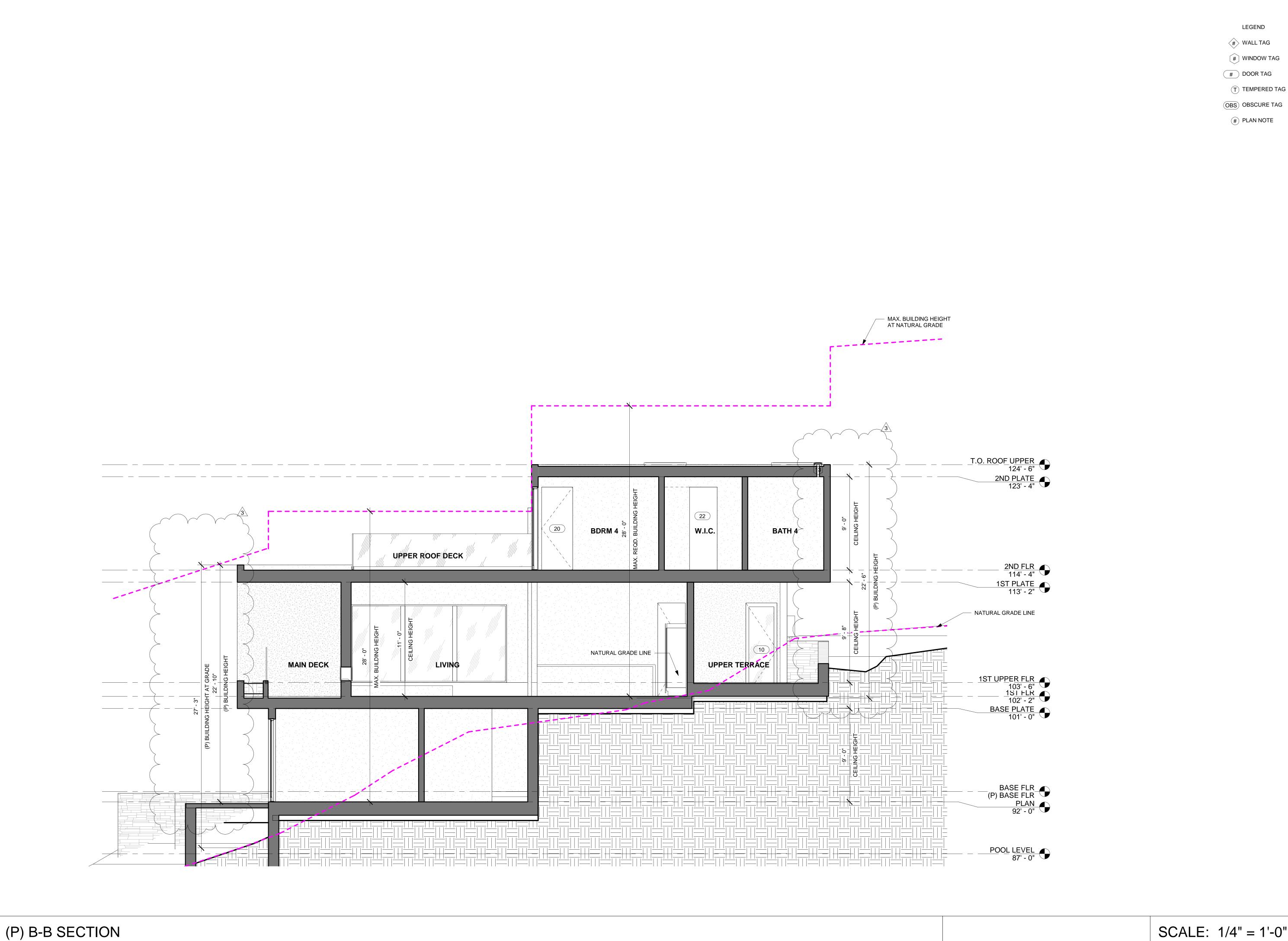


Description LEGEND REVISION 3 06/01/2021 (E) WALLS, FLOORS,
AND ROOFS TO REMAIN
LEGEND
(P) NEW WALLS, FLOORS
AND ROOFS

# WALL TAG

# WALL TAG # WINDOW TAG # WINDOW TAG # DOOR TAG # DOOR TAG T TEMPERED TAG T) TEMPERED TAG OBS OBSCURE TAG OBS OBSCURE TAG # PLAN NOTE # PLAN NOTE M.DESIGNS ARCHITECTS M DESIGNS ARCHITECTS 4131 WEST EL CAMINO REAL, SUITE 200, PALO ALTO CA 94306 www.mdesignsarchitects.com Email: info@mdesignsarchitects.com Phone: 650-565-9036 Fax: 949-625-7869 VCE AT DRIVE CA 94062 MAX. BUILDING HEIGHT AT NATURAL GRADE -DAYLIGHT PLANE -BUILDING BEYOND UPPER ROOF DECK INTERIOR DESIGN PACKAGE SEATING LIVING DINING LIVING NATURAL GRADE LINE GARAGE GAME ROOM PWDR 1 POOL A5.1 (P) A-A SECTION SCALE: 1/4" = 1'-0"



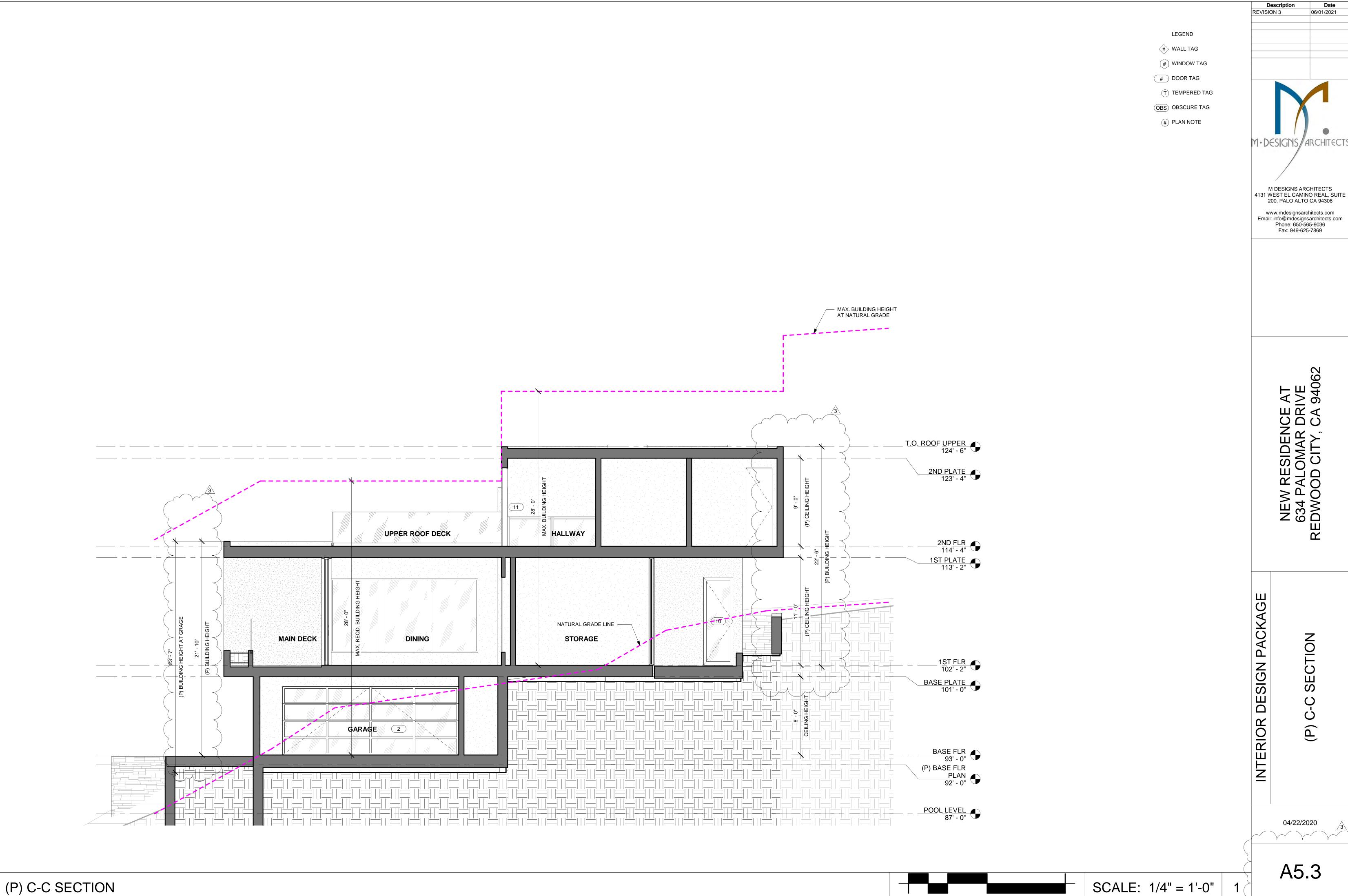
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ICE AT DRIVE CA 94062

INTERIOR DESIGN PACKAGE (P) B-B SECTION

04/22/2020

A5.2



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

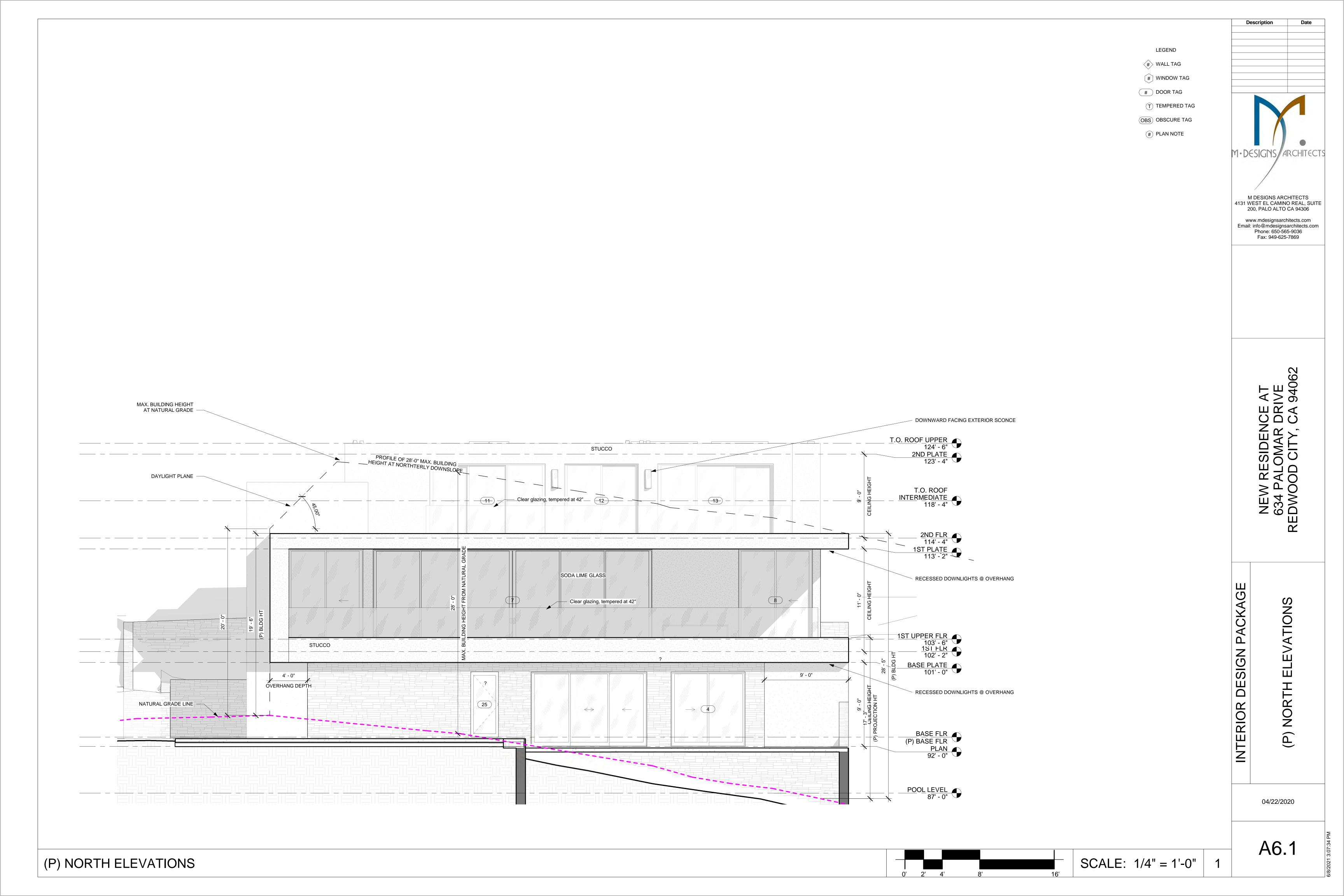
ICE AT DRIVE CA 94062

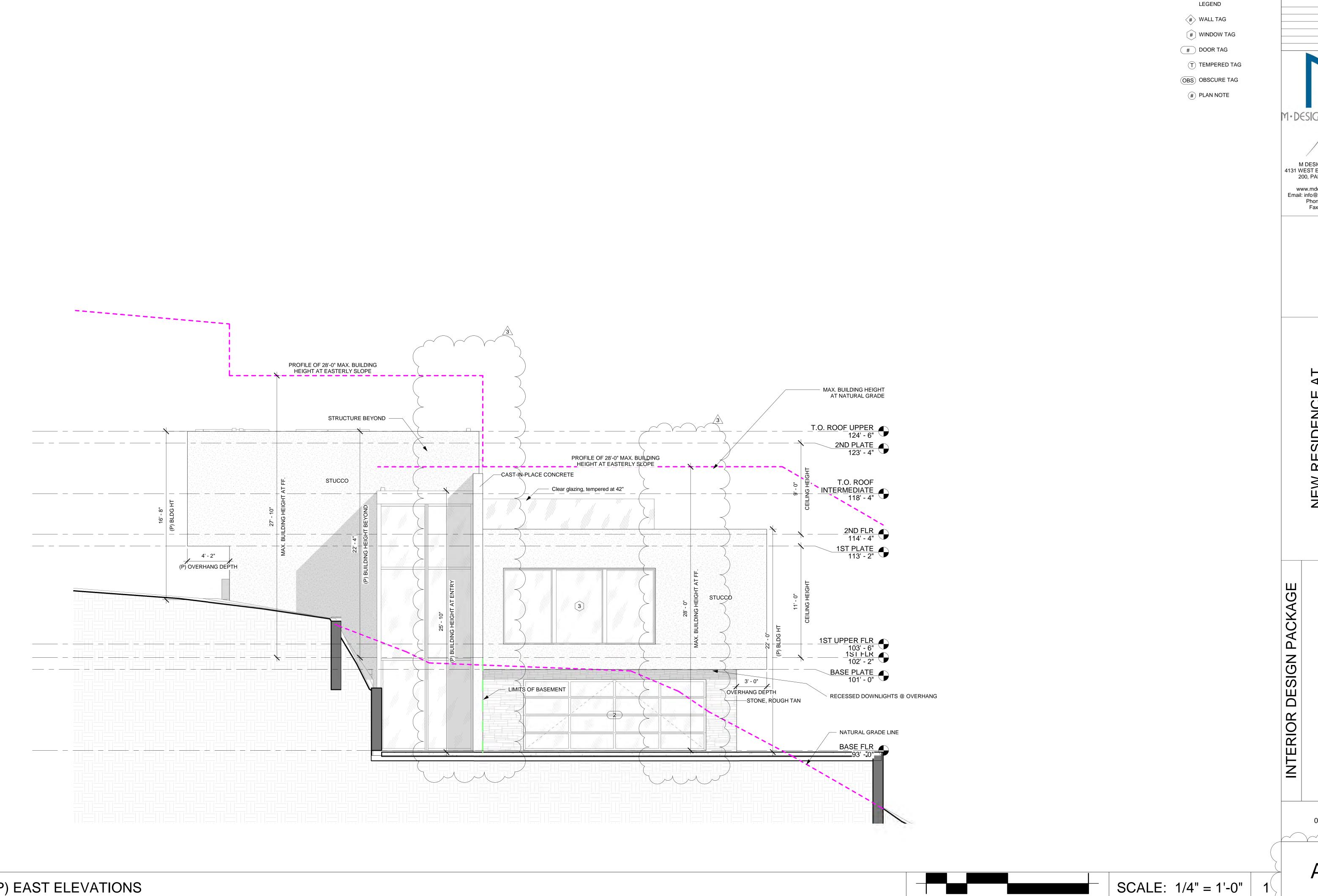
NEW RE 634 PAL( REDWOOD

SECTION (P) C-C

04/22/2020

A5.3





Description REVISION 3 M.DESIGNS ARCHITECTS M DESIGNS ARCHITECTS 4131 WEST EL CAMINO REAL, SUITE 200, PALO ALTO CA 94306 www.mdesignsarchitects.com Email: info@mdesignsarchitects.com Phone: 650-565-9036 Fax: 949-625-7869

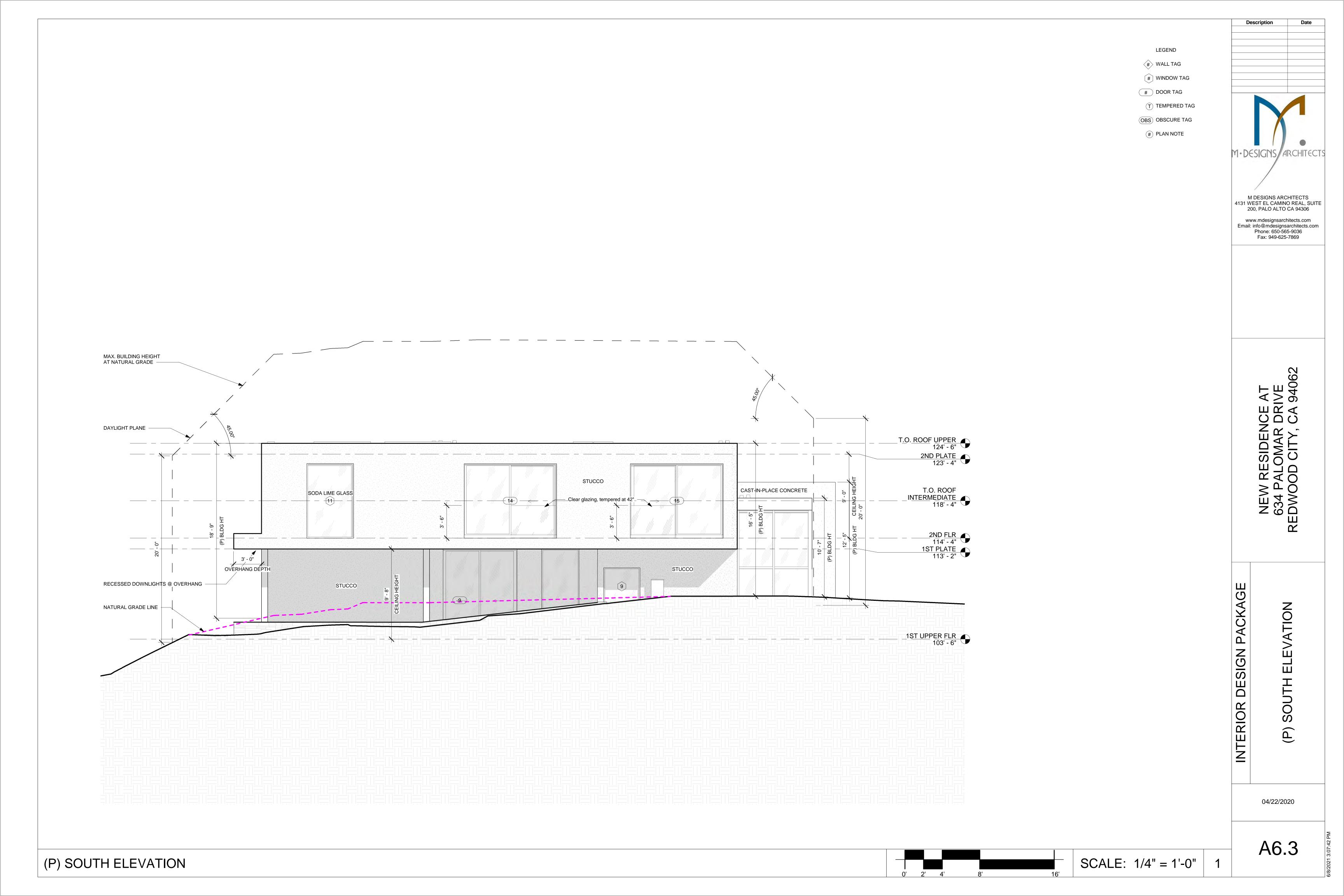
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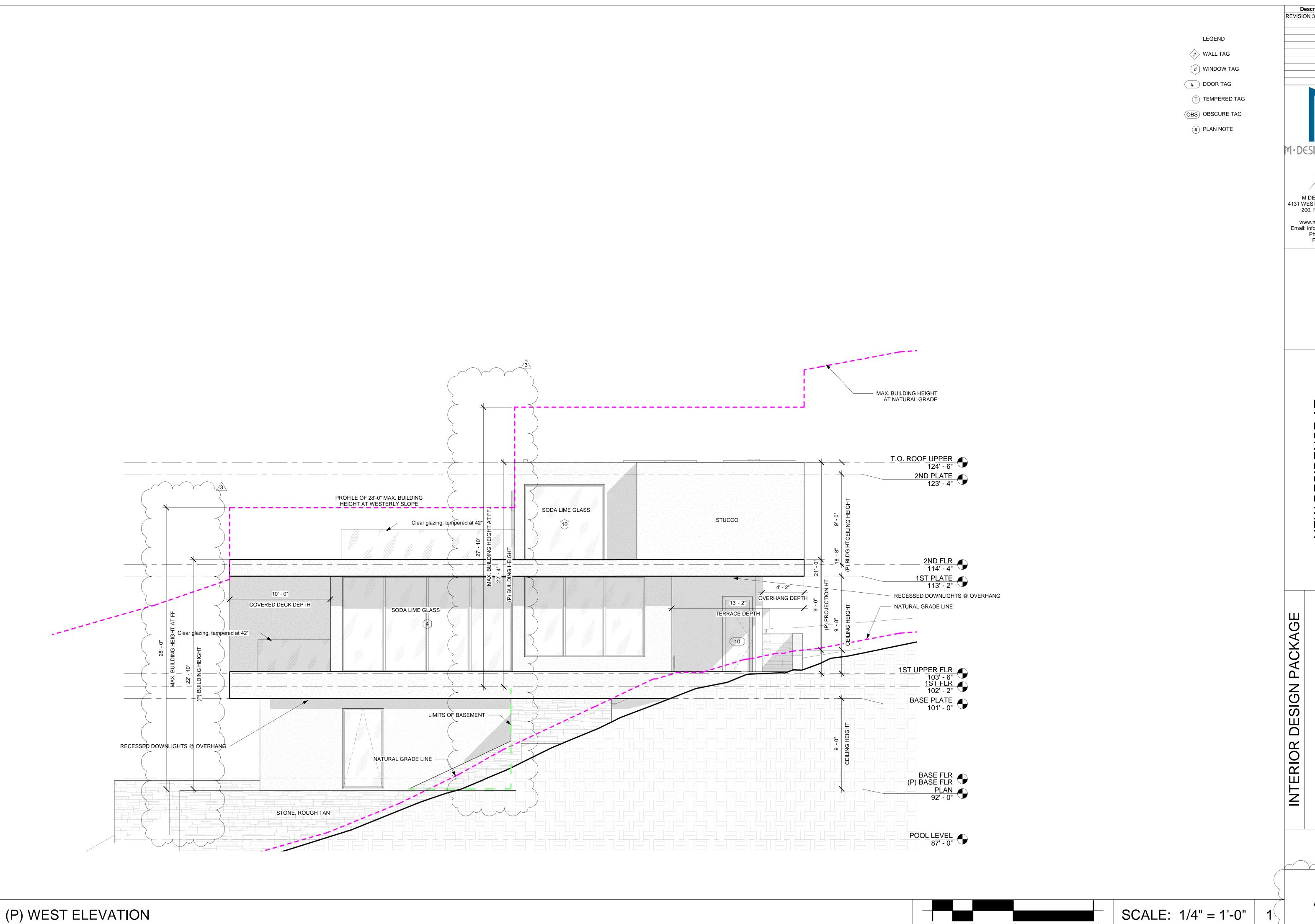
(P) EAST ELEVATIONS

04/22/2020

A6.2

(P) EAST ELEVATIONS





M DESIGNS ARCHITECTS

M DESIGNS ARCHITECTS

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

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

RESIDENCE AT ALOMAR DRIVE OD CITY, CA 94062

NEW RESIDEN 634 PALOMAR REDWOOD CITY,

(P) WEST ELEVATION

04/22/2020

A6.4



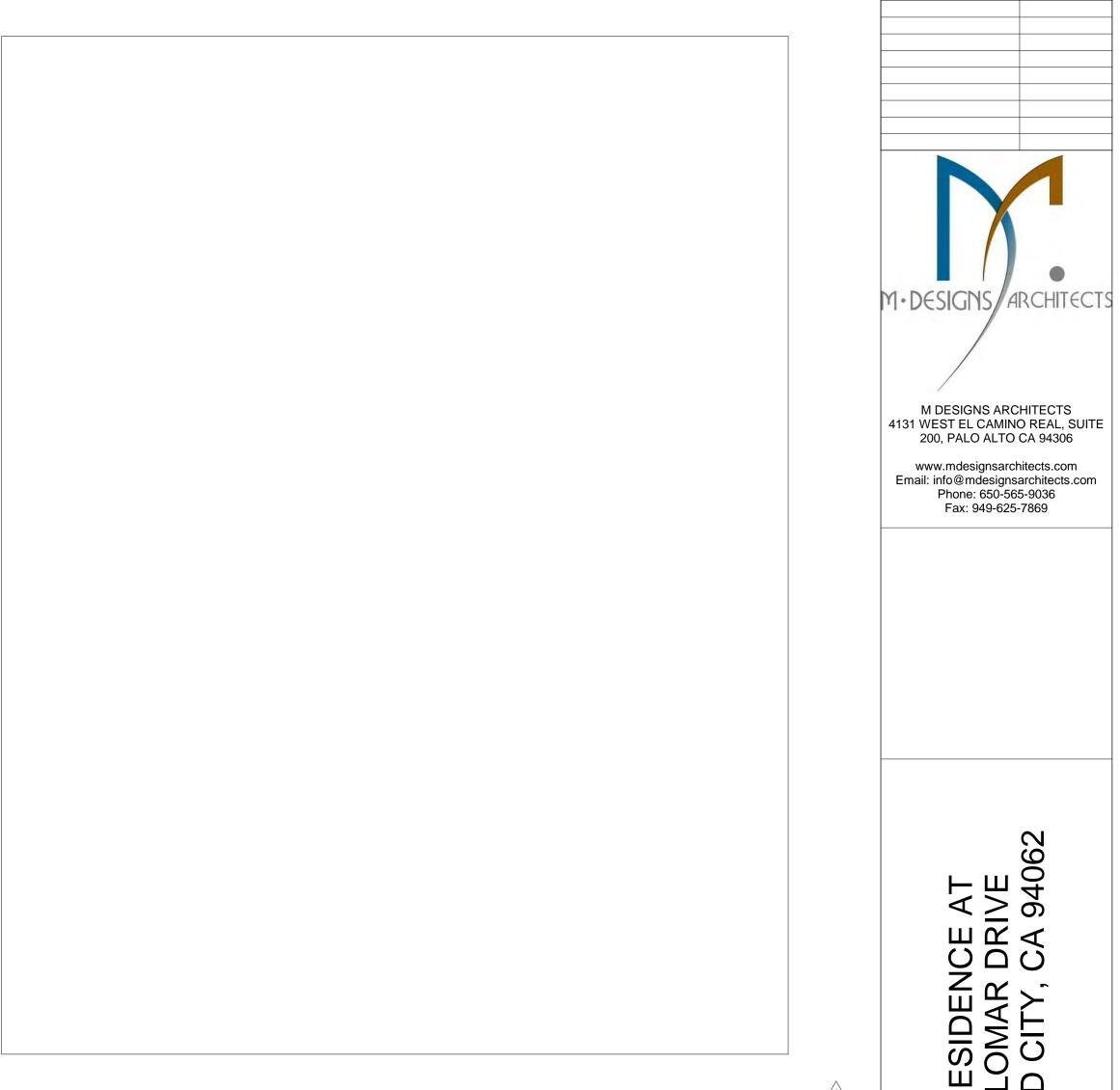
FRONT VIEW



**REAR VIEW** 

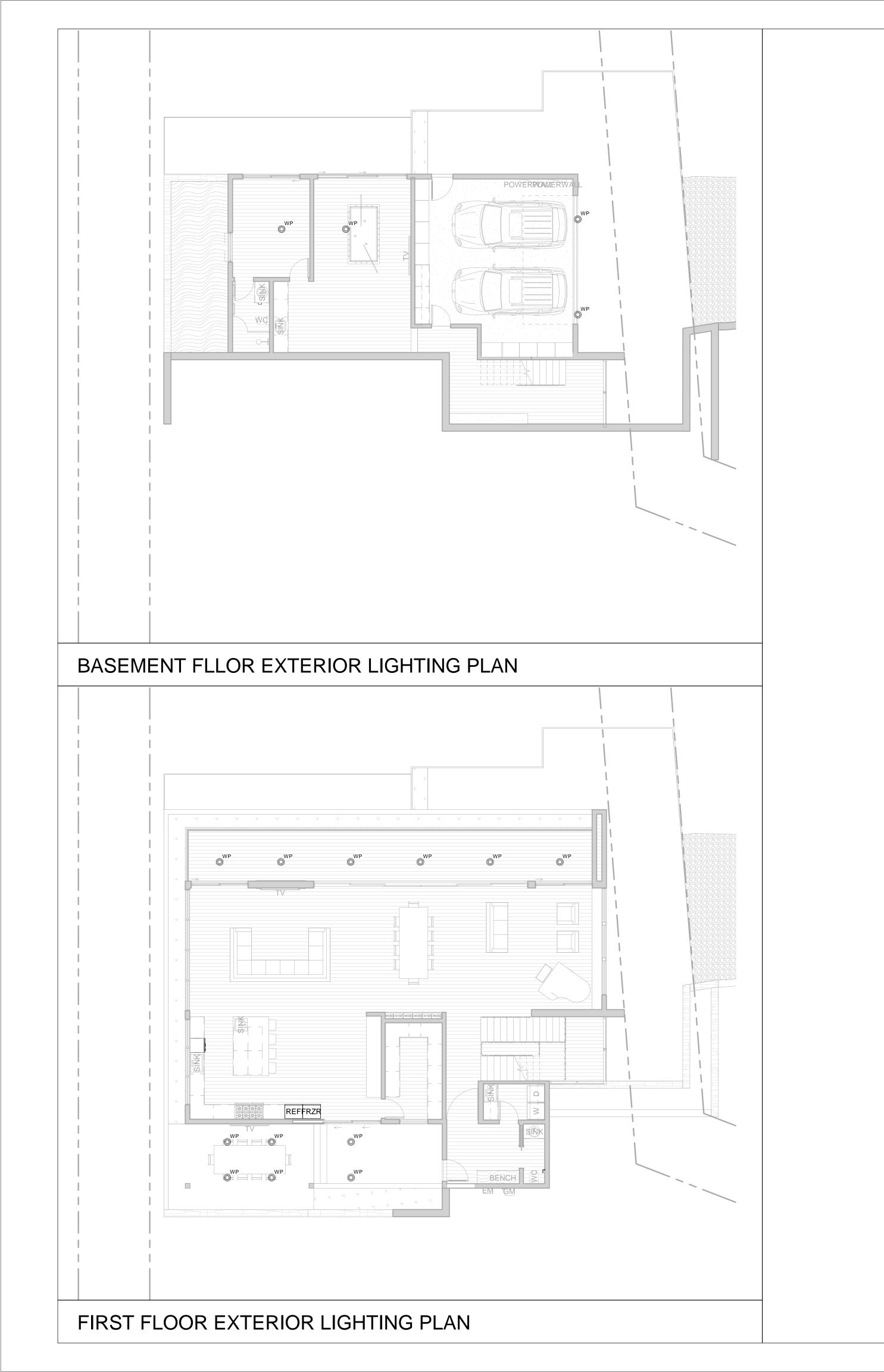


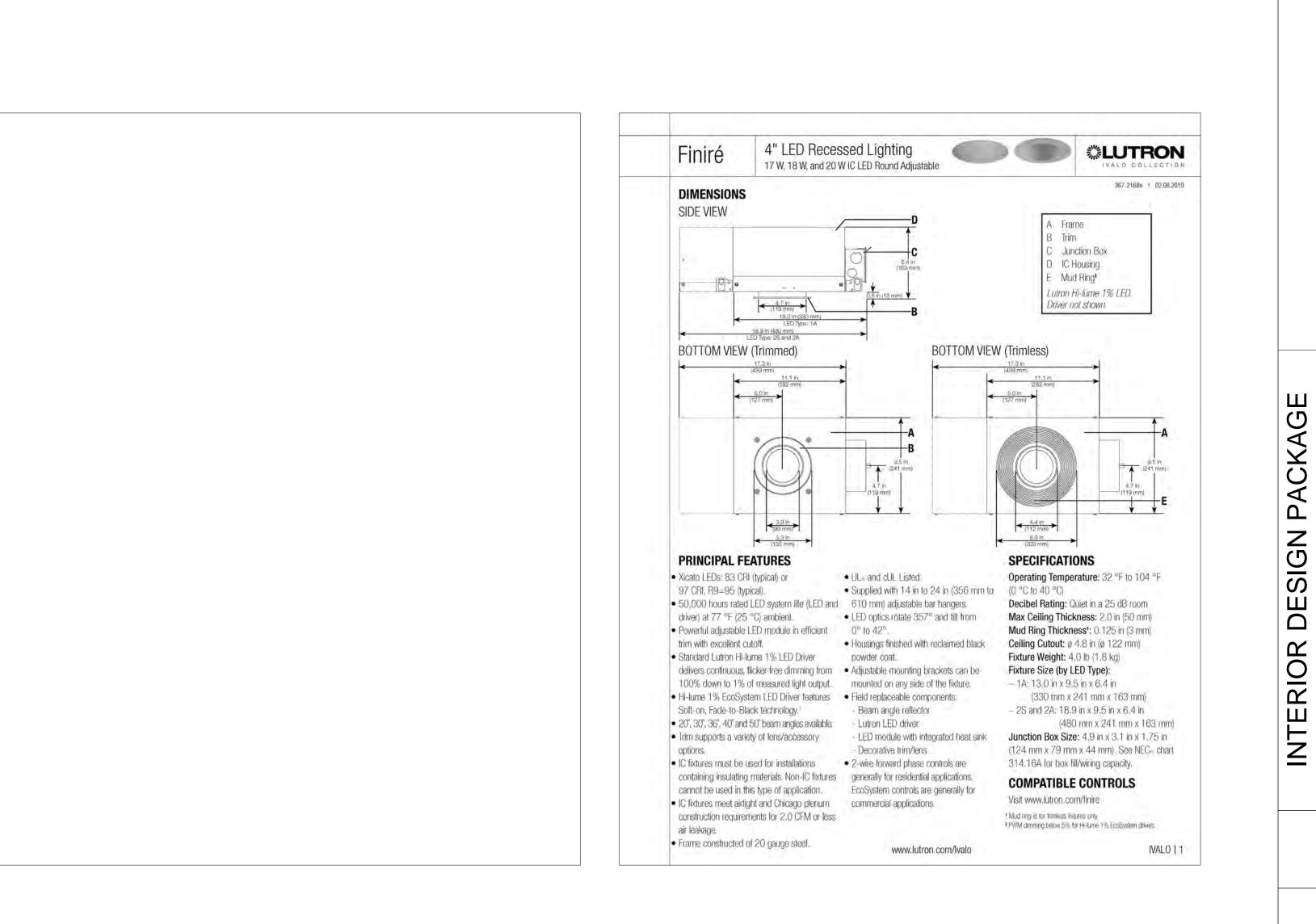
STREET VIEW



REVISION 1

CB.1



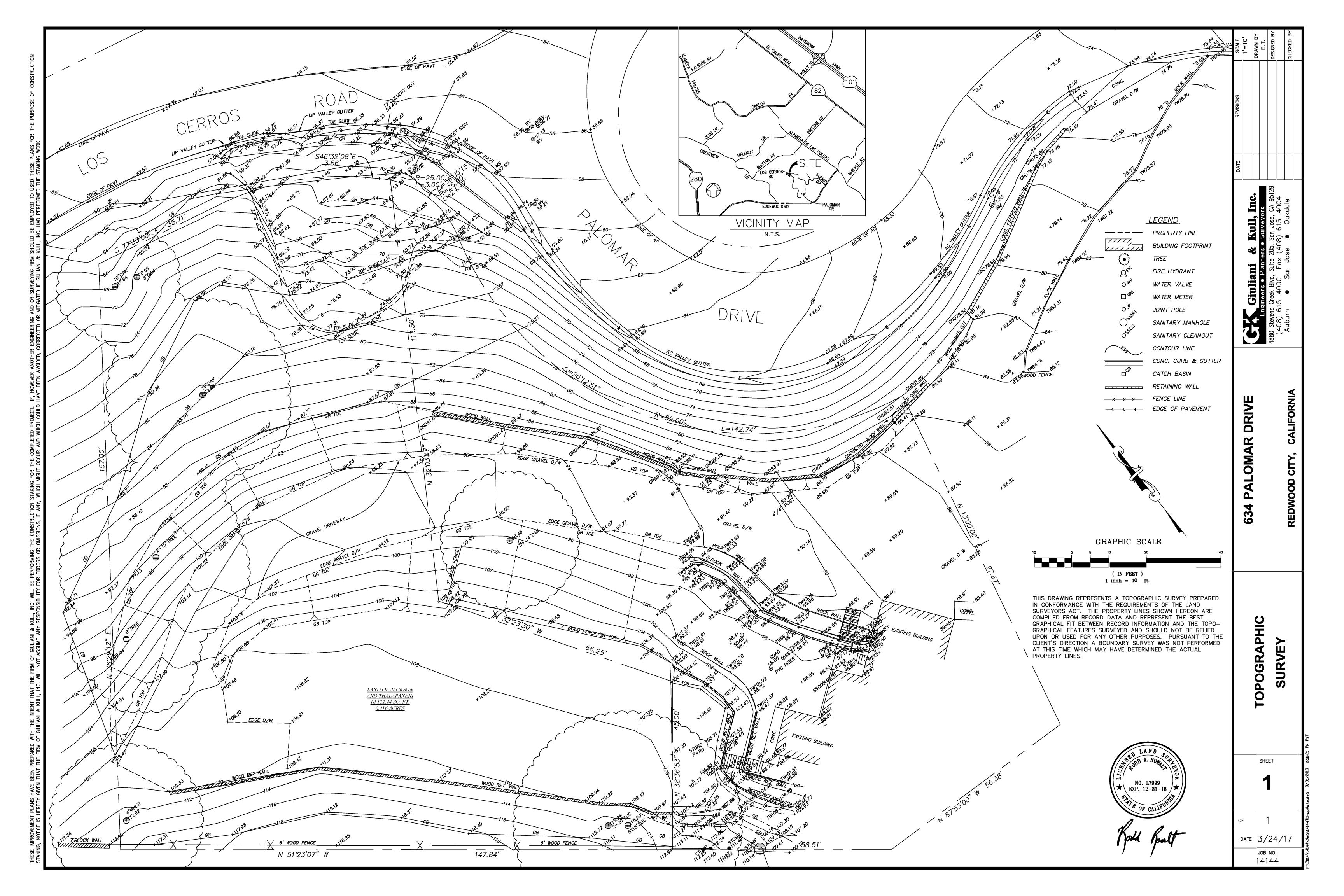




**EXTERIOR LIGHTING** 

04/22/2020

E2.0



**PROPOSED** 

~>· ~>· ~>

**~>· ~>· ~>** 

X

**EXISTING** 

DESCRIPTION

PROPERTY LINE

RETAINING WALL

SUBDRAIN LINE

STORM DRAIN LINE

SANITARY SEWER LINE

TIGHTLINE

WATER LINE

PRESSURE LINE

JOINT TRENCH

SET BACK LINE

EARTHEN SWALE

**CATCH BASIN** 

JUNCTION BOX

AREA DRAIN

CURB INLET

FIRE HYDRANT

STREET SIGN

SPOT ELEVATION

FLOW DIRECTION

BENCHMARK

**CONTOURS** 

DEMOLISH/REMOVE

TREE TO BE REMOVED

LINEAR FEET

CONCRETE VALLEY GUTTER

STORM DRAIN MANHOLE

SANITARY SEWER MANHOLE

GAS LINE

LANDSCAPE RETAINING WALL

RAINWATER TIGHTLINE

**BOUNDARY** 

DRIVE

VICINITY MAP

# OWNER'S INFORMATION

DAVID JACKSON AND ANUSHA THALAPANENI 485 BRYANT STREET, APT. B SAN FRANCISCO, CALIFORNIA

- THIS GRADING AND DRAINAGE PLAN IS SUPPLEMENTAL TO: 1. TOPOGRAPHIC SURVEY BY GIULIANI & KULL, INC., "TOPOGRAPHIC SURVEY" 634 PALOMAR DRIVE REDWOOD CITY, CALIFORNIA DATED: 3-24-17
- 2. ARCHITECTURAL AND SITE DESIGN PLANS BY M. DESIGN ENTITLED: "NEW RESIDENCE AT 634 PALOMAR DRIVE" 634 PALOMAR DRIVE REDWOOD CITY, CALIFORNIA DATED: 04-22-20
- "PROPOSED RESIDENTIAL DEVELOPMENT" 634 PALOMAR DRIVE REDWOOD CITY, CALIFORNIA DATE: 07-29-2020

SURVEY AND PLAN, AND SHALL VERIFY BOTH EXISTING AND PROPOSED ITEMS ACCORDING TO THEM.

TOTAL SITE AREA: TOTAL DISTURBED AREA:

JOB# 91-55905-A

18,129 SQFT / 0.42 ACRE 14,359 SQFT / 0.33 ACRE

APN: 051-022-380

## REFERENCES

- JOB#14144
- 3. SOIL REPORT BY ATLAS GEOSPHERE CONSULTANTS. INC.

## SITE DEVELOPMENT INFORMATION

# **ABBREVIATIONS**

AGGREGATE BASE **ASPHALT CONCRETE ACCESSIBLE** AREA DRAIN BEGINNING OF CURVE **BEARING & DISTANCE** BENCHMARK NTS O.C. BOTTOM OF WALL/FINISH CATCH BASIN CURB AND GUTTER CENTER LINE CORRUGATED PLASTIC PIPE (SMOOTH INTERIOR) ČLEANOUT CLEANOUT TO GRADE CONC CONCRETE CONST CONSTRUCT or -TION CONC COR CONCRETE CORNER CUBIC YARD DIAMETER DROP INLET DUCTILE IRON PIPE END OF CURVE **EXISTING GRADE ELEVATIONS EDGE OF PAVEMENT SDMH EQUIPMENT** EACH WAY **EXISTING** FACE OF CURB FINISHED FLOOR SSCO SSMH FINISHED GRADE FIRE HYDRANT FLOW LINE FINISHED SURFACE GAGE OR GAUGE GRADE BREAK HIGH DENSITY CORRUGATED TEMP TP POLYETHYLENE PIPE HORIZONTAL HI PT HIGH POINT HUB & TACK INSIDE DIAMETER INVERT ELEVATION JUNCTION BOX

JOINT TRENCH

LANDING

**LNDG** 

JOINT UTILITY POLE

MAXIMUM MANHOLE MINIMUM MONUMENT **NUMBER** NOT TO SCALE ON CENTER OVER PLANTING AREA **PEDESTRIAN** POST INDICATOR VALVE PUBLIC SERVICES EASEMENT PROPERTY LINE POWER POLE PUBLIC UTILITY EASEMENT POLYVINYL CHLORIDE REINFORCED CONCRETE PIPE RIM ELEVATION RAINWATER RIGHT OF WAY SEE ARCHITECTURAL DRAWINGS SANITARY STORM DRAIN STORM DRAIN MANHOLE SEE LANDSCAPE DRAWINGS SPECIFICATION SANITARY SEWER SANITARY SEWER CLEANOUT SANITARY SEWER MANHOLE **STATION STANDARD STRUCTURAL** TELEPHONE TOP OF CURE **TEMPORARY** TOP OF PAVEMENT

TOP OF WALL/FINISH GRADE

VERTICAL CURVE

VERTICAL

WATER LINE

WATER METER

VITRIFIED CLAY PIPE

WELDED WIRE FABRIC

1. TW/FG REPRESENTS FINISHED EARTHEN GRADE OR PAVEMENT ELEVATION AT TOP OF WALL, NOT ACTUAL TOP OF WALL MATERIAL. BW/FG REPRESENTS FINISH EARTHEN GRADE OR PAVEMENT ELEVATION AT BOTTOM OF WALL NOT INCLUDING FILL FOUNDATION. GRADES INDICATED ON THESE PLANS REFER TO THE FINISHED GRADES ADJACENT TO THE RETAINING WALL, NOT INCLUDING FOOTING, FREEBOARD, ETC.

2. DIMENSIONS SHOWN IN BRACKETS SHOWN AS [X.X'] DENOTE THE EFFECTIVE WALL HEIGHT ONLY. THE ACTUAL WALL HEIGHT AND DEPTH MAY DIFFER DUE TO CONSTRUCTION REQUIREMENTS.

(N) GARAGI

3. REFER TO SPECIFIC WALL CONSTRUCTION DETAIL FOR STRUCTURAL ELEMENTS, FREEBOARD, AND EMBEDMENT.

4. REFER TO ARCHITECTURAL, LANDSCAPE ARCHITECTURE, AND/OR STRUCTURAL PLANS FOR DETAILS, WALL ELEVATIONS, SUBDRAINAGE, WATERPROOFING, FINISHES, COLORS, STEEL REINFORCING, MATERIALS, ETC. PROVIDE CLIPS OR OTHER MEANS OF SECURING FINISH MATERIALS AS NECESSARY (WET SET INTO

5. ALL RETAINING WALLS SHOULD HAVE A BACK-OF-WALL SUB-SURFACE DRAINAGE SYSTEM INCLUDING WEEPHOLES TO PREVENT HYDROSTATIC

6. SEE DETAIL SHEET FOR SPECIFIC INFORMATION.

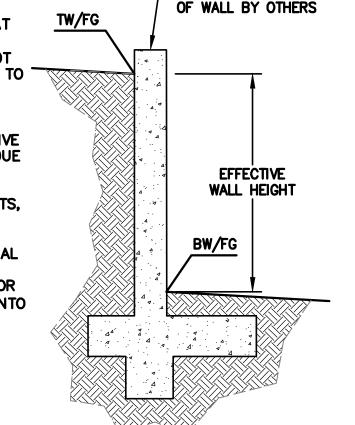
730 LOMA COURT

RETAINING WALL NOTES

CERROS

7. PROVIDE GUARDRAIL (WHERE APPLICABLE AND DESIGNED BY OTHERS) AS REQUIRED FOR GRADE SEPARATION OF 30 INCHES OR MORE MEASURED 5' HORIZONTALLY FROM FACE OF WALL, PER CBC.

\* BUILDING PAD NOTE: ADJUST PAD LEVEL AS FOR CONSTRUCTION STAKING **SCHEDULING OR QUOTATIONS** REQUIRED. REFER TO **PLEASE CONTACT ALEX ABAYA** STRUCTURAL PLANS AT LEA & BRAZE ENGINEERING FOR SLAB SECTION OR CRAWL SPACE DEPTH (510)887-4086 EXT 116. TO ESTABLISH PAD aabaya@leabraze.com



—FLAT OR SLOPING TOP

722 PALOMAR DRIVE

1" = 20'

KEY MAP

<u>SCHEMATIC RETAINING WALL</u> PLEASE NOTE THE DETAIL ABOVE IS SCHEMATIC ONLY AND DOES NOT PERTAIN TO ANY SPECIFIC RETAINING WALL LOCATED ON-SITE.



#### ESTIMATED EARTHWORK QUANTITIES OFFSITE/ TOTAL CUBIC WITHIN BUILDING BUILDING POOL(S) AND **CUBIC YARDS** FOOTPRINT ROADWAY YARDS SPA(S) FOOTPRINT 290 35 30 90 90 0 **EXPORT** 790

GRADING QUANTITIES REPRESENT BANK YARDAGE. IT DOES NOT INCLUDE ANY SWELLING OR SHRINKAGE FACTORS AND IS INTENDED TO REPRESENT IN-SITU CONDITIONS. QUANTITIES DO NOT INCLUDE OVER-EXCAVATION, TRENCHING, STRUCTURAL FOUNDATIONS OR PIERS, OR POOL EXCAVATION (IF ANY). NOTE ADDITIONAL EARTHWORKS, SUCH AS KEYWAYS OR BENCHING MAY BE REQUIRED BY THE GEOTECHNICAL ENGINEER IN THE FIELD AT TIME OF CONSTRUCTION. CONTRACTOR TO VERIFY QUANTITIES.

## INSPECTIONS REQUIRED

THE COUNTY OF SAN MATEO REQUIRES LEA & BRAZE ENGINEERING, INC. TO INSPECT ALL STORM DRAINAGE AS I' IS INSTALLED. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT LEA & BRAZE ENGINEERING, INC. PRIOR TO START OF CONSTRUCTION TO SET UP A PRE-CONSTRUCTION MEETING, AND TO CALL AT LEAST 48 HOURS IN ADVANCE OF ANY INSPECTIONS. PIPES ARE TO REMAIN UNCOVERED UNTIL AN INSPECTION PERFORMED BY LEA & BRAZE **ENGINEERING, INC. OCCURS.** POINT OF CONTACT:

**JIM TOBY** LEA & BRAZE ENGINEERING, INC. (510)887-4086 jtoby@leabraze.com

# SHEET INDEX

TITLE SHEET GRADING & DRAINAGE PLAN C - 3.0UTILITY PLAN **DETAILS** C - 4.0C - 4.1DETAILS

GRADING SPECIFICATIONS C - 5.0C - 6.0DRIVEWAY PROFILES EROSION CONTROL EROSION CONTROL DETAILS

BEST MANAGEMENT PRACTICES

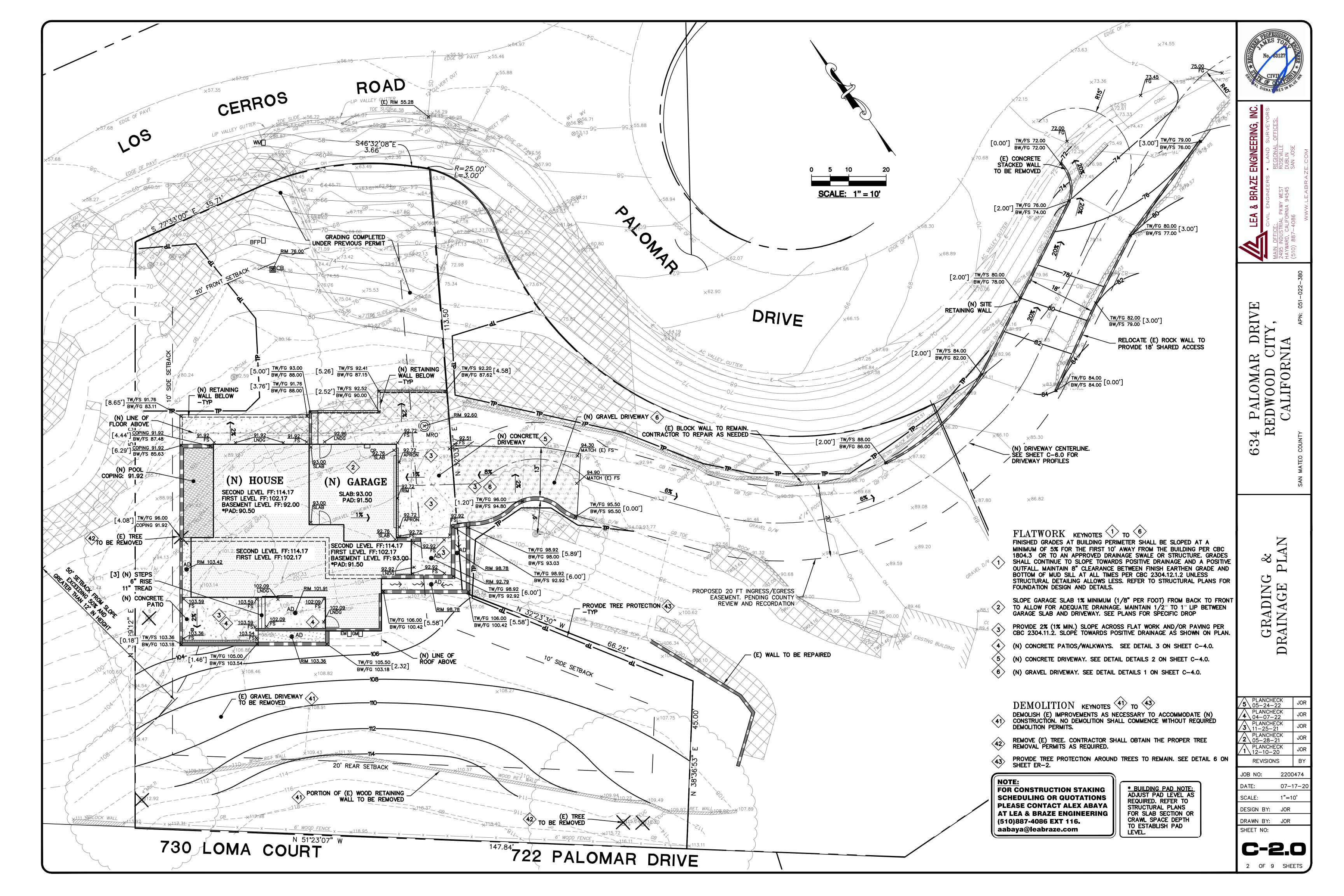
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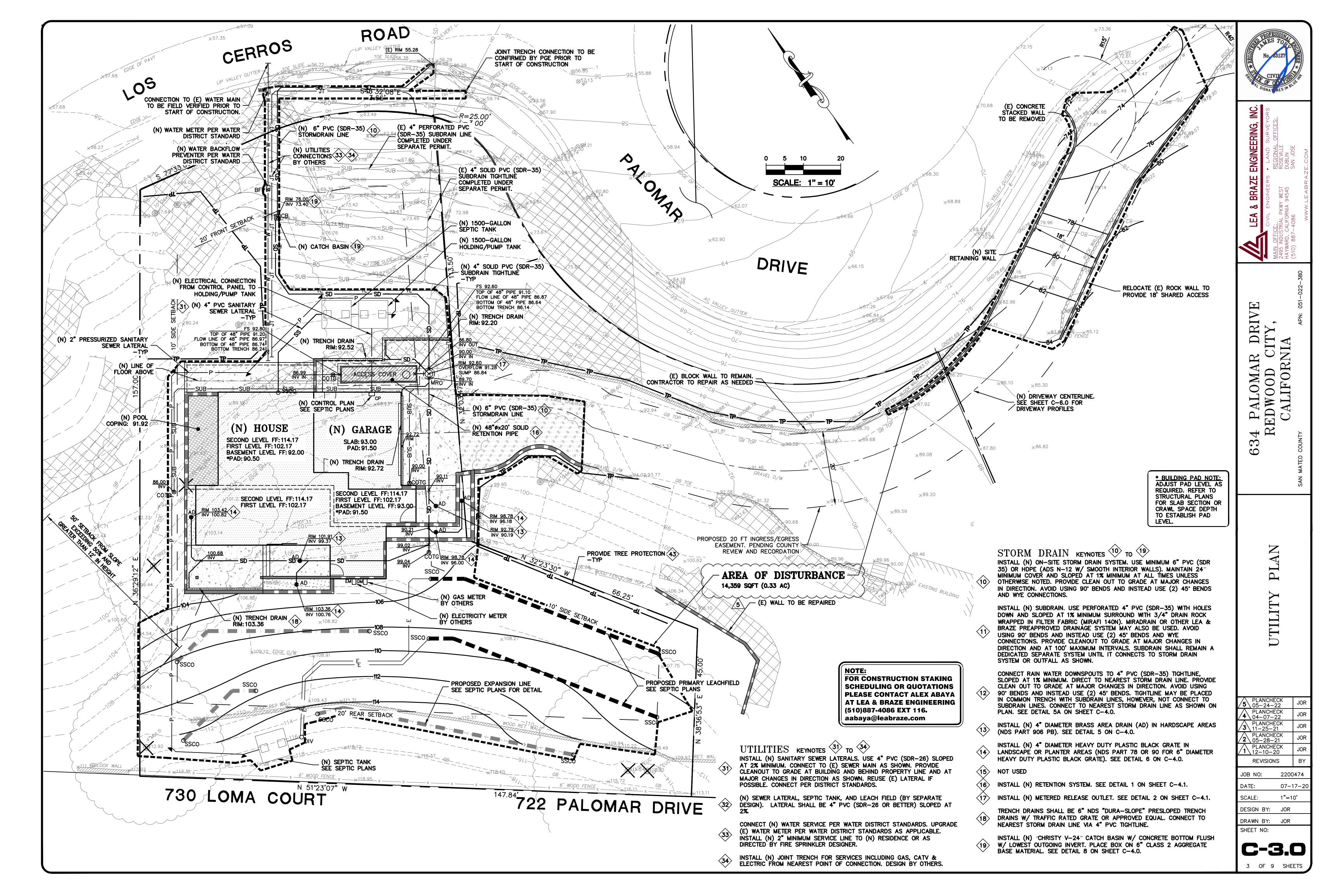
PLANCHECK 05-24-22 PLANCHECK **/4** \ 04−07−22 PLANCHECK 11-25-21 PLANCHECK 05-28-21 PLANCHECK 12-10-20 REVISIONS

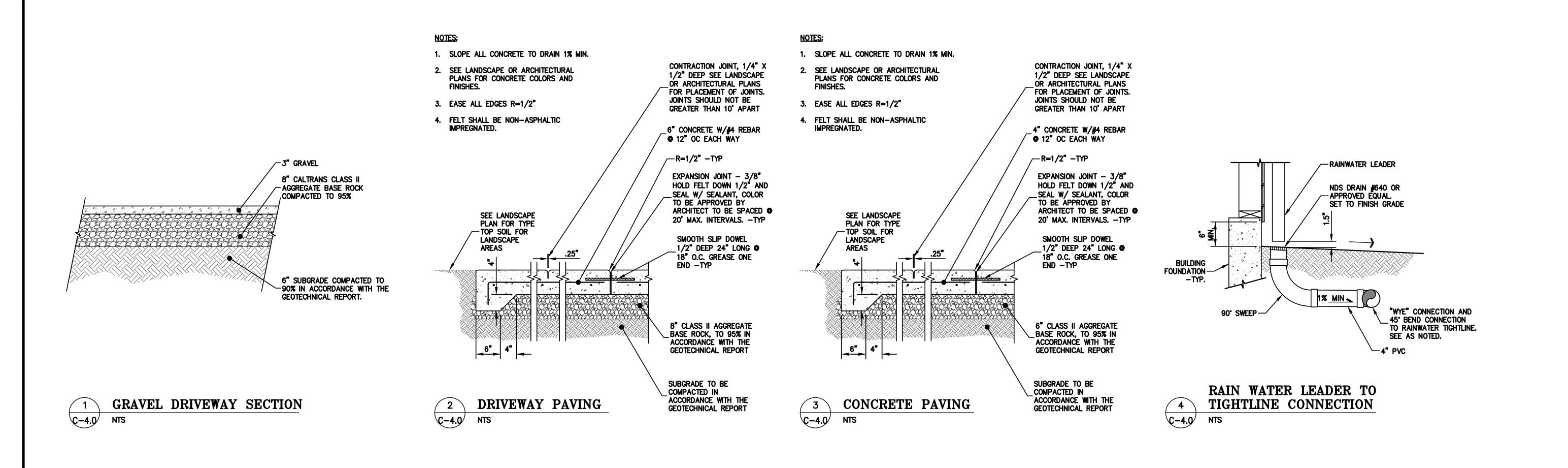
JOB NO: 2200474 07-17-20 1"=20' SCALE: DESIGN BY: JOR

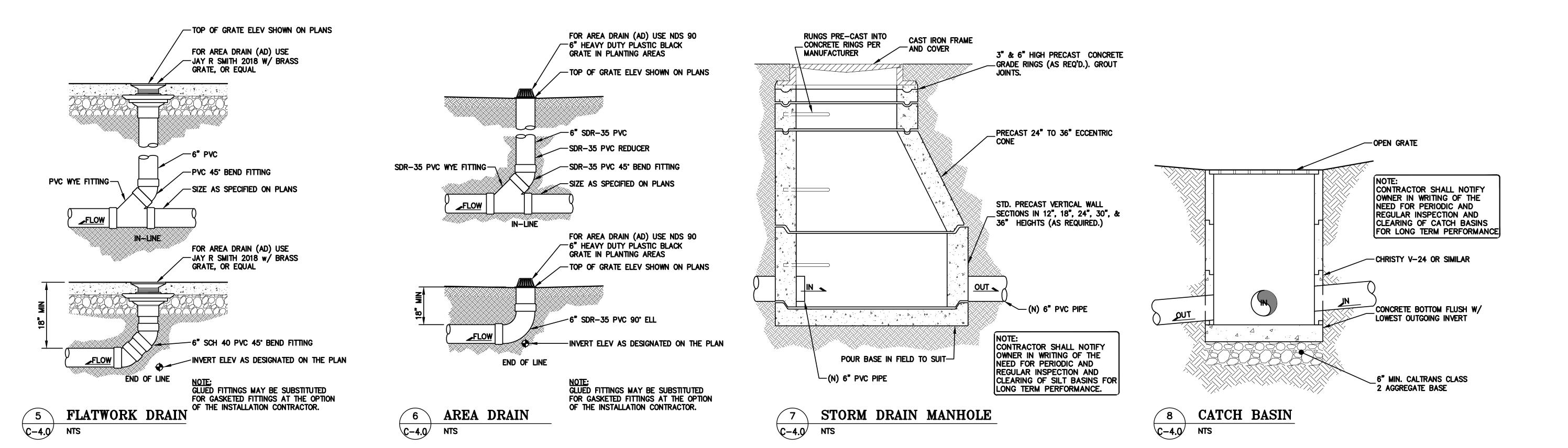
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LEA

REDWOOD CITY, CALIFORNIA

PLANCHECK 05-24-22
PLANCHECK 04-07-22
PLANCHECK 11-25-21
PLANCHECK 05-28-21 PLANCHECK 12-10-20 REVISIONS JOB NO: 2200474 DATE: 07-17-20

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 2200474

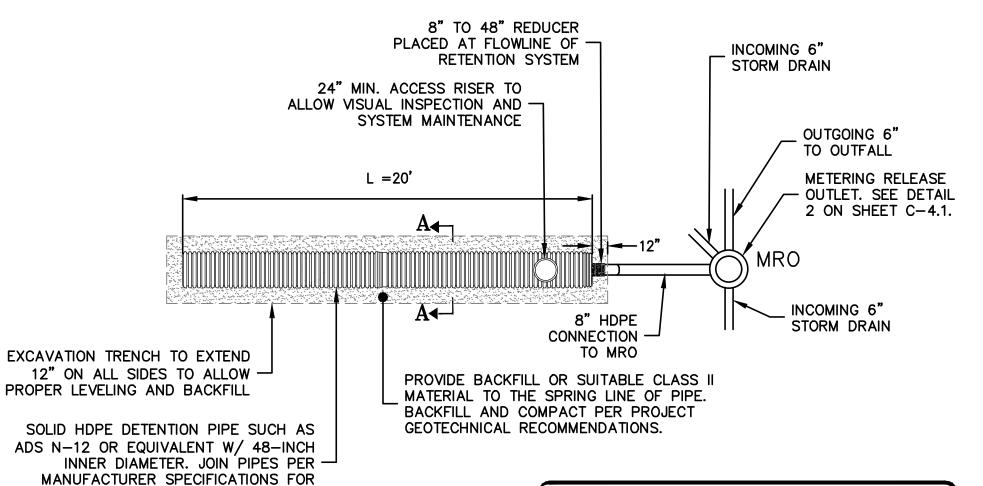
 DATE:
 07-17-20

 SCALE:
 NTS

DESIGN BY: JOR
DRAWN BY: JOR

SHEET NO:

**C-4.1**5 OF 9 SHEETS



PLAN VIEW

NOTE:
REFER TO THE PLANS FOR SPECIFIC INLET AND
OUTLET LOCATIONS.
REFER TO THE PLANS FOR SPECIFIC ACCESS COVER

STORAGE PIPE	NOMINAL	MIN. SIDE
NOMINAL I.D.	O.D.	COVER
48"	54"	12"
(1200 MM)	(1372 MM)	(292 MM)

WATERTIGHT CONNECTIONS

NOTE

LOCATIONS.

1. ALL REFERENCES TO CLASS I OR II MATERIAL ARE PER ASTM D2321 "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS", LATEST EDITION.

ALL RETENTION AND DETENTION SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321, LATEST EDITION AND THE MANUFACTURER'S PUBLISHED INSTALLATION GUIDELINES.
 MEASURES SHOULD BE TAKEN TO PREVENT THE MIGRATION OF NATIVE FINES INTO THE BACKFILL MATERIAL, WHEN REQUIRED. SEE ASTM D2321.

4. <u>FILTER FABRIC:</u> A GEOTEXTILE FABRIC MAY BE USED AS SPECIFIED BY THE ENGINEER TO PREVENT THE MIGRATION OF FINES FROM THE NATIVE SOIL INTO THE SELECT BACKFILL MATERIAL.

5. <u>FOUNDATION:</u> WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH SUITABLE MATERIAL AS SPECIFIED BY THE ENGINEER. AS AN ALTERNATIVE AND AT THE DISCRETION OF THE DESIGN ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A GEOTEXTILE MATERIAL.

6. <u>BEDDING:</u> SUITABLE MATERIAL SHALL BE SAND OR CLASS II\*. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. UNLESS OTHERWISE NOTED BY THE ENGINEER, MINIMUM BEDDING THICKNESS SHALL BE 4" (100mm) FOR 4"-24" (100mm-600mm); 8" (150mm) FOR 30"-60" (750mm-900mm) COMPACTED TO 90% SPD.

SECTION A-A

GRADE —

PROVIDE BACKFILL OR SUITABLE CLASS II

MATERIAL TO THE SPRING LINE OF PIPE.

BACKFILL AND COMPACT PER PROJECT

GEOTECHNICAL RECOMMENDATIONS.

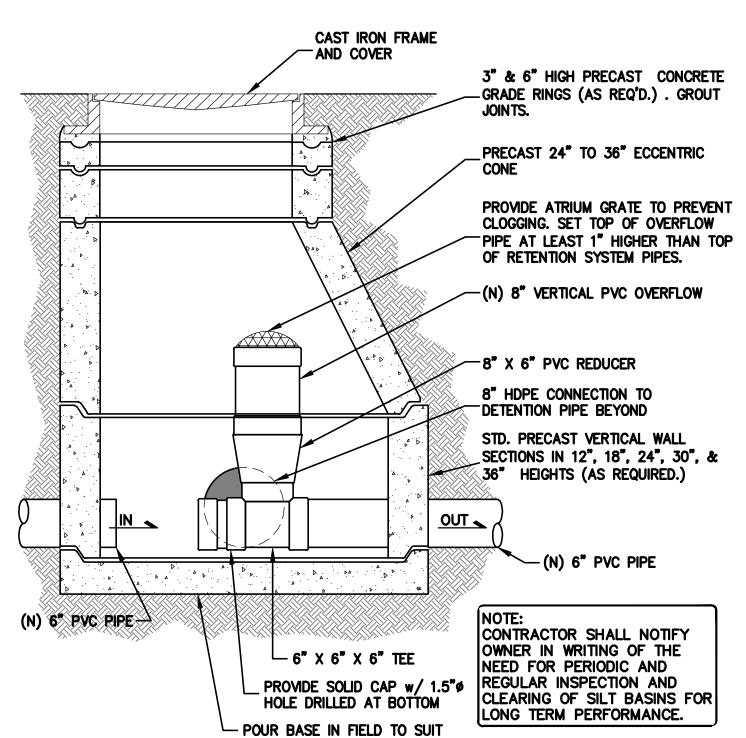
7. <u>INITIAL BACKFILL:</u> SUITABLE MATERIAL SHALL BE SAND OR CLASS II\*. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.

8. <u>MINIMUM COVER:</u> MINIMUM COVER OVER ALL RETNETION/DETENTION SYSTEMS IN NON-TRAFFIC

APPLICATIONS (GRASS OR LANDSCAPE AREAS) IS 18" FROM TOP OF PIPE TO GROUND SURFACE, COMPACT AS RECOMMENDED BY THE SOILS ENGINEER. ADDITIONAL COVER MAY BE REQUIRED TO PREVENT FLOATATION. FOR TRAFFIC APPLICATIONS, MINIMUM COVER IS 18" UP TO 36" DIAMETER PIPE AND 24" OF COVER FOR 42" — 60" DIAMETER PIPE, MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TO TOP OF RIGID PAVEMENT.

9. <u>CONECTIONS:</u> ALL CONNECTIONS FOR EACH SEGMENT SHALL BE WATER TIGHT.\* CLASS I BACKFILL REQUIRED AROUND 60" DIAMETER FITTINGS.

# DETENTION SYSTEM DETAIL C-4.7 NTS



2 METERED RELEASE OUTLET

THESE DRAWINGS AND THEIR CONTENT ARE AND SHALL REMAIN THE PROPERTY OF LEA AND BRAZE ENGINEERING, INC. WHETHER THE PROJECT FOR WHICH THEY ARE PREPARED IS EXECUTED OR NOT. THEY ARE NOT TO BE USED BY ANY PERSONS ON OTHER PROJECTS OR EXTENSIONS OF THE PROJECT EXCEPT BY AGREEMENT IN WRITING AND WITH APPROPRIATE COMPENSATION TO THE ENGINEER.

ALL WORK SHALL COMPLY WITH APPLICABLE CODES AND TRADE STANDARDS WHICH GOVERN EACH PHASE OF WORK INCLUDING, BUT NOT LIMITED TO, CALIFORNIA MECHANICAL CODE, CALIFORNIA PLUMBING CODE, CALIFORNIA ELECTRICAL CODE, CALIFORNIA FIRE CODE, CALTRANS STANDARDS AND SPECIFICATIONS, AND ALL APPLICABLE STATE AND/OR LOCAL CODES AND/OR LEGISLATION.

IT IS THE RESPONSIBILITY OF THE CONTRACTOR AND ALL SUBCONTRACTORS TO CHECK AND VERIFY ALL CONDITIONS, DIMENSIONS, LINES AND LEVELS INDICATED. PROPER FIT AND ATTACHMENT OF ALL PARTS IS REQUIRED. SHOULD THERE BE ANY DISCREPANCIES, IMMEDIATELY NOTIFY THE ENGINEER FOR CORRECTION OR ADJUSTMENT THE EVENT OF FAILURE TO DO SO, THE CONTRACTOR SHALL BE RESPONSIBLE FOR CORRECTION OF ANY ERROR.

ALL DIMENSIONS AND CONDITIONS SHALL BE CHECKED AND VERIFIED ON THE JOB BY EACH SUBCONTRACTOR BEFORE HE/SHE BEGINS HIS/HER WORK. ANY ERRORS, OMISSION, OR DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER/CONTRACTOR BEFORE CONSTRUCTION BEGINS.

COMMENCEMENT OF WORK BY THE CONTRACTOR AND/OR ANY SUBCONTRACTOR SHALL INDICATE KNOWLEDGE AND ACCEPTANCE OF ALL CONDITIONS DESCRIBED IN THESE CONSTRUCTION DOCUMENTS, OR EXISTING ON SITE, WHICH COULD AFFECT THEIR WORK.

#### WORK SEQUENCE

IN THE EVENT ANY SPECIAL SEQUENCING OF THE WORK IS REQUIRED BY THE OWNER OR THE CONTRACTOR, THE CONTRACTOR SHALL ARRANGE A CONFERENCE BEFORE ANY SUCH WORK IS BEGUN.

SITE EXAMINATION: THE CONTRACTOR AND ALL SUBCONTRACTORS SHALL THOROUGHLY EXAMINE THE SITE AND FAMILIARIZE HIM/HERSELF WITH THE CONDITIONS UNDER WHICH THE WORK IS TO BE PERFORMED. THE CONTRACTOR SHALL VERIFY AT THE SITE ALL MEASUREMENTS AFFECTING HIS/HER WORK AND SHALL BE RESPONSIBLE FOR THE CORRECTIONS OF THE SAME. NO EXTRA COMPENSATION WILL BE ALLOWED TO THE CONTRACTOR FOR EXPENSES DUE TO HIS/HER NEGLECT TO EXAMINE, OR FAILURE TO DISCOVER, CONDITIONS WHICH AFFECT HIS/HER WORK.

LEA AND BRAZE ENGINEERING, INC. EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND OTHER PROPERTY RIGHTS IN THESE PLANS. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED OR COPIED IN ANY FORM OR MANNER WHATSOEVER, NOR ARE THEY TO BE ASSIGNED TO A THIRD PARTY WITHOUT FIRST OBTAINING THE WRITTEN PERMISSION AND CONSENT OF LEA AND BRAZE ENGINEERING, INC. IN THE EVENT OF UNAUTHORIZED REUSE OF THESE PLANS BY A THIRD PARTY, THE THIRD PARTY SHALL HOLD HARMLESS LEA AND BRAZE ENGINEERING, INC.

CONSTRUCTION IS ALWAYS LESS THAN PERFECT SINCE PROJECTS REQUIRE THE COORDINATION AND INSTALLATION OF MANY INDIVIDUAL COMPONENTS BY VARIOUS CONSTRUCTION INDUSTRY TRADES. THESE DOCUMENTS CANNOT PORTRAY ALL COMPONENTS OR ASSEMBLIES EXACTLY. IT IS THE INTENTION OF THESE ENGINEERING DOCUMENTS THAT THEY REPRESENT A REASONABLE STANDARD OF CARE IN THEIR CONTENT. IT IS ALSO PRESUMED BY THESE DOCUMENTS THAT CONSTRUCTION REVIEW SERVICES WILL BE PROVIDED BY THE ENGINEER. SHOULD THE OWNER NOT RETAIN THE ENGINEER TO PROVIDE SUCH SERVICES, OR SHOULD HE/SHE RETAIN THE ENGINEER TO PROVIDE ONLY PARTIAL OR LIMITED SERVICES, THEN IT SHALL BE THE OWNER'S AND CONTRACTOR'S RESPONSIBILITY TO FULLY RECOGNIZE AND PROVIDE THAT STANDARD OF CARE.

IF THE OWNER OR CONTRACTOR OBSERVES OR OTHERWISE BECOMES AWARE OF ANY FAULT OR DEFECT IN THE PROJECT OR NONCONFORMANCE WITH THE CONTRACT DOCUMENTS, PROMPT WRITTEN NOTICE THEREOF SHALL BE GIVEN BY THE OWNER AND/OR CONTRACTOR TO THE ENGINEER.

THE ENGINEER SHALL NOT HAVE CONTROL OF OR CHARGE OF AND SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, OR PROCEDURES, OR FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK, FOR THE ACTS OR OMISSIONS OF THE CONTRACTOR, SUBCONTRACTORS, OR ANY OTHER PERSONS PERFORMING ANY OF THE WORK, OR FOR THE FAILURE OF ANY OF THEM TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

## SITE PROTECTION

PROTECT ALL LANDSCAPING THAT IS TO REMAIN. ANY DAMAGE OR LOSS RESULTING FROM EXCAVATION. GRADING, OR CONSTRUCTION WORK SHALL BE CORRECTED OR REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION OF ALL EXISTING SITE UTILITIES AND SHALL COORDINATE THEIR REMOVAL OR MODIFICATIONS (IF ANY) TO AVOID ANY INTERRUPTION OF SERVICE TO ADJACENT AREAS. THE GENERAL CONTRACTOR SHALL INFORM HIM/HERSELF OF MUNICIPAL REGULATIONS AND CARRY OUT HIS/HER WORK IN COMPLIANCE WITH ALL FEDERAL AND STATE REQUIREMENTS TO REDUCE FIRE HAZARDS AND INJURIES TO THE PUBLIC.

# STORMWATER POLLUTION PREVENTION NOTES

- 1) STORE, HANDLE, AND DISPOSE OF CONSTRUCTION MATERIALS AND WASTES PROPERLY, SO AS TO PREVENT THEIR CONTACT WITH STORMWATER.
- 2) CONTROL AND PREVENT THE DISCHARGE OF ALL POTENTIAL POLLUTANTS, INCLUDING SOLID WASTES, PAINTS. CONCRETE, PETROLEUM PRODUCTS, CHEMICALS, WASH WATER OR SEDIMENT, AND NON-STORMWATER DISCHARGES TO STORM DRAINS AND WATER COURSES.
- 3) USE SEDIMENT CONTROL OR FILTRATION TO REMOVE SEDIMENT FROM DEWATERING EFFLUENT.
- 4) AVOID CLEANING, FUELING, OR MAINTAINING VEHICLES ON SITE, EXCEPT IN A DESIGNATED AREA IN WHICH RUNOFF IS CONTAINED AND TREATED.
- 5) DELINEATE CLEARING LIMITS, EASEMENTS, SETBACKS, SENSITIVE OR CRITICAL AREAS, BUFFER ZONES, TREES AND DISCHARGE COURSE WITH FIELD MARKERS.
- 6) PROTECT ADJACENT PROPERTIES AND UNDISTURBED AREAS FROM CONSTRUCTION IMPACTS USING VEGETATIVE BUFFER STRIPS, SEDIMENT BARRIERS OF FILTERS, DIKES, MULCHING, OR OTHER MEASURES AS APPROPRIATE.
- 7) PERFORM CLEARING AND EARTH MOVING ACTIVITIES DURING DRY WEATHER TO THE MAXIMUM EXTENT
- PRACTICAL.
- 8) LIMIT AND TIME APPLICATIONS OF PESTICIDES AND FERTILIZERS TO PREVENT POLLUTED RUNOFF.

9) LIMIT CONSTRUCTION ACCESS ROUTES AND STABILIZE DESIGNATED ACCESS POINTS.

10) AVOID TRACKING DIRT OR MATERIALS OFF—SITE; CLEAN OFF—SITE PAVED AREAS AND SIDEWALKS USING DRY SWEEPING METHODS TO THE MAXIMUM EXTENT PRACTICAL.

## SUPPLEMENTAL MEASURES

- A. THE PHRASE "NO DUMPING DRAINS TO BAY" OR EQUALLY EFFECTIVE PHRASE MUST BE LABELED ON STORM DRAIN INLETS (BY STENCILING, BRANDING, OR PLAQUES) TO ALERT THE PUBLIC TO THE DESTINATION OF STORM WATER AND TO PREVENT DIRECT DISCHARGE OF POLLUTANTS INTO THE STORM DRAIN.
- B. USING FILTRATION MATERIALS ON STORM DRAIN COVERS TO REMOVE SEDIMENT FROM DEWATERING EFFLUENT.
- C. STABILIZING ALL DENUDED AREAS AND MAINTAINING EROSION CONTROL MEASURES CONTINUOUSLY FROM OCTOBER 15 AND APRIL 15.
- D. REMOVING SPOILS PROMPTLY, AND AVOID STOCKPILING OF FILL MATERIALS, WHEN RAIN IS FORECAST. IF RAIN THREATENS, STOCKPILED SOILS AND OTHER MATERIALS SHALL BE COVERED WITH A TARP OR OTHER WATERPROOF MATERIAL.
- E. STORING. HANDLING. AND DISPOSING OF CONSTRUCTION MATERIALS AND WASTES SO AS TO AVOID THEIR ENTRY TO THE STORM DRAIN SYSTEMS OR WATER BODY.
- F. AVOIDING CLEANING, FUELING, OR MAINTAINING VEHICLES ON—SITE, EXCEPT IN AN AREA DESIGNATED TO CONTAIN AND TREAT RUNOFF.

## GRADING & DRAINAGE NOTES:

#### 1. SCOPE OF WORK

these specifications and applicable plans pertain to and include all site grading and EARTHWORK ASSOCIATED WITH THE PROJECT INCLUDING, BUT NOT LIMITED TO THE FURNISHING OF ALL LABOR, TOOLS AND EQUIPMENT NECESSARY FOR SITE CLEARING AND GRUBBING, SITE PREPARATION, DISPOSAL OF EXCESS OR UNSUITABLE MATERIAL, STRIPPING, KEYING, EXCAVATION, OVER EXCAVATION RECOMPACTION PREPARATION FOR SOIL RECEIVING FILL, PAVEMENT, FOUNDATION OF SLABS, EXCAVATION, IMPORTATION OF ANY REQUIRED FILL MATERIAL, PROCESSING, PLACEMENT AND COMPACTION OF FILL AND SUBSIDIARY WORK NECESSARY TO COMPLETE THE GRADING TO CONFORM TO THE LINES, GRADING AND SLOPE SHOWN ON THE PROJECT GRADING PLANS.

### 2. GENERAL

- A. ALL SITE GRADING AND EARTHWORK SHALL CONFORM TO THE RECOMMENDATIONS OF THESE SPECIFICATIONS, THE SOILS REPORT BY EARTH INVESTIGATIONS CONSULTANTS; AND THE COUNTY OF SAN
- B. ALL FILL MATERIALS SHALL BE DENSIFIED SO AS TO PRODUCE A DENSITY NOT LESS THAN 90% RELATIVE COMPACTION BASED UPON ASTM TEST DESIGNATION D1557. FIELD DENSITY TEST WILL BE PERFORMED IN ACCORDANCE WITH ASTM TEST DESIGNATION 2922 AND 3017. THE LOCATION AND FREQUENCY OF THE FIELD DENSITY TEST WILL BE AS DETERMINED BY THE SOIL ENGINEER. THE RESULTS OF THESE TEST AND COMPLIANCE WITH THE SPECIFICATIONS WILL BE THE BASIS UPON WHICH SATISFACTORY COMPLETION OF THE WORK WILL BE JUDGED BY THE SOIL ENGINEER. ALL CUT AND FILL SLOPES SHALL BE CONSTRUCTED AS SHOWN ON PLANS, BUT NO STEEPER THAN TWO (2) HORIZONTAL TO ONE (1) VERTICAL.
- C. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SATISFACTORY COMPLETION OF ALL THE EARTHWORK IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS. NO DEVIATION FROM THESE SPECIFICATIONS SHALL BE MADE EXCEPT UPON WRITTEN APPROVAL BY THE SOILS ENGINEER. BOTH CUT AND FILL AREAS SHALL BE SURFACE COMPLETED TO THE SATISFACTION OF THE SOILS ENGINEER AT THE CONCLUSION OF ALL GRADING OPERATIONS AND PRIOR TO FINAL ACCEPTANCE. THE CONTRACTOR SHALL NOTIFY THE SOILS ENGINEER AT LEAST TWO (2) WORKING DAYS PRIOR TO DOING ANY SITE GRADING AND EARTHWORK INCLUDING CLEARING.

### CLEARING AND GRUBBING

- A. THE CONTRACTOR SHALL ACCEPT THE SITE IN ITS PRESENT CONDITION. ALL EXISTING PUBLIC IMPROVEMENTS SHALL BE PROTECTED, ANY IMPROVEMENTS DAMAGED SHALL BE REPLACED BY THE CONTRACTOR AS DIRECTED BY THE LOCAL JURISDICTION WITH NO EXTRA COMPENSATION.
- B. ALL ABANDONED BUILDINGS AND FOUNDATIONS, TREE (EXCEPT THOSE SPECIFIED TO REMAIN FOR LANDSCAPING PURPOSES), FENCES, VEGETATION AND ANY SURFACE DEBRIS SHALL BE REMOVED AND DISPOSED OF OFF THE SITE BY THE CONTRACTOR.
- C. ALL ABANDONED SEPTIC TANKS AND ANY OTHER SUBSURFACE STRUCTURES EXISTING IN PROPOSED DEVELOPMENT AREAS SHALL BE REMOVED PRIOR TO ANY GRADING OR FILL OPERATION. ALL APPURTENANT DRAIN FIELDS AND OTHER CONNECTING LINES MUST ALSO BE TOTALLY REMOVED.
- D. ALL ABANDONED UNDERGROUND IRRIGATION OR UTILITY LINES SHALL BE REMOVED OR DEMOLISHED. THE APPROPRIATE FINAL DISPOSITION OF SUCH LINES DEPEND UPON THEIR DEPTH AND LOCATION AND THE METHOD OF REMOVAL OR DEMOLITION SHALL BE DETERMINED BY THE SOILS ENGINEER. ONE OF THE FOLLOWING METHODS WILL BE USED:
  - (1) EXCAVATE AND TOTALLY REMOVE THE UTILITY LINE FROM THE TRENCH.
  - (2) EXCAVATE AND CRUSH THE UTILITY LINE IN THE TRENCH.
  - (3) CAP THE ENDS OF THE UTILITY LINE WITH CONCRETE TO PREVENT THE ENTRANCE OF WATER. THE LOCATIONS AT WHICH THE UTILITY LINE WILL BE CAPPED WILL BE DETERMINED BY THE UTILITY DISTRICT ENGINEER. THE LENGTH OF THE CAP SHALL NOT BE LESS THAN FIVE FEET, AND THE CONCRETED MIX EMPLOYED SHALL HAVE MINIMUM SHRINKAGE.

### SITE PREPARATION AND STRIPPING

- A. ALL SURFACE ORGANICS SHALL BE STRIPPED AND REMOVED FROM BUILDING PADS, AREAS TO RECEIVE COMPACTED FILL AND PAVEMENT AREAS.
- B. UPON THE COMPLETION OF THE ORGANIC STRIPPING OPERATION, THE GROUND SURFACE (NATIVE SOIL SUBGRADE) OVER THE ENTIRE AREA OF ALL BUILDING PADS. STREET AND PAVEMENT AREAS AND ALL AREAS TO RECEIVE COMPACTED FILL SHALL BE PLOWED OR SCARIFIED UNTIL THE SURFACE IS FREE RUTS, HUMMOCKS OR OTHER UNEVEN FEATURES WHICH MAY INHIBIT UNIFORM SOIL COMPACTION. THE GROUND SURFACE SHALL THEN BE DISCED OR BLADED TO A DEPTH OF AT LEAST 6 INCHES. UPON ENGINEER'S SATISFACTION, THE NEW SURFACE SHALL BE WATER CONDITIONED AND RECOMPACTED PER REQUIREMENTS FOR COMPACTING FILL MATERIAL.

## EXCAVATION

- A. UPON COMPLETION OF THE CLEARING AND GRUBBING. SITE PREPARATION AND STRIPPING. THE CONTRACTOR SHALL MAKE EXCAVATIONS TO LINES AND GRADES NOTED ON THE PLAN. WHERE REQUIRED BY THE SOILS ENGINEER. UNACCEPTABLE NATIVE SOILS OR UNENGINEERED FILL SHALL BE OVER EXCAVATED BELOW THE DESIGN GRADE. SEE PROJECT SOILS REPORT FOR DISCUSSION OF OVER EXCAVATION OF THE UNACCEPTABLE MATERIAL. RESULTING GROUND LINE SHALL BE SCARIFIED. MOISTURE-CONDITIONED AND RECOMPACTED AS SPECIFIED IN SECTION 4 OF THESE SPECIFICATIONS. COMPACTED FILL MATERIAL SHALL BE PLACED TO BRING GROUND LEVEL BACK TO DESIGN GRADE.
- B. EXCAVATED MATERIALS SUITABLE FOR COMPACTED FILL MATERIAL SHALL BE UTILIZED IN MAKING THE REQUIRED COMPACTED FILLS. THOSE NATIVE MATERIALS CONSIDERED UNSUITABLE BY THE SOILS ENGINEER SHALL BE DISPOSED OF OFF THE SITE BY THE CONTRACTOR.

## 6. PLACING. SPREADING AND COMPACTING FILL MATERIAL

the materials proposed for use as compacted fill shall be approved by the soils engineer BEFORE COMMENCEMENT OF GRADING OPERATIONS. THE NATIVE MATERIAL IS CONSIDERED SUITABLE FOR FILL; HOWEVER, ANY NATIVE MATERIAL DESIGNATED UNSUITABLE BY THE SOILS ENGINEER SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR. ANY IMPORTED MATERIAL SHALL BE APPROVED FOR use by the soils engineer, in writing, before being imported to the site and shall possess sufficient fines to provide a competent soil matrix and shall be free of vegetative and ORGANIC MATTER AND OTHER DELETERIOUS MATERIALS. ALL FILL VOIDS SHALL BE FILLED AND PROPERLY COMPACTED. NO ROCKS LARGER THAN THREE INCHES IN DIAMETER SHALL BE PERMITTED.

#### B. FILL CONSTRUCTION

THE SOILS ENGINEER SHALL APPROVE THE NATIVE SOIL SUBGRADE BEFORE PLACEMENT OF ANY COMPACTED FILL MATERIAL. UNACCEPTABLE NATIVE SOIL SHALL BE REMOVED AS DIRECTED BY THE SOILS ENGINEER. THE RESULTING GROUND LINE SHALL BE SCARIFIED MOISTURE CONDITIONED AND RECOMPACTED AS SPECIFIED IN SECTION 4 OF THESE SPECIFICATIONS. COMPACTED FILL MATERIAL SHALL BE PLACED TO BRING GROUND LEVEL BACK TO DESIGN GRADE. GROUND PREPARATION SHALL BE FOLLOWED CLOSELY BY FILL PLACEMENT TO PREVENT DRYING OUT OF THE SUBSOIL BEFORE PLACEMENT of the fill.

THE APPROVED FILL MATERIALS SHALL BE PLACED IN UNIFORM HORIZONTAL LAYERS NO THICKER THAN 8" IN LOOSE THICKNESS. LAYERS SHALL BE SPREAD EVENLY AND SHALL BE THOROUGHLY BLADE MIXED DURING THE SPREADING TO ENSURE UNIFORMITY OF MATERIAL IN EACH LAYER. THE SCARIFIED SUBGRADE AND FILL MATERIAL SHALL BE MOISTURE CONDITIONED TO AT LEAST OPTIMUM MOISTURE. when the moisture content of the fill is below that specified, water shall be added until THE MOISTURE DURING THE COMPACTION PROCESS. WHEN THE MOISTURE CONTENT OF THE FILL IS above that specified, the fill material shall be aerated by blading or other satisfactory METHODS UNTIL THE MOISTURE CONTENT IS AS SPECIFIED.

AFTER EACH LAYER HAS BEEN PLACED, MIXED, SPREAD EVENLY AND MOISTURE CONDITIONED, IT SHALL BE COMPACTED TO AT LEAST THE SPECIFIED DENSITY.

THE FILL OPERATION SHALL BE CONTINUED IN COMPACTED LAYERS AS SPECIFIED ABOVE UNTIL THE FILL HAS BEEN BROUGHT TO THE FINISHED SLOPES AND GRADES AS SHOWN ON THE PLANS. NO LAYER SHALL BE ALLOWED TO DRY OUT BEFORE SUBSEQUENT LAYERS ARE PLACED.

COMPACTION EQUIPMENT SHALL BE OF SUCH DESIGN THAT IT WILL BE ABLE TO COMPACT THE FILL TO THE SPECIFIED MINIMUM COMPACTION WITHIN THE SPECIFIED MOISTURE CONTENT RANGE. COMPACTION OF EACH LAYER SHALL BE CONTINUOUS OVER ITS ENTIRE AREA UNTIL THE REQUIRED MINIMUM DENSITY HAS BEEN OBTAINED.

### CUT OR FILL SLOPES

all constructed slopes, both cut and fill, shall be no steeper than 2 to 1 (horizontal TO VERTICAL). DURING THE GRADING OPERATION, COMPACTED FILL SLOPES SHALL BE OVERFILLED BY AT LEAST ONE FOOT HORIZONTALLY AT THE COMPLETION OF THE GRADING OPERATIONS, THE EXCESS FILL EXISTING ON THE SLOPES SHALL BE BLADED OFF TO CREATE THE FINISHED SLOPE EMBANKMENT. all cut and fill slopes shall be track walked after being brought to finish grade and THEN BE PLANTED WITH EROSION CONTROL SLOPE PLANTING. THE SOILS ENGINEER SHALL REVIEW ALL CUT SLOPES TO DETERMINE IF ANY ADVERSE GEOLOGIC CONDITIONS ARE EXPOSED. IF SUCH CONDITIONS DO OCCUR, THE SOILS ENGINEER SHALL RECOMMEND THE APPROPRIATE MITIGATION MEASURES AT THE TIME OF THEIR DETECTION.

#### 8. SEASONAL LIMITS AND DRAINAGE CONTROL

FILL MATERIALS SHALL NOT BE PLACED, SPREAD OR COMPACTED WHILE IT IS AT AN UNSUITABLY HIGH MOISTURE CONTENT OR DURING OTHERWISE UNFAVORABLE CONDITIONS. WHEN THE WORK IS interrupted for any reason the fill operations shall not be resumed until field test PERFORMED BY THE SOILS ENGINEER INDICATE THAT THE MOISTURE CONDITIONS IN AREAS TO BE FILLED ARE AS PREVIOUSLY SPECIFIED. ALL EARTH MOVING AND WORKING OPERATIONS SHALL BE CONTROLLED TO PREVENT WATER FROM RUNNING INTO EXCAVATED AREAS. ALL EXCESS WATER SHALL BE PROMPTLY REMOVED AND THE SITE KEPT DRY.

## DUST CONTROL

the contractor shall take all steps necessary for the alleviation or prevention of any DUST NUISANCE ON OR ABOUT THE SITE CAUSED BY THE CONTRACTOR'S OPERATION EITHER DURING THE PERFORMANCE OF THE GRADING OR RESULTING FROM THE CONDITION IN WHICH THE CONTRACTOR LEAVES THE SITE, THE CONTRACTOR SHALL ASSUME ALL LIABILITY INCLUDING COURT COST OF CO-DEFENDANTS FOR ALL CLAIMS RELATED TO DUST OR WIND-BLOWN MATERIALS ATTRIBUTABLE TO HIS WORK. COST FOR THIS ITEM OF WORK IS TO BE INCLUDED IN THE EXCAVATION ITEM AND NO ADDITIONAL COMPENSATION SHALL BE ALLOWED.

## 10. INDEMNITY

the contractor will hold harmless, indemnify and defend the engineer. The owner and his CONSULTANTS AND EACH OF THEIR OFFICERS AND EMPLOYEES AND AGENTS, FROM ANY AND ALL LIABILITY CLAIMS, LOSSES OR DAMAGE ARISING OR ALLEGED TO HEREIN, BUT NOT INCLUDING THE SOLE NEGLIGENCE OF THE OWNER, THE ARCHITECT, THE ENGINEER AND HIS CONSULTANTS AND EACH OF THEIR OFFICERS AND EMPLOYEES AND AGENTS.

## 11. SAFETY

IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES. THE CONTRACTOR WILL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE. INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.

THE DUTY OF THE ENGINEERS TO CONDUCT CONSTRUCTION REVIEW OF THE CONTRACTOR'S PERFORMANCE IS NOT INTENDED TO INCLUDE REVIEW OF THE ADEQUACY OF THE CONTRACTOR'S SAFETY MEASURES, IN, ON OR NEAR THE CONSTRUCTION SITE.

### 12. GUARANTEE

ieither the final payment, nor the provisions in the contract, nor partial, nor entire use OR OCCUPANCY OF THE PREMISES BY THE OWNER SHALL CONSTITUTE AN ACCEPTANCE OF THE WORK NOT DONE IN ACCORDANCE WITH THE CONTRACT OR RELIEVES THE CONTRACTOR OF LIABILITY IN RESPECT TO ANY EXPRESS WARRANTIES OR RESPONSIBILITY FOR FAULTY MATERIAL OR WORKMANSHIP.

the contractor shall remedy any defects in work and pay for any damage to other work RESULTING THERE FROM WHICH SHALL APPEAR WITHIN A PERIOD OF ONE (1) CALENDAR YEAR FROM THE DATE OF FINAL ACCEPTANCE OF THE WORK.

### TRENCH BACKFILL

either the on—site inorganic soil or approved imported soil may be used as trench BACKFILL. THE BACKFILL MATERIAL SHALL BE MOISTURE CONDITIONED PER THESE SPECIFICATIONS AND SHALL BE PLACED IN LIFTS OF NOT MORE THAN SIX INCHES IN HORIZONTAL UNCOMPACTED LAYERS and be compacted by Mechanical Means to a minimum of 90% relative compaction. Imported SAND MAY BE USED FOR TRENCH BACKFILL MATERIAL PROVIDED IT IS COMPACTED TO AT LEAST 90% relative compaction. Water jetting associated with compaction using vibratory equipment WILL BE PERMITTED ONLY WITH IMPORTED SAND BACKFILL WITH THE APPROVAL OF THE SOILS ENGINEER. ALL PIPES SHALL BE BEDDED WITH SAND EXTENDING FROM THE TRENCH BOTTOM TO TWELVE INCHES ABOVE THE PIPE. SAND BEDDING IS TO BE COMPACTED AS SPECIFIED ABOVE FOR SAND

### EROSION CONTROL

- A. ALL GRADING, EROSION AND SEDIMENT CONTROL AND RELATED WORK UNDERTAKEN ON THIS SITE IS SUBJECT TO ALL TERMS AND CONDITIONS OF THE COUNTY GRADING ORDINANCE AND MADE A PART HEREOF BY REFERENCE.
- B. THE CONTRACTOR WILL BE LIABLE FOR ANY AND ALL DAMAGES TO ANY PUBLICLY OWNED AND MAINTAINED ROAD CAUSED BY THE AFORESAID CONTRACTOR'S GRADING ACTIVITIES, AND SHALL BE RESPONSIBLE FOR THE CLEANUP OF ANY MATERIAL SPILLED ON ANY PUBLIC ROAD ON THE HAUL ROUTE.
- C. THE EROSION CONTROL MEASURES ARE TO BE OPERABLE DURING THE RAINY SEASON, GENERALLY FROM OCTOBER FIRST TO APRIL FIFTEENTH, EROSION CONTROL PLANTING IS TO BE COMPLETED BY OCTOBER FIRST. NO GRADING OR UTILITY TRENCHING SHALL OCCUR BETWEEN OCTOBER FIRST AND APRIL FIFTEENTH UNLESS AUTHORIZED BY THE LOCAL JURISDICTION.
- D. ALL EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL DISTURBED AREAS ARE STABILIZED AND CHANGES TO THIS EROSION AND SEDIMENT CONTROL PLAN SHALL BE MADE TO MEET FIELD CONDITIONS ONLY WITH THE APPROVAL OF OR AT THE DIRECTION OF THE SOILS ENGINEER.
- E. DURING THE RAINY SEASON, ALL PAVED AREAS SHALL BE KEPT CLEAR OF EARTH MATERIAL AND DEBRIS. THE SITE SHALL BE MAINTAINED SO AS TO MINIMIZE SEDIMENT—LADEN RUNOFF TO ANY STORM DRAINAGE SYSTEM.
- F. ALL EROSION CONTROL FACILITIES MUST BE INSPECTED AND REPAIRED AT THE END OF EACH WORKING DAY DURING THE RAINY SEASON.
- G. WHEN NO LONGER NECESSARY AND PRIOR TO FINAL ACCEPTANCE OF DEVELOPMENT. SEDIMENT BASINS SHALL BE REMOVED OR OTHERWISE DEACTIVATED AS REQUIRED BY THE LOCAL JURISDICTION.
- H. A CONSTRUCTION ENTRANCE SHALL BE PROVIDED AT ANY POINT OF EGRESS FROM THE SITE TO ROADWAY. A CONSTRUCTION ENTRANCE SHOULD BE COMPOSED OF COARSE DRAIN ROCK (2" TO 3") MINIMUM DIAMETER) AT LEAST EIGHT INCHES THICK BY FIFTY (50) FEET LONG BY TWENTY (20) FEET WIDE UNLESS SHOWN OTHERWISE ON PLAN AND SHALL BE MAINTAINED UNTIL THE SITE IS PAVED.
- I. ALL AREAS SPECIFIED FOR HYDROSEEDING SHALL BE NOZZLE PLANTED WITH STABILIZATION MATERIAL CONSISTING OF FIBER, SEED, FERTILIZER AND WATER, MIXED AND APPLIED IN THE FOLLOWING

SEED, 200 LBS/ACRE (SEE NOTE J, BELOW) FERTILIZER (11-8-4), 500 LBS/ACRE WATER, AS REQUIRED FOR APPLICATION

## J. SEED MIX SHALL BE PER CALTRANS STANDARDS.

- K. WATER UTILIZED IN THE STABILIZATION MATERIAL SHALL BE OF SUCH QUALITY THAT IT WILL PROMOTE GERMINATION AND STIMULATE GROWTH OF PLANTS. IT SHALL BE FREE OF POLLUTANT MATERIALS AND
- L. HYDROSEEDING SHALL CONFORM TO THE PROVISIONS OF SECTION 20. EROSION CONTROL AND HIGHWAY PLANTING". OF THE STANDARD SPECIFICATIONS OF THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION, AS LAST REVISED.
- M. A DISPERSING AGENT MAY BE ADDED TO THE HYDROSEEDING MATERIAL. PROVIDED THAT THE CONTRACTOR FURNISHES SUITABLE EVIDENCE THAT THE ADDITIVE WILL NOT ADVERSELY AFFECT THE PERFORMANCE OF THE SEEDING MIXTURE.
- N. STABILIZATION MATERIALS SHALL BE APPLIED AS SOON AS PRACTICABLE AFTER COMPLETION OF GRADING OPERATIONS AND PRIOR TO THE ONSET OF WINTER RAINS, OR AT SUCH OTHER TIME AS DIRECTED BY THE COUNTY ENGINEER. THE MATERIAL SHALL BE APPLIED BEFORE INSTALLATION OF OTHER LANDSCAPING MATERIALS SUCH AS TREES, SHRUBS AND GROUND COVERS.
- O. THE STABILIZATION MATERIAL SHALL BE APPLIED WITHIN 4-HOURS AFTER MIXING. MIXED MATERIAL NOT USED WITHIN 4-HOURS SHALL BE REMOVED FROM THE SITE.
- P. THE CONTRACTOR SHALL MAINTAIN THE SOIL STABILIZATION MATERIAL AFTER PLACEMENT. THE COUNTY ENGINEER MAY REQUIRE SPRAY APPLICATION OF WATER OR OTHER MAINTENANCE ACTIVITIES TO ASSURE THE EFFECTIVENESS OF THE STABILIZATION PROCESS. APPLICATION OF WATER SHALL BE ACCOMPLISHED USING NOZZLES THAT PRODUCE A SPRAY THAT DOES NOT CONCENTRATE OR WASH AWAY THE STABILIZATION MATERIALS.

## 15. CLEANUP

THE CONTRACTOR MUST MAINTAIN THE SITE CLEAN, SAFE AND IN USABLE CONDITION. ANY SPILLS OF SOIL. ROCK OR CONSTRUCTION MATERIAL MUST BE REMOVED FROM THE SITE BY THE CONTRACTOR DURING CONSTRUCTION AND UPON COMPLETION OF THE PROJECT. COST FOR THIS ITEM OF WORK SHALL BE INCLUDED IN THE EXCAVATION AND COMPACTION ITEM AND NO ADDITIONAL COMPENSATION SHALL

> NOTE:
> THESE NOTES ARE INTENDED TO BE USED AS A GENERAL GUIDELINE. THE REFERENCED SOILS REPORT FOR THE PROJECT AND GOVERNING AGENCY GRADING ORDINANCE SHALL SUPERSEDE THESE NOTES. THE SOILS ENGINEER MAY MAKE ON-SITE RECOMMENDATIONS DURING GRADING OPERATIONS.



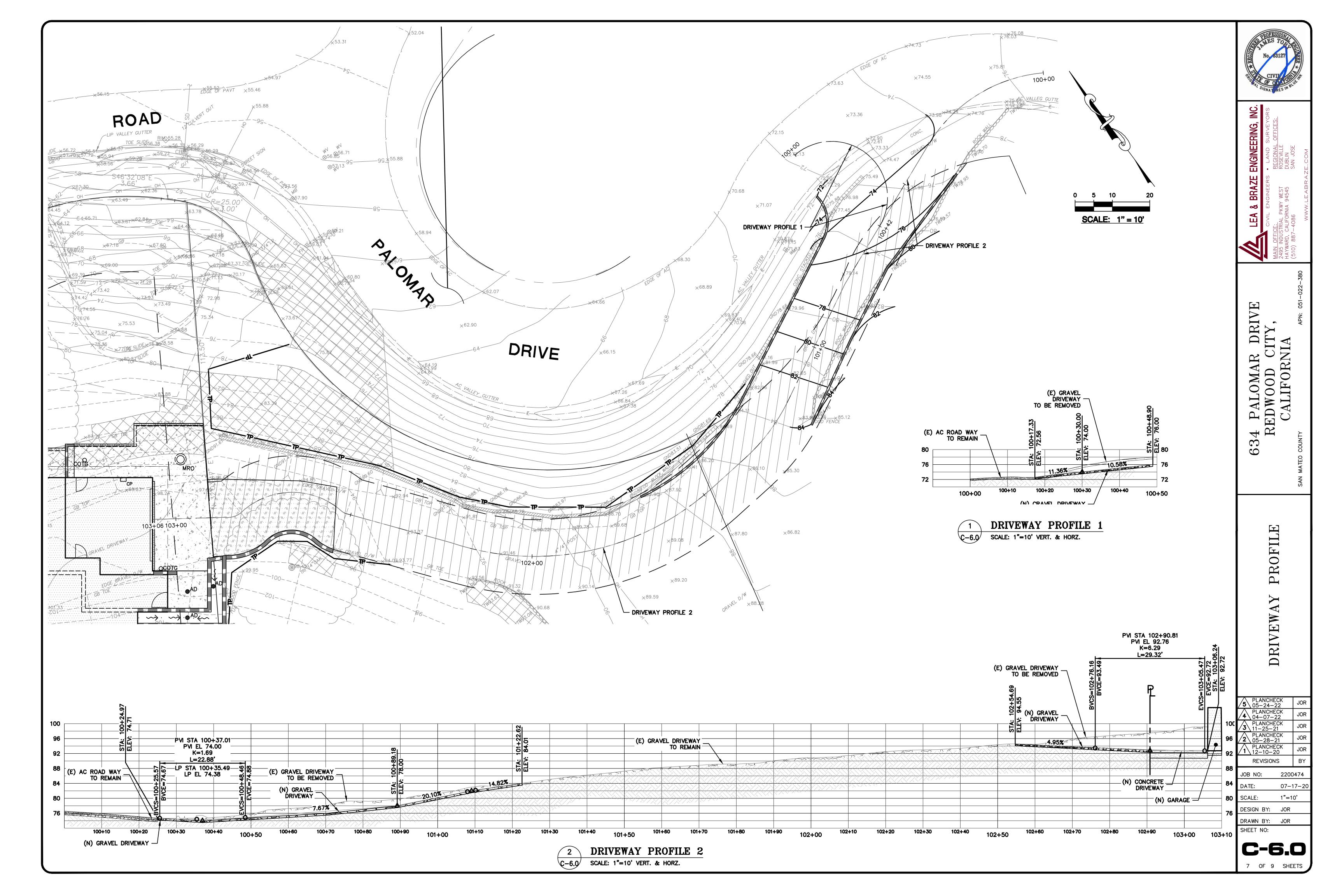
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## PURPOSE:

THE PURPOSE OF THIS PLAN IS TO STABILIZE THE SITE TO PREVENT EROSION OF GRADED AREAS AND TO PREVENT SEDIMENTATION FROM LEAVING THE CONSTRUCTION AREA AND AFFECTING NEIGHBORING SITES, NATURAL AREAS, PUBLIC FACILITIES OR ANY OTHER AREA THAT MIGHT BE AFFECTED BY SEDIMENTATION. ALL MEASURES SHOWN ON THIS PLAN SHOULD BE CONSIDERED THE MINIMUM REQUIREMENTS NECESSARY. SHOULD FIELD CONDITIONS DICTATE ADDITIONAL MEASURES, SUCH MEASURES SHALL BE PER CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD'S FIELD MANUAL FOR EROSION AND SEDIMENTATION CONTROL AND THE CALIFORNIA STORM WATER QUALITY ASSOCIATION BEST MANAGEMENT PRACTICES HANDBOOK FOR CONSTRUCTION. LEA & BRAZE ENGINEERING SHOULD BE NOTIFIED IMMEDIATELY SHOULD CONDITIONS CHANGE.

## **EROSION CONTROL NOTES:**

- . IT SHALL BE THE OWNER'S/CONTRACTOR'S RESPONSIBILITY TO MAINTAIN CONTROL OF THE ENTIRE CONSTRUCTION OPERATION AND TO KEEP THE ENTIRE SITE IN COMPLIANCE WITH THIS EROSION CONTROL PLAN.
- 2. THE INTENTION OF THIS PLAN IS FOR INTERIM EROSION AND SEDIMENT CONTROL ONLY. ALL EROSION CONTROL MEASURES SHALL CONFORM TO CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD'S FIELD MANUAL FOR EROSION AND SEDIMENTATION CONTROL, THE CALIFORNIA STORM WATER QUALITY ASSOCIATION BEST MANAGEMENT PRACTICES HANDBOOK FOR CONSTRUCTION, AND THE LOCAL GOVERNING AGENCY FOR THIS
- 3. OWNER/CONTRACTOR SHALL BE RESPONSIBLE FOR MONITORING EROSION AND SEDIMENT CONTROL MEASURES PRIOR TO, DURING, AND AFTER STORM EVENTS. PERSON IN CHARGE OF MAINTAINING EROSION CONTROL MEASURES SHOULD WATCH LOCAL WEATHER REPORTS AND ACT APPROPRIATELY TO MAKE SURE ALL NECESSARY MEASURES ARE IN PLACE.
- 4. SANITARY FACILITIES SHALL BE MAINTAINED ON THE SITE AT ALL TIMES.
- 5. DURING THE RAINY SEASON, ALL PAVED AREAS SHALL BE KEPT CLEAR OF EARTH MATERIAL AND DEBRIS. THE SITE SHALL BE MAINTAINED SO AS TO MINIMIZE SEDIMENT-LADEN RUNOFF TO ANY STORM DRAINAGE SYSTEM. INCLUDING EXISTING DRAINAGE SWALES AND WATERCOURSES.
- 5. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER THAT EROSION AND WATER POLLUTION WILL BE MINIMIZED. COMPLIANCE WITH FEDERAL, STATE AND LOCAL LAWS CONCERNING POLLUTION SHALL BE MAINTAINED AT ALL TIMES.
- 7. CONTRACTOR SHALL PROVIDE DUST CONTROL AS REQUIRED BY THE APPROPRIATE FEDERAL, STATE AND LOCAL AGENCY REQUIREMENTS.
- 8. ALL MATERIALS NECESSARY FOR THE APPROVED EROSION CONTROL MEASURES SHALL BE IN PLACE BY OCTOBER 1ST.
- 9. EROSION CONTROL SYSTEMS SHALL BE INSTALLED AND MAINTAINED THROUGHOUT THE RAINY SEASON, OR FROM OCTOBER 1ST THROUGH APRIL 30TH, WHICHEVER IS LONGER.
- 10. IN THE EVENT OF RAIN, ALL GRADING WORK IS TO CEASE IMMEDIATELY AND THE SITE IS TO BE SEALED IN ACCORDANCE WITH THE APPROVAL EROSION CONTROL MEASURES AND APPROVED EROSION CONTROL PLAN.
- 11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CHECKING AND REPAIRING EROSION CONTROL SYSTEMS AFTER EACH STORM.
- 12. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED BY LOCAL JURISDICTION'S ENGINEERING DEPARTMENT OR BUILDING OFFICIALS.
- 13. MEASURES SHALL BE TAKEN TO COLLECT OR CLEAN ANY ACCUMULATION OR DEPOSIT OF DIRT, MUD, SAND, ROCKS, GRAVEL OR DEBRIS ON THE SURFACE OF ANY STREET. ALLEY OR PUBLIC PLACE OR IN ANY PUBLIC STORM DRAIN SYSTEMS. THE REMOVAL OF AFORESAID SHALL BE DONE BY STREET SWEEPING OR HAND SWEEPING. WATER SHALL NOT BE USED TO WASH SEDIMENTS INTO PUBLIC OR PRIVATE DRAINAGE FACILITIES.
- 14. EROSION CONTROL MEASURES SHALL BE ON-SITE FROM SEPTEMBER 15TH THRU APRIL 30TH.
- 15. ALL EROSION CONTROL MEASURES SHALL BE INSTALLED AND MAINTAINED THROUGHOUT THE RAINY SEASON OR FROM OCTOBER 1ST THRU APRIL 30TH, WHICHEVER IS GREATER.
- 16. PLANS SHALL BE DESIGNED TO MEET C3 REQUIREMENTS OF THE MUNICIPAL STORMWATER REGIONAL PERMIT("MRP") NPDES PERMIT CAS 612008.
- 17. THE CONTRACTOR TO NPDES (NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM) BEST MANAGEMENT PRACTICES (BMP) FOR SEDIMENTATION PREVENTION AND EROSION CONTROL TO PREVENT DELETERIOUS MATERIALS OR POLLUTANTS FROM ENTERING THE TOWN OR COUNTY STORM DRAIN
- 18. THE CONTRACTOR MUST INSTALL ALL EROSION AND SEDIMENT CONTROL MEASURES PRIOR TO THE INCEPTION OF ANY WORK ONSITE AND MAINTAIN THE MEASURES UNTIL THE COMPLETION OF ALL LANDSCAPING.
- 19. THE CONTRACTOR SHALL MAINTAIN ADJACENT STREETS IN A NEAT, CLEAN DUST FREE AND SANITARY CONDITION AT ALL TIMES AND TO THE SATISFACTION OF THE TOWN INSPECTOR. THE ADJACENT STREET SHALL AT ALL TIMES BE KEPT CLEAN OF DEBRIS, WITH DUST AND OTHER NUISANCE BEING CONTROLLED AT ALL TIMES. THE CONTRACTOR BE RESPONSIBLE FOR ANY CLEAN UP ON ADJACENT STREETS AFFECTED BY THE BY THEIR CONSTRUCTION, METHOD OF STREET CLEANING SHALL BE BY DRY SWEEPING OF ALL PAVED AREAS. NO STOCKPILING OF BUILDING MATERIALS WITHIN THE TOWN RIGHT-OF-WAY.
- 20. SEDIMENTS AND OTHER MATERIALS SHALL NOT BE TRACKED FROM THE SITE BY VEHICLE TRAFFIC. THE CONTRACTOR SHALL INSTALL A STABILIZED CONSTRUCTION ENTRANCE PRIOR TO THE INSPECTION OF ANY WORK ONSITE AND MAINTAIN IT FOR THE DURATION OF THE CONSTRUCTION PROCESS SO AS TO NOT INHIBIT SEDIMENTS FROM BEING DEPOSITED INTO THE PUBLIC RIGHT-OF-WAY UNTIL THE COMPLETION OF ALL LANDSCAPING.
- 21. THE CONTRACTOR SHALL PROTECT DOWN SLOPE DRAINAGE COURSES, STREAMS AND STORM DRAINS WITH ROCK FILLED SAND BAGS, TEMPORARY SWALES, SILT FENCES, AND EARTH PERMS IN CONJUNCTION OF ALL LANDSCAPING.
- 22. STOCKPILED MATERIALS SHALL BE COVERED WITH VISQUEEN OR A TARPAULIN 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 IS SEEDED OR PLANTED TO PROVIDE GROUND COVER PRIOR TO THE FALL RAINY SEASON.
- 23. EXCESS OR WASTE CONCRETE MUST NOT BE WASHED INTO THE PUBLIC RIGHT-OF-WAYOR ANY OTHER DRAINAGE SYSTEM. PROVISIONS SHALL BE MADE TO RETAIN CONCRETE WASTES ON SITE UNTIL THEY CAN BE DISPOSED OF AS SOLID WASTE.
- 24. TRASH AND CONSTRUCTION RELATED SOLID WASTES MUST BE DEPOSITED INTO A COVERED RECEPTACLE TO PREVENT CONTAMINATION AND DISPERSAL BY WIND

## EROSION CONTROL NOTES CONTINUED:

- 24. FUELS, OILS, SOLVENTS AND OTHER TOXIC MATERIALS MUST BE STORED IN ACCORDANCE WITH THEIR LISTING AND ARE NOT TO CONTAMINATE THE SOIL AND SURFACE WATERS. ALL APPROVED STORAGE CONTAINERS ARE TO BE PROTECTED FROM THE WEATHER. SPILLS MUST BE CLEANED UP IMMEDIATELY AND DISPOSED OF IN A PROPER MANNER. SPILLS MUST NOT BE WASHED INTO THE DRAINAGE SYSTEM.
- 25. DUST CONTROL SHALL BE DONE BY WATERING AND AS OFTEN AS REQUIRED BY THE
- 26. SILT FENCE(S) AND/OR FIBER ROLL(S) SHALL BE INSTALLED PRIOR TO SEPTEMBER 15TH AND SHALL REMAIN IN PLACE UNTIL THE LANDSCAPING GROUND COVER IS INSTALLED. CONTRACTOR SHALL CONTINUOUSLY MONITOR THESE MEASURES, FOLLOWING AND DURING ALL RAIN EVENTS. TO PUBLIC OWNED FACILITIES.

## **EROSION CONTROL MEASURES:**

- 1. THE FACILITIES SHOWN ON THIS PLAN ARE DESIGNED TO CONTROL EROSION AND SEDIMENT DURING THE RAINY SEASON, OCTOBER 1ST TO APRIL 30TH. EROSION CONTROL FACILITIES SHALL BE IN PLACE PRIOR TO OCTOBER 1ST OF ANY YEAR. GRADING OPERATIONS DURING THE RAINY SEASON WHICH LEAVE DENUDED SLOPES SHALL BE PROTECTED WITH EROSION CONTROL MEASURES IMMEDIATELY FOLLOWING GRADING ON THE SLOPES.
- 2. SITE CONDITIONS AT TIME OF PLACEMENT OF EROSION CONTROL MEASURES WILL VARY. APPROPRIATE ACTION INCLUDING TEMPORARY SWALES, INLETS, HYDROSEEDING, STRAW BALES, ROCK SACKS, ETC. SHALL BE TAKEN TO PREVENT EROSION AND SEDIMENTATION FROM LEAVING SITE. EROSION CONTROL MEASURES SHALL BE ADJUSTED AS THE CONDITIONS CHANGE AND THE NEED OF CONSTRUCTION SHIFT.
- CONSTRUCTION ENTRANCES SHALL BE INSTALLED PRIOR TO COMMENCEMENT OF GRADING. ALL CONSTRUCTION TRAFFIC ENTERING ONTO THE PAVED ROADS MUST CROSS THE STABILIZED CONSTRUCTION ENTRANCES. CONTRACTOR SHALL MAINTAIN STABILIZED ENTRANCE AT EACH VEHICLE ACCESS POINT TO EXISTING PAVED STREETS. ANY MUD OR DEBRIS TRACKED ONTO PUBLIC STREETS SHALL BE REMOVED DAILY AND AS REQUIRED BY THE GOVERNING AGENCY.
- 4. ALL EXPOSED SLOPES THAT ARE NOT VEGETATED SHALL BE HYDROSEEDED. IF HYDROSEEDING IS NOT USED OR IS NOT EFFECTIVE BY OCTOBER 1ST, THEN OTHER IMMEDIATE METHODS SHALL BE IMPLEMENTED, SUCH AS EROSION CONTROL BLANKETS, OR A THREE-STEP APPLICATION OF 1) SEED, MULCH, FERTILIZER 2) BLOWN STRAW 3) TACKIFIER AND MULCH. HYDROSEEDING SHALL BE IN ACCORDANCE WITH THE PROVISIONS OF SECTION 20" EROSION CONTROL AND HIGHWAY PLANTING" OF THE STANDARD SPECIFICATION OF THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION. AS LAST REVISED. REFER TO THE EROSION CONTROL SECTION OF THE GRADING SPECIFICATIONS THAT ARE A PART OF THIS PLAN SET FOR FURTHER INFORMATION.
- 5. INLET PROTECTION SHALL BE INSTALLED AT OPEN INLETS TO PREVENT SEDIMENT FROM ENTERING THE STORM DRAIN SYSTEM. INLETS NOT USED IN CONJUNCTION WITH EROSION CONTROL ARE TO BE BLOCKED TO PREVENT ENTRY OF SEDIMENT. MINIMUM INLET PROTECTION SHALL CONSIST OF A ROCK SACKS OR AS SHOWN ON THIS PLAN
- 6. THIS EROSION AND SEDIMENT CONTROL PLAN MAY NOT COVER ALL THE SITUATIONS THAT MAY ARISE DURING CONSTRUCTION DUE TO UNANTICIPATED FIELD CONDITIONS. VARIATIONS AND ADDITIONS MAY BE MADE TO THIS PLAN IN THE FIELD. A REPRESENTATIVE OF LEA & BRAZE ENGINEERING SHALL PERFORM A FIELD REVIEW AND MAKE RECOMMENDATIONS AS NEEDED. CONTRACTOR IS RESPONSIBLE TO NOTIFY LEA & BRAZE ENGINEERING AND THE GOVERNING AGENCY OF ANY CHANGES.
- THE EROSION CONTROL MEASURES SHALL CONFORM TO THE LOCAL JURISDICTION'S STANDARDS AND THE APPROVAL OF THE LOCAL JURISDICTION'S ENGINEERING DEPARTMENT.
- 8. STRAW ROLLS SHALL BE PLACED AT THE TOE OF SLOPES AND ALONG THE DOWN SLOPE PERIMETER OF THE PROJECT. THEY SHALL BE PLACED AT 25 FOOT INTERVALS ON GRADED SLOPES. PLACEMENT SHALL RUN WITH THE CONTOURS AND ROLLS SHALL BE TIGHTLY END BUTTED. CONTRACTOR SHALL REFER TO MANUFACTURES SPECIFICATIONS FOR PLACEMENT AND INSTALLATION INSTRUCTIONS.

## REFERENCES:

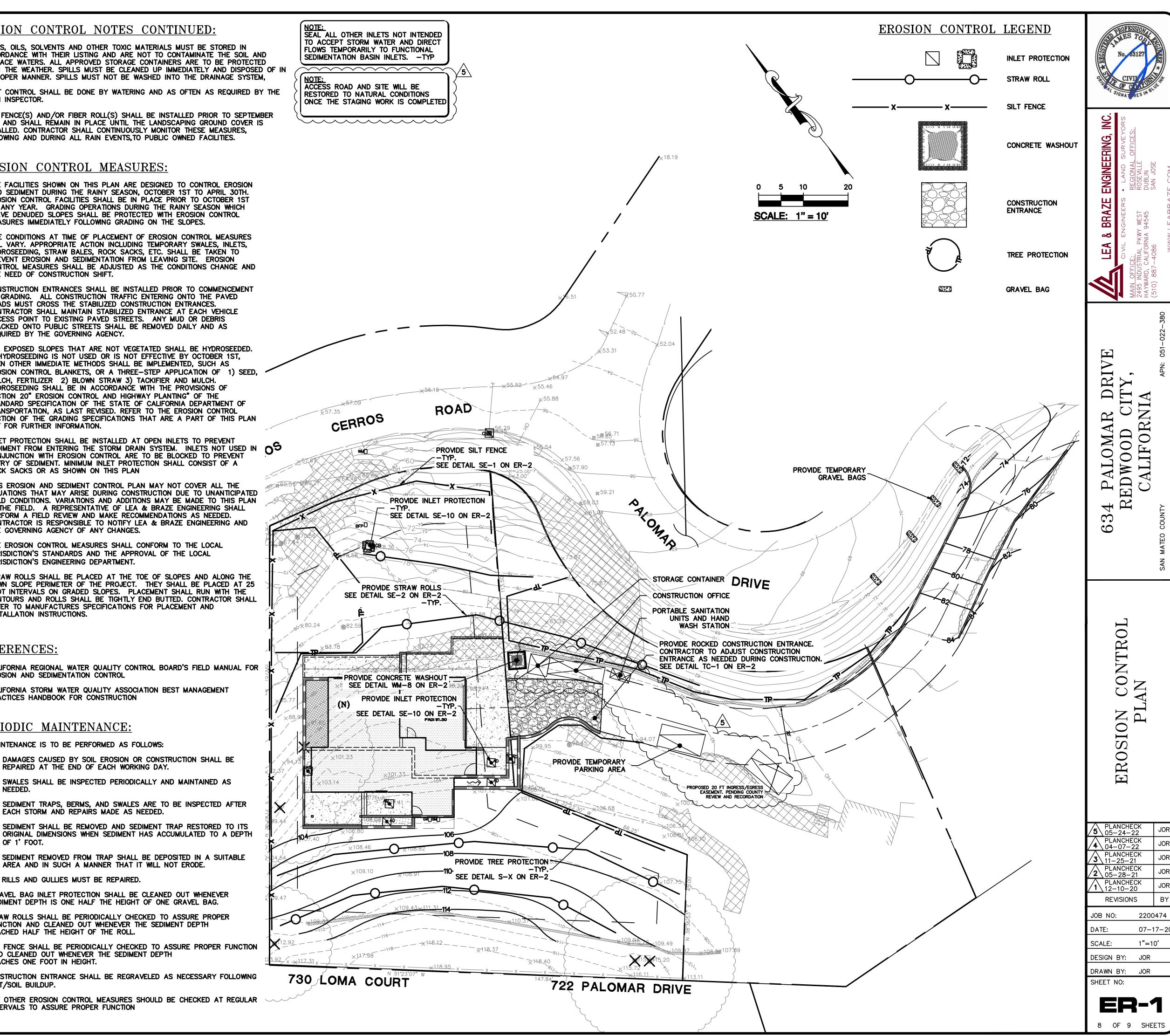
- 1. CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD'S FIELD MANUAL FOR EROSION AND SEDIMENTATION CONTROL
- 2. CALIFORNIA STORM WATER QUALITY ASSOCIATION BEST MANAGEMENT PRACTICES HANDBOOK FOR CONSTRUCTION

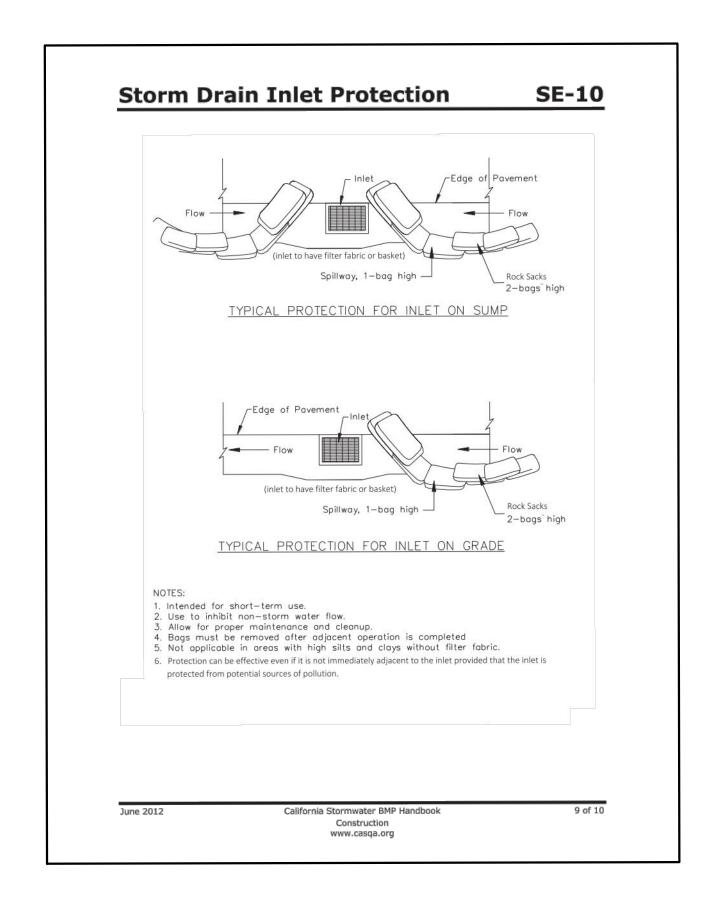
## PERIODIC MAINTENANCE:

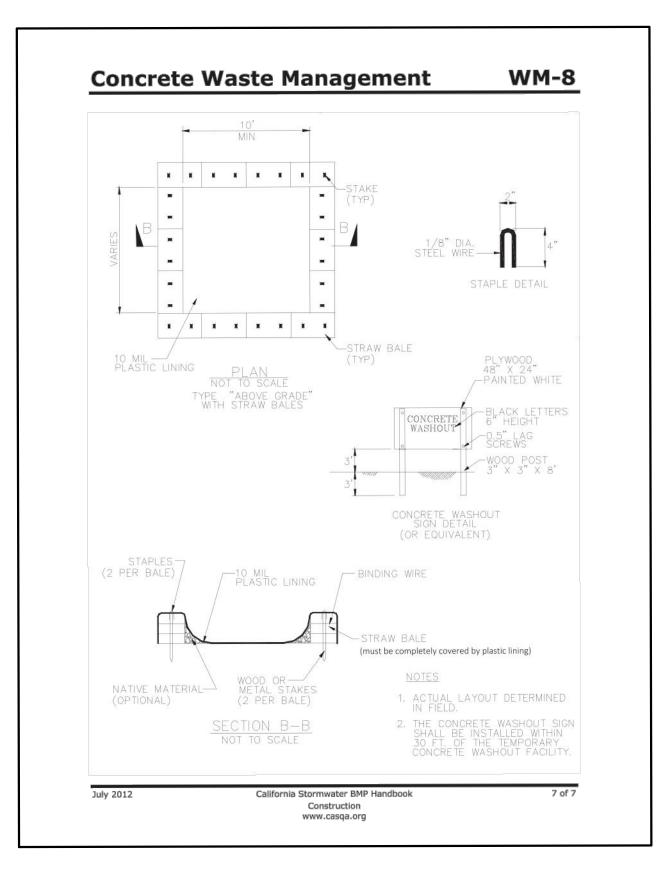
- 1. MAINTENANCE IS TO BE PERFORMED AS FOLLOWS:
  - A. DAMAGES CAUSED BY SOIL EROSION OR CONSTRUCTION SHALL BE REPAIRED AT THE END OF EACH WORKING DAY.
- B. SWALES SHALL BE INSPECTED PERIODICALLY AND MAINTAINED AS
- C. SEDIMENT TRAPS, BERMS, AND SWALES ARE TO BE INSPECTED AFTER EACH STORM AND REPAIRS MADE AS NEEDED. D. SEDIMENT SHALL BE REMOVED AND SEDIMENT TRAP RESTORED TO ITS
- OF 1' FOOT. E. SEDIMENT REMOVED FROM TRAP SHALL BE DEPOSITED IN A SUITABLE
- F. RILLS AND GULLIES MUST BE REPAIRED.
- 2. GRAVEL BAG INLET PROTECTION SHALL BE CLEANED OUT WHENEVER SEDIMENT DEPTH IS ONE HALF THE HEIGHT OF ONE GRAVEL BAG.

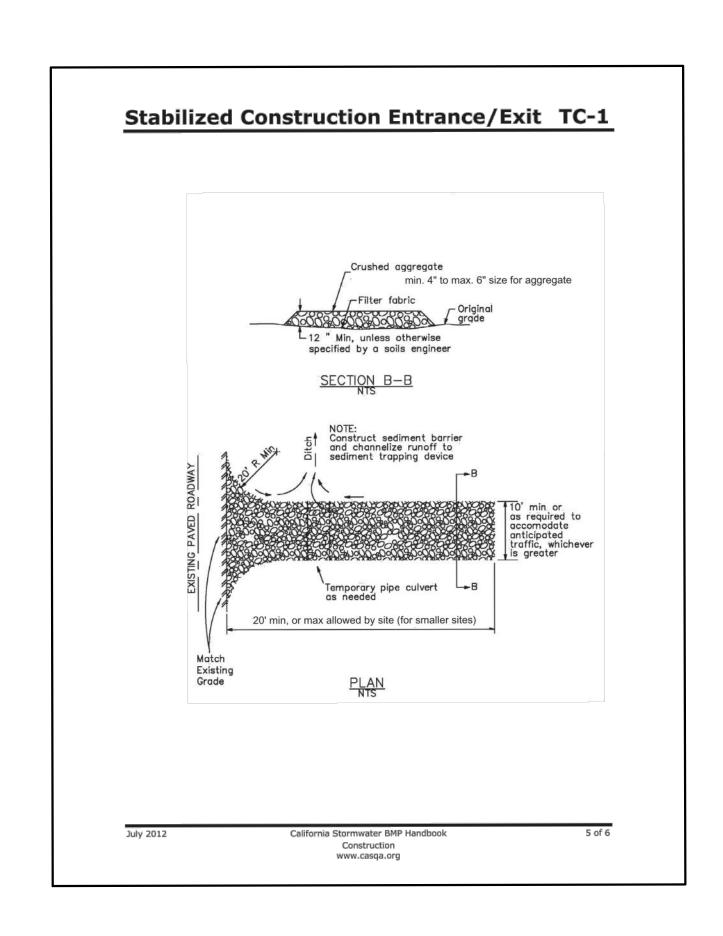
AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.

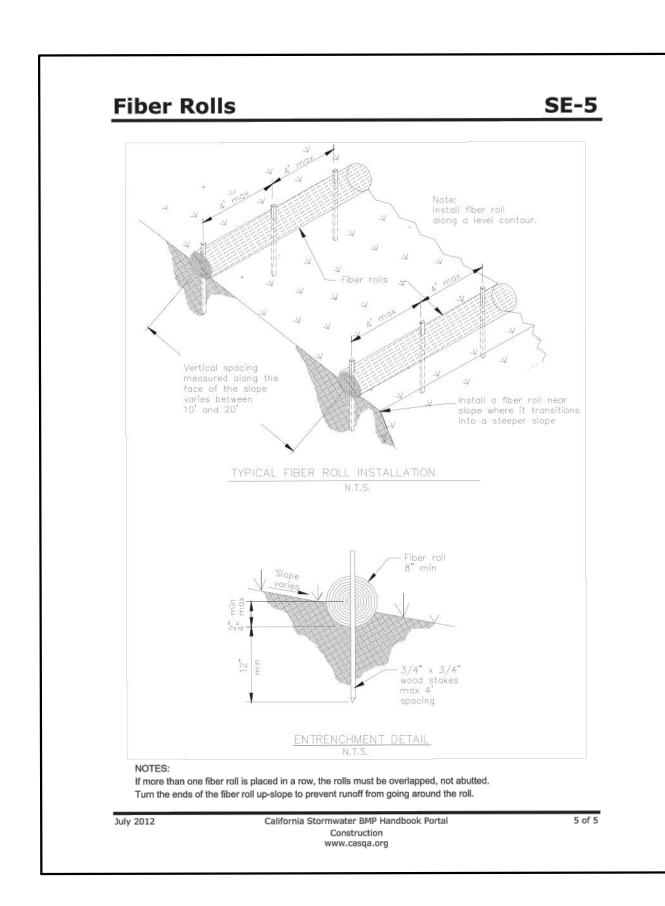
- 3. STRAW ROLLS SHALL BE PERIODICALLY CHECKED TO ASSURE PROPER FUNCTION AND CLEANED OUT WHENEVER THE SEDIMENT DEPTH REACHED HALF THE HEIGHT OF THE ROLL.
- 4. SILT FENCE SHALL BE PERIODICALLY CHECKED TO ASSURE PROPER FUNCTION AND CLEANED OUT WHENEVER THE SEDIMENT DEPTH REACHES ONE FOOT IN HEIGHT.
- 5. CONSTRUCTION ENTRANCE SHALL BE REGRAVELED AS NECESSARY FOLLOWING SILT/SOIL BUILDUP.
- 6. ANY OTHER EROSION CONTROL MEASURES SHOULD BE CHECKED AT REGULAR INTERVALS TO ASSURE PROPER FUNCTION

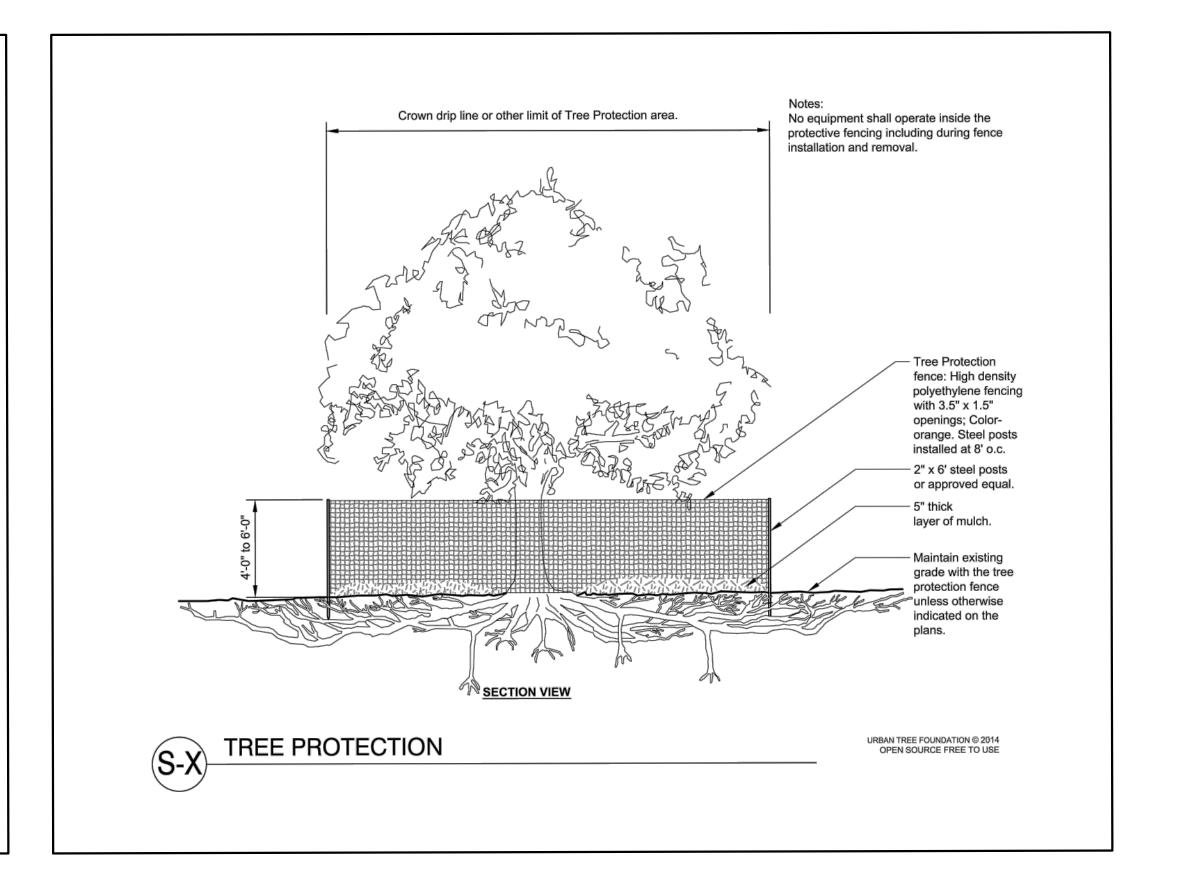


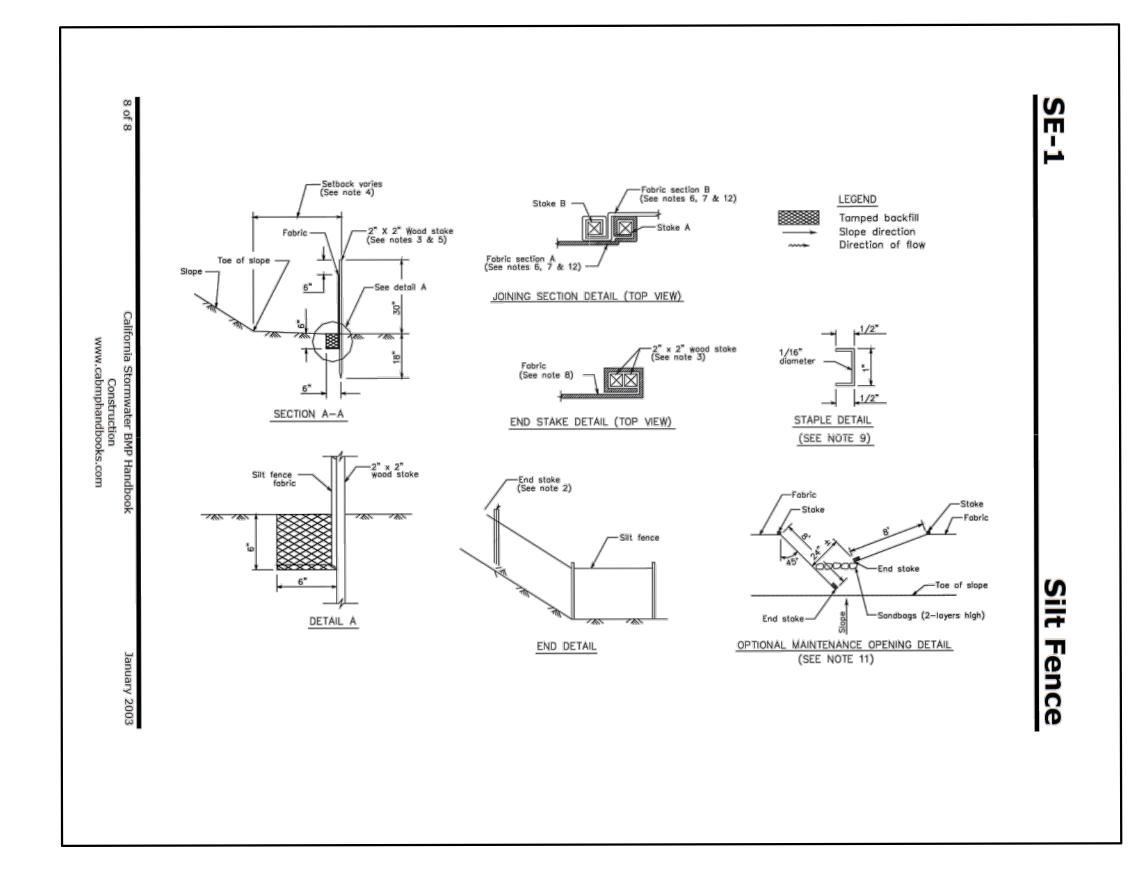














REGIONAL OFFICES:
ROSEVILLE
DUBLIN
SAN JOSE

LEA & BRAZE ENGINEERR

CIVIL ENGINEERS • LAND SU

AIN OFFICE:
AYWARD, CALIFORNIA 94545
TO) 887-4086
SAN JOSE

TY,

MAIN OFFICE:
2495 INDUSTRIAL
HAYWARD, CALIFOF
(510) 887-4086

634 PALOMAR DRIVE REDWOOD CITY, CALIFORNIA

> EROSION CONTROL DETAILS

PLANCHECK 5 05-24-22	JOR	
PLANCHECK 04-07-22	JOR	
PLANCHECK 3 11-25-21	JOR	
PLANCHECK 05-28-21	JOR	
PLANCHECK 12-10-20	JOR	
REVISIONS	BY	

JOB NO: 2200474

DATE: 07-17-20

SCALE: AS NOTED

DESIGN BY: JOR

**ER-2** 

DRAWN BY: JOR

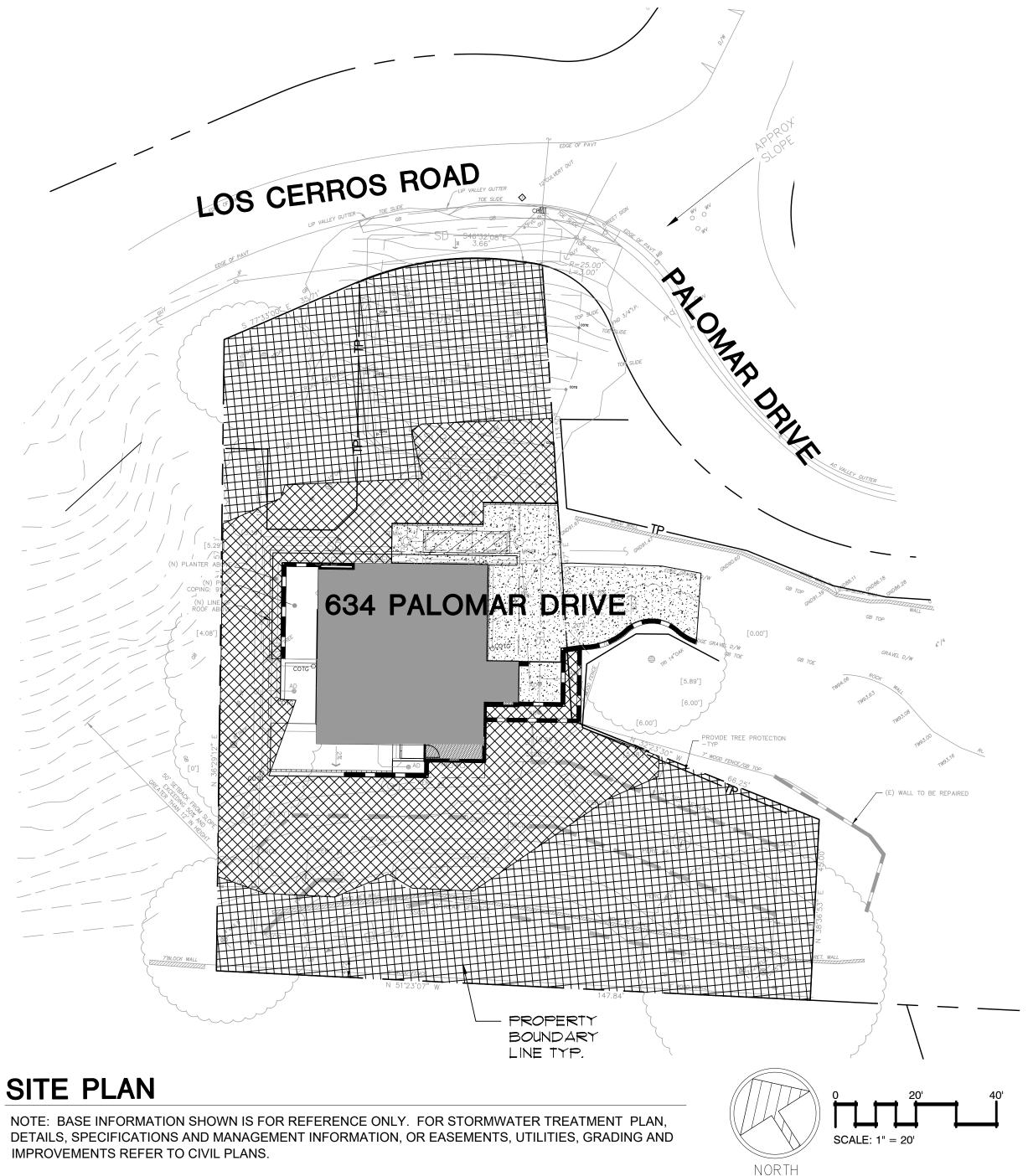
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#### **GENERAL NOTES**

manner prior to construction.

- 1. All construction and installation of landscape items are subject to the County of San Mateo Guidelines and Specifications for Landscape Development.
- 2. The Landscape Contractor is responsible for obtaining all permits necessary for installation prior to beginning work. This includes all building and plumbing permits prior to commencing wall construction and irrigation installation, respectively.
- 3. The Contractor is responsible for knowing all site conditions and all underground utilities, pipes, and structures, and shall take sole responsibility for replacement costs incurred due to damage during construction. Contractor shall call for all underground utilities to be marked-out in field prior to excavation. Before excavation, verify the location of underground utilities. Call Dig Alert (underground services alert) 811 or
- 4. The Contractor is to verify existing PSI at the job site prior to installing the landscape irrigation system. Verification shall be made with the Bayshore District San Carlos Water (650-558-7800). Discrepancies between the design pressures shown on the plan and existing static pressures shall be reported to the project
- 5. The Contractor shall not willfully proceed with construction when it is obvious that discrepancies exist between this plan and actual site conditions, and assumes responsibility that any discrepancies are brought to the attention of the Owner's representative. The Contractor shall bear the cost of necessary revisions due to failure to give such notification, and no change in contract price will be allowed for actual or claimed discrepancy between existing conditions and those shown on the
- 6. The Contractor must notify the Landscape Architect and County Public Works Inspector minimum of 48 hours (two working days) prior to starting construction. Within the 48 hours (two working days) notice, prior to beginning landscape construction, the Job Superintendent, Landscape Contractor, Landscape Architect of work, and the City Public Works Inspector shall meet for a pre-construction site meeting. Any work not meeting the approval of the Owner, Owner's representative or the approved landscape plan shall be corrected at the Contractor's expense. 7. All property, lot lines and buffer lines shall be verified and marked in an obvious
- 8. A soils report shall be prepared by County approved equal. Soils testing for agricultural suitability shall be accomplished at the conclusion of rough grading and submitted to the Landscape Architect for conformance review prior to soil preparation All soils reports shall meet all of the specifications of the MWELO ordinance for soil fertility, infiltration and percolation tests and soil texture information. Contact the project Landscape Architect for a copy of the preliminary soils analysis, dated August 7, 2020, prior to beginning work. Any subsequent report shall be EQUALLY comprehensive in the information provided in the preliminary report and the recommendations for soil preparation and backfill amendments. If a subsequent report is incomplete, then the original soils report recommendations shall take precedence.
- 9. All reduced pressure backflow preventors and pressure vacuum breaker assemblies shall be tested by a County approved certified tester after installation, relocation, or repairs. Notify the Bayshore District San Carlos Water Department for a current list.(If applicable)
- 10. Approved landscape plans and specifications shall be at the job site location at all
- 11. Note: ALL trees and palms shall have a one (1) year warranty, both in the right of way and in common area landscapes. The Contractor or Owner is required to maintain all common areas shrubs and groundcovers for 90 days and the public right of way landscaping for one (1) year prior to City acceptance of all improvements. Thereafter, permanent maintenance responsibility will be that of the owner
- 12. The 'As-Built' plans must be completed and approved by the City Engineer prior to the commencement of the required one (1) year maintenance period. The Landscape Contractor shall provide As-Builts to Landscape Architect prior to end of the 90 Day maintenance period per the City's policy and Landscape Manual
- 13. Any turfed areas, if applicable, shall have a maximum design slope of 4:1. Ground cover areas shall have a maximum design slope of 2:1.
- 14. All graffiti shall be removed within 24 hours of occurrence.
- 15. Contractor shall obtain for reference purposes, all approved grading plans and all relative technical reports, drawings and documents and keep on site with landscape
- 16. For details not referenced or shown on these plans, please refer to the County of San Mateo Manual or Manufacturer's details and specifications for installation.
- 17. The project Landscape Architect is aware of the County of San Mateo policy which prohibits trees and permanent structures in utility easements and has designed the project landscape plans in accordance with this requirement, based on the easement information received from the project Engineer of Work. The project Landscape Architect has verified that these plans meet the requirements of said policy.
- 18. The project Contractor is aware of the County policy which prohibits trees and structures in utility easements and shall install the project in accordance with this requirement. The Contractor shall verify the location of all easements, property mark or stake all property lines and easements, and verify the scope of work within the easement prior to installing improvements within any easement.
- 19. Guarantee of Irrigation Work. Per the County's policy, the Landscape Contractor shall provide "Guarantee of Irrigation Work" letter. See irrigation notes for required content of the Irrigation Guarantee.
- 20. The landscape contractor shall provide Controller certification letter to Landscape Architect for documentation package. See irrigation plan, notes and details. 21. MWELO Compliance. The landscape contractor shall provide to Landscape Architect all required permanent irrigation schedules, installation certification letter, maintenance information and third party audit as required by the Water Efficiency Landscape Ordinance . See Irrigation Notes for additional requirements.

# LANDSCAPE IMPROVEMENTS 634 PALOMAR DR. REDWOOD CITY, CALIFORNIA



LEGEND

APPROXIMATE TOTAL SQ. FT. OF LANDSCAPE AND MAINTENANCE

RESPONSIBILITY FOR PROJECT PRIVATE AREA LANDSCAPE = 14,265 SQ. FT. THIS AREA SHALL BE PERMANENTLY MAINTAINED BY THE OWNER

## SHEET INDEX

TITLE SHEET	L-1
IRRIGATION PLAN	L-2
HYDROZONE PLAN	L-3
IRRIGATION DETAILS	L-4
PLANTING PLAN	L-5
PLANTING DETAILS/NOTES	L-6

## NOTES:

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.

AN IRRIGATION AUDIT REPORT SHALL BE COMPLETED BY A CERTIFIED IRRIGATION AUDITOR AT THE TIME OF FINAL INSPECTION, REPORT SHALL BE SUBMITTED TO SAN MATEO COUNTY PLANNING FOR REVIEW AND ACCEPTANCE.

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 LANDSCAPE ARCHITECT, DESIGNER, OF THE PLANTING / IRRIGATION PLANS, OR THE LICENSED LANDSCAPE CONTRACTOR FOR THE PROJECT.

# WATER EFFICIENT LANDSCAPE ORDINANCE COMPLIANCE

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

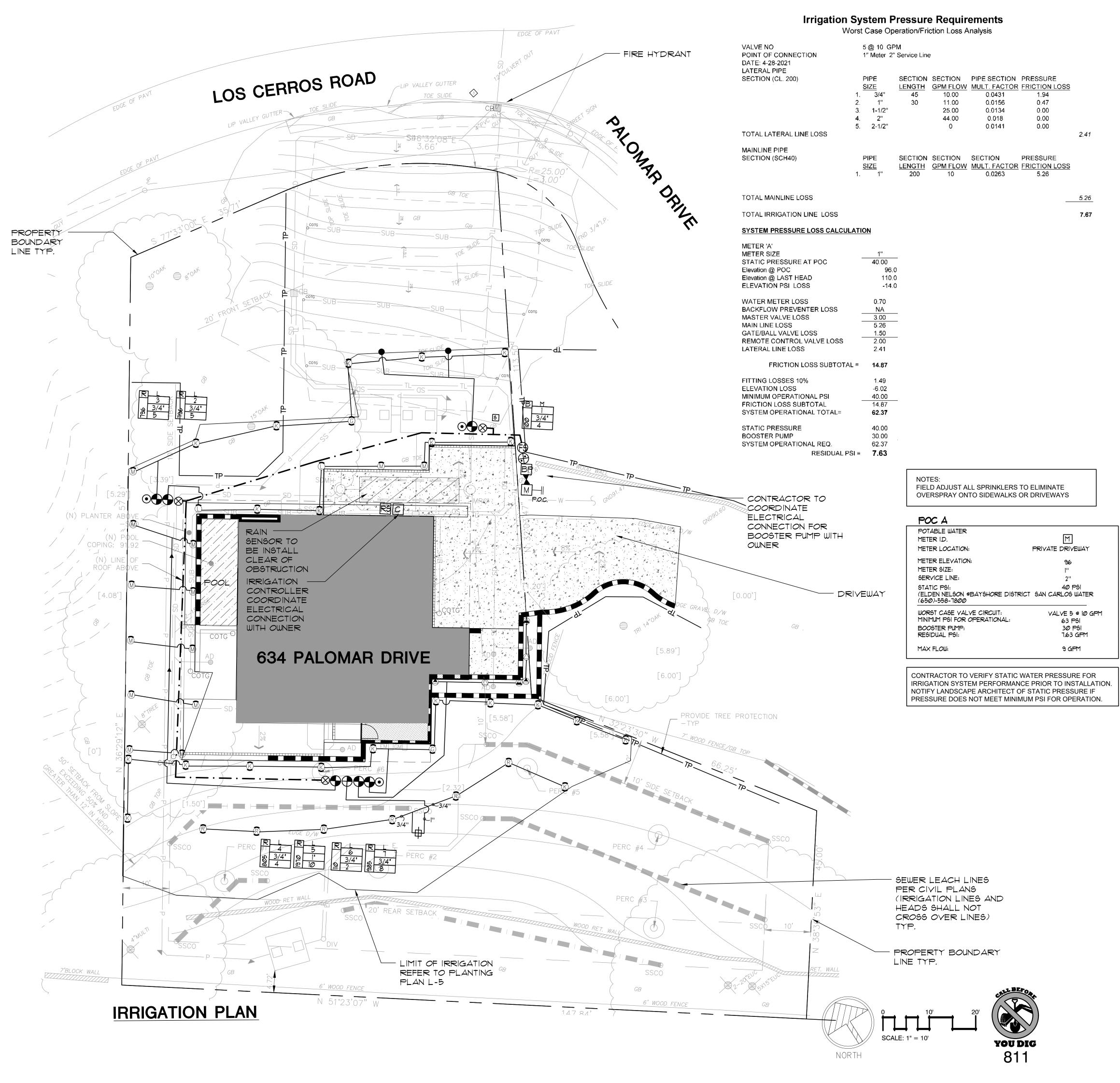
LANDSCAPE ARCHITECT

DATE



SHEET NUMBER:





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IRRIGATION NOTES

1. ALL IRRIGATION IMPROVEMENTS SHALL FOLLOW THE SAN MATEO COUNTY STANDARD AND REQUIREMENTS. AN AUTOMATIC BELOW GRADE IRRIGATION SYSTEM SHALL BE INSTALLED TO PROVIDE COVERAGE FOR ALL PLANTING AREAS SHOWN ON THE PLAN. LOW VOLUME, LOW FLOW IRRIGATION EQUIPMENT AND CONSERVATION TECHNIQUES SHALL BE EMPLOYED ALONG WITH THE DOCUMENTATION PACKAGE TO PROVIDE SUFFICIENT WATER FOR PLANT GROWTH WITH A MINIMUM WATER LOSS DUE TO WATER RUN-OFF. ZERO RUNOFF IS PERMITTED.

- 2. BUBBLERS AND ROTARY SPRAYS IRRIGATION SYSTEMS SHALL BE USED WITH HIGH QUALITY, AUTOMATIC CONTROL VALVES, CONTROLLERS, MASTER VALVE, FLOW SENSOR AND RAIN SHUT-OFF SENSOR AND OTHER NECESSARY IRRIGATION EQUIPMENT FOR BEST EFFICIENCY AND WATER CONSERVATION.
- ALL COMPONENTS SHALL BE OF NON-CORROSIVE MATERIAL.
   ALL IRRIGATION EQUIPMENT, SENSORS AND CONTROLLERS
   SHALL BE INSTALLED PER MANUFACTURER GUIDELINES AND
   SPECIFICATIONS, AND ADHERE TO ALL CODE RESTRICTIONS AND
   GUIDELINES.
- 5. ALL IRRIGATION PIPING AND WIRING SHALL BE SLEEVED UNDER ALL HARDSCAPE AND VEHICULAR AREAS, WITH STANDARD
- DEPTH OF COVER PER SAN MATEO COUNTY REQUIREMENTS.

  6. SPRAY NOZZLES, AND/OR OR EFFICIENT ROTARY AND ROTOR SPRAY SYSTEMS THAT ARE ORDINANCE-COMPLIANT AND PROVIDE ZERO OVERSPRAY MAY BE USED.
- 7. FIELD ADJUST ALL SPRINKLERS AND EMITTERS TO ELIMINATE OVERSPRAY ONTO SIDEWALKS, DRIVEWAYS AND HARDSCAPE AREAS
- 8. ALL IRRIGATION AREAS SHALL BE APPROPRIATELY HYDROZONED AND INSTALLED ACCORDING TO ORDINANCE REQUIREMENTS AND LANDSCAPE DESIGN STANDARDS.

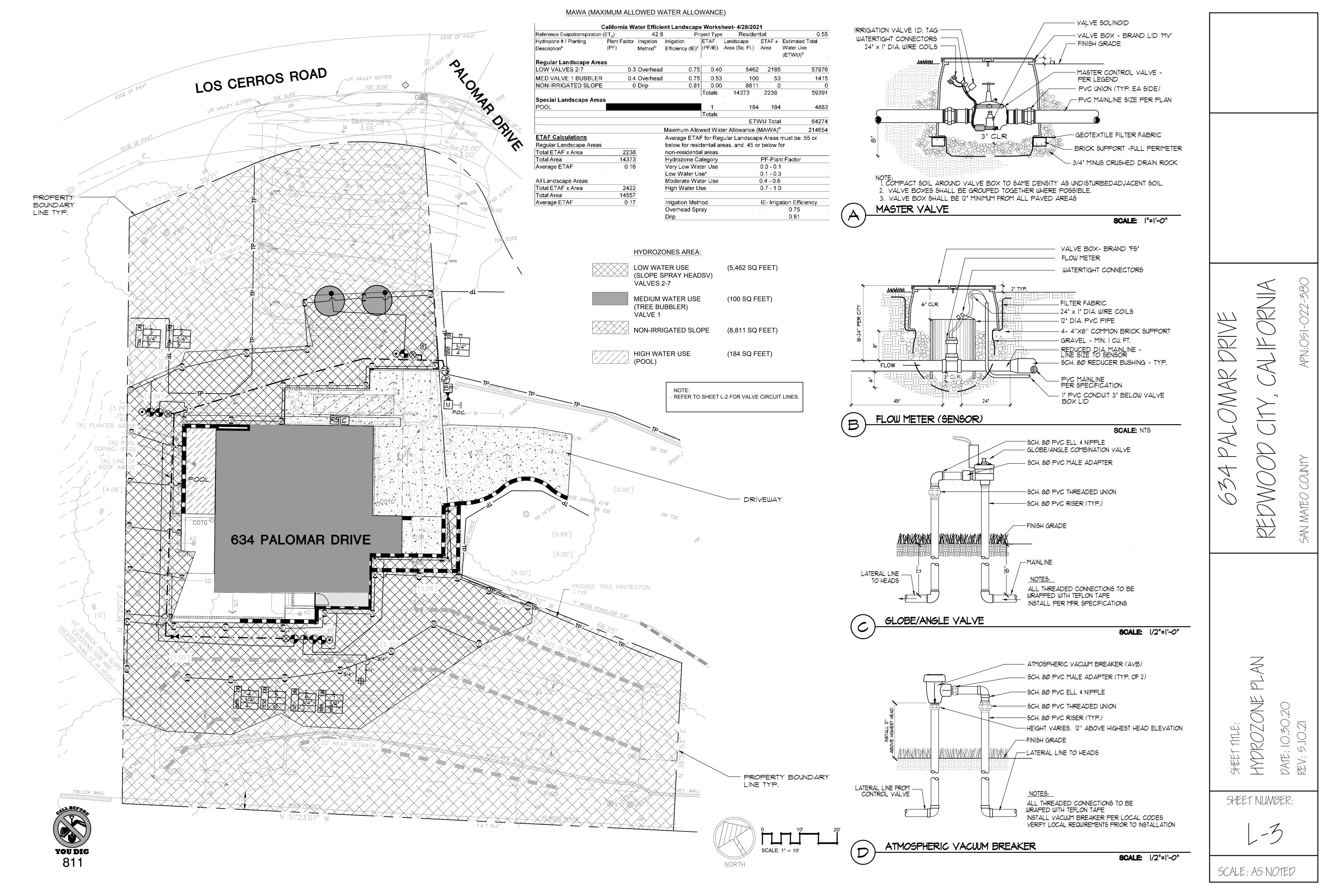
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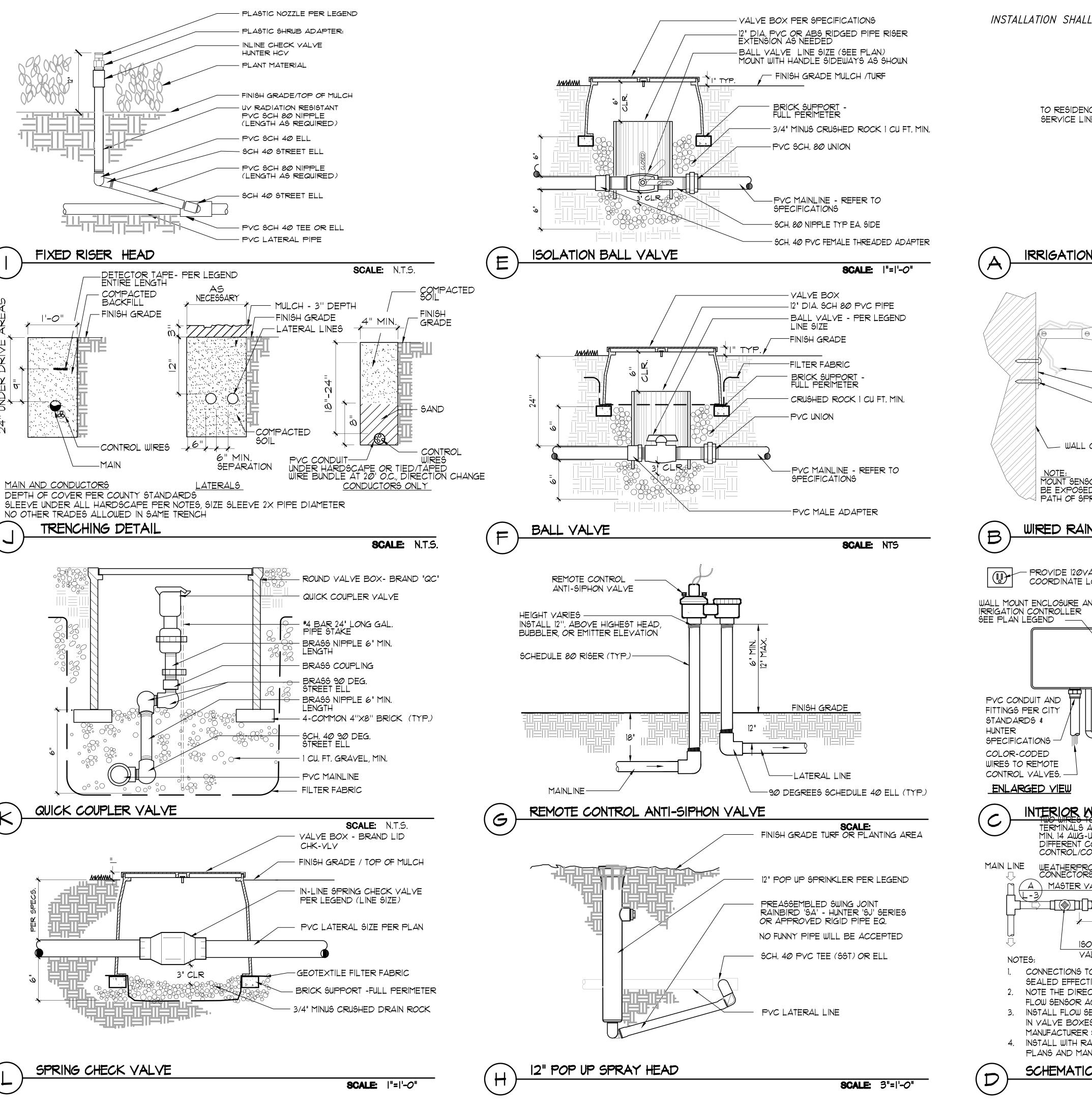
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IRRIGATION PLAI DATE: 10,30,20 REV: 5,10,21

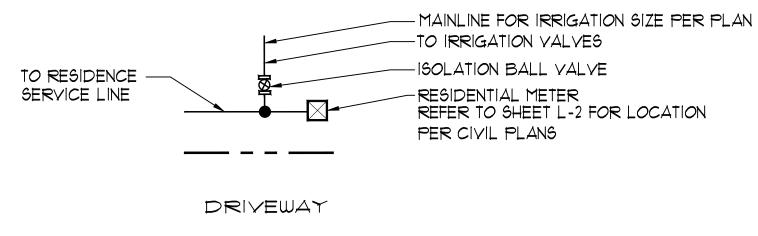
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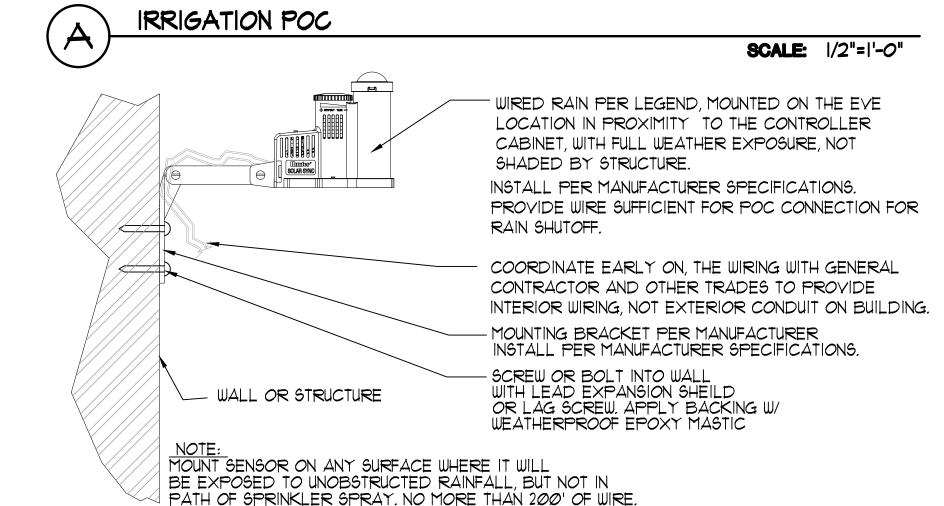


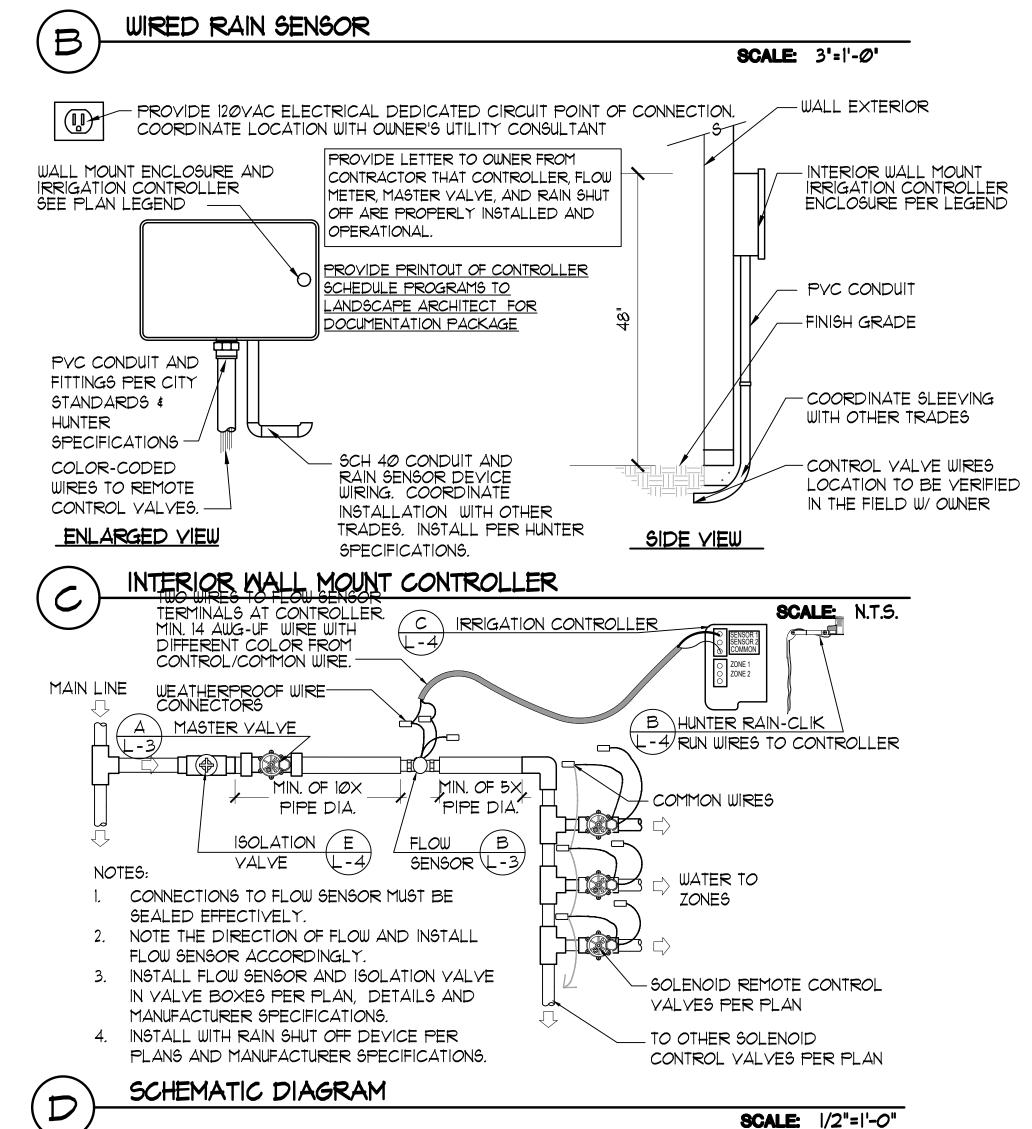


INSTALLATION SHALL MEET SAN MATEO COUNTRY STANDARDS AND REGULATIONS



PLAN VIEW IRRIGATION P.O.C.



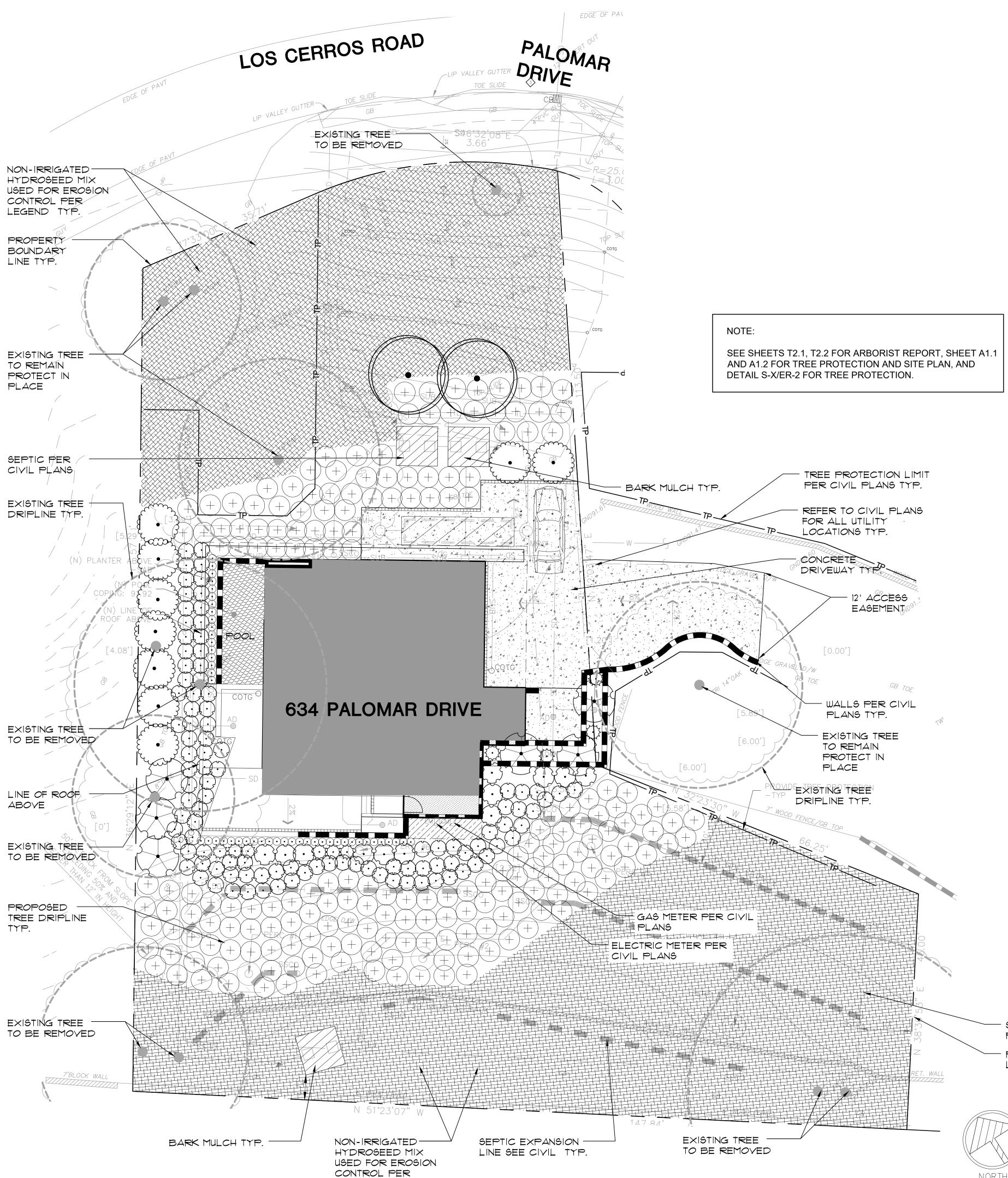


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LEGEND TYP.

PLANT SC	HEDULE					Wate	r Use	
TREES	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	QTY	Low	Medium	DETAILS
$\overline{(\cdot)}$	Geijera parviflora	Australian Willow	24" Box	As Shown	2		X	A,B/L-6
SHRUBS	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	QTY	Low	Medium	DETAILS
$\langle \cdot \rangle$	Agave attenuata	Foxtail Agave	5 gal.	4' o.c.	12	X		C,D/L-6
$\odot$	Aloe x `Blue Elf`	Aloe	1 gal.	18" o.c.	46	X		C,D/L-6
£ • 3	Dodonaea viscosa `Purpurea`	Purple Leafed Hopseed Bush	15 gal.	8' o.c.	9	X		C,D/L-6
$\overline{\odot}$	Lomandra longifolia `Breeze` TM	Breeze Mat Rush	1 gal.	3' o.c.	104	X		C,D/L-6
(+)	Muhlenbergia rigens	Deer Grass	1 gal.	4' o.c.	195	X		C,D/L-6
₹÷}	Phormium x `Amazing Red`	Amazing Red New Zealand Flax	5 gal.	3' o.c.	10	X		C,D/L-6
GROUND COVERS	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	QTY	Low	Medium	DETAILS
	Dymondia margaretae	Silver Carpet Dymondia	flat	12" o.c.	57 sf	X		D/L-6
	This is a mixture of showy, provide months of bright S	Native Hydroseed Mix- S &S Seeds low growing annual and perennial spring color in a non-irrigated setting added Application Rate – 42 lbs/acre	species tha	at will	8,811 sf	x		MFR. SPEC.

## SOIL PREPARATION-FOR BID PURPOSES

Gro-Power Plus is designed for soil conditions that are impossible, such as highly-compacted, hard pan areas (clay, adobe, caliche soils) or areas that have extremely high levels of salt (EC), sodium boron or pH problems. Here is what Gro-Power Plus does for

levels of salt (EC), sodium boron or pH problems. H you:
(1) Increases the rate and depth water penetration.
(2) Aerates the soil.
(3) Reduces evaporation.
(4) Deepens root system.
(5) Makes plant food in soil more available.

I. Gro-Power Plus Used For Soil Preparation:
Use Gro-Power Plus at the rate of 150 lbs. to 200 lbs. per 1000 square feet Rototill Gro-Power Plus into the top 6" to 8" of soil. Then water thoroughly; the water activates the penetrant and starts to break up the compacted soil. Each time the water is added, the soil is broken up deeper until the penetrant is finally used up. The best part - the Humus in Gro-Power is there to keep the soil loose and friable below the root zone

II. **Gro-Power Plus Used For Turf Maintenance**:
Use Gro-Power Plus at the rate of 25 lbs. to 30 lbs. per 1000 square feet on areas that have become highly compacted, hard-pan areas, areas where water stands, the center of football fields or high traffic areas. Use Gro-Power Plus once a year, then regular Gro-Power formula or Gro-Power Hi Nitrogen at 7 lbs. to 8 lbs per 1000 square feet the rest of the application . Usually one or two more applications of regular Gro-Power or Gro-Power Hi-Nitrogen is all that is needed the balance of the year after Gro-Power Plus has been used.

III. **Gro-Power Plus Used For Hydroseeding**:
Use for those difficult soil conditions - on cut and fill slopes, decomposed granite, etc.
Apply at the rate 1,000 lbs. to 1,300 lbs per acre in slurry.

SPECIFICATIONS:

(6) Frees trace minerals.

(7) Soil does not become waterlogged

Gro-Power Plus 5-3-1 Soil Penetrant Added (1.00% Alkyl Naphthalene Sodium Sulfonate)

Fertilizer - Conditioner - Organic materials, higher plant form life, composted below the fibrous stage to support bacterial cultures. Gro-Power contains no poultry, animal or human waste.

**PHYSICAL PROPERTIES**: A uniform "Beaded" homogenous mixture - 100.00% passing through a #4 mesh screen - a water soluble bio-degradable binder is used to insure fast breakdown.

**CHEMICAL ANALYSIS**: 5-3-1, Nitrogen (available) 5.00%, Phosphate 3.00%, Potash 1.00% Humus 70.00%, Humic Acids 15.00% Soil Penetrant 1.00%. Gro-Power bacterial "stimulator" included.

## GROW PLANTING TABLETS

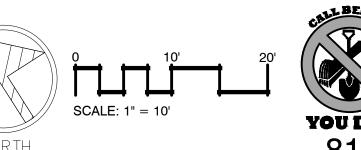
**GRO-POWER PLANTING TABLETS**: 7 gram planting tablet designed for 12 month slow release. Components of tablets allow for breakdown within all soil mediums. May be used in new plantings, existing plants, containers, water plants.

12-8-8 NPK, 20% Humus, 4% Humic Acids, 3.5% Sulfur, 2% Iron, Micronutrients.

Gro-Power Planting Tablets Application Rates for New Landscape Plantings or Containers:								
4" Pot Ground Cover	6" Pot Liner	1 Gal. Plant	3 Gal. Plant					
1	1-2	2-3	3-6					
5 Gal. Plant	7 Gal. Plant	10 Gal. Plant	15 Gal. Plant					
6-9	8-10	10-12	12-15					
20" - 24" Box	30" Box	36" Box	42" Box					
14-16	16-18	18-20	20-22					
48" Box	60" Box	Larger sizes for e	ach ½" caliper use					
22-24	32-36		3-4					

PER CIVIL PLANS

PROPERTY BOUNDARY LINE TYP.





(alkyl naphthalene sulfonate)
(common soil and organisms - aerobic, comol Minimum 60,000 per comol Mold

Derived from ammonium phosphate, urea, sulphate of potash, compost and sulfides and oxides of iron, manganese and zinc.

0.05%

- BACKFILL FOR BID PURPOSES

  A. 7 PARTS OF NATIVE ON-SITE SOIL, 3 PARTS OF
  NITROLIZED SHAVINGS AND 15LBS. OF GRO -POWER
  PER CUBUC YARD OF MIX. MIX THIS THOROUGHLY AND
  BACKFILL.- OR-.
- B. MIX 7 PARTS OF ROCK-FREE SOIL AND 3 PARTS OF NITROLIZED SHAVINGS AND MIX THOROUGHLY.
  BACKFILL WITH THIS MIXTURE TO TOP OF PLANTING PIT. APPLY GO-POWER, PLUS OR PLUS w/M ON TOP OF MIX.

1 gallon 5 gallon 15 gallon 24" box 30" box 36" box 42" box 48" box 54" box 60" box 72" box	PIT SIZE	Dig hole twice the size of ball Dig hole twice the size of ball Dig hole twice the size of ball Allow 2 ft. on each side of box	FEED GRO-POWER*	1/2 cup 1 cup 2 cups 4 cups 4 1/2 cups 5 cups 6 cups 7 cups 8 cups 9 cups 12 cups
---	----------	---	-----------------	---

624 PALOMAR DRIVE
PRODUCTY (ALIFORNIA)

2 LANTING PL 2ATE; 07.6,20 2EV; 5,10,21

MATEO

SHEET NUMBER:

1-5

#### PLANTING NOTES:

1.A MINIMUM OF THREE (3) INCHES OF MULCH SHALL BE ADDED TO THE SOIL SURFACE AFTER PLANTING IN NON-TURF AREAS. NON-POROUS MATERIAL SHALL NOT BE PLACED UNDER THE MULCH.

2.FINAL LANDSCAPE PLANS SHALL ACCURATELY SHOW PLACEMENT OF TREES, SHRUBS, AND GROUNDCOVERS.

3.ALL PLANTING AREAS SHALL BE PREPARED WITH APPROPRIATE SOIL AMENDMENTS, FERTILIZERS, AND APPROPRIATE SUPPLEMENTS BASED UPON A SOILS REPORT FROM A SOIL SUITABILITY SAMPLE TAKEN FROM THE SITE PRIOR TO PLANTING.

4.DESIGN SHALL MEET ALL WATER CONSERVATION POLICY AND GUIDELINES AND THE SAN MATEO COUNTY REQUIREMENTS.

5.CONTRACTOR SHALL INSTALL ALL PLANT MATERIAL IN ACCORDANCE WITH ALL LOCAL CODES AND ORDINANCES. COORDINATE WITH THE OWNER TO OBTAIN ANY REQUIRED PERMITS NECESSARY TO COMPLETE WORK. ALL WORKMANSHIP AND MATERIALS SHALL BE GUARANTEED BY THE CONTRACTOR FOR A PERIOD OF ONE(1) CALENDAR YEAR AFTER FINAL ACCEPTANCE.

6.MAINTAIN ALL PLANT MATERIAL FOR A THREE(3) MONTH PERIOD FROM DATE OF SUBSTANTIAL COMPLETION. MAINTENANCE SHALL INCLUDE PRUNING, CULTIVATING, WATERING, WEEDING, FERTILIZING, SPRAYING FOR DISEASE AND INSECTS. RECOMMENDED LONG-TERM MAINTENANCE PROCEDURES SHALL BE PROVIDED TO THE OWNER BEFORE EXPIRATION OF THIS PERIOD.

7.ALL REQUIRED LANDSCAPE AREAS SHALL BE THE RESPONSIBILITY OF THE OWNER. THE LANDSCAPE AREAS SHALL BE MAINTAINED PER THE COUNTY OF SAN MATEO COUNTY REQUIREMENTS.

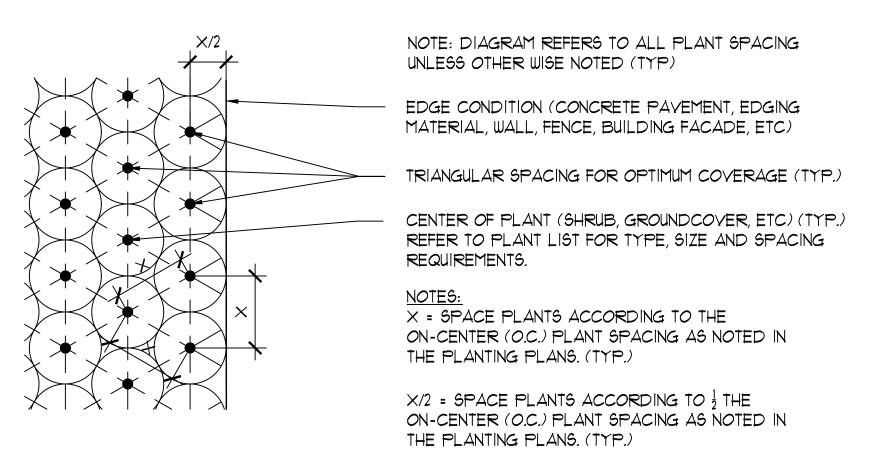
8.VERIFY ALL UTILITY LOCATIONS IN THE FIELD PRIOR TO BEGINNING WORK. REPAIR ALL DAMAGED UTILITIES IF DAMAGED BY CONSTRUCTION TO SATISFACTION OF THE OWNER AND OPERATING AUTHORITY AT NO ADDITIONAL COST.

9.ALL EXISTING TREES THAT ARE TO REMAIN SHALL BE PROTECTED IN PLACE AND SHALL NOT DISTURB ROOTS UNDER TREE DRIPLINE. REFER TO CIVIL FOR ADDITIONAL NOTES.

10. A FUEL BREAK OF DEFENSIBLE SPACE IS REQUIRED AROUND THE PERIMETER OF ALL STRUCTURES TO A DISTANCE OF NOT LESS THAN 30 FEET AND MAY BE REQUIRED TO A DISTANCE OF 100 FEET OR TO THE PROPERTY LINE. THIS IS NEITHER A REQUIREMENT NOR AN AUTHORIZATION FOR THE REMOVAL OF LIVING TREES. TREES LOCATED WITHIN THE DEFENSIBLE SPACE SHALL BE PRUNED TO REMOVE DEAD AND DYING PORTIONS, AND LIMBED UP 6 FEET ABOVE THE GROUND. NEW TREES PLANTED IN THE DEFENSIBLE SPACE SHALL BE LOCATED NO CLOSER 10' TO ADJACENT TREES WHEN FULLY GROWN OR AT MATURITY. REMOVED THAT PORTION OF ANY EXISTING TREE, WHICH EXTENDS WITHIN 10 FEET OF THE OUTLET OF A CHIMNEY OR STOVEPIPE OR IS WITHIN 5' OF ANY STRUCTURE. MAINTAIN ANY TREE ADJACENT TO OR OVERHANGING A BUILDING FREE OF DEAD OR DYING WOOD.

11. ROOT BARRIER SHALL BE IMPLEMENTED IN AREAS WHERE TREES ARE WITHIN 10 FEET ADJACENT TO COUNTY FACILITIES AND HARDSCAPE. DETAIL A/L-2

12.LANDSCAPING WITH DEEP ROOTS SYSTEM SHALL NOT BE PLACED ON STORMWATER IMPROVEMENTS UNLESS THEY ARE AN INTEGRAL PART OF THE STORMWATER POLLUTION PREVENTION MEASURES. CONSTRACTOR TO VERIFY THAT LANDSCAPING DOES NOT IMPACT STORAGE VOLUMES IN STORMWATER BASINS, SWALES, OR OTHER HYDRAULIC STRUCTURES.



# TRIANGULAR SPACING DIAGRAM

SOILS REPORT

Analytical data determined on soil fraction passing a 2 mm sieve.

WALLACE LABS

**SCALE:** 3/4" = 1'-0"

8/5/20

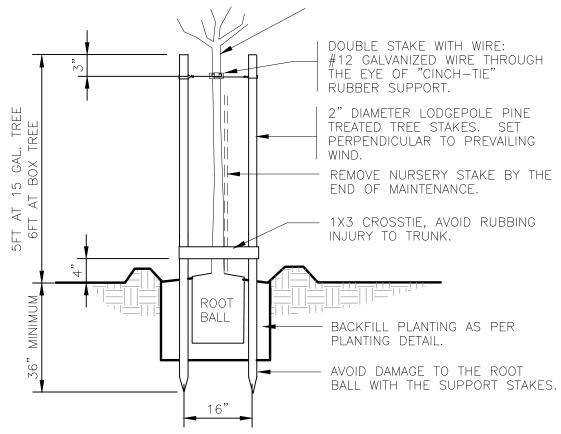
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Receive Date

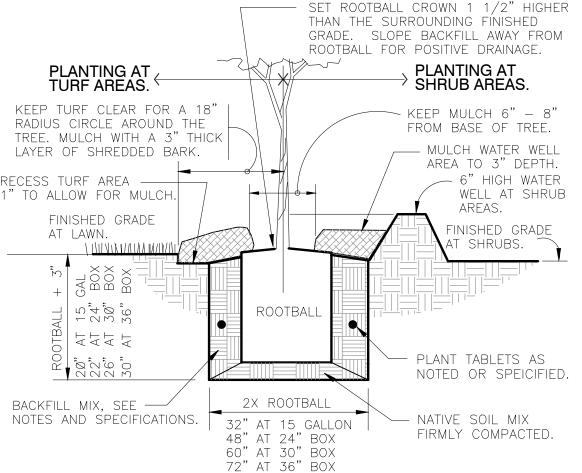
# SOILS ANALYSIS REPORT

Print Date

WALLACE LAB	3	SOILS KEFOKT	Print Date	Aug. 6, 2020	Receive Date	6/5/20
365 Coral Circle		Location	634 Palomer Dr., Red	dwood City, CA / Thala	pancni Residence	
El Segundo, CA 9	00245	Requester	Enrique Guzman, Co	and the continues of the control of	* TOTAL STREET, TOTAL STREET,	
(310) 615-0116		graphic interpretation: * very low, **	the manchestate is manipulated by made and or	and the same of th		
ammonium bicar	honoto/Da			Link		
			* * * * high, * * * * * very	All the second s		
extractable - mg/kg sc		Sample ID Number	20-219-28			
Interpretation of data		Sample Description	Redwood City, 6"			
low medium high		elements		graphic		
0 - 7 8-15 over 15		phosphorus	54.56			
0-60 60 -120 121-18	0	potassium	557.85	the steady steady		
0 - 4 4 - 10 over 1	0	iron	54.18	ole ole ole ole		
0- 0.5 0.6-1 over 1		manganese	51.77	ole ole ole ole		
0 - 1 1 - 1.5 over 1	.5	zinc	12.80	the the trie trie		
0- 0.2 0.3- 0.5 over 0	0.5	copper	4.30	Production and the second		
0- 0.2 0.2- 0.5 over 1		boron	0.20	ole ole		
		calcium	447.80	0.7479		
		magnesium	304.44			
		sodium	27.78			
		sulfur	20.16			
		molybdenum	0.04			
		nickel	6.05	ale ale ale		
The fellowders to			1000000	Three contracts and the contract of the contra		
The following trace		aluminum	n d			
elements may be toxic		arsenic	0.20	744		
The degree of toxicity		barium	2.08			
depends upon the pH	of	cadmium	0.08			
the soil, soil texture,		chromium	0.15			
organic matter, and the	0	cobalt	0.29	111 111 111		
concentrations of the		lead	8.37	ole ole ole		
individual elements as	well	lithium	0.23	NA .		
as to their interactions		mercury	n d	**		
		selenium	n d	ole .		
The pH optimum de	pends	silver	n d	N/A		
upon soil organic		strontium	2.07	NA .		
matter and clay cont	ent-	tin	n d	n e		
for clay and loam so		vanadium	0.41	ole .		
under 5.2 is too acidi						
6.5 to 7 is ideal	1	Saturation Extract				
over 8.0 is too alkali		pH value	6.62	oje oje oje		
de employe de la comercia de comercia de entre de la companya de la companya de la companya de entre de entre d	Name and Address of the Owner o		0.47			
The ECe is a measur	e 01	ECe (milli-	0.47			
the soil salinity:		mho/cm)		millieq/l		
1-2 affects a few plan		calcium	62.7	3.1		
2-4 affects some plai		magnesium	24.3	2.0		
> 4 affects many pla	nts.	sodium	11.1	0.5		
		potassium	24.1	0.6		
		cation sum		6,2		
problems over 150 p	pm	chloride	21	0,6		
good 20 - 30 ppm		nitrate as N	7	0.5		
		phosphorus as P	4.7	0,2		
toxic over 800		sulfate as S	15.8	1.0		
A THE CONTROL OF THE PARTY OF T		anion sum	11 11 17 11	2.3		
toxic over 1 for man	y plants	boron as B	0.19			
ncreasing problems star		SAR	0.3	H		
est. gypsum requirer			23			
ou gypouni requirer	relative infil	The state of the s	fair/slow			
	estimated so	700 07 17 W 7 V 1 W 1 9 7 W 7 T	loam			
	many transfer of the state of t	m carbonate)	no Color/Leave			
	organic mat	CONTROL OF THE CONTRO	fair/low	The second secon		
	moisture con	ntent of soil	5.2%			
		ion percentage	40.8%			

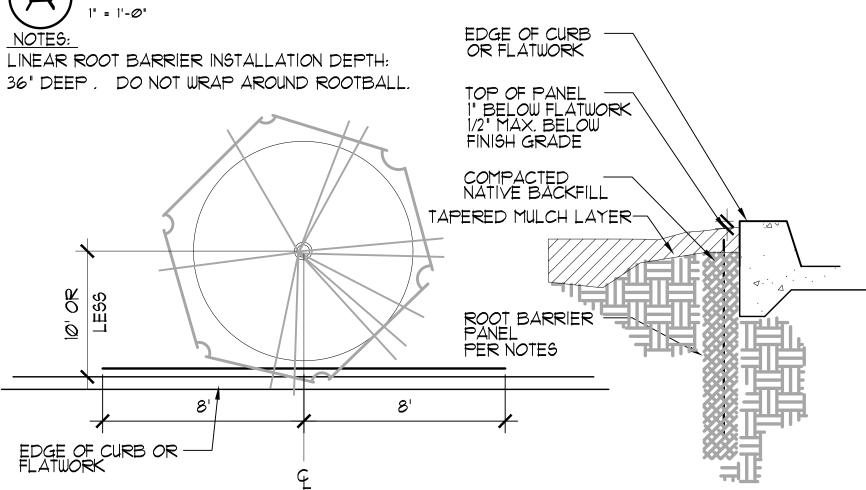


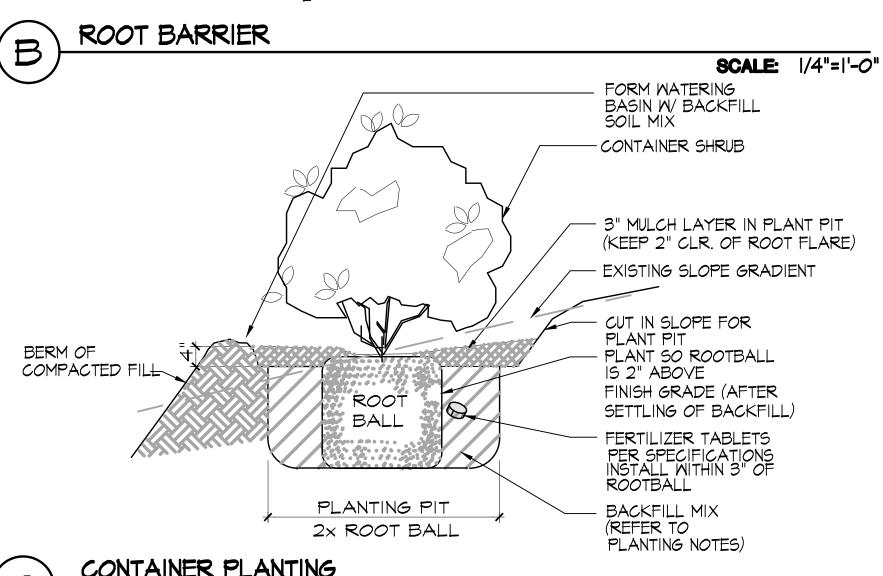
STAKING DETAIL



PLANT PIT DETAIL

# TREE PLANTING DOUBLE STAKE





CONTAINER PLANTING

SCALE: |"=|'-0"

624 PALOMAR DRIVE REDWOOD CITY, CALIFORNII

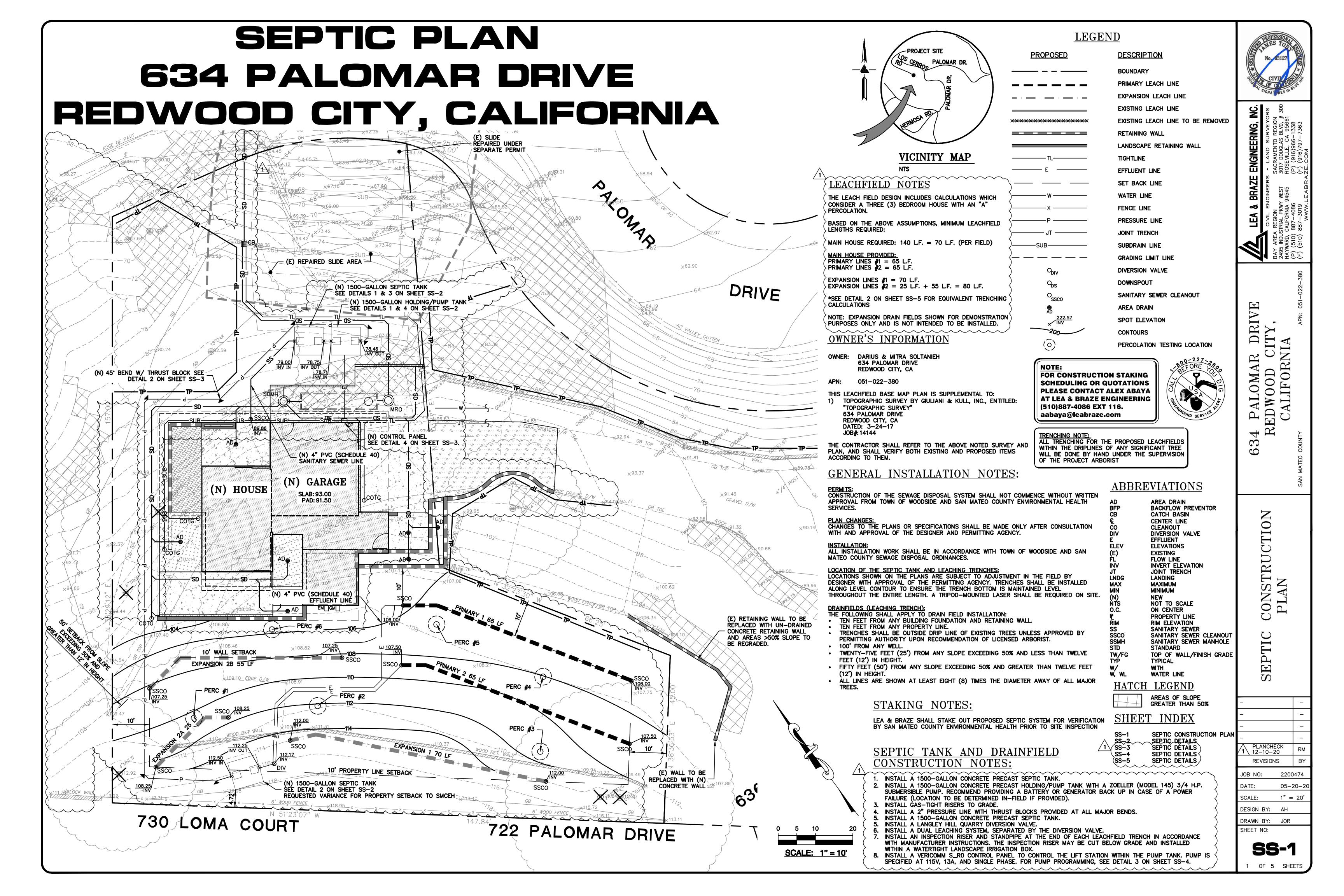
SAN MATEO

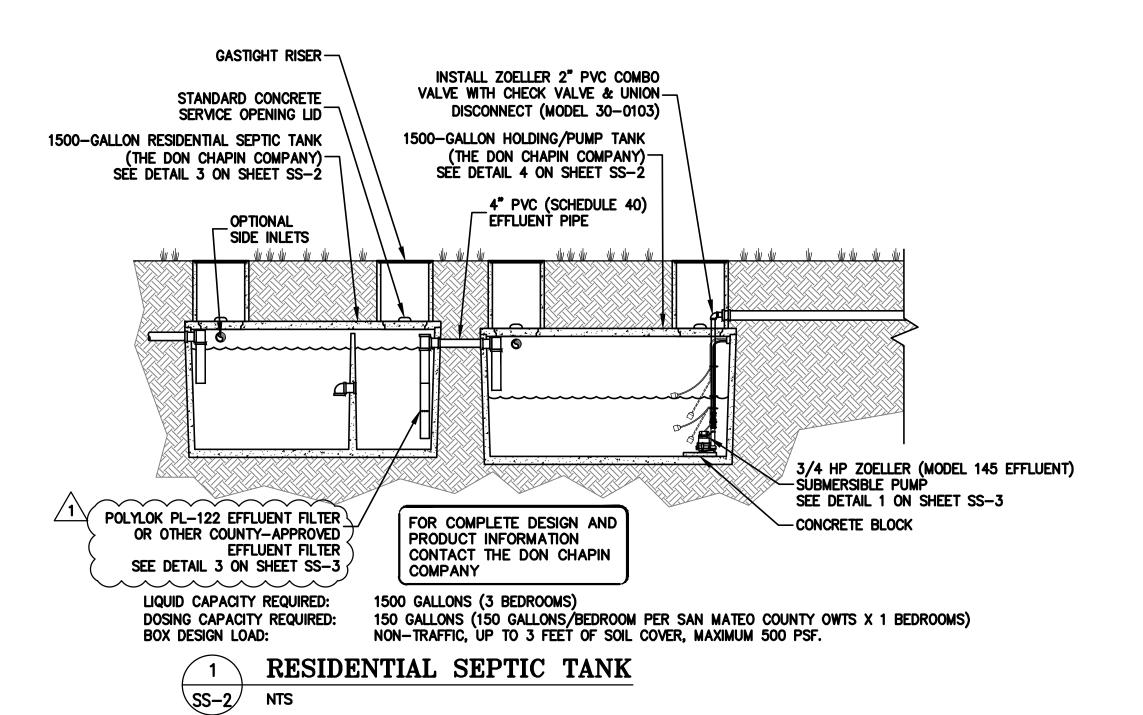
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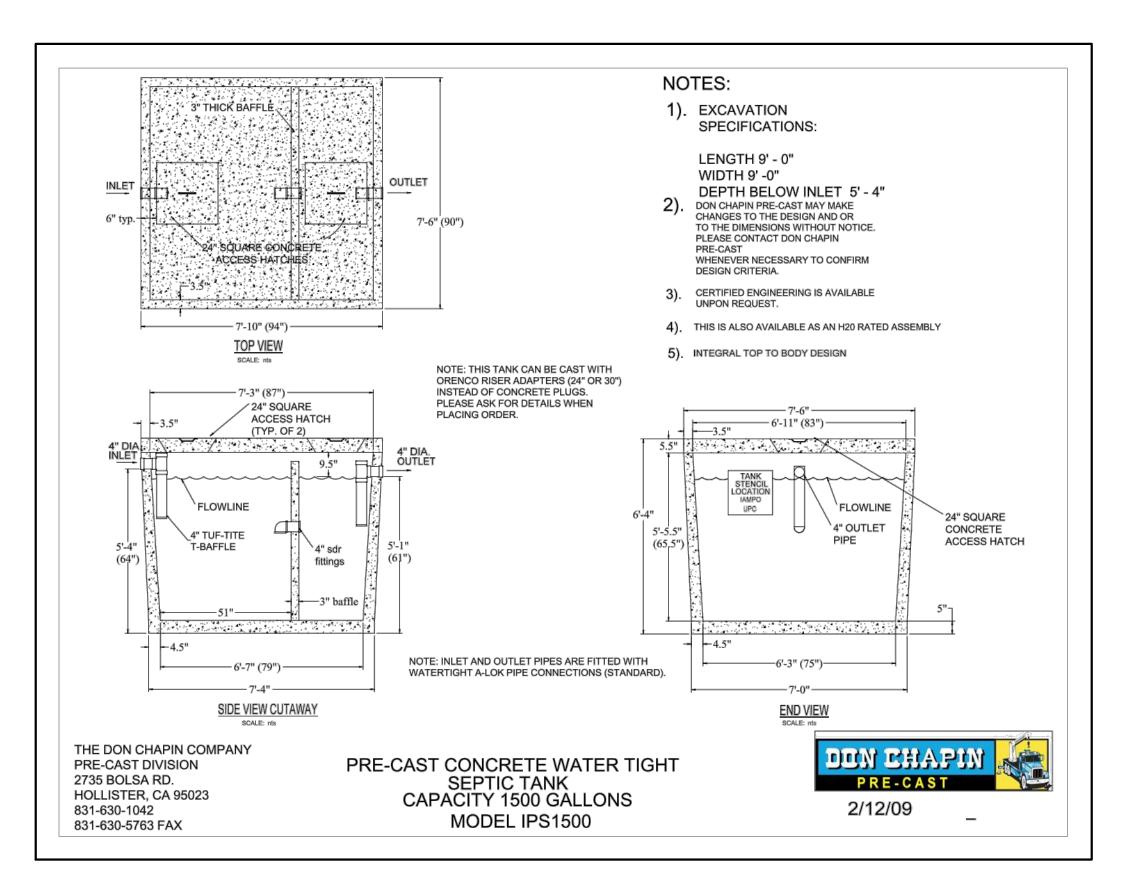
SHEET TITLE;
PLANTING DETAIL5/NOTE5

DATE; 10,30,20

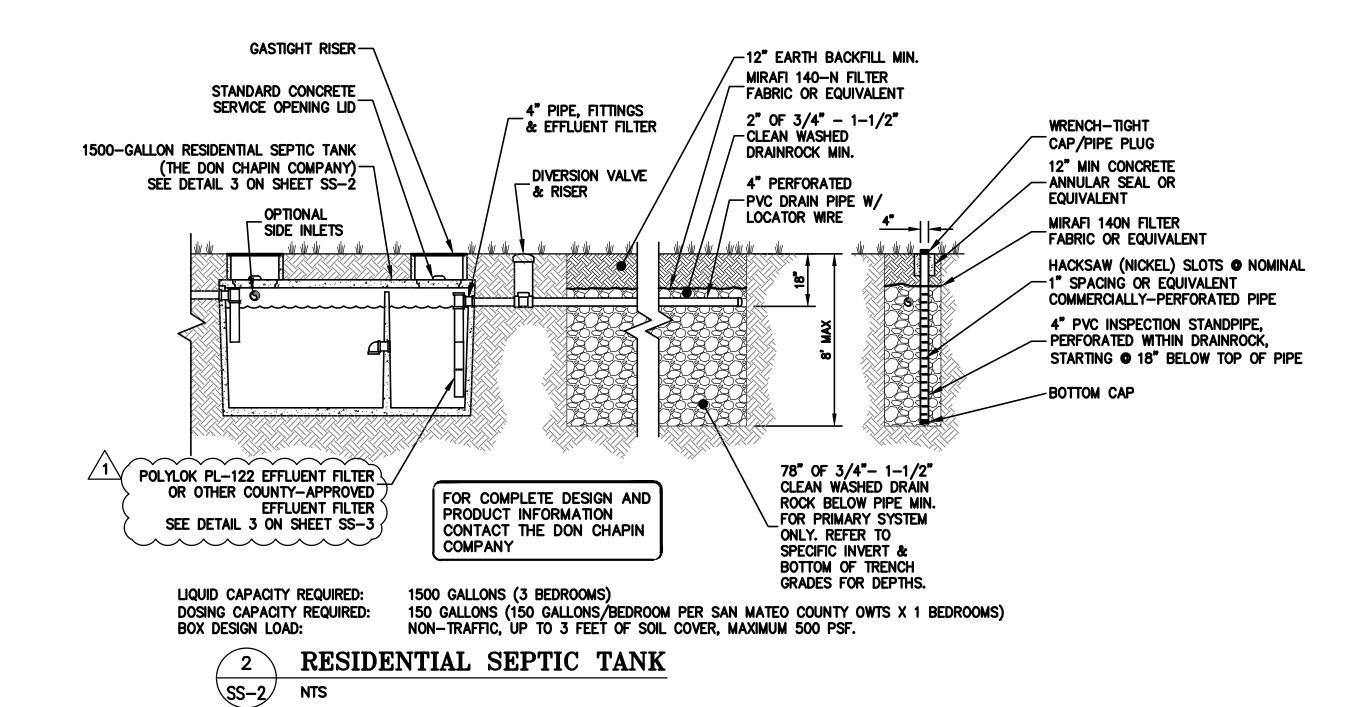
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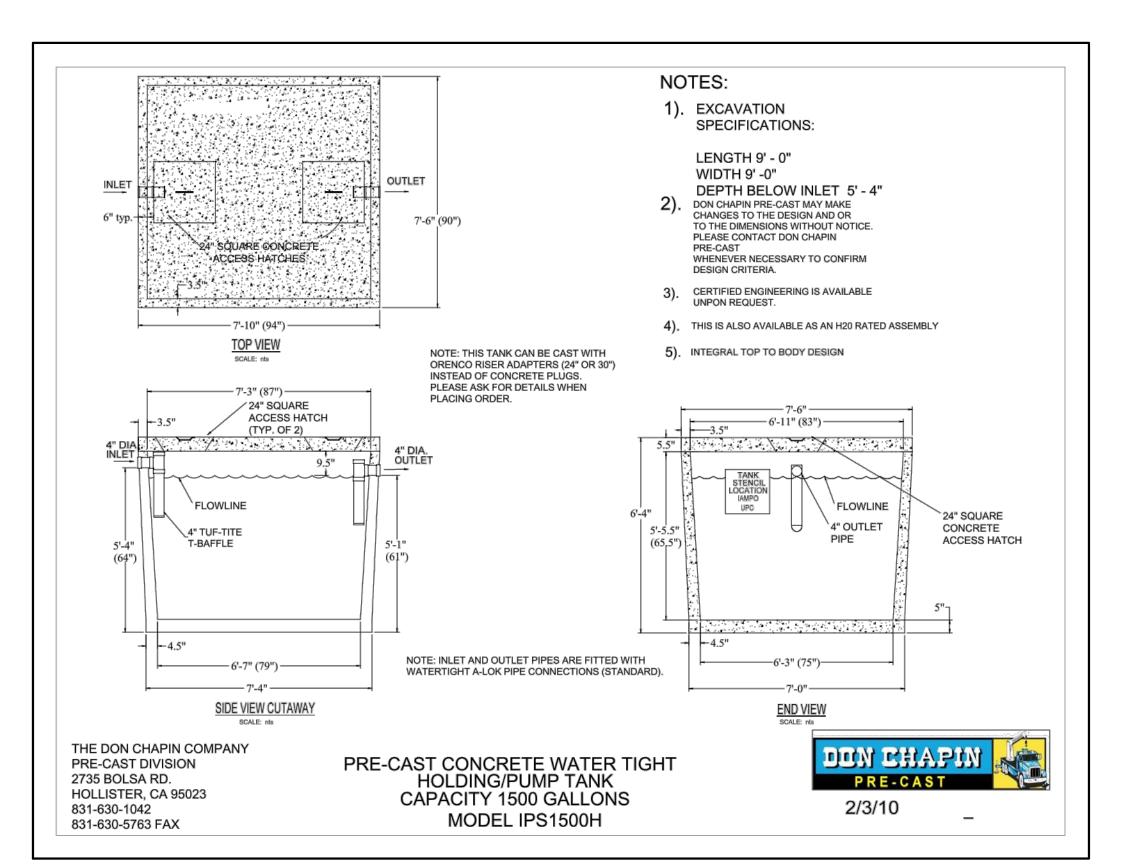












4 1500-GALLON HOLDING/PUMP TANK



SACRAMENTO REGION
ST 3017 DOUGLAS BLVD, # 300
45 ROSEVILLE, CA 95661
(P) (916)966-1338
(F) (916)797-7363

CIVIL ENGINEERS • LAND SUR SACRAMENTO R SACRAMENTO R 2495 INDUSTRIAL PKWY WEST 3017 DOUGLAS B HAYWARD, CALIFORNIA 94545 (P) (916)966-1

634 PALOMAR DRIVE REDWOOD CITY, CALIFORNIA

SEPTIC DETAILS

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PLANCH 12-10-		RM
REVISIO	NS	BY
OB NO:	2200	)474
Λ T <b>Γ</b> •	05_1	20-20

DATE: 05-20-20

SCALE: AS NOTED

DESIGN BY: AH

DRAWN BY: JOR

SHEET NO:

**SS-2** 

2 OF 5 SHEETS

## **TECHNICAL DATA SHEET** FLOW-MATE SERIES

Models 140/4140, 145/4145 Effluent / Dewatering Pumps

## PRODUCT SPECIFICATIONS

	11100001	
	Horse Power	3/4 - 1
	Voltage	115 or 230
Œ	Phase	1 Ph
2	Hertz	60 Hz
MOTOR	RPM	3450
Σ	Туре	Permanent split capacitor
	Insulation	Class B
	Amps	6.0 - 13.0
	Operation	Automatic or nonautomatic
	Discharge Size	1-1/2" NPT
	Solids Handling	1/2" (12 mm), 3/4" (19 mm) spherical solids
	Cord Length	20° (6 m)
PUMP	Cord Type	UL listed, neoprene cord
Š	Max. Head	50' (15.2 m) or 74' (22.6 m)
	Max. Flow Rate	86 GPM (326 LPM) or 61 GPM (232 LPM)
	Max. Operating Temp.	130 °F (54 °C)
	Cooling	Oil filled
	Motor Protection	Auto reset thermal overload

Stainless steel JIS S45C steel

Single vane (145)

or non-clogging vortex (140)

**DOUBLE SEAL** 

NOTE: See model comparison chart for specific details



POL BOK Inc.

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SINGLE SEAL

MODEL		140/	4140	145/414		
Feet	Meters	Gal.	Liters	Gal.	Liter	
5	1.5	86	326	56	212	
10	3.0	80	303	55	208	
15	4.6	73	276	53	200	
20	6.1	66	250	51	193	
25	7.6	59	223	48	182	
30	9.1	49	185	45	170	
40	12.2	28	106	35	132	

MODEL		140/	4140	145/4145		
Feet	Meters	Gal.	Liters	Gal.	Liters	
5	1.5	86	326	56	212	
10	3.0	80	303	55	208	
15	4.6	73	276	53	200	
20	6.1	66	250	51	193	
25	7.6	59	223	48	182	
30	9.1	49	185	45	170	
40	12.2	28	106	35	132	
50	15.2			26	98	
60	18.3	-		16	61	
		•				

**TOTAL DYNAMIC HEAD** 

FLOW PER MINUTE

20	85 -										
20 -	60		$\setminus$								
18 —	60 -		$\vdash$							-	
	55 -		<u> </u>	_						$\vdash$	
16 —	50 -			$\Lambda$							
				$  \  $							
14 -	45 -	$\vdash$			$\overline{}$					$\Box$	
HEAD	40 -	_			+					$\vdash$	
TOTAL DYSAMIC HEAD	35 -				7	-				Ш	
E ==						/					
	30 -					7					
8	25 -					$\rightarrow$				$\vdash$	
6-	20 -	_					1	$\forall$		-	
	15 -										
4									\		
2	10 -						$\top$			$\Box$	
2-	5-	_					145/			140/	
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GA	LLONS	1					0 6		) 8		
LIT	ERS (			80		160	T 1400 OT	240		320	15
						LOWPE	RMINUT	E.			

PUMP PERFORMANCE CURVE

MODEL 140/4140/145/4145

		MODEL COMPARISON									
Model	Seal	Mode	Volts	Ph	Amps	HP	Hz	Lbs	Kg	Simplex	Duplex
N140	Single	Non	115	1	12.0	1	60	46	21	1 or 2	3
E140	Single	Non	230	1	6.0	1	60	46	21	1 or 2	3
BN140	Single	Auto	115	1	12.0	1	60	47	21	*	***
BE140	Single	Auto	230	1	6.0	1	60	47	21	*	
E145	Single	Non	230	1	6.0	3/4	60	46	21	1 or 2	3
N145	Single	Non	115	1	13.0	3/4	60	46	21	1 or 2	3
BN145	Single	Auto	115	1	13.0	3/4	60	48	22	*	
N4140	Double	Non	115	1	12.0	1	60	65	29	*	-
E4140	Double	Non	230	1	6.0	1	60	65	29	1 or 2	3
BN4140	Double	Auto	115	1	12.0	1	60	66	30	*	
BE4140	Double	Auto	230	1	6.0	1	60	66	30	*	
N4145	Double	Non	115	1	13.0	3/4	60	64	29	1 or 2	3
BN4145	Double	Auto	115	1	13.0	3/4	60	64	29	*	

BN and BE models include a 20' (6 m) piggyback variable level pump switch. Additional cord lengths are available in 15' (5 m), 25' (8 m), 25' (11 m) and 50' (15 m). 50° (15 m) cord length is for 230 V only.

1. For automatic, use single piggyback variable level float switch or double piggyback variable level float switch. Refer to FM0477.

2. See FM1228 for correct model of simplex control panel.

\* Single piggyback switch included.

3. See FM0712 for correct model of duplex control panel.

 Reduces potential clogging by debris Replaces rocks or bricks under the pump Raises pump 2" (5 cm) off bottom of basin (DN40 or DN50) PVC piping

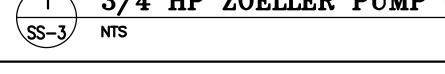
 Accommodates sump, dewatering and effluent applications NOTE: Make sure float is free from obstruction.

ACAUTION

All installation of controls, protection devices and wiring should be done by a qualified licensed electrician. All electrical and safety codes should be followed including the most recent National Electrical Code (NEC) and the Occupational Safety and Health Act (OSHA).

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3/4 HP ZOELLER PUMP (MODEL 145)



PL-122 Effluent Filter

Accepts 1/2" PVC

**Extension Handle** 

Alarm Switch

122 Linear Ft. of

1/16" Filtration

Filter Housing with 3" & 4" Pîpe Adapter

1/16" Filtration Slots

3,000 GPD

Automatic Shut-Off Ball

(Optional)

## PL-122 Filter

The PL-122 was the original Polylok filter. It was the first filter on the market with an automatic shut-off ball installed with every filter. When the filter is removed for regular servicing, the ball will float up and prevent any solids from leaving the tank. Our patented design cannot be duplicated.

## Features:

- Offers 122 linear feet of 1/16" filter slots, which significantly extends time between cleaning.
- Has a flow control ball that shuts off the flow of effluent
- when the filter is removed for cleaning. • Has its own gas deflector ball which deflects solids away.
- Installs easily in new tanks, or retrofits in existing systems.
- Comes complete with its own housing. No gluing of tees or pipe, no extra parts to buy.
- Has a modular design, allowing for increased filtration.

## PL-122 Installation:

Ideal for residential waste flows up to 3,000 gallons per day (GPD). Easily installs in any new or existing 4" outlet tee.

- 1. Locate the outlet of the septic tank.
- 2. Remove the tank cover and pump tank if necessary. 3. Glue the filter housing to the outlet pipe, or use a

Polylok Extend & Lok if not enough pipe exists.

4. Insert the PL-122 filter into tee. 5. Replace and secure the septic tank cover.

## PL-122 Maintenance:

The PL-122 Effluent Filter will operate efficiently for several years under normal conditions before requiring cleaning. It is recommended that the filter be cleaned every time the tank is pumped, or at least every three years.

- 1. Do not use plumbing when filter is removed.
- 2. Pull PL-122 cartridge out of the tee.

4. Insert filter back into tee/housing.

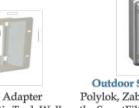
www.polylok.com

3. Hose off filter over the septic tank. Make sure all solids fall back into septic tank.



olylok offers the only filter on the market here you can get more GPD by simply







Gas Deflector

Outdoor SmartFilter® Alarm Polylok, Zabel & Best filters accept Connects to Septic Tank Wall the SmartFilter® switch and alarm.

1-877-765-9565

EFFLUENT FILTER

# **VeriComm® S\_RO Control Panels**

Technical Data Sheet

## **Applications**

VeriComm® S1RO and S2RO remote telemetry control panels are used 
Communication and Alarm Management with on-demand simplex pumping operations. Coupled with the webbased VeriComm Monitoring System, these affordable control panels give wastewater system operators and maintenance organizations the ability to monitor and control each individual system's performance remotely, with real-time efficiency, while remaining invisible to the



## **Features**

# **Three Operating Modes**

- "Start-Up Mode" collects trend data and establishes operating standards during the first 30 days of operation
- "Normal Mode" manages day-to-day functions
- "Test Mode" suspends data collection and alarm reporting during installation and service

## **Data Collection and Utilization**

 Compiles data logs of system conditions and events such as pump run times, pump cycles, and alarm conditions

## Troubleshooting and Diagnostic Logic Reports suspected component failures, which then trigger alarms

Advanced Control Logic · Activates system diagnostics in the event of a float failure or malfunction and maintains normal system operation until servicing can occur

# Features, con't.

"Easy assembly"

pump & discharge pip

- Provides remote telemetry and a web-based monitoring application for communication and alarm management (see VeriComm Monitoring System, NTD-CP-VCOM-1)
- Updates point values (including timer settings) and queued changes during each host communication session

## Contacts with host monthly; more frequently during alarm conditions

#### **Multiple Communication Methods** Call-In to VeriComm® Host (phone line or optional high speed internet)

 Signals critical fault conditions that require immediate attention (e.g., pump failure) through automatic alarm notifications - Signals less-critical fault conditions (e.g., stuck float switch) through automatic alert notifications and triggers the panel's troubleshooting

logic and alternative operating mode - Sends updates through automatic update notifications, including alarm updates or all-clear notifications following alarms/alerts, as

well as normally scheduled monthly panel reports Allows manual, forced communication from panel to host for updat-

ing point values and receipt of queued changes Real-Time, Manual Direct Panel Connection Allows a local operator real-time access to detailed logged data

and the ability to change point values through direct connection via RS-232 serial port from a laptop or Android® device with optional Bluetooth® kit - Allows a local operator to initiate an auto-answer mode in real-time

to access detailed logged data and the ability to change point values via direct, forced communication at the site Open-architecture software with password security is used during real-time, manual connections. Orenco offers BT-VCOM software as an

option, but VeriComm panels require no proprietary software. VT100 protocol allows access and control from a Mac or PC computer using a simple communication program (e.g., Windows® HyperTerminal), with multilevel password protection ensuring that only qualified personnel can access the panel's data.

## Status Light Indicators

Flashing green LED for normal operation

 Yellow LEDs for status of digital inputs Red LEDs for status of digital outputs and modem activity

UL-recognized and FCC-approved

Orenco Systems® Inc., 814 Airway Ave., Sutherlin, OR 97479 USA • 800-348-9843 • 541-459-4449 • www.orenco.com

For more information, try our online demo at www.vericomm.net (no password required). Rev. 1.0, @ 06/18

<b>Optional Compon</b>	ents	
Feature	Specification(s)	Product Code Adde
Pump Run Light	7/8-in. (22-mm) diameter green lens. UL Type 4X rated, 1 W LED light, 120 V	PRL
Heater	Anti-condensation heater; self-adjusting: radiates additional wattage as temperature drops	HT
Additional ontions available on a custom	basis. Contact Orenco Controls for more information.	

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(LARGEST MAIN GOVERNS) CASE C CASE D <u>CASE E</u> CASE F 1. CASE "A" IS TYPICAL FOR ALL. REQUIRED BEARING AREAS-SQ.FT. ALL BLOCKS TO BE KEPT CLEAR OF LUGS. A B C D E<sub>1</sub> E<sub>2</sub> F

4" | 2 | 3 | 3 | 3 | 2 | 3 | 2

6" | 5 | 6 | 7 | 7 | 5 | 7 | 4

8" | 8 | 12 | 11 | 11 | 8 | 11 | 6

10" | 12 | 18 | 17 | 17 | 12 | 17 | 8

12" | 17 | 24 | 24 | 24 | 17 | 24 | 12

CONCRETE SHALL BE CLASS B PER STANDARD SPECIFICATIONS. THRUST BLOCK DETAIL

UNSUPPORTED SURFACES TO BE FORMED.

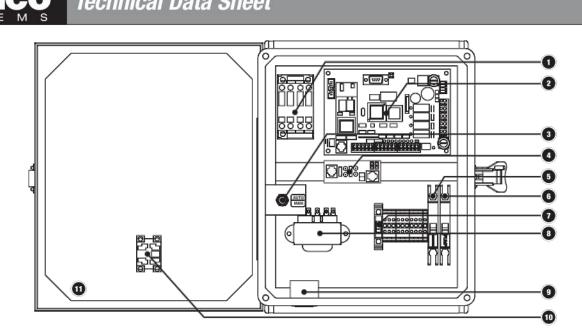
ARROWS ON CASE "A", "C" & "E" INDICATE MAINS WHICH DETERMINE BEARING AREA.

BASED ON 150 PSI PRESSURE, 1,000 PSF

SOIL BEARING.

CONCRETE POUR AGAINST UNDISTURBED

MATERIAL: BACK AND BOTTOM 7



## Standard Components

Feature	Specifications
1. Motor-Start Contactor	120 V, 16 FLA, 1 hp (0.75 kW), 60 hz; 2.5 million cycles at FLA (5 million at 50% of FLA) 240 V, 16 FLA, 3 hp (2.24 kW), 60 hz; 2.5 million cycles at FLA (5 million at 50% of FLA)
2. VeriComm® Remote Telemetry Unit*	ATRTU-100: 36/18 VAC (center tap transformer); 8 digital inputs, 4 analog inputs, 4 digital outputs, 0 analog outputs, on-board modem (2400 baud); LED input and output indicators; 1-year battery backup of data and program settings
3. Toggle Switch	Single-pole, single-throw, momentary manual switch; 20 A, 3/4 hp (0.75 kW)
4. Phone Line Surge Arrestor/DSL Filter	Surge protection for phone line; DSL filter for lines that also carry DSL service; connection to panel via RJ11 jack or terminal block
5. Controls Circuit Breaker	10 A, OFF/ON switch; single-pole 120 V; DIN rail mounting with thermal magnetic tripping characteristics (240 V units are available for international markets)
6. Pump Circuit Breaker	20 A, OFF/ON switch; single-pole 120 V or double-pole 240 V; DIN rail mounting with thermal magnetic tripping characteristic
7. Fuse	250 VAC, 1 A
8. Transformer	120 VAC primary, 36 VCT @ 0.85 A secondary
9. Audible Alarm	95 dB at 24 in. (610 mm), warble-tone sound
10. Visual Alarm	7/8-in. (22-mm) diameter red lens; "Push-to-silence;" UL Type 4X rated, 1 W LED light, 120 V
11. Panel Enclosure	Measures 13.51 in. high x 11.29 in. wide x 5.58 in. deep (343 mm x 287 mm x 142 mm); UL Type 4X rated; constructed of UV-resistant fiberglass; hinges and latch are stainless steel
VCOM-S1 RO	120 VAC, 1 hp, 16 A, single-phase, 60 Hz
VCOM-S2 RO	120 VAC, 1 hp, or 240 VAC, 3 hp; 16 A, single-phase, 60 Hz

optional compo	nients	
Feature	Specification(s)	Product Code Adder
Pump Run Light	7/8-in. (22-mm) diameter green lens. UL Type 4X rated, 1 W LED light, 120 V	PRL.
Heater	Anti-condensation heater; self-adjusting: radiates additional wattage as temperature drops	HT

CONTROL PANEL LOCATION: CONTRACTOR AND OWNER TO DETERMINE BEST LOCATION FOR CONTROL PANEL. MUST BE IN A VISIBLE AND READILY-AVAILABLE LOCATION.

SEE DETAIL 3 ON SHEET SS-4 FOR PUMP PROGRAMMING ELEVATIONS.

CONTROL PANEL FUNCTIONALITY NOTE:
CONTROL PANEL SHALL BE DESIGNED AND CONFIGURED IN SUCH A MANNER THAT, IN THE EVENT OF A TREATMENT UNIT MALFUNCTION, AN ALARM SYSTEM WILL BE TRIGGERED AND DISCHARGE FROM THE TREATMENT SYSTEM TO THE DISPERSAL FIELD WILL BE INTERRUPTED UNTIL THE TREATMENT UNIT MALFUNCTION IS RECTIFIED. AT A MINIMUM, THE ALARM SYSTEM SHALL INCLUDE AN AUDIBLE AND VISUAL ALARM LOCATION WITHIN THE BUILDING SERVED BY THE SYSTEM.

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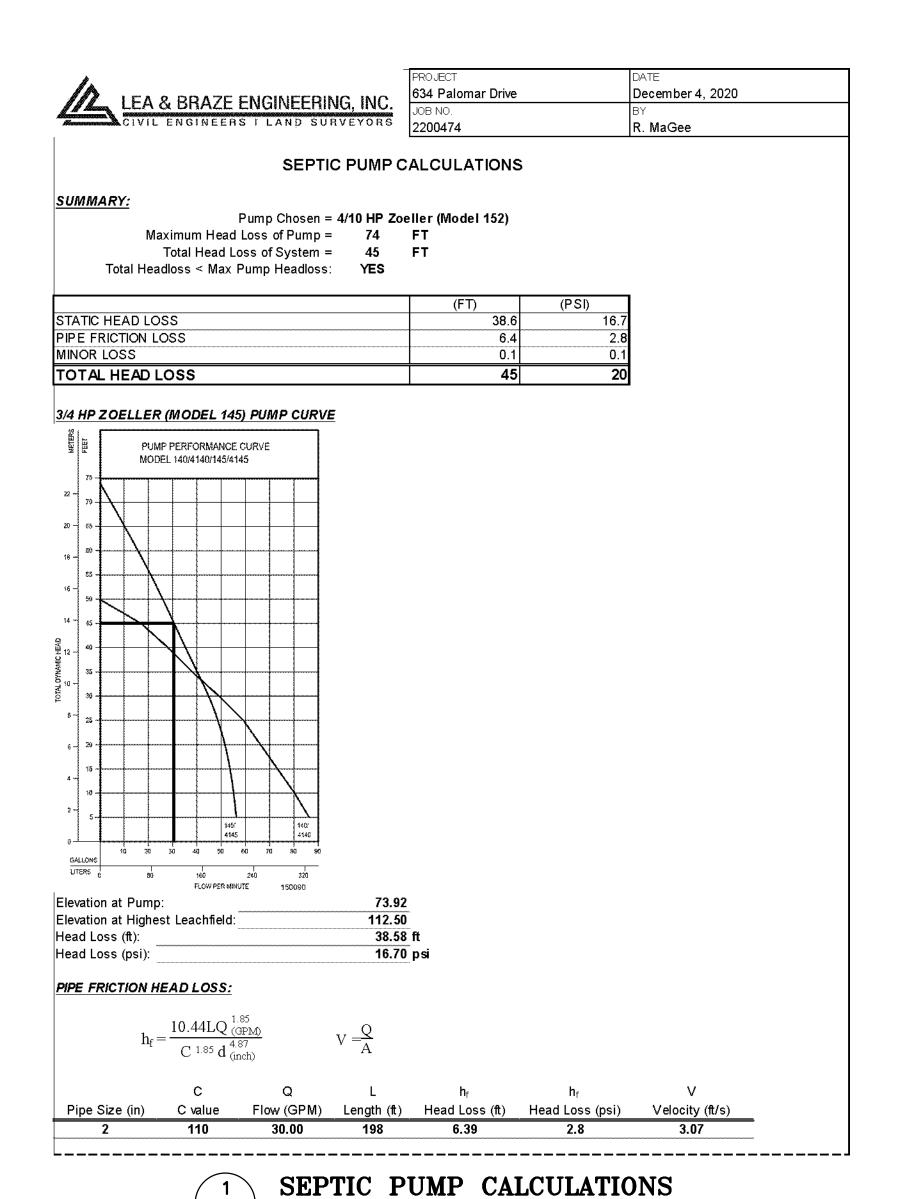
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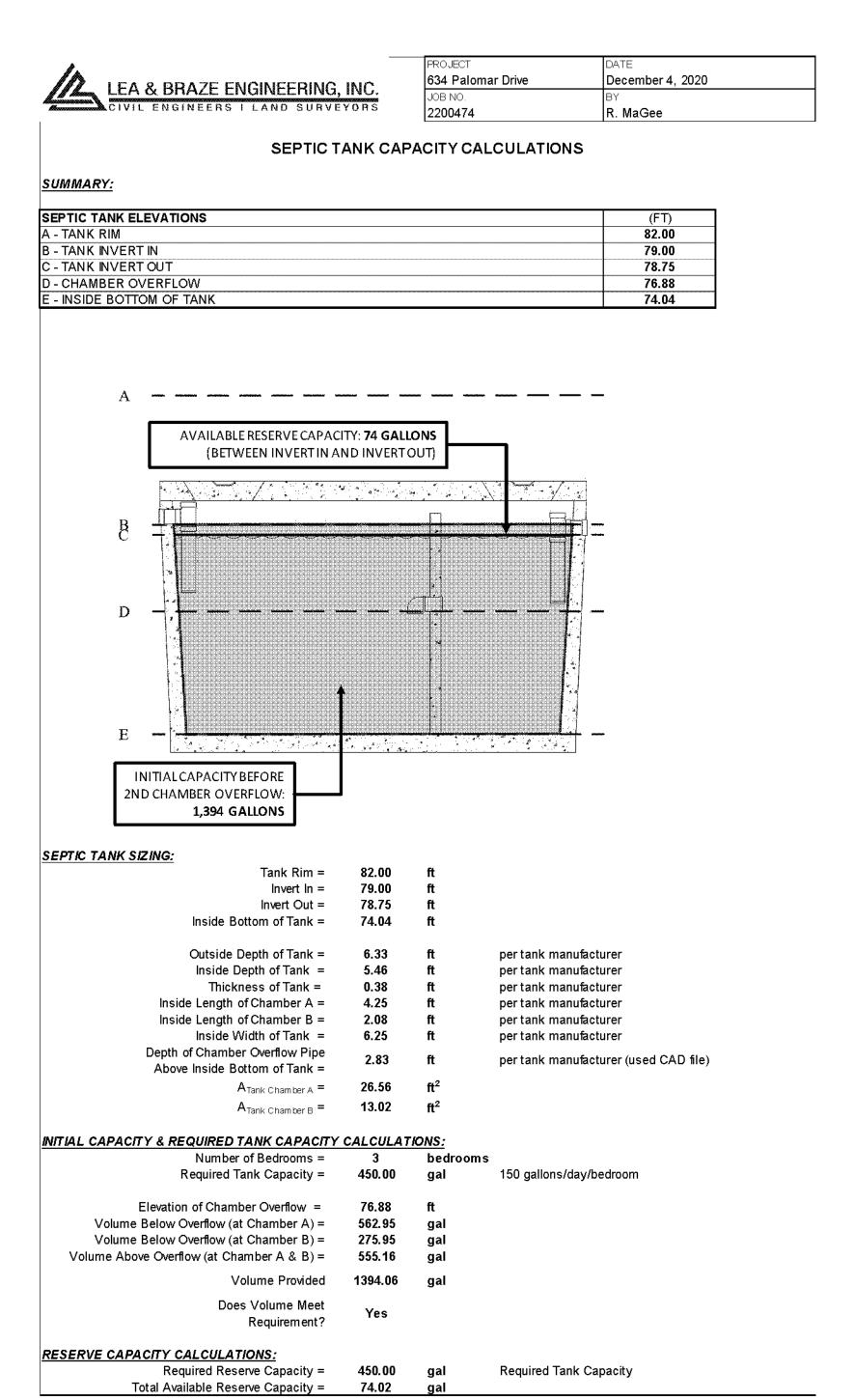
PLANCHECK 12-10-20 REVISIONS JOB NO: 2200474 05-20-20

DATE: AS NOTED SCALE: DESIGN BY: AH DRAWN BY: JOR SHEET NO:

3 OF 5 SHEETS







SEPTIC TANK CAPACITY CALCULATIONS



I EA 9 DDA7E ENCINEEDING INIC	PROJECT 634 Palomar Drive	DATE December 4, 2020
LEA & BRAZE ENGINEERING, INC.	JOB NO. <b>2200474</b>	BY <b>R. MaGee</b>
HOLDING TANK CAP	ACITY CALCULATIONS	

HOLDING TANK & PUMP PROGRAMMING ELEVATIONS	(FT)
A - TANK RIM	82.50
B - TANK INVERT IN	78.71
C - EMERGENCY ALARM ELEVATION	76.57
D - PUMP OVERRIDE TIMER "ON"	75.41
E - PUMP TIMER "ON" ELEVATION	74.91
F - PUMP TIMER & OVERRIDE TIMER "OFF" ELEVATION	74.42

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PUMP SETTINGS		
NUMBER OF DOSES PER DAY	3	doses
GALLONS PUMPED PER DOSING	150	gallons/dosing
GALLONS PUMPED PER DAY	450	gallons/day
PUMP TIMER "ON" PER DOSING	5.00	minutes
PUMP OVERRIDE TIMER "ON"	2.25	minutes

PUMP TIMER "ON" PER DOSING			5.00	minutes	
PUMP OVERRIDE TIMER "ON"			2.25	minutes	
SEPTIC TANK SIZING:					
Tank Rim =	82.50	ft			
Invert In =	78.71	ft			
Pump Invert In =	73.92	ft	pump sitting on	2" concrete block	
Inside Bottom of Tank =	73.75	ft	P 2 3		
Outside Depth of Tank =	6.33	ft	per tank manufa	cturer	
Inside Depth of Tank =	5.46	ft	per tank manufa	cturer	
Thickness of Tank =	0.38	ft	per tank manufa	cturer	
Inside Length of Chamber A =	6.58	ft	per tank manufa	cturer	
Inside Width of Tank =	6.25	ft	per tank manufa	cturer	
$A_{Tank\ Chamber\ A}$ =	41.15	ft²			
ESERVE CAPACITY CALCULATIONS:					
Required Reserve Capacity =	375.98	gal	74.02	gallons stored in Sep	tic Tank
Depth Above Pump Override =	1.17	ft	"Emergency" flo	at must be minimum 6"	above "Overrid
Elevation of Required Tank Reserve Capacity =	76.57	ft			
Emergency Alarm Elevation =	76.57	ft	at elevation of R	equired Tank Reserve Ca	pacity
Available Reserve Capacity	658.25	gal			
Above Emergency Alarm =		J			
Does Volume Meet	Yes				
Requirement?					
PUMP TIMER "ON" CALCULATIONS:		_			
Required Pump Capacity =	450.00	gal	150 gallons/day/	/bedroom	
Number of Doses Per Day =	3	doses			
Gallons Pumped Per Dosing =	150.00	gallons			
Total Gallons Pumped Per Day =	450.00	gal			
Pump "On/Off" Cycle Time =	480	min			
Average Pump Flow @ Required Head =	30.00	gpm	•	Pump Calculations	
Pump Timer "On" For Dosing =	5.00	min	should be more	than 2 minutes	
Depth Above Tank Invert for Pump Capacity =	0.49	ft	"On" float must	be minimum 6" above "C	ff"
Pump Timer "On" Elevation =	74.91	ft			
PUMP OVERRIDE TIMER "ON" CALCULATIONS:					
Pump Override Timer Elevation =	75.41	ft	set 6" higher tha	an pump timer "on"	
Capacity at Pump Override Timer Elevation =	69.53	gal			
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Average Pump Flow @ Required Head = 30.00 gpm from the Septic Pump Calculations

Pump Override Timer "On" = 2.25 min



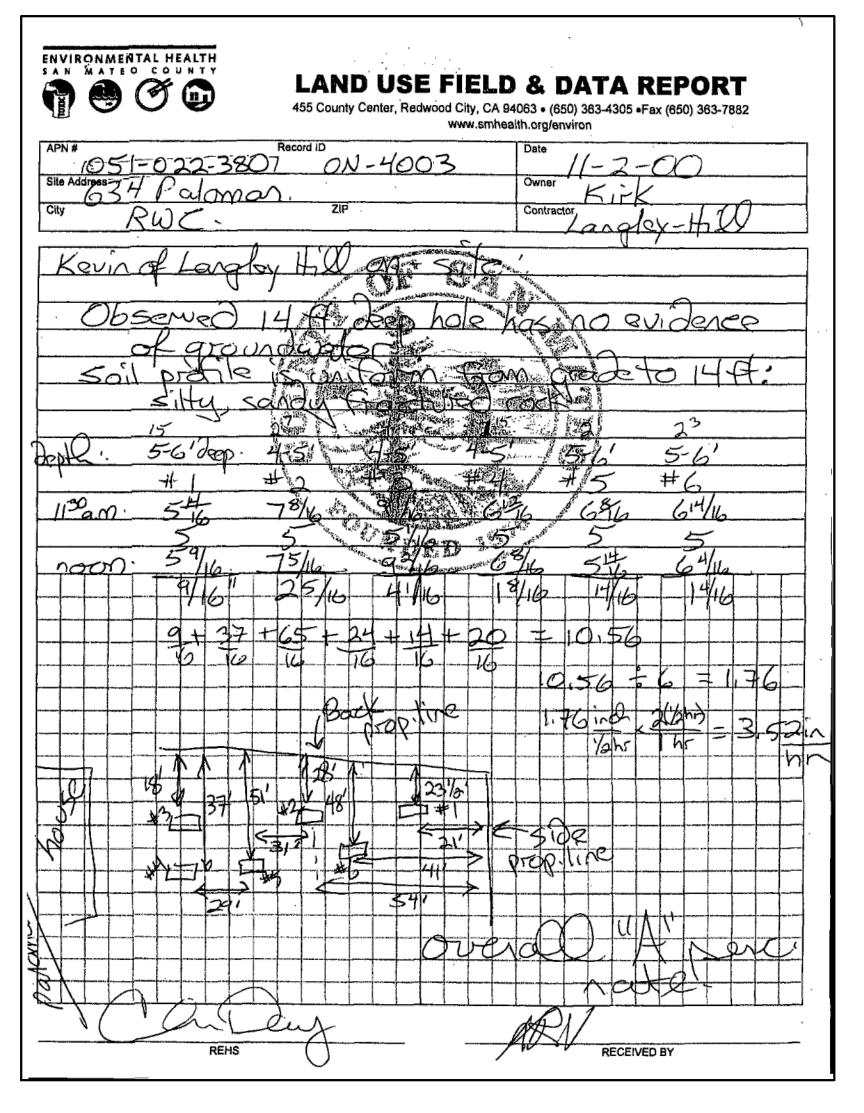
34 PALOMAR DRIVE REDWOOD CITY, CALIFORNIA

05-20-20 SCALE: AS NOTED DESIGN BY: AH DRAWN BY: JOR  $\sim\sim$ 

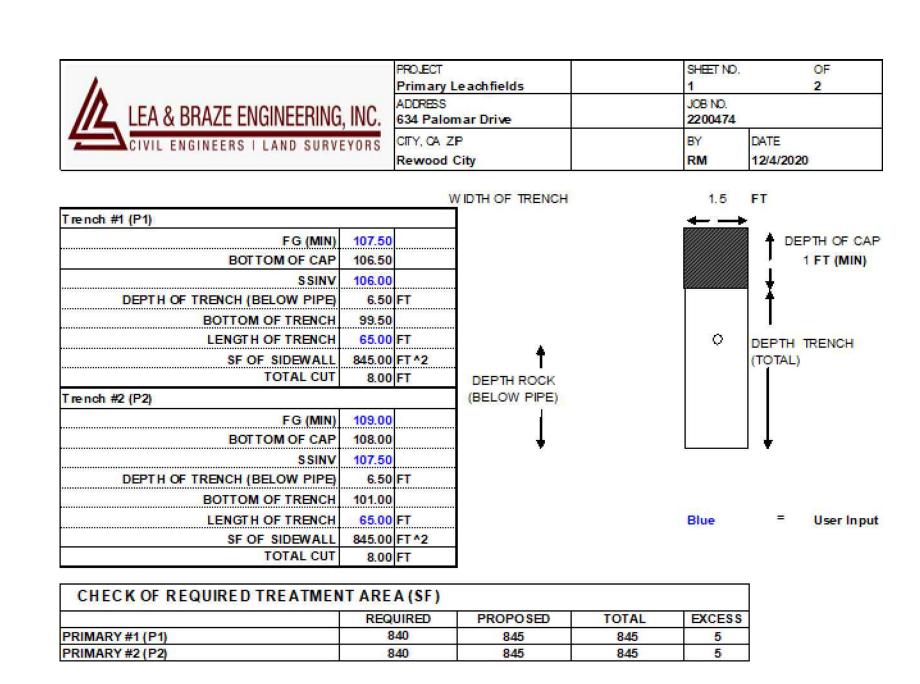
PLANCHECK 12-10-20

REVISIONS

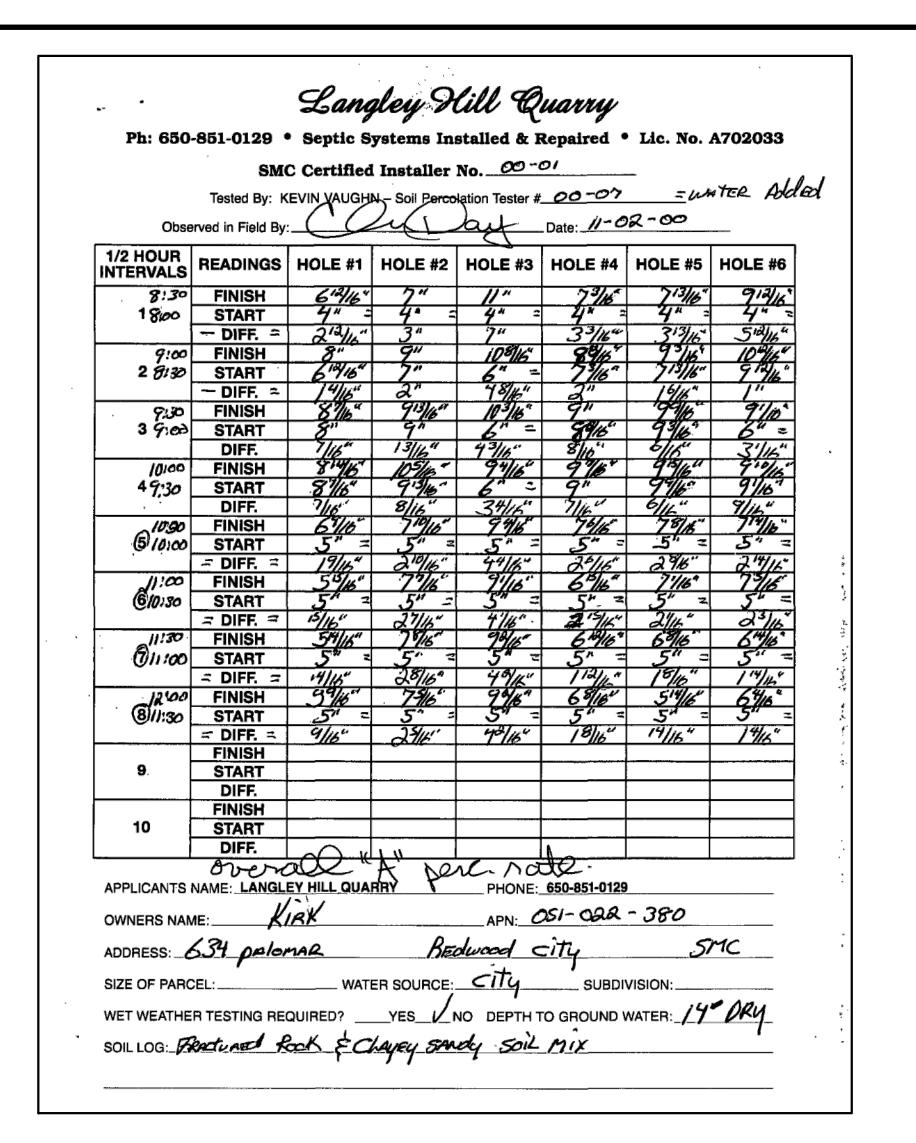
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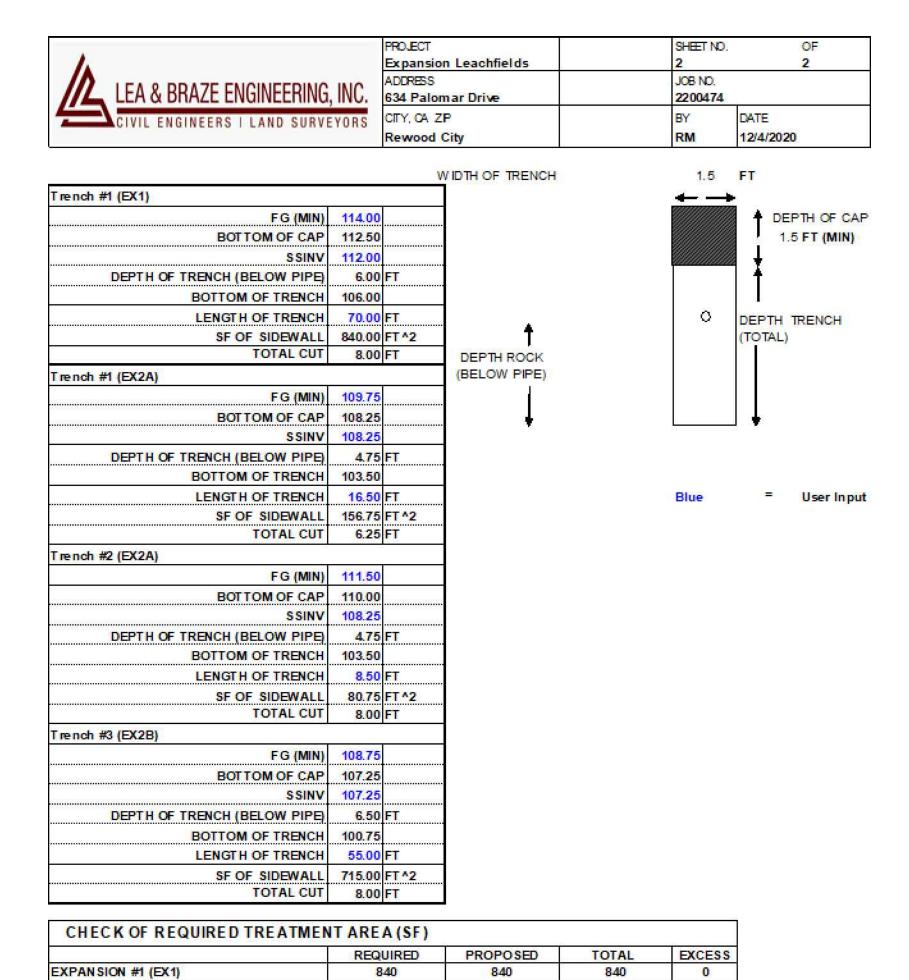


1 PERCOLATION TEST DATA



EQUIVALENT TRENCH CALCULATIONS





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EXPANSION #2 (EX2A)

EXPANSION #2 (EX2B)



34 PALOMAR DRIVE REDWOOD CITY, CALIFORNIA 63,

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AS NOTED DESIGN BY: AH

DRAWN BY: JOR SHEET NO: