my report is intended to be all-inclusive. Clarification and/or more specific measures can be provided as needed.

Root Zone Work - - Key Table of Definitions & Distances

TPZ = Tree Protection Zone … a radius distance measured from the outside of the largest area of the trunk … likely contains many of the tree's roots, but by no means all, which the tree needs for biological and structural support.
Activity within any TPZ or inside of any TPF (Tree Protective Fencing) must follow the work plan agreed to by the Project Arborist, which may include monitoring by the Project Arborist.
TPZ is calculated as ten times the trunk diameter (10 X DBH / 12)

PMD = Potential Minimum Distance … a radius distance measured from the outside of the largest area of the trunk … likely contains a substantial portion of the tree's roots, but by no means all, which the tree needs for biological and structural support ;… "Potential", if agreed upon by the Project Arborist and/or City Arborist.
Activity within any PMD must follow the work plan agreed to by the Project Arborist, which may include monitoring by the Project Arborist.
PMD is calculated as five times the trunk diameter (5 X DBH / 12) for a cut on only one side of a tree – keeping the remainder of the roots undisturbed, uncut.
All activity within a PMD must be monitored by the Project Arborist when encountering roots equal to or greater than 3-inch diameter (≥3").

CRZ = Critical Root Zone … a radius distance measured from the outside of the largest area of the trunk … likely contains most of the tree's supporting roots, physically holding it up.
CRZ is calculated as three times the trunk diameter (3 X DBH / 12) for one cut along one side of the tree.
Activity within any CRZ must be monitored by the Project Arborist.

AMD = Absolute Minimum Distance = the not-to-exceed distance for a cut on one side … if necessary to cut on more than one side, then that distance must be marked-out aggressively on a case-by-case basis, as determined by the Project Arborist.
AMD is calculated as once and a half the trunk diameter (1.5 X DBH / 12) for one cut along one side of the tree … round up to next larger whole number.
All activity at AMD must be monitored by the Project Arborist.

*** * * Measurements are all from outside of the largest area on the trunk, which means usually outside of the RF (Root Flare) - - NOT from the center of the trunk.**

TPZ per TTM =10xDBH/12; PMD=5xDBH/12; CRZ=3xDBH/12; AMD=1.5xDBH/12

#	Name, Common	Diam.	TPZ radius	PMD one side cut in feet	CRZ one side cut in feet	AMD: one side cut in feet
1	Sweetgum	26.4"	22'	11'	6'	3.5'
2	Silverthorn	12.2"	10'	5'	3'	2'
3	Douglas-fir	13.9"	11'	6'	4'	2'
4	Lemon	6.6"	5.5'	3'	2'	1'
5	Fig	9.8"	8'	4'	3'	2'
6	Avocado	8.8"	7.5'	4'	3'	2'
7	Orange	4.9"	4'	2'	2'	2'
8	Hackberry	21.2"	17.5'	9'	5.5'	3'
9	Sweetgum	18.9"	16'	8'	5'	3'

* * * *

Important Note:
In the City of Palo Alto, the TPZ (Tree Protection Zone) for each and every tree to remain is ten times the particular tree's diameter (10 X DBH).
When the entire TPZ cannot be fenced, special work procedures MUST be followed
Per Tree Protection Measures in Sections 5 and 6, below.

* * * *

5.0 Tree Preservation Guidelines: Basic

5.1 These Tree Preservation Guidelines in §4, §5 and §6 contain practical tree information, which helps project team members to know what to expect regarding site trees. They help everyone coordinate between various sub-projects within the whole. They help minimize construction impacts and stresses on the trees.
These need to be included as part of the construction documents so that everyone who has a set of drawings also knows what tree protection measures they are required to follow here. Including them as a sheet in the blueline drawings is a typical and straightforward way to accomplish this. The Palo Alto standard uses its published "T-sheets" – downloadable: https://www.cityofpaloalto.org/civicax/filebank/documents/31783 (last accessed 12/15/2019) for both T-1 and T-2.

5.2 Usually a plan to provide supplemental watering is required. Root zone moisture under the mulch can be monitored and a deep-soaking can be applied if the upper three inches become dry.
Supplemental watering should be provided for trees to remain. A rule of thumb for construction site stressed trees is 10-20 gallons per trunk diameter inch per month, particularly critical during hot weather. This is modified by the Project Arborist on site with root zone inspections and monitoring as water demands will obviously be lower during cool, damp weather. Inspection should find soil between 3" and 18" below grade moist enough for roots to thrive.

5.3 If pruning is needed, ANSI A-300 standards apply. The general contractor and the tree care contractor both need to be communicating with the Project Arborist as to the pruning specifications.
No pruning is absolutely needed at this time, however, generally pruning to reduce deadwood and foliage branch endweights could make for much better structured trees.
That said, deadwood removal and endweight reduction is commonly performed to improve existing site and neighboring trees.
Usually project trees benefit from "Crown Cleaning" for deadwood removal and "Crown Thinning" to lighten branch endweights) at sometime before the close of the project. Then the owner has a benchmark against which to compare future status of the trees. All work must conform to published ANSI A-300 Standards

5.4 All project tree work performed before, during, or after construction is to be done by a qualified tree care contractor with a current, active C61/D49 license issued by the California State Contractors' Licensing Board. This especially includes all pruning, removals (including stump removals) within driplines of trees to be preserved, root pruning, and repair or remedial measures.
That company must have experience on similar projects. The crew must include WCISA Certified Tree Workers who can perform the work under the supervision of an ISA Certified Arborist (or equivalents, if they possess sufficient skill for approval by Project Arborist).

5.5 The Tree Technical Manual, Section 2.30, requires the following Project Arborist site monitoring inspections, with summary monthly reports submitted to City of Palo Alto Planning Department (typically, e-mailed to Planning Division Arborist, Dave Dockter).
- Tree Protection Fence. Inspect placement of TPFs and other pre-construction protections (e.g. mulch, signs) before start of project.
- Pre-construction meeting. Before commencement of construction, the applicant or contractor shall arrange site meeting attended by, job site superintendent, grading equipment operators, subcontractors, Project Arborist, and City Arborist.
- Inspection of Rough Grading. Project Arborist needs a minimum of 48-hours notice to inspect rough grading issues in or adjacent to TPZs. Not applicable in this case.
- Project Arborist monthly site monitoring inspections are, with summary monthly reports submitted to City of Palo Alto Planning Department (typically, faxed to Planning Division Arborist, Dave Dockter).
- Special Activity within any Tree Protection Zone. Work in the TPZ requires direct on-site supervisory monitoring by the Project Arborist (48-hours minimum prior notice required).
- Landscape Architect Inspection. Depending on the level of landscape architect involvement, his final inspection may be required. This will not be needed for this project -- but Project Arborist can provide one last inspection at the time of contractor's need to remove tree protection fence.

6.0 Tree Preservation Guidelines: Site-Specific Tree Protection Measures (162 Waverley Street, PA)

This report can only provide a general tree preservation-protection protocol at this time. By their very nature, construction projects develop along a continuum with degrees of detail continually changing, being updated, sometimes right down to the final punchlist and turnover.

This report is merely a dot on the project timeline. As details change and plans develop and more information becomes available, changes can be addressed by memo until it makes more sense to issue an entirely revised report.

- Building projects in Palo Alto are required to preserve trees.
- Every person on the project is responsible for promoting reduced project impacts to trees that are to remain after the last truck drives away from a completed job.
- The next two text boxes are basic reminders.

Ray Morneau's Construction Crew Notes [summarized-to-one-page]]

CCN-1.0 Preserve the tree(s) … not just firewood – Whole Trees …
- Tops (foliage crowns / branches)
- Trunks
- Roots / root zones.

CCN-2.0 Must get permission before moving any Tree Protection Fencing (TPFs).

CCN-3.0 Stop excavator or tractor digging when roots 1-inch diameter are encountered … hand-tool digging only after that … upon encountering roots 2-inch diameter or larger – call in Project Arborist.

CCN-4.0 Keep roots 2-inch diameter and larger intact / uncut … probably can sever 2-to 4-inch diameter roots once Project Arborist sees them.

CCN-5.0 Any roots to be severed 2-inch diameter or larger must be carefully hand dug around and severed with hand tools or Sawz-All®.

CCN-6.0 Keep roots moist – but not flooded.

CCN-7.0 Keep root zone buffers intact and in place – arborist wood chipper-chips, plywood, trench plates, Ground Protection Mats,….

CCN-8.0 No wash-out, cleaning tools, storage of tools, materials, equipment, supplies beneath tree canopies.

Fence locations, modifications, adjustments, and stagings must be discussed at the pre-construction meeting called out in Section 5.5, above. Other/additional root zone protection may be needed for this project, such as mulch or other root preservation materials (plywood, trench plates, geogrid, other?) and shall be discussed at that pre-construction meeting, too.

DEPENDING on project plans submitted to and ultimately approved by the Palo Alto Planning Department, these Tree Preservation Measures may be "adjusted" by a Planning Arborist and/or Project Arborist.

* * * **For Example**: Existing asphalt-concrete (driveways/drive-aisles, sidewalk) will be kept in place "as-is" and will provide some root zone protection for trees. * * *

6.1 Fencing [TPF]
6.1.1 Before any equipment arrives or project site work commences, root zone protection must be in place.
6.1.2 Tree Protection Fence [TPF] locations for this project can/will be further identified as additional information is made available. Fence placement preference would be a Type-I, of course – but it is impracticable here to fence these trees at their driplines (branch tips).
So, mostly Type-II will be used due to the close proximity of necessary work. However, if either the Planning or Public Works Department requires the street trees (#1 and #9 Sweetgums and/or #8 Hackberry) to be retained/preserved here, they might allow for trunk wraps with wattle and/or orange plastic fencing held in place with 2x4 slats.
The city Arborist or Project Arborist must be contacted to advise re-positioning of TPF, if relocation becomes necessary.
6.1.3 Palo Alto typically requires fence material to be 6' high chain link. At the contractor's option, depending on site conditions, driven posts shall be preferred. Alternatively, pipe or concrete base supports may be set on top of the ground with sufficient anchorage to prevent moving the fencing.
TPF locations are to be sketched on the Site Plans. Palo Alto requires signs on the fences, warning of penalties in the event fencing is moved or removed prematurely. Language available per *Tree Technical Manual* – or per City standard T-1 Sheet referred to above – or "Protected tree – before working in this area, contact the Project Arborist at __-__-____ or City Arborist at (650) 496-5953. Noncompliance is subject to $500 fine per day".
6.1.4 All root zone protection shall remain in-place and effective until Project Arborist's final inspection.
6.2 Fencing is often the first noted tree protection measure [TPM]. However, arborist wood chip mulch (chipper chips) is a common root zone buffer (often in combination with other materials – such as plywood, trench plates, geogrid, other?) and is required here, 4- to 6-inches deep over unprotected root zones. Further, other TPMs are noted throughout this report.

6.3 Prohibited Acts & Requirements
6.3.1 No parking or vehicle traffic may travel over any root zones, unless using buffers approved by Project Arborist.
6.3.2 Have a certified arborist repair any tree damage promptly. And promptly notify Project Arborist.
6.3.3 No pouring or storage of fuel, oil, chemicals, or hazardous materials under these foliage canopies.
6.3.4 Any temporary construction site utilities shall be placed so as not to affect foliage crowns or root zones. This includes electric, water, communication, portable toilets, etc. Infringement on any tree's space requires Project Arborist consultation.
6.3.5 No storage of construction materials or equipment under any foliage canopy without prior Project Arborist approval.
6.3.6 No trenching within any tree protection zone without Planning or Project Arborist review. Consult Project Arborist before any trenching or root cutting beneath any tree's foliage canopy.
6.3.7 Any work inside of Tree Protection Fences and/or encountering roots of 1-inch-or-greater diameter requires the notice to the Project Arborist to arrange for on-site monitoring. Typically, 48-hours prior notice is acceptable.
6.3.8 No clean out of trucks, tools, or other equipment over any root zone. Keep this debris outside of any existing or future root zone.
6.3.9 No attachment of signs or other construction apparatus to these trees.

7.0 Certification & Use Statement

The instant report is applicable to this project at 162 Waverley Street and may not be adopted without site-specific updates/revisions/adaptations by this Project Arborist.

The City of Palo Alto Planning Department requires the two documents included as the final-following two pages of this report Their "Tree Disclosure Statement" can stand alone, as I have signed it, and it can be added to the T-1 Sheet by the architect, owner, or whoever prepares the T-Sheets. Their "Project Arborist Certification Letter" on the next page becomes valid for use when the owner complies with those City requirements, countersigns it, and returns a signed copy to me.

I certify that all the statements of fact in this report are true, complete, and correct to the best of my knowledge, ability, and belief, and are made in good faith.
This report is valid for submittal and use upon my receipt of valid payment.

Respectfully submitted,

Raymond J. Morneau
ISA Certified Arborist #WE-0132A
ISA Tree Risk Assessment Qualified
PNW-ISA Certified Tree Risk Assessor #1188

8.0 Project Arborist's Certification Letter (next/final-minus-1 page)

Project Arborist Certification Letter.pdf … a PDF file often attached to City Planners' comment letter …
here captured and modified by Ray Morneau, Arborist to provide a completion signature line for the project's responsible party to show they are in concurrence.

CITY OF PALO ALTO

Project Arborist Certification Letter

Prior to demolition, building, or grading permit issuance, the project arborist must sign this certification letter. By signing, the arborist certifies that the following terms have been met:

- Reviewed the entire building permit plan set submittal, and all updated Tree Protection Report (TPR) measures and changes are incorporated in the plan set.
- Affirms that the T-1 (Tree Protection – it's Part of the Plan!) is included in the plan set with the Tree Disclosure Statement complete/signed by the Property Owner or Agent.
- Reviewed the Urban Forestry Conditions of Approval, and required items (e.g. specific plan notes and standard drawings) have been included in all relevant permit sheets.
- Confirms that ongoing Contractor/Project Arborist site monitoring inspections and reporting have been arranged with the contractor or owner.
- If protected oaks, redwoods, or designated trees are located on or next to the property, an itemized list of any activity impacts has been quantified and mitigated in the Tree Protection Zone for each tree.
- Confirms that changes to plans before or during construction shall be reviewed by the project arborist and responded to with a written letter of acceptance before submitting the revision to the Building Department for review by Planning, Public Works, or Urban Forestry.

Project Address: 162Waverley Street, Palo Alto, CA 94301

We, Zachary Trailer and Ray Morneau , certify that the items listed have been addressed and are in accordance with City of Palo Alto standards and Building Permit stipulations.

Zach Trailer	12/10/2020	650-906-8008
Project Owner/Agent Signature	Date	Contact Number
Raymond J. Morneau	**September 28, 2020**	**WE-0132A**
Project Arborist Signature	Date	Certification Number

Palo Alto Tree Technical Manual: http://www.cityofpaloalto.org/civicax/filebank/documents/6436
Public Works Urban Forestry Operations Phone: (650) 496-5953 Version received 4/19/2017

hya
HEATHER YOUNG ARCHITECTS
81 Encina Avenue, Suite 100
Palo Alto, CA 94301
650-459-3200 / hyarchs.com

WAVERLEY RESIDENCES

160 - 164 WAVERLEY ST, PALO ALTO, CA 94301

ISSUANCES

REV	DATE	DESCRIPTION
	14 DEC 2020	ARB SUBMITTAL
	12 MAR 2021	ARB RESUBMITTAL
	06 MAY 2021	ARB RESUBMITTAL
	09 AUG 2021	ARB RESUBMITTAL
	10 OCT 2021	ARB RESUBMITTAL
	18 MAR 2022	ARB RESUBMITTAL

ARBORIST REPORT

A-7

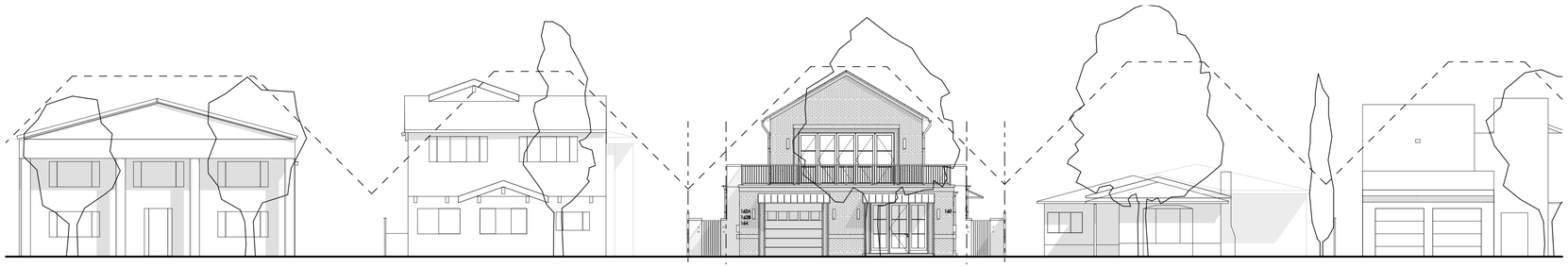
170 WAVERLEY STREET
ZONED: RM-20

168 WAVERLEY STREET
ZONED: RM-20

160 -164 WAVERLEY STREET
ZONED: RM-20

150 WAVERLEY STREET
ZONED: R1

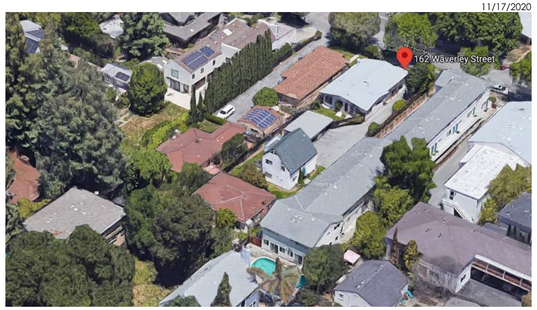
126 WAVERLEY STREET
ZONED: R1



0 8' 16' 24'

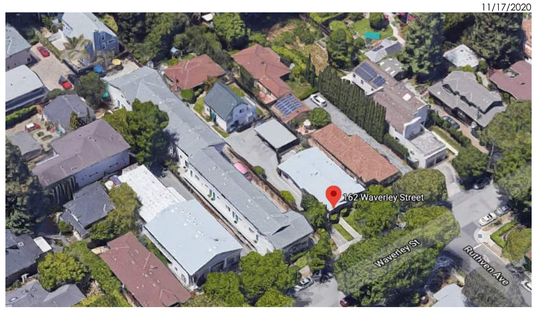
STREET ELEVATION 3
SCALE: 3/32" = 1'-0"

11/17/2020

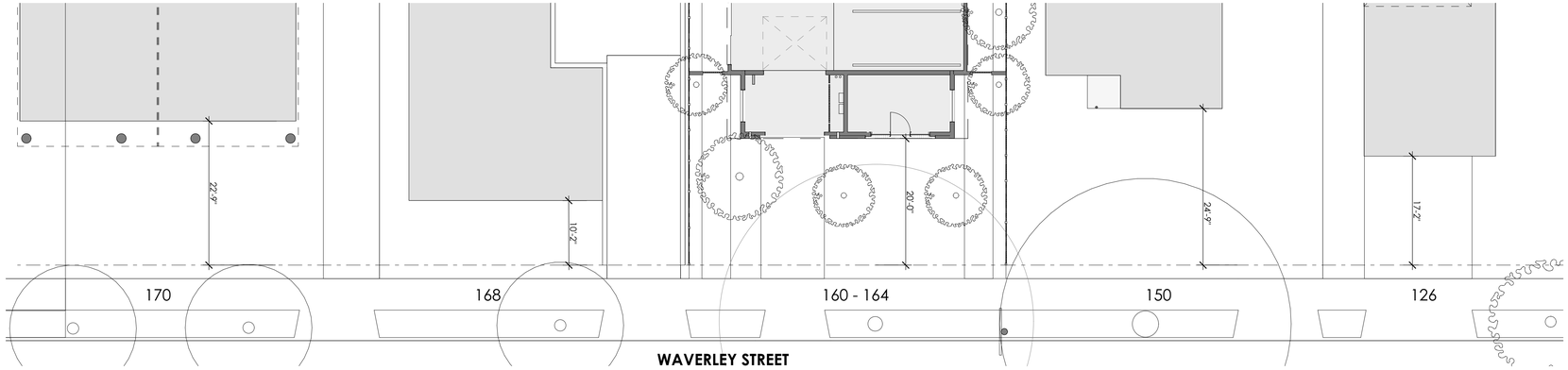


AERIAL VIEW - BACK OF SITE 6

11/17/2020

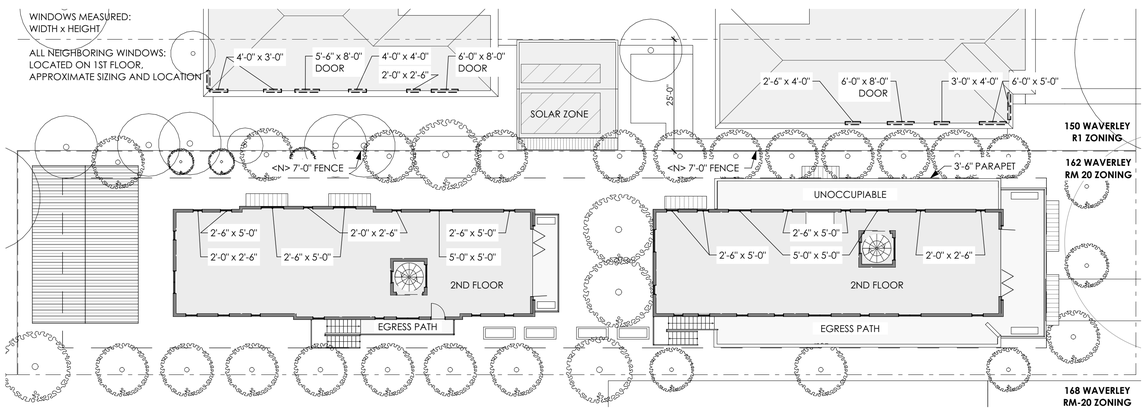


AERIAL VIEW - FRONT OF SITE 5



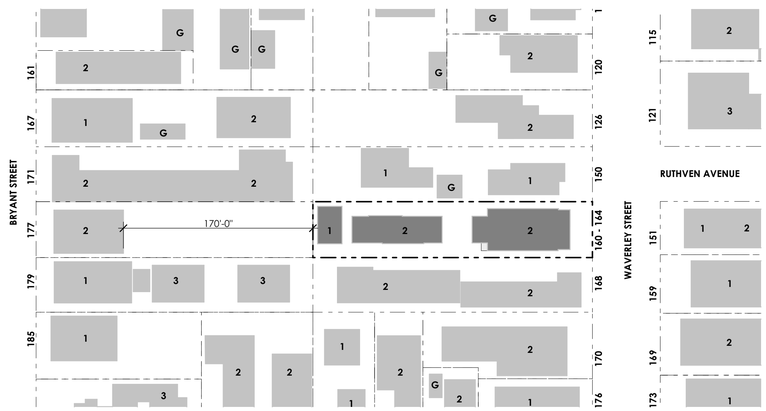
0 8' 16' 24'

STREET CONTEXT 2
SCALE: 3/32" = 1'-0"



0 8' 16' 32'

PRIVACY DIAGRAM (NO MARKERS) 4
SCALE: 1/16" = 1'-0"



1 - SINGLE STORY RESIDENCE 2 - TWO STORY RESIDENCE G - GARAGE

NEIGHBORHOOD CONTEXT 1
SCALE: 1/64" = 1'-0"

hya
HEATHER YOUNG ARCHITECTS
81 Encina Avenue, Suite 100
Palo Alto, CA 94301
650-459-3200 / hyarchs.com

WAVERLEY RESIDENCES

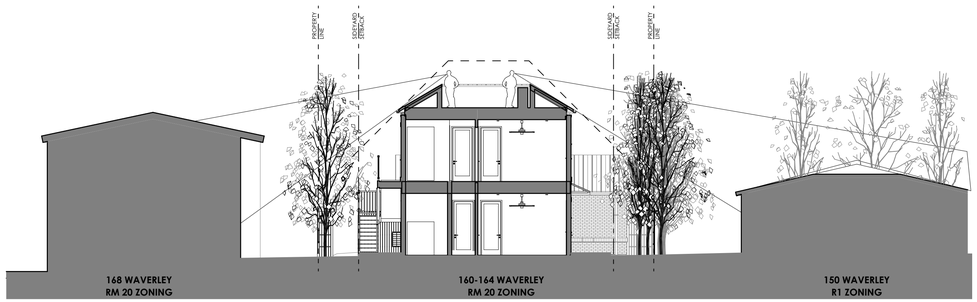
160 - 164 WAVERLEY ST, PALO ALTO, CA 94301

ISSUANCES

REV	DATE	DESCRIPTION
	14 DEC 2020	ARB SUBMITTAL
	12 MAR 2021	ARB RESUBMITTAL
	06 MAY 2021	ARB RESUBMITTAL
	09 AUG 2021	ARB RESUBMITTAL
	10 OCT 2021	ARB RESUBMITTAL
	18 MAR 2022	ARB RESUBMITTAL

NEIGHBORHOOD CONTEXT

A-8

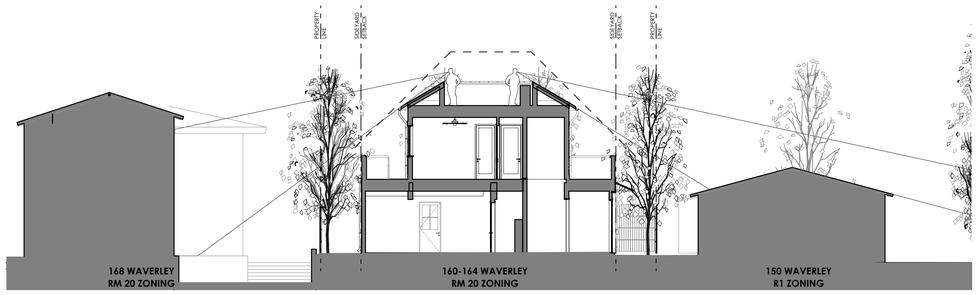


BUILDING 2 - N/S SITE SECTION

SCALE: 3/32" = 1'-0"

4

0 8' 16' 24'



BUILDING 1 - N/S SITE SECTION

SCALE: 3/32" = 1'-0"

3

0 8' 16' 24'

EAST/WEST SITE SECTION

SCALE: 3/32" = 1'-0"

2

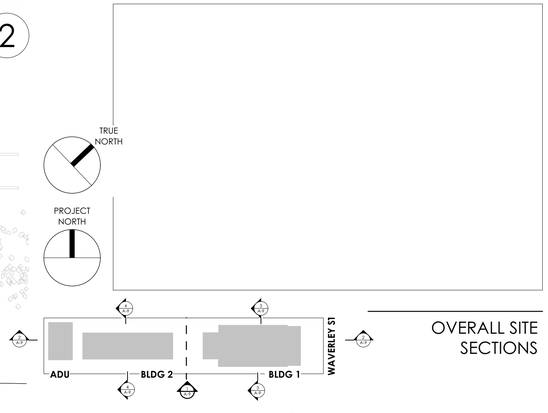
0 8' 16' 24'

EAST/WEST SITE ELEVATION

SCALE: 3/32" = 1'-0"

1

0 8' 16' 24'



KEY PLAN

OVERALL SITE SECTIONS

A-9

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Palo Alto, CA 94301
650-459-3200 / hyarchs.com

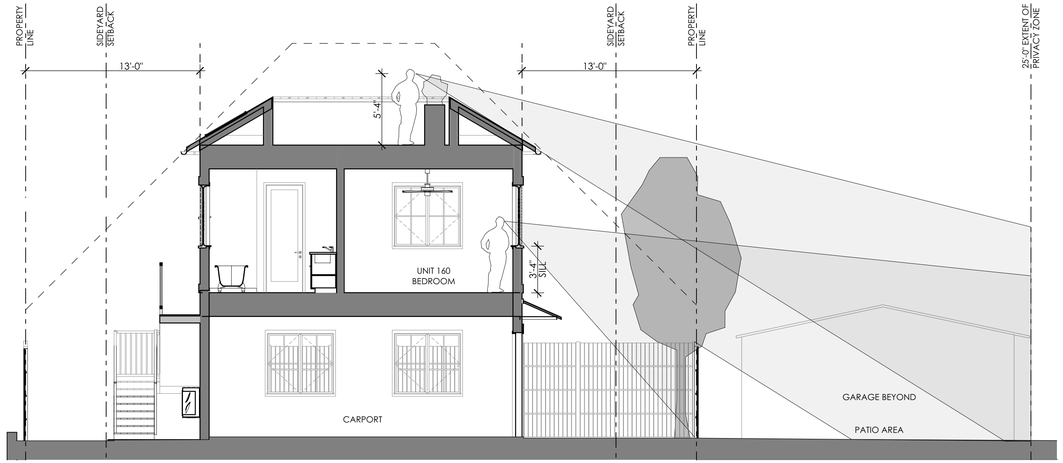
WAVERLEY RESIDENCES

160 - 164 WAVERLEY ST, PALO ALTO, CA 94301

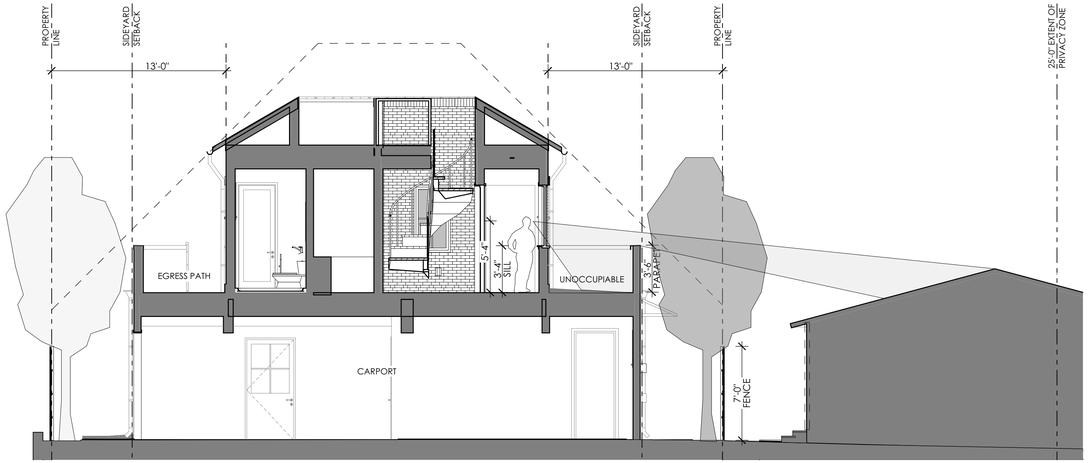
ISSUANCES

REV	DATE	DESCRIPTION
	14 DEC 2020	ARB SUBMITTAL
	12 MAR 2021	ARB RESUBMITTAL
	06 MAY 2021	ARB RESUBMITTAL
	09 AUG 2021	ARB RESUBMITTAL
	10 OCT 2021	ARB RESUBMITTAL
	18 MAR 2022	ARB RESUBMITTAL

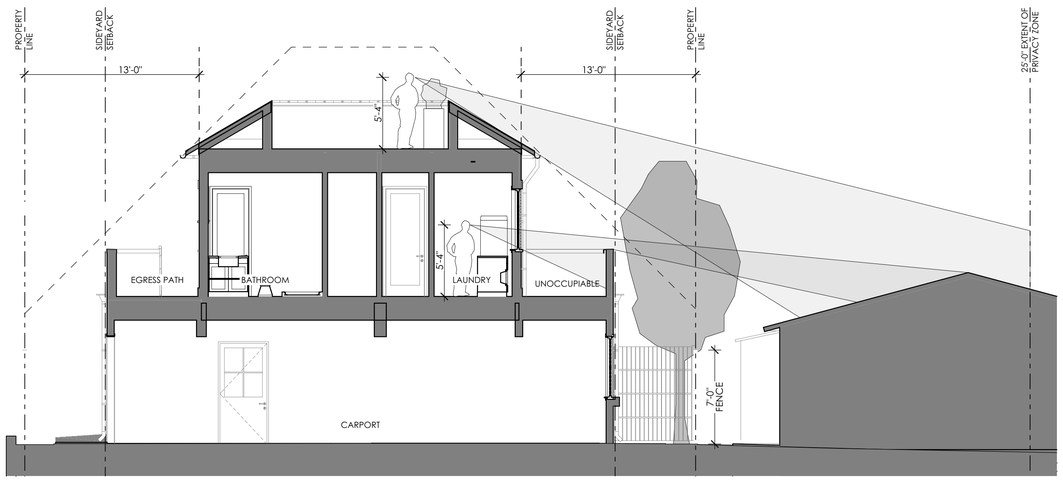
WAVERLEY RESIDENCES - 3/24/2022 3:08 PM



FRONT BLDG @ REAR 5



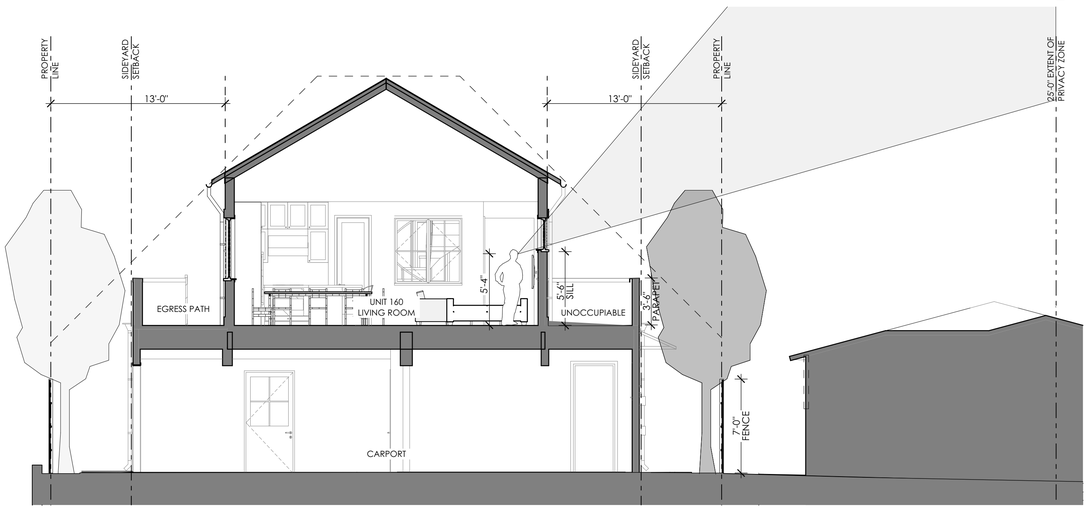
FRONT BLDG @ HALL 3



FRONT BLDG @ LAUNDRY 4

SCALE: 3/16" = 1'-0"

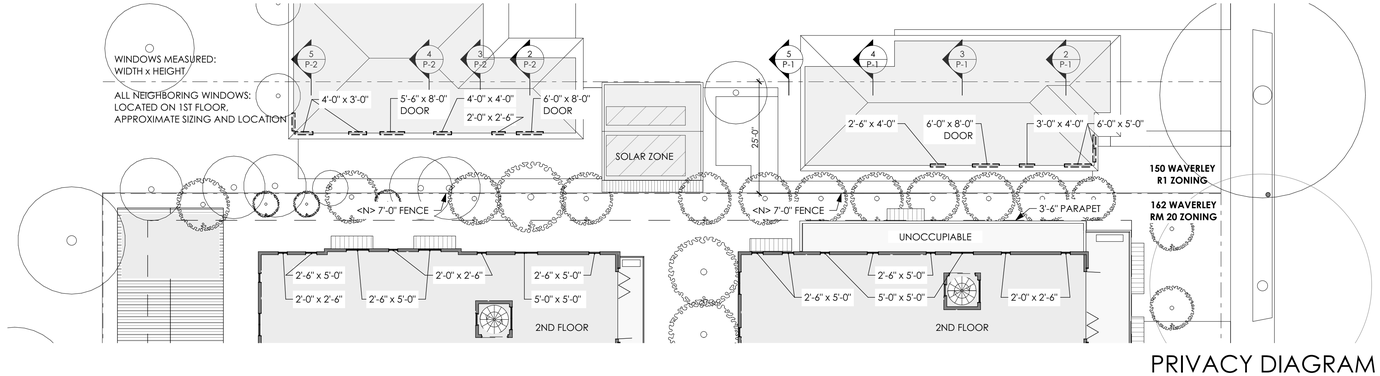
0 4' 8' 12'



FRONT BLDG @ LIVING ROOM 2

SCALE: 3/16" = 1'-0"

0 4' 8' 12'



PRIVACY DIAGRAM 1

SCALE: 1/16" = 1'-0"

0 8' 16' 32'

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WAVERLEY RESIDENCES

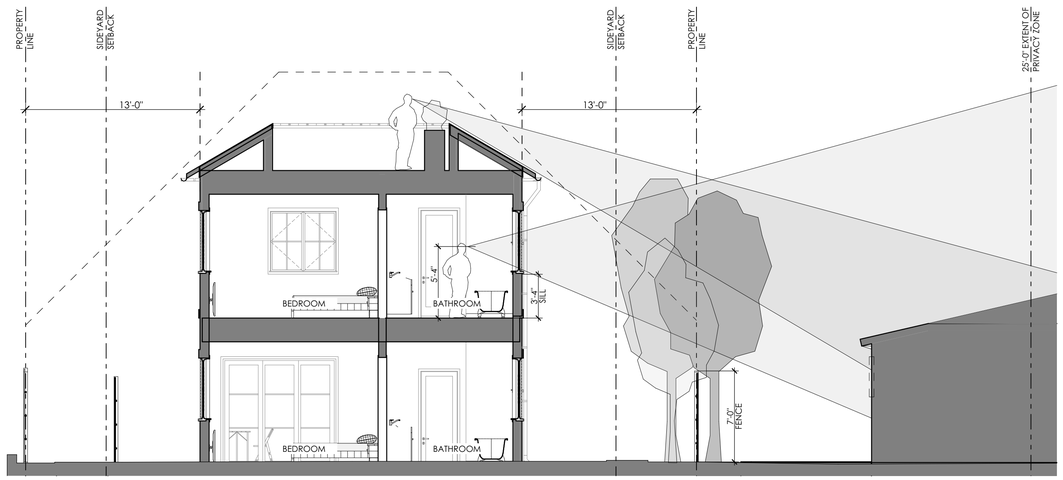
160 - 164 WAVERLEY ST, PALO ALTO, CA 94301

ISSUANCES

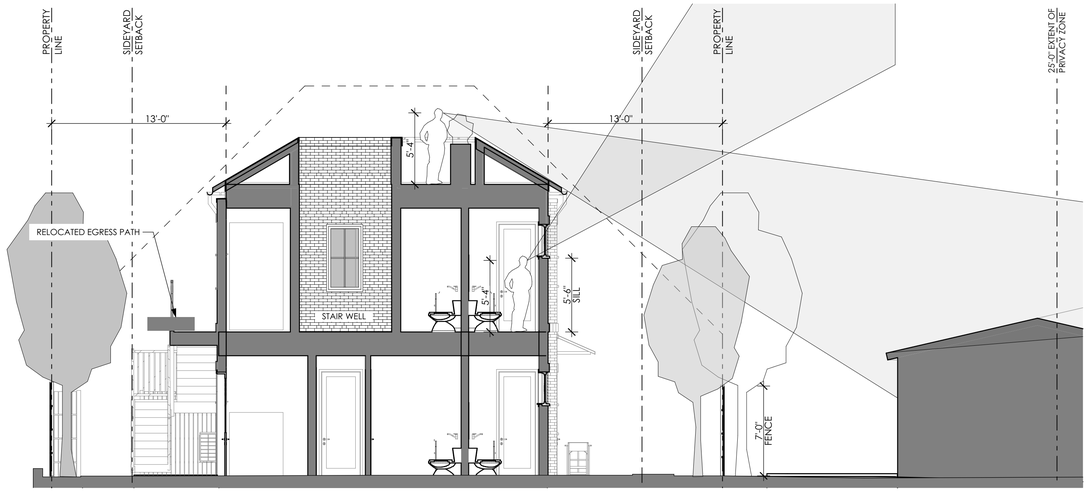
REV	DATE	DESCRIPTION
	09 AUG 2021	ARB RESUBMITTAL
	10 OCT 2021	ARB RESUBMITTAL
	18 MAR 2022	ARB RESUBMITTAL

PRIVACY SECTIONS - BLDG 1

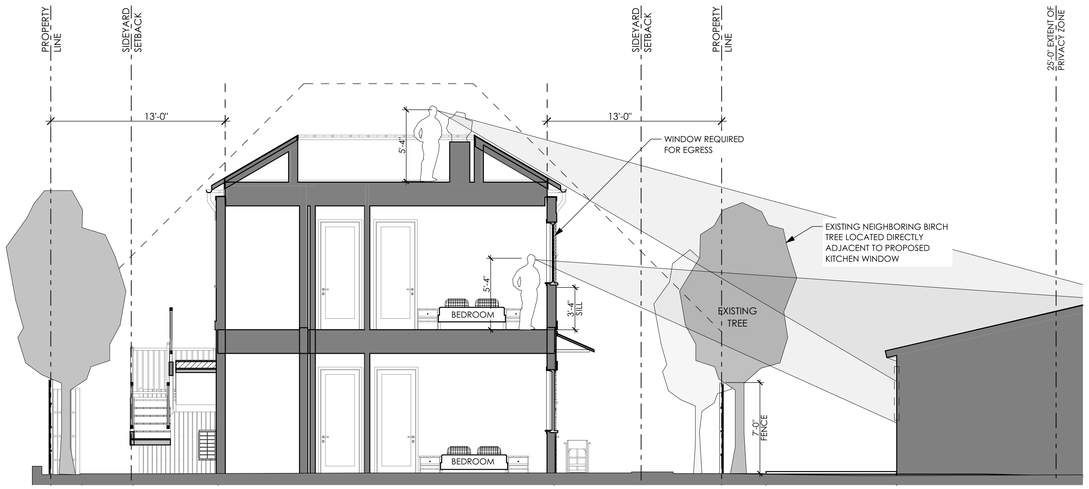
P-1



REAR BLDG @ REAR 5



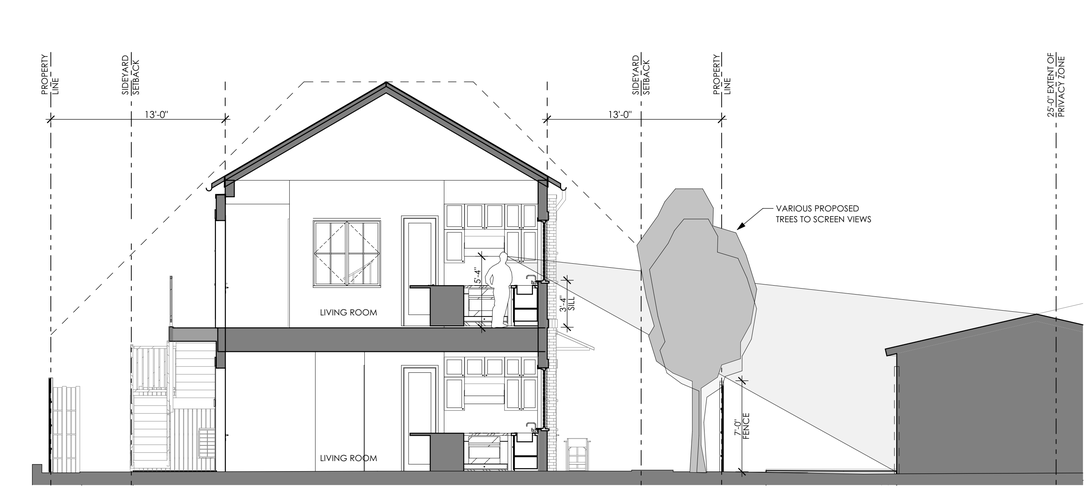
REAR BLDG @ BATHROOM 3



REAR BLDG @ BEDROOM 4

SCALE: 3/16" = 1'-0"

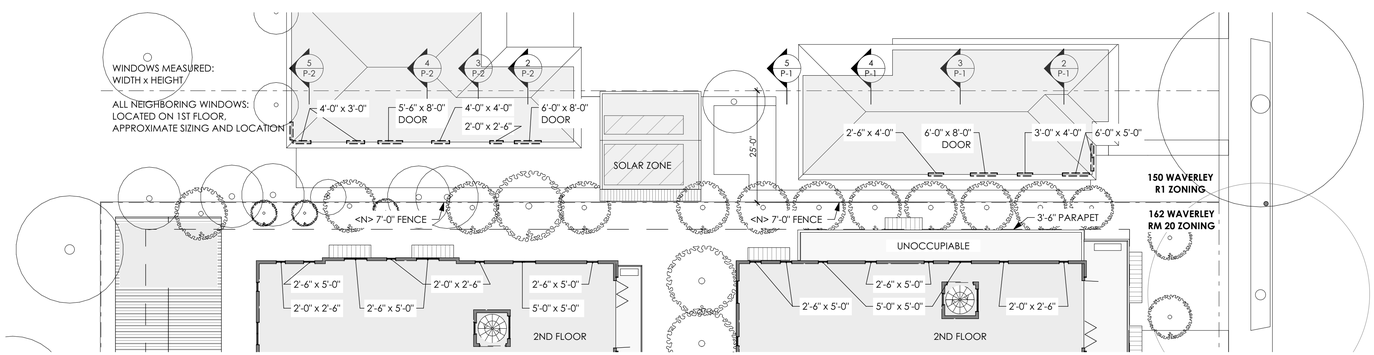
0 4' 8' 12'



REAR BLDG @ KITCHEN 2

SCALE: 3/16" = 1'-0"

0 4' 8' 12'



PRIVACY DIAGRAM 1

SCALE: 1/16" = 1'-0"

0 8' 16' 32'

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WAVERLEY RESIDENCES

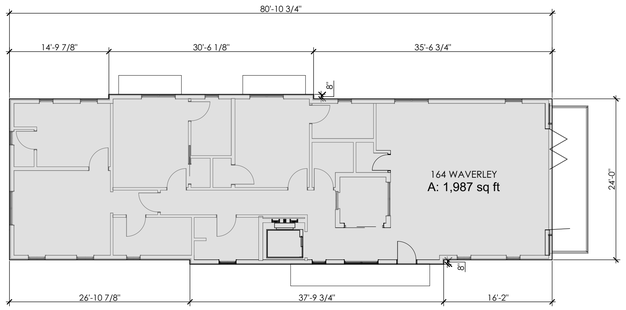
160 - 164 WAVERLEY ST, PALO ALTO, CA 94301

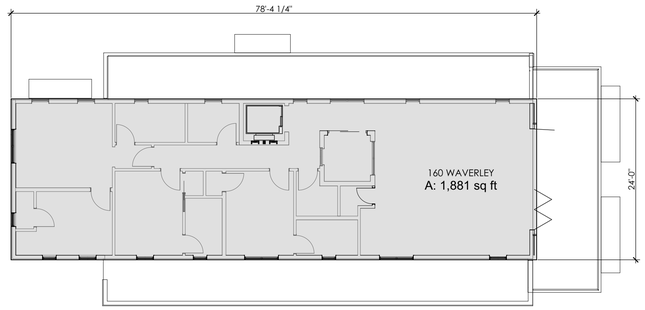
ISSUANCES

REV	DATE	DESCRIPTION
	09 AUG 2021	ARB RESUBMITTAL
	10 OCT 2021	ARB RESUBMITTAL
	18 MAR 2022	ARB RESUBMITTAL

PRIVACY SECTIONS - BLDG 2

P-2

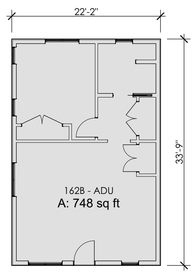


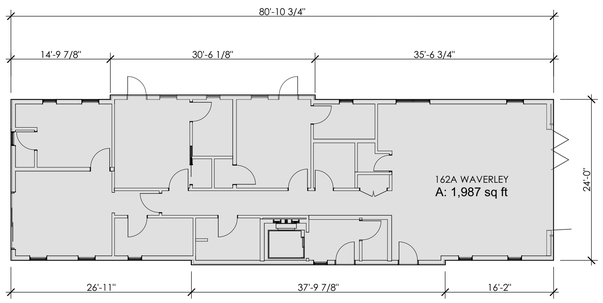


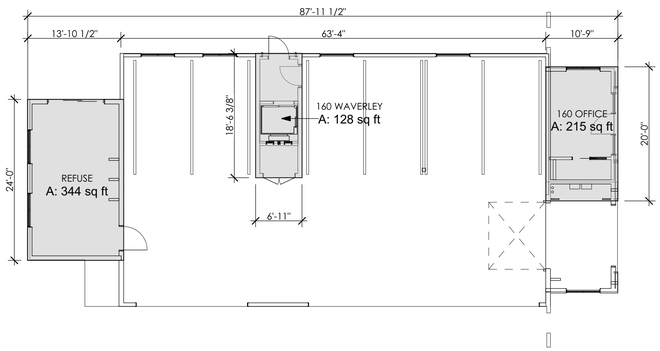
SECOND FLOOR - FAR 3

SCALE: 3/32" = 1'-0"

0 8' 16' 24'



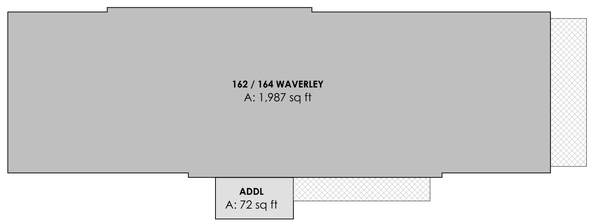


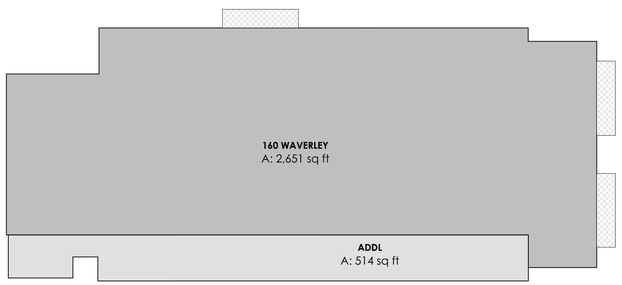


GROUND FLOOR - FAR 2

SCALE: 3/32" = 1'-0"

0 8' 16' 24'





SITE COVERAGE 1

SCALE: 3/32" = 1'-0"

0 8' 16' 24'

FLOOR AREA NOTES

1) REFER TO ZONING COMPLIANCE TABLE ON SHEET A0.1 FOR OVERALL ZONING COMPLIANCE.

2) BASIS FOR FAR AREA CALCULATIONS:
BASED ON "GROSS FLOOR AREA" WHICH IS THE TOTAL AREA OF ALL FLOORS OF A BUILDING MEASURED TO THE OUTSIDE SURFACES OF EXTERIOR WALLS. INCLUDING:
- HALLS
- STAIRWAYS, ELEVATORS (EACH FLOOR)
- SERVICE/MECHANICAL ROOMS
- USABLE BASEMENTS OR ATTICS
- OPEN COURTS ABOVE THE GROUND FLOOR USED FOR ACCESS

3) MULTIFAMILY FLOOR AREA EXCLUSIONS:
- ACCESSORY PARKING FACILITIES
- ROOFED ARCADES NOT SUBSTAINTIALLY ENCLOSED BY WALLS

4) RM-20 ALLOWABLE SQUARE FOOTAGES
SITE AREA = 12,500 SQ FT
FAR = 0.5:1 = 6,250 SF*
LOT COVERAGE = 35% = 4,375 SF**
ADD'L COVERAGE = 5% = 625 SF
ADU FAR AND LOT COVERAGE = 800 SF MAX EXEMPT

*18.13.045 (UNDER SENATE BILL 478) INCREASES ALLOWABLE FAR UP TO 1.0
ACTUAL MAX FAR ALLOWED: 12,500 SQ FT

**SB 478 STATES THAT THE LOT COVERAGE REQUIREMENT CANNOT PROCLUDE A HOUSING DEVELOPMENT FROM MAX 1.0 FAR
ACTUAL LOT COVERAGE ALLOWED: NOT LIMITED TO 4,375 SQ FT

PROPOSED FAR CALCULATIONS

LOCATION		AREA
160 OFFICE		
	GROUND FLOOR	215
160 WAVERLEY		
	GROUND FLOOR	128
	SECOND FLOOR	1,881
162A WAVERLEY		
	GROUND FLOOR	1,987
164 WAVERLEY		
	SECOND FLOOR	1,987
REFUSE		
	GROUND FLOOR	344

MAIN DWELLINGS = 6,542 ft²
+ ADU (EXEMPT) = 748 sq ft

LOT COVERAGE

LOCATION	AREA
160 WAVERLEY	2,651
162 / 164 WAVERLEY	1,987

MAIN DWELLINGS = 4,638 ft²
+ ADU (EXEMPT) = 748 sq ft

ADDITIONAL LOT COVERAGE

LOCATION	AREA
ADDL	72
ADDL	514
	586 ft²

LEGEND - LOT COVERAGE

- SITE COVERAGE
- ADDITIONAL SITE COVERAGE
- EXEMPT COVERAGE

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WAVERLEY RESIDENCES

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ISSUANCES

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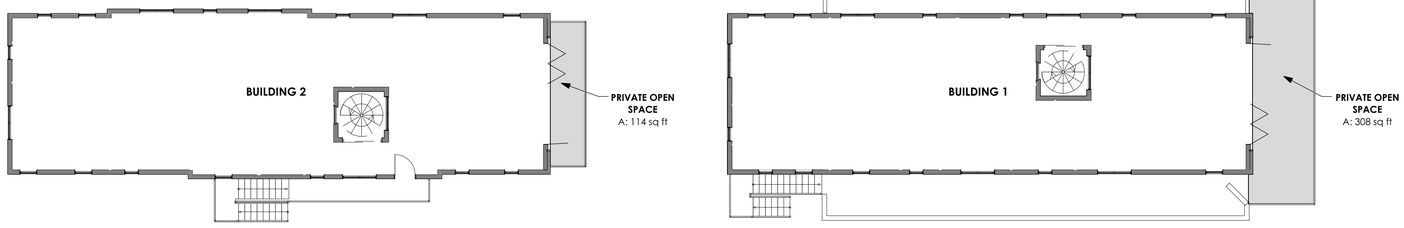
FLOOR AREA CALCULATIONS

A-10

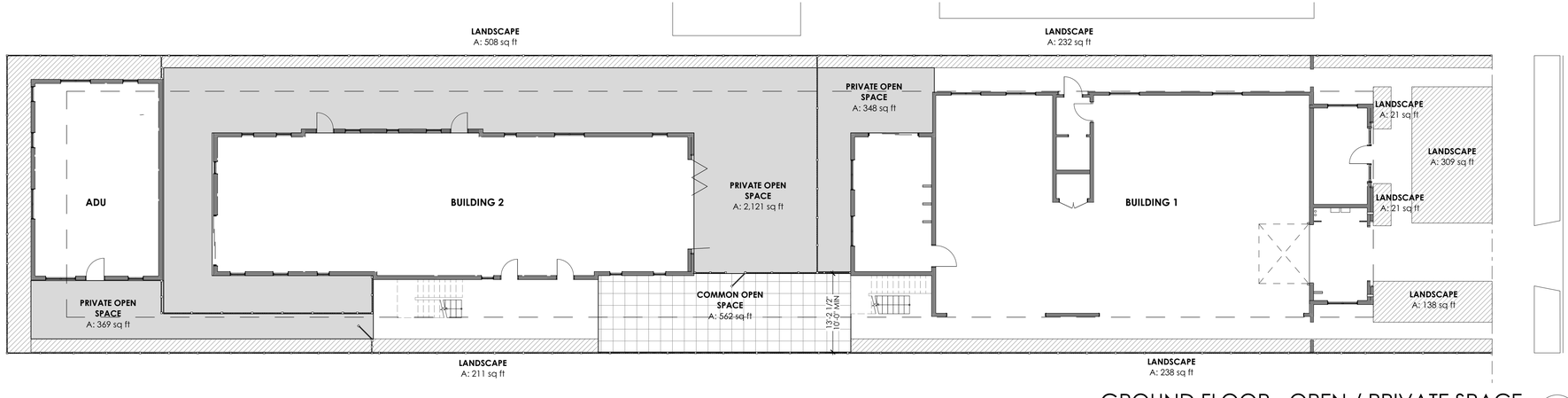


SECOND FLOOR - OPEN / PRIVATE SPACE

SCALE: 3/32" = 1'-0"

2

0 8' 16' 24'



GROUND FLOOR - OPEN / PRIVATE SPACE

SCALE: 3/32" = 1'-0"

1

0 8' 16' 24'

AREA NOTES

MINIMUM OPEN SPACE REQUIREMENTS
SITE AREA = 12,500 SQ FT

1) SITE OPEN SPACE MINIMUM = 35% / 4,375 SQ FT

2) SITE USABLE OPEN SPACE MINIMUM (INCLUDES COMMON + PRIVATE OPEN SPACE) = 150 SQ FT PER UNIT

3) COMMON OPEN SPACE MINIMUM = 75 SQ FT PER UNIT

4) PRIVATE OPEN SPACE MINIMUM = 50 SQ FT PER UNIT

CALCULATIONS

SITE USABLE SPACE

FLOOR	TYPE	AREA
GROUND FLOOR		
	COMMON OPEN SPACE	562
	PRIVATE OPEN SPACE	2,838
SECOND FLOOR		
	PRIVATE OPEN SPACE	422
	PROPOSED =	**3,822 ft²**
	REQUIRED =	450 sq ft

SITE OPEN SPACE

FLOOR	TYPE	AREA
GROUND FLOOR		
	COMMON OPEN SPACE	562
	LANDSCAPE	1,678
	PRIVATE OPEN SPACE	2,838
SECOND FLOOR		
	PRIVATE OPEN SPACE	422
	PROPOSED =	**5,500 ft²**
	REQUIRED = 35% / 4,375 sq ft	

LEGEND - OPEN SPACE

- LANDSCAPE
- PRIVATE OPEN SPACE
- COMMON OPEN SPACE

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WAVERLEY RESIDENCES

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ISSUANCES

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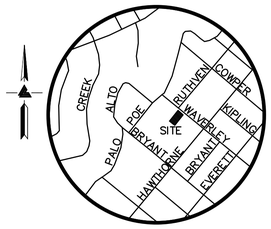
OPEN SPACE

A-11



VICINITY MAP
NO SCALE

NOTES
ALL DISTANCES AND DIMENSIONS ARE IN FEET AND DECIMALS OF A FOOT.

BUILDING FOOTPRINTS ARE SHOWN TO FINISHED MATERIAL (STUCCO/SIDING) AT GROUND LEVEL.

FINISH FLOOR ELEVATIONS ARE TAKEN AT DOOR THRESHOLD (EXTERIOR)

THE AREA OF THE SURVEYED LOT IS 12,500± SQUARE FEET / 0.29± ACRE

EASEMENT NOTE
EASEMENTS ARE SHOWN PER PRELIMINARY TITLE REPORT ISSUED BY CHICAGO TITLE COMPANY, ORDER NO. FWPS-2989202163-MA, DATED AS OF SEPTEMBER 9, 2020

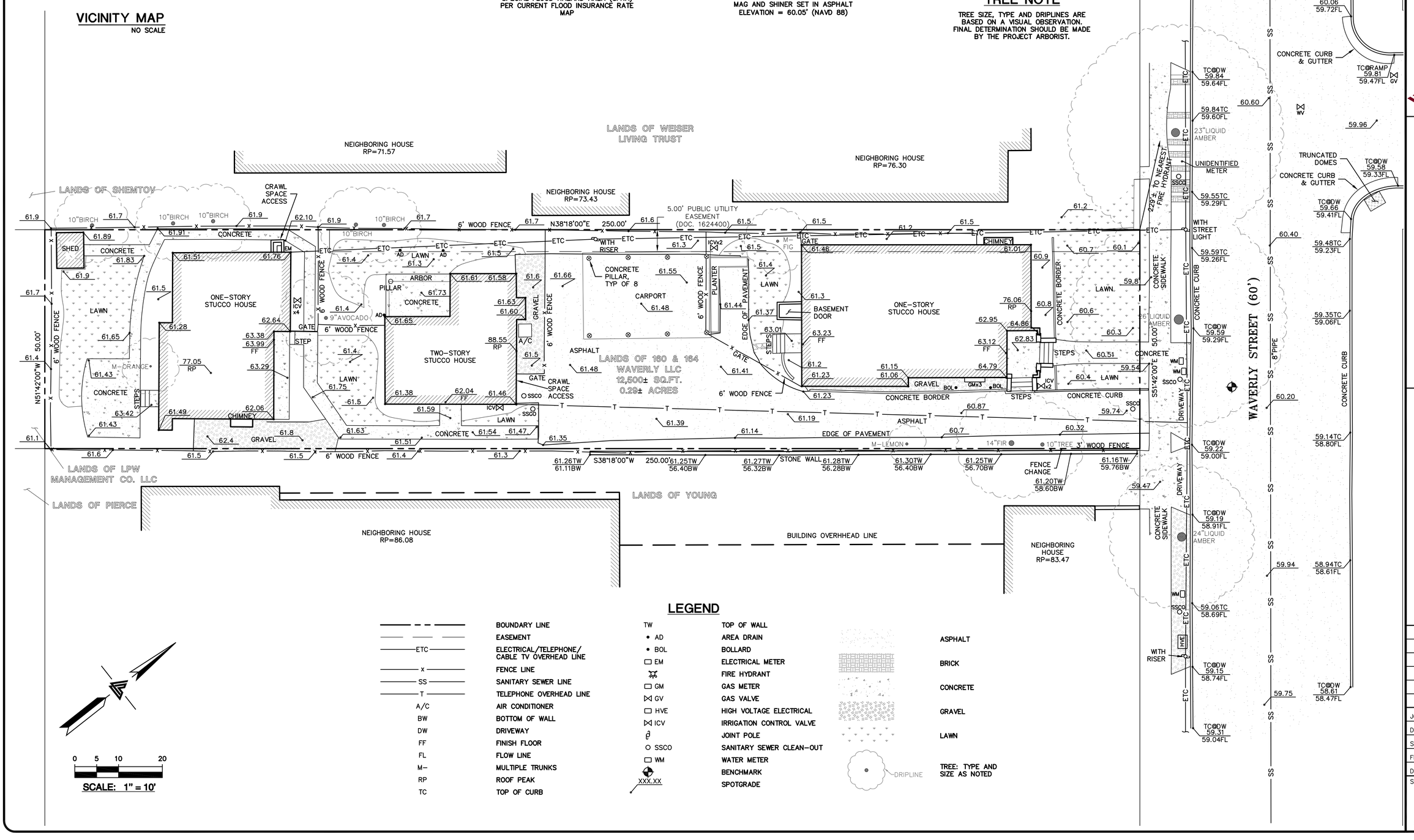
FEMA NOTE
PROPERTY COMPLETELY OUT OF SPECIAL FLOOD HAZARD AREA (SFHA) PER CURRENT FLOOD INSURANCE RATE MAP

BENCHMARK
CITY OF PALO ALTO BENCHMARK 2142
ON BRASS DISK IN MONUMENT WELL
LOCATED AT THE INTERSECTION OF
BRYANT STREET AND POE STREET.
ELEVATION = 68.91'
(ADJUSTED TO NAVD 88)

SITE BENCHMARK
SURVEY CONTROL POINT
MAG AND SHINER SET IN ASPHALT
ELEVATION = 60.05' (NAVD 88)

UTILITY NOTE
ALL UNDERGROUND PIPE TYPES, SIZES AND LOCATION SHOWN ON THIS SURVEY ARE BASED ON VISUAL OBSERVATION. ANY USE OF THIS INFORMATION SHOULD BE VERIFIED, BEFORE ITS USE, WITH THE CONTROLLING MUNICIPALITY OR UTILITY PROVIDER. THIS SURVEY MAKES NO GUARANTEE OF THE INSTALLED ACTUAL LOCATION, DEPTHS OR SIZE.

TREE NOTE
TREE SIZE, TYPE AND DRIPLINES ARE BASED ON A VISUAL OBSERVATION. FINAL DETERMINATION SHOULD BE MADE BY THE PROJECT ARBORIST.



LEGEND

	BOUNDARY LINE	TW	TOP OF WALL
	EASEMENT	AD	AREA DRAIN
ETC	ELECTRICAL/TELEPHONE/ CABLE TV OVERHEAD LINE	BOL	BOLLARD
x	FENCE LINE	EM	ELECTRICAL METER
SS	SANITARY SEWER LINE		FIRE HYDRANT
T	TELEPHONE OVERHEAD LINE	GM	GAS METER
A/C	AIR CONDITIONER	GV	GAS VALVE
BW	BOTTOM OF WALL	HVE	HIGH VOLTAGE ELECTRICAL
DW	DRIVEWAY	ICV	IRRIGATION CONTROL VALVE
FF	FINISH FLOOR		JOINT POLE
FL	FLOW LINE	SSCO	SANITARY SEWER CLEAN-OUT
M-	MULTIPLE TRUNKS	WM	WATER METER
RP	ROOF PEAK		BENCHMARK
TC	TOP OF CURB	XXX.XX	SPOTGRADE

ASPHALT
BRICK
CONCRETE
GRAVEL
LAWN
TREE: TYPE AND SIZE AS NOTED
DRIPLINE

0 5 10 20
SCALE: 1" = 10'

LICENSED LAND SURVEYOR
GREGORY F. BRAZE
No. 7623
STATE OF CALIFORNIA

LEA & BRAZE ENGINEERING, INC.
CIVIL ENGINEERS • LAND SURVEYORS
MAIN OFFICE:
2495 INDUSTRIAL PKWY WEST
HAYWARD, CALIFORNIA 94545
(510) 887-4086
REGIONAL OFFICES:
ROSEVILLE
DUBLIN
SAN JOSE
WWW.LEABRAZE.COM

APN: 120-12-011

162 WAVERLY STREET
PALO ALTO
CALIFORNIA

SANTA CLARA COUNTY

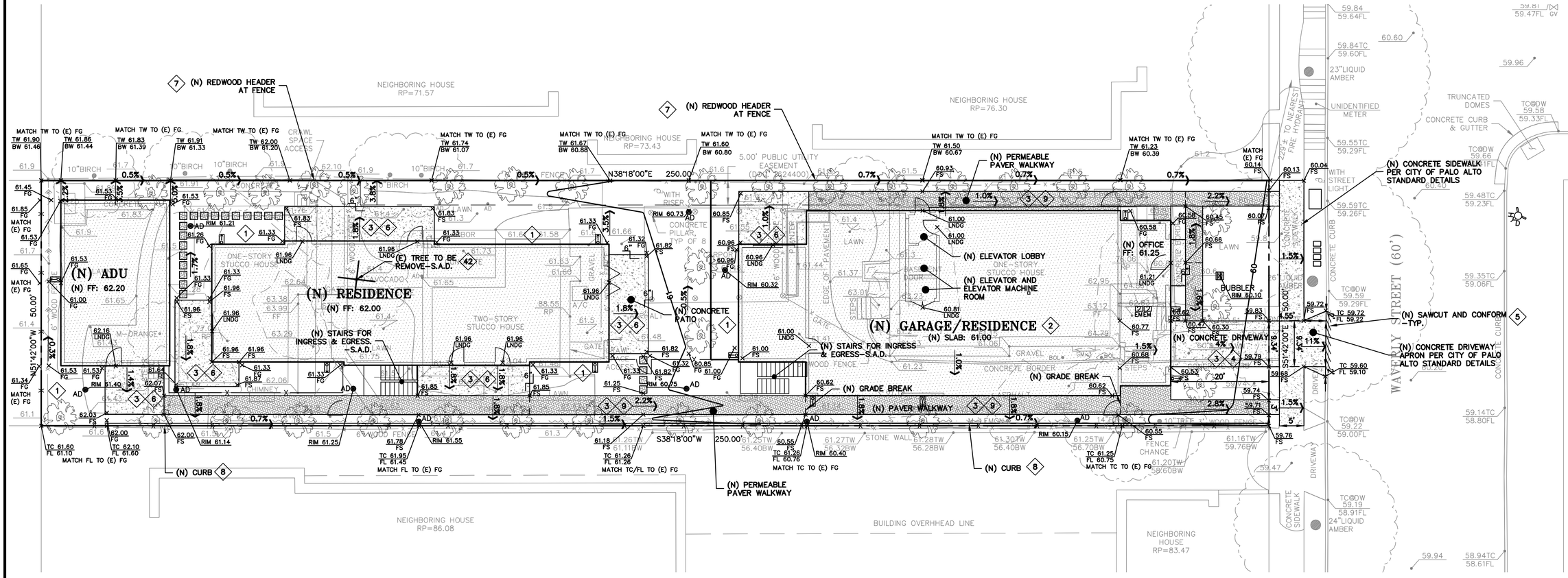
TOPOGRAPHIC SURVEY

REVISIONS	BY

JOB NO: 2201312
DATE: 10-8-20
SCALE: 1" = 10'
FIELD BY: WW
DRAWN BY: JN
SHEET NO:

SU1

01 OF 01 SHEETS



FLATWORK KEYNOTES 1 TO 9

1. FINISHED GRADES AT BUILDING PERIMETER SHALL BE SLOPED AT A MINIMUM OF 5% FOR THE FIRST 10' AWAY FROM THE BUILDING PER CBC 1804.4 OR TO AN APPROVED DRAINAGE SWALE OR STRUCTURE. GRADES SHALL CONTINUE TO SLOPE TOWARDS POSITIVE DRAINAGE AND A POSITIVE OUTFALL. MAINTAIN 8" CLEARANCE BETWEEN FINISH EARTHEN GRADE AND BOTTOM OF MUD SILL AT ALL TIMES PER CBC 2304.12.1.2 UNLESS STRUCTURAL DETAILING ALLOWS LESS. REFER TO STRUCTURAL PLANS FOR FOUNDATION DESIGN AND DETAILS.
2. SLOPE GARAGE SLAB 1% MINIMUM (1/8" PER FOOT) FROM BACK TO FRONT TO ALLOW FOR ADEQUATE DRAINAGE. MAINTAIN 1/2" TO 1" LIP BETWEEN GARAGE SLAB AND DRIVEWAY. SEE PLANS FOR SPECIFIC DROP
3. PROVIDE 2% (0.5% MIN) SLOPE ACROSS FLAT WORK AND/OR PAVING PER CBC 1804.4. SLOPE TOWARDS POSITIVE DRAINAGE AS SHOWN ON PLAN.
4. (N) CONCRETE DRIVEWAY.
5. GRIND AC TO TIE (N) AC INTO (E) AC PAVING.
6. (N) CONCRETE PATIOS/WALKWAYS.
7. (N) REDWOOD HEADER AT FENCE.
8. (N) CURB.
9. (N) PERMEABLE PAVER WALKWAY.

DEMOLITION KEYNOTES 41 TO 42

41. DEMOLISH (E) IMPROVEMENTS AS NECESSARY TO ACCOMMODATE (N) CONSTRUCTION. NO DEMOLITION SHALL COMMENCE WITHOUT REQUIRED DEMOLITION PERMITS.
42. REMOVE (E) TREE. CONTRACTOR SHALL OBTAIN THE PROPER TREE REMOVAL PERMITS AS REQUIRED.

NOTE:
FOR CONSTRUCTION STAKING SCHEDULING OR QUOTATIONS PLEASE CONTACT ALEX ABAYA AT LEA & BRAZE ENGINEERING (510)887-4086 EXT 116. aabaya@leabraze.com

*** BUILDING PAD NOTE:** ADJUST PAD LEVEL AS REQUIRED. REFER TO STRUCTURAL PLANS FOR SLAB SECTION OR CRAWL SPACE DEPTH TO ESTABLISH PAD LEVEL.

REDWOOD PROFESSIONAL ENGINEER PETER CARLINO No. C79559 CIVIL STATE OF CALIFORNIA ORIGINAL SIGNATURES IN BLUE INK

LEA & BRAZE ENGINEERING, INC.
CIVIL ENGINEERS • LAND SURVEYORS
MAIN OFFICE: 2495 INDUSTRIAL PKWY WEST HAYWARD, CALIFORNIA 94545 (510) 887-4086
REGIONAL OFFICES: ROSEVILLE DUBLIN SAN JOSE
WWW.LEABRAZE.COM

WAVERLEY RESIDENCES
160-164 WAVERLEY STREET
PALO ALTO, CALIFORNIA
SANTA CLARA COUNTY
APN: 120-12-011

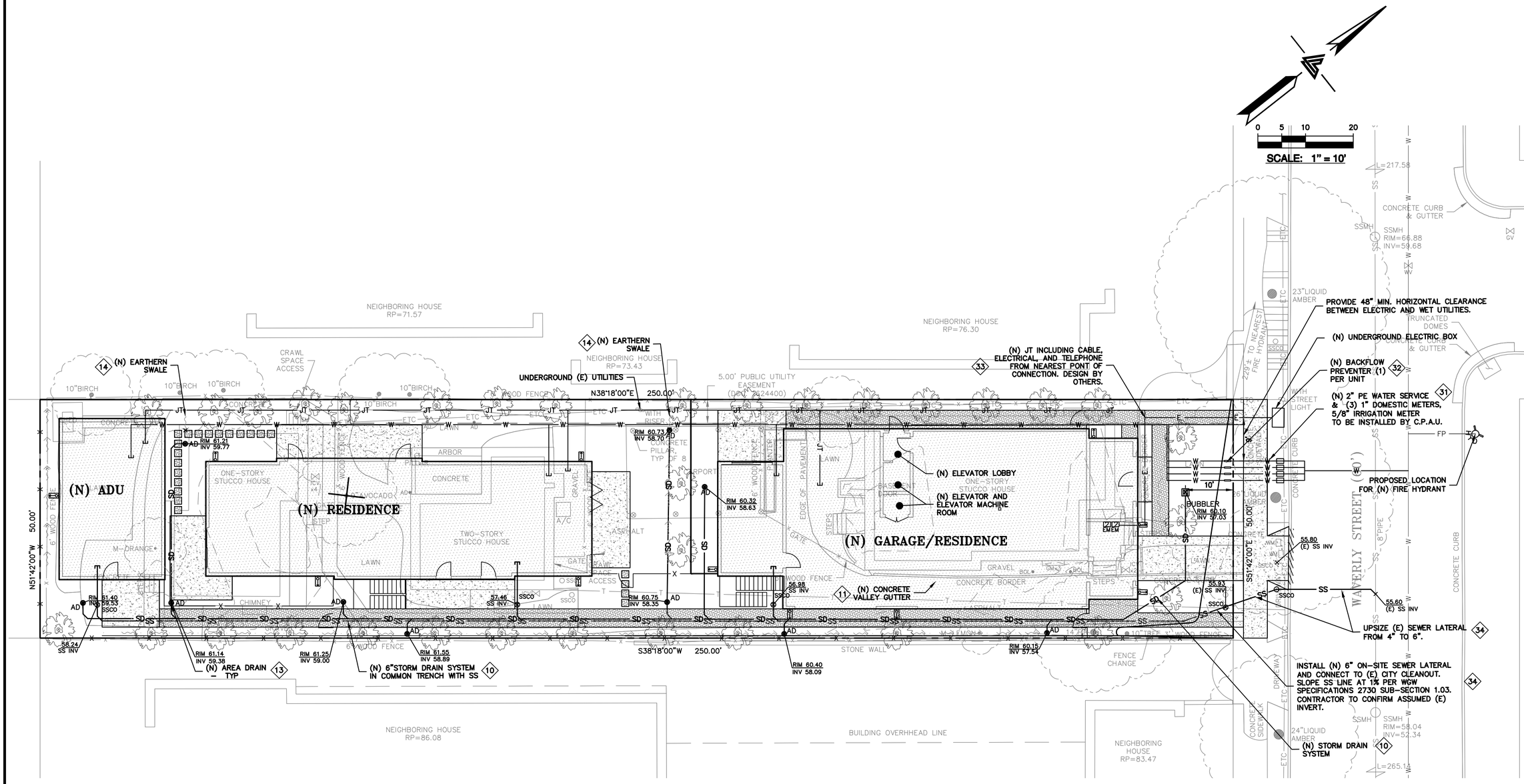
PRELIMINARY GRADING AND DRAINAGE PLAN

-		-
-		-
-		-
-		-
-		-
REVISIONS		BY

JOB NO: 2201529
DATE: 03-18-22
SCALE: AS NOTED
DESIGN BY: VA
CHECKED BY: JH/PC
SHEET NO:

C-2.0

02 OF 05 SHEETS



STORM DRAIN KEYNOTES 10 TO 14

10 INSTALL (N) ON-SITE STORM DRAIN SYSTEM. USE MINIMUM 6" PVC (SDR 35) OR HDPE (ADS N-12 W/ SMOOTH INTERIOR WALLS). MAINTAIN 24" MINIMUM COVER AND SLOPED AT 1% MINIMUM AT ALL TIMES UNLESS OTHERWISE NOTED. PROVIDE CLEANOUT TO GRADE AT MAJOR CHANGES IN DIRECTION. AVOID USING 90° BENDS AND INSTEAD USE (2) 45° BENDS AND WYE CONNECTIONS.

11 CONSTRUCT (N) CONCRETE VALLEY GUTTER SLOPED AT 1% MINIMUM TOWARDS POSITIVE OUTFALL.

12 DIRECT DOWNSPOUTS TO 24" LONG PRECAST CONCRETE SPLASHBLOCKS OR OTHER HARD SURFACE. DIRECT AWAY FROM ANY STRUCTURE AND TOWARDS POSITIVE DRAINAGE.

13 INSTALL (N) "CHRISTY F08" AREA DRAINS. CONNECT TO ON-SITE STORM DRAIN SYSTEM.

14 CONSTRUCT (N) EARTHEN SWALE SLOPED AT 1% MINIMUM TOWARDS POSITIVE OUTFALL.

UTILITIES KEYNOTES 31 TO 34

31 CONNECT (N) 2" HDPE WATER SERVICE AND WATER METER PER CPAU STANDARDS. NOTE THAT WATER METER SIZE WILL DEPEND ON WATER DEMANDS. INSTALLATION OF NEW, DISCONNECTION AND ABANDONMENT OF EXISTING WATER SERVICES WILL BE CONDUCTED BY CPAU.

32 INSTALL A RESIDENTIAL DOUBLE CHECK VALVE ASSEMBLY – DCVA BACKFLOW PREVENTER. THE DCVA SHALL BE INSTALLED ON THE OWNER'S PROPERTY AND DIRECTLY BEHIND THE WATER METER PER CITY'S STANDARD DETAIL WD-12C OR M-47. AN RPPA DEVICE MAY BE REQUIRED.

33 INSTALL (N) JOINT TRENCH FOR SERVICES INCLUDING CATV & ELECTRIC FROM NEAREST POINT OF CONNECTION. DESIGN BY OTHERS.

34 (E) CITY SEWER LATERAL AND CLEANOUT TO REMAIN. CONTRACTOR TO VERIFY ASSUMED INVERTS AND LOCATION SHOWN ON PLAN. CONTRACTOR SHALL VIDEO TAPE OR REPAIR AS NEEDED TO ENSURE LATERAL IS IN GOOD WORKING ORDER PRIOR TO CONSTRUCTION. INSTALL ON-SITE SEWER LATERAL AND CONNECT TO (E) CITY CLEANOUT. STREET WORK PERMIT IS REQUIRED BY PUBLIC WORKS FOR WORKING IN THE CITY RIGHT OF WAY.

NOTE:
FOR CONSTRUCTION STAKING SCHEDULING OR QUOTATIONS PLEASE CONTACT ALEX ABAYA AT LEA & BRAZE ENGINEERING (510)887-4086 EXT 116. aabaya@leabraze.com

*** BUILDING PAD NOTE:** ADJUST PAD LEVEL AS REQUIRED. REFER TO STRUCTURAL PLANS FOR SLAB SECTION OR CRAWL SPACE DEPTH TO ESTABLISH PAD LEVEL.

REGISTERED PROFESSIONAL ENGINEER PETER CARLINO No. C79559 CIVIL STATE OF CALIFORNIA ORIGINAL SIGNATURES IN BLUE INK

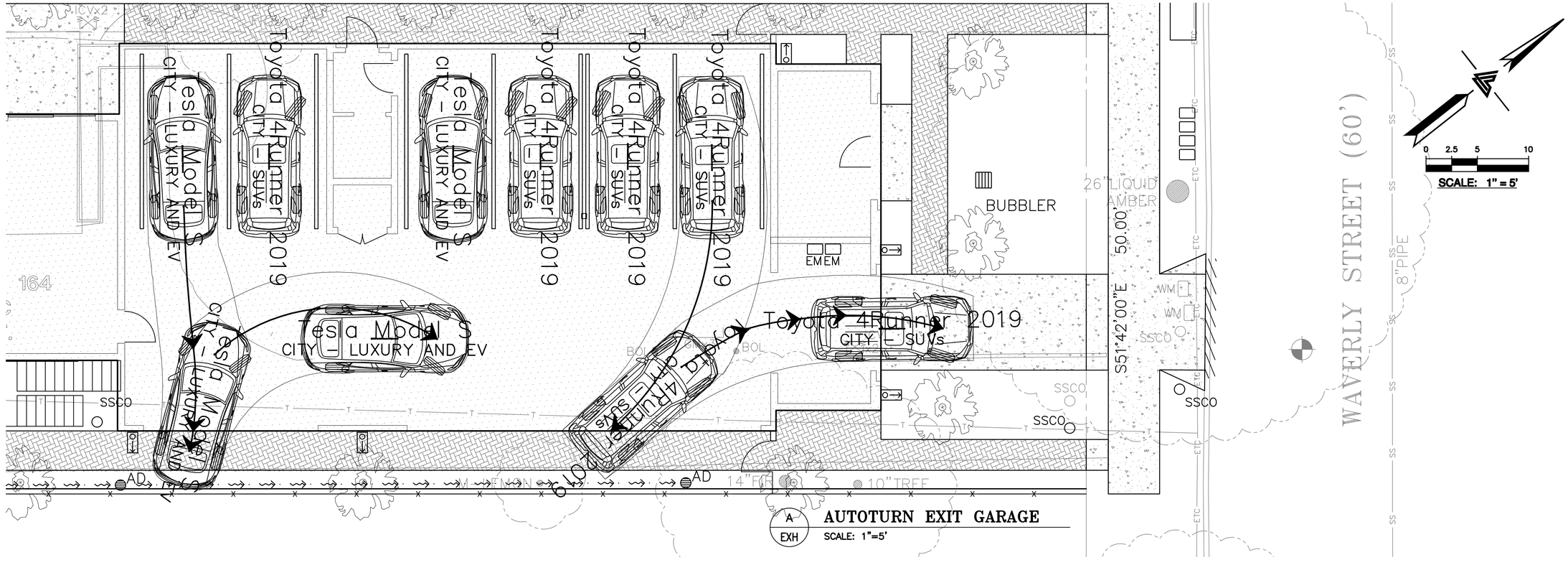
LEA & BRAZE ENGINEERING, INC.
CIVIL ENGINEERS • LAND SURVEYORS
MAIN OFFICE: 2495 INDUSTRIAL PKWY WEST HAYWARD, CALIFORNIA 94545 (510) 887-4086
REGIONAL OFFICES: ROSEVILLE DUBLIN SAN JOSE
WWW.LEABRAZE.COM

WAVERLEY RESIDENCES
160-164 WAVERLEY STREET
PALO ALTO, CALIFORNIA
APN: 120-12-011
SANTA CLARA COUNTY

PRELIMINARY UTILITY PLAN

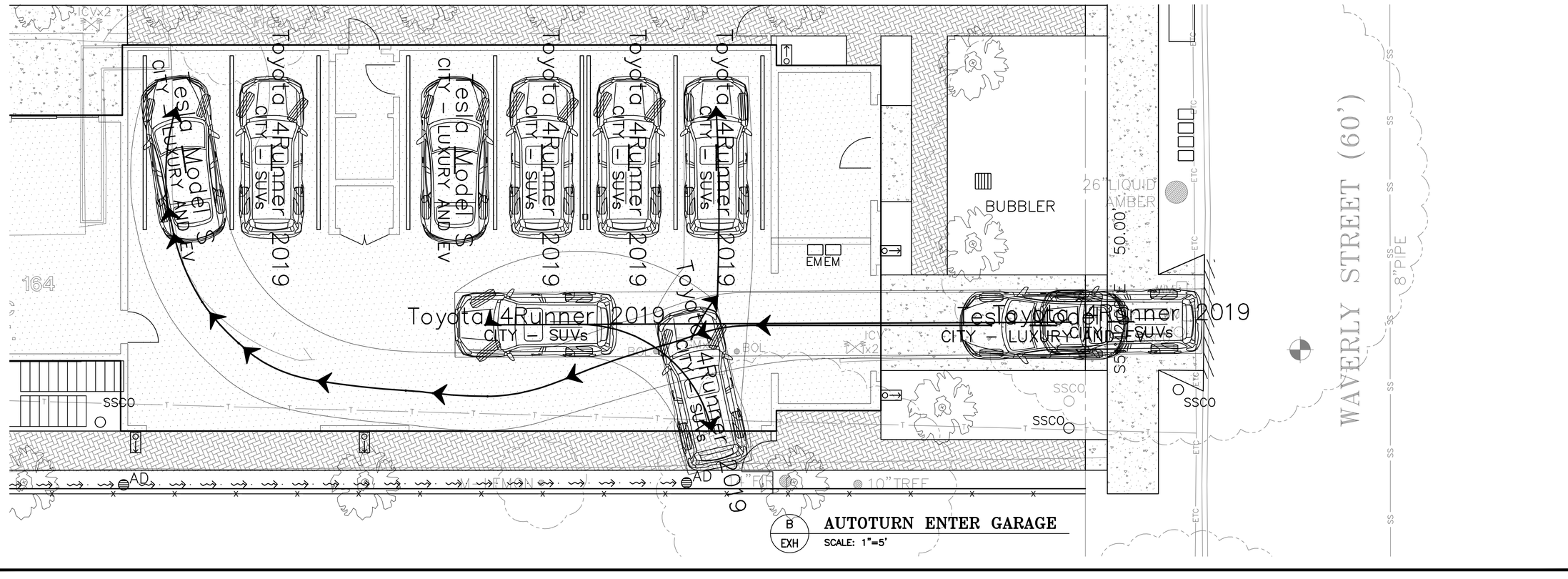
–	–
–	–
–	–
–	–
–	–
REVISIONS	BY
JOB NO:	2201529
DATE:	03-18-22
SCALE:	AS NOTED
DESIGN BY:	VA
CHECKED BY:	JH/PC
SHEET NO:	C-3.0

03 OF 05 SHEETS



A EXH **AUTOTURN EXIT GARAGE**

SCALE: 1"=5'



B EXH **AUTOTURN ENTER GARAGE**

SCALE: 1"=5'

REGISTERED PROFESSIONAL ENGINEER CARLSON No. C79355 CIVIL STATE OF CALIFORNIA ORIGINAL SIGNATURES IN BLUE INK

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REGIONAL OFFICES: ROSEVILLE DUBLIN SAN JOSE
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WAVERLEY RESIDENCES
160–164 WAVERLEY STREET
PALO ALTO, CALIFORNIA

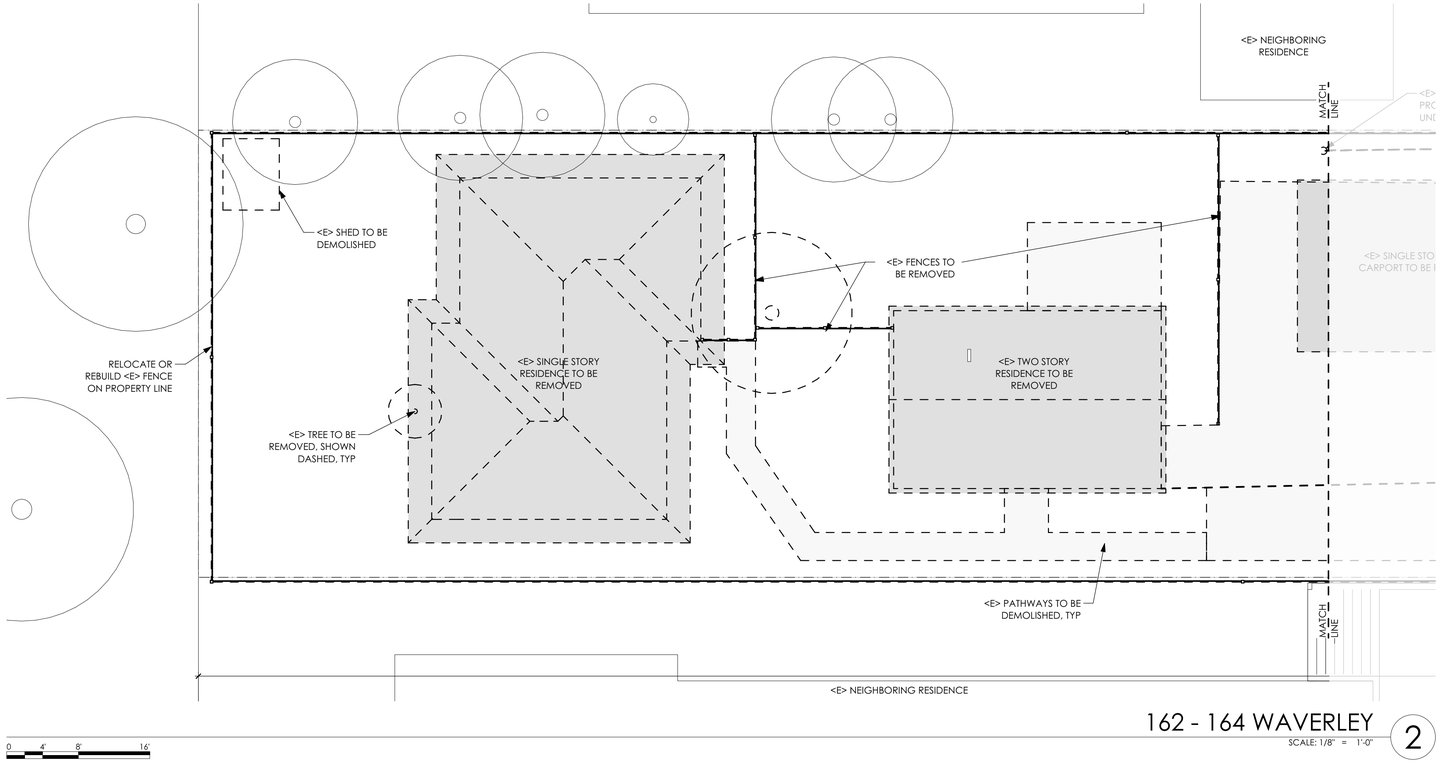
SANTA CLARA COUNTY APN: 120-12-011

PRELIMINARY TURNING TEMPLATE

-		-
-		-
-		-
-		-
-		-
REVISIONS		BY

JOB NO:	2201529
DATE:	03-18-22
SCALE:	AS NOTED
DESIGN BY:	VA
CHECKED BY:	JH/PC
SHEET NO:	EX-1

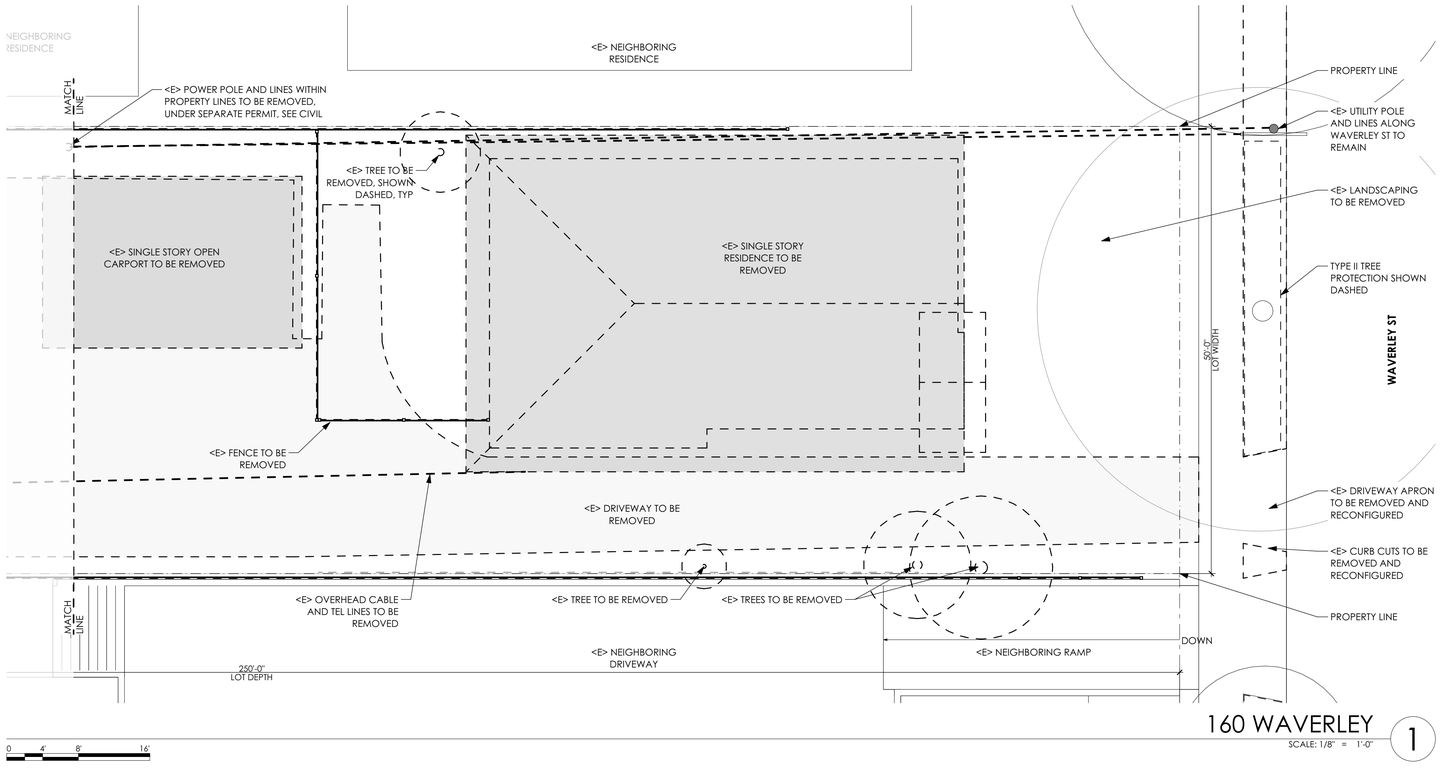
01 OF 05 SHEETS



162 - 164 WAVERLEY

SCALE: 1/8" = 1'-0"

2



160 WAVERLEY

SCALE: 1/8" = 1'-0"

1

WAVERLEY RESIDENCES - 3/24/2022 3:08 PM

DEMO NOTES

1) PRIOR TO ANY SITE DEMOLITION ALL TREE PROTECTION MUST BE IN PLACE. REFER TO ARBORIST REPORT ON SHEET T-2 FOR REQUIRED TREE PRESERVATION MEASURES.
2) ALL UTILITIES (WATER, ELECTRIC AND GAS) TO BE SHUT OFF THROUGH CITY OF PALO ALTO PRIOR TO DEMOLITION.
3) REMOVE ALL STRUCTURES, HARDSCAPE, VEGETATION AND FENCING WHICH IS NOT ON PROPERTY LINES, UON.
4) PROVIDE A MEANS ON THE SITE FOR CONTROL OF DUST DURING DEMOLITION AND CONSTRUCTION WORK.

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Palo Alto, CA 94301
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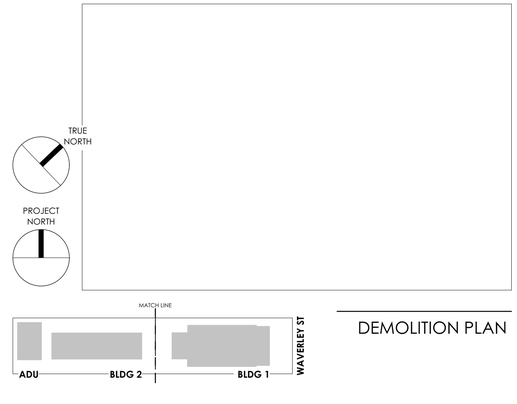
WAVERLEY RESIDENCES

160 - 164 WAVERLEY ST, PALO ALTO, CA 94301

ISSUANCES

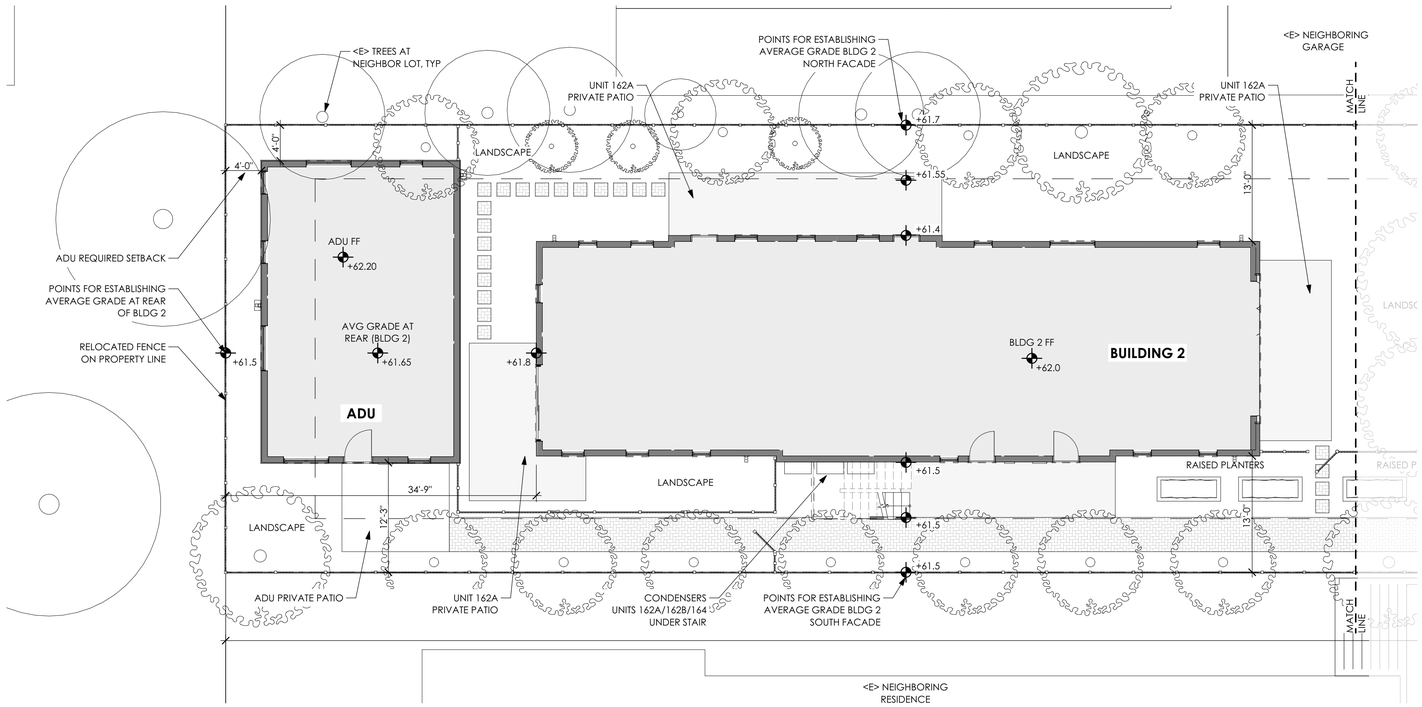
REV	DATE	DESCRIPTION
	14 DEC 2020	ARB SUBMITTAL
	12 MAR 2021	ARB RESUBMITTAL
	06 MAY 2021	ARB RESUBMITTAL
	09 AUG 2021	ARB RESUBMITTAL
	10 OCT 2021	ARB RESUBMITTAL
	18 MAR 2022	ARB RESUBMITTAL



KEY PLAN

DEMOLITION PLAN

A-12

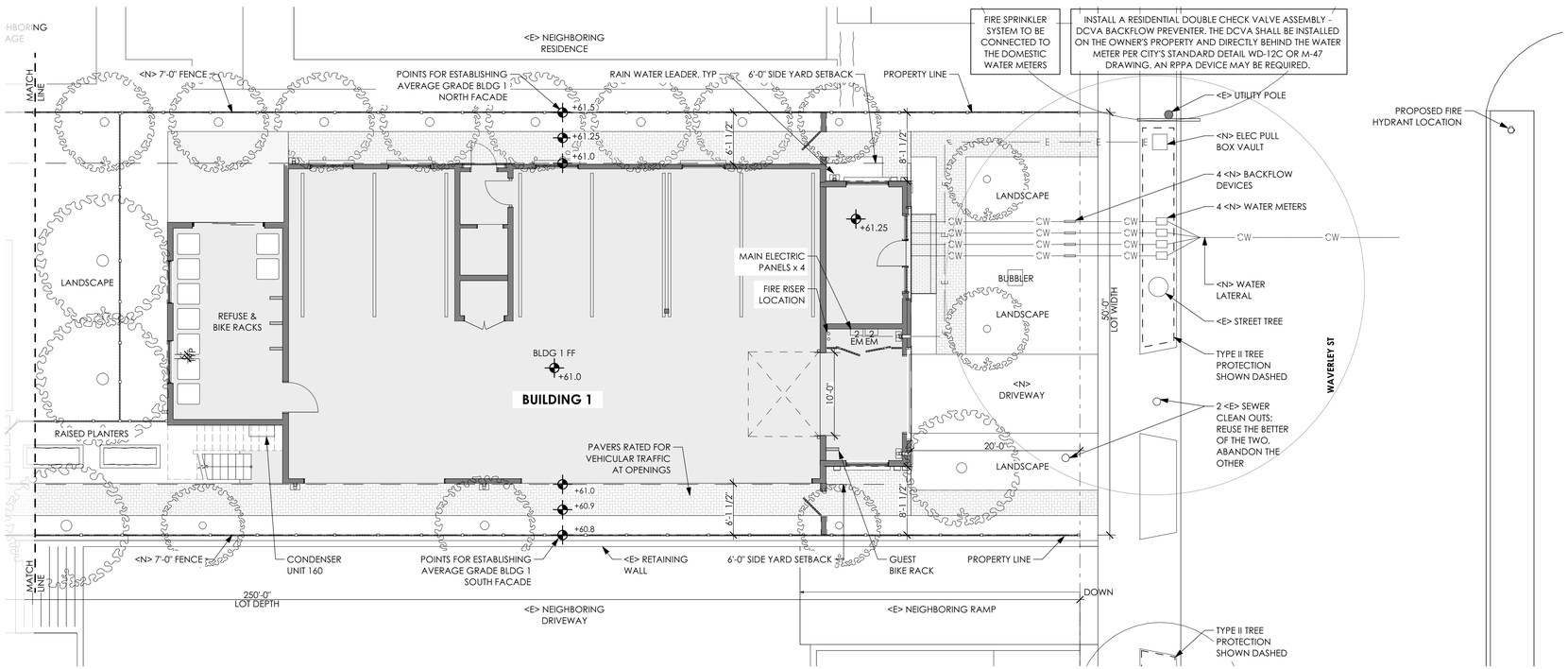


0 4' 8' 16'

162 - 164 WAVERLEY

SCALE: 1/8" = 1'-0"

2



0 4' 8' 16'

160 WAVERLEY

SCALE: 1/8" = 1'-0"

1

SITE PLAN NOTES

1) TREE PROTECTION ON REGULATED TREES SHALL IN IN PLACE FO RTHE DURATION OF THE PROJECT.

2) NO INDIVIDUAL PIECE OF EQUIPMENT SHALL PRODUCE A NOISE LEVEL EXCEEDING 110 dBA AT A DISTANCE OF 25 FT [9.10.060 (1)]

3) THE NOISE LEVEL AT ANY POINT OUTSIDE OF THE PROPERTY PLANE OF THE PROJECT SHALL NOT EXCEED 110 dBA [9.10.060 (2)]

4) RIGHT OF WAY WORK: ANY CONSTRUCTION WITHIN THE CITY RIGHT OF WAY MUST HAVE AN APPROVED "PERMIT FOR CONSTRUCTION IN THE PUBLIC STREET" PRIOR TO COMMENCEMENT OF THIS WORK. THE PERFORMANCE OF THE WORK IS NOT AUTHORIZED BY THE BUILDING PERMIT ISSUANCE BUT IS SHOWN ON THE BUILDING PERMIT FOR INFORMATION ONLY

5) GENERAL CONTRACTOR SHALL OBTAIN A STREET IMPROVEMENT PERMIT FROM THE PUBLIC WORKS DEPARTMENT PRIOR TO STARTING ANY WORK OUTSIDE OF THE PROPERTY LINES

6) IF POSSIBLE USE EXISTING DRIVEWAY FOR THE CONSTRUCTION ENTRANCE AND MAINTAIN BY SWEEPING AS REQUIRED

7) UNDERGROUND UTILITY LINES TO BE DIRECTED AWAY FROM THE STREET TREES BY A MINIMUM OF 10 FEET

8) FOR SITE GRADING AND DRAINAGE PATTERN COORDINATE WITH CIVIL ENGINEERING. VERIFY ALL GRADES IN FIELD TO COORDINATE WITH NEW FOUNDATION WORK.

9) CONSTRUCTION SIGNAGE IS LIMITED TO 9 SF MAX

10) A FOUNDATION SURVEY WILL BE REQUIRED BY A PROFESSIONAL ENGINEER OR OTHER AUTHORIZED PERSON WITH THE REPORT BEING AVAILABLE TO THE BUILDING INSPECTOR AT THE TIME OF THE FOUNDATION INSPECTION.

11) CONTRACTOR SHALL NOT STAGE, STORE, OR STOCKPILE ANY MATERIAL OR EQUIPMENT WITHIN THE PUBLIC ROAD RIGHT-OF-WAY.

SITE PREPARATION:

1) SITE GRADING: REFER TO GEOTECHNICAL ENGINEERS RECOMMENDATIONS FOR REMOVAL OF ALL DELETERIOUS MATERIAL, EXCAVATION SPECIFICATIONS, AND COMPACTED FILL RECOMMENDATIONS.

ARBORIST NOTES:

1) REGULATED TREES: BEFORE ANY EQUIPMENT IS DELIVERED OR ANY SITE WORK COMMENCES, CONTACT THE PROJECT SITE ARBORIST, RAY MORNEAU, AT (650) 964-7664.

2) ALL TREE PROTECTION AND INSPECTION SCHEDULE MEASURES, DESIGN RECOMMENDATIONS, WATERING AND OTHER REQUIRED MEASURES SHALL BE IMPLEMENTED IN FULL BY OWNER AND CONTRACTOR, AS STATED ON SHEET T-2, IN THE TREE PROTECTION REPORT AND THE APPROVED PLANS.

3) NO PRUNING OR CLEARANCE CUTTING OF BRANCHES IS PERMITTED ON CITY TREES.

ZERO WASTE NOTES:

1) THE SITE WILL BE RESPONSIBLE TO PULL THE BINS TO THE CURB FOR REFUSE SERVICE AND PLACE THE BINS IMMEDIATELY BACK INTO ITS REFUSE ENCLOSURE AFTER SERVICE.

STORM WATER (BMPs) 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 THE BAY 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.

UTILITY NOTES

1) SEE UTILITY SHEET C-3.0 FOR MORE INFORMATION.

2) **GAS** - NO GAS SERVICE WILL BE PROVIDED. REMOVE EXISTING GAS METER AND GAS LATERAL, CAP AT GAS MAIN.

3) **ELECTRIC** - NEW UNDERGROUND SERVICE PROPOSED. NEW PULLBOX NEXT TO EXISTING POWER POLE. NEW MAIN ELECTRIC METER AND MAIN PANEL. 4 SUB METERS PROPOSED, ONE FOR EACH UNIT PLUS A HOUSE PANEL. PANEL SIZE AND NEC LOAD CALCULATION TO BE PROVIDED DURING CONSTRUCTION DOCUMENT PHASE.

4) **WATER** - NEW 2" HDPE WATER SERVICE AND WATER METERS TO BE INSTALLED DEPENDING ON WATER DEMANDS. INSTALLATION BY CPAU. EXISTING WATER SERVICE TO BE DISCONNECTED AND ABANDONED BY CPAU. SINGLE LATERAL WILL SERVE 4 NEW METERS PLUS FIRE SERVICE. ONE METER FOR DOMESTIC WATER FOR EACH UNIT AND ONE METER FOR IRRIGATION.

5) **BACKFLOW DEVICE** - INSTALL A RESIDENTIAL DOUBLE CHECK VALVE ASSEMBLY - DCVA BACKFLOW PREVENTER BEHIND EACH WATER METER. THE DCVA SHALL BE INSTALLED ON THE OWNER'S PROPERTY DIRECTLY BEHIND THE WATER METER PER CITY STANDARD DETAIL WD-12C OR M-47 DRAWING. AN RPPA DEVICE MAY BE REQUIRED.

6) **SEWER** - TWO EXISTING SEWER LATERALS TO BE REUSED IF POSSIBLE. IF CONDITION OR SIZE IS UNACCEPTABLE, A NEW SINGLE SEWER LATERAL WILL BE INSTALLED AND CONNECTED TO <E> CITY CLEAN-OUT.

7) **RAINWATER** - ALL RAINWATER TO FLOW FROM ROOF THROUGH SCUPPERS, COLLECTORS AND RAINWATERLEADERS AND CONNECT TO SUBGRADE SYSTEM OF PERFORATED PIPES CONNECTING LANDSCAPE AREA DRAINS TO BUBBLER IN FRONT YARD. ALL WATER WILL SHEET FLOW ACROSS SITE AND NOT BE DIRECTED INTO NEIGHBORING PROPERTIES.

8) NEW FIRE HYDRANT AT CORNER OF RUTHAVEN AND WAVERLEY

9) STREET WORK PERMIT IS REQUIRED BY PUBLIC WORKS FOR WORKING IN THE CITY RIGHT OF WAY.

CALGREEN NOTES

1) A4.106.2.3 TOPSOIL PROTECTION: DISPLACED TOPSOIL SHALL BE STOCKPILED FOR REUSE IN A DESIGNATED AREA AND COVERED OR PROTECTED FROM EROSION. NOTE: PROTECTION FROM EROSION INCLUDES COVERING WITH TARPS, STRAW, MULCH, CHIPPED WOOD, VEGETATIVE COVER, OR OTHER MEANS ACCEPTABLE TO THE ENFORCING AGENCY TO PROTECT THE TOPSOIL FOR LATER USE. THE CONSTRUCTION AREA SHALL BE IDENTIFIED AND DELINEATED BY FENCING OR FLAGGING TO LIMIT CONSTRUCTION ACTIVITY TO THE CONSTRUCTION AREA. HEAVY EQUIPMENT OR VEHICLE TRAFFIC AND MATERIAL STORAGE OUTSIDE THE CONSTRUCTION AREA SHALL BE LIMITED TO AREAS THAT ARE PLANNED TO BE PAVED.

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WAVERLEY RESIDENCES

160 - 164 WAVERLEY ST, PALO ALTO, CA 94301

ISSUANCES

REV	DATE	DESCRIPTION
	14 DEC 2020	ARB SUBMITTAL
	12 MAR 2021	ARB RESUBMITTAL
	06 MAY 2021	ARB RESUBMITTAL
	09 AUG 2021	ARB RESUBMITTAL
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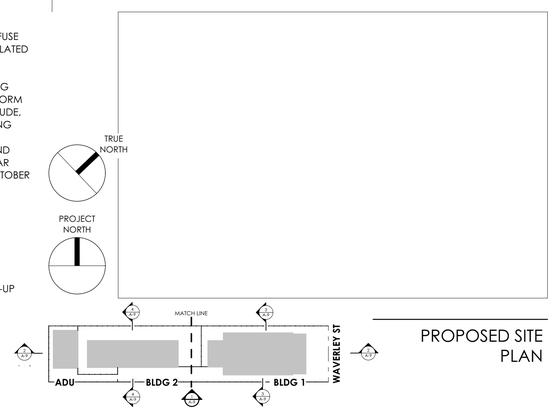
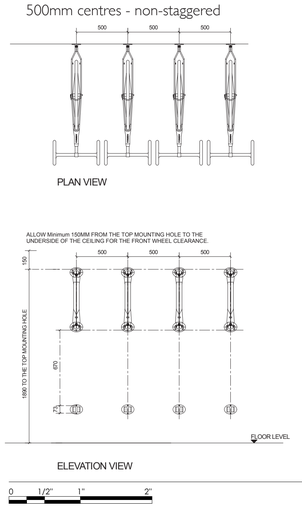
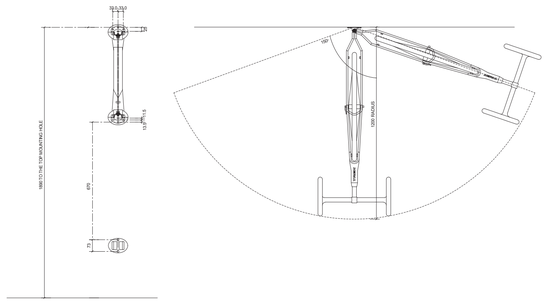


KEY PLAN

PROPOSED SITE PLAN

A-13

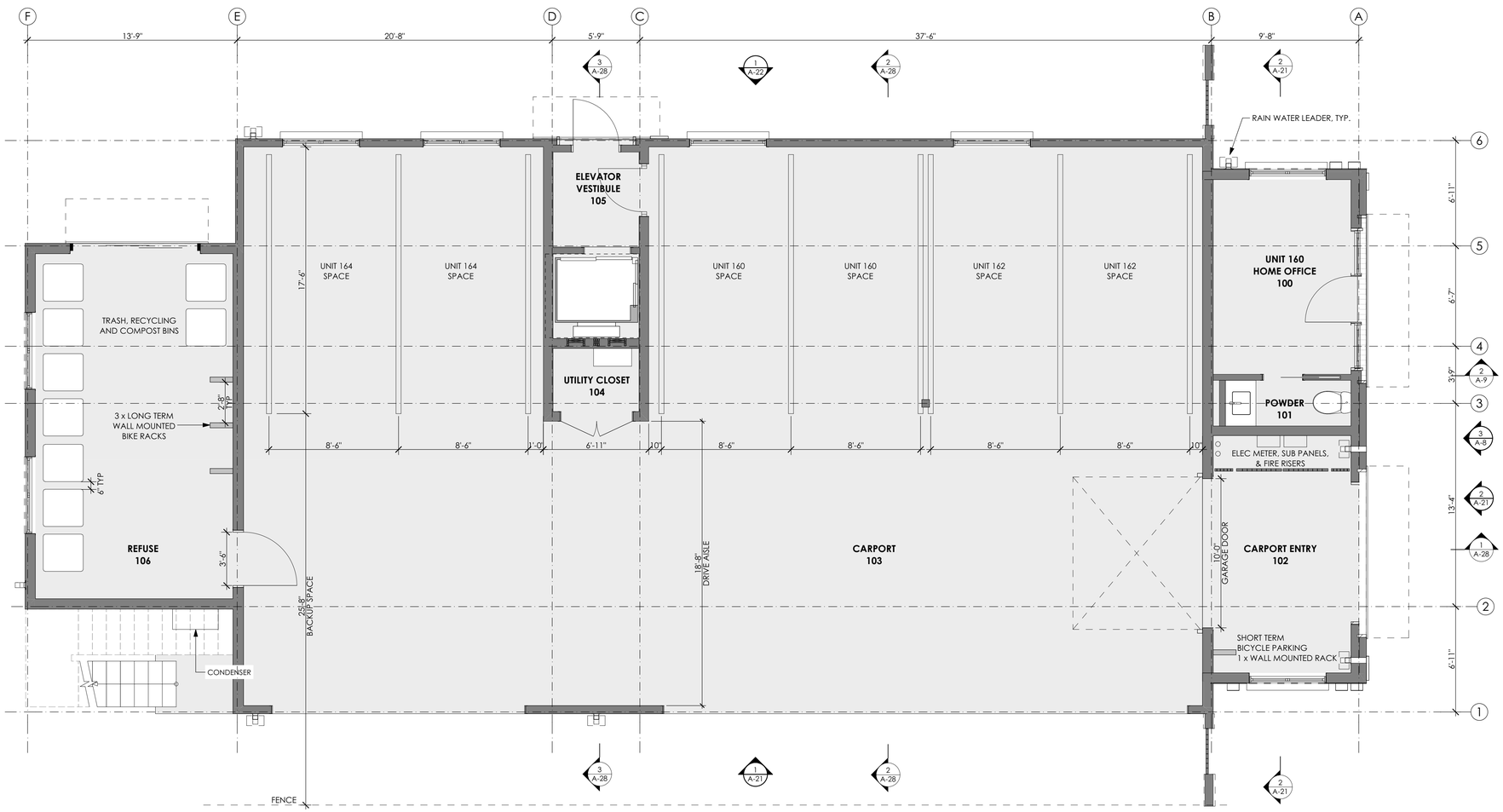




WALL MOUNTED BIKE RACK - STEADY RACK

SCALE: 1" = 1'-0"

2



GROUND FLOOR

SCALE: 1/4" = 1'-0"

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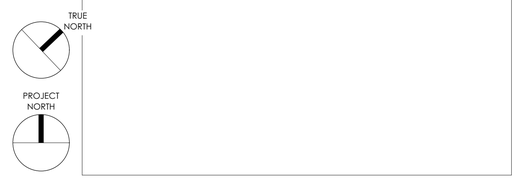

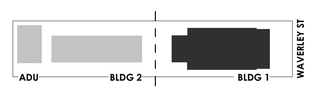

KEY PLAN

0 2' 4' 8'

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WAVERLEY RESIDENCES

160 - 164 WAVERLEY ST, PALO ALTO, CA 94301

ISSUANCES

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	10 OCT 2021	ARB RESUBMITTAL
	18 MAR 2022	ARB RESUBMITTAL

BLDG 1 - GROUND FLOOR PLAN

A-14

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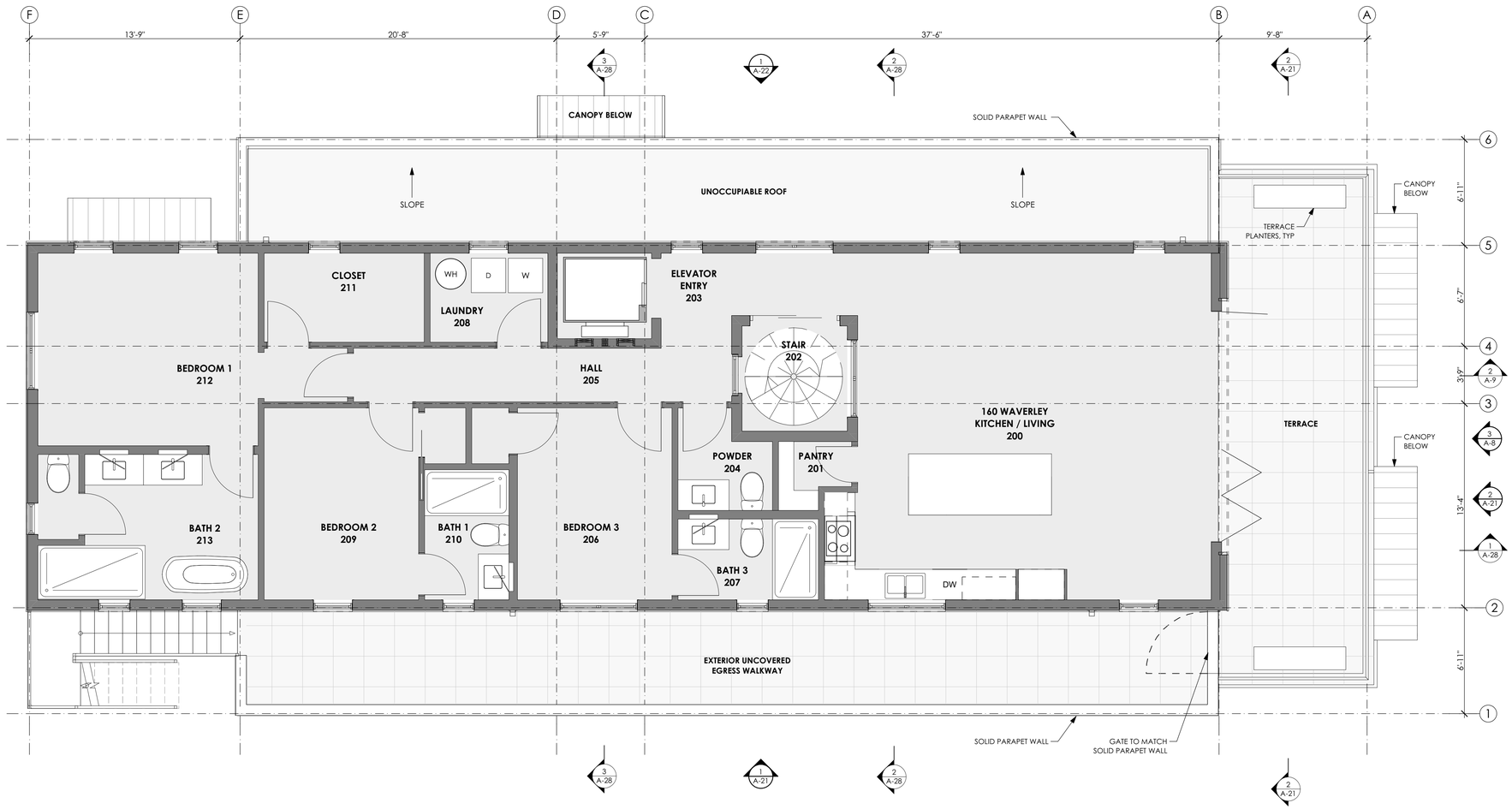
WAVERLEY RESIDENCES

160 - 164 WAVERLEY ST, PALO ALTO, CA 94301



SECOND FLOOR 1

SCALE: 1/4" = 1'-0"

0 2' 4' 8'

ISSUANCES		
REV	DATE	DESCRIPTION
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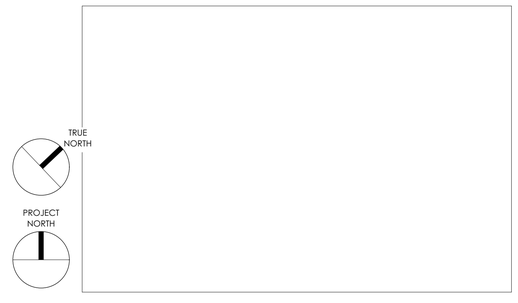
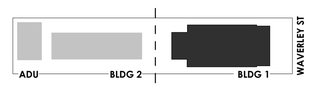




KEY PLAN

BLDG 1 - SECOND FLOOR PLAN

A-15

ROOF PLAN NOTES

1) PHOTOVOLTAIC REQUIREMENT:
FULL WORKING SYSTEM REQUIRED FOR THIS PROJECT. LOCATIONS AND SIZES ARE APPROXIMATE. A SOLAR SUB CONTRACTOR SHOULD DESIGN THE SYSTEM AND CONSULT WITH ARCHITECT ON CONFIGURATION.

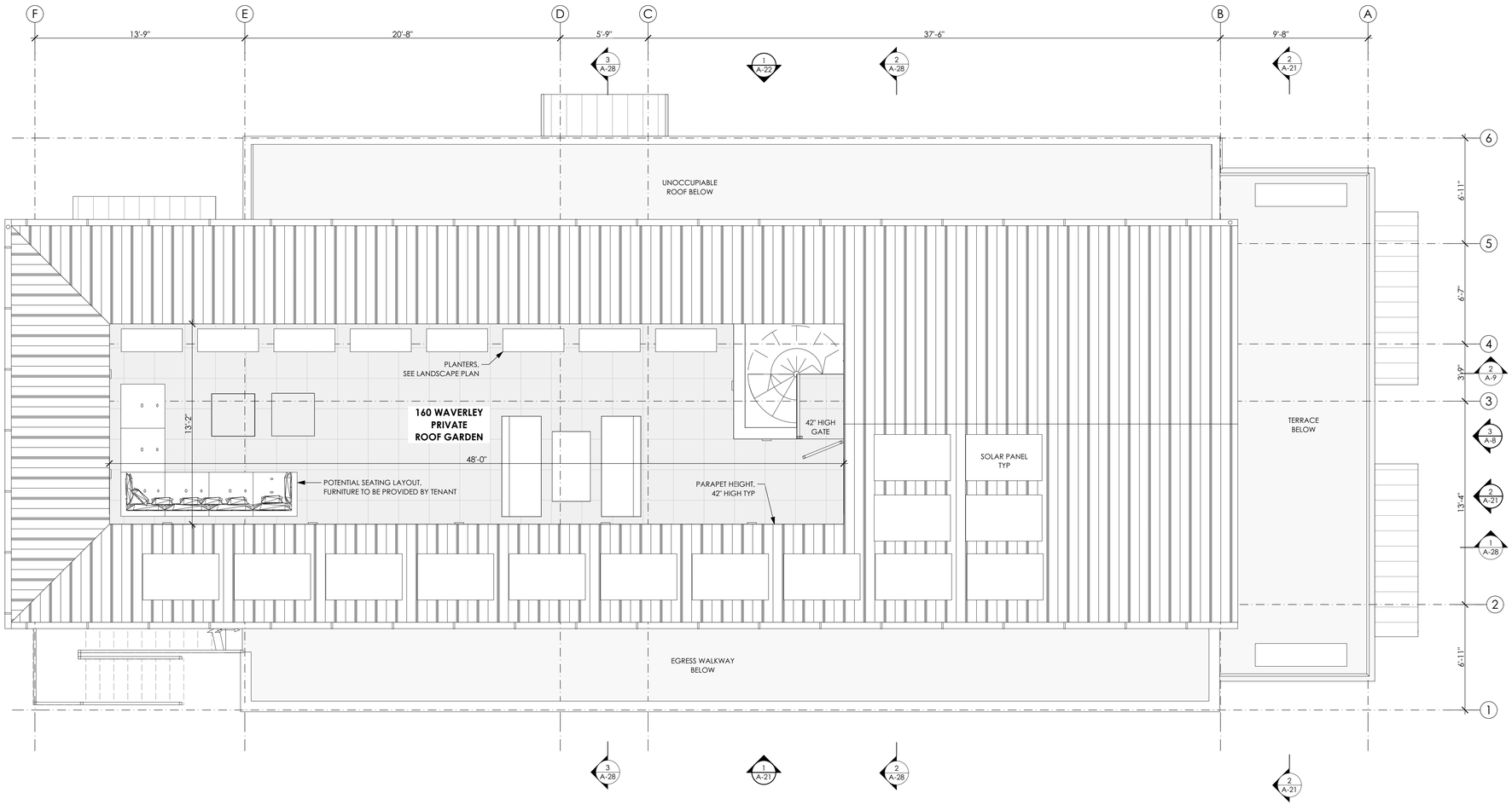
2) ROOF COVERING TO BE DURA-LAST 60-MIL MEMBRANE MEETING COOL ROOF REQUIREMENTS.

3) PEDESTAL SYSTEM TO BE BISONIP WITH STONE PAVERS IN SANDSTONE PORCELIN COLOR.

4) ALL ROOF PENETRATION TO BE FLASHED ACCORDING TO CURRENT SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION (SMACNA) GUIDELINES. PAINT EXPOSED VENT STACKS TO MATCH ROOF FINISH COLOR. GANG VENTS WHERE POSSIBLE AND COORDINATE WITH ARCHITECT ON LOCATIONS PRIOR TO INSTALLING.

CALGREEN NOTES

1) A4.106.5 COOL ROOF: LOW-SLOPE ROOFS SHALL HAVE A MINIMUM REFLECTANCE OF 0.65 AND A MINIMUM EMITTANCE OF 0.85. STEEP SLOPE ROOFS SHALL HAVE A MINIMUM REFLECTANCE OF 0.23 AND EMITTANCE OF 0.85.



ROOF PLAN
SCALE: 1/4" = 1'-0"
1

KEY PLAN

0 2' 4' 8'

WAVERLEY RESIDENCES 3/24/2022 5:06 PM

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WAVERLEY RESIDENCES

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BLDG 1 - ROOF PLAN

A-16

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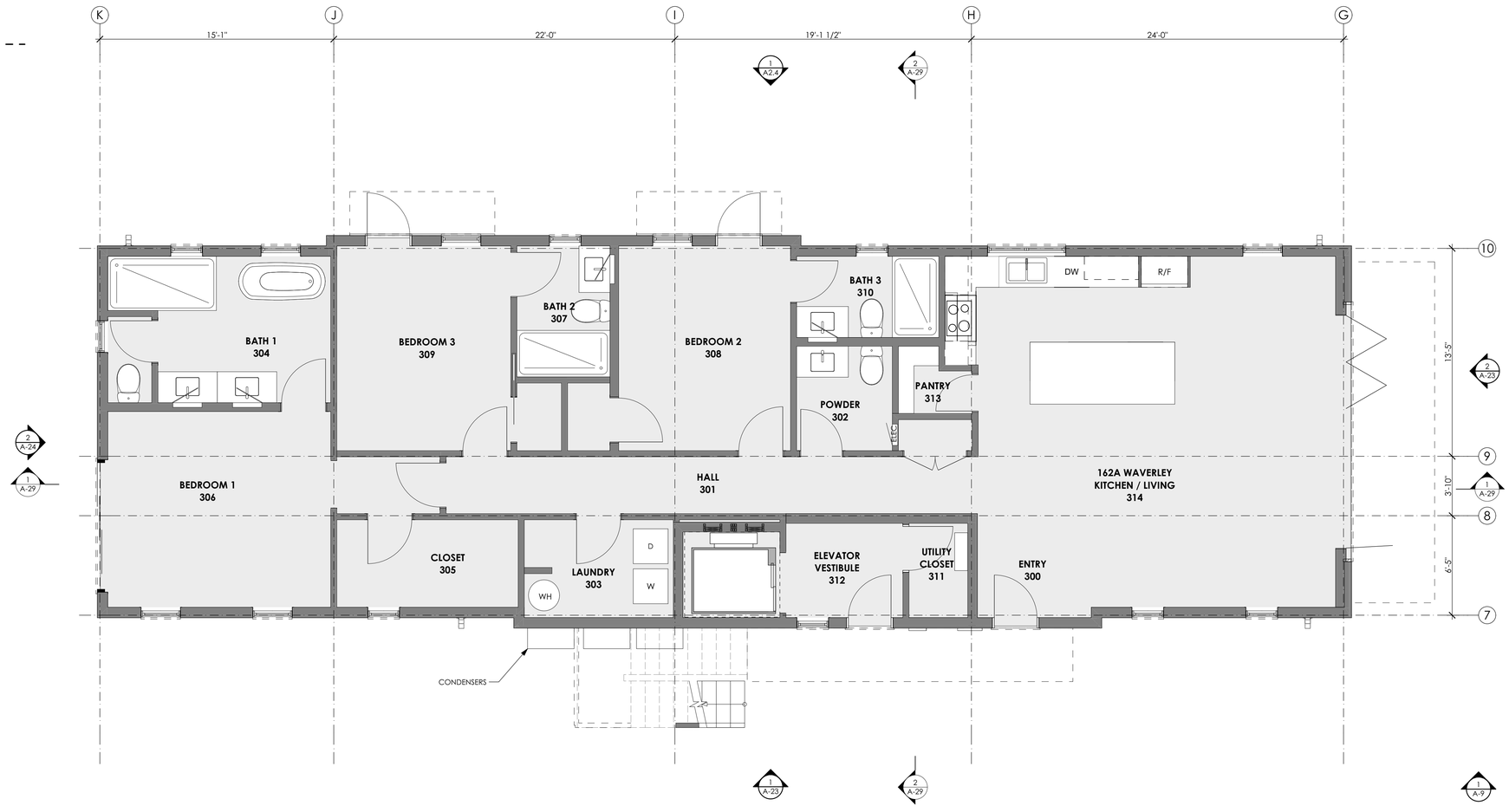
WAVERLEY RESIDENCES

160 - 164 WAVERLEY ST, PALO ALTO, CA 94301



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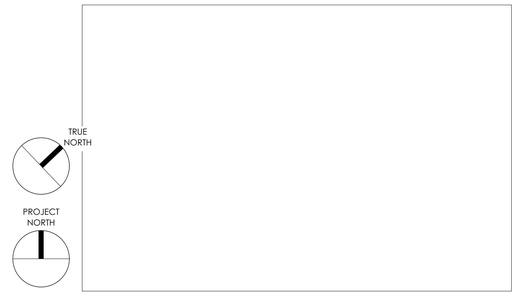

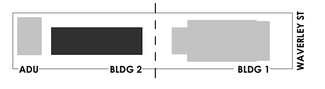

KEY PLAN

BLDG 2 - GROUND FLOOR PLAN

GROUND FLOOR 1
SCALE: 1/4" = 1'-0"

0 2' 4' 8'

A-17

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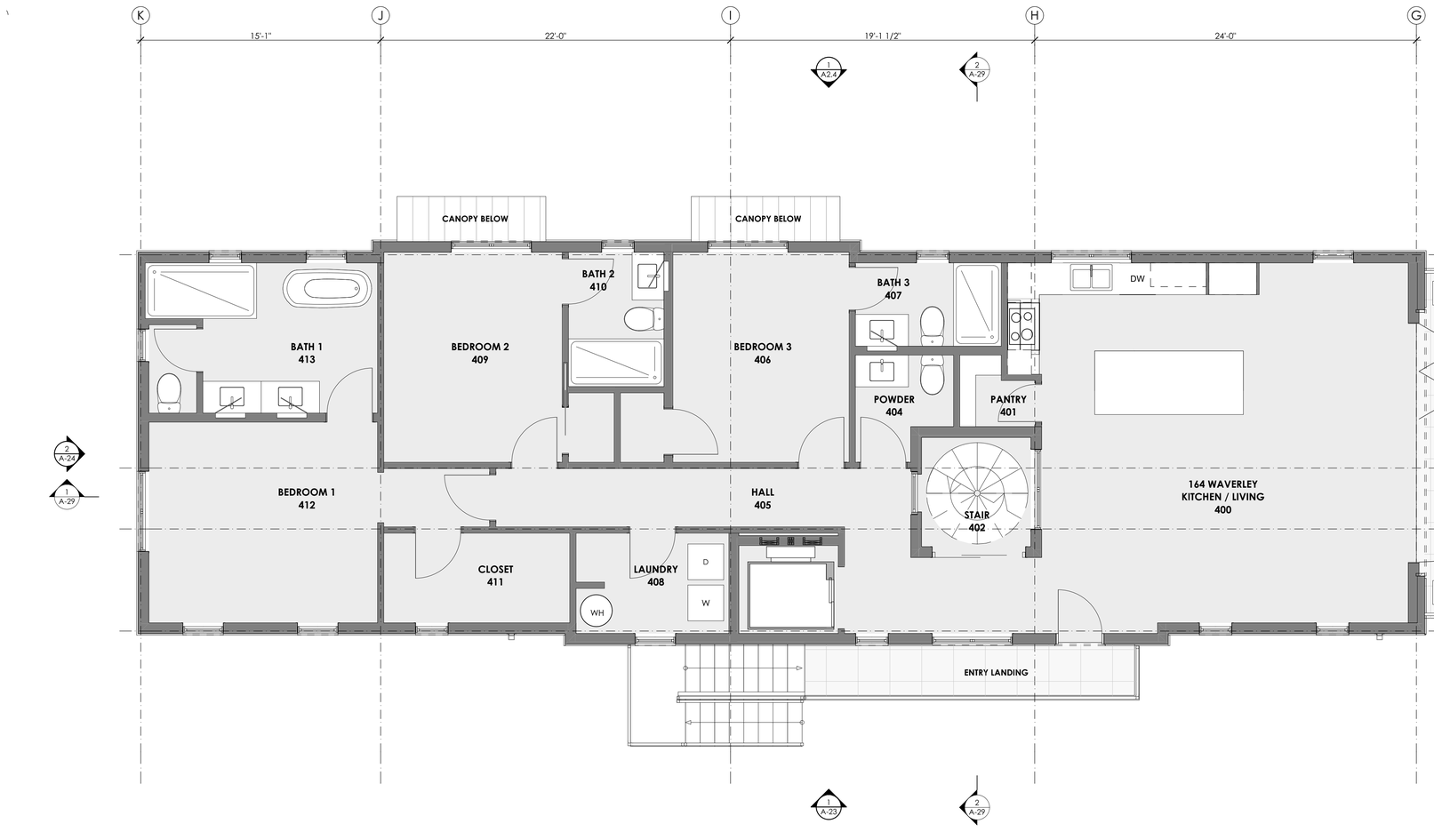
WAVERLEY RESIDENCES

160 - 164 WAVERLEY ST, PALO ALTO, CA 94301



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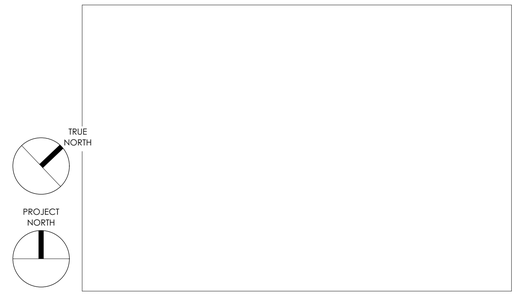
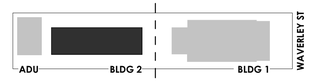




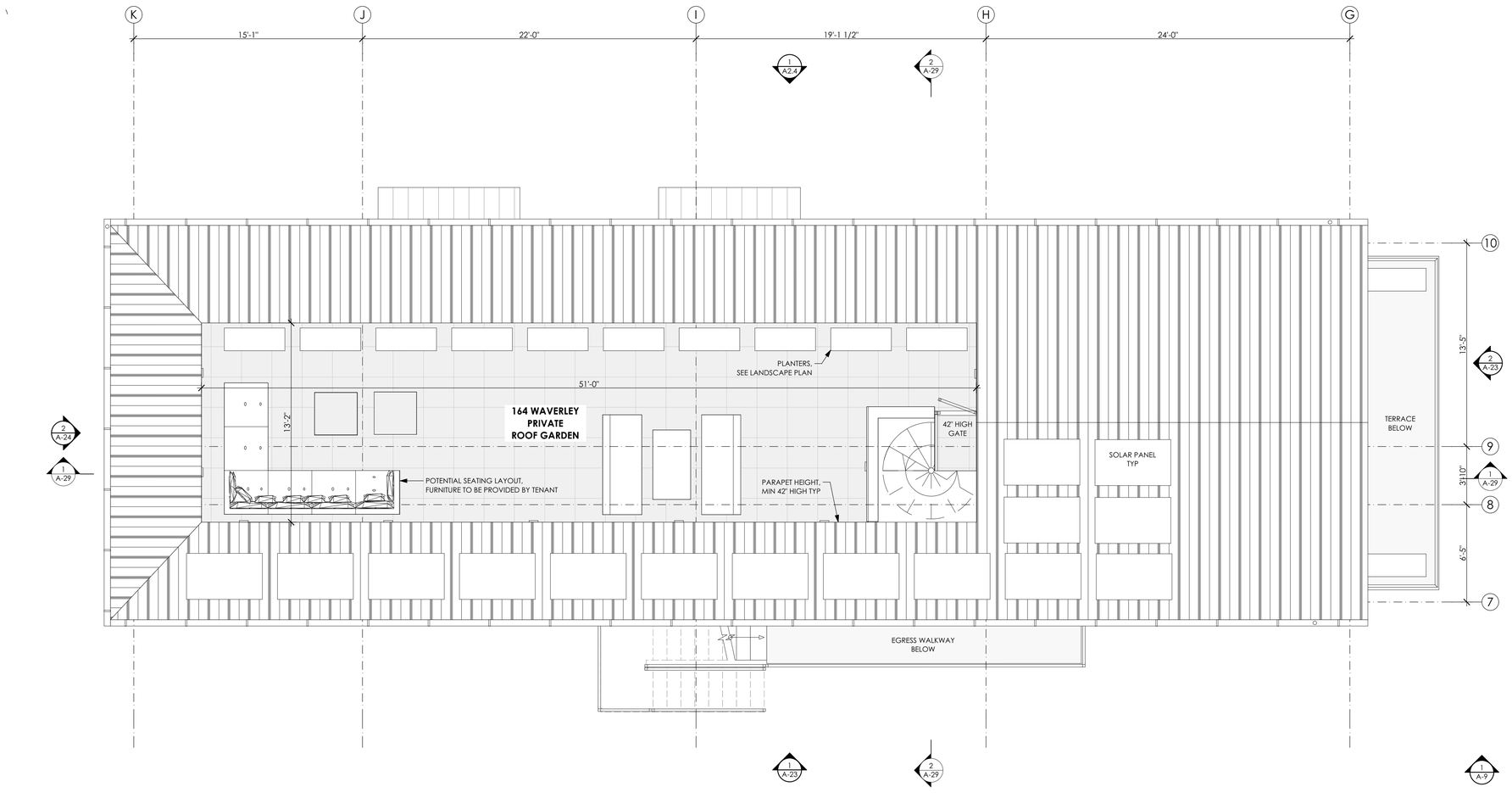
KEY PLAN

BLDG 2 - SECOND FLOOR PLAN

SECOND FLOOR 1
SCALE: 1/4" = 1'-0"

0 2' 4' 8'

A-18



0 2' 4' 8'

ROOF PLAN 1
SCALE: 1/4" = 1'-0"

ROOF PLAN NOTES

1) PHOTOVOLTAIC REQUIREMENT:
FULL WORKING SYSTEM REQUIRED FOR THIS PROJECT. LOCATIONS AND SIZES ARE APPROXIMATE. A SOLAR SUB CONTRACTOR SHOULD DESIGN THE SYSTEM AND CONSULT WITH ARCHITECT ON CONFIGURATION.

2) ROOF COVERING TO BE DURA-LAST 60-MIL MEMBRANE MEETING COOL ROOF REQUIREMENTS.

3) PEDESTAL SYSTEM TO BE BISONIP WITH STONE PAVERS IN SANDSTONE PORCELIN COLOR.

4) ALL ROOF PENETRATION TO BE FLASHED ACCORDING TO CURRENT SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION (SMACNA) GUIDELINES. PAINT EXPOSED VENT STACKS TO MATCH ROOF FINISH COLOR. GANG VENTS WHERE POSSIBLE AND COORDINATE WITH ARCHITECT ON LOCATIONS PRIOR TO INSTALLING.

CALGREEN NOTES

1) A4.106.5 COOL ROOF: LOW-SLOPE ROOFS SHALL HAVE A MINIMUM REFLECTANCE OF 0.65 AND A MINIMUM EMITTANCE OF 0.85. STEEP SLOPE ROOFS SHALL HAVE A MINIMUM REFLECTANCE OF 0.23 AND EMITTANCE OF 0.85.

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650-459-3200 / hyarchs.com

WAVERLEY RESIDENCES

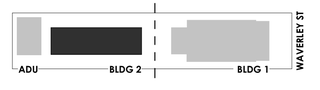
160 - 164 WAVERLEY ST, PALO ALTO, CA 94301

ISSUANCES

REV	DATE	DESCRIPTION
	14 DEC 2020	ARB SUBMITTAL
	12 MAR 2021	ARB RESUBMITTAL
	06 MAY 2021	ARB RESUBMITTAL
	09 AUG 2021	ARB RESUBMITTAL
	10 OCT 2021	ARB RESUBMITTAL
	18 MAR 2022	ARB RESUBMITTAL

TRUE NORTH

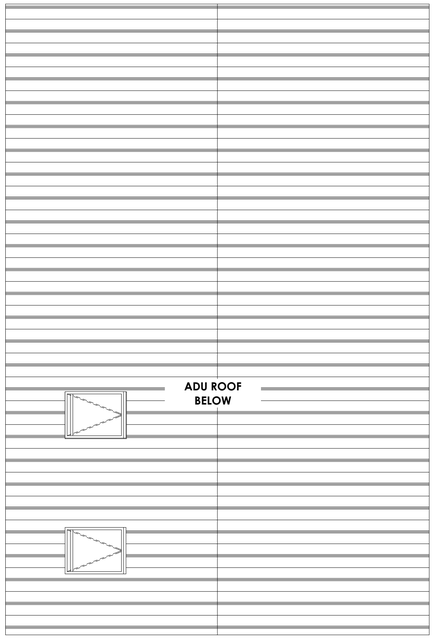
PROJECT NORTH



KEY PLAN

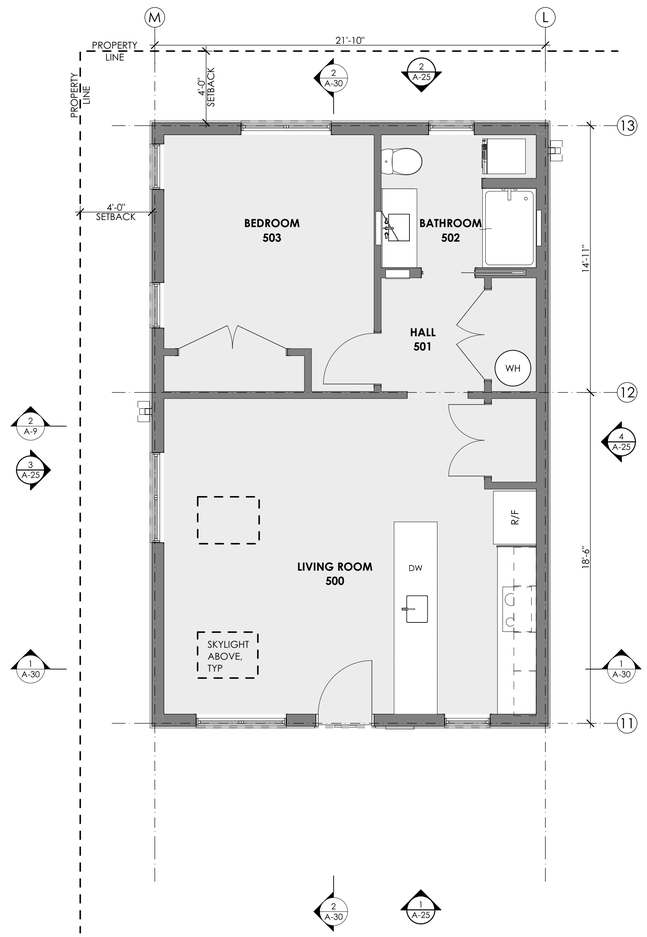
BLDG 2- ROOF PLAN

A-19



ROOF PLAN 2
SCALE: 1/4" = 1'-0"

0 2' 4' 8'



GROUND FLOOR 1
SCALE: 1/4" = 1'-0"

0 2' 4' 8'

ROOF PLAN NOTES

1) PHOTOVOLTAIC REQUIREMENT:
FULL WORKING SYSTEM REQUIRED FOR THIS PROJECT. LOCATIONS AND SIZES ARE APPROXIMATE. A SOLAR SUB CONTRACTOR SHOULD DESIGN THE SYSTEM AND CONSULT WITH ARCHITECT ON CONFIGURATION.

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3) PEDESTAL SYSTEM TO BE BISONIP WITH STONE PAVERS IN SANDSTONE PORCELIN COLOR.

4) ALL ROOF PENETRATION TO BE FLASHED ACCORDING TO CURRENT SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION (SMACNA) GUIDELINES. PAINT EXPOSED VENT STACKS TO MATCH ROOF FINISH COLOR. GANG VENTS WHERE POSSIBLE AND COORDINATE WITH ARCHITECT ON LOCATIONS PRIOR TO INSTALLING.

CALGREEN NOTES

1) A4.106.5 COOL ROOF: LOW-SLOPE ROOFS SHALL HAVE A MINIMUM REFLECTANCE OF 0.65 AND A MINIMUM EMITTANCE OF 0.85. STEEP SLOPE ROOFS SHALL HAVE A MINIMUM REFLECTANCE OF 0.23 AND EMITTANCE OF 0.85.

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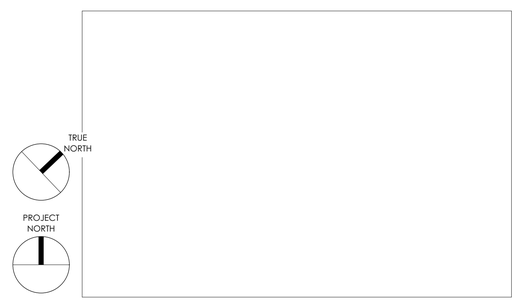
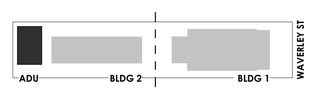
WAVERLEY RESIDENCES

160 - 164 WAVERLEY ST, PALO ALTO, CA 94301

ISSUANCES

REV	DATE	DESCRIPTION
	18 MAR 2022	ARB RESUBMITTAL

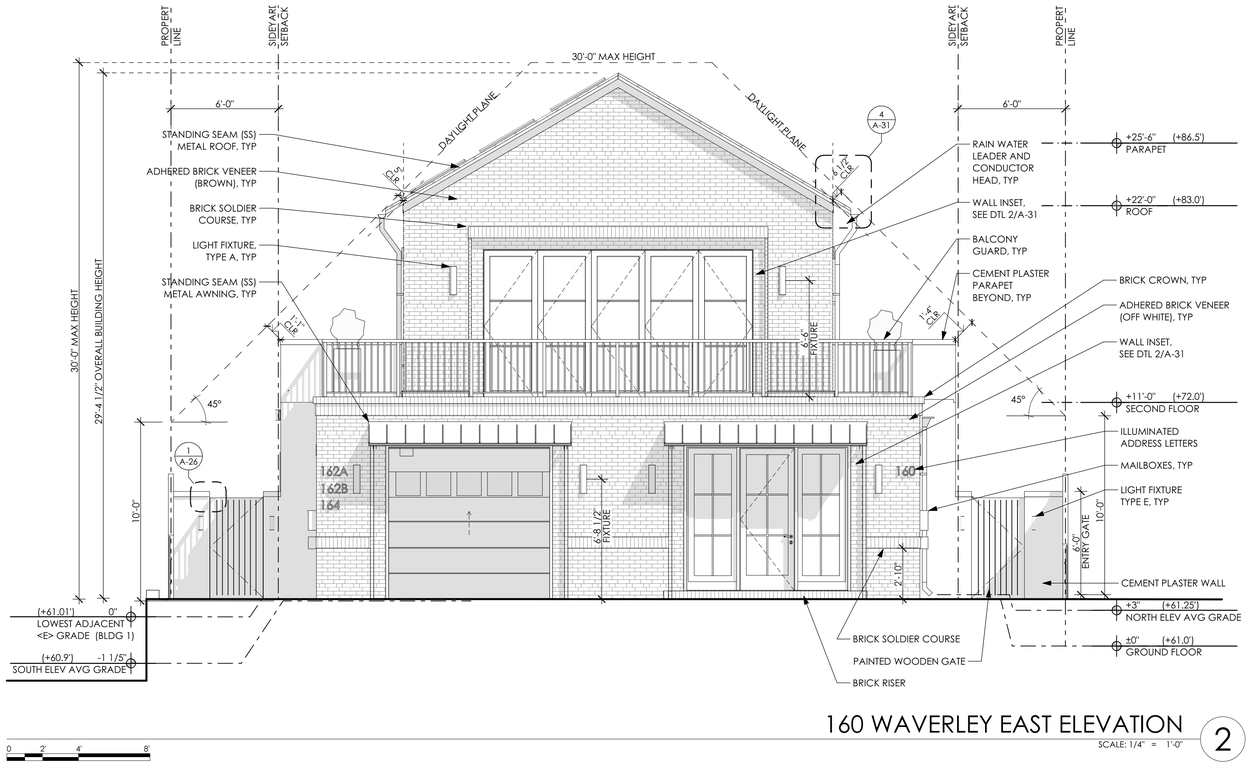




KEY PLAN

ADU - FLOOR PLANS

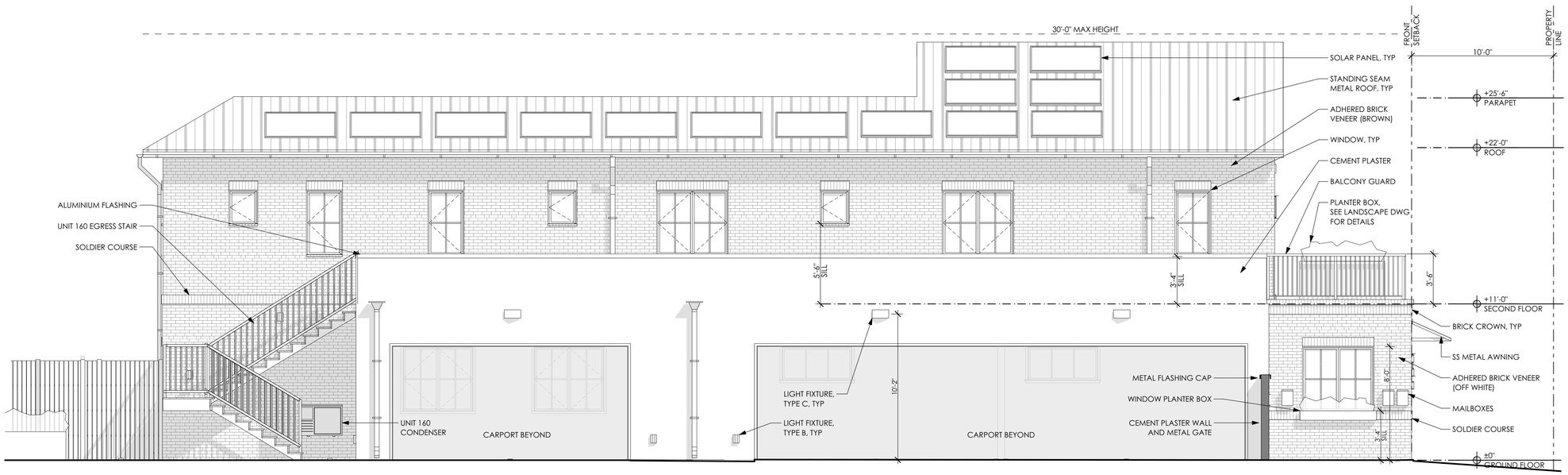
A-20



160 WAVERLEY EAST ELEVATION

SCALE: 1/4" = 1'-0"

2



160 WAVERLEY SOUTH ELEVATION

SCALE: 1/4" = 1'-0"

1

MATERIALS & FINISHES

1) **ADHERED BRICK VENEER (OFF WHITE):**
   - MANUFACTURER: INTERSTATE BRICK
   - SERIES: ARCTIC WHITE THIN BRICK
   - STANDARD THIN BRICK FLATS AND CORNERS
   - SIZE: 7 5/8" x 2 1/4" x 5/8" THICK
   - RUNNING BOND PATTERN W/ FLEMISH BOND EVERY 13 COURSES
   - 3/8" GROUT - CONCAVE JOINTS
   - ADHERED MASONRY VENEER SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS.

2) **CEMENT PLASTER:**
   - PAINTED: WARM WHITE
   - 7/8" THICK 3-COAT SAND FINISH

3) **ADHERED BRICK VENEER (BROWN):**
   - MANUFACTURER: GENERAL SHALE
   - SERIES: IRONWORKS THIN BRICK
   - STANDARD THIN BRICK FLATS AND CORNERS
   - SIZE: 7 5/8" x 2 1/4" x 1/2"
   - RUNNING BOND PATTERN W/ FLEMISH BOND EVERY 13 COURSES
   - 3/8" GROUT - CONCAVE JOINTS
   - ADHERED MASONRY VENEER SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS.

4) **BALCONY GUARD:**
   - 42" HIGH WITH VERTICAL PICKETS
   - ANODIZED ALUMINUM
   - COLOR DARK GREY

5) **BRICK CROWN:**
   - OFF WHITE BRICK, SEE DETAILS ON A-31

6) **RAINWATER LEADERS, CONDUCTORS & GUTTERS:**
   - BONDERIZED PAINTED METAL
   - SIZE: 3" x 4" RECTANGULAR
   - COLOR: DARK GREY

7) **WINDOWS:**
   - ALUMINIUM CLAD WOOD CASEMENT
   - JELD-WEN, SIGHTLINE SERIES
   - DARK GREY FRAMES AND SASHES

8) **OFFICE DOOR:**
   - ALUMINIUM CLAD WOOD
   - FULL GLASS WITH MUNTINS
   - DARK GREY FRAMES AND SASHES

9) **ENTRY/ ELEVATOR VESTIBULE DOORS:**
   - ALUMINIUM CLAD WOOD
   - HALF GLASS WITH MUNTINS
   - DARK GREY FRAMES AND SASHES

10) **FOLDING/ SLIDING DOORS:**
   - ALUMINUM, NARROW STILE
   - FLEETWOOD
   - FULL GLASS WITH MUNTINS
   - DARK GREY FRAMES AND SASHES

11) **GARAGE DOOR:**
   - ALUMINUM, SECTIONAL
   - UPPER GLASS PANELS (5)
   - DARK GREY FRAMES AND DOORS

12) **FRONT GATES:**
   - CEDAR SHIPLAP, PRIMED AND PAINTED TO MATCH DARK GREY GUARD RAILS

13) **ROOFS AND AWNINGS:**
   - 1" STANDING SEAM (SS) METAL
   - MANUFACTURER: TITAL COOL ROOF OR SIM
   - CA TITLE 24 COOL ROOF (0668-0129)
   - LIGHT GREY TONE SELECTION

14) **ALUMINUM FLASHING CAP**
   - 20 GAUGE
   - PRE FINISHED POWDER COAT
   - PAINTED DARK GREY TO MATCH DOOR & WINDOW FRAMES

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WAVERLEY RESIDENCES

160 - 164 WAVERLEY ST, PALO ALTO, CA 94301

ISSUANCES

REV	DATE	DESCRIPTION
	14 DEC 2020	ARB SUBMITTAL
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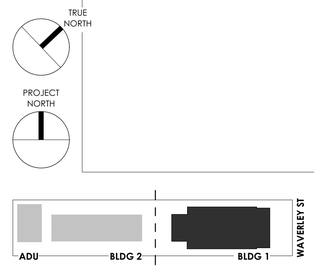
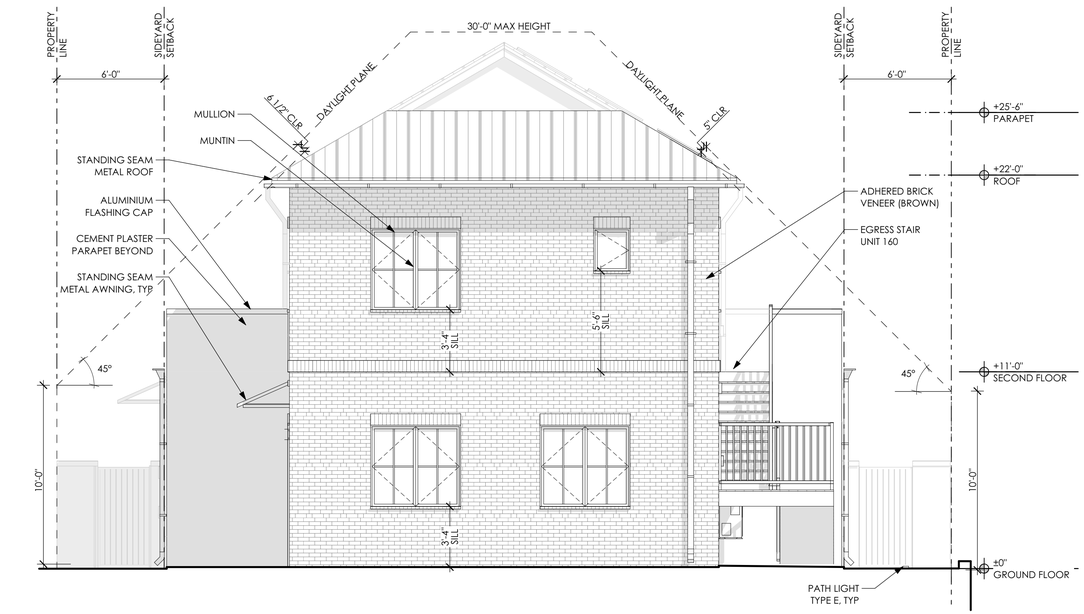
	06 MAY 2021	ARB RESUBMITTAL
	09 AUG 2021	ARB RESUBMITTAL
	10 OCT 2021	ARB RESUBMITTAL
	18 MAR 2022	ARB RESUBMITTAL



KEY PLAN

BLDG 1 - ELEVATIONS

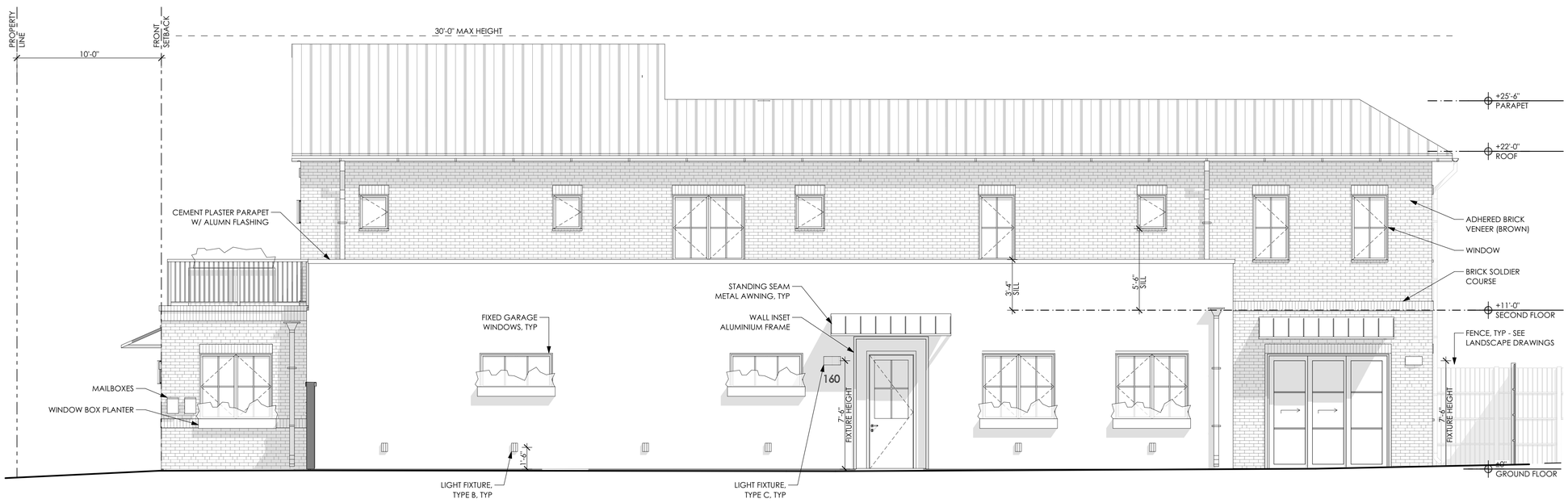
A-21



160 WAVERLEY WEST ELEVATION

SCALE: 1/4" = 1'-0"

2



160 WAVERLEY NORTH ELEVATION

SCALE: 1/4" = 1'-0"

1

MATERIALS & FINISHES

1) **ADHERED BRICK VENEER (OFF WHITE):**
   - MANUFACTURER: INTERSTATE BRICK
   - SERIES: ARCTIC WHITE THIN BRICK
   - STANDARD THIN BRICK FLATS AND CORNERS
   - SIZE: 7 5/8" x 2 1/4" x 5/8" THICK
   - RUNNING BOND PATTERN W/ FLEMISH BOND EVERY 13 COURSES
   - 3/8" GROUT - CONCAVE JOINTS
   - ADHERED MASONRY VENEER SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS.

2) **CEMENT PLASTER:**
   - PAINTED: WARM WHITE
   - 7/8" THICK 3-COAT SAND FINISH

3) **ADHERED BRICK VENEER (BROWN):**
   - MANUFACTURER: GENERAL SHALE
   - SERIES: IRONWORKS THIN BRICK
   - STANDARD THIN BRICK FLATS AND CORNERS
   - SIZE: 7 5/8" x 2 1/4" x 1/2"
   - RUNNING BOND PATTERN W/ FLEMISH BOND EVERY 13 COURSES
   - 3/8" GROUT - CONCAVE JOINTS
   - ADHERED MASONRY VENEER SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS.

4) **BALCONY GUARD:**
   - 42" HIGH WITH VERTICAL PICKETS
   - ANODIZED ALUMINUM
   - COLOR DARK GREY

5) **BRICK CROWN:**
   - OFF WHITE BRICK, SEE DETAILS ON A-31

6) **RAINWATER LEADERS, CONDUCTORS & GUTTERS:**
   - BONDERIZED PAINTED METAL
   - SIZE: 3" x 4" RECTANGULAR
   - COLOR: DARK GREY

7) **WINDOWS:**
   - ALUMINIUM CLAD WOOD CASEMENT
   - JELD-WEN, SIGHTLINE SERIES
   - DARK GREY FRAMES AND SASHES

8) **OFFICE DOOR:**
   - ALUMINIUM CLAD WOOD
   - FULL GLASS WITH MUNTINS
   - DARK GREY FRAMES AND SASHES

9) **ENTRY/ ELEVATOR VESTIBULE DOORS:**
   - ALUMINIUM CLAD WOOD
   - HALF GLASS WITH MUNTINS
   - DARK GREY FRAMES AND SASHES

10) **FOLDING/ SLIDING DOORS:**
   - ALUMINUM, NARROW STILE
   - FLEETWOOD
   - FULL GLASS WITH MUNTINS
   - DARK GREY FRAMES AND SASHES

11) **GARAGE DOOR:**
   - ALUMINUM, SECTIONAL
   - UPPER GLASS PANELS (5)
   - DARK GREY FRAMES AND DOORS

12) **FRONT GATES:**
   - CEDAR SHIPLAP, PRIMED AND PAINTED TO MATCH DARK GREY GUARD RAILS

13) **ROOFS AND AWNINGS:**
   - 1" STANDING SEAM (SS) METAL
   - MANUFACTURER: TITAL COOL ROOF OR SIM
   - CA TITLE 24 COOL ROOF (0668-0129)
   - LIGHT GREY TONE SELECTION

14) **ALUMINUM FLASHING CAP**
   - 20 GAUGE
   - PRE FINISHED POWDER COAT
   - PAINTED DARK GREY TO MATCH DOOR & WINDOW FRAMES

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WAVERLEY RESIDENCES

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ISSUANCES

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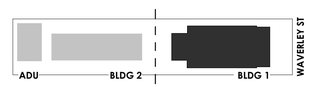
	10 OCT 2021	ARB RESUBMITTAL
	18 MAR 2022	ARB RESUBMITTAL

TRUE NORTH

PROJECT NORTH



KEY PLAN

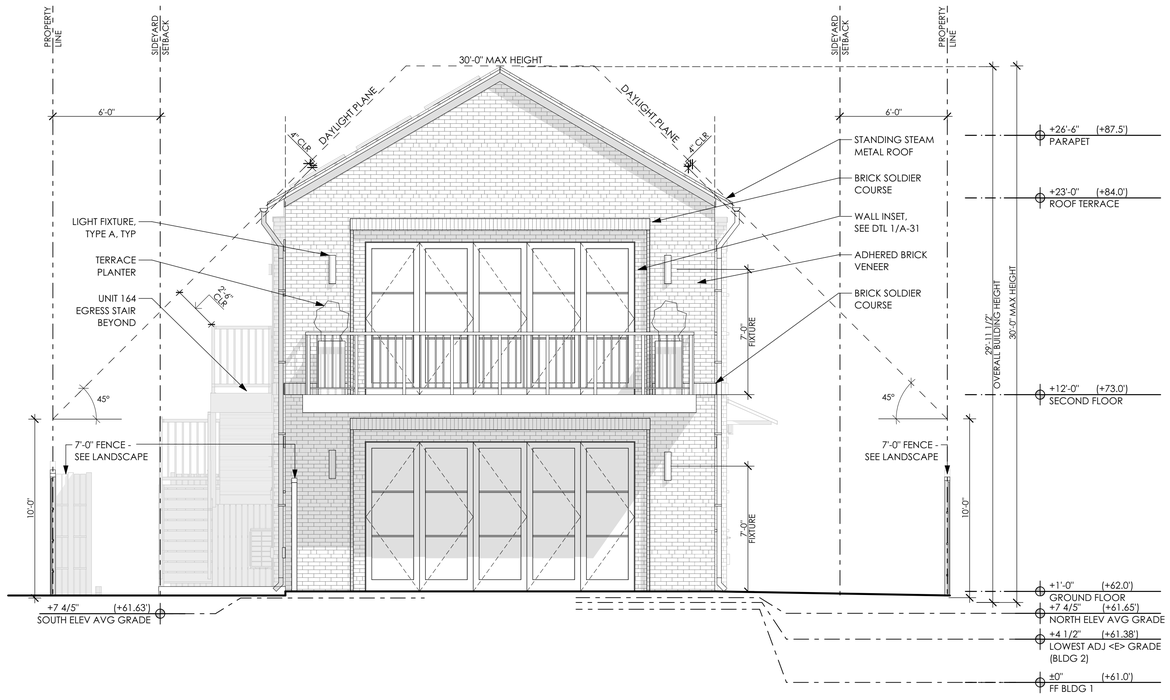
BLDG 1 - ELEVATIONS

A-22

TYPE A -
BEGA, MODEL 24008
24w LED, 2700K
4-1/2" DIA, 19-1/2" TALL

TYPE B -
BEGA, MODEL 22215
2w LED, 2700K
3-1/2" x 3-3/4" x 2-3/4" PROJECTION

TYPE C -
BEGA, MODEL 33344
12w LED, 2700K
13-1/2" x 5-1/2" x 7-3/8" PROJECTION

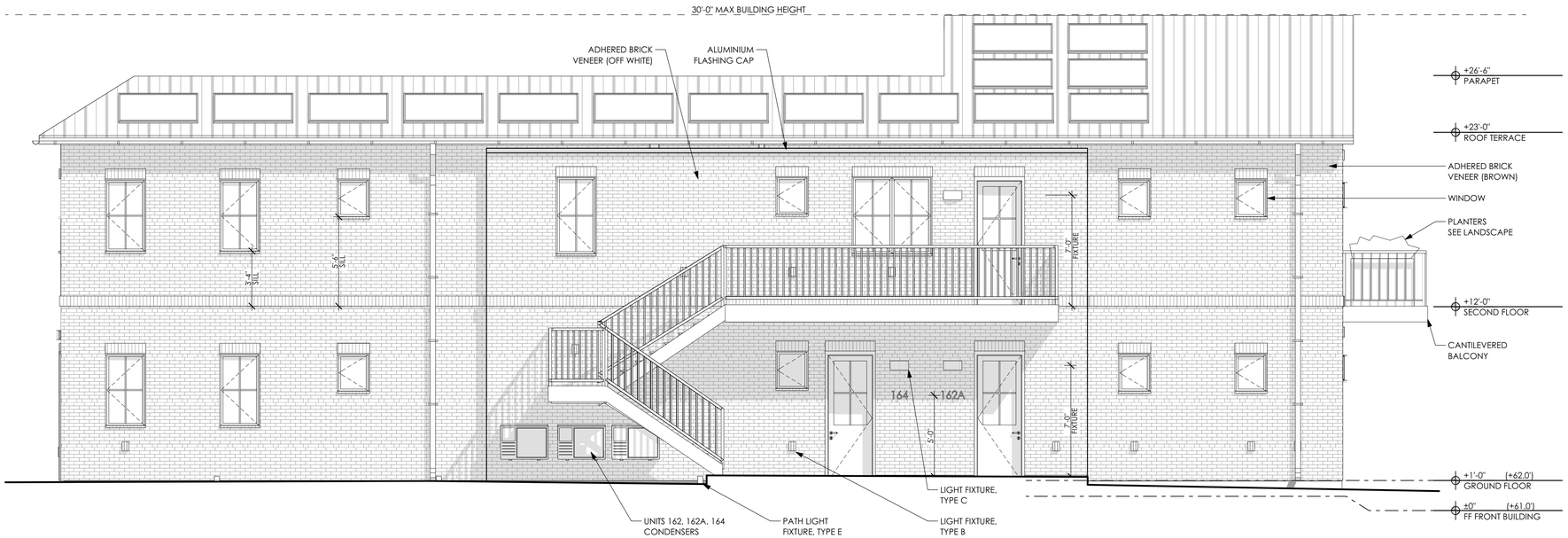


0 2' 4' 8'

162/164 WAVERLEY EAST ELEVATION

SCALE: 1/4" = 1'-0"

2



0 2' 4' 8'

162/164 WAVERLEY SOUTH ELEVATION

SCALE: 1/4" = 1'-0"

1

MATERIALS & FINISHES

1) **ADHERED BRICK VENEER (OFF WHITE):**
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   - SERIES: ARCTIC WHITE THIN BRICK
   - STANDARD THIN BRICK FLATS AND CORNERS
   - SIZE: 7 5/8" x 2 1/4" x 5/8" THICK
   - RUNNING BOND PATTERN W/ FLEMISH BOND EVERY 13 COURSES
   - 3/8" GROUT - CONCAVE JOINTS
   - ADHERED MASONRY VENEER SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS.

2) **CEMENT PLASTER:**
   - PAINTED: WARM WHITE
   - 7/8" THICK 3-COAT SAND FINISH

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   - ANODIZED ALUMINUM
   - COLOR DARK GREY

5) **BRICK CROWN:**
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   - SIZE: 3" x 4" RECTANGULAR
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7) **WINDOWS:**
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   - JELD-WEN, SIGHTLINE SERIES
   - DARK GREY FRAMES AND SASHES

8) **OFFICE DOOR:**
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   - FULL GLASS WITH MUNTINS
   - DARK GREY FRAMES AND SASHES

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   - DARK GREY FRAMES AND SASHES

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   - FLEETWOOD
   - FULL GLASS WITH MUNTINS
   - DARK GREY FRAMES AND SASHES

11) **GARAGE DOOR:**
   - ALUMINUM, SECTIONAL
   - UPPER GLASS PANELS (5)
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12) **FRONT GATES:**
   - CEDAR SHIPLAP, PRIMED AND PAINTED TO MATCH DARK GREY GUARD RAILS

13) **ROOFS AND AWNINGS:**
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   - LIGHT GREY TONE SELECTION

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WAVERLEY RESIDENCES

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ISSUANCES

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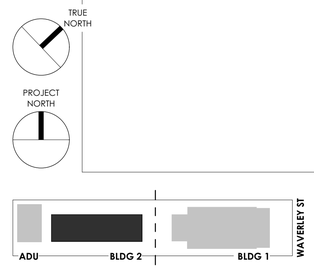
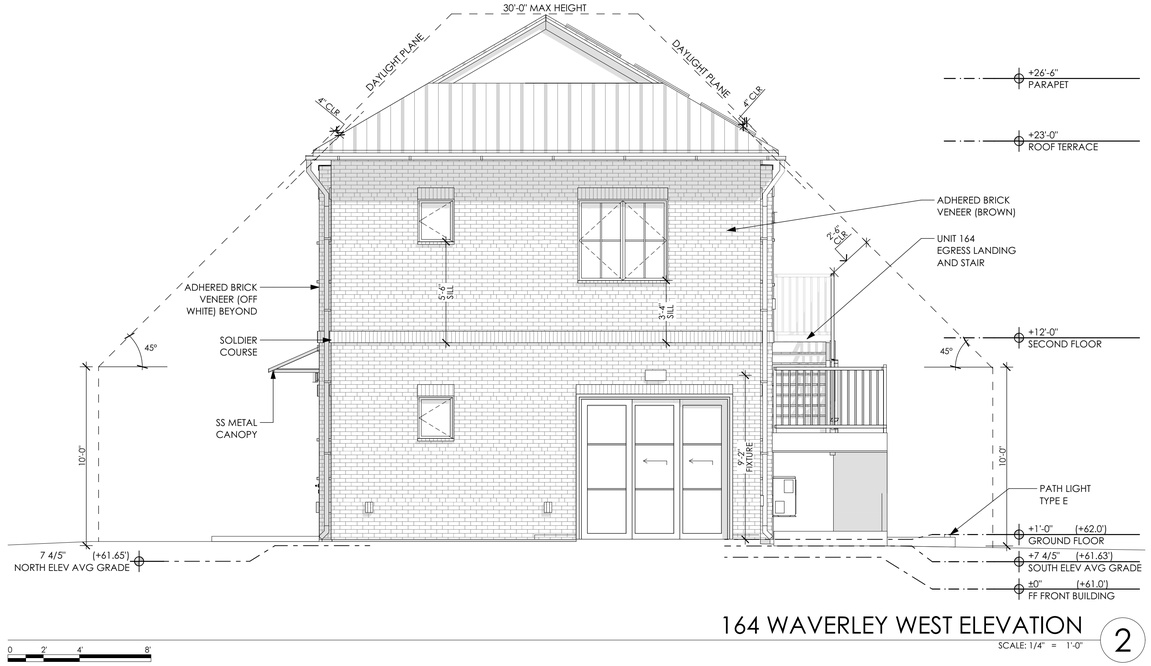


KEY PLAN

BLDG 2 - ELEVATIONS

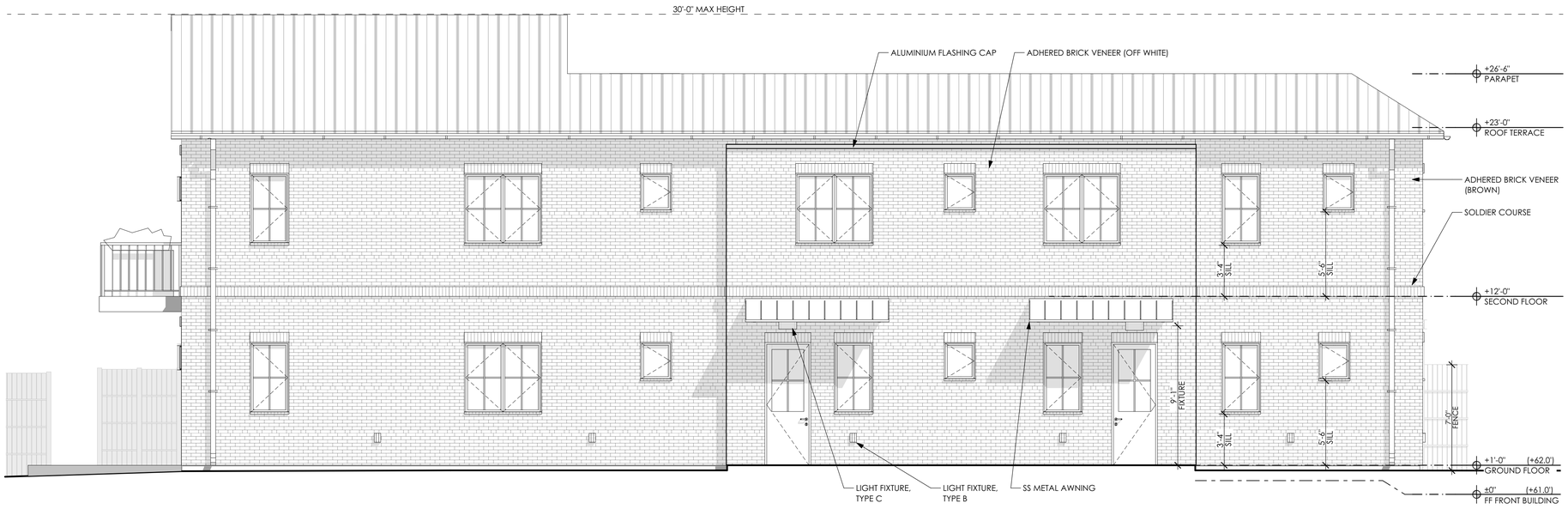
A-23



164 WAVERLEY WEST ELEVATION

SCALE: 1/4" = 1'-0"

2



164 WAVERLEY NORTH ELEVATION

SCALE: 1/4" = 1'-0"

1

MATERIALS & FINISHES

1) **ADHERED BRICK VENEER (OFF WHITE):**
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   - SERIES: ARCTIC WHITE THIN BRICK
   - STANDARD THIN BRICK FLATS AND CORNERS
   - SIZE: 7 5/8" x 2 1/4" x 5/8" THICK
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   - 3/8" GROUT - CONCAVE JOINTS
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2) **CEMENT PLASTER:**
   - PAINTED: WARM WHITE
   - 7/8" THICK 3-COAT SAND FINISH

3) **ADHERED BRICK VENEER (BROWN):**
   - MANUFACTURER: GENERAL SHALE
   - SERIES: IRONWORKS THIN BRICK
   - STANDARD THIN BRICK FLATS AND CORNERS
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   - 3/8" GROUT - CONCAVE JOINTS
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4) **BALCONY GUARD:**
   - 42" HIGH WITH VERTICAL PICKETS
   - ANODIZED ALUMINUM
   - COLOR DARK GREY

5) **BRICK CROWN:**
   - OFF WHITE BRICK. SEE DETAILS ON A-31

6) **RAINWATER LEADERS, CONDUCTORS & GUTTERS:**
   - BONDERIZED PAINTED METAL
   - SIZE: 3" x 4" RECTANGULAR
   - COLOR: DARK GREY

7) **WINDOWS:**
   - ALUMINUM CLAD WOOD CASEMENT
   - JELD-WEN, SIGHTLINE SERIES
   - DARK GREY FRAMES AND SASHES

8) **OFFICE DOOR:**
   - ALUMINIUM CLAD WOOD
   - FULL GLASS WITH MUNTINS
   - DARK GREY FRAMES AND SASHES

9) **ENTRY/ ELEVATOR VESTIBULE DOORS:**
   - ALUMINIUM CLAD WOOD
   - HALF GLASS WITH MUNTINS
   - DARK GREY FRAMES AND SASHES

10) **FOLDING/ SLIDING DOORS:**
   - ALUMINUM, NARROW STILE
   - FLEETWOOD
   - FULL GLASS WITH MUNTINS
   - DARK GREY FRAMES AND SASHES

11) **GARAGE DOOR:**
   - ALUMINUM, SECTIONAL
   - UPPER GLASS PANELS (5)
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12) **FRONT GATES:**
   - CEDAR SHIPLAP, PRIMED AND PAINTED TO MATCH DARK GREY GUARD RAILS

13) **ROOFS AND AWNINGS:**
   - 1" STANDING SEAM (SS) METAL
   - MANUFACTURER: TITAL COOL ROOF OR SIM
   - CA TITLE 24 COOL ROOF (0668-0129)
   - LIGHT GREY TONE SELECTION

14) **ALUMINUM FLASHING CAP**
   - 20 GAUGE
   - PRE FINISHED POWDER COAT
   - PAINTED DARK GREY TO MATCH DOOR & WINDOW FRAMES

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81 Encina Avenue, Suite 100
Palo Alto, CA 94301
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WAVERLEY RESIDENCES

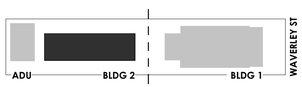
160 - 164 WAVERLEY ST, PALO ALTO, CA 94301

ISSUANCES

REV	DATE	DESCRIPTION
	14 DEC 2020	ARB SUBMITTAL
	12 MAR 2021	ARB RESUBMITTAL
	06 MAY 2021	ARB RESUBMITTAL
	09 AUG 2021	ARB RESUBMITTAL
	10 OCT 2021	ARB RESUBMITTAL
	18 MAR 2022	ARB RESUBMITTAL

TRUE NORTH

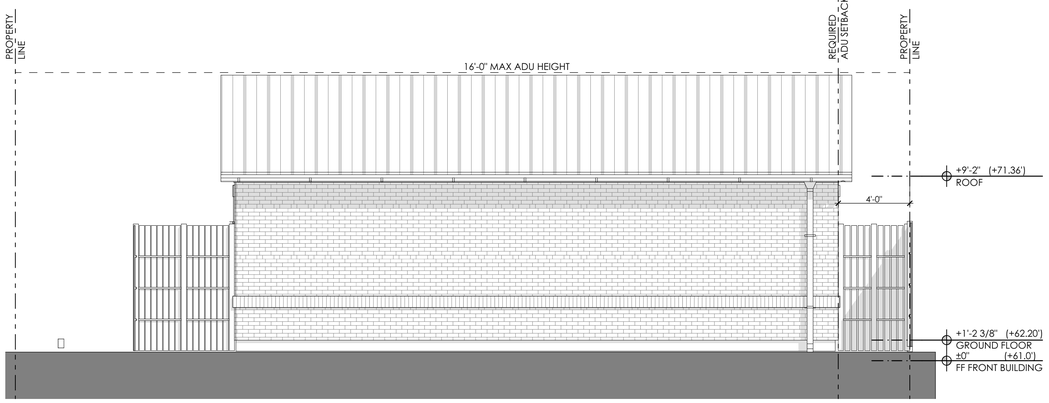
PROJECT NORTH



KEY PLAN

BLDG 2 - ELEVATIONS

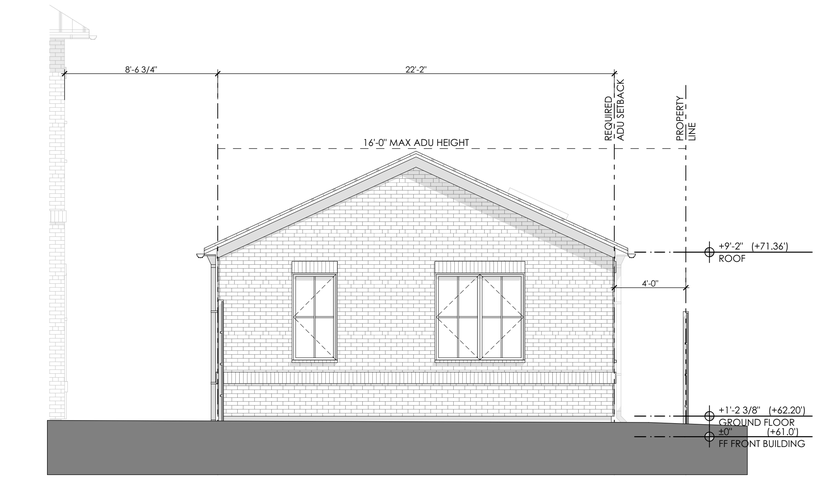
A-24



BUILDING 3 EAST ELEVATION

SCALE: 1/4" = 1'-0"

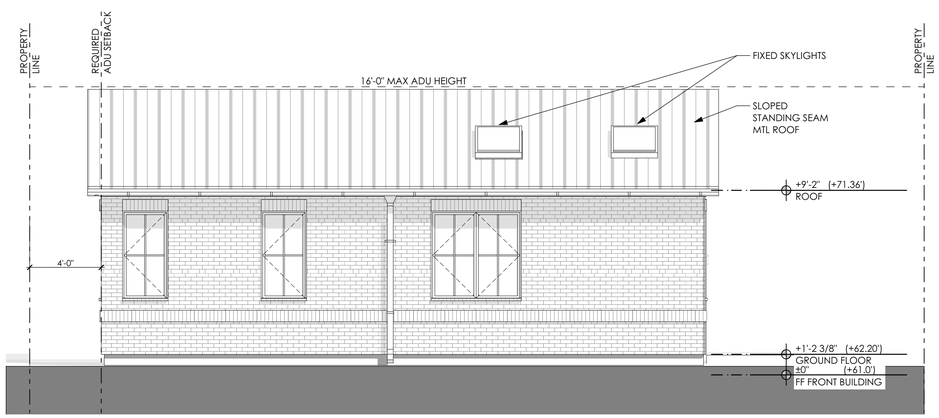
4



BUILDING 3 NORTH ELEVATION

SCALE: 1/4" = 1'-0"

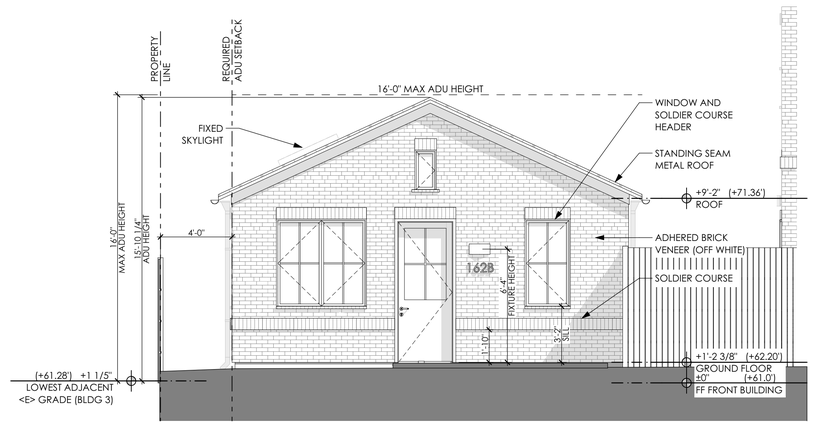
2



BUILDING 3 WEST ELEVATION

SCALE: 1/4" = 1'-0"

3



BUILDING 3 SOUTH ELEVATION

SCALE: 1/4" = 1'-0"

1

MATERIALS & FINISHES

1) **ADHERED BRICK VENEER (OFF WHITE):**
   - MANUFACTURER: INTERSTATE BRICK
   - SERIES: ARCTIC WHITE THIN BRICK
   - STANDARD THIN BRICK FLATS AND CORNERS
   - SIZE: 7 5/8" x 2 1/4" x 5/8" THICK
   - RUNNING BOND PATTERN W/ FLEMISH BOND EVERY 13 COURSES
   - 3/8" GROUT - CONCAVE JOINTS
   - ADHERED MASONRY VENEER SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS.

2) **CEMENT PLASTER:**
   - PAINTED: WARM WHITE
   - 7/8" THICK 3-COAT SAND FINISH

3) **ADHERED BRICK VENEER (BROWN):**
   - MANUFACTURER: GENERAL SHALE
   - SERIES: IRONWORKS THIN BRICK
   - STANDARD THIN BRICK FLATS AND CORNERS
   - SIZE: 7 5/8" x 2 1/4" x 1/2"
   - RUNNING BOND PATTERN W/ FLEMISH BOND EVERY 13 COURSES
   - 3/8" GROUT - CONCAVE JOINTS
   - ADHERED MASONRY VENEER SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS.

4) **BALCONY GUARD:**
   - 42" HIGH WITH VERTICAL PICKETS
   - ANODIZED ALUMINUM
   - COLOR DARK GREY

5) **BRICK CROWN:**
   - OFF WHITE BRICK. SEE DETAILS ON A-31

6) **RAINWATER LEADERS, CONDUCTORS & GUTTERS:**
   - BONDERIZED PAINTED METAL
   - SIZE: 3" x 4" RECTANGULAR
   - COLOR: DARK GREY

7) **WINDOWS:**
   - ALUMINUM CLAD WOOD CASEMENT
   - JELD-WEN, SIGHTLINE SERIES
   - DARK GREY FRAMES AND SASHES

8) **OFFICE DOOR:**
   - ALUMINIUM CLAD WOOD
   - FULL GLASS WITH MUNTINS
   - DARK GREY FRAMES AND SASHES

9) **ENTRY/ ELEVATOR VESTIBULE DOORS:**
   - ALUMINIUM CLAD WOOD
   - HALF GLASS WITH MUNTINS
   - DARK GREY FRAMES AND SASHES

10) **FOLDING/ SLIDING DOORS:**
   - ALUMINUM, NARROW STILE
   - FLEETWOOD
   - FULL GLASS WITH MUNTINS
   - DARK GREY FRAMES AND SASHES

11) **GARAGE DOOR:**
   - ALUMINUM, SECTIONAL
   - UPPER GLASS PANELS (5)
   - DARK GREY FRAMES AND DOORS

12) **FRONT GATES:**
   - CEDAR SHIPLAP, PRIMED AND PAINTED TO MATCH DARK GREY GUARD RAILS

13) **ROOFS AND AWNINGS:**
   - 1" STANDING SEAM (SS) METAL
   - MANUFACTURER: TITAL COOL ROOF OR SIM
   - CA TITLE 24 COOL ROOF (0668-0129)
   - LIGHT GREY TONE SELECTION

14) **ALUMINUM FLASHING CAP**
   - 20 GAUGE
   - PRE FINISHED POWDER COAT
   - PAINTED DARK GREY TO MATCH DOOR & WINDOW FRAMES

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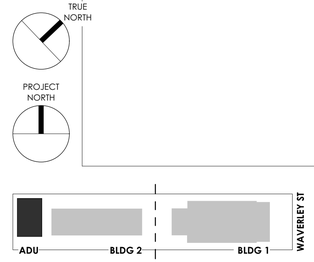
WAVERLEY RESIDENCES

160 - 164 WAVERLEY ST, PALO ALTO, CA 94301

ISSUANCES

REV	DATE	DESCRIPTION
	18 MAR 2022	ARB RESUBMITTAL



KEY PLAN

ADU - ELEVATIONS

A-25

BUILDING 2 WEST COLOR ELEVATION

SCALE: 1/8" = 1'-0"

5

BUILDING 1 WEST COLOR ELEVATION

SCALE: 1/8" = 1'-0"

3

BUILDING 2 EAST COLOR ELEVATION

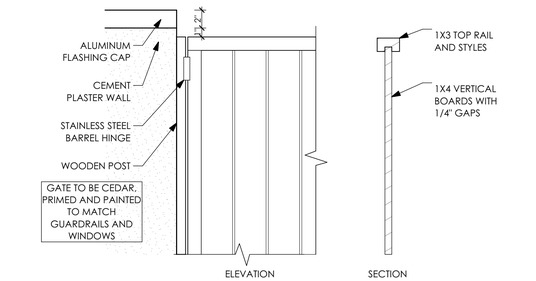
SCALE: 1/8" = 1'-0"

4

BUILDING 1 EAST COLOR ELEVATION

SCALE: 1/8" = 1'-0"

2



ENTRY GATE DETAIL

SCALE: 1 1/2"= 1'-0"

1

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WAVERLEY RESIDENCES

160 - 164 WAVERLEY ST, PALO ALTO, CA 94301

ISSUANCES

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COLOR ELEVATIONS

A-26

0 4' 8' 16'

160 - 164 SOUTH COLOR ELEVATION

SCALE: 1/8" = 1'-0"

2

0 4' 8' 16'

160 - 164 NORTH COLOR ELEVATION

SCALE: 1/8" = 1'-0"

1

0 4' 8' 16'

162A WAVERLEY WEST COLOR ELEVATION

SCALE: 1/8" = 1'-0"

4

0 4' 8' 16'

162A WAVERLEY EAST COLOR ELEVATION

SCALE: 1/8" = 1'-0"

1

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WAVERLEY RESIDENCES

160 - 164 WAVERLEY ST, PALO ALTO, CA 94301

ISSUANCES

REV	DATE	DESCRIPTION
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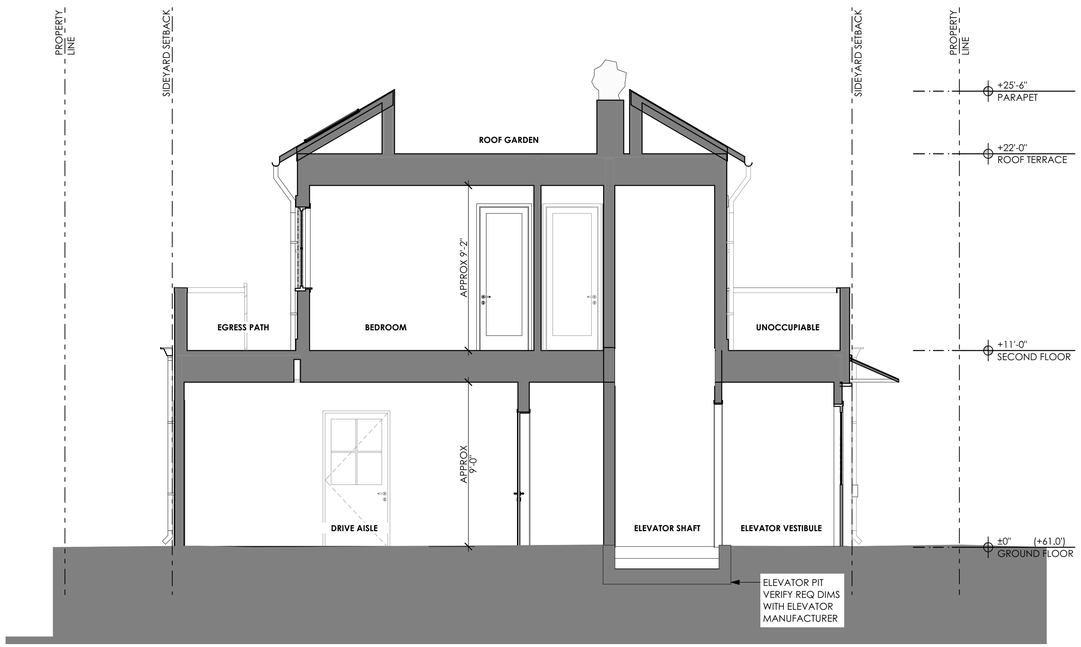
	18 MAR 2022	ARB RESUBMITTAL

COLOR ELEVATIONS

A-27

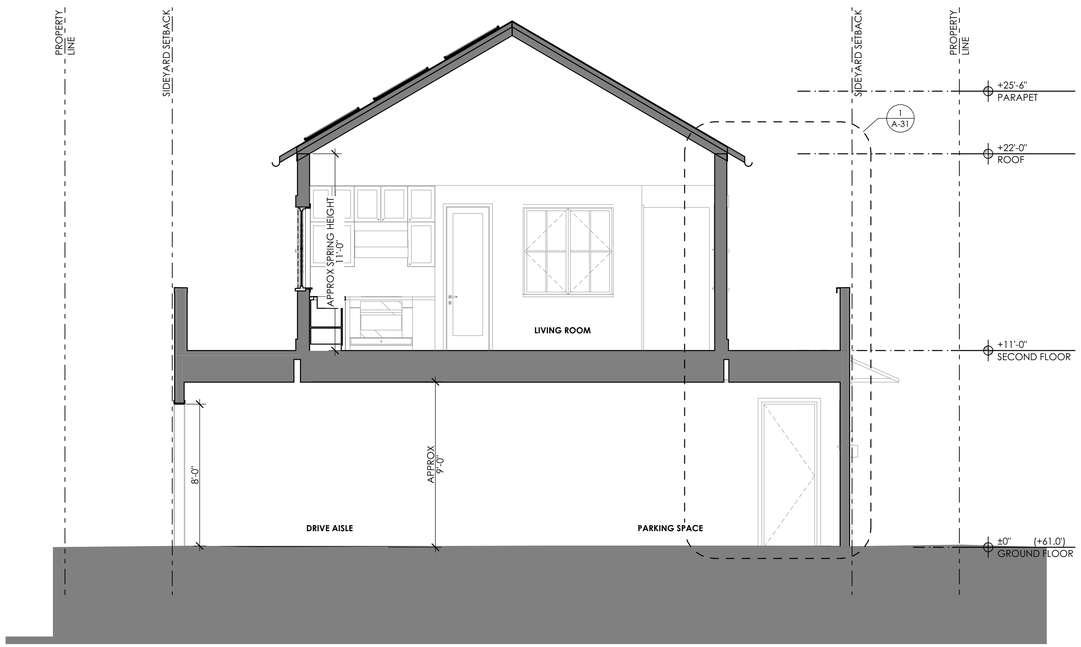


160 WAVERLEY - NORTH / SOUTH SECTION

SCALE: 1/4" = 1'-0"

3

0 2' 4' 8'

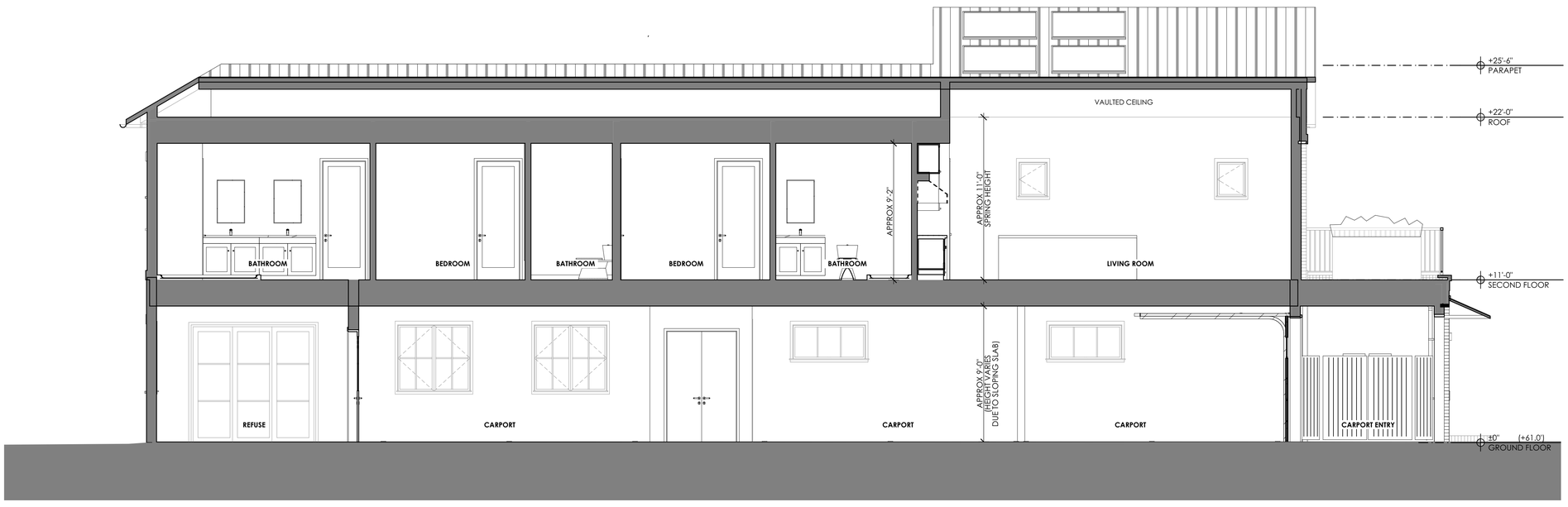


160 WAVERLEY - NORTH / SOUTH SECTION

SCALE: 1/4" = 1'-0"

2

0 2' 4' 8'



160 WAVERLEY - EAST / WEST SECTION

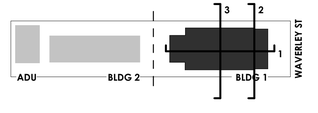
SCALE: 1/4" = 1'-0"

1

0 2' 4' 8'

TRUE NORTH

PROJECT NORTH



KEY PLAN

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WAVERLEY RESIDENCES

160 - 164 WAVERLEY ST, PALO ALTO, CA 94301

ISSUANCES

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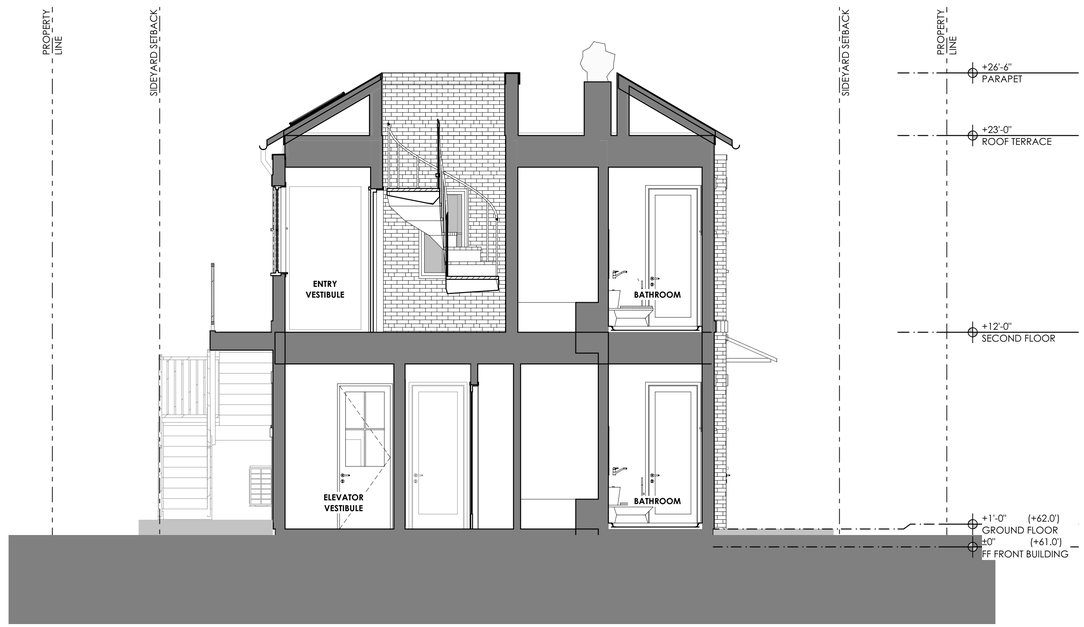
	18 MAR 2022	ARB RESUBMITTAL

BLDG 1 - BUILDING SECTIONS

A-28



162A-164 WAVERLEY - NORTH / SOUTH SECTION

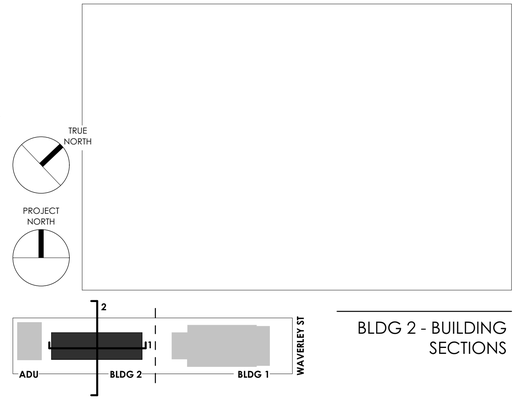
SCALE: 1/4" = 1'-0"

2

162A-164 WAVERLEY - EAST / WEST SECTION

SCALE: 1/4" = 1'-0"

1



KEY PLAN

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WAVERLEY RESIDENCES

160 - 164 WAVERLEY ST, PALO ALTO, CA 94301

ISSUANCES

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	10 OCT 2021	ARB RESUBMITTAL
	18 MAR 2022	ARB RESUBMITTAL

BLDG 2 - BUILDING SECTIONS

A-29

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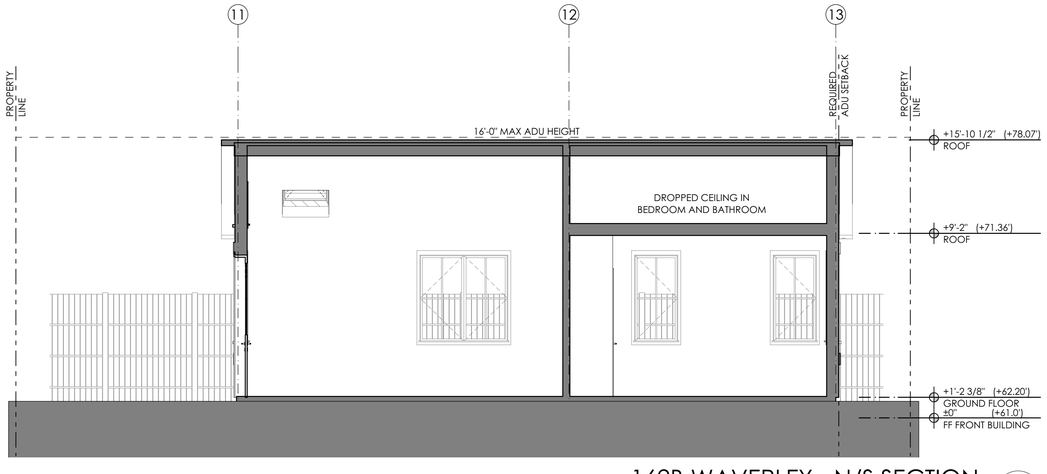
WAVERLEY RESIDENCES

160 - 164 WAVERLEY ST, PALO ALTO, CA 94301

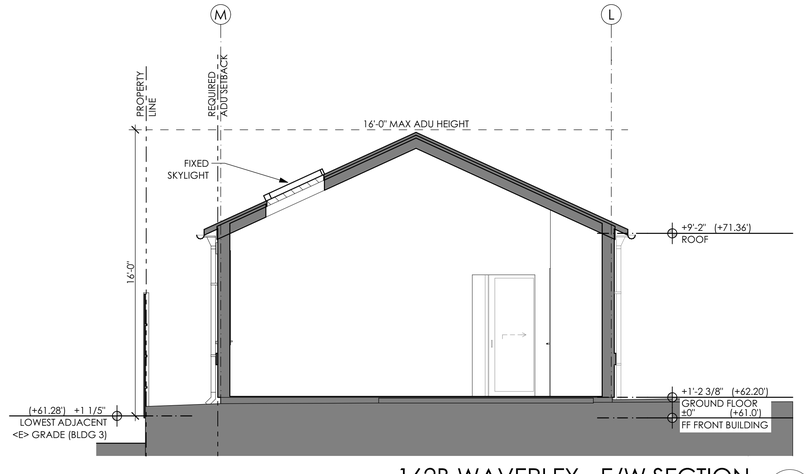
ISSUANCES

REV	DATE	DESCRIPTION
	18 MAR 2022	ARB RESUBMITTAL



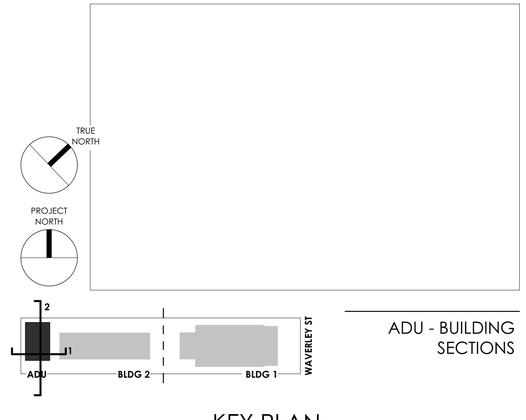
162B WAVERLEY - N/S SECTION 2

SCALE: 1/4" = 1'-0"



162B WAVERLEY - E/W SECTION 1

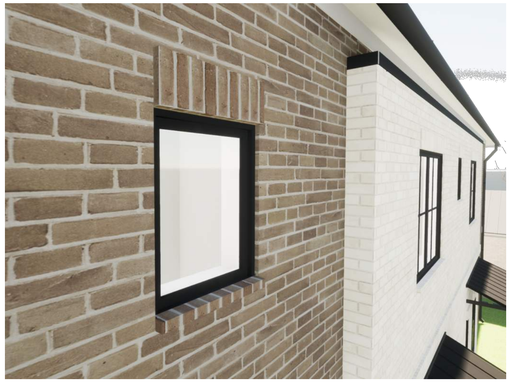
SCALE: 1/4" = 1'-0"

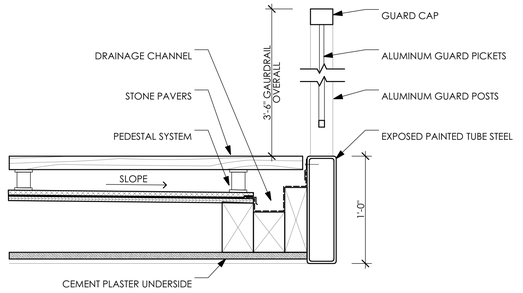


KEY PLAN

ADU - BUILDING SECTIONS

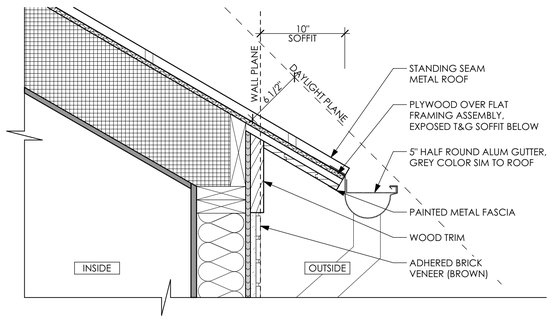
A-30





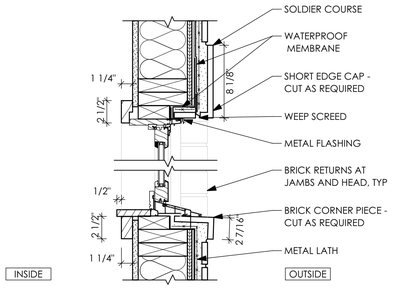
BALCONY, RAIL AND DRAINAGE 5

SCALE: 1 1/2"= 1'-0"



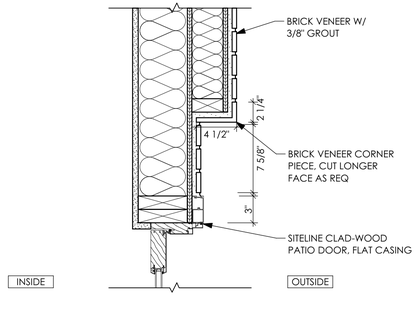
PARAPET AND DAYLIGHT PLANE (BLDG 1) 4

SCALE: 1 1/2"= 1'-0"



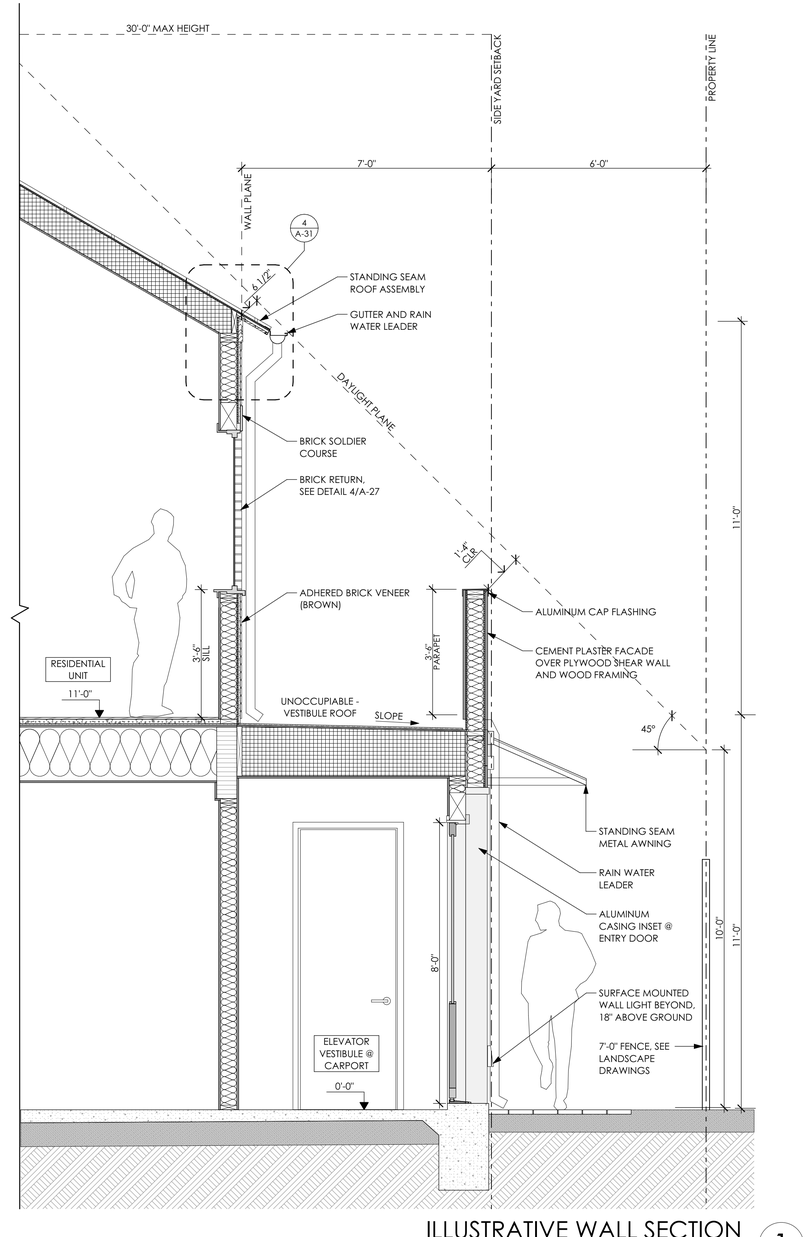
TYPICAL WINDOW IN BRICK WALL 3

SCALE: 1 1/2"= 1'-0"



HEAD BRICK INSET (JAMB SIM) 2

SCALE: 1 1/2"= 1'-0"



ILLUSTRATIVE WALL SECTION 1

SCALE: 1/2" = 1'-0"

ASSEMBLIES

1) **ADHERED BRICK VENEER (OFF WHITE) ASSEMBLY:**
   - INTERSTATE BRICK
   - ARCTIC WHITE THIN BRICK
   - 3/4" 2 COAT CEMENT PLASTER
   - WEATHER BARRIER
   - PLYWOOD SHEATHING
   - WOOD STUDS W/ BATT INSULATION
   - GYPSUM BOARD TYP, SEE WALL TYPES FOR LOCATIONS OF INTERIOR CEMENT PLASTER

2) **CEMENT PLASTER WALL ASSEMBLY:**
   - 7/8" 3 COAT CEMENT PLASTER
   - WEATHER BARRIER
   - PLYWOOD SHEATHING
   - WOOD STUDS W/ BATT INSULATION
   - GYPSUM BOARD TYP, SEE WALL TYPES FOR LOCATIONS OF INTERIOR CEMENT PLASTER

3) **ADHERED BRICK VENEER (BROWN) ASSEMBLY:**
   - GENERAL SHALE
   - IRON WORKS THIN BRICK
   - 3/4" 2 COAT CEMENT PLASTER
   - WEATHER BARRIER
   - PLYWOOD SHEATHING
   - WOOD STUDS W/ BATT INSULATION
   - GYPSUM BOARD TYP, SEE WALL TYPES FOR LOCATIONS OF INTERIOR CEMENT PLASTER

4) **1-HR RATED FLOOR CEILING ASSEMBLY:**
   - HARDWOOD FLOORING
   - 1 1/2" LIGHTWEIGHT CONCRETE
   - ACOUSTIC UNDERLAYMENT
   - PLYWOOD
   - TJI FLOOR FRAMING
   - ACOUSTIC BATT INSULATION
   - KINETICS ICW ISOLATION HANGER
   - 3/4" FURRING CHANNEL
   - 2 LAYERS 5/8" GYPSUM BOARD

5) **ROOF ASSEMBLY:**
   - 1" STANDING SEAM METAL
   - ROOF FELTS AND WATERPROOFING
   - 1/2" PLYWOOD SHEATHING
   - 2x10 WOOD STUDS @ 16" OC W/
   - CLOSED CELL RIGID INSULATION AND 5/8" GWB

6) NO INTERIOR CLASS I VAPOR RETARDERS TO BE INSTALLED ON THE CEILING SIDE OF THE ASSEMBLY.

7) AIR-IMPERMEABLE INSULATION ONLY. INSULATION SHALL BE APPLIED IN DIRECT CONTACT WITH THE UNDERSIDE OF THE STRUCTURAL ROOF SHEATHING.

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WAVERLEY RESIDENCES

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ISSUANCES

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WALL SECTION AND SCHEMATIC DETAILS

A-31

ENTRY LEFT 4

ENTRY RIGHT 3

AERIAL BACK 2

AERIAL FRONT 1

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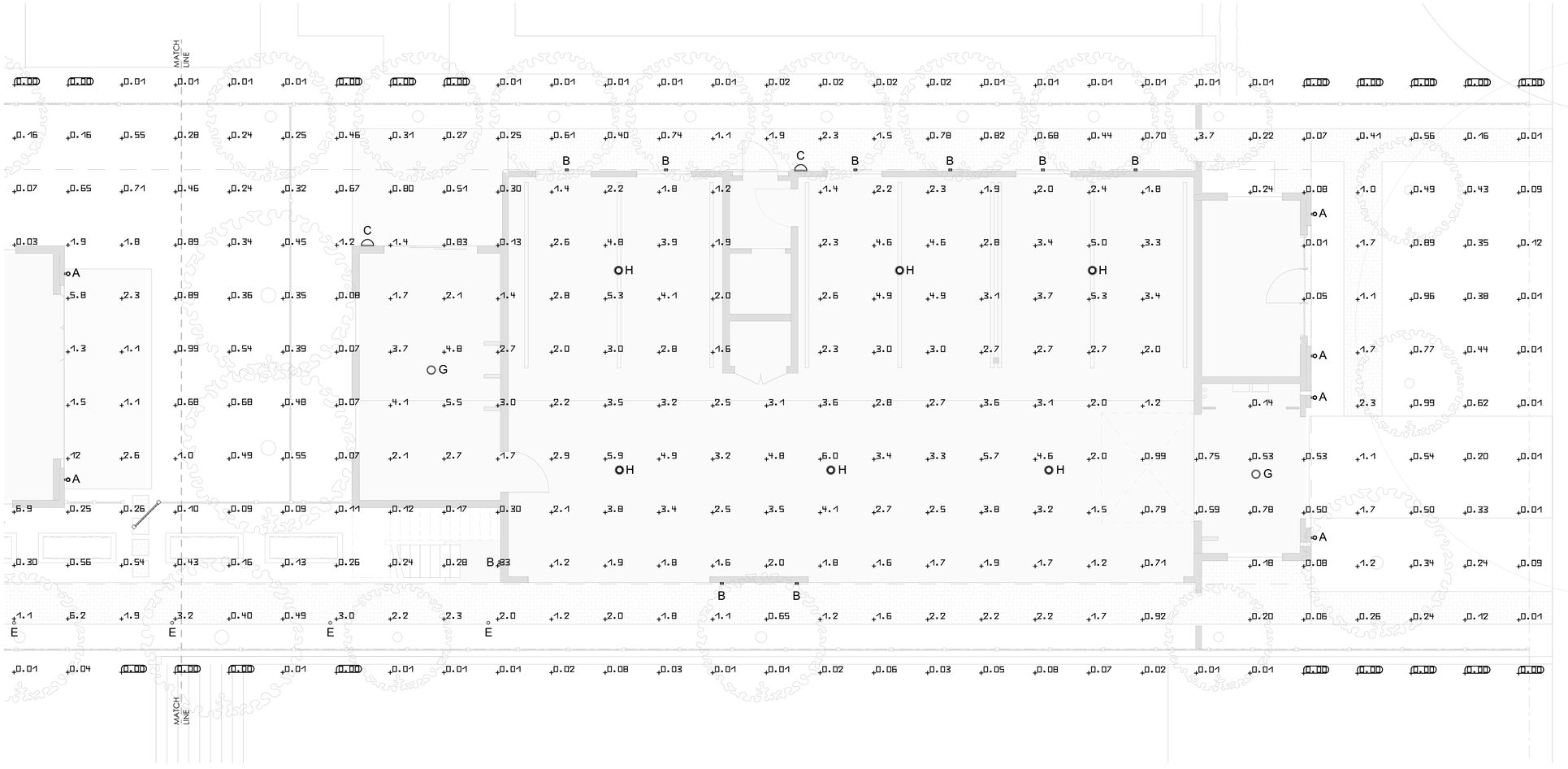
3D IMAGES

A-32

LUMINAIRE LIST			
INDEX	MANUFACTURER	FIXTURE ID	QUANTITY
A	BEGA	24008	10
B	BEGA	22215	17
C	BEGA	33344	8
E	BEGA	88673	13
F	BEGA	66655	4
G	KUZCO	EC44113	2
H	SENSCAPE	SPG18	10



BUILDING 1
SCALE: 3/16" = 1'-0"

1

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WAVERLEY RESIDENCES

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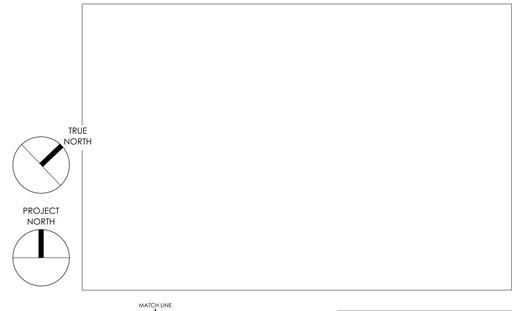

KEY PLAN

SITE PHOTOMETRICS

A-33

BUILDING 2 AND ADU

SCALE: 3/16" = 1'-0"

1

KEY PLAN

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WAVERLEY RESIDENCES

160 - 164 WAVERLEY ST, PALO ALTO, CA 94301

ISSUANCES

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SITE PHOTOMETRICS

A-34

LED wall luminaires - two-sided light output

BEGA

Application
LED wall luminaires with directed narrow beam light distribution on two sides. Arranged individually or in groups, they are great design elements for a host of lighting applications.

Materials
Luminaire housing and faceplates constructed of die-cast marine grade, copper free (≤ 0.3% copper content) A360.0 aluminum alloy
Clear safety glass
Reflectors made of pure anodized aluminum
High temperature silicone gaskets
Mechanically captive stainless steel fasteners

NRTL listed to North American Standards, suitable for wet locations
Protection class IP65
Weight: 6.6 lbs

Electrical

Operating voltage	120-277VAC
Minimum start temperature	-30° C
LED module wattage	24.2 W
System wattage	28.0 W
Controllability	0-10V dimmable
Color rendering index	Ra > 80
Luminaire lumens	2,216 lumens (3000K)
Lifetime at Ta = 15° C	420,000 h (L70)
Lifetime at Ta = 35° C	275,000 h (L70)

LED color temperature
☐ 4000K - Product number + **K4**
☐ 3500K - Product number + **K35**
☐ 3000K - Product number + **K3**
☐ 2700K - Product number + **K27**

BEGA can supply you with suitable LED replacement modules for up to 20 years after the purchase of LED luminaires - see website for details

Finish
All BEGA standard finishes are matte, textured polyester powder coat with minimum 3 mil thickness.

Available colors: ☐ Black (BLK) ☐ White (WHT) ☐ RAL:
☐ Bronze (BRZ) ☐ Silver (SLV) ☐ CUS:

Type:
BEGA Product:
Project:
Modified:

Available Accessories
☐ **79547** Surface mounted wiring box
See individual accessory spec sheet for details.

LED wall luminaire - two-sided light output

	LED	β	A	B	C	D	Required wiring box
24008	24.2 W	18°	4 ¼	19 ¼	6 ½	1 ½	**19537**

β = Beam angle

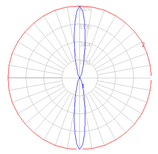
BEGA 1000 BEGA Way, Carpinteria, CA 93013 (805) 684-0533 info@bega-us.com

Updated 02/06/18

BEGA

Photometric Filename: 24008.IES

TEST:	BE_24008
TEST LAB:	BEGA
DATE:	5/23/2017
LUMINAIRE:	24 008
LAMP:	24.2W LED

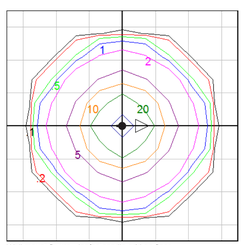


Characteristics

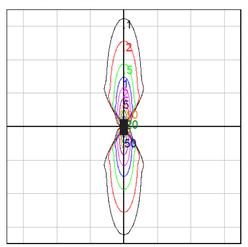
Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2235
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	75
Total Luminaire Watts	30
Ballast Factor	1.00
CIE Type	General Diffuse
Spacing Criterion (0-180)	N.A.
Spacing Criterion (90-270)	N.A.
Spacing Criterion (Diagonal)	N.A.
Basic Luminous Shape	Circular
Luminous Length (0-180)	0.00 ft
Luminous Width (90-270)	0.26 ft (Diameter)
Luminous Height	0.00 ft

Zonal Lumen Summary

Zone	Lumens
0-10	433.82
10-20	412.03
20-30	223.28
30-40	36.48
40-50	6.04
50-60	3.16
60-70	1.99
70-80	0.61
80-90	0.33
90-100	0.33
100-110	0.61
110-120	1.99
120-130	3.16
130-140	6.04
140-150	36.48
150-160	223.28
160-170	412.03
170-180	433.82



Wall mount fixture - Isofootcandle grid on floor
Mounting Height = 10 ft. Grid Spacing = 2.5 ft.



Wall mount fixture- Isofootcandle grid on wall
Grid Spacing = 10 ft.

In the interest of product improvement, BEGA reserves the right to make technical changes without notice.

 2/7/2018

TYPE A | BEGA MODEL 24008

Wall luminaire - directed light

BEGA

Application
Wall luminaire with directed light. As individual luminaires with low mounting height, they can be used for marking danger areas or in rows for illuminating corridors and passageways. With high mounting heights they can be used as wall luminaires next to doors or for lighting small wall areas.

Materials
Luminaire housing constructed of die-cast marine grade, copper free (≤ 0.3% copper content) A360.0 aluminum alloy
Matte safety glass
High temperature silicone gasket
Mechanically captive stainless steel fasteners

NRTL listed to North American Standards, suitable for wet locations
Protection class IP64
Weight: 0.9 lbs

Electrical

Operating voltage	120-277VAC
Minimum start temperature	-20° C
LED module wattage	2.1 W
System wattage	3.0 W
Controllability	Dimming not available
Color rendering index	Ra > 90
Luminaire lumens	172 lumens (4000K)
LED service life (L70)	60,000 hours

LED color temperature
☐ 4000K - Product number + **K4**
☐ 3500K - Product number + **K35**
☐ 3000K - Product number + **K3**
☐ 2700K - Product number + **K27**

BEGA can supply you with suitable LED replacement modules for up to 20 years after the purchase of LED luminaires - see website for details

Finish
All BEGA standard finishes are matte, textured polyester powder coat with minimum 3 mil thickness.

Available colors: ☐ Black (BLK) ☐ White (WHT) ☐ RAL:
☐ Bronze (BRZ) ☐ Silver (SLV) ☐ CUS:

Type:
BEGA Product:
Project:
Modified:

Wall luminaire - directed light

	LED	A	B	C	Required wiring box
22215	2.1W	3 ½	3 ½	2 ½	**19538**

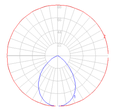
BEGA 1000 BEGA Way, Carpinteria, CA 93013 (805)684-0533 info@bega-us.com

Updated 05/24/18

BEGA

Photometric Filename: 22215.ies

TEST:	BE22215
TEST LAB:	BEGA
DATE:	9/18/2015
LUMINAIRE:	22.215
LAMP:	2.1W LED

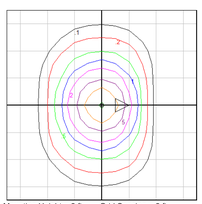


Characteristics

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	173
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	58
Total Luminaire Watts	3
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.08
Spacing Criterion (90-270)	1.18
Spacing Criterion (Diagonal)	1.22
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	0.10 ft
Luminous Width (90-270)	0.26 ft
Luminous Height	0.00 ft
R9 Value	54.10

Zonal Lumen Summary

Zone	Lumens
0-10	8.26
10-20	23.19
20-30	33.47
30-40	36.38
40-50	31.68
50-60	22.07
60-70	12.27
70-80	4.99
80-90	0.80
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00



Mounting Height = 2 ft. Grid Spacing = 2 ft.

In the interest of product improvement, BEGA reserves the right to make technical changes without notice.

 7/1/2016

TYPE B | BEGA MODEL 22215

LED wall luminaire - shielded with output in two directions

BEGA

Application
This LED wall luminaire has a shielded light source with output in two directions. It is ideal for upward and downward lighting effects for interior and exterior locations. Arranged individually or in groups, this is a great design element for a host of lighting applications.

Materials
Luminaire housing constructed of die-cast marine grade, copper free (≤ 0.3% copper content) A360.0 aluminum alloy
Heavy pressed crystal glass with optical texture
High temperature silicone gasket
Mechanically captive stainless steel fasteners

NRTL listed to North American Standards, suitable for wet locations
Protection class IP65
Weight: 9.5 lbs

Electrical

Operating voltage	120-277VAC
Minimum start temperature	-30° C
LED module wattage	11.8 W
System wattage	14 W
Controllability	0-10V dimmable
Color rendering index	Ra > 80
Luminaire lumens	846 lumens (3000K)
Lifetime at Ta = 15° C	>500,000 h (L70)
Lifetime at Ta = 25° C	369,000 h (L70)

LED color temperature
☐ 4000K - Product number + **K4**
☐ 3500K - Product number + **K35**
☐ 3000K - Product number + **K3**
☐ 2700K - Product number + **K27**

BEGA can supply you with suitable LED replacement modules for up to 20 years after the purchase of LED luminaires - see website for details

Finish
All BEGA standard finishes are matte, textured polyester powder coat with minimum 3 mil thickness.

Available colors: ☐ Black (BLK) ☐ White (WHT) ☐ RAL:
☐ Bronze (BRZ) ☐ Silver (SLV) ☐ CUS:

Type:
BEGA Product:
Project:
Modified:

LED wall luminaire - shielded with output in two directions

	LED	A	B	C
33344	11.8W	13 ¾	5 ½	7 ⅞

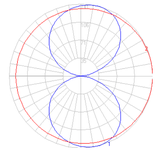
BEGA 1000 BEGA Way, Carpinteria, CA 93013 (805) 684-0533 info@bega-us.com

Updated 08/14/18

BEGA

Photometric Filename: 33344.IES

TEST:	BE_33344
TEST LAB:	BEGA
DATE:	7/3/2017
LUMINAIRE:	33 344
LAMP:	11.8W LED

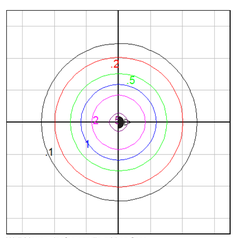


Characteristics

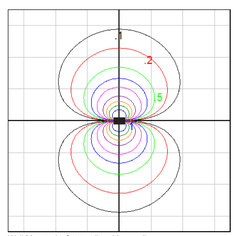
Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	846
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	60
Total Luminaire Watts	14
Ballast Factor	1.00
CIE Type	General Diffuse
Spacing Criterion (0-180)	N.A.
Spacing Criterion (90-270)	N.A.
Spacing Criterion (Diagonal)	N.A.
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	0.50 ft
Luminous Width (90-270)	1.05 ft
Luminous Height	0.00 ft

Zonal Lumen Summary

Zone	Lumens
0-10	14.20
10-20	40.65
20-30	61.62
30-40	74.47
40-50	77.43
50-60	69.83
60-70	52.29
70-80	27.57
80-90	5.13
90-100	5.13
100-110	27.57
110-120	52.29
120-130	69.83
130-140	77.43
140-150	74.47
150-160	61.62
160-170	40.65
170-180	14.20



Wall Mount - Isofootcandle grid on floor
Mounting Height = 5 ft. Grid Spacing = 5 ft.



Wall Mount - Isofootcandle grid on wall
Grid Spacing = 5 ft.

In the interest of product improvement, BEGA reserves the right to make technical changes without notice.

 4/20/2018

TYPE C | BEGA MODEL 33344

Recessed wall luminaire - directed light

BEGA

Application
Recessed wall luminaire with forward throw light distribution for the illumination of ground surfaces, stairs and pathways.

Materials
Luminaire housing and faceplate constructed of die-cast marine grade, copper free (≤ 0.3% copper content) A360.0 aluminum alloy
Clear safety glass
Silicone applied robotically to casting, plasma treated for increased adhesion
High temperature silicone gasket
Mechanically captive stainless steel fasteners
Stainless steel screw clamps
Composite installation housing

NRTL listed to North American Standards, suitable for wet locations
Protection class IP65
Weight: 2.1 lbs

Electrical

Operating voltage	120-277VAC
Minimum start temperature	-40° C
LED module wattage	2.9 W
System wattage	5.0 W
Controllability	0-10V dimmable
Color rendering index	Ra > 80
Luminaire lumens	321 lumens (4000K)
LED service life (L70)	50,000 hours

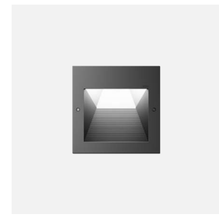
LED color temperature
☐ 4000K - Product number + **K4**
☐ 3500K - Product number + **K35**
☐ 3000K - Product number + **K3**
☐ 2700K - Product number + **K27**

BEGA can supply you with suitable LED replacement modules for up to 20 years after the purchase of LED luminaires - see website for details

Finish
All BEGA standard finishes are matte, textured powder coat with minimum 3 mil thickness. BEGA Unidure® finish, a fluoropolymer technology, provides superior fade protection in Black, Bronze, and Silver. BEGA standard White, as well as optionally available RAL and custom colors, are a polyester powder.

Available colors: ☐ Black (BLK) ☐ White (WHT) ☐ RAL:
☐ Bronze (BRZ) ☐ Silver (SLV) ☐ CUS:

Type:
BEGA Product:
Project:
Modified:



Recessed wall luminaire - directed light

	LED	A	B	C
24210	2.9 W	5 ¼	5 ⅛	5 ¼

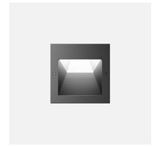
BEGA 1000 BEGA Way, Carpinteria, CA 93013 (805) 684-0533 info@bega-us.com

Updated 11/17/20

BEGA

File: 24210K4_BEGA_IES.ies

TEST:	BE_24210K4
TEST LAB:	BEGA
DATE:	3/31/2017
LUMINAIRE:	24 210K4
LAMP:	2.9W LED



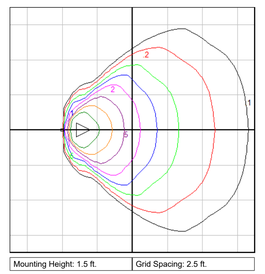
Characteristics

IES Classification	Type IV
Longitudinal Classification	Very Short
Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	321
Downward Total Efficiency	N.A.
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	64
Total Luminaire Watts	5
Ballast Factor	1.00
Upward Waste Light Ratio	0.01
Max. Cd.	390.1 (0H, 65V)
Max. Cd. (<90 Vert.)	390.1 (0H, 65V)
Max. Cd. (At 90 Deg. Vert.)	28.9 (9.0%Lum)
Max. Cd. (80 to <90 Deg. Vert.)	198.6 (61.9%Lum)
Cutoff Classification (deprecated)	N.A. (absolute)

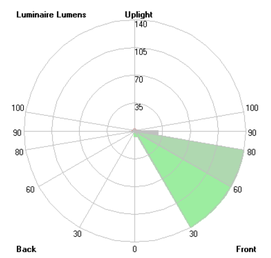
Lum. Classification System (LCS)

LCS Zone	Lumens	%Lamp	%Lum
FL (0-30)	7.2	N.A.	2.3
FM (30-60)	139.7	N.A.	43.5
FH (60-80)	139.6	N.A.	43.5
FVH (80-90)	29.7	N.A.	9.3
BL (0-30)	0.0	N.A.	0.0
BM (30-60)	< 0.05	N.A.	0.0
BH (60-80)	< 0.05	N.A.	0.0
BVH (80-90)	0.0	N.A.	0.0
UL (90-100)	2.7	N.A.	0.8
UH (100-180)	2.1	N.A.	0.6
Total	321.0	N.A.	100.0

BUG Rating **B0-U1-G1**



Mounting Height: 1.5 ft. Grid Spacing: 2.5 ft.



In the interest of product improvement, BEGA reserves the right to make technical changes without notice.

 11/17/2020

TYPE D | BEGA MODEL 24210

hya
HEATHER YOUNG ARCHITECTS
81 Encina Avenue, Suite 100
Palo Alto, CA 94301
650-459-3200 / hyarchs.com

WAVERLEY RESIDENCES

160 - 164 WAVERLEY ST, PALO ALTO, CA 94301

ISSUANCES

REV	DATE	DESCRIPTION
	12 MAR 2021	ARB RESUBMITTAL
	06 MAY 2021	ARB RESUBMITTAL
	09 AUG 2021	ARB RESUBMITTAL
	10 OCT 2021	ARB RESUBMITTAL
	18 MAR 2022	ARB RESUBMITTAL

LIGHT FIXTURES

A-35

Drive-over in-grade luminaires to illuminate ground surfaces

Type: 88673
BEGA Product: TWIN 90 DEG PORTS
Project:
Voltage:
Color: BLACK
Options:
Modified:

Housing: Constructed of .125" thick machined stainless steel welded to a stainless steel bottom mounting plate. Trim/Clamping ring is heavy, machined bronze.

Enclosure: Top enclosure is constructed of copper free die-cast aluminum alloy secured by two (2) captive socket head stainless steel screws. Clear, borosilicate focusing lens with molded one piece, high temperature silicone rubber gasket. Symmetrical reflector and internal lamp shield are included.

Electrical: 3.4W LED luminaire on a 24 V DC circuit, 5 total system watts. Remote 24 V DC driver required. Standard LED color temperature is 3000K with a >80 CRI. Available in 4000K (>80 CRI); add suffix K4 to order. Inner housing pre-wired with ten (10) feet of 12 AWG wire and waterproof cable gland entry into housing. A separate weatherproof single gang wiring box for power supply must be proved (by contractor).

Note: Due to the dynamic nature of LED technology, LED luminaire data in this catalog is subject to change at the discretion of BEGA-US. For the most current technical data, please refer to www.bega-us.com.

Finish: All BEGA standard finishes are polyester powder coat with minimum 3 mil thickness. Available in standard BEGA Black (BLK). Custom colors not available.

UL listed for US and Canadian Standards, suitable for wet locations and vehicle drive over. Protection class: IP67.

Note: A foundation and proper drainage must be supplied by the contractor. These luminaires are designed to bear pressure loads up to 2,200lbs. from vehicles with pneumatic tires. The luminaires must not be used for traffic lanes where they are subject to horizontal pressure from vehicles braking, accelerating and changing direction.

Weight: 3.0 lbs.

Luminaire Lumens: 8
Tested in accordance with LM-79-08

Single 180° light sector

Lamp		T	A	B	C	D
88 673*	3.4 W LED	25°	4¼	3½	3¼	1¼

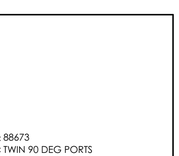
*Remote driver required

BEGA-US 1000 BEGA Way, Carpinteria, CA 93013 (805) 684-0533 FAX (805) 566-9474 www.bega-us.com

BEGA

Photometric Filename: 88673.ies

TEST: BE_88673
TEST LAB: BEGA
DATE: 1/28/2013
LUMINAIRE: 88 673
LAMP: 3W LED



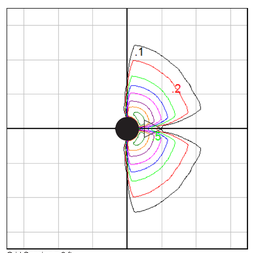
Characteristics

IES Classification	Type IV
Longitudinal Classification	Long
Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	67
Downward Total Efficiency	N.A.
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	13
Total Luminaire Watts	5
Ballast Factor	1.00
Upward Waste Light Ratio	0.05
Max. Cd.	211 (40H, 82.5V)
Max. Cd. (<90 Vert.)	211 (40H, 82.5V)
Max. Cd. (At 90 Deg. Vert.)	44.6 (66.6%Lum)
Max. Cd. (80 to <90 Deg. Vert.)	211 (314.9%Lum)
Cutoff Classification (deprecated)	N.A. (absolute)

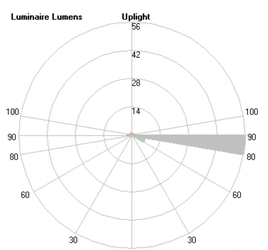
Lum. Classification System (LCS)

LCS Zone	Lumens	%Lamp	%Lum
FL (0-30)	0.1	N.A.	0.1
FM (30-60)	0.2	N.A.	0.3
FH (60-80)	6.7	N.A.	10.0
FVH (80-90)	55.9	N.A.	83.6
BL (0-30)	0.1	N.A.	0.1
BM (30-60)	0.2	N.A.	0.3
BH (60-80)	0.2	N.A.	0.3
BVH (80-90)	0.4	N.A.	0.5
UL (90-100)	2.1	N.A.	3.1
UH (100-180)	1.0	N.A.	1.6
Total	66.9	N.A.	100.0

BUG Rating B0-U1-G1



Grid Spacing = 2 ft.



In the interest of product improvement, BEGA reserves the right to make technical changes without notice.

TYPE E | BEGA MODEL 88673

Wall luminiare - single-sided light output

BEGA

Type:
BEGA Product:
Project:
Modified:

Application
Wall luminaires with single-sided light output designed to provide up or down lighting effects for interior and exterior locations.

Materials
Luminaire housing and faceplate constructed of die-cast marine grade, copper free (≤ 0.3% copper content) A360.0 aluminum alloy
Clear safety glass
Reflector made of pure anodized aluminum
High temperature silicone gasket
Mechanically captive stainless steel fasteners

NRTL listed to North American Standards, suitable for wet locations
Protection class IP65
Weight: 4.4 lbs

Electrical

Operating voltage	120-277VAC
Minimum start temperature	-30° C
LED module wattage	7.9W
System wattage	10.5W
Controllability	0-10V dimmable
Color rendering index	Ra > 80
Luminaire lumens	652 lumens (3000K)
LED service life (L70)	60,000 hours

LED color temperature

☐ 4000K - Product number + **K4 *(EXPRESS)***
☐ 3500K - Product number + **K35**
☐ 3000K - Product number + **K3 *(EXPRESS)***
☐ 2700K - Product number + **K27**
☐ Amber - Product number + **AM8**

Wildlife friendly amber LED - Optional
Luminaire is optionally available with a narrow bandwidth, amber LED source (585-600nm) approved by the FWC. This light output is suggested for use within close proximity to sea turtle nesting and hatching habitats. Electrical and control information may vary from standard luminaire.

LED module wattage	9.0W (Amber)
System wattage	11.6W (Amber)
Luminaire lumens	220 lumens (Amber)

BEGA can supply you with suitable LED replacement modules for up to 20 years after the purchase of LED luminaires - see website for details

Finish
All BEGA standard finishes are matte, textured polyester powder coat with minimum 3 mil thickness.
Available colors: ☐ Black (BLK) ☐ White (WHT) ☐ RAL:
☐ Bronze (BRZ) ☐ Silver (SLV) ☐ CUS:

Available Accessories
☐ **78 947** Surface mounted wiring box
See individual accessory spec sheet for details.

Wall luminaire - single-sided output

	LED	β	A	B	C	D	Required wiring box
66 655	7.9W	19.5°	4½	9	6½	1¼	**19 537**

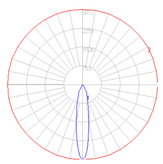
β = Beam angle

BEGA 1000 BEGA Way, Carpinteria, CA 93013 (805) 684-0533 info@bega-us.com

BEGA

Photometric Filename: 66655.IES

TEST: BE_66655
TEST LAB: BEGA
DATE: 3/4/2019
LUMINAIRE: 66 655
LAMP: 7.9W LED



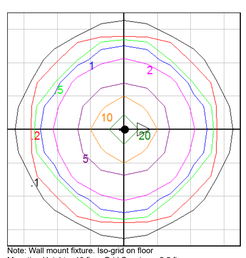
Characteristics

NEMA Type	4 H x 4 V
Maximum Candela	3011.85
Maximum Candela Angle	0 H 0 V
Horizontal Beam Angle (50%)	19.6
Vertical Beam Angle (50%)	19.6
Horizontal Field Angle (10%)	54.6
Vertical Field Angle (10%)	54.6
Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Beam Lumens	178
Beam Efficiency	N.A.
Field Lumens	560
Field Efficiency	N.A.
Spill Lumens	93
Luminaire Lumens	652
Total Efficiency	N.A.
Total Luminaire Watts	10.5

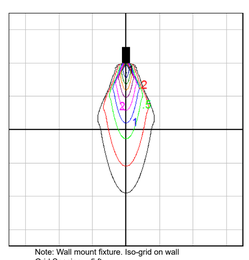
Lum. Classification System (LCS)

LCS Zone	Lumens	%Lamp	%Lum
FL (0-30)	303.4	N.A.	46.6
FM (30-60)	20.9	N.A.	3.2
FH (60-80)	1.5	N.A.	0.2
FVH (80-90)	0.0	N.A.	0.0
BL (0-30)	303.4	N.A.	46.6
BM (30-60)	20.9	N.A.	3.2
BH (60-80)	1.5	N.A.	0.2
BVH (80-90)	0.0	N.A.	0.0
UL (90-100)	0.0	N.A.	0.0
UH (100-180)	0.0	N.A.	0.0
Total	651.6	N.A.	100.0

BUG Rating B1-U0-G0



Note: Wall mount fixture. Iso-grid on floor
Mounting Height = 10 ft. Grid Spacing = 2.5 ft.



Note: Wall mount fixture. Iso-grid on wall
Grid Spacing = 5 ft.

In the interest of product improvement, BEGA reserves the right to make technical changes without notice.

TYPE F | BEGA MODEL 66655

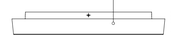
ELLE
EC44113
CEILING

PROJECT

EC44113-BK
Black-Marine Grade

DESCRIPTION
Architectural exterior flush mount, die-cast shallow profile aluminum body with frosted PC cover maximize light output without hot spot.

Aluminum Finish
BK - Black



Ø13-3/8"

SPECIFICATION DETAILS
* For custom options, consult factory for details.

Fixture Dimensions	D13-3/8" x H2-1/8"
Light Source	LED with DC Driver
Wattage	25W
Total Lumens	2625lm
Delivered Lumens	BK-2673lm
Voltage	120-277V
Color Temperature	3000K
CRI (Ra)	>80
Optional Color Temps	2700K – 5000K Available, MOQ May Apply
LED Rated Life	50,000 hours
Dimmable	No
Dimming	Non-Dimming
Diffuser Details	White PC Diffuser
Location	WET, IP65
Warranty	5 Years

COMMENT

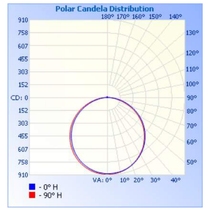
KUZCO
CONTRACT
19054 28TH AVENUE
SURREY - BC V3Z 6M3
CANADA
WWW.KUZCOCONTRACT.COM

Intertek

KUZCO
LIGHTING

LUMINAIRE PHOTOMETRIC REPORT

Filename: EC44113-BK - Elle
Manufacturer: KUZCO LIGHTING
Luminaire: Exterior Ceiling Mount
Luminaire Cat: EC44113-BK
Lamp: DC LED
Lamp Cat: Unknown
Lamp Output: Total luminaire Lumens: 2672.4
Max Candela: 901.2 at Horizontal: 270°, Vertical: 2°
Input Wattage: 25.4
Luminous Opening: Circular (Dia: 0.04")
Test: 1443-20
Test Date: 06 February 2020
Test Lab: KUZCO LIGHTING
Photometry : Type C
CIE Class: Direct
Cutoff Class: Cutoff
Nema Type: 7 X 7

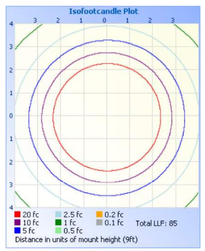


Zonal Lumen Summary

Zone	Lumens	% Luminaire
0-30	698.6	26.1%
0-40	1,148.3	43%
0-60	2,052.6	76.8%
60-90	594.0	22.2%
70-100	261.1	9.8%
90-120	9.7	0.4%
0-90	2,646.6	99%
90-180	25.8	1%
0-180	2,672.4	100%

Lumens Per Zone

Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	84.8	3.2%	90-100	3.0	0.1%
10-20	243.4	9.1%	100-110	3.2	0.1%
20-30	370.4	13.9%	110-120	3.6	0.1%
30-40	449.7	16.8%	120-130	3.8	0.1%
40-50	471.6	17.6%	130-140	3.7	0.1%
50-60	432.7	16.2%	140-150	3.4	0.1%
60-70	335.9	12.6%	150-160	2.8	0.1%
70-80	199.0	7.4%	160-170	1.8	0.1%
80-90	59.2	2.2%	170-180	0.6	0%



TYPE G | KUZCO MODEL EC44113

SENSCAPE™
SPG18 SERIES

PROJECT INFORMATION
Job Name
Fixture Type
Catalog Number
Approved by

PRODUCT FEATURES:
» Textured tertiary lens for glare reduction and up-light feature to eliminate "cave-effect"
» Outputs ranging from 3,047 lm to 13,680 lm
» Compatible with TekLink™ lighting control technology
» 10 Year limited product warranty

(optional debris shield (-DS))

APPLICATIONS:
• Parking Decks • Canopies • Low Bay

SPECIFICATIONS

HOUSING: Marine-grade die-cast aluminum and UV-stabilized polycarbonate construction. Standard TGIC polyester powder coat finish on aluminum components with five-step pre-treatment to withstand 1,000 hour salt spray test per ASTM B117. Painted white finish. Closed-cell silicone gasketing seals all housing component interfaces.

TRIM: High-impact resistant, UV-stabilized polycarbonate. See ordering information for available finishes.

MOUNTING: Direct-to-Surface (DTS) mounts over recessed electrical box to ceiling. Quick-Mount (QM) mounts to either surface or recessed electrical box, Trunnion Mount (TK) or pendant-mounted (PM) via ¾" rigid sealed conduit. See Ordering Information for selection.

OPTICAL: Type V-Square, V-Narrow and House-side Shield distributions. Multiple uplight options optically coupled to primary light source requires no additional electrical power to provide function. UV-stabilized, high-impact resistant injection-molded clear textured polycarbonate or DR acrylic tertiary lens.

ELECTRICAL: Arrayed backlit mid-power LED light source. See Ordering Information for color temperature and CRI options. 70 CRI minimum. 120-277 VAC, 347VAC and 480VAC 50/60Hz single-phase input; constant-current dimming driver; <10% THD; >0.95 PF. Minimum 83% electrical efficiency. 0-10V dimming protocol with 1-100% range, 0.2mA source current. Replaceable surge suppressor rated to 20kA/4kV per IEEE/ANSI C62.41 Cat. A. EMC compliant with FCC 47 CFR Part 15, Class B. Passes IEC 61000-4-4 EFT and IEC 61000-4-5 (Class 4) surge evaluation.

TEKLINK® TL150M/TL150DM: An independent lighting control system integral to the luminaire, featuring its own embedded occupancy sensor and adjustable time-out/dimming settings. TL150DM adds a closed-loop daylight harvesting function for maximum energy savings.

TEKLINK® TL100: Centralized, wired zonal occupancy and closed-loop daylight harvesting control system. TL100 controllers are standalone devices and ordered separately from luminaire. Click here for specifications

TEKLINK® TL1000/2000: An adaptive lighting control system with wired or wireless communication between system nodes. In addition to occupancy detection and daylight harvesting, TL1000 and TL2000 feature advanced scheduling and energy management capabilities with cloud-based management of system settings, reporting and notifications.

TEKLINK® TL2000SP: An adaptive lighting control system utilizing an embedded image sensor with wireless communication to bridge. The image sensor provides advanced capability with video analytics, supporting car counting data reporting and standard lighting control features for occupancy detection and light level sensing.

PHOTOMETRICS: Photometry tested to the IESNA LM-79-08 standard by an ILAC/ISO17025 accredited laboratory. For photometric data, please go to www.kenall.com.

WARRANTY: Limited ten (10) year warranty. Limited five (5) year warranty when constructed with HA option. Peace of Mind Guarantee™ when ordered and installed with direct-to-surface (DTS) mounting and polycarbonate lens (TP).

LISTINGS: Luminaire is certified to UL Standards by Intertek Testing Laboratory for Wet Location. IP65 rating per IEC 60598 standard with optional IP66 rating. Suitable for installation into -40°C to 40°C ambient environments, unless otherwise noted. Passes 3G vibration test per ANSI C136.31-2001. Certain versions of this product are Designlights Consortium (DLC) qualified. Consult factory and check the DLC Qualified Products List here for listed configuration details. Product Innovation Award Winner 2018.

LED | PEACE OF MIND Guarantee™ POLYCARBONATE LENS & DIRECT TO SURFACE* | IP65 | IP66 | 3G | DLC | plug

ORDERING INFORMATION Example: DTS - MW - 55 - D - TP - 45L - 30K8 - DCC - DV - IP66

Model	Mounting	Trim	Optic Type	Uplight	Lens Type	Lamp Power	Lamp Color	Driver Type	Voltage	Options	Accessories	TekLink	Controls Kit
SPG18								**DCC**					< >

Mounting
DTS Direct-to-Surface
PM Pendant Mount
TK Trunnion Kit
QM Quick Mount System

Trim Finish
MW Matte White (STD)
LG Light Gray
CC Custom Color (consult factory)

Optic Type
SS Type V – Wide Square
SN Type V – Narrow
HSS House-side Shield

Uplight
SU Standard Uplight (STD)
EU Enhanced Uplight
NU Downlight

Lens Type
TP Textured Polycarbonate (STD)
TA Textured Acrylic

Lamp Power
30L 30W LED
45L 45W LED
70L 70W LED
90L 90W LED
104L 104W LED
122L 122W LED

Lamp Color
30K8 3000K/80CRI min
35K8 3500K/80CRI min
40K8 4000K/80CRI min
40K7 4000K/70CRI min
50K7 5000K/70CRI min
57K7 5700K/70CRI min

Driver Type
DCC 0-10V Dimming Constant Current

Voltage
DV 120-277 Volts (50/60Hz)
347 347 Volts (60Hz)
480 480 Volts (60Hz)

Options
LEL 7W LED Emergency Battery Backup (0°C min. ambient, 70L max., N/A 347V and 480V input)
CEL 18W Cold-Weather Battery Backup (-20°C min. ambient, 70L max., N/A 347V and 480V input)
FS Single Fuse & Holder
BG Bird Guard (DTS and QM Mounting only)
DS* Debris Shield
IP66* IP66 Rating per IEC60598
HA* 50°C Ambient Rating (see Warranty; n/a battery backup options)

Accessories
BD Bird Deterrent (PM and TK Mounting only)

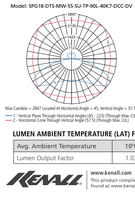
TekLink®
TL150M Non-Networked Control – Motion Only (Click here for specifications)
TL150DM Non-Networked Control -Daylight Harvesting and Motion Sensing (Click here for specifications)
TL100 Wired Network Control - Basic (Click here for specifications)
TL1000 Wired Network Control - Advanced (Click here for specifications)
TL2000 Wireless Network Control – Advanced (Click here for specifications)
TL2000PS* Wireless Network Control – Image Sensor (Click here for specifications)

Please consult Kenall Applications when ordering controls. Mounting heights above 14' may require alternate sensing technology.

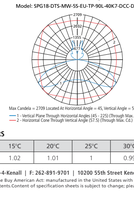
Controls Kit
< > Factory Assigned Internal Code

* Available in 90L Lamp Power max.
• See page 7 for alternate construction for 70L and 90L Lamp Power options
* n/a with TL2000PS

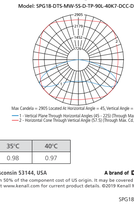
Standard Uplight
Model: SPG18-DTS-MW-55-SU-TP-90L-40K7-DCC-DV



Enhanced Uplight
Model: SPG18-DTS-MW-55-EU-TP-90L-40K7-DCC-DV



Downlight
Model: SPG18-DTS-MW-55-D-TP-90L-40K7-DCC-DV



LUMEN AMBIENT TEMPERATURE (LAT) FACTORS

Avg. Ambient Temperature	10°C	15°C	20°C	25°C	30°C	35°C	40°C
Lumen Output Factor	1.03	1.02	1.01	1	0.99	0.98	0.97

www.kenall.com | P: 800-4-Kenall | F: 262-891-9701 | 10200 55th Street Kenosha, Wisconsin 53144, USA **A brand of legrand**
This product complies with the Buy American Act: manufactured in the United States with more than 50% of the component cost of US origin. It may be covered by patents found at www.kenall.com/patents.Content of specification sheets is subject to change; please consult www.kenall.com for current product details. ©2019 Kenall Mfg. Co.
SPG18-071620

TYPE H | SENSCAPE SPG18

hya
HEATHER YOUNG ARCHITECTS
81 Encina Avenue, Suite 100
Palo Alto, CA 94301
650-459-3200 / hyarchs.com

WAVERLEY RESIDENCES

160 - 164 WAVERLEY ST, PALO ALTO, CA 94301

ISSUANCES

REV	DATE	DESCRIPTION
	12 MAR 2021	ARB RESUBMITTAL
	06 MAY 2021	ARB RESUBMITTAL
	09 AUG 2021	ARB RESUBMITTAL
	10 OCT 2021	ARB RESUBMITTAL
	18 MAR 2022	ARB RESUBMITTAL

LIGHT FIXTURES

A-36

PLANT LIST

#	QU.	SIZE	BOTANICAL NAME	COMMON NAME	HEIGHT x WIDTH	WUCOLS PLANT FACTOR	REGIONAL INDIGENOUS	DROUGHT RESISTANT	HABITAT FOR WILDLIFE
A	6	36" BOX	CORNUS CAPITATA 'MOUNTAIN MOON'	EVERGREEN DOGWOOD	20' x 15'-20'	M	NO	NO	BIRDS
B	7	24" BOX	MORELLO CALIFORNICA (MYRICA CALIFORNICA)	PACIFIC WAX MYRTLE (STD FORM)	30' x 10'-30'	M	YES	NO	BIRDS
C	1	36" BOX	ACER RUBRUM 'RED OCTOBER GLORY'	RED MAPLE	20'x35' x 15'-25'	M	NO	NO	BIRDS BUTTERFLIES
D	7	24" BOX	PODOCARPUS GRACILLIOR (TREE FORM)	FERN PINE (PRUNED TO 10' WIDE)	20'x40'x 20'	M	NO	NO	BIRDS
E	7	24" BOX	LAURUS NOBILIS	BAY LAUREL	15'-40' x 15'-25'	L	NO	YES	BIRDS
F	2	24" BOX	ACER CIRCINATUM (MULTI TRUNKED)	VINE MAPLE (MULTI TRUNK)	12' x 12'	M	YES	YES	BIRDS BUTTERFLIES
G	3	15G	PITTOSPORUM 'SILVER SHEEN'	SILVER SHEEN PITTOSPORUM	8'x5'	M	NO	NO	BIRDS
H	6	15G	CARPENTERIA CALIFORNICA 'ELIZABETH'	CALIFORNIA ANEMONE	4'-6'x4'-6'	M	YES	YES	BEES,BIRDS BUTTERFLIES
I	AS SHOWN	5G	RHAMNUS 'SEA VIEW'	COFFEEBERRY	2'x6'	L	YES	YES	BEES BIRDS
J		5G	RHAPHIOLEPIS UMBELLATA 'MINOR'	DWARF YEDDO HAWTHORN	3'-4' x 3'-4'	L-M	NO	YES	BIRDS BUTTERFLIES
K		1G	LOMONDRA 'BREEZE'	MATT RUSH	2'-3' x 3'	L	NO	YES	BIRDS
L		1G	AEONIUM ARBOREUM	AEONIUM (SUCCULENT)	1'-6" x 1'	L	NO	YES	BIRDS
M		1G	ARCTOSTAPHYLOS 'EMERALD CARPET' @ 30" O.C.	MANZANITA GROUND COVER	6"-12" x 3'	L	YES	YES	BIRDS
N		5G	DISTICTUS BUCCINATORIA	TRUMPET VINE	12' x 12'	M	NO	NO	BIRDS
O		5G	WESTRINGIA FRUTICOSA 'GREY BOX' ADJACENT TO LAWN & IN PLANTERS ON ROOF)	COASTAL ROSEMARY	2'-3'x-2'-3'	L	NO	YES	BIRDS
P		15G	HYDRANGEA ANOMALIS	CLIMBING HYDRANGEA	8' x 8'	M	NO	NO	BEES/ BUTTERFLIES
Q		1G	CAREX TUMULICOLA	SEDGE	1'-2'x-1'-2'	M	YES	YES	BIRDS
R	1	15G	MALUS SPP. ESPALIERED APPLE TREE	ESPALIERED APPLE TREE	6' x 8'	M	NO	YES	BIRDS/ BEES

THE PLANTING DESIGN INTENT IS TO COMPLIMENT THE ARCHITECTURE AND TO PROVIDE AN INTERESTING AND PLEASANT OUTDOOR ENVIRONMENT. I HAVE TAKEN SPECIAL CARE TO PROVIDE ADEQUATE EVERGREEN PRIVACY SCREENING BETWEEN THE NEW DWELLINGS AND BETWEEN THE PROJECT SITE AND THE NEIGHBORING PROPERTIES. HIGH WATER USE LAWN AREAS ARE MINIMAL AND LIMITED TO AREAS OF ACTIVE PLAY. THE PLANTING DESIGN PRIMARILY UTILIZES LOW TO MODERATE WATER USE PLANTS AND FOLLOWS THE GUIDELINES OF THE STATE WATER EFFICIENT LANDSCAPE ORDINANCE (WELO)

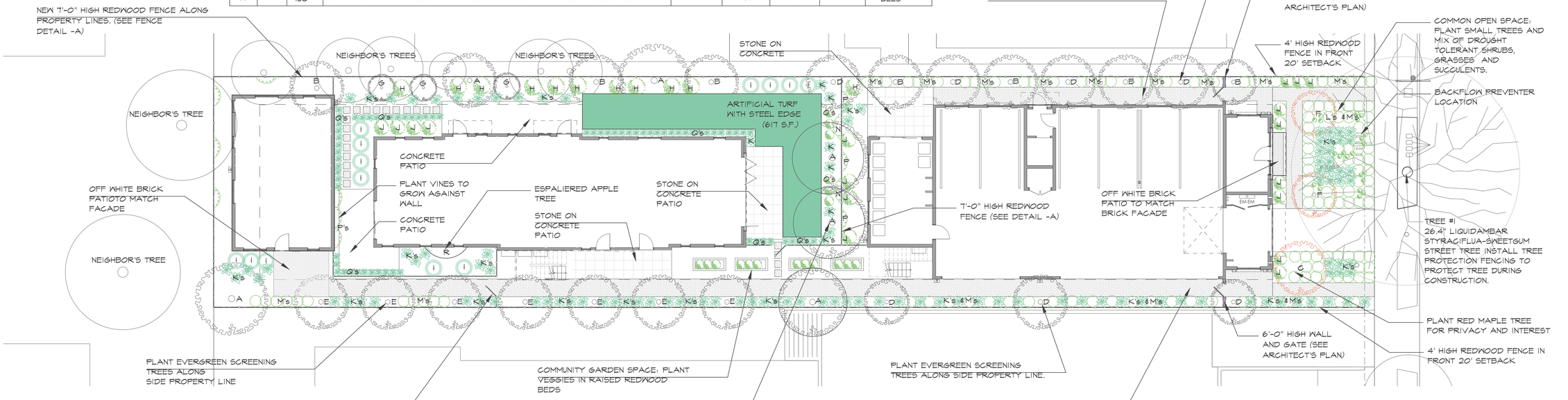
IRRIGATION DESIGN INTENT THE IRRIGATION SYSTEM WILL BE FULLY AUTOMATIC. SPRAY IRRIGATION WILL BE USED ONLY FOR LAWN ARES AND WILL UTILIZE MATCHED PRECIPITATION SPRAY HEADS FOR MAXIMUM WATER CONSERVATION. THE REMAINDER OF THE PLANTING AREAS WILL BE IRRIGATED USING WATER EFFICIENT DRIP IRRIGATION AND COMPLY WITH THE GUIDELINES OF THE STATE WATER EFFICIENT LANDSCAPE ORDINANCE (WELO)

hya
HEATHER YOUNG ARCHITECTS
81 Encina Avenue, Suite 100
Palo Alto, CA 94301
650-459-3200 / hyarchs.com

MARA YOUNG
LANDSCAPE ARCHITECT
CAL. LICENSE # 3754
PHONE:(650) 704-9255
www.marayoung.com

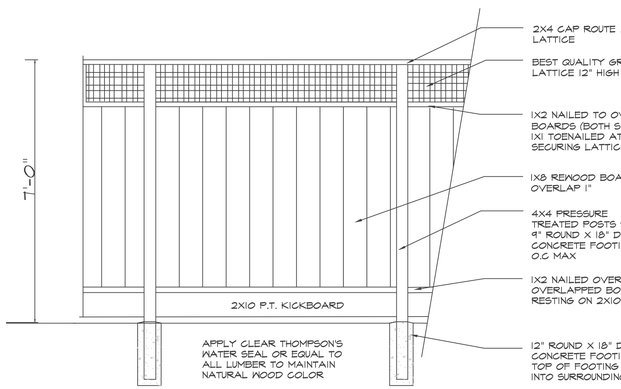
WAVERLEY RESIDENCES

160-164 WAVERLEY ST.
PALO ALTO, CA 94301

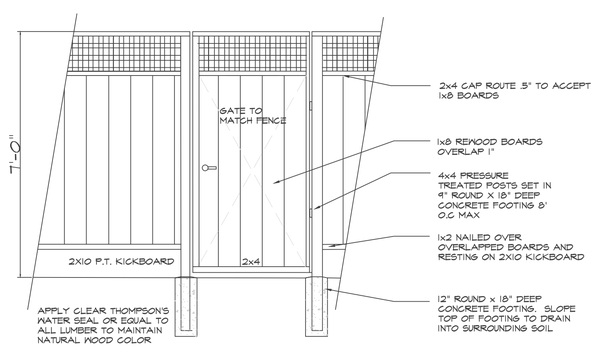


ISSUANCES		
REV	DATE	DESCRIPTION
	12/14/20	ARB SUBMITTAL
1	3/15/21	REVISION
2	4/27/21	REVISION
3	7/29/21	REVISION
4	8/9/21	ARB RESUBMITTAL
5	3/18/22	ARB RESUBMITTAL

SCALE= 3/32"=1'-0"



FENCE DETAIL A. NTS.



FENCE/GATE DETAIL- B. NTS.

TYPICAL REDWOOD FENCE IMAGE
NOTE: LATTICE SHALL BE IN A HORIZONTAL VERTICAL GRID AS PER DETAILS A AND B

N

REGISTERED LANDSCAPE ARCHITECT
MARA YOUNG NO. 3754
EXP 11/30/23
3/18/22
STATE OF CALIFORNIA

LANDSCAPE PLAN

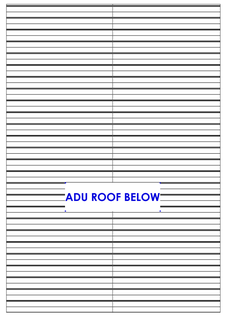
L-1

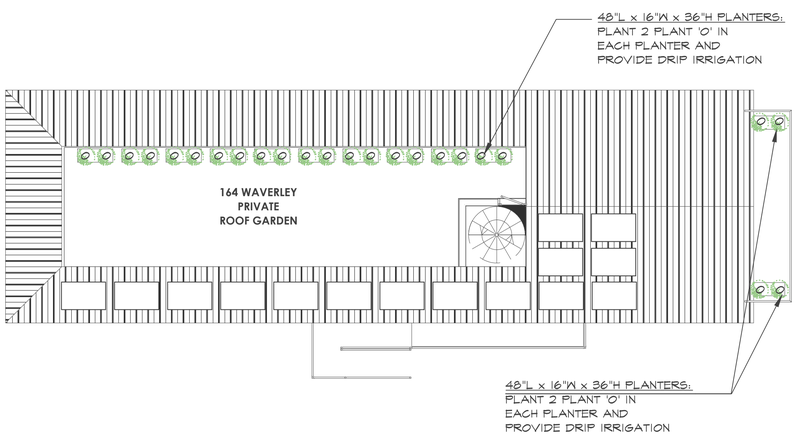
PLANT LIST

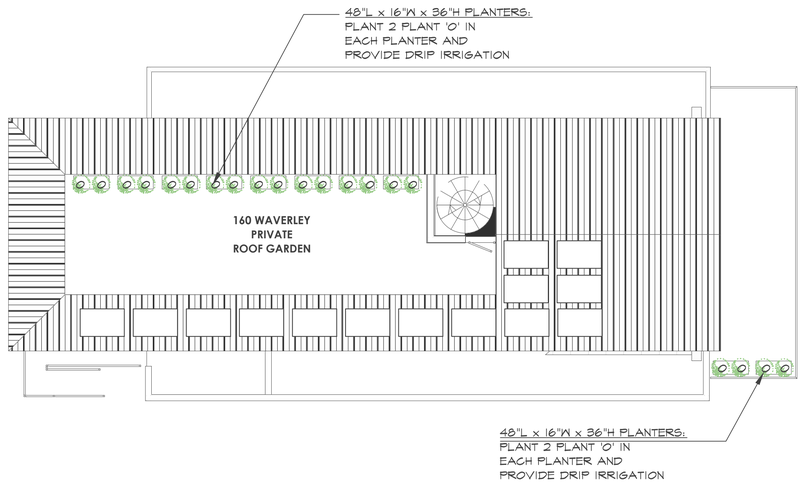
#	QU.	SIZE	BOTANICAL NAME	COMMON NAME	HEIGHT x WIDTH	WOCOLS PLANT FACTOR	REGIONAL INDIGENOUS	DROUGHT RESISTANT	HABITAT FOR WILDLIFE
A	6	36" BOX	CORNUS CAPITATA 'MOUNTAIN MOON'	EVERGREEN DOGWOOD	20' x 15'-20'	M	NO	NO	BIRDS
B	7	24" BOX	MORELLO CALIFORNICA (MYRICA CALIFORNICA)	PACIFIC WAX MYRTLE (STD FORM)	30' x 10'-30'	M	YES	NO	BIRDS
C	1	36" BOX	ACER RUBRUM 'RED OCTOBER GLORY'	RED MAPLE	20'-35' x 15'-25'	M	NO	NO	BIRDS BUTTERFLIES
D	7	24" BOX	PODOCARPUS GRACILLIOR (TREE FORM)	FERN PINE (PRUNED TO 10' WIDE)	20'x40'x 20'	M	NO	NO	BIRDS
E	7	24" BOX	LAURUS NOBILIS	BAY LAUREL	15'-40' x 15'-25'	L	NO	YES	BIRDS
F	2	24" BOX	ACER CIRCINATUM (MULTI TRUNKED)	VINE MAPLE (MULTI TRUNK)	12' x 12'	M	YES	YES	BIRDS BUTTERFLIES
G	3	15G	PITTOSPORUM 'SILVER SHEEN'	SILVER SHEEN PITTOSPORUM	8'x5'	M	NO	NO	BIRDS
H	6	15G	CARPENTERIA CALIFORNICA 'ELIZABETH'	CALIFORNIA ANEMONE	4'-6'x4'-6'	M	YES	YES	BEES,BIRDS BUTTERFLIES
I	AS SHOWN	5G	RHAMNUS 'SEA VIEW'	COFFEEBERRY	2'x6'	L	YES	YES	BEES BIRDS
J		5G	RHAPHIOLEPIS UMBELLATA 'MINOR'	DWARF YEDDO HAWTHORN	3'-4' x 3'-4'	L-M	NO	YES	BIRDS BUTTERFLIES
K		1G	LOMONDRA 'BREEZE'	MATT RUSH	2'-3' x 3'	L	NO	YES	BIRDS
L		1G	AEONIUM ARBOREUM	AEONIUM (SUCCULENT)	1'-6" x 1'	L	NO	YES	BIRDS
M		1G	ARCTOSTAPHYLOS 'EMERALD CARPET' @ 30" O.C.	MANZANITA GROUND COVER	6"-12" x 3'	L	YES	YES	BIRDS
N		5G	DISTICTUS BUCCINATORIA	TRUMPET VINE	12' x 12'	M	NO	NO	BIRDS
O		5G	WESTRINGIA FRUTICOSA 'GREY BOX' ADJACENT TO LAWN & IN PLANTERS ON ROOF)	COASTAL ROSEMARY	2'-3'x-2'-3'	L	NO	YES	BIRDS
P		15G	HYDRANGEA ANOMALIS	CLIMBING HYDRANGEA	8' x 8'	M	NO	NO	BEES/ BUTTERFLIES
Q		1G	CAREX TUMULICOLA	SEDGE	1'-2'x-1'-2'	M	YES	YES	BIRDS
R	1	15G	MALUS SPP. ESPALIERED APPLE TREE	ESPALIERED APPLE TREE	6' x 8'	M	NO	YES	BIRDS/ BEES

THE PLANTING DESIGN INTENT IS TO COMPLIMENT THE ARCHITECTURE AND TO PROVIDE AN INTERESTING AND PLEASANT OUTDOOR ENVIRONMENT. I HAVE TAKEN SPECIAL CARE TO PROVIDE ADEQUATE EVERGREEN PRIVACY SCREENING BETWEEN THE NEW DWELLINGS AND BETWEEN THE PROJECT SITE AND THE NEIGHBORING PROPERTIES. HIGH WATER USE LAWN AREAS ARE MINIMAL AND LIMITED TO AREAS OF ACTIVE PLAY. THE PLANTING DESIGN PRIMARILY UTILIZES LOW TO MODERATE WATER USE PLANTS AND FOLLOWS THE GUIDELINES OF THE STATE WATER EFFICIENT LANDSCAPE ORDINANCE (WELO)

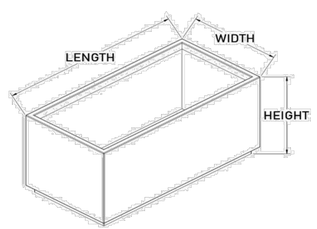
IRRIGATION DESIGN INTENT THE IRRIGATION SYSTEM WILL BE FULLY AUTOMATIC. SPRAY IRRIGATION WILL BE USED ONLY FOR LAWN ARES AND WILL UTILIZE MATCHED PRECIPITATION SPRAY HEADS FOR MAXIMUM WATER CONSERVATION. THE REMAINDER OF THE PLANTING AREAS WILL BE IRRIGATED USING WATER EFFICIENT DRIP IRRIGATION AND COMPLY WITH THE GUIDELINES OF THE STATE WATER EFFICIENT LANDSCAPE ORDINANCE (WELO)







CHANDLER *Rectangular Planter*



CHANDLER RECTANGULAR PLANTERS

SIZE:

48" LONG x 16" WIDE x 36" HIGH

COLOR: DARK TAN

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WAVERLEY RESIDENCES

160-164 WAVERLEY ST.
PALO ALTO, CA 94301

ISSUANCES

REV	DATE	DESCRIPTION
	8/9/21	ARB RESUBMITTAL
1	3/18/22	ARB RESUBMITTAL

SCALE= 1/8"=1'-0"

ROOF LANDSCAPE PLAN

N

REGISTERED LANDSCAPE ARCHITECT
MARA YOUNG NO. 3754
EXP 11/30/23
STATE OF CALIFORNIA
3/18/22

L-1.1

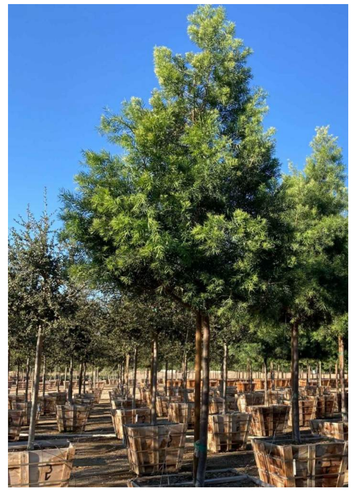
TREE A- CORNUS CAPITATA MOUNTAIN MOON
EVERGREEN DOGWOOD

TREE B- MORELLO CALIFORNICA
PACIFIC WAX MYRTLE

PLANT LIST

#	QU.	SIZE	BOTANICAL NAME	COMMON NAME	HEIGHT x WIDTH	WUCOLS PLANT FACTOR	REGIONAL INDIGENOUS	DROUGHT RESISTANT	HABITAT FOR WILDLIFE
A	6	36" BOX	CORNUS CAPITATA 'MOUNTAIN MOON'	EVERGREEN DOGWOOD	20' x 15'-20'	M	NO	NO	BIRDS
B	7	24" BOX	MORELLO CALIFORNICA (MYRICA CALIFORNICA)	PACIFIC WAX MYRTLE (STD FORM)	30' x 10'-30'	M	YES	NO	BIRDS
C	1	36" BOX	ACER RUBRUM 'RED OCTOBER GLORY'	RED MAPLE	20'x35' x 15'-25'	M	NO	NO	BIRDS BUTTERFLIES
D	7	24" BOX	PODOCARPUS GRACILLIOR (TREE FORM)	FERN PINE (PRUNED TO 10' WIDE)	20'x40'x 20'	M	NO	NO	BIRDS
E	7	24" BOX	LAURUS NOBILIS	BAY LAUREL	15'-40' x 15'-25'	L	NO	YES	BIRDS
F	2	24" BOX	ACER CIRCINATUM (MULTI TRUNKED)	VINE MAPLE (MULTI TRUNK)	12' x 12'	M	YES	YES	BIRDS BUTTERFLIES
G	3	15G	PITTOSPORUM 'SILVER SHEEN'	SILVER SHEEN PITTOSPORUM	8'x5'	M	NO	NO	BIRDS
H	6	15G	CARPENTERIA CALIFORNICA 'ELIZABETH'	CALIFORNIA ANEMONE	4'-6'x4'-6'	M	YES	YES	BEES,BIRDS BUTTERFLIES
I	AS SHOWN	5G	RHAMNUS 'SEA VIEW'	COFFEEBERRY	2'x6'	L	YES	YES	BEES BIRDS
J		5G	RHAPHIOLEPIS UMBELLATA 'MINOR'	DWARF YEDDO HAWTHORN	3'-4' x 3'-4'	L-M	NO	YES	BIRDS BUTTERFLIES
K		1G	LOMONDRA 'BREEZE'	MATT RUSH	2'-3' x 3'	L	NO	YES	BIRDS
L		1G	AEONIUM ARBOREUM	AEONIUM (SUCCULENT)	1'-6" x 1'	L	NO	YES	BIRDS
M		1G	ARCTOSTAPHYLOS 'EMERALD CARPET' @ 30" O.C.	MANZANITA GROUND COVER	6"-12" x 3'	L	YES	YES	BIRDS
N		5G	DISTICTUS BUCCINATORIA	TRUMPET VINE	12' x 12'	M	NO	NO	BIRDS
O		5G	WESTRINGIA FRUTICOSA 'GREY BOX' ADJACENT TO LAWN & IN PLANTERS ON ROOF)	COASTAL ROSEMARY	2'-3'x-2'-3'	L	NO	YES	BIRDS
P		15G	HYDRANGEA ANOMALIS	CLIMBING HYDRANGEA	8' x 8'	M	NO	NO	BEES/ BUTTERFLIES
Q		1G	CAREX TUMULICOLA	SEDGE	1'-2'x-1'-2'	M	YES	YES	BIRDS
R	1	15G	MALUS SPP. ESPALIERED APPLE TREE	ESPALIERED APPLE TREE	6' x 8'	M	NO	YES	BIRDS/ BEES

TREE C- ACER RUBRUM OCTOBER GLORY
RED MAPLE



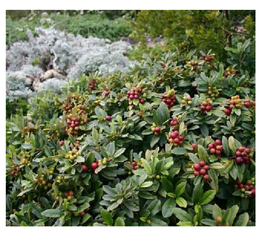
TREE D- PODOCARPUS GRACILLIOR
FERN PINE

TREE E- LAURUS NOBILIS
BAY LAUREL

TREE F- ACER CIRCINATUM
VINE MAPLE

SHRUB G- PITTOSPORUM 'SILVER SHEEN'
SILVER SHEEN PITTOSPRORUM

SHRUB H- CARPENTERIA CAL.'ELIZABETH'
CALIFORNIA ANEMEONE



SHRUB I- RHAMNUS 'SEA VIEW'
COFFEEBERRY

SHRUB J- RHAPHIOLEPIS UMBELLATA 'MINOR'
DWARF YEDDO HAWTHORN

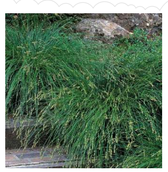
GRASS K- LOMONDRA 'BREEZE'
MATT RUSH

SHRUB O WESTRINGIA
'GREY BOX'
COAST ROSEMARY

SUCCULENT L-AEONIUM ARBOREUM
AEONUM (SUCCULENT)

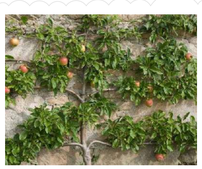
VINE P- HYDRANGEA ANOMALA
CLIMBING HYDRANGEA

GROUND COVER M-ARCTOSTAPHYLOS
'EMERALD CARPET'
MANZANITA GROUNDCOVER



GRASS Q- CAREX TUMULICOLA
SEDGE

VINE N-DISTICTUS BUCCINATORIA
TRUMPET VINE



TREE R- MALUS SPP. ESPALIER
APPLE TREE

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PALO ALTO, CA 94301

ISSUANCES

REV	DATE	DESCRIPTION
	12/14/20	ARB SUBMITTAL
1	3/15/21	REVISION
2	4/27/21	REVISION
3	7/29/21	REVISION
4	8/9/21	ARB RESUBMITTAL
5	3/18/22	ARB RESUBMITTAL

REGISTERED LANDSCAPE ARCHITECT
MARA YOUNG NO. 3754
EXP 11/30/23
STATE OF CALIFORNIA
3/18/2022

PLANT IMAGES

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