

PROJECT DATA

PROPERTY ADDRESS

2579 HOME AVE AND
2600 HILLCREST AVE (PROPOSED)
HAYWARD, CA 94542

SCOPE OF WORK

THE WORK INCLUDES GRADING THE EXISTING VACANT LOT AND BUILDING A NEW SINGLE-FAMILY RESIDENCE AND ATTACHED ADU UNIT, DRIVEWAYS AND GARAGES. THE MAIN RESIDENCE WILL BE ON HILLCREST AVENUE, WHILE THE ADU WILL HAVE ITS FRONTAGE ON HOME AVENUE.

PLANNING INFORMATION

ZONING DISTRICT: RS, SINGLE-FAMILY RESIDENTIAL
LOT SIZE: 9301 SQ FT
NO. OF STORIES: 2-STORY OVER BASEMENT AND 2-STORY ADU

SETBACKS/YARD REQUIREMENTS:

DESCRIPTION	AREA	ALLOWABLE	EXISTING	NEW
FRONT SETBACK	HOME	20'	N/A	21' MIN
	HILLCREST	20'	N/A	20'-8" MIN
REAR SETBACK		15'	N/A	N/A
SIDE SETBACK	10% HOME	6'-6"	N/A	6'-9" MIN
	10% HILLCREST	6'-9"	N/A	6'-9" MIN
BUILDING HEIGHT		30'	N/A	30' MAX
LOT COVERAGE		40%	N/A	37%

BUILDING INFORMATION

OCCUPANCY TYPE: R3/U
CONSTRUCTION TYPE: VB
FIRE SPRINKLERS: REQUIRED

FLOOR AREA:

DESCRIPTION	FLOOR	PROPOSED	TOTALS
ADU - CONDITIONED	1ST FLOOR	101	
	2ND FLOOR	1097	
	SUBTOTAL	1198	
ADU - UNCONDITIONED	DECK	138	
ADU - GROSS AREA	TOTAL		1336
MAIN HOUSE - CONDITIONED	1ST FLOOR	1824	
	2ND FLOOR	1698	
	SUBTOTAL	3522	
MAIN HOUSE - UNCONDITIONED	GARAGE - HILLCREST	459	
	GARAGE - HOME	718	
	DECKS	1184	
	STORAGE	256	
	SUBTOTAL	2617	
MAIN HOUSE - GROSS AREA	TOTAL		6139
TOTAL - GROSS AREA	GRAND TOTAL		7475

CODES

- 2019 CALIFORNIA BUILDING CODE (CBC)
- 2019 CALIFORNIA RESIDENTIAL CODE (CRC)
- 2019 CALIFORNIA ELECTRICAL CODE (CEC)
- 2019 CALIFORNIA MECHANICAL CODE (CME)
- 2019 CALIFORNIA PLUMBING CODE (CPC)
- 2019 CALIFORNIA FIRE CODE (CFC)
- 2019 CALIFORNIA BUILDING ENERGY EFFICIENCY STANDARDS (CBEES)
- 2019 CALIFORNIA GREEN BUILDING CODE
- APPLICABLE HAYWARD MUNICIPAL CODES

PROJECT DIRECTORY

OWNER

Brad Switzer Trust
24709 Broadmore Ave.
Hayward CA 94544
E: Vortexbrad@gmail.com
T: 510-909-1085

DESIGNER

SF Modern
751 Laurel Street #940
San Carlos CA 94070
Contact: Bich-Khoi Do
E: bk@sfmodern.com
T: 650-281-4832

SURVEYOR

Advanced Development
1360 Harriet Ave
Campbell, CA 95008
Contact: Jacob Saidian
T: 408-891-1689
E: jsaidian2@gmail.com

GEOTECHNICAL ENGINEER

Gray Geotech
3234 Alta Lane
Layfayette, CA 94549
Contact: Joe Gray
T: 925-999-6254
E: joe@graygeotech.com

LANDSCAPE ARCHITECT

Jon Nelson
23585 Summit Road
Los Gatos, CA 95033
Contact: Jon Nelson
E: CNDEV@aol.com
T: 408-591-08 73

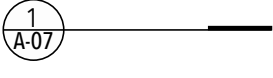

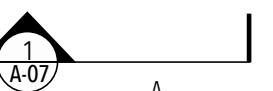
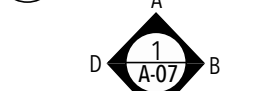




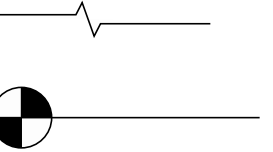
ARBORIST

Kiely Arborist Services
P.O. Box 6187
San Mateo, CA 94403
Contact: Kevin Kiely
T: 650-515-9783
E: kkarbor0476@yahoo.com

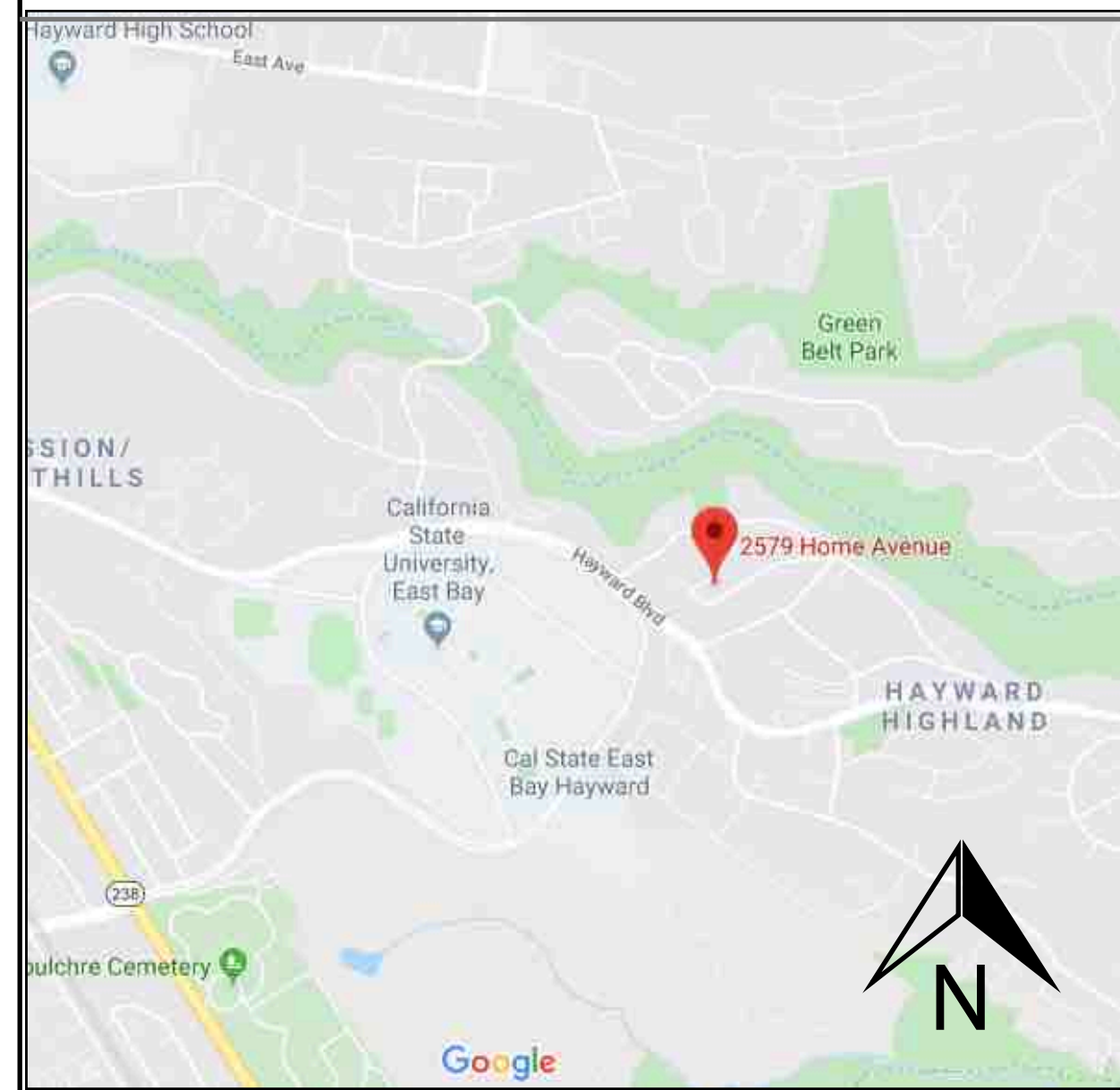
STRUCTURAL ENGINEER

IDS Engineering
6280 West Las Positas Blvd,
Suite 201
Pleasanton CA, 94588
Contact: Steve Fedewa
P: 925.399.7001
D: 925.413.3378
F: 925.461.2367
E: stevef@ids-eng.net

SYMBOLS

- DETAIL MARKER 
- ELEVATION MARKER 
- SECTION MARKER 
- INTERIOR ELEVATION MARKER 
- REVISION MARKER 
- DOOR SYMBOL 
- WINDOW SYMBOL 
- BREAK LINE 
- ELEVATION LINE 

VICINITY MAP



DRAWING INDEX

ARCHITECTURAL

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- C-4 SLOPE CALCULATION

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- L-3 PLANTING NOTES, WATER & MAINTENANCE

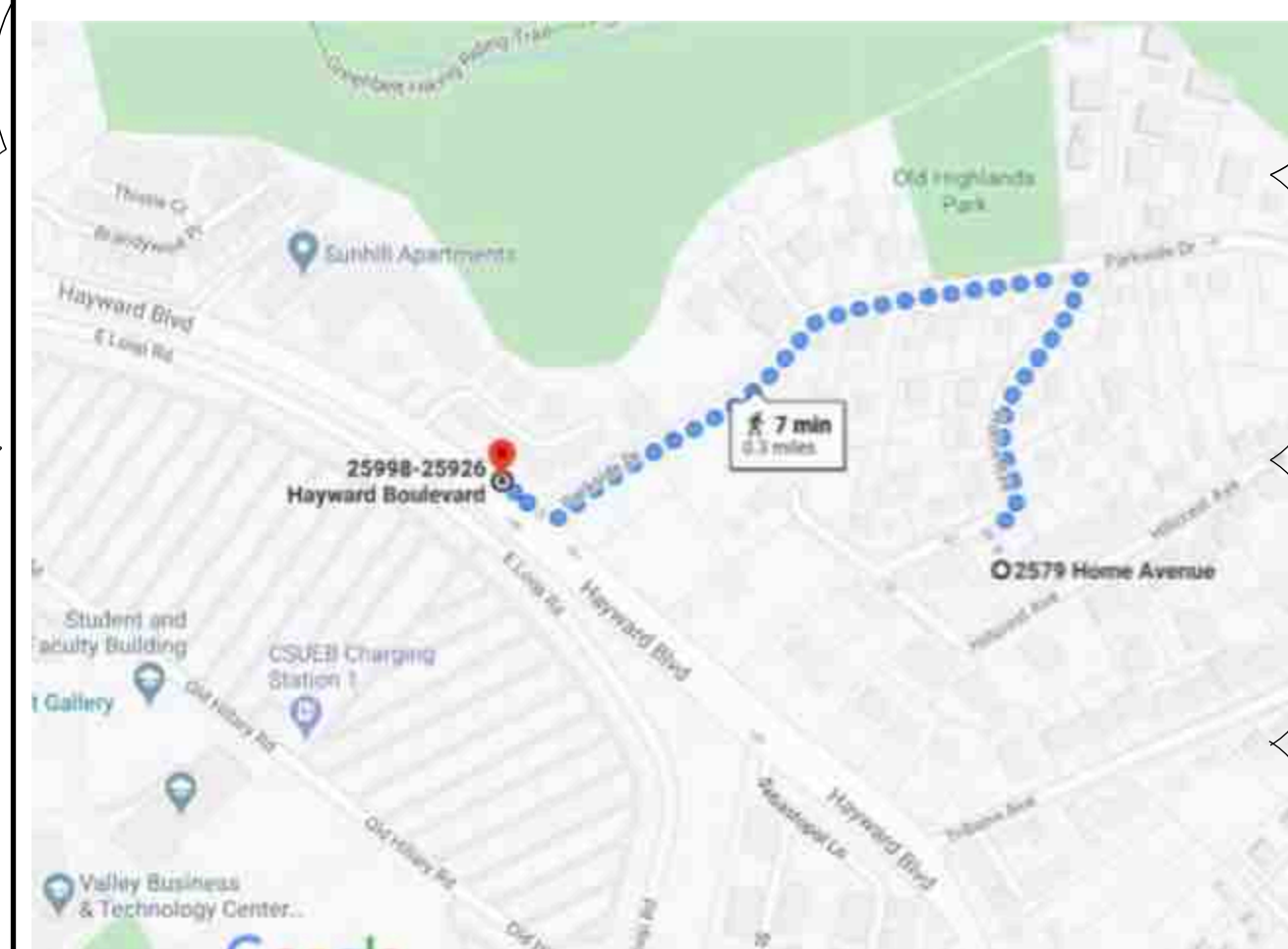
GEOTECHNICAL REPORT

See separate Geotechnical Report by Gray Geotech

ARBORIST REPORT

See separate Arborist Report by Kiely Arborist Services

TRANSIT INFO



DISTANCE TO NEAREST PUBLIC BUS STATION: .3 MILES
HAYWARD BLVD X PARKSIDE DR

GENERAL NOTES

- ALL CONSTRUCTION SHALL CONFORM TO CURRENT HAYWARD CODES AND ANY OTHER GOVERNING CODES, AMENDMENTS, RULES, REGULATIONS, ORDINANCES, LAWS, ORDERS, APPROVALS, ETC. THAT ARE REQUIRED BY APPLICABLE PUBLIC AUTHORITIES. IN THE EVENT OF CONFLICT THE MOST STRINGENT REQUIREMENTS SHALL APPLY.
 - THE GENERAL CONTRACTOR IS RESPONSIBLE FOR CHECKING CONTRACT DOCUMENTS, FIELD CONDITIONS, AND DIMENSIONS FOR ACCURACY AND CONFIRMING THE WORK CAN BE BUILT OR DEMOLISHED AS SHOWN BEFORE PROCEEDING WITH THE WORK. IF THERE ARE ANY QUESTIONS REGARDING THESE OR OTHER COORDINATION QUESTIONS, THE GENERAL CONTRACTOR IS RESPONSIBLE FOR OBTAINING A CLARIFICATION FROM THE DESIGNER BEFORE PROCEEDING WITH THE WORK IN QUESTION OR RELATED WORK.
 - ANY ERRORS, OMISSIONS OR CONFLICTS FOUND IN THE VARIOUS PARTS OF THE CONSTRUCTION DOCUMENTS SHALL BE BROUGHT TO THE ATTENTION OF THE DESIGNER BEFORE PROCEEDING WITH THE WORK.
 - CONTRACTOR SHALL THOROUGHLY EXAMINE THE PREMISES AND SHALL BASE HIS BID ON THE EXISTING CONDITIONS, NOTWITHSTANDING ANY INFORMATION SHOWN OR NOT SHOWN ON THE DRAWINGS.
- GENERAL NOTES (CONT'D)
- CONTRACTOR TO MAINTAIN ALL PROPER WORKMAN'S COMPENSATION AND LIABILITY INSURANCE THROUGHOUT THE DURATION OF PROJECT.
 - SUBSTITUTIONS, REVISIONS OR CHANGES MUST HAVE PRIOR APPROVAL OF DESIGNER.
 - DURING THE BIDDING AND NEGOTIATION PERIOD THE GENERAL CONTRACTOR AND SUBCONTRACTOR(S) SHALL CONFIRM IN WRITING APPROX. ON-SITE DELIVERY DATES FOR ALL CONSTRUCTION MATERIALS AS REQUIRED BY THE CONSTRUCTION DOCUMENTS AND SHALL NOTIFY THE DESIGNER IN WRITING OF ANY POSSIBLE CONSTRUCTION DELAYS AFFECTING OCCUPANCY THAT MAY ARISE DUE TO THE AVAILABILITY OF THE SPECIFIED PRODUCT.
 - ALL WORK SHALL BE PERFORMED SUCH THAT DAMAGE TO EXISTING LANDSCAPE AND/OR PERSONAL PROPERTY IS PREVENTED OR MINIMIZED.
 - CONTRACTOR SHALL TAKE MEASURES TO PROTECT ADJACENT PROPERTIES. USE VISQUEEN, PLYWOOD, ETC. TO MINIMIZE NOISE, DUST, ETC.
 - IN THE EVENT THAT FOUNDATION MIGHT AFFECT ADJACENT PROPERTIES, CONTRACTOR SHALL TAKE ALL APPROPRIATE STEPS TO NOTIFY THE PROPERTY OWNER OF THE CONDITION, AND TO ADEQUATELY PROTECT THE ADJACENT STRUCTURE.
 - WRITTEN DIMENSIONS REFER TO FACE OF FINISH OR CENTER-LINE UNLESS OTHERWISE NOTED. EXTERIOR WALLS ARE DIMENSIONED TO FACE OF SHEATHING, U.O.N.
 - DIMENSIONS ARE TO TOP OF FINISHED FLOOR, SLAB OR DECK IN SECTION OR ELEVATION, UNLESS OTHERWISE NOTED.
 - "SIM." OR "SIMILAR" MEANS COMPARABLE CHARACTERISTICS FOR THE ITEM NOTED. VERIFY DIMENSIONS AND ORIENTATION ON PLAN.
 - "TYP." OR "TYPICAL" MEANS IDENTICAL FOR ALL SIMILAR CONDITIONS UNLESS NOTED OTHERWISE.
 - DIMENSIONS NOTED "CLR" OR "CLEAR" ARE MINIMUM REQUIRED DIMENSIONS AND CLEARANCES MUST BE ACCURATELY MAINTAINED.
 - CONTRACTOR TO VERIFY DIMENSIONS AND CONDITIONS IN FIELD. IF CONDITIONS ARE SIGNIFICANTLY DIFFERENT THAN REPRESENTED IN DRAWINGS, VERIFY CONDITIONS WITH DESIGNER.
 - ALL MATERIALS & EQUIPMENT TO BE NEW UNLESS OTHERWISE NOTED.
 - ALL MATERIALS & EQUIPMENT TO BE INSTALLED PER MANUFACTURER'S INSTRUCTIONS.
 - WINDOW AND DOOR SIZES ARE NOMINAL DIMENSIONS. REFER TO MANUFACTURER'S SPECIFICATIONS FOR ACTUAL ROUGH OPENINGS.
 - WHERE LOCATIONS OF WINDOWS AND DOORS ARE NOT DIMENSIONED, THEY SHALL BE CENTERED IN THE WALL OR PLACED TWO STUD WIDTHS FROM ADJACENT WALL AS INDICATED ON DRAWINGS, UNLESS OTHERWISE NOTED.
 - ALL CHANGES IN FLOOR MATERIAL SHALL OCCUR AT CENTERLINE OF DOOR OR FRAMED OPENING, UNLESS OTHERWISE INDICATED ON THE DRAWINGS.
 - SEALANT, CAULKING, FLASHING, ETC. LOCATIONS SHOWN ON DRAWINGS ARE INTENDED TO BE INCLUSIVE. FOLLOW MANUFACTURER'S INSTALLATION RECOMMENDATIONS AND STANDARD INDUSTRY AND BUILDING PRACTICES.
 - ALL ATTICS, RAFTER SPACES, SOFFITS, CRAWL SPACES, ETC. TO BE FULLY VENTILATED PER APPLICABLE CODE.
 - PROVIDE WOOD BLOCKING FOR ALL TOWEL BARS, ACCESSORIES, ETC.
 - MEET ALL CALIFORNIA ENERGY CONSERVATION REQUIREMENTS INCLUDING BUT NOT LIMITED TO:
 - MIN. ROOF/CEILING INSULATION R-19
 - MIN. WALL INSULATION IN FRAMED EXTERIOR WALLS R-13
 - MIN. FLOOR INSULATION OVER CRAWL/UNOCCUPIED SPACES R-13
 - ALL INSULATION TO MEET CEC QUALITY STANDARDS
 - INFILTRATION CONTROL:
 - DOORS AND WINDOWS WEATHER-STRIPPED.
 - EXHAUST SYSTEMS DAMPENED.
 - DOORS AND WINDOWS CEC CERTIFIED AND LABELED.
 - ALL JOINTS AND PENETRATIONS CAULKED AND SEALED.
 - DUCTS CONSTRUCTED AND INSTALLED PER UMC.
 - ELECTRICAL OUTLET PLATE GASKETS SHALL BE INSTALLED ON ALL RECEPTACLES, SWITCHES AND ELECTRICAL BASES ON EXTERIOR WALLS.
 - SMOKE ALARMS ARE TO BE INSTALLED IN ALL SLEEPING ROOMS. SMOKE ALARMS SHALL BE HARDWIRED TO 110V HOUSE WIRING AND WIRED TOGETHER IN SERIES. MINIMUM ONE ALARM PER STORY. REFER TO PLANS FOR LOCATIONS.
 - GENERAL CONTRACTOR IS TO COORDINATE INSTALLATION OF NOT IN CONTRACT ITEMS WITH OTHER TRADES.
 - LOCATION/SPECIFICATION OF SAFETY GLAZING (TEMPERED GLASS) ARE SOLE RESPONSIBILITY OF CONTRACTOR. ALL DOORS WITH GLAZING AND ALL GLAZING OF WINDOWS WITHIN 24" OF EDGE OF ANY DOOR SHALL BE TEMPERED GLASS (UBC SECTION 2406)

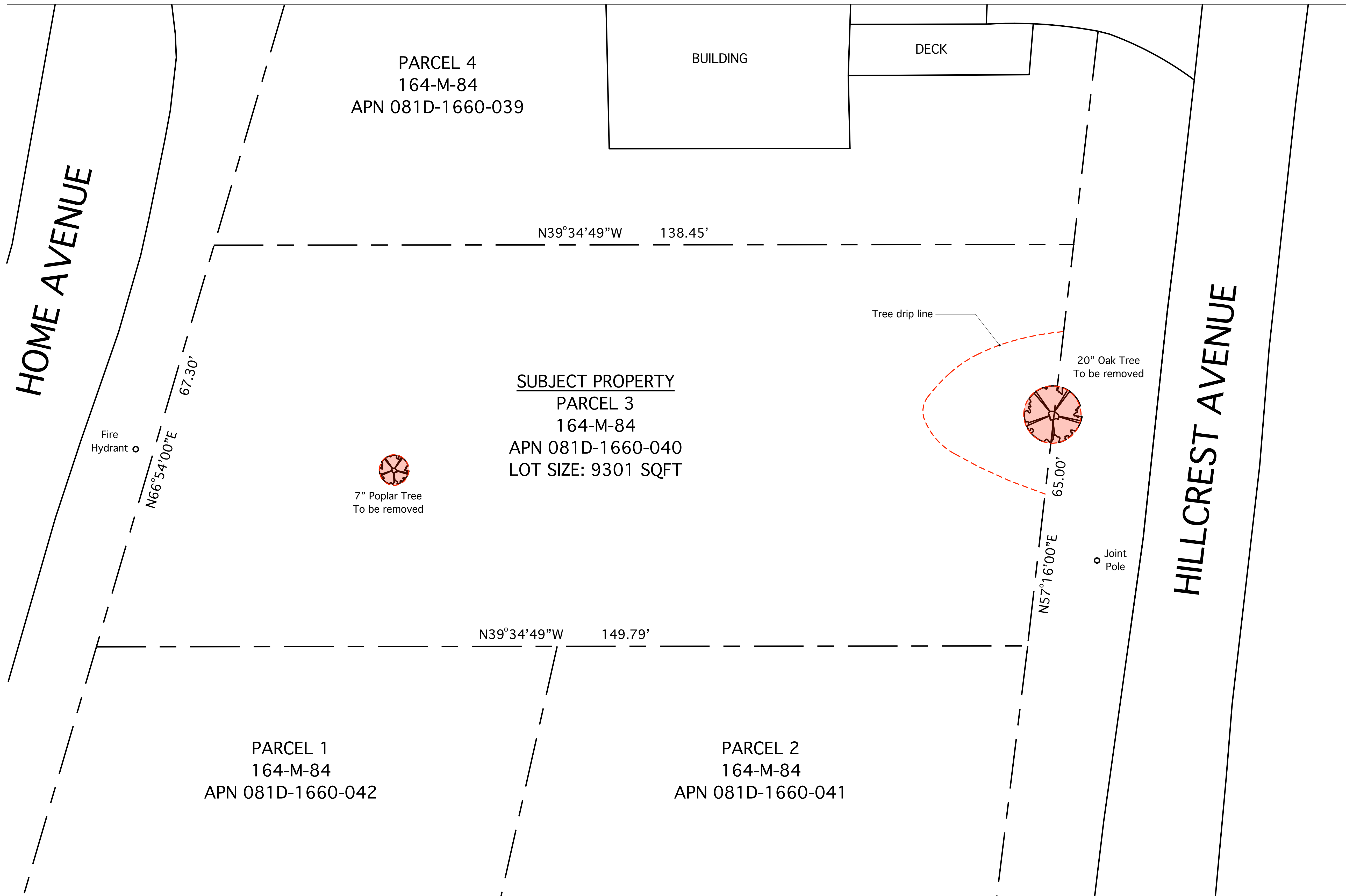
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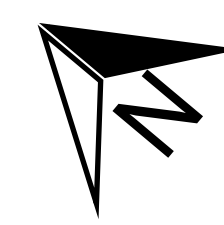
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751 Laurel Street, #940, San Carlos CA 94070

Parcel 3, 164-M-84
Title Sheet



1 Site Plan: Existing

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



LEGEND

	Property Line
	Areas Removed

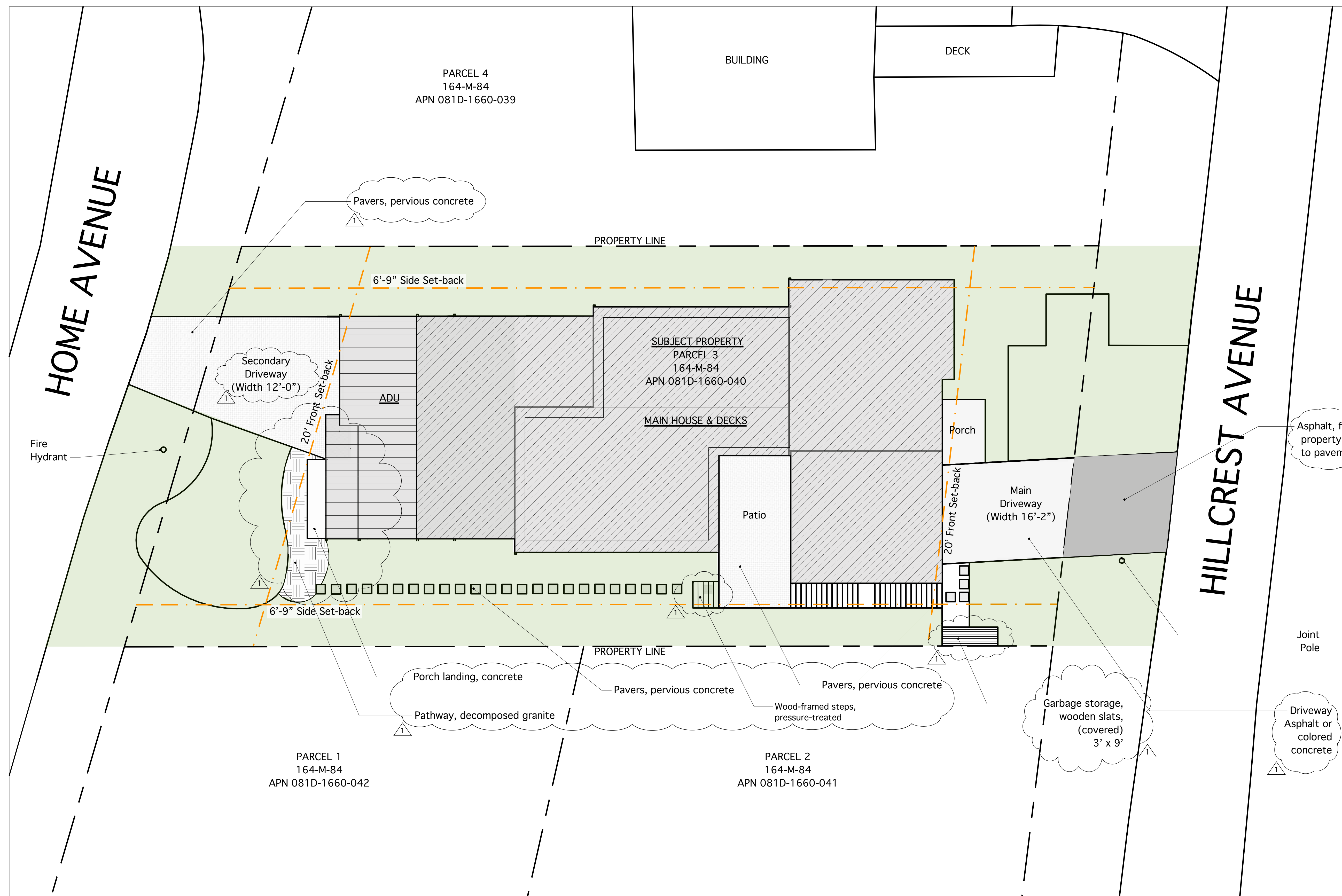


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**Parcel 3, 164-M-84
Existing Site Plan**

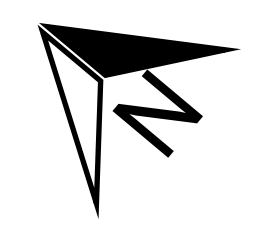
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1 Site Plan: Proposed

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

LOT SIZE: 9301 SQFT
 BUILDING FOOTPRINT: 3468 SQFT
 LOT COVERAGE: 3468 SQFT / 9301 SQFT = 37%



LEGEND

	Property Line
	Set-back Line
	Slope 1/8" H : 1' L (min)
	Down-spout / scupper

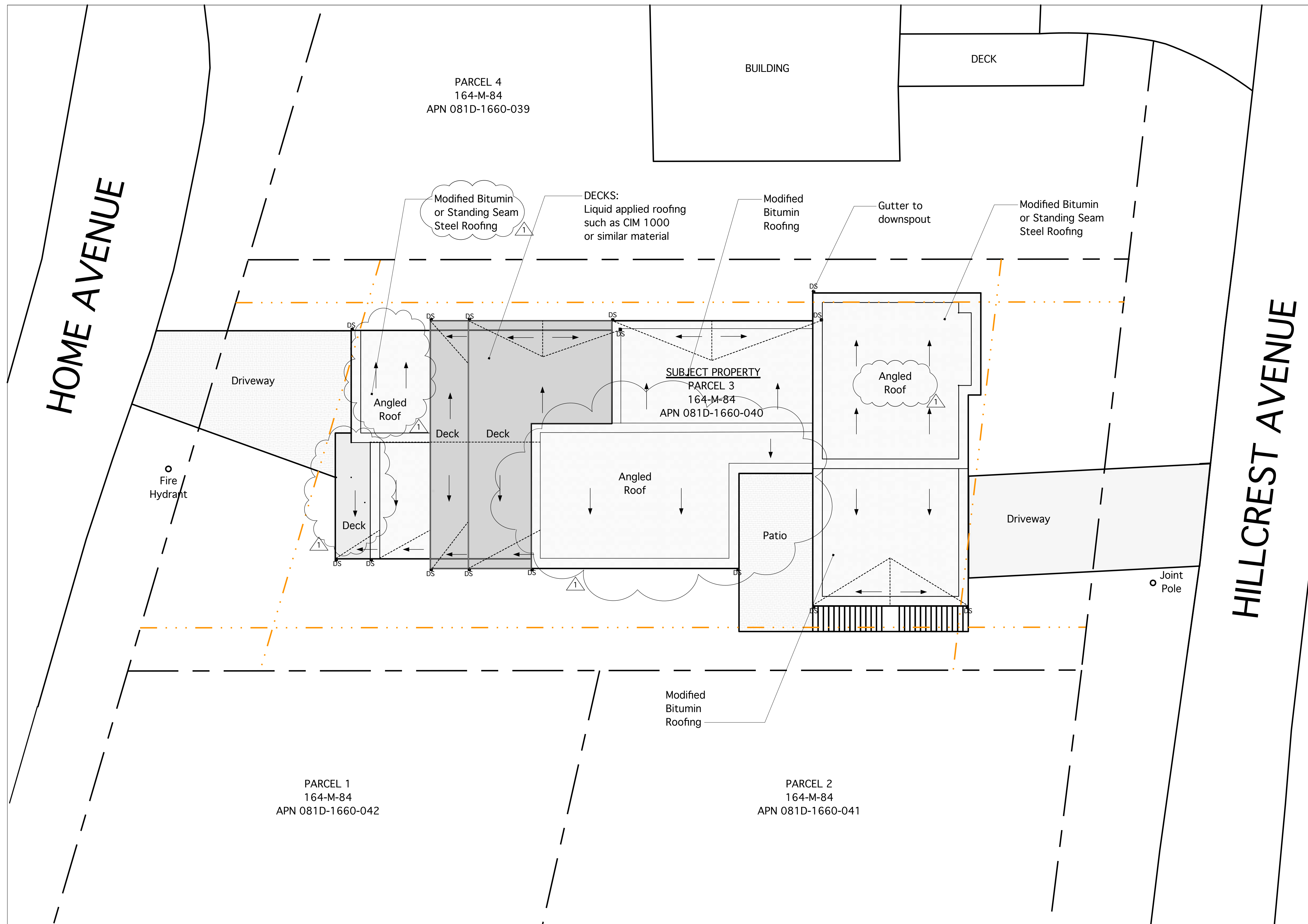
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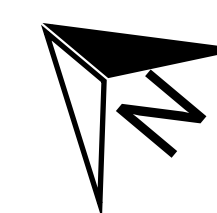
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**Parcel 3, 164-M-84
 Proposed Site Plan**



1 Roof Plan: Proposed

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



LEGEND

	Property Line
	Set-back Line
	Slope 1/8" H : 1' L (min)
	Down-spout / scupper

REVISIONS	MM/DD/YY	INITIAL PLAN DATE	REMARKS
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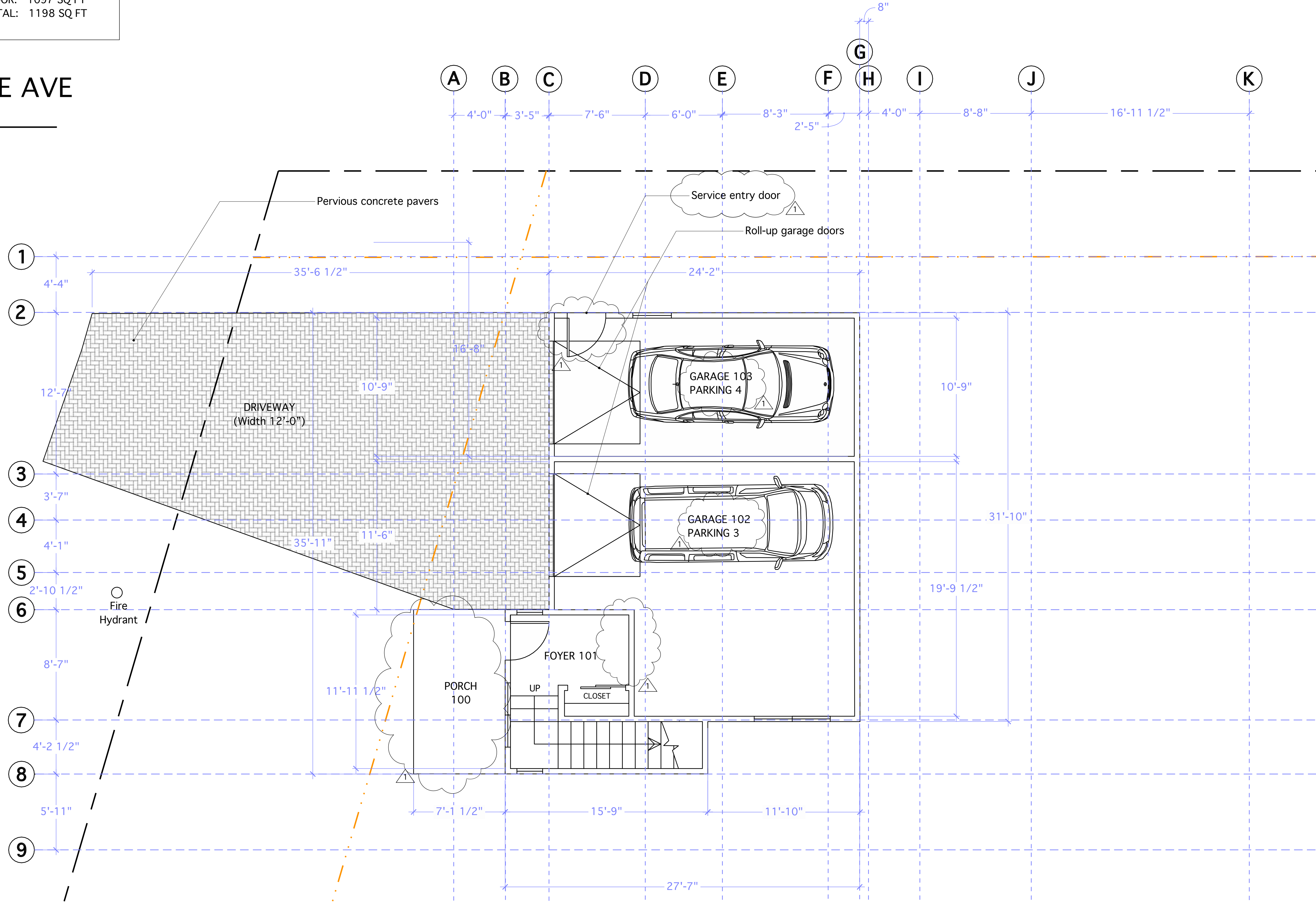
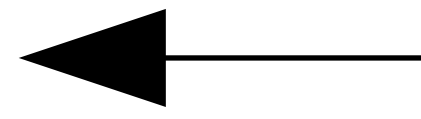
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**Parcel 3, 164-M-84
Proposed Roof Plan**

CONDITIONED SIZE

1ST FLOOR: 101 SQ FT
 2ND FLOOR: 1097 SQ FT
 ADU TOTAL: 1198 SQ FT

HOME AVE



1 ADU Floor Plan, Level 1: Proposed

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

LEGEND

- Property Line
- Set-back Line
- Slope 1/8" H : 1' L (min)
- DS Down-spout / scupper

REVISIONS	REMARKS	MM/DD/YY	INITIAL PLAN DATE
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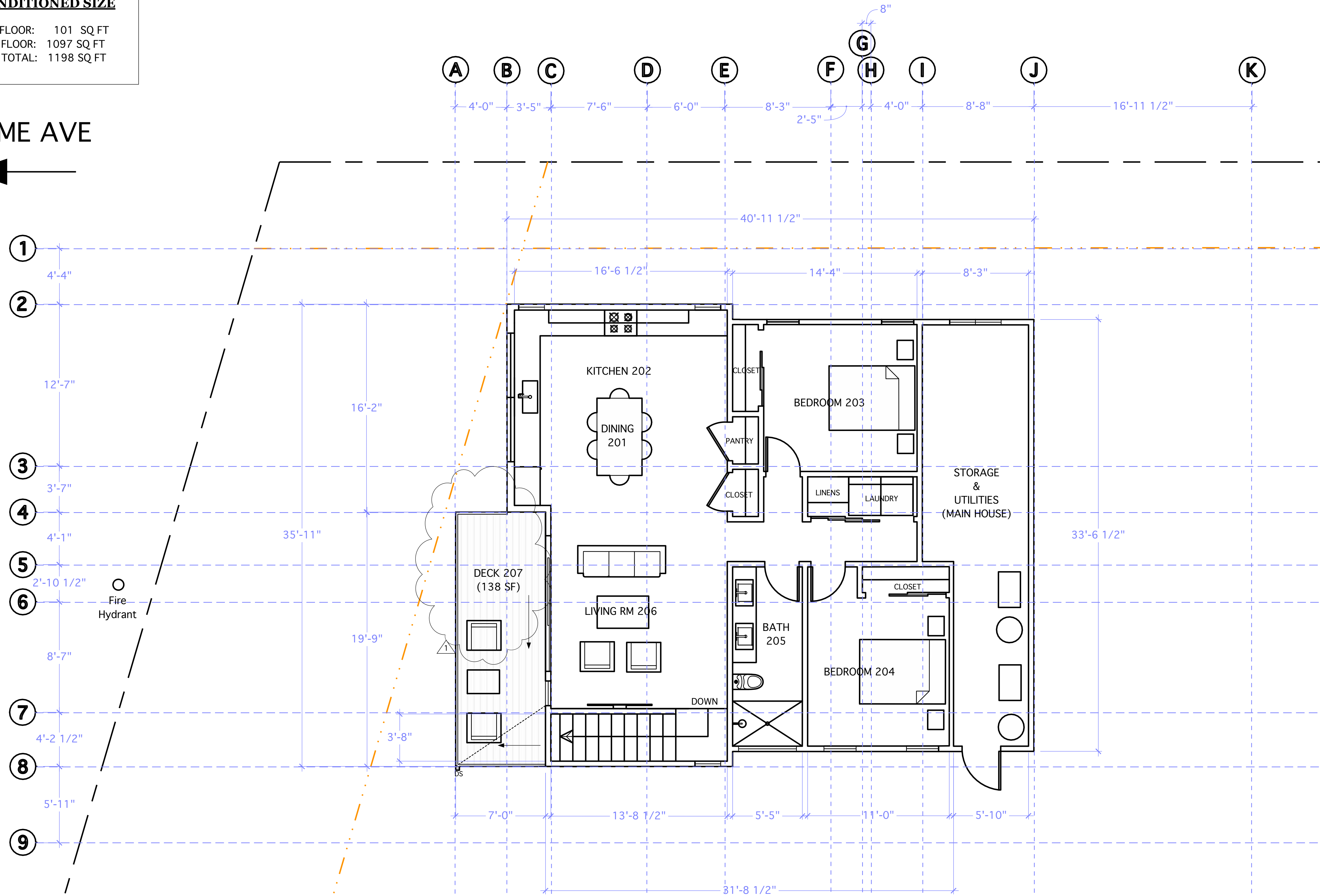
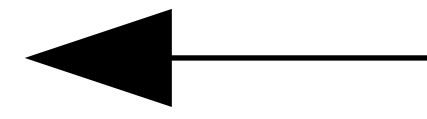
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**Parcel 3, 164-M-84
 ADU Floorpan, Level 1**

CONDITIONED SIZE

1ST FLOOR: 101 SQ FT
 2ND FLOOR: 1097 SQ FT
 ADU TOTAL: 1198 SQ FT

HOME AVE



1 ADU Floor Plan, Level 2: Proposed

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

LEGEND

- Property Line
- Set-back Line
- Slope 1/8" H : 1' L (min)
- Down-spout / scupper

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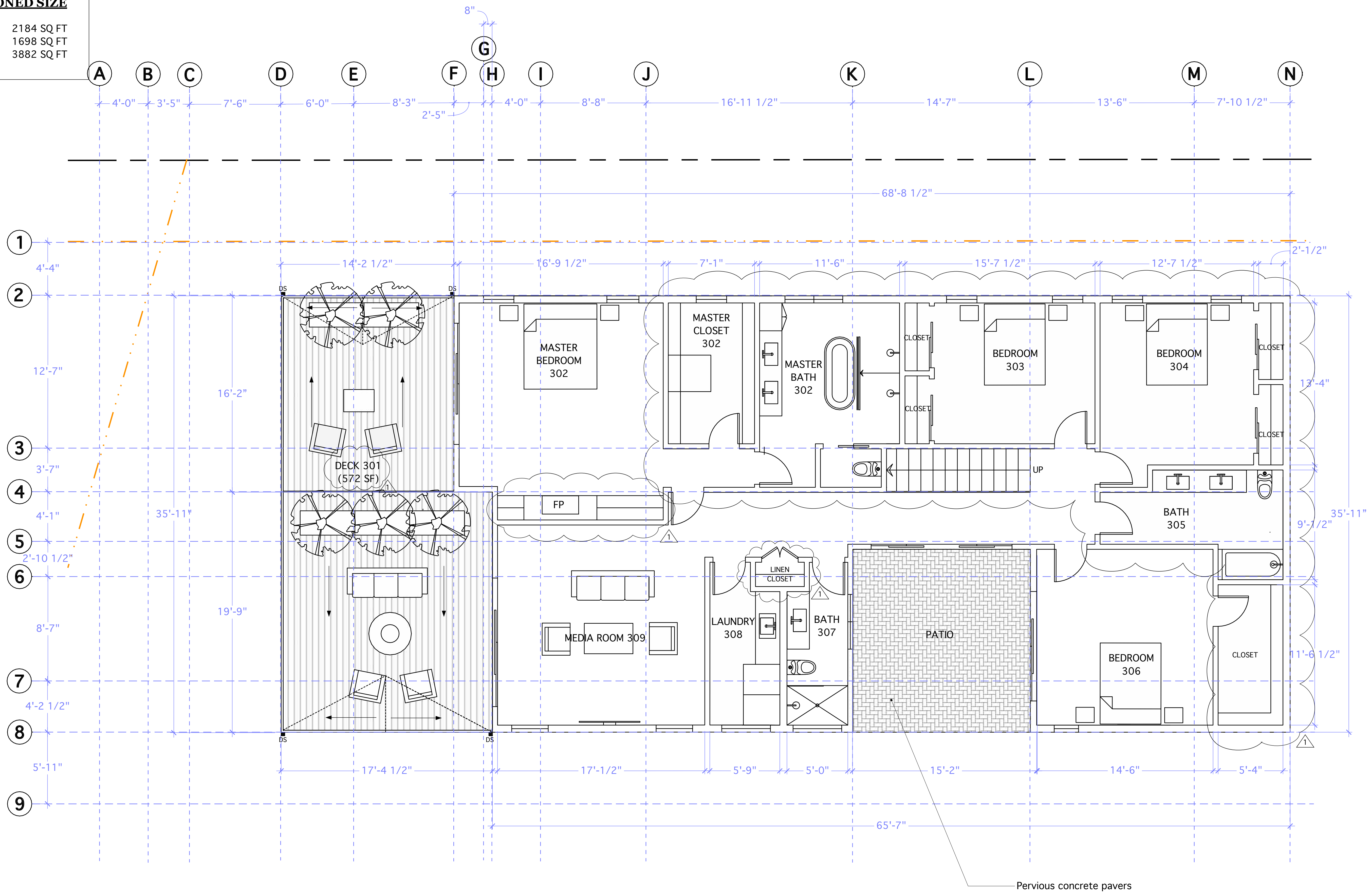


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**Parcel 3, 164-M-84
 ADU Floorplan, Level 2**

CONDITIONED SIZE

1ST FLOOR: 2184 SQ FT
 2ND FLOOR: 1698 SQ FT
 MAIN TOTAL: 3882 SQ FT



1 Main House, Level 1: Proposed
 SCALE: 1/4" = 1'-0"

LEGEND

	Property Line
	Set-back Line
	Slope 1/8" H : 1' L (min)
	Down-spout / scupper

REVISIONS

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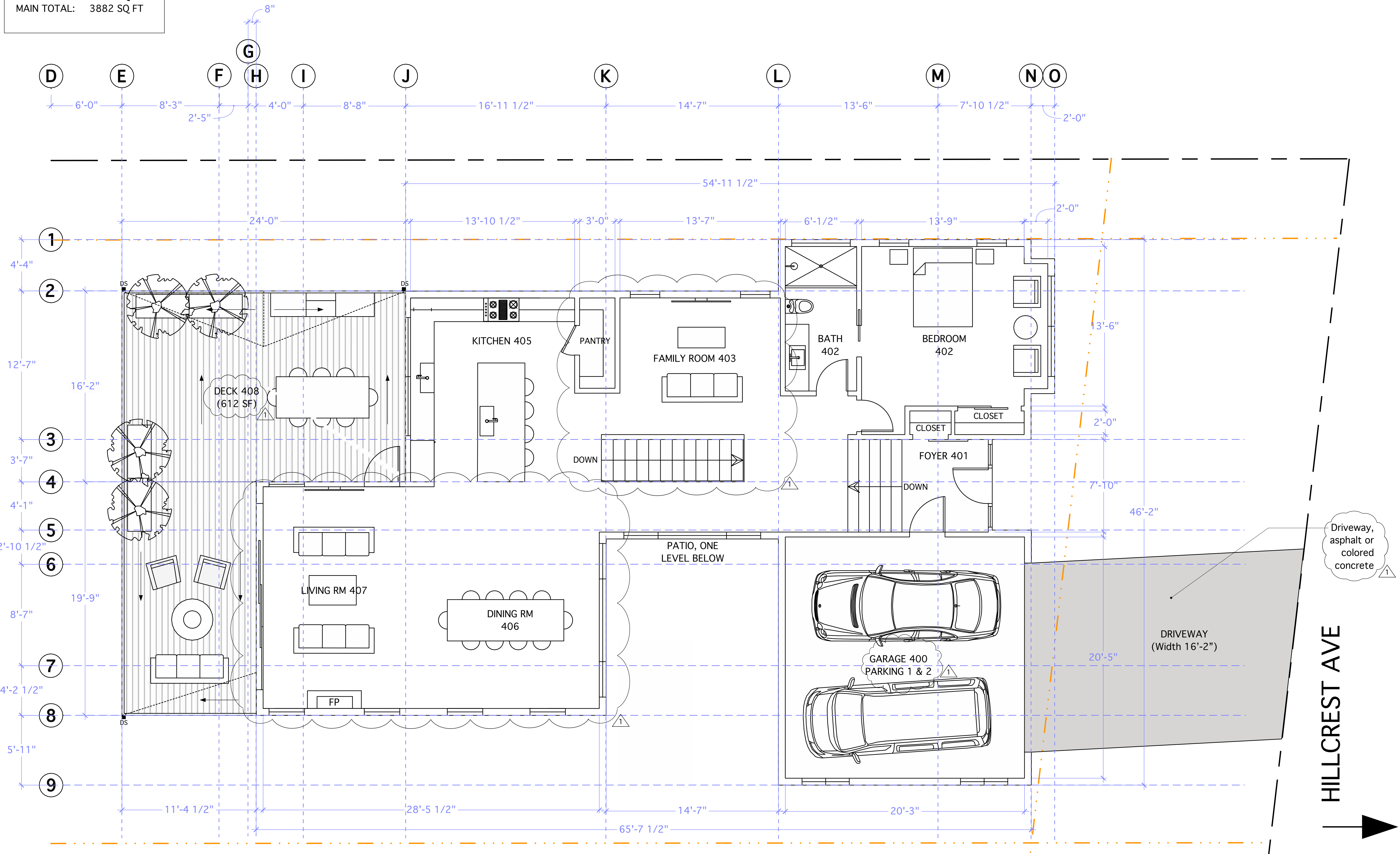
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**Parcel 3, 164-M-84
 Main House, Level 1**

CONDITIONED SIZE

1ST FLOOR: 2184 SQ FT
 2ND FLOOR: 1698 SQ FT
 MAIN TOTAL: 3882 SQ FT



1 Main House, Level 2: Proposed
 SCALE: 1/4" = 1'-0"

LEGEND

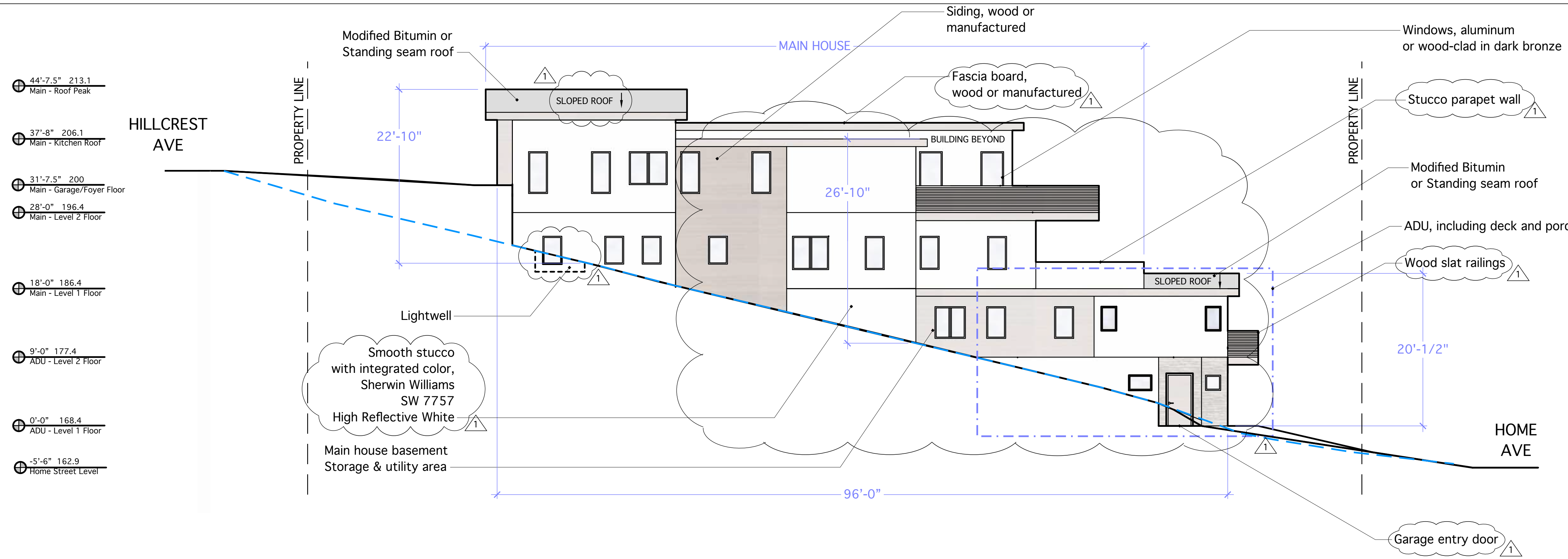
- Property Line
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REVISIONS	REMARKS	MM/DD/YY	INITIAL PLAN DATE
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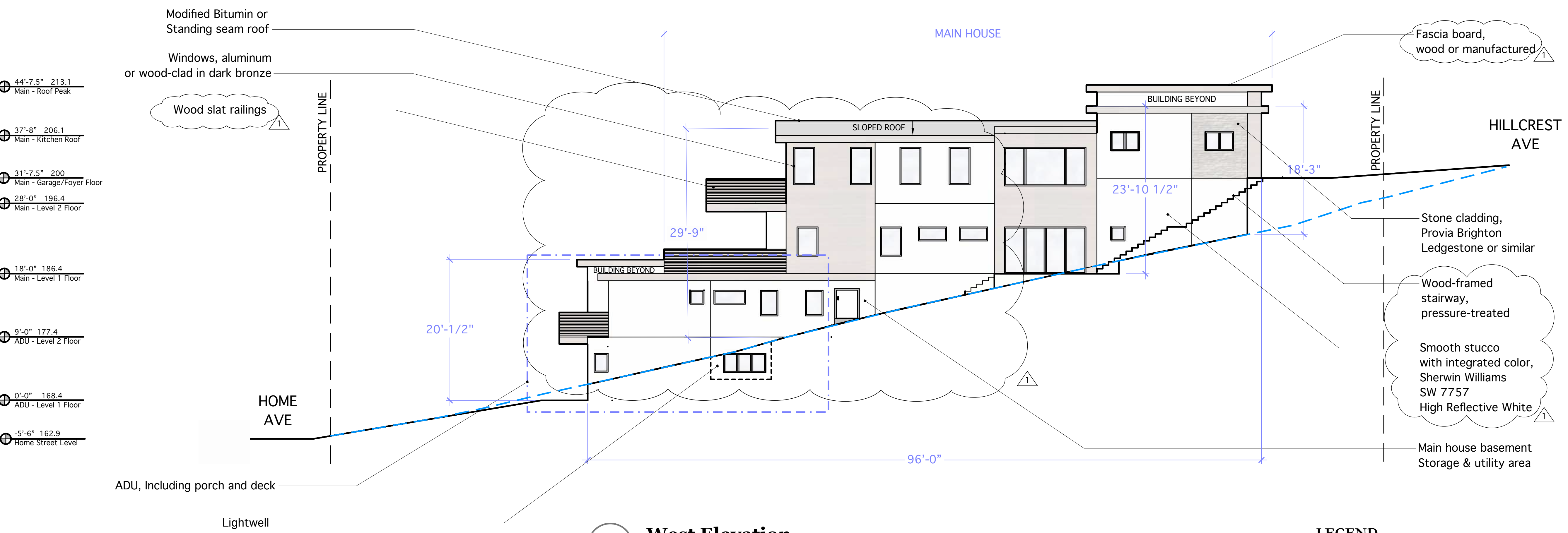
**Parcel 3, 164-M-84
 Main House, Level 2**



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

LEGEND

- Property Line
- - - Existing Grade Line



2 West Elevation SCALE: 1/8" = 1'-0"

LEGEND

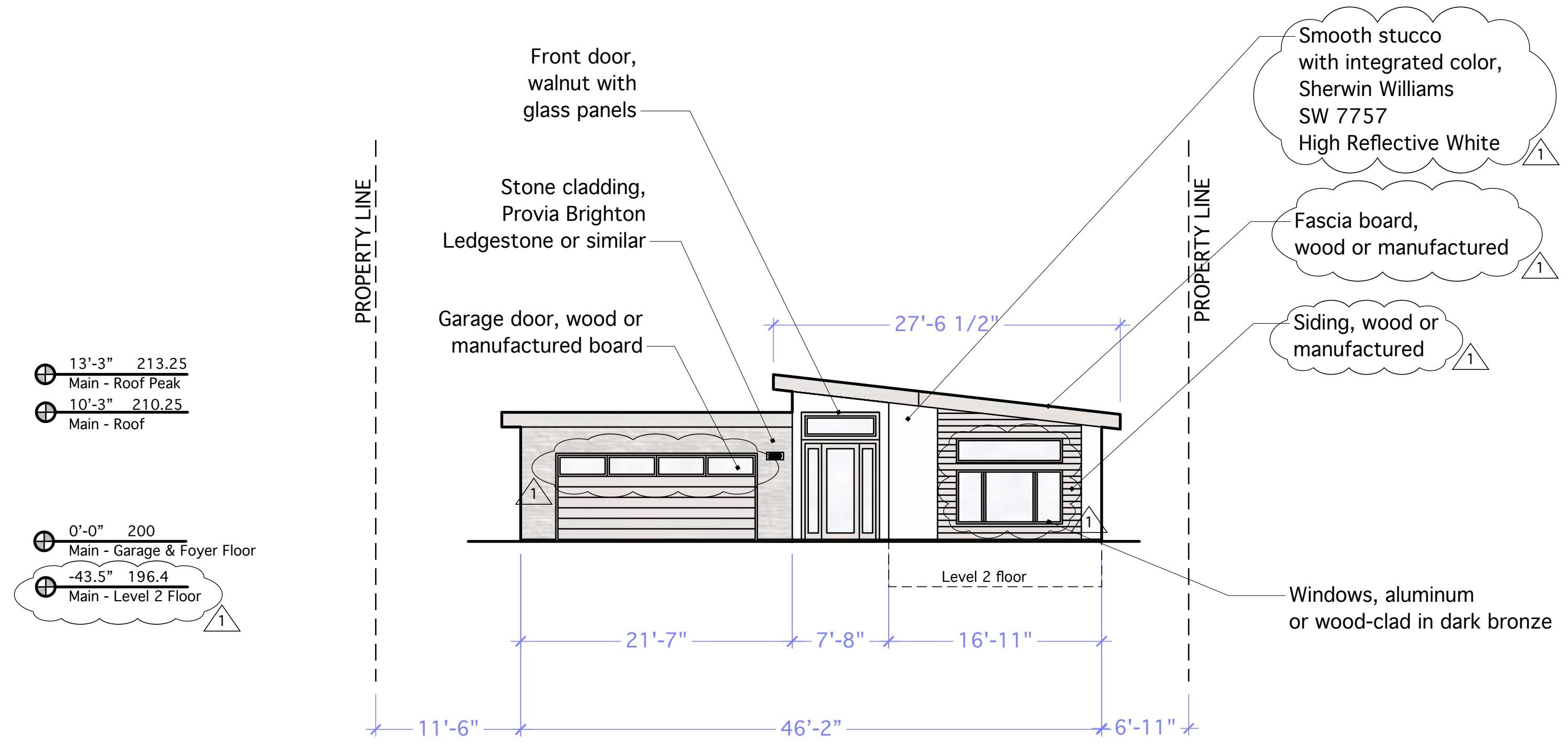
- Property Line
- - - Existing Grade Line

REVISIONS	REMARKS	MM/DD/YY	INITIAL PLAN DATE
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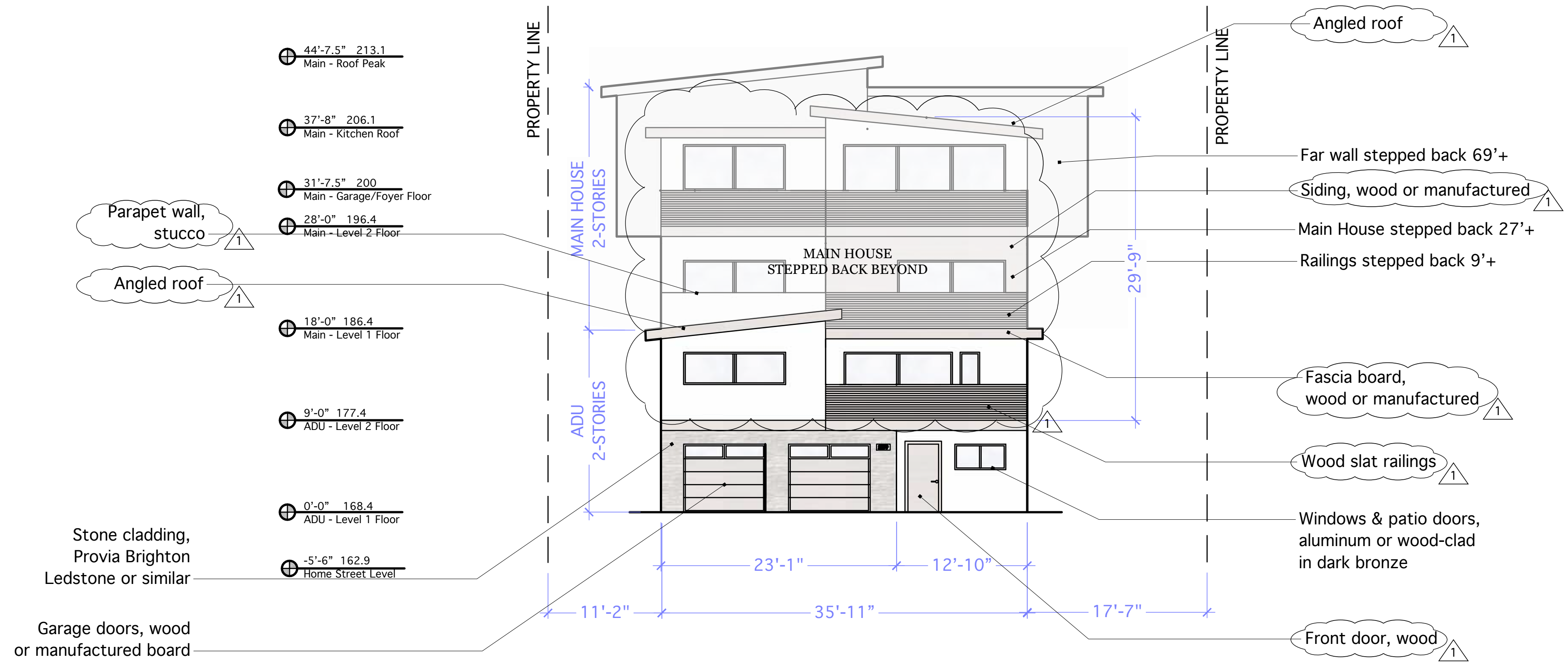
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Parcel 3, 164-M-84
Elevations - Proposed



1 South Elevation: Main House
SCALE: 1/8" = 1'-0"



2 North Elevation: ADU
SCALE: 1/8" = 1'-0"

REVISIONS	REMARKS	MM/DD/YY	INITIAL PLAN DATE
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Parcel 3, 164-M-84
Elevations - Proposed



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Parcel 3, 164-M-84
Renderings

ABBREVIATIONS

A.B.	AGGREGATE BASE
A.C.	ASPHALT CONCRETE
B.C.	BEGINNING OF CURVE(HORIZONTAL)
BLDG	BUILDING
BOW/BWLK	BACK OF WALK
B.V.C.	BEGINNING OF VERTICAL CURVE
C.B.	CATCH BASIN
CLF	CHAIN LINK FENCE
C.O.	CLEAN OUT
CONT.	CONTINUOUS
D.I.	DRAINAGE INLET
D/W	DRIVEWAY
E.C.	END OF CURVE(HORIZONTAL)
ELEV.	ELEVATION
EXIST.	EXISTING
E.V.C.	END OF VERTICAL CURVE
F.F.	FINISHED FLOOR ELEVATION
F.G.	FINISHED GRADE
F.H.	FIRE HYDRANT
F.C.	FACE OF CURB
F.L.	FLOW LINE
FOC	FACE OF CURB
F.S.	FINISHED SURFACE
G.B.	GRADE BREAK
G.V.	GATE VALVE
H.P.	HIGH POINT
I.D.	INSIDE DIAMETER
INV.	INVERT
J.P.	JOINT POLE
L.F.	LINEAL FEET
L.P.	LOW POINT
L&T	LEAD & TACK
MAX.	MAXIMUM
M.H.	MANHOLE
MIN.	MINIMUM
M.V.C.	MIDDLE OF VERTICAL CURVE
M.W.	MONITORING WELL
NO.	NUMBER
N.T.S.	NOT TO SCALE
P.C.C.	PORTLAND CEMENT CONCRETE
P.C.R.	POINT OF CURB RETURN
P.P.B.	PEDESTRIAN PUSH BUTTON
PP&T	PLASTIC PLUG & TACK
P.V.C.	POLYVINYL CHLORIDE
P.V.I.	POINT OF VERTICAL INTERSECTION
R	RADIUS
R.C.P.	REINFORCED CONCRETE PIPE
R/W	RIGHT-OF-WAY
S	SLOPE
S.D.	STORM DRAIN
S.D.M.N	STORM DRAIN MANHOLE
S.F.	SQUARE FEET
SHT.	SHEET
S.S.M.H.	SANITARY SEWER MANHOLE
S.S.	SANITARY SEWER
S/W	SIDEWALK
T.C.	TOP OF CURB
T.FOC	TOP FACE OF CURB
TYP.	TYPICAL
U.O.N.	UNLESS OTHERWISE NOTED
V.C.	VERTICAL CURVE
V.C.P.	VITRIFIED CLAY PIPE (EXTRA STRENGTH)
W	WATER
W.M.	WATER METER
W.V.	WATER VALVE

BASIS OF ELEVATION

TOP OF THE RIM OF SANITARY SEWER MANHOLE AT INTERSECTION OF HOME AVENUE AND HILLCREST AVENUE. TBM ELEVATION: 173.29'

BASIS OF BEARING

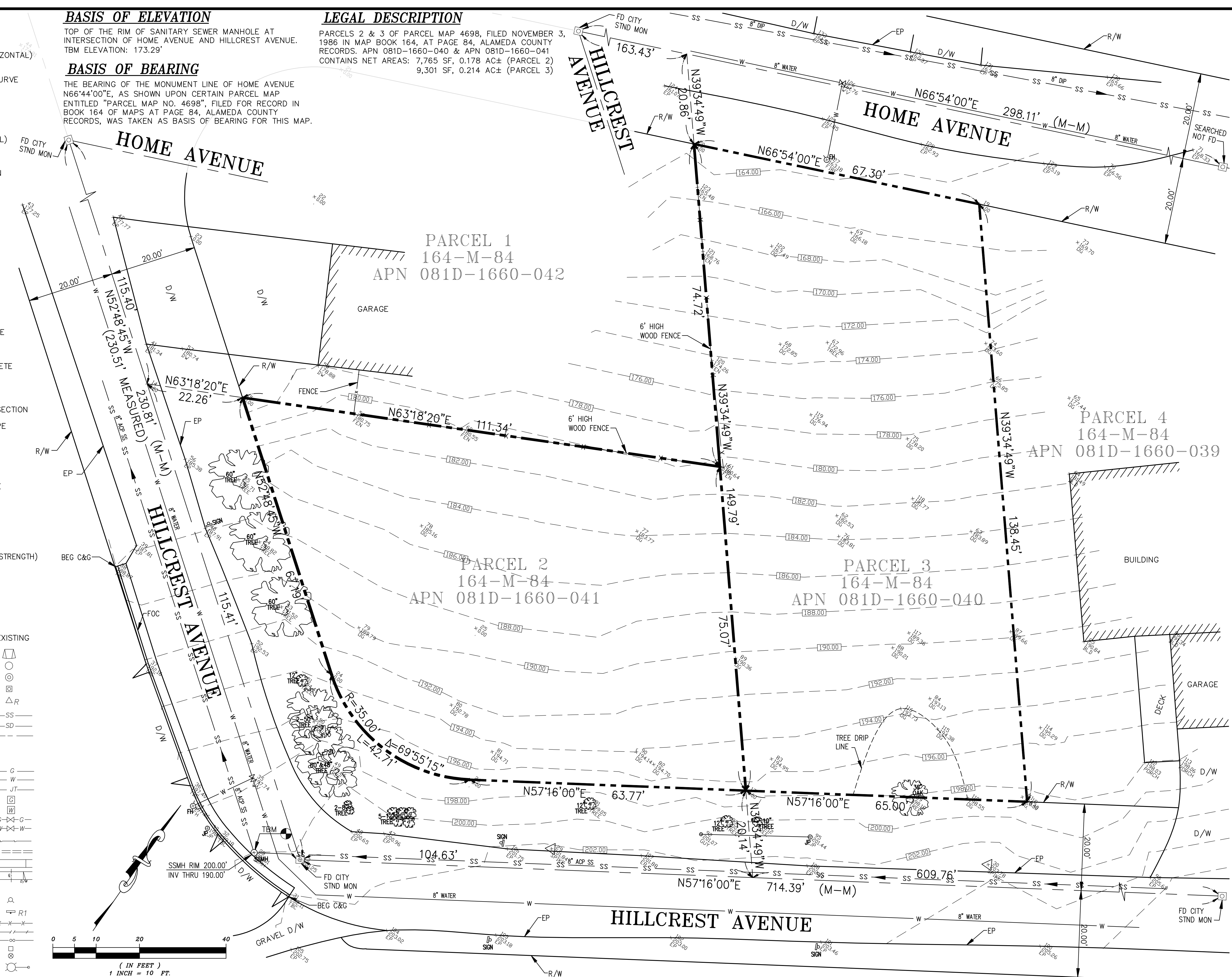
THE BEARING OF THE MONUMENT LINE OF HOME AVENUE N66°44'00"E, AS SHOWN UPON CERTAIN PARCEL MAP ENTITLED "PARCEL MAP NO. 4698", FILED FOR RECORD IN BOOK 164 OF MAPS AT PAGE 84, ALAMEDA COUNTY RECORDS, WAS TAKEN AS BASIS OF BEARING FOR THIS MAP.

LEGAL DESCRIPTION

PARCELS 2 & 3 OF PARCEL MAP 4698, FILED NOVEMBER 3, 1986 IN MAP BOOK 164, AT PAGE 84, ALAMEDA COUNTY RECORDS. APN 081D-1660-040 & APN 081D-1660-041 CONTAINS NET AREAS: 7,765 SF, 0.178 AC± (PARCEL 2) 9,301 SF, 0.214 AC± (PARCEL 3)

LEGEND

DESCRIPTION	PROPOSED	EXISTING
WHEELCHAIR RAMP		
SANITARY MANHOLE		
STORM MANHOLE		
CITY SURVEY MONUMENT		
STANDARD HOODED INLET		
SANITARY SEWER		
STORM SEWER		
CENTER LINE		
PROPERTY LINE		
MATCH LINE		
GAS LINE		
WATER LINE		
JOINT TRENCH		
GAS METER		
WATER METER		
GAS VALVE		
WATER VALVE		
EDGE OF PAVEMENT		
CURB AND GUTTER		
SIDEWALK		
DRIVEWAY		
PAVING CONFORM		
FIRE HYDRANT		
STREET SIGN		
FENCE(TYPE)		
ELECTRICAL CONDUIT		
OVERHEAD CONDUCTORS		
PULL BOX		
UTILITY POLE		
ELECTROLIER		



ADVANCED DEVELOPMENT

2983 BENJAMIN COURT
SAN JOSE, CALIFORNIA 95124
(408) 376-0570
JACOB SAIDIAN - CIVIL ENGINEER

TOPOGRAPHICAL & RECORD BOUNDARY SURVEY FOR: APN 081D-1660-040 & 041 HOME AVENUE & 2579 HILLCREST AVENUE HAYWARD CALIFORNIA

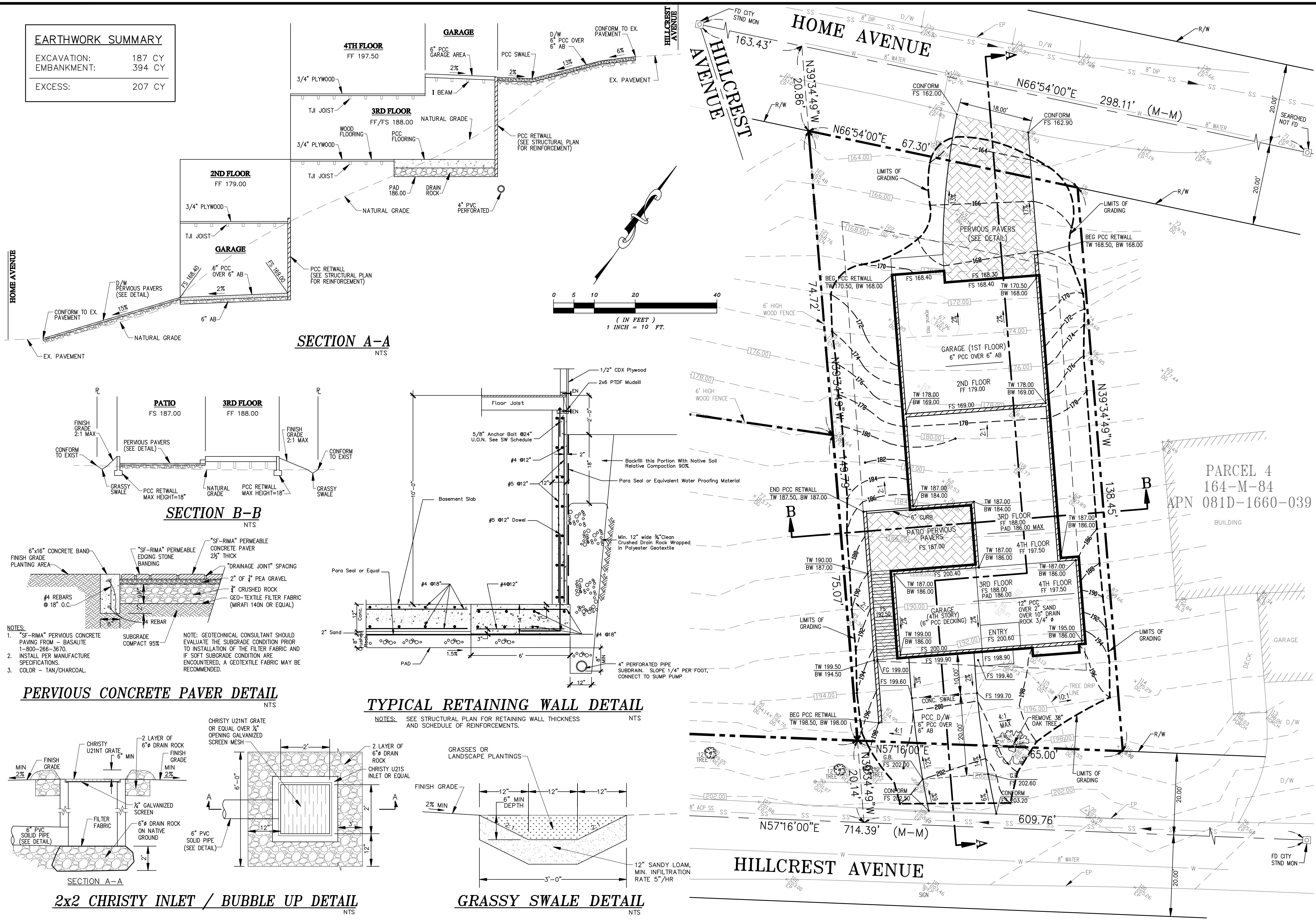
APPROVED BY: JACOB SAIDIAN, PROFESSIONAL ENGINEER, No. 33503, Exp. 08/20/18

CHECKED: JS, DRAWN: AG, DESIGNED: JS, SURVEYED: JS, SCALE: 1"=10', DATE: 05-06-2018

SHEET NO. **C1** OF 1
JOB NO. 401

EARTHWORK SUMMARY

EXCAVATION:	187 CY
EMBANKMENT:	394 CY
EXCESS:	207 CY



SECTION A-A
NTS

SECTION B-B
NTS

TYPICAL RETAINING WALL DETAIL
NTS

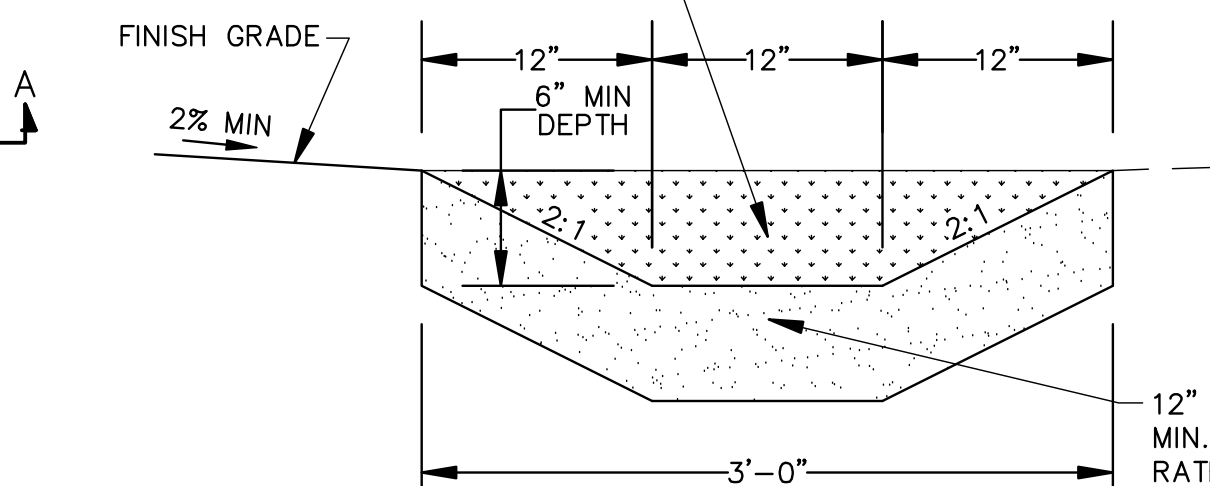
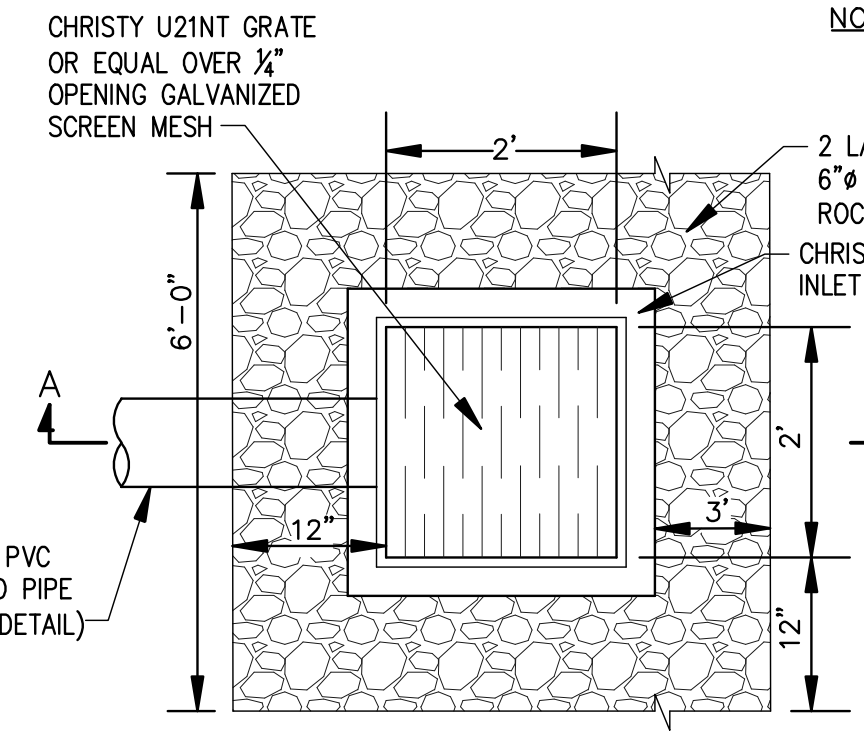
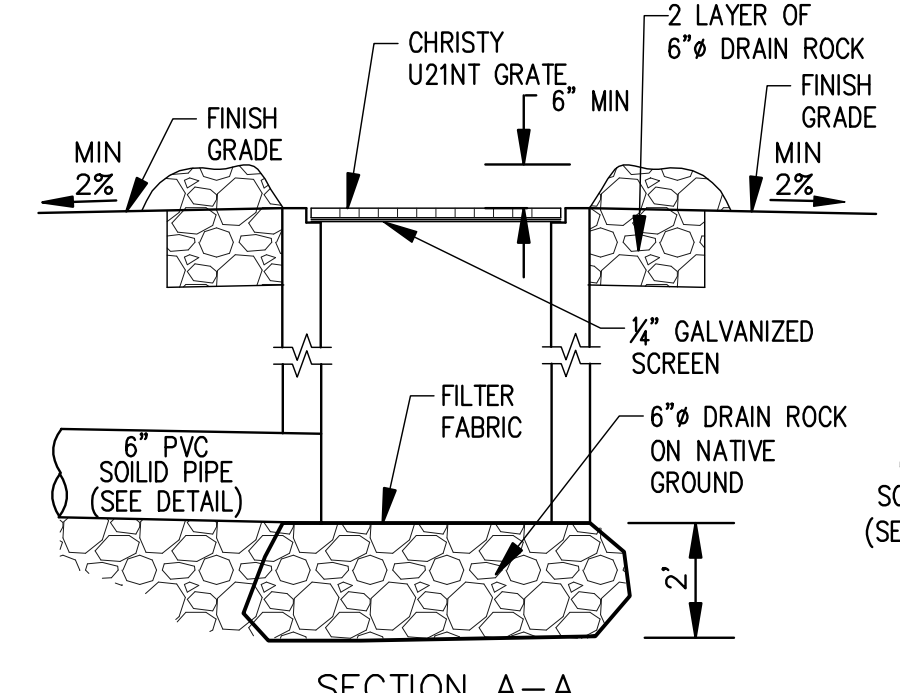
PERVIOUS CONCRETE PAVER DETAIL
NTS

GRASSY SWALE DETAIL
NTS

2x2 CHRISTY INLET / BUBBLE UP DETAIL
NTS

- NOTES:**
- "SF-RIMA" PERVIOUS CONCRETE PAVING FROM - BASALITE 1-800-266-3670.
 - INSTALL PER MANUFACTURE SPECIFICATIONS.
 - COLOR - TAN/CHARCOAL.
- NOTE:** GEOTECHNICAL CONSULTANT SHOULD EVALUATE THE SUBGRADE CONDITION PRIOR TO INSTALLATION OF THE FILTER FABRIC AND IF SOFT SUBGRADE CONDITION ARE ENCOUNTERED, A GEOTEXTILE FABRIC MAY BE RECOMMENDED.

NOTES: SEE STRUCTURAL PLAN FOR RETAINING WALL THICKNESS AND SCHEDULE OF REINFORCEMENTS.



ADVANCED DEVELOPMENT

2933 BENJAMIN COURT
SAN JOSE, CALIFORNIA 95124
(408) 376-0570
JACOB SAIDIAN - CIVIL ENGINEER

Revision	Date	Description

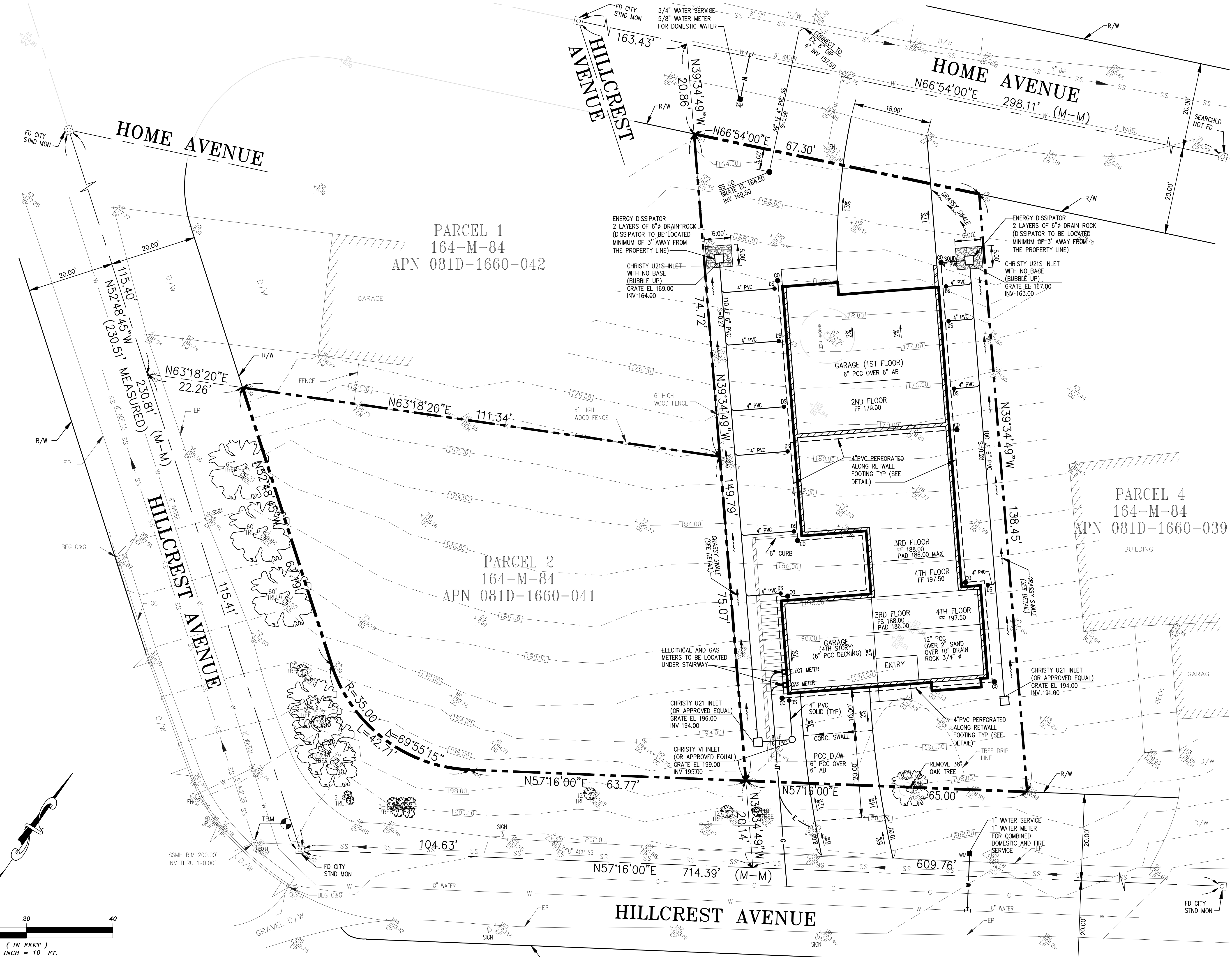
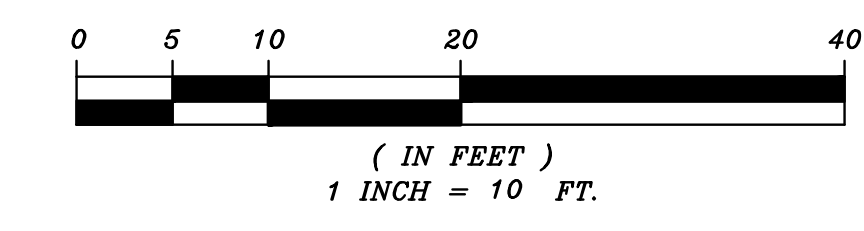
FOR: APN 081D-1660-040
2579 HOME AVENUE
HAYWARD CALIFORNIA

APPROVED BY: *Jacob Saidian*
MICHAEL SAIDIAN
No. 33503
Exp. 06/30/20
CIVIL ENGINEER

Checked: *Jacob Saidian*
Drawn: *Jacob Saidian*
Designed: *Jacob Saidian*
Surveyed: *Jacob Saidian*
Scale: 1"=10'
Date: 05-05-2020
Expires: 06/30/20

Sheet No. **C2**

Job No. 401



ADVANCED DEVELOPMENT

2983 BENJAMIN COURT
SAN JOSE, CALIFORNIA 95124
(408) 376-0570
JACOB SAIDIAN - CIVIL ENGINEER

Description	App'd	Date	Revision

UNDERGROUND UTILITY & DRAINAGE PLAN
FOR: APN 081D-1660-040
2579 HOME AVENUE
HAYWARD CALIFORNIA

PROFESSIONAL ENGINEER
JACOB SAIDIAN
No. 33503
Exp. 06/30/20
STATE OF CALIFORNIA

APPROVED BY:
MICHAEL SAIDIAN
P.C.E. No. 39509
EXPIRES 06/30/20

Checked: JS
Drawn: AG
Designed: JS
Surveyed: JS
Scale: 1"=10'
Date: 05-05-2020

Sheet No. **C3**

Job No. 401

TERMS AND DEFINITIONS

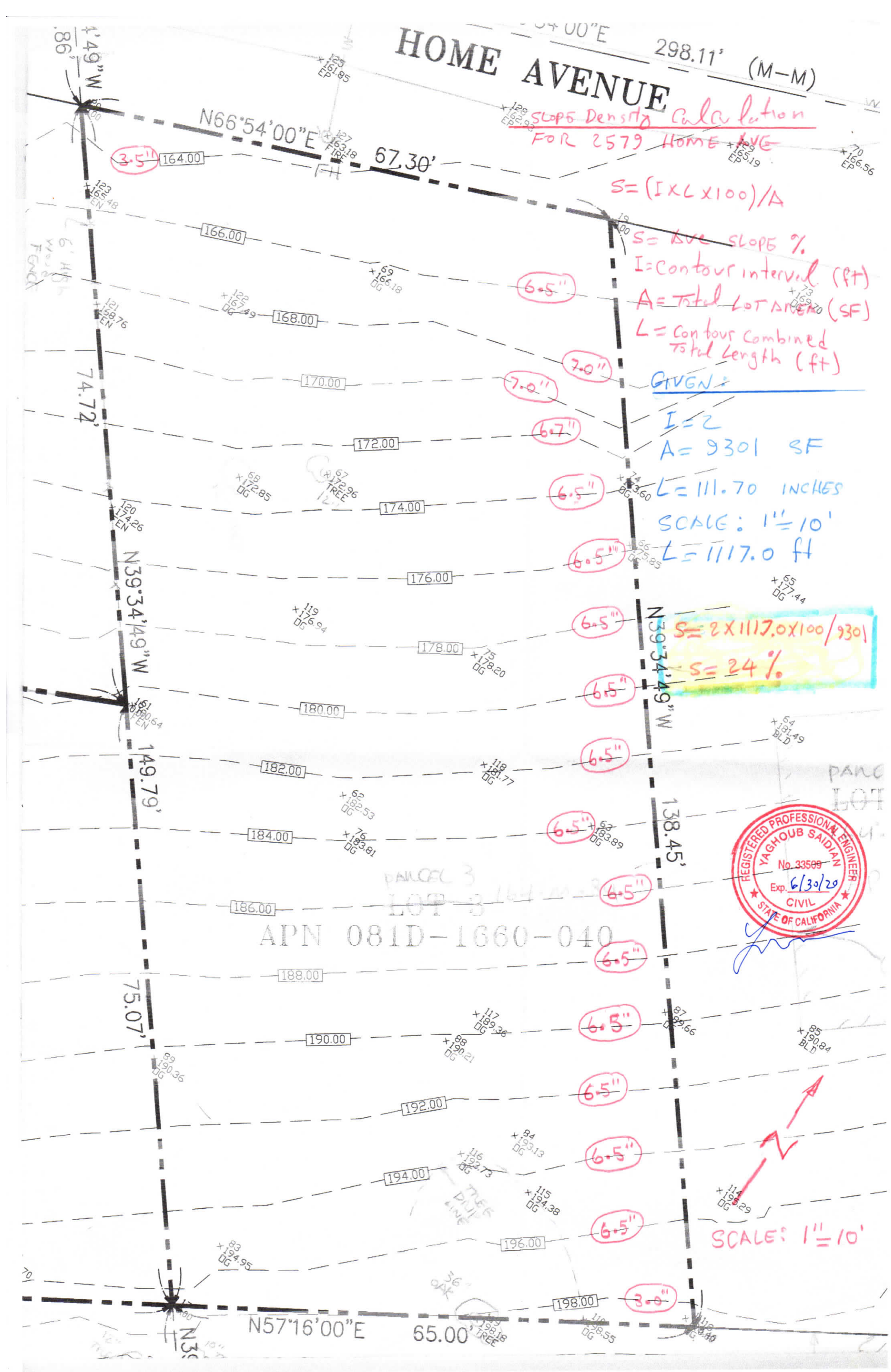
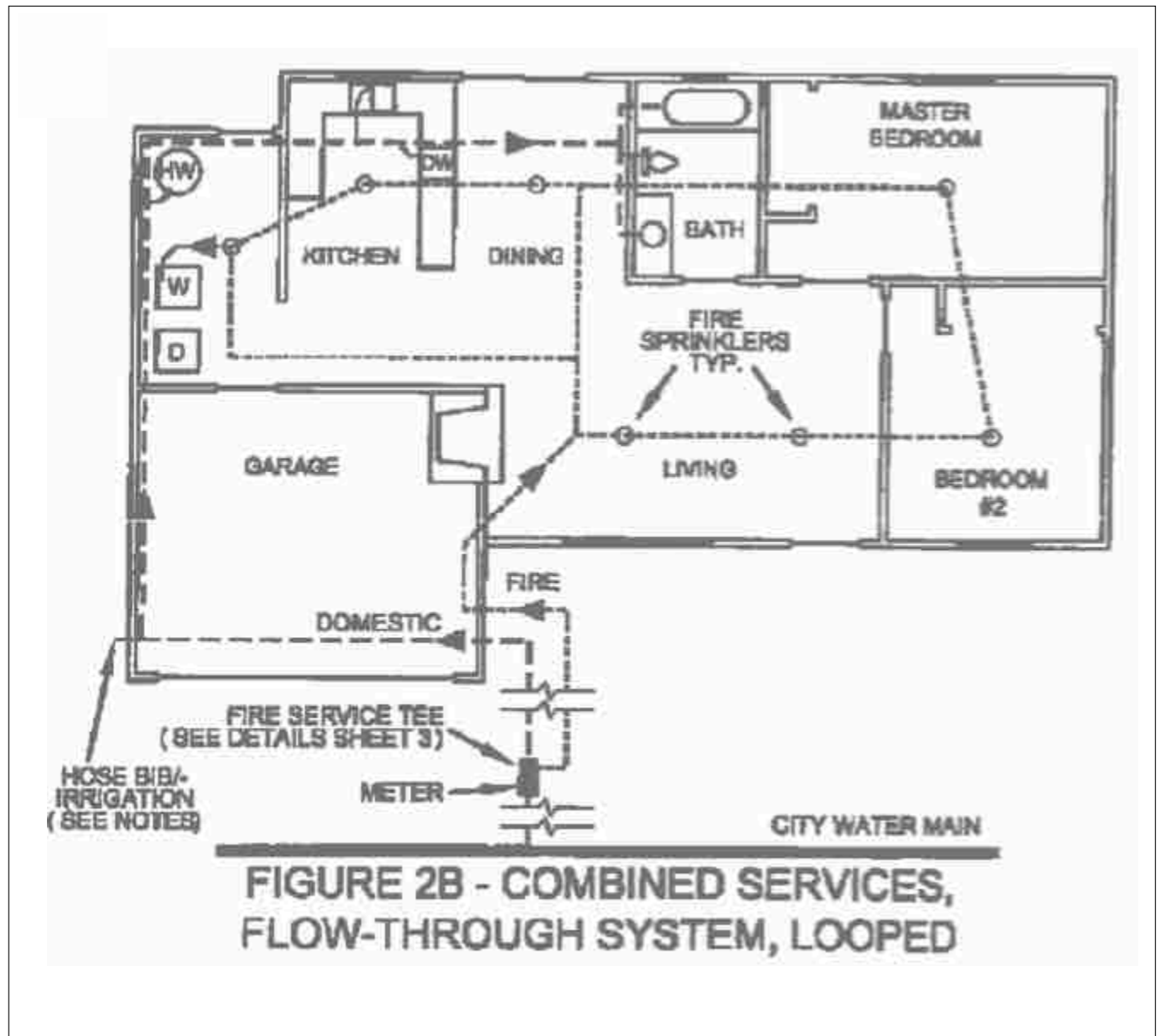
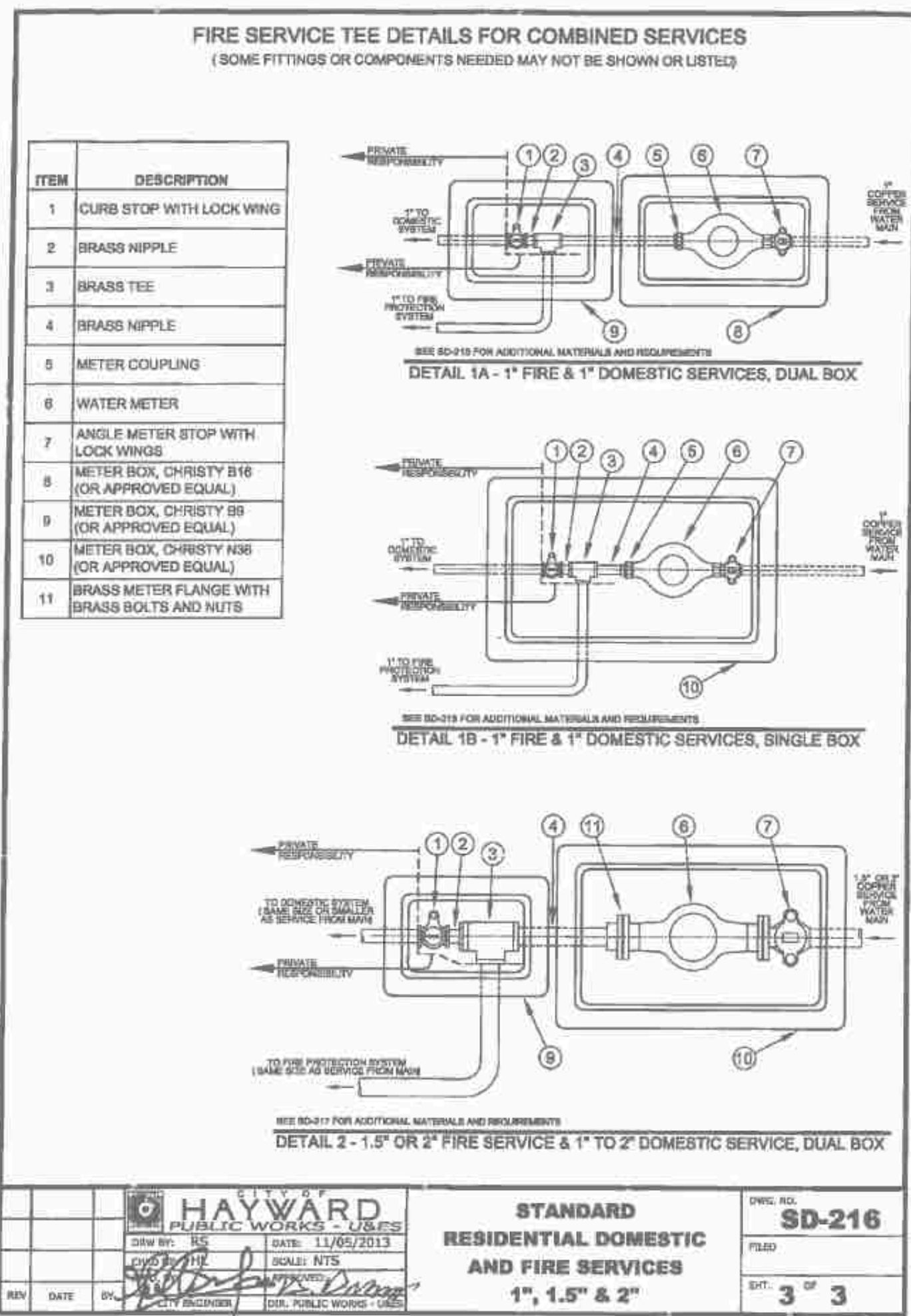
- RESIDENTIAL WATER SERVICES, ONE AND TWO FAMILY, 2" OR SMALLER
 - SEPARATE SERVICES: THE DOMESTIC SYSTEM AND STAND-ALONE FIRE PROTECTION SYSTEM ARE EACH SUPPLIED BY A SEPARATE SERVICE LINE AND METER. (SEE FIGURES 1A & 1B)
 - COMBINED SERVICE: THE DOMESTIC AND FIRE PROTECTION SYSTEMS SHARE A SINGLE SERVICE LINE AND METER. DOWNSTREAM THE METER, THE LINE MAY SUPPLY A MULTI-PURPOSE SYSTEM OR SPLIT TO SUPPLY SEPARATE DOMESTIC AND STAND-ALONE FIRE PROTECTION SYSTEMS. (SEE FIGURES 2A, 2B, 3A & 3B)
- RESIDENTIAL FIRE PROTECTION SYSTEMS
 - STAND-ALONE: SEPARATE AND INDEPENDENT FROM THE DOMESTIC SYSTEM.
 - CLOSED: DOES NOT CONNECT TO ANY DOMESTIC WATER FIXTURES AND CAN ONLY BE DRAINED THROUGH A RELIEF OR DRAIN VALVE. AT A MINIMUM, A DOUBLE CHECK VALVE ASSEMBLY (DCVA) BACKFLOW DEVICE (PER SD-201) IS REQUIRED ON ALL CLOSED SYSTEMS TO PROTECT THE DOMESTIC WATER SUPPLY. (SEE FIGURES 1A & 2A)
 - FLOW-THROUGH: CONNECTS TO ONE OR MORE DOMESTIC WATER FIXTURES SUCH THAT WATER IN THE SYSTEM IS REPLACED UPON USE OF THE FIXTURES; FLOW-THROUGH SYSTEMS MUST BE LOOPED OR SINGLE-MEANDER. (SEE FIGURES 1B & 2B)
 - MULTI-PURPOSE: USES THE SAME DISTRIBUTION PIPING WITHIN THE STRUCTURE TO SUPPLY THE DOMESTIC WATER FIXTURES AND FIRE SPRINKLERS. MULTI-PURPOSE SYSTEMS MUST BE LOOPED OR SINGLE-MEANDER, IF ALLOWED. (SEE FIGURES 3A & 3B)
- FIRE SPRINKLER PIPING LAYOUTS
 - BRANCHED: HAS DEAD-ENDS AT SOME SPRINKLER HEADS WHERE WATER COULD STAGNATE. (SEE FIGURES 1A & 2A)
 - LOOPED: HAS NO DEAD-ENDS AND FORMS ONE OR MORE LOOPS SUCH THAT WATER CAN CIRCULATE. (SEE FIGURES 2B & 3B)
 - SINGLE-MEANDER: ALL SPRINKLER HEADS ARE CONNECTED IN SERIES BY A SINGLE PIPING RUN. (SEE FIGURES 1B & 2B)

NOTES

- RESIDENTIAL FIRE PROTECTION SYSTEM SHALL BE DESIGNED BY A C-16 (FIRE PROTECTION) CALIFORNIA LICENSED CONTRACTOR OR A CALIFORNIA REGISTERED PROFESSIONAL ENGINEER (CIVIL, MECHANICAL, OR FIRE PROTECTION), AND PURSUANT TO THE CITY'S LATEST ADOPTED CALIFORNIA CODES & REGULATIONS INCLUDING, BUT NOT LIMITED TO: FIRE CODE (SEC. 900); CA RESIDENTIAL CODE (SEC. 1013); NFA 100, CA PLUMBING CODE (SEC. 803.4.16); CA ELECTRICAL CODE (ART. 700); NFPA 72; AND CA HEALTH & SAFETY CODE 19114.7.
- WATER SERVICES, FLOW-THROUGH AND MULTI-PURPOSE SYSTEMS WILL BE REVIEWED BY THE PUBLIC WORKS DEPARTMENT, UTILITIES & ENVIRONMENTAL SERVICES (UTILITIES). FIRE PROTECTION SYSTEMS WILL BE REVIEWED BY THE FIRE DEPARTMENT, FLOW-THROUGH AND MULTI-PURPOSE SYSTEMS WILL BE REVIEWED BY BOTH THE BUILDING AND FIRE DEPARTMENTS.
- THE DESIGN WATER PRESSURE FOR ALL FIRE PROTECTION SYSTEMS SHALL BE EITHER A MAXIMUM OF 80 PSI OR THE ACTUAL SUPPLY PRESSURE, WHICHEVER IS LOWER.
- THE FIRE SPRINKLER SYSTEM DEMAND FLOW RATE FOR COMBINED SERVICES THAT DO NOT INCLUDE A BACKFLOW DEVICE SHALL INCLUDE AN ADDITIONAL 5 GPM AT THE POINT WHERE THE SYSTEMS ARE CONNECTED (P13.5.5). IF THE TOTAL DEMAND EXCEEDS 100 GPM, THEN THE USE OF A SEPARATE FIRE SERVICE WILL BE REQUIRED.
- THE DOMESTIC WATER FIXTURES THAT A FLOW-THROUGH SYSTEM SUPPLIES SHALL BE A CLOTHES WASHER, DSB WASHER OR TOILET (ALTERNATE FIXTURES MAY BE PROPOSED). THE NUMBER AND KIND OF FIXTURES REQUIRED WILL DEPEND UPON THE LAYOUT AND SIZE OF THE SYSTEM AND STRUCTURE, AND SHALL BE DETERMINED BY UTILITIES. AT A MINIMUM, THE SYSTEM SHALL SUPPLY ONE FIXTURE PER FLOOR OF THE RESIDENCE.
 - FOR A SINGLE-MEANDER LAYOUT, THE SPRINKLER HEAD AT THE DOWNSTREAM END OF THE SYSTEM SHALL SUPPLY A FIXTURE.
 - WHERE THE LINE PRESSURE IN THE SPRINKLER SYSTEM IS GREATER THAN 80 PSI, A PRESSURE REDUCING VALVE (PRV) SHALL BE INSTALLED ON THE SUPPLY CONNECTION TO THE WATER FIXTURES; THE PRV MUST BE INSTALLED IMMEDIATELY DOWNSTREAM OF THE FIXTURES SHUT OFF VALVE AND LEFT UNOPENED, TO ALLOW FOR MAINTENANCE.
- FLOW-THROUGH AND MULTI-PURPOSE SYSTEMS SHALL HAVE LEAD-FREE SPRINKLER HEADS, VALVES AND FITTINGS (CA AB 1985).
- IN MULTI-PURPOSE SYSTEMS, IF A WATER SOFTENER OR FILTRATION DEVICE WILL BE USED THAT MAY RESTRICT FLOW OR REDUCE WATER PRESSURE TO THE FIRE SPRINKLERS, THE DEVICE MUST BE INCLUDED IN THE DESIGN OF THE SYSTEM.
- SERVICE AND METER SIZING**
 - METERS SHALL BE THE SAME SIZE AS THE SERVICE LINE FROM THE WATER MAIN.
 - DOMESTIC, IRRIGATION AND FIRE SERVICE LINES SHALL BE THE SAME SIZE OR SMALLER THAN THE METER SIZE.
 - MANIFOLDS THAT SUPPLY "MANIFOLD" METERS ARE NOT ALLOWED TO SUPPLY FIRE PROTECTION SYSTEMS.
- DOMESTIC AND IRRIGATION SYSTEMS: THE SIZE OF THE METER, SUPPLY AND SERVICE LINES SHALL BE 80% PER 80% OF THE MAXIMUM FLOW RATING OF THE METER. PER AWWA, THE 80% MAX FLOW RATING OF DISPLACEMENT METERS ARE:

1/2" = 15 GPM	3/4" = 25 GPM	1" = 40 GPM	1.5" = 60 GPM	2" = 100 GPM
---------------	---------------	-------------	---------------	--------------
- MULTI-PURPOSE AND SEPARATE FIRE SYSTEMS: THE SIZE OF THE METER, SUPPLY AND SERVICE LINES SHALL BE SIZED PER THE MAXIMUM INTERMITTENT FLOW RATING OF THE METER. PER AWWA, THE MAX INTERMITTENT FLOW RATING OF DISPLACEMENT METERS ARE:

1" = 80 GPM	1.5" = 100 GPM	2" = 180 GPM
-------------	----------------	--------------
- FIRE AND COMBINED SERVICES SHALL CONFORM TO SD-213 FOR 1" SERVICE AND SD-217 FOR 1.5" AND 2" SERVICES EXCEPT AS SPECIFIED HEREIN. OTHERWISE, SERVICE CONNECTIONS 2" AND SMALLER SHALL CONFORM TO STANDARD DETAILS SD-213 THRU SD-216 AND SD-217 THRU SD-218.
- ALL HOSE BIBS AND IRRIGATION SYSTEMS SHALL BE EQUIPPED WITH ATMOSPHERIC VACUUM BREAKERS/ANTI-SIPHON DEVICES.
- AS A CONDITION OF FINAL APPROVAL, THE OWNER/DESIGNER/CONTRACTOR SHALL INSTALL A VALVE SIGN OR TAG AT THE MAIN SHUTOFF VALVE TO THE WATER DISTRIBUTION SYSTEM (ITEM #17 SHEET 3) WITH THE FOLLOWING TEXT: "WARNING: THE WATER SYSTEM FOR THIS HOME SUPPLIES FIRE SPRINKLERS THAT REQUIRE CERTAIN FLOWS AND PRESSURES TO FIGHT A FIRE. DEVICES THAT RESTRICT THE FLOW OR DECREASE THE PRESSURE OR AUTOMATICALLY SHUT OFF THE WATER TO THE FIRE SPRINKLER SYSTEM, SUCH AS WATER SOFTENERS, FILTRATION SYSTEMS AND AUTOMATIC SHUTOFF VALVES, SHALL NOT BE ADDED TO THIS SYSTEM WITHOUT A REVIEW OF THE FIRE SPRINKLER SYSTEM BY A FIRE PROTECTION SPECIALIST. DO NOT REMOVE THIS SIGN." (CA 1213.5.7) THE SIGN OR TAG SHALL BE OF MATERIAL SUITABLE FOR WEATHER BURIAL, MIN. TEXT HEIGHT 0.2 INCHES.

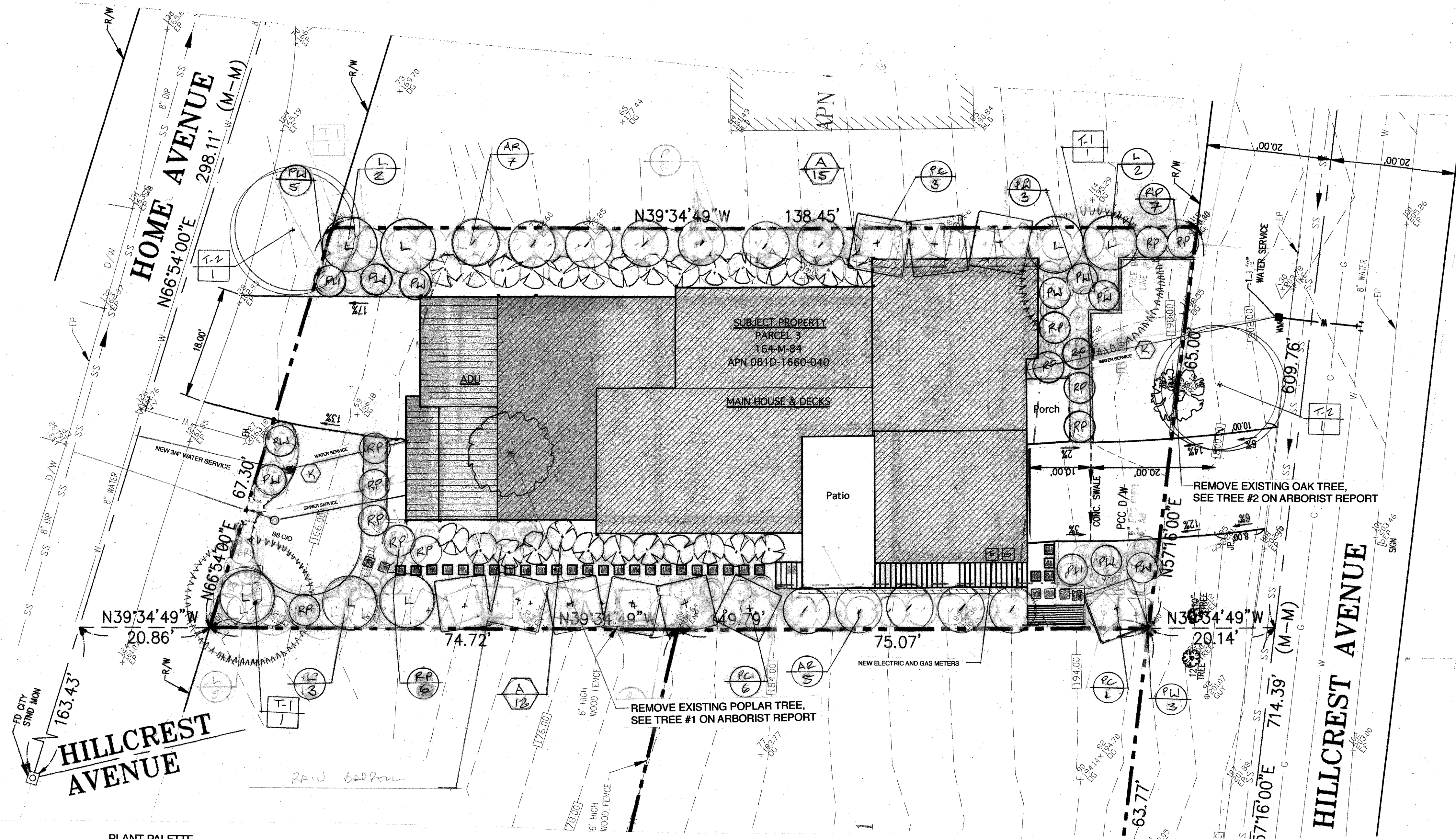


FIRE SERVICES

SLOPE CALCULATION

REVISIONS	REMARKS
MM/DD/YY	
1	
2	
3	
4	
5	

**APN 081D-1660-040
DOMESTIC & FIRE SERVICES
SLOPE CALCULATION**



USA NORTH 811
Call 811 Before You Dig

BAY-FRIENDLY WATER EFFICIENT LANDSCAPE ORDINANCE AND DOCUMENTATION PACKAGE

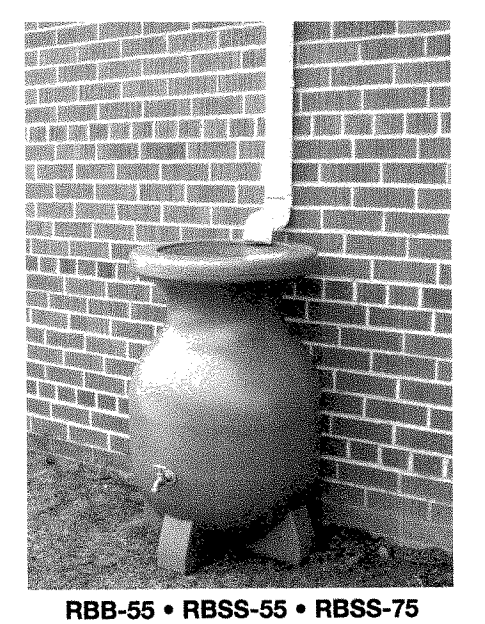
WE HAVE COMPLIED WITH THE CRITERIA OF THE CITY OF HAYWARD BAY-FRIENDLY WATER EFFICIENT LANDSCAPE ORDINANCE, HAYWARD MUNICIPAL CODE CHAPTER 10, ARTICLE 12, AND APPLIED THEM FOR THE EFFICIENT USE OF WATER IN THE LANDSCAPE DESIGN PLAN.

WE AGREE TO COMPLY WITH THE REQUIREMENTS OF THE WATER EFFICIENT LANDSCAPE ORDINANCE AND SUBMIT A COMPLETE LANDSCAPE DOCUMENTATION PACKAGE.

JON NELSON, PRINCIPAL

MARCH 28, 2020

KoolScapes
RAIN BARRELS
BARILS PLUVIAL



RBB-55 • RBSS-55 • RBSS-75

Installation Manual
Guide d'installation

YOU WILL NEED

- Downspout Diverter (1) (to be purchased separately)
- Hack saw
- Level
- Drill with 1/4" Drill Bit and screws to secure the downspout diverter to the downspout

TO START

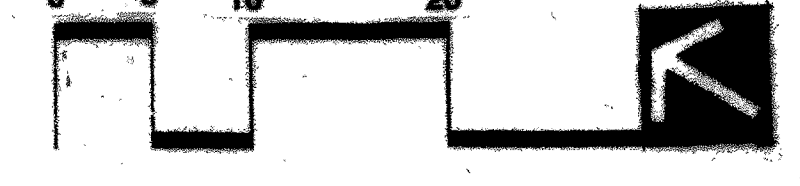
- Start by choosing a location for the KoolScapes™ Environmental Rain Barrel where there is a downspout nearby.
- Place the Downspout Diverter (1) on the top of the Rain Barrel and hold it up to the downspout and mark a line with a pencil.
- Using the Hack saw cut a straight line at the mark you just made.
- Place the Screen Guard (2) in the open area on the top of the Rain Barrel.
- Attach a downspout diverter to the downspout and connect so that it sits on the screen guard on the top of the Rain Barrel.
- Using the Level ensure your Rain Barrel is level to avoid tipping when full.
- Ensure that the signs (3) fit inserted into the fitting in the bottom front of the Rain Barrel - turn in clock wise direction until it is seated tight.
- Ensure that the drain plug (4) is also seated tight by also turning it in clock wise.

CARE AND MAINTENANCE

- The KoolScapes™ Environmental Rain Barrel needs little care.
- There is an overflow spout (5) in the back to prevent water from overflowing out the top of the Rain Barrel. To divert the water away from your home simply attach a backwash hose to the overflow spout and run through your garden or lawn for slow watering.
 - Also if you get a lot of rainfall in your area you may want to have several rain barrels to harvest the rainwater. To connect another Rain Barrel you will need to attach tubing to the overflow spout and secure with a clamp. Connect the other end of the tubing to the overflow spout of the second rain barrel and secure with a clamp.

PLAN VIEW

Scale 1" = 10'-0"



AUTOMATIC IRRIGATION SHALL COVER 100% OF PLANTED AREA

REVISIONS	DATE
5.5.2020 ADD UTILITY METERS	
10.21.2020 PLAN CHECK COMMENTS	

I.R. NELSON & ASSOCIATES, INC.
23585 SUMMIT ROAD 95033
LOS GATOS, CALIFORNIA
PHONE (408) 591-0873 EMAIL: CNDEV@AOL.COM

LANDSCAPE PLANNING FOR:
BRAD SWITZER
2579 HOME AVENUE
HAYWARD, CALIFORNIA

LANDSCAPE PLAN

DESIGNED BY	JON NELSON
CHECKED BY	JON NELSON
DATE	3.28.2020
SCALE	1" = 10'-0"
SHEET NO.	1 OF 1
PROJECT	2579 HOME AVENUE HAYWARD

PLANT PALETTE

KEY	QUANTITY	SIZE	BOTANICAL NAME	COMMON NAME	NOTES	WUCOLS IV RATING	HEIGHT X WIDTH
TREES							
T-1	2	24" BOX	LAGERSTROEMIA "TUSCARORA"	GRAPE MYRTLE	STANDARD	LOW	22'-0" X 12'-0"
T-2	2	24" BOX	PISTACIA CHINENSIS	CHINESE PISTACHE	STANDARD CITY STREET TREE	LOW	25'-0" X 25'-0"
SHRUBS							
AR	12	1 GALLON	AREBUTUS UNEDO "ELFIN KING"	STRAWBERRY TREE	COMPACT	LOW	6'-0" X 4'-0"
L	7	1 GALLON	LOROPETLUM "RAZZLEBERRY"	FRINGE FLOWER		LOW	8'-0" X 6'-0"
PC	10	1 GALLON	PRUNUS CAROLIANA "COMPACTA"	CAROLINA CHERRY		LOW	10'-0" X 10'-0"
PW	11	1 GALLON	PITOSPORUM TOBIIRA "CREAM D'AMINT"	PITOSPORUM		LOW	4'-0" X 4'-0"
RP	13	1 GALLON	RHAPHOLEPS "PINKIE"	INDIAN HAWTHORN		LOW	4'-0" X 4'-0"
GROUND COVER							
A	27	1 GALLON	ARCTOSTAPHYLOS "EMERALD CARPET"	MANZANITA		LOW	1'-0" X 6'-0"
K	850#	SOD	PHYLLOXEROPHYLLA	KURAPPA		LOW	4" X 3'-0"
SYMBOLS							
ST	34	18" X 18"	CONCRETE STEPPING STONES	SQUARE GREY	SMOOTH		18" X 18"
RB	2	55 GAL	KOOLSCAPE	RAIN BARREL	RBSS-55		55 GALLON
PLANT MIX							
			% OF LOW WATER USE				
	4		24" BOX TREES	LOW WATER USE	LOW		4%
	53		1 GALLON SHRUBS	LOW WATER USE	LOW		64%
	27		1 GALLON GR CVR	LOW WATER USE	LOW		32%
	850#		GROUND COVER	LOW WATER USE	LOW		
			SUBTOTAL	LOW WATER USE	LOW		100%

MWELC Calcs - Residential
2579 HOME AVENUE
HAYWARD

Hydrozones
Zone number 1 Plant factor Low.3 Irrigation type Drip
Area in square feet (number only) 3850

Zone	Plant Factor	Irr.	Irr. Eff. (PF/IE)	ETAF Area	ETAF x Area	ETWU Delete
1	.3	Drip	0.81	0.37	3850 s.f.	1,425
TOTALS					3,850 s.f.	38,988 gal/yr

TOTAL SPECIAL LANDSCAPE AREA 0 s.f.

MAWA: 57,897 gal/yr
ETWU: 38,988 gal/yr
HAYWARD ANNUAL Eto = 44.1in

Project Name and City
Project name 2579 HOME AVENUE
Choose city (for ETo data) HAYWARD

PLANTING SOURCED BY:
EBMUD- WATER CONSERVING PLANTS AND LANDSCAPES FOR THE BAY AREA
UNIVERSITY OF CALIFORNIA- WATER USE CLASSIFICATION OF LANDSCAPE SPECIES, CURRENT VERSION WUCOLS IV
SOIL TYPE: CLAY LOAM

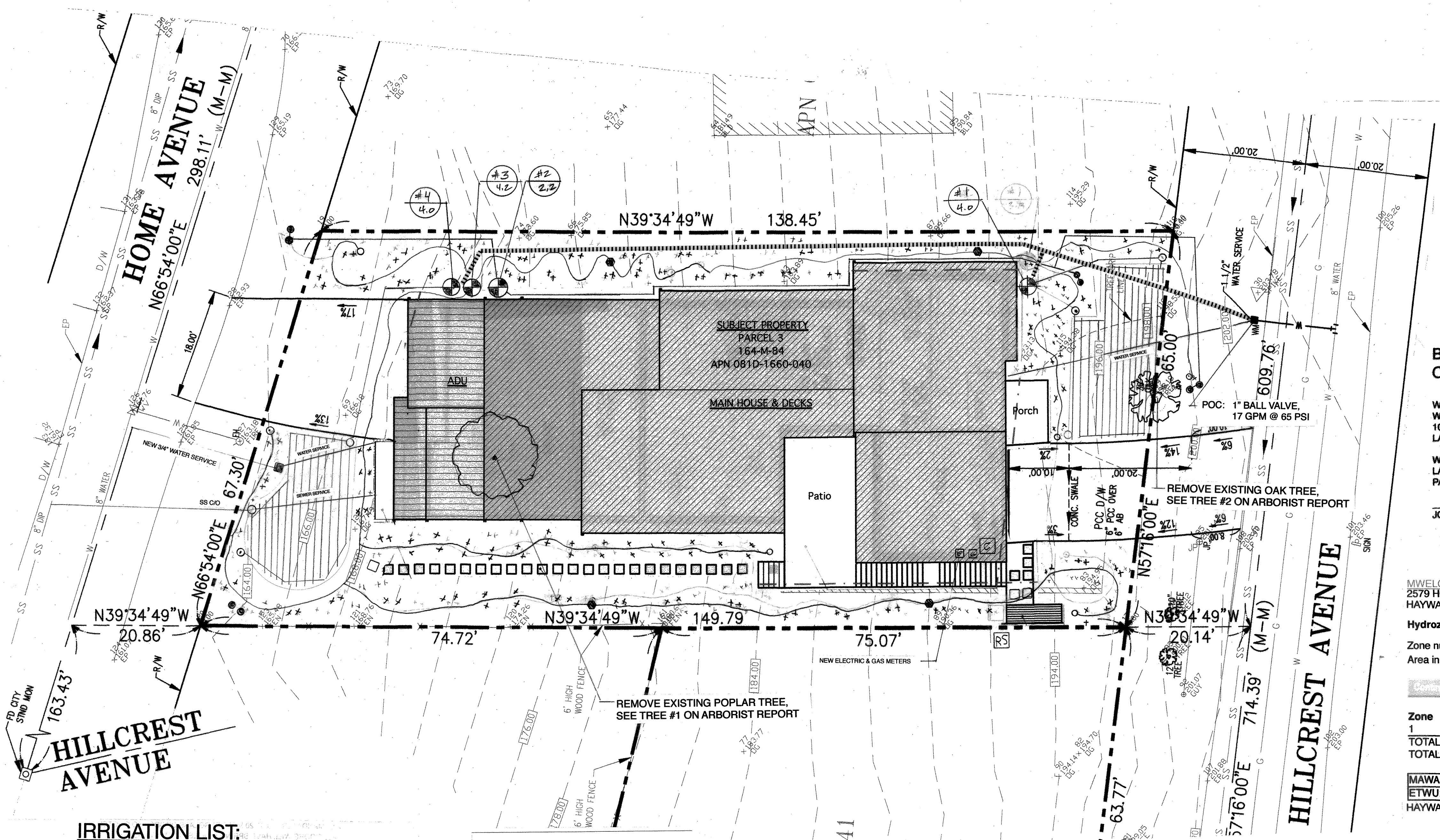
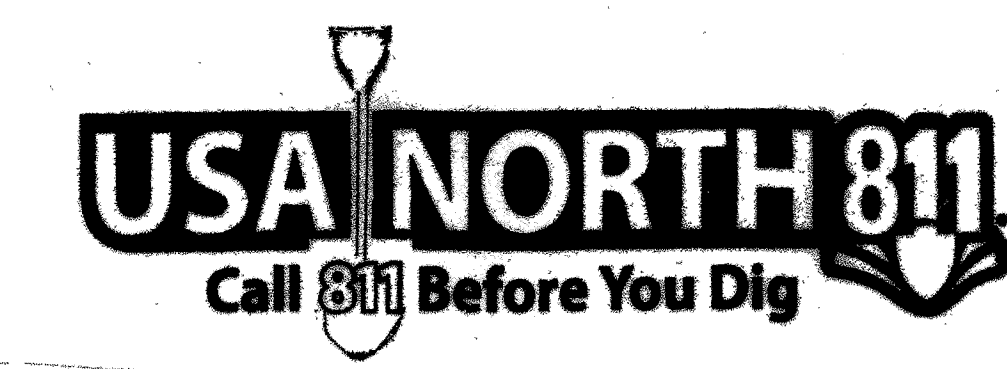
TREE MITIGATION SUMMARY CHART: 2579 HOME AVE, HAYWARD 10.27.2020

Tree ID Number	Tree Species	Trunk Diameter (inches)	Protected	Status	Appraised Value
#1	Poplar	5.8, 7.8 and 6.2	Yes	Removal	\$340.00
#2	Oak	20.5	Yes	Removal	\$6,200.00
Total Value For Preservation Bond					0.00
Total Value For Mitigation					\$6,570.00

Required Trees	Required Tree Qty/size/ installed unit cost	Proposed tree quantity size	Unit Cost Difference	Mitigation Value
Street Trees	2-24" Box @ \$350 each	2-24" Box @ \$350.00	0.00	0.00
Screening Trees	0 2-24" Box @ \$350.00	0 2-24" Box @ \$350.00	\$700.00	\$700.00
TOTAL				\$6,570.00
MITIGATION GOAL				\$700.00
BALANCE				\$6,870.00

3. WHEN PROPOSED MITIGATION IS BELOW THE GOAL:
Provide Item No. 1 and No. 2 and provide the chart below for permitted mitigation

Standard Material/ Installed Unit Cost/SF	Proposed Material/ Installed Unit Cost/ SF	Unit Cost Difference	Total Square Footage/ SF	Mitigation Value \$
AC Paving for driveway	Permeable Pavers	\$25.00/ SF	1,224 SF	\$27,540.00
Standard Grey Concrete sidewalk	Permeable Pavers	\$25.00/ SF	39 SF	\$790.50
\$4.50 (SF) stepping stones	\$25.00/ SF	\$20.50/ SF	136 SF	\$2,780.00
\$4.50 (SF)	\$25.00/ SF	\$20.50/ SF		
MITIGATION TOTAL				\$31,127.50



BAY-FRIENDLY WATER EFFICIENT LANDSCAPE ORDINANCE AND DOCUMENTATION PACKAGE

WE HAVE COMPLIED WITH THE CRITERIA OF THE CITY OF HAYWARD BAY-FRIENDLY WATER EFFICIENT LANDSCAPE ORDINANCE, HAYWARD MUNICIPAL CODE CHAPTER 10, ARTICLE 12, AND APPLIED THEM FOR THE EFFICIENT USE OF WATER IN THE LANDSCAPE DESIGN PLAN.

WE AGREE TO COMPLY WITH THE REQUIREMENTS OF THE WATER EFFICIENT LANDSCAPE ORDINANCE AND SUBMIT A COMPLETE LANDSCAPE DOCUMENTATION PACKAGE.

JON NELSON, PRINCIPAL

MARCH 28, 2020

MWELO Calcs - Residential
2579 HOME AVENUE
HAYWARD

Hydrozones

Zone number 1 Plant factor Low.3 Irrigation type Drip
Area in square feet (number only) 3850

Zone	Plant Factor	Irr. Irr. Eff. (PF/E)	Area	ETAF x Area	ETWU Delete
1	.3	0.81 0.37	3850 s.f.	1,425	38,988
TOTALS			3,850 s.f.		38,988 gal/yr
			TOTAL SPECIAL LANDSCAPE AREA	0 s.f.	

MAWA: 57,897 gal/yr
ETWU: 38,988 gal/yr
HAYWARD ANNUAL Eto = 44.1in

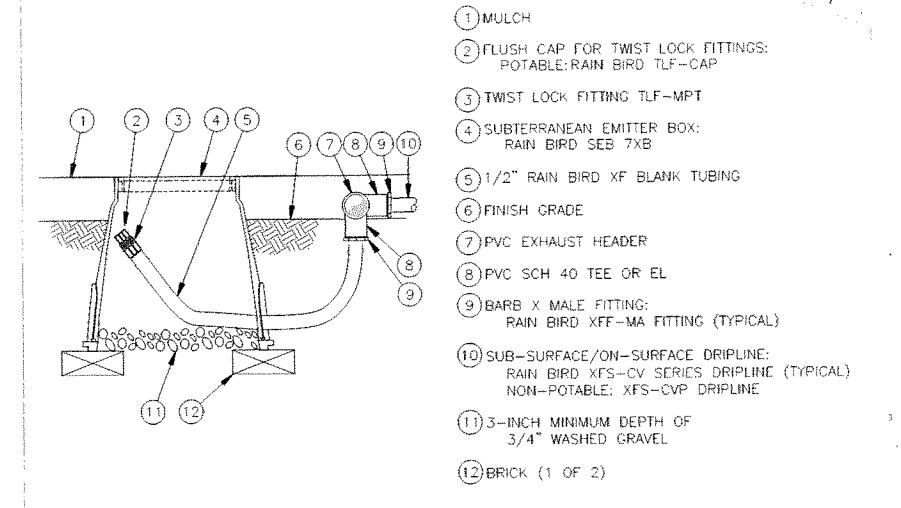
Project Name and City

Project name 2579 HOME AVENUE

Choose city (for ETo data) HAYWARD

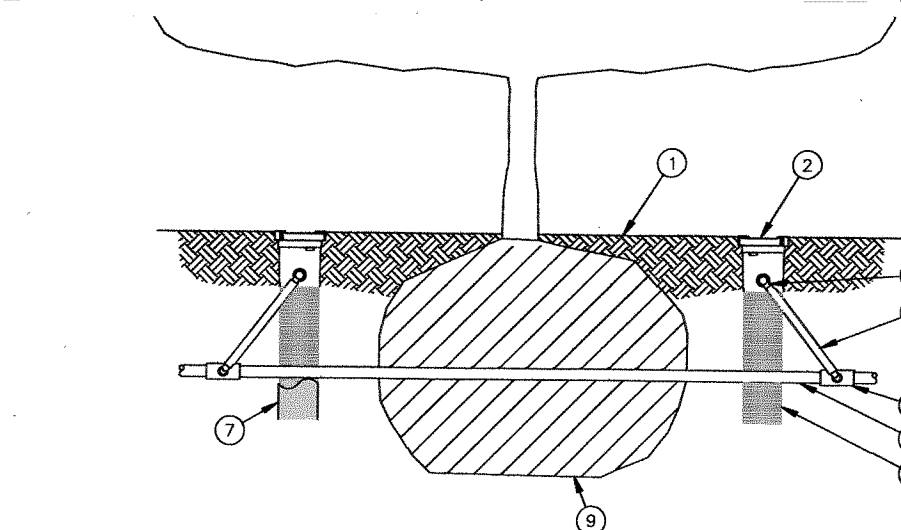
IRRIGATION LIST:

SYMBOL	SIZE	NAME/NOTES
	1"	WATER METER, CITY OF HAYWARD MIN 15 GPM, 65 PSI
		HUNTER X-CORE #XC-600I WALL MOUNT TO GARAGE INTERIOR WALL, 6 STATION CONTROLLER
		HUNTER SOLAR SENSOR MOUNT TO SIDE YARD FENCE, RUN WIRE TO GARAGE IRRIGATION CONTROLLER
	1"	RAINBIRD VALVE #XACZ-100 PRF, ASVF WITH 1" PR #RBY FILTER INSTALL PER LOCAL CODES USING A 1" PVC BALL VALVE
		RAINBIRD DRIP TECHLINE, RAINBIRD #XFS-06-12, 0.5 GPH, WITH 12" SPACING, X ROW SPACING OF 12" OC, INSTALL AT A DEPTH OF 4" WITH A 1" PVC HEADER AND FOOTER PIPE.
		RAINBIRD DRIP EMITTER, RAINBIRD #XB-10PC (BLACK, 1.0 GPM), PRESSURE COMPENSATING MODULE CONSTRUCTION.
	1/2"	RAINBIRD ROOT WATERING SYSTEM (#RWS-M, BUBBLER #1401, 0.25 GPM)
	3/4"	NDS PRO ADJUSTABLE INLINE CHECKVALVE #CV-0750-FF, INSTALL IN ROUND VALVE BOX
	1/2"	AIR VALVE, RAINBIRD #ARV050 AIR RELIEF VALVE INSTALL IN CARSON R-910 VALVE BOX
	1/2"	FLUSH VALVE, NETAFIM #TLFV-1, INSTALL IN A CARSON R-910 VALVE BOX
	3/4"	BLACK POLY PLASTIC DISTRIBUTION LINE, 4" DEEP, STAKE EVERY 5'-0" OC USING WIRE STAKES
	1"	MAINLINE SCH 40 PVC PIPE, 18" MIN DEPTH



NOTE: ALLOW A MINIMUM OF 6-INCHES OF DRIPLINE TUBING IN VALVE BOX IN ORDER TO DIRECT FLUSHED WATER OUTSIDE VALVE BOX.

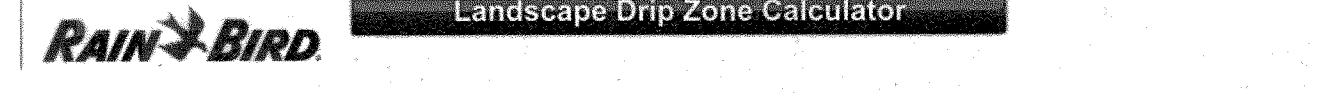
XFS-CV SUB-SURFACE/ON-SURFACE DRIPLINE FLUSH POINT WITH RAIN BIRD TLF FITTINGS



NOTES:
1. POSITION 2-3 UNITS (OR MORE) EVENLY SPACED AROUND PLANT. FOR NEW TREES PLACE NEAR ROOT BALL. FOR EXISTING TREES PLACE HALF THE DISTANCE BETWEEN CANOPY EDGE AND TREE TRUNK.
2. INSTALL PRODUCT WITH TOP EVEN WITH FINISH GRADE OR TOP OF MULCH.
3. RWS-M SERIES AVAILABLE IN THE FOLLOWING MODELS:
RWS-M-B-C-1401: 0.25 GPM (0.95 L/M), CHECK VALVE
RWS-M-B-1402: 0.25 GPM (0.95 L/M)
RWS-M-B-1403: 0.5 GPM (1.9 L/M), CHECK VALVE
RWS-M-B-1404: 0.5 GPM (1.9 L/M)
4. WHEN INSTALLING IN EXTREMELY HARD OR CLAY SOILS, ADD 3/4" (1.9 CM) GRAVEL UNDER AND AROUND THE UNIT TO ALLOW FASTER WATER INFILTRATION AND ROOT PENETRATION.
5. ONCE RWS-M HAS BEEN INSTALLED IN THE BASKET WITH PEA GRAVEL BEFORE LOCKING LID.
6. OPTIONAL RWS-SOCK FOR USE IN SANDY SOILS.

ROOT WATERING SYSTEM RWS-M INSTALLATION FOR TREES

**VALVE SPEC (VALVE #1 & #4)
FOR RAINBIRD XFS DRIPLINE**



Questions

1. What type of area are you trying to irrigate? Shrub & Groundcover - Sub-surface

2. What is the type of soil within the irrigated area? Sandy Loam (Loam)

3. Is this a sloped installation? Yes

4. How much area will be irrigated (sq ft)?

5. What is the outlet pressure after the pressure regulator?

Recommendations

Below are the recommendations and results of your drip tubing calculations. You may select a new drip tubing Type, Part Number or enter a new Row Spacing to recalculate the results as required.

Recommended Drip Tubing	Type	Part Number	Emitter Flow	Emitter Spacing	Row Spacing	Recommended Row Spacing
XFS Dripline	XFS-06-12	0.9 GPM	18 in	18	18-21 in	
Total Drip Zone Flow:		3.83 GPM				
Maximum Lateral Length of Tubing:		294 ft				
Total Length of Zone Dripline Required:		284 ft				
Application Rate:		0.64 in/hr				
Time to Apply 1" of Water:		23 minutes (based on a 90% system efficiency)				

Recommended Control Valve Kits

Part Number	Inlet Size	Outlet Size	Flow Range	Inlet Pressure Range	Regulated Pressure
XCCZ-075-PRF	0.75 in	0.75 in	0.2 - 5 GPM	15 - 120 psi	30 psi
XACCZ-075-PRF	0.75 in	0.75 in	0.2 - 5 GPM	20 - 120 psi	30 psi
XCCZ-LF-100-PRF	1 in	0.75 in	0.2 - 5 GPM	20 - 120 psi	30 psi

Required Number of Stakes: 71
Recommended Number of Flush Points: 1
Suggested Header and Footer Pipe Size: Class 315 1/2"

All relief to be installed at all high points within the zone - refer to the XFS Series design guide for recommendations.

VALVE DEMAND

VALVE NUMBER	GPM DEMAND	DELIVERY TYPE	VALVE SIZE	LOCATION
#1	4.0	DRIPLINE	1"	SUN-GRCVR
#2	2.2	BUBBLER	3/4"	SUN-TREE
#3	3.3	DRIPLINE	1"	SUN-SHRUB
#4	4.0	DRIPLINE	1"	SUN-GRCVR

PLAN VIEW

Scale 1" = 10'-0"



AUTOMATIC IRRIGATION SHALL COVER 100% OF PLANTED AREA

REVISIONS	BY
5.5.2020 ADD UTILITY METERS	
10/21/2020 PLAN CHECK COMMENTS	

I.R. NELSON & ASSOCIATES, INC.
23585 SUMMIT ROAD
LOS GATOS, CALIFORNIA 95033
PHONE (408) 591-0873 EMAIL: CNDEV@AOL.COM

LANDSCAPE PLANNING FOR:
BRAD SWITZER
2579 HOME AVENUE
HAYWARD, CALIFORNIA

DESIGN
JRN
CHECKED
DATE
3/26/20
1" = 10'-0"
JOB NO.
HAYWARD
SHEET

L-2
SHEETS

PLANTING NOTES

THE CONTRACTOR SHALL LOCATE AND VERIFY THE EXISTENCE OF ALL UTILITIES PRIOR TO STARTING WORK.
 PRIOR TO BIDDING AND QUOTING COSTS FOR THIS PROJECT THE LANDSCAPE CONTRACTOR SHALL VISIT THE SITE AND BECOME FAMILIAR WITH ALL EXISTING CONTROLS, PIPING, WIRING AND ANY NEEDED IMPROVEMENTS THAT ARE REQUIRED TO COMPLETE BOTH THE AUTOMATIC IRRIGATION AND LANDSCAPING SHOWN ON THIS PLANSET. SEVERAL TREES AND SHRUBS WILL BE REMOVED, OTHERS WILL BE SAVED IF AT ALL POSSIBLE. PLEASE REVIEW THIS PLAN THOROUGHLY BEFORE BIDDING AND START OF IRRIGATION AND PLANTING OPERATIONS.

ALL WORK TO BE PERFORMED BY PERSONS FAMILIAR WITH THIS TYPE OF WORK AND UNDER THE SUPERVISION OF A QUALIFIED PLANTING FOREMAN.
 ALL WORK PERFORMED NEAR SIDEWALKS, DRIVEWAYS, ROADS, OR TEMPORARY WALKWAYS SHALL BE FENCED OFF TO PREVENT ANY ACCESS OTHER THAN LANDSCAPE CONTRACTORS PERSONAL. ALL WALKWAYS SHALL BE SWEEP DOWN WHEN NEEDED TO PROMOTE A SAFE WORKPLACE.

ALL LANDSCAPED AREAS SHALL RECEIVE AN AUTOMATIC IRRIGATION SYSTEM WHICH WILL WATER 100% OF PLANTED AREAS WITH A MINIMUM OF RUNOFF TO STREETS AND SIDEWALKS. IRRIGATION WILL ADJUSTED TO ELIMINATE OVER AND UNDER SPRAY ON ALL BUILDINGS, FENCES AND CARLS. THIS SYSTEM SHALL BE SET TO WATER LANDSCAPED AREAS DURING THE NIGHT TIME OR AS EARLY IN THE MORNING AS POSSIBLE TO REDUCE WATER LOST TO EVAPORATION (10 PM UNTIL 6:00 AM ONLY) IRRIGATION CONTROLLER SHALL ALSO HAVE A RAIN SENSOR INSTALLED TO OVERRIDE THE AUTOMATIC SYSTEM.

ALL PLANTING AREAS AND TREE/SHRUB PLANTING HOLES SHALL BE FREE FROM ROCKS AND CONSTRUCTION DEBRIS LARGER THAN 2" IN DIAMETER.

ALL LANDSCAPED AREAS SHALL HAVE NITRIIFIED REDWOOD SAWDUST ROTOTILLED INTO THE TOP 6" OF SOIL. THE APPLICATION RATE WILL BE 6 CUBIC YARDS OF NITRIIFIED SAWDUST PER 1000 SQUARE FEET OF AREA. THIS AMOUNTS TO A 2" LAYER OF SAWDUST INCORPORATED AS SOIL AMENDMENT INTO THE EXISTING SOIL.

FINISH SOIL GRADE SHALL BE 1" BELOW TOP OF PAVING, CURBS OR SIDEWALKS. LANDSCAPE CONTRACTOR SHALL ENSURE POSITIVE SURFACE DRAINAGE AWAY FROM BUILDING FOUNDATIONS IN ALL AREAS.

THE PLANT MATERIAL LOCATIONS ARE DIAGRAMATIC AND SUBJECT TO CHANGE IN THE FIELD AS DIRECTED BY THE LANDSCAPE PLANNER. LAYOUT PLANTS ACCORDING TO THE PLAN SO THAT PLANTS ARE PROPERLY SPACED FOR FUTURE GROWTH. MINOR ADJUSTMENTS MAY BE NECESSARY DUE TO VARIATIONS IN SITE CONDITIONS (EX: MAILBOXES, UTILITIES, LIGHT FIXTURES, DRAINAGE STRUCTURES).

ALL PLANT MATERIAL SHALL CONFORM TO THE GUIDELINES ESTABLISHED BY THE CURRENT AMERICAN STANDARDS OF NURSERY STOCK, PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN.

ALL TREES AND SHRUBS SHALL HAVE AGRIFORM 21 GRAM FERTILIZER TABLETS INSTALLED IN THE BACKFLIP AND ROOT ZONE OF PLANTS. TABLET APPLICATION RATE SHALL BE 15 GALLON MATERIAL WILL GET 3 TABLETS, 5 GALLON MATERIAL 2 TABLETS, AND ALL 1 GALLON STOCK WILL GET 1 TABLET.

THE PLANT COUNT IS FOR THE CONTRACTORS CONVENIENCE, IN CASE OF DISCREPANCY, THE PLAN SHALL GOVERN.

ALL GROUNDCOVER AND LANDSCAPED BEDS SHALL RECEIVE A 3" DEPTH OF SMALL SIZE WOOD MULCH CONSISTING OF FIBER OR DRIED RECYCLED WOOD FIBER. IF RECYCLED WOOD CHIP IS USED ALL MATERIAL SHALL BE CERTIFIED FROM THE SUPPLIER TO CONTAIN NO CHEMICAL, PAINT, LEAD OR OTHER HAZARDOUS MATERIAL PRIOR TO SHIPPING ON SITE.

THE EXCEPTION TO THIS NOTE CONCERNING THE MULCH IS AREAS THAT WILL BE GETTING KURAPIA GROUNDCOVER FROM SOD. THIS AREA WILL NOT BE MULCHED, WILL ONLY GET SOIL ADJMENTMENT, AND FINISH GRADING PRIOR TO FERTILIZER APPLICATION AND GROUNDCOVER INSTALLATION.

ALL TREES TO BE STAKED, STREET TREE INSTALLATION SHALL HAVE VESPRO 18" TREE ROOT CONTROL INSTALLED. VINES SHALL TO TYED BACK TO SUPPORT THE LONG RANGE GROWTH OF THE PLANT.

CONTRACTOR SHALL APPLY ONE APPLICATION OF "RONSTAR" PRE-EMERGENT WEED CONTROL TO ALL PLANTED AREAS. THE PRE-EMERGENT WEED CONTROL SHALL BE APPLIED USING THE MANUFACTURERS RECOMMENDED RATE OF APPLICATION.

CONTRACTOR SHALL PERFORM A 30 DAY LANDSCAPE MAINTENANCE PERIOD BEGINNING FROM THE DATE OF FINAL PLANT INSTALLATION, APPLICATION OF WEED CONTROL AND FINAL PROJECT CLEANUP.

THE LANDSCAPE CONTRACTOR SHALL GUARANTEE ALL LANDSCAPE PLANTING FOR A PERIOD OF 6 MONTHS FROM THE DATE OF FINAL PLANT INSTALLATION, APPLICATION AND LANDSCAPE MAINTENANCE PERIOD.

FOR ADDITIONAL INFORMATION SEE PLANTING, IRRIGATION, HARDSCAPE, GRADING, SITE IMPROVEMENT AND CONSTRUCTION DETAIL PLANS.

The Water Calculator

Results

Note: Schedules are based upon at most 3 separate days per week to comply with current watering restrictions. For more information about the restrictions please click here (http://www.sjwater.com/news/topic/water_conservation_rules_in_effect/).

2579 HOME AVENUE HAYWARD, CALIFORNIA

Settings: Low Water Plants, Loam, Drip-Emitter Line, Sloped Area

Controller Settings

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	1	1	1	2	2	2	3	2	3	2	1	2
6	9	19	13	17	19	20	12	14	19	5	5	
1	1	1	1	1	1	1	1	1	1	1	1	1
99 - 150 - 150	224 - 474 - 474	316 - 649 - 649	433 - 849 - 849	566 - 949 - 949	633 - 999 - 999	666 - 899 - 899	600 - 699 - 699	466 - 474 - 474	316 - 249 - 249	166 - 124 - 124	83 - 124 - 124	

* If your irrigation controller has a "Seasonal Adjust % Feature" we suggest that you program your controller to the July recommendations and then adjust as suggested below:

San Jose - Seasonal / Budget Adjustments

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
20%	20%	50%	60%	80%	90%	100%	90%	70%	50%	20%	10%

Seasonal / Budget Adjust % Feature is used to make global run time changes without reprogramming the entire

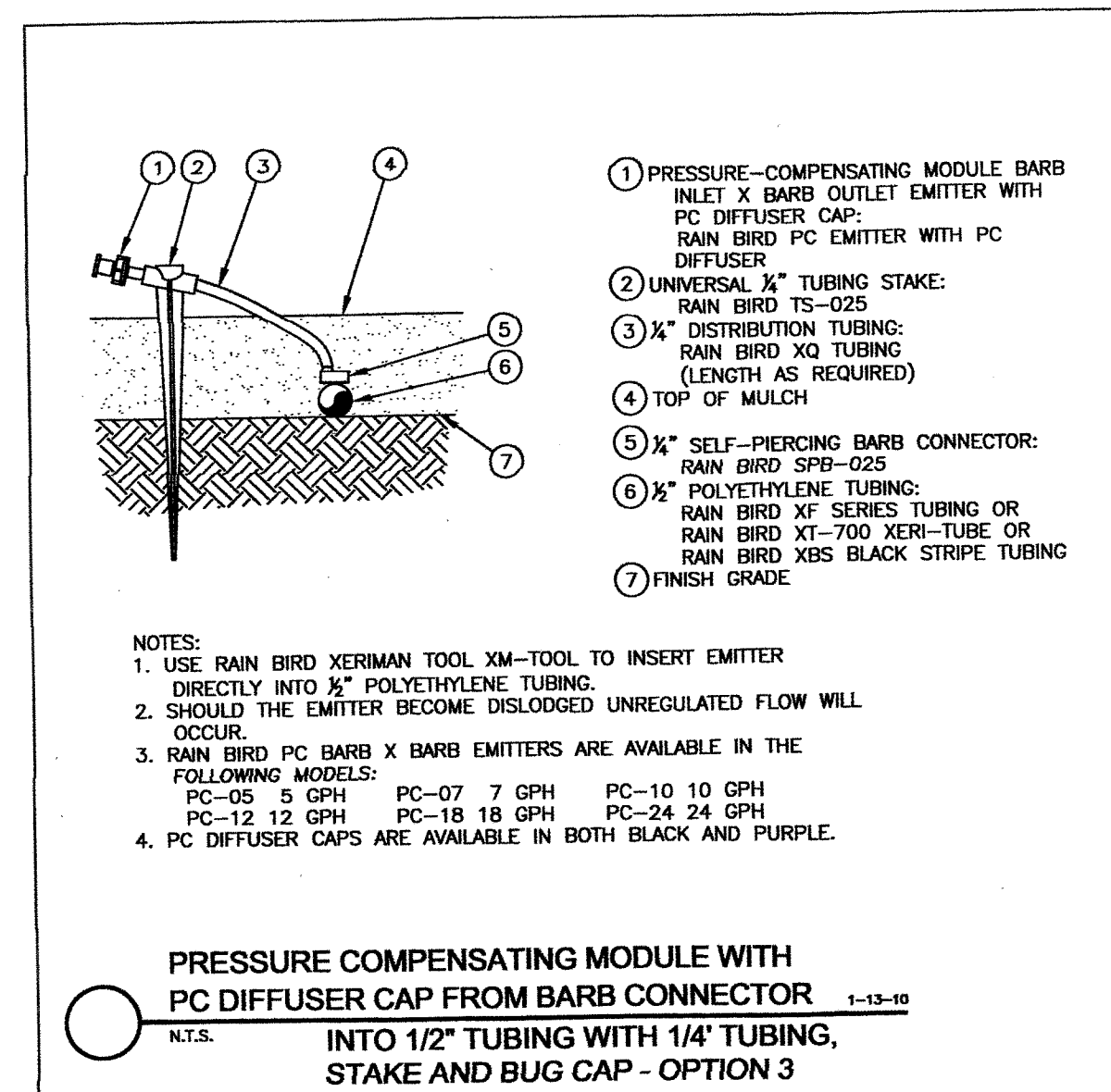
WATER AND LANDSCAPE EFFICIENCY CHECKLIST

IRRIGATION POINTS:

- MANUAL SHUTOFF OF ENTIRE IRRIGATION SYSTEM WITHIN 10'-0" OF POINT OF CONNECTION. EXISTING POC IS A 1" AND 1" SIZE, SYSTEM DESIGNED FOR A MINIMUM OF STATIC PRESSURE OF 65 PSI, PRODUCING 17 GPM AT WATER METER.
- ALL DRIP EMITTERS ARE DESIGNED FOR MATCHED PRECIPITATION RATES THROUGHOUT ALL VALVES AND SYSTEMS.
- IRRIGATION WATER AUDIT SHALL BE PERFORMED UPON PROJECT COMPLETION.
- SITE IS PRIMARILY FLAT, NOT SLOPED, REDUCING ANY RUNOFF CONDITIONS.
- DRIP EMITTERS AND BUBBLERS ARE ALL DESIGNED TO CURRENT ANSI STANDARDS FOR THE MOST EFFICIENT IRRIGATION.
- AUTOMATIC IRRIGATION CONTROLLER IS DESIGNED USING REDUCING CARBON IMPACT, DESIGNED WITH NON-VOLATILE MEMORY ALLOWING FOR FULL MEMORY IF SYSTEM IS SHUT-OFF FOR ANY REASON.
- AUTOMATIC IRRIGATION IS CONTROLLED BY A SOLAR SYNC SENSOR PROVIDING POSITIVE CLOCK SHUT-OFF IN A RAIN EVENT.
- EACH AUTOMATIC IRRIGATION VALVE HAS ITS OWN INDIVIDUAL BALL VALVE SHUT-OFF LOCATED AT EACH VALVE BOX LOCATION, THIS ALLOWS FOR QUICK POSITIVE CONTROL OF EACH CONTROL VALVE.
- ALL DRIP VALVES HAVE ACCU-SYNC #40 PRESSURE REDUCING VALVES ATTACHED TO ELIMINATE ANY MISTING OR BLOWOUTS OF DRIP EMITTERS. AND MAINTAIN A CONSTANT PRESSURE OF 40 PSI OR LESS.
- SYSTEM DESIGNED USING DRIP EMITTER IRRIGATION. POPUP SPRAY HEADS ARE USED IN ONLY A VERY LIMITED WAY ON THIS PROJECT. THIS PROMOTES HEALTHY PLANT GROWTH, AND REDUCES OVERALL WATER USE.
- A MASTER VALVE IS INSTALLED BETWEEN THE BACKFLOW PREVENTION VALVE AND THE FIRST AUTOMATIC VALVE TO REDUCE WATER LOSS DUE TO MAINLINE PIPE DAMAGE.
- BACKFLOW PREVENTION UNIT IS TO BE INSTALLED PER LOCAL CODES, UPON INSTALLATION UNIT SHALL HAVE BACKFLOW TEST GIVEN TO ASSURE COMPLIANCE.

PLANTING ITEMS

- PROJECT IS NOT DESIGNED WITH ANY FORM OF NOXIOUS OR INVASIVE TREES, SHRUBS OR GROUNDCOVER.
- HEAVY AMOUNTS OF WOOD MULCH CHIPS IN LANDSCAPE AREAS, 3" DEPTH IN GENERAL PLANTING BEDS. THIS DEPTH OF MULCH WILL REDUCE WEED GROWTH AND IRRIGATION WATER EVAPORATION AT EMITTER SITE.
- HEAVY USE OF SOIL ADJMENTMENTS IN PLANTING AREAS ALLOWS FOR BETTER PLANT GROWTH AND REDUCED AMOUNTS OF IRRIGATION WATER. THE MIX SHOWN ON PLAN IS DOUBLE THE AMOUNT OF ORGANIC MATERIAL REQUIRED BY THE CURRENT STATE STANDARD.
 SOIL ADJMENTMENT WILL BE: 6 CUBIC YARDS OF NITROFIED REDWOOD COMPOST PER 1,000 SQUARE FEET OF LANDSCAPED AREA. THIS WILL BE ROTOTILLED INTO THE TOP 6" OF TOPSOIL. ADDITIONAL SOIL ADJMENTMENT NOTES ARE SHOWN ON SHEET L-6
- ALL PLANTING IS DERIVED FROM THE MOST CURRENT WULCOS IV SOFTWARE AND FROM THE LATEST EAST BAY MUNICIPAL UTILITY DISTRICT PLANTING RECOMMENDATIONS TITLED "LOW WATER USE PLANTINGS".
- LANDSCAPE PLANTINGS FEATURE NO LAWN SOD OR ANNUAL FLOWER COLOR, DECORATIVE WATER FEATURES OR VEGETABLE GARDENS.
- ALL FERTILIZER REQUIRED WILL BE ORGANIC, SLOW RELEASE VARIETY. THIS WILL REDUCE THE NITROGEN SPIKE AND SUBSEQUENT INCREASED IRRIGATION TO WATER RAPIDLY GROWING PLANTINGS.
- ALL PLANTINGS USED ARE RELATIVELY LOW WATER USE MATERIAL. PLANT PALETTE WATER RATIO IS 100% LOW WATER USE PLANTINGS. NO HIGH USE NURSERY MATERIAL INCLUDED SUCH AS FLOWER/ GARDEN OR WATER FEATURE USE INCORPORATED IN DESIGN OF THIS PROJECT.



LANDSCAPE AND IRRIGATION MAINTENANCE SCHEDULE

SHRUB AND GROUNDCOVER AREAS:

- All weeds shall be removed as they appear. Additional weed control shall be initiated as necessary to maintain a weed free condition.
- Shrub and ground cover shall be fertilized as little as possible while still keeping them healthy. It might be necessary to fertilize 1 to 2 times a year after the danger of frost has passed in the Spring and possibly again in the Fall. Application to be 1 pound of actual nitrogen per 1,000 square feet using a 16-16-16 slow release formula material. Where possible use organic fertilizers whenever possible. Native ground cover such as Manzanita doesn't want much fertilizer if any. DO NOT USE OR APPLY ANY FORM OF FERTILIZER IN THE EXISTING OAK TREE DRIFLINE.
- Trim and edge as necessary to restrict growth from encroaching on sidewalks, irrigation components, or other adjacent areas.
- Thin, shape and head back all shrubs only as needed, but check them at least annually.
- All shrubs with a leaf size exceeding 2 inches shall be selectively pruned with hand clippers.
- Maximize plant size. Encourage shrubs to completely fill in planting beds. Shrubs shall have a natural branching habit and form at all times.
- Maintain shrubs at driveways and entrances to a height that will ensure safe vehicular access and view.
- Prune at the proper time of year for each species to promote new growth and flowering.
- Irrigate as necessary to maintain adequate growth and reasonable appearance.
- Spot check soil moisture with a soil sampling probe weekly.
- Control pests, including rodents and snails, to provide a healthy environment for plants and people.

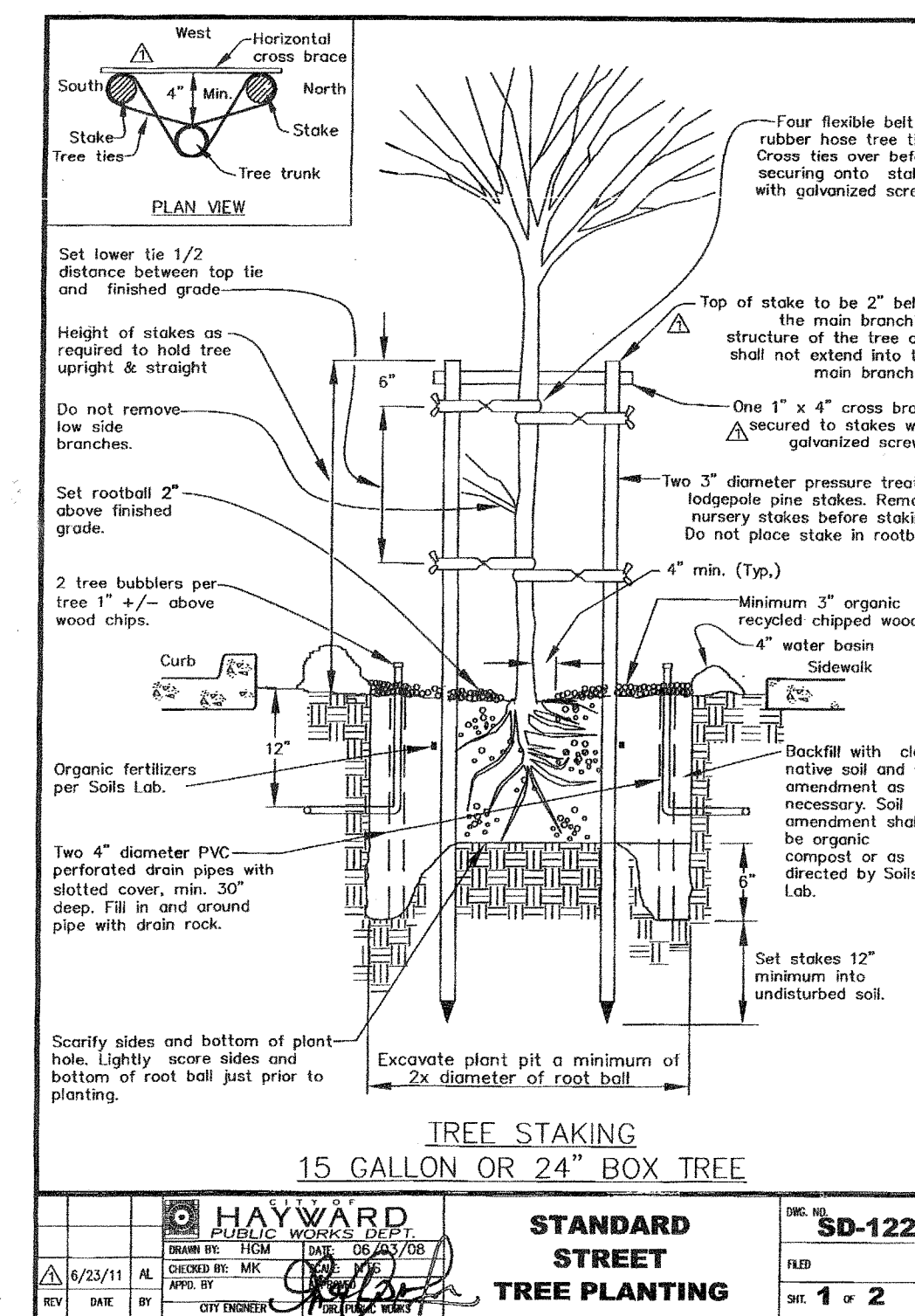
TREES:

- All trimming of trees on the property is to be discussed with the Owner prior to commencement of work and may require guidance and/or skills of a certified arborist.
- Trim, shape and selectively prune to maintain a safe, reasonable appearance. Trees shall be allowed to grow to the full genetic height and habit (trees shall not be topped). Trees shall be maintained standard arboriculture practices.
 - Control pest and diseases as needed. Report occurrences to the Owner.
 - Tag and report any trees that show stress or weakness or trees that are in danger of uprooting paticos or endangering building to the Owner assign as they are detected.
 - Remove all dead, diseased or damaged branches back to a side branch.
 - Stake and support trees when necessary. Check all trees and remove unnecessary tree guy wires at least annually.
 - All guys and ties shall be checked frequently to avoid girdling
 - Maintain watering basins on young trees through the second year of establishment if they have drip irrigation.
 - Fertilized ornamental trees each April with deep root feeding and a 3 to 4 month, water soluble, 10-15-15 slow release fertilizer at recommended rates for the individual planting. DON'T FERTILIZE MATURE OAK TREES.
 - Irrigate as required as required to maintain adequate growth and appearance.

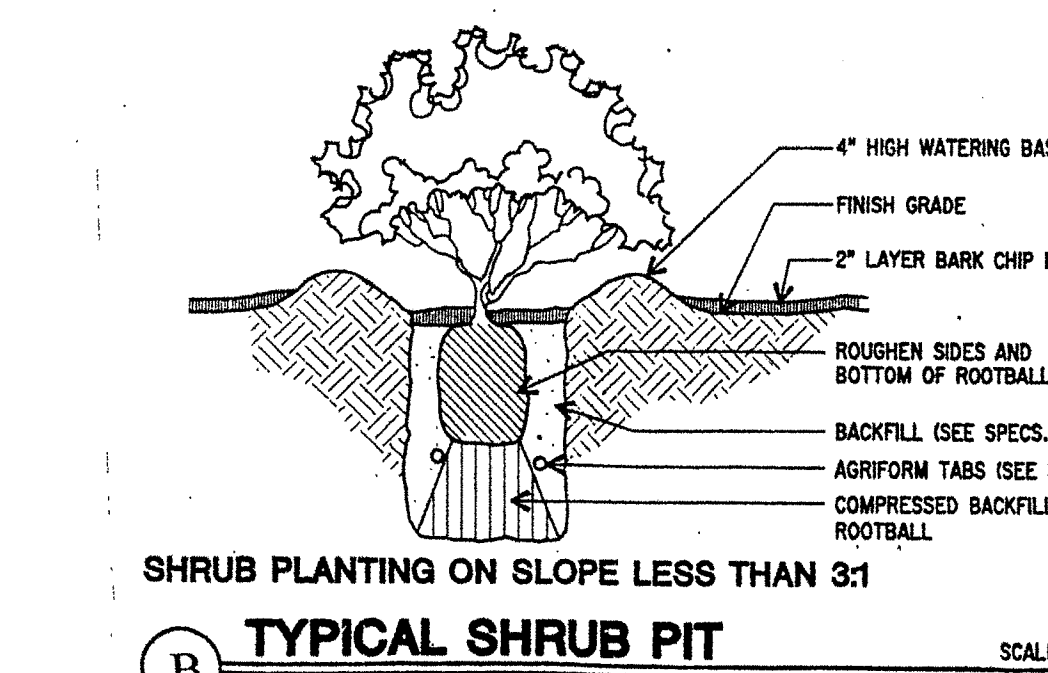
Irrigation System Maintenance:

It is the responsibility of the landscape maintenance crew or the homeowner if there is no maintenance company to maintain the complete sprinkler and irrigation system in an operable condition at all times. This includes, but is not limited to, pressure regulators, basket strainers, back flow devices, pump systems, main pressure lines, lateral lines, clocks, valves, drip emitters, and sprinkler heads.

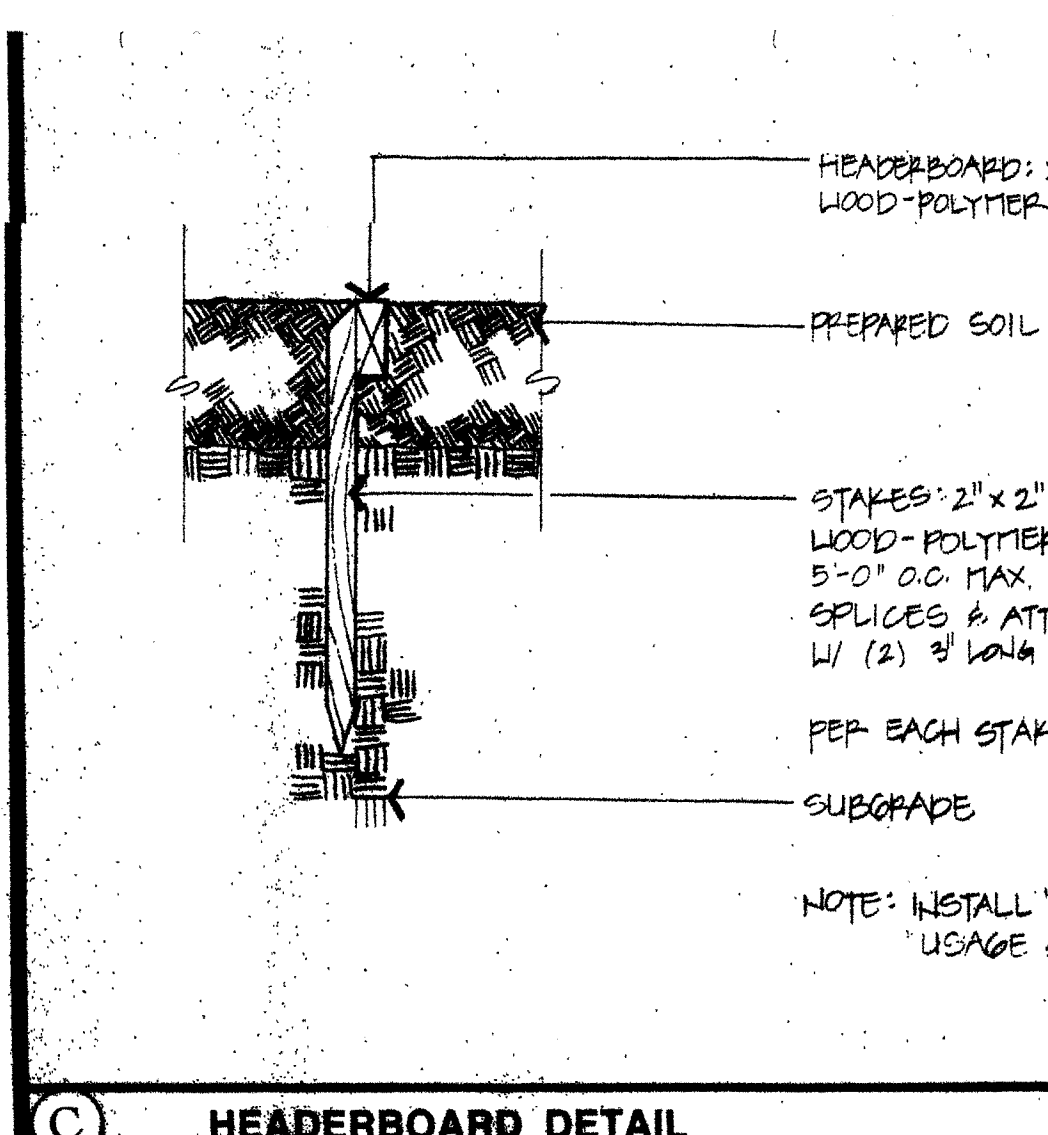
- Annually, during the month of February, a detailed Irrigation System Check shall be performed. A report on all necessary and suggested repairs shall be submitted to the homeowner or property owner by March 1st.
 - All systems are to be operationally checked monthly by running each zone a minimum of two minutes.
 - Keep valves in adjustment to prevent excessive flow velocity, slow or rap closure, excessive preside, and water hammer.
 - Check and record the water supply static pressure annually. Differences in the sprinkler systems design operating pressure and actual available water pressure can affect operation and efficiency.
 - Annual backflow device certification tests for all devices shall be completed once a year when notified and as required by the water department or supplier, and the results submitted to the owner and the water department supplier. Monthly, the devices shall be visually checked for failure. Water meter readings are to be taken monthly and recorded in a water usage log to help determine if there are any leaks.
 - Check all irrigation control clocks once a month to ensure that timers are still programmed correctly and are receiving ET data. Adjust water application settings of timers only if automatic ET irrigation controller shows error. Verify appropriate operation duration and frequency and start time. Irrigate only at night between 10:00 PM and 8 AM. Reprogram the ET based automatic controllers two months after the establishment period and of any new planting installations.
 - At the beginning of the rainy season and monthly during the rainy season, make sure a rain sensor is still properly installed, set at one fourth of an inch or less, and not sheltered by walls, shrubs or other plants. All irrigation systems must be turned off during periods of rain.
 - Repair and adjust all sprinkler heads to maintain proper coverage on an as needed and ongoing basis. Adjust irrigation system components whenever irrigation water falls or runs onto hard surfaces such as sidewalks, streets or driveways. (There are no sprinkler heads on this job because there is only drip irrigation).
 - General plant health, due to under or over watering and vandalism to irrigation materials shall be reported monthly.
 - Verify that sprinkler coverage is properly adjusted. Check the nozzle, arc, radius level and attitude with respect to slope. Make sure all heads pop-up completely and fully retract when the water is turned off. Check for sprinklers blocked by grass, plants or other obstacles. If the spray is blocked, remove the obstacle or move the sprinkler head. Make sure sprinklers are vertical and flush with the soil grade. (There are no sprinkler heads on this job because there is drip irrigation).
 - Check drip zone emitters for debris and assure proper operation.
 - Clean out Y-filters of drip valve assemblies and flush drip lines, if excessive dirt or mineral deposits are noticed.
 - Identify pipeline and valve leaks, and low head drainage problems. Make repairs immediately. Signs of leakage include green and soggy areas, often around spray heads and hose bibs.
 - Repair or replace broken hardware and pipes with matching, original equipment. Refer to pipe size in irrigation plan, to maintain correct design pressure after repairs. Test all repairs.
 - Winterize sprinkler systems if freezing is to be expected by removing all the water from the irrigation system in order to prevent cracked pipes, broken heads and other problems.
- Identify your priorities during water limited situations such as various stages of drought. These priorities shall be summarized and reported to the home or property owner annually.



REV	DATE	BY	DESCRIPTION
1	4/23/11	AL	CREATED IN MK
2	4/23/11	AL	REVISED



(B) TYPICAL SHRUB PIT SCALE: N.T.S.



(C) HEADERBOARD DETAIL N.T.S.

REVISIONS	BY

I.R. NELSON & ASSOCIATES, INC.
 23585 SUMMIT ROAD
 LOS GATOS, CALIFORNIA 95033
 PHONE (408) 591-0873 EMAIL: CNDEY@AOL.COM

LANDSCAPE PLANNING FOR:
BRAD SWITZER
 2579 HOME AVENUE
 HAYWARD, CALIFORNIA

PLANTING NOTES, WATER, AND MAINTENANCE

DRAWN: JRN
 CHECKED: [Signature]
 DATE: 1.17.2019
 SCALE: AS NOTED
 SHEET NO: HAYWARD
L-3
 SHEETS