

RECEIVED

San Mateo County

Planning and Building Department APR 18 2018

455 County Center, 2nd Floor • Redwood City CA 94063

Mail Drop: PLN 122 • TEL (650) 363-4161 • FAX (650) 363-4849

www.co.sanmateo.ca.gov

# Planning Permit Application Form

PLN: PLN2018-00154

San Mateo County Planning and Building Department

BLD:

## Applicant/Owner Information

Applicant: Paul and Ruth Huard

Mailing Address: 350 Sequoia Ave

Palo Alto, CA

Zip: 94306

Phone, W: 8082828059

H:

E-mail Address: huard@yahoo.com, rhuard@gmail.com

FAX:

Name of Owner (1): Paul and Ruth Huard

Mailing Address: 350 Sequoia Ave

Palo Alto, CA

Zip: 94306

Phone, W: 8082828059

H:

E-mail Address: huard@yahoo.com, rhuard@g

Name of Owner (2):

Mailing Address:

Zip:

Phone, W:

H:

E-mail Address:

## Project Information

Project Location (address):

Magellan Ave

*Miramar*

Assessor's Parcel Numbers: 048 - 013 - 920

Zoning: R-1 / S94 / DR / CD

Parcel/lot size: 12,424

SF (Square Feet)

List all elements of proposed project: (e.g. access, size and location, primary and accessory structures, well, septic, tank)

Proposed project is a new, single family residence. Home will be two stories, with a two-car garage and no basement

Describe Existing Site Conditions/Features (e.g. topography, water bodies, vegetation):

Site is an undeveloped lot with a Riparian corridor at the rear.

Describe Existing Structures and/or Development:

No existing structures on the property

## Signature

We hereby certify that the information stated above and on forms, plans and other materials submitted herewith in support of the application is true and correct to the best of our knowledge. It is our responsibility to inform the County of San Mateo through our assigned project planner of any changes to information represented in these submittals.

Owner's signature:

*RNH*

Owner's signature:

Applicant's signature:

# Application for Design Review by the County Coastside Design Review Committee

County Government Center ■ 455 County Center ■ Redwood City CA 94063  
Mail Drop PLN 122 ■ 650 • 363 • 4161 ■ FAX 650 • 363 • 4849

Permit #: PLN PLN2018-00154

Other Permit #: \_\_\_\_\_

### Applicant:

Name: Paul and Ruth Huard

Address: 350 Sequoia Ave

Palo Alto, CA Zip: 94306

Phone, W: 8082828059 H: \_\_\_\_\_

Email: huard@yahoo.com, rhuard@gmail.com

### Owner (if different from Applicant):

Name: \_\_\_\_\_

Address: 350 Sequoia Ave

Zip: 94105

Phone, W: \_\_\_\_\_ H: \_\_\_\_\_

Email: \_\_\_\_\_

**RECEIVED**

SEP 12 2018

San Mateo County  
Planning Division

### Architect or Designer (if different from Applicant):

Name: BONE Structure

Address: 156 2nd Street, San Francisco, CA

Zip: 94105

Phone, W: 6506600434 H: \_\_\_\_\_

Email: aazaren@bonestructure.ca

### Project location:

APN: 4813920

Address: Magellan Ave

Half Moon Bay Zip: 94,019

Zoning: R-1 / S94 / DR / CD

Parcel/lot size: 12424 sq. ft.

### Site Description:

- Vacant Parcel
- Existing Development (Please describe): \_\_\_\_\_

### Project:

- New Single Family Residence: 5,262 sq. ft
- Addition to Residence: \_\_\_\_\_ sq. ft
- Other: \_\_\_\_\_

### Additional Permits Required:

- Certificate of Compliance Type A or Type B
- Coastal Development Permit
- Fence Height Exception (not permitted on coast)
- Grading Permit or Exemption
- Home Improvement Exception
- Non-Conforming Use Permit
- Off-Street Parking Exception
- Variance

### Describe Project:

Proposed project is a new, single family residence. Home will be two stories, with a two-car garage and no basement

Fill in Blanks:

Material

Color/Finish

Check if matches existing

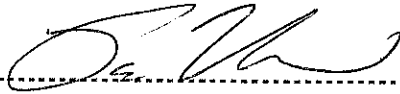
(If different from existing, attach sample)

a. Exterior walls	Stucco   Porcelain Tile   Composite panel	Off-white smooth   Gray   Wood look	<input type="checkbox"/>
b. Trim	None	N/A	<input type="checkbox"/>
c. Windows	Aluminum Clad	Charcoal	<input type="checkbox"/>
d. Doors	Aluminum Clad	Charcoal	<input type="checkbox"/>
e. Roof	Flat roof (material cannot be seen)	N/A	<input type="checkbox"/>
f. Chimneys			<input type="checkbox"/>
g. Decks & railings	Cable railings	Cable	<input type="checkbox"/>
h. Stairs	No exterior stairs	N/A	<input type="checkbox"/>
i. Retaining walls	N/A	N/A	<input type="checkbox"/>
j. Fences	N/A	N/A	<input type="checkbox"/>
k. Accessory buildings	N/A	N/A	<input type="checkbox"/>
l. Garage/Carport	Composite panel	Wood look	<input type="checkbox"/>

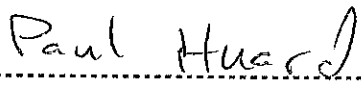
To approve this application, the County must determine that this project complies with all applicable regulations including the required findings that the project does conform to the standards and guidelines for design review applicable to the location of the project pursuant to Section 6565.10.

(optional) Applicant's Statement of project compliance with standards and guidelines (check if attached).

I hereby certify that the information stated above and on forms, plans, and other materials submitted herewith in support of the application is true and correct to the best of my knowledge. It is my responsibility to inform the County of San Mateo through my assigned project planner of any changes to information represented in these submittals.



Owner:



Applicant:

9/12/18

Date:

9/12/18

Date:

# Environmental Information Disclosure Form

RECEIVED  
 Planning and Building Department

PLN 2018-00154 APR 18 2018

BLD \_\_\_\_\_  
**San Mateo County**  
**Planning and Building Department**

Project Address: Magellan Ave, *Miramar*

Name of Owner: Paul and Ruth Huard

Address: 350 Sequoia Ave

Palo Alto Phone: 8082828059

Assessor's Parcel No.: 048 — 013 — 920

Name of Applicant: Paul and Ruth Huard

Address: 350 Sequoia Ave

Zoning District: R-1 / S94 / DR / CD

Palo Alto Phone: 8082828059

## Existing Site Conditions

Parcel size: 12,424sf

Describe the extent and type of all existing development and uses on the project parcel, including the existence and purpose of any easements on the parcel, and a description of any natural features on the project parcel (i.e. steep terrain, creeks, vegetation). Proposed project is a new, single family residence. Home will be two stories + two-car garage, no basement

Proposed project is a new, single family residence. Home will be two stories + two-car garage, no basement

Site is an undeveloped lot with a Riparian corridor at the rear. No existing structures on the property.

## Environmental Review Checklist

### 1. California Environmental Quality Act (CEQA) Review

Yes	No	Will this project involve:
<input type="checkbox"/>	<input type="checkbox"/>	a. Addition to an existing structure > 50% of the existing area OR > 2,500 sq. ft?
<input type="checkbox"/>	<input type="checkbox"/>	b. Construction of a new multi-family residential structure having 5 or more units?
<input type="checkbox"/>	<input checked="" type="checkbox"/>	c. Construction of a commercial structure > 2,500 sq.ft?
<input type="checkbox"/>	<input checked="" type="checkbox"/>	d. Removal of mature tree(s) ( ≥ 6" d.b.h. in Emerald Lake Hills area or ≥ 12" d.b.h. in any residential zoning district)? If yes, how many trees to be removed? _____
<input type="checkbox"/>	<input type="checkbox"/>	e. Land clearing or grading? If yes, please state amount in cubic yards (c.y.): Excavation : <sup>85</sup> _____ c.y. Fill: <sup>25</sup> _____ c.y.
<input type="checkbox"/>	<input type="checkbox"/>	f. Subdivision of land into 5 or more parcels?
<input type="checkbox"/>	<input type="checkbox"/>	g. Construction within a State or County scenic corridor?
<input type="checkbox"/>	<input type="checkbox"/>	h. Construction within a sensitive habitat?
<input type="checkbox"/>	<input type="checkbox"/>	i. Construction within a hazard area (i.e. seismic fault, landslide, flood)?
<input type="checkbox"/>	<input type="checkbox"/>	j. Construction on a hazardous waste site (check with Co. Env. Health Division)?

**Please explain all "Yes" answers:**

New construction of a single family home, site will require grading for foundation and driveway, riparian corridor on site.

Signature required on reverse →



2. National Marine Fisheries Rule 4(d) Review		
Yes	No	Will the project involve:
<input type="checkbox"/>	<input checked="" type="checkbox"/>	a. Construction outside of the footprint of an existing, legal structure?
<input type="checkbox"/>	<input checked="" type="checkbox"/>	b. Exterior construction within 100-feet of a stream?
<input type="checkbox"/>	<input checked="" type="checkbox"/>	c. Construction, maintenance or use of a road, bridge, or trail on a stream bank or unstable hill slope?
<input checked="" type="checkbox"/>	<input type="checkbox"/>	d. Land-use within a riparian area?
<input type="checkbox"/>	<input checked="" type="checkbox"/>	e. Timber harvesting, mining, grazing or grading?
<input type="checkbox"/>	<input checked="" type="checkbox"/>	f. Any work inside of a stream, riparian corridor, or shoreline?
<input type="checkbox"/>	<input checked="" type="checkbox"/>	g. Release or capture of fish or commerce dealing with fish?
<b>Please explain any "Yes" answers:</b>		
There is a riparian corridor on the property, the home will respect the required 30ft setback from the corridor.		

3. National Pollutant Discharge Elimination System (NPDES) Review		
Yes	No	Will the project involve:
<input type="checkbox"/>	<input checked="" type="checkbox"/>	a. <u>A subdivision or Commercial / Industrial Development that will result in the addition or replacement of 10,000 sq. ft. or more of impervious surface?</u> If yes, Property Owner may be required to implement appropriate source control and site design measures and to design and implement stormwater treatment measures, to reduce the discharge of stormwater pollutants. Please consult the Current Planning Section for necessary forms and both construction and post-construction requirements.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	b. <u>Land disturbance of 1 acre or more of area?</u> If yes, Property Owner must file a Notice of Intent (NOI) to be covered under the statewide General Construction Activities Storm Water Permit (General Permit) <b>prior</b> to the commencement of construction activity. Proof of coverage under State permit must be demonstrated prior to the issuance of a building permit.

**Certification**

I hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this initial evaluation to the best of my ability, and the facts, statements and information presented are true and correct to the best of my knowledge and belief. **If any of the facts represented here change, it is my responsibility to inform the County.**

Signed:  Date: 4-18-2018

(Applicant may sign)

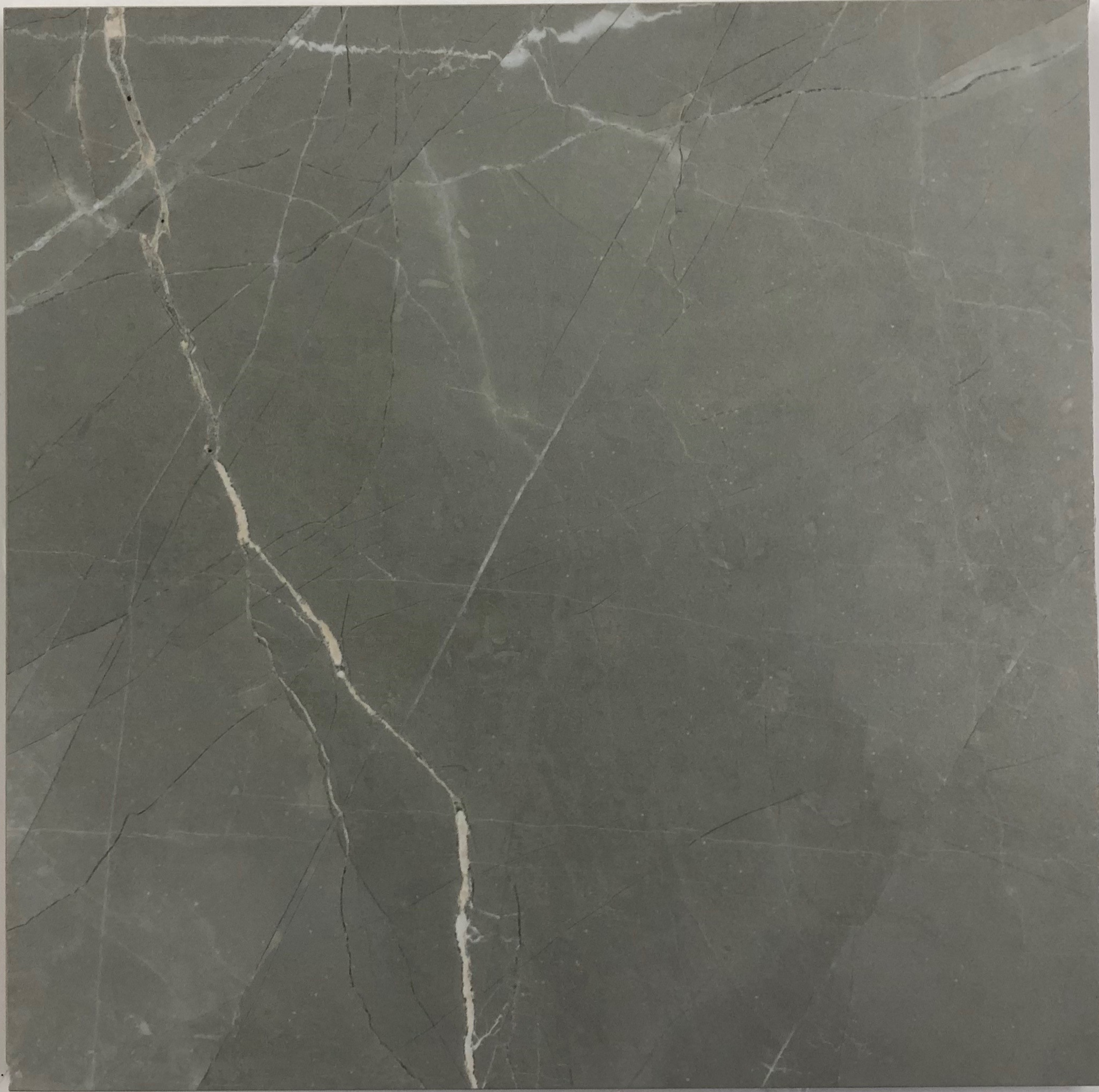




**WIN**  
Window Finish  
Kolbe Windows | Corbeau



**STC1**  
Stucco  
LaHabra | Smooth Plaster Finish



**T1**  
Porcelain Tile  
Florim | Timeless | Amani Grey



**C1**  
Composite Panel  
Trespa | Meteon | Loft Brown



# 17-887 HUARD - RESIDENCE

## DESIGN REVIEW PLANS

### ARCHITECTURAL PLANS

- A. 000 Title page
- A. 002 Compositions
- A. 100 Site plan
- A. 104 First floor plan
- A. 105 Second floor plan
- A. 106 Roof plan
- A. 107 GFA / FAR Calculations
- A. 200 Front & back elevations
- A. 201 Left & Right elevations
- A. 300 Cross & Longitudinal sections

### CIVIL PLANS

- C-1 Grading And Drainage.
- C-2 Erosion Control.
- C-3 Civil Details.
- C-4 Construction BMP Checklist.

### LANDSCAPE PLANS

- LA 1\_A HardScape Plan.
- LA 1\_B GreenRoof Plan.
- LA 1\_C DriveWay Details.
- LA 1\_D Water Feature And WalkWay.
- LA 1\_E Fire Pit And BBQ Counter
- LA 2\_A Lighting Plan.
- LA 3\_A Planting Plan.
- LA 3\_B Planting\_GreenRoof Plan.
- LA 3\_C LandScape Notes And Details.
- LA 3\_D Soil Report And Preparation.
- IR\_1 Irrigation Plan.
- IR\_2 Irrigation Notes and Legend.
- IR\_3 Irrigation Details
- IR\_4 Irrigation Details and Worksheets
- TP\_1 Tree Protection Plan

Lot area	
• Total lot area	12,424 sq. ft.
Permitted (ft/m) / Proposed (ft/m)	
• Lot coverage	(30%) / (25%) 3,727 sq. ft. / 2,859.15 sq. ft.
Setbacks	
• Front yard setback	20'-0" / 20'-0"
• Side yard setback	10'-0" / 11'-0"
• Side yard setback	10'-0" / 18'-0"
• Rear yard setback	30'-0" / 30'-0"
Building depth	
• Building depth	28'-0" / 28'-3 1/4"
Floor space index	
• Gross floor area	6200sq. ft. / 5354.78sq. ft.
First floor	2849.13sq. ft.
Second floor	2505.65sq. ft.

AN AUTOMATED RESIDENTIAL FIRE SPRINKLER SYSTEM IN ACCORDANCE WITH NFPA 13D AND STATE AND LOCAL REQUIREMENTS SHALL BE INSTALLED IN THE SINGLE FAMILY DWELLING UNITS PER CRC 1313.2. FIRE SPRINKLER SYSTEM TO BE ADDRESSED IN A DEFERRED SUBMITTABLE CODES:

- 2016 CALIFORNIA BUILDING CODE (CBC)
- 2016 CALIFORNIA RESIDENTIAL CODE (CRC)
- 2016 CALIFORNIA ELECTRICAL CODE (CEC)
- 2016 CALIFORNIA MECHANICAL CODE (CMC)
- 2016 CALIFORNIA PLUMBING CODE (CPC)
- 2016 CALIFORNIA ENERGY CODE
- 2016 CALIFORNIA FIRE CODE (CFC)
- 2016 CALIFORNIA GREEN BUILDING STANDARDS CODE
- LOCAL ORDINANCES, CODES, RULES AND REGULATIONS

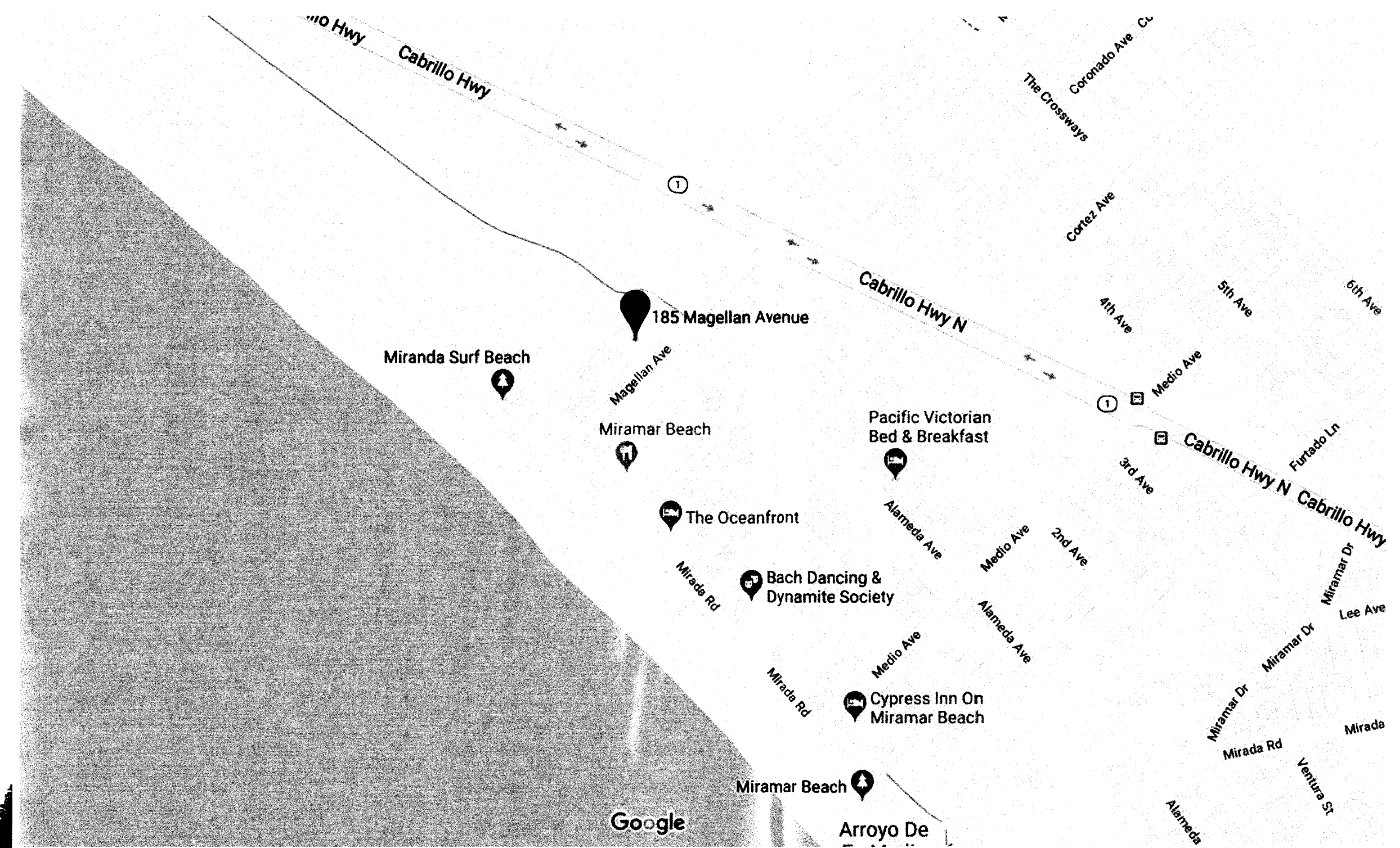
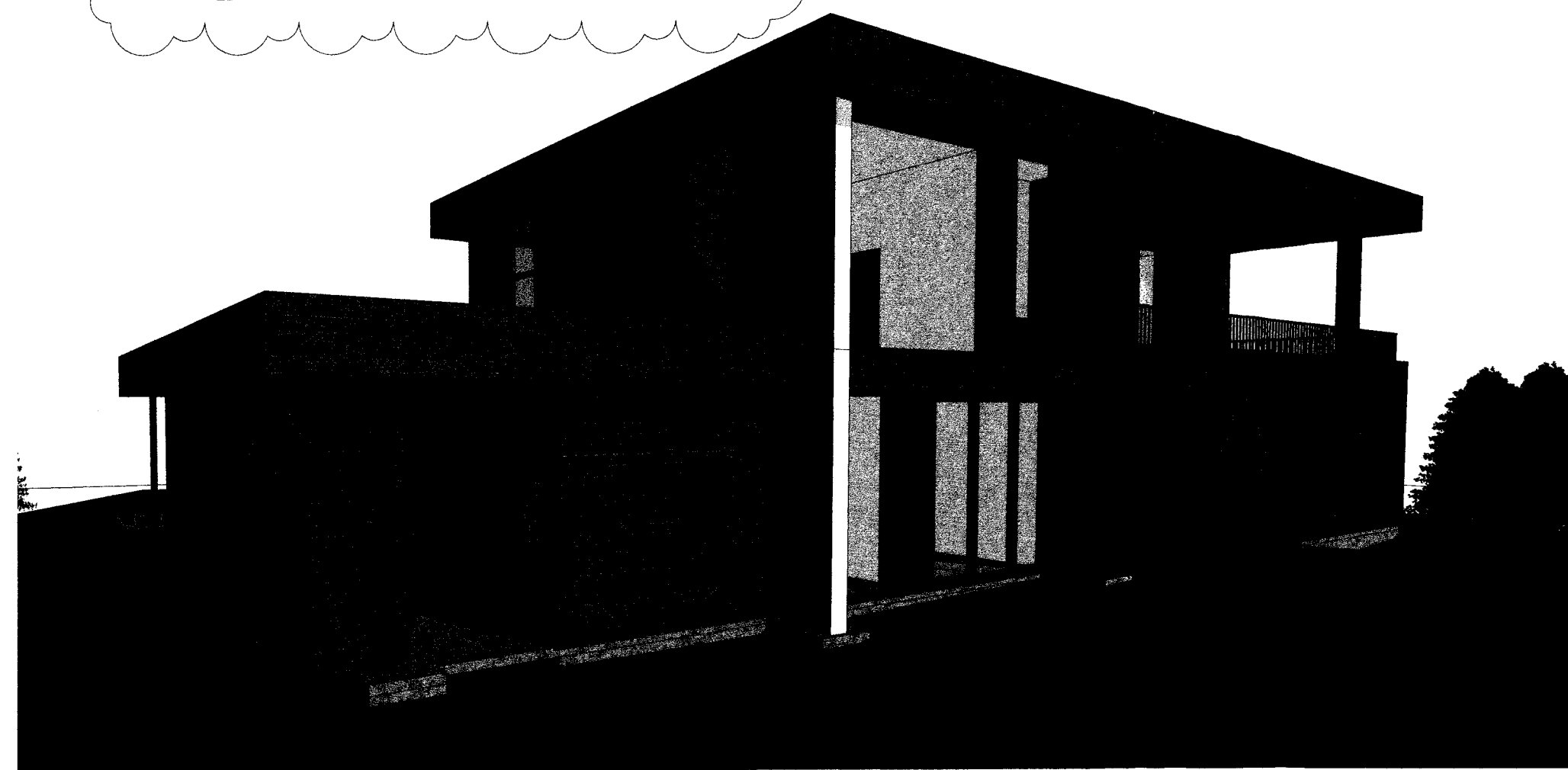
#### ARCHITECT INFORMATION

ARCHITECT: BONE STRUCTURE  
 ADDRESS: 2812, RUE JOSEPH-A. BOMBARDIER, LAVAL (QC) H7P 0E2  
 PHONE NUMBER:  
 TOLL FREE: 1 855 978 2663  
 DIRECT: 450 978 9002  
 FAX: 450 978 4917

PROJECT ADDRESS: 185 MAGELLAN AVE. MIRAMAR, CA 94019

Parcel Report For APN: 048-013-920

Net Lot Size: 12,424 sq. ft.  
 Zone Dist: R-1-S94-DR/CD  
 Flood Zone: no  
 Historic Status: no  
 Traffic Imp. Dist.: no  
 Max. Lot Coverage: 3,727 sq. ft.  
 Max Height to Ridge: 28'-0"  
 Special Setbacks: NA



PLN2018-00154

RECEIVED  
 JUL 9 2019  
 San Mateo County  
 Planning Division

THE FOLLOWING PLANS, PROVIDED BY BONE STRUCTURE, ARE FOR INFORMATION REGARDING THE CONSTRUCTION OF THE PROJECT BY A LICENSED DEALER. BONE STRUCTURE IS THE SUPPLIER OF A STRUCTURAL SYSTEM THAT INCLUDES THE ANCHORS NECESSARY FOR THE EXTERIOR AND INTERIOR FINISHING. ALL OTHER SYSTEMS ARE SHOWN ONLY FOR UNDERSTANDING AND ARE UNDER THE RESPONSIBILITY OF THE BUILDER.

DATE : 2019/07/02

\* THESE PLANS ARE NOT FOR CONSTRUCTION.



\* THESE PLANS ARE NOT FOR CONSTRUCTION



\* NOTE  
 - THE R VALUES PROVIDED ARE ZONE 4 EFFECTIVE INSULATION VALUES  
 - UPPERCASE LETTER : INCLUDED  
 - Lowercase letter : NOT INCLUDED

**F1** **GRADE BEAM W/ MAT SLAB**  
 - 18" Grade beam w mat slab  
 - ANCHOR INSTALLED WHEN CASTING  
 - Waterproofing membrane (Grace Procor fluid applied waterproofing or equivalent)

**W1** **HORIZONTAL WOOD SIDING (R25.5)**  
 - Wood siding (Horizontal)  
 - 1 3/4" Air space  
 - 3/4" wood furring @ 16" c/c (Vertical)  
 - 3 3/8" "Z" BARS @ 18" c/c HORIZONTALLY  
 - 2 1/2" Sprayed urethane-based foam  
 - 3" RIGID INSULATION PANEL, EXPANDED POLYSTYRENE  
 - 1" STEEL SUPPORT WITH THERMAL BREAK  
 - 4"x 4" GALVANIZED STEEL COLUMN @ 5'-0" c/c  
 - 1/4" FURRING ANCHOR  
 - 7/8" METALLIC FURRING @ 16" c/c HORIZONTALLY  
 - 1/2" Gypsum

**W2** **STUCCO (R25.5)**  
 - Stucco  
 - 1 3/4" Air space  
 - 3/4" wood furring @ 16" c/c (Vertical)  
 - 3 3/8" "Z" BARS @ 18" c/c HORIZONTALLY  
 - 2 1/2" Sprayed urethane-based foam  
 - 3" RIGID INSULATION PANEL, EXP. POLYSTYRENE  
 - 1" STEEL SUPPORT WITH THERMAL BREAK  
 - 4"x 4" GALVANIZED STEEL COLUMN @ 5'-0" c/c  
 - 1/4" FURRING ANCHOR  
 - 7/8" METALLIC FURRING @ 16" c/c HORIZONTALLY  
 - 1/2" Gypsum

**W3** **STUCCO - BUILD OUT (R25.5)**  
 - Stucco  
 - 6 7/8" Air space  
 - 3/4" wood furring @ 16" c/c (Diagonal)  
 - 5 3/8" "Z" BARS @ 18" c/c VERTICALLY  
 - 3 3/8" "Z" BARS @ 18" c/c HORIZONTALLY  
 - 2 1/2" Sprayed urethane-based foam  
 - 3" RIGID INSULATION PANEL, EXPANDED POLYSTYRENE  
 - 1" STEEL SUPPORT WITH THERMAL BREAK  
 - 4"x 4" GALVANIZED STEEL COLUMN @ 5'-0" c/c  
 - 1/4" FURRING ANCHOR  
 - 7/8" METALLIC FURRING @ 16" c/c HORIZONTALLY  
 - 1/2" Gypsum

**W4** **STUCCO - BUILD OUT(Non Insulated) (R25.5)**  
 - Stucco  
 - 1/2" Gypsum  
 - 3/4" wood furring @ 16" c/c (Diagonal)  
 - 5 3/8" "Z" BARS @ 18" c/c VERTICALLY  
 - 4 3/8" "Z" BARS @ 18" c/c HORIZONTALLY  
 - 2 1/2" Sprayed urethane-based foam  
 - 4 3/8" "Z" BARS @ 18" c/c HORIZONTALLY  
 - 5 3/8" "Z" BARS @ 18" c/c VERTICALLY  
 - 3/4" wood furring @ 16" c/c (Diagonal)  
 - 1/4" FURRING ANCHOR  
 - 1/2" Gypsum  
 - 3/4" Stucco

**P1** **TYPICAL FLOOR**  
 - Floor finish  
 - 3/4" PLYWOOD  
 - 17" GALVANIZED STEEL JOIST  
 - "C" BARS @ 1'-8" c/c  
 - 1/4" FURRING ANCHOR  
 - 7/8" METALLIC FURRING  
 - 1/2" Gypsum

**P2** **FLOOR - INSULATED**  
 - Floor finish  
 - 3/4" PLYWOOD  
 - 17" GALVANIZED STEEL JOIST  
 - "C" BARS @ 1'-8" c/c  
 - 3" RIGID INSULATION PANEL, EXPANDED POLYSTYRENE  
 - 1/4" FURRING ANCHOR  
 - 7/8" METALLIC FURRING  
 - 5/8" Gypsum

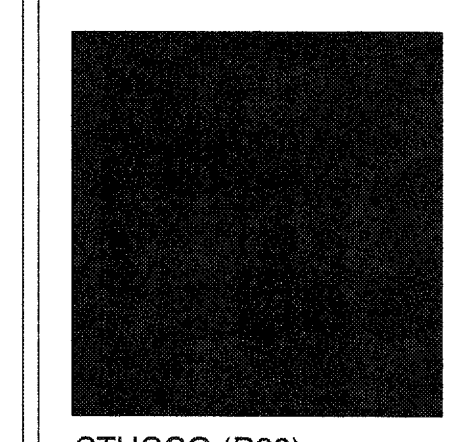
**P3** **SLAB ON GRADE (R1.0)**  
 - Floor finish  
 - 4" concrete mat slab  
 - Vapour barrier  
 - 2" rigid insulation panel

**P4** **GARAGE SLAB**  
 - 6" concrete mat slab  
 - Vapour barrier  
 - Subbase per site conditions

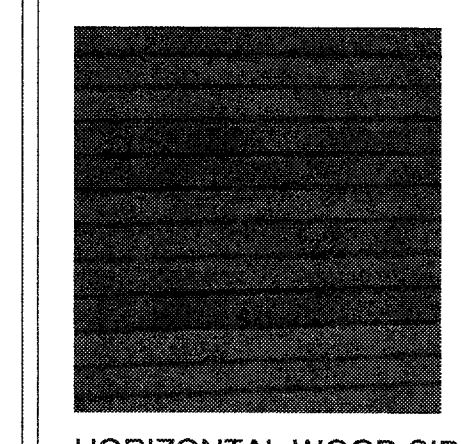
**R1** **TYPICAL ROOF (2% SLOPE) (R50)**  
 - Johns-Manville Dyna-Glas, Dyna-Base membrane systems or equivalent  
 - 3/4" PLYWOOD  
 - 5" Tapered insulation  
 - 4 1/2" SIP  
 - 2" Sprayed urethane-based foam  
 - 7" BARS WITH INTEGRATED SLOPE  
 - 17" GALVANIZED STEEL JOIST  
 - "C" BARS @ 5'-0" c/c  
 - 1/4" FURRING ANCHOR  
 - 7/8" METALLIC FURRING  
 - 1/2" Gypsum

**R2** **BALCONY**  
 - Terrace finish  
 - Wood structure with inverse integrated slope  
 - 1/2" rubber pad  
 - Johns-Manville Dyna-Glas, Dyna-Base membrane systems or equivalent  
 - 3/4" Plywood  
 - 7" BARS WITH INTEGRATED SLOPE  
 - 17" GALVANIZED STEEL JOIST  
 - "C" BARS @ 5'-0" c/c  
 - 1/4" FURRING ANCHOR  
 - 3/4" Wood furring  
 - Exterior finish

**R3** **CANOPY**  
 - Wood Siding  
 - 3/4" wood furring @ 16" c/c (Vertical)  
 - 3/4" Plywood  
 - 7" BARS WITH INTEGRATED SLOPE  
 - 17" GALVANIZED STEEL JOIST  
 - "C" BARS @ 5'-0" c/c  
 - 1/4" FURRING ANCHOR  
 - 3/4" Wood furring  
 - Exterior finish (Metallic cladding)



STUCCO (R29)



HORIZONTAL WOOD SIDING (R29)

**Simple Concept**

2812 JOSEPH A. BOMBARDIER, LAVAL, QC, CA H7P 6E2  
 T.450.978.0602 FAX.450.978.4917

THESE PLANS, PROVIDED BY BONE STRUCTURE, ARE FOR INFORMATION ONLY REGARDING THE CONSTRUCTION OF THE PROJECT BY AN AUTHORIZED DEALER. BONE STRUCTURE IS THE SUPPLIER OF A STRUCTURAL SYSTEM THAT INCLUDES THE ANCHORS REQUIRED FOR INDOOR AND OUTDOOR FINISH. OTHER BUILDING SYSTEMS ARE LISTED AND SHOWN FOR INFORMATIONAL PURPOSES AND ARE THE RESPONSIBILITY OF THE MANUFACTURER.

DATE	REVISION	BY	NO.
2018-09-10	Response To Comments	AR	2
2018-04-06	Design Review	AR	1

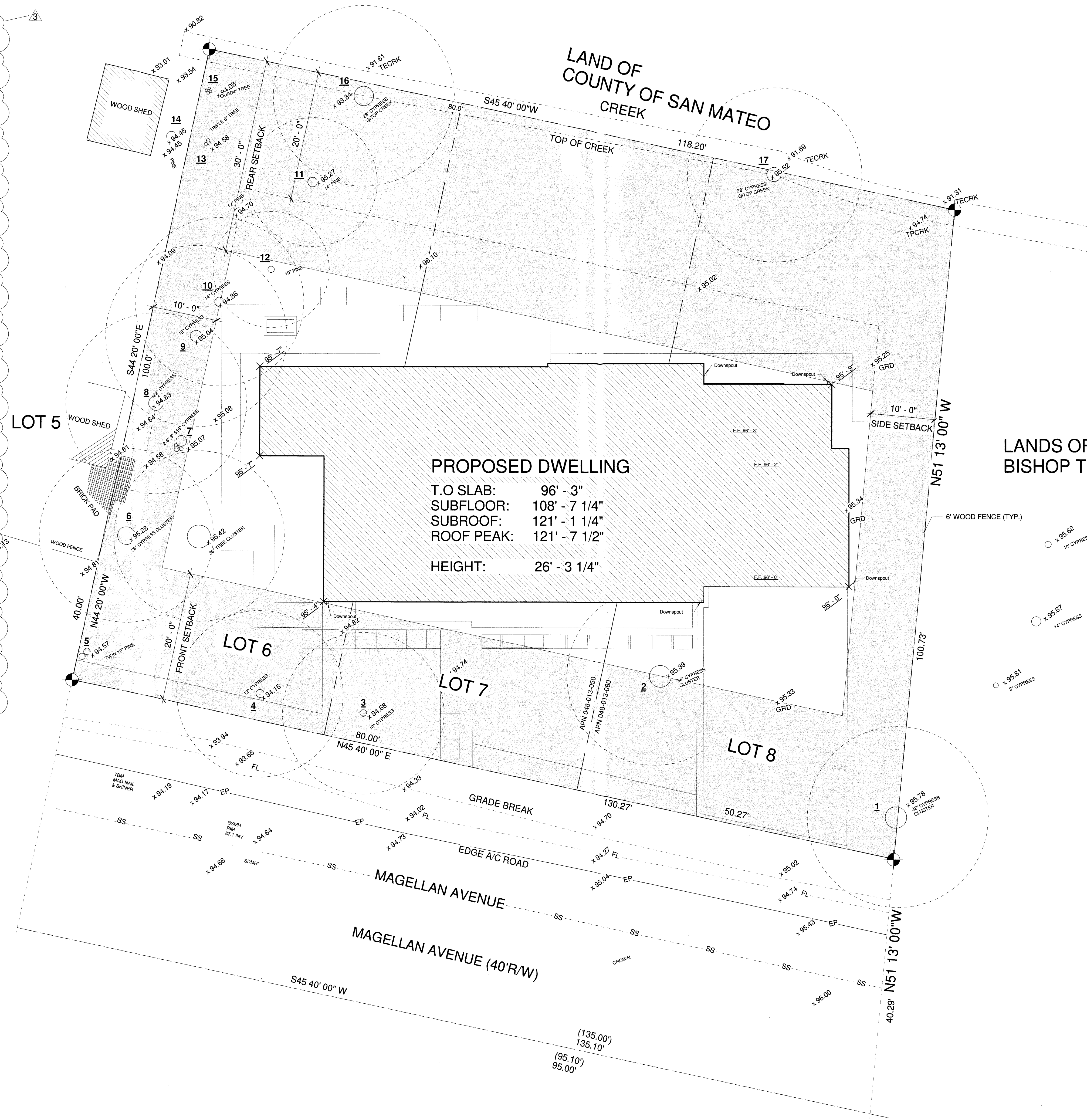
PROJECT  
**HUARD - RESIDENCE**  
 17-887  
 185, MAGELLAN AVENUE  
 MIRAMAR, CALIFORNIA ,94019

DRAWING TITLE	Compositions	DRAWN BY	AR
		CHECK BY	BONE Structure
SCEAU		DATE	2018/09/10
		SCALE	1" = 1'-0"
		REVISION	2
		PAGE	A. 002



**Notes:**

- An encroachment permit may be required from the Parks Department for any work performed on the trees.
- Geo-grid will be used to minimize grading for the two trees which is directly in front of the house north and south of the driveway.
- Tree protection zones should be established and maintained throughout the entire length of the project.
- Fencing for the protection zones should be 6 foot tall metal chain link supported by cinder blocks.
- The support poles should be spaced no more than 10 feet apart on center.
- The location for the protection fencing should be as close to the dripline as possible still allowing room for construction to safely continue.
- Signs should be placed on fencing signifying "Tree Protection Zone - Keep Out".
- No materials or equipment should be stored or cleaned inside the tree protection zones.
- Areas outside the fencing but still beneath the dripline of protected trees, where foot traffic is expected to be heavy, should be mulched with 4 to 6 inches of chipper chips.
- No neighboring trees will be affected or have work performed within 4 times the trees' DBH measured at 48 inches above ground level.
- The general contractor is responsible for contacting the Project Arborist in a timely manner to have the Project Arborist review all work performed within the dripline of protected trees.
- No self-propelled equipment may enter the dripline of trees. The Project Arborist is to monitor work within the dripline of trees.
- The Tree Protection Plan is to be included on full size sheets of the construction plans.
- 6 inches of mulch will be laid down and covered with steel plates or 1 inch thick plywood during the construction period.
- The excavation of any driveway within the root zone (10xDBH) of a protected tree to be covered with Geo-Grid fabric with compatible base-rock.
- Paving material should be porous.
- The Project Arborist will be on site for the excavation and to document the use of geo-grid fabric.
- Trenching for irrigation, electrical, drainage or any other reason should be dug with care when beneath the driplines of protected trees. Carefully laying pipes below or beside protected roots will dramatically reduce root loss of desired trees thus reducing trauma to the entire tree. Trenches should be backfilled as soon as possible with native material and compacted to near its original level. Trenches that must be left exposed for a period of time should also be covered with layers of burlap or straw wattle and kept moist. Plywood over the top of the trench will also help protect exposed roots below. All work within the dripline of protected trees is to be done with care.
- Normal, natural, irrigation should be maintained throughout the entire length of the project. Some irrigation may be required during the dry months depending on the seasonal rainfall. However, all living trees are naturally occurring and thriving with no previous human intervention. Mulching the root zone of protected trees will help the soil retain moisture, thus reducing water consumption. The Project Arborist is to determine the irrigation schedule for protected trees. The general contractor is expected to apply supplemental water at the direction of the Project Arborist.
- Prior to the commencement of construction operations, clearance pruning of protected trees is to be properly completed. All trimming will be carried out within ANSI standards and Best Management Practices. The Project Arborist will supervise any tree trimming on site. Ornamental trimming will be done during the landscape phase of the project. The Project Arborist will inspect all trimming. All tree trimming will adhere to ANSI 300 standards and Best Management Practices and City of San Mateo ordinances.
- Prior to the commencement of demolition or construction operations, all appropriate tree protection measures are to be properly implemented and inspected by the Project Arborist. Prior to the issuance of demolition permits, the Project Arborist is to submit a letter by fax or email to the city planner assigned to this project verifying that all tree protection measures are properly implemented and clearance pruning of the trees has been completed. Monthly inspections by the Project Arborist are required for a site such as this.
- The Project Arborist will inspect the tree protection measures and tree trimming prior to the start of construction. The Project Arborist will conduct inspections of the site as required by the City of San Mateo. Inspections will include an inspection letter provided for the owner, contractor and city arborist. The information included in this report is believed to be true and based on sound arboricultural principles and practices.



**PROPOSED DWELLING**  
 T.O SLAB: 96' - 3"  
 SUBFLOOR: 108' - 7 1/4"  
 SUBROOF: 121' - 1 1/4"  
 ROOF PEAK: 121' - 7 1/2"  
 HEIGHT: 26' - 3 1/4"

**Zoning and Site Restrictions Notes**

Municipality and Project Information		
Project type and description	New single Family Dwelling	
Municipality	San Mateo County, California	
Zoning designation	R-1.1 (S4) (20) / CD	
Lot area		
Total lot area	12,404 sq. ft. / 1134 221 sq. ft.	
Lot coverage		
Permitted (ft <sup>2</sup> )	2756	
Proposed (ft <sup>2</sup> )	2756 (100%)	
Setbacks		
Front yard setback	20'-0"	20'-0"
Side yard setback	10'-0"	10'-0"
Side yard setback	10'-0"	10'-0"
Rear yard setback	30'-0"	30'-0"
Building depth		
Building depth	N/A	Variates on site
Building height	26'-0"	26'-3 1/4"
Floor space index	N/A	N/A
Gross floor area	8000 sq. ft.	5281.75 sq. ft.
Landscaping - Front		
Front yard area	N/A	1000 sq. ft.
Driveway area	N/A	1000 sq. ft.
Total landscaping area	100%	100%
Soft landscaping area	100%	100%
Landscaping - Rear		
Rear yard area	N/A	1000 sq. ft.
Total landscaping area	100%	100%
Soft landscaping area	100%	100%

\* THESE PLANS ARE NOT FOR CONSTRUCTION.



**SimpleConcept**  
 2812 JOSEPH A. BOMBARDIER, LAVAL, QC, CA H7P 6E2  
 T: 450.978.0602 FAX: 450.978.4917

THESE PLANS, PROVIDED BY BONE STRUCTURE, ARE FOR INFORMATION ONLY REGARDING THE CONSTRUCTION OF THE PROJECT BY AN AUTHORIZED DEALER. BONE STRUCTURE IS THE SUPPLIER OF A STRUCTURAL SYSTEM THAT INCLUDES THE ANCHORS REQUIRED FOR INDOOR AND OUTDOOR FINISH. OTHER BUILDING SYSTEMS ARE LISTED AND SHOWN FOR INFORMATIONAL PURPOSES AND ARE THE RESPONSIBILITY OF THE MANUFACTURER.

DATE	REVISION	BY	NO.
2018-07-02	Response To Com	MJK	3
2018-09-10	Response To Comments	AR	2
2018-04-06	Design Review	AR	1

PROJECT	
<b>HUARD - RESIDENCE</b>	
17-887	
185, MAGELLAN AVENUE MIRAMAR, CALIFORNIA, 94019	
DRAWING TITLE	DRAWN BY
Site plan	AR
	CHECK BY
	BONE Structure
SCEAU	DATE
	2019/07/02
	SCALE
	As indicated
	REVISION
	3
	PAGE
	A. 100

© 2017 Simple Concept Inc. | BONE Structure® is a registered trademark of Simple Concept Inc. at all utilities, no license or exclusive license by Simple Concept Inc. All rights reserved. © 2017 Simple Concept Inc. | BONE Structure® is a registered trademark of Simple Concept Inc. and is used under exclusive license by Simple Concept Inc. All rights reserved.





SYMBOLS, LEGEND & NOTES

- ⊗ FLOOR DRAIN
- ⊙ HARD-WIRED IONIC SMOKE ALARM AND CARBON MONOXIDE DETECTOR, INTERCONNECTED (per 9.10.19.5) WITH BATTERY BACKUP (per 9.10.19.4)
- ⊕ TEMPERED OR LAMINATED SAFETY GLASS, CONFORM TO CAN/CBSB-12.1-M per 9.6.1.4
- ⊖ UNOBSTRUCTED OPENING OF NOT LESS THAN 0.35 m<sup>2</sup> IN AREA WITH NO DIMENSION LESS THAN 380mm.
- ⊞ FAN
- ⊚ EXTERIOR LIGHTING OUTLET WITH INTERIOR SWITCH PER 9.34.2.1
- ⊛ LIGHTING OUTLET WITH 3-WAYS WALL SWITCH PER 9.34.2.3
- ⊜ MIN. 1070 MM HIGH GUARDRAIL DESIGNED TO WITHSTAND THE SPECIFIED LATERAL LOADS PER 4.1.5.1.4
- BR BRACING TAG

- ⊖1 HORIZONTAL WOOD SIDING
- ⊖2 STUCCO
- ⊖3 STUCCO (BUILT OUT)

## Simple Concept

2812 JOSEPH-A, BOMBARDIER, LAVAL, QC, CA H7P 6E2  
T: 450.978.0602 FAX: 450.978.4917

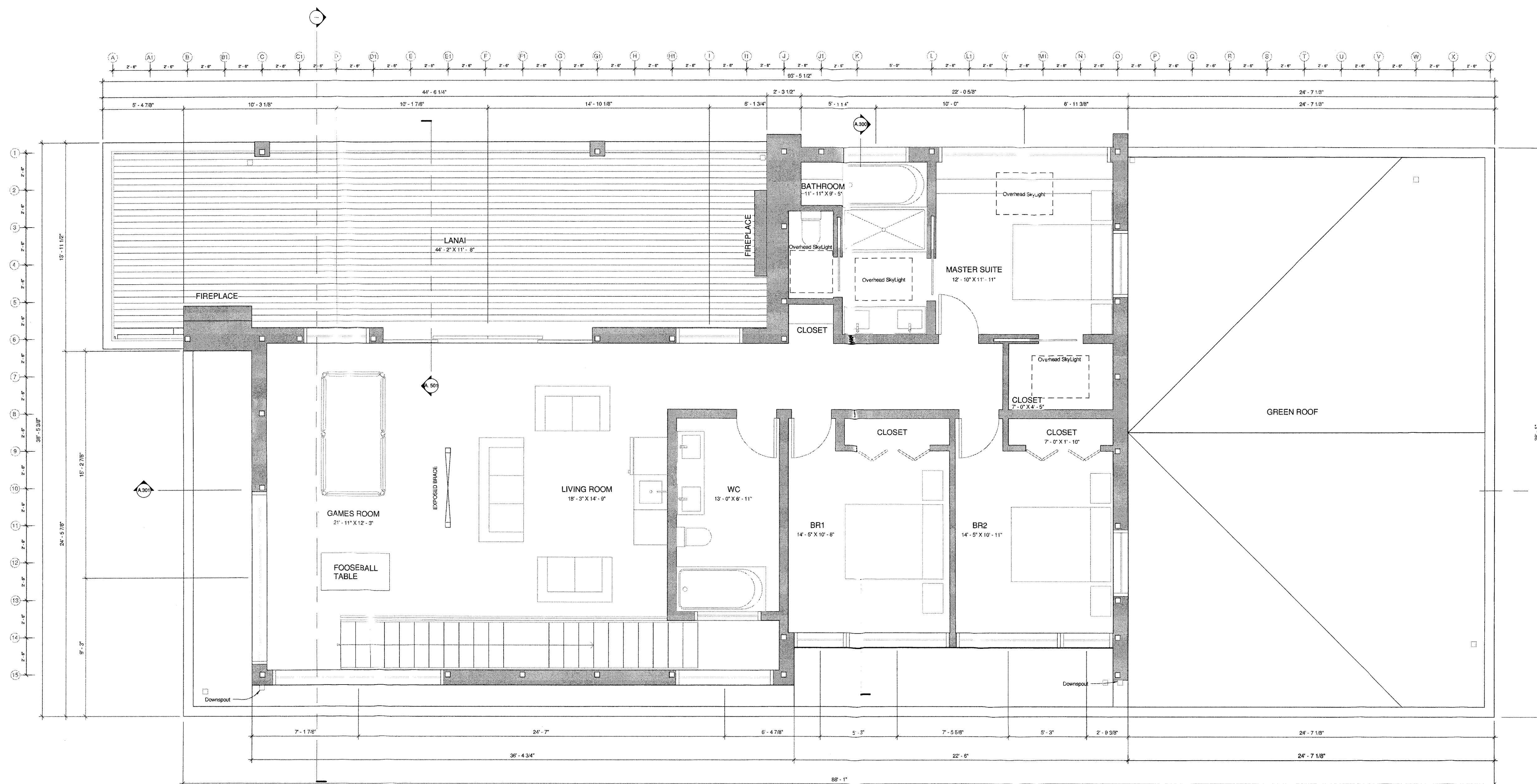
THESE PLANS, PROVIDED BY BONE STRUCTURE, ARE FOR INFORMATION ONLY REGARDING THE CONSTRUCTION OF THE PROJECT BY AN AUTHORIZED DEALER. BONE STRUCTURE IS THE SUPPLIER OF A STRUCTURAL SYSTEM THAT INCLUDES THE ANCHORS REQUIRED FOR INDOOR AND OUTDOOR FINISH. OTHER BUILDING SYSTEMS ARE LISTED AND SHOWN FOR INFORMATIONAL PURPOSES AND ARE THE RESPONSIBILITY OF THE MANUFACTURER.

DATE	REVISION	BY	NO.
2018-09-10	Response To Comments	AR	2
2018-04-08	Design Review	AR	1

PROJECT  
**HUARD - RESIDENCE**  
17-887  
185, MAGELLAN AVENUE  
MIRAMAR, CALIFORNIA, 94019

DRAWING TITLE	DRAWN BY
First floor plan	AR
SCEAU	CHECK BY
	BONE Structure
	DATE
	2018/09/10
	SCALE
	As indicated
	REVISION
	2
	PAGE
	A. 105

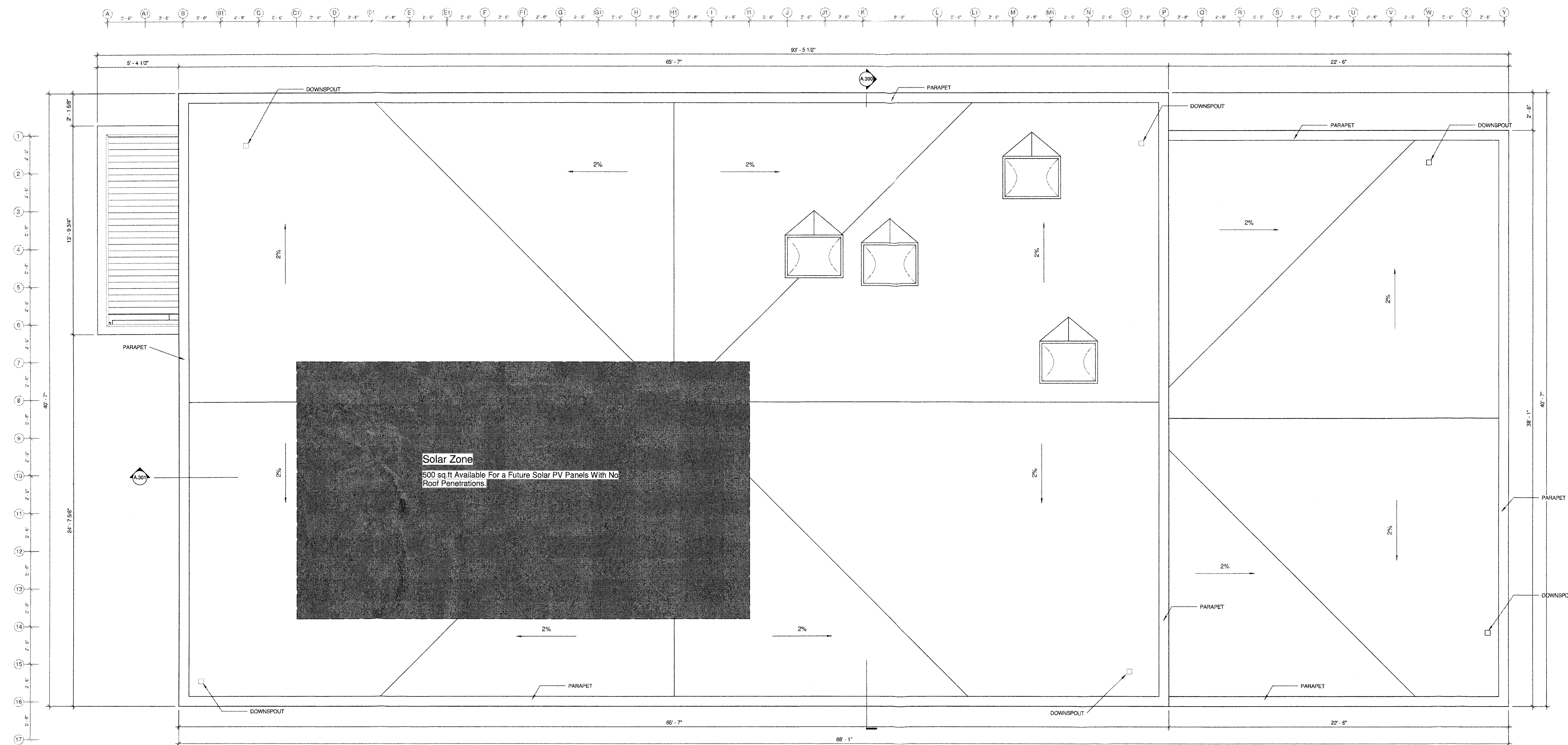
\* THESE PLANS ARE NOT FOR CONSTRUCTION



1 First Floor Plan  
1/4" = 1'-0"



\* THESE PLANS ARE NOT FOR CONSTRUCTION.



3 Roof Plan  
1/4" = 1'-0"

## Simple Concept

2812 JOSEPH-A. BOMBARDIER, LAVAL, QC, CA H7P 6E2  
T: 450.978.0602 FAX: 450.978.4917

THESE PLANS, PROVIDED BY BONE STRUCTURE, ARE FOR INFORMATION ONLY REGARDING THE CONSTRUCTION OF THE PROJECT BY AN AUTHORIZED DEALER. BONE STRUCTURE IS THE SUPPLIER OF A STRUCTURAL SYSTEM THAT INCLUDES THE ANCHORS REQUIRED FOR INDOOR AND OUTDOOR FINISH. OTHER BUILDING SYSTEMS ARE LISTED AND SHOWN FOR INFORMATIONAL PURPOSES AND ARE THE RESPONSIBILITY OF THE MANUFACTURER.

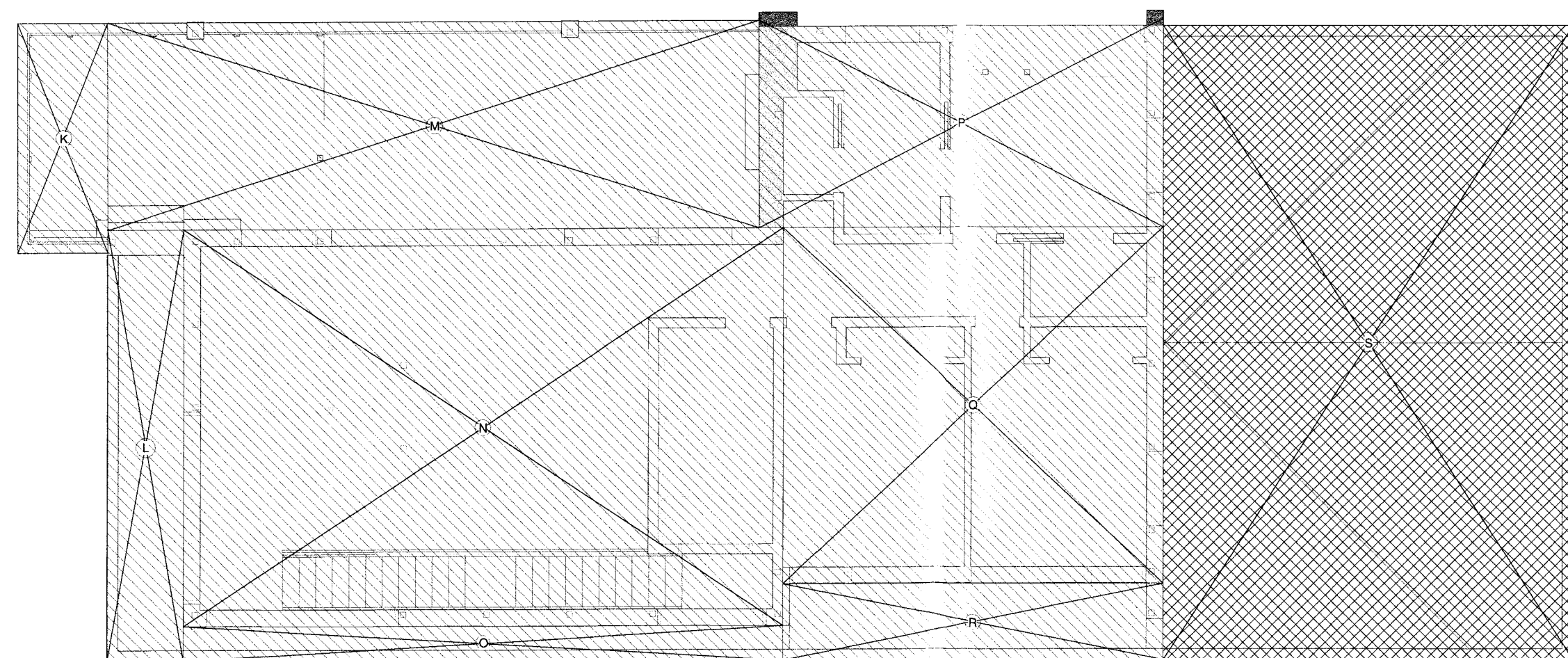
DATE	REVISION	BY	NO.
2018-09-10	Response To Comments	AR	2
2018-04-26	Design Review	AR	1

PROJECT	
<b>HUARD - RESIDENCE</b>	
17-887	
185, MAGELLAN AVENUE MIRAMAR, CALIFORNIA, 94019	
DRAWING TITLE	DRAWN BY
Roof plan	A.R
	CHECK BY
	A.A
SCEAU	DATE
	2018/09/10
	SCALE
	1/4" = 1'-0"
	REVISION
	2
	PAGE
	A. 106

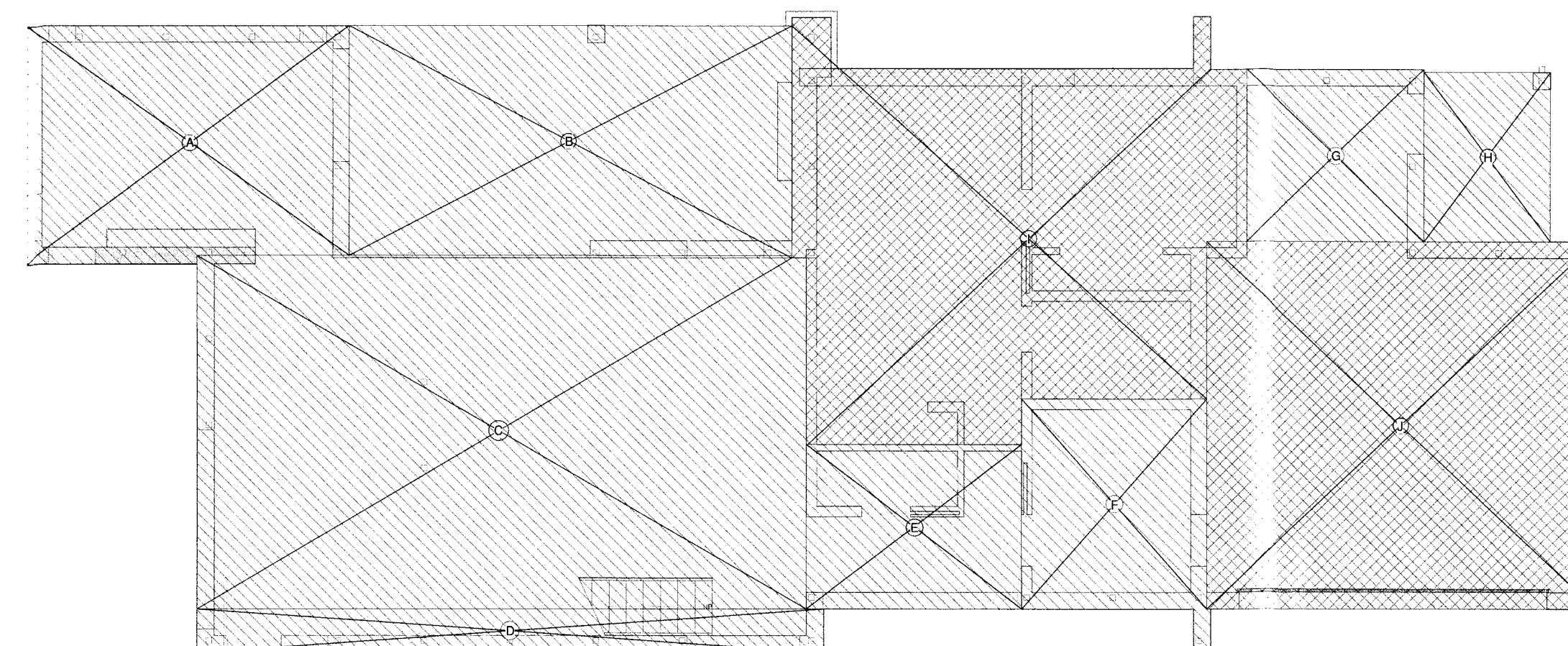
© 2017 Simple Concept Inc. BONE Structure® est une marque déposée de Simple Concept Inc. et est utilisée sous licence exclusive par Simple Concept Inc. Tous droits réservés.  
© 2017 Simple Concept Inc. BONE Structure® is a registered trademark of Simple Concept Inc. and is used under exclusive license by Simple Concept Inc. All rights reserved.



\* THESE PLANS ARE NOT FOR CONSTRUCTION.



Second Floor Plan - GFA



First Floor Plan - GFA

LOT COVERAGE CALCULATION	
A = 18' - 9 3/4" X 13' - 9 3/4"	255.93 sq.ft.
B = 25' - 8 3/8" X 13' - 3 7/8"	342.37 sq.ft.
C = 35' - 4 3/4" X 20' - 5 7/8"	725.25 sq.ft.
D = 36' - 4 3/4" X 2' - 6 1/2"	92.51 sq.ft.
E = 12' - 6" X 9' - 6 1/2"	119.27 sq.ft.
F = 12' - 2 1/4" X 10' - 9 1/4"	133.51 sq.ft.
G = 10' - 4 1/4" X 10' - 0"	103.55 sq.ft.
H = 9' - 10 1/8" X 7' - 4 1/8"	72.29 sq.ft.
I = 26' - 5 3/8" X 21' - 9 3/4"	520.92 sq.ft.
J = 22' - 8 1/4" X 21' - 3 3/4"	483.53 sq.ft.
K = 13' - 9 3/4" X 5' - 4 7/8"	74.67 sq.ft.
L = 25' - 11 7/8" X 4' - 7 1/8"	118.58 sq.ft.
M = 39' - 1 3/8" X 12' - 5 1/2"	487.30 sq.ft.
N = 36' - 0" X 23' - 10 3/4"	860.25 sq.ft.
O = 36' - 0" X 2' - 1 1/8"	75.38 sq.ft.
P = 24' - 4 1/8" X 12' - 1 1/8"	294.41 sq.ft.
Q = 22' - 10 3/4" X 21' - 4 3/4"	489.88 sq.ft.
R = 22' - 10 3/4" X 4' - 7 1/8"	105.18 sq.ft.
S = 38' - 1" X 24' - 7 1/8"	936.61 sq.ft.

Second Unit square footage

**TOTAL GFA = 5354.78 sq.ft**  
**FAR = 0.43**

**FIRST FLOOR GFA:**  
 A+B+C+D+E+F+G+H  
 255.93+342.37+725.25+92.51+119.27+133.51+103.55+72.29 = **1844.68 sq.ft**

**ADU+GARAGE GFA:**  
 I+J  
 520.92+483.53 = **1004.45 sq.ft**

**SECOND FLOOR GFA:**  
 K+L+M+N+O+P+Q+R  
 74.67+118.58+487.30+860.25+75.38+294.41+489.88+105.18 = **2505.65 sq.ft**

**LOT COVERAGE CALCULATION**  
 = A + B + C + D + E + F + G + H + I + J  
 = 255.93+342.37+725.25+92.51+119.27+133.51+103.55+  
 72.29+520.92+483.53 = **2849.13 sq.ft**

## SimpleConcept

2812 JOSEPH-A. BOMBARDIER, LAVAL, QC, CA H7P 6E2  
 T: 450.978.0602 FAX: 450.978.4917

THESE PLANS, PROVIDED BY BONE STRUCTURE, ARE FOR INFORMATION ONLY REGARDING THE CONSTRUCTION OF THE PROJECT BY AN AUTHORIZED DEALER. BONE STRUCTURE IS THE SUPPLIER OF A STRUCTURAL SYSTEM THAT INCLUDES THE ANCHORS REQUIRED FOR INDOOR AND OUTDOOR FINISH. OTHER BUILDING SYSTEMS ARE LISTED AND SHOWN FOR INFORMATIONAL PURPOSES AND ARE THE RESPONSIBILITY OF THE MANUFACTURER.

DATE	REVISION	BY	NO.
2018-07-02	Response To Com	ARK	3
2018-09-10	Response To Comments	AR	2
2018-04-06	Design Review	AR	1

PROJECT  
**HUARD - RESIDENCE**  
 17-887  
 185, MAGELLAN AVENUE  
 MIRAMAR, CALIFORNIA, 94019

DRAWING TITLE	DRAWN BY
GFA / FAR Calculations	AR
SCEAU	CHECK BY
	BONE Structure
	DATE
	2019/07/02
	SCALE
	1/8" = 1'-0"
	REVISION
	3
	PAGE
	A. 107







\* THESE PLANS ARE NOT FOR CONSTRUCTION

XXXX'-X" EXISTING GRADE  
 XXXX'-X" PROPOSED GRADE

ROOF	Membrane
EASCIA	Wood Siding
SOFFIT	Wood Siding

- ◇ W1 HORIZONTAL WOOD SIDING
- ◇ W2 STUCCO
- ◇ W3 STUCCO (BUILT OUT)

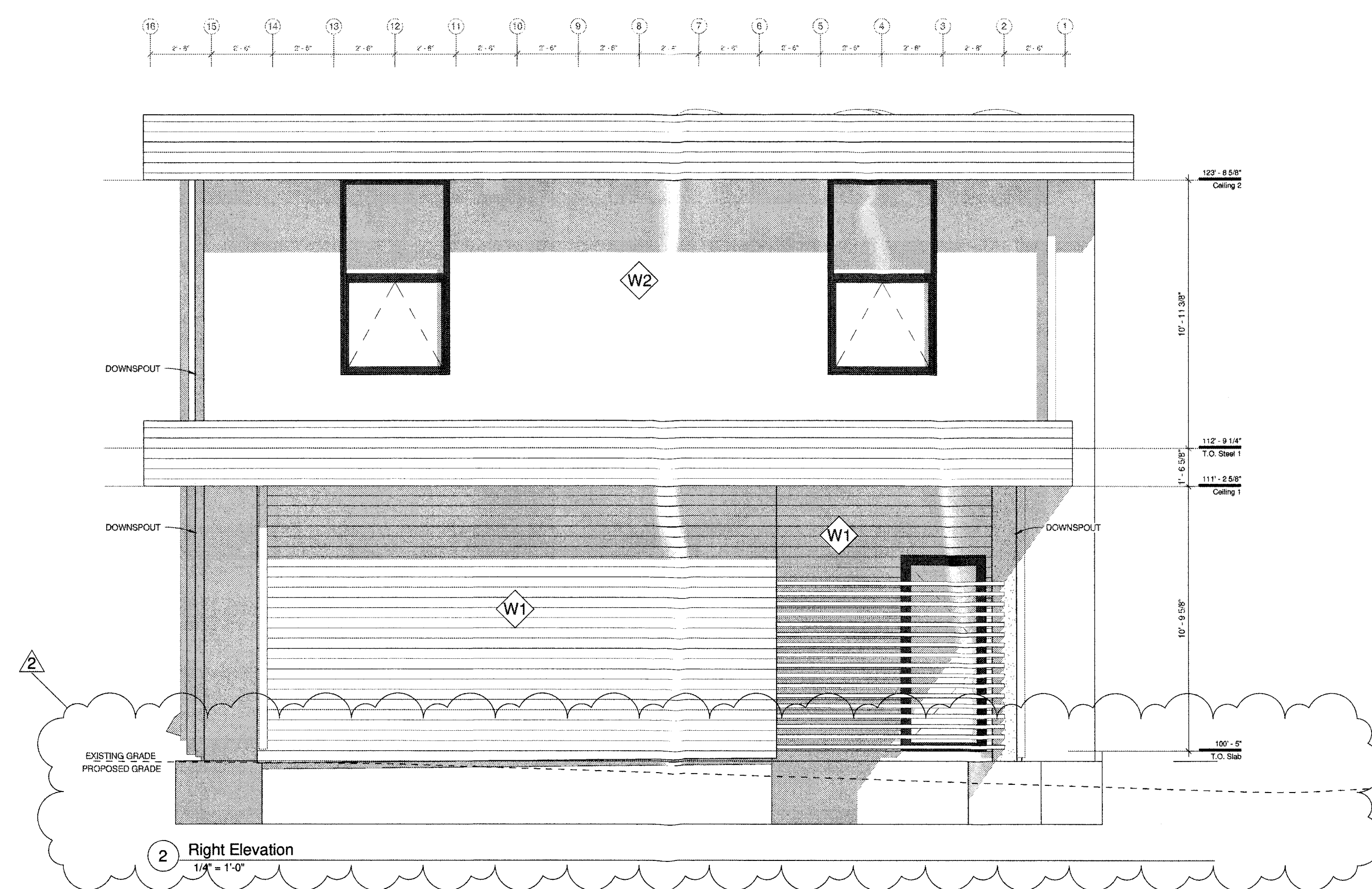
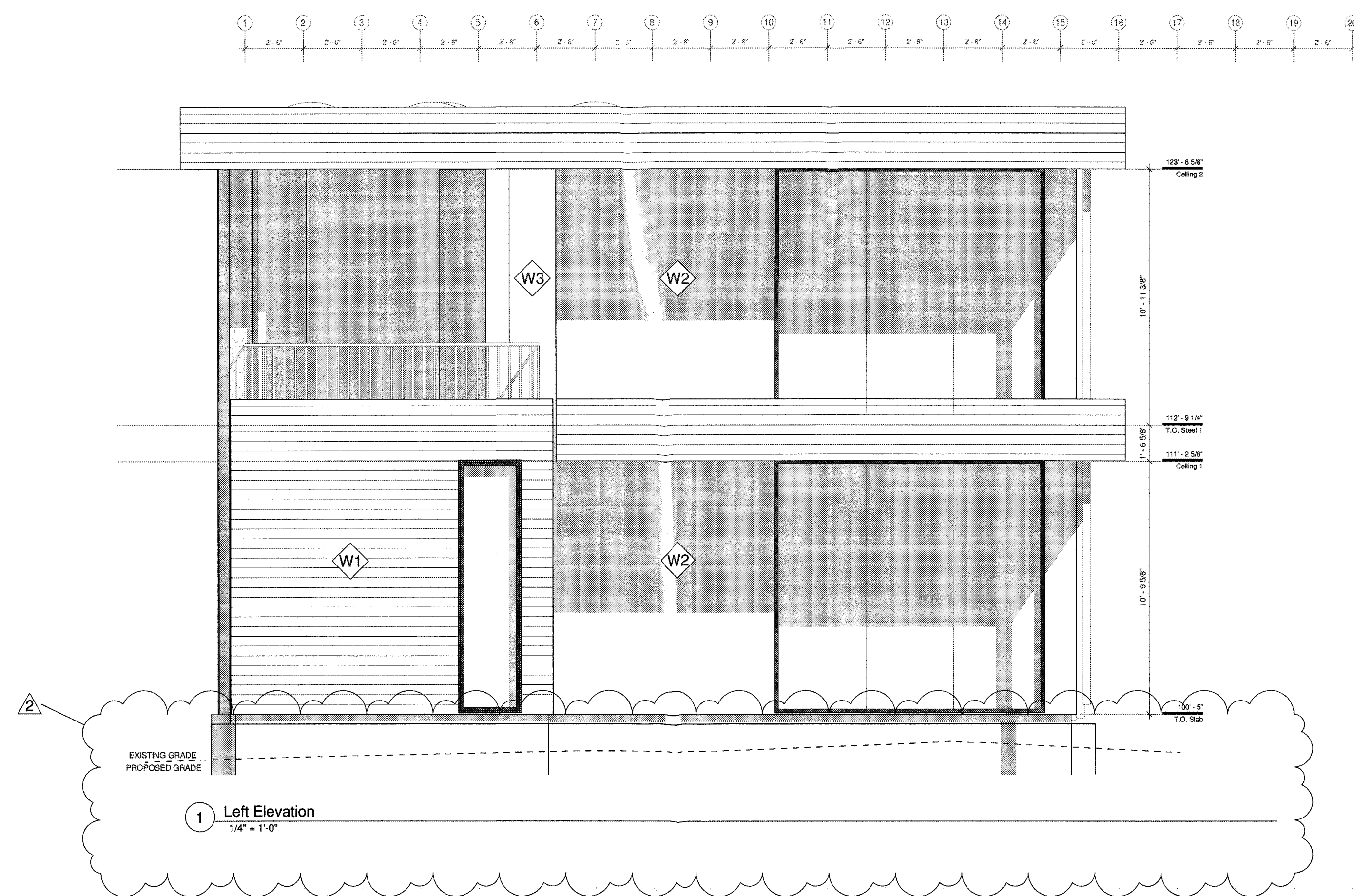
## Simple Concept

2812 JOSEPH-A, BOMBARDIER, LAVAL, QC, CA H7P 6E2  
 T. 450.978.0602 FAX: 450.978.4917

THESE PLANS, PROVIDED BY BONE STRUCTURE, ARE FOR INFORMATION ONLY REGARDING THE CONSTRUCTION OF THE PROJECT BY AN AUTHORIZED DEALER. BONE STRUCTURE IS THE SUPPLIER OF A STRUCTURAL SYSTEM THAT INCLUDES THE ANCHORS REQUIRED FOR INDOOR AND OUTDOOR FINISH. OTHER BUILDING SYSTEMS ARE LISTED AND SHOWN FOR INFORMATIONAL PURPOSES AND ARE THE RESPONSIBILITY OF THE MANUFACTURER.

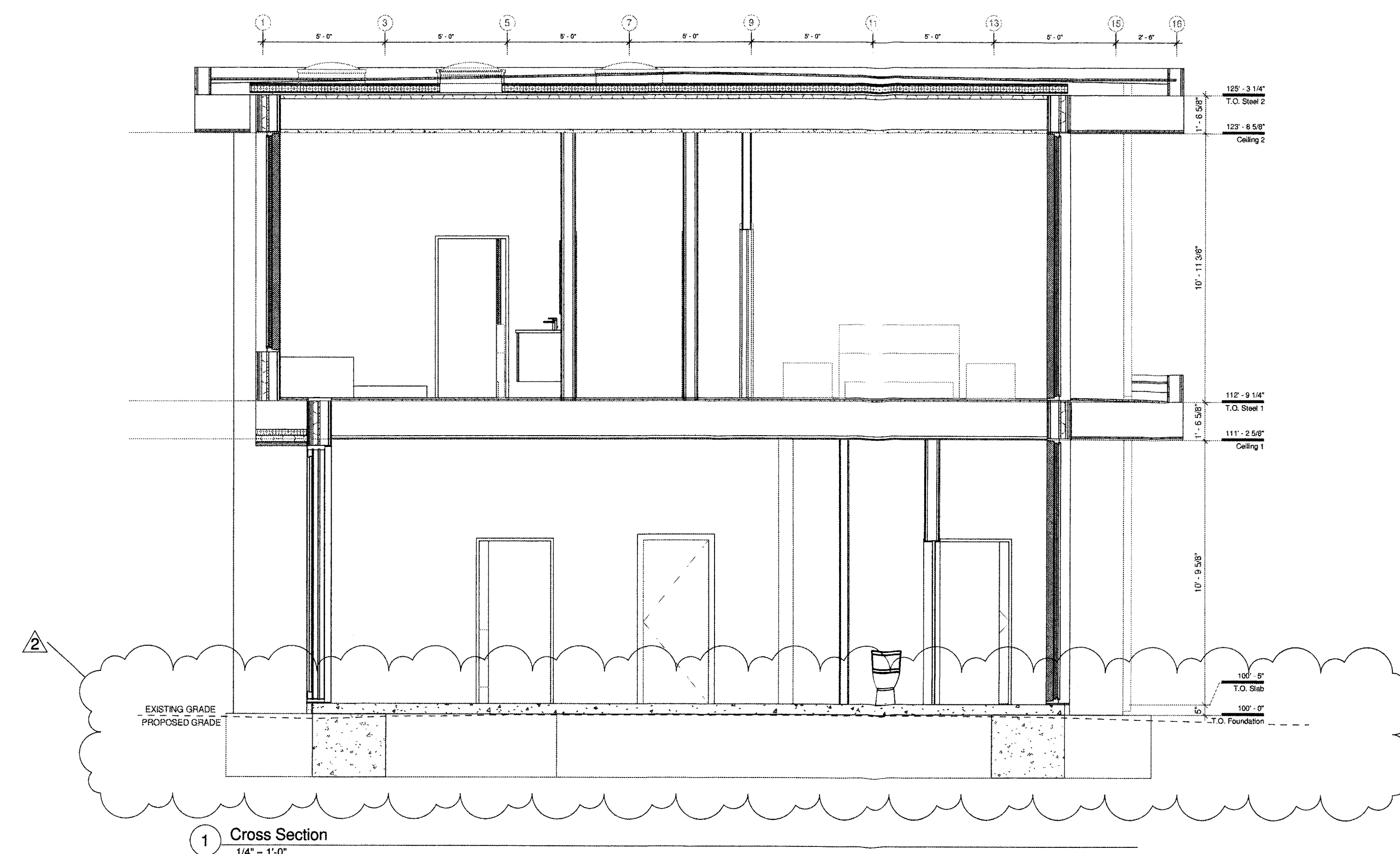
DATE	REVISION	BY	NO.
2018-09-10	Response To Comments	AR	2
2018-04-06	Design Review	AR	1

PROJECT	
<b>HUARD - RESIDENCE</b>	
17-887	
185, MAGELLAN AVENUE MIRAMAR, CALIFORNIA, 94019	
DRAWING TITLE	DRAWN BY
Left & Right elevations	A.R
	CHECK BY
	A.A
SCEAU	DATE
	2018/09/10
	SCALE
	As indicated
	REVISION
	2
	PAGE
	A. 201





\* THESE PLANS ARE NOT FOR CONSTRUCTION



## Simple Concept

2812 JOSEPH-A. BOMBARDIER, LAVAL, QC, CA H7P 6E2  
T: 450.978.0602 FAX: 450.978.4917

THESE PLANS, PROVIDED BY BONE STRUCTURE, ARE FOR INFORMATION ONLY REGARDING THE CONSTRUCTION OF THE PROJECT BY AN AUTHORIZED DEALER. BONE STRUCTURE IS THE SUPPLIER OF A STRUCTURAL SYSTEM THAT INCLUDES THE ANCHORS REQUIRED FOR INDOOR AND OUTDOOR FINISH. OTHER BUILDING SYSTEMS ARE LISTED AND SHOWN FOR INFORMATIONAL PURPOSES AND ARE THE RESPONSIBILITY OF THE MANUFACTURER.

DATE	REVISION	BY	NO.
2018-09-10	Response To Comments	AR	2
2018-04-08	Design Review	AR	1

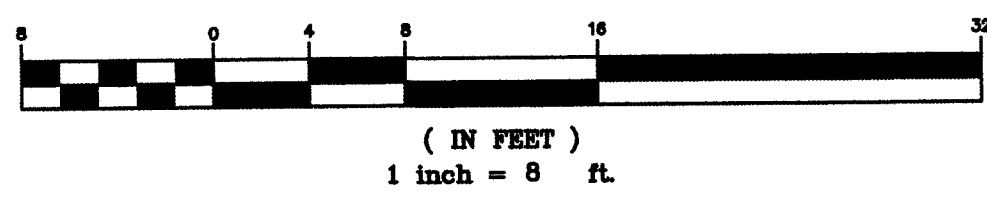
PROJECT  
**HUARD - RESIDENCE**  
17-887  
185, MAGELLAN AVENUE  
MIRAMAR, CALIFORNIA, 94019

DRAWING TITLE	Cross & Longitudinal sections	DRAWN BY	A.R
		CHECK BY	A.A
SCEAU		DATE	2018/09/10
		SCALE	1/4" = 1'-0"
		REVISION	2
		PAGE	A. 300

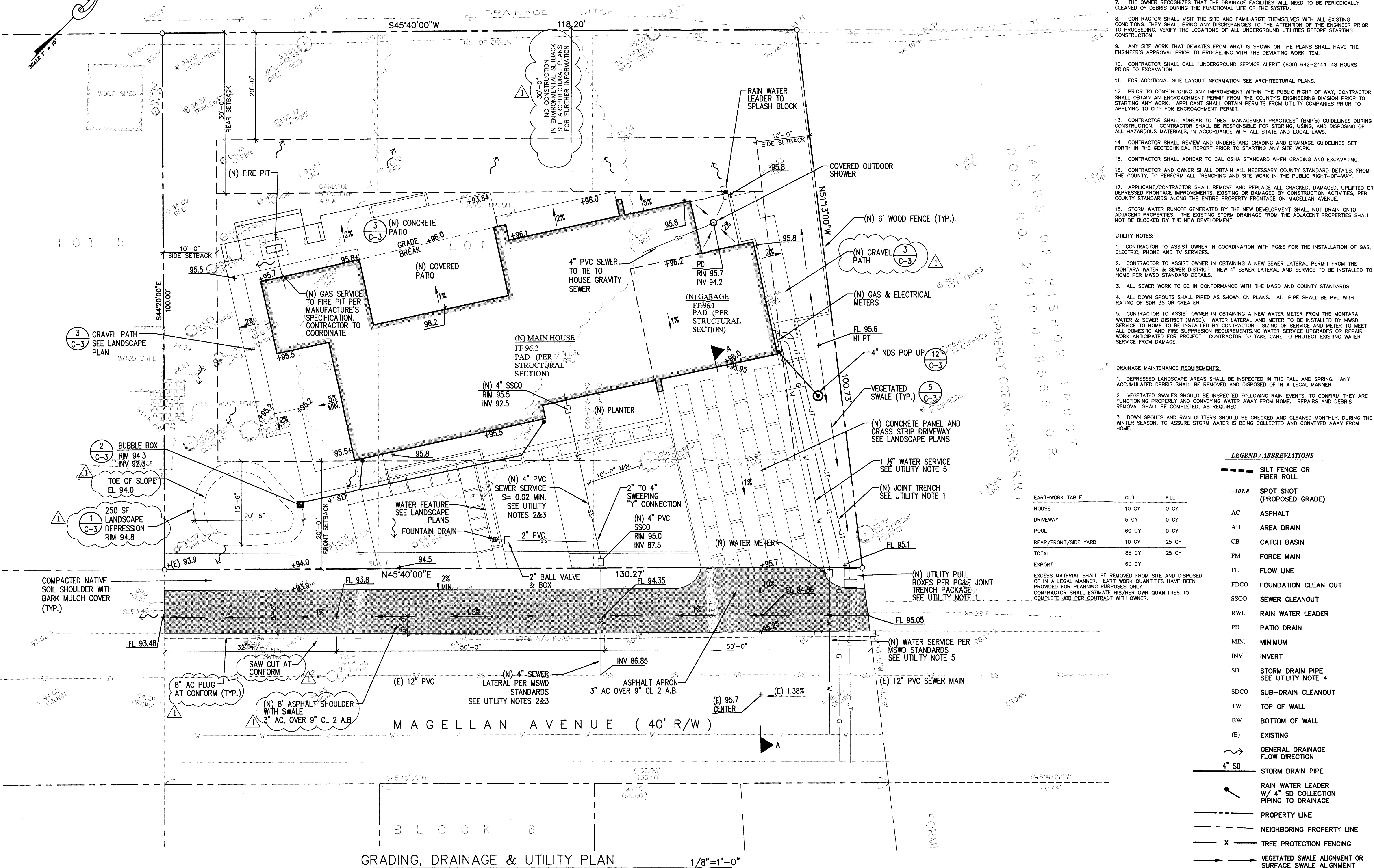
© 2017 Simple Concept Inc. BONE Structure® est une marque déposée de Simple Concept Inc. et est utilisée sous licence exclusive par Simple Concept Inc. Tous droits réservés. © 2017 Simple Concept Inc. BONE Structure® is a registered trademark of Simple Concept Inc. and is used under exclusive license by Simple Concept Inc. All rights reserved.



GRAPHIC SCALE



LANDS OF  
COUNTY OF SAN MATEO



- GENERAL NOTES:**
- CONTRACTOR TO VERIFY ALL CONTROLLING DIMENSIONS & SETBACKS WITH ARCHITECTURAL PLANS.
  - TOPOGRAPHIC INFORMATION PROVIDED BY B&H SURVEYING, INC., DATED SEPTEMBER, 2017.
  - SLOPE PORCHES, LANDINGS AND TERRACES 2% AWAY FROM RESIDENCE.
  - PROVIDE POSITIVE SURFACE DRAINAGE AWAY FROM THE HOUSE PERIMETER BY SLOPING THE FINISHED GROUND SURFACE AT LEAST 5% AWAY FROM RESIDENCE.
  - CONTRACTOR TO CONTACT SOILS ENGINEER TO COORDINATE INSPECTIONS AT LEAST ONE WEEK PRIOR TO PENDING INSPECTIONS.
  - ALL EARTHWORK, SUBSLAB PREPARATION, FOUNDATION AND SLAB CONSTRUCTION, BACKFILLING, SITE DRAINAGE, AND GEOTECHNICAL OBSERVATION AND TESTING SHALL BE IN ACCORDANCE WITH GEOTECHNICAL REPORT RECOMMENDATIONS.
  - THE OWNER RECOGNIZES THAT THE DRAINAGE FACILITIES WILL NEED TO BE PERIODICALLY CLEANED OF DEBRIS DURING THE FUNCTIONAL LIFE OF THE SYSTEM.
  - CONTRACTOR SHALL VISIT THE SITE AND FAMILIARIZE THEMSELVES WITH ALL EXISTING CONDITIONS. THEY SHALL BRING ANY DISCREPANCIES TO THE ATTENTION OF THE ENGINEER PRIOR TO PROCEEDING. VERIFY THE LOCATIONS OF ALL UNDERGROUND UTILITIES BEFORE STARTING CONSTRUCTION.
  - ANY SITE WORK THAT DEVIATES FROM WHAT IS SHOWN ON THE PLANS SHALL HAVE THE ENGINEER'S APPROVAL PRIOR TO PROCEEDING WITH THE DEViating WORK ITEM.
  - CONTRACTOR SHALL CALL "UNDERGROUND SERVICE ALERT" (800) 642-2444, 48 HOURS PRIOR TO EXCAVATION.
  - FOR ADDITIONAL SITE LAYOUT INFORMATION SEE ARCHITECTURAL PLANS.
  - PRIOR TO CONSTRUCTING ANY IMPROVEMENT WITHIN THE PUBLIC RIGHT OF WAY, CONTRACTOR SHALL OBTAIN AN ENCROACHMENT PERMIT FROM THE COUNTY'S ENGINEERING DIVISION PRIOR TO STARTING ANY WORK. APPLICANT SHALL OBTAIN PERMITS FROM UTILITY COMPANIES PRIOR TO APPLYING TO CITY FOR ENCROACHMENT PERMIT.
  - CONTRACTOR SHALL ADHERE TO "BEST MANAGEMENT PRACTICES" (BMP's) GUIDELINES DURING CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR STORING, USING, AND DISPOSING OF ALL HAZARDOUS MATERIALS, IN ACCORDANCE WITH ALL STATE AND LOCAL LAWS.
  - CONTRACTOR SHALL REVIEW AND UNDERSTAND GRADING AND DRAINAGE GUIDELINES SET FORTH IN THE GEOTECHNICAL REPORT PRIOR TO STARTING ANY SITE WORK.
  - CONTRACTOR SHALL ADHERE TO CAL OSHA STANDARD WHEN GRADING AND EXCAVATING.
  - CONTRACTOR AND OWNER SHALL OBTAIN ALL NECESSARY COUNTY STANDARD DETAILS, FROM THE COUNTY, TO PERFORM ALL TRENCHING AND SITE WORK IN THE PUBLIC RIGHT-OF-WAY.
  - APPLICANT/CONTRACTOR SHALL REMOVE AND REPLACE ALL CRACKED, DAMAGED, UPLIFTED OR DEPRESSED FRONTAGE IMPROVEMENTS, EXISTING OR DAMAGED BY CONSTRUCTION ACTIVITIES, PER COUNTY STANDARDS ALONG THE ENTIRE PROPERTY FRONTAGE ON MAGELLAN AVENUE.
  - STORM WATER RUNOFF GENERATED BY THE NEW DEVELOPMENT SHALL NOT DRAIN ONTO ADJACENT PROPERTIES. THE EXISTING STORM DRAINAGE FROM THE ADJACENT PROPERTIES SHALL NOT BE BLOCKED BY THE NEW DEVELOPMENT.

- UTILITY NOTES:**
- CONTRACTOR TO ASSIST OWNER IN COORDINATION WITH PG&E FOR THE INSTALLATION OF GAS, ELECTRIC, PHONE AND TV SERVICES.
  - CONTRACTOR TO ASSIST OWNER IN OBTAINING A NEW SEWER LATERAL PERMIT FROM THE MONTARA WATER & SEWER DISTRICT. NEW 4" SEWER LATERAL AND SERVICE TO BE INSTALLED TO HOME PER MWSO STANDARD DETAILS.
  - ALL SEWER WORK TO BE IN CONFORMANCE WITH THE MWSO AND COUNTY STANDARDS.
  - ALL DOWN SPOUTS SHALL BE INSTALLED AS SHOWN ON PLANS. ALL PIPE SHALL BE PVC WITH RATING OF SDR 35 OR GREATER.
  - CONTRACTOR TO ASSIST OWNER IN OBTAINING A NEW WATER METER FROM THE MONTARA WATER & SEWER DISTRICT (MWSO). WATER LATERAL AND METER TO BE INSTALLED BY MWSO. SERVICE TO HOME TO BE INSTALLED BY CONTRACTOR. SIZING OF SERVICE AND METER TO MEET ALL DOMESTIC AND FIRE SUPPRESSION REQUIREMENTS. NO WATER SERVICE UPGRADES OR REPAIR WORK ANTICIPATED FOR PROJECT. CONTRACTOR TO TAKE CARE TO PROTECT EXISTING WATER SERVICE FROM DAMAGE.

- DRAINAGE MAINTENANCE REQUIREMENTS:**
- DEPRESSED LANDSCAPE AREAS SHALL BE INSPECTED IN THE FALL AND SPRING. ANY ACCUMULATED DEBRIS SHALL BE REMOVED AND DISPOSED OF IN A LEGAL MANNER.
  - VEGETATED SWALES SHOULD BE INSPECTED FOLLOWING RAIN EVENTS, TO CONFIRM THEY ARE FUNCTIONING PROPERLY AND CONVEYING WATER AWAY FROM HOME. REPAIRS AND DEBRIS REMOVAL SHALL BE COMPLETED, AS REQUIRED.
  - DOWN SPOUTS AND RAIN GUTTERS SHOULD BE CHECKED AND CLEANED MONTHLY, DURING THE WINTER SEASON, TO ASSURE STORM WATER IS BEING COLLECTED AND CONVEYED AWAY FROM HOME.

LEGEND / ABBREVIATIONS

- SILT FENCE OR FIBER ROLL
- +101.8 SPOT SHOT (PROPOSED GRADE)
- AC ASPHALT
- AD AREA DRAIN
- CB CATCH BASIN
- FM FORCE MAIN
- FL FLOW LINE
- FDKO FOUNDATION CLEAN OUT
- SSCO SEWER CLEANOUT
- RWL RAIN WATER LEADER
- PD PATIO DRAIN
- MIN. MINIMUM
- INV INVERT
- SD STORM DRAIN PIPE SEE UTILITY NOTE 4
- SDCO SUB-DRAIN CLEANOUT
- TW TOP OF WALL
- BW BOTTOM OF WALL
- (E) EXISTING
- ~ GENERAL DRAINAGE FLOW DIRECTION
- 4" SD STORM DRAIN PIPE
- RAIN WATER LEADER W/ 4" SD COLLECTION PIPING TO DRAINAGE
- PROPERTY LINE
- NEIGHBORING PROPERTY LINE
- X TREE PROTECTION FENCING
- VEGETATED SWALE ALIGNMENT OR SURFACE SWALE ALIGNMENT

LANDS OF BISHOP TRUST  
DOC. NO. 2010019565 O.R.  
(FORMERLY OCEAN SHORE R.R.)

EARTHWORK TABLE

	CUT	FILL
HOUSE	10 CY	0 CY
DRIVEWAY	5 CY	0 CY
POOL	60 CY	0 CY
REAR/FRONT/SIDE YARD	10 CY	25 CY
TOTAL	85 CY	25 CY
EXPORT	60 CY	

EXCESS MATERIAL SHALL BE REMOVED FROM SITE AND DISPOSED OF IN A LEGAL MANNER. EARTHWORK QUANTITIES HAVE BEEN PROVIDED FOR PLANNING PURPOSES ONLY. CONTRACTOR SHALL ESTIMATE HIS/HER OWN QUANTITIES TO COMPLETE JOB PER CONTRACT WITH OWNER.

GRADING, DRAINAGE & UTILITY PLAN 1/8"=1'-0"

CLIFFORD BECHTEL  
AND ASSOCIATES  
CLIFFORD BECHTEL, PE  
801 WALTERS STREET  
BELMONT, CA 94002  
925-333-0103  
925-837-1059 (FAX)

California

Miramar

CONTENTS:

GRADING,  
DRAINAGE  
& UTILITY  
PLAN

DATE 04/05/18

SCALE AS NOTED

REVISIONS:  
REV. 08/27/18

DRAWN J.G.

CHECKED C.B.

JOB No. 2018608

SHEET NO.

**C-1**

OF 4 SHEETS



GRAPHIC SCALE

( IN FEET )  
1 inch = 8 ft.

LANDS OF  
COUNTY OF SAN MATEO

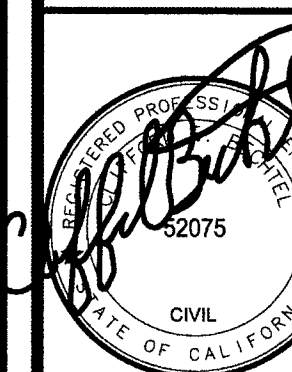
EROSION CONTROL  
POINT OF CONTACT:

OWNER: PAUL HUARD  
Phone: 808-282-6019

EROSION AND SEDIMENT CONTROL NOTES:

1. STORM DRAIN POLLUTION PREVENTION: PROTECT DOWN SLOPE DRAINAGE COURSES, STREAMS AND STORM DRAINS WITH ROCK BAGS, TEMPORARY DRAINAGE SWALES, FIBER ROLLS, SILT FENCES, BERMS OR STORM DRAIN INLET FILTERS.
2. THE EXISTING CONCRETE DRIVEWAY SHALL SERVE AS THE STABILIZED CONSTRUCTION ENTRANCE.
3. FIBER ROLL(S) SHALL BE INSTALLED, IF REQUIRED BY COUNTY, PRIOR TO THE INCEPTION OF ANY WORK ON-SITE, AND SHALL REMAIN IN PLACE UNTIL THE LANDSCAPING GROUND COVER IS INSTALLED.
4. DRY SWEEPING METHODS SHALL BE USED TO REMOVE ANY DEBRIS AND/ OR SOIL TRACKED ON TO MAGELLAN AVENUE. DRY SWEEPING SHALL BE DONE AT THE END OF EACH WORK DAY.
5. THE CONTRACTOR SHALL FOLLOW AND USE BEST MANAGEMENT PRACTICES (BMP) FOR DISCHARGE INTO THE COUNTY'S STORM WATER SYSTEM DURING SITE STRIPPING, HAULING, EARTH MOVING ACTIVITIES, HEAVY EQUIPMENT OPERATIONS, GENERAL CONSTRUCTION AND SITE SUPERVISION, PAINTING, APPLICATIONS AND USE OF SOLVENTS AND ADHESIVES, LANDSCAPING AND GARDENING.
6. STOCKPILED MATERIAL SHALL BE COVERED WITH VISQUEEN OR A TARPULIN UNTIL THE MATERIAL IS REMOVED FROM THE SITE. ANY REMAINING BARE SOIL THAT EXISTS AFTER THE STOCKPILE HAS BEEN REMOVED SHALL BE COVERED UNTIL A NATURAL GROUND COVER IS ESTABLISHED OR IT MAY BE SEEDED OR PLANTED TO PROVIDE GROUND COVER PRIOR TO THE FALL RAINY SEASON.
7. ONCE THE PROPOSED ON-SITE DRAINAGE INLETS HAVE BEEN INSTALLED, THE CONTRACTOR SHALL PROTECT ANY BARE SOIL FROM ENTERING THE INLETS BY INSTALLING PROTECTIONS PER DETAIL 10 ON SHEET C-3.
8. CONTRACTOR SHALL CONTROL DUST AS OFTEN AS REQUIRED BY SITE CONDITIONS AND AS DIRECTED BY COUNTY OR PROJECT ENGINEER. DUST CONTROL IS REQUIRED YEAR AROUND.
9. IF EROSION DEVELOPS IN A TEMPORARY EROSION PROTECTED AREA OR ANY ESTABLISHED VEGETATED AREA, THE CONTRACTOR SHALL IMMEDIATELY ALLEVIATE AND REMEDY THE PROBLEM AND TAKE PREVENTATIVE MEASURES TO MINIMIZE THE POSSIBILITY OF ITS REOCCURRENCE AND ALSO TO PREVENT THE RESULTING FLOW OF SOILS OR WATER WITH SUSPENDED SOILS FROM GETTING INTO THE TOWN'S DRAINAGE SYSTEM OR ANY NATURAL DRAINAGE CHANNEL OR DITCH.
10. PERFORM CLEARING AND EARTH MOVING ACTIVITIES ONLY DURING DRY WEATHER. PROTECTION MEASURES TO ENSURE ADEQUATE EROSION AND SEDIMENT CONTROL SHALL BE INSTALLED PRIOR TO EARTH MOVING ACTIVITIES AND CONSTRUCTION. ALL PROTECTION ARE REQUIRED YEAR AROUND.
11. ALL DISTURBED AREAS SHALL BE PROTECTED WITH BARK MULCH OR REPLANTED FOLLOWING GRADING OPERATIONS.
12. APPLICATIONS OF PESTICIDES AND FERTILIZERS SHALL BE DURING DRY WEATHER PERIODS TO PREVENT POLLUTED RUNOFF.
13. OWNERS REPRESENTATIVE AND CONTRACTOR TO PROVIDE INSTRUCTION TO ALL EMPLOYEES AND SUBCONTRACTORS REGARDING THE WATERSHED PROTECTION MAINTENANCE STANDARDS AND CONSTRUCTION BEST MANAGEMENT PRACTICES.
14. CONSTRUCTION SITES ARE REQUIRED TO HAVE EROSION CONTROL MEASURES ON SITE DURING "OFF SEASON". EROSION CONTROL MATERIALS ARE TO BE STORED ON SITE.
15. ALL TREE PROTECTION SHALL BE IN PLACE BEFORE ANY GRADING OR GRUBBING IS STARTED.

CLIFFORD BECHTEL AND ASSOCIATES  
CLIFFORD BECHTEL, PE  
801 WATERLOO STREET  
BELMONT, CA 94002  
925-333-0103  
925-637-1059 (FAX)



California

HUARD RESIDENCE  
MAGELLAN AVENUE  
SAN MATEO COUNTY

Miramar

CONTENTS:

EROSION & SEDIMENT CONTROL & STAGING PLAN

DATE 04/05/18

SCALE AS NOTED

REVISIONS:

REV. 08/27/18

DRAWN I.G.

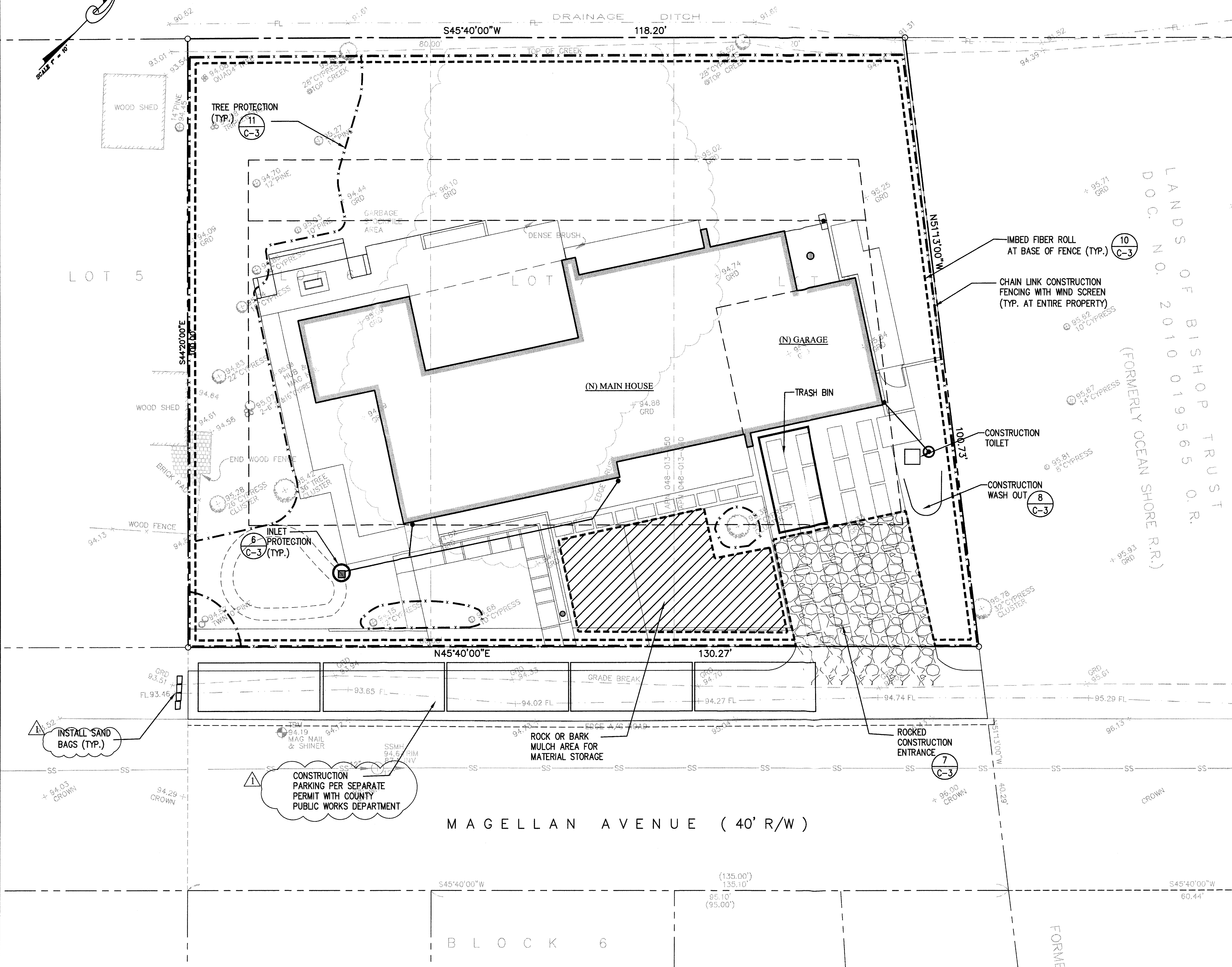
CHECKED C.B.

JOB No. 2018608

SHEET No.

C-2

OF 4 SHEETS



COUNTY NOTES

- THE AREAS DELINEATED ON THIS PLAN FOR PARKING, GRUBBING, STORAGE, ETC., SHALL NOT BE ENLARGED OR "RUN OVER".
- Perform clearing and earth-moving activities only during dry weather. Measures to ensure adequate erosion and sediment control shall be installed prior to earth-moving activities and construction.
- Measures to ensure adequate erosion and sediment control are required year-round. Stabilize all denuded areas and maintain erosion control measures continuously between October 1 and April 30.
- Store, handle, and dispose of construction materials and wastes properly, so as to prevent their contact with stormwater.
- Avoid cleaning, fueling, or maintaining vehicles on-site, except in a designated area where wash water is contained and treated.
- Limit construction access routes to stabilized, designated access points.
- Avoid tracking dirt or other materials off-site; clean off-site paved areas and sidewalks using dry sweeping methods.
- Train and provide instruction to all employees and subcontractors regarding the Watershed Protection Maintenance Standards and construction Best Management Practices.
- Construction sites are required to have erosion control materials on-site during the "off-season."
- Dust control is required year-round.
- Erosion control materials shall be stored on-site.
- Use of plastic sheeting between October 1st and April 30th is not acceptable, unless for use on stockpiles where the stockpile is also protected with fiber rolls containing the base of the stockpile.

C. For Your Reference Only - Erosion Control Policies for Construction Sites:

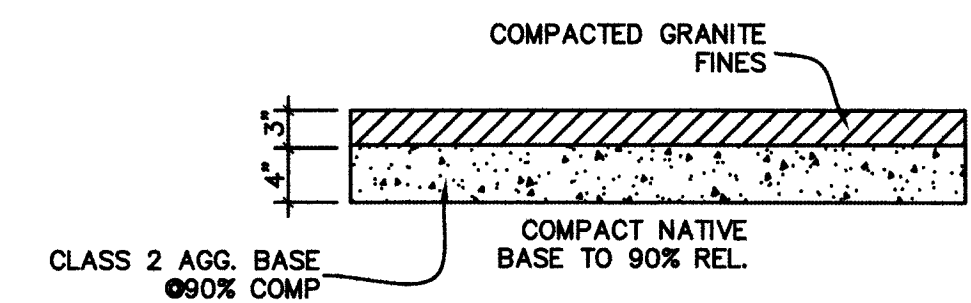
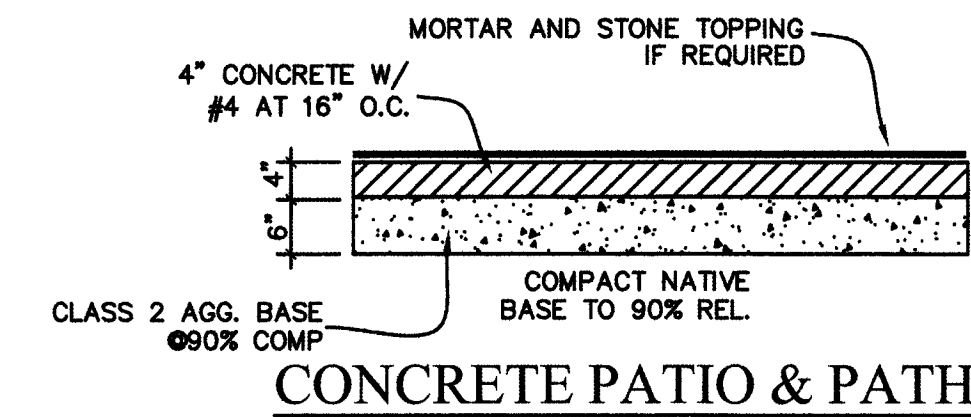
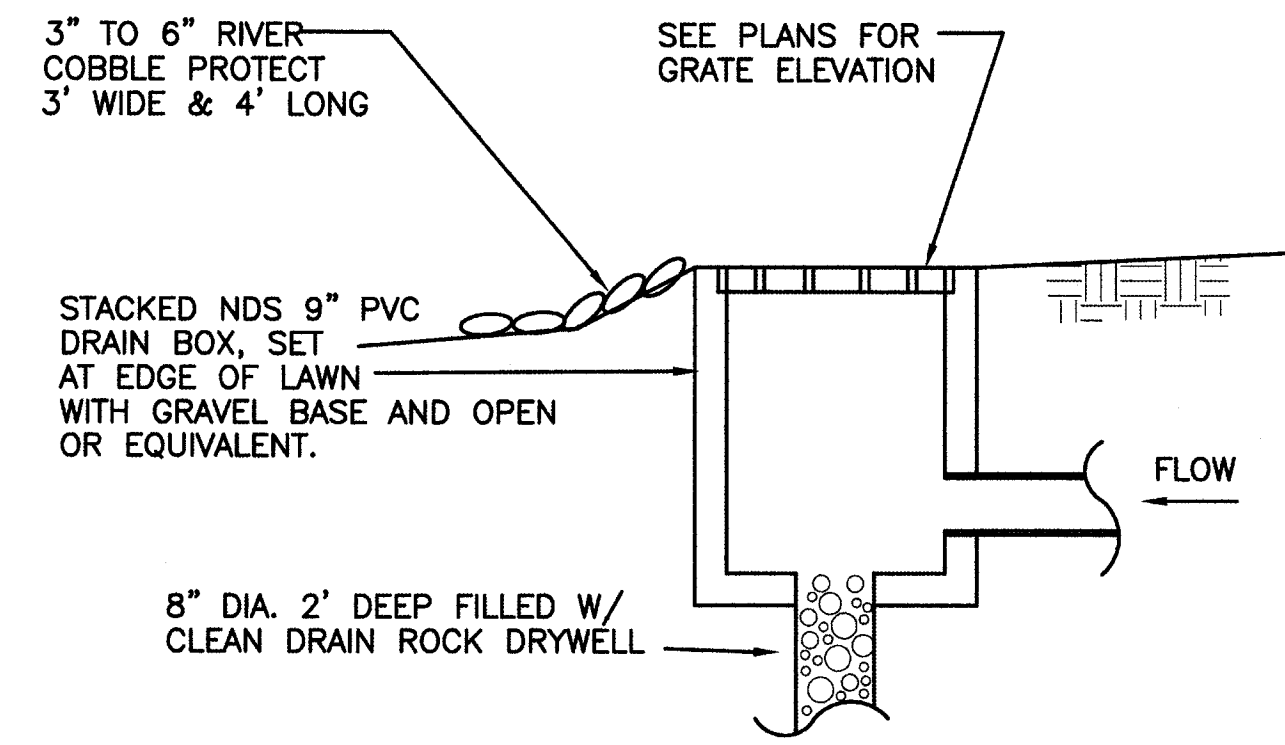
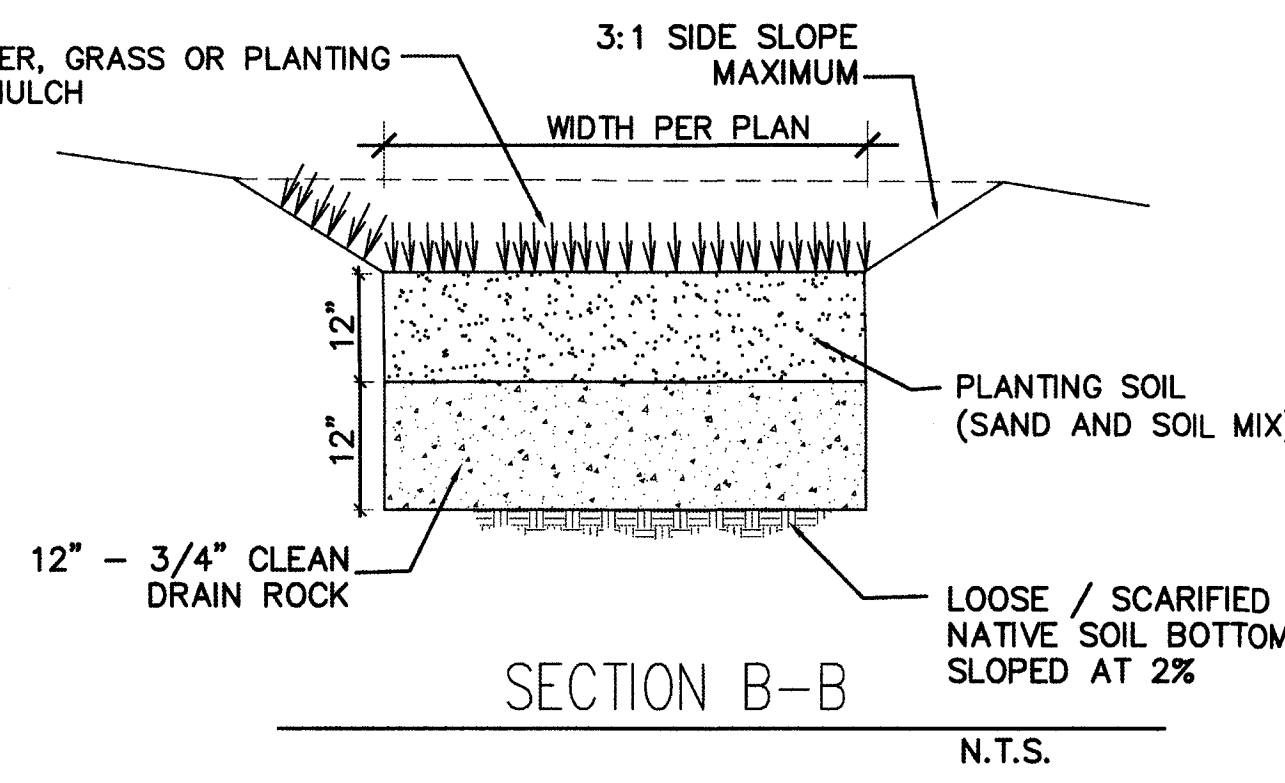
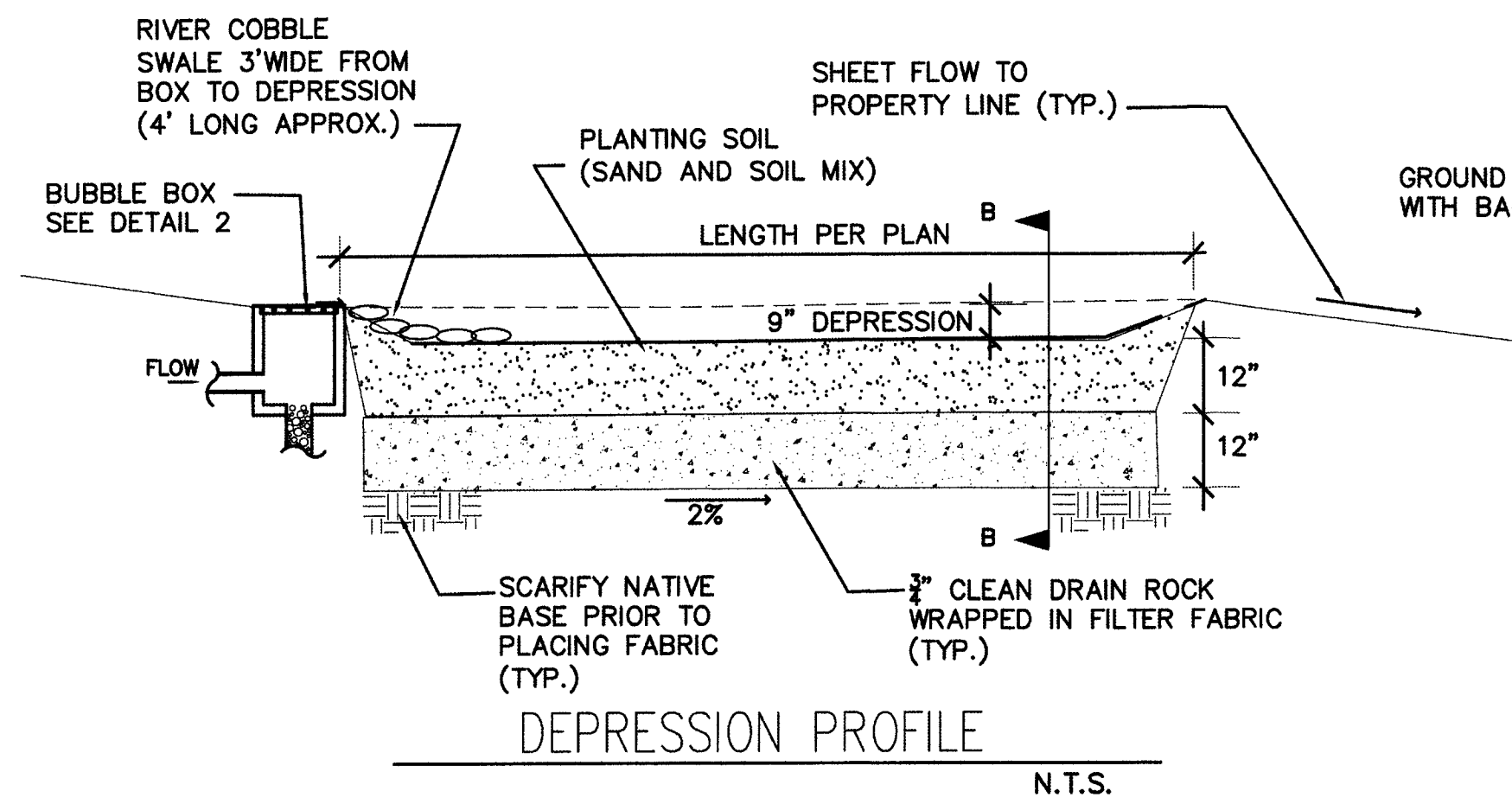
Project erosion and sediment control measures shall be maintained as necessary throughout the duration of the permit to be effective. If significant field changes are made, revised plans must be submitted for approval. The building inspector has the authority to require additional measures at any time, and may cancel any requested inspection if any measures are found to be deficient. A Stop Work Notice may be issued pursuant to the County's Stormwater Enforcement Response Plan until corrections have been made and applicable fees paid for staff enforcement time. The property owner shall demonstrate via building inspection, that the site is stabilized either with adequate erosion control or landscaping, prior to issuance of the Certificate of Occupancy.

LEGEND / ABBREVIATIONS

SD	STORM DRAIN PIPE	SEE UTILITY NOTE 4
SDCO	SUB-DRAIN CLEANOUT	
TW	TOP OF WALL	
BW	BOTTOM OF WALL	
(E)	EXISTING	
~	GENERAL DRAINAGE FLOW DIRECTION	
4" SD	STORM DRAIN PIPE	
EL	FLOW LINE	
FDCO	FOUNDATION CLEAN OUT	
SSCO	SEWER CLEANOUT	
RWL	RAIN WATER LEADER	RAIN WATER LEADER W/ 4" SD COLLECTION PIPING TO DRAINAGE
PD	PATIO DRAIN	
MIN.	MINIMUM	
INV	INVERT	
---	PROPERTY LINE	
---	NEIGHBORING PROPERTY LINE	
X	TREE PROTECTION FENCING	
---	VEGETATED SWALE ALIGNMENT OR SURFACE SWALE ALIGNMENT	

EROSION AND SEDIMENT CONTROL & STAGING PLAN 1/8"=1'-0"

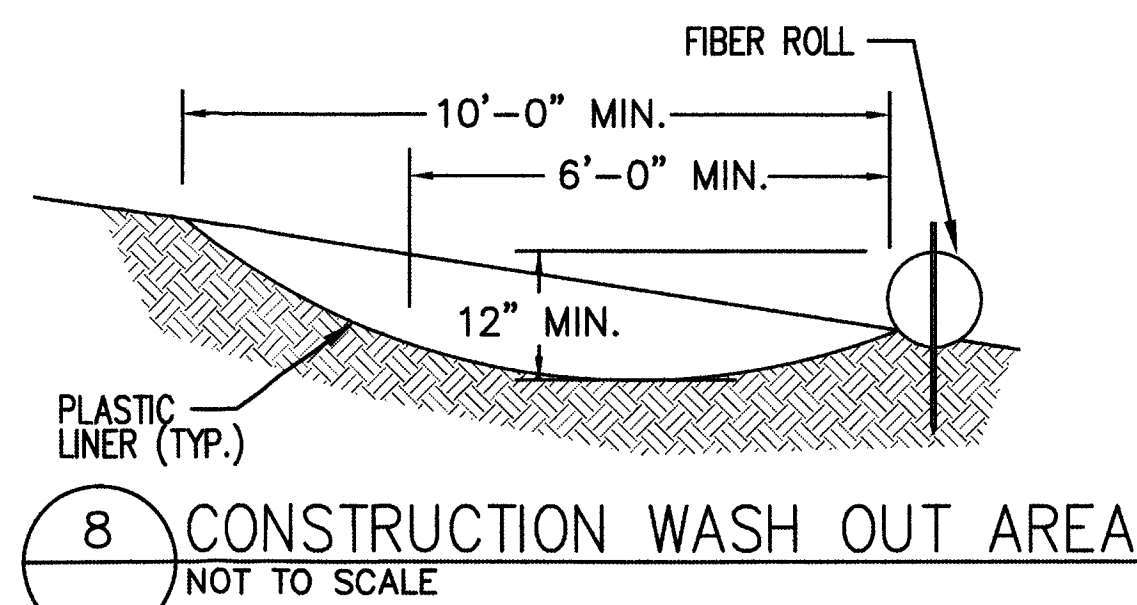
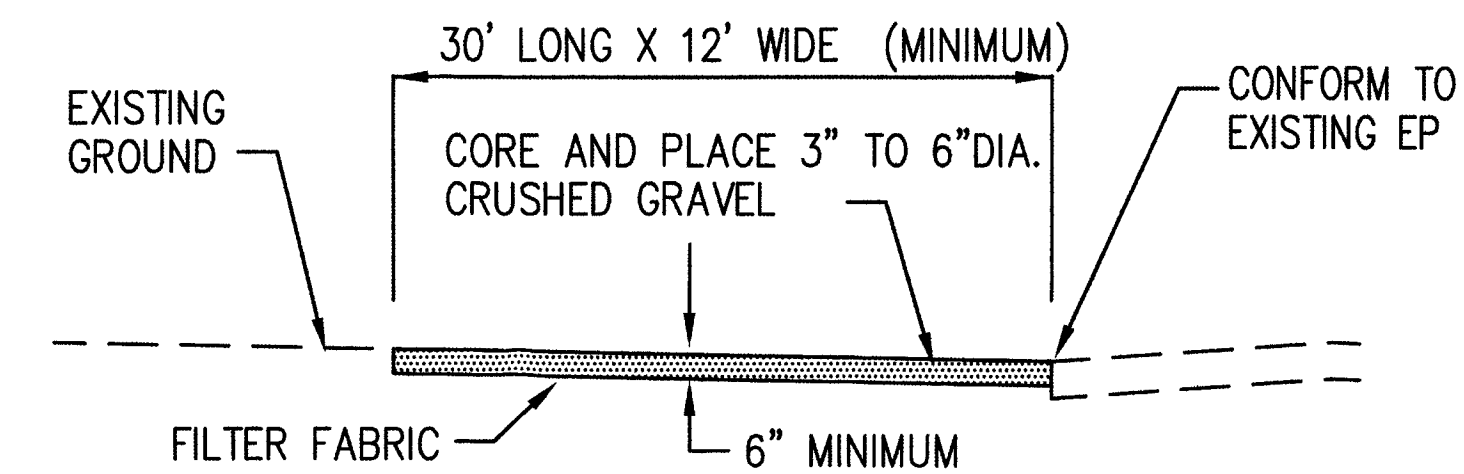
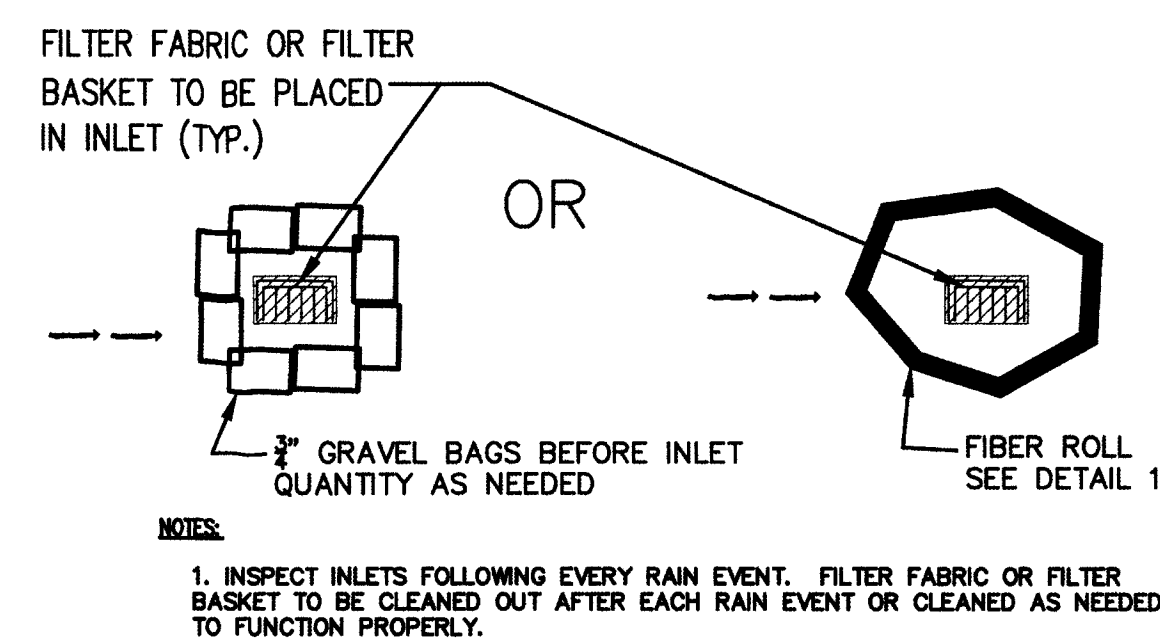
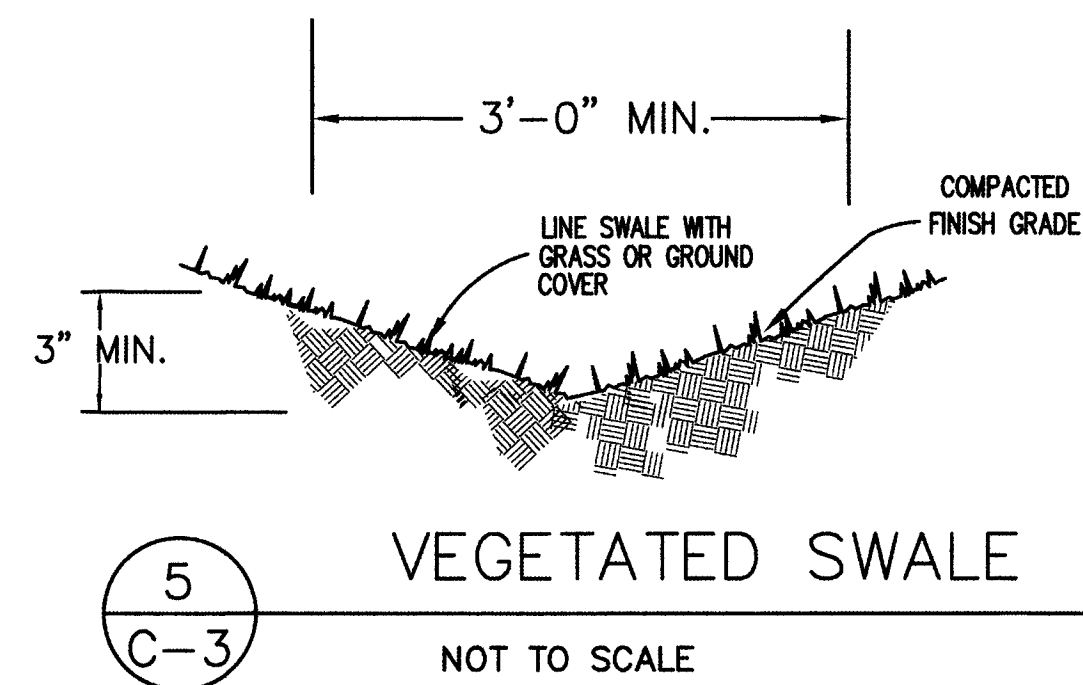




1 DEPRESSED LANDSCAPE AREA  
C-3 NOT TO SCALE

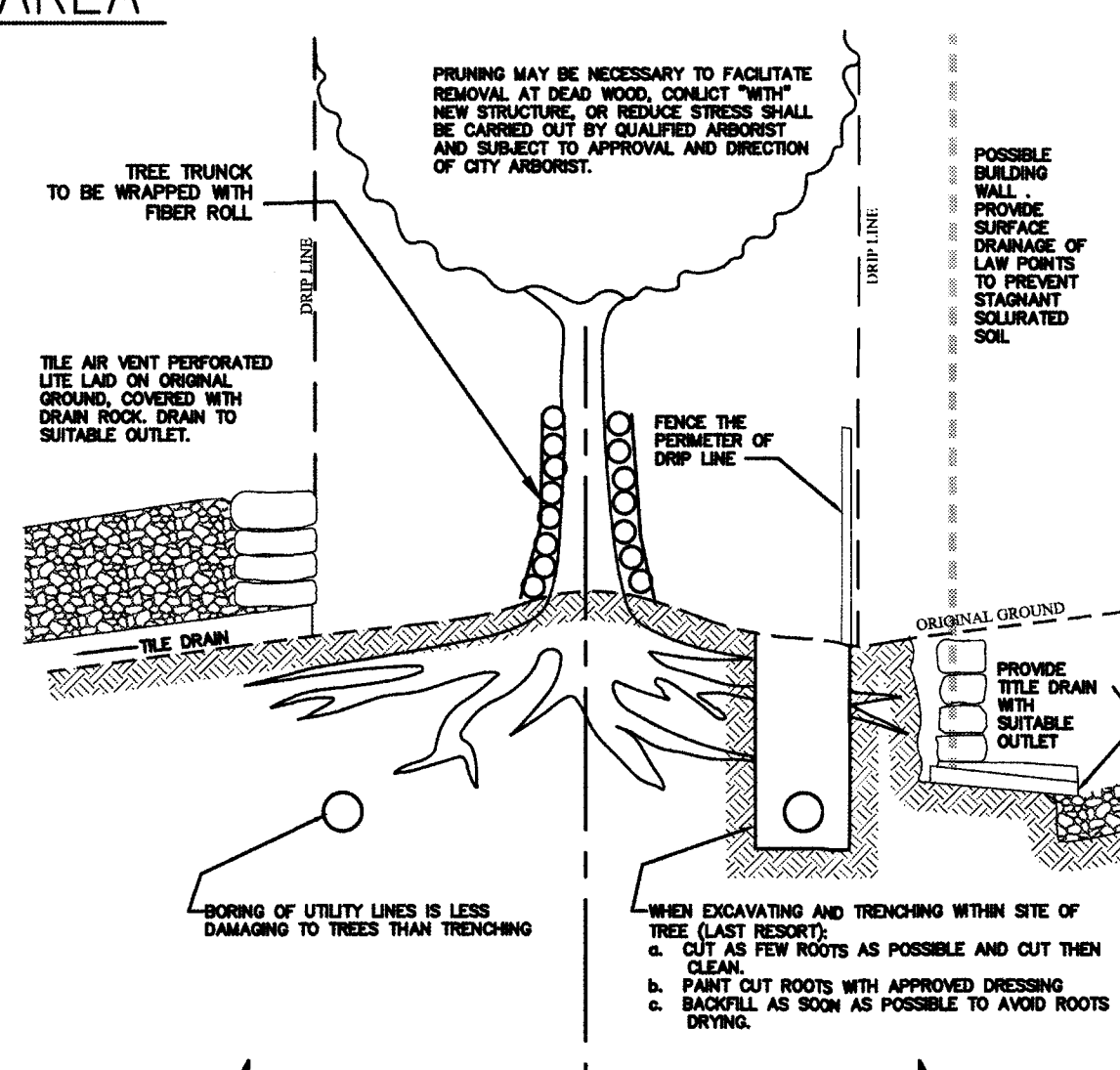
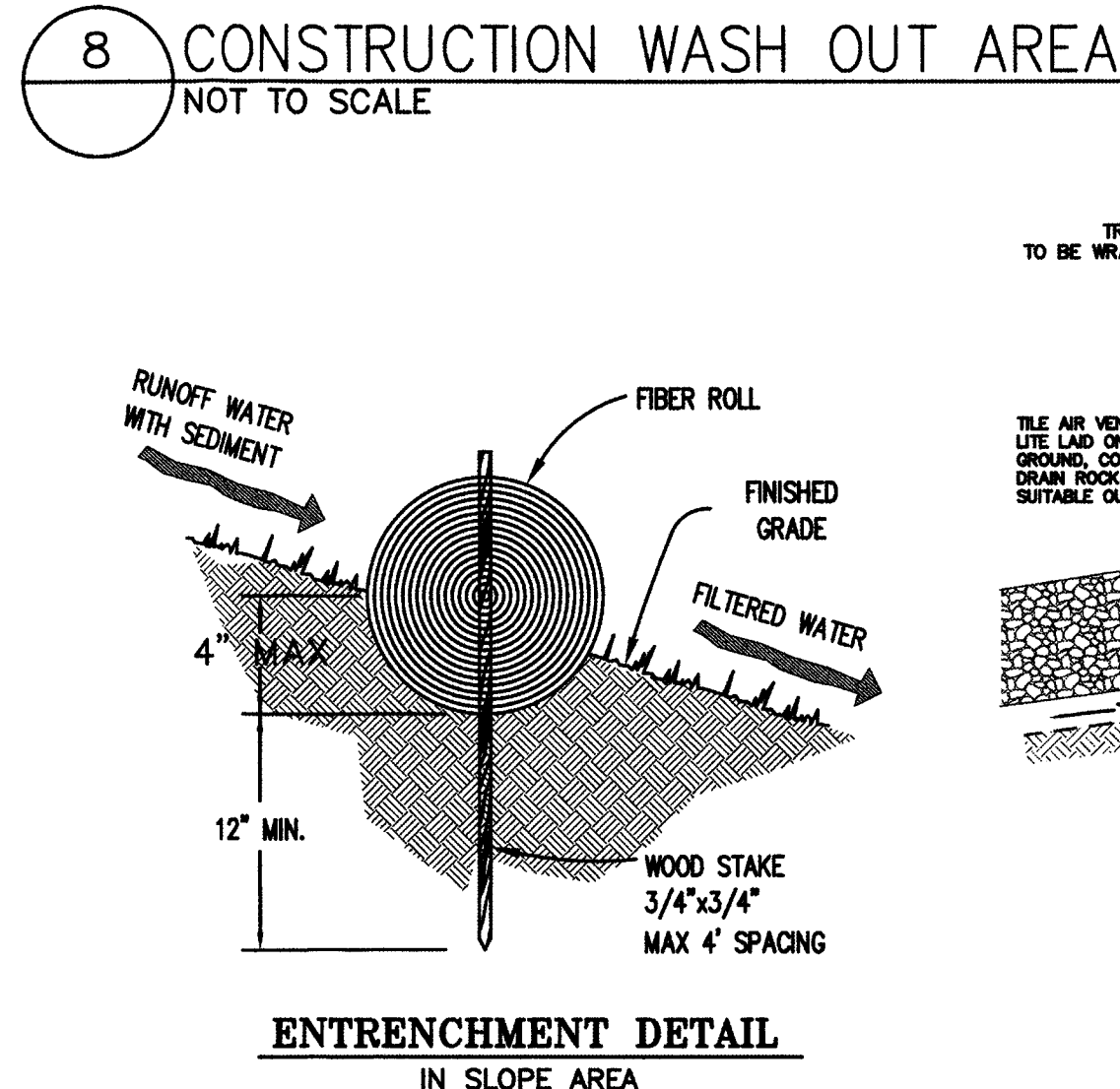
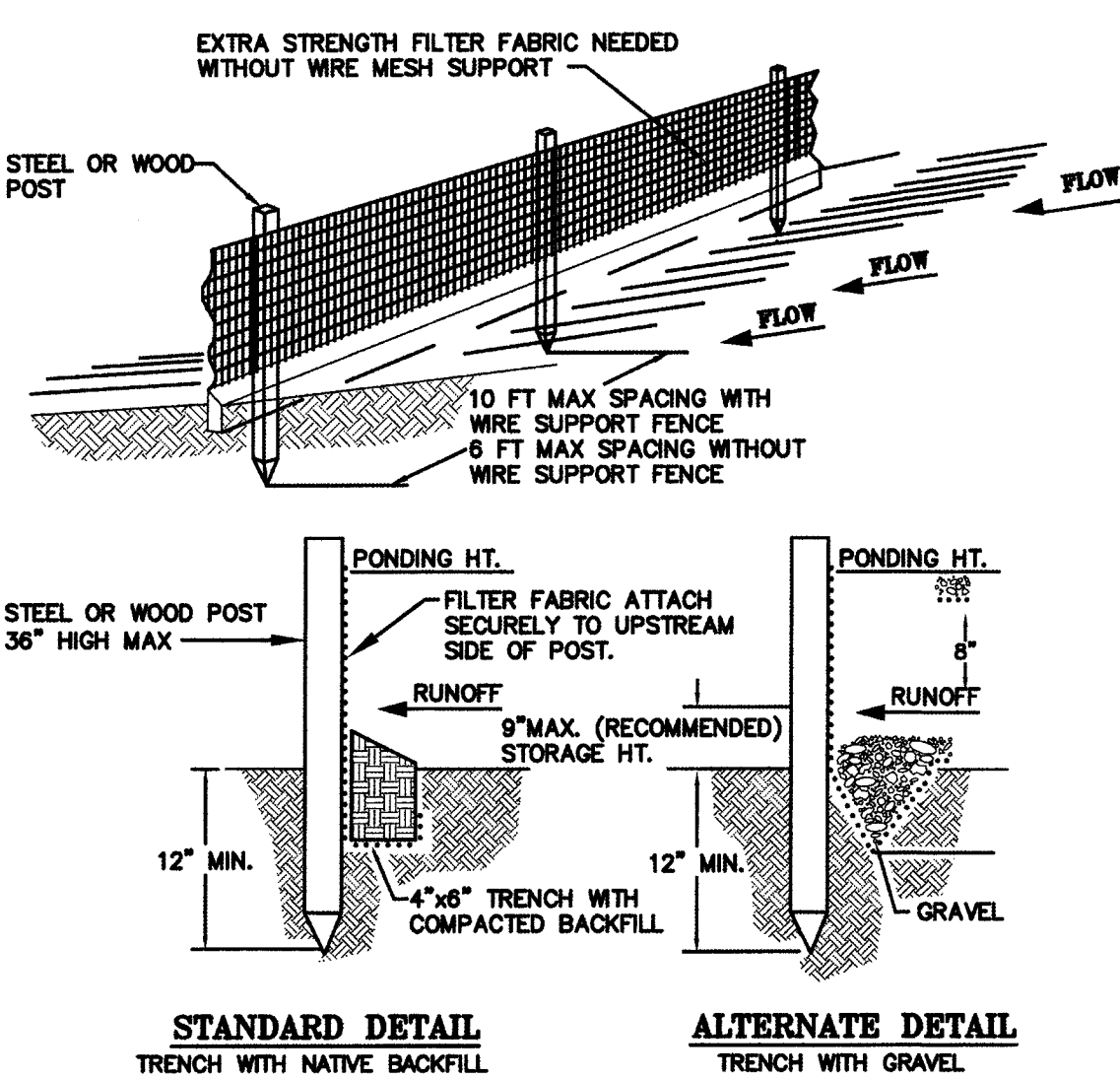
2 BUBBLE BOX  
C-3 NOT TO SCALE

3 PAVEMENT SECTION  
C-3 NOT TO SCALE



6 INLET PROTECTION  
NOT TO SCALE

7 CONSTRUCTION ENTRANCE  
C-3 NOT TO SCALE



- NOTES:
1. INSPECT AND REPAIR FENCE AFTER EACH STORM EVENT AND REMOVE SEDIMENT WHEN NECESSARY.
  2. REMOVED SEDIMENT SHALL BE DEPOSITED TO AN AREA THAT WILL NOT CONTRIBUTE SEDIMENT OFF-SITE AND CAN BE PERMANENTLY STABILIZED.
  3. SILT FENCE SHALL BE PLACED ON SLOPE CONTOURS TO MAXIMIZE PONDING EFFICIENCY.

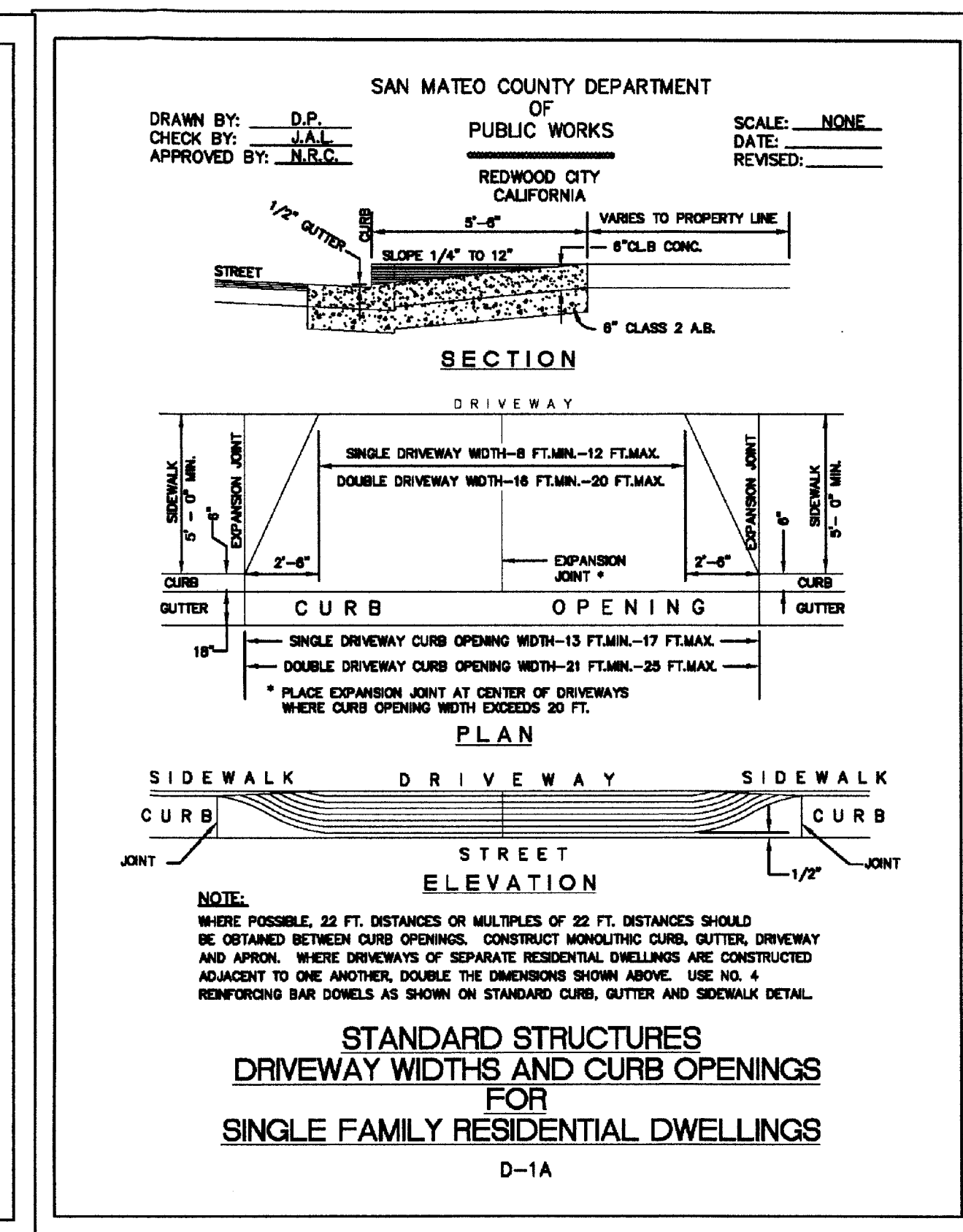
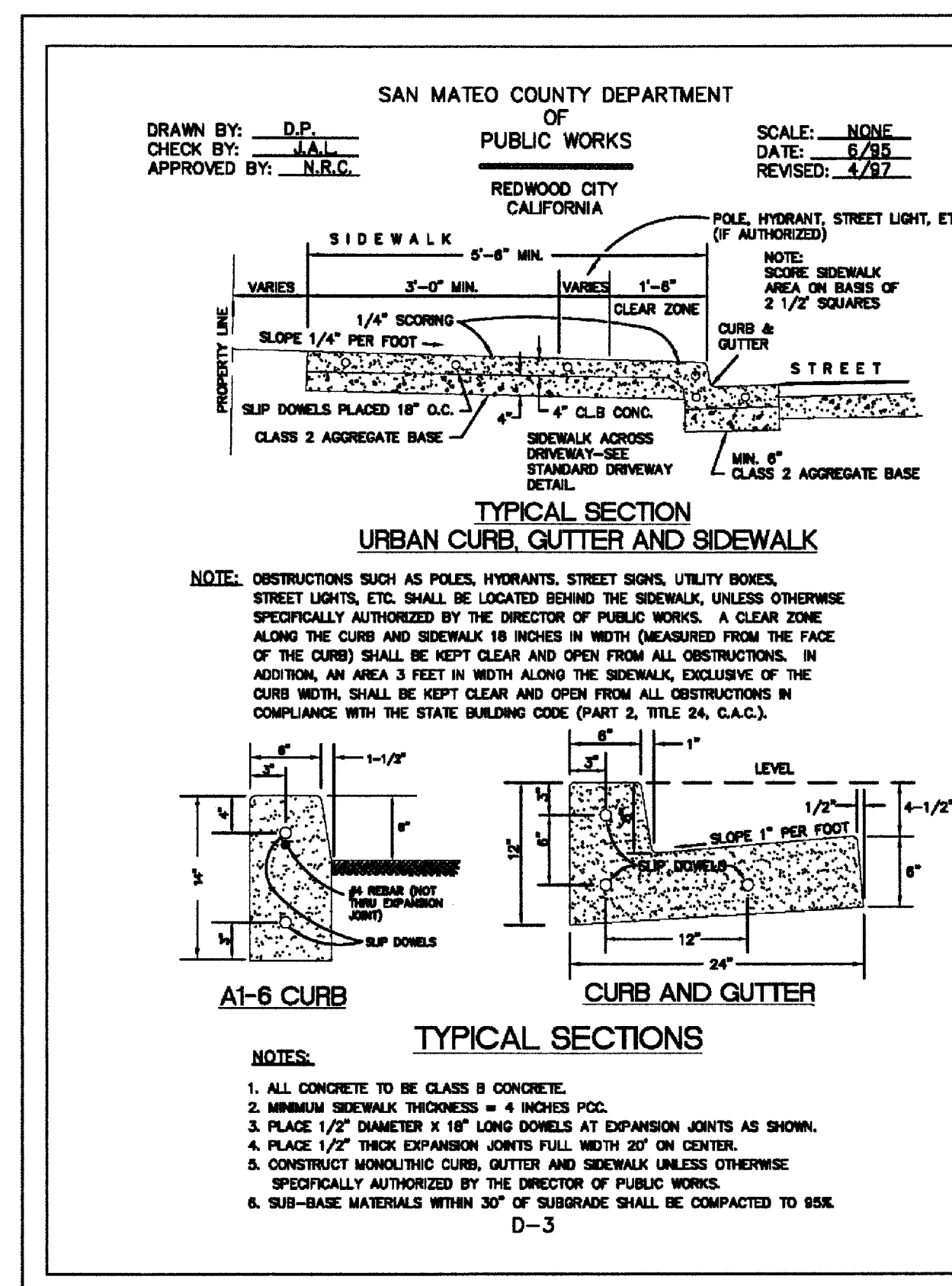
- NOTES:
1. FIBER ROLL INSTALLATION REQUIRES THE PLACEMENT AND SECURE STAKING OF THE ROLL IN A TRENCH, 3" TO 4" DEEP, DUG ON CONTOUR.
  2. ADJACENT ROLLS SHALL TIGHTLY ABUT.
  3. RUNOFF MUST NOT BE ALLOWED TO RUN UNDER OR AROUND FIBER ROLL.

- NOTES:
- LARGE AMOUNT OF FILL WILL INHERIT DELICATE SHALES BETWEEN ROOTS AND SOIL.
  - TO LIMIT SERIOUS DAMAGE OR DEAD TO TREE, PROVIDE GRAVEL AND SYSTEM TO DRAIN.
  - AVOID ANY PONDING BY DRAINING LAWN POINTS.
  - PROVIDE ADEQUATE RETAINING WALL - NO CLOSER THAN DRIP LINE.
  - ADDITIONAL PRECAUTIONS:
    - PROVIDE FENCES AND BARBICOLES AROUND TREE, INSTALL PRIOR TO GRADING.
    - FERTILIZE AND WATER TO MINIMIZE SHOCK - AS DIRECTED BY QUALIFIED ARBORIST.

9 SILT FENCE  
C-3 NOT TO SCALE

10 FIBER ROLL  
C-3 NOT TO SCALE

11 TREE PROTECTION  
C-3 NOT TO SCALE



COUNTY DETAILS  
NOT TO SCALE



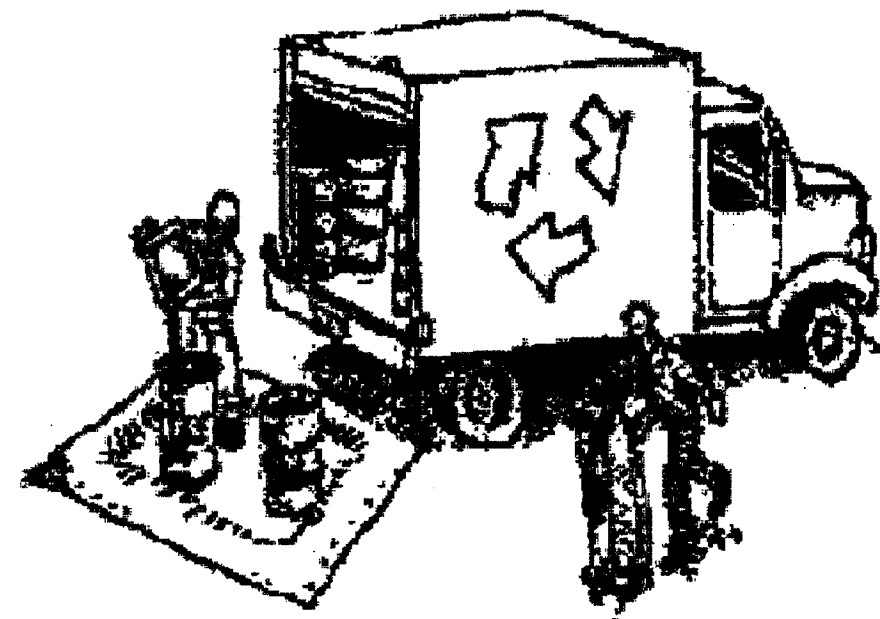


SAN MATEO COUNTYWIDE  
**Water Pollution  
Prevention Program**  
Clean Water. Healthy Community.

# Construction Best Management Practices (BMPs)

Construction projects are required to implement the stormwater best management practices (BMP) on this page, as they apply to your project, all year long.

## Materials & Waste Management



### Non-Hazardous Materials

- Berm and cover stockpiles of sand, dirt or other construction material with tarps when rain is forecast or if not actively being used within 14 days.
- Use (but don't overuse) reclaimed water for dust control.

### Hazardous Materials

- Label all hazardous materials and hazardous wastes (such as pesticides, paints, thinners, solvents, fuel, oil, and antifreeze) in accordance with city, county, state and federal regulations.
- Store hazardous materials and wastes in water tight containers, store in appropriate secondary containment, and cover them at the end of every work day or during wet weather or when rain is forecast.
- Follow manufacturer's application instructions for hazardous materials and be careful not to use more than necessary. Do not apply chemicals outdoors when rain is forecast within 24 hours.
- Arrange for appropriate disposal of all hazardous wastes.

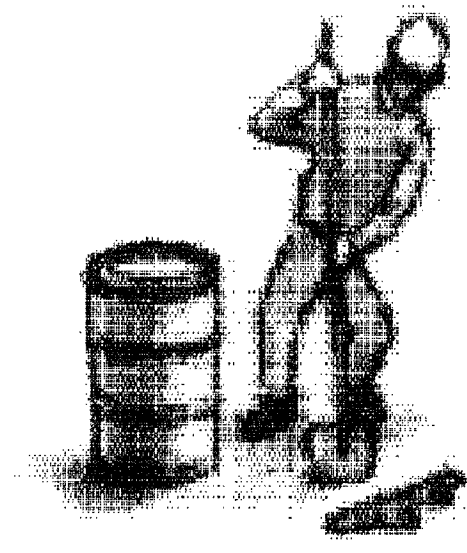
### Waste Management

- Cover waste disposal containers securely with tarps at the end of every work day and during wet weather.
- Check waste disposal containers frequently for leaks and to make sure they are not overfilled. Never hose down a dumpster on the construction site.
- Clean or replace portable toilets, and inspect them frequently for leaks and spills.
- Dispose of all wastes and debris properly. Recycle materials and wastes that can be recycled (such as asphalt, concrete, aggregate base materials, wood, gyp board, pipe, etc.)
- Dispose of liquid residues from paints, thinners, solvents, glues, and cleaning fluids as hazardous waste.

### Construction Entrances and Perimeter

- Establish and maintain effective perimeter controls and stabilize all construction entrances and exits to sufficiently control erosion and sediment discharges from site and tracking off site.
- Sweep or vacuum any street tracking immediately and secure sediment source to prevent further tracking. Never hose down streets to clean up tracking.

## Equipment Management & Spill Control



### Maintenance and Parking

- Designate an area, fitted with appropriate BMPs, for vehicle and equipment parking and storage.
- Perform major maintenance, repair jobs, and vehicle and equipment washing off site.
- If refueling or vehicle maintenance must be done onsite, work in a bermed area away from storm drains and over a drip pan or drop cloths big enough to collect fluids. Recycle or dispose of fluids as hazardous waste.
- If vehicle or equipment cleaning must be done onsite, clean with water only in a bermed area that will not allow rinse water to run into gutters, streets, storm drains, or surface waters.
- Do not clean vehicle or equipment onsite using soaps, solvents, degreasers, or steam cleaning equipment.

### Spill Prevention and Control

- Keep spill cleanup materials (e.g., rags, absorbents and cat litter) available at the construction site at all times.
- Inspect vehicles and equipment frequently for and repair leaks promptly. Use drip pans to catch leaks until repairs are made.
- Clean up spills or leaks immediately and dispose of cleanup materials properly.
- Do not hose down surfaces where fluids have spilled. Use dry cleanup methods (absorbent materials, cat litter, and/or rags).
- Sweep up spilled dry materials immediately. Do not try to wash them away with water, or bury them.
- Clean up spills on dirt areas by digging up and properly disposing of contaminated soil.
- Report significant spills immediately. You are required by law to report all significant releases of hazardous materials, including oil. To report a spill: 1) Dial 911 or your local emergency response number, 2) Call the Governor's Office of Emergency Services Warning Center, (800) 852-7550 (24 hours).

## Earthmoving



- Schedule grading and excavation work during dry weather.
- Stabilize all denuded areas, install and maintain temporary erosion controls (such as erosion control fabric or bonded fiber matrix) until vegetation is established.
- Remove existing vegetation only when absolutely necessary, and seed or plant vegetation for erosion control on slopes or where construction is not immediately planned.
- Prevent sediment from migrating offsite and protect storm drain inlets, gutters, ditches, and drainage courses by installing and maintaining appropriate BMPs, such as fiber rolls, silt fences, sediment basins, gravel bags, berms, etc.
- Keep excavated soil on site and transfer it to dump trucks on site, not in the streets.

### Contaminated Soils

- If any of the following conditions are observed, test for contamination and contact the Regional Water Quality Control Board:
  - Unusual soil conditions, discoloration, or odor.
  - Abandoned underground tanks.
  - Abandoned wells
  - Buried barrels, debris, or trash.

## Paving/Asphalt Work



- Avoid paving and seal coating in wet weather or when rain is forecast, to prevent materials that have not cured from contacting stormwater runoff.
- Cover storm drain inlets and manholes when applying seal coat, tack coat, slurry seal, fog seal, etc.
- Collect and recycle or appropriately dispose of excess abrasive gravel or sand. Do NOT sweep or wash it into gutters.
- Do not use water to wash down fresh asphalt concrete pavement.

### Sawcutting & Asphalt/Concrete Removal

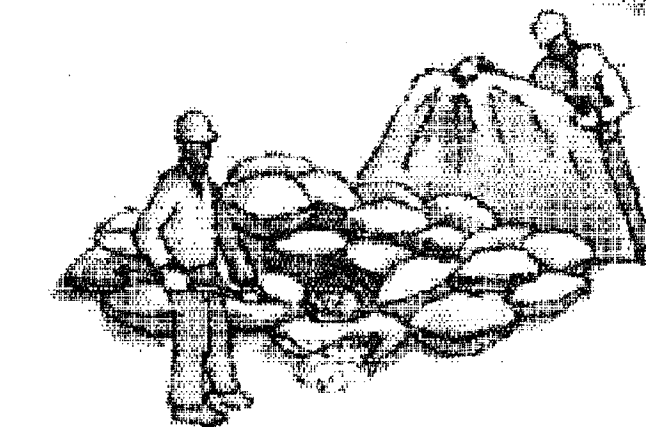
- Protect nearby storm drain inlets when saw cutting. Use filter fabric, catch basin inlet filters, or gravel bags to keep slurry out of the storm drain system.
- Shovel, absorb, or vacuum saw-cut slurry and dispose of all waste as soon as you are finished in one location or at the end of each work day (whichever is sooner!).
- If sawcut slurry enters a catch basin, clean it up immediately.

## Concrete, Grout & Mortar Application



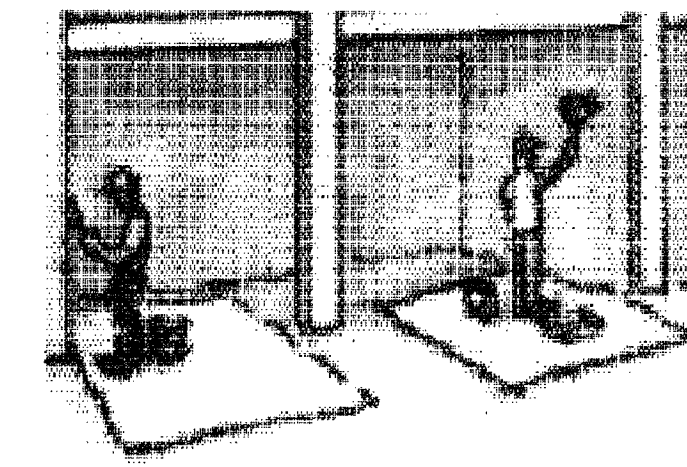
- Store concrete, grout, and mortar away from storm drains or waterways, and on pallets under cover to protect them from rain, runoff, and wind.
- Wash out concrete equipment/trucks offsite or in a designated washout area, where the water will flow into a temporary waste pit, and in a manner that will prevent leaching into the underlying soil or onto surrounding areas. Let concrete harden and dispose of as garbage.
- When washing exposed aggregate, prevent washwater from entering storm drains. Block any inlets and vacuum gutters, hose washwater onto dirt areas, or drain onto a bermed surface to be pumped and disposed of properly.

## Landscaping



- Protect stockpiled landscaping materials from wind and rain by storing them under tarps all year-round.
- Stack bagged material on pallets and under cover.
- Discontinue application of any erodible landscape material within 2 days before a forecast rain event or during wet weather.

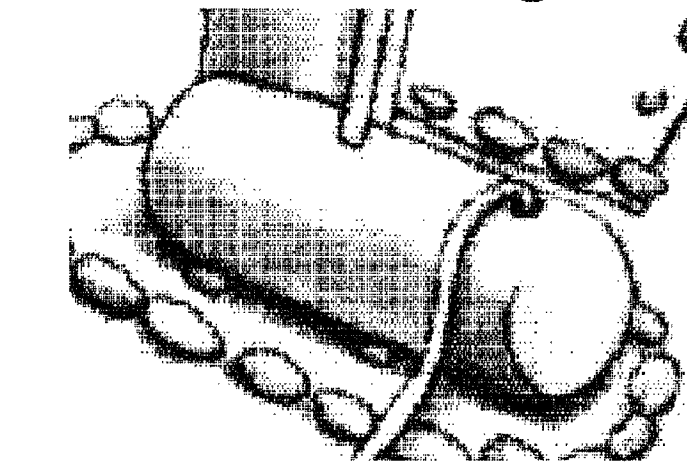
## Painting & Paint Removal



### Painting Cleanup and Removal

- Never clean brushes or rinse paint containers into a street, gutter, storm drain, or stream.
- For water-based paints, paint out brushes to the extent possible, and rinse into a drain that goes to the sanitary sewer. Never pour paint down a storm drain.
- For oil-based paints, paint out brushes to the extent possible and clean with thinner or solvent in a proper container. Filter and reuse thinners and solvents. Dispose of excess liquids as hazardous waste.
- Paint chips and dust from non-hazardous dry stripping and sand blasting may be swept up or collected in plastic drop cloths and disposed of as trash.
- Chemical paint stripping residue and chips and dust from marine paints or paints containing lead, mercury, or tributyltin must be disposed of as hazardous waste. Lead based paint removal requires a state-certified contractor.

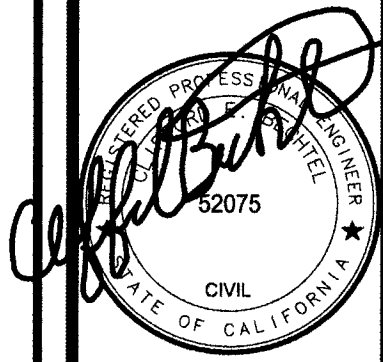
## Dewatering



- Discharges of groundwater or captured runoff from dewatering operations must be properly managed and disposed. When possible send dewatering discharge to landscaped area or sanitary sewer. If discharging to the sanitary sewer call your local wastewater treatment plant.
- Divert run-on water from offsite away from all disturbed areas.
- When dewatering, notify and obtain approval from the local municipality before discharging water to a street gutter or storm drain. Filtration or diversion through a basin, tank, or sediment trap may be required.
- In areas of known or suspected contamination, call your local agency to determine whether the ground water must be tested. Pumped groundwater may need to be collected and hauled off-site for treatment and proper disposal.

**Storm drain polluters may be liable for fines of up to \$10,000 per day!**

CLIFFORD BECHTEL  
AND ASSOCIATES  
CLIFFORD BECHTEL, PE  
801 WALTERS STREET  
RELMONT, CA 94002  
850-333-9103  
850-337-1056 (FAX)



California

HUARD RESIDENCE  
MAGELLAN AVENUE  
SAN MATEO COUNTY

Miramar

CONTENTS:

CONSTRUCTION  
BMP  
CHECKLIST

DATE 04/05/18

SCALE AS NOTED

REVISIONS:  
REV. 08/27/18

DRAWN J.G.

CHECKED C.B.

JOB No. 2018608

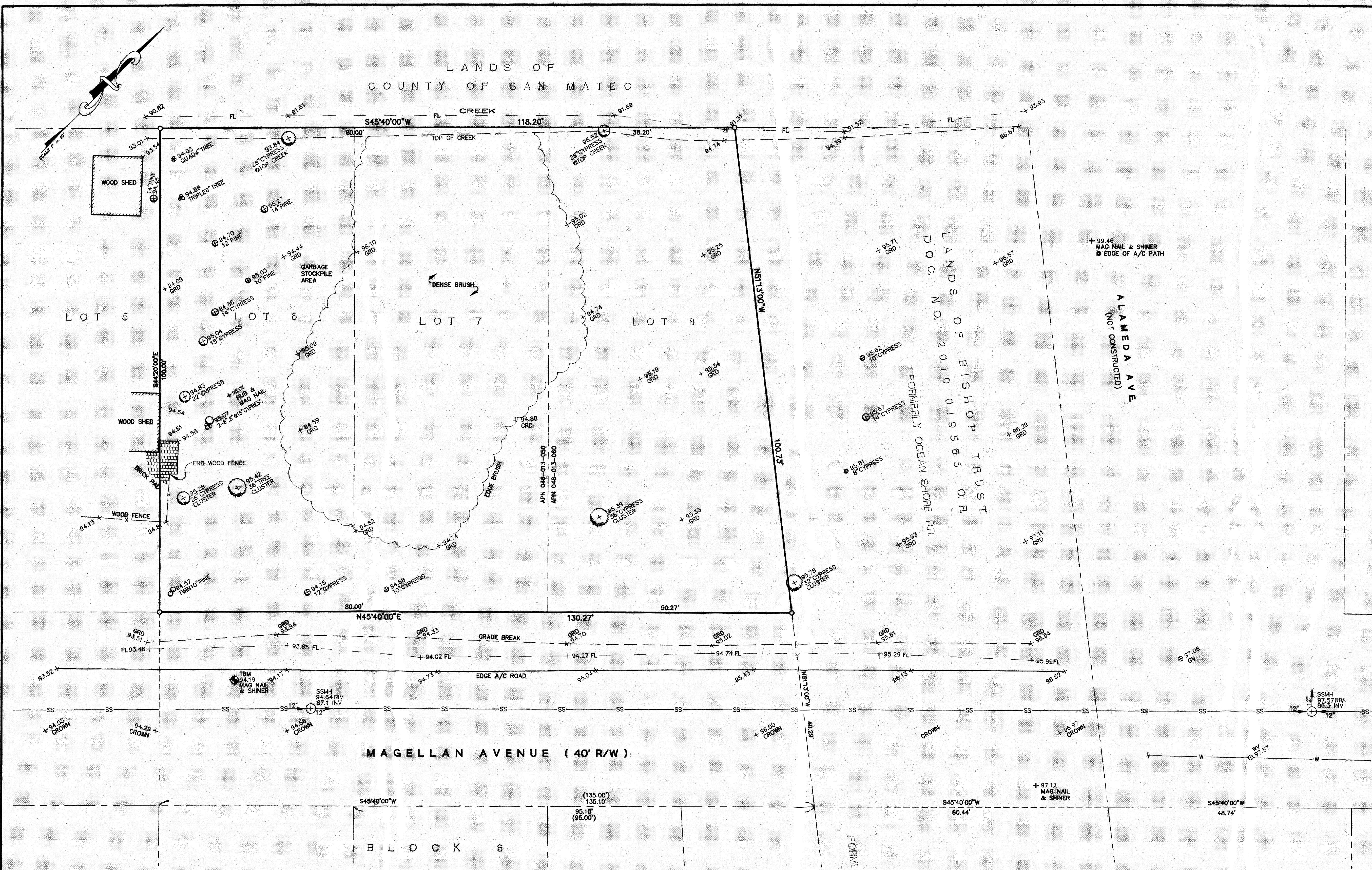
SHEET NO.

C-4

OF 4 SHEETS



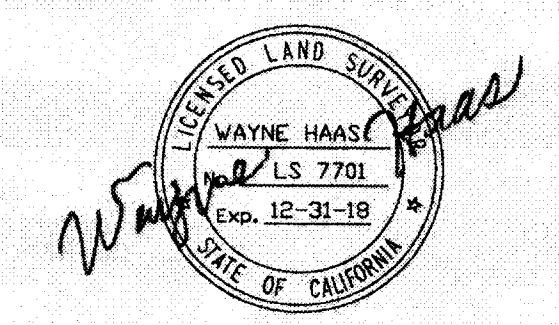
LANDS OF  
COUNTY OF SAN MATEO



**BOUNDARY NOTE:**  
MONUMENTS HAVE BEEN SET AT THE PROPERTY CORNERS AND A RECORD OF SURVEY FILED ON AUGUST 17, 2010 IN VOL. 35 OF LLS MAPS AT PAGE 34, RECORDS OF SAN MATEO COUNTY.

**BASIS OF BEARINGS:**  
THE BEARING N45°40'00"E ON THE CENTERLINE OF MEDIO AVENUE AS SHOWN ON THOSE CERTAIN RECORD OF SURVEY MAPS FILED IN VOLUME 20 OF LLS MAPS AT PAGES 31 AND 32 AND IN VOLUME 30 OF LLS MAPS AT PAGE 98, RECORDS OF SAN MATEO COUNTY, WAS TAKEN AS THE BASIS OF BEARINGS FOR THIS SURVEY.

**BASIS OF ELEVATIONS:**  
ELEVATIONS ARE BASED UPON AN ASSUMED DATUM.  
TBM: MAG NAIL & SHINER SET IN MAGELLAN AVENUE, AS SHOWN ELEVATION = 94.19



**BOUNDARY AND TOPOGRAPHIC SURVEY**

LANDS OF HUARD  
DOCUMENT # 2017-05772811 O.R.  
LOTS 6, 7 AND 8, BLOCK 1  
"SHORE ACRES HALF MOON BAY, CALIFORNIA  
FIRST ADDITION TO THE CITY OF BALBOA"  
VOLUME 3 OF MAPS AT PAGE 95  
ASSESSOR'S PARCEL NUMBER: 048-013-080 & 060  
(MAGELLAN AVENUE)  
HALF MOON BAY SAN MATEO COUNTY CALIFORNIA  
SCALE: 1" = 10'

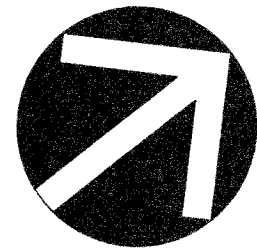
**B & H SURVEYING, INC.**  
PROFESSIONAL LAND SURVEYING  
901 WALTERMIRE ST.  
BELMONT, CA 94002  
OFFICE (650) 637-1590  
FAX (650) 637-1059

**LEGEND:**

- |      |   |        |                           |
|------|---|--------|---------------------------|
| ○    | 3/4" IRON PIPE MONUMENT WITH PLASTIC PLUG "LS 7701" AS SHOWN ON SS LLS 34 | P.U.E. | PUBLIC UTILITIES EASEMENT |
| A/C  | ASPHALTIC CONCRETE  | RCP    | REINFORCED CONCRETE PIPE  |
| BW   | BACK OF WALK  | RWALL  | RETAINING WALL            |
| CB   | CATCH BASIN   | R/W    | RIGHT OF WAY              |
| CP   | CAST IRON PIPE  | SSCO   | SANITARY SEWER CLEAN-OUT  |
| CMC  | CORRUGATED METAL PIPE   | SSMH   | SANITARY SEWER MANHOLE    |
| CO   | CONCRETE  | SDMH   | STORM DRAIN MANHOLE       |
| CO   | CLEAN-OUT   | TBC    | TOP BACK OF CURB          |
| DI   | DROP INLET  | T/W    | TOP OF WALL               |
| EM   | ELECTRIC METER  | U/G    | UNDERGROUND               |
| FD   | FOUND   | VCP    | VITRIFIED CLAY PIPE       |
| FF   | FINISHED FLOOR  | WV     | WATER VALVE               |
| FL   | FLOW LINE   | WM     | WATER METER BOX           |
| FL   | FIRE HYDRANT  | -CTV-  | CABLE TELEVISION LINE     |
| GA   | GUT ANCHOR  | -E-    | ELECTRICAL LINE           |
| GM   | GAS METER   | -G-    | GAS LINE                  |
| GRD  | GROUND  | -SS-   | SANITARY SEWER LINE       |
| HCR  | HANDICAP RAMP   | -SD-   | STORM DRAIN LINE          |
| INV. | INVERT  | -T-    | TELEPHONE LINE            |
| IP   | IRON PIPE   | -W-    | WATER LINE                |
| LAT. | LATERAL   |        |                           |
| LG   | LIP OF GUTTER   |        |                           |
| O/H  | OVERHEAD  |        |                           |

**UTILITY NOTE:**  
THE UTILITIES EXISTING ON THE SURFACE AND SHOWN ON THIS DRAWING HAVE BEEN LOCATED BY FIELD SURVEY. ALL UNDERGROUND UTILITIES SHOWN ON THIS DRAWING ARE FROM RECORDS OF THE VARIOUS UTILITY COMPANIES AND THE SURVEYOR DOES NOT ASSUME RESPONSIBILITY FOR THEIR COMPLETENESS, INDICATED LOCATION, OR SIZE. RECORD UTILITY LOCATION SHOULD BE CONFIRMED BY EXPOSING THE UTILITY.

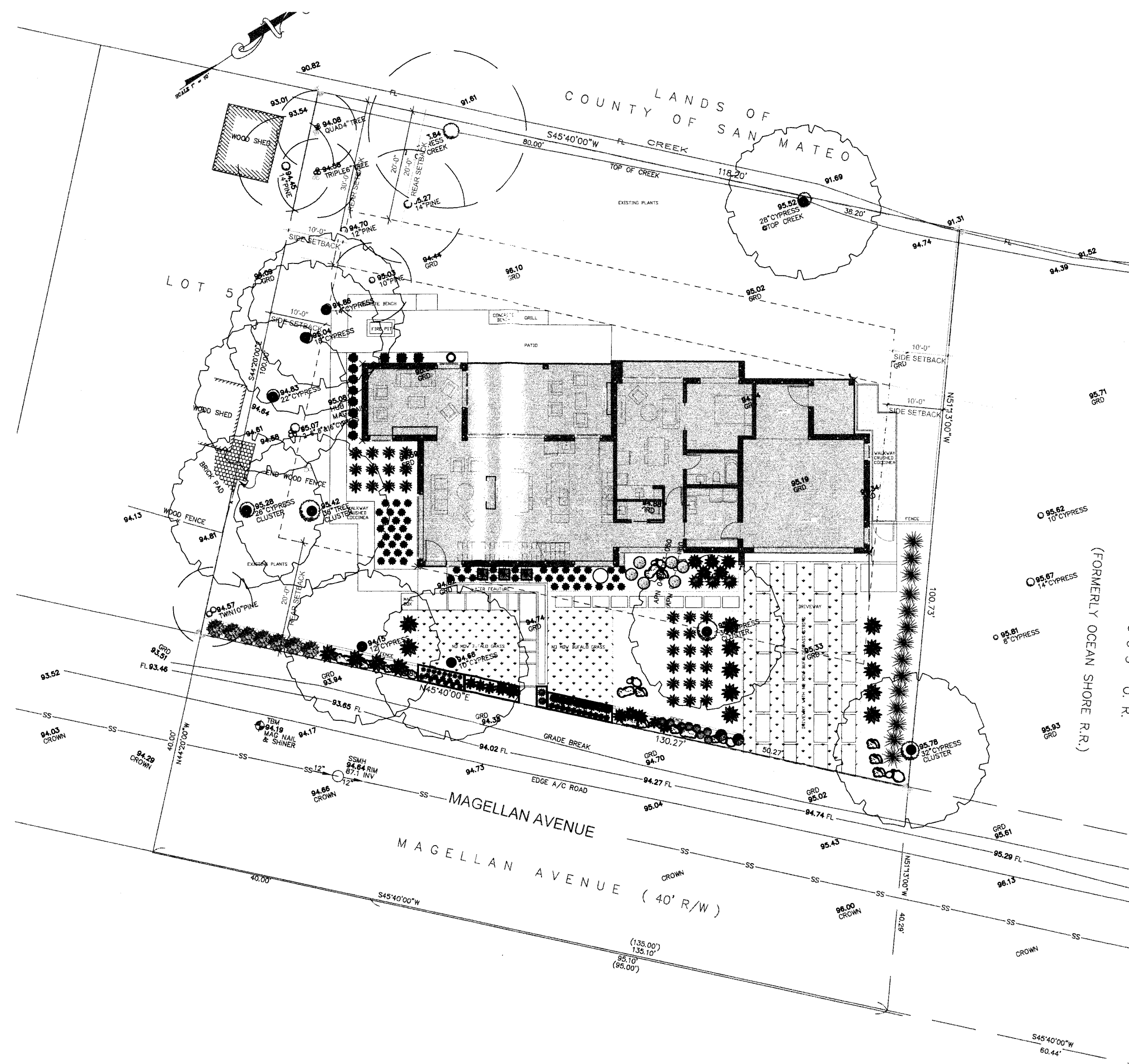




MAP VIEW



PROPOSED LANDSCAPE



HUARD RESIDENCE

185 Megellan Avenue - Half Moon Bay - CA

LANDSCAPE PERMIT DOCUMENTS

- LA 1\_A - HARDSCAPE PLAN
- LA 1\_B - GREENROOF PLAN
- LA 1\_C - DRIVEWAY DETAILS
- LA 1\_D - WATER FEATURE AND WALKWAY
- LA 1\_E - FIRE PIT AND BBQ COUNTER
- LA 2\_A - LIGHTING PLAN
- LA 3\_A - PLANTING PLAN
- LA 3\_B - PLANTING\_GREENROOF PLAN
- LA 3\_C - LANDSCAPE NOTES AND DETAILS
- LA 3\_D - SOIL REPORT AND PREPARATION

\* FOR IRRIGATION PLANS AND WELO SHEETS SEE BROOKWATER PLANS

\*\*FOR TREE REMOVED SEE ARBORIST REPORT.

"I agree to comply with the requirement of the water efficient landscape ordinance and submit a complete Landscape Documentation Package"

Paul Huard  
Property Owner

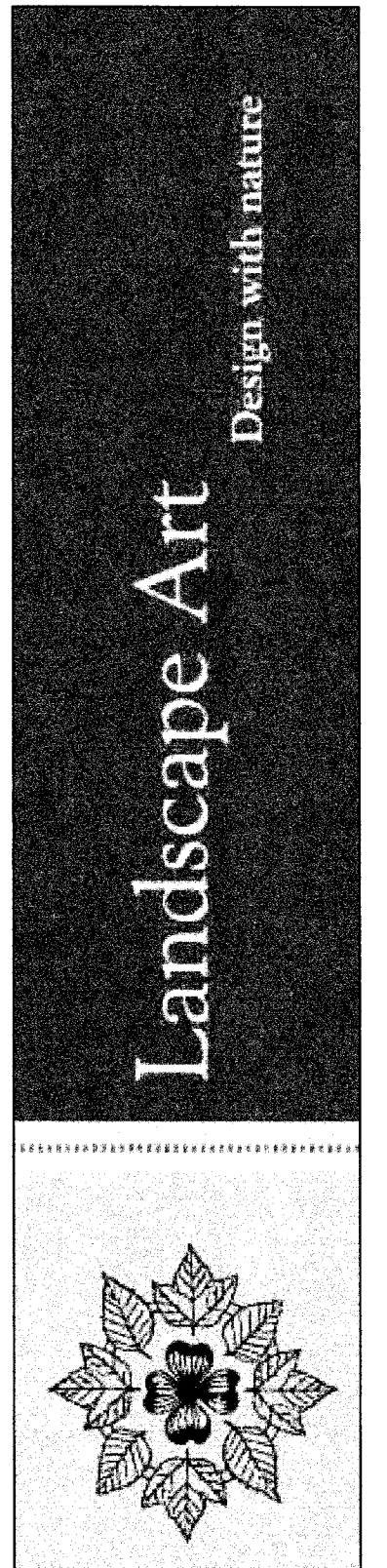
Date

STREE VIEW



PLN2018-00154

RECEIVED  
JUL 9 2019  
San Mateo County  
Planning Division

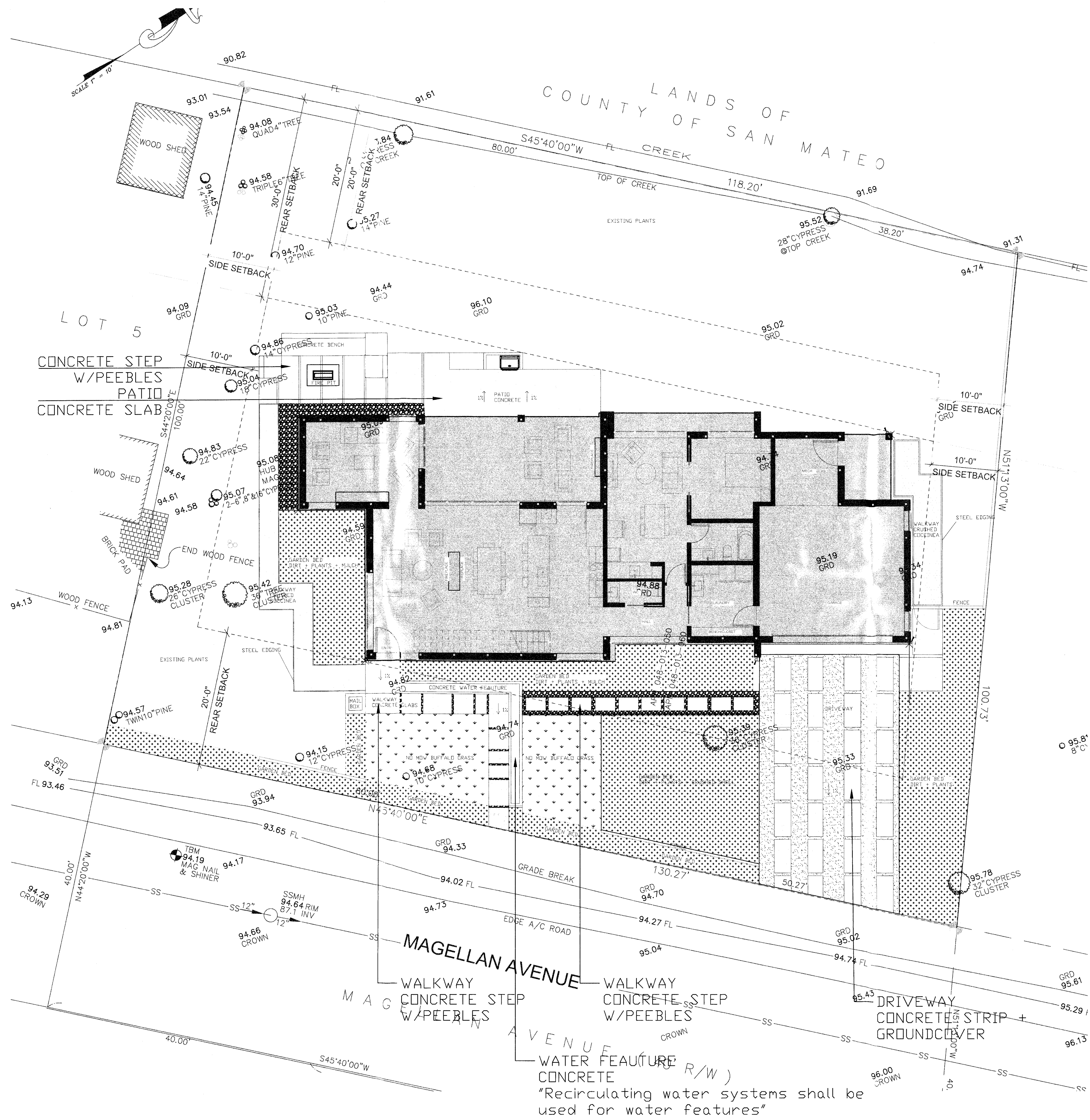


COVER

HUARD RESIDENCE  
185 Megellan Avenue - Half Moon Bay - CA

PROJECT REVIEW





Huard Residence\_Landscape Lot Areas\_Permit x Proposed\_Jun 28/2019

	12,424 sf	
	PERMITTED (sq.ft)	PROPOSED (sq.ft)
<b>Total Lot Area</b>		
<b>Lot Coverage (house)</b>	3,727 sq.ft (30%)	2,411
<b>Lot Coverage (Hardscape over 18")</b>		101.35
<b>Impervious Area</b>	1,170 sq.ft (max)	1,145
<b>Landscape Area (total)</b>	8,697 sq.ft (min 70%)	10,013
<b>Native/Existing Landscape</b>	NOT IRRIGATED	6,253
<b>Now Mow Buffalo Grass (total)</b>	2,503 sq.ft (max 25% Landscape)	773
<b>Greenroof</b>		411
<b>Front Yard</b>		PROPOSED
Driveway area(Concrete)		337
Hardscape area(Walkway+Water feature)		320
Soft Landscaping area		1,252
No mow Buffalo Grass		398
Native/Existing Landscape	NOT IRRIGATED	620
Driveway No mow Buffalo Grass Strip		436
<b>Front yard Landscaping Area</b>		<b>3363</b>
<b>Backyard (Rear)</b>		PROPOSED
Hardscape area(Patio)		465
Soft Landscaping area (Garden Beds)		0
Turf		0
Native/Existing Landscape	NOT IRRIGATED	4671
<b>Backyard Landscaping Area</b>		<b>5136</b>
<b>Sides yards</b>		PROPOSED
Hardscape area		0
Walkway Crushed Coccinea		273
Soft Landscaping area (Garden Beds)		279
Turf		0
Native/Existing Landscape	NOT IRRIGATED	962
<b>Backyard Landscaping Area</b>		<b>1514</b>

LEGEND

	CONCRETE
	CRUSHED SHELL
	PEEBLES
	DIRT FOR LANDSCAPE
	NO MOW BUFFALO GRASS
	CALIFORNIA MEADOW SEDGE

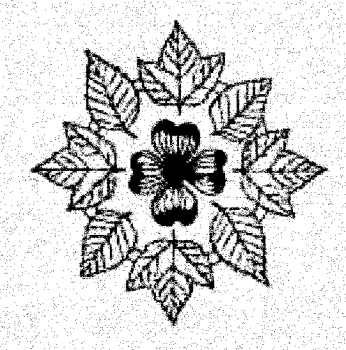
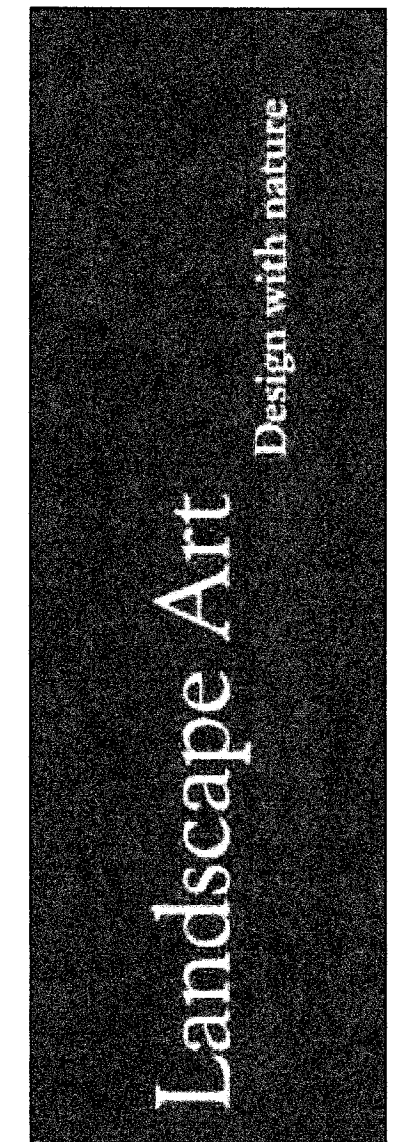
01 Landscape Plan  
1/8"=1'-0"

SCALE	1/2"=1'-0"
DESIGNED BY	AI
DRAWN BY	AI
CHECKED BY	AI
CAD DWG.	Huard Residence_Nov 12.dwg
DATE	Nov, 12/2018
REVISIONS	
#1	Feb,13/2018
#2 - City Review	Aug, 31/2018
#3 - City Review	Jun, 28/2019

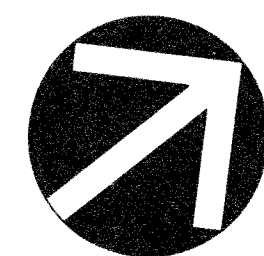
LA- 1-A

**HUARD RESIDENCE**  
185 Magellan Avenue - Half Moon Bay - CA

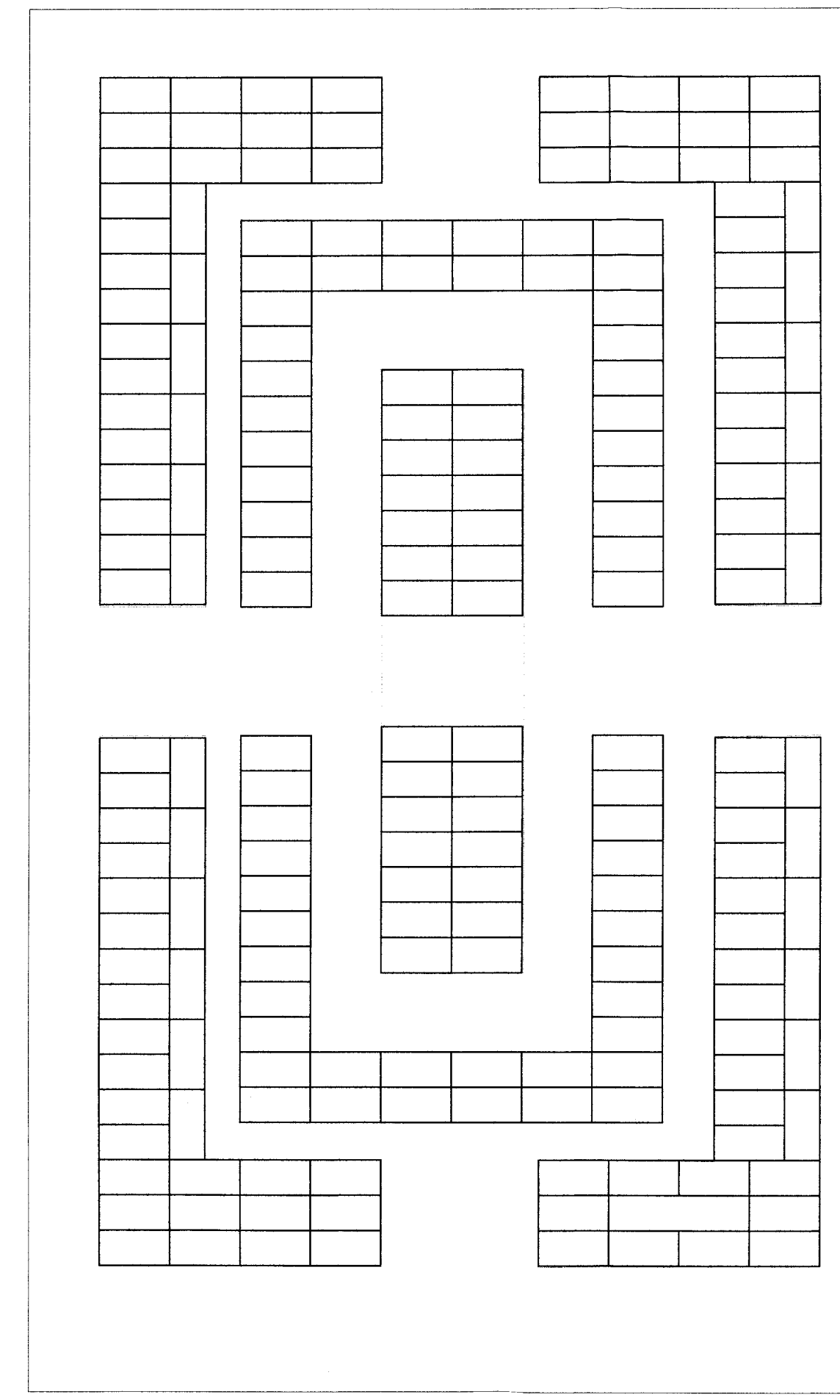
HARDSCAPE PLAN



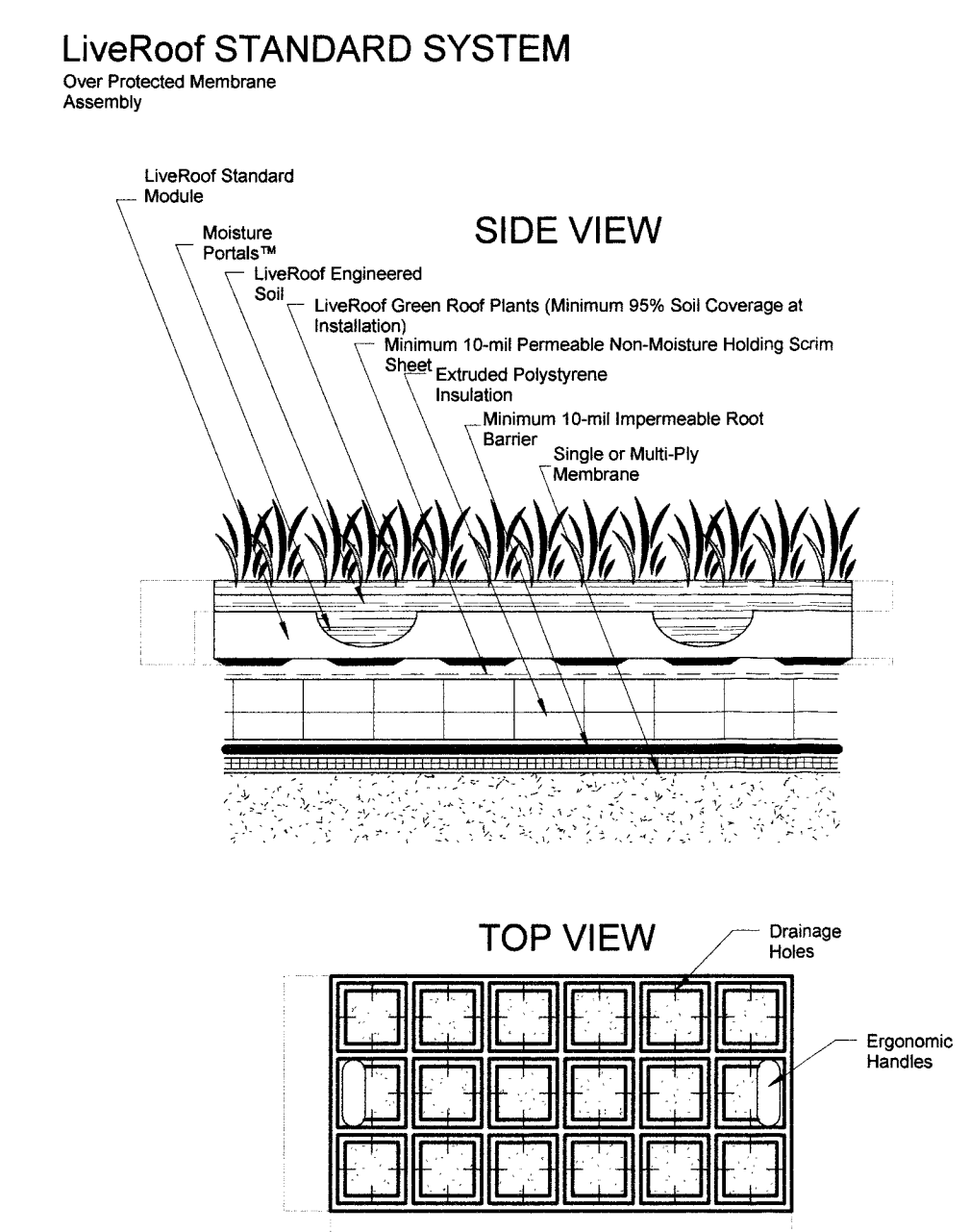




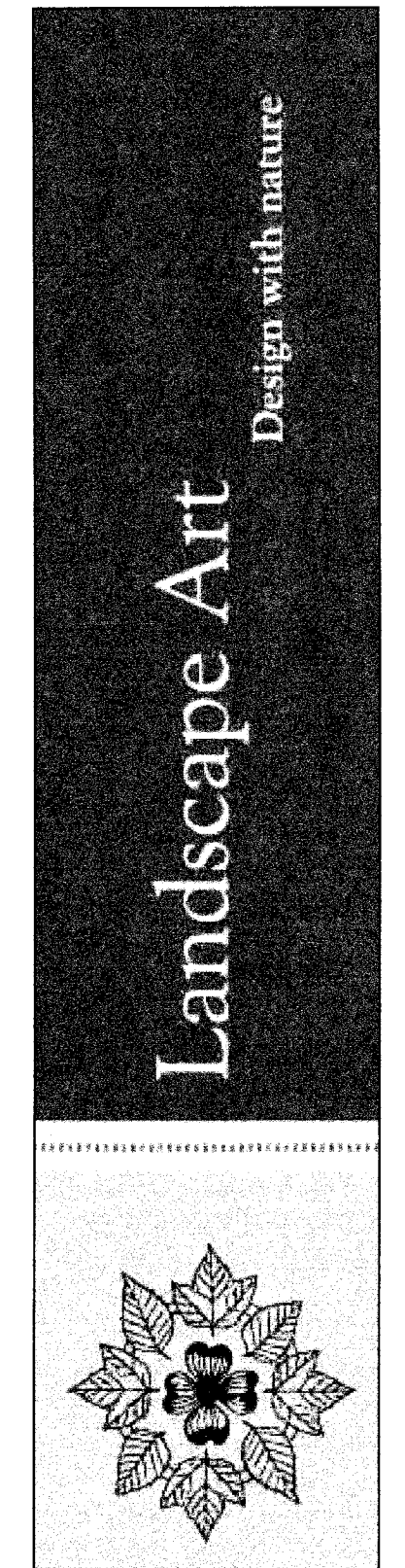
**01** Greenroof Plan  
1/2"=1'-0"



**02** Greenroof Tray System (180 TRAY 2'X1')  
1/4"=1'-0"



**03** Tray Installation  
NO SCALE

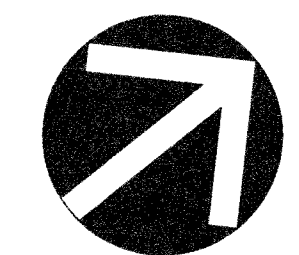
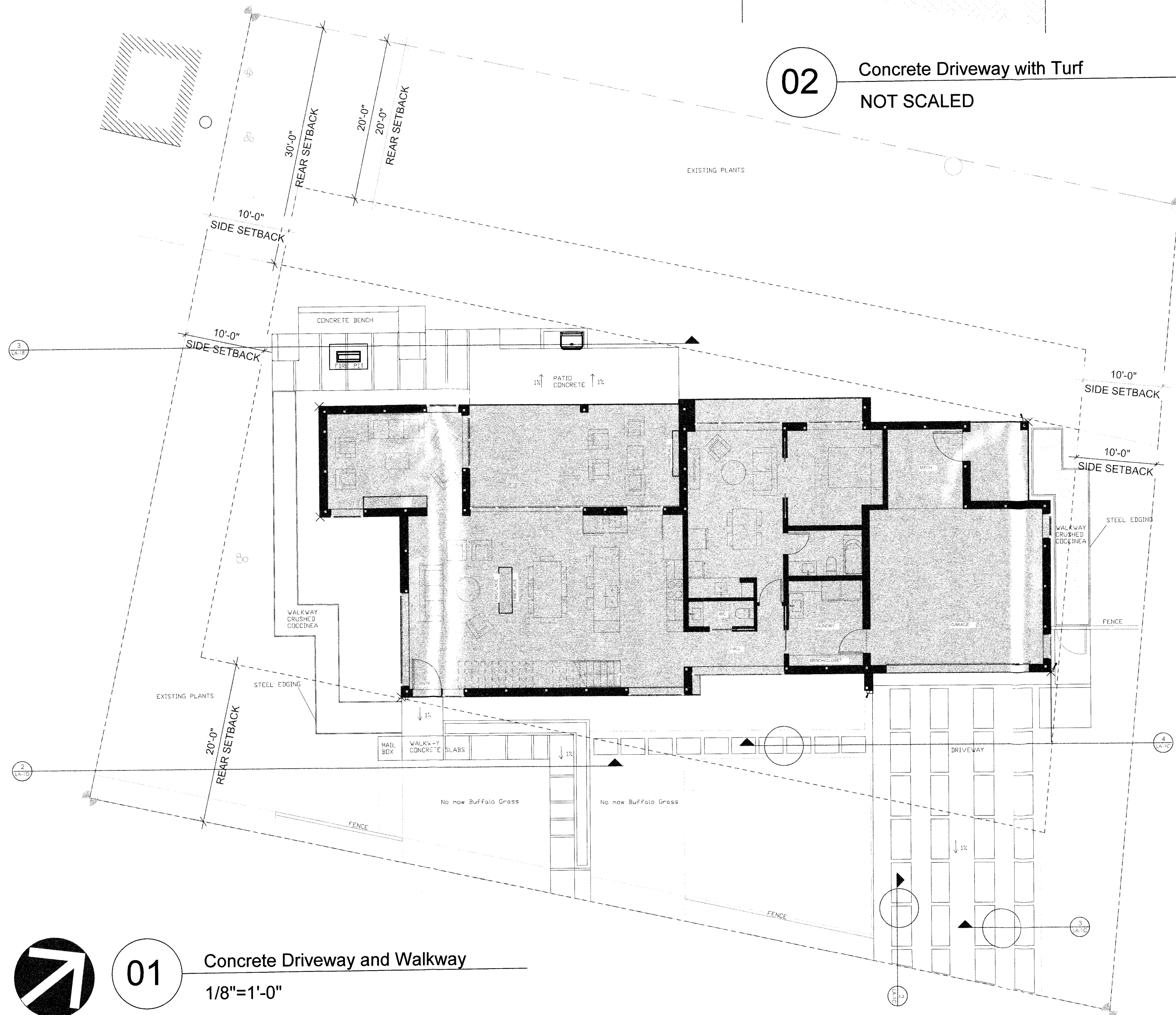


SCALE	1/2"=1'-0"
DESIGNED BY	AI
DRAWN BY	AI
CHECKED BY	AI
CAD DWG.	Huard Residence_Nov 12.dwg
DATE	Nov, 12/2018
REVISIONS	
#1	Feb, 13/2018
#2 - City Review	Aug, 31/2018
#3 - City Review	Jun, 28/2019

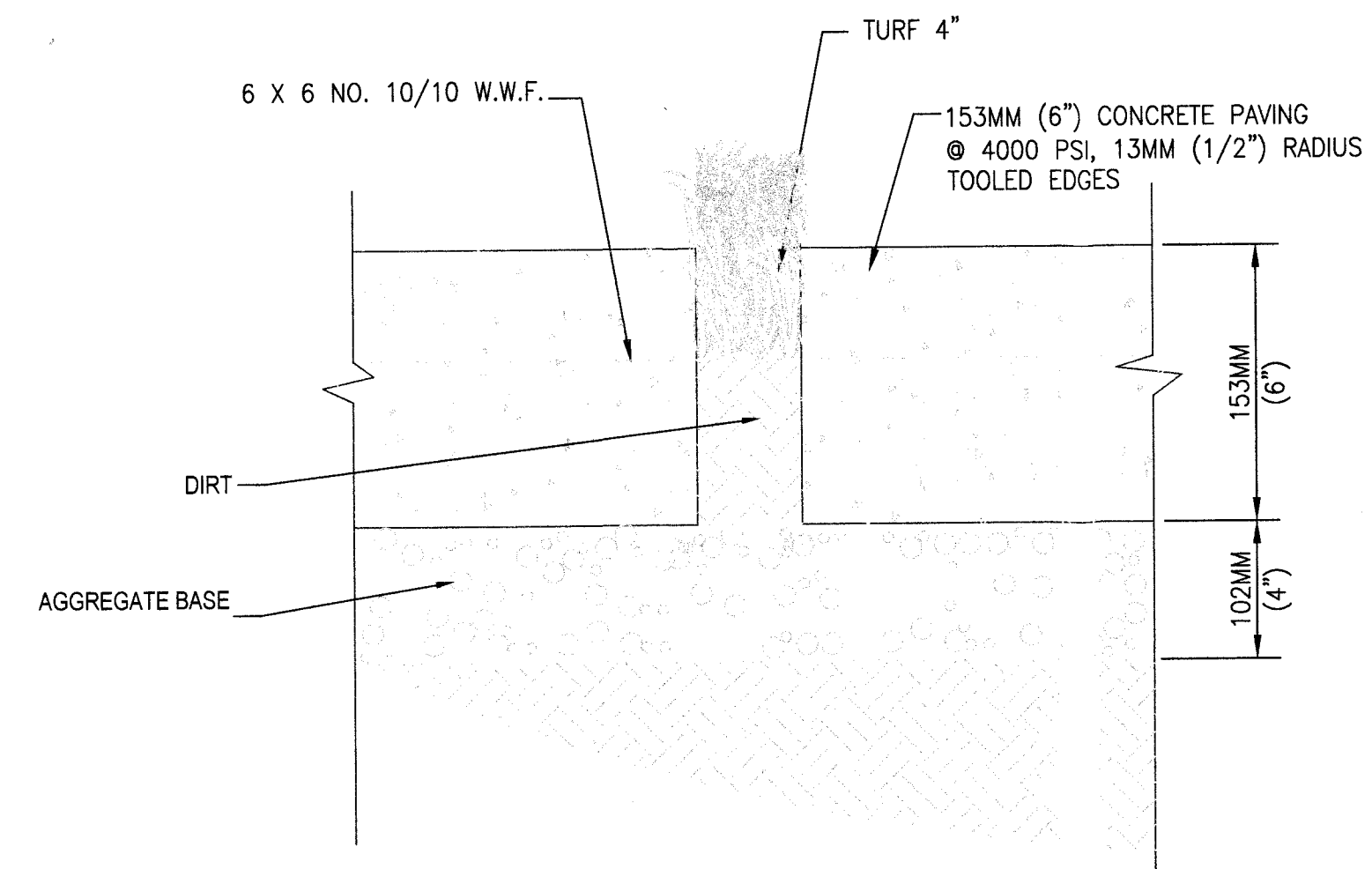
**LA- 1-B**

**HUARD RESIDENCE**  
185 Megellan Avenue - Half Moon Bay - CA

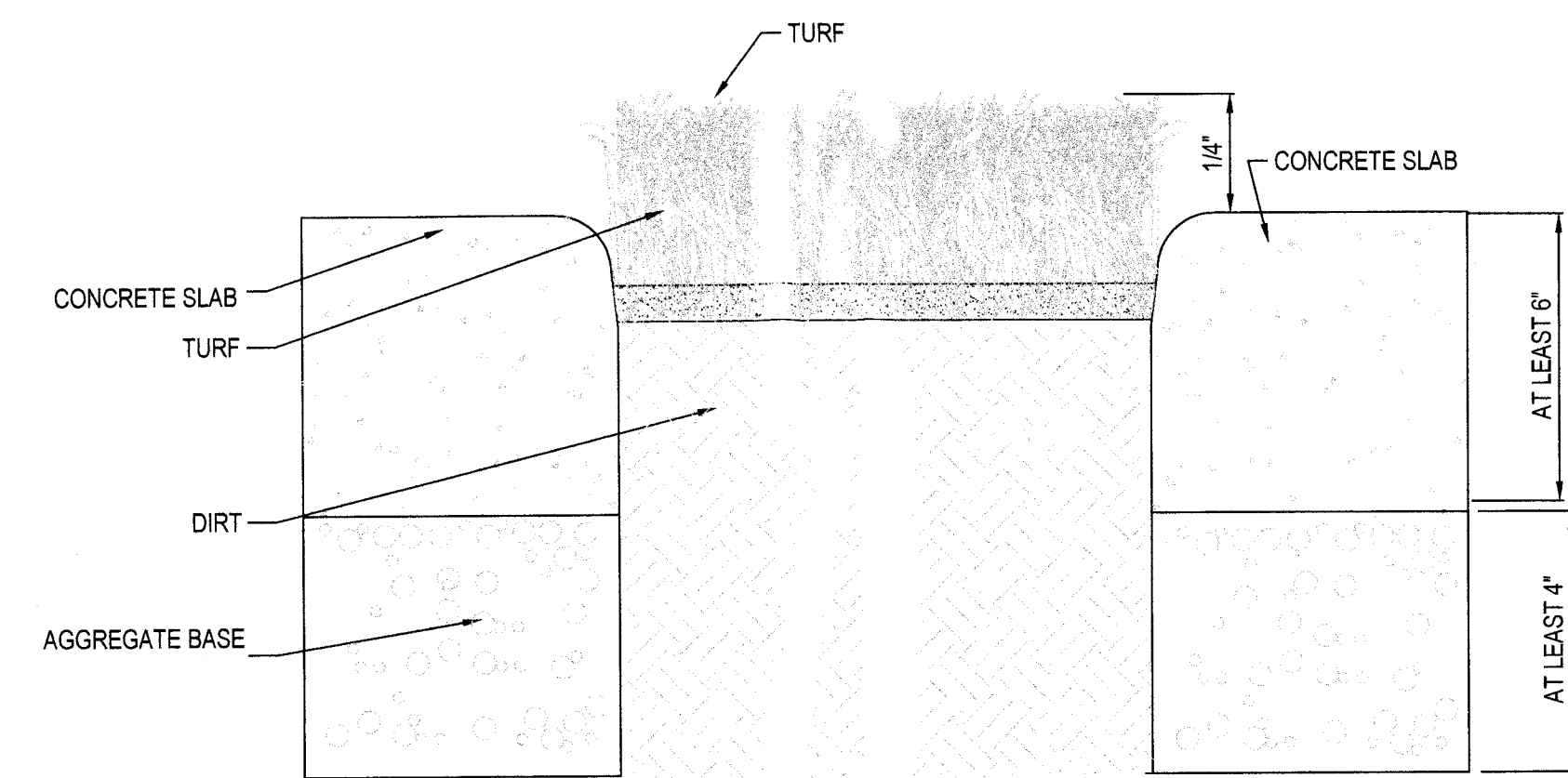
**HARDSCAPE GREENROOF**



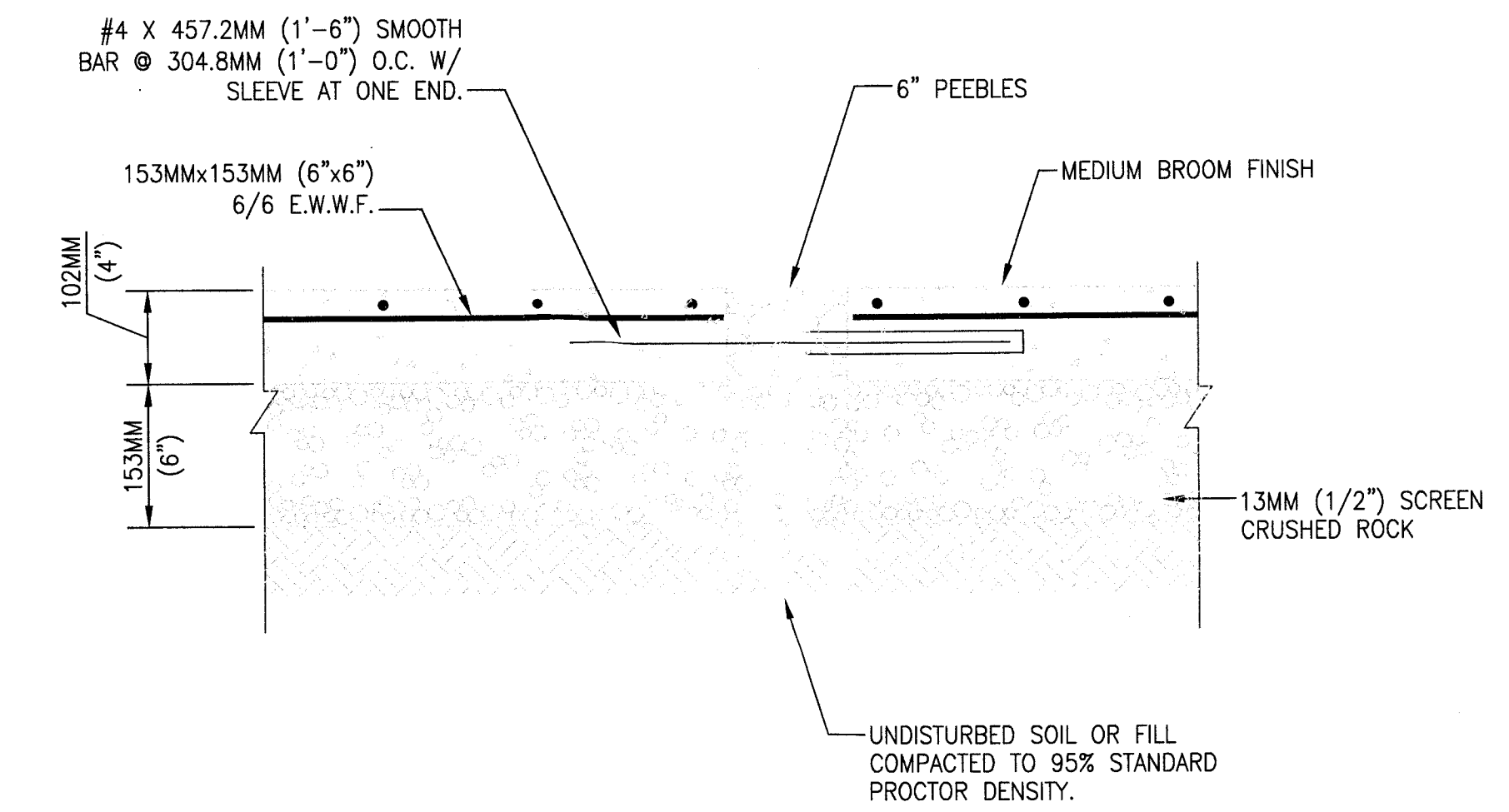
**01** Concrete Driveway and Walkway  
1/8"=1'-0"



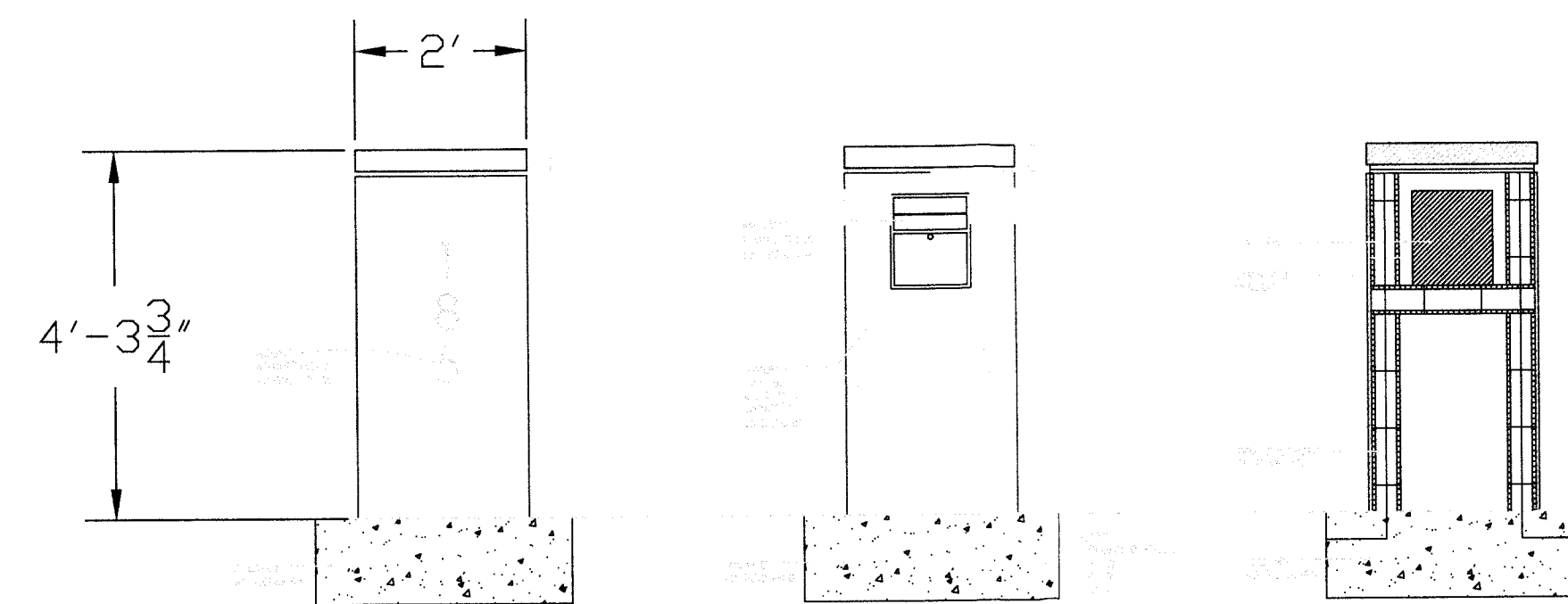
**02** Concrete Driveway with Turf  
NOT SCALED



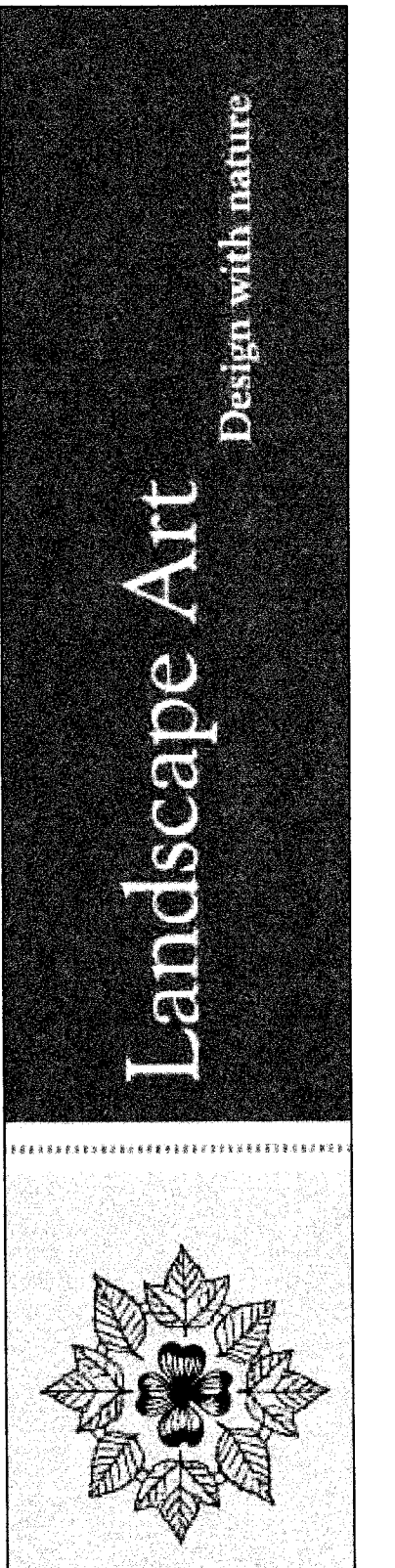
**03** Concrete Driveway with Turf  
NOT SCALED



**04** Concrete Walkway Detail  
NOT SCALED



**05** Mail Box  
3/8'-1'-0"



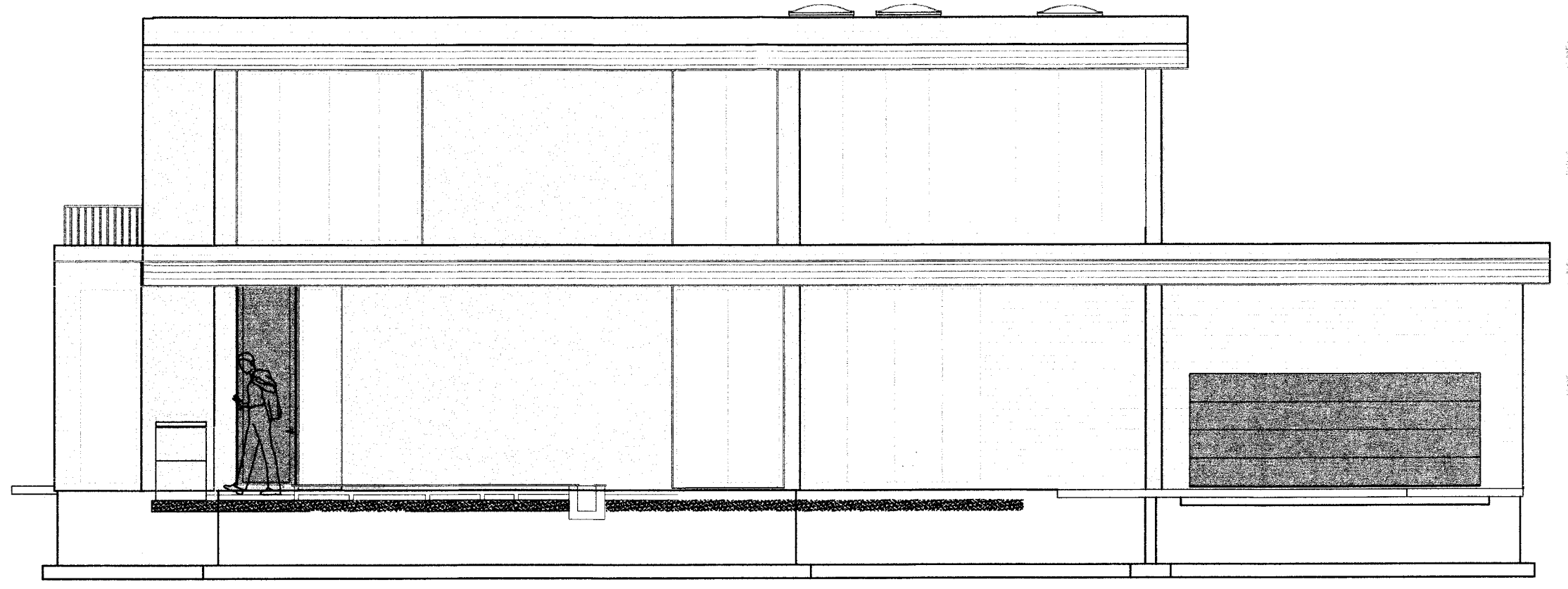
SCALE	AT THE DRAWING
DESIGNED BY	AI
DRAWN BY	AI
CHECKED BY	AI
CAD DWG.	Huard Residence_Nov 12.dwg
DATE	Nov, 12/2018
REVISIONS	
#1	Feb 13/2018
#2 - City Review	Aug, 31/2018
#3 - City Review	Jun, 28/2019

**LA- 1-C**

**HUARD RESIDENCE**  
185 Megellan Avenue - Half Moon Bay - CA

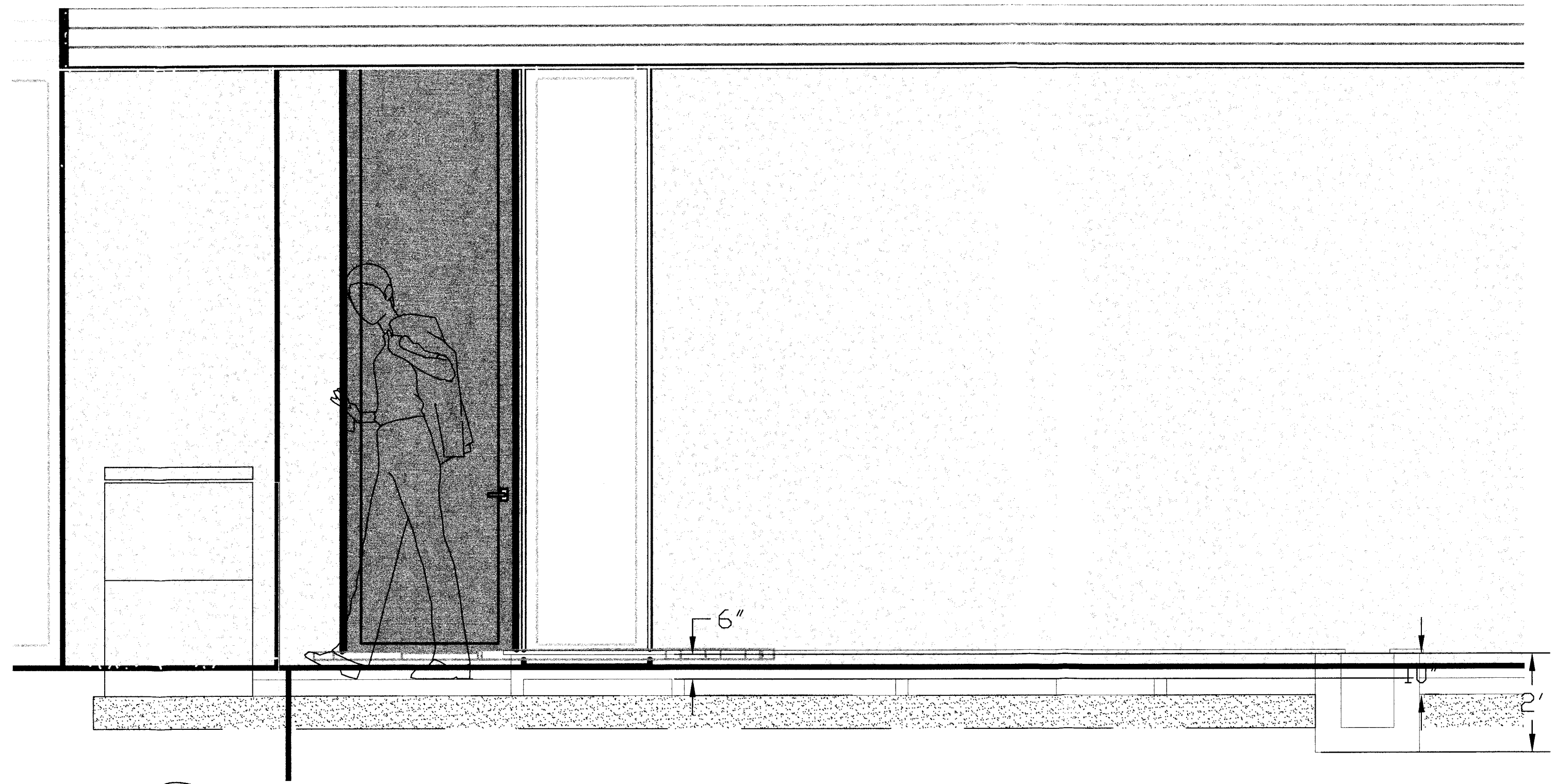
**DRIVEWAY AND WALKWAY DETAILS**





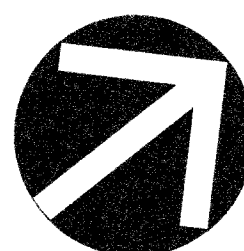
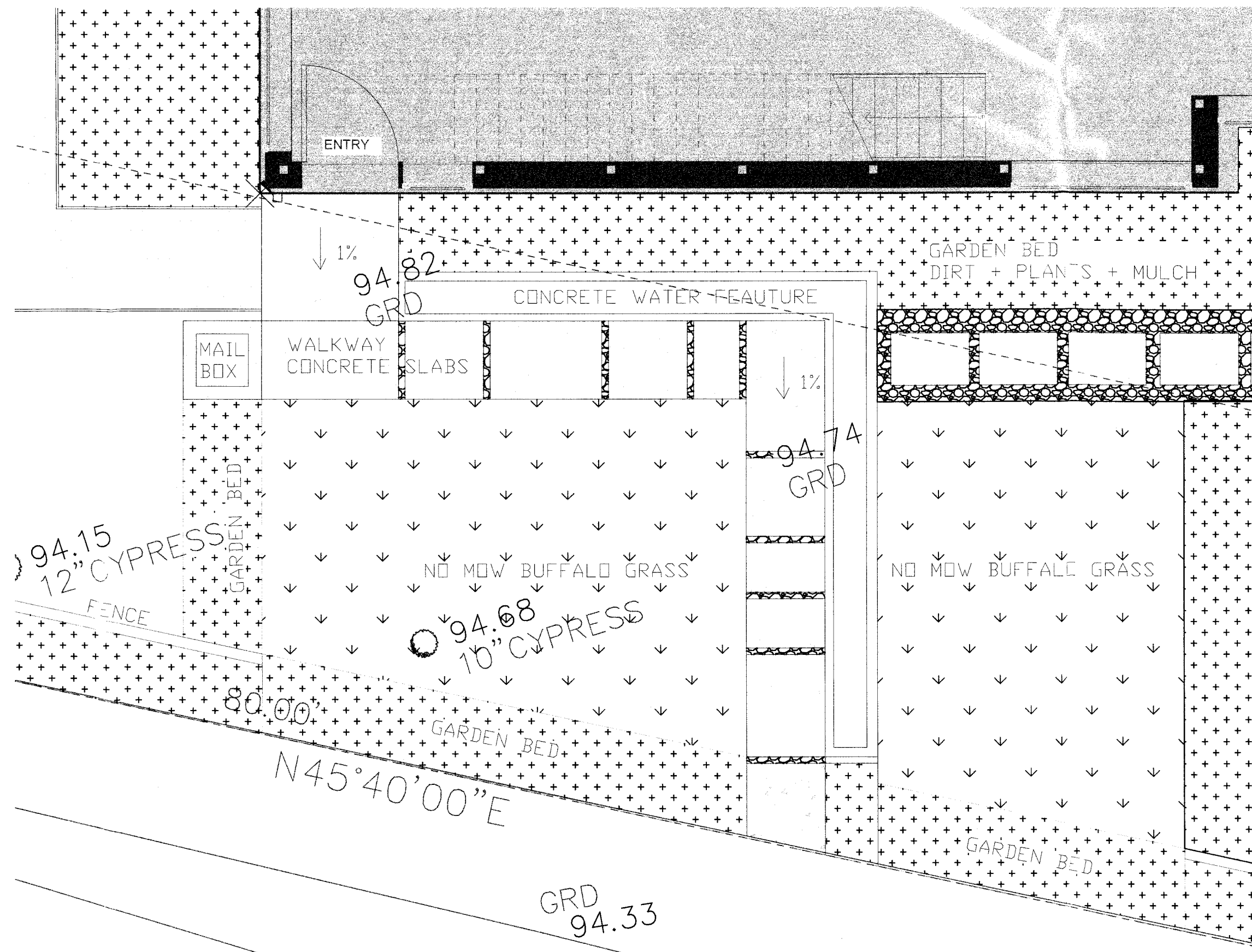
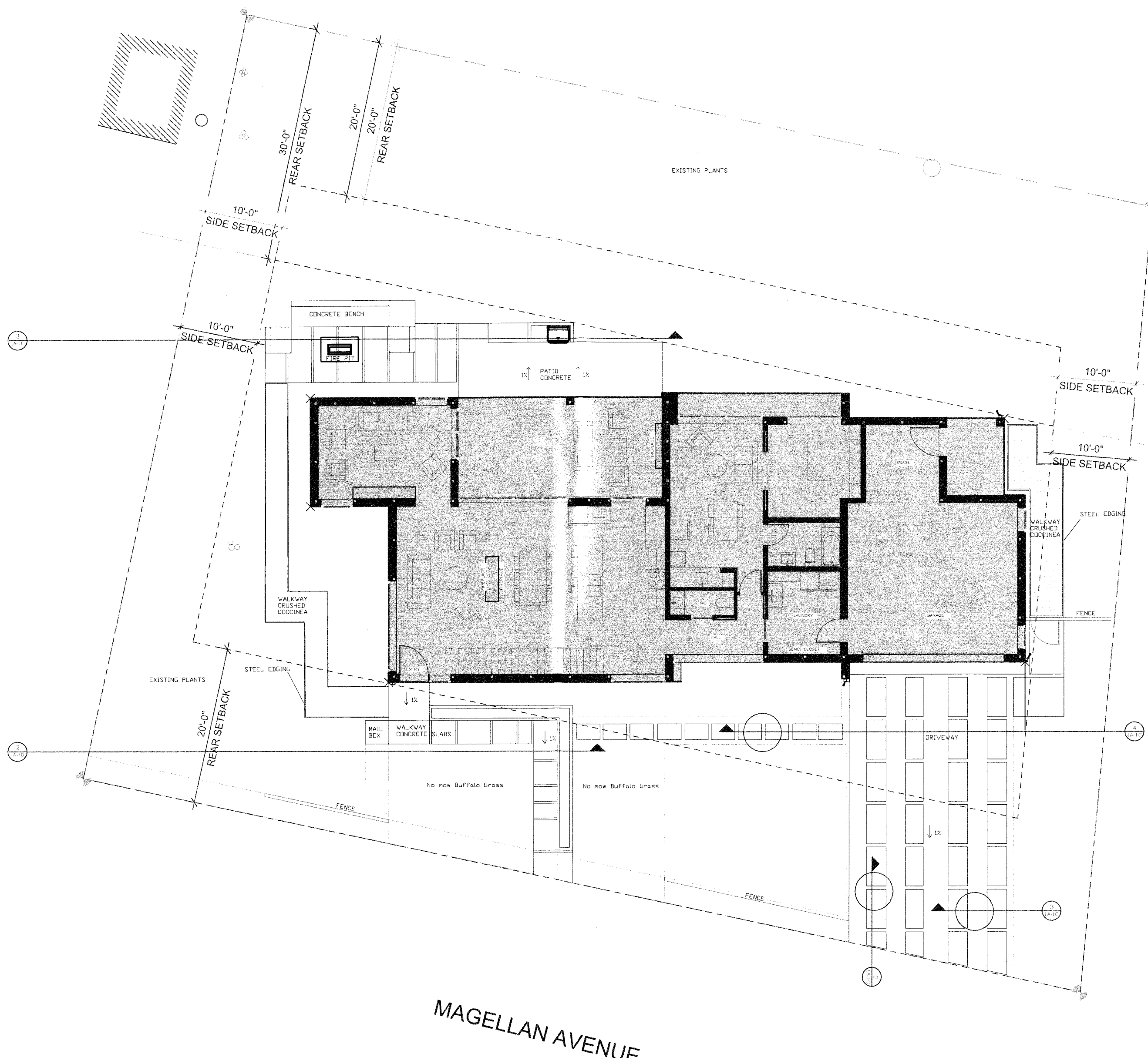
02

Water Feature  
1/8"=1'-0"



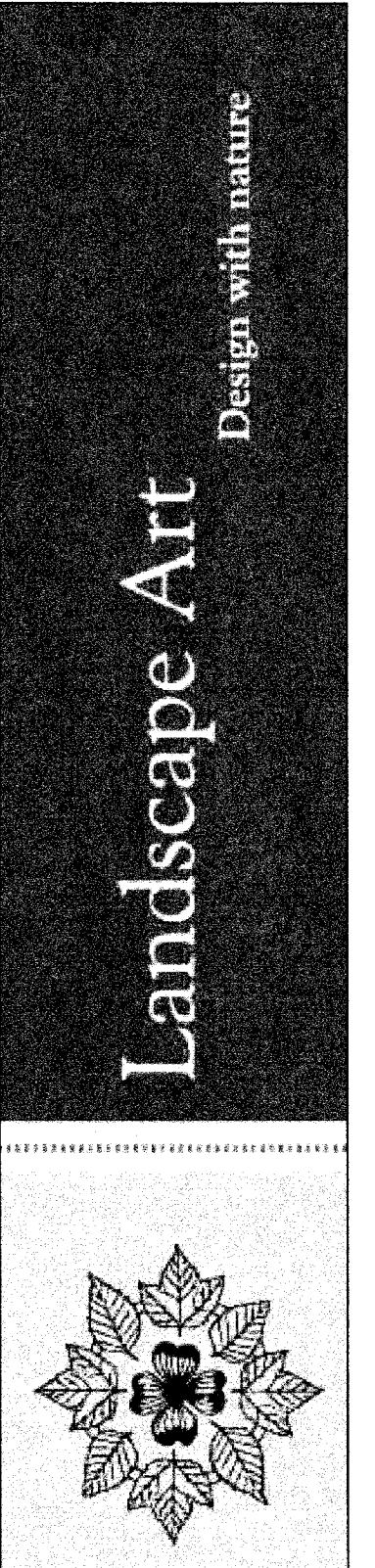
03

Water Feature  
1/2"=1'-0"



01

Concrete Water Feature  
1/4"=1'-0"



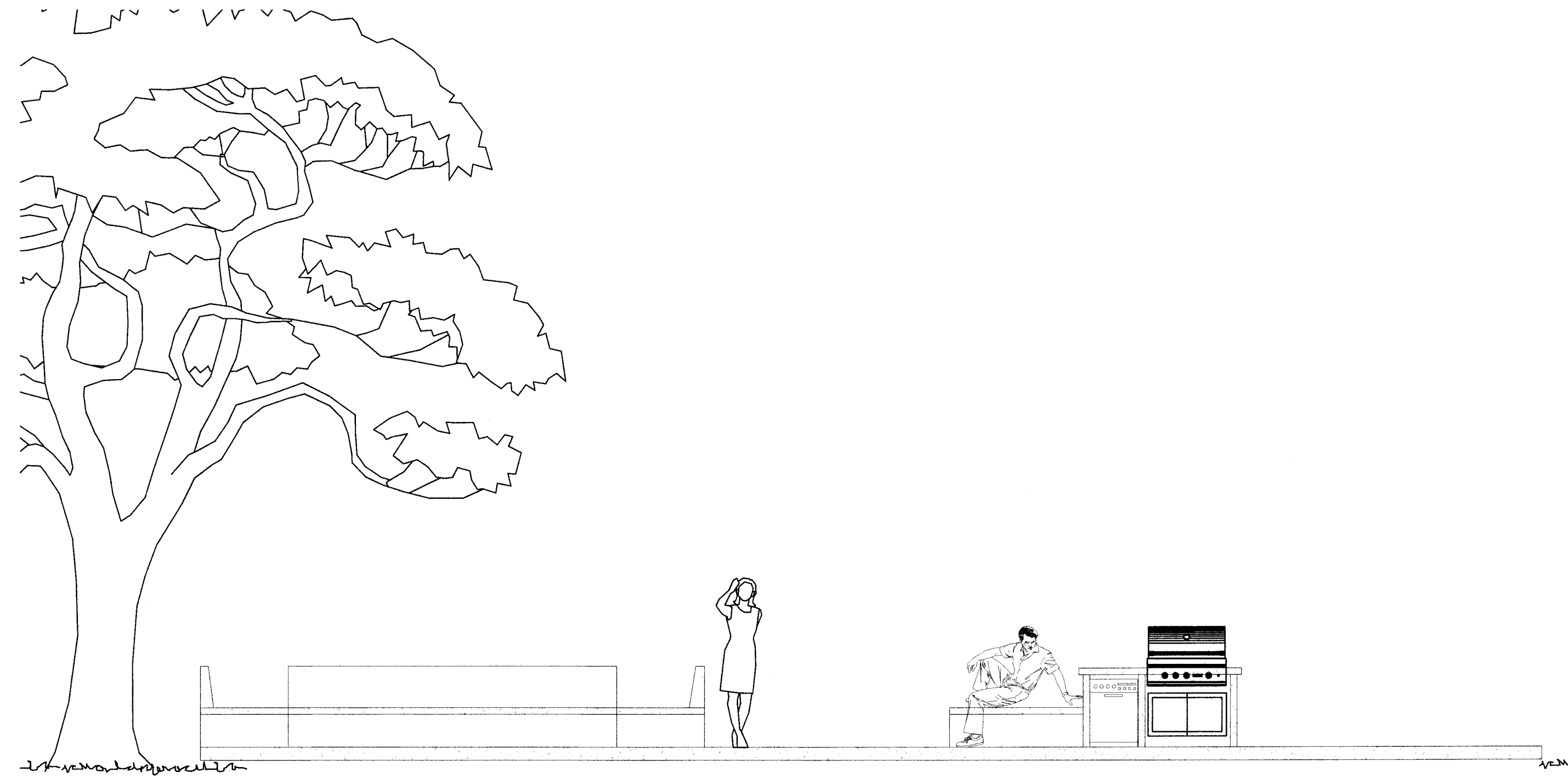
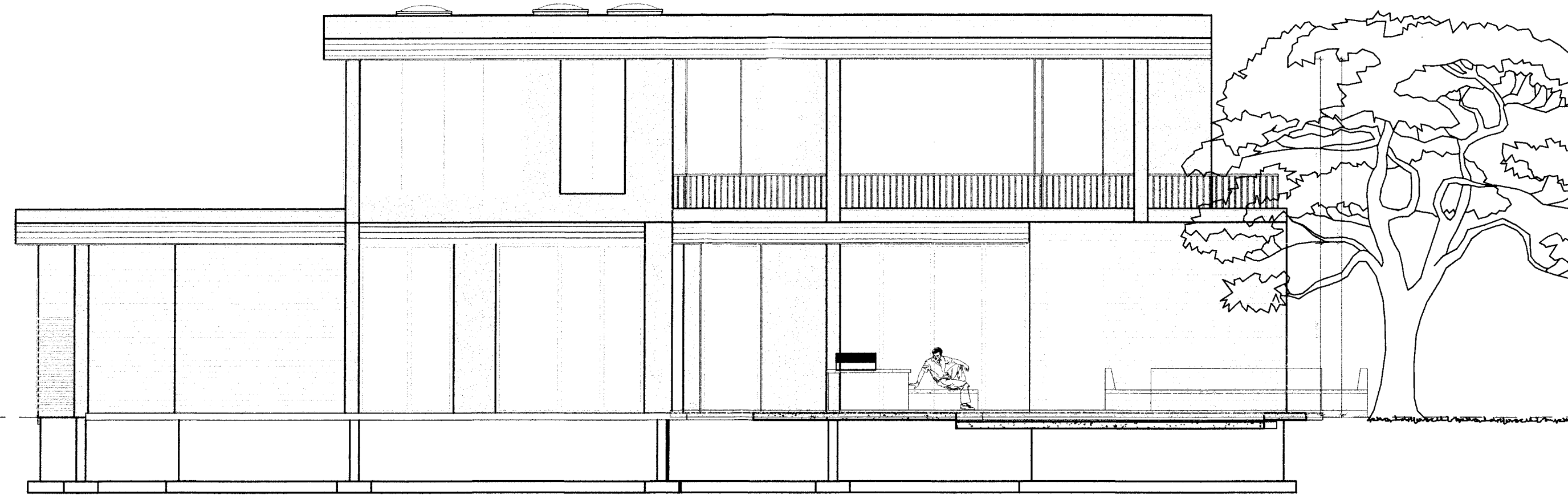
SCALE	AT THE DRAWING
DESIGNED BY	AI
DRAWN BY	AI
CHECKED BY	AI
CAD DWG.	Huard Residence_Nov 12.dwg
DATE	Nov, 12/2018
REVISIONS	
#1	Feb, 13/2018
#2 - City Review	Aug, 31/2018
#3 - City Review	Jun, 28/2019

LA- 1-D

**HUARD RESIDENCE**  
185 Magellan Avenue - Half Moon Bay - CA

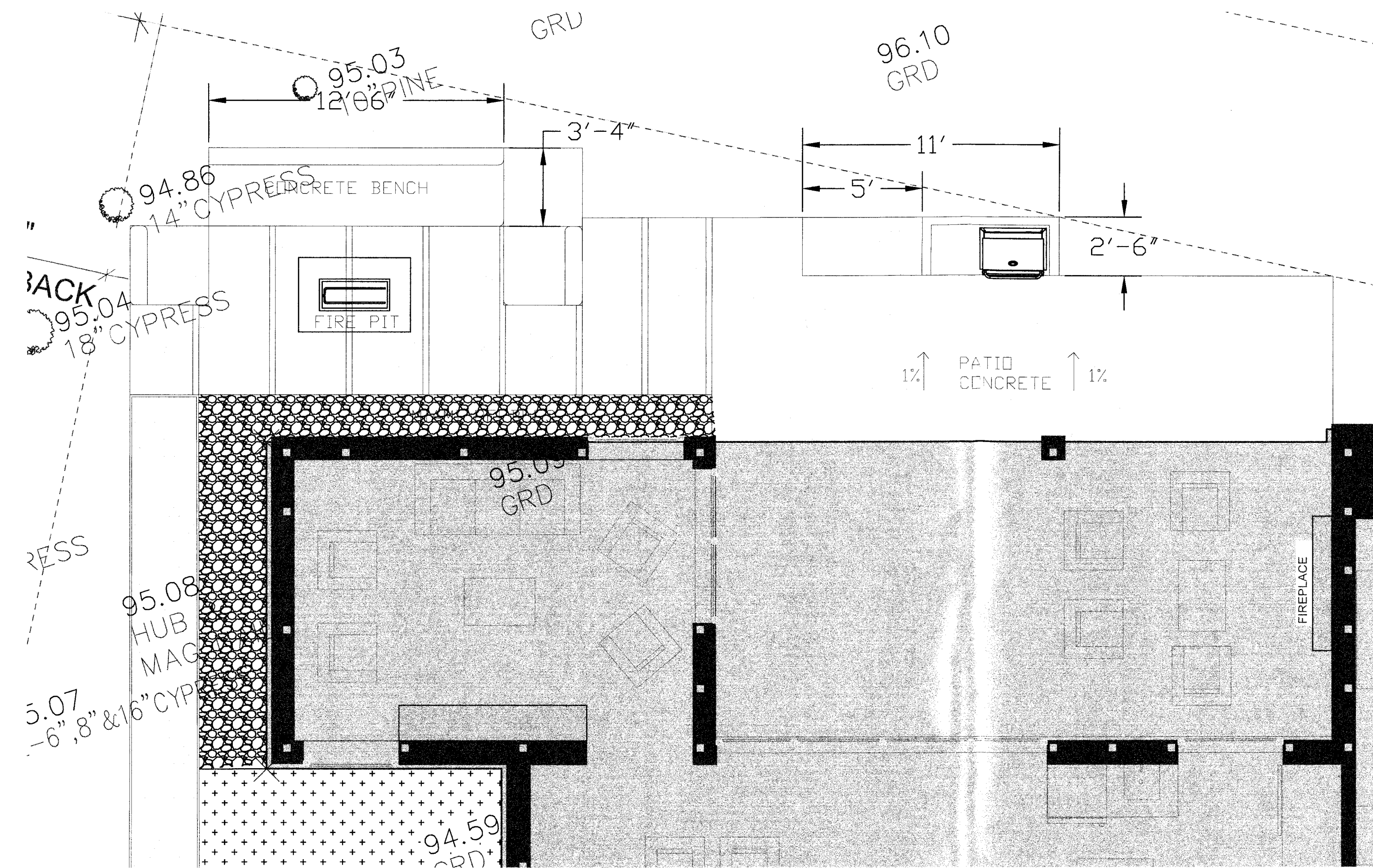
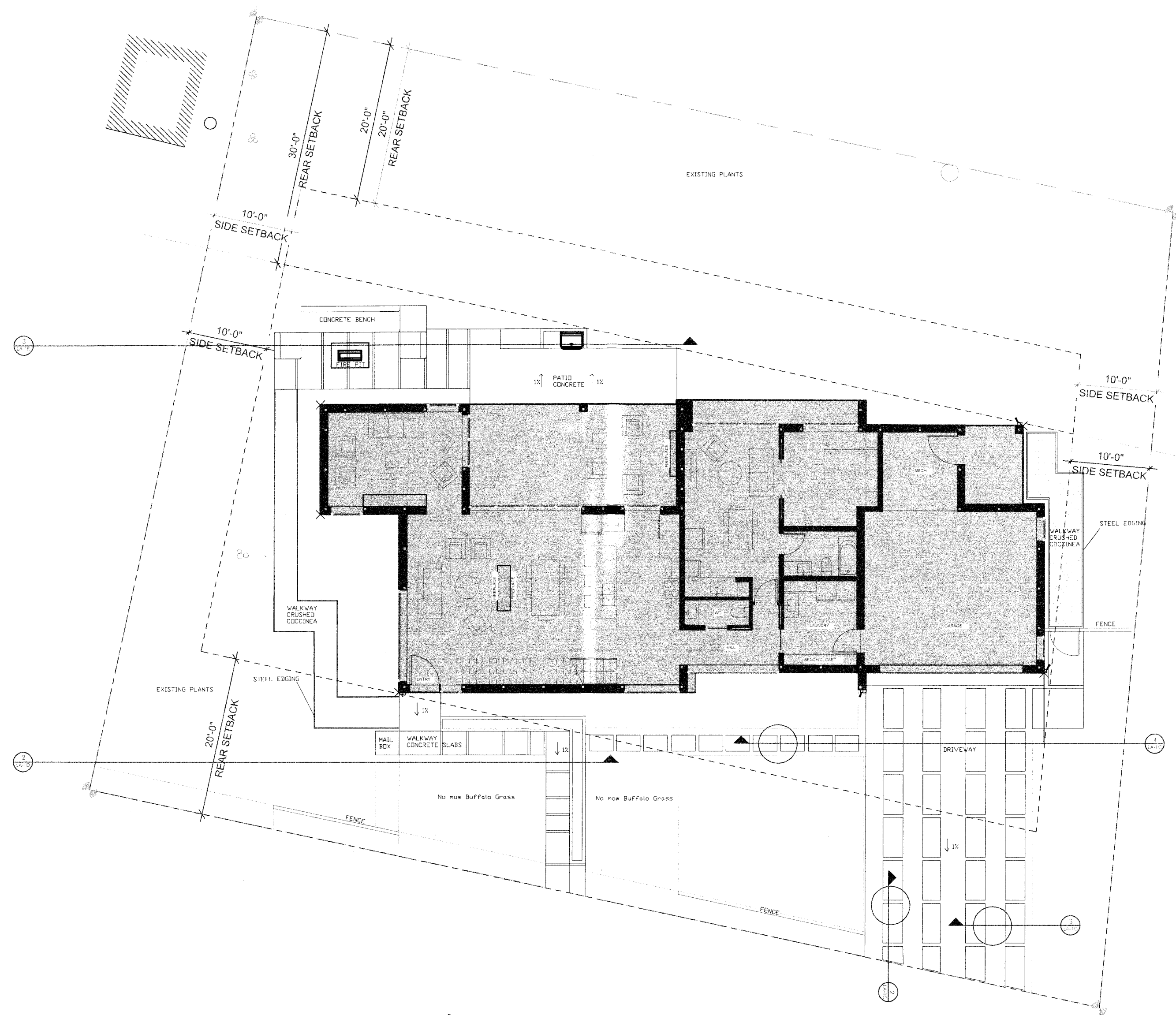
WATER FEATURE





**02** Fire pit & BBQ Counter  
1/8"=1'-0"

**03** Fire pit & BBQ Counter  
1/4"-1'-0"



**01** Fire Pit & BBQ Counter  
1/4"=1'-0"

Landscape Art

Design with nature

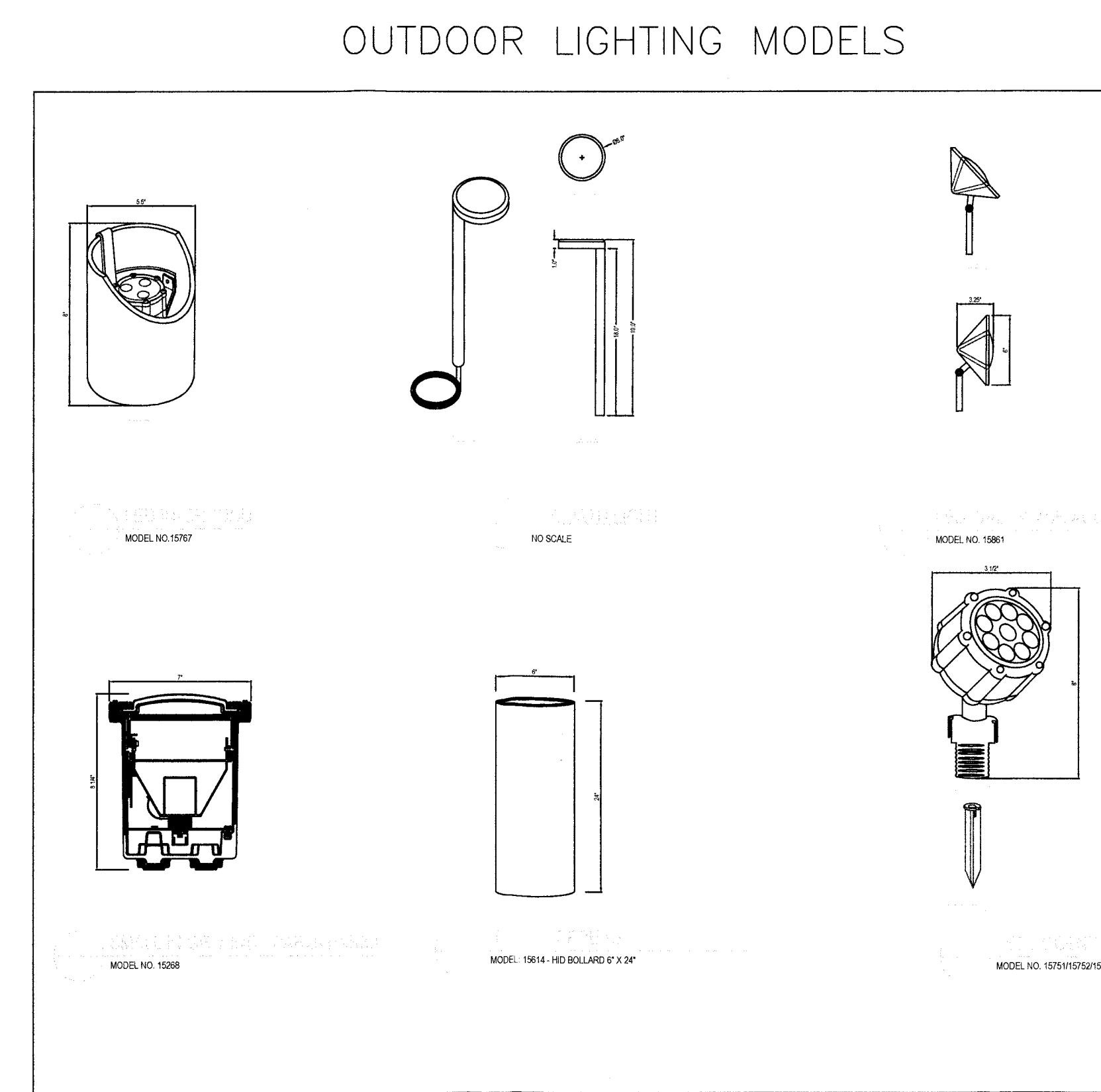
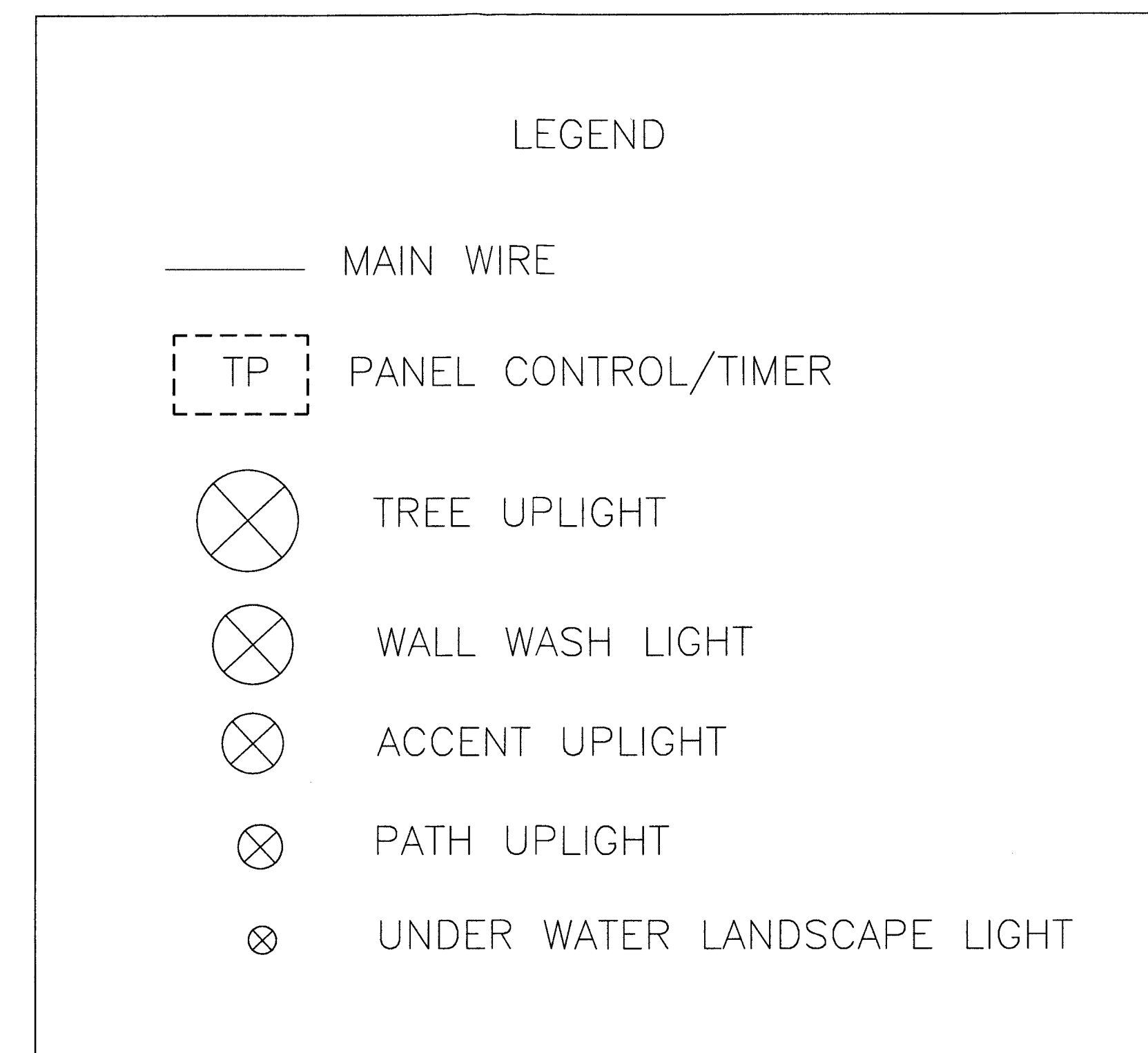
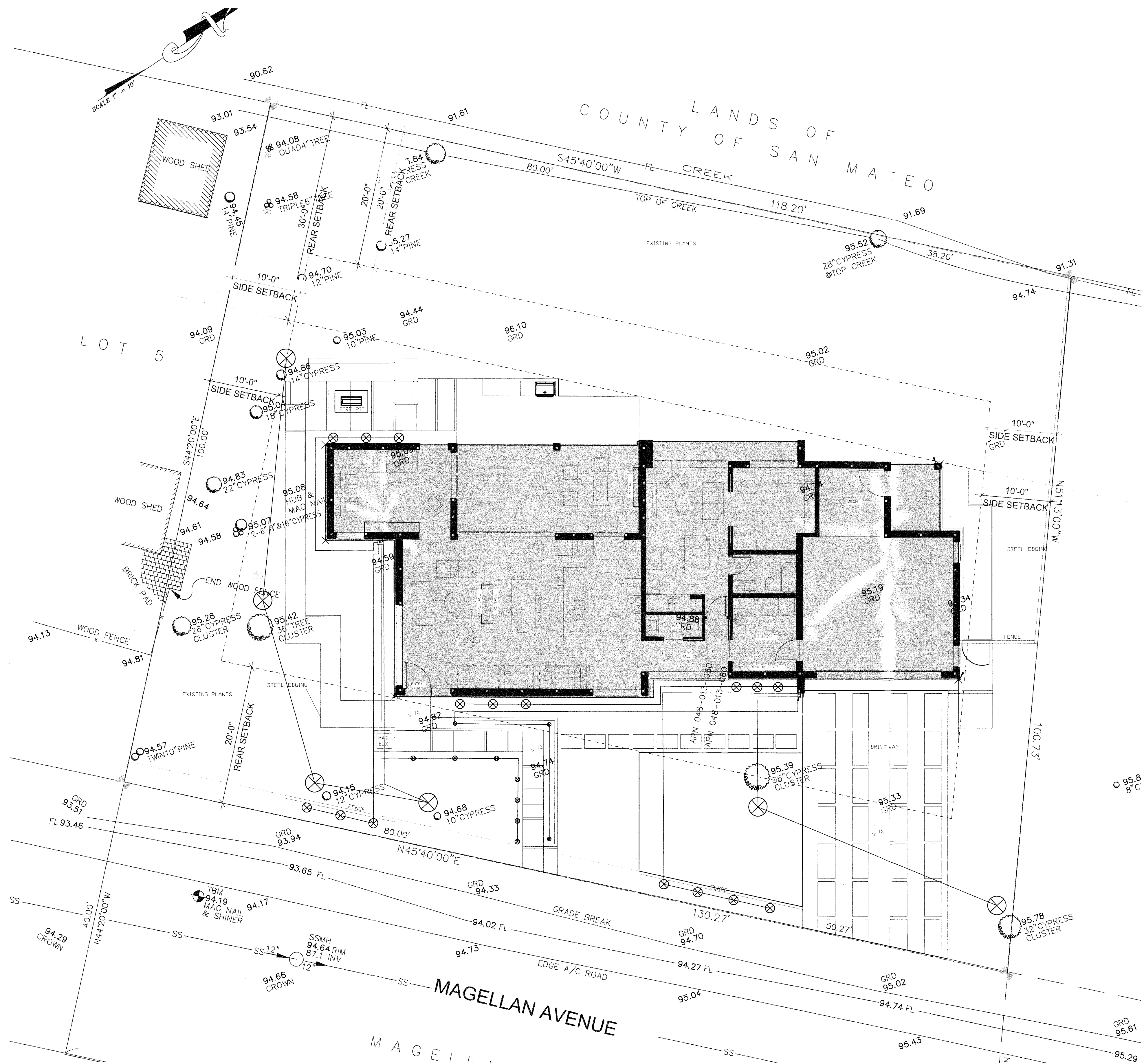
SCALE	AT THE DRAWING
DESIGNED BY	AI
DRAWN BY	AI
CHECKED BY	AI
CAD DWG.	Huard Residence_Nov 12.dwg
DATE	Nov, 12/2018
REVISIONS	
#1	Feb, 13/2018
#2 - City Review	Aug, 31/2018
#3 - City Review	Jun, 28/2019

**LA- 1-E**

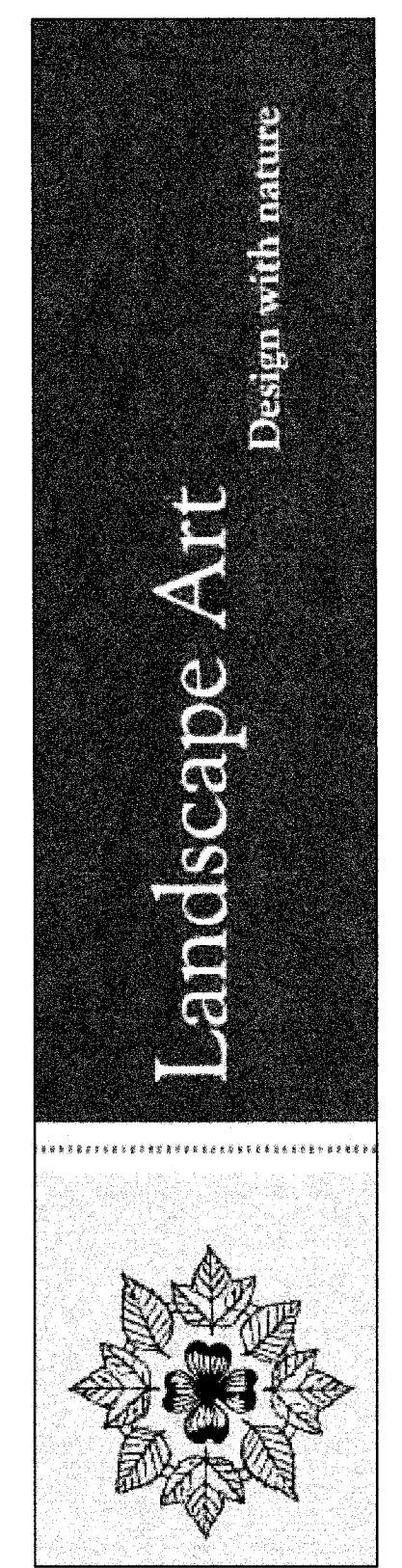
**HUARD RESIDENCE**  
185 Megellan Avenue - Half Moon Bay - CA

**FIRE PIT & BBQ COUNTER**





**01** Outdoor Lighting Plan  
1/8"=1'-0"



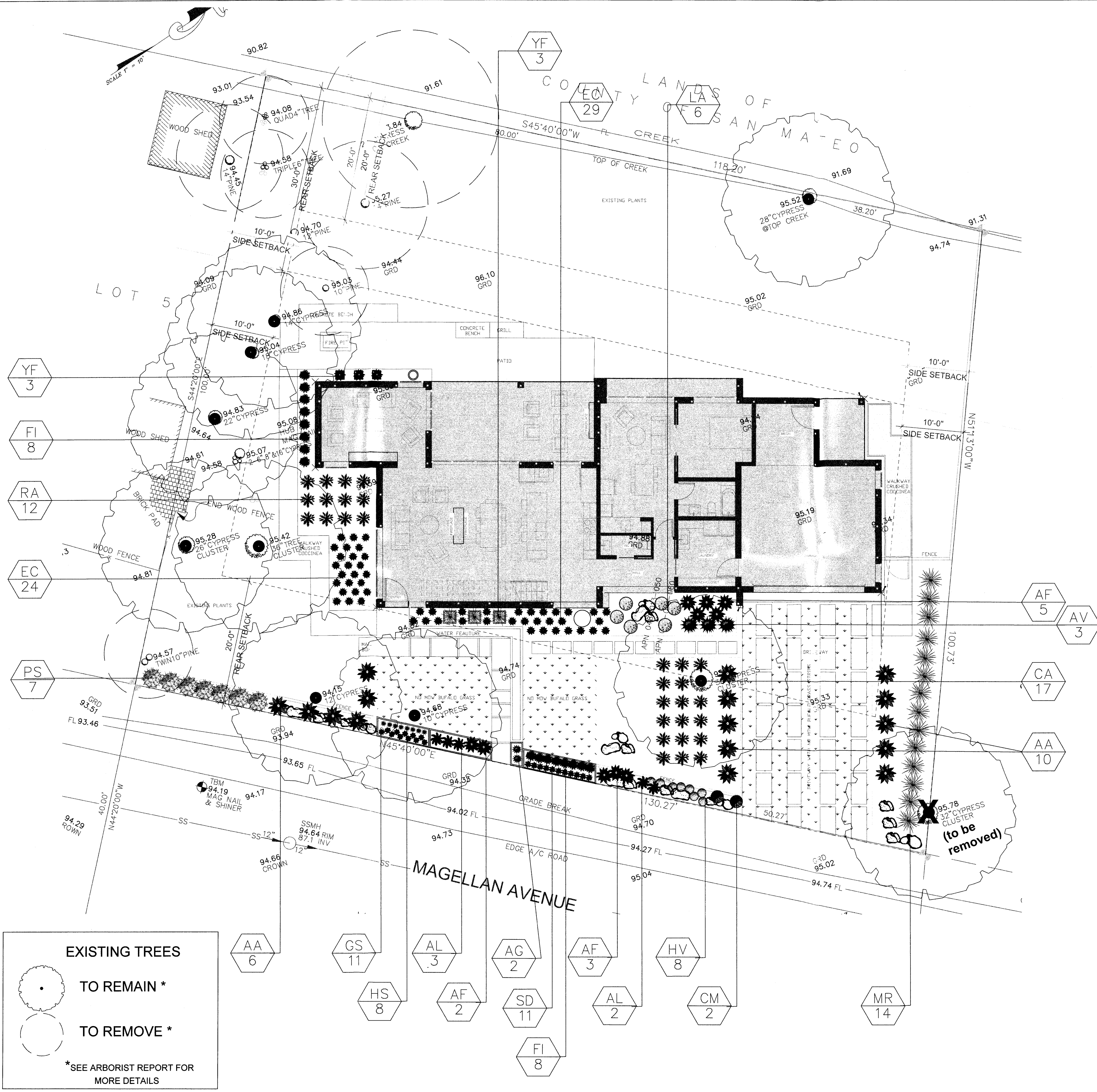
SCALE	1/8"=1'-0"
DESIGNED BY	AI
DRAWN BY	AI
CHECKED BY	AI
CAD DWG.	Huard Residence_Nov 12.dwg
DATE	Nov, 12/2018
REVISIONS	
#1	Feb, 13/2018
#2	City Review Aug, 31/2018
#3	City Review Jun, 28/2019

## LA-2-A

**HUARD RESIDENCE**  
185 Magellan Avenue - Half Moon Bay - CA

LIGHTING PLAN





**EXISTING TREES**

● TO REMAIN \*

○ TO REMOVE \*

\*SEE ARBORIST REPORT FOR MORE DETAILS

WUCOLS+PLANT LIST, GROUND FLOOR, Huard Residence, CA, Plant zone: 10a, Jun 28/2019

PERENIALS	WUCOLS	BOTANICAL NAME	COMMON NAME	MATURE HT - SPREAD	SPACING	COLOR	BLOOMS	CHARACTERISTICS	CONT. SIZE	QTY
EC	VL	<i>Eschscholzia californica</i>	California poppy	1-3FT	1FT		Feb to Oct	Native Drought	1 gal	53
LA	VL	<i>Lupinus arboreus</i>	Coastal Bush Lupine	3-6FT	3FT	Yellow	Spring	Native Drought	3 gal	6
AF	L	<i>Anigozanthos flavidus</i>	Kangaroo paw 'RED'	3-6 FT	3FT		Spring-Summer	Drought tolerant	5 gal	7
AF	L	<i>Anigozanthos flavidus</i>	Kangaroo paw 'YELLOW'	3-6 FT	3FT		Spring-Summer	Drought tolerant	7 gal	3
HV	L	<i>Heterotheca villosa (chrysopsis villosa)</i>	Hairy golden aster	2-3 FT	1.5FT		Summer	Drought tolerant	3 gal	8
CM	L	<i>Coreopsis maritima</i>	Sea dahlia	1-3FT	1 FT	Yellow	Summer	Native Drought	3 gal	2

DROUGHT/SUCCULENTS	TYPE	BOTANICAL NAME	COMMON NAME	MATURE HT - SPREAD	SPACING	COLOR	BLOOMS	CHARACTERISTICS	CONT. SIZE	QTY
AL	L	<i>Aloe spp.</i>	Aloe	3-6 FT	3FT		NA	Drought tolerant	5 gal	5
AA	L	<i>Agave spp</i>	Agave foxtail	3-5 FT	3 FT	NA	NA	Drought tolerant	5 gal	16
AV	L	<i>Agave spp</i>	Agave foxtail Var	3-5 FT	3 FT	NA	NA	Drought tolerant	5 gal	3
AG	L	<i>Agave spp</i>	Agave blue glow	3-5 FT	3 FT	NA	NA	Drought tolerant	3 gal	2
YF	L	<i>Yucca filamentosa</i>	Yucca	3-5 FT	3 FT	White	Summer	Drought tolerant	5 gal	6
SD	L	<i>Sedum spp.</i>	Sedum	1 FT	1 FT	NA	NA	Drought tolerant	Pot	11
GS	VL	<i>Graptopetalum spp.</i>	graptopetalum	1 FT	1 FT	NA	NA	Drought tolerant	Pot	11
HS	L	<i>Haworthia spp.</i>	haworthia	1 FT	1 FT	NA	NA	Drought tolerant	Pot	8

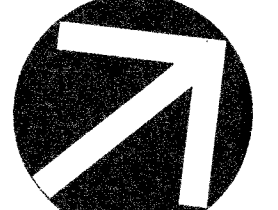
GRASS/FERN	TYPE	BOTANICAL NAME	COMMON NAME	MATURE HT - SPREAD	SPACING	COLOR	BLOOMS	CHARACTERISTICS	CONT. SIZE	QTY
CA	L	<i>Calamagrostis spp</i>	Feather Reed	H 3-5 FT W1-2.5FT	2FT	Pink	May-Feb	Good fall color	5 gal	17
FI	VL	<i>Festuca idahoensis</i>	Idaho fescue	1-1.5FT	1.5FT	NA	NA	Drought tolerant	1 gal	16
PS	L	<i>Pennisetum setaceum</i>	Fountain grass	H 3-5FT W2-4FT	2.5FT	WHITE	Summer-Fall	Bird attract	3 gal	7
MR	L	<i>Muhlenbergia rigens</i>	deer grass	H 3-6FT W2-3FT	2.5 FT		Fall	Drought tolerant	5 gal	14
RA	M	<i>Rumohra adiantiformis</i>	leather leaf fern	3FT	2.5 FT	NA	NA	Easy care	3 gal	12

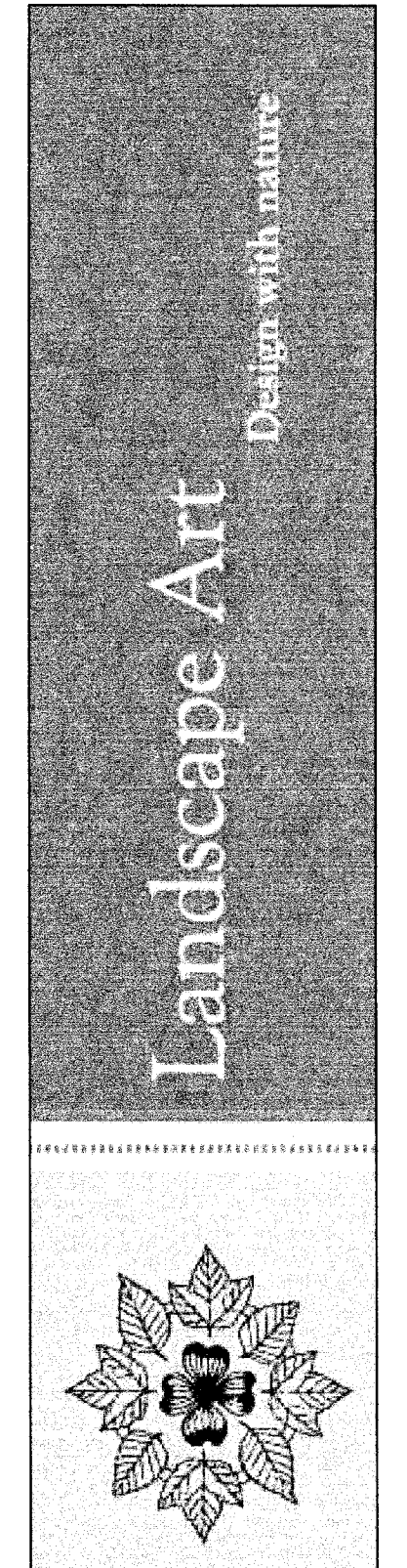
  

GROUNDCOVER	TYPE	BOTANICAL NAME	COMMON NAME	MATURE HT - SPREAD	SPACING	COLOR	BLOOMS	CHARACTERISTICS	CONT. SIZE	QTY
BG	L	<i>Bouteloua gracilis</i>	UC Verde buffalo grass	NA	NA	NA	NA	Low water Grass	SF	398
CP	M	<i>Carex protergracilis</i>	California Meadow Sedge	NA	Na	Na	Na	Medium water grass	SF	436

**NOTES**

1. A Certificate of Completion shall be filled out and certified by either the designer of the landscape plans, irrigation plans, or the licensed landscape contractor for the project.
2. At the time of final inspection, the permit applicant must provide the owner of the property with a certificate of completion, certificate of installation, irrigation schedule of landscape and irrigation maintenance.
3. Contractors must see the Soil report to follow the recommendations of the lab for soil preparation, see page LA-3-D for more details.

 **01** Planting Plan  
1/8"=1'-0"



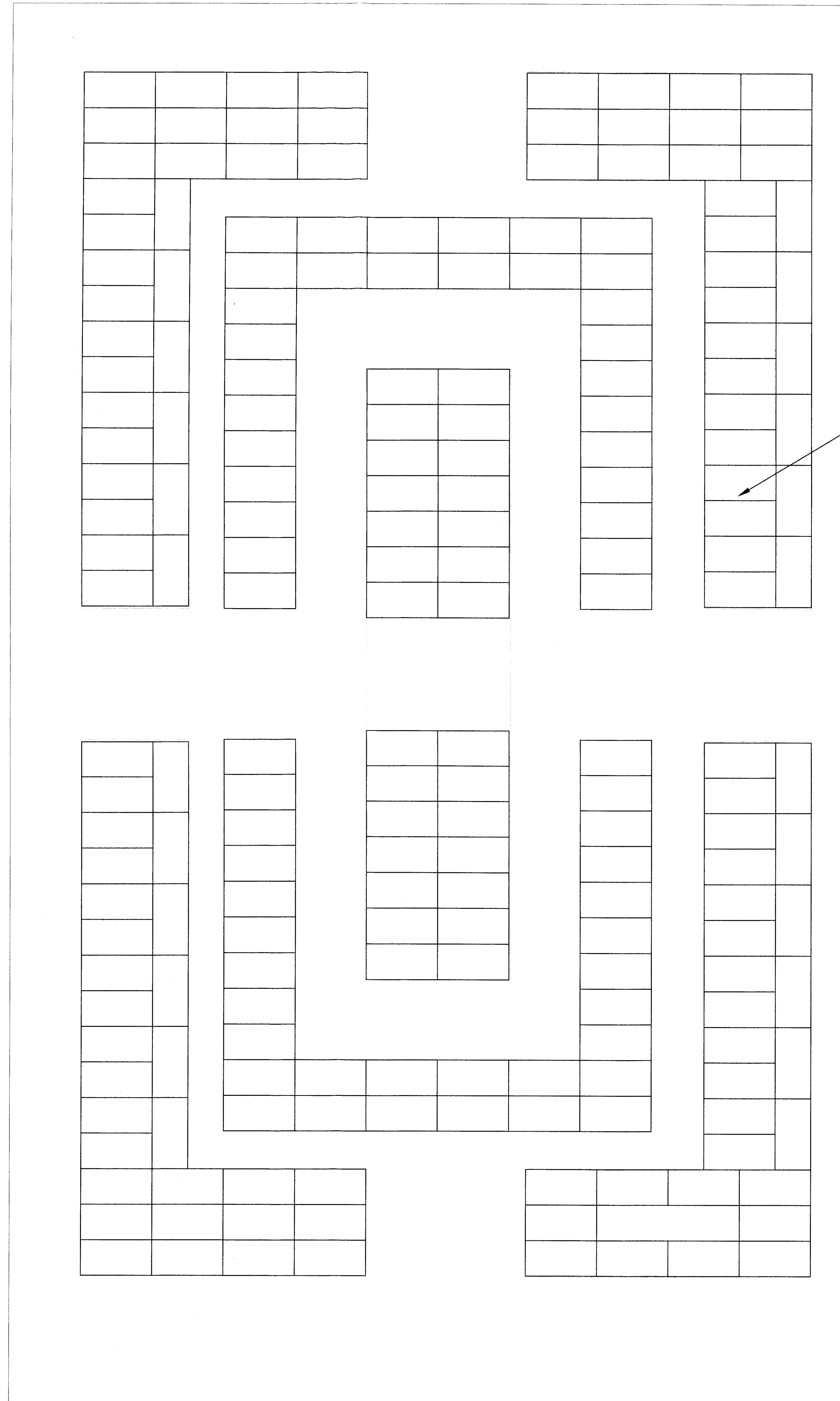
SCALE 1/8"=1'-0"  
 DESIGNED BY AI  
 DRAWN BY AI  
 CHECKED BY AI  
 CAD DWG. Huard Residence\_Nov 12.dwg  
 DATE Nov, 12/2018  
 REVISIONS  
 #1 Feb, 13/2018  
 #2 - City Review Aug, 31/2018  
 #3 - City Review Jun, 28/2019

**LA-3-A**

**HUARD RESIDENCE**  
 185 Magellan Avenue - Half Moon Bay - CA

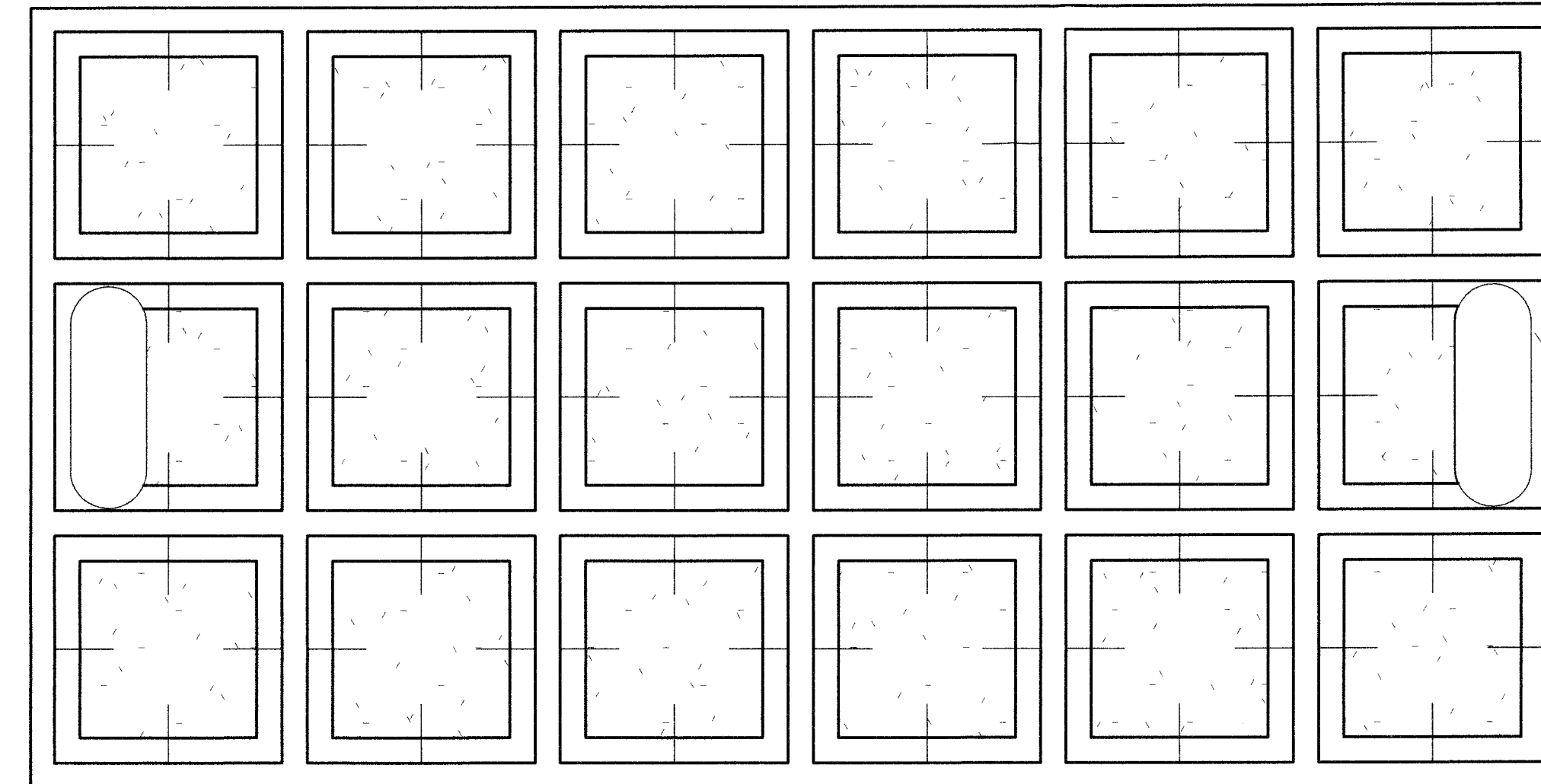
**PLANTING PLAN**





180 UNITS  
GREEN ROOF  
TRAY SYTEM  
MIX PLANTS  
SD/GS/AS/AM

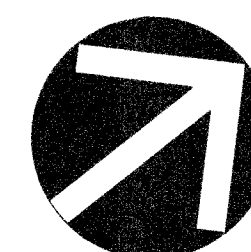
## TOP VIEW



02

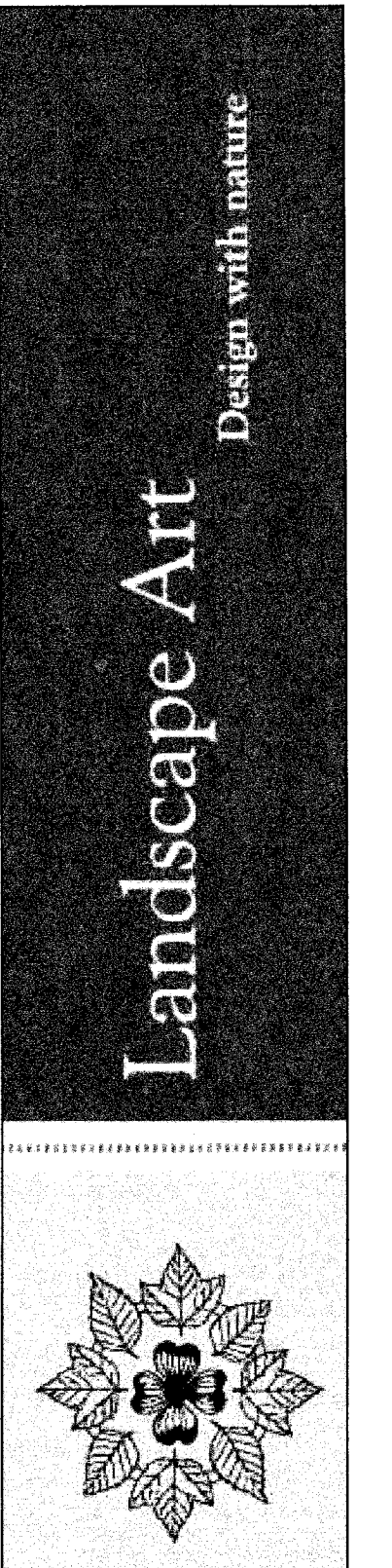
Tray Top view  
NO SCALE

WUCOLS+PLANT LIST_GREENROOF_Huard Residence_CA_ Plant zone: 10a_Jun 28/2019										
DROUGHT/ SUCCULENTS	TYPE	BOTANICAL NAME	COMMON NAME	MATURE HT - SPREAD	SPACING	COLOR	BLOOMS	CHARACTERISTI CS	CONT. SIZE	QTY
<b>SD</b>	L	<i>Sedum spp.</i>	Sedum	15"	NA	YELLOW	NA	Drought tolerant Succlent	in tray	1440
<b>GS</b>	VL	<i>Graptopetalum spp.</i>	graptopetalum	12"	NA		NA	Drought tolerant Succlent	in tray	1440
<b>AS</b>	VL	<i>Allium schoenoprasum</i>	Allium Pink	18"	NA		Spring	Drought tolerant	in tray	180
<b>AM</b>	L	<i>Achillea millefolium</i> (CA native cultivars)	Achillea	2-3FT	NA		Summer	Drought tolerant Native Butterfly Attract	in tray	180



01

Greenroof Planting Plan  
1/2"=1'-0"



SCALE	1/2"=1'-0"
DESIGNED BY	AI
DRAWN BY	AI
CHECKED BY	AI
CAD DWG.	Huard Residence_Nov 12.dwg
DATE	Nov, 12/2018
REVISIONS	
#1	Feb, 13/2018
#2 - City Review	Aug, 31/2018
#3 - City Review	Jun, 28/2019

**LA- 3-B**

**HUARD RESIDENCE**  
185 Megellan Avenue - Half Moon Bay - CA

HARDSCAPE GREENROOF

**JOB CONDITIONS:**

Any building construction material or foreign material shall be removed from planting areas and replaced with acceptable top soil.

Care shall be taken not to disturb or damage any underground construction or utilities. Any damage to these facilities during the planting operations will be repaired at the expense of the Landscape Contractor in a manner approved by the Owner. Where underground obstructions will not permit the planting materials in accordance with the plans, new locations shall be approved by the Landscape Architect.

Landscape work shall be coordinated with the landscape irrigation work. Landscape Contractor shall ensure that no plantings will interfere with the proper coverage. Landscape Contractor shall point out situations where minor adjustments or relocation or addition of sprinklers heads may be most beneficial for the landscape work as a whole.

**PLANT MATERIAL:**

Plant species and size shall conform to those indicated on the drawings. Nomenclature shall conform to STANDARDIZED PLANT NAMES, LATEST EDITION. All plant material shall be in accordance with GRADES AND STANDARDS FOR NURSERY PLANTS, latest edition published by the Florida Department Agriculture and Consumer Services. All plants not otherwise specified as Florida Fancy, or Specimen, shall be Florida Grade Number 1 or better as determined by the Florida Grade Plant Industry. Specimen means an exceptionally heavy, symmetrical, tightly-knit plant, so trained or favored in its development that its appearance is unquestionable and outstandingly superior in form, number of branches, compactness and symmetry. All plants shall be sound, healthy, vigorous, well branched and free of disease and insect eggs and larvae and shall have adequate root systems. Trees and shrubs for planting rows shall be uniform in size and shape. All materials shall be subject to approval by the Landscape Architect. Where any requirements are omitted from the Plant List, the plants furnished shall be normal for the variety.

All container grown material shall be healthy, vigorous, well-rooted plants and established in the container. The plants shall have tops which are good quality and are in a healthy growing condition. An established container grown plant shall be transplanted into a container and grown in that container long enough for the new fibrous roots to have developed enough to hold the root mass together when removed from the container. Root bound plants will not be accepted.

Site water shall be verified by Contractor prior to submission of bids.

The use of natural material is strongly encouraged for balled and burlapped plants. All synthetic material shall be completely removed from root ball PRIOR to planting.

At time of bid, Contractor shall submit a written schedule of all sources for coconut palms as well as seed sources for coconuts. Coconuts shall be certified Malayan Green with a certified seed source from Jamaica.

**TREES:**

The most critical factor for selecting a healthy Florida Number 1 tree is the structure. This consists of one central main trunk and leader. Branches are considered competing if they are 2/3 the diameter of the leader or greater. Competing branches may be acceptable if they occur above 50% of the overall height of the tree. Caliper of tree should meet specifications. Leader (center trunk) may have slight (<15 degree) bow (Tabebuia caraiba excluded), but must be intact with apical (leading) bud.

Branches should be spread evenly (staggered, alternating) through the tree branches spaced no closer than 4".

Canopy should be full to specifications with little or no openings or holes. A thinning canopy will be taken into consideration with field dug plant material.

Trees should have no open wounds or damage, flush cuts, chlorosis, shorter or taller than specified height, girdling roots, undersize loose root ball, crossing branches, smaller than normal leaves.

10% of root ball shall be above grade after planting. Root ball tying ropes removed from trunk and top of root ball.

**MULTIPLE TRUNK TREES:**

Trees having no distinct leader. Trunks on these trees should not be touching and free of damage and similar in size. Canopy should be full and uniform.

**RELOCATED TREES:**

These trees may not conform to grades and standards, yet do have quality criteria which effect the health, longevity and safety of the tree (and person which may contact tree). This is NOT meant to be a guideline for transplanting trees, but rather the criteria by which relocated trees will meet Town, County, State or governing agency guidelines. Trees which require excessive pruning should NOT be used. Damaged or dead relocated trees will be replaced with appropriate number of caliper inches and species equal to relocated or dead tree, as approved by the Landscape Architect.

No more than 20% of the foliage should be removed for any reason (excluding Sabal Palms). Trees should be corrected for any structural defects, touching branches, dead or rotting wood, V-shaped branching or branching which may effect human safety issues post relocation. Topping a relocated tree is not acceptable.

Damage to the trunk/branches will not exceed 10% of the trunk diameter and 2" in height.

Any major limb or canopy pruning will be qualified and performed by a Certified Arborist.

**IRRIGATION**

Provide bubblers on separate zones for all newly planted and transplanted trees unless alternate approach to provide additional water is approved by owner and Landscape Architect.

**MATERIALS LIST:**

Landscape Contractor shall be responsible for verifying all quantities for material shown on drawings prior to submitting a bid. Planting plan shall take precedence over the plant list. Final quantity of sod and mulch shall be verified.

**SUBSTITUTIONS:**

No substitutions shall be made without the approval from the Landscape Architect and/or the Owner. Intended substitutions shall be indicated on the bid.

**MEASUREMENTS:**

Canopy Trees- Height shall be measured from the ground to the average height of canopy. Spread shall be measured to the end of branching equally around the crown from the center of the trunk. Caliper (d.b.h.) will be measured 4'-6" above grade.

Shrubs- Height shall be measured from the ground. Spread shall be measured to the end of branching equally around the shrub mass.

Palms- Clear trunk (C.T.) shall be measured from the ground to the point where the mature aged trunk joins the immature or green part of the trunk or head.

Overall height (O.A.) shall be measured from the ground to the tip of the unopened bud.

**IRRIGATION:**

100% irrigation coverage shall be provided. Provide bubblers on separate zones for all newly planted and transplanted trees unless alternate approach to provide additional water is approved by Owner and Landscape Architect.

**GUARANTEE:**

All new plant materials shall be guaranteed for one year from the time of acceptance and shall be alive and in satisfactory growth for each specific kind of plant at the end of the guarantee period. The Landscape Contractor shall not be responsible for damage caused by vandalism, violent wind storms or other acts of God beyond control. Replacement shall occur within two weeks of rejection and guaranteed six months from date of installation. Landscape Contractor shall repair damage to other plants or lawns during plant replacements at no additional cost.

**MULCH:**

A minimum 3-inch layer of mulch shall be applied on all exposed soil surfaces of planting areas except turf areas, creeping or rooting groundcovers, or direct seeding applications where mulch is contraindicated.

**SOIL:**

For soils less than 6% organic matter in the top 6 inches of soil, compost at a rate of a minimum of four cubic yards per 1,000 square feet of permeable area shall be incorporated to a depth of six inches into the soil.

**TURF:**

All turf shall be installed in such a manner that there is an even surface, staggered pattern. Turf will be green in color and in good health. NO overlap, gaps, damage, insects, disease and less than 10% chlorosis will be permitted. All gaps will be filled with clean native soil.

**STAKING:**

Landscape Contractor to suggest alternate means of staking for approval with Landscape Architect if staking methods shown are not feasible due to site conditions.

**FERTILIZER:**

Manufacturer's Specification: Submit manufacturer's specification sheet(s) for approval of product. Submit tags from bags of fertilizer used on site to the Architect. Submit copies of the manufacturer's specifications or analysis of all fertilizer for approval.

Composition and Quality: All fertilizer shall be uniform in composition and dry. Granular fertilizer shall be free flowing and delivered in unopened bags. Tablet fertilizer shall be delivered in unopened containers or boxes. All bags, containers or boxes shall be fully labeled with the manufacturer's analysis.

Fertilizer shall be slow release with ratio greater than 3 to 1 nitrogen to phosphorous applied on top of backfill, per manufacturer's recommendations.

All shall comply with the State of Florida fertilizer laws.

**CLEANUP:**

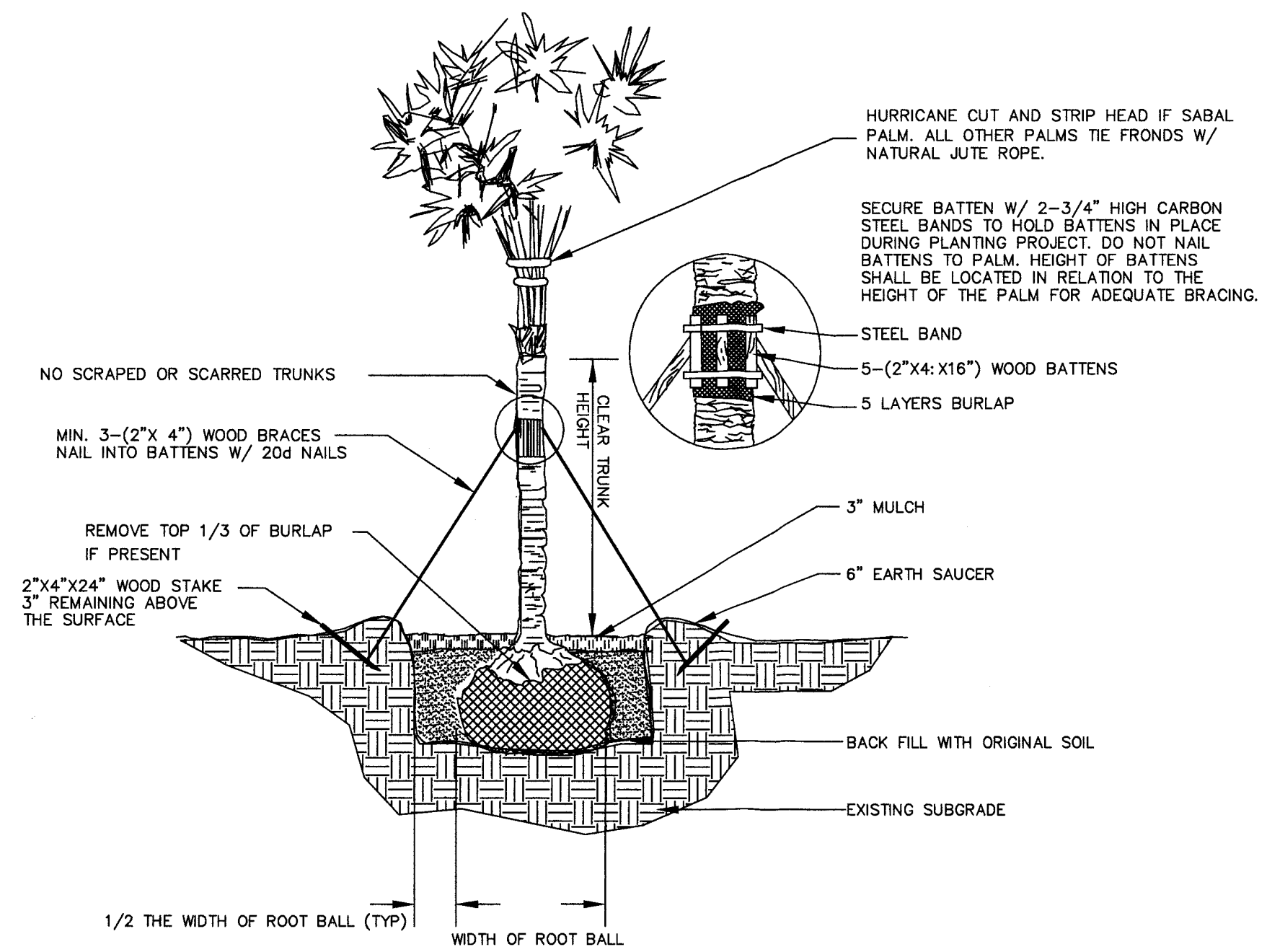
Landscape Contractor shall at all times keep job site clean and free from accumulation of waste material, debris and rubbish.

**IRRIGATION INSPECTION:**

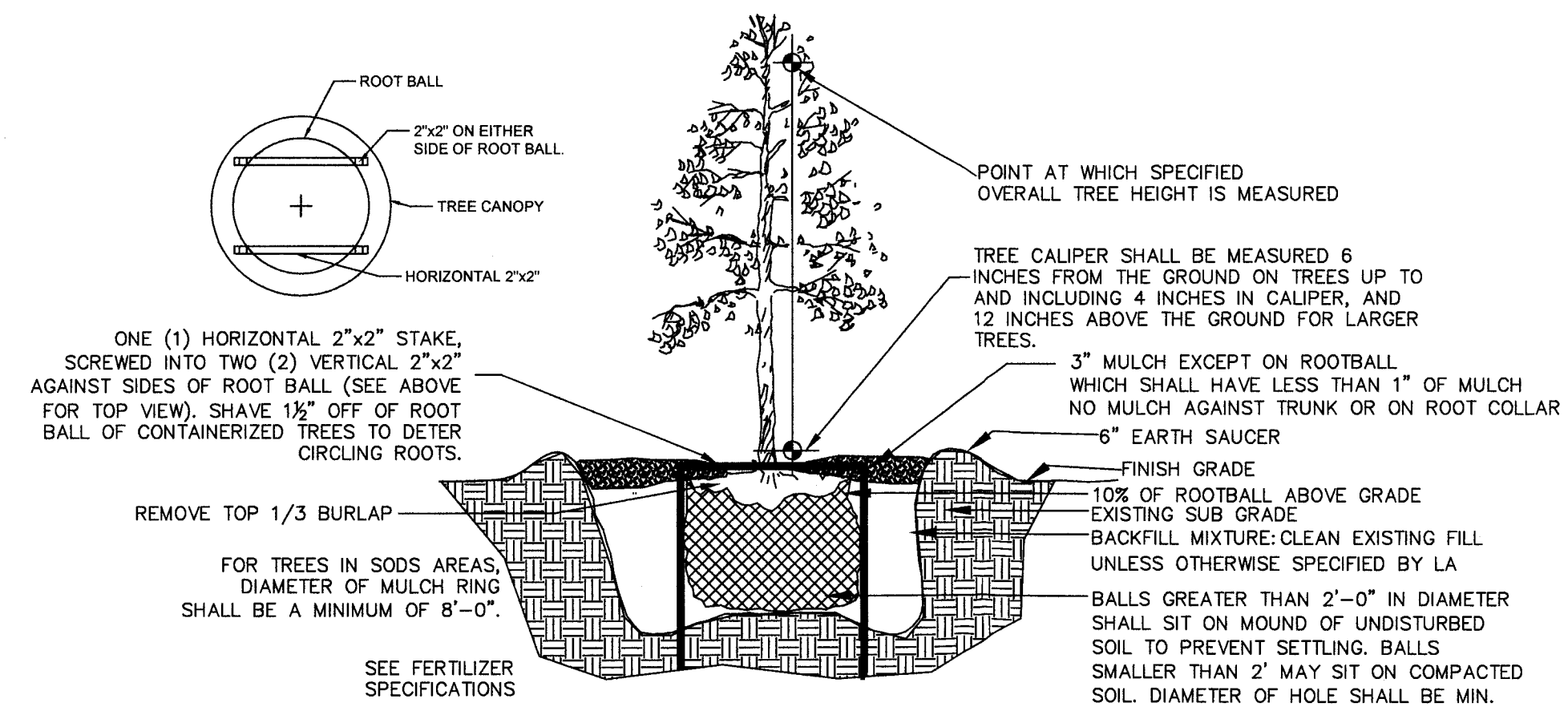
An Irrigation audit report shall be completed at the time of final inspection.

**COMPLETION:**

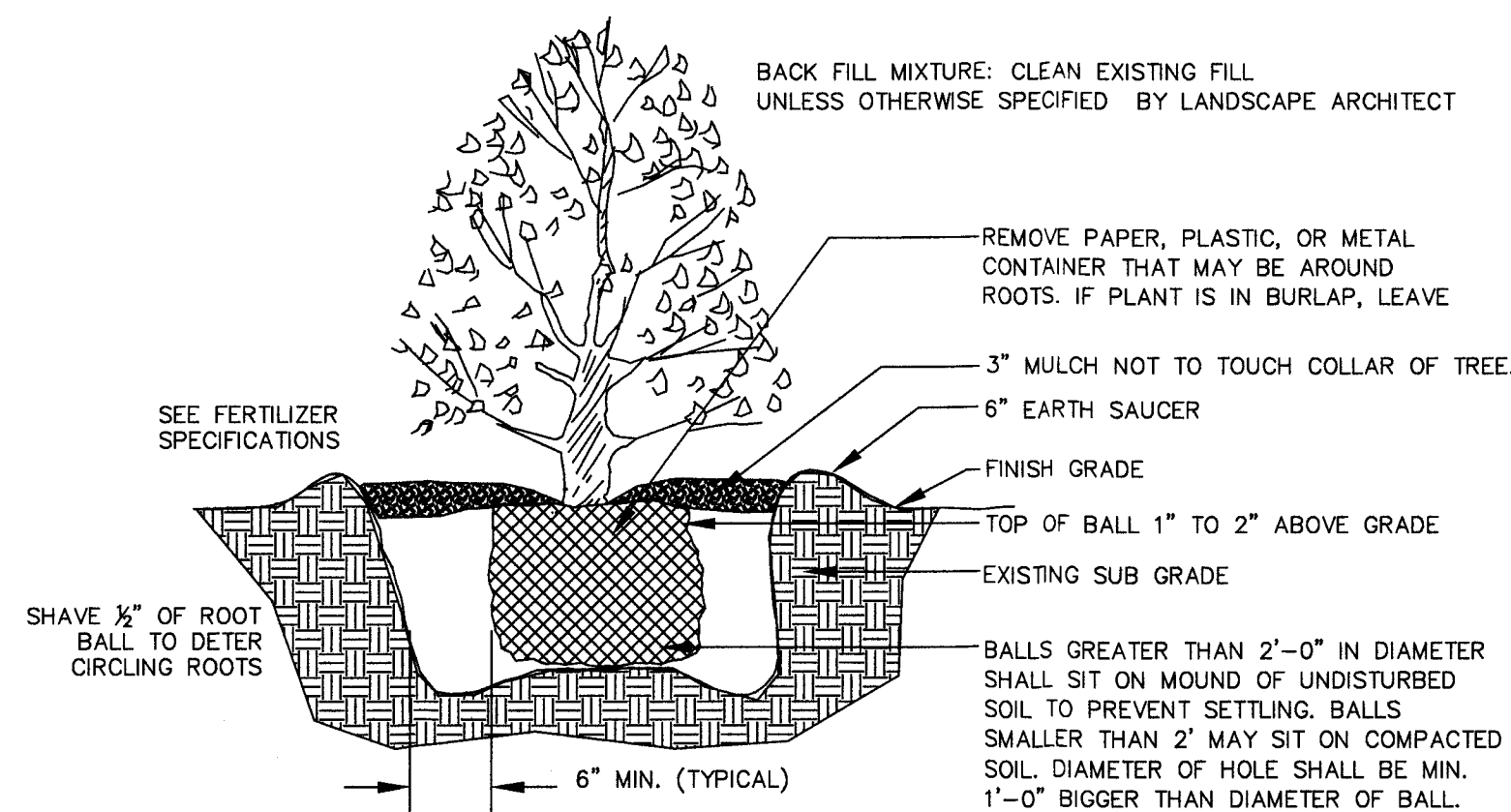
A Certificate of Completion shall be filled out and certified by either the designer of the landscape plans, irrigation plans, or the licensed contractor for the project.



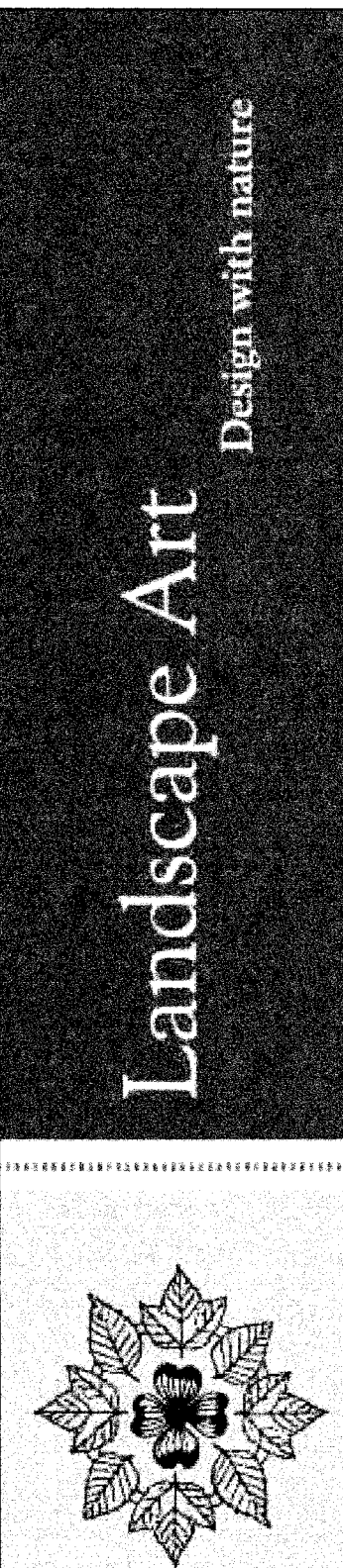
**PALM PLANTING DETAIL**



**TREE PLANTING DETAIL**



**SHRUB PLANTING DETAIL**



SCALE	NO SCALE
DESIGNED BY	AI
DRAWN BY	AI
CHECKED BY	AI
CAD DWG.	Huard Residence_Nov 12.dwg
DATE	Nov, 12/2018
REVISIONS	
#1	Feb, 13/2018
#2	City Review Aug, 31/2018
#3	City Review Jun, 28/2019

**LA-3-C**

**HUARD RESIDENCE**  
185 Megellan Avenue - Half Moon Bay - CA

**SOIL REPORT AND APPLICATION**





San Jose Office  
July 30, 2018  
Report 18-197-0104 Updated

Paul Huard  
350 Sequoia Ave.  
Palo Alto, CA 94306

RE: Huard@Magellan, Half Moon Bay, Job HMB1

Background

One sample was processed on July 16, 2018 identified as site soil from a depth of 1 to 18 inches from an area that is scheduled for new landscaping. Fertilizer and amendment recommendations were requested. The sample was analyzed for horticultural suitability, fertility, and physical characteristics for WELCO compliance. The results of the analyses are attached.

Analytical Results and Comments

The reaction of the sample is moderately alkaline at a pH of 7.9 with high qualitative lime present. This is considered to be above the range preferred by most plants and could cause most plants to show some yellowing of foliage and poor vigor. The high lime present will also help buffer the soil in the alkaline range. If you choose to use this soil for planting purposes, incorporation of soil sulfur is recommended to help decrease the pH to a more favorable range. Soil sulfur works slowly and most efficiently only to the depth it is incorporated. It may require multiple applications of soil sulfur in order to decrease the soil pH to a more favorable range. Alkalinity in the subsoil will remain elevated and this should be taken into account during plant selection.

Salinity (ECe), sodium and boron are safely low. The sodium adsorption ratio (SAR) indicates that sodium adequately balanced by soluble calcium and magnesium; this balance is important for soil structure quality, which relates to the rate at which water infiltrates the soil.

According to the USDA Soil Classification system, the less than 2mm fraction of the soil is classified as clay in all three samples. Organic content is low at 1.6% dry weight. Based on this information, the estimated infiltration rate is a slow 0.13 inch per hour. Infiltration rates may vary due to potential differences in compaction across the site.

The over 70% silt plus clay present indicates that this material will have a strong potential for slow drainage and high water holding capacity and irrigation timing should take this into account. Additional subsurface drainage is recommended for larger specimens being installed in flat areas in this soil.

In terms of soil fertility, nitrogen, phosphorus and potassium are low. All of the other major nutrients are sufficient to abundant for proper plant nutrition at this time. Of the micronutrients; copper is sufficient and manganese is fair while zinc and iron are low.

Recommendations

If these soils will be used for planting purposes despite the elevated silt and clay content and potential for poor drainage then nitrogen, phosphorus and potassium fertilizers are recommended at the time of planting along with a nitrogen stabilized organic amendment or composted greenwaste product in order to help improve soil nutrient holding capacity and porosity. If a composted greenwaste amendment is

1101 S Winchester Blvd., Ste. G-173 San Jose, CA 95128  
(408) 727-0330 (408) 727-5125 fax  
www.waypointanalytical.com



Paul Huard  
Report 18-197-0104 Updated

If we can be of any further assistance, please feel free to contact us.

Anmarie Lucchesi  
alucchesi@waypointanalytical.com

Emailed 5 Pages: huard@yahoo.com

1101 S Winchester Blvd., Ste. G-173 San Jose, CA 95128  
(408) 727-0330 (408) 727-5125 fax  
www.waypointanalytical.com



Paul Huard  
Report 18-197-0104 Updated

chosen, that would provide additional phosphorus and potassium as well as supplemental micronutrients, product depending.

The primary symptom of zinc, manganese and iron deficiencies is a general yellowing of leaves with veins remaining green. In severe cases, leaves may become pale yellow or whitish, but veins remain green. Brown spots may develop between veins and leaf margins may turn brown. Zinc deficiencies typically appear first on older, interior leaves. Manganese deficiency symptoms appear first on younger leaves. Iron deficiency shows first and more severely on the newer growth at branch tips. If these symptoms are present after plant installation they may be treated with an application of a chelated micronutrient product at the manufacturer's recommended rate. Decreasing the soil pH to a more favorable range will also help improve micronutrient availability. Incorporation of a composted greenwaste amendment would also provide additional micronutrients and may be sufficient to negate any deficiency, product depending.

To Prepare For Mass Planting:

Drainage of the root zone should be improved by first loosening the top 10 inches of any undisturbed or compacted soil. The following materials should then be evenly spread and thoroughly blended with the top 6 inches of soil to form a homogenous layer:

Amount per 1000 Square Feet	
5 cubic yards	Nitrogen Stabilized Organic Amendment*
7 pounds	Ammonium Phosphate (16-20-0)*
9 pounds	Potassium Sulfate (0-0-50)*
25 pounds	Soil Sulfur

\*The rate may change based on the analysis of the chosen organic amendment. This rate is based on 270 lbs. of dry weight of organic matter per cubic yard of amendment. If a composted greenwaste amendment is selected that contains a significant amount of phosphorus or potassium, the ammonium phosphate should be replaced with ammonium sulfate (21-0-0) at a 7 pound rate and the potassium sulfate should be reduced or omitted accordingly.

It may require multiple applications of soil sulfur in order to continue pH decrease to a more favorable range over time.

For turf areas the organic amendment should be decreased by half.

To Prepare Backfill For Trees and Shrubs:

- Excavate planting pits at least twice as wide as the diameter of the rootball.
- Soil immediately below the root ball should be left undisturbed to provide support but the sides and the bottom around the side should be cultivated to improve porosity.
- The top of the rootball should be at or slightly above final grade.
- The top 12 inches of backfill around the sides of the rootball of trees and shrubs may consist of the above amended soil or may be prepared as follows:

1101 S Winchester Blvd., Ste. G-173 San Jose, CA 95128  
(408) 727-0330 (408) 727-5125 fax  
www.waypointanalytical.com



Paul Huard  
Report 18-197-0104 Updated

Uniformly blended with:

Amount per Cubic Yard of Backfill	
3 parts	Site Soil
1 part	Nitrogen Stabilized Organic Amendment*
1/3 pound	Ammonium Phosphate (16-20-0)*
1/2 pound	Potassium Sulfate (0-0-50)*
1 1/3 pounds	Soil Sulfur

- Backfill below 12 inches required for 24 inch box or larger material should not contain the organic amendment, ammonium phosphate or soil sulfur but should still contain the potassium sulfate at the recommended rate. Iron sulfate should be incorporated at a 2 1/2 pound rate in order to continue pH decrease below 12 inches in depth. Caution: Iron sulfate can stain moist concrete. In order to improve phosphorus nutrition below 12 inches in depth, triple superphosphate (0-45-0) should be incorporated at a 1/4 pound rate.
- Ideally a weed and turf free zone should be maintained just beyond the diameter of the planting hole. A 2-4 inch deep layer of coarse mulch can be placed around the tree or shrub. Mulch should be kept a minimum 4 inches from the trunk.
- Irrigation of new plantings should take into consideration the differing texture of the rootball substrate and surrounding soil matrix to maintain adequate moisture during this critical period of establishment.

Maintenance

For turf areas, new sod should receive a light fertilization 2 weeks after planting with 16-6-8 applied at a rate of 4 pounds per 1000 square feet. For turf from seed this application should be after the first mowing. The area may then be maintained with primarily a nitrogen program of applying 5 pounds of ammonium sulfate (21-0-0) per 1000 square feet. Treatment should be at 45 to 60 day intervals until the turf becomes well established. Once the turf is well established, the frequency of fertilization should be decreased depending on color and rate of growth desired. In the spring and fall substitute a complete fertilizer such as 15-15-15 to help insure continuing adequate phosphorus and potassium.

Maintenance fertilization for other areas should rely primarily on a nitrogen only program supplemented with a complete fertilizer in the fall and spring. Beginning 45-60 days after planting, ammonium sulfate (21-0-0) should be applied at a rate of 5 pounds per 1000 square feet with reapplication every 45-60 days. Alternatively, slow release Sulfur Coated Urea (43-0-0) may be applied at 6 pounds per 1000 square feet every 90 days. Once plants are performing satisfactorily, the frequency of fertilization may be decreased depending on color and rate of growth desired. In the winter for a quick greening effect, calcium nitrate (15.5-0-0) may be applied at a 6 pound rate if applicable. Early fall and spring, substitute a complete fertilizer such as 15-15-15 to help insure continuing adequate phosphorus and potassium.

Alternatively, Blood Meal (12-0-0) provides available nitrogen fairly rapidly while materials such as Feather Meal (12-0-0), Soybean or Cotton Seed Meal (7-1-1) are slower to provide available nitrogen, but they extend the length of time they make this contribution. In order to provide a good supply of nitrogen for a 3-4 month time frame a good combination would be 6 pounds Blood Meal and 14 pounds Feather Meal per 1000 square feet. In the fall and spring, substitute a complete organic fertilizer such as 5-5-5 applied at the manufacturer's label rate. Or, nutrient rich composted greenwaste may be spread in a 1 to 2 inch layer, which generally carries enough nutrition to boost complete nutrition though a source of nitrogen might also be added at a half rate to assure adequate nitrogen availability.

1101 S Winchester Blvd., Ste. G-173 San Jose, CA 95128  
(408) 727-0330 (408) 727-5125 fax  
www.waypointanalytical.com

Paul Huard  
350 Sequoia Ave.  
Palo Alto CA 94306

4741 East Hunter Ave. Suite A  
Anaheim, CA 92807  
Main 714-282-8777 Fax 714-282-8575  
www.waypointanalytical.com

Project: Huard@Magellan  
Half Moon Bay  
Job HMB1

Report No: 18-197-0104  
Purchase Order:  
Date Recd: 07/16/2018  
Date Printed: 07/20/2018  
Page: 1 of 1

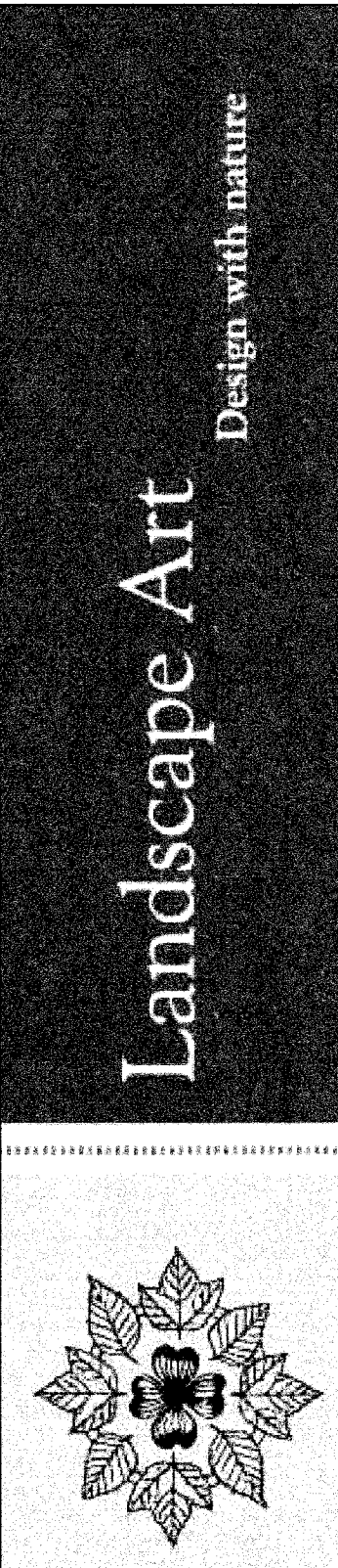
### COMPREHENSIVE SOIL ANALYSIS

Sample Description - Sample ID	Half Sat %	pH	ECe dS/m	NO <sub>3</sub> -N ppm	NH <sub>4</sub> -N ppm	PO <sub>4</sub> -P ppm	K ppm	Ca ppm	Mg ppm	Cu ppm	Zn ppm	Mn ppm	Fe ppm	Organic % dry wt.	Lab No.
	TEC	Qual Lime		Sufficiency Factors											
Site Soil 1-18"	20	7.9	0.9	2	6	6	57	1920	466	1.8	0.7	7	13	1.6	25731
	133	High		0.2	0.2	0.3	0.9	1.6	1.0	0.1	0.4	0.2			

Saturation Extract Values						Percent of Sample Passing 2 mm Screen						USDA Soil Classification	Lab No.		
Ca meq/L	Mg meq/L	Na meq/L	K meq/L	B ppm	SO <sub>4</sub> meq/L	SAR	Gravel %		Sand						
							Coarse 5-12	Fine 2-5	Very Coarse 1-2	Coarse 0.5-1	Med. to Very Fine 0.05-0.5	Silt .002-.05	Clay 0-.002		
7.1	2.6	2.5	0.3	0.17	9.2	1.2	2.3	9.2	4.2	4.4	19.8	30.0	41.5	Clay	25731

Sufficiency factor (1.0=sufficient for average crop) below each nutrient value. N factor based on 200 ppm constant feed. SAR = Sodium adsorption ratio. Half Saturation %=approx field moisture capacity. Nitrogen(N), Potassium(K), Calcium(Ca) and Magnesium(Mg) by sodium chloride extraction. Phosphorus(P) by sodium bicarbonate extraction. Copper(Cu), Zinc(Zn), Manganese(Mn) and Iron(Fe) by DTPA extraction. Sat. ext. method for salinity (ECe as dS/m), Boron (B), Sulfate(SO<sub>4</sub>), Sodium(Na). Gravel fraction expressed as percent by weight of oven-dried sample passing a 12mm(1/2 inch) sieve. Particle sizes in millimeters. Organic percentage determined by Walkley-Black or Loss on Ignition.

\* LOW . SUFFICIENT . HIGH



SCALE	NO SCALE
DESIGNED BY	AI
DRAWN BY	AI
CHECKED BY	AI
CAD DWG.	Huard Residence_Nov 12.dwg
DATE	Nov, 12/2018
REVISIONS	
#1	Feb, 13/2018
#2 - City Review	Aug, 31/2018
#3 - City Review	Jun, 28/2019

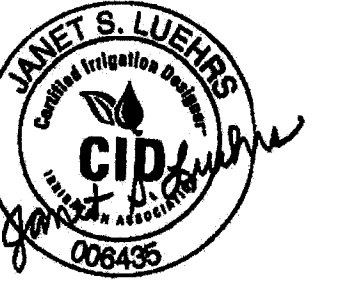
# LA-3-D

## HUARD RESIDENCE

185 Megellan Avenue - Half Moon Bay - CA

### SOIL REPORT AND PREPARATION

STAMP



CONSULTANT

HUARD RESIDENCE  
 185 MAGELLAN AVE.  
 HALF MOON BAY, CALIFORNIA

ISSUANCE

NO	REVISIONS	DATE

SHEET TITLE

**IRRIGATION PLAN**

DRAWN BY WM CHECKED BY JL

DATE 6/24/19 SCALE 1" = 8'-0"

JOB NO.

SHEET NO.

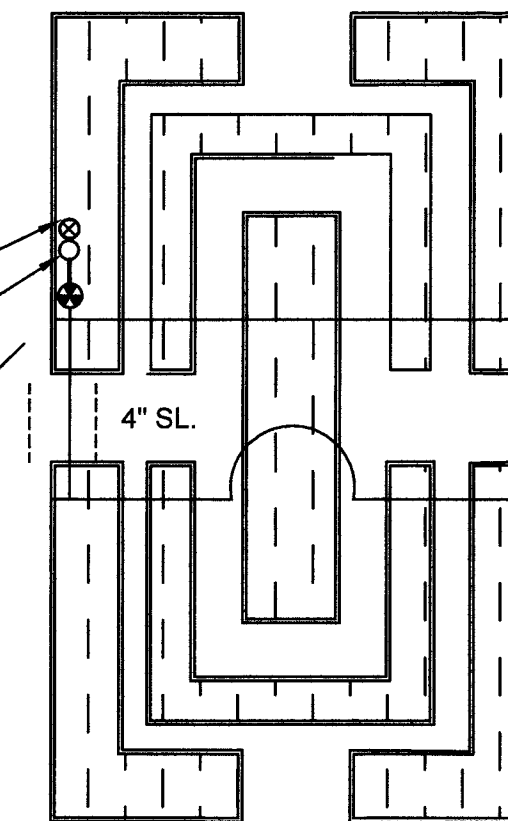
**IR-1**

OF SHEETS

**COORDINATION LEGEND**

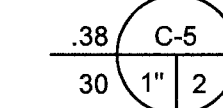
SYMBOL	DESCRIPTION
○	1" COPPER PIPE PENETRATION. ALL COPPER PIPE IN STRUCTURE SHALL BE ROUTED, SUPPLIED, AND INSTALLED BY THE PLUMBING CONTRACTOR. SIZE AS NOTED ON PLANS.
⊙	1" ELECTRICAL CONDUIT PENETRATION. ALL CONDUIT IN STRUCTURE SHALL BE ROUTE, SUPPLIED, AND INSTALLED BY THE ELECTRICAL CONTRACTOR. SIZE AS NOTED ON PLANS.

ALAMEDA AVE  
 (NOT CONSTRUCTED)

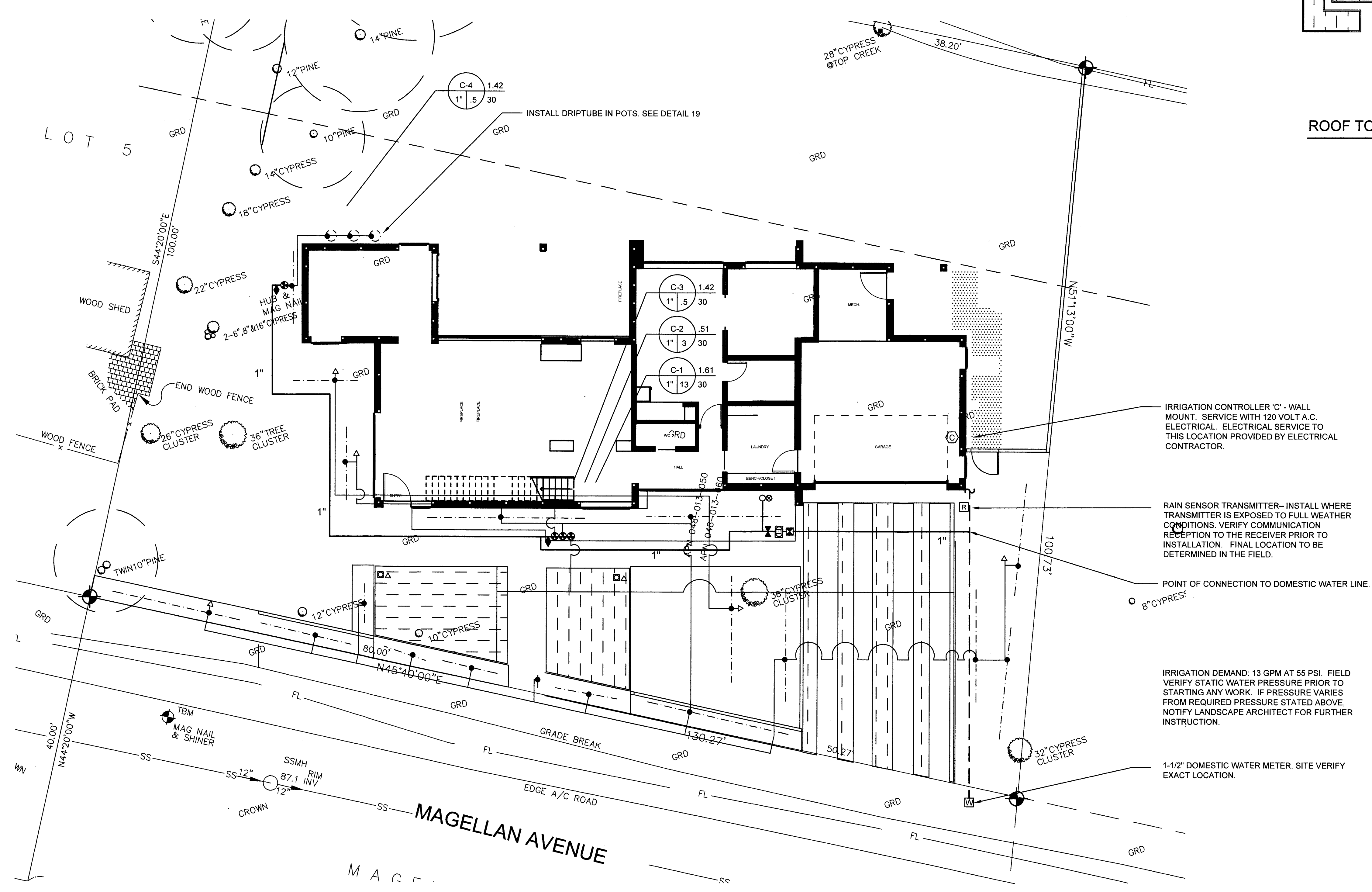


ELECTRICAL CONDUIT STUB-OUT, TYPICAL

MAINLINE STUB-OUT, TYPICAL



**ROOF TOP IRRIGATION PLAN**



IRRIGATION CONTROLLER 'C' - WALL MOUNT. SERVICE WITH 120 VOLT A.C. ELECTRICAL. ELECTRICAL SERVICE TO THIS LOCATION PROVIDED BY ELECTRICAL CONTRACTOR.

RAIN SENSOR TRANSMITTER--INSTALL WHERE TRANSMITTER IS EXPOSED TO FULL WEATHER CONDITIONS. VERIFY COMMUNICATION RECEPTION TO THE RECEIVER PRIOR TO INSTALLATION. FINAL LOCATION TO BE DETERMINED IN THE FIELD.

POINT OF CONNECTION TO DOMESTIC WATER LINE.

IRRIGATION DEMAND: 13 GPM AT 55 PSI. FIELD VERIFY STATIC WATER PRESSURE PRIOR TO STARTING ANY WORK. IF PRESSURE VARIES FROM REQUIRED PRESSURE STATED ABOVE, NOTIFY LANDSCAPE ARCHITECT FOR FURTHER INSTRUCTION.

1-1/2" DOMESTIC WATER METER. SITE VERIFY EXACT LOCATION.

INSTALL DRIPTUBE IN POTS. SEE DETAIL 19

LOT 5

MAGELLAN AVENUE



**IRRIGATION NOTES**

- THE CONTRACTOR SHALL REVIEW RELATED DRAWINGS AND SHALL ENSURE COORDINATION WITH ALL APPLICABLE TRADES PRIOR TO SUBMITTING BID.
- THE IRRIGATION SYSTEM SHALL BE INSTALLED IN CONFORMANCE WITH ALL APPLICABLE STATE AND LOCAL CODES AND ORDINANCES BY LICENSED CONTRACTORS AND EXPERIENCED WORKERS. CONTRACTOR SHALL OBTAIN AND PAY FOR ALL REQUIRED PERMITS AND FEES RELATING TO THEIR WORK.
- THIS DESIGN IS DIAGRAMMATIC. ALL PIPING, VALVES, ETC. SHOWN WITHIN PAVED AREAS IS FOR DESIGN CLARIFICATION ONLY AND SHALL BE INSTALLED IN PLANTING AREAS WHERE POSSIBLE. AVOID ANY CONFLICTS BETWEEN THE IRRIGATION SYSTEM, PLANTING AND ARCHITECTURAL FEATURES.
- PARALLEL PIPES MAY BE INSTALLED IN COMMON TRENCH. PIPES ARE NOT TO BE INSTALLED DIRECTLY ABOVE ONE ANOTHER. TRENCHES SHALL BE AMPLE SIZE TO PERMIT THE PIPES TO BE LAID AT THE ELEVATIONS INTENDED AND TO PERMIT SPACE FOR JOINING.
- CONTRACTOR SHALL RESTORE SURFACES, EXISTING UNDERGROUND INSTALLATIONS, ETC., DAMAGED OR CUT AS A RESULT OF EXCAVATIONS, TO ORIGINAL CONDITIONS IN A MANNER APPROVED BY THE OWNER'S REPRESENTATIVE.
- DO NOT WILLFULLY INSTALL THE IRRIGATION SYSTEM AS SHOWN ON THE DRAWINGS WHEN IT IS OBVIOUS IN THE FIELD THAT OBSTRUCTIONS, GRADE DIFFERENCES OR DIFFERENCES IN THE AREA DIMENSIONS EXIST THAT MIGHT NOT HAVE BEEN CONSIDERED IN THE ENGINEERING. SUCH OBSTRUCTIONS OR DIFFERENCES SHOULD BE BROUGHT TO THE ATTENTION OF THE OWNER'S AUTHORIZED REPRESENTATIVE. IN THE EVENT THAT THIS NOTIFICATION IS NOT PERFORMED, THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY REVISIONS NECESSARY.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO BECOME FAMILIAR WITH ALL GRADE DIFFERENCES, LOCATION OF WALLS, RETAINING WALLS, ETC. COORDINATE WORK WITH THE GENERAL CONTRACTOR AND OTHER SUBCONTRACTORS FOR THE LOCATION AND THE INSTALLATION OF PIPE SLEEVES THROUGH WALLS, UNDER ROADWAYS, PAVING, STRUCTURES, ETC. CONTRACTOR TO VERIFY THE LOCATION OF EXISTING UNDERGROUND UTILITIES AND STRUCTURES PRIOR TO THE EXCAVATION OF TRENCHES. CONTRACTOR IS TO REPAIR ANY DAMAGE CAUSED BY THEIR WORK AT NO ADDITIONAL COST TO THE OWNER.
- DUE TO THE SCALE OF THE DRAWINGS, IT IS NOT POSSIBLE TO INDICATE ALL OFFSETS, FITTINGS, SLEEVES, ETC., WHICH MAY BE REQUIRED. CAREFULLY INVESTIGATE THE STRUCTURAL AND FINISHED CONDITIONS AFFECTING ALL WORK AND PLAN WORK ACCORDINGLY, FURNISHING SUCH FITTINGS, ETC., AS MAY BE REQUIRED TO MEET SUCH CONDITIONS. DRAWINGS ARE GENERALLY DIAGRAMMATIC AND INDICATIVE OF THE WORK TO BE INSTALLED. THE WORK SHALL BE INSTALLED IN SUCH A MANNER AS TO AVOID CONFLICTS BETWEEN IRRIGATION SYSTEMS, PLANTING, AND ARCHITECTURAL FEATURES.
- ELECTRICAL CONTRACTOR TO SUPPLY 120 VAC (2.5 AMP) SERVICE TO CONTROLLER LOCATION. IRRIGATION CONTRACTOR TO MAKE FINAL CONNECTION FROM ELECTRICAL STUB-OUT TO CONTROLLER. IRRIGATION CONTROL WIRE SHALL BE #14, U.L. APPROVED FOR DIRECT BURIAL. COMMON WIRE SHALL BE #12 U.L. APPROVED AND SHALL BE WHITE IN COLOR. WIRING TO INDIVIDUAL REMOTE CONTROL VALVES SHALL BE COLOR OTHER THAN WHITE.
- EACH CONTROLLER SHALL HAVE ITS OWN INDEPENDENT GROUND WIRE.
- REMOTE CONTROL VALVES SHALL BE WIRED TO CONTROLLER IN SEQUENCE AS SHOWN ON PLANS. RUN WIRE FROM EACH RCV TO THE CONTROLLER. SPLICING WIRES TOGETHER OUTSIDE OF VALVE BOXES WILL NOT BE PERMITTED. ATTACH A LABEL TO CONTROL WIRE AT THE CONTROLLER AND ATTACH AN ID TAG AT EACH REMOTE CONTROL VALVE INDICATING CONTROLLER AND STATION NUMBER.
- SPLICING OF 24-VOLT WIRES WILL NOT BE PERMITTED EXCEPT IN VALVE BOXES. LEAVE A 36" COIL OF EXCESS WIRE AT EACH SPLICE AND 100 FEET ON CENTER ALONG WIRE RUN. TAPE WIRE IN BUNDLES 10 FEET ON CENTER. NO TAPING PERMITTED INSIDE SLEEVES.
- WIRE CONNECTORS SHALL BE 3M-DBRY-6 DIRECT BURY UNLESS OTHERWISE NOTED.
- INSTALL TWO (2) SPARE CONTROL WIRES ALONG THE ENTIRE MAIN LINE. SPARE WIRES SHALL BE THE SAME COLOR (ONE WITH A WHITE STRIPE) AND OF A DIFFERENT COLOR THAN OTHER CONTROL WIRES. LOOP 36" EXCESS WIRE INTO EACH SINGLE VALVE BOX AND INTO ONE VALVE BOX IN EACH GROUP OF VALVES.
- VALVE LOCATIONS SHOWN ARE DIAGRAMMATIC. INSTALL IN GROUND COVER/SHRUB AREAS WHERE POSSIBLE.
- INSTALL VALVE BOXES MINIMUM 12" FROM AND PERPENDICULAR TO WALK, CURB, LAWN, BUILDING OR LANDSCAPE FEATURE. AT MULTIPLE VALVE BOX GROUPS, EACH BOX SHALL BE AN EQUAL DISTANCE FROM THE WALK, CURB, LAWN, ETC. AND EACH BOX SHALL BE MINIMUM 12" APART. SHORT SIDE OF VALVE BOXES SHALL BE PARALLEL TO WALK, CURB, ETC.
- PRESSURE REGULATING DEVICES ARE REQUIRED IF WATER PRESSURE IS BELOW OR EXCEEDS THE RECOMMENDED PRESSURE OF THE SPECIFIED IRRIGATION DEVICES.
- LOCATE QUICK COUPLING VALVE 12" FROM HARDSCAPE AREA.
- THOROUGHLY FLUSH MAIN LINE BEFORE INSTALLING VALVES.
- CHECK VALVES OR ANTI-DRAIN VALVES ARE REQUIRED ON ALL SPRINKLER HEADS WHERE LOW POINT DRAINAGE COULD OCCUR. FOR DRIP OR BUBBLER CIRCUITS, INSTALL KING BROS. CV SERIES CHECK VALVES IN LATERAL LINES FOR EVERY 10' OF ELEVATION CHANGE.
- ALL MAIN LINES SHALL BE FLUSHED PRIOR TO THE INSTALLATION OF IRRIGATION, BUBBLERS AND DRIP TUBING. AT 30 DAYS AFTER INSTALLATION EACH SYSTEM SHALL BE FLUSHED TO ELIMINATE GLUE AND DIRT PARTICLES FROM THE LINES.
- NOTIFY ARCHITECT OF ANY ASPECTS OF LAYOUT THAT WILL PROVIDE INCOMPLETE OR INSUFFICIENT WATER COVERAGE OF PLANT MATERIAL AND DO NOT PROCEED UNTIL HIS/HER INSTRUCTIONS ARE OBTAINED.
- IN ADDITION TO THE SLEEVES AND CONDUITS SHOWN ON THE DRAWINGS, THE IRRIGATION CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE INSTALLATION OF SLEEVES AND CONDUITS OF SUFFICIENT SIZE UNDER ALL PAVED AREAS.
- ALL EXCAVATIONS ARE TO BE FILLED WITH COMPACTED BACKFILL. BACKFILL MATERIAL SHALL BE THE EARTH EXCAVATED FROM THE TRENCH AND FREE OF ROCKS AND OTHER FOREIGN COURSE MATERIAL. COMPACT BACKFILL TO A MINIMUM OF 90 PERCENT OF ORIGINAL SOIL DENSITY. REPAIR ALL SETTLED TRENCHES PROMPTLY, FOR A PERIOD OF 1 YEAR AFTER COMPLETION OF WORK.
- CONTRACTOR SHALL WARRANT THAT THE IRRIGATION SYSTEM WILL BE FREE FROM DEFECTS IN MATERIALS AND WORKMANSHIP FOR A PERIOD OF 1 YEAR AFTER FINAL ACCEPTANCE OF WORK.
- ALL CONSTANT PRESSURE PIPES SHALL BE TESTED AT A MINIMUM OF 125 PSI FOR TWO HOURS. CENTER LOAD PIPING WITH A SMALL AMOUNT OF BACKFILL TO PREVENT ARCHING OR SLIPPING UNDER PRESSURE. NO FITTINGS SHALL BE COVERED. REPAIR FAULTY JOINTS WITH NEW MATERIALS. DO NOT USE CEMENT OR CAULKING TO REPAIR LEAKS.
- WHERE IT IS NECESSARY TO EXCAVATE ADJACENT TO EXISTING TREES, USE ALL POSSIBLE CARE TO AVOID INJURY TO TREES, AND TREE ROOTS. EXCAVATION IN AREAS WHERE 2 INCH AND LARGER ROOTS OCCUR SHALL BE DONE BY HAND. ROOTS 2 INCHES AND LARGER IN DIAMETER SHALL BE WRAPPED IN A PLASTIC BAG AND SECURED WITH A RUBBER BAND. TRENCHES ADJACENT TO TREE SHOULD BE CLOSED WITHIN 24 HOURS; WHERE THIS IS NOT POSSIBLE, THE SIDE OF THE TRENCH ADJACENT TO THE TREE SHALL BE KEPT SHADED WITH BURLAP OR CANVAS.
- THE IRRIGATION SYSTEM DESIGN IS BASED ON THE MINIMUM OPERATING PRESSURE SHOWN ON THE IRRIGATION DRAWINGS. VERIFY WATER PRESSURE PRIOR TO CONSTRUCTION. REPORT ANY DIFFERENCE BETWEEN THE WATER PRESSURE INDICATED ON THE DRAWINGS AND THE ACTUAL PRESSURE READING AT THE IRRIGATION POINT OF CONNECTION TO THE OWNER'S AUTHORIZED REPRESENTATIVE.
- IRRIGATION DEMAND: REFER TO IRRIGATION POINTS OF CONNECTION.
- OPERATE IRRIGATION CONTROLLER(S) BETWEEN THE HOURS OF 10:00 PM AND 7:00 AM.
- NOTIFY ALL LOCAL JURISDICTIONS FOR INSPECTION AND TESTING OF INSTALLED BACKFLOW PREVENTION DEVICE.
- NOTIFY UNDERGROUND SERVICE ALERT AT 811 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION.
- AT LEAST 10 DAYS PRIOR TO COMPLETION OF CONSTRUCTION, PROVIDE THE OWNER WITH A MAINTENANCE MANUAL. DATA SHALL BE ON 8 1/2" X 11" SHEETS, IN A 3-RING BINDER AND SHALL INCLUDE:
  - INDEX SHEET WITH CONTRACTOR'S CONTACT INFORMATION AND LIST OF EQUIPMENT WITH LOCAL MANUFACTURER'S REPRESENTATIVES.
  - CATALOG AND PARTS SHEET OF ALL MATERIAL AND EQUIPMENT.
  - COMPLETE OPERATING AND MAINTENANCE INSTRUCTIONS FOR ALL EQUIPMENT.
  - COMPLETE AND DATED MANUFACTURER'S WARRANTIES.
- AT COMPLETION OF MAINTENANCE PERIOD, PROVIDE OWNER WITH THREE (3) EACH OF ALL OPERATING AND SERVICING KEYS AND WRENCHES REQUIRED FOR COMPLETE MAINTENANCE AND OPERATION OF ALL HEADS AND VALVES. PROVIDE TWO (2) EACH OF KEYS AND HOSE SWIVELS FOR QUICK COUPLERS AND KEYS TO CONTROLLER CABINETS.
- A DIAGRAM OF THE IRRIGATION PLAN SHOWING HYDROZONES SHALL BE KEPT WITH THE IRRIGATION CONTROLLER FOR SUBSEQUENT MANAGEMENT PURPOSES.
- A CERTIFICATE OF COMPLETION SHALL BE FILLED OUT AND CERTIFIED BY EITHER THE DESIGNER OF THE LANDSCAPE PLANS, IRRIGATION PLANS, OR THE LICENSED LANDSCAPE CONTRACTOR FOR THE PROJECT.
- AN IRRIGATION AUDIT REPORT SHALL BE COMPLETED AT THE TIME OF FINAL INSPECTION.
- AT THE TIME OF FINAL INSPECTION, THE PERMIT APPLICANT MUST PROVIDE THE OWNER OF THE PROPERTY WITH A CERTIFICATE OF COMPLETION, CERTIFICATE OF INSTALLATION, IRRIGATION SCHEDULE OF LANDSCAPE AND IRRIGATION MAINTENANCE.

**IRRIGATION LEGEND**

SYMBOL	MODEL NUMBER	DESCRIPTION	PSI	FLOW RATE (GPM)	DETAIL #
NOT SHOWN	T-DPC04-DC, T-DPC02-DC	TORO NGE SINGLE OUTLET EMITTER	40	1 GPH, 1/2 GPH	15
•	-	COMPRESSION FITTING STUB-OUT FROM PVC RIGID PIPE TO POLY TUBING			14
Δ	T-FCH-H-FIPT	TORO DL2000 FLUSH VALVE			12
NOT SHOWN	T-YD-500-34	TORO DL2000 AIR VENT			13
□	T-DL-MP9	TORO DL2000 POP-UP OPERATION INDICATOR			11
⊕	DZK-700 / LT-1000-T	TORO DRIP ZONE VALVE KIT - INCL. REMOTE CONTROL VALVE, WYE FILTER WITH 150 MESH SCREEN, AND PRESET PRESSURE REGULATOR / NDS SCH 80 PVC BALL VALVE			3
◆	100-2SLLVC/075-MHS	TORO QUICK COUPLING VALVE WITH 3/4" HOSE SWIVEL			8
⊞	T-113-LF	NIBCO LEAD FREE GATE VALVE (LINE SIZE)			7
⊞	EZ001CX-CBV-100	EZ-FLO FERTILIZER INJECTOR. INSTALL IN 15"x10"x12" VALVE BOX			18
⊞	975XL2-1"	WILKINS LEAD-FREE REDUCED PRESSURE BACKFLOW PREVENTER			1
⊞	WR-CLIK	HUNTER RAIN SENSOR			10
⊞	HUNTER HC1200-I	HUNTER 12 STATION WIFI CONTROLLER			2
		CONTROLLER AND STATION NUMBER			
		APPLICATION RATE (INCHES)			
		OPERATING PRESSURE (PSI)			
		APPROXIMATE GALLONS PER MINUTE			
		REMOTE CONTROL VALVE SIZE			
		MAIN LINE: 1120-SCHEDULE 40 PVC SOLVENT WELD PLASTIC PIPE WITH SCHEDULE 80 AND SCHEDULE 40 PVC SOLVENT WELD FITTINGS. 18" COVER.			
		LATERAL LINE: 1120-CLASS 200 PSI PVC SOLVENT WELD PIPE WITH SCHEDULE 40 PVC SOLVENT WELD FITTINGS. 12" COVER.			
		DRIP TUBING: TORO T-EHD1645 BLUE STRIPE HOSE WITH TORO LOC-EZE FITTINGS. 4" COVER. DISTRIBUTION TUBING: TORO EHW0437-010 1/4" HOSE.			
		SUB-SURFACE DRIPLINE: TORO DL2000 RGP-212-10 DRIPLINE WITH ROOT GUARD. USE ONLY DL2000 DRIPLINE TRI-LOC FITTINGS. 2" COVER. (12" EMITTER SPACING; 1 GPH PER EMITTER)			
		SLEEVE (SL): 1120-CLASS 200 PVC PLASTIC PIPE. 24" COVER.			

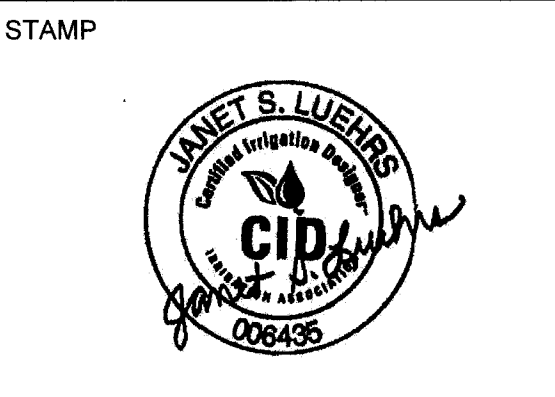
**DRIP IRRIGATION NOTES**

- THE CONTRACTOR SHALL PROVIDE A DRIP EMITTER SYSTEM FOR ALL TREES, SHRUBS, AND GROUNDCOVER AS INDICATED ON THE IRRIGATION PLAN AND DETAILS.
- EMITTERS ARE NOT SHOWN ON THE IRRIGATION PLAN. ACTUAL LAYOUT OF EMITTER SYSTEM SHALL BE DETERMINED BY THE CONTRACTOR IN THE FIELD USING THE IRRIGATION PLAN AND THE DRIP IRRIGATION DETAILS AS A GUIDE, WHILE USING THE PLANTING PLAN FOR THE LOCATION AND QUANTITIES OF EMITTERS.
- EACH 15 GALLON SHRUB SHALL RECEIVE THREE 1 GPH EMITTERS DISTRIBUTED EVENLY AROUND SHRUB (TWO SHALL BE ON UPHILL SIDE OF SHRUB), VIA DISTRIBUTION TUBING. REFER TO THE PLANTING PLAN FOR THE LOCATION AND QUANTITY OF SHRUBS.
- EACH 5 GALLON SHRUB SHALL RECEIVE TWO 1 GPH EMITTERS ON OPPOSITE SIDES AND UPHILL OF SHRUB, VIA DISTRIBUTION TUBING. REFER TO THE PLANTING PLAN FOR THE LOCATION AND QUANTITY OF SHRUBS.
- EACH 1 GALLON SHRUB SHALL RECEIVE TWO 1/2 GPH EMITTERS ON OPPOSITE SIDES AND UPHILL OF SHRUB, VIA DISTRIBUTION TUBING. REFER TO THE PLANTING PLAN FOR THE LOCATION AND QUANTITY OF SHRUBS.
- INSTALL THE EMITTERS ON TOP OF THE ROOT BALL AND AS FAR FROM THE TRUNK OF THE PLANT AS POSSIBLE.
- DISTRIBUTION TUBING SHALL BE A MAXIMUM OF 5' IN LENGTH FROM 1/2" TUBING TO EMITTER. EACH LENGTH OF 1/2" DRIP TUBING SHALL BE A MAXIMUM OF 25'.
- INSTALL FLUSH VALVES AT THE END OF THE RIGID PVC AS SHOWN ON PLANS.
- ALL PVC LATERAL PIPE TO DRIP TUBING SHALL BE 3/4" UNLESS OTHERWISE NOTED.
- THE DRIP EMITTER SYSTEM LAYOUT SHALL BE APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO BEGINNING CONSTRUCTION AND AFTER PLANTING HAS BEEN COMPLETED.

**DRIPLINE NOTES**

- PLANS ARE DIAGRAMMATIC. INSTALL DRIPLINE AND COMPONENTS PER MANUFACTURERS INSTRUCTIONS AND INSTALLATION DETAILS.
- INSTALL DRIPLINE A MAXIMUM OF 12' APART WITH EMITTERS TRIANGULARLY SPACED. INSTALL 2" FROM PERIMETER OF PLANTED AREA. THERE SHOULD BE A MINIMUM OF TWO DRIPLINE LATERALS IN EACH PLANTED AREA. DRIPLINE SHALL BE INSTALLED AT A CONSISTANT DEPTH THROUGHOUT THE CIRCUIT.
- PLACE AIR/VACUUM RELIEF VALVES AT THE HIGHEST POINTS OF EACH ZONE AND JUST BELOW CHECK VALVES ON SLOPES. INSTALL ONE AIR/VACUUM RELIEF VALVE FOR EVERY 390' OF TOTAL DRIPLINE PER ZONE.
- PLACE FLUSH VALVES AT THE HYDRAULIC CENTER OF THE EXHAUST HEADER OR AT LOW POINT ON SLOPES. INSTALL MINIMUM OF ONE FOR EVERY 15 GPM.
- INSTALL IN-LINE CHECK VALVES ON SLOPES GREATER THAN 3% AND WHERE LOW-LINE DRAINAGE COULD CAUSE WET AREAS IN THE LOWEST AREAS OF AN IRRIGATION ZONE. CHECK VALVES SHALL BE PLACED EVERY 4-5 FEET BETWEEN DRIPLINE LATERALS AND BEFORE THE FLUSH VALVE.
- ON ALL SLOPES AND MOUNDS, PLACE THE DRIPLINE LATERALS PARALLEL TO THE SLOPE CONTOUR WHERE POSSIBLE. INCREASE THE LATERAL SPACING BY 25% ON THE LOWER ONE-THIRD OF THE SLOPE TO AVOID EXCESS DRAINAGE.
- PVC SUPPLY AND FLUSH LINE SIZING GUIDE (ALL SUPPLY AND FLUSH LINES SHALL BE THE SAME SIZE FOR THE ENTIRE ZONE):
  - 0-8 GPM - 3/4"
  - 8-1-15 GPM - 1"
  - 15-1-25 GPM - 1 1/4"
- FITTINGS SHALL BE OF THE SAME MANUFACTURER AS DRIPLINE.
- STAPLE DRIPLINE TO GROUND EVERY 3 FEET. USE ADDITIONAL STAPLES OVER EACH TEE, ELBOW OR CROSS. USE U-SHAPED STAPLES TO AVOID PINCHING THE DRIPLINE.
- THOROUGHLY FLUSH EACH INSTALLATION SEGMENT TO ENSURE NO DEBRIS CONTAMINATION OCCURS.
- IN TURF OR NOW-MOW GRASS AREAS, A TEMPORARY OVERHEAD SPRAY SYSTEM WILL NEED TO BE PROVIDED UNTIL THE TURF SEED OR SOD IS ESTABLISHED. OVERHEAD WATERING CAN BE DISCONTINUED WHEN EDGES OF THE SOD CANNOT BE PULLED UP. RUN THE DRIPLINE SYSTEM SEVERAL TIMES DAILY IN ADDITION TO THE TEMPORARY OVERHEAD SYSTEM.
- RUN THE DRIPLINE SYSTEM EVERY DAY OR EVERY OTHER DAY TO ESTABLISH PLANT MATERIAL. MAINTAIN A CONSISTENT MOISTURE BALANCE IN THE SOIL. IT IS IMPORTANT TO KEEP THE SOIL MOIST WITHOUT SATURATION.

**BROOK WATER**  
 IRRIGATION CONSULTANTS  
 480 SAINT JOHN STREET, SUITE 220  
 PLEASANTON, CALIFORNIA 94566  
 TEL. 925. 855. 0417  
 FAX. 925. 855. 0357  
 E-MAIL  
 JANET@BROOKWATER.COM



STAMP  
 CONSULTANT

HUARD RESIDENCE  
 185 MAGELLAN AVE.  
 HALF MOON BAY, CALIFORNIA

ISSUANCE

NO	REVISIONS	DATE

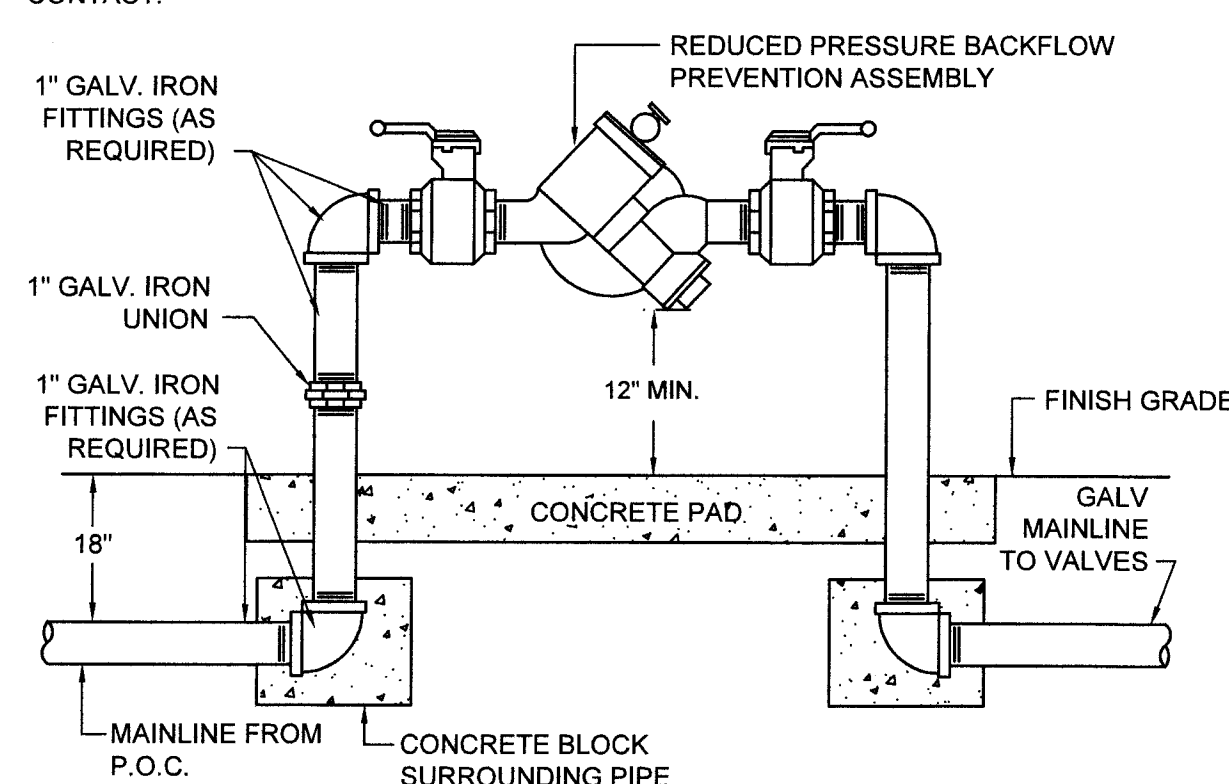
SHEET TITLE  
**IRRIGATION NOTES AND LEGEND**

DRAWN BY WM	CHECKED BY JL
DATE 6/24/19	SCALE N/A
JOB NO.	

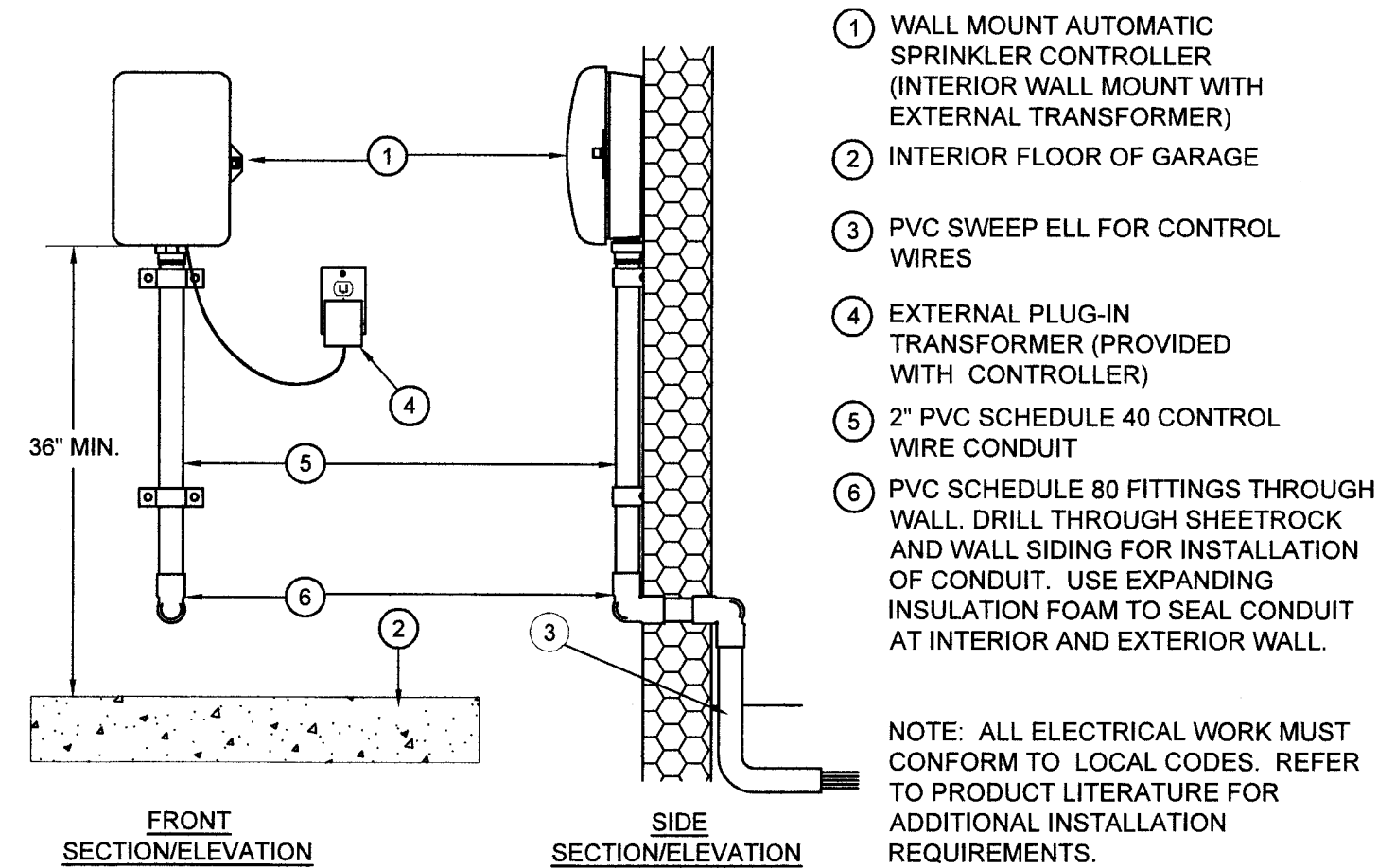
SHEET NO.  
**IR-2**  
 OF SHEETS



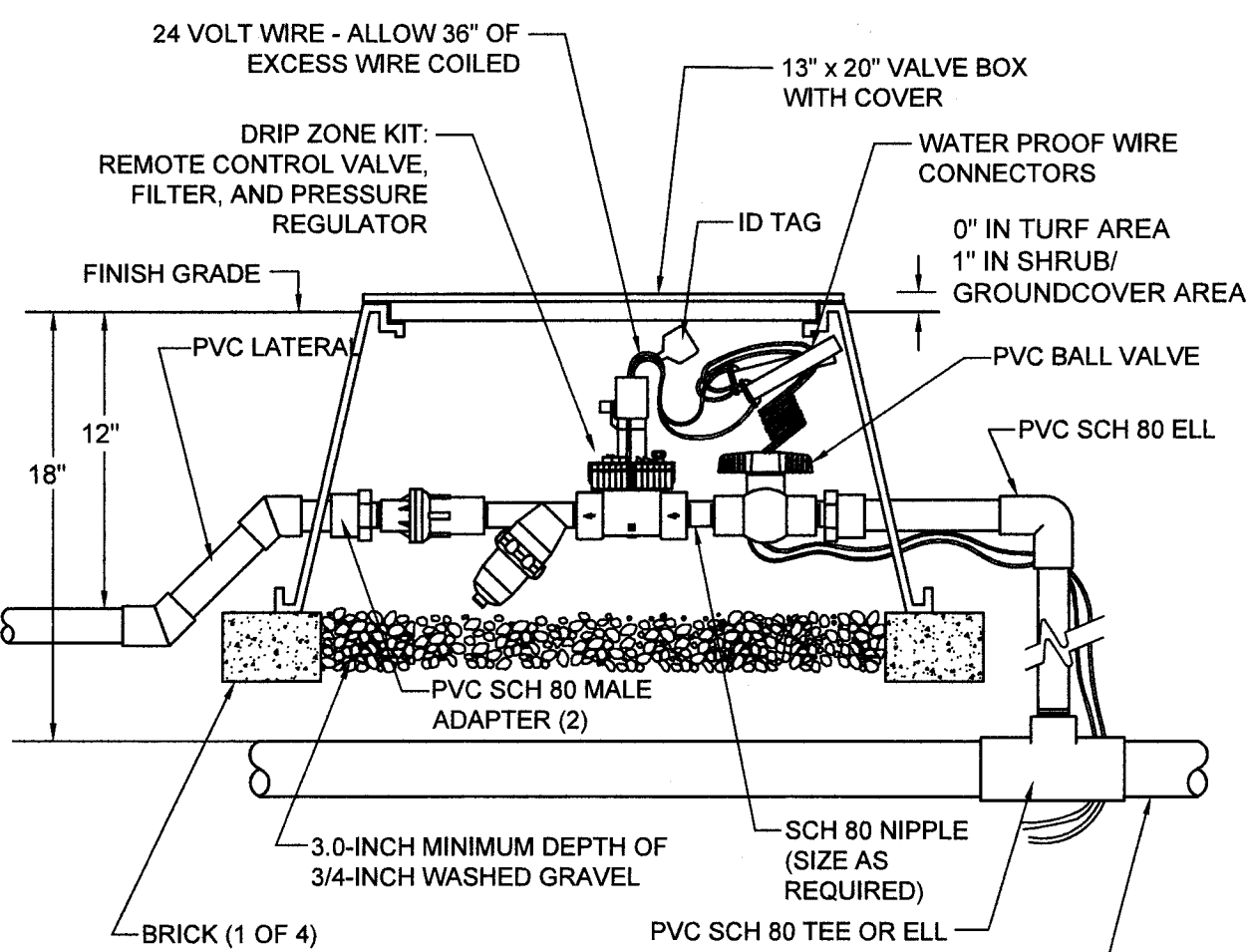
NOTE: EVENLY COAT METAL FITTINGS EXPOSED TO SOIL AND CONCRETE WITH 3M SCOTCHRAIP PIPE PRIMER AND THEN WRAP WITH 3M SCOTCHRAIP NO. 51 BLACK TAPE (3/4" OVERLAP). USE DIELECTRIC FITTINGS WHERE DISSIMILAR METALS COME INTO CONTACT.



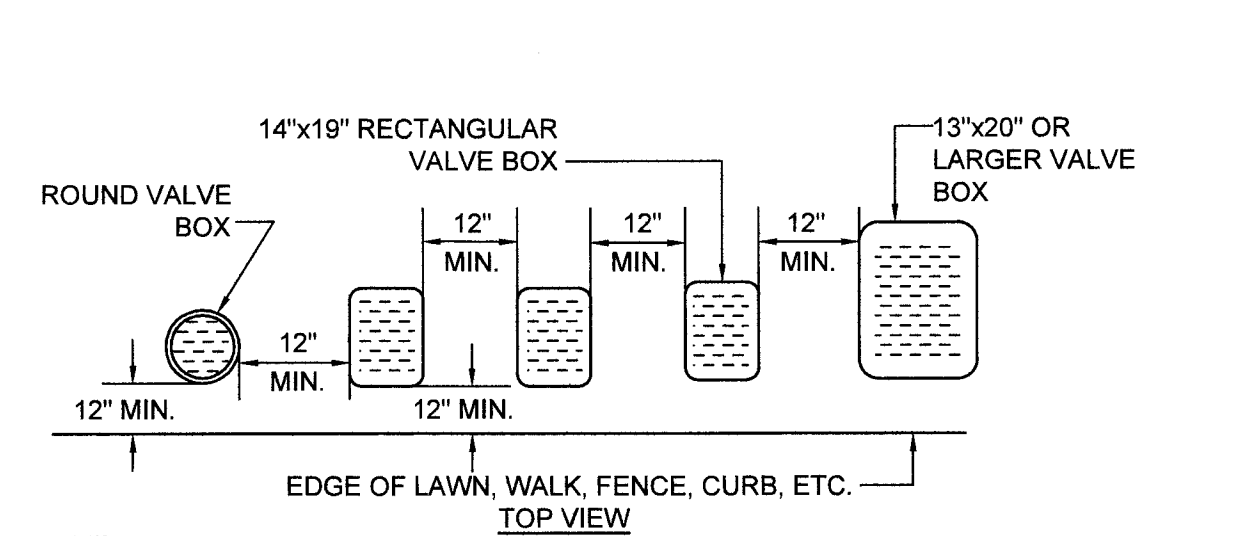
1 REDUCED PRESSURE BACKFLOW ASSEMBLY  
NOT TO SCALE



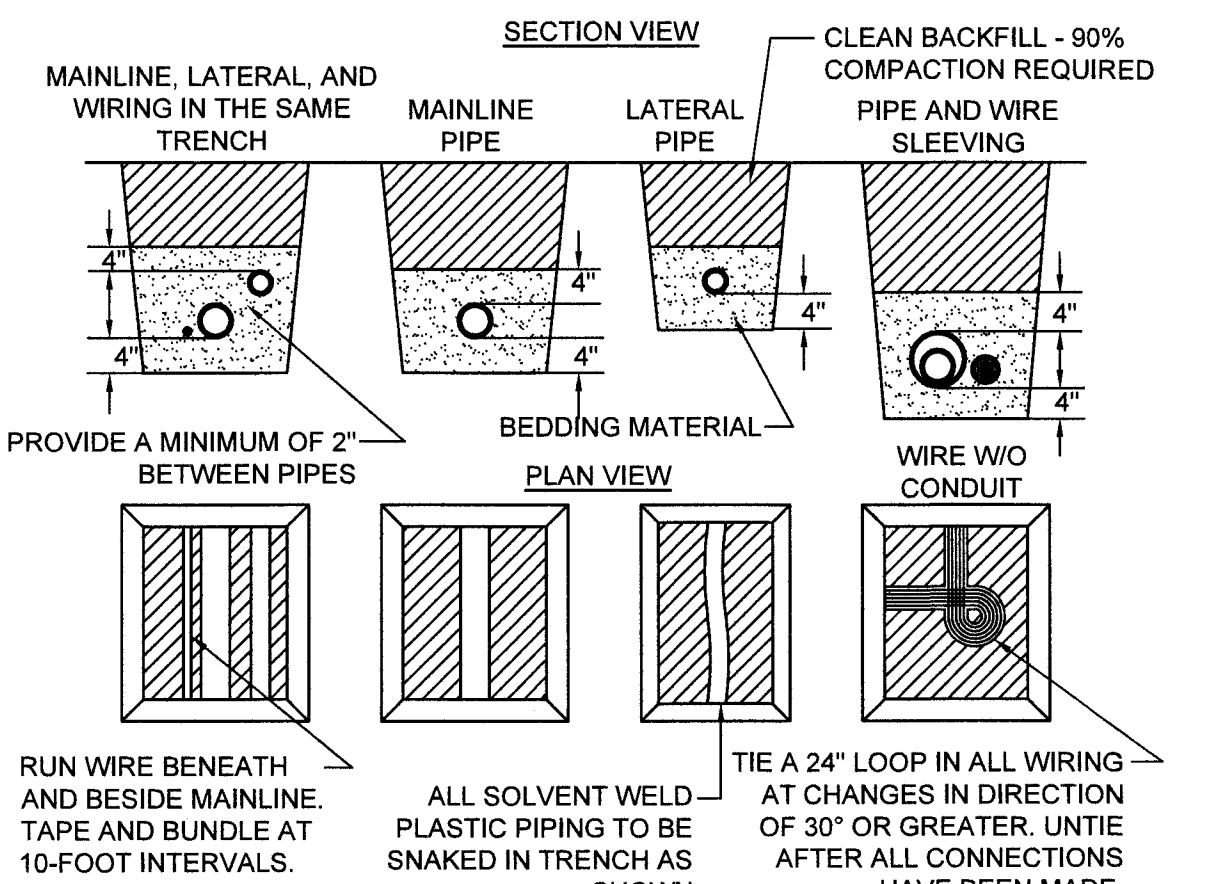
2 RESIDENTIAL CONTROLLER - INDOOR.  
NOT TO SCALE



3 TORO DRIP ZONE KIT  
NOT TO SCALE

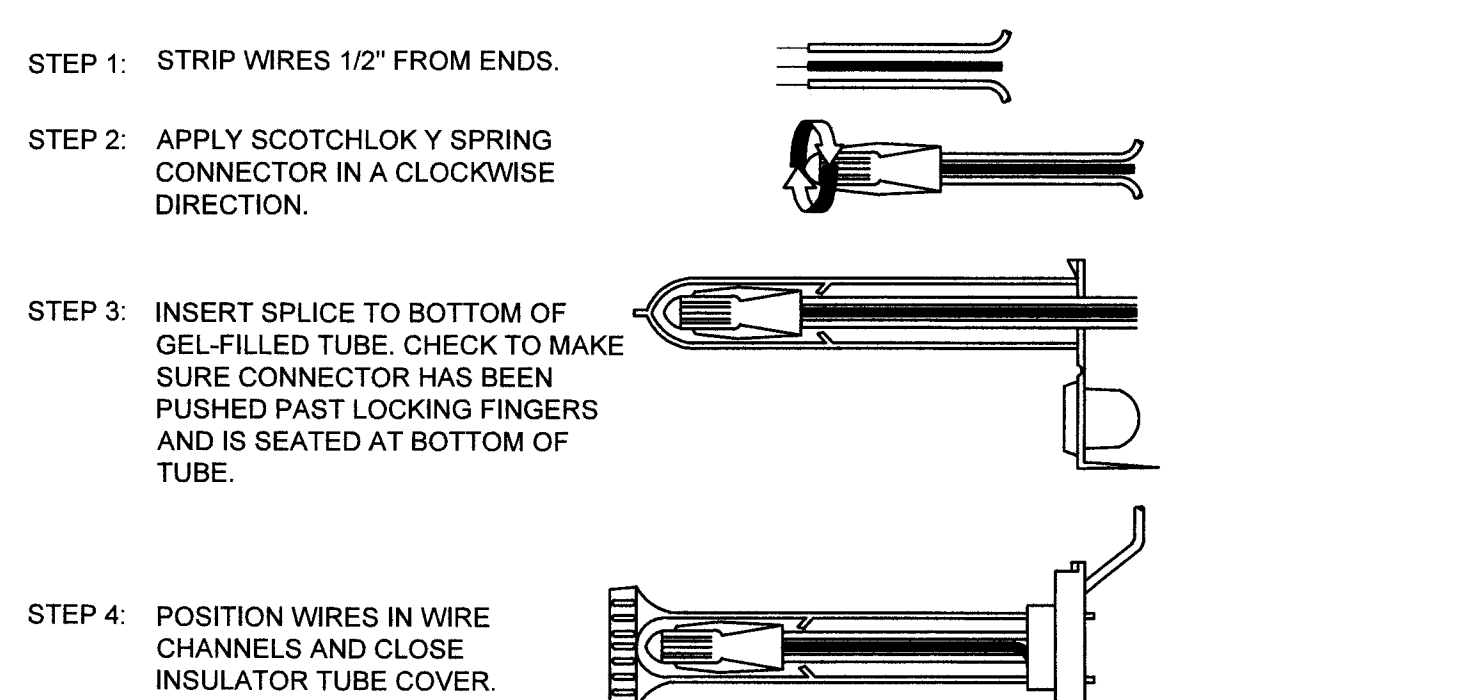


4 VALVE BOX INSTALLATION DETAIL  
NOT TO SCALE



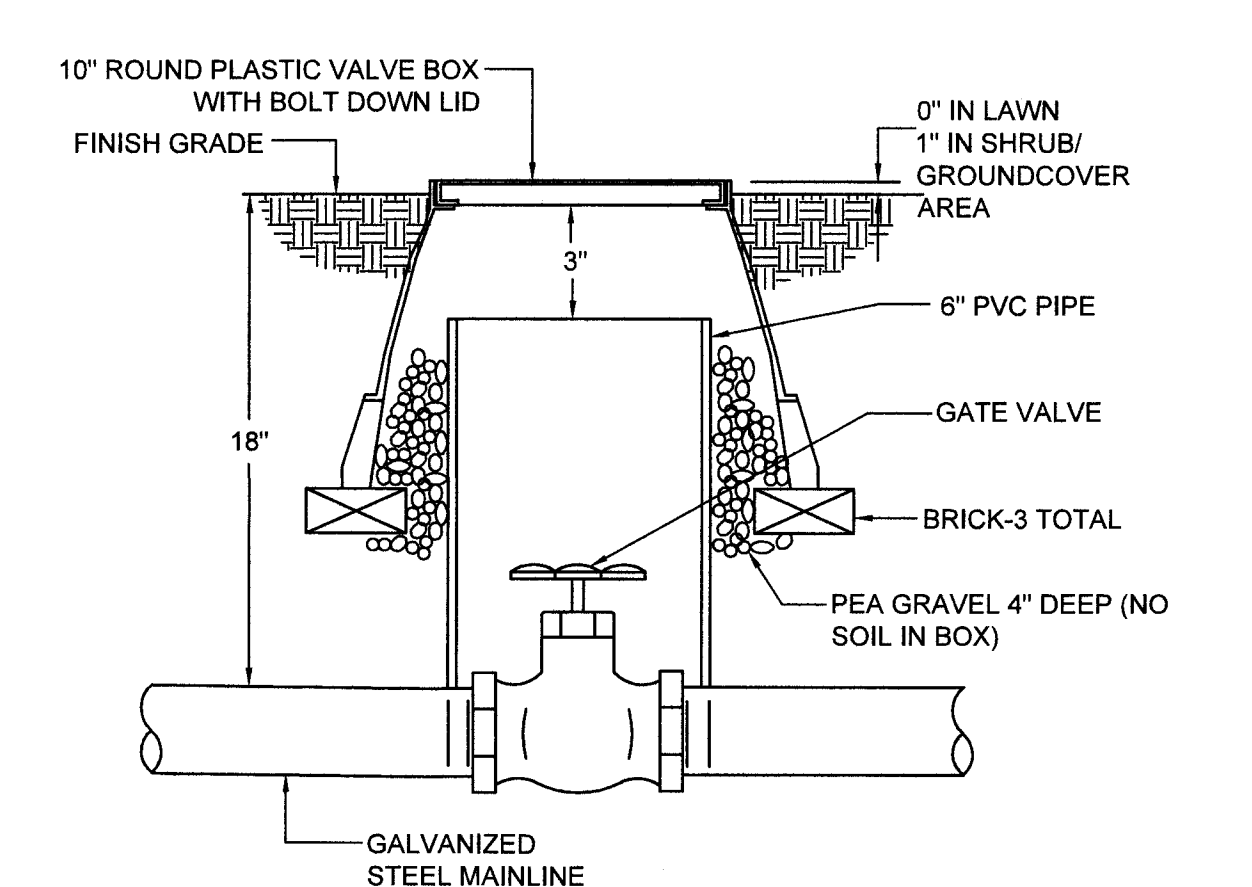
NOTES:  
1. SLEEVE BELOW ALL HARDSCAPE ELEMENTS WITH SPECIFIED PVC PIPE TWICE THE DIAMETER OF THE PIPE OR WIRE BUNDLE WITHIN.  
2. FOR PIPE AND WIRE BURIAL DEPTHS REFER TO IRRIGATION LEGEND AND SPECIFICATIONS.

5 PIPE AND WIRE TRENCHING  
NOT TO SCALE

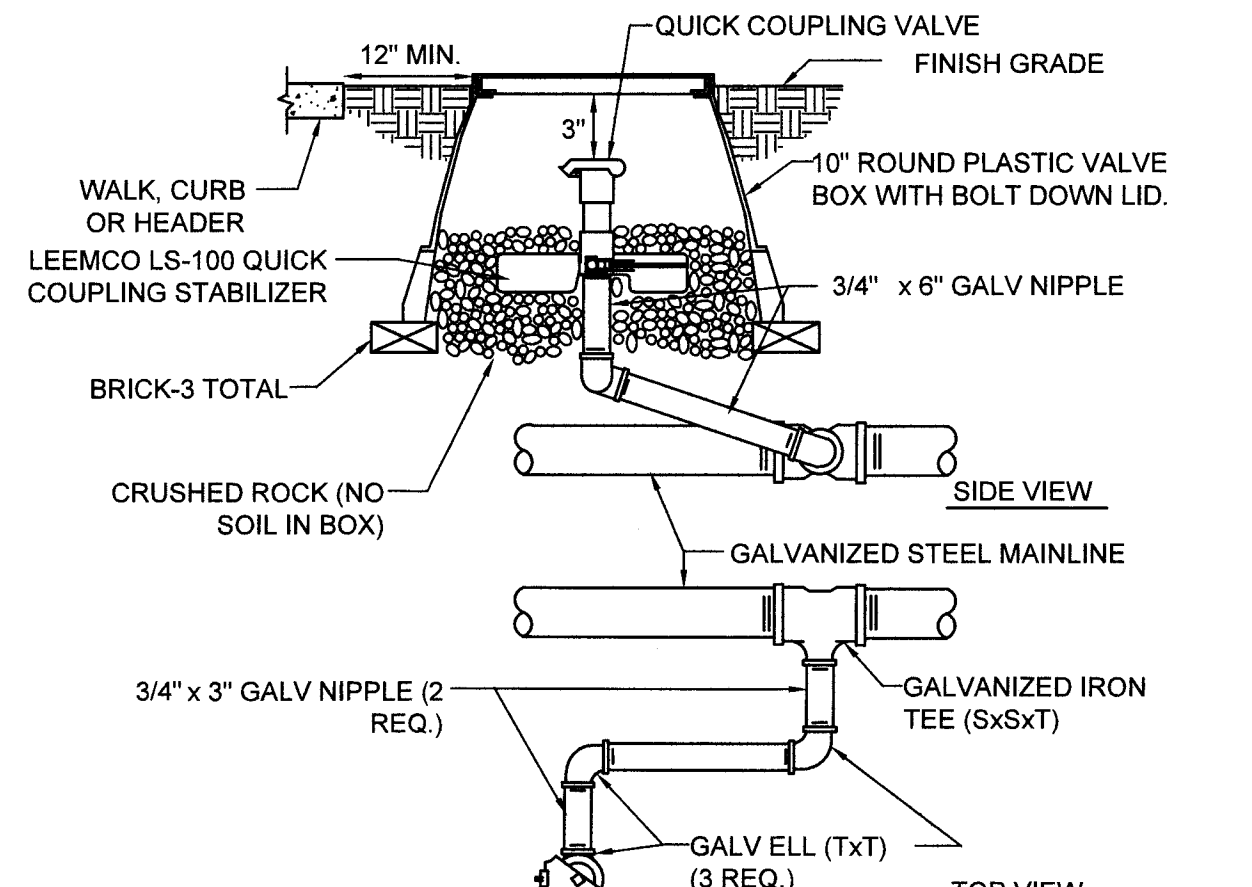


NOTE: MAXIMUM WIRE SIZES PER CONNECTOR ARE THREE #14'S OR TWO #12'S.

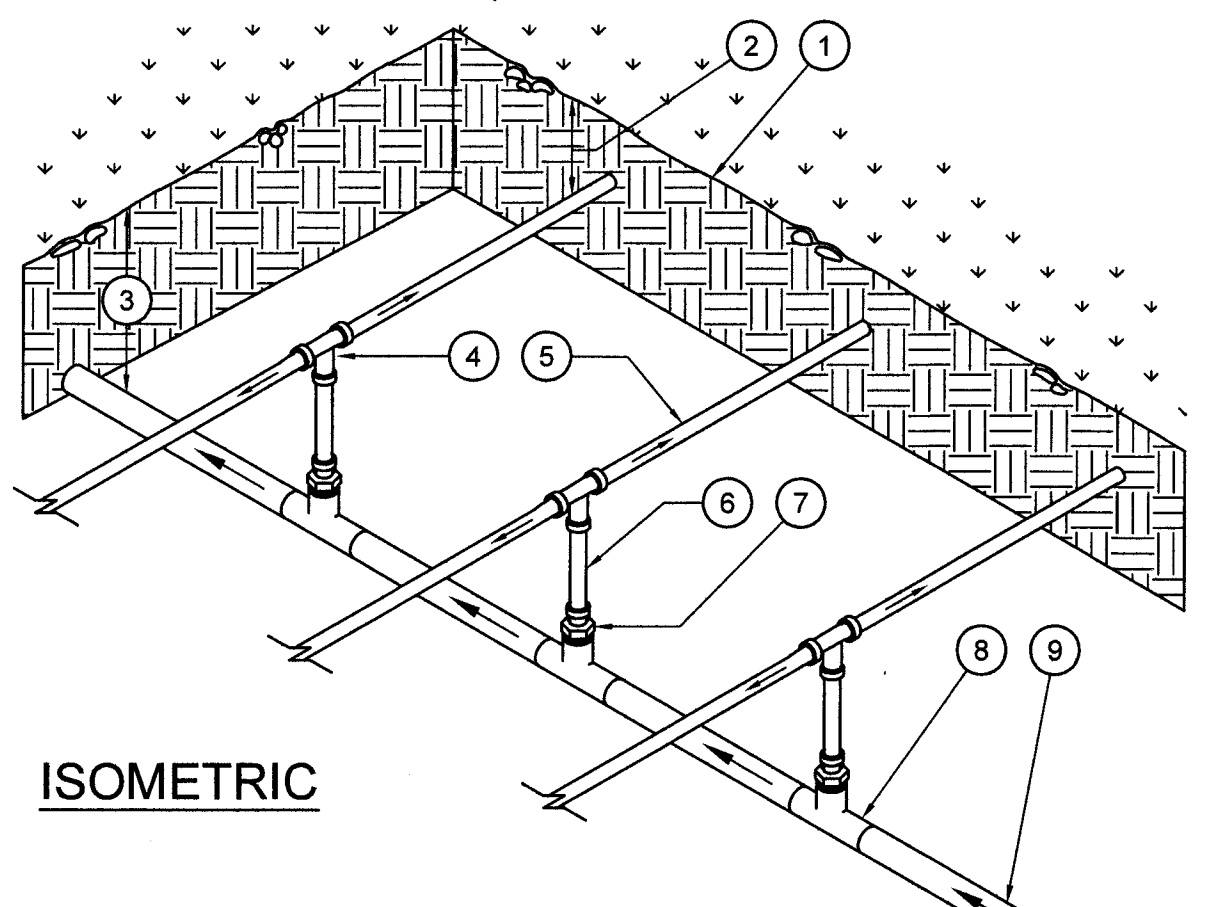
6 WIRE CONNECTION DETAIL  
NOT TO SCALE



7 GATE VALVE DETAIL  
NOT TO SCALE



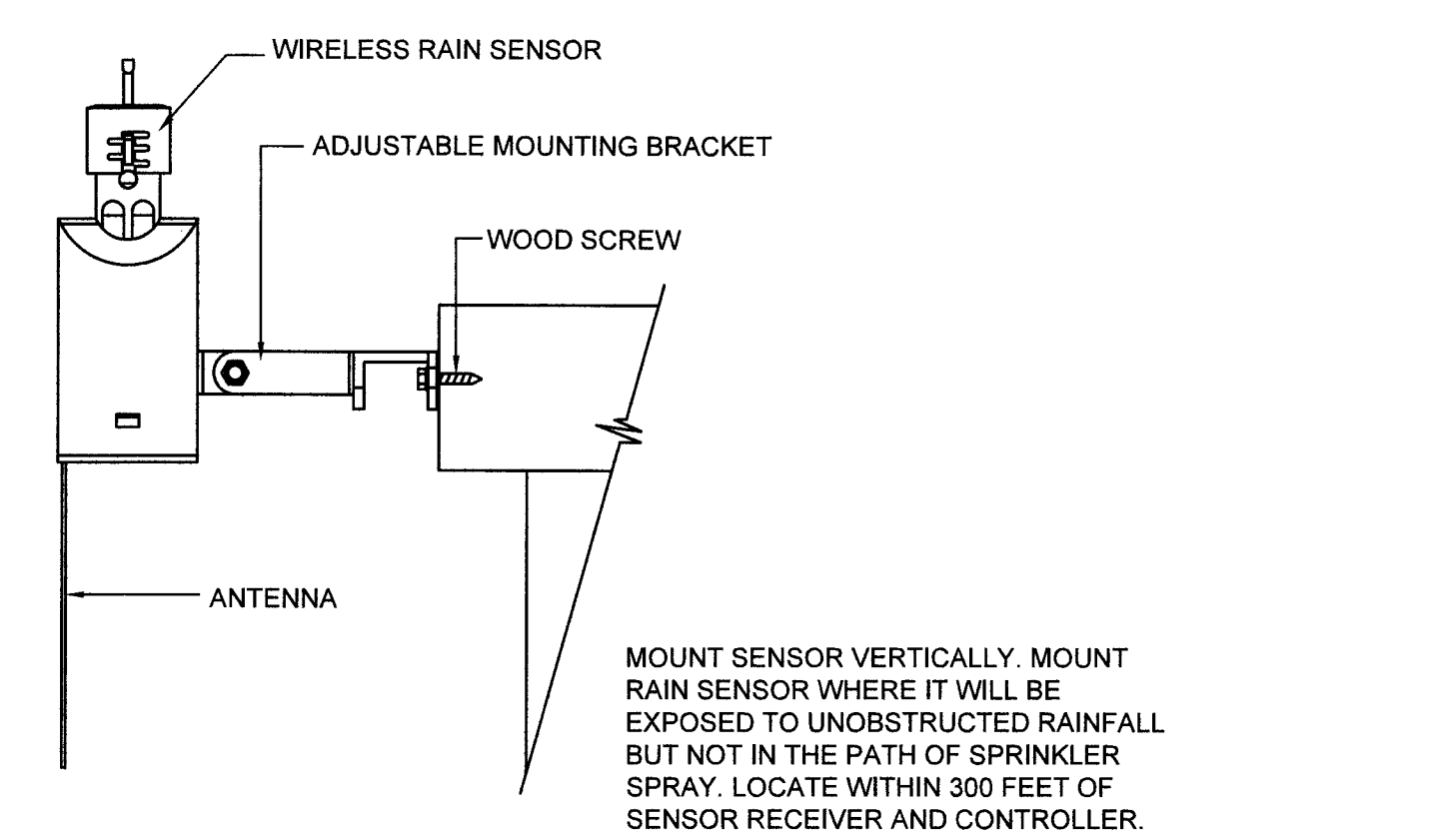
8 QUICK COUPLER IN BOX DETAIL  
NOT TO SCALE



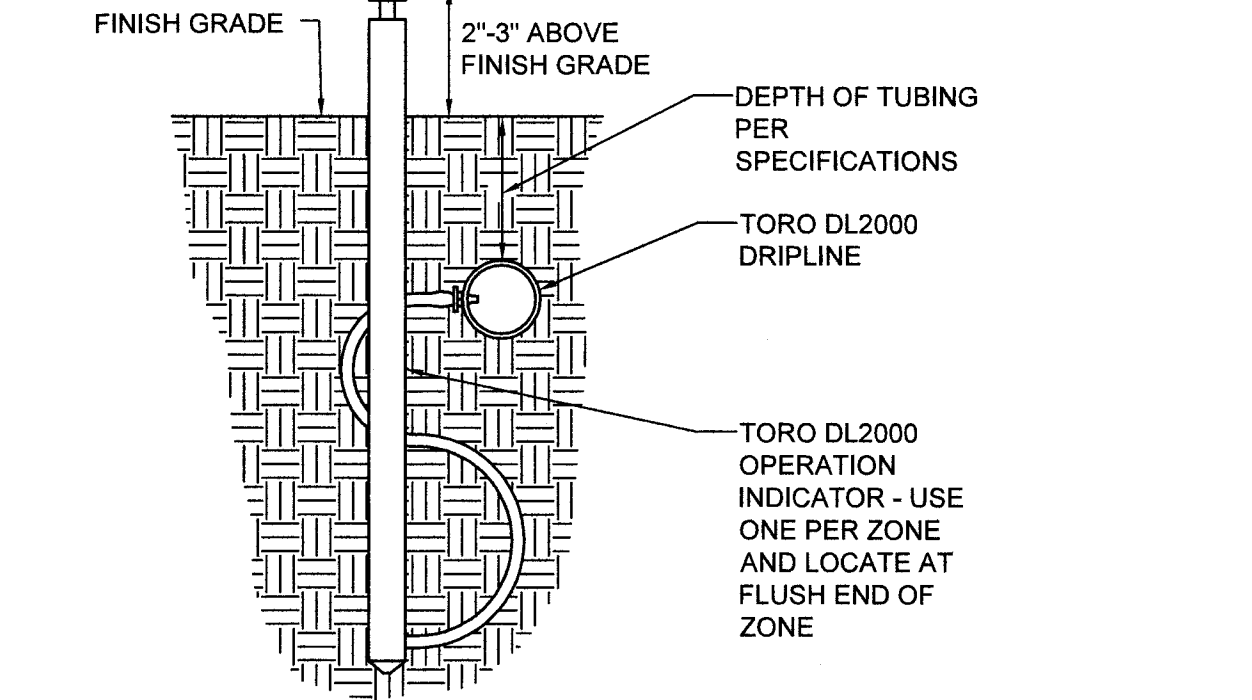
**LEGEND**

1. FINISH GRADE.
2. DEPTH OF TUBING PER SPECIFICATIONS.
3. DEPTH OF PVC SUPPLY MANIFOLD PER SPECIFICATIONS.
4. DRIPLINE TEE FITTING.
5. DRIPLINE LATERAL.
6. BLANK POLY TUBING, LENGTH AS NECESSARY.
7. DRIPLINE MPT ADAPTER.
8. PVC TEE (SxSxT) WITH 1/2" FPT OUTLET.
9. PVC SUPPLY MANIFOLD FROM REMOTE CONTROL VALVE ASSEMBLY.

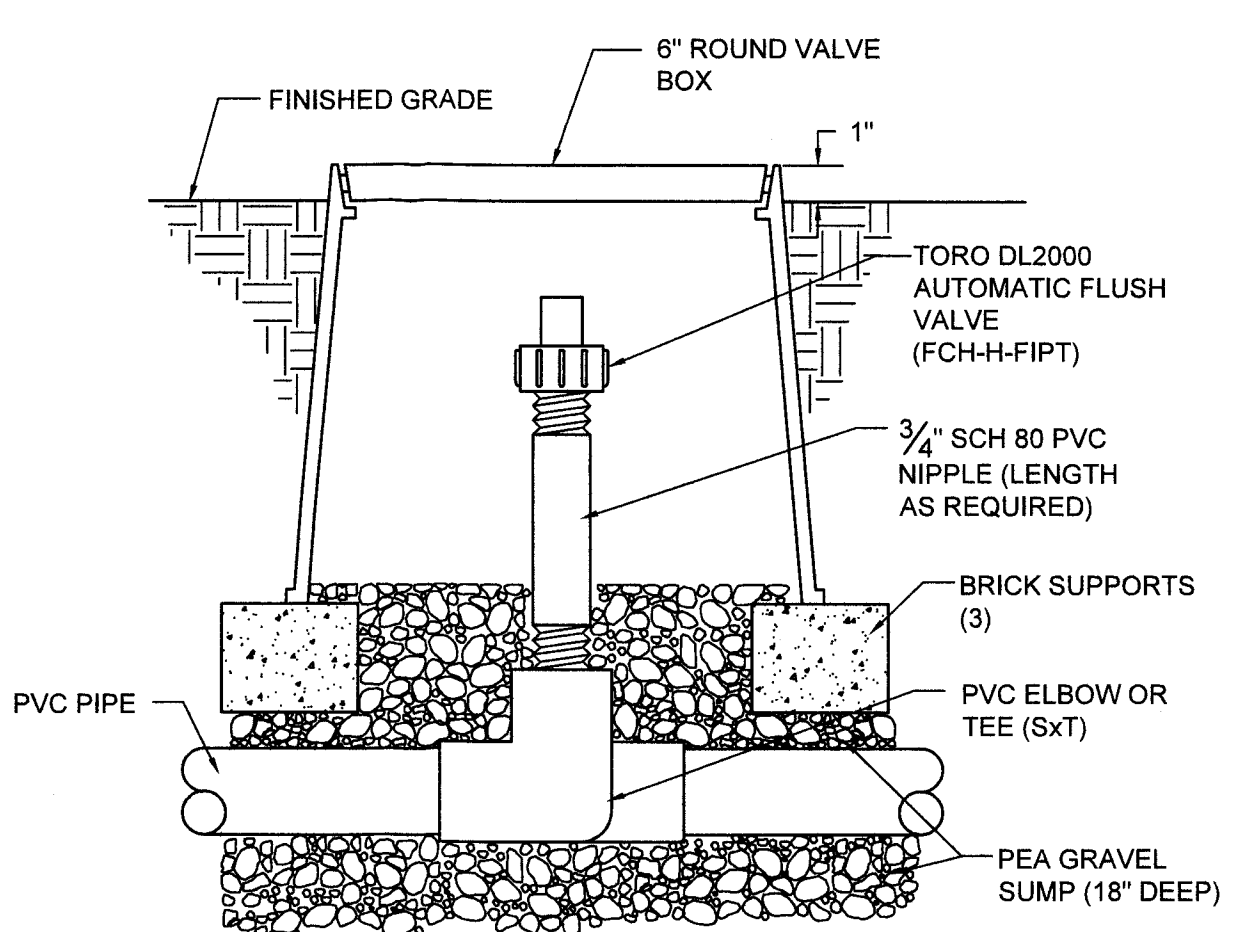
9 CENTER FEED MANIFOLD  
NOT TO SCALE



10 WIRELESS RAIN SENSOR INSTALLATION DETAIL  
NOT TO SCALE

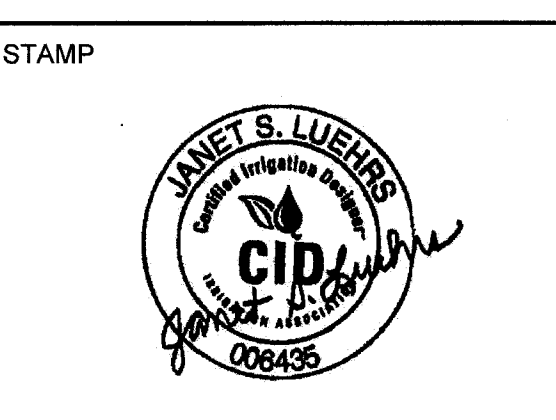


11 TORO DL2000 OPERATION INDICATOR  
NOT TO SCALE



12 TORO DL2000 AUTOMATIC FLUSH VALVE - PLUMBED TO PVC  
NOT TO SCALE

**BROOKWATER**  
IRRIGATION CONSULTANTS  
480 SAINT JOHN STREET, SUITE 220  
PLEASANTON, CALIFORNIA 94566  
TEL. 925. 855. 0417  
FAX 925. 855. 0357  
E-MAIL  
JANET@BROOKWATER.COM



CONSULTANT

HUARD RESIDENCE  
185 MAGELLAN AVE.  
HALF MOON BAY, CALIFORNIA

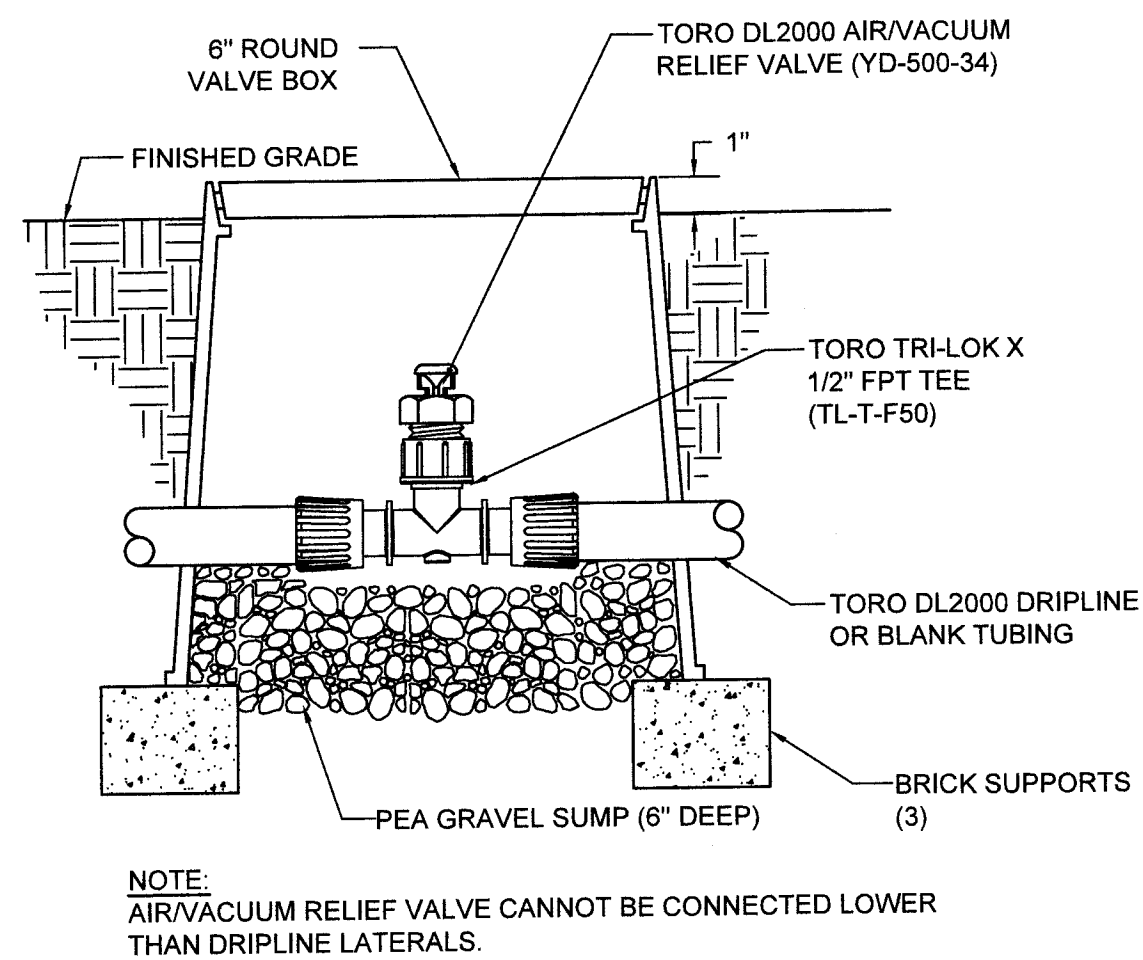
ISSUANCE

NO	REVISIONS	DATE

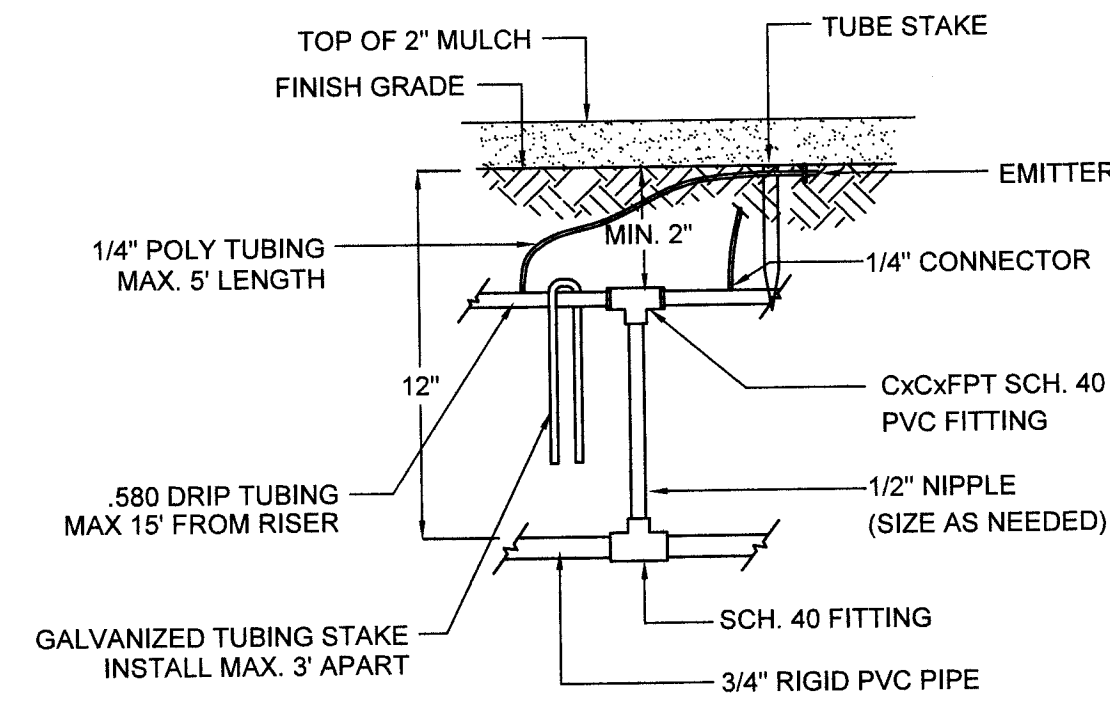
SHEET TITLE  
**IRRIGATION  
DETAILS**

DRAWN BY WM	CHECKED BY JL
DATE 6/24/19	SCALE AS SHOWN
JOB NO.	
SHEET NO.	

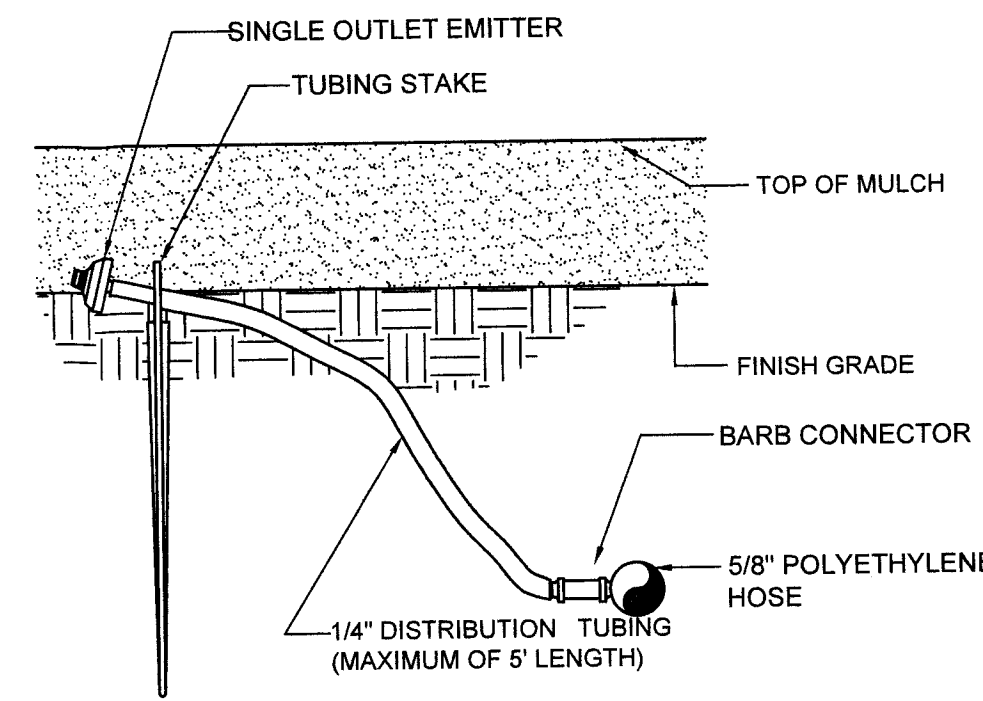
IR-3  
OF SHEETS



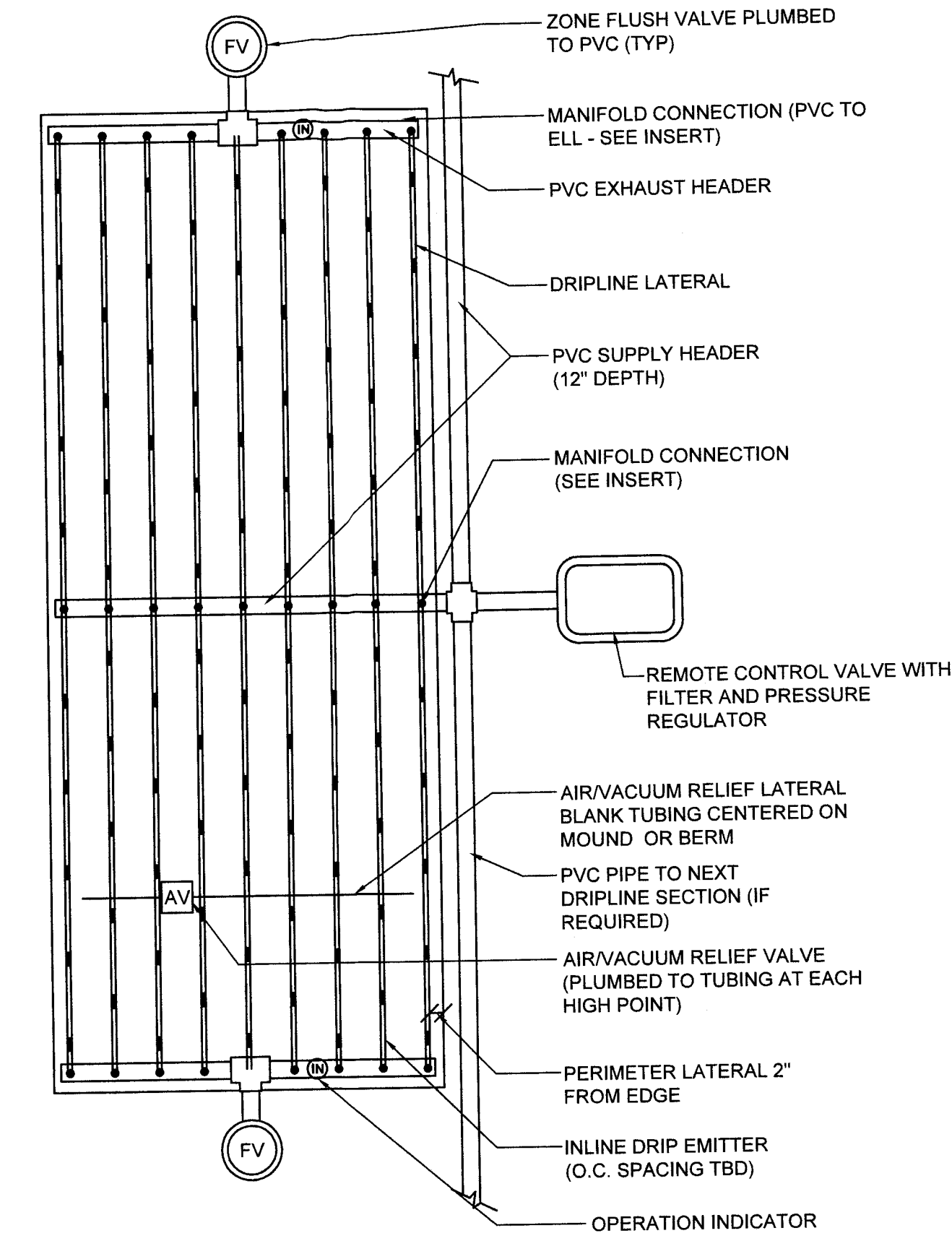
13 TORO DL2000 AIR/VACUUM RELIEF VALVE - PLUMBED TO TUBING NOT TO SCALE



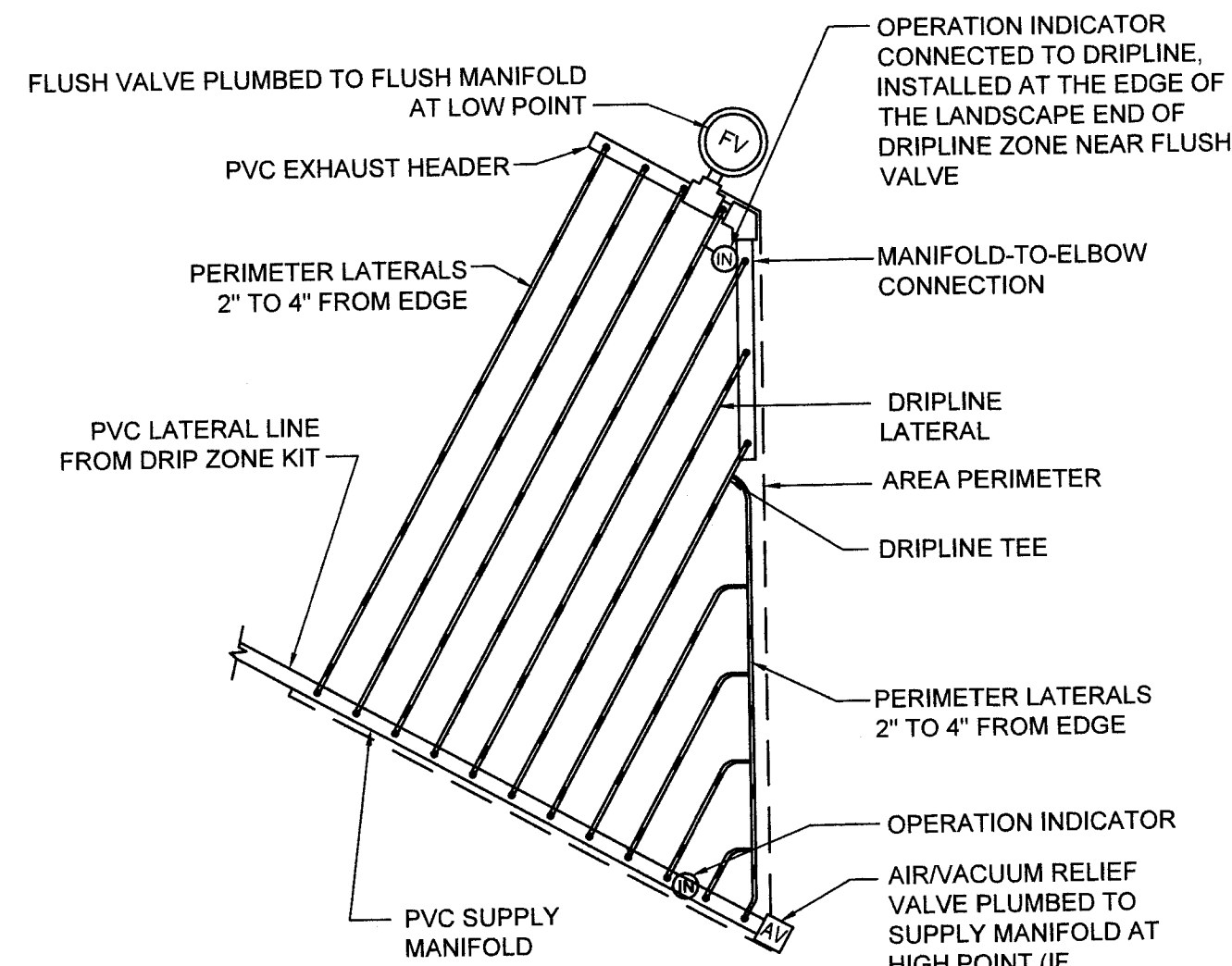
14 RISER TO DRIP TUBING DETAIL NOT TO SCALE



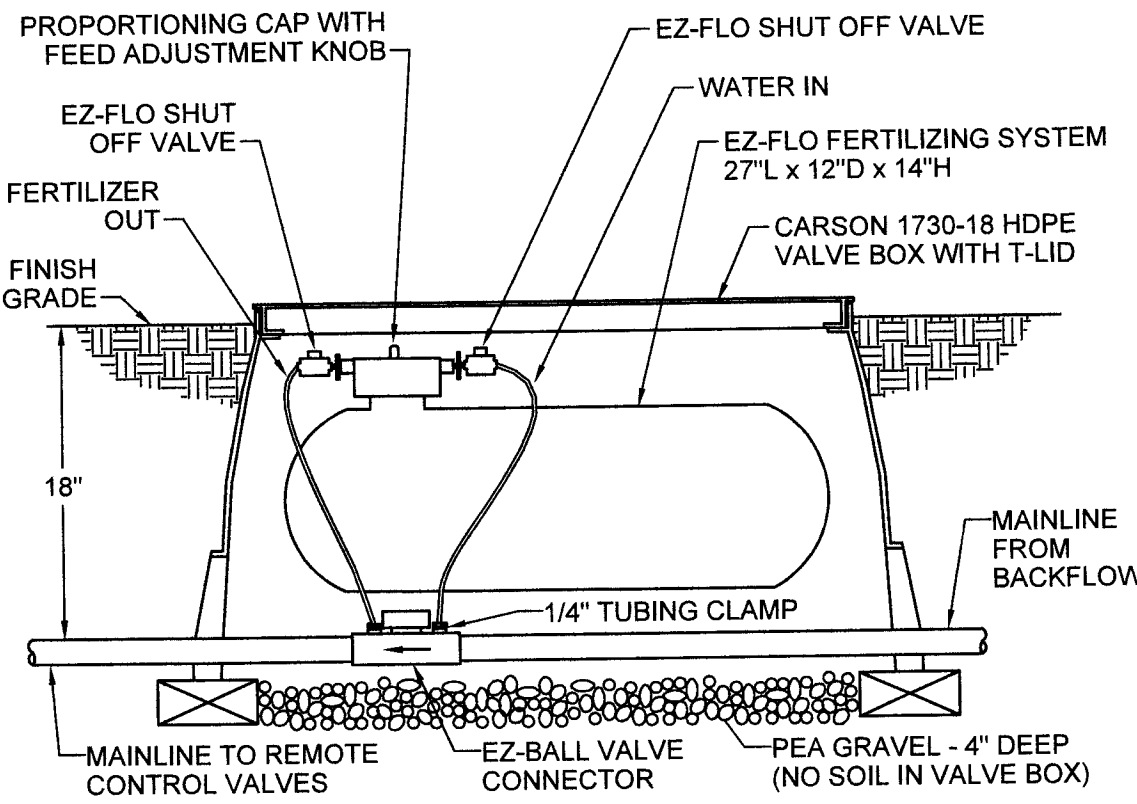
15 SINGLE OUTLET EMITTER DETAIL NOT TO SCALE



16 CENTER FEED INLINE DRIP LAYOUT NOT TO SCALE



17 TYPICAL ISLAND LAYOUT END FEED NOT TO SCALE



18 EZ-FLO FERTILIZING SYSTEM (EZ001CX-CBV) NOT TO SCALE

CITY OF HALF MOON BAY  
LANDSCAPE WATER USE STATEMENT

PROJECT NAME: HUARD RESIDENCE  
PROJECT ADDRESS: 185 MEGELLAN AVE.

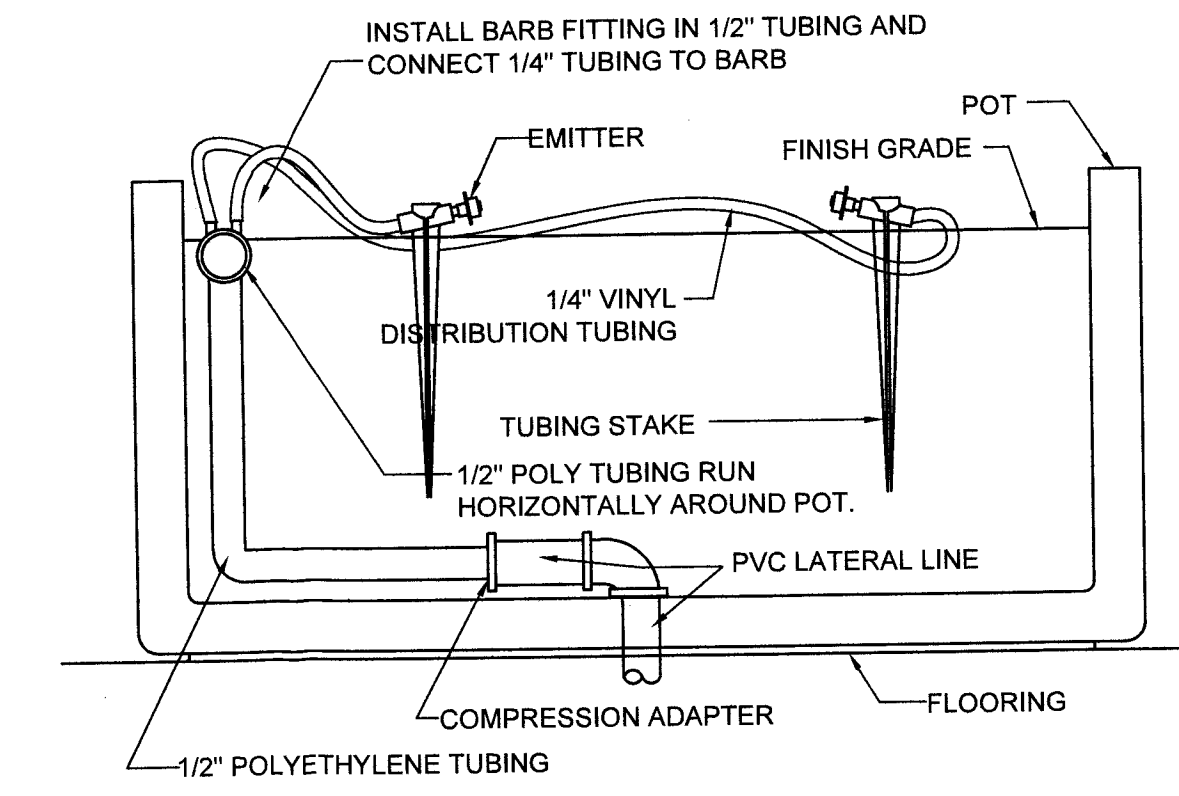
PREPARED BY: JANET LUEHRS (CID, CLIA #43274)  
BROOKWATER, INC., IRRIGATION CONSULTANTS  
480 SAINT JOHN STREET, SUITE 220  
PLEASANTON, CA 94566  
925-855-0417  
925-855-0357 (FAX)  
Janet@brookwater.com (e-mail)

"I have complied with the criteria of the Water Efficient Landscape Ordinance and applied them accordingly for the efficient use of water in the irrigation design plan."

Signed: Janet Luehrs

PART ONE	MAXIMUM APPLIED WATER ALLOWANCE (MAWA)
	MAWA = $E_{To} \times .62 \times [(ETAF \times HA) + ((1-ETAF) \times SLA)]$
YEARLY $E_{To}$	33.7
CONVERSION FACTOR	0.62
ETAF	0.55
TOTAL IRRIGATED LANDSCAPE AREA (HA)	1,911 SQUARE FEET
SPECIAL LANDSCAPE AREA (SLA)	0 SQUARE FEET
LANDSCAPE WATER ALLOWANCE	21,961 GALLONS PER YEAR
TOTAL ACRE FEET	0.07 ACRE FEET

PART TWO	ESTIMATED TOTAL WATER USE (ETWU)
	(AVERAGE ETAF AND ETWU FROM WATER EFFICIENT LANDSCAPE WORKSHEET)
AVERAGE ETAF FOR REGULAR LANDSCAPE AREAS (TOTAL ETAF x AREA / TOTAL AREA)	0.40
ETWU FOR REGULAR LANDSCAPE AREAS	15,897 GALLONS PER YEAR
SITE WIDE ETAF	0.40
ETWU FOR ALL LANDSCAPE AREAS	15,897 GALLONS PER YEAR
TOTAL ACRE FEET	0.05 ACRE FEET



19 DRIP TO POT DETAIL NOT TO SCALE

HYDROZONE SUMMARY		
*Hydrozone Description	Total Sq. Ft.	% of Landscape
Cool Season Turf (CST)	0	0.0%
Warm Season Turf (WST)	0	0.0%
High Water Use Plants (HW)	0	0.0%
Bioretention Plants (BR)	0	0.0%
Medium Water Use Plants (MW)	215	11.3%
Low Water Use Plants (LW)	1,696	88.7%
Very Low Water Use Plants (VLW)	0	0.0%
Water Feature	0	0.0%
Special Landscape Area (SLA)	0	0.0%
<b>TOTAL</b>	<b>1,911</b>	<b>100.0%</b>

**Irrigation Method	Total Sq. Ft.	% of Landscape
Rotor (FC-R, PC-R)	0	0.0%
Multi-Stream Rotator (MR)	0	0.0%
Spray (S)	0	0.0%
Bubbler (B)	0	0.0%
Drip (D)	810	42.4%
In-Line Drip (DL)	1,101	57.6%
Micro Spray (MS)	0	0.0%
Other (O)	0	0.0%

HUARD RESIDENCE WATER EFFICIENT LANDSCAPE WORKSHEET										
Reference Evapotranspiration (Eto)		33.7								
ZONE NO.	PLANT TYPE	HYDROZONE* (PLANT WATER USE)	PLANT FACTOR (PF)	IRRIGATION METHOD**	IRRIGATION EFFICIENCY (IE)	ETAF (PF/IE)	HYDROZONE AREA (HA) (Sq Ft)	ETAF x HA	ESTIMATED TOTAL WATER USE (ETWU)	% LANDSCAPE AREA
<b>REGULAR LANDSCAPE AREA</b>										
C-1	NO MOW	LW	0.30	DL	0.81	0.37	729	270	5,641	38.1%
C-2	SHRUB	LW	0.30	D	0.81	0.37	561	208	4,341	29.4%
C-3	SHRUB	MW	0.50	D	0.81	0.62	215	133	2,773	11.3%
C-4	SHRUB	LW	0.30	D	0.81	0.37	34	13	263	1.8%
C-5	SHRUB	LW	0.30	DL	0.81	0.37	372	138	2,879	19.5%
<b>TOTALS (REGULAR LANDSCAPE AREAS)</b>							<b>1,911</b>	<b>761</b>	<b>15,897</b>	<b>100.0%</b>
<b>SPECIAL LANDSCAPE AREA</b>										
0							1.00	0	0	0.0%
<b>TOTALS (SPECIAL LANDSCAPE AREAS)</b>							<b>0</b>	<b>0</b>	<b>0</b>	<b>0.0%</b>
<b>TOTALS FOR ALL AREAS</b>							<b>1,911</b>	<b>761</b>	<b>15,897</b>	<b>100%</b>

**BROOKWATER**  
IRRIGATION CONSULTANTS  
480 SAINT JOHN STREET, SUITE 220  
PLEASANTON, CALIFORNIA 94566  
TEL 925.855.0417  
FAX 925.855.0357  
E-MAIL  
JANET@BROOKWATER.COM



CONSULTANT

HUARD RESIDENCE  
185 MEGELLAN AVE.  
HALF MOON BAY, CALIFORNIA

ISSUANCE

NO	REVISIONS	DATE

SHEET TITLE

**IRRIGATION DETAILS AND WORKSHEETS**

DRAWN BY: WM CHECKED BY: JL

DATE: 6/24/19 SCALE: AS SHOWN

JOB NO.

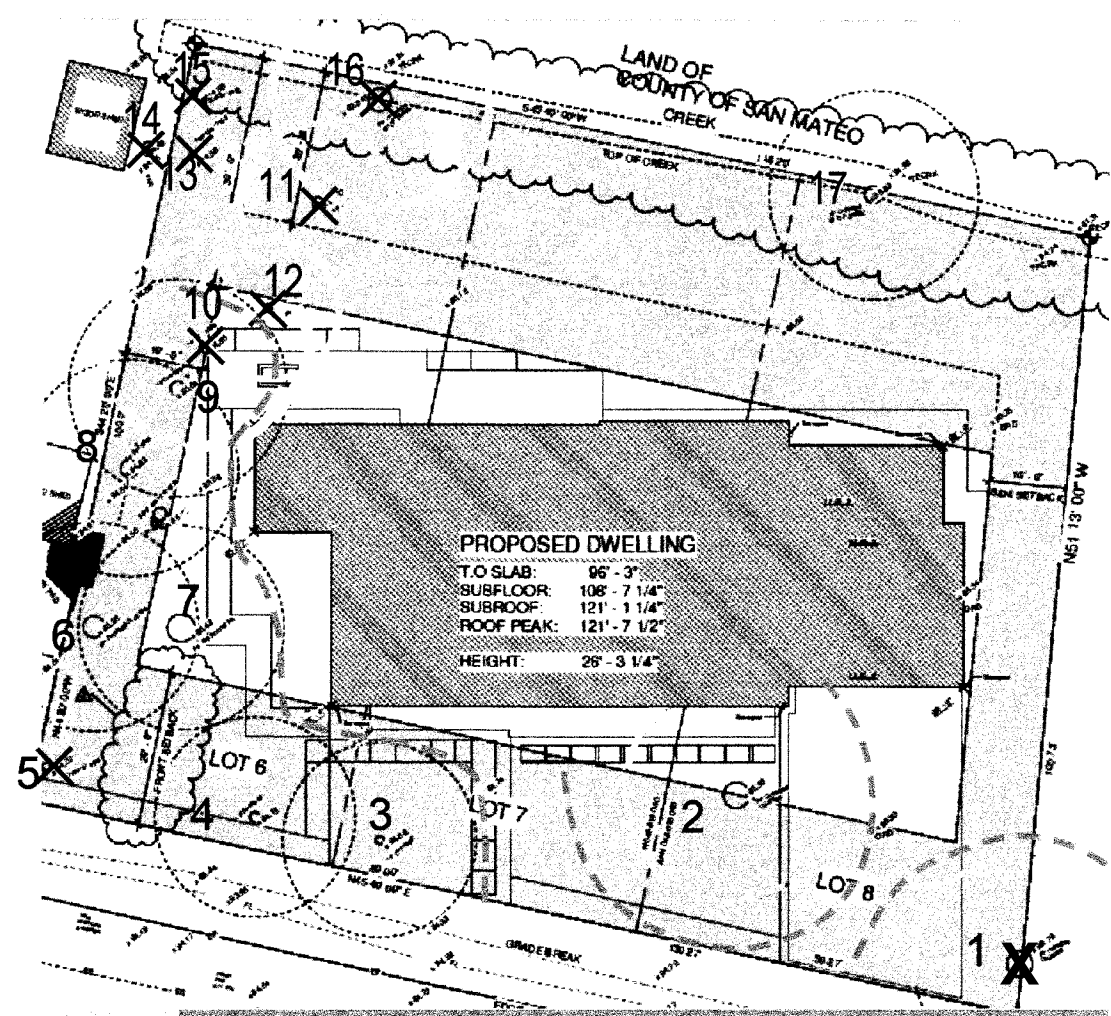
SHEET NO.

**IR-4**

OF SHEETS



# Tree Preservation Plan



Scale: 1"=20'-0"

## Legend

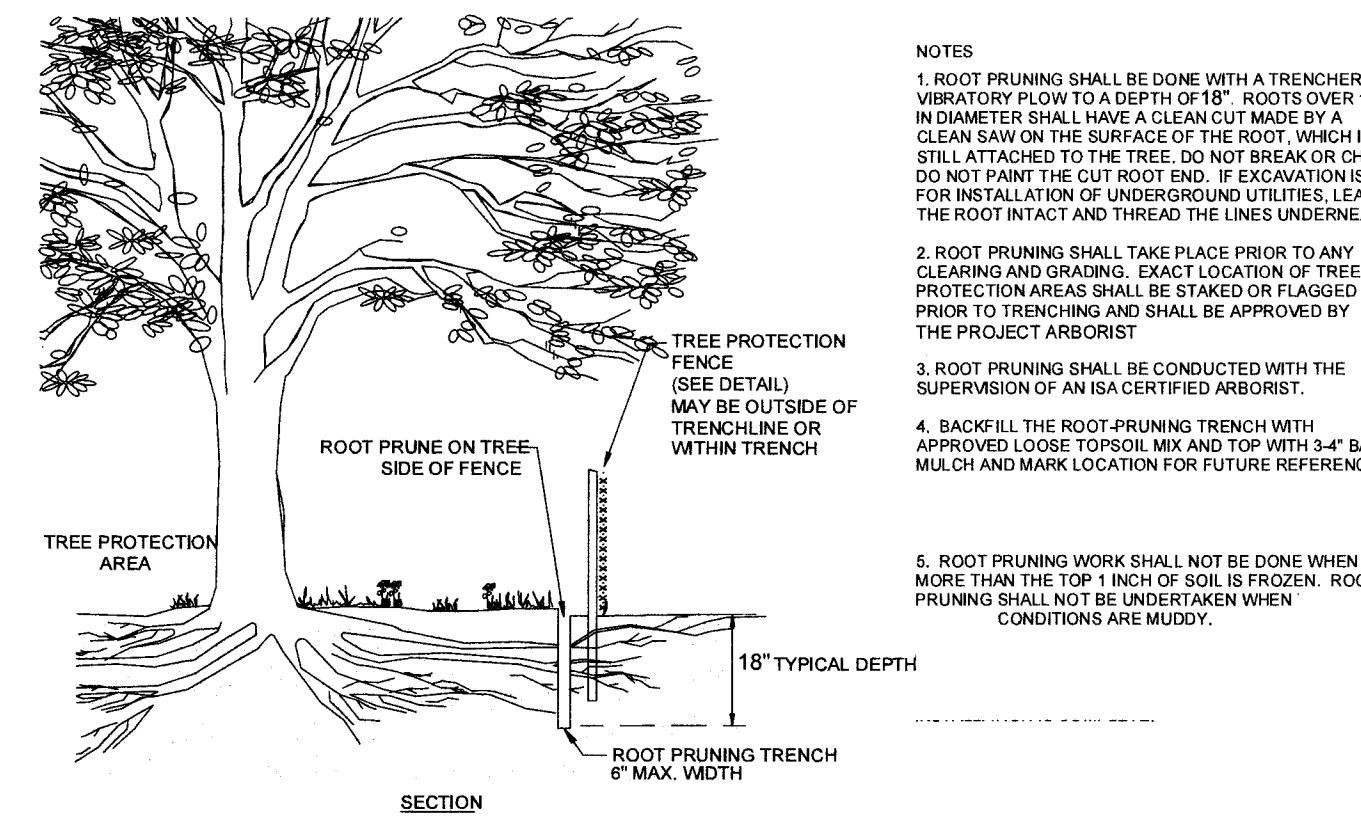
Critical Root Zone = Retained Canopy

Species = Refer to list

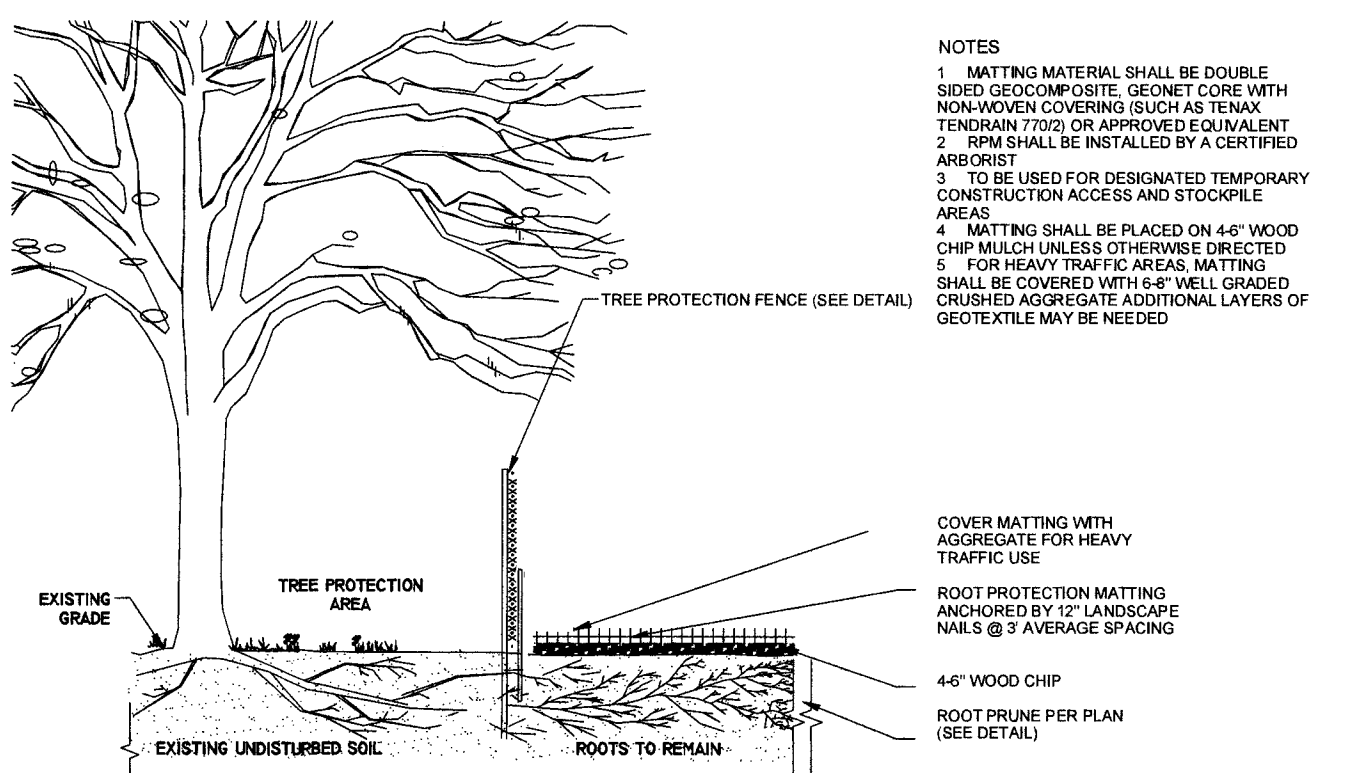
○ Retained Canopy

✕ Removal

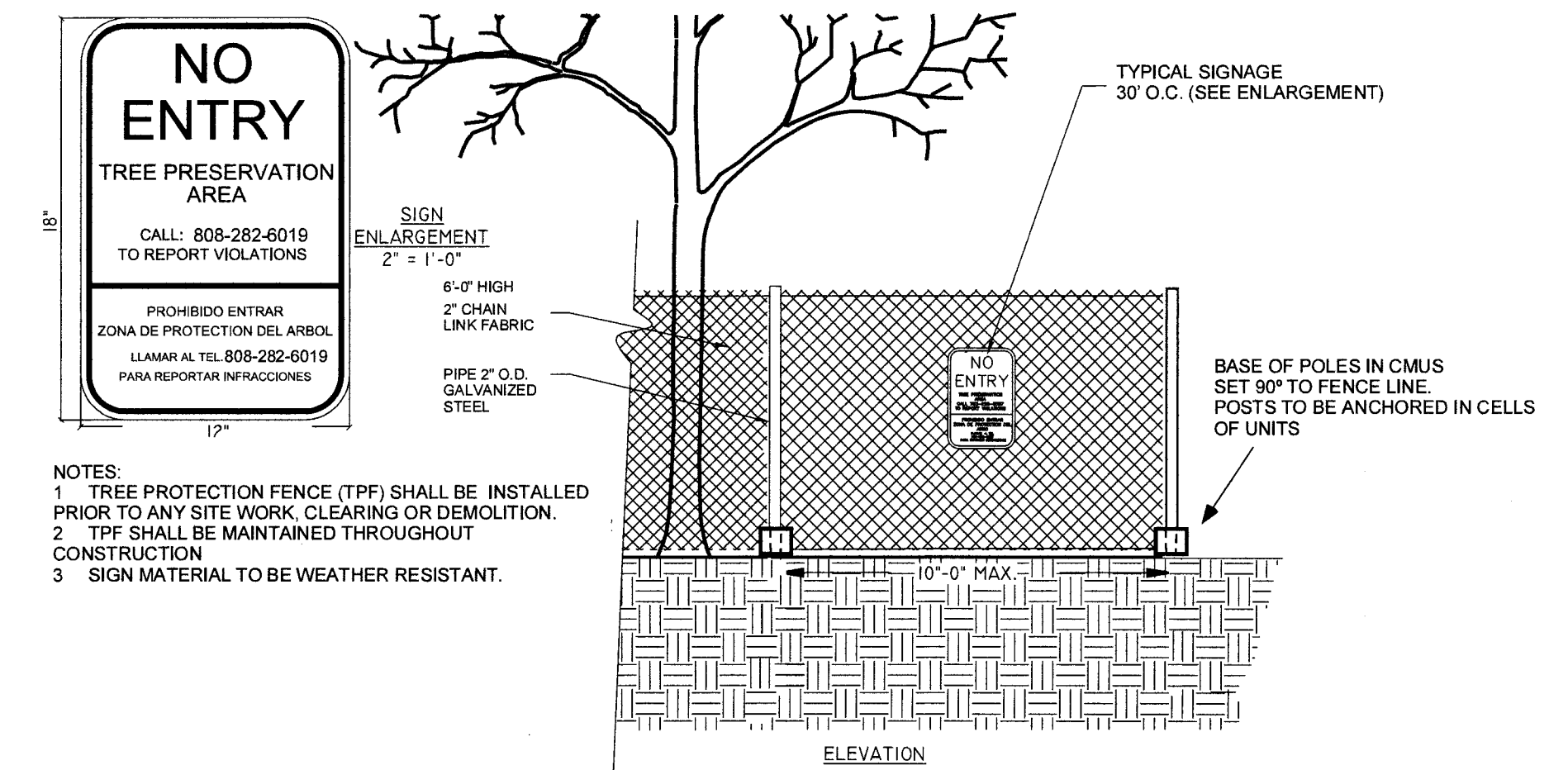
□ Tree Protection



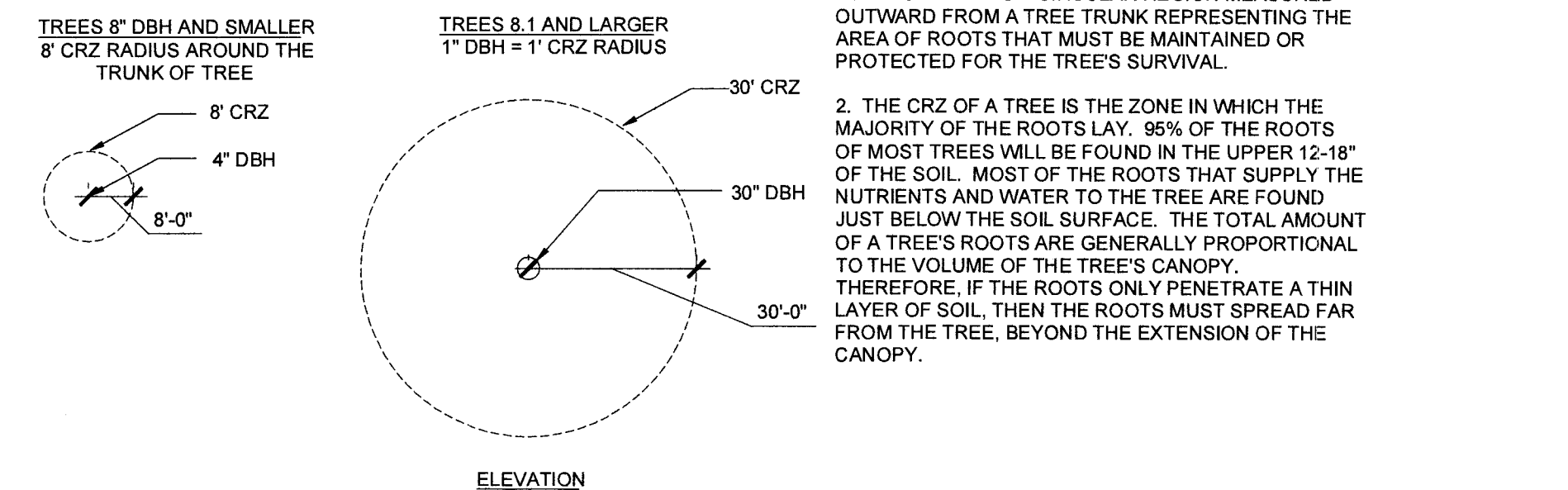
ROOT PRUNING N.T.S.



TEMPORARY ROOT PROTECTION MATTING WITHIN CRZ NOT TO SCALE



6 CHAIN LINK TREE PROTECTION FENCE (RESIDENTIAL) 1/2\"/>



Tree condition rating is based on 50-percent vitality and 50-percent form, using the following scale.

- 1 - 29 Very Poor
- 30 - 49 Poor
- 50 - 69 Fair
- 70 - 89 Good
- 90 - 100 Excellent

#	Species	Trunk Diameter (in)	Canopy (ft)	Height (ft)	Condition	Heritage	Significance	Retain/Remove
1	Monterey Cypress	50"	48'	38'	good	no	yes	retain
2	Monterey Cypress	45"	39'	36'	good	no	yes	retain
3	Monterey Cypress	23"	30'	36'	good	no	yes	retain
4	Monterey Cypress	25"	24'	38'	good	no	yes	retain
5	Monterey Pine	14" x 11"	14'	30'	poor	no	yes	remove
6	Monterey Cypress	39"	48'	44'	fair	no	yes	retain
7	Monterey Cypress	25"	33'	44'	fair	no	yes	retain
8	Monterey Cypress	28"	34'	46'	fair	no	yes	retain
9	Monterey Cypress	26"	48'	46'	fair	no	yes	retain
10	Monterey Pine	14"	20'	22'	dead	no	no	remove
11	Monterey Pine	17"	18'	40'	poor	no	yes	remove
12	Monterey Pine	15"	15'	22'	dead	no	yes	remove
13	Myoporum	5" x 4" x 3" x 4"	15'	16'	poor	no	no	remove
14	Monterey Pine	19"	22'	32'	poor	no	yes	remove
15	Myoporum	4" x 3" x 4" x 4"	15'	12'	poor	no	no	remove
16	Monterey Cypress	31"	26'	32'	dead	no	no	remove
17	Monterey Cypress	35"	52'	42'	good	no	yes	retain

## Tree Protection Plan

The Project Arborist will determine the configuration of the tree protection zones, but the general rules follow. Tree protection zones should be established and maintained throughout the entire length of the project. Fencing for the protection zones should be 6 foot tall metal chain link supported by cinder blocks. The support poles should be spaced no more than 10 feet apart on center. The location for the protection fencing should be as close to the dripline as possible still allowing room for construction to safely continue. Signs should be placed on fencing signifying "Tree Protection Zone - Keep Out". No materials or equipment should be stored or cleaned inside the tree protection zones. Areas outside the fencing but still beneath the dripline of protected trees, where foot traffic is expected to be heavy, should be mulched with 4 to 6 inches of chipper chips. No neighboring trees will be affected or have work performed within 4 times the trees' DBH measured at 48 inches above ground level.

## Contractor Responsibilities

The general contractor is responsible for contacting the Project Arborist in a timely manner to have the Project Arborist review all work performed within the dripline of protected trees. No self-propelled equipment may enter the dripline of trees. The Project Arborist is to monitor work within the dripline of trees. The Tree Protection Plan is to be included on full size sheets of the construction plans.

## Installation of Driveways

The driveway is within the tree protection zone of Tree #1 and #2. Prior to construction of the driveway, both Tree #1 and Tree #2 will be protected per the general guidelines above. After construction of the home and during construction of the driveway, the tree protection zone will be adjusted to allow driveway construction. To ensure protection of trees 1 and 2, the project arborist will be on site for excavation and ensure: 1) that the fenced portion of tree protection zone areas is adjusted to allow construction of the drive way and 2) those areas that are not fenced and not directly within the perimeter of the driveway are protected with 6 inches of mulch and either steel plates or 1 inch thick plywood during the driveway construction period. The excavation of the driveway within the root zone (10xDBH) of a protected tree will be covered with Geo-Grid fabric with compatible base-rock. Paving material should be porous. A certified arborist will monitor raising the canopy of Tree #1 and #2 to a height of 6'. In addition, Tree #1 and Tree #2 will be thinned to ensure they are not top heavy. Trimming will also compensate for the branches that have been cut from the Magellan Ave side of the tree by another entity - presumably the county trims Tree #1 and Tree #2 so that branches do not break off and fall onto Magellan Ave. If the County requires removal of Tree #1 or Tree #2 the owner will comply, but the owner's hope is that these protection measures will ensure that Tree #1 and Tree #2 continue as viable trees and need not be removed.

## Trenching

Trenching for irrigation, electrical, drainage or any other reason should be dug with care when beneath the driplines of protected trees. Carefully laying pipes below or beside protected roots will dramatically reduce root loss of desired trees thus reducing trauma to the entire tree. Trenches should be backfilled as soon as possible with native material and compacted to near its original level. Trenches that must be left exposed for a period of time should also be covered with layers of burlap or straw wattle and kept moist. Plywood over the top of the trench will also help protect exposed roots below. All work within the dripline of protected trees is to be done with care.

## Irrigation

Normal, natural, irrigation should be maintained throughout the entire length of the project. Some irrigation may be required during the dry months depending on the seasonal rainfall. However, all living trees are naturally occurring and thriving with no previous human intervention. Mulching the root zone of protected trees will help the soil retain moisture, thus reducing water consumption. The Project Arborist is to determine the irrigation schedule for protected trees. The general contractor is expected to apply supplemental water at the direction of the Project Arborist.

## Tree Trimming

Prior to the commencement of construction operations, clearance pruning of protected trees is to be properly completed. All trimming will be carried out within ANSI standards and Best Management Practices. The Project Arborist will supervise any tree trimming on site. Ornamental trimming will be done during the landscape phase of the project. The Project Arborist will inspect all trimming. All tree trimming will adhere to ANSI 300 standards and Best Management Practices and City of San Mateo ordinances.

## Pre-Construction Requirements

Prior to the commencement of demolition or construction operations, all appropriate tree protection measures are to be properly implemented and inspected by the Project Arborist. Prior to the issuance of demolition permits, the Project Arborist is to submit a letter by fax or email to the city planner assigned to this project verifying that all tree protection measures are properly implemented and clearance pruning of the trees has been completed. Monthly inspections by the Project Arborist are required for a site such as this.

## Inspection Schedule

The Project Arborist will inspect the tree protection measures and tree trimming prior to the start of construction. The Project Arborist will conduct inspections of the site as required by the city of San Mateo. Inspections will include an inspection letter provided for the owner, contractor and city arborist. The information included in this report is believed to be true and based on sound arboricultural principles and practices.

DATE	REVISION	BY	NO.
PROJECT			
HUARD - RESIDENCE			
17-887			
185, MAGELLAN AVENUE MIRAMAR, CALIFORNIA, 94019			
DRAWING TITLE	DRAWN BY		
	CHECK BY		
	Checker		
SCEAU	DATE	2019/07/02	
	SCALE		
	REVISION		
	PAGE	TP-1	