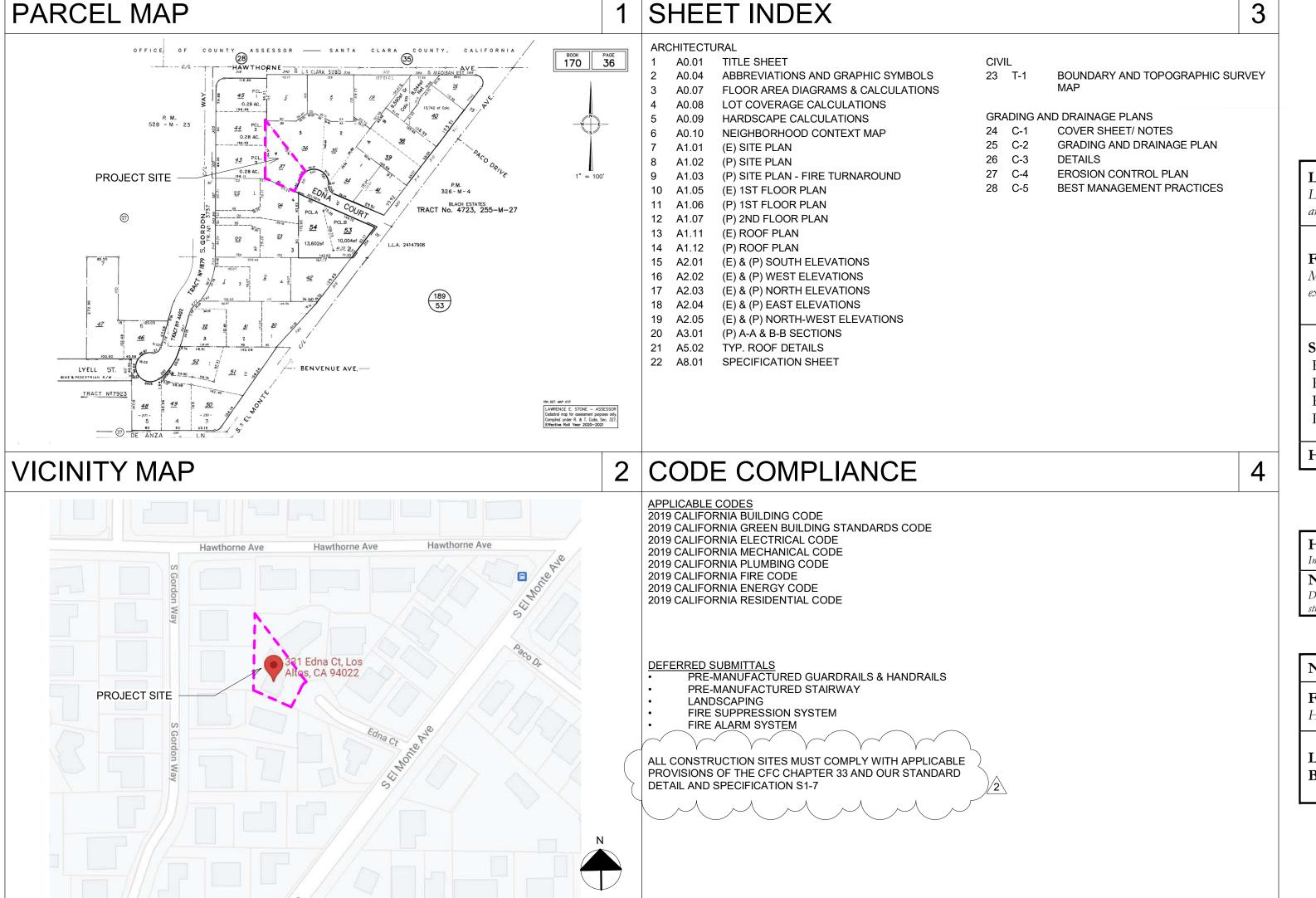


# SHASTRI - RUGGE RESIDENCE 331 EDNA COURT, LOS ALTOS, CA 94022



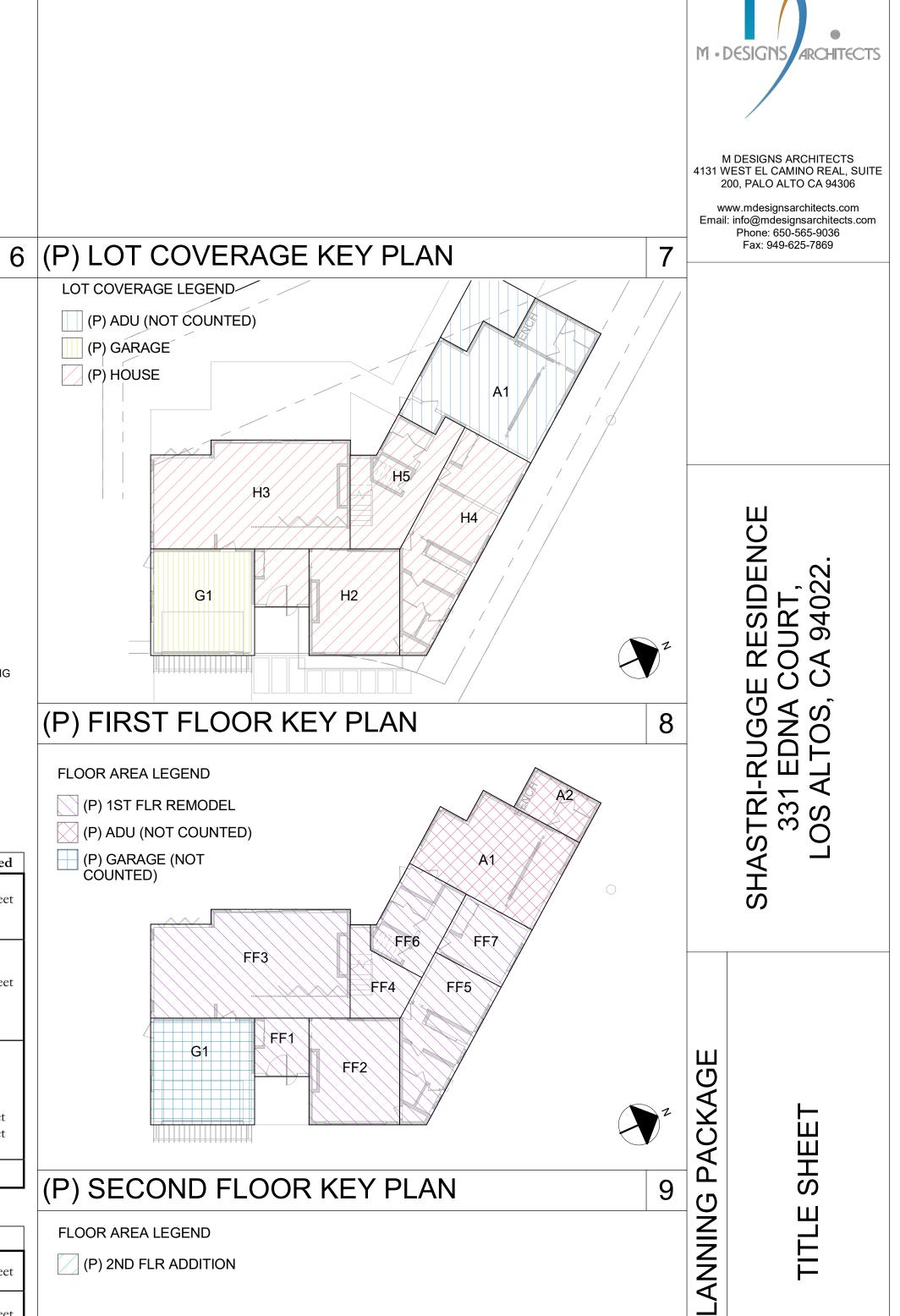
#### **PROJECT TEAM** 5 OFFICIAL USE ONLY <u>OWNERS</u> TANYA SHASTRI & RUDRA RUGGE TBD TBD PHONE: LOS ALTOS, CA 94022 TANYA SHASTRI & RUDRA RUGGE tanyas@gmail.com rudrarugge@gmail.com PHONE: M DESIGNS ARCHITECTS 4131 W. EL CAMINO REAL, STE 200 TBD TBD PALO ALTO, CA 94306 PHONE: NICK MCCRACKEN nick@mdesignsarchitects.com; quan@mdesignsarchitects.com SMP ENGINEERS 1534 CAROB LANE LOS ALTOS, CA 94024 srazavi@smpengineers.com PHONE: 650.941.8055 SMP ENGINEERS 1534 CAROB LANE, LOS ALTOS, CA 94024 CONTACT: SAEID RAZAVI, PE srazavi@smpengineers.com 650.941.8055 PROJECT DATA TABLES CODE SUMMARY 331 EDNA COURT, LOS ALTOS, CA. 94022 ADDRESS: (P) GARAGE 170-36-037 (P) HOUSE NON-CONFORMING (EXISTING BUILDING BUILT ON SETBACK LINES) **EXISTING CONDITION STATUS GROSS LOT SIZE:** 10,579 SF NET LOT SIZE: 10,579 SF ZONING: OCCUPANCY: OCCUPANT LOAD: 200 GROSS TYPE OF CONSTRUCTION: FIRE SUPPRESSION: SPRINKLED OCCUPANCY SEPARATION: 1-HOUR **HEIGHT MAXIMUM:** ALLOWABLE FLOOR AREA: 3,702.65 (10,579 x 0.35) ALLOWABLE LOT COVERAGE: 3,173.7 (10,579 x 0.30) SCOPE OF WORK: 2 STORY REMODEL & ADDITION FOR SINGLE-FAMILY RESIDENCE CONTAINING 4 BDRMS & ATTACHED ADU ATTACHED ADU: 667.4 SF 2ND FLOOR ADDITION: 833.4 SF FLOOR AREA LEGEND ZONING COMPLIANCE (P) GARAGE (NOT COUNTED) SQUARE FOOTAGE BREAKDOWN FLOOR AREA LEGEND

	Existing	Proposed	Allowed/Required
Lot Coverage:  Land area covered by all structures that are over 6 feet in height	2,791 square feet ( 22.33%)	2,673 square feet ( 25.59%)	$\frac{3,173.7}{(\underline{30} \%)}$ square feet
FLOOR AREA:  Measured to the outside surfaces of exterior walls	1st Flr: 2,790.8 sq ft 2 <sup>nd</sup> Flr: N/A sq ft Total: 2,790.8 sq ft ( 26.3 %)	1st Flr: 2,684.2 sq ft 2 <sup>nd</sup> Flr: 833.4 sq ft <b>Total:</b> 3,517.6 sq ft ( 33.2 %)	3,702.65 square feet ( 35 %)
SETBACKS: Front Rear Right side (1st/2nd) Left side (1st/2nd)	24'-7 1/2" feet  25'-0" feet  9'-8 1/2'feet/ N/A feet  9'-6" feet/ N/A feet	N/A feet  25'-0" feet  10'-0" feet/17'-6"feet  N/A feet/40'-7'feet	25'-0" feet 25'-0" feet 10'-0" feet/17'-6"feet 10'-0" feet/17'-6"feet
HEIGHT:	15'-11'feet	22'-3" feet	<u>27'-0"</u> feet

	Existing	g	Change	e in	Total P	roposed
HABITABLE LIVING AREA: Includes habitable basement areas	2,085.2	_square feet	1,669.4	_square feet	3,754.6	_square feet
NON- HABITABLE AREA:  Does not include covered porches or open	705.6	_square feet	- 275.2	_square feet	430.4	_square feet

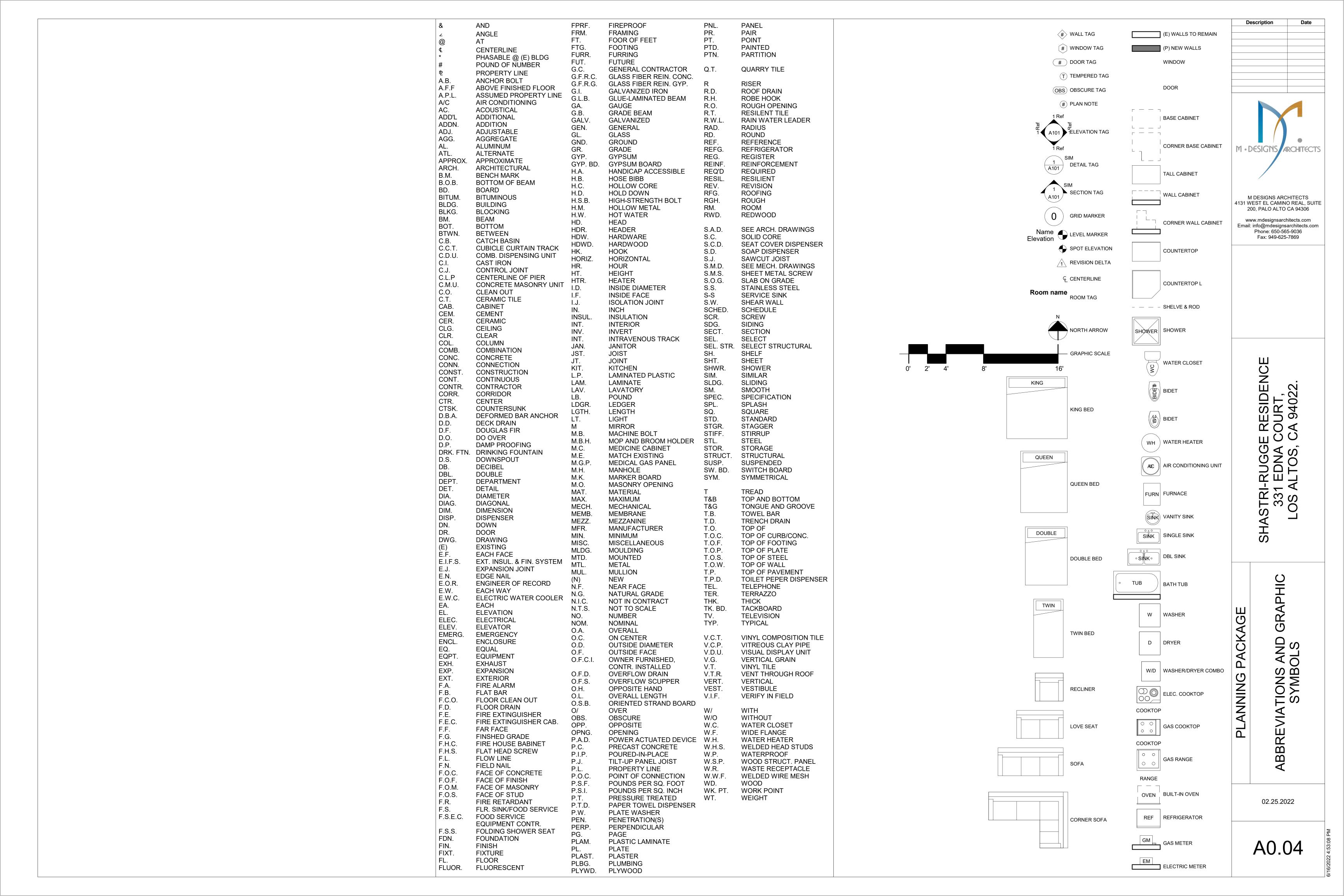
## LOT CALCULATIONS

NET LOT AREA:	7,228 square feet
FRONT YARD HARDSC Hardscape area in the front yar	1 000 square teet ( %)
LANDSCAPING BREAKDOWN:	Total hardscape area (existing and proposed): 2,713 sq ft Existing softscape (undisturbed) area: 1,164 sq ft New softscape (new or replaced landscaping) area: 6,065 sq ft Sum of all three should equal the site's net lot area



A0.01

02.25.2022









PLANNING PACKAGE



305 S GORDON WAY, LOS ALTOS, CA 94022 ONE-STORY SINGLE FAMILY HOUSE



TWO-STORY SINGLE FAMILY HOUSE

OFFICE



COUNTY, CALIFORNIA

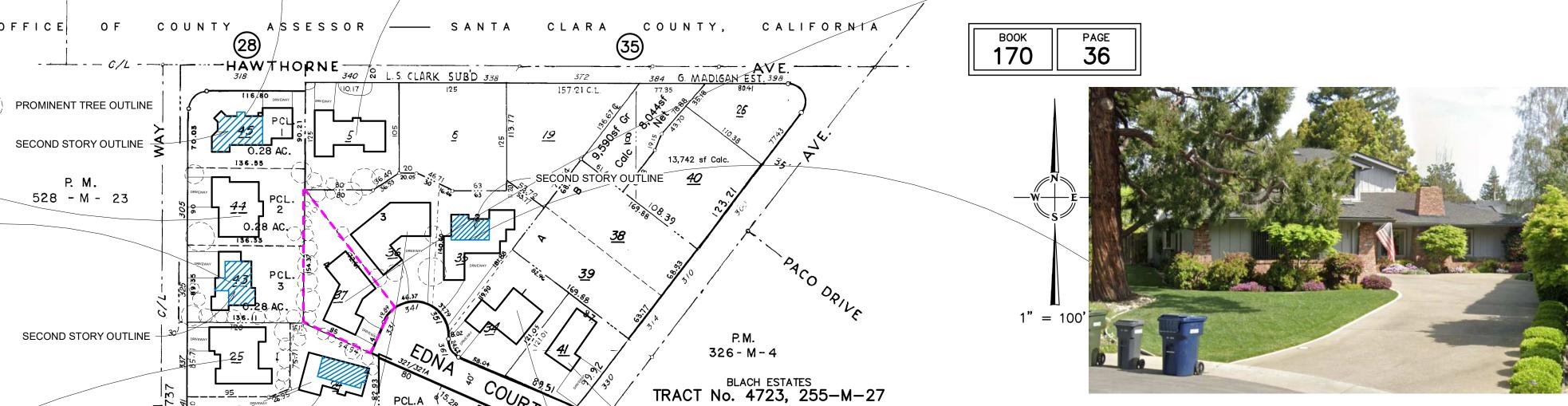
340 HAWTHORNE AVE, LOS ALTOS, CA 94022 ONE-STORY SINGLE FAMILY HOUSE

L.L.A. 24147906

- BENVENUE AVE. -

189 53





351 EDNA COURT, LOS ALTOS, CA 94022 TWO-STORY SINGLE FAMILY HOUSE



TRA DET. MAP 073 LAWRENCE E. STONE — ASSESSOR Cadastral map for assessment purposes only. Compiled under R. & T. Code, Sec. 327. Effective Roll Year 2020—2021

330 S EL MONTE AVE, LOS ALTOS, CA 94022 ONE-STORY SINGLE FAMILY HOUSE



337 S GORDON WAY, LOS ALTOS, CA 94022 ONE-STORY SINGLE FAMILY HOUSE



341 EDNA COURT, LOS ALTOS, CA 94022 ONE-STORY SINGLE FAMILY HOUSE 341 S GORDON WAY, LOS ALTOS, CA 94022 TWO-STORY SINGLE FAMILY HOUSE



LYELL ST.

TRACT Nº7923

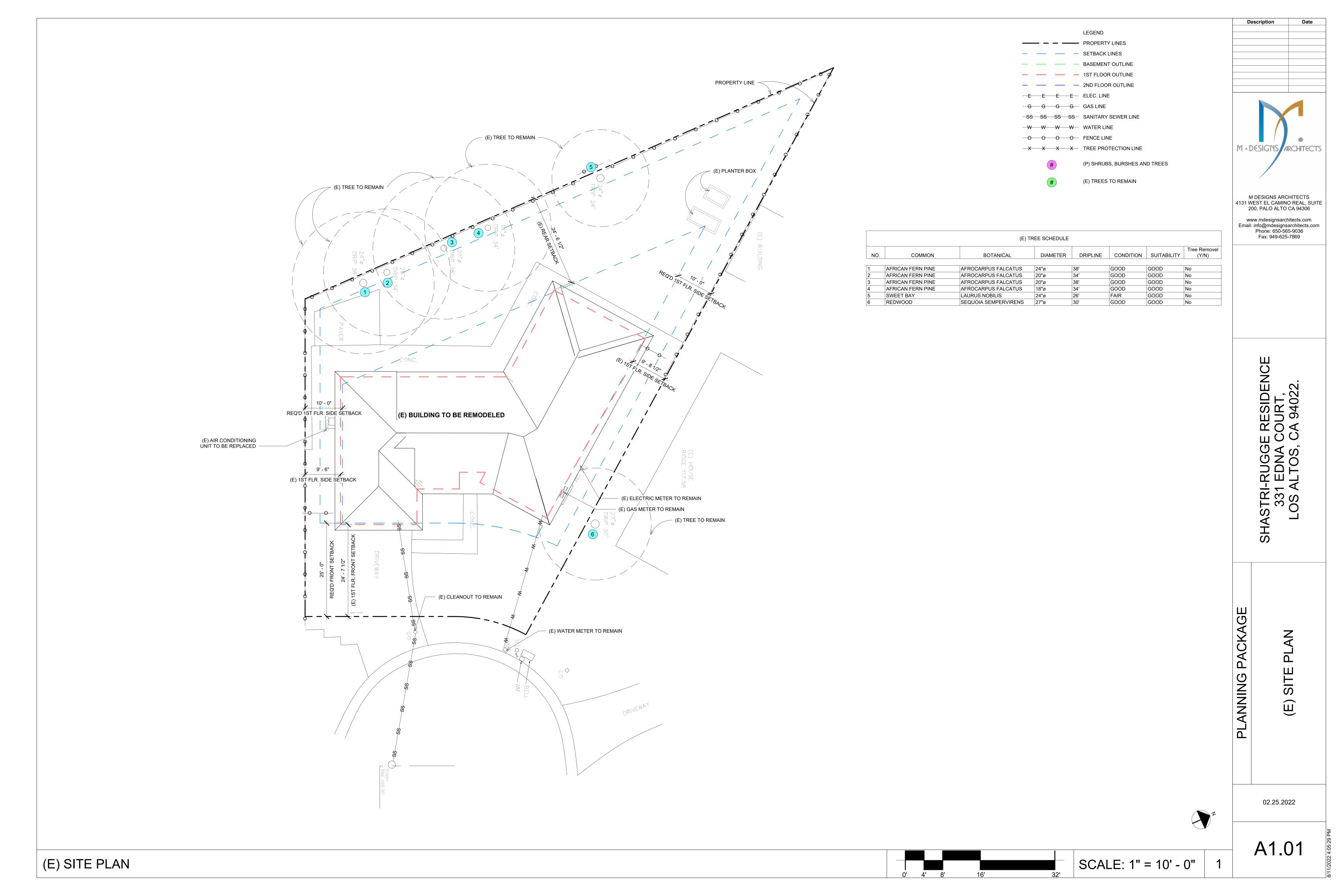
BIKE & PEDESTRIAN R/W ...

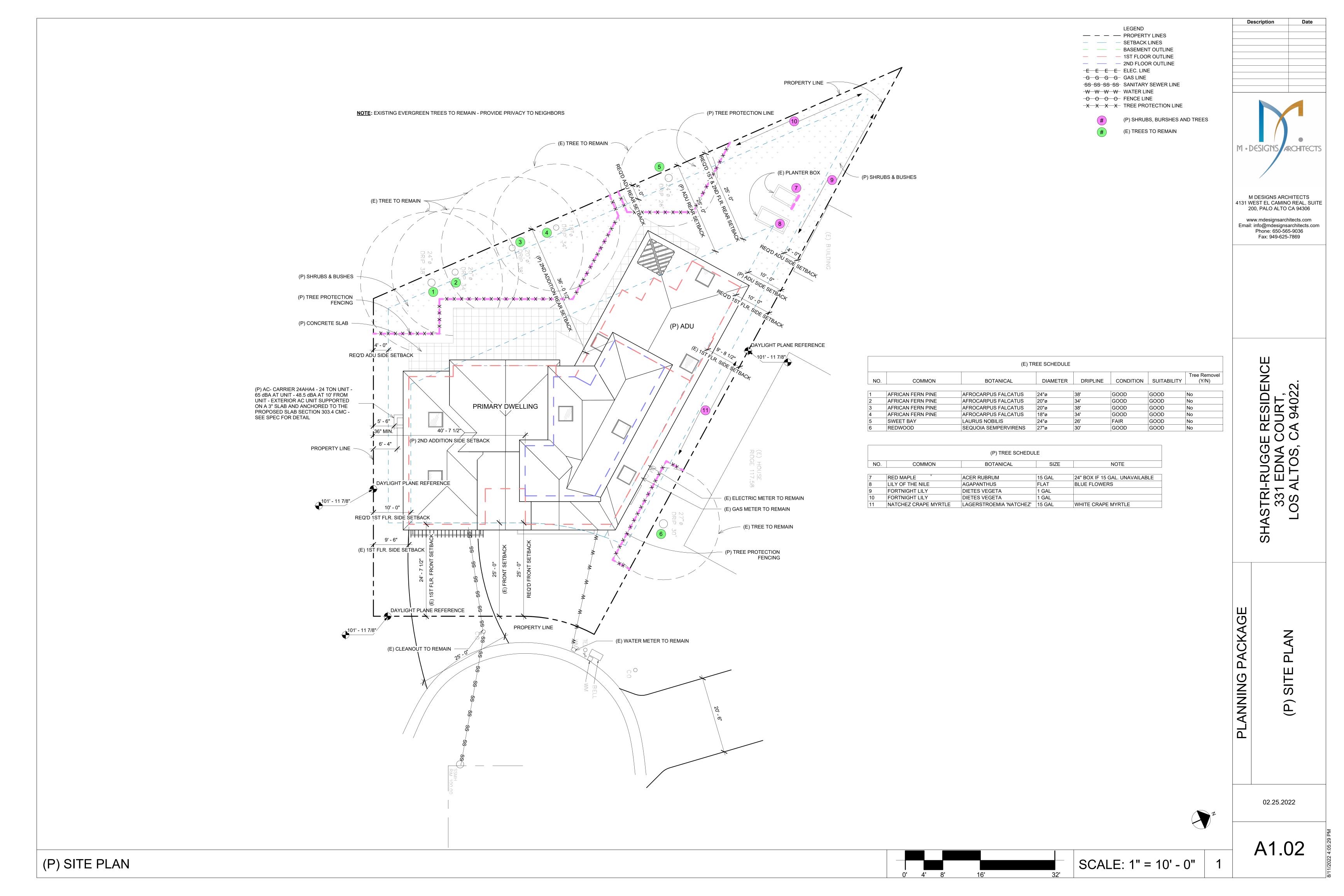


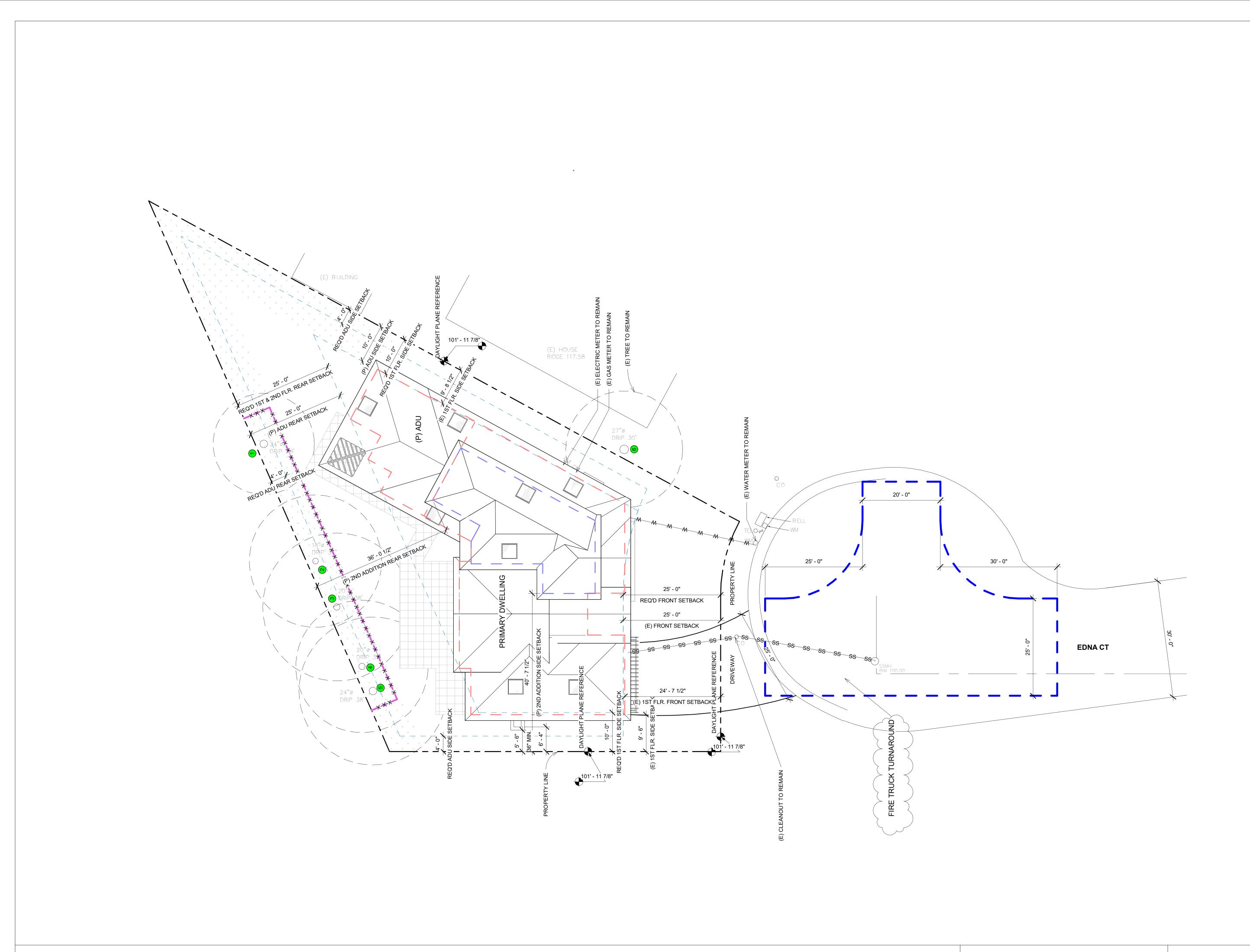
354 S EL MONTE AVE, LOS ALTOS, CA 94022 ONE-STORY SINGLE FAMILY HOUSE



361 EDNA COURT, LOS ALTOS, CA 94022 ONE-STORY SINGLE FAMILY HOUSE







I-RUGGE RESIDENCE 1 EDNA COURT, ALTOS, CA 94022.

M DESIGNS ARCHITECTS 4131 WEST EL CAMINO REAL, SUITE 200, PALO ALTO CA 94306

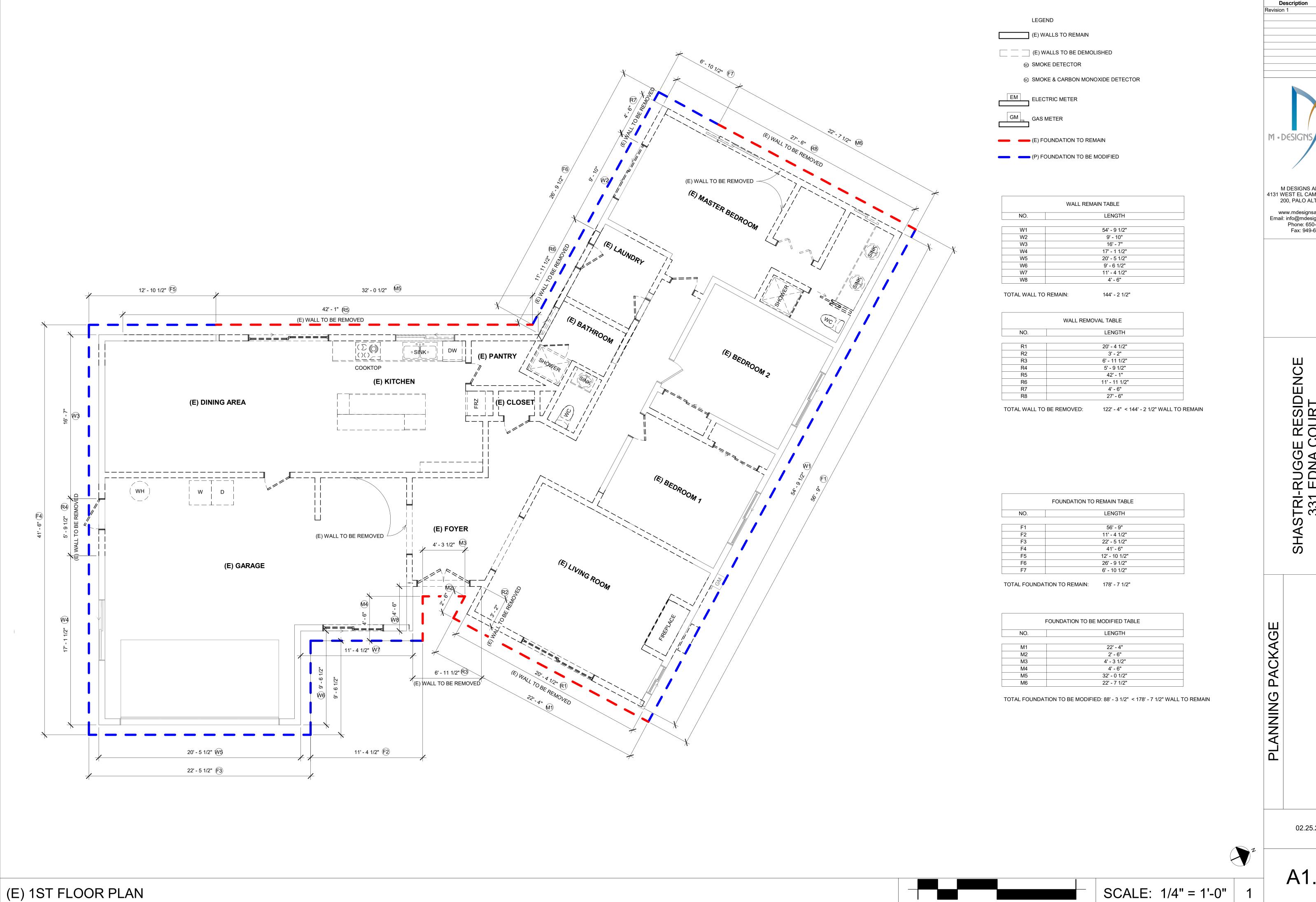
www.mdesignsarchitects.com Email: info@mdesignsarchitects.com Phone: 650-565-9036 Fax: 949-625-7869

> (P) SITE PLAN - FIRE TURNAROUND

02.25.2022

A1.03





M • DESIGNS ARCHITECTS M DESIGNS ARCHITECTS 4131 WEST EL CAMINO REAL, SUITE 200, PALO ALTO CA 94306 www.mdesignsarchitects.com Email: info@mdesignsarchitects.com Phone: 650-565-9036 Fax: 949-625-7869 RESIDENCE SOURT, SA 94022.

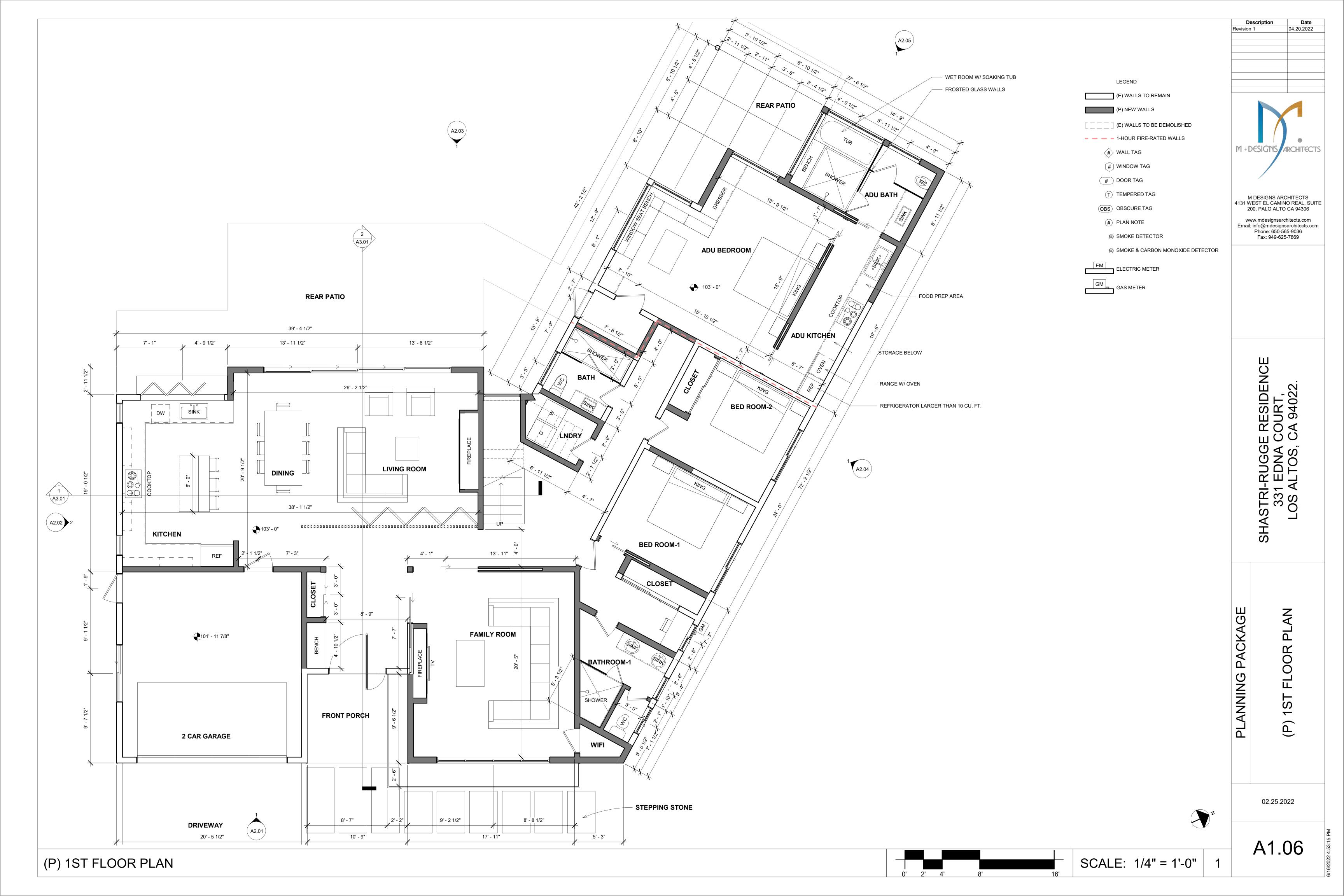
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FLOOR PLAN 1ST (E)

02.25.2022

A1.05



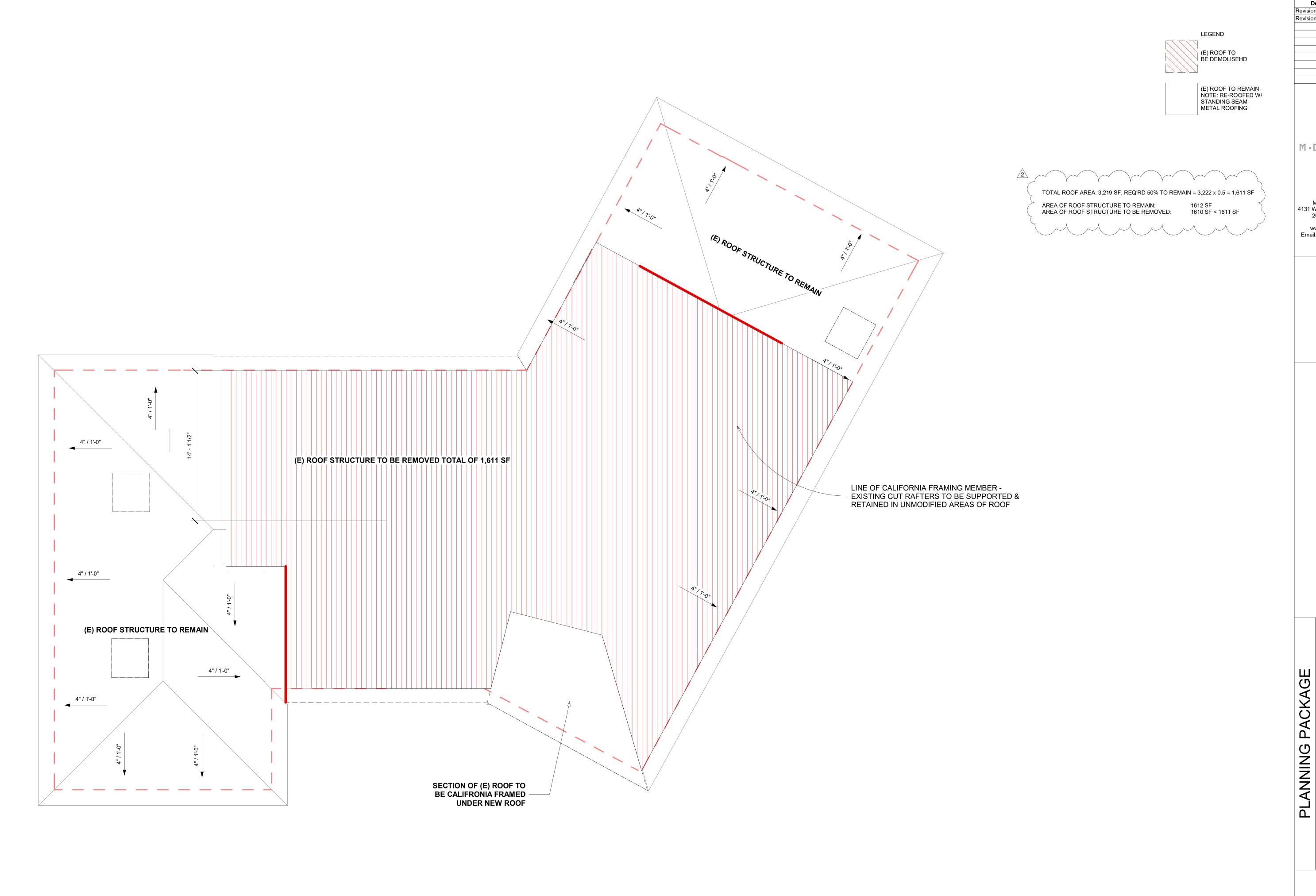


(P) 2ND FLOOR PLAN

A1.07

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

Description



04.20.2022 06.03.2022

M • DESIGNS ARCHITECTS

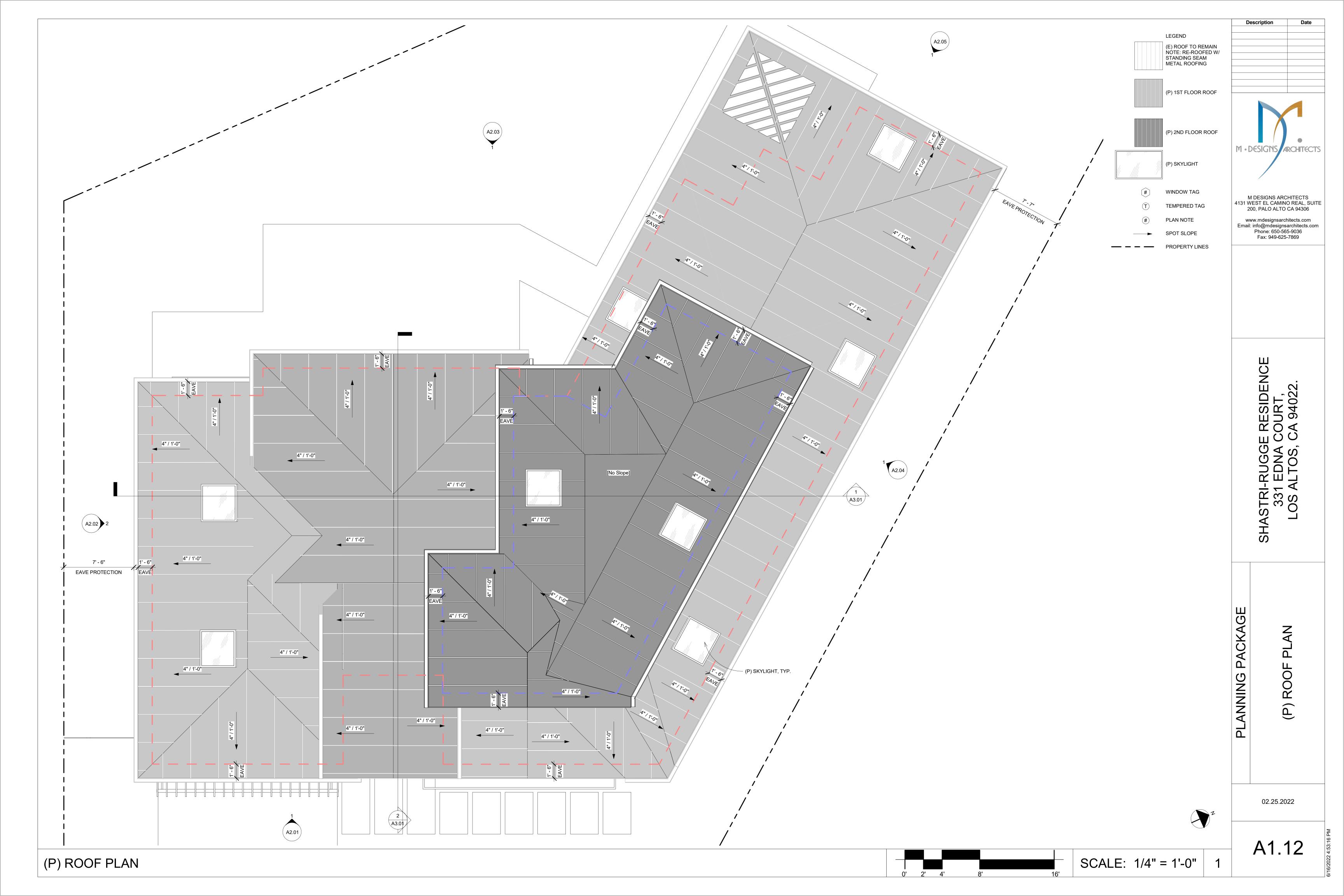
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SE RESIDENCE COURT, CA 94022.

(E) ROOF PLAN

02.25.2022



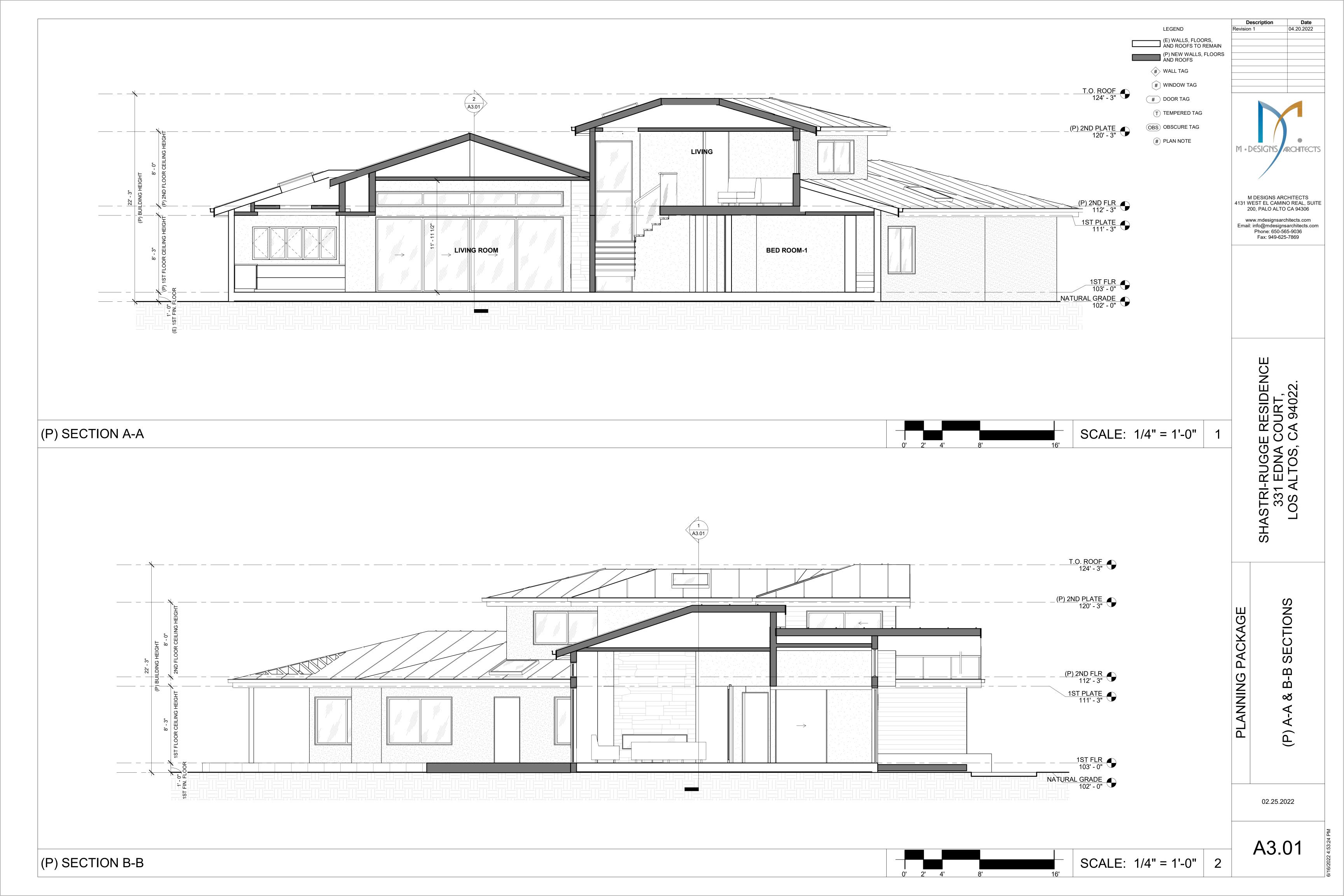


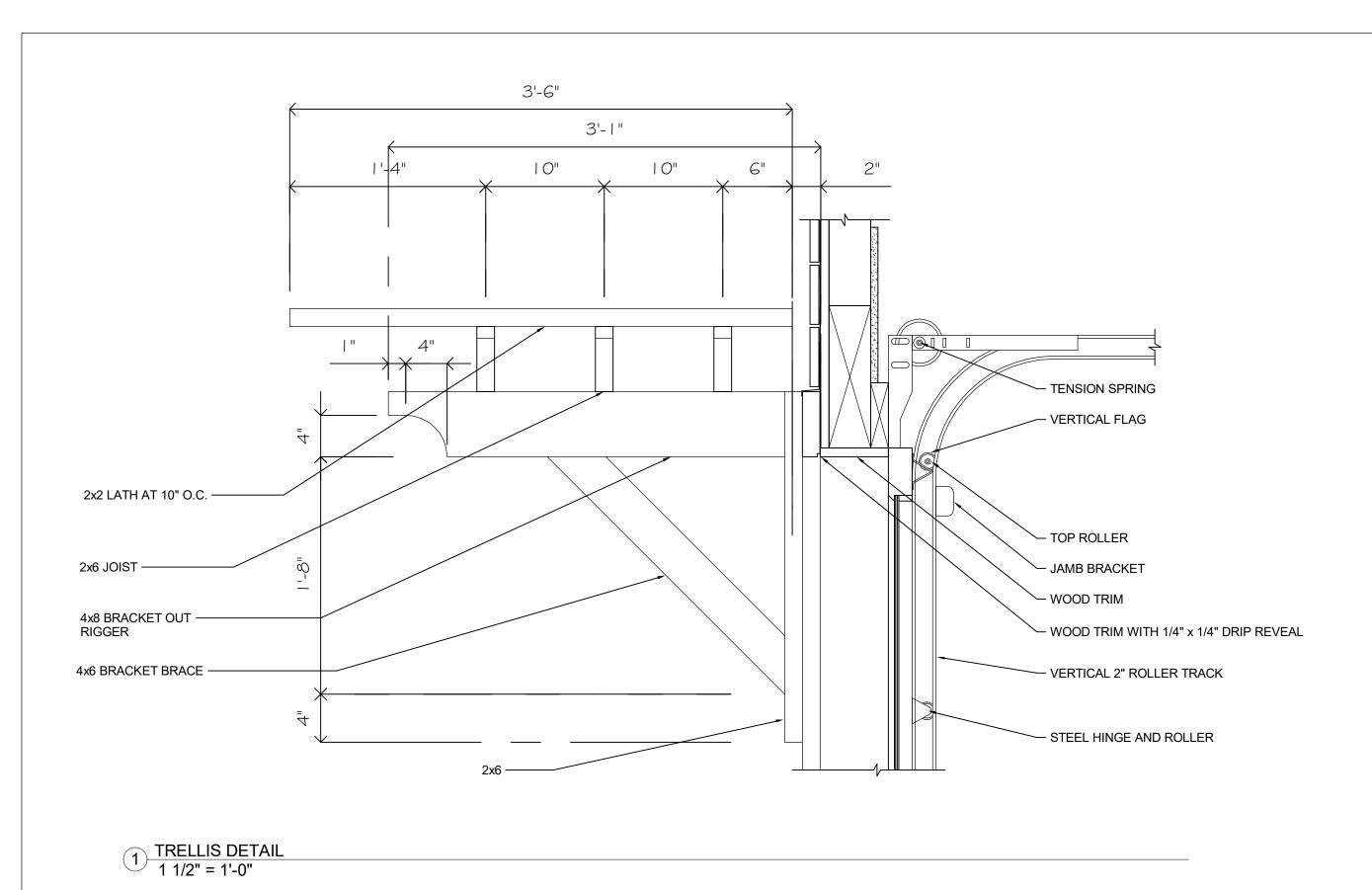












M DESIGNS ARCHITECTS

M DESIGNS ARCHITECTS

4131 WEST EL CAMINO REAL, SUITE 200, PALO ALTO CA 94306

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Fax: 949-625-7869

SHASTRI-RUGGE RESIDENCE 331 EDNA COURT, LOS ALTOS, CA 94022.

PLANNING PACKAGE
TYP. ROOF DETAILS

02.25.2022

A5.02





# Puron

## Fig. 1 — 24AHA4 Unit

NOTE: Images are for illustration purposes only. Actual models may **BENEFITS** differ slightly.

Carrier air conditioners with **Puron**® refrigerant provide a collection • 14 SEER/11.7 - 12.2 EER of features unmatched by any other family of equipment. The 24AHA4 has been designed utilizing Carrier's Puron® refrigerant. This environmentally sound refrigerant allows you to make a responsible decision in the protection of the earth's ozone layer.

NOTE: Ratings contained in this document are subject to change at any time. Always refer to the AHRI directory (www.ahridirectory.org) for the most up-to-date ratings information.

#### TABLE OF CONTENTS

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PRODUCTS17

## INDUSTRY LEADING FEATURES /

**Energy Efficiency** 

(Based on tested combinations)

Levels as low as 66 dBA

## **Design Features**

 Small footprint WeatherArmor cabinet

#### - Mesh coil guard Reliability, Quality and Toughness

- All steel cabinet construction

- Scroll compressor Factory-supplied filter drier
- High pressure switch • Line lengths up to 250ft (76.2 m)

Forestdale Outdoor Wall Light

KHR462117

**(l.**) **♦** 

ITEM NUMBER

• Low ambient operation (down to -20°F/-28.9°C with low ambient

Specifications subject to change without notice.

#### ELECTRICAL DATA

UNIT SIZE -	WIDH	V/PH OPER VOLTS*		CO	MPR	FAN	MCA	MAX FUSE** OR	
VOLTAGE, SERIES	V/PH	MAX	MIN	LRA	RLA	FLA	MCA	CKT BRK AMPS	
18-30				56.3	9.0	0.50	11.8	20	
24-30				62.9	10.9	0.50	14.1	25	
30-30	208/230/1	253	197	73.0	14.1	0.70	18.3	30	
36-30	200/230/1	253	197	77.0	14.1	1.20	18.8	30	
48-30				124.0	18.5	1.20	24.3	40	
60-30				152.5	23.7	1.45	31.1	50	
36-50				71.0	9.0	1.20	12.5	20	
48-50	208/230/3	253	197	83.1	13.7	1.20	18.3	30	
60-50				110.0	15.9	1.45	21.4	35	
36-60				38.0	5.6	0.60	7.6	15	
48-60	460/3	506	414	41.0	6.2	0.60	8.4	15	
60-60				52.0	7.1	0.80	9.7	15	

#### FLA - Full Load Amps HACR - Heating, Air Conditioning, Refrigeration LRA - Locked Rotor Amps

\* Permissible limits of the voltage range at which the unit operates satisfactorily \*\* Time-Delay fuse. Complies with 2007 requirements of ASHRAE Standards 90.1

NEC - National Electrical Code RLA - Rated Load Amps (compressor)

#### A-WEIGHTED SOUND POWER (dBA)

LIMIT CIZE	STANDARD RATING (DRA)	TYPI	TYPICAL OCTAVE BAND SPECTRUM (DBA, WITHOUT TONE ADJUSTMENT)								
UNIT SIZE	IZE STANDARD RATING (DBA)	125	250	500	1000	2000	4000	8000			
18	69	50.5	57.0	59.5	64.5	60.5	53.5	43.0			
24	66	50.5	58.5	60.5	59.5	56.5	51.0	41.5			
30	68	55.5	59.5	61.5	63.5	60.0	58.0	49.5			
36	71	59.5	59.5	62.0	65.5	63.5	62.0	55.0			
48	70	57.5	59.5	64.0	66.0	63.0	60.5	54.5			
60	73	60.0	61.5	64.5	67.0	66.0	65.5	58.0			

#### NOTE: Tested in accordance with AHRI Standard 270-08 (not listed in AHRI).

#### A-WEIGHTED SOUND POWER (dBA) WITH ACCESSORY SOUND SHIELD

LINIT OLZE	OTANDADD DATING (DDA)	TYPICAL OCTAVE BAND SPECTRUM (DBA, WITHOUT TONE ADJUSTMENT)								
UNIT SIZE	STANDARD RATING (DBA)	125	250	500	1000	2000	4000	8000		
18	68	52.5	58.0	58.5	64.5	59.5	52.5	42.5		
24	65	54.5	57.5	59.5	59.0	56.0	50.5	40.5		
30	68	55.0	60.0	61.5	62.5	60.0	58.0	49.5		
36	71	59.5	59.5	62.5	65.0	63.0	61.5	55.0		
48	70	57.5	59.5	63.0	65.0	62.5	60.0	54.0		
60	73	61.0	62.0	64.0	67.0	65.5	65.5	57.5		

#### **NOTE**: Tested in accordance with AHRI Standard 270-08 (not listed in AHRI).

#### SOUND PRESSURE LEVELS, (dBA)

UNIT SIZE	AT DISTANCE 10' FROM UNIT	AT DISTANCE 15' FROM UNIT	AT DISTANCE 20' FROM UNIT
18	51.5	48.0	45.5
24	48.5	45.0	42.5
30	50.5	47.0	44.5
36	53.5	50.0	47.5
48	52.5	49.0	46.5
60	55.5	52.0	49.5

#### NOTE: Sound pressure data vs distance converted using AHRI 275 Standard under certain environmental and layout assumptions.

#### CHARGING SUB-COOLING (TXV-TYPE EXPANSION DEVICE

UNIT SIZE-SERIES	REQUIRED SUBCOOLING °F (°C)
18	12 (6.7)
24	12 (6.7)
30	12 (6.7)
36	8 (4.4)
48	12 (6.7)
60	10 (5.6)

**NOTE:** The conversion is accurate **only** when all the assumptions are correct.

24 gauge steel

22 gauge steel

1-1/2" High

12", 16", 18" or 20" O.C.

12", 16", 18" or 20" O.C.

30-year non-prorated finish warranty

Weathertightness warranty available

for panel condition availability

unlimited when field-formed

Maximum panel length of 64' when

factory or shop-formed but virtually

Available in four pan variations; smooth,

striated, pencil rib or flat rib. Check locally 43 stocked colors (24 gauge steel)

PRODUCT FEATURES

**MATERIALS** 

.032 aluminum

.040 aluminum

**SPECS** 

12", 16", 18"

or 20" O.C.

ES

Specifications subject to change without notice. 24AHA4-06PD

#### BRAND Kichler

#### DESCRIPTION

The Forestdale Outdoor Wall Light features an Olde Bronze finish with Clear Seedy glass and is available in four sizes. Small: One 60 watt max 120 volt A19 medium base bulb is required, but not included. 7 inch width x 14.75 inch height x 6.5 inch depth. Medium: Two 60 watt max 120 volt B10 candelabra base bulbs are required, but not included. 8.5 inch width x 18.5 inch height x 8 inch depth. Large: Two 60 watt max 120 volt B10 candelabra base bulbs are required, but not included. 10 inch width x 21.5 inch height x 9.25 inch depth. Extra Large: Three 60 watt max 120 volt B10 candelabra base bulbs are required, but not included. 12 inch width x 30.75 inch height x 11.25

inch depth. UL listed for wet locations.

SHADE COLOR Clear Seeded BODY FINISH Olde Bronze WATTAGE DIMMER Standard 120V DIMENSIONS 10"W x 21.5"H x 9.25"D 2 x B11/Candelabra (E12)/5W/120V LED 2 x B10/Candelabra (E12)/60W/120V Incandescent

LIGHTOLOGY.COM | QUOTES@LIGHTOLOGY.COM

ITEM NUMBER

KHR462117

Oct 26, 2021 | 1,866,954,4489

Shown in: Olde Bronze / Clear Seeded

PAC-CLAD

800 PAC CLAD | PAC-CLAD.COM

12", 16", 18" or 20" O.C.

12", 16", 18" or 20" O.C.

NOTE: Seamers for PAC-150 are available

16 Stocked colors (22 gauge steel)

36 stocked colors (.032 aluminum)

22 stocked colors (.040 aluminum)

Galvalume Plus available

► Mechanically seamed in the field to 180° UL CLASSIFICATION

▶ UL-1897

▶ TAS-125

FLORIDA BUILDING PRODUCT APPROVALS

PAC-150 product approvals.

Contact the Acworth, Georgia facility for

©2021 Petersen Aluminum

#### MODEL NUMBER NOMENCLATURE

1	2	3	4	5	6	7	8	9	10	11	12	13
N	N	Α	Α	A/N	N	N	N	A/N	A/N	A/N	N	N
2	4	Α	Н	Α	4	1	8	Α	0	0	3	0
	oduct eries	Product Family	Product Type	Major Series	SEER			Variations	Open	Open	Voltage	Min Seri
24	= AC	A = AC	H = Horizontal Discharge		4 = 14 SEER	Cooling	Capacity	A = Standard	0 = Not Defined	0 = Not Defined	3=208/ 230-1 5=208/ 230-3 6=460/3	0, 1,





#### PHYSICAL DATA

UNIT SIZE-SERIES	18-30	24-30	30-30	36-30, 50, 60	48-30, 50, 60	60-30, 50, 60
Compressor Type			So	croll		
REFRIGERANT						
Charge lb (kg)	6.40 (2.90)	6.50 (2.95)	8.60 (3.90)	8.90 (4.04)	9.00 (4.08)	10.60 (4.81)
Cond Fan			Propeller Typ	e, Direct Drive		
Air Discharge			Hori	zontal		
Air Qty (CFM)	1285	1285	1900	2615	2615	2785
Motor HP	1/12	1/12	1/10	1/4	1/4	1/4
Motor RPM	800	800	800	800	800	800
Cond Coil						
Face Area (Sq ft)	7.3	7.3	12.1	12.1	12.1	14.1
Fins per In.	20	20	20	20	20	20
Rows	2	2	2	2	2	2
Circuits	3	3	3	3	3	4
Valve Connect. (In. ID)						
Vapor	5/8	3/4	3/4	7/8	7/8	7/8
Liquid			3	3/8		
Refrigerant Tubes* (In. OD)						
Rated Vapor*	5/8	3/4	3/4	7/8	7/8	1 1/8
Max Liquid Line†		I	3	3/8		

\* Units are rated with 25 ft. (7.6 m) of lineset length. Review the VAPOR LINE SIZING AND COOLING CAPACITY LOSS section when using other lineset sizes and lengths of Note: Review the unit's Installation Instructions for proper installation guidance. †Liquid Line Sizing For Cooling Only Systems with Puron® Refrigerant tables.

Specifications subject to change without notice.

24AHA4-06PD



Description

M DESIGNS ARCHITECTS 4131 WEST EL CAMINO REAL, SUITE 200, PALO ALTO CA 94306

www.mdesignsarchitects.com Email: info@mdesignsarchitects.com Phone: 650-565-9036 Fax: 949-625-7869

> SIDENCE URT, 9402

> > SHEE **CIFICATION**

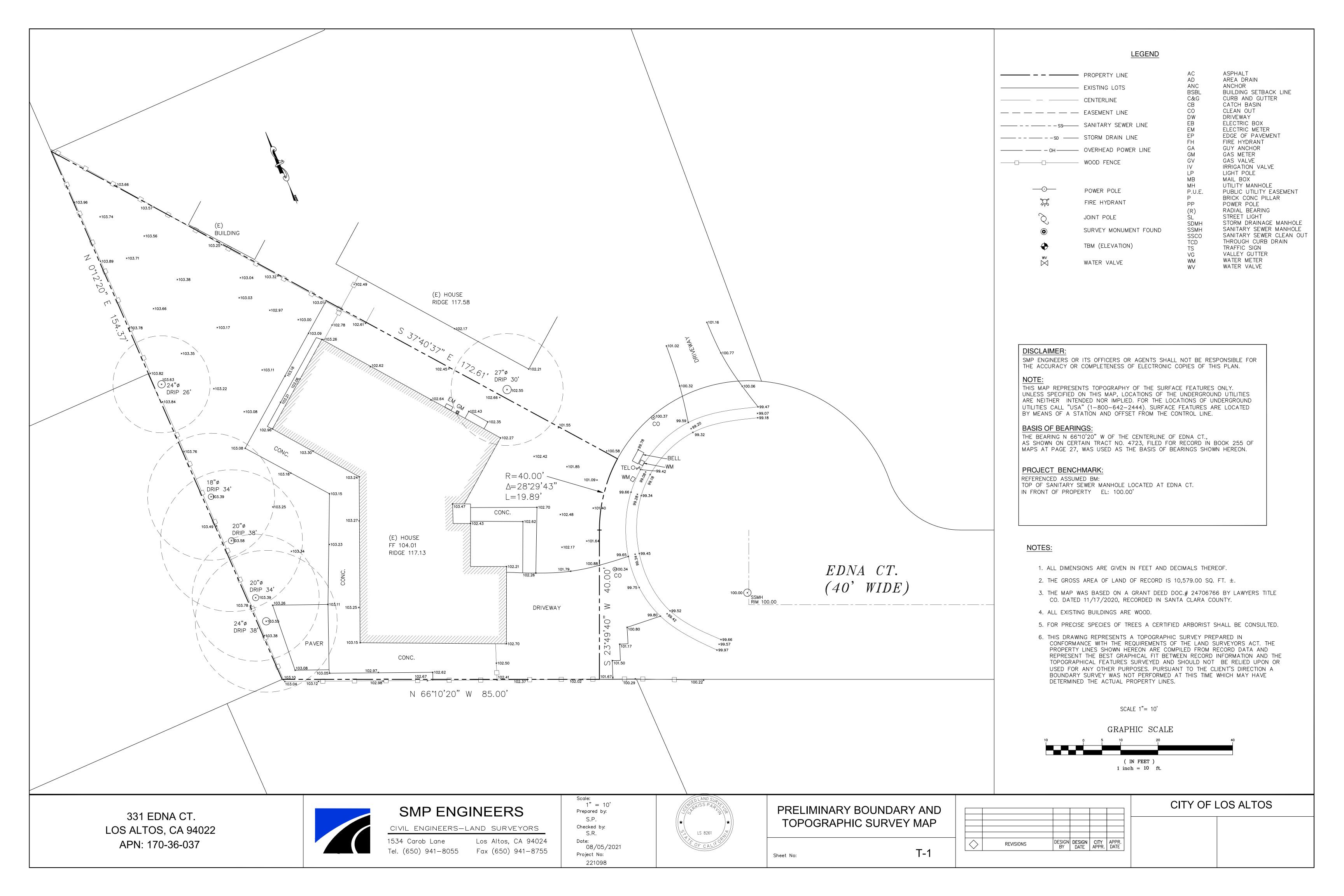
PACKAGE

PLANNING

02.25.2022

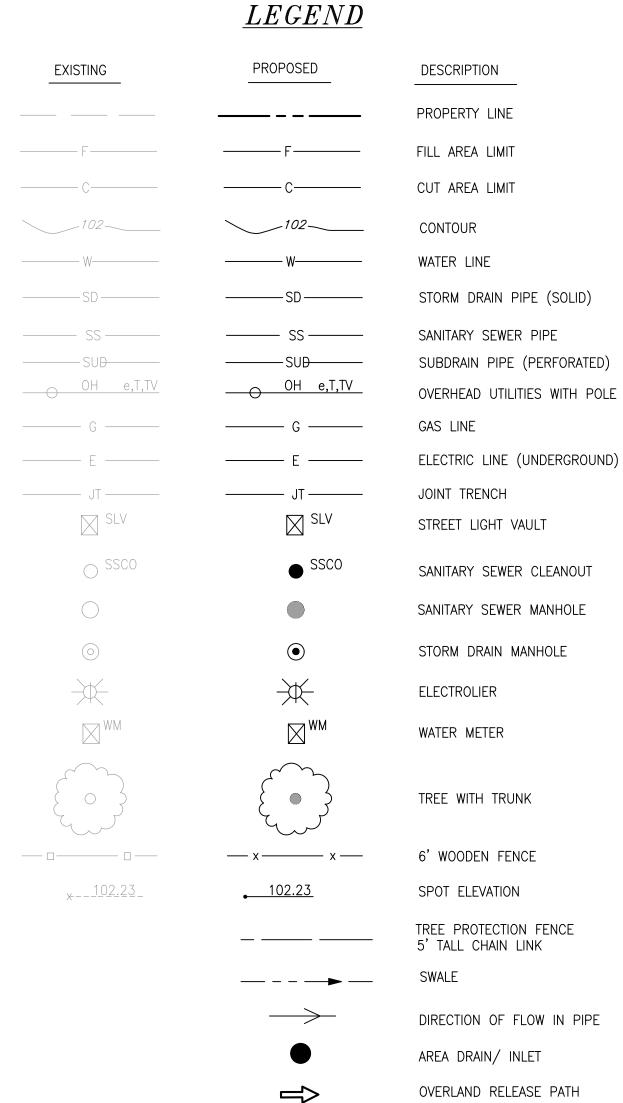
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#### *ABBREVIATIONS* MON. | MONUMENT ASPHALT CONCRETÈ AREA DRAIN OG ORIGINAL GROUND PGEV | PG&E VAULT PROPERTY LINE BACK OF WALK PVC | POLYVINYL CHLORIDE CENTERLINE R/W | RIGHT OF WAY CENTERLINE SWALE RCP REINFORCED CONCRETE PIPE STORM DRAIN CONC CONCRETE STORM DRAIN MANHOLE SANITARY SEWER LINE SANITARY SEWER MANHOLE SIDEWALK TOP OF CURB EDGE OF PAVEMENT ELEVATION TOE OF SLOPE EUCALYPTUS TREE TOP OF FOUNDATION TOP OF PIPE FINISHED FLOOR FINISH GRADE FLOW LINE UNDERGROUND WATER GRADE BREAK WL WHITE LINE STRIPE GARAGE FINISHED FLOOR (FRONT) WM WATER METER WV WATER VALVE IRON PIPE YL YELLOW LINE STRIPE LIP LIP OF GUTTER

# GRADING AND DRAINAGE PLANS ADDITION AND REMODELING 331 EDNA CT., LOS ALTOS, CA 94022 APN: 170-36-037



GRADING DIRECTION

SPLASH BLOCK

(E) TREE TO BE REMOVE

## EARTHWORK TABLE

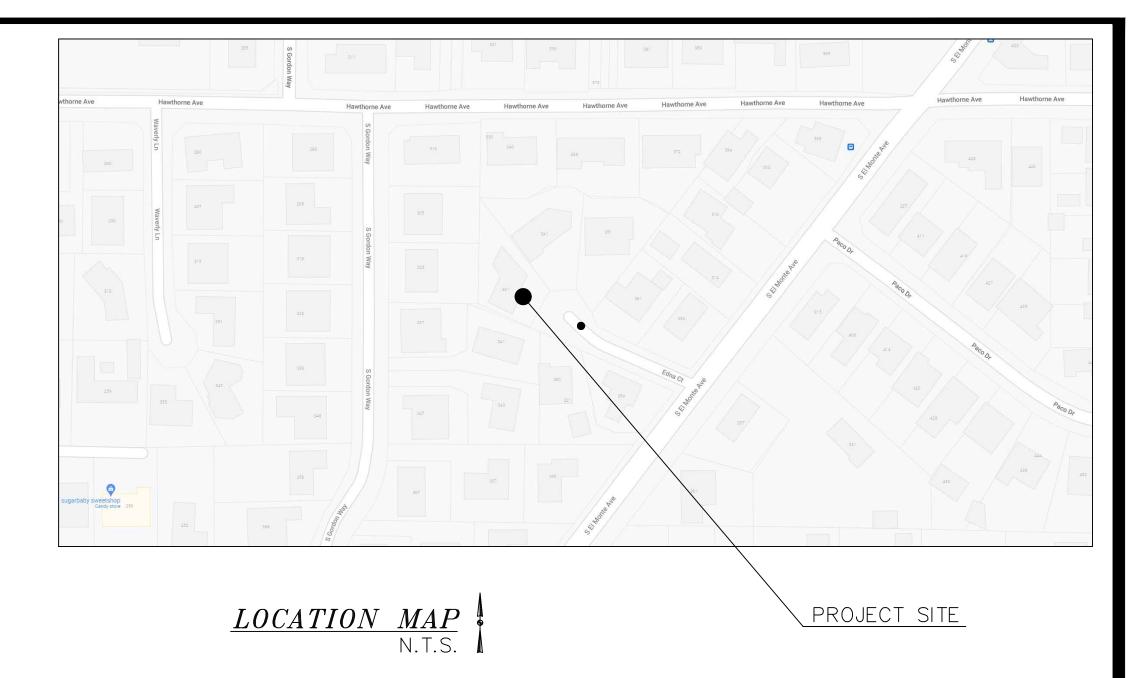
	FILL (CY)	CUT (CY)	IMPORT (CY)	EXPORT (CY)
ADDITION TO HOUSE	0	26		
ADDITION PATIO/ PORCH	2	3		
SITE	13	0		
TOTAL	15	29	0	14

## NOTE:

1. EARTHWORK QUANTITIES ON THIS TABLE ARE FOR INFORMATION ONLY. CONTRACTORS ARE TO PERFORM THEIR OWN QUANTITY TAKE OFFS.

## NOTE:

ANY DAMAGED RIGHT-OF-WAY INFRASTRUCTURES AND OTHERWISE DISPLACED CURB AND GUTTER SHALL BE REMOVED AND REPLACED AS DIRECTED BY THE CITY ENGINEER OR HIS DESIGNEE, CONTRACTOR SHALL COORDINATE WITH PUBLIC WORKS DEPARTMENT AT (650) 947-2780.



#### SHEET INDEX:

COVER SHEET/ NOTES GRADING AND DRAINAGE PLAN C-3DETAILS EROSION CONTROL PLAN C-4BEST MANAGEMENT PRACTICES

#### DRAINAGE NOTES

 Surface water shall be directed away from all buildings into drainage swales, gutters, storm drain inlets and drainage systems. 2. Connect roof down spouts to 4" solid pvc @ minimum 1% slope and min. 6" ground cover. Connect pipes to on-site inlets. See architectural plans for roof downspout locations.

3. On site storm drain lines shall consist of PVC-SCH 40 minimum or better. 4. Storm drain inlets shall be precast concrete, Christy U23 type or equivalent.

#### BASIS OF BEARINGS:

THE BEARING N 66°10'20" W OF THE CENTERLINE OF EDNA CT., AS SHOWN ON CERTAIN TRACT NO. 4723, FILED FOR RECORD IN BOOK 255 OF MAPS AT PAGE 27, WAS USED AS THE BASIS OF BEARINGS SHOWN HEREON.

#### PROJECT BENCHMARK:

REFERENCED ASSUMED BM: TOP OF SANITARY SEWER MANHOLE LOCATED AT EDNA CT. IN FRONT OF PROPERTY EL: 100.00'

#### NOTE:

PRIOR TO THE COMMENCEMENT OF ANY WORK DONE IN THE PUBLIC RIGHT-OF-WAY, A PERMIT TO OPEN STREET AND/OR AN ENCROACHMENT PERMIT WILL BE REQUIRED.

## NOTE:

GRADING AND DRAINAGE PLANS SHALL BE REVIEWED AND APPROVED BY THE PROJECT GEOTECHNICAL ENGINEER.

GEOTECHNICAL B	ENGINEER OF RECORD
THIS PLAN HAS BEEN REVIEWED AND WITH THE INTENT AND PURPOSE O	O FOUND TO BE IN GENERAL CONFORMANCE OF THE GEOTECHNICAL REPORT
PREPARED BY	DATED
BY C.E.G. #	BY G.E. #

#### NOTICE TO CONTRACTORS

CONTRACTOR TO NOTIFY U.S.A. (UNDERGROUND SERVICE ALERT) AT 800-227-2600 A MINIMUM OF 2 WORKING DAYS BEFORE BEGINNING UNDER-GROUND WORK FOR VERIFICATION OF THE LOCATION AND DEPTH OF UNDERGROUND UTILITIES.





CIVIL ENGINEERS

LOS ALTOS, CA 94024 TEL: (650) 941-8055 FAX: (650) 941-8755

OWNER:

COPYRIGHT (C) 2022 SMP ENGINEERS

DING

Revisions:

No. C52724 Sucid Razam

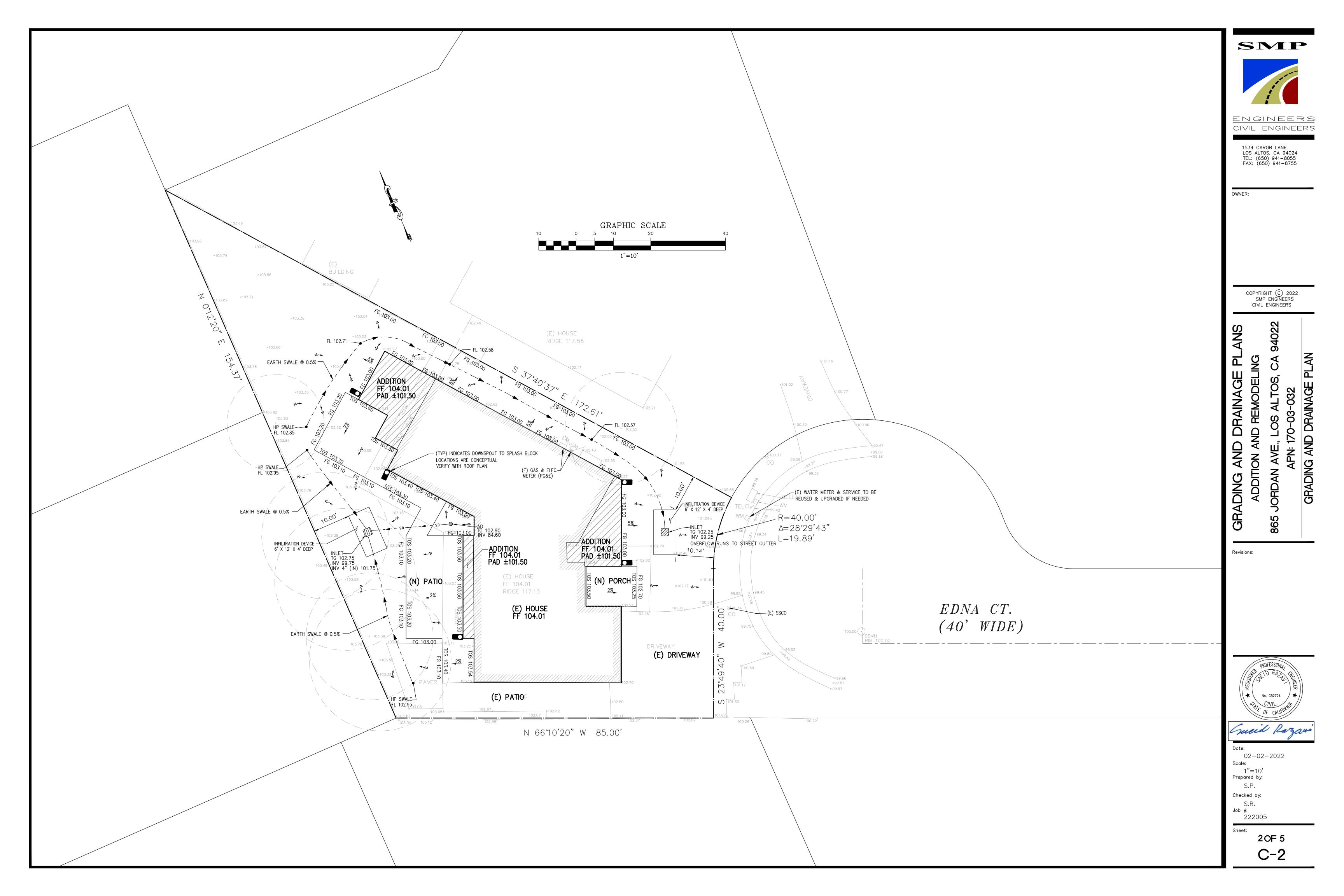
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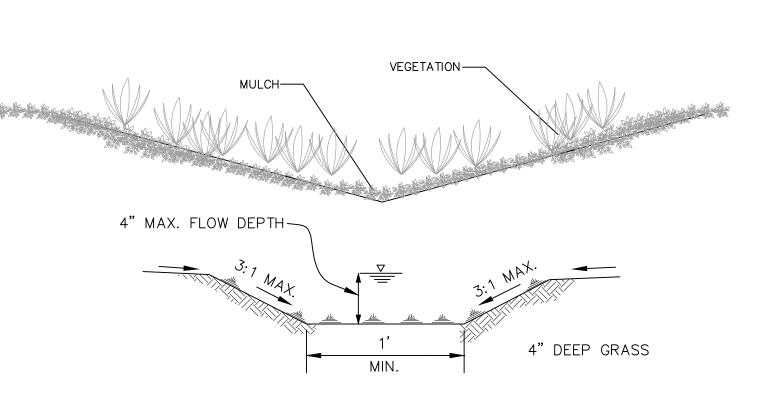
Prepared by: S.P.

Checked by: S.R.

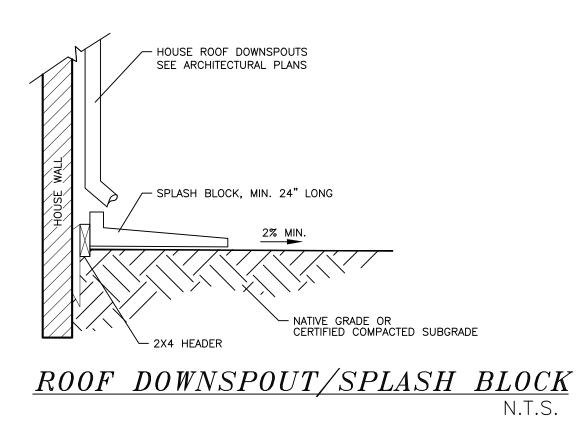
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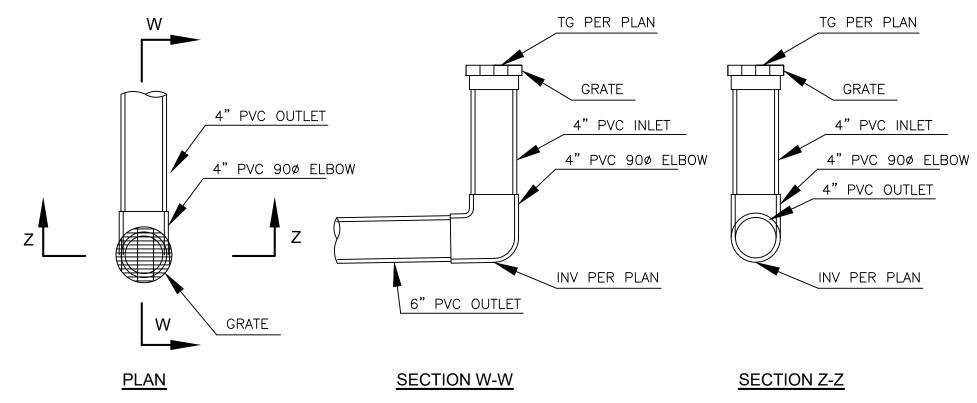
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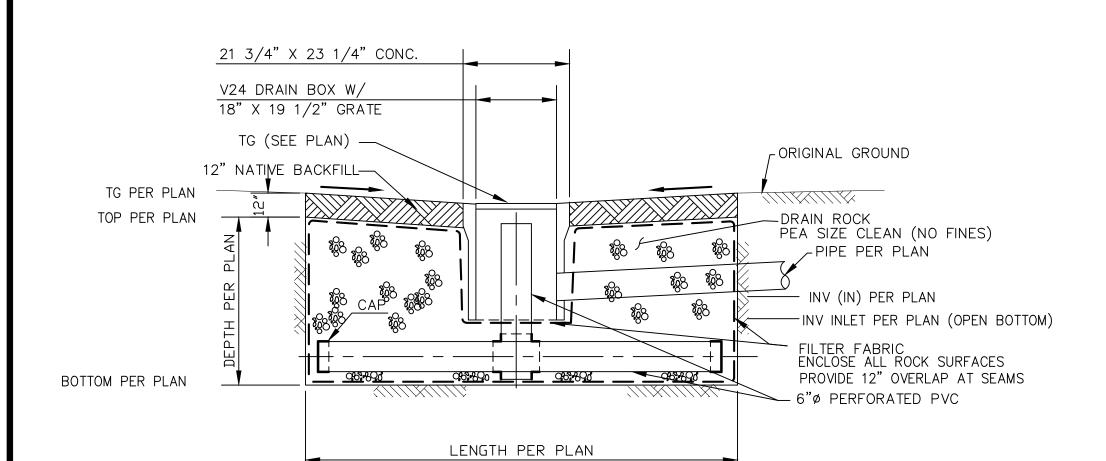


EARTH SWALE DETAIL
N.T.S.





STORM DRAIN AREA DRAIN
N.T.S.



INFILTRATION DEVICE

ELEVATION VIEW- NTS

SMP



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ADING AND DRAINAGE PLANS
ADDITION AND REMODELING
JORDAN AVE., LOS ALTOS, CA 9402

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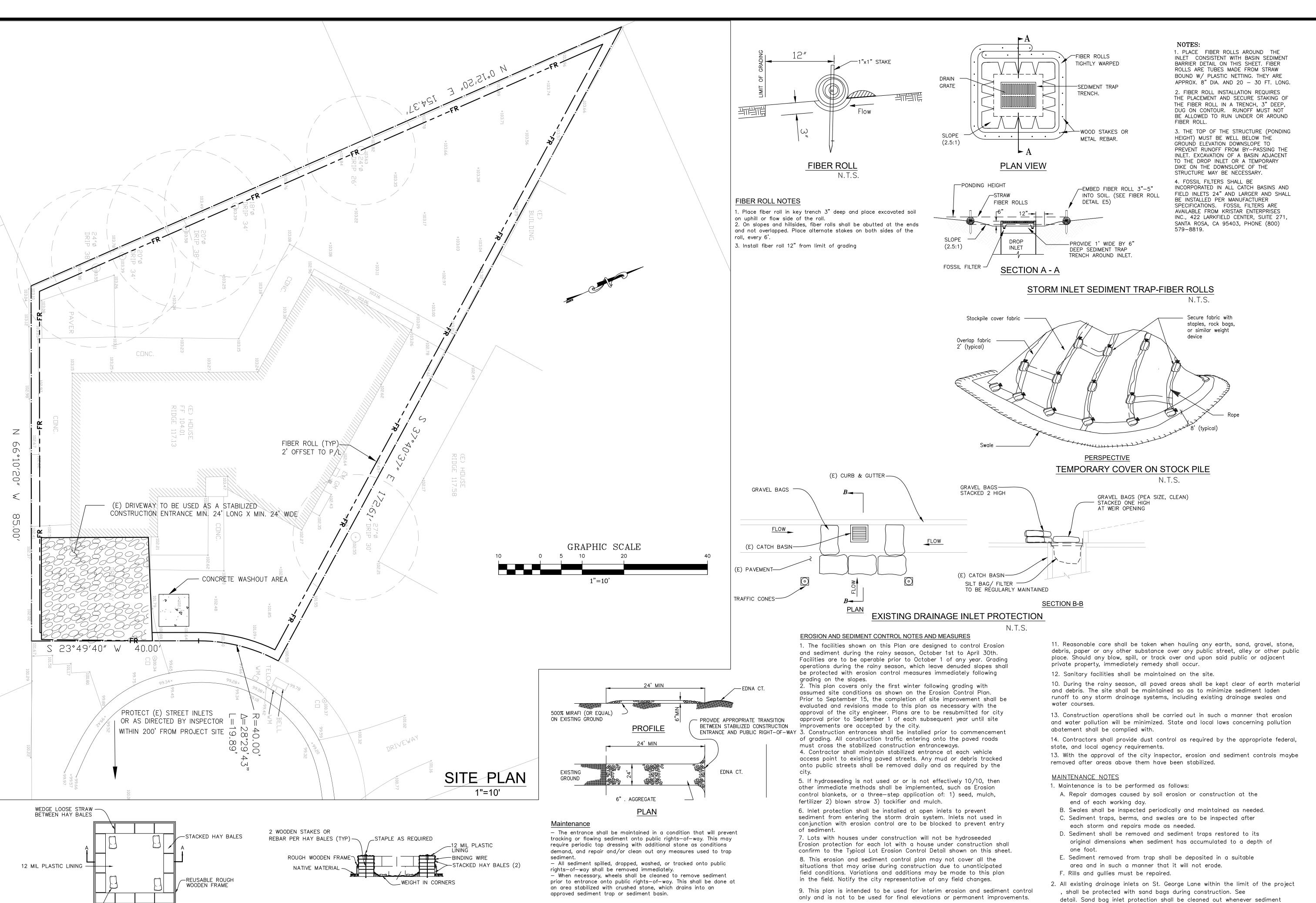
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02-02-Scale: 1"=10' Prepared by:

S.P. Checked by: S.R.

S.R. Job #: 222005

3 OF 5



STABILIZED CONSTRUCTION ENTRANCE

(TO BE MAINTAINED)

WEIGHT IN CORNERS \_\_\_\_

**CONCRETE WASHOUT AREA** 

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No. C52724

02-16-2022

Scale: AS NOTED

Prepared by: S.P.

Checked by:

Job #: 222023

depth is one half the height of one sand bag.

during construction.

3. Existing concrete ditch sediment trap shall be cleaned out routinely

10. Contractor shall be responsible for monitoring erosion and sediment

control prior, during, and after storm events.

Sheet: 4 OF 5



#### **Best Management Practices for the**

- Vehicle and equipment operators
- Site supervisors General contractors
- Home builders Developers

Landscaping,

Construction Industry

Gardening, and

**Pool Maintenance** 

Best Management Practices for the

## Storm water Pollution from Heavy Equipment on

**Doing The Right Job** 

during dry weather.

sediment controls.

**General Business Practices** 

or secured plastic sheeting.

Store pesticides, fertilizers, and other

#### Doing the Job Right Site Planning and Preventive Vehicle

Maintain all vehicles and heavy equipment

Inspect frequently for and repair leaks.

- Perform major maintenance, repair jobs, and vehicle and equipment washing off site where cleanup is easier.
- ☐ If you must drain and replace motor oil, radiator coolant, or other fluids on site, use drip pans or drop cloths to catch drips and spills. Collect all properly dispose as hazardous waste (recycle
- Do not use diesel oil to lubricate equipment parts, or clean equipment. Use only water for any onsite cleaning.
- Cover exposed fifth wheel hitches and other oily or greasy equipment during rain events.

# Construction Sites

Poorly maintained vehicles and hea quipment that leak fuel, oil, antifreeze or other luids on the construction site are common sources of storm drain pollution. Prevent spills and leaks by isolating equipment from runo channels, and by watching for leaks and other naintenance problems. Remove construction equipment from the site as soon as possible

Protect stockpiles and landscaping materials

chemicals indoors or in a shed or storage

Schedule grading and excavation projects

from wind and rain by storing them under tarps

☐ Clean up spills immediately when they

Spill Cleanup

- Never hose down "dirty" pavement or mpermeable surfaces where fluids hav spilled. Use dry cleanup methods absorbent materials, cat litter, and/or igs) whenever possible and properly ispose of absorbent materials.
- Sweep up spilled dry materials nmediately. Never attempt to "wash them away" with water, or bury them
- Use as little water as possible for dust control. Ensure water used doesn't leave silt or discharge to storm drains.
- Clean up spills on dirt areas by digging
- Report significant spills to the appropriate local spill response
- If the spill poses a significant hazard to

human health and safety, property or

to the State Office of Emergency

the environment, you must also report i

# Roadwork **Paving**

Best Management Practices for the Construction Industry



## **Best Management Practices for the**

- - Driveway/sidewalk/parking lot construction
  - Seal coat contractors Operators of grading equipment, paving machines, dump trucks, concrete mixers
    - Construction inspectors General contractors

Road crews

 Home builders Developers

#### Doing The Job Right

## General Business Practices

- Develop and implement erosion/sediment
- control plans for roadway embankments. Schedule excavation and grading work during
- Check for and repair leaking equipment. Perform major equipment repairs at designated areas in your maintenance vard, where cleanup is easier. Avoid performing equipment
- repairs at construction sites. ■ When refueling or when vehicle/equipment maintenance must be done on site, designate a location away from storm drains and creeks

whenever possible, or dispose of properly:

Avoid paving and seal coating in wet weather

or when rain is forecast, to prevent fresh

Do not use diesel oil to lubricate equipment parts or clean equipment Recycle used oil, concrete, broken asphalt, etc.

### **During Construction**

- materials from contacting stormwater runoff. Cover and seal catch basins and manholes when applying seal coat, slurry seal, fog seal
- Protect drainage ways by using earth dikes.

#### Storm Drain Pollution from Roadwork

Road paving, surfacing, and pavement removal nappen right in the street, where there are numerous opportunities for asphalt, saw-cut slurry r excavated material to illegally enter storm drains. Extra planning is required to store and dispose of aterials properly and guard against pollution of storm drains, creeks, and the Bay.

**Doing The Job Right** 

#### ■ Never wash excess material from. Fresh Concrete exposed- aggregate concrete or simila reatments into a street or storm drain and Mortar Cover stockpiles (asphalt, sand, etc.) and other construction materials with **Application**

plastic tarps. Protect from rainfall and

prevent runoff with temporary roofs or

absorbent material (cloth, rags, etc.) to

Park naving machines over drip pans or

Clean up all spills and leaks using "dry

Collect and recycle or appropriately

methods (with absorbent materials

and/or rags), or dig up, remove, and

dispose of excess abrasive gravel or

Avoid over-application by water trucks

Asphalt/Concrete Removal

Avoid creating excess dust when

breaking asphalt or concrete.

contact with rainfall or runoff.

When making saw cuts, use as little

After breaking up old pavement, be sure

to remove all chunks and pieces. Make

water as possible. Shovel or vacuum

Cover or protect storm drain inlets

during saw-cutting. Sweep up, and

clean up tracked dirt. Use a street

vacuumed liquor in storm drains.

Painting Cleanup

sweeper or vacuum truck. Do not dumo

properly dispose of, all residues.

☐ Sweep, never hose down streets to

saw-cut slurry and remove from the site

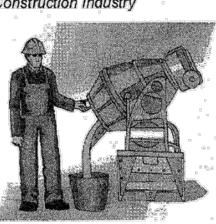
sure broken pavement does not come in

for dust control

plastic sheets and berms.

catch drips when not in use.

Best Management Practices for the Construction Industry



## Best Management Practices for the

- Masons and bricklayers Sidewalk construction crews
- Patio construction workers
- Construction inspectors General contractors
- Home builders
- Developers Concrete delivery/pumping workers

#### **Doing The Job Right**

#### **General Business Practices**

- Wash out concrete mixers only in designated wash-out areas in your yard, away from storm drains and waterways, where the water will flow into a temporary waste pit in a dirt area Let water percolate through soil and dispose of settled, hardened concrete as garbage. Whenever possible, recycle washout b pumping back into mixers for reuse.
- Wash out chutes onto dirt areas at site that do not flow to streets or drains.
- Always store both dry and wet materials under cover, protected from rainfall and runoff and away from storm drains or waterways. Protect dry materials from wind.
- Secure bags of cement after they are open. Be sure to keep wind-blown cement powder away from streets, gutters, storm drains, rainfall, and
- Do not use diesel fuel as a lubricant on

#### Storm Drain Pollution from Fresh

## **Concrete and Mortar Applications**

Fresh concrete and cement-related mortars that wash into lakes, streams, or estuaries are toxic to fish and the aquatic environment. Disposing of these materials to the storm drains or creeks can block storm drains, causes serious problems, and is prohibited by law.

Los Altos Municipal Code Requirements

permitted by a discharge permit or unless exempted pursuant to guidelines published by the superintendent.

Unlawful discharges. It shall be unlawful to discharge any domestic waste or industrial waste into storm drains, gutters, creeks, or

San Francisco Bay. Unlawful discharges to storm drains shall include, but not be limited to, discharge from toilets; sinks; industrial

processes; cooling systems; boilers; fabric cleaning; equipment cleaning; vehicle cleaning; construction activities, including, but not

limited to, painting, paving, concrete placement, saw cutting and grading; swimming pools; spas; and fountains, unless specifically

Threatened discharges. It shall be unlawful to cause hazardous materials, domestic waste, or industrial waste to be deposited in

such a manner or location as to constitute a threatened discharge into storm drains, gutters, creeks or San Francisco Bay. A

"threatened discharge" is a condition creating a substantial probability of harm, when the probability and potential extent of harm

make it reasonably necessary to take immediate action to prevent, reduce or mitigate damages to persons, property or natural

resources. Domestic or industrial wastes that are no longer contained in a pipe, tank or other container are considered to be

A spill response plan for hazardous waste, hazardous materials and uncontained construction materials shall be prepared and

available at the construction sites for all projects where the proposed construction site is equal to or greater than one acre of

disturbed soil and for any other projects for which the city engineer determines is necessary to protect surface waters. Preparation

A storm water pollution prevention plan shall be prepared and available at the construction sites for all projects greater than one

acre of disturbed soil and for any other projects for which the city engineer determines that a storm water management plan is

necessary to protect surface waters. Preparation of the plan shall be in accordance with guidelines published by the city engineer.

Prior approval shall be obtained from the city engineer or designee to discharge water pumped from construction sites to the storm

drain. The city engineer or designee may require gravity settling and filtration upon a determination that either or both would

improve the water quality of the discharge. Contaminated groundwater or water that exceeds state or federal requirements for

discharge to navigable waters may not be discharged to the storm drain. Such water may be discharged to the sewer, provided

No cleanup of construction debris from the streets shall result in the discharge of water to the storm drain system; nor shall any

that the requirements of Section 10.08.240 are met and the approval of the superintendent is obtained prior to discharge.

Remember: The property owner and the contractor share ultimate

responsibility for the activities that occur on a construction site.

You may be held responsible for any environmental damage

construction debris be deposited or allowed to be deposited in the storm drain system. (Prior code § 5-5.643)

Los Altos Municipal Code Chapter 10.08.390 Non-storm water discharges

threatened discharges unless they are actively being cleaned up.

Criminal and judicial penalties can be assessed for non-compliance.

Los Altos Municipal Code Section 10.08.430 Requirements for construction operations.

of the plan shall be in accordance with guidelines published by the city engineer.

#### **During Construction**

- Don't mix up more fresh concrete or cement than you will use in a two-hour
- Set up and operate small mixers on.
- tarps or heavy plastic drop cloths. When cleaning up after driveway or sidewalk construction, wash fines onto dirt areas, not down the driveway or into

the street or storm drain.

- ☐ Protect applications of fresh concrete and mortar from rainfall and runoff until the material has dried.
- ☐ Wash down exposed aggregate concrete only when the wash water can 1) flow onto a dirt area; (2) drain onto a ermed surface from which it can be numped and disposed of properly; or (3 e vacuumed from a catchment created by blocking a storm drain inlet. If necessary, divert runoff with temporary erms. Make sure runoff does not reach gutters or storm drains.
- When breaking up pavement, be sure to pick up all the pieces and dispose of properly. Recycle large chunks of roken concrete at a landfill.
- Never bury waste material. Dispose of small amounts of excess dry concrete grout, and mortar in the trash.
- ☐ Never dispose of washout into the street, storm drains, drainage ditches, or

## Preventing Pollution: It's Up to Us

In the Santa Clara Valley, storm drains transport water directly to local creeks and San Francisco Bay without treatment. Storm water pollution is a serious problem for wildlife dependent on our waterways and for the people who live near polluted streams or bay lands. Some common sources of this pollution include spilled oil, fuel, and fluids from vehicles and heavy equipment; construction debris; sediment created by erosion; landscaping runoff containing pesticides or weed killers; and materials such as used motor oil, antifreeze, and paint products that people pour or spill into a street or storm drain.

Thirteen valley municipalities have joined together with Santa Clara County and the Santa Clara Valley Water District to educate local residents and businesses and fight storm water pollution. TO comply with this program, contractors most comply with the practices described this drawing sheet.

## Spill Response Agencies

**DIAL 9-1-1** 

State Office of Emergency Services Warning 800-852-7550 Center (24 hours): Santa Clara County Environmental Health (408) 299-6930 Services:

#### Local Pollution Control <u>Agencies</u>

County of Santa Clara Pollution Prevention County of Santa Clara Integrated Waste

(408) 441-1198 Management Program: County of Santa Clara District Attorney **Environmental Crimes Hotline:** 

(408) 299-TIPS

Santa Clara County 1-800-533-8414 Recycling Hotline:

Santa Clara Valley Water (408) 265-2600

Santa Clara Valley Water District Pollution 1-888-510-5151

Regional Water Quality Control Board San (510) 622-2300 Francisco Bay Region:

Palo Alto Regional Water Quality (650) 329-2598 Serving East Palo Alto Sanitary District, Los Altos, Los Altos Hills, Mountain View, Palo Alto, Stanford

#### City of Los Altos

Building Department: (650) 947-2752 Engineering Department: (650) 947-2780

# General **And Site** Supervision



- General contractors
- Inspectors

#### Storm Drain Pollution from **Construction Activities**

contractors or employees

- Landscapers
- Gardeners

**Best Management Practices for the** 

- General contractors Home builders

Developers

Homeowner

Swimming pool/spa service and repair

- ecycling pickup in piles in the street, 18
- Use temporary check dams or ditches to divert unoff away from storm drains. Protect storm drains with sandbags or other
- andscaping/Garden Maintenance Use pesticides sparingly, according to instructions on the label. Rinse empty containers, and use rinse water as product.
- Dispose of rinsed, empty containers in the
- Collect lawn and garden clippings, pruning In communities with curbside pick-up of yard curb in approved bags or containers. Or, take to a landfill that composts yard waste. No curbside pickup of yard waste is available for

## **Storm Drain Pollution**

# Do not blow or rake leaves, etc. into the

- In San Jose, leave yard waste for curbside nches from the curb and completely out
- Re-vegetation is an excellent form of erosion
- waste, place clippings and pruning waste at the

# From Landscaping and

**Swimming Pool Maintenance** Many landscaping activities expose soils and chemicals will run off into the storm drains during rrigation or when it rains. Swimming pool water ontaining chlorine and copper-based algaecides should never be discharged to storm drains. These chemicals are toxic to aquatic life.

#### street, or place yard waste in gutters or on dirt shoulders, unless you are piling them for recycling (allowed by San Jose and unincorporated County only). Sweep up any leaves, litter or residue in gutters or on

the flow line to any storm drain.

- Pool/Fountain/Spa Maintenance Draining Pools Or Spas
- When it's time to drain a pool, spa, or fountain please be sure to call your local wastewater treatment plant before you start for further guidance on flow rate restrictions, backflow prevention, and handling special cleaning waste (such as acid wash). Discharge flows
- shall not exceed 100 gallon per minute. ■ Never discharge pool or spa water to a street or storm drain; discharge to a sanitary sewer cleanout.

☐ If possible, when emptying a pool or spa.

then recycle/reuse water by draining it

#### gradually onto a landscaped area. Do not use copper-based algaecides Control algae with chlorine or other

- alternatives, such as sodium bromide Filter Cleaning Never clean a filter in the street or near a storm drain. Rinse cartridge and diatomaceous earth filters onto a dirt area
- and spade filter residue into soil. Dispose of spent diatomaceous earth in the If there is no suitable dirt area, call your local wastewater treatment plant for instructions on discharging filter backwash

or rinse water to the sanitary sewer.

## Painting and **Application of** Solvents and

Adhesives Best Management Practices for the Construction Industry



## Best Management Practices for the

Paperhangers

Developers

 Graphic artists Floor covering installers General contractors Home builders

Earth-Moving

Dewatering

Best Management Practices for the

**Activities** 

Construction Industry

pressure, test paint for lead by taking pain scrapings to a local laboratory. See Yellow Pages for a state-certified laboratory. If there is loose paint on the building, or if the paint tests positive for lead, block storm drains. determine whether you may discharge water to the sanitary sewer, or if you must send it offsite

a hazardous waste collection facility (contact

or disposal as hazardous waste. Storm Drain Pollution from

Paints, Solvents, and Adhesives All paints, solvents, and adhesives contain chemicals that are harmful to wildlife in local reeks, San Francisco Bay, and the Pacific Ocean oxic chemicals may come from liquid or solid products or from cleaning residues or rags. Paint naterial and wastes, adhesives and cleaning fluids should be recycled when possible, or disposed of properly to prevent these materials from flowing into storm drains and watercourses.

Doing The Job Right

**General Business Practices** 

■ When refueling or vehicle/equipment

location away from storm drains

parts, or clean equipment.

**Practices During Construction** 

Remove existing vegetation only when

Do not use diesel oil to lubricate equipment

vegetation for erosion control on slopes or

Protect down slope drainage courses, streams

and storm drains with wattles, or temporary

drainage swales. Use check dams or ditches

to divert runoff around excavations. Refer to

the Regional Water Quality Control Board's

where construction is not immediately planned.

☐ Schedule excavation and grading work during

Perform major equipment repairs away from the

maintenance must be done on site, designate a

- ☐ Never clean brushes or rinse paint **Handling Paint Products** ontainers into a street, gutter, storm Irain, French drain, or stream. Keep all liquid paint products and wastes ☐ For water-based paints, paint out away from the gutter, street, and storm brushes to the extent possible, and rinse drains. Liquid residues from paints, thinners. into a drain that goes to the sanitary solvents, glues, and cleaning fluids are sewer. Never pour paint down a storm hazardous wastes and must be disposed of at
- For oil-based paints, paint out brushes to your local stormwater program listed on the the extent possible and clean with thinner back of this brochure). or solvent in a proper container. Filter and When thoroughly dry, empty paint cans, used reuse thinners and solvents. Dispose of brushes, rags, and drop cloths may be disposed of as garbage in a sanitary landfill. excess liquids and residue as hazardous Empty, dry paint cans also may be recycled as
- Wash water from painted buildings constructed Paint chips and dust from non-hazardous dry stripping and sand blasting may be before 1978 can contain high amounts of lead, swept up or collected in plastic drop cloths even if paint chips are not present. Before you begin stripping paint or cleaning pre-1978 and disposed of as trash. building exteriors with water under high Chemical paint stripping residue and chips and dust from marine paints or paints containing lead, mercury or tributyl tin must be disposed of as hazardous wastes

**Paint Removal** 

Lead based paint removal requires a state-certified contractor. exteriors with high-pressure water, block storm drains. Direct wash water onto a dir area and spade into soil. Or, check with find out if you can collect (mop or vacuum) building cleaning water and dispose to the sanitary sewer. Sampling of the water may be required to assist the wastewater

#### treatment authority in making its decision Recycle/Reuse Leftover Paints never Possible

(latex) paint, or return to supplier. unwanted paint, as hazardous waste

# Recycle or donate excess water-based

# Reuse leftover oil-based paint, Dispose

- of non-recyclable thinners, sludge and Unopened cans of paint may be able to be returned to the paint vendor. Check with the vendor regarding its "buy-back" policy
- secured tarps or plastic sheeting. **Dewatering Operations** 1. Check for Toxic Pollutants
- Call your local wastewater treatment must be tested. If contamination is suspected, have the water tested by a certified laboratory.
- be required to collect and haul pumped groundwater offsite for treatment and lisposal at an appropriate treatment Check for Sediment Levels

## Erosion and Sediment Control Field Manual for Storm Drain Pollution

Soil excavation and grading operations loosen large amounts of soil that can flow or blow into storn drains when handled improperly. Sediments in runoff can clog storm drains, smother aquatic life, and destroy habitats in creeks and the Bay. Effective erosion control practices reduce the amount of runof crossing a site and slow the flow with check dams or

# and Dewatering

Discharging sediment-laden water from a dewatering site into any water of the state without treatment is prohibited.

- Check for odors, discoloration, or an oily
- agency and ask whether the groundwater Depending on the test results, you may be
- If the water is clear, the pumping time is less than 24 hours, and the flow rate is
- and the flow rate greater than 20 gpm. call your local wastewater treatment plan ☐ If the water is not clear, solids must be filtered or settled out by pumping to a settling tank prior to discharge. Options
- fabric wrapped around end of suction When discharging to a storm grain, protect the inlet using a barrier of burlap bags illed with drain rock, or cover inlet with filter fabric anchored under the grate. OF pump water through a grassy swale prior

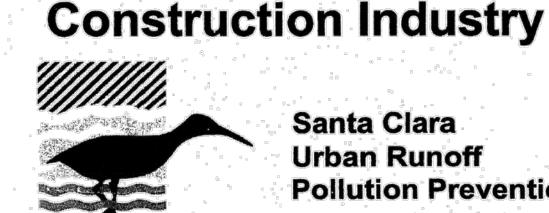
- sheen on groundwater.
- allowed to discharge pumped groundwater to the storm drain (if no sediments present) or sanitary sewer. OR, you may
- ess than 20 gallons per minute, you may pump water to the street or storm drain. If the pumping time is more than 24 hours
- Pumping through a perforated pipe sunk part way into a small pit filled Pumping from a bucket placed below water level using a submersible pump

Pumping through a filtering device

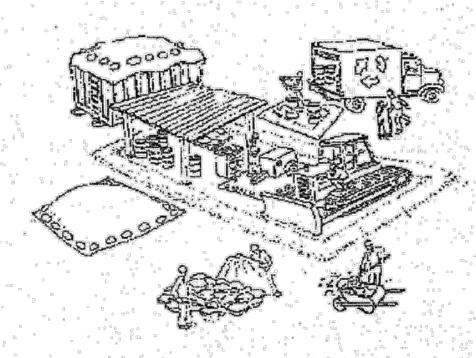
such as a swimming pool filter or filter

# Blueprint for a Clean Bay

caused by your subcontractors or employees. **Best Management Practices for the** 



Santa Clara **Urban Runoff Pollution Prevention Program** 



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DESIGNED BY:	APPROVED BY: CITY OF LOS ALTOS	DATE:	0
LARRY LIND		OCTOBER, 2003	8
DRAWN BY:	Jun 106 48056	SCALE:	9
VICTOR CHEN	OTY ENGINEER . RC.E.	N.T.S.	
CHECKED BY: JIM GUSTAFSON	SHEET OF SHEETS	DRAWING NO:	
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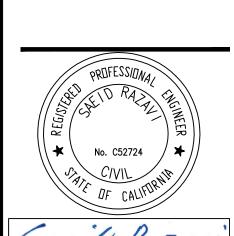
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DING



Prepared by: S.P. Checked by:

222005

# Construction Best Management Practices

- Home builders
- Construction sites are common sources of storm wash into a storm drain, gutter, or street have a direct impact on local creeks and the Bay.

# Site supervisors

## Doing The Job Right

Maintain equipment properly.

Seneral Principals Keep an orderly site and ensure good housekeeping practices are used.

Cover materials when they are not in use.

and drainage channels ☐ Ensure dust control water doesn't leave site or discharge to storm drains. **Advance Planning To Prevent Pollution** Schedule excavation and grading activities for

dry weather periods. To reduce soil erosion.

erosion controls before rain begins. Use the

plant temporary vegetation or place other

☐ Keep materials away from streets, storm drains

Erosion and Sediment Control Manual, available from the Regional Water Quality Control Board, Oontrol the amount of runoff crossing your site especially during excavation!) by using berms or temporary or permanent drainage ditches to divert water flow around the site. Reduce storm water runoff velocities by constructing temporary check dams or berms where appropriate.

Train your employees and subcontractors.

Make these best management practices

available to everyone who works on the construction site. Inform subcontractors about the storm water requirements and their own Designate one area of the site for auto parking, ehicle refueling, and routine equipment maintenance. The designated area should be well away from streams or storm drain inlets

piles of soil or construction materials with plastic

sheeting or temporary roofs. Before it rains.

drain to storm drains, creeks, or channels.

Place trashcans and recycling receptacle

Keep pollutants off exposed surfaces.

around the site to minimize litter

sweep and remove materials from surfaces tha

- must be taken to an appropriate landfill or permed if necessary. Make major repairs off ☐ Keep materials out of the rain – prevent runoff contamination at the source. Cover exposed
- frequently for leaks. Place dumpsters under roofs or cover with tarps or plastic sheeting secured around the outside of the dumpster. Never clean out a dumpster by
- possible. Arrange for pick-up of recyclable materials such as concrete, asphalt, scrap metal, solvents, degreasers, cleared vegetation, paper, rock, and vehicle maintenance materials such as used oi antifreeze, batteries, and tires Dispose of all wastes properly. Many construction materials and wastes. ncluding solvents, water-based paints. vehicle fluids, broken asphalt and concrete
  - disposed of as hazardous waste. Never bury waste materials or leave them in the street or near a creek or stream bed. In addition to local building permits, yo will need to obtain coverage under the

Storm water Permit if your construction

site disturbs one acre or more. Obtain

information from the Regional Water

Quality Control Board.

Clean up leaks, drips and other spills immediately so they do not contaminate soil or groundwater or leave residue on paved surfaces. Use dry cleanup methods whenever possible. If you must use water, use just enough to keep the dust down.

Cover and maintain dumpsters. Check

hosing it down on the construction site. Set portable toilets away from storm drains. Make sure portable toilets are in good working order. Check frequently for leaks Materials/Waste Handling Practice Source Reduction — minimize

waste when you order materials. Order

Use recyclable materials whenever

only the amount you need to finish the job

wood, and cleared vegetation can be recycled. Materials that cannot be recycled

Home builders

Developers

 Buildozer, back hoe, and grading machine Dump truck drivers Site supervisors

Best Management Practices for the

General contractors

## proper erosion and sediment control from Earth-Moving Activities

roughened ground surfaces. Contaminated groundwater is a common problem in the Santa Clara Valley. Depending on soil types and site history, groundwater pumped from construction sites may be contaminated with toxics (such as oil or solvents) or laden with sediments. Any of these pollutants can harm wildlife in creeks or the Bay, o nterfere with wastewater treatment plant operation

# Cover stockpiles and excavated soil with