Before the Housing and Community Development
in and for the County of Monterey, State of California

In the matter of the application of:
BERRELLEZA OCTAVIO & IRMA TRS (PLN190440)

RESOLUTION NO. 25-001

Resolution by the Monterey County HCD Chief of Planning:

1) Finding that the project qualifies as a Class 3 Categorical Exemption pursuant to CEQA guidelines section 15303, and there are no exceptions pursuant to Section 15300.2 of the CEQA guidelines; and
2) Approving a Coastal Administrative Permit to allow demolition of an existing 1,152 square foot two-story single-family dwelling and construction of a one-story 5,234 square foot single-family dwelling with an attached 968 square foot garage; and a Coastal Administrative Permit to allow construction of a 425 square foot guesthouse.

[BERRELLEZA OCTAVIO & IRMA TRS, 543 Pini Road, Royal Oaks (Assessor's Parcel Number 412-012-055-000), North County Land Use Plan, Coastal Zone.]

The BERRELLEZA OCTAVIO & IRMA TRS application (PLN190440) came before the Monterey County HCD Chief of Planning on January 15, 2025. Having considered all the written and documentary evidence, the administrative record, and the staff report, the HCD Chief of Planning finds and decides as follows:

FINDINGS

1. **FINDING:** **CONSISTENCY –** The proposed project and use, as conditioned, is consistent with the applicable plans and policies which designate this area as appropriate for development.

   EVIDENCE: a) The project has been reviewed for consistency with the text, policies, and regulations in:
   - 1982 Monterey County General Plan (General Plan);
   - North County Land Use Plan (NC LUP);
   - Monterey County Coastal Implementation Plan, Part 2 (NC CIP); and
   - Monterey County Coastal Zoning Ordinance (Title 20).

   No conflicts were found to exist. The subject property is located within the Coastal Zone; therefore, the 2010 Monterey County General Plan does not apply.

   b) Proposed Project. The subject property is currently developed with a 1,152-square-foot single-family dwelling. A portion (727 square feet) of this existing residence will be demolished, and the remaining 425 square foot portion of the structure will be remodeled into a

guesthouse. However, because more than 50 percent of the walls will be demolished, it is considered demolition of the existing dwelling and new construction of a guesthouse. Additionally, the proposed project involves the construction of a 5,234 square-foot single-family dwelling with an attached 968 square foot garage, and 1,649 square feet of covered decks.

c) Allowed Use. The property is located at 543 Pini Road, Royal Oaks , North County Land Use Plan, Coastal Zone (Assessor's Parcel Number [APN]: 412-012-055-000). The subject property is zoned Rural Density Residential (RDR), with 5 acres per unit, Coastal Zone or "RDR/5(CZ)." Pursuant to Title 20 sections 20.16.040.A & B, the RDR zoning allows for the establishment of the first family dwelling per legal lot of record and a guesthouse as a principally allowed use subject to a Coastal Administrative Permit in each case. The project involves construction of a single-family dwelling and a detached guesthouse. Therefore, the project involves an allowed use.

d) Lot Legality. The subject property (5.4 acres), APN: 412-012-055-000 is shown in its current configuration and under separate ownership in both the 1964 and 1972 Assessors Maps. Therefore, the County recognizes the subject property as a legal lot of record.

e) Cultural Resources. NC CIP Section 20.144.110.B.1.b states that an archaeological survey report shall be required for any development project within a low or moderate archaeological sensitivity zone which would require environment assessment and within 750 feet of a known archaeological resource. According to the Monterey County Geographic Informational System (GIS), the subject property has a low archaeological sensitivity and is not within 750 of a known archeological resource. As demonstrated in Finding No. 6 and supporting evidence, the project is exempt from environmental review. Therefore, an archaeological report was not required in this case. The potential for inadvertent impacts to cultural resources is limited. The County has applied a standard project condition of approval (Condition No. 3) which requires the contractor to stop work if previously unidentified resources are accidentally discovered during construction.

f) Design and Visual Resources. The single-family dwelling and guesthouse will include colors and materials consisting of tan and beige cement plaster, tile roofing, and natural wood trim. The proposed project is consistent with the rural neighborhood character and will not detract from the surrounding environment. Further, the proposed project is not visible from Highway One, Molera Road, Struve Road, public beaches, or Elkhorn Slough due to location and distance, and therefore will have no visual impact.

g) Review of Development Standards. Title 20 section 20.16.060 identifies site development standards for the RDR district. Required setbacks for main structures are 30 feet (front), 20 feet (sides) and 20 feet (rear). Required setbacks for non-habitable structures, such as guesthouses, are 50 feet (front), 6 feet (front one-half side), 1 foot (rear one-half side), and 1 foot (rear). As illustrated on the attached plans, the proposed residence and the existing residence to be

partially demolished and remodeled into a guesthouse comply with these setback requirements.

The proposed main structure will have a height of 18 feet 9 inches, which is below the 30 feet maximum allowed for main structures in the RDR zoning district. The proposed guesthouse will have a height of 11 feet 11 inches, which is consistent with the 12 feet maximum height allowed for guesthouses pursuant to Title 20 section 20.64.020.

Pursuant to Title 20 section 20.16.060.E, the maximum allowed site coverage for RDR is 25 percent. The proposed development will result in a site coverage of 8 percent. Therefore, the proposed project complies with all applicable site development standards.

h) Guesthouse. The proposed project includes a Coastal Administrative Permit to allow the establishment of a guesthouse. As demonstrated in Finding No. 7 and supporting evidence, the proposed guesthouse complies with guesthouse standards identified in Title 20 section 20.64.020.

i) The application, plans, and supporting materials, submitted by the project applicant to Monterey County HCD-Planning found in Project File PLN190440.

2. **FINDING:** **SITE SUITABILITY –** The site is physically suitable for use proposed.

EVIDENCE:

a) The project has been reviewed for site suitability by the following departments and agencies: HCD-Planning, HCD-Environmental Services, North County Fire Protection District, HCD-Engineering Services, and Environmental Health Bureau. There has been no indication from these departments/agencies that the site is not suitable for the proposed development. Recommended conditions from these departments/agencies have been incorporated.

b) The following technical report has been prepared:

- Soil Investigation Report (Design Phase) (LIB230117) prepared by Geronimo Daliva, GMD Engineers, Salinas, California, December 1, 2019.

Upon independent review, staff concurs with conclusions of the report. There are no physical or environmental constraints that would render the site unsuitable for the use proposed.

c) Staff conducted a site inspection on February 21, 2023 and confirmed the site is suitable for implementation of the proposed development.

d) The application, plans and supporting materials submitted by the project applicant to Monterey County HCD-Planning for the proposed development found in Project File PLN190440.

3. **FINDING:** **HEALTH AND SAFETY –** The establishment, maintenance, or operation of the project applied for will not under the circumstances of this particular case be detrimental to the health, safety, peace, morals, comfort, and general welfare of persons residing or working in the neighborhood of such proposed use, or be detrimental or

injurious to property and improvements in the neighborhood or to the general welfare of the County.

EVIDENE:
a) The project was reviewed by the HCD-Planning, North County Fire Protection District, HCD-Engineering Services, HCD-Environmental Services, and Environmental Health Bureau (EHB). The respective agencies have recommended conditions, where appropriate, to ensure that the project will not have an adverse effect on the health, safety, and welfare of persons either residing or working in the neighborhood.
b) All necessary public facilities are currently available to the subject property. The subject property and proposed development will continue to utilize Pini Road Water System #07, which produced acceptable water quality results in July 2020. An existing on-site wastewater treatment system (OWTS) serves the existing residence. This OWTS will be demolished and replaced with an Alternative OWTS, which has been designed to serve both the proposed main residence and the guesthouse. EHB reviewed and approved the Alternative OWTS and applied no conditions of approval.
c) The application, plans and supporting materials submitted by the project applicant to Monterey County HCD-Planning for the proposed development found in Project File PLN190440.

4. **FINDING:** **NO VIOLATIONS -** The subject property is in compliance with all rules and regulations pertaining to zoning uses, subdivision, and any other applicable provisions of the County's zoning ordinance. No violations exist on the property.

EVIDENCE:
a) Staff reviewed Monterey County HCD - Planning and HCD-Building Services Department records and conducted a site overview to verify there are no violations existing on the subject property.
b) The application, plans and supporting materials submitted by the project applicant to Monterey County HCD-Planning for the proposed development found in Project File PLN190440.

5. **FINDING:** **PUBLIC ACCESS -** The project is in conformance with the public access and recreation policies of the Coastal Act (specifically Chapter 3 of the Coastal Act of 1976, commencing with Section 30200 of the Public Resources Code) and applicable Local Coastal Program, and does not interfere with any form of historic public use or trust rights.

EVIDENCE:
a) The subject project site is not described as an area where the Local Coastal Program requires public access (Figure 4, Local Coastal Program Public Access, in the North County Land Use Plan).
b) No access is required as part of the project as no substantial adverse impact on access, either individually or cumulatively, as described in Section 20.144.150 of the North County Coastal Implementation Plan can be demonstrated.
c) No evidence or documentation has been submitted or found showing the existence of historic public use or trust rights over this property.
d) The application, plans and supporting materials submitted by the project applicant to Monterey County HCD-Planning for the proposed development found in Project File PLN190440.

6. **FINDING:** **CEQA (Exempt) -** The project is categorically exempt from environmental review and no unusual circumstances were identified to exist for the proposed project.

EVIDENCE:

a) California Environmental Quality Act (CEQA) Guidelines Section 15303 categorically exempts the construction of the first single-family dwelling and accessory structures and the conversion of structures from one use to the other.

b) A portion (727 square feet) of an existing 1,152-square-foot single-family dwelling will be demolished, and the remaining 425 square foot portion will be converted into a guesthouse. Only minor exterior improvements will occur to the 425 square foot portion the residence. Additionally, the proposed project involves the construction of a 5,234 square-foot single-family dwelling with an attached 968 square-foot garage, and 1,649 square feet of covered decks. Therefore, the proposed project qualifies for a Class 3 Categorical Exemption.

c) No adverse environmental effects were identified during HCD Staff review of the development application or during a site overview.

d) The property is fairly ordinary in its location and environment. It is located adjacent to farmlands (to the south) and several rural residential lots with developed single-family dwellings on the east, west and north. There are some trees along Pini Road that will remain and open, non-native grasslands where the home will be constructed.

e) None of the exceptions under CEQA Guidelines Section 15300.2 apply to this project. The project does not involve a designated historical resource, a hazardous waste site, development located near or within view of a scenic highway, unusual circumstances that would result in a significant effect or development that would result in a cumulative significant impact.

f) The application, plans and supporting materials submitted by the project applicant to Monterey County HCD-Planning for the proposed development found in Project File PLN190440.

7. **FINDING:** **GUESTHOUSE** - The project meets the established regulations and standards as identified in Title 20 section 20.64.020.

EVIDENCE:

a) Title 20 section 20.64.020 establishes regulations and standards for which a guesthouse may be permitted. The project includes the construction of a 425 square foot guesthouse with no cooking facilities.

b) The proposed guesthouse is the only guesthouse on the property and it will not be separately rented from the main house. Staff has applied the standard coastal guesthouse deed restriction as Condition No. 5 which reflects the limitations on the use of the guesthouse.

c) As defined in Title 20 section 20.58.040, the guesthouse requires one parking space. Consistent with this requirement, the guesthouse will have one parking space located along the existing driveway, which will serve the guesthouse.

d) The guesthouse meets the required site development standards and design criteria as defined in Title 20 section 20.12.060 (see Finding No. 1, Evidence “f”). The guesthouse has been designed to be visually consistent and compatible with the main residence (see Finding No. 1, Evidence “e”).

e) The application was reviewed by the Environmental Health Bureau (EHB) to ensure adequate sewage disposal and water supply facilities exist and are readily available to serve the guesthouse. Although the guesthouse will be sited approximately 400 feet from the proposed residence, the guesthouse will share the same utilities with the main residence. EHB made the determination that the property has adequate water facilities and proposes adequate wastewater facilities, and no further comments or conditions were provided (see Finding No. 3 and supporting evidence).

f) The application, plans and supporting materials submitted by the project applicant to Monterey County HCD-Planning for the development are found in Project File PLN190440.

8. **FINDING:** **APPEALABILITY -** The decision on this project may be appealed to the Board of Supervisors and not to the Coastal Commission.

EVIDENCE: a) Board of Supervisors. In accordance with Section 20.86.030.A of the Monterey County Zoning Ordinance (Title 20), an appeal may be made to the Board of Supervisors by any public agency or person aggrieved by a decision of an Appropriate Authority other than the Board of Supervisors.

b) Coastal Commission. Pursuant to Title 20 section 20.86.080.A, the project is not subject to appeal by/to the California Coastal Commission because it does not involve development between the sea and the first through public road paralleling the sea. The project site is not located within 300 feet of the inland extent of any beach or of the mean high tide line of the sea, or located on tidelands, submerged lands, public trust lands, within 100 feet of any wetland, estuary, stream or within 300 feet of the top of the seaward face of any coastal bluff. The project also does not include development that is permitted in the underlying zone as a conditional use.

DECISION

NOW, THEREFORE, based on the above findings and evidence, the HCD Chief of Planning does hereby:

1) Find that the project qualifies as a Class 3 Categorical Exemption pursuant to CEQA guidelines section 15303, and there are no exceptions pursuant to Section 15300.2 of the CEQA guidelines; and
2) Approve a Coastal Administrative Permit to allow demolition of an existing 1,152 square foot two-story single-family dwelling and construction of a one-story 5,234 square foot single-family dwelling with an attached 968 square foot garage; and a Coastal Administrative Permit to allow construction of a 425 square foot guesthouse.

All of which are in general conformance with the Plan Set and subject to five (5) conditions of approval, all being attached hereto, and incorporated herein, by reference.

PASSED AND ADOPTED this 15th day of January 2025 by:

DocuSigned by:
Melanie Beretti
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Melanie Beretti, AICP
HCD, Chief of Planning

COPY OF THIS DECISION MAILED TO APPLICANT ON **JANUARY 21, 2025**.

THIS APPLICATION IS APPEALABLE TO THE BOARD OF SUPERVISORS.

IF ANYONE WISHES TO APPEAL THIS DECISION, AN APPEAL FORM MUST BE COMPLETED AND SUBMITTED TO THE CLERK OF THE BOARD ON OR BEFORE **FEBRUARY 3, 2025**.

THIS PROJECT IS LOCATED IN THE COASTAL ZONE AND IS APPEALABLE TO THE COASTAL COMMISSION. UPON RECEIPT OF NOTIFICATION OF THE FINAL LOCAL ACTION NOTICE (FLAN) STATING THE DECISION BY THE FINAL DECISION MAKING BODY, THE COMMISSION ESTABLISHES A 10 WORKING DAY APPEAL PERIOD. AN APPEAL FORM MUST BE FILED WITH THE COASTAL COMMISSION. FOR FURTHER INFORMATION, CONTACT THE COASTAL COMMISSION AT (831) 427-4863 OR AT 725 FRONT STREET, SUITE 300, SANTA CRUZ, CA.

This decision, if this is the final administrative decision, is subject to judicial review pursuant to California Code of Civil Procedure Sections 1094.5 and 1094.6. Any Petition for Writ of Mandate must be filed with the Court no later than the 90th day following the date on which this decision becomes final.

NOTES

1. You will need a building permit and must comply with the Monterey County Building Ordinance in every respect.

   Additionally, the Zoning Ordinance provides that no building permit shall be issued, nor any use conducted, otherwise than in accordance with the conditions and terms of the permit granted or until ten days after the mailing of notice of the granting of the permit by the appropriate authority, or after granting of the permit by the Board of Supervisors in the event of appeal.

Do not start any construction or occupy any building until you have obtained the necessary permits and use clearances from Monterey County HCD-Planning and HCD-Building Services office in Salinas.

2. This permit expires 3 years after the above date of granting thereof unless construction or use is started within this period.

County of Monterey HCD Planning

Conditions of Approval/Implementation Plan/Mitigation Monitoring and Reporting Plan

PLN190440

1. PD001 - SPECIFIC USES ONLY

Responsible Department: Planning

Condition/Mitigation Monitoring Measure: This Coastal Administrative Permit (PLN190440) allows demolition of an existing 1,152 square foot two-story single-family dwelling and construction of a one-story 5,234 square foot single-family dwelling with an attached 968 square foot garage and a detached 425 square foot guesthouse. The property is located at 543 Pini Road, Royal Oaks (Assessor's Parcel Number 412-012-055-000), North County Land Use Plan, Coastal Zone.This permit was approved in accordance with County ordinances and land use regulations subject to the terms and conditions described in the project file. Neither the uses nor the construction allowed by this permit shall commence unless and until all of the conditions of this permit are met to the satisfaction of the Director of RMA - Planning. Any use or construction not in substantial conformance with the terms and conditions of this permit is a violation of County regulations and may result in modification or revocation of this permit and subsequent legal action. No use or construction other than that specified by this permit is allowed unless additional permits are approved by the appropriate authorities. To the extent that the County has delegated any condition compliance or mitigation monitoring to the Monterey County Water Resources Agency, the Water Resources Agency shall provide all information requested by the County and the County shall bear ultimate responsibility to ensure that conditions and mitigation measures are properly fulfilled. (RMA - Planning)

Compliance or Monitoring Action to be Performed: The Owner/Applicant shall adhere to conditions and uses specified in the permit on an ongoing basis unless otherwise stated.

2. PD002 - NOTICE PERMIT APPROVAL

Responsible Department: Planning

Condition/Mitigation Monitoring Measure: The applicant shall record a Permit Approval Notice. This notice shall state:
"Two Coastal Administrative Permits (Resolution Number 25-001) were approved by the HCD-Chief of Planning for Assessor's Parcel Number 412-012-055-000 on January 15, 2025. The permit was granted subject to 5 conditions of approval which run with the land. A copy of the permit is on file with Monterey County RMA - Planning."

Proof of recordation of this notice shall be furnished to the Director of RMA - Planning prior to issuance of grading and building permits, Certificates of Compliance, or commencement of use, whichever occurs first and as applicable. (RMA - Planning)

Compliance or Monitoring Action to be Performed: Prior to the issuance of grading and building permits, certificates of compliance, or commencement of use, whichever occurs first and as applicable, the Owner/Applicant shall provide proof of recordation of this notice to the RMA - Planning.

3. PD003(A) - CULTURAL RESOURCES NEGATIVE ARCHAEOLOGICAL REPORT

Responsible Department: Planning

Condition/Mitigation Monitoring Measure: If, during the course of construction, cultural, archaeological, historical or paleontological resources are uncovered at the site (surface or subsurface resources) work shall be halted immediately within 50 meters (165 feet) of the find until a qualified professional archaeologist can evaluate it. Monterey County RMA - Planning and a qualified archaeologist (i.e., an archaeologist registered with the Register of Professional Archaeologists) shall be immediately contacted by the responsible individual present on-site. When contacted, the project planner and the archaeologist shall immediately visit the site to determine the extent of the resources and to develop proper mitigation measures required for recovery.
(RMA - Planning)

Compliance or Monitoring Action to be Performed: The Owner/Applicant shall adhere to this condition on an on-going basis.

Prior to the issuance of grading or building permits and/or prior to the recordation of the final/parcel map, whichever occurs first, the Owner/Applicant shall include requirements of this condition as a note on all grading and building plans. The note shall state "Stop work within 50 meters (165 feet) of uncovered resource and contact Monterey County RMA - Planning and a qualified archaeologist immediately if cultural, archaeological, historical or paleontological resources are uncovered."

When contacted, the project planner and the archaeologist shall immediately visit the site to determine the extent of the resources and to develop proper mitigation measures required for the discovery.

4. PD014(A) - LIGHTING - EXTERIOR LIGHTING PLAN

Responsible Department: Planning

Condition/Mitigation Monitoring Measure: All exterior lighting shall be unobtrusive, down-lit, harmonious with the local area, and constructed or located so that only the intended area is illuminated and off-site glare is fully controlled. The lighting source shall be shielded and recessed into the fixture. The applicant shall submit three (3) copies of an exterior lighting plan which shall indicate the location, type, and wattage of all light fixtures and include catalog sheets for each fixture. The lighting shall comply with the requirements of the California Energy Code set forth in California Code of Regulations Title 24 Part 6. The exterior lighting plan shall be subject to approval by the Director of HCD - Planning, prior to the issuance of building permits.
(HCD - Planning)

Compliance or Monitoring Action to be Performed: Prior to the issuance of building permits, the Owner/Applicant shall submit three copies of the lighting plans to HCD - Planning for review and approval. Approved lighting plans shall be incorporated into final building plans.

Prior to final/occupancy, the Owner/Applicant/Contractor shall submit written and photographic evidence demonstrating that the lighting has been installed according to the approved plan.

On an on-going basis, the Owner/Applicant shall ensure that the lighting is installed and maintained in accordance with the approved plan.

5. PD019(B) - DEED RESTRICTION-GUESTHOUSE (COASTAL)

Responsible Department: Planning

Condition/Mitigation Monitoring Measure: The applicant shall record a deed restriction stating the regulations applicable to a Guesthouse (Coastal) as follows:

- Only 1 guesthouse shall be allowed per lot.
- Detached guesthouses shall be located in close proximity to the principal residence.
- Guesthouses shall share the same utilities with the main residence, unless prohibited by public health requirements.
- The guesthouse shall not have cooking or kitchen facilities, including but not limited to microwave ovens, hot plates and toaster ovens.
- The guesthouse shall have a maximum of 6 linear feet of counter space, excluding counter space in a bathroom. There shall be a maximum of 8 square feet of cabinet space, excluding clothes closets.
- The guesthouse shall not exceed 425 square feet of livable floor area.
- The guesthouse shall not be separately rented, let or leased from the main residence whether compensation be direct or indirect.
- Subsequent subdivisions which divide a main residence from a guesthouse shall be prohibited.
- The guesthouse shall be designed in such a manner as to be visually consistent and compatible with the main residence on site and other residences in the area.
- The guesthouse height shall not exceed 12 feet nor be more than one story.

(HCD - Planning)

Compliance or Monitoring Action to be Performed: Prior to the issuance of grading or building permits, the Owner/Applicant shall submit a signed and notarized document to the Director of HCD-Planning for review and signature by the County.

Prior to occupancy or commencement of use, the Owner/Applicant shall submit proof of recordation of the document to the Director of the HCD-Planning.

TIER 1 RESIDENTIAL MEASURES
EFFECTIVE JANUARY 1, 2017

This checklist focuses on TIER 1 measures only.
See specific referenced sections for complete details on CALGreen mandatory requirements.

2016 CALGREEN CODE

SECTION	REQUIREMENTS
DIVISION A4.1- PLANNING AND DESIGN (SITE DEVELOPMENT)	
	Topsoil protection
A4.106.2.3	Displaced topsoil shall be stockpiled for reuse in a designated area and covered or protected from erosion. **Note:** Protection from erosion includes covering with tarps, straw, mulch, chipped wood, vegetative cover, or other means acceptable to the enforcing agency to protect the topsoil for later use.
	Water permeable surfaces
A4.106.4	Not less than 20% of the total parking, walking, or patio surfaces shall be permeable.
	Cool roof for reduction of heat island effect
A4.106.5	Roofing materials for Tier 1 buildings shall comply with this section. **Exceptions:** 1. Roof constructions that have a thermal mass over the roof membrane, including areas of vegetated (green) roofs, weighing at least 25 lbs/sf. 2. Roof areas covered by building integrated solar photovoltaic panels and solar thermal panels.
	Solar reflectance
A4.106.5.1	Roofing materals shall have a minimum 3-year aged solar reflectance equal to or greater than the values specified in Tables A4.106.5.1(1) and A4.106.5.1(3). If Cool Roof Rating Council (CRRC) testing for aged solar reflectance is not available for any roofing products, the aged value shall be determined using the CRRC certified initial value in Section A4.106.5.1.
	Thermal emittance
A4.106.5.2	Roofing materials shall have a CRRC initial or aged thermal emittance equal to or greater than those specified in Tables A4.106.5.1(1) & A4.106.5.1(3). Thermal emittance may also be certified by other entities approved by the Energy Commission pursuant to the California Administrative Code.
	Solar reflectance index alternative
A4.106.5.3	Solar Reflectance Index (SRI) equal to or greater than the values specified in Tables A4.106.5.1(1) & A4.106.5.1(3) may be used as an alternative to compliance with the 3-year aged solar reflectance values and thermal emittance. SRI values shall be calculated using the SRI Calculation Worksheet (SRI-WS) or in compliance with ASTM E1980-01 as specified in the 2016 California Energy Code. Solar reflectance values used in the SRI-WS shall be based on the aged reflectance value of the roofing product or the equation in Section A4.106.5.1 if the CRRC certified aged solar reflectance are not available. Certified thermal emittance used in the SRI-WS may be either the initial value or the aged value listed by the CRRC. Solar reflectance and thermal emittance may also be certified by other entities approved by the Commission pursuant to the California Administrative Code. **Note:** SRI-WS is available by contacting the Energy Standards Hotline at 1-800-772-3300, website at www.energy.ca.gov or by e-mail at Title24@energy.ca.us

SEE SHT. S2

TIER 1 RESIDENTIAL MEASURES
EFFECTIVE JANUARY 1, 2017

This checklist focuses on TIER 1 measures only.
See specific referenced sections for complete details on CALGreen mandatory requirements.

2016 CALGREEN CODE

SECTION	REQUIREMENTS
	Verification
A4.106.5.4	Inspection shall be conducted to ensure roofing materials meet cool roof aged solar reflectance and thermal emittance or SRI values.
	Electric vehicle (EV) charging for new construction
A4.106.8	New construction shall comply with Sections A4.106.8.1 and A4.106.8.2 to facilitate future installation and use of electric vehicle chargers. Electric vehicle supply equipment (EVSE) shall be installed in accordance with the California Electrical Code, Article 625.
	1 & 2-family dwellings and townhouses with attached private garages
A4.106.8.1	For each dwelling unit, a dedicated 208/240-volt branch circuit shall be installed in the raceway required by Section 4.106.4.1. The branch circuit and associated overcurrent protective device shall be rated at 40 amperes minimum. Other electrical components, including a receptacle or blank cover, related to this section shall be installed in accordance with the California Electrical Code.
	New multifamily dwellings
A4.106.8.2	• Applies to sites with 17 or more multifamily dwelling units constructed on the site. • 5% of the total number of parking spaces provided for all types of parking facilities, but in no case less than 1, shall be electric vehicle charging spaces (EV spaces) capable of supporting future EVSE. • Calculations for EV spaces shall be rounded up to the nearest whole number. • See Section 4.106.4.2 for additional requirements related to EVCS for multifamily dwellings. **Notes:** See CALGreen Section A4.106.8.2, Notes, for referenced documents.
	Required elective measures
A4.601.4.2	Comply with at least 2 elective measures selected from Division A4.1.
DIVISION A4.2- ENERGY EFFICIENCY	
	Prerequisites
A4.203.1.1	Each of the following efficiency measures is required for all applicable components of the project. • A4.203.1.1.1 An energy design rating for the Proposed Design Building shall be computed by Compliance Software certified by the Commission and this rating shall be included in the Certificate of Compliance documentation. • A4.203.1.1.2 Complete Quality Insulation Installation procedures specified in the Building Energy Efficiency Standards Reference Residential Appendix RA3.5.
	Performance standards
A4.203.1.2.1	Requires Energy Budget no greater than 85% of the 2016 California Energy Code (CEC) Energy Budget for the Standard Design Building, or an Energy Design Rating showing a 15% or greater reduction in its Energy Budget Component compared to the Standard Design Building, as calculated by the CEC Compliance Software.
	Prerequisites
A5.203.1.1	Newly installed outdoor lighting power shall be no greater than 90% Allowed Outdoor Lighting Power.

SEE SHT. E1

TIER 1 RESIDENTIAL MEASURES
EFFECTIVE JANUARY 1, 2017

This checklist focuses on TIER 1 measures only.
See specific referenced sections for complete details on CALGreen mandatory requirements.

2016 CALGREEN CODE

SECTION	REQUIREMENTS
A5.203.1.1 continued	The Allowed Outdoor Lighting Power calculation is specified in the 2016 CEC, Section 140.7 "Requirements For Outdoor Light.
	Performance standards
A5.203.1.2	Buildings complying with the first level of advanced energy efficiency shall have an Energy Budget no greater than indicated below, depending on the type of energy systems included in the building project. If the newly constructed building or addition does not include indoor lighting or mechanical systems, no additional performance requirements above the Energy Code are required. 1. Building projects that include indoor lighting or mechanical systems, but not both: No greater than 95% of the CEC Energy Budget for the Standard Design Building as calculated by Compliance Software certified by the Energy Commission. 2. Building projects that include indoor lighting and mechanical systems: No greater than 90% of the CEC Energy Budget for the Standard Design Building as calculated by Compliance Software certified by the Energy Commission.
DIVISION A4.3 - WATER EFFICIENCY AND CONSERVATION	
	Required elective measures
A4.601.4.2	Comply with at least 2 elective measures selected from Division A4.3.
DIVISION A4.4- MATERIAL CONSERVATION AND RESOURCE EFFICIENCY	
	Reduction in cement use
A4.403.2	As allowed by the enforcing agency, cement used in foundation mix design shall be reduced to not less than 20%. Examples of products commonly used to replace cement in concrete mix designs: fly ash, slag, silica fume, rice hull ash.
	Recycled content
A4.405.3 A4.405.3.1	Use materials, equivalent in performance to virgin materials, with a total (combined) recycled content value (RCV) of not less than 10% per Section A4.405.3.1. **Note:** Interactive forms for calculation of RCV are available at http://www.hcd.ca.gov/calgreen.html
	Enhanced construction waste reduction 65%
A4.408.1	Nonhazardous construction and demolition debris generated at the site is diverted to recycle or salvage in compliance with the following: • At least a 65% reduction. • Any mixed recyclables sent to mixed-waste recycling facilities shall include a qualified third party verified facility average diversion rate. Verification of diversion rates shall meet minimum certification eligibility guidelines, acceptable to the local enforcing agency. **Exceptions:** 1. Equivalent or alternative waste reduction methods are developed by working with local agencies if diversion or recycle facilities capable of compliance with this item do not exist. 2. The enforcing agency may make exceptions to the requirements of this section when jobsites are located in areas beyond the haul boundaries of the diversion facility.

SEE SHT. A2

TIER 1 RESIDENTIAL MEASURES
EFFECTIVE JANUARY 1, 2017

This checklist focuses on TIER 1 measures only.
See specific referenced sections for complete details on CALGreen mandatory requirements.

2016 CALGREEN CODE

SECTION	REQUIREMENTS
A4.601.4.2	**Required elective measures** Comply with at least 2 elective measures selected from Division A4.4.
DIVISION A4.5 - ENVIRONMENTAL QUALITY	
A4.504.2	**Resilient flooring systems** At least 90% of the total area of resilient flooring systems installed in the building shall comply with the VOC emission limits defined in at least 1 of the following: 1. Products compliant with the California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers," Version 1.1, February 2010 (also known as Specification 01350), certified as a CHPS Low-Emitting Material in the Collaborative for High Performance Schools (CHPS) High Performance Products Database. 2. Products certified UL GREENGUARD GOLD (formerly the Greenguard Children & Schools program). 3. Certification under the Resilient Floor Covering Institute (RFCI) FloorScore program. 4. Meet the California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers," Version 1.1, February 2010 (also known as Specification 01350). **Note:** Documentation must be provided that verifies that finish materials are certified to meet the pollutant emission limits in this section.
A4.504.3	**Thermal insulation** Install thermal insulation in compliance with the California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers," Version 1.1, February 2010 (also known as Specification 01350), certified as a CHPS Low-Emitting Material in the Collaborative for High Performance Schools (CHPS) High Performance Products Database; products certified under the UL GREENGUARD Gold (formerly Greenguard Children & Schools program); or meet California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers," Version 1.1, February 2010 (also known as Specification 01350). **Note:** Documentation must be provided that verifies the materials are certified to meet the pollutant emission limits in this section.
A4.601.4.2	**Required elective measures** Comply with at least 1 elective measures selected from Division A4.5.

SEE SHT. A7

5

Geri Martin Daliva Engineers
Foundation Engineering -11 W Laurel Dr Suite 225, Salinas CA 93906-(831)800-7371

June 10, 2020

Inna Berrellesa
537 Pini Rd Royal Oaks, CA 95076

SUBJECT: REVIEW OF FOUNDATION PLAN AND SPECIFICATIONS

Dear Sir:

In accordance with your request, we reviewed and confirmed that latest site and foundation plan, details, specifications, and structural calculations substantially confirm to all applicable recommendations in the soils investigation report for the proposed project.

We provided review on the following:
A1 Site Plan
S1 Foundation Plan, & Details

Based on our review, the site and foundation plan, including specifications appear to be in general conformance with the recommendations for the subject project.

The plans are reviewed with respect to soil considerations. We make no representation as to the accuracy of the dimension, or other portion of the design.

We appreciate the opportunity to have been of service. Please feel free to contact us at your convenience if you have any questions or require additional information.

Very truly yours,

GERONIMO M. [illegible] License#65185 Expires Sept 30, 2021
Soils Engineer on Record

RMA-ENVIRONMENTAL SERVICES

PRIOR TO ISSUANCE OF THE CONSTRUCTION PERMIT:
The applicant shall submit (3) copies of an erosion control plan in conformance with the requirements of Monterey County Code Chapter 16.12. The erosion control plan shall be clearly identified and shall include stockpile area(s), material storage area(s), portable sanitation facilities and waste collection area(s), where appropriate.

PRIOR TO COMMENCEMENT OF ANY LAND DISTURBANCE:
The applicant shall schedule an inspection (300-Environmental Services Initial Inspection) with RMA-Environmental Services to ensure all necessary sediment controls are in place and the project is compliant with Monterey County regulations.

DURING CONSTRUCTION:
The applicant shall schedule an inspection (305-Environmental Services Active Construction) with RMA-Environmental to inspect drainage device installation, review the maintenance and effectiveness of BMPs installed, and to verify that pollutants of concern are not discharged from the site. At the time of the inspection, the applicant shall provide certification that all necessary geotechnical inspections have been completed to that point.

PRIOR TO FINAL BUILDING

The applcant shall schedule an inspection (310-Environmental Services Hold Final Inspection) with RMA-Environmental Services to ensure that all disturbed areas have been stabilized and That all temporary erosion and sediment control measures, that are no longer needed, have been removed.

FIRE NOTES:

MONTEREY COUNTY
FIRE
PREVENTION OFFICERS ASSOCIATION

FIRE DEPARTMENT NOTES

The following paragraphs must be printed on the project plans under "FIRE DEPARTMENT NOTES".

☐ Fire sprinklers are required. Place the following note on the project plans:

1. **Fire Sprinklers Required** - The residence(s) shall be protected with automatic fire sprinkler system(s). *Fire sprinklers are required in attached garages.* Installation, approval, and maintenance shall be in compliance with applicable National Fire Protection Association Standard 13D and local amendments, the edition(s) of which shall be determined by the enforcing jurisdiction. Plans for fire sprinkler system(s) must be submitted and approved prior to installation. Rough-in inspections must be completed prior to requesting a framing inspection from the Building Inspection Dept.

☐ When fire sprinklers are required, place the following note on the project plans:

2. **Fire Alarm Flow Switch** shall be wired to the kitchen refrigerator circuit. Any deviations require approval from the fire department.

☐ Address numbers shall be posted pursuant to the note that follows. Place the following note on project plans.

3. **Address Numbers to be Posted** - Before construction begins, temporary or permanent address numbers shall be posted. Permanent address numbers shall be posted prior to request of a final inspection. All address numbers (permanent or temporary) shall be posted on the property so as to be clearly visible from the road. Where visibility cannot be provided, a post or sign bearing the address numbers shall be set adjacent to the driveway or access road to the property. Address numbers posted shall be "Arabic" (1, 2, 3, etc.), not "Roman" (I, VI, X, etc.) or written out in words (Thirteen, Seventy-six, etc.). Address numbers posted shall be a minimum number height of 3 inches, 3/8 inch wide stroke, and contrasting with the background colors of the sign. **NOTE: If numbers are not posted, Building/Fire Inspectors will not grant a final inspection.**

☐ Separate addresses shall be obtained pursuant to the note that follows for caretaker's units, senior citizen units and "granny houses". Also, place the following note on the project plans.

4. **Separate Address Required** - Caretaker's Units, Senior Citizen Units and "Granny Houses" shall be issued addresses separate from the main residence. Contact the Monterey County Public Works Dept. at 755-4936.

☐ Show the type and class of roof on the project plans.

5. **Roofing - Class "A" or "B" Required** - Roof construction shall be a Class A or Class B buildup, as defined by Uniform Building Code Standard 15-2. This requirement shall apply to all new construction and when 50 percent or more of an existing roof is replaced within a one-year period.

☐ Vegetation shall be cleared pursuant to the note that follows. Place the note on the project plans:

6. **Clear Vegetation** - All flammable vegetation or other combustible growth shall at all times maintain clear distance of not less than 30 feet on each side from structures or buildings. This shall not apply to single specimens of trees, ornamental shrubbery or similar plants used as ground covers, provided that they do not form a means of rapidly transmitting fire from the native growth to any structure. Additional fire protection or firebreak may be required when, because of extra hazardous conditions, a firebreak of only 30 feet around such structure is not sufficient to provide reasonable fire safety. Environmentally sensitive area may require alternative fire protection, to be determined by the Fire Chief and Director of Planning and Building. This project requires _____ feet clearance.

PUBLIC EDUCATION • FIRE SERVICE TRAINING • CODES & ENFORCEMENT

☐ Show the width, length, slope percentage, and type of surface of the access roadway on the project plans.

7. **Access Driveways** - General - Access driveways shall be all-weather driving surface capable of supporting fire apparatus (22 tons) not less than 12 feet of unobstructed width, a minimum of 13'6" or 15'0" vertical clearance, and a maximum 15 percent grade. On driveways and access roads having a slope of 8 percent or more the finish surface shall be A/C pavement or concrete. EXCEPTION: When buildings are protected by an approved automatic fire sprinkler system, the provisions of this section may be modified, subject to the approval of the Local Jurisdiction.

☐ If the access road is over 250 feet long and less than 20 feet wide, place the following note on the project plans: (for diagram, see attached Example "A")

8. **Driveways - Turn-Out Required** - Driveways shall not be less than 12 feet wide unobstructed. All driveways exceeding 250 feet in length, but less than 800 feet in length, shall provide a turnout near the midpoint of the driveway. Where the driveway exceeds 800 feet, turnouts shall be provided at no greater than 400 foot intervals.

☐ If the access road has a dead-end and is more than 150 feet long, add a turn around to the access road drawing on the project plans (see attached diagram labeled Example B). Also, add the following note to the project plans:

9. **Access Roadways - Turn Around Required** - All dead-end access roads in excess of 150 feet in length shall be provided with approved provision for the turning around of fire apparatus.

☐ If the access road has turns, indicate the turning radius of the turns (see attached diagram labeled Example C).

☐ Show gate(s) on the plans. Also, place the following note on the project plans.

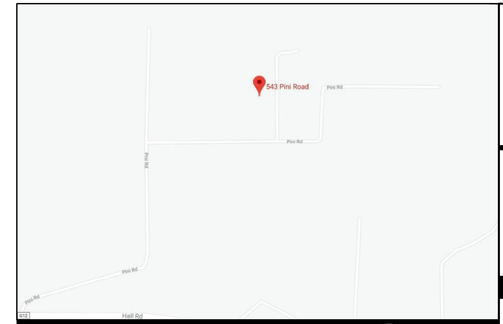
10. **Privacy Gates** - Electric gates shall be provided with a keyed switch meeting fire department specifications. Manual gates shall be provided with fire department padlocks meeting fire department specifications. Gate entrances shall be at least the width of the traffic lane, but in no case less than 12 feet wide. Unobstructed vertical clearance shall be not less than 15 feet.

☐ Show bridge(s) on plans.

11. **Bridges** - All new and reconstructed bridges shall be at least the width of the existing roadbed and berms but in no case less than 12 feet wide. Bridge width on all roads exceeding tertiary standards shall nt be less than the width of two lanes with berms. All bridges shall be designed for HS 20-44 loading (standard specification for highway bridges) and have guard rails.

☐ Show defensible space on plans.

12. **Setback for Structure Defensible Space (30 Foot)** - All parcels 1 acre and larger shall provide a minimum 30-foot setback for buildings and accessory buildings from all property lines and/or the center of the road. For parcels less than 1 acre, or when a 30 foot minimum setback cannot be reached, alternate fuel modification standards may be imposed by the local fire jurisdiction to provide the same practical effect.



VICINITY MAP

PROJECT DATA:
ZONING RDR/5(CZ)
DESCRIPTION OF USE RESIDENTIAL
OCCUPANCY R-3 / U
NUMBER OF STORIES 1
TYPE OF CONSTRUCTION V-B
SPRINKLER SYSTEMS NO

<E> MAIN RESIDENCE 1152 SQ.F. **TO BE DEMO.**
<N> GUESTHOUSE 425 SF

<N> NEW RESIDENCE 5234 SQ.F
<N> FRONT PORCH 859 SF.
<N> REAR PORCH 790 SF.

<N> GARAGE 968 SQ.F

MAX HIGHT 20'-9"
LOT AREA 5,403 AC
OPEN SPACE NA.
LOT COVERAGE ALLOWED 25 %
LOT COVERAGE 8 %

SCOPE OF WORK:

PROPOSE:
EXISTING 2 STORY HOUSE
803 SF @ 1ST. FLOOR TO BE DEMO.
349 SF @ 2ND. FLOOR TO BE DEMO.
(UNDER A SEPARATE DEMOLITION PERMIT)
NEW GUESTHOUSE 425 SF.

TO BUILD A NEW 5,234 SF. SINGLE STORY RESIDENCE
PLUS FRONT COVER DECK 859 SF. REAR COVER DECK 790 SF
AND 4 CAR GARAGE 968 SF. ATTACHED

GREEN BUILDING NOTE:

THIS PROJECT SHALL COMPLY WITH THE 2016 CALIFORNIA GREEN BUILDING STANDARDS CODE (CGBSC) AND CURRENT EDITION

THIS PROJECT SHALL COMPLY WITH TITLE 24 AND 2016 CALIFORNIA RESIDENTIAL CODE (CRC), CALIFORNIA BUILDING CODE (CBC), CALIFORNIA MECHANICAL CODE (CMC), CALIFORNIA PLUMBING CODE (CPC), CALIFORNIA ELECTRICAL CODE (CEC), AND CALIFORNIA ENERGY CODE (CENC).
[§ R106.1 .1 CRC]

MONTEREY COUNTY
RESOURCE MANAGEMENT AGENCY
Carl P. Holm, AICP, Director

LAND USE & COMMUNITY DEVELOPMENT | PUBLIC WORKS & FACILITIES | PARKS
1441 Schilling Place, South 2nd Floor (831)755-4800
Salinas, California 93901-4527 www.co.monterey.ca.us/rma

Construction Waste Management Plan (CWMP) – CW 1

Project Name: NEW RESIDENCE
Project Location: 543 PINI RD. ROYAL OAKS, CA. 95076
Building Permit No.: _____ Project Sq. Ft.: 7,920
Contractors Name: _____ Phone: _____
Fax: _____ Email: _____
Owners Name: _____ Phone: _____
Fax: _____ Email: _____

This construction waste management plan is hereby submitted to comply with Section 4.408.2 of the 2016 California Green Building Standards Code.

The purpose of this plan is to identify and outline the methods to be used as the minimum requirements for a construction waste management ordinance per Section 4.408.2.

1. The method of waste tracking to be used on this project will be: (Check one box)
☐ Volume ☐ Weight ☐ 4 Lbs. per Sq. Ft. ☐ Recycling Facility
2. Construction waste generated on this project for transport to a recycling facility will be:
☐ Site Sorted/Source Separated ☐ Mixed (Commingled)
3. The facility (or facilities) where the construction waste material will be taken is:
Name of Facility: _____
Address: _____
Phone: _____
(Attach separate sheet for additional facilities)
4. The following construction methods will be used to reduce the amount of waste generated: (Check all that apply)
☐ Efficient design (dimensions of building components are designed to available material sizes or standard sizes).
☐ Careful and accurate material ordering.
☐ Careful material handling and storage.
☐ Panelized or prefabricated construction.
☐ Other _____
☐ Other _____

Updated 6/20/17

ECKHAUS DESIGNS
Design Studio
ENRIQUE ECKHAUS GIL.
P.O. BOX 783 - SALINAS,CA 93902
PH. (831) 794 - 2461
FX. (831) 287 - 0121
eeckhaus@pacbell.net
eeckhaus@gmail.com

OWNER.
IRMA BERRELLEZA

PROJECT.
543 PINI RD ROYAL OAKS, CA 95076 APN 412-012-055-000

CODES.
2022 California Building Standards Code (Cal. Code Regs., Tit. 24)

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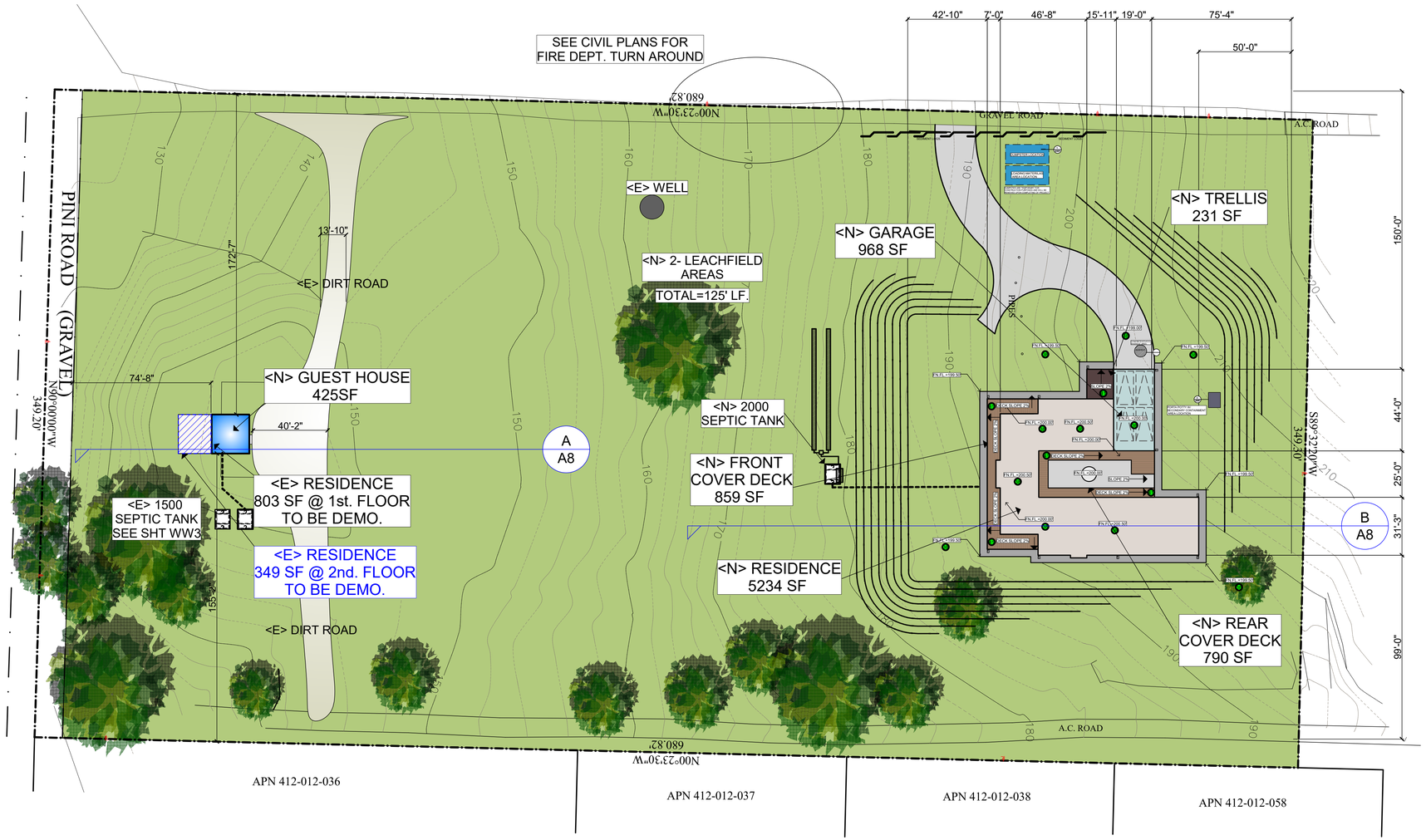
SHEET.
A0



4.106.4 ELECTRIC VEHICLE (EV) CHARGING FOR NEW CONSTRUCTION

NEW CONSTRUCTION SHALL COMPLY WITH SECTION 4.106.4.1, 4.106.4.2, OR 4.106.4.3, TO FACILITATE FUTURE INSTALLATION AND USE OF EV CHARGERS. ELECTRIC VEHICLE SUPPLY EQUIPMENT (EVSE) SHALL BE INSTALLED IN ACCORDANCE WITH THE *CALIFORNIA ELECTRICAL CODE*, ARTICLE 625.

4.106.4.1 NEW ONE- AND TWO-FAMILY DWELLINGS AND TOWNHOUSES WITH ATTACHED PRIVATE GARAGES

FOR EACH DWELLING UNIT, INSTALL A LISTED RACEWAY TO ACCOMMODATE A DEDICATED 208/240-VOLT BRANCH CIRCUIT. THE RACEWAY SHALL NOT BE LESS THAN TRADE SIZE 1 (NOMINAL 1-INCH INSIDE DIAMETER). THE RACEWAY SHALL ORIGINATE AT THE MAIN SERVICE OR SUBPANEL AND SHALL TERMINATE INTO A LISTED CABINET, BOX OR OTHER ENCLOSURE IN CLOSE PROXIMITY TO THE PROPOSED LOCATION OF AN EV CHARGER. RACEWAYS ARE REQUIRED TO BE CONTINUOUS AT ENCLOSED, INACCESSIBLE OR CONCEALED AREAS AND SPACES. THE SERVICE PANEL AND/OR SUBPANEL SHALL PROVIDE CAPACITY TO INSTALL A 40-AMPERE MINIMUM DEDICATED BRANCH CIRCUIT AND SPACE(S) RESERVED TO PERMIT INSTALLATION OF A BRANCH CIRCUIT OVERCURRENT PROTECTIVE DEVICE.

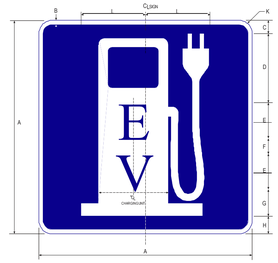
4.106.4.1.1 IDENTIFICATION

THE SERVICE PANEL OR SUBPANEL CIRCUIT DIRECTORY SHALL IDENTIFY THE OVERCURRENT PROTECTIVE DEVICE SPACE(S) RESERVED FOR FUTURE EV CHARGING AS "EV CAPABLE". THE RACEWAY TERMINATION LOCATION SHALL BE PERMANENTLY AND VISIBLY MARKED AS "EV CAPABLE".

4.106.4.2.2 ELECTRIC VEHICLE CHARGING SPACE (EV SPACE) DIMENSIONS

THE EV SPACES SHALL BE DESIGNED TO COMPLY WITH THE FOLLOWING:

THE MINIMUM LENGTH OF EACH EV SPACE SHALL BE 18 FEET (5486 MM).
THE MINIMUM WIDTH OF EACH EV SPACE SHALL BE 9 FEET (2743 MM).



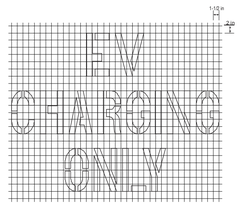
* Optically space the "EV" letters vertically with the charging unit.

G66-21B (CA)

ENGLISH UNITS

A	B	C	D	E	F	G	H	J	K	L
12	.375	.75	3.875	2EM	.875	1.5	1	10.25	1.5	3.625
18	.375	1.125	5.75	3EM	1.375	2.25	1.5	15.375	1.5	5.1625
24	.5	1.5	7.75	4EM	1.75	3	2	20.5	1.5	7.25
30	.75	1.875	9.625	5EM	2	4	2.5	25.625	1.875	9.063

COLORS: BORDER & SYMBOL - WHITE (RETROREFLECTIVE)
LEGEND & BACKGROUND - BLUE (RETROREFLECTIVE)



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SHEET.

A1

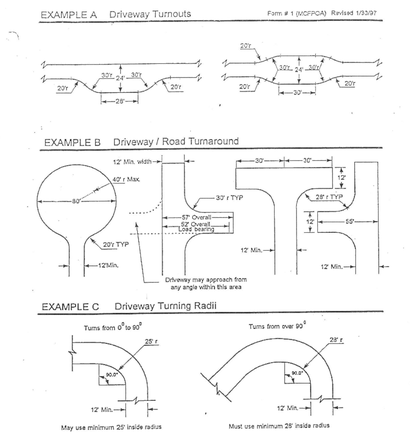
SITE PLAN

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

DEMOLITION OF EXISITING RESIDENCE TO BE UNDER A SEPARATED PERMIT.

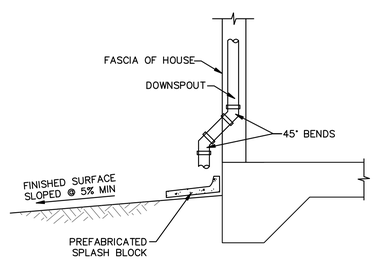
DRAINAGE SHALL NOT NEGATIVELY IMPACT ADJACENT PROPERTIES PROVIDE POSITIVE DRAINAGE TOWARDS STREET (TYP)

FINISH GRADE AROUND THE ADDITION SHALL SLOPE AWAY FROM THE FOUNDATION A MINIMUM OF 6 INCHES OVER 10 FEET. IMPERVIOUS SURFACES WITHIN 10 FEET OF THE BUILDING FOUNDATION SHALL BE SLOPED 2% MINIMUM AWAY FROM THE BUILDING. INCLUDE A NOTE ON THE SITE PLAN [§ R401.3 CRC]



<E> IMPERVIOUS AREA	=777 SQ. FT.
<E> PERVIOUS AREA	=249,693 SQ. FT.
<N> IMPERVIOUS AREA	=14,401 SQ. FT.
<E> PERVIOUS AREA	=236,069 SQ. FT.

<E> IMPERVIOUS AREA	=777 SQ. FT.
<E> PERVIOUS AREA	=249,693 SQ. FT.
<N> IMPERVIOUS AREA	=14,401 SQ. FT.
<E> PERVIOUS AREA	=236,069 SQ. FT.



DOWNSPOT DETAIL

DOWNSPOUT
WITH CONCRETE SPLASHBLOCK

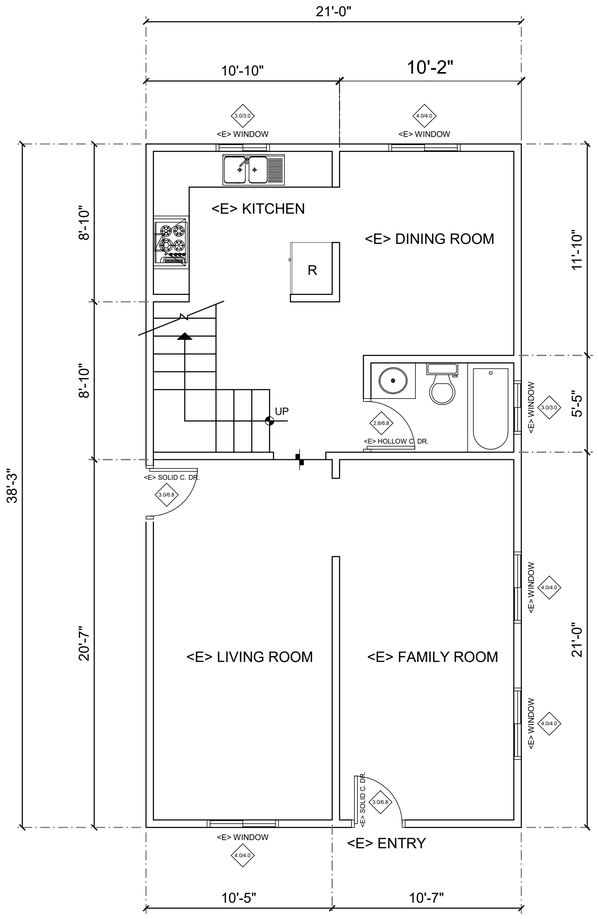
DENOTES EXITING TURF OR NEW LANDSCAPING. LANDSCAPING TO BE ESTABLISHED AND MAINTAINED PRIOR TO FINAL INSPECTION.

FL DENOTES FLOWLINE

W <N> WATER METER.

E <N> 200 AMP. ELECT. PANEL UFER GROUNDING-CONCRETE ENCASED ELECTRODE, NEC-250-81 (C). REQ'D.

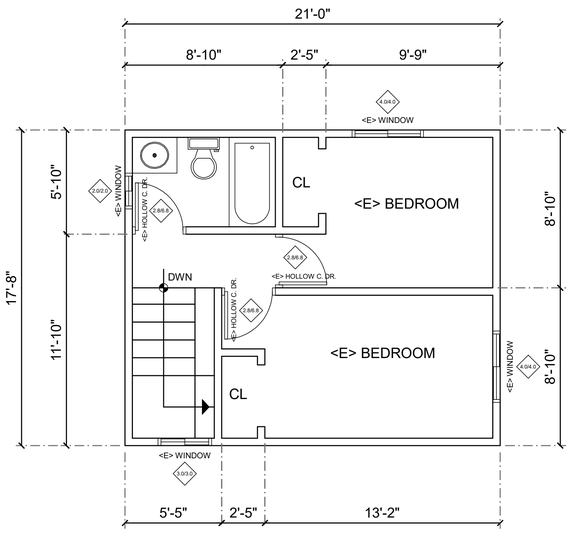
G <E> GAS TANK



1st. FLOOR PLAN

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

1,152 sf.



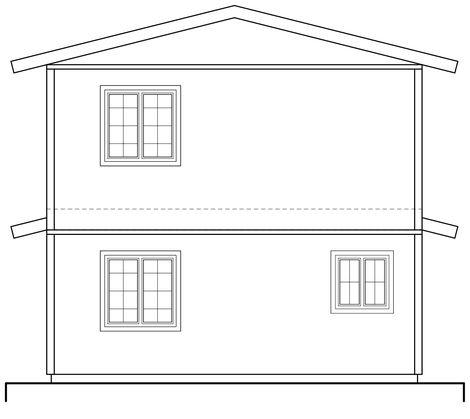
2nd. FLOOR PLAN

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

NOTE:
EXISTING BUILDING
TO BE DEMO.

RIGHT ELEVATION

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

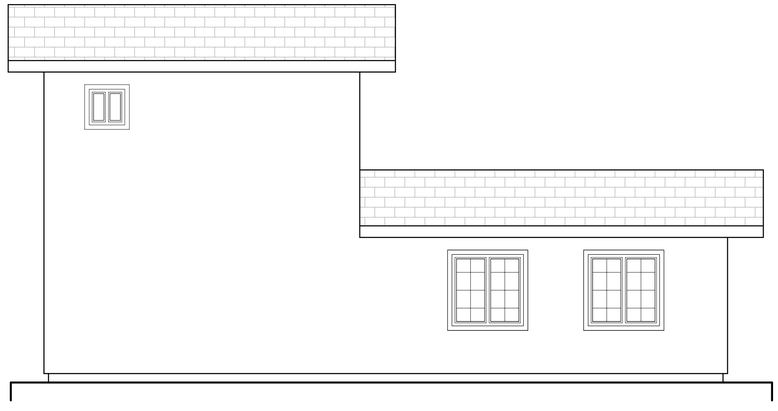


REAR ELEVATION

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

FRONT ELEVATION

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



LEFT ELEVATION

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

ECKHAUS DESIGNS
Design Studio

ENRIQUE ECKHAUS GIL.

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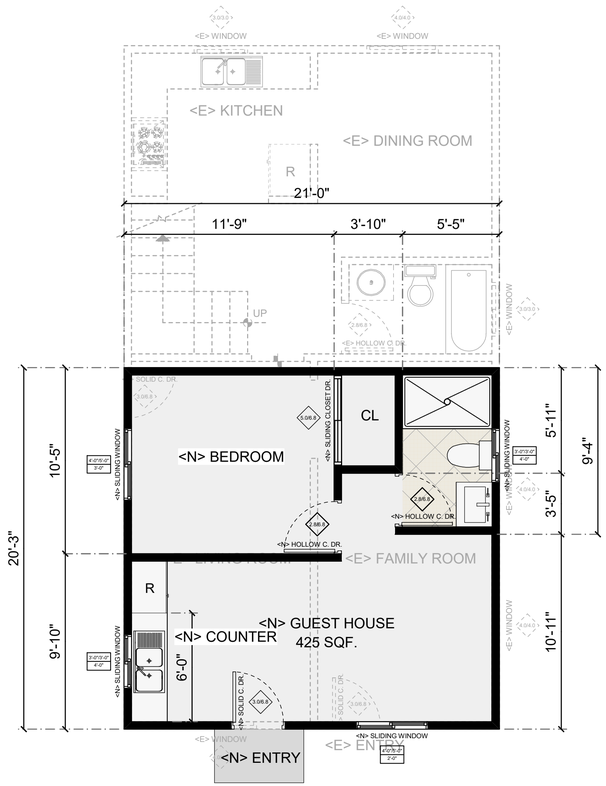
A2

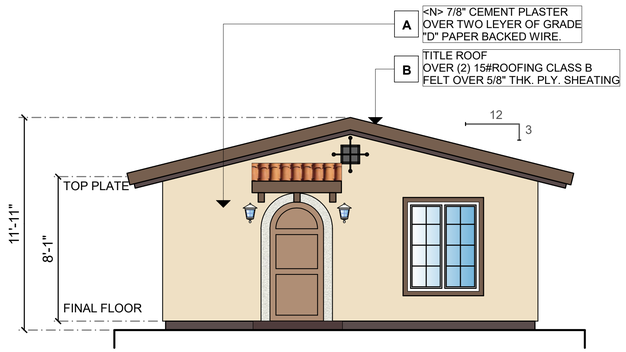


1st. FLOOR PLAN

GUEST HOUSE

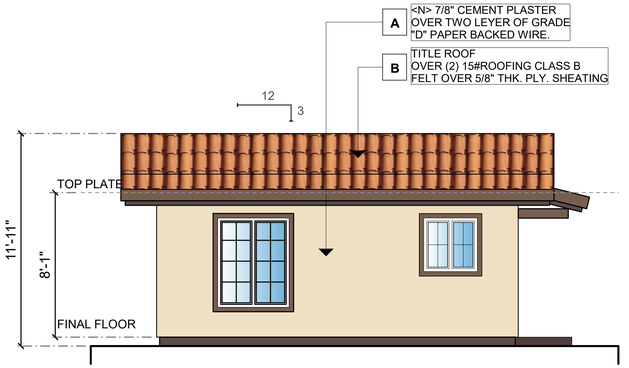
PROPOSED #1 03-22-23

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



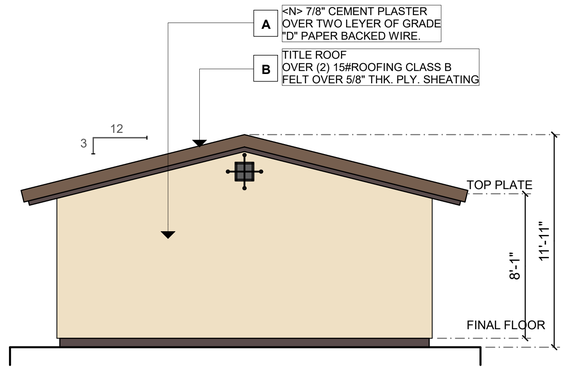
FRONT ELEVATION

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



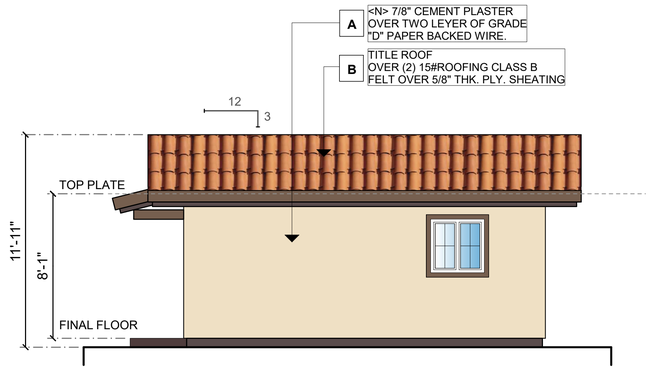
LEFT ELEVATION

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



REAR ELEVATION

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



RIGHT ELEVATION

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

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PROJECT.
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APN 412-012-055-000

CODES.

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- Part 12 – California Referenced Standards Code

INDEX PLANS.

REVISIONS

1

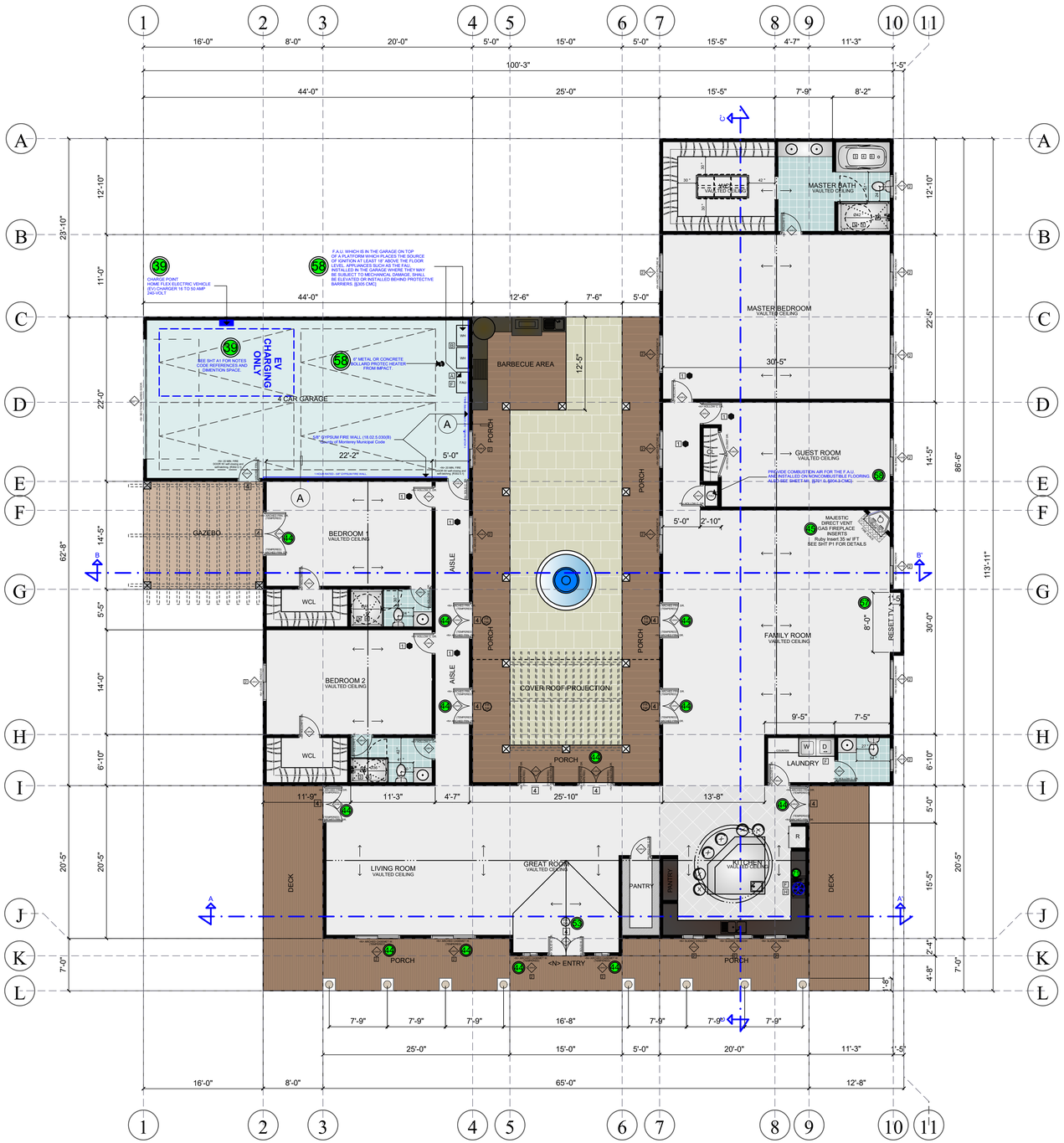
DATE
MARCH-22-23

DRAWN
E.ECKHAUS/F.BALDERAS/A.ALONSO

JOB
2023-024

SHEET.

A3



4.106.4 Electric vehicle (EV) charging for new construction

New construction shall comply with Section 4.106.4.1, 4.106.4.2, or 4.106.4.3, to facilitate future installation and use of EV chargers. Electric vehicle supply equipment (EVSE) shall be installed in accordance with the *California Electrical Code,* Article 625

4.106.4.1 New one- and two-family dwellings and townhouses with attached private garages

For each dwelling unit, install a listed raceway to accommodate a dedicated 208/240-volt branch circuit. The raceway shall not be less than trade size 1 (nominal 1-inch inside diameter). The raceway shall originate at the main service or subpanel and shall terminate into a listed cabinet, box or other enclosure in close proximity to the proposed location of an EV charger. Raceways are required to be continuous at enclosed, inaccessible or concealed areas and spaces. The service panel and/or subpanel shall provide capacity to install a 40-ampere minimum dedicated branch circuit and space(s) reserved to permit installation of a branch circuit overcurrent protective device.

4.106.4.1.1 Identification

The service panel or subpanel circuit directory shall identify the overcurrent protective device space(s) reserved for future EV charging as "EV CAPABLE". The raceway termination location shall be permanently and visibly marked as "EV CAPABLE".

4.106.4.2.3 Single EV space required

Install a listed raceway capable of accommodating a 208/240-volt dedicated branch circuit. The raceway shall not be less than trade size 1 (nominal 1-inch inside diameter). The raceway shall originate at the main service or subpanel and shall terminate into a listed cabinet, box or enclosure in close proximity to the proposed location of the EV space. Construction documents shall identify the raceway termination point. The service panel and/or subpanel shall provide capacity to install a 40-ampere minimum dedicated branch circuit and space(s) reserved to permit installation of a branch circuit overcurrent protective device.

4.106.4.3.2 Electric vehicle charging space (EV space) dimensions

The EV spaces shall be designed to comply with the following:

1. The minimum length of each EV space shall be 18 feet (5486 mm).
2. The minimum width of each EV space shall be 9 feet (2743 mm).

National Electrical Code Top Ten Tips: Article 625, Electrical Vehicle Charging System

Coal-powered cars, commonly called "EV" or electric vehicles, are the dirtiest, most energy-consuming form of personal transportation in existence today. The common wisdom, or lack thereof, is that somehow electric power is free and is generated without any pollution whatsoever, if it's stored in toxic batteries (the lithium for which is energy-intensive to obtain) and then used to power a vehicle. Due to this utter nonsense, politicians are touting electric vehicles as some sort of solution to a host of problems they merely exacerbate.

So instead of using electric vehicles only in the limited applications for which they make sense, schemes are now underway to use them in place of internal combustion engine cars. This means more electrical vehicle charging system work for electricians. It also means faster depletion of worldwide oil reserves and more pollution, but that's a subject for a different Website. Here are your ten tips:

1. Article 625 covers the charging equipment *external* to the vehicle. It covers anything you will install or wire up, if it connects the vehicle to premises wiring for charging the vehicle or to export or transfer power [625.1].
2. In 625.2, Article 625 used today it is for on the road vehicles, not golf carts and the like for off road use, and not for hybrids. That was in the definition of "Electric Vehicle". In the 2017 revision, the definition was still in 625.2. With the 2020 revision, that definition moved to Article 100.
3. Don't "invent" or "design" connectors, enclosures, or other equipment or devices in this installation. It must be listed and labeled, or it can't be used [625.5].
4. Part II addresses the permissible wiring methods. They are essentially the responsibility of the manufacturer. The installer needs to observe plug configurations and connector kit instructions to ensure compliance.
5. Part III provides the equipment installation requirements. They are the installer.
6. Size the overcurrent protection for continuous duty. Ensure it has a rating of at least 125% of the maximum load of the EV supply equipment [625.41].
7. If the charger is 60A or larger or more than 150V (to ground), you must install a disconnect in a readily accessible location. It must be capable of being locked in the open position [625.43].
8. You must provide a means to prevent back feed to the utility, in the event of loss of utility power. This should be included in the charger kit; ensure it's properly connected [625.46].
9. For *indoor* installations, you'll find the minimum ventilation requirements in Tables 625.52(B)(1)(a) and .625.52(B)(1)(b).
10. For outdoor installations, the coupling means must be stored or located at least 2 ft but not more than 4 ft above the parking surface [625.50].

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EXTERIOR DOORS SHALL BE OF APPROVED NONCOMBUSTIBLE CONSTRUCTION OR IGNITION-RESISTANT MATERIAL, SOLID CORE WOOD HAVING STILES AND RAILS NOT LESS THAN 1-3/8 INCHES THICK WITH INTERIOR FIELD PANEL THICKNESS NO LESS THAN 1-1/4 INCHES THICK, SHALL HAVE A FIRE-RESISTANCE RATING OF NOT LESS THAN 20 MINUTES WHEN TESTED ACCORDING TO NFPA 252 OR MEET THE REQUIREMENTS OF SFM-7A-1. [§R337.8.3 CRC]

FLOOR PLAN NOTES:

1 <N> CARBON MONOXIDE

DUAL CARBON/ SMOKE

- CARBON MONOXIDE ALARMS SHALL BE INSTALLED IN NEW AND EXISTING DWELLING UNITS AND SLEEPING UNITS WHICH HAVE FUEL-BURNING APPLIANCES INSTALLED OR HAVE ATTACHED GARAGES: [§ R315.1 CRC]
- WHERE ALTERATIONS, REPAIRS, OR ADDITIONS TO EXISTING DWELLINGS OCCUR THAT REQUIRE A PERMIT AND EXCEED $1000, THE INDIVIDUAL DWELLING UNIT SHALL BE EQUIPPED WITH CARBON MONOXIDE ALARMS LOCATED AS REQUIRED FOR NEW DWELLINGS. [§ R315.2 CRC]
- NOTE THE REQUIREMENTS FOR CARBON MONOXIDE ALARM/DETECTION SYSTEMS AND INSTALLATION ON THE PLANS, SINGLE- AND MULTIPLE-STATION CARBON MONOXIDE ALARMS SHALL BE LISTED TO COMPLY WITH UL 2034. CARBON MONOXIDE DETECTORS SHALL BE LISTED TO COMPLY WITH UL 2075. INSTALLATION SHALL BE IN ACCORDANCE WITH NFPA 720 AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. [§ R315.3 CRC]
- IN EXISTING DWELLING UNITS, THE CARBON MONOXIDE ALARMS MAY BE SOLELY BATTERY-OPERATED AND ARE NOT REQUIRED TO BE INTERCONNECTED WHERE REPAIRS OR ALTERATIONS DO NOT RESULT IN THE REMOVAL OF WALL AND CEILING FINISHES OR THERE IS NO ACCESS BY MEANS OF ATTIC BASEMENT OR CRAWL SPACE, AND WHERE NO PREVIOUS METHOD FOR INTERCONNECTION EXISTED. [§ R315.1.1, 315.1.2 CRC EXCEPTIONS]
- CARBON MONOXIDE ALARMS SHALL BE INSTALLED OUTSIDE OF EACH SEPARATE SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOMS, AND ON EVERY LEVEL OF A DWELLING UNIT INCLUDING BASEMENTS. SHOW ALARM LOCATIONS ON THE PLANS. [§ R315.3 CRC]

<N> SMOKE ALARMS:

DUAL CARBON/ SMOKE

- SMOKE ALARMS SHALL BE HARD-WIRED AND EQUIPPED WITH A BATTERY BACKUP. IN EXISTING DWELLING UNITS, THE SMOKE ALARMS MAY BE SOLELY BATTERY-OPERATED AND ARE NOT REQUIRED TO BE INTERCONNECTED WHERE REPAIRS OR ALTERATIONS DO NOT RESULT IN THE REMOVAL OF INTERIOR WALLS OR CEILING FINISHES EXPOSING THE STRUCTURE UNLESS THERE IS AN ATTIC, CRAWL SPACE, OR BASEMENT WHICH COULD PROVIDE ACCESS FOR BUILDING WIRING WITHOUT REMOVAL OF INTERIOR FINISHES. [§ R314.4 CRC EXCEPTION]
- SMOKE ALARMS SHALL BE INTERCONNECTED. IN EXISTING DWELLING UNITS, THE SMOKE ALARMS MAY BE SOLELY BATTERY-OPERATED AND ARE NOT REQUIRED TO BE INTERCONNECTED WHERE REPAIRS OR ALTERATIONS DO NOT RESULT IN THE REMOVAL OF INTERIOR WALLS OR CEILING FINISHES EXPOSING THE STRUCTURE UNLESS THERE IS AN ATTIC, CRAWL SPACE, OR BASEMENT WHICH COULD PROVIDE ACCESS FOR INTERCONNECTION WITHOUT REMOVAL OF INTERIOR FINISHES. [§ R314.5 CRC EXCEPTION]

2 WINDOWS:

- WINDOWS TO BE DOUBLE PANE, WITHE VINYL WINDOWS.
- WINDOW SILL SHALL BE OF MATERIALS NOT ADVERSELY AFFECTED BY MOISTURE.
- SILL HEIGHT SHALL NOT EXCEED 44" ABOVE THE FLR.
- ALL 2X4 WINDOW SILL WHERE OCCURS 2-2X4 (SILL AT OPENING WIDER THAN 4'-0").

3 BATHROOM

- INSTALL NEW FIBER GLASS TUB & SHOWER TUB UNIT 3-PIECE COMPLETE W/TUB SPOUT DIVERTER VALVE & LOW-FLOW SHOWER HEAD INDIVIDUAL CONTROL CONTROL VALVES OF THE PRESSURE BALANCE ON THE THERMOSTATIC MIXING VALVE TYPE. AT THE SHOWER.
- SHOWER FLOORS AND WALLS SHALL BE FINISHED WITH A NONABSORBENT SURFACE. SUCH SURFACE SHALL EXTEND UP THE WALLS A MINIMUM HEIGHT OF 6 FEET (72 INCHES); NOTE ON PLANS. [§ R307.2 CRC]
- NEW FLUOR LIGHT FIXT. AND PROVIDE NEW 50 C.F.M. 5 AIR FAN SWITCHES TO LIGHT @ <N> BATH.
- WATER CLOSETS SHALL HAVE AN AVERAGE WATER CONSUMPTION OF NOT MORE THAN 1.28 GALLONS PER FLUSH. SHOWERHEADS SHALL NOT EXCEED 2.0 GALLONS PER MINUTE AT 80 PSI. LAVATORY FAUCETS SHALL NOT EXCEED 1.2 GALLONS PER MINUTE AT 60 PSI." (CPC 411.2 & 408.2 & 407.2.1.2.
- OPTIONAL BATHTUB WALL COVERING SHALL BE CEMENT PLASTER,TILE OR APPROVED EQUAL TO 72" ABOVE DRAIN AT SHOWERS OR TUBS WITH SHOWERS. MATERIAL OTHER THAN STRUCTURAL ELEMENTS TO BE MOISTURE RESISTANT.
- CONTROL VALVES AND SHOWERHEADS SHALL BE LOCATED ON THE SIDEWALL OF SHOWER COMPARTMENTS OR OTHERWISE ARRANGED SO THAT THE SHOWERHEAD DOES NOT DISCHARGE DIRECTLY AT THE ENTRANCE TO THE COMPARTMENT SO THAT THE BATHER CAN ADJUST THE VALVES PRIOR TO STEPPING INTO THE SHOWER SPRAY. 2016 CPC SECTION 408.9

4 DOORS

- GLAZING USED IN DOORS AND PANELS OF SHOWER AND TUB ENCLOSURES SHALL BE FULLY TEMPERED GLASS, LAMINATED SAFETY GLASS OR APPROVED PLASTIC OF A SHATTER-RESISTENT.
- ALL SLIDING DOORS AT SHOWERS OR BATHTUB SHALL BE SAFETY .
- GLAZING IN AZARDOUS LOCATION INDICATED ON PLANS.
- ALL EXTERIOR DOORS SHALL HAVE A 1" MAXIMUM THRESHOLD ABOVE LANDING.

A <N> ON DEMAND HEATER

B <N> 85,000 CENTRAL FURNACE, OR EQUAL.

C ALL WIRNG SHALL COMPLY WITH THE NATIONALELECTRICAL CODE.

AFCI-PROTECTION FOR KITCHENS AND LAUNDRY ROOMS.

ALL ELECTRICAL SYSTEMS GROUND TO BE PROVIDED PER NEC, ART,

ALL HOSE BIBS MUST BE PROTECTED BY AN ANTI-SIPHON DEVICE UPC.603.3.7.

ALL 120-VOLT, SINGLE PHASE, 15- AND 20-AMPERE BRANCH CIRCUITS SUPPLYING OUTLETS IN DWELLING UNIT FAMILY ROOMS, DINING ROOMS, LIVING ROOMS, PARLORS, LIBRARIES, DENS, BEDROOMS, SUNROOMS, RECREATION ROOMS, CLOSETS, HALLWAYS, OR SIMILAR ROOMS OR AREAS SHALL BE PROTECTED BY A LISTED COMBINATION-TYPE AFCI. (ART. 210.12(B) CEC)

KITCHEN TO HAVE 2-20 AMP SMALL APPLIANCE DEDICATED BRANCH CIRCUITS (*CEC SECTION 210.52 B.3*), AND LAUNDRY AND BATHROOM FACILITIES SHALL HAVE AT LEAST 1-20 AMP DEDICATED BRANCH CIRCUIT (*CEC SECTION 210.52D&F*).

RECEPTACLES SHALL BE INSTALLED SO THAT NO POINT MEASURED HORIZONTALLY ALONG THE FLOOR LINE IN ANY WALL SPACE IS MORE THAN 6' FROM AN OUTLET. *CEC SECTION 210.52(A)(1)*

ALL 125-VOLT, 15 AND 20 AMP OUTLETS SHALL BE TAMPER-RESISTANT AS PER *CEC SECTION 210.52*.
A RECEPTACLE OUTLET SHALL BE INSTALLED AT EACH WALL COUNTERTOP SPACE 12 INCHES OR WIDER SO THAT NO POINT IS MORE THAN 24 INCHES FROM AN OUTLET. *CEC SECTION 210.52(C)(1-5)*

KITCHEN TO HAVE 2-20 AMP SMALL APPLIANCE DEDICATED BRANCH CIRCUITS (*CEC SECTION 210.52 B.3*), AND LAUNDRY AND BATHROOM FACILITIES SHALL HAVE AT LEAST 1-20 AMP DEDICATED BRANCH CIRCUIT (*CEC SECTION 210.52D&F*).

THE OPENING AROUND GAS VENTS, DUCTS, AND PIPES AT CEILING SHALL HAVE FIREBLOCKINGPER UBC 708.2.1.

D <N> 22"X30" ATTIC ACCESS. TIGHT-FITTING WETHER STRIP 1-3/8" MIN.

E CLOTHES CLOSET LAMPS SHALL BE ENCLOSED IF INCASED TYPE. LIGHT FIXTURE CLEARANCES SHALL CONFORM TO CEC 410-8.

F AIR EXHAUST AND INTAKE OPENINGS THAT TERMINATE OUTDOORS SHALL BE PROTECTED WITH CORROSION-RESISTANT SCREENS, LOUVERS, OR GRILLES WITH 1/4" MINIMUM- AND ½" MAXIMUM-SIZED OPENINGS IN ANY DIMENSION. OPENINGS SHALL BE PROTECTED AGAINST LOCAL WEATHER CONDITIONS. [§ R303.5 CRC]

G ALL THE NEWLY INSTALLED INTERIOR LIGHTING TO BE HIGH EFFICACY PER CENC 150.0(K)(1)(A).

ALL THE NEWLY INSTALLED EXTERIOR LIGHTING TO BE HIGH EFFICACY AND BE CONTROLLED BY A MANUAL ON AND OFF SWITCH THAT DOES NOT OVERRIDE THE AUTOMATIC ACTIONS OF ITEMS SHOWN ON CENC 150(K)(3)(II) OR CENC 150.0(K)(3)(III).

AT LEAST ONE LIGHT FIXTURE IN THE BATHROOM TO BE CONTROLLED BY VACANCY SENSOR PER CENC 150.0(K)(2)(J).

H KITCHEN HOODS SHALL HAVE A MINIMUM VENTILATION RATE OF 100 CFM INTERMITTENT OR 25 CFM CONTINUOUS. BATHROOMS SHALL HAVE A MECHANICAL EXHAUST CAPACITY OF 50 CFM INTERMITTENT OR 20 CFM CONTINUOUS. *IRC TABLE M1507.3*"

COOKING APPLIANCES SHALL HAVE A CLEARANCE ABOVE THE COOKING TOP OF NOT LESS THAN 30". A MINIMUM CLEARANCE OF 24" IS PERMITTED WHEN A VENTILATING HOOD CONSTRUCTED OF SHEET METAL NOT LESS THAN 0.0122" THICK IS INSTALLED ABOVE THE COOKING TOP WITH A CLEARANCE OF NOT LESS THAN ¼" BETWEEN THE HOOD AND UNDERSIDE OF CABINET. CMC SECTION 916.1 & 916.2.

LEGEND WALL

- EXISTING WALL
- NEW WALL (2X4 STUD WALL @ 16" O.C.)
- WALL TO BE REMOVED

FLOOR PLAN

PROPOSED

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

RESIDENCE: 5235 SF.
GARAGE: 968 SF.

68

ALL NEW PLUMBING FIXTURES SHALL COMPLY WITH THE MAXIMUM FLOW FOR CONSERVING FIXTURES INTHE TABLE BELOW.

FOR HOMES BUILT ON OR BEFORE JANUARY 1, 1994, ALL NON-COMPLIANT PLUMBING FIXTURES IN THE DWELLING UNITS SHALL BE REPLACED WITH WATER CONSERVING FIXTURES AS LISTED IN THE TABLE BELOW.

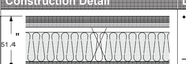
FIXTUTE TYPE	NON-COMPLIANT (FLOW RATE OVER)	CONSERVING FIXTURES (MAX FLOW RATE)
KITCHEN FAUCET	2.2 GAL/MIN.	1.8 GAL./MIN. @ 60 psi
OTHER FAUCETS	2.2 GAL/MIN.	1.2 GAL./MIN. @ 60 psi
SHOWER*	2.5 GAL/MIN.	1.8 GAL./MIN. @ 60 psi
WATER CLOSET	1.6 GAL/FLUSH	1.28 GAL/FLUSH

*FLOW RATES COMBINED FOR ALL SHOWERHEADS AND/OR OTHER OUTLETS CONTROLLED BY A SINGLE VALVE.(CAL. STATE LAW SB407)

Wood Framed

37

FIRE WALL SECTION DETAIL "A"

1 Hour Fire-Rated Construction	Loadbearing		Acoustical Performance		Reference
Construction Detail	Description	Test Number	STC	Test Number	Index
	• 5/8" Sheetrock Firecode core panels, or 5/8" Sheetrock UltraLight Panels Firecode X or 5/8" Fiberock panels – 2x4 wood studs 16" o.c. or 24" o.c. – 3" mineral fiber or fiberglass insulation – RC-1 channel or equivalent	UL Des 327	46	**RAL-TL11-082** Based on 5/8" Sheetrock UltraLight Panels Firecode X	A-66
			48	**RAL-TL11-083** Based on 5/8" Sheetrock Firecode core panels	
			50	**BBN-760903** Based on 5/8" Sheetrock Firecode C Core panels	
			51	**RAL-TL11-174** Based on 5/8" double layer Sheetrock UltraLight Panels Firecode X same side as RC-1 channel	

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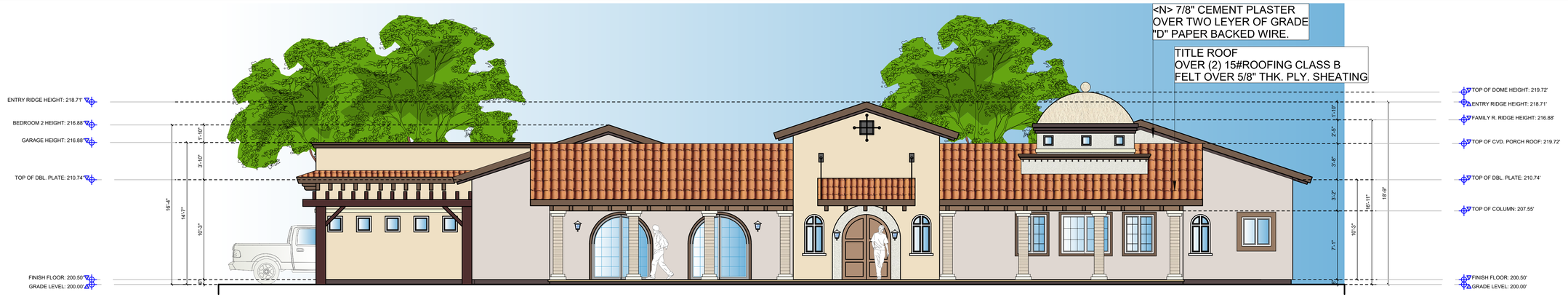
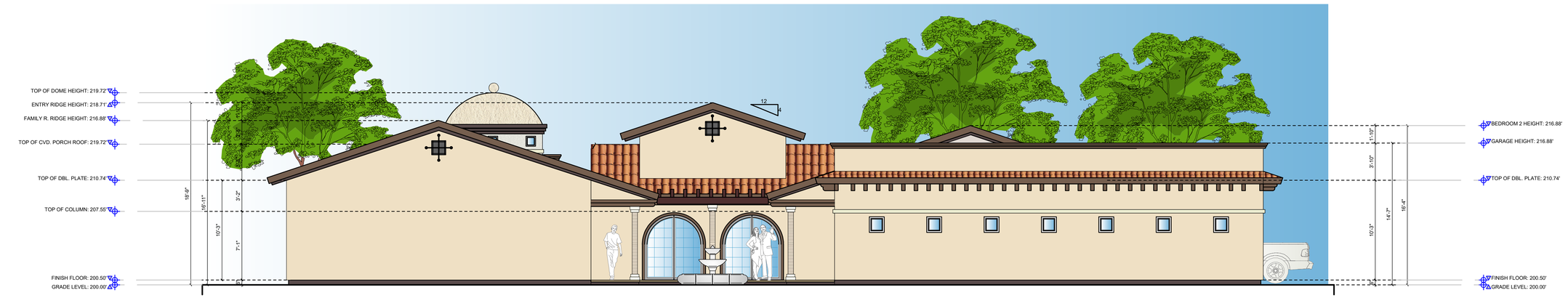


FRONT ELEVATION

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



REAR ELEVATION

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

SECTION R902 FIRE CLASSIFICATION

R902.1 ROOFING COVERING MATERIALS

ROOFS SHALL BE COVERED WITH MATERIALS AS SET FORTH IN SECTIONS R904 AND R905. *A MINIMUM CLASS A, B OR C ROOFING SHALL BE INSTALLED IN AREAS DESIGNATED BY THIS SECTION* OR WHERE THE EDGE OF THE ROOF IS LESS THAN 3 FEET (914 MM) FROM A LOT LINE. CLASS A, B AND C ROOFING REQUIRED BY THIS SECTION TO BE LISTED SHALL BE TESTED IN ACCORDANCE WITH UL 790 OR ASTM E108.

SECTION R905 REQUIREMENTS FOR ROOF COVERINGS

R905.1 ROOF COVERING APPLICATION

ROOF COVERINGS SHALL BE APPLIED IN ACCORDANCE WITH THE APPLICABLE PROVISIONS OF THIS SECTION AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. UNLESS OTHERWISE SPECIFIED IN THIS SECTION, ROOF COVERINGS SHALL BE INSTALLED TO RESIST THE COMPONENT AND CLADDING LOADS SPECIFIED IN TABLE R301.2(2), ADJUSTED FOR HEIGHT AND EXPOSURE IN ACCORDANCE WITH TABLE R301.2(3).

R905.1.1 UNDERLAYMENT

UNDERLAYMENT FOR ASPHALT SHINGLES, CLAY AND CONCRETE TILE, METAL ROOF SHINGLES, MINERAL-SURFACED ROLL ROOFING, SLATE AND SLATE-TYPE SHINGLES, WOOD SHINGLES, WOOD SHAKES AND METAL ROOF PANELS SHALL CONFORM TO THE APPLICABLE STANDARDS LISTED IN THIS CHAPTER. UNDERLAYMENT MATERIALS REQUIRED TO COMPLY WITH ASTM D226, D1970, D4869 AND D6757 SHALL BEAR A LABEL INDICATING COMPLIANCE TO THE STANDARD DESIGNATION AND, IF APPLICABLE, TYPE CLASSIFICATION INDICATED IN TABLE R905.1.1(1). UNDERLAYMENT SHALL BE APPLIED IN ACCORDANCE WITH TABLE R905.1.1(2). UNDERLAYMENT SHALL BE ATTACHED IN ACCORDANCE WITH TABLE R905.1.1(3).

R905.3 CLAY AND CONCRETE TILE

THE INSTALLATION OF CLAY AND CONCRETE TILE SHALL COMPLY WITH THE PROVISIONS OF THIS SECTION.

R905.3.1 DECK REQUIREMENTS

CONCRETE AND CLAY TILE SHALL BE INSTALLED ONLY OVER SOLID SHEATHING OR SPACED STRUCTURAL SHEATHING BOARDS.

R905.3.2 DECK SLOPE

CLAY AND CONCRETE ROOF TILE SHALL BE INSTALLED ON ROOF SLOPES OF TWO AND ONE-HALF UNITS VERTICAL IN 12 UNITS HORIZONTAL (2½:12) OR GREATER. FOR ROOF SLOPES FROM TWO AND ONE-HALF UNITS VERTICAL IN 12 UNITS HORIZONTAL (2½:12) TO FOUR UNITS VERTICAL IN 12 UNITS HORIZONTAL (4:12), DOUBLE UNDERLAYMENT APPLICATION IS REQUIRED IN ACCORDANCE WITH SECTION R905.3.3.

R905.3.3 UNDERLAYMENT

UNDERLAYMENT SHALL COMPLY WITH SECTION R905.1.1.

R905.3.4 CLAY TILE

CLAY ROOF TILE SHALL COMPLY WITH ASTM C1167.

R905.3.5 CONCRETE TILE

CONCRETE ROOF TILE SHALL COMPLY WITH ASTM C1492.

TABLE R905.1.1(1)
UNDERLAYMENT TYPES

ROOF COVERING	SECTION	MAXIMUM ULTIMATE DESIGN WIND SPEED, V_{ult} < 140 MPH	MAXIMUM ULTIMATE DESIGN WIND SPEED, V_{ult} ≥ 140 MPH
Asphalt shingles	R905.2	ASTM D226 Type I	ASTM D226 Type II
		ASTM D4869 Type I, II, III or IV	ASTM D4869 Type IV
		ASTM D6757	ASTM D6757
Clay and concrete tile	R905.3	ASTM D226 Type II	ASTM D226 Type II
		ASTM D2626 Type I	ASTM D2626 Type I
		ASTM D6380 Class M mineral-surfaced roll roofing	ASTM D6380 Class M mineral-surfaced roll roofing
Metal roof shingles	R905.4	ASTM D226 Type I or II	ASTM D226 Type II
		ASTM D4869 Type I, II, III or IV	ASTM D4869 Type IV
Mineral-surfaced roll roofing	R905.5	ASTM D226 Type I or II	ASTM D226 Type II
		ASTM D4869 Type I, II, III or IV	ASTM D4869 Type IV
Slate and slate-type shingles	R905.6	ASTM D226 Type I	ASTM D226 Type II
		ASTM D4869 Type I, II, III or IV	ASTM D4869 Type IV
Wood shingles	R905.7	ASTM D226 Type I or II	ASTM D226 Type II
		ASTM D4869 Type I, II, III or IV	ASTM D4869 Type IV
Wood shakes	R905.8	ASTM D226 Type I or II	ASTM D226 Type II
		ASTM D4869 Type I, II, III or IV	ASTM D4869 Type IV
Metal panels	R905.10	Manufacturer's instructions	ASTM D226 Type II
			ASTM D4869 Type IV

TABLE R905.1.1(2)
UNDERLAYMENT APPLICATION

ROOF COVERING	SECTION	MAXIMUM ULTIMATE DESIGN WIND SPEED, V_{ult} < 140 MPH	MAXIMUM ULTIMATE DESIGN WIND SPEED, V_{ult} ≥ 140 MPH
Asphalt shingles	R905.2	For roof slopes from two units vertical in 12 units horizontal (2:12), up to four units vertical in 12 units horizontal (4:12), underlayment shall be two layers applied in the following manner: apply a 19-inch strip of underlayment felt parallel to and starting at the eaves. Starting at the eave, apply 36-inch-wide sheets of underlayment, overlapping successive sheets 19 inches. Distortions in the underlayment shall not interfere with the ability of the shingles to seal. For roof slopes of four units vertical in 12 units horizontal (4:12) or greater, underlayment shall be one layer applied in the following manner: underlayment shall be applied shingle fashion, parallel to and starting from the eave and lapped 2 inches, Distortions in the underlayment shall not interfere with the ability of the shingles to seal. End laps shall be 4 inches and shall be offset by 6 feet.	Same as Maximum Ultimate Design Wind Speed, V_{ult} < 140 mph except all laps shall be not less than 4 inches.
Clay and concrete tile	R905.3	For roof slopes from two and one-half units vertical in 12 units horizontal (2½:12), up to four units vertical in 12 units horizontal (4:12), underlayment shall be a minimum of two layers applied as follows: starting at the eave, apply a 19-inch strip of underlayment parallel with the eave. Starting at the eave, apply 36-inch-wide strips of underlayment felt, overlapping successive sheets 19 inches. For roof slopes of four units vertical in 12 units horizontal (4:12) or greater, underlayment shall be a minimum of one layer of underlayment felt applied shingle fashion, parallel to and starting from the eaves and lapped 2 inches. End laps shall be 4 inches and shall be offset by 6 feet.	Same as Maximum Ultimate Design Wind Speed, V_{ult} < 140 mph except all laps shall be not less than 4 inches.
Metal roof shingles	R905.4	Apply in accordance with the manufacturer's installation instructions.	For roof slopes from two units vertical in 12 units horizontal (2:12), up to four units vertical in 12 units horizontal (4:12), underlayment shall be two layers applied in the following manner: apply a 19-inch strip of underlayment felt parallel to and starting at the eaves. Starting at the eave, apply 36-inch-wide sheets of underlayment, overlapping successive sheets 19 inches, and fastened sufficiently to hold in place. For roof slopes of four units vertical in 12 units horizontal (4:12) or greater, underlayment shall be one layer applied in the following manner: underlayment shall be applied shingle fashion, parallel to and starting from the eave and lapped 4 inches. End laps shall be 4 inches and shall be offset by 6 feet.
Mineral-surfaced roll roofing	R905.5		
Slate and slate-type shingles	R905.6		
Wood shingles	R905.7		
Wood shakes	R905.8		
Metal panels	R905.10		

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm.

TABLE R905.1.1(3)
UNDERLAYMENT ATTACHMENT

ROOF COVERING	SECTION	MAXIMUM ULTIMATE DESIGN WIND SPEED, V_{ult} < 140 MPH	MAXIMUM ULTIMATE DESIGN WIND SPEED, V_{ult} ≥ 140 MPH
Asphalt shingles	R905.2	Fastened sufficiently to hold in place	The underlayment shall be attached with corrosion-resistant fasteners in a grid pattern of 12 inches between side laps with a 6-inch spacing at the side laps. Underlayment shall be attached using metal or plastic cap nails or cap staples with a nominal cap diameter of not less than 1 inch. Metal caps shall have a thickness of not less than 32-gage sheet metal. Power-driven metal caps shall have a minimum thickness of 0.010 inch. Minimum thickness of the outside edge of plastic caps shall be 0.035 inch. The cap nail shank shall be not less than 0.083 inch for ring shank cap nails and 0.091 inch for smooth shank cap nails. Staples shall be not less than 21 gage. Cap nail shank and cap staple legs shall have a length sufficient to penetrate through the roof sheathing or not less than ¾ inch into the roof sheathing.
Clay and concrete tile	R905.3		
Metal roof shingles	R905.4	Manufacturer's installation instructions.	The underlayment shall be attached with corrosion-resistant fasteners in a grid pattern of 12 inches between side laps with a 6-inch spacing at the side laps. Underlayment shall be attached using metal or plastic cap nails or cap staples with a nominal cap diameter of not less than 1 inch. Metal caps shall have a thickness of at least 32-gage sheet metal. Power-driven metal caps shall have a minimum thickness of 0.010 inch. Minimum thickness of the outside edge of plastic caps shall be 0.035 inch. The cap nail shank shall be not less than 0.083 inch for ring shank cap nails and 0.091 inch for smooth shank cap nails. Staples shall be not less than 21 gage. Cap nail shank and cap staple legs shall have a length sufficient to penetrate through the roof sheathing or not less than ¾ inch into the roof sheathing.
Mineral-surfaced roll roofing	R905.5		
Slate and slate-type shingles	R905.6		
Wood shingles	R905.7		
Wood shakes	R905.8		
Metal panels	R905.10		

For SI: 1 inch = 25.4 mm.

TABLE R905.3.7
CLAY AND CONCRETE TILE ATTACHMENT

SHEATHING	ROOF SLOPE	NUMBER OF FASTENERS
Solid without battens	All	One per tile
Spaced or solid with battens and slope < 5:12	Fasteners not required	—
Spaced sheathing without battens	5:12 ≤ slope < 12:12	One per tile/ every other row
	12:12 ≤ slope < 24:12	One per tile

SOLAUS DESIGNS
design build

ENRIQUE ECKHAUS GIL.

P.O. BOX 783 - SALINAS,CA 93902
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FX. (831) 287 - 0121
eeckhaus@pacbell.net
eeeckhaus@gmail.com

OWNER.
IRMA BERRELLEZA

PROJECT.
543 PINI RD ROYAL OAKS, CA 95076
APN 412-012-055-000

CODES.

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INDEX PLANS.

REVISIONS

1

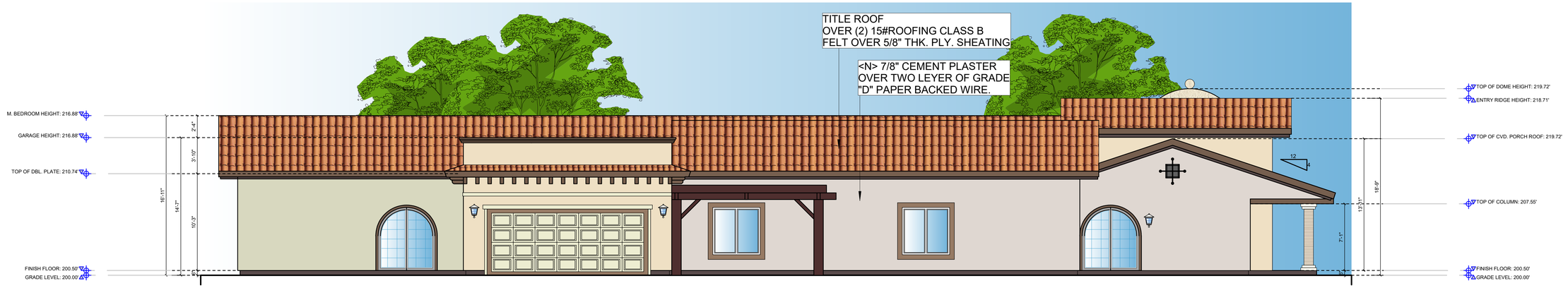
DATE
MARCH-22-23

DRAWN:
E.ECKHAUS/F.BALDERAS/A.ALONSO

JOB
2023-000

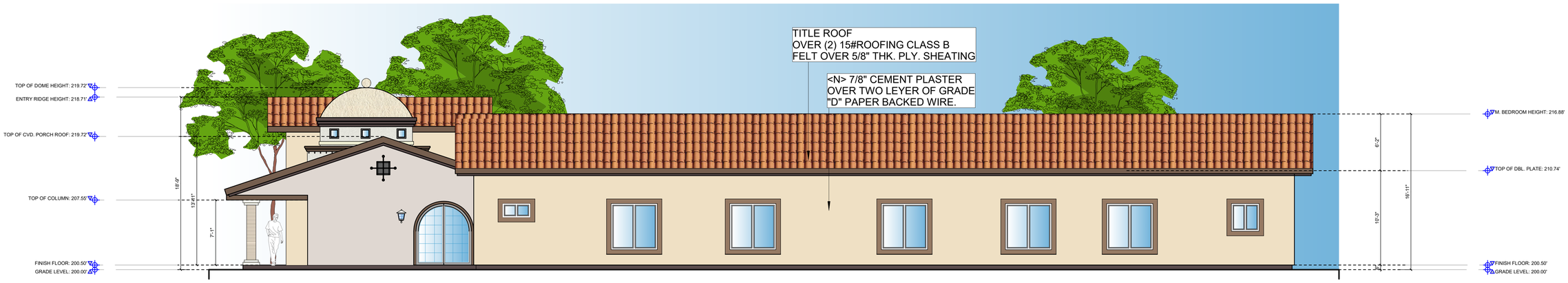
SHEET.

A5



LEFT ELEVATION

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



RIGHT ELEVATION

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

R337.1.3 APPLICATION 46

NEW BUILDINGS LOCATED IN ANY FIRE HAZARD SEVERITY ZONE OR ANY WILDLAND-URBAN INTERFACE FIRE AREA DESIGNATED BY THE ENFORCING AGENCY CONSTRUCTED AFTER THE APPLICATION DATE SHALL COMPLY WITH THE PROVISIONS OF THIS CHAPTER.

R337.1.3.1 APPLICATION DATE AND WHERE REQUIRED

NEW BUILDINGS FOR WHICH AN APPLICATION FOR A BUILDING PERMIT IS SUBMITTED ON OR AFTER JULY 1, 2008 LOCATED IN ANY FIRE HAZARD SEVERITY ZONE OR WILDLAND INTERFACE FIRE AREA SHALL COMPLY WITH ALL SECTIONS OF THIS CHAPTER, INCLUDING ALL OF THE FOLLOWING AREAS:

ALL UNINCORPORATED LANDS DESIGNATED BY THE STATE BOARD OF FORESTRY AND FIRE PROTECTION AS STATE RESPONSIBILITY AREA (SRA) INCLUDING:

1. 1.1. MODERATE FIRE HAZARD SEVERITY ZONES
2. 1.2. HIGH FIRE HAZARD SEVERITY ZONES
3. 1.3. VERY-HIGH FIRE HAZARD SEVERITY ZONES

LAND DESIGNATED AS VERY-HIGH FIRE HAZARD SEVERITY ZONE BY CITIES AND OTHER LOCAL AGENCIES.

LAND DESIGNATED AS WILDLAND INTERFACE FIRE AREA BY CITIES AND OTHER LOCAL AGENCIES.

FIRE HAZARD SEVERITY ZONES
ARE GEOGRAPHICAL AREAS DESIGNATED PURSUANT TO CALIFORNIA PUBLIC RESOURCES CODES SECTIONS 4201 THROUGH 4204 AND CLASSIFIED AS VERY-HIGH, HIGH, OR MODERATE IN STATE RESPONSIBILITY AREAS OR AS LOCAL AGENCY VERY-HIGH FIRE HAZARD SEVERITY ZONES DESIGNATED PURSUANT TO CALIFORNIA GOVERNMENT CODE SECTIONS 51175 THROUGH 51189. SEE CALIFORNIA FIRE CODE ARTICLE 86.
THE CALIFORNIA CODE OF REGULATIONS, TITLE 14, SECTION 1280 ENTITLES THE MAPS OF THESE GEOGRAPHICAL AREAS AS "MAPS OF THE FIRE HAZARD SEVERITY ZONES IN THE STATE RESPONSIBILITY AREA OF CALIFORNIA."

HEAVY TIMBER.

A TYPE OF CONSTRUCTION CLASSIFICATION SPECIFIED IN SECTION R602. FOR USE IN THIS CHAPTER, HEAVY TIMBER SHALL BE SAWN LUMBER OR GLUE LAMINATED WOOD WITH THE SMALLEST MINIMUM NOMINAL DIMENSION OF 4 INCHES (102 MM). HEAVY TIMBER WALLS OR FLOORS SHALL BE SAWN OR GLUE-LAMINATED PLANKS SPLINED, TONGUE-AND-GROVE, OR SET CLOSE TOGETHER AND WELL SPIKED.

COLOR SCHEDULE

SOLAUS DESIGNS
DESIGN BUILD

ENRIQUE ECKHAUS GIL.

P.O. BOX 783 - SALINAS,CA 93902
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FX. (831) 287 - 0121
eeckhaus@pacbell.net
eeeckhaus@gmail.com

OWNER.
IRMA BERRELLEZA

PROJECT.
543 PINI RD ROYAL OAKS, CA 95076 APN 412-012-055-000

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MARCH-22-23
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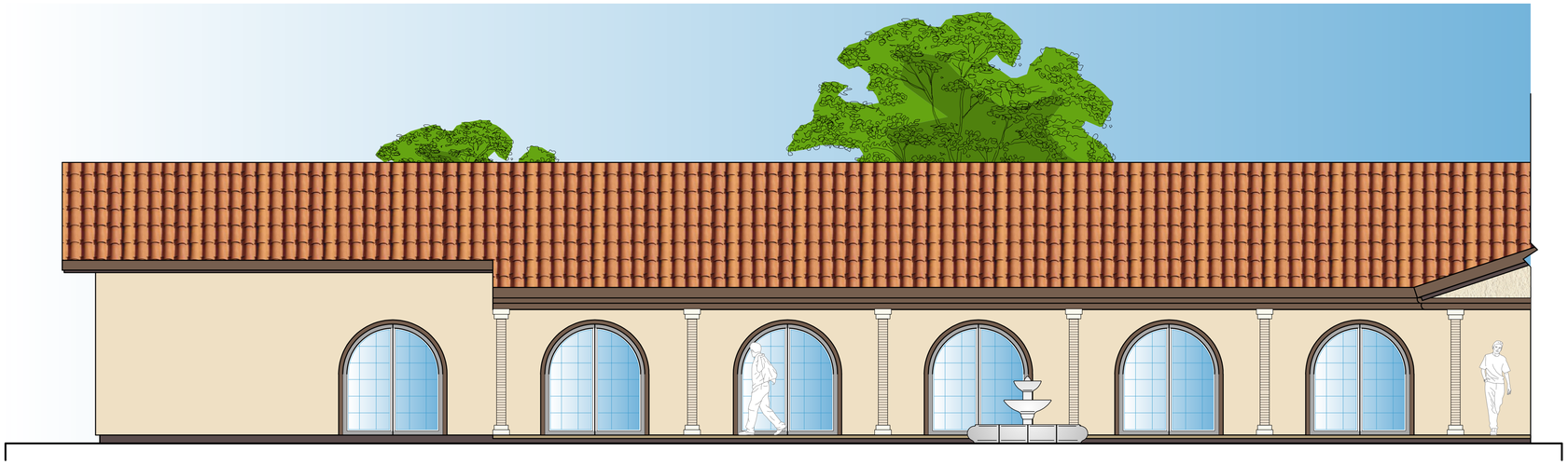
E.ECKHAUS/F.BALDERAS/A.ALONSO
JOB.
2023-000

SHEET.

A6



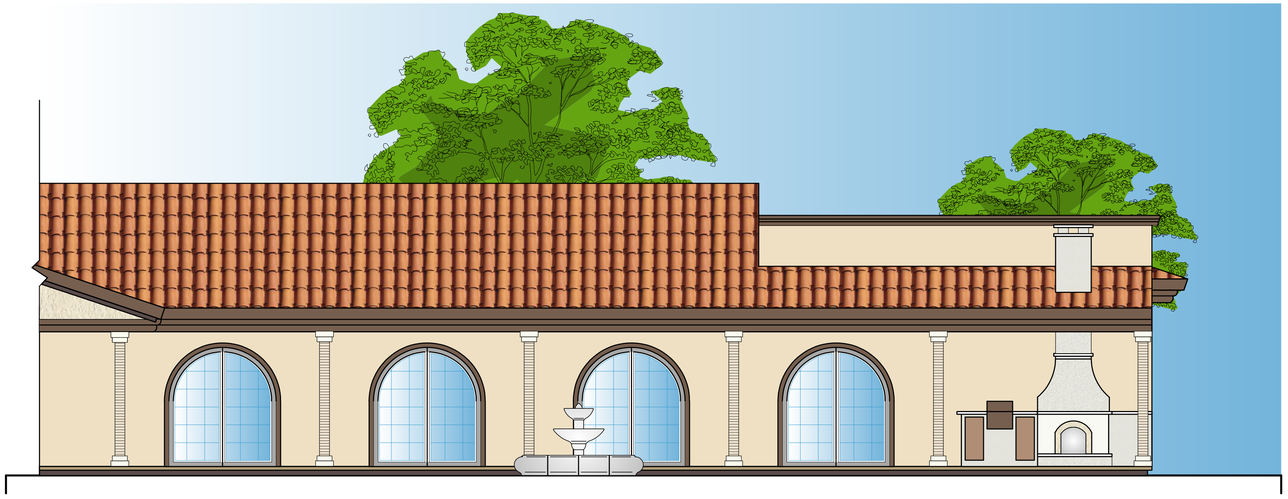
INTERIOR ELEVATION

PROPOSED

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

Boosted Capistrano

Weight Per Piece:
Standard: 4.8



INTERIOR ELEVATION

PROPOSED

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

ECKHAUS DESIGNS
design group

ENRIQUE ECKHAUS GIL.

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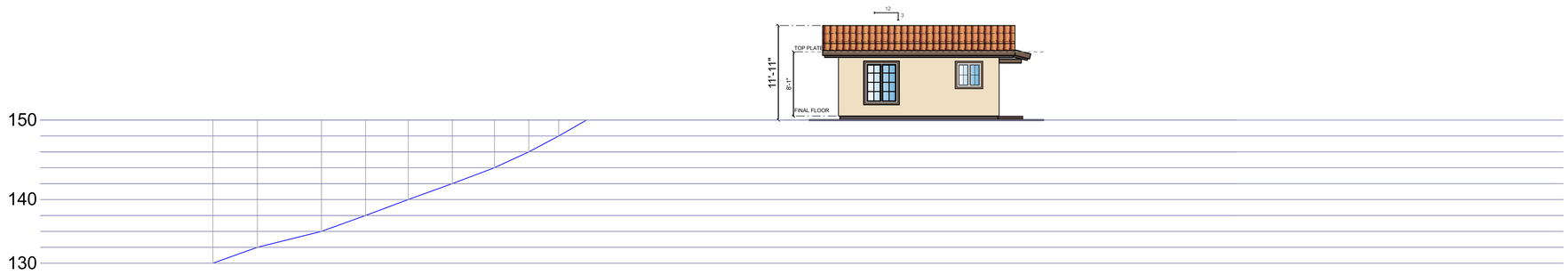
JOB
2023-000

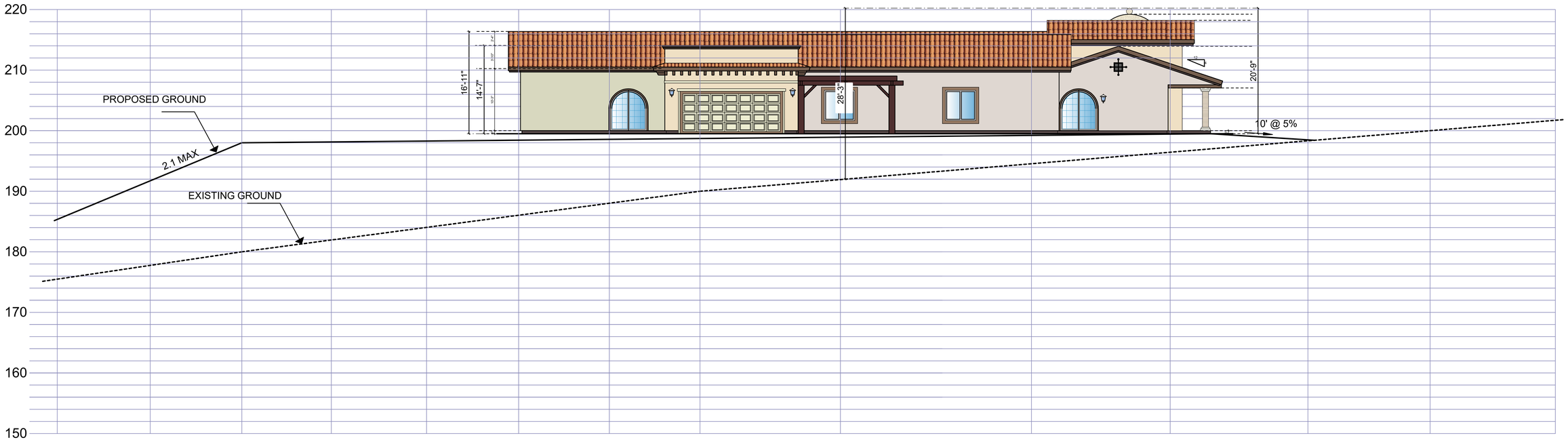
SHEET.

A7



SECTION "A" <N> GUEST HOUSE

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



SECTION "B" <N> RESIDENCE

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

ECKHAUS DESIGNS

ENRIQUE ECKHAUS GIL.

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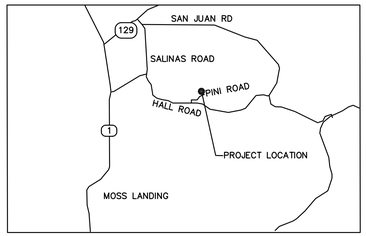
JOB
2023-024

SHEET.

A8



VICINITY MAP – NOT TO SCALE

STORM DRAINAGE SPECIFICATIONS

1. ALL INLETS SHALL BE CONCRETE OLDCASTLE CHRISTY PRODUCTS OR APPROVED EQUAL.
2. ALL STORM DRAIN PIPES SHALL BE SDR-26, HDPE SCHEDULE 40 OR APPROVED EQUAL.

DISCLAIMER

ENGINEER'S NOTE TO CONTRACTOR

THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITY PIPES OR STRUCTURES SHOWN ON THESE PLANS ARE OBTAINED BY A SEARCH OF THE AVAILABLE RECORDS. THE CONTRACTOR IS REQUIRED TO TAKE DUE PRECAUTIONARY MEASURES TO PROTECT THE UTILITY LINES SHOWN AND ANY OTHER LINES NOT OR RECORD OR NOT SHOWN ON THESE DRAWINGS. PRIOR TO EXCAVATION, THE CONTRACTOR SHALL CALL U.S.A. DIG ALERT TO VERIFY THE LOCATION OF ALL UNDERGROUND UTILITIES. 1(800)624-1444

GENERAL NOTES

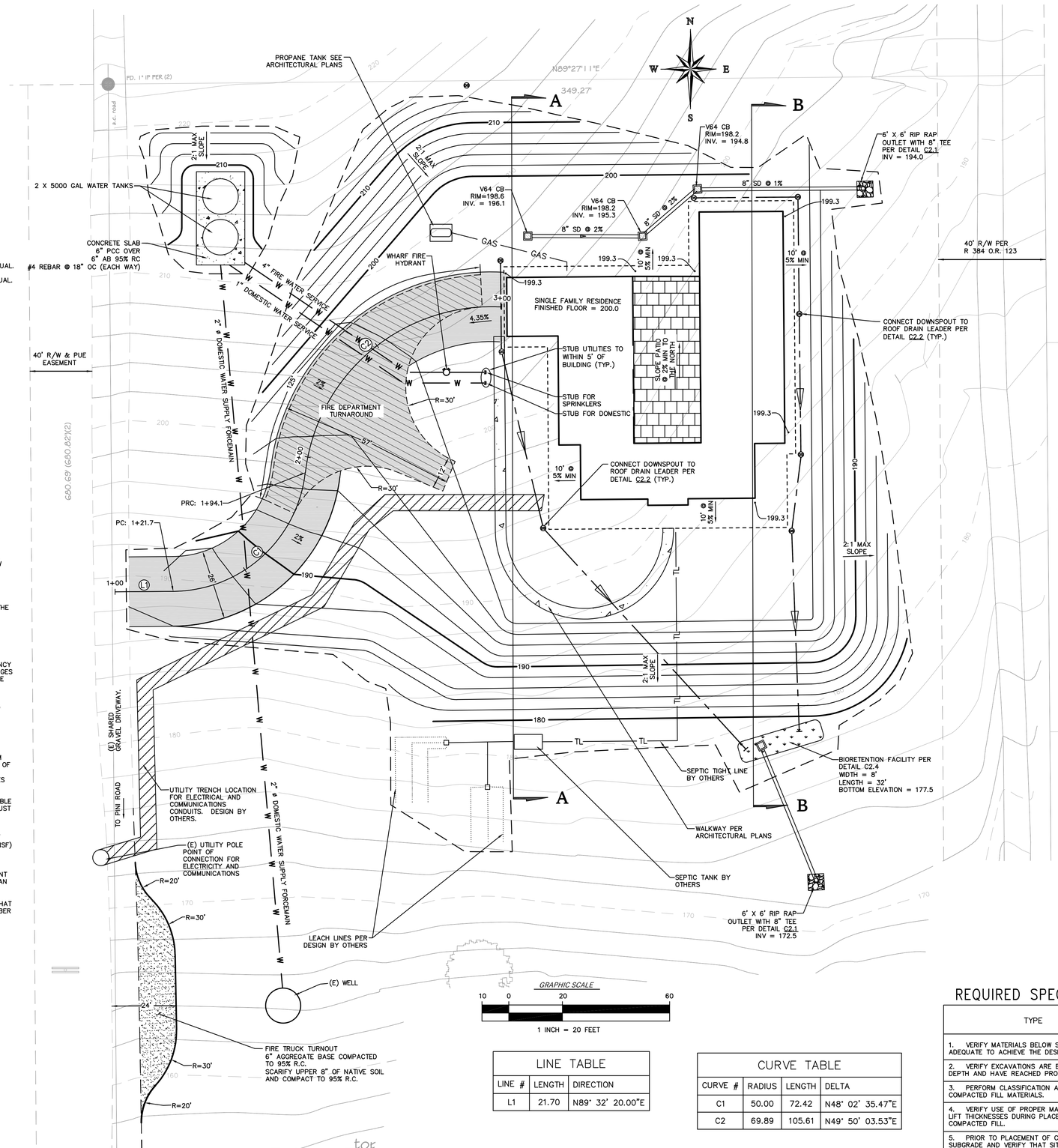
1. OWNER:
   IRMA BERRELLESA
   543 PINI ROAD
   ROYAL OAKS, CA
2. ARCHITECTURAL PLANS:
   ENRIQUE ECKHAUS
   PO BOX 783
   SALINAS, CA 93902
3. REFERENCE IS MADE TO THE GEOTECHNICAL INVESTIGATIONS BY GMD ENGINEERS, DATED DECEMBER 1, 2019. THE CONTRACTOR SHALL MAKE A THOROUGH REVIEW OF THIS REPORT AND SHALL FOLLOW ALL RECOMMENDATIONS THEREIN. THE CONTRACTOR SHALL CONTACT GERONIMO DALIVA, PE (833)800-4284. FOR ANY CLARIFICATIONS NECESSARY PRIOR TO PROCEEDING WITH THE WORK.
4. ALL GRADING OPERATIONS SHALL CONFORM TO SECTION 19 OF THE CALTRANS STANDARD SPECIFICATIONS, AND SHALL ALSO BE DONE IN CONFORMANCE WITH THE REQUIREMENTS OF THE COUNTY OF MONTEREY AND THE AFOREMENTIONED GEOTECHNICAL INVESTIGATION.
5. THE CONTRACTOR SHALL NOTIFY THE COUNTY GRADING INSPECTOR AND THE GEOTECHNICAL ENGINEER AT LEAST 48 HOURS PRIOR TO TO THE START OF CONSTRUCTION.
6. THE CONTRACTOR SHALL IMMEDIATELY REPORT TO THE ENGINEER ANY DISCREPANCY OCCURRING ON THE DRAWINGS OR FOUND IN HIS COORDINATION WORK. NO CHANGES IN APPROVED PLANS SHALL BE MADE WITHOUT PRIOR WRITTEN APPROVAL OF THE PROJECT ENGINEER AND THE COUNTY OF MONTEREY.
7. WORK SHALL BE LIMITED TO 8:00 A.M. TO 5:00 PM WEEKDAYS. NON-NOISE PRODUCING ACTIVITIES, SUCH AS INTERIOR PAINTING, SHALL NOT BE SUBJECT TO THIS RESTRICTION.
8. NO LAND CLEARING, GRADING OR EXCAVATING SHALL TAKE PLACE BETWEEN OCTOBER 15 AND APRIL 15 UNLESS THE PLANNING DIRECTOR APPROVES A SEPARATE WINTER EROSION CONTROL PLAN.
9. BETWEEN OCTOBER 15 AND APRIL 15, EXPOSED SOIL SHALL BE PROTECTED FROM EROSION AT ALL TIMES. DURING CONSTRUCTION SUCH PROTECTION MAY CONSIST OF MULCHING AND/OR PLANTING OF NATIVE VEGETATION OF ADEQUATE DENSITY. BEFORE COMPLETION OF THE PROJECT, ANY EXPOSED SOIL ON DISTURBED SLOPES SHALL BE PERMANENTLY PROTECTED FROM EROSION.
10. THE ENGINEER PREPARING THESE PLANS WILL NOT BE RESPONSIBLE FOR, OR LIABLE FOR, UNAUTHORIZED CHANGES TO, OR USES OF, THESE PLANS. ALL CHANGES MUST BE IN WRITING AND MUST BE APPROVED BY THE ENGINEER PRIOR TO CONSTRUCTION.
11. ALL WATER STORAGE TANKS AND PLUMBING INTENDED FOR THE DISTRIBUTION OF DRINKING WATER SHALL COMPLY WITH THE NATIONAL SANITATION FOUNDATION (NSF) 61 STANDARDS.
12. TANKS USED FOR POTABLE WATER SHALL BE TIGHTLY COVERED AND VENTED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. SUCH VENT SHALL BE SCREENED WITH A CORROSION-RESISTANT MATERIAL OF NOT LESS THAN NUMBER 24 MESH.
13. TANKS SHALL HAVE NOT LESS THAN A 16 SQUARE INCH (0.01 M2) OVERFLOW THAT IS SCREENED WITH A CORROSION-RESISTANT MATERIAL OF NOT LESS THAN NUMBER 24 MESH.

IMPERVIOUS SUMMARY

ITEM	EXISTING	PROPOSED	
		CREATED	REPLACED
BUILDING	1,269	6,247	0
ASPHALT	0	5,977	0
CONCRETE	0	628	0
TOTAL	12,852 SF CREATED OR REPLACED		

EARTHWORK SUMMARY

ITEM	CUT (CY)	FILL (CY)
SITE GRADING	2700	5300
DRIVEWAY	480	45
SUB-TOTAL	3180	5345
TOTAL	2165 CY (IMPORT)	



LINE TABLE		
LINE #	LENGTH	DIRECTION
L1	21.70	N89° 32' 20.00"E

CURVE TABLE			
CURVE #	RADIUS	LENGTH	DELTA
C1	50.00	72.42	N48° 02' 35.47"E
C2	69.89	105.61	N49° 50' 03.53"E

LEGEND

- PROPOSED BUILDING
- 488 — PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- 492 — EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- 476.52 — PROPOSED SPOT GRADE ELEVATION
- PROPOSED CONCRETE
- PROPOSED ASPHALT
- SETBACK
- PROPOSED CATCH BASIN
- PROPOSED VEGETATED SWALE
- GRADE BREAK
- PROPOSED FLOW ARROW
- PROPOSED 4" ROOF DRAIN LEADER
- 37 LF 8" SD — PROPOSED STORM DRAIN PIPE
- DS — ROOF DOWNSPOUT
- DS — ROOF DOWNSPOUT OUTLET TO SPLASHBLOCK
- EXISTING TREE
- W — W — PROPOSED WATER SERVICE
- TL — PROPOSED SEPTIC TIGHT LINE
- GAS — GAS — PROPOSED GAS LINE
- LIMIT OF DISTURBANCE

ABBREVIATIONS

(E)	EXISTING
A.C.	ASPHALT CONCRETE
BW	BOTTOM OF WALL ELEVATION
CB	CATCH BASIN
DS	DOWNSPOUT
EL	ELEVATION
FF	FINISHED FLOOR ELEVATION
FL	FLOWLINE ELEVATION
INV	INVERT ELEVATION
LF	LINEAR FOOT
MAX	MAXIMUM
MIN	MINIMUM
(N)	NEW
NTS	NOT TO SCALE
PC	POINT OF CURVATURE
PRC	POINT OF REVERSE CURVATURE
PT	POINT OF TANGENCY
PROP	PROPOSED
RET	RETAINING
WNC	WALNUT CREEK
TW	TOP OF WALL ELEVATION
TYP	TYPICAL

ELEVATION DATUM

NAVD 1988. ELEVATIONS BASED ON GNSS OBSERVATIONS WITH CORRECTIONS FROM "TOPNET LIVE" AND CONVERTED TO NAVD 88 USING GEOID 12A

PAD CERTIFICATION

A SOIL OR CIVIL ENGINEER TO DETERMINE GRADING PERFORMED IS IN SUBSTANTIAL CONFORMANCE WITH THE APPROVED PLANS AND IS SUITABLE TO SUPPORT THE INTENDED STRUCTURE(S).

REQUIRED SPECIAL INSPECTIONS AND TESTS OF SOILS

TYPE	CONTINUOUS SPECIAL INSPECTION	PERIODIC SPECIAL INSPECTION
1. VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY.	–	X
2. VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL.	–	X
3. PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS.	–	X
4. VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL.	X	–
5. PRIOR TO PLACEMENT OF COMPACTED FILL, INSPECT SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY.	–	X

04/30/20	REVISED PER COUNTY COMMENTS

SINGLE FAMILY DWELLING

FOR IRMA BERRELLESA
543 PINI ROAD
ROYAL OAKS, CA
APN: 412-012-055-000

CORNERSTONE CIVIL
Land Development Engineering
2528 Charlene Lane
Santa Cruz, CA
(831) 346-5446

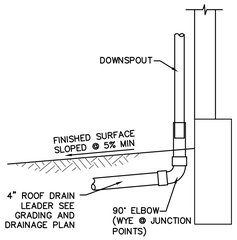
REGISTERED PROFESSIONAL ENGINEER RYAN P. HALEY NO. 80236 CIVIL STATE OF CALIFORNIA

APRIL 30, 2020
DATE

DRAWN BY: R. HALEY
PROJECT No.: 19.021
DATE: DEC 2019

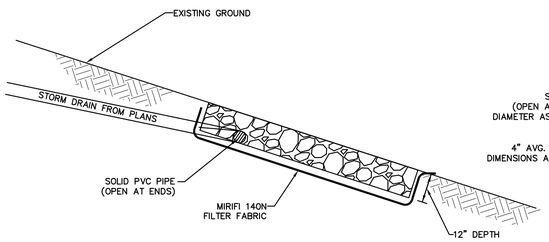
GRADING & DRAINAGE PLAN

C-1

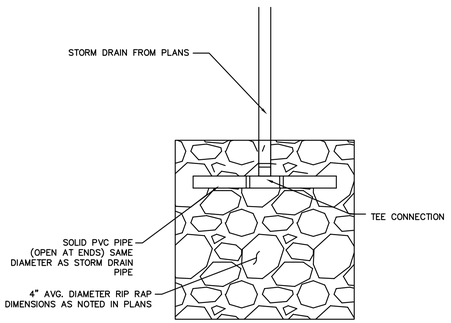


C2.1 ROOF DOWNSPOUT CONNECTION

NOT TO SCALE



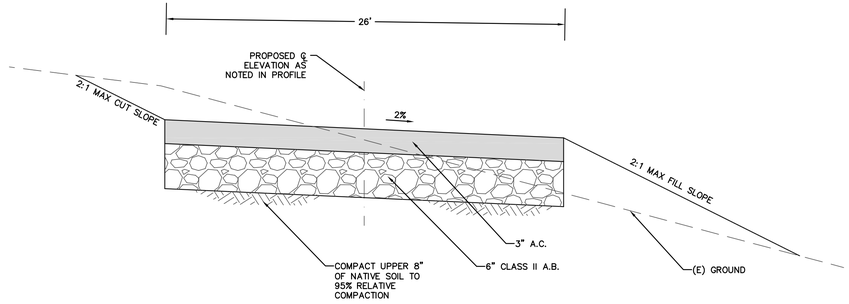
SECTION VIEW



PLAN VIEW

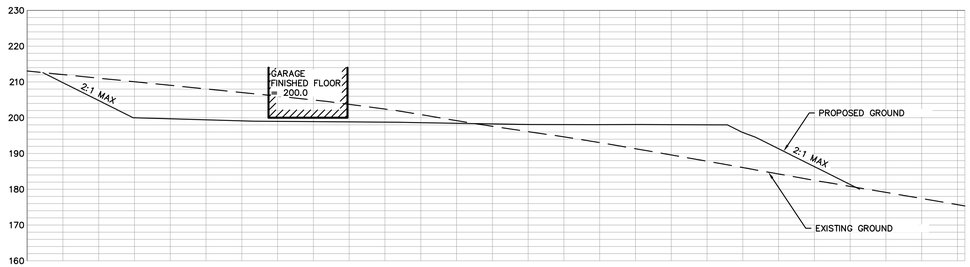
C2.2 RIP RAP OUTLET

NOT TO SCALE



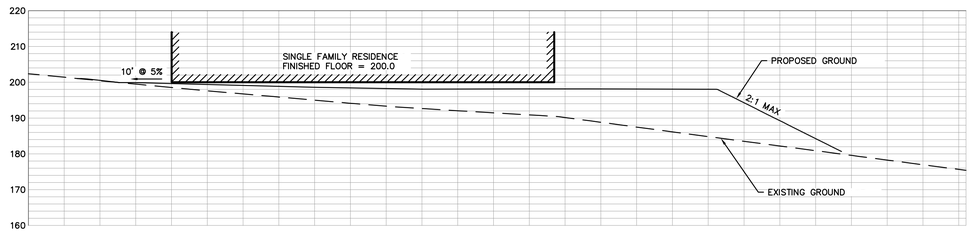
C2.3 TYPICAL DRIVEWAY SECTION

NOT TO SCALE



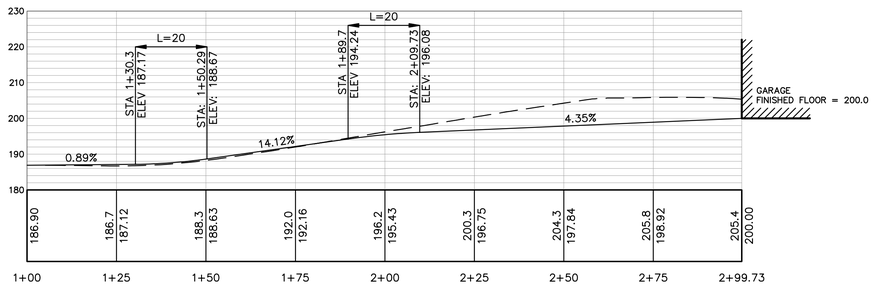
SECTION A–A

SCALE: 1" = 20'



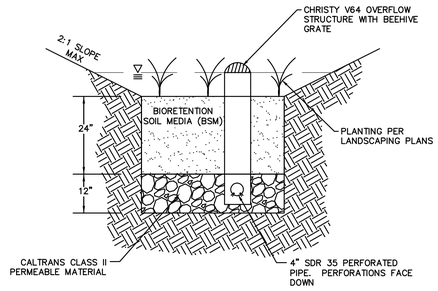
SECTION B–B

SCALE: 1" = 20'



DRIVEWAY PROFILE

SCALE: 1" = 20' H AND V



1. MULCH DEPTH 2–3", USE OF MULCH BELOW PONDING HIGH WATER MARK IS OPTIONAL. PREFERRED MULCH TYPE: AGED, STABILIZED, NON–FLOATING.

2. MINIMUM CURB DEPTH ALONG CITY RIGHT–OF–WAY SHALL BE 24". STEEL REINFORCEMENT IS REQUIRED FOR PLANTER WALLS INSTALLED ALONG CITY RIGHT–OF–WAY.

3. BIORETENTION SOIL MEDIA (BSM): MINIMUM INFILTRATION RATE 5 IN/HR. USE CONCRETE SAND (60–70%) MEETING ASTM C33 SPECIFICATIONS AND STABLE, WEED–FREE COMPOST (30–40%) MIXTURE.

4. SCARIFY SUBGRADE BEFORE INSTALLING BIORETENTION AREA AGGREGATE AND BSM.

5. USE MIN. 4" DIA. PVC SDR36 PERFORATED PIPE. INSTALL NEAR THE TOP OF AGGREGATE LAYER WITH HOLES FACING DOWN.

6. UNDERDRAIN DISCHARGE SHALL BE NO LOWER THAN THE TOP OF THE AGGREGATE LAYER. UNDERDRAIN SLOPE MAY BE FLAT.

7. PROVIDE 4" MIN. DIAMETER CAPPED AND THREADED PVC CLEANOUT FOR UNDERDRAIN, WITH SWEEP BEND.

C2.4 BIORETENTION FACILITY

NOT TO SCALE

⚠ 04/30/20	REVISED PER COUNTY COMMENTS

SINGLE FAMILY DWELLING

FOR IRMA BERRELLESA
543 PINI ROAD
ROYAL OAKS, CA
APN: 412-012-055-000

CORNERSTONE CIVIL
Land Development Engineering
2528 Charlene Lane
Santa Cruz, CA
(831) 346-5446

REGISTERED PROFESSIONAL ENGINEER RYAN P. HALEY NO. 80236 CIVIL STATE OF CALIFORNIA

APRIL 30, 2020
DATE

DRAWN BY: R. HALEY
PROJECT No.: 19.021
DATE: DEC 2019

DETAILS

C–2

SITE HOUSEKEEPING REQUIREMENTS

CONSTRUCTION MATERIALS

1. ALL LOOSE STOCKPILED CONSTRUCTION MATERIALS THAT ARE NOT ACTIVELY BEING USED (I.E. SOIL, SPOILS, AGGREGATE, FLY-ASH, STUCCO, HYDRATED LIME, ETC.) SHALL BE COVERED AND BERMED.
2. ALL CHEMICALS SHALL BE STORED IN WATERTIGHT CONTAINERS (WITH APPROPRIATE SECONDARY CONTAINMENT TO PREVENT ANY SPILLAGE OR LEAKAGE) OR IN A STORAGE SHED (COMPLETELY ENCLOSED).
3. EXPOSURE OF CONSTRUCTION MATERIALS TO PRECIPITATION SHALL BE MINIMIZED. THIS DOES NOT INCLUDE MATERIALS AND EQUIPMENT THAT ARE DESIGNED TO BE OUTDOORS AND EXPOSED TO ENVIRONMENTAL CONDITIONS (I.E. POLES, EQUIPMENT PADS, CABINETS, CONDUCTORS, INSULATORS, BRICKS, ETC.).
4. BEST MANAGEMENT PRACTICES TO PREVENT THE OFF-SITE TRACKING OF LOOSE CONSTRUCTION AND LANDSCAPE MATERIALS SHALL BE IMPLEMENTED.

LANDSCAPE MATERIALS

1. CONTAIN STOCKPILED MATERIALS SUCH AS MULCHES AND TOPSOIL WHEN THEY ARE NOT ACTIVELY BEING USED.
2. CONTAIN FERTILIZERS AND OTHER LANDSCAPE MATERIALS WHEN THEY ARE NOT ACTIVELY BEING USED.
3. DISCONTINUE THE APPLICATION OF ANY ERODABLE LANDSCAPE MATERIAL WITHIN 2 DAYS BEFORE A FORECASTED RAIN EVENT OR DURING PERIOD OF PRECIPITATION.
4. APPLY ERODABLE LANDSCAPE MATERIAL AT QUANTITIES AND APPLICATION RATES ACCORDING TO MANUFACTURE RECOMMENDATIONS OR BASED ON WRITTEN SPECIFICATIONS BY KNOWLEDGEABLE AND EXPERIENCED FIELD PERSONNEL.
5. STACK ERODABLE LANDSCAPE MATERIAL ON PALLETS AND COVERING OR STORING SUCH MATERIALS WHEN NOT BEING USED OR APPLIED.

VEHICLE STORAGE AND MAINTENANCE

1. MEASURES SHALL BE TAKEN TO PREVENT OIL, GREASE, OR FUEL TO LEAK IN TO THE GROUND, STORM DRAINS OR SURFACES WATERS.
2. ALL EQUIPMENT OR VEHICLES, WHICH ARE THE BE FUELED, MAINTAINED AND STORED ONSITE SHALL BE IN A DESIGNATED AREA FITTED WITH APPROPRIATE BMP'S.
3. LEAKS SHALL BE IMMEDIATELY CLEANED AND LEAKED MATERIALS SHALL BE DISPOSED OF PROPERLY.

WASTE MANAGEMENT

1. DISPOSAL OF ANY RINSE OR WASH WATERS OR MATERIALS ON IMPERVIOUS OR PERVIOUS SITE SURFACES OR INTO THE STORM DRAIN SYSTEM SHALL BE PREVENTED.
2. SANITATION FACILITIES SHALL BE CONTAINED (E.G., PORTABLE TOILETS) TO PREVENT DISCHARGES OF POLLUTANTS TO THE STORM WATER DRAINAGE SYSTEM OR RECEIVING WATER, AND SHALL BE LOCATED A MINIMUM OF 20 FEET AWAY FROM AN INLET, STREET OR DRIVEWAY, STREAM, RIPARIAN AREA OR OTHER DRAINAGE FACILITY.
3. SANITATION FACILITIES SHALL BE INSPECTED REGULARLY FOR LEAKS AND SPILLS AND CLEANED OR REPLACED AS NECESSARY.
4. COVER WASTE DISPOSAL CONTAINERS AT THE END OF EVERY BUSINESS DAY AND DURING A RAIN EVENT.
5. DISCHARGES FROM WASTE DISPOSAL CONTAINERS TO THE STORM WATER DRAINAGE SYSTEM OR RECEIVING WATER SHALL BE PREVENTED.
6. STOCKPILED WASTE MATERIAL SHALL BE CONTAINED AND SECURELY PROTECTED FROM WIND AND RAIN AT ALL TIMES UNLESS ACTIVELY BEING USED.
7. PROCEDURES THAT EFFECTIVELY ADDRESS HAZARDOUS AND NON-HAZARDOUS SPILLS SHALL BE IMPLEMENTED.
8. EQUIPMENT AND MATERIALS FOR CLEANUP OF SPILLS SHALL BE AVAILABLE ON SITE AND THAT SPILLS AND LEAKS SHALL BE CLEANED UP IMMEDIATELY AND DISPOSED OR PROPERLY; AND
9. CONCRETE WASHOUT AREAS AND OTHER WASHOUT AREAS THAT MAY CONTAIN ADDITIONAL POLLUTANTS SHALL BE CONTAINED SO THERE IS NO DISCHARGE INTO THE UNDERLYING SOIL AND ONTO THE SURROUNDING AREAS.

EROSION CONTROL MEASURES

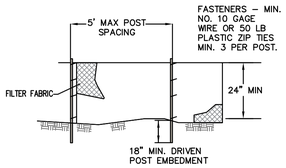
1. EROSION IS TO BE CONTROLLED AT ALL TIMES ALTHOUGH SPECIFIC MEASURES SHOWN ARE TO BE IMPLEMENTED AT A MINIMUM BY OCTOBER 15.
2. UNLESS SPECIFIC MEASURES ARE SHOWN OR NOTED ON THIS PLAN, ALL COLLECTED RUNOFF SHALL BE CARRIED TO DRAINAGE COURSES IN LINED CONDUITS. DISCHARGE SHALL BE IN THE LOCATIONS SHOWN ON THE PLANS.
3. THE DESIRED END RESULT OF THESE MEASURES IS TO CONTROL SITE EROSION AND PREVENT SEDIMENT TRANSPORT OFF THE SITE. IT SHALL BE THE DEVELOPER'S RESPONSIBILITY TO SEE THAT ANY ADDITIONAL MEASURES NECESSARY TO MEET THIS GOAL ARE IMPLEMENTED. IF FAILED INSPECTIONS BY COUNTY STAFF SHOW THIS GOAL IS NOT BEING MET, ADDITIONAL MEASURES MAY BE REQUIRED.
4. ALL DISTURBED AREAS NOT CURRENTLY BEING USED FOR CONSTRUCTION SHALL BE SEEDED WITH THE FOLLOWING SEED MIXTURE:

   WINTER BARLEY 25#/ACRE
5. AFTER SEEDING, STRAW MULCH WILL BE APPLIED IN 4" (AVG.) LAYERS.
6. AMMONIUM PHOSPHATE FERTILIZER, 6-3-3, SHALL BE APPLIED AT A RATE OF 30 LBS. PER ACRE. ON SLOPES GREATER THAN 20% EROSION CONTROL BLANKET (NORTH AMERICAN GREEN) SHALL BE APPLIED.
7. SILT BARRIERS SHALL BE PLACED END TO END AND STAKED DOWN ALONG THE BOTTOM OF ALL GRADED SLOPES.
8. DURING DRY AND WINDY PERIODS, DISTURBED SOIL SHALL BE SPRINKLED WITH WATER UNTIL DAMPENED AND REPEATED AS NEEDED TO PREVENT DUST GENERATION.

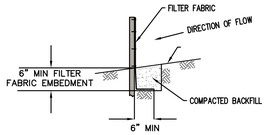
ALL EROSION CONTROL MEASURES INCLUDING BUT NOT LIMITED TO SILT FENCES, FIBER ROLLS AND SLOPE PROTECTION SHALL BE IN PLACE BY OCTOBER 15TH. THE ENGINEER OF RECORD SHALL INSPECT ONCE EROSION CONTROL MEASURES HAVE BEEN INSTALLED.

EXPOSED SLOPE MEASURES

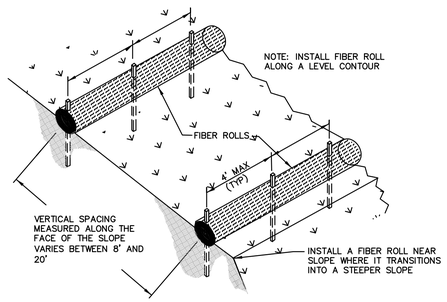
1. COVER ALL EXPOSED SLOPES
2. STRAW 2 TONS/ACRE ON SLOPES ≤ 20% WITH SOIL BINDER
3. USE NORTH AMERICAN GREEN C125 OR EQUAL ON SLOPES >20%.



ELEVATION

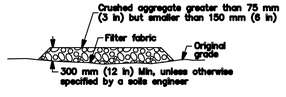


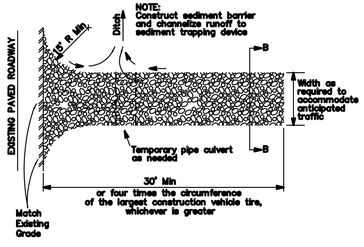
SILT FENCE DETAIL



TYPICAL FIBER ROLL INSTALLATION

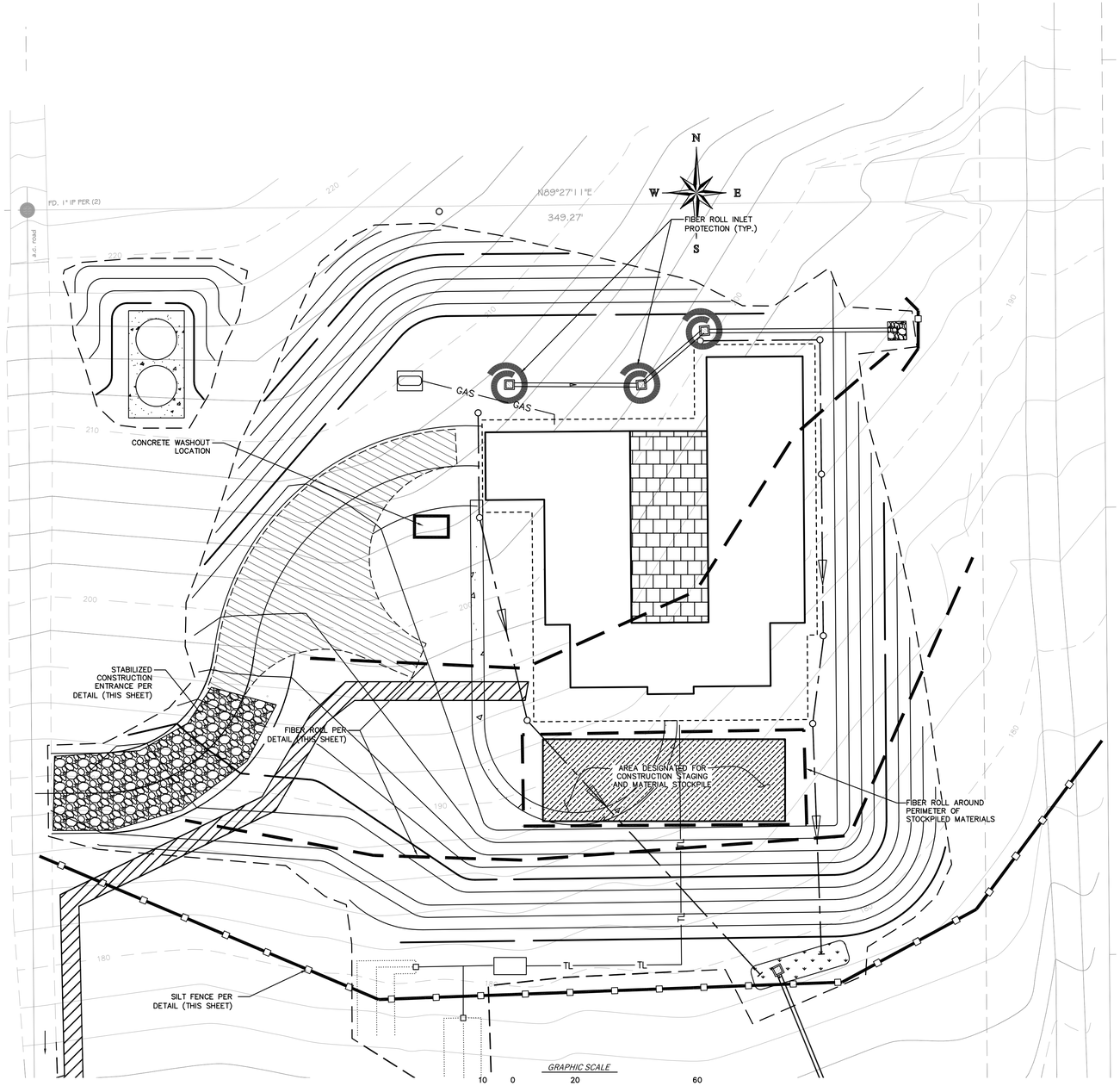
NTS





STABILIZED CONSTRUCTION ENTRANCE

NTS



LEGEND

- SILT FENCE
- FIBER ROLL
- LIMIT OF DISTURBANCE
- STOCKPILE AND STAGING AREA
- FIBER ROLL INLET PROTECTION
- STABILIZED CONSTRUCTION ENTRANCE

TOTAL DISTURBED AREA = 50,600 SF (1.16 ACRES)

⚠ 04/30/20	REVISED PER COUNTY COMMENTS

SINGLE FAMILY DWELLING
FOR IRMA BERRELLESA
543 PINI ROAD
ROYAL OAKS, CA
APN: 412-012-055-000

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REGISTERED PROFESSIONAL ENGINEER
RYAN P. HALEY
NO. 80235
CIVIL
STATE OF CALIFORNIA

APRIL 30, 2020
DATE

DRAWN BY: R. HALEY
PROJECT No.: 19.021
DATE: DEC 2019

EROSION CONTROL PLAN

C-3

ABBREVIATIONS

Ø	DIAMETER	MAX	MAXIMUM
		MEP	MECHANICAL/ELECTRICAL/PLUMBING
AB	AGGREGATE BASE	MH	MANHOLE
ABDN	ABANDONED	MIN	MINIMUM
AC	ACRE, ASPHALT CONCRETE	MIPT	MALE IRON PIPE THREAD
ACP	ASBESTOS CEMENT PIPE	MJ	MECHANICAL JOINT
ACM	ASBESTOS CONTAINING MATERIAL	MPVC	MIDPOINT OF VERTICAL CURVE
AD	AREA DRAIN	MON	MONUMENT
AGG	AGGREGATE		
ALGN	ALIGNMENT	N	NORTHING COORDINATE
ARV	AIR RELEASE VALVE	(N)	NEW
ASB	AGGREGATE SUBBASE	NC	NORMALLY CLOSED
ASPH	ASPHALT	NIC	NOT IN CONTRACT
		NO	NUMBER
BC	BEGIN CURVE	NTS	NOT TO SCALE
BEG	BEGIN		
BFP	BACK FLOW PREVENTER		
BLDC	BUILDING CORNER	OHE	OVERHEAD ELECTRIC
BLDG	BUILDING	O.R.	OFFICIAL RECORDS
BMP	BEST MANAGEMENT PRACTICES		
BOD	BOTTOM OF DOCK	(P)	PROPOSED
BOL	BOLLARD	P	PAVEMENT ELEVATION
BSW	BACK OF SIDEWALK	PA	PLANTER AREA
BVC	BEGIN VERTICAL CURVE	PB	PULL BOX
BW	FINISHED GRADE AT BOTTOM OF WALL	PCC	POINT OF COMPOUND CURVATURE
			PORTLAND CEMENT CONCRETE
C	CONCRETE OR CIVIL	PE	PLAIN END
CB	CATCH BASIN	PED	PEDESTRIAN
C&G	CURB AND GUTTER	PERF	PERFORATED
CG&S/W	CURB, GUTTER & SIDEWALK	PH	POTHOLE
CI	CAST IRON OR CURB INLET	PID	POINT ID
CIP	CAST IRON PIPE	PIV	POST INDICATOR VALVE
CL	CENTERLINE	PL	PROPERTY LINE
CLR	CLEAR	PM	PARKING METER
CLSM	CONTROLLED LOW-STRENGTH MATERIAL	PMH	POWER MANHOLE
CMN	COMMUNICATION	PO	PUSH-ON
CMP	CORRUGATED METAL PIPE	POC	POINT ON CURVE
CO	CLEAN OUT	POI	POINT OF INTERSECTION
CONC	CONCRETE	PP	POWER POLE
CONST	CONSTRUCTION OR CONSTRUCT	PRC	POINT OF REVERSE CURVATURE
CONF	CONFORM TO EXISTING	PRV	PRESSURE REDUCING VALVE
CSC	CITY OF SANTA CLARA	PRUE	PRIVATE UTILITY EASEMENT
CU	CUBIC	PT	POINT OF TANGENCY
CY	CUBIC YARD	PUE	PUBLIC UTILITY EASEMENT
		PVC	POLYVINYL CHLORIDE PIPE
D=	DELTA (CURVE)		
DCDA	DOUBLE CHECK DETECTOR ASSEMBLY	R	RIGHT
DEMO	DEMOLISH	R=	RADIUS (CURVE)
DEPT	DEPARTMENT	RC	RELATIVE COMPACTION
DET	DETAIL	RCP	REINFORCED CONCRETE PIPE
DI	DROP INLET, DUCTILE IRON	RJ	RESTRAINED JOINT
DIA	DIAMETER	RP	RADIUS POINT
DIP	DUCTILE IRON PIPE	RPBFP	REDUCED PRESSURE BACKFLOW PREVENTER
DOM	DOMESTIC	RPPA R	EDUCED PRESSURE PRINCIPLE ASSEMBLY
DW	DOMESTIC WATER	RSC	RECEIVING AND SUPPORT CENTER
DWG	DRAWING	RW	RECYCLED WATER
		R/W, ROW	RIGHT OF WAY
E	EASTING COORDINATE, ELECTRIC		
EC	END CURVE	S	SOUTH, SLOPE
EG	EXISTING GRADE	S.A.D.	SEE ARCHITECTURAL DRAWINGS
EL, ELEV	ELEVATION	SD	STORM DRAIN
ELEC	ELECTRICAL	SDCB	STORM DRAIN CATCH BASIN
EP	EDGE OF PAVEMENT	SDI	STORM DRAIN INLET
EVA	EMERGENCY VEHICLE ACCESS	SDMH	STORM DRAIN MANHOLE
EX,EXIST,	EXISTING	SDCO	STORM DRAIN CLEANOUT
(E)		S.E.D.	SEE ELECTRICAL DRAWINGS
		SF	SILT FENCE
(F)	FUTURE	SG	SUBGRADE
FA	FIRE ALARM	SHLDR	SHOULDER
F/C,FC	FACE OF CURB	SHT	SHEET
FD	FOUND	SL	STREETLIGHT
FDC	FIRE DEPARTMENT CONNECTION	S.L.D.	SEE LANDSCAPE DRAWINGS
FF,FFE	FINISHED FLOOR ELEVATION	SMH	SIGNAL MANHOLE
FG	FINISH GRADE	S.M.D	SEE MECHANICAL DRAWINGS
FH	FIRE HYDRANT	S.P.D	SEE PLUMBING DRAWINGS
FIPT	FEMALE IRON PIPE THREAD	SS	SANITARY SEWER
FL	FLOW LINE, FLANGE	S.S.D.	SEE STRUCTURAL DRAWINGS
FLG	FLANGE	SSD	SUBSURFACE DRIP
FM	FLOWMETER/FORCE MAIN	SSCO	SANITARY SEWER CLEANOUT
FOUND	FOUNDATION	SSFM	SANITARY SEWER FORCE MAIN
FS	FINISHED SURFACE	SSMH	SANITARY SEWER MANHOLE
FT	FOOT, FEET	SSPS	SANITARY SEWER PUMP STATION
FW	FIRE WATER	STA	STATION
		STD	STANDARD
G	GAS, GROUND ELEVATION	STL	STEEL
GB	GRADE BREAK	S/W	SIDEWALK
GI	GALVANIZED IRON	SVP	SILICON VALLEY POWER
GRD, G	GROUND		
GV	GATE VALVE	T	TELEPHONE
		TC	TOP OF CURB
HMA	HOT MIX ASPHALT	TD	TRENCH DRAIN
HORIZ	HORIZONTAL	TEL	TELEPHONE
HT	HEIGHT	TEMP	TEMPORARY
HP	HIGH POINT	TFC	TOP FACE OF CURB
		THK	THICK
INV	INVERT	TOD	TOP OF DOCK
INST	INSTALL	TOE	TOE OF SLOPE
IRR	IRRIGATION	TW,TOW	TOP OF WALL
		TS	TOP OF SLAB
JP	JOINT POLE	TYP	TYPICAL
JT	JOINT TRENCH		
		UON	UNLESS OTHERWISE NOTED
L	LEFT	U/G	UNDERGROUND
L=	LENGTH (CURVE)		
LF	LINEAR FEET	VC	VERTICAL CURVE
LAT	LATERAL		
LIP	LIP OF GUTTER	W	WEST, WATER
LP	LIGHT POLE, LOW POINT	WM	WATER METER
LPFH	FIRE HYDRANT	WV	WATER VALVE
LS	LANDSCAPE	WWF	WELDED WIRE FABRIC
LSA	LANDSCAPE ARCHITECT	W/	WITH
MA	MEDICAL AIR	YDS	YARDS

CIVIL SYMBOLS LEGEND

SURVEY TOPO AND SITE IMPROVEMENTS

	6" CURB & GUTTER	SDCO	STORM DRAIN CLEANOUT
	EDGE OF AC PAVEMENT	E	ELECTRIC VAULT COVER
	6" VERTICAL CURB	PB	PULL BOX
DW	DOMESTIC WATER MAIN	HVE	HIGH VOLTAGE ELECTRIC
E	ELECTRIC LINE	T	TELEPHONE MANHOLE
FL	FLUSH LINE		POWER POLE
FM	FORCE MAIN	GUY	GUY WIRE & ANCHOR
G	GAS LINE	JP	JOINT POLE
IRR	IRRIGATION LINE		STREET LIGHT
OH	OVERHEAD WIRES		ELECTROLIER
OHE	OVERHEAD ELECTRIC		TRAFFIC SIGNAL
OHT	OVERHEAD TELEPHONE	TS	TRAFFIC SIGNAL
RW	RECYCLED WATER		PEDESTRIAN LIGHT
SS	SANITARY SEWER LINE		PEDESTRIAN PUSH BUTTON
SD	STORM DRAIN LINE	DET	CROSSWALK DETECTOR
SL	STREET LIGHT CONDUIT	SL	STREET LIGHT PULLBOX
C	TELECOMMUNICATIONS		SIGN (AS NOTED)
TEL	TELEPHONE LINE		THRUST BLOCK
TV	TELEVISION LINE		CAP
W	WATER LINE		GATE VALVE
UGE	UNDERGROUND ELECTRIC		BUTTERFLY VALVE
	TRENCH DRAIN		DEMO
	METAL BEAM GUARD RAIL		WELL
	SILT FENCE		PUMP
x	CHAIN LINK FENCE		BALL VALVE
	FLOW LINE		ACTUATED BALL VALVE
#	CONTOUR ELEVATION LINE		SOLENOID VALVE
	CENTER LINE		AIR/VACUUM BREAKER
	PROPERTY LINE		PRESSURE REGULATOR
	MONUMENT LINE		SSD FILTER
	EASEMENT LINE		ISOLATION VALVE
TC 24.52 FG	FINISH GRADE		CHECK VALVE
2.0%	SURFACE DRAINAGE SLOPE		FLOW METER
x 95.94	SPOT ELEVATION		PRESSURE GAUGE
	GRADE BREAK		PRESSURE SWITCH
	LIMIT OF WORK/GRADING		FLOAT VALVE
	IRRIGATION BOX		
GM	GAS METER		
G	GAS VALVE		
WM	WATER METER		
W	WATER VALVE		
	WATER METER OR BFP		
	FIRE HYDRANT		
	FIRE DEPARTMENT CONNECTION		
	WATER TAPPING SADDLE		
SSMH	SEWER MANHOLE		
CO	SEWER CLEANOUT		
	SEWER LAMP HOLE		
	SEWER VENT		
SDMH	STORM DRAIN MANHOLE		
CB	CATCH BASIN		
CI	CURB INLET		
DI	DRAINAGE INLET		

ANNOTATION

1 KEYNOTE

1 DEMOLITION NOTE

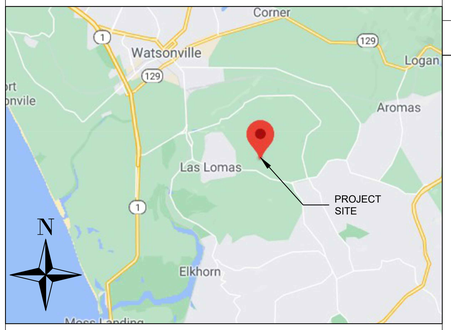
DETAIL NUMBER 1 / C-501 — SHEET NUMBER ON WHICH DETAIL APPEARS

DETAIL INDICATOR

SECTION LETTER A / C-301 — SHEET NUMBER ON WHICH SECTION APPEARS

SECTION INDICATOR

SITE VICINITY



SITE LOCATION

PROJECT DESCRIPTION

GENERAL: NEW SEPTIC SYSTEM

BASIS: NEW SFD

GENERAL SHEET NOTES

1. ABBREVIATIONS AND SYMBOLS ON THIS SHEET APPLY ONLY TO THE CIVIL DRAWINGS, REFER TO OTHER DISCIPLINES FOR APPLICABLE ABBREVIATIONS AND SYMBOLS NOT PROVIDED HERE.
2. THIS IS A STANDARD ABBREVIATION AND LEGEND SHEET, THEREFORE, SOMEABBREVIATIONS AND LEGEND SYMBOLS MAY APPEAR ON THIS SHEET AND MAY NOT BE UTILIZED ON THIS PROJECT.
3. DO NOT SCALE DRAWINGS.
4. ALL WORK AND MATERIALS SHALL BE IN FULL ACCORDANCE WITH THE CURRENTLY REQUIRED VERSION OF THE FOLLOWING CODE:
   - 4.1. CALIFORNIA BUILDING CODE
   - 4.2. CALIFORNIA PLUMBING CODE
   - 4.3. CALIFORNIA MECHANICAL CODE
   - 4.4. CALIFORNIA ELECTRICAL CODE
   - 4.5. ALL APPLICABLE LOCAL, STATE, AND FEDERAL CODES AND ORDINANCES
5. NOTHING ON THE ENCLOSED DRAWINGS IS TO BE CONSTRUED AS REQUIRING OR PERMITTING WORK THAT IS CONTRARY TO THE CODES, ORDINANCES, OR REGULATIONS DESCRIBED ABOVE.
6. ANY DEVIATIONS FROM THE PROPOSED PLANS SHALL BE DISCUSSED WITH THE PROJECT ENGINEER PRIOR TO MAKING CHANGES IN THE FIELD.

INDEX

PROJECT DESIGN AND OPERATION NOTES

DESIGN FLOWS, VOLUMES, AND TREATMENT
FACILITY TYPE: RESIDENTIAL
UNIT FLOW BASIS: # OF BEDROOMS
OF UNITS: NEW 4 BEDROOM SFD AND REMODELED 1 BEDROOM GUESTHOUSE
DESIGN FLOWS: 600 GPD
TREATMENT CATEGORY: ALTERNATIVE (AX20 TREATMENT POD)
NEW SEPTIC TANK VOLUMES: 1,500 & 2,500 GALLONS
WASTEWATER STRENGTH: DOMESTIC RESIDENTIAL STRENGTH
DOMESTIC STRENGTH DEFINITION: <220 MG/L BOD, <60 MG/L TSS, <60 MG/L TN

SOIL TESTING RESULTS AND DISPOSAL DESIGN
THE FOLLOWING SOILS INFORMATION WAS EXTRACTED FROM THE "SOIL INVESTIGATION REPORT" PREPARED BY GMD ENGINEERS, DATED DECEMBER 1, 2019 (GMD 20190934). LOCATIONS AND BORING LOGS FOR THE SOIL BORINGS ARE PROVIDED IN THE SOIL INVESTIGATION REPORT:
BORING B-1:
6" TO 12" = ORGANIC SOILS AND ROOTS
2' TO 9' = DARK BROWN CLAYEY SAND, DENSE
9' TO 15' = DARK BROWN CLAYEY SAND, VERY DENSE
15' TO 18' = SANDSTONE-GRAY TO ORANGE STAINING, FRACTURE, VERY DENSE
BORING B-2:
6" TO 12" = ORGANIC SOILS AND ROOTS
2' TO 9' = DARK BROWN CLAYEY SAND, DENSE
9' TO 15' = DARK BROWN CLAYEY SAND, DENSE
15' TO 18' = SANDSTONE-GRAY TO ORANGE STAINING, FRACTURE, VERY DENSE
GROUNDWATER WAS NOT ENCOUNTERED TO A DEPTH OF 20',
BUT GROUNDWATER INDICATORS ARE PRESENT AT 15'.
THE FOLLOWING PERCOLATION TEST RESULTS WERE EXTRACTED FROM PERCOLATION TEST RESULTS PROVIDED BY GMD ENGINEERS:
TEST HOLE #1 (B1): DEPTH = 3.0', RATE = 9.23 MPI
TEST HOLE #2 (B2): DEPTH = 5.0', RATE = 13.25 MPI
TEST HOLE #3 (B3): DEPTH = 7.0', RATE = 19.5 MPI
AVERAGE RATE = 13.99 MPI

MYER ENGINEERING OBSERVED THE SOIL CHARACTERISTICS OF A SOIL TEST BORING TO A DEPTH OF 9' BELOW GROUND LEVEL (BGL). THE LOCATION OF THE BORING IS PROVIDED ON THE PROJECT DESIGN PLANS. THE FOLLOWING SOIL PROFILE WAS OBSERVED:
MYE BORING B-1
6" TO 12" = ORGANIC SOILS AND ROOTS
1' TO 3' = TAN/BROWN SILTY SAND
3' TO 5' = TAN/BROWN SILTY SAND WITH SOME CLAY
5' TO 9' = TAN/BROWN SILTY CLAYEY SAND, VERY DENSE, INCREASING DENSITY WITH DEPTH

MYER ENGINEERING PREPARED 3 PERCOLATION TEST HOLES AT THE SITE. THE LOCATION OF THE TEST HOLES IS SHOWN ON THE DESIGN PLANS. THE PERCOLATION TEST WAS PERFORMED USING THE PROCEDURE OUTLINED IN THE MONTEREY COUNTY LOCAL AGENCY MANAGEMENT PROGRAM FOR ONSITE WASTEWATER TREATMENT SYSTEMS (MC LAMP)
SOILS OBSERVED IN EACH OF THE PERCOLATION TEST HOLES WERE CONSISTENT WITH THE TEST BORINGS, INDICATING CONSISTENT SOIL TYPES IN THE PROPOSED DISPOSAL AREA. THE PERCOLATION TEST DATA IS ENCLOSED AS ATTACHMENT 1. THE RESULTS OF THE PERCOLATION TESTS ARE AS FOLLOWS:

TEST HOLE #1 (P-1): DEPTH = 5', RATE = 3.95 MPI
TEST HOLE #2 (P-2): DEPTH = 7', RATE = >120 MPI
TEST HOLE #3 (P-3): DEPTH = 3', RATE = 3.18 MPI

DESIGN AREA APPLICATION RATE: 1.2 GPD/SF
REQUIRED EFFECTIVE LEACHING AREA: 500 SF
DESIGN PRIMARY EFFECTIVE LEACHING AREA: 500 SF
DESIGN SECONDARY EFFECTIVE LEACHING AREA: 500 SF

WATER SUPPLY: PRIVATE WELL

OWNER IS RESPONSIBLE FOR GENERAL OPERATION AND MAINTENANCE OF THE WASTEWATER/SEPTIC SYSTEM

THE SEPTIC/WASTEWATER SYSTEM SHALL BE INSTALLED BY A QUALIFIED PROFESSIONAL.

COVER SHEET

Berrelleza Site Improvement Project
543 Pini Rd.
Royal Oaks CA 95076
APN: 412-012-055-000

CLIENT
Irma Berrellesa
537 Pini Rd.
Royal Oaks, CA

MYER ENGINEERING, INC.
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REGISTERED PROFESSIONAL ENGINEER
PAUL MYER
C 88522
EXP 03/31/25
CIVIL
STATE OF CALIFORNIA

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Project No. 202029	Scale AS SHOWN
Date AUG 2023	
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PEM 5/9/2023 MYE_Pini Rd_Septic Plans_REV.dwg

SWIFT ENGINEERING
3520 CEDAR SPRINGS LN., MEADOW VISTA, CA 95722
530-878-6732 CELL: 916-838-0185
EMAIL: donswift@swiftengineenng.net

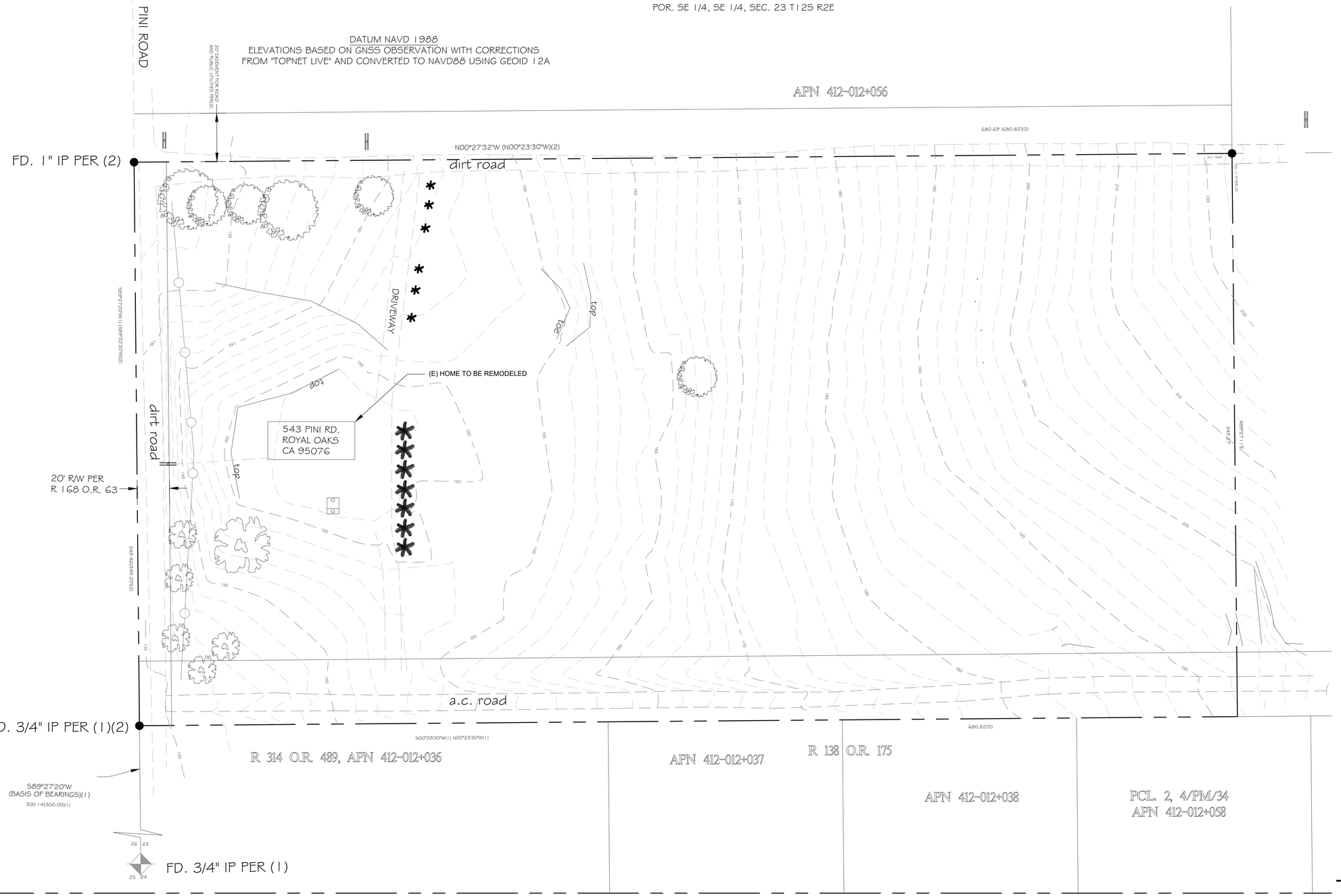
BOUNDARY AND TOPOGRAPHIC SURVEY

543 PINI RD. , ROYAL OAKS CA 95076
APN 412-012-055-000
POR. SE 1/4, SE 1/4, SEC. 23 T12S R2E

DATUM NAVD 1988
ELEVATIONS BASED ON GNSS OBSERVATION WITH CORRECTIONS
FROM "TOPNET LIVE" AND CONVERTED TO NAVD88 USING GEOID 12A

LEGEND

(1) BOOK 4 OF PARCEL MAPS PAGE 34
(2) OLD REPUBLIC ORDER # 03780021 72-TL (2ND UPDATE)



1 EXISTING SITE LAYOUT
SCALE: 1" = 30'

No.	Revision/Issue	Date

EXISTING SITE LAYOUT

Berrelleza Site Improvement Project
543 Pini Rd.
Royal Oaks CA 95076
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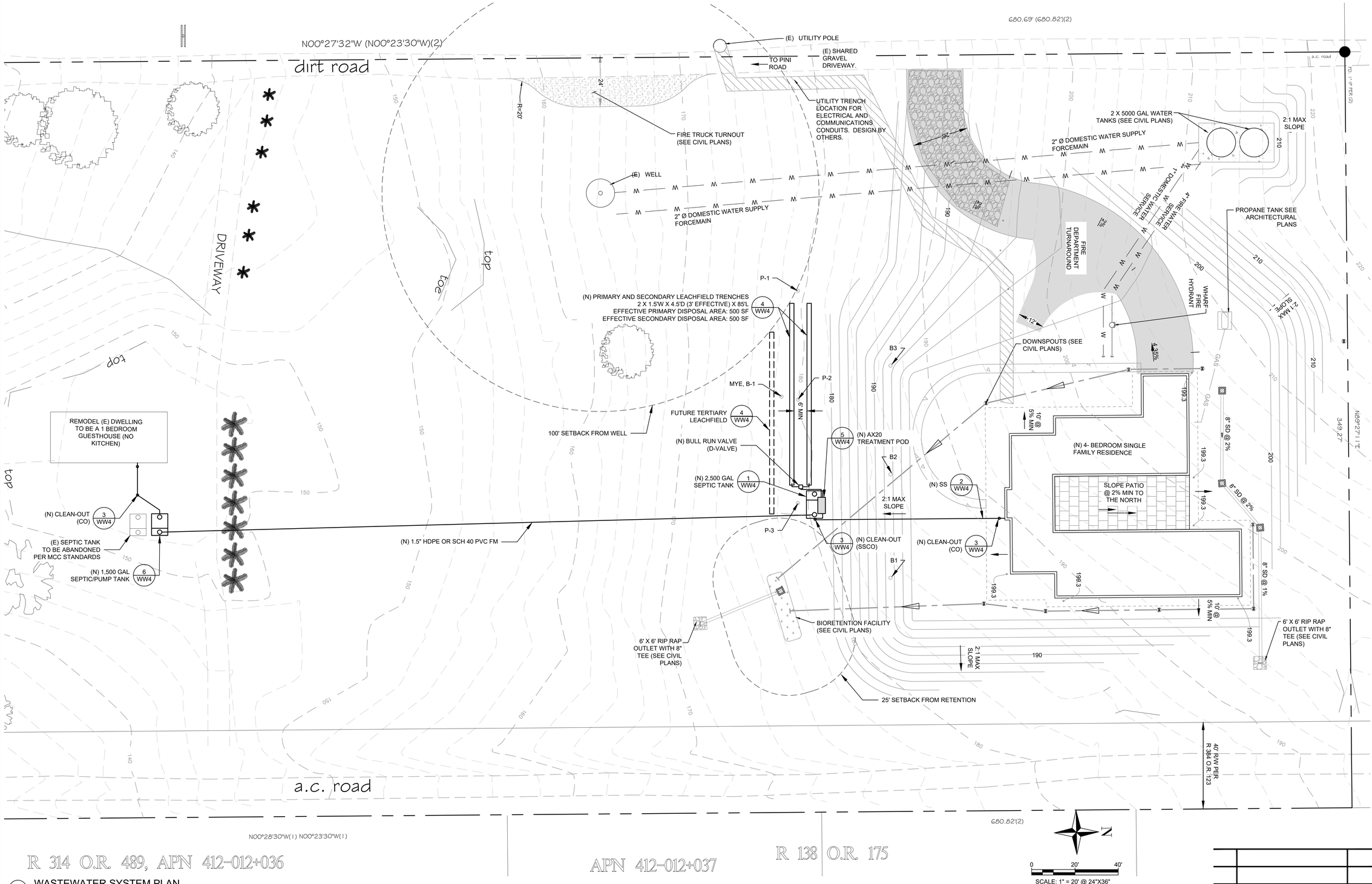

1 WASTEWATER SYSTEM PLAN
SCALE: 1" = 20'

WASTEWATER SYSTEM PLAN

Berrelleza Site Improvement Project
543 Pini Rd.
Royal Oaks CA 95076
APN: 412-012-055-000

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Date AUG 2023	
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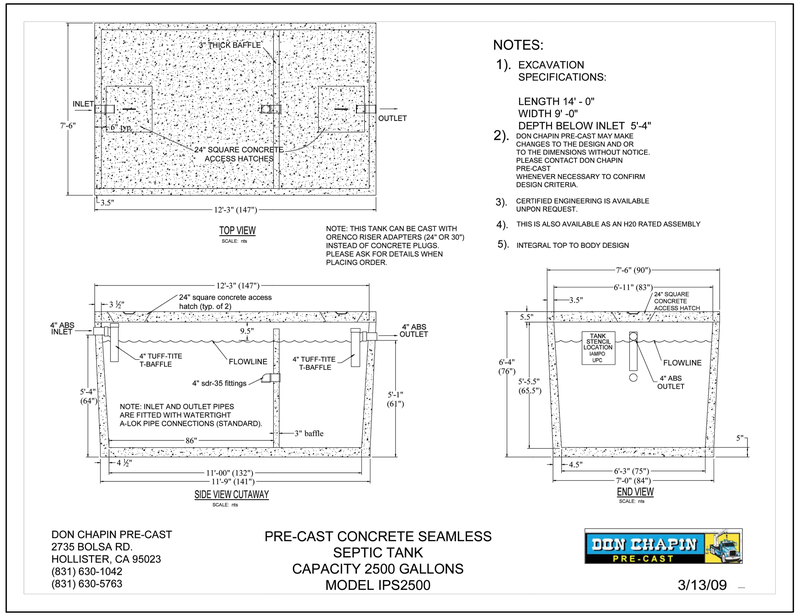
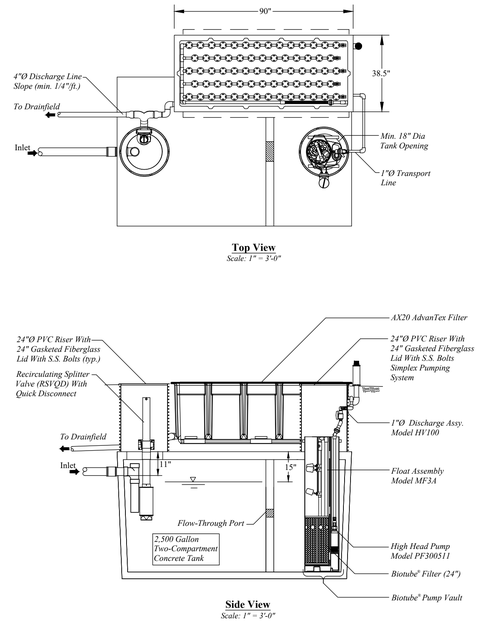
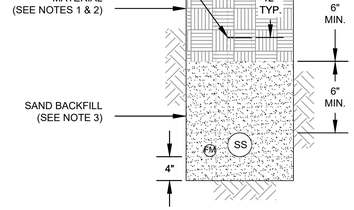


1 2,500 GALLON WATER TIGHT SEPTIC TANK (CHAPIN PRE-CAST WATERTIGHT CONC. TANK OR EQUIV)
SCALE: AS DIMENSIONED



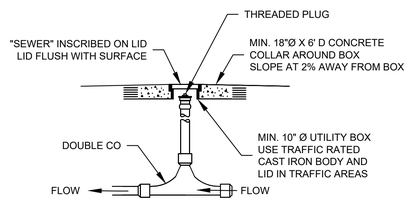
5 ADVANTEX AX20 MODE 3A ENHANCED TREATMENT SYSTEM (WITH 2,500 GALLON CONCRETE WATERTIGHT SEPTIC TANK)
SCALE: AS DIMENSIONED



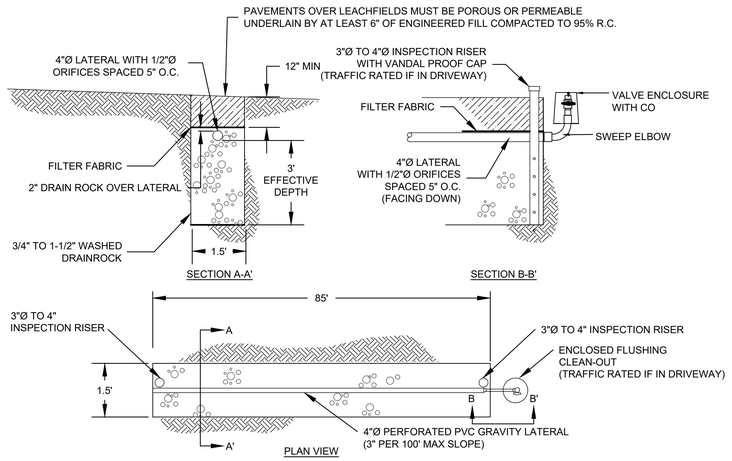
UTILITY TRENCH NOTES:

1. UTILITY TRENCH STRUCTURAL BACKFILL UNDER DRIVEWAYS AND ROADS SHALL BE COMPACTED TO 95% RELATIVE COMPACTION.
2. UTILITY TRENCH STRUCTURAL BACKFILL UNDER NON-TRAFFIC AREAS SHALL BE COMPACTED TO 90% RELATIVE COMPACTION.
3. ALL SAND BACKFILL SHALL BE COMPACTED TO 90% RELATIVE COMPACTION.
4. SS=SANITARY SEWER
5. SANITARY SEWER LINES SHALL BE INSTALLED WITH A 10' MINIMUM SEPARATION FROM ALL POTABLE WATER LINES.
6. IF SANITARY SEWER AND WATER LINES MUST CROSS, THE SANITARY SEWER SHALL BE LOCATED AT LEAST 2' BELOW THE WATER LINE.

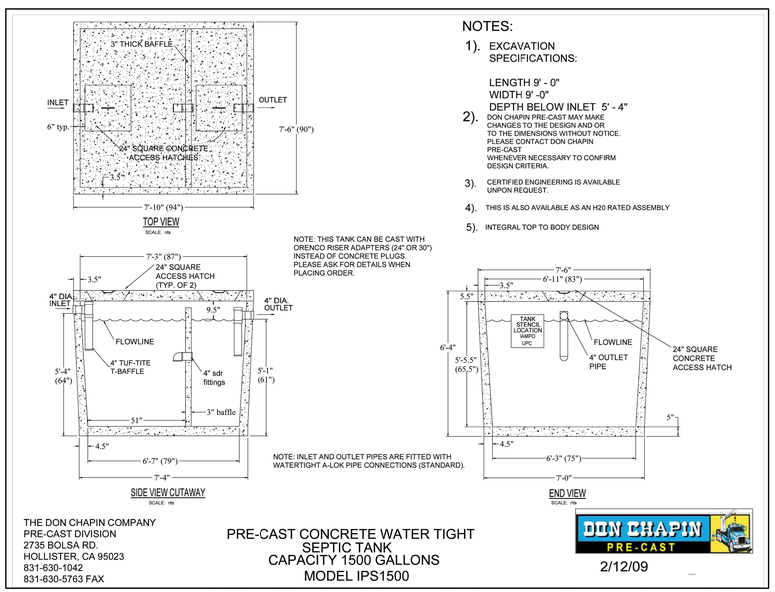
2 SS UTILITY TRENCH DETAIL
SCALE: AS DIMENSIONED



3 SS CLEANOUT
SCALE: AS DIMENSIONED



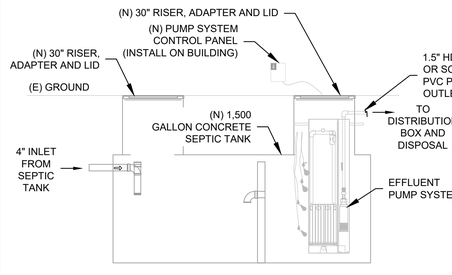
4 CONVENTIONAL LEACHFIELD
SCALE: AS DIMENSIONED



6 1,500 GALLON CONCRETE SEPTIC/PUMP TANK WITH PUMP SYSTEM IN 2ND CHAMBER (CHAPIN PRE-CAST WATERTIGHT CONC.)
SCALE: AS DIMENSIONED

EFFLUENT PUMP SYSTEM NOTES:

1. INSTALL PUMP SYSTEM IN AN ORENCO UNIVERSAL BIOTUBE PUMP VAULT WITH BIOTUBE FILTER
2. PUMP SYSTEM: ORENCO MODEL PF2005 OR EQUIVALENT PUMPING SYSTEM WITH OPERATING POINT OF 20 GPM @ 30' (TDH)
3. FLOAT CONTROL SYSTEM:
   - 3.1. HIGH LEVEL ALARM/ OVERFLOW PROTECTION FLOAT
   - 3.2. TIMER ENABLED ON/OFF FLOAT WITH ON-DEMAND OVERRIDE, AND
   - 3.3. LOW LEVEL ALARM/REDUNDANT SHUTOFF FLOAT
   - 3.4. LEVELS TO BE DETERMINED DURING CONSTRUCTION



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WASTEWATER SYSTEM SCHEMATIC AND DETAILS

Berrelleza Site Improvement Project
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Royal Oaks CA 95076
APN: 412-012-055-000

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REGISTERED PROFESSIONAL ENGINEER PAUL MYER C 80522 EXP 03/31/25 CIVIL STATE OF CALIFORNIA

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GENERAL SPECIFICATIONS

THE FOLLOWING SPECIFICATIONS ARE FOR THE INSTALLATION OF THE ENHANCED WASTEWATER TREATMENT SYSTEM AT THE LOCATION SPECIFIED IN THE BORDER OF THESE DESIGN PLANS. THE ACCOMPANIED PLANS PRESENT THE GENERAL LAYOUT, PLUMBING CONFIGURATION, AND CONSTRUCTION DETAILS.

MATERIAL SPECIFICATIONS

THE FOLLOWING ARE MATERIAL SPECIFICATIONS FOR THE WASTEWATER SYSTEM COMPONENTS. ALL MATERIALS USED FOR THE CONSTRUCTION OF THIS PROJECT SHALL CONFORM TO THE FOLLOWING SPECIFICATIONS AND AS DESCRIBED IN THE ACCOMPANIED PLANS OR AN ENGINEER APPROVED EQUIVALENT.

1. SUBSURFACE TANKS

THE SUBSURFACE TANKS INCLUDE THE 2,500 GALLON CONCRETE WATER-TIGHT SEPTIC TANK, 1,500 GALLON CONCRETE WATER-TIGHT SEPTIC/PUMP TANK AND THE ORENCO ADVANTEX AX20 TREATMENT POD.

1.1. 2,500 GALLON CONCRETE WATER-TIGHT SEPTIC TANK AND AX20 TREATMENT POD. THE SYSTEM SHALL BE CAPABLE OF TREATING DESIGN FLOW OF AT LEAST 600 GPD. DIMENSIONS, FITTING SIZES AND LOCATIONS, AND OPTIONAL ACCESSORIES SHALL BE INCLUDED AS SHOWN ON TANK DRAWINGS. THE TANK SHALL BE WATERTIGHT AND TESTED IN THE FIELD AFTER INSTALLATION.

1.2. PRODUCT STORAGE. THE SUBSURFACE TANKS SHALL BE CAPABLE OF STORING SEPTAGE LIMITED TO THE COLLECTION AND STORAGE OF HUMAN SOLID OR LIQUID ORGANIC WASTE.

1.3. PIPING. SDR35 PVC PIPE, SCHEDULE 40 PVC PIPE, OR ABS PIPE SHALL BE USED FOR INLET AND OUTLET PIPING AS SHOWN ON DRAWINGS. ALL PIPING SHALL BE FACTORY SEALED TO ENABLE FIELD TIGHTNESS TESTING WITH AT LEAST ONE PIPE OPENING PROVIDED WITH A THREADED FITTING FOR CONNECTING A PRESSURE TEST MANIFOLD.

1.4. ACCESS OPENINGS. ALL ACCESS OPENINGS SHALL BE 30 INCHES IN DIAMETER OR LARGER AS SHOWN ON THE PLANS, SHALL BE MANUFACTURED OF FIBERGLASS, CONCRETE OR CAST IRON WITH RESPECT TO SPECIFIED TRAFFIC RATING. LOCATIONS SHALL BE AS SHOWN ON TANK DRAWINGS. EACH MANHOLE SHALL HAVE A WATERTIGHT RISER TO FINISH GRADE.

1.5. RISERS. RISERS SHALL BE REQUIRED FOR ACCESS TO INTERNAL VAULTS AND ACCESS INTO THE TANKS FOR SEPTAGE PUMPING. ALL RISERS SHALL BE CONSTRUCTED WITH WATERTIGHT SEALS PROVIDED. RISERS SHALL BE A MINIMUM OF 30" IN NOMINAL DIAMETER WHEN THE DEPTH OF BURY IS 36" OR GREATER. TO ENSURE PRODUCT COMPATIBILITY, RISERS, LIDS, AND ATTACHMENT COMPONENTS SHALL BE SUPPLIED BY A SINGLE MANUFACTURER AND, WHERE APPLICABLE, SHALL BE FACTORY EQUIPPED WITH THE FOLLOWING;

1.5.1. ADHESIVE. WHEN BONDING TO THE RISER RINGS, AN EPOXY PROVIDED BY THE MANUFACTURER SHALL BE USED. ADHESIVES AND SEALANTS SHALL BE WATERPROOF, CORROSION RESISTANT, AND APPROVED FOR THE INTENDED APPLICATION. THE RISER-TO-TANK CONNECTION SHALL BE WATERTIGHT AND STRUCTURALLY SOUND. THE RISER-TO-TANK CONNECTION SHALL BE CAPABLE OF WITHSTANDING A VERTICAL UPLIFT OF 5,000 POUNDS TO PREVENT RISER SEPARATION DUE TO TANK SETTLEMENT, FROST HEAVE, AND VEHICLE TRAFFIC OVER THE TANK.

1.5.2. LIDS. ONE LID SHALL BE FURNISHED WITH EACH ACCESS RISER. LIDS SHALL BE WATERPROOF, CORROSION RESISTANT, AND UV RESISTANT. LIDS SHALL BE FLAT, WITH NO NOTICEABLE UPWARD DOME. LIDS SHALL NOT ALLOW WATER TO POND ON THEM. LIDS SHALL FORM A WATERTIGHT SEAL WITH THE TOP OF RISER. TRAFFIC-RATED LIDS SHALL BE CAPABLE OF WITHSTANDING A TRUCK WHEEL LOAD (36 SQUARE INCHES) OF 2500 POUNDS FOR 60 MINUTES WITH A MAXIMUM VERTICAL DEFLECTION OF 1-1/2". LIDS SHALL BE PROVIDED WITH TAMPER-RESISTANT STAINLESS STEEL FASTENERS AND A TOOL FOR FASTENER REMOVAL. TAMPER-RESISTANT FASTENERS INCLUDE RECESSED DRIVES, SUCH AS HEX, TORX, AND SQUARE. FASTENERS THAT CAN BE REMOVED WITH COMMON SCREWDRIVERS, SUCH AS SLOTTED AND PHILLIPS, OR FASTENERS THAT CAN BE REMOVED WITH STANDARD TOOLS, SUCH AS PLIERS OR CRESCENT WRENCHES, ARE NOT CONSIDERED TAMPER-RESISTANT. TO PREVENT A TRIPPING HAZARD, FASTENERS SHALL NOT EXTEND ABOVE THE SURFACE OF THE LID.

1.5.3. RISER INSTALLATION. RISER INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.

2. PIPING AND FITTINGS

THE TYPE OF PIPE MATERIALS AND FITTINGS SHALL BE AS DESIGNATED ON THE PLANS AND SHALL COMPLY WITH THE FOLLOWING:

2.1. FITTINGS AND COUPLINGS
THE FITTINGS AND COUPLINGS FOR PVC PIPES SHALL BE THREADED OR SLIP-FITTED TAPERED SOCKET SOLVENT WELD. THREADED ADAPTERS SHALL BE PROVIDED WITH SOCKET PIPE FOR CONNECTIONS TO THREADED PIPE.

3. VALVES

3.1. GENERAL
VALVES SHALL BE OF THE SIZE, TYPE, AND CAPACITY DESIGNATED ON THE PLANS OR IN THE SPECIFICATIONS AND SHALL COMPLY WITH THE REQUIREMENTS SPECIFIED HEREIN. ALL VALVES ON PRESSURIZED PORTIONS OF THE SYSTEM SHALL BE CAPABLE OF SATISFACTORY PERFORMANCE AT WORKING PRESSURE OF 150 PSI. ALL VALVES ON GRAVITY PORTIONS OF THE SYSTEM SHALL BE RATED FOR AT LEAST TWICE THE ESTIMATED STATIC HEAD ABOVE THE VALVE. VALVES SHALL BE DESIGNED TO PERMIT DISASSEMBLY TO REPLACE SEALING COMPONENTS WITHOUT REMOVAL OF THE VALVE BODY FROM THE PIPELINE, SUCH AS TRUE UNION BALL VALVES AND CHECK VALVES.

4. ADDITIONAL COMPONENTS

ALL COMPONENTS SHALL BE INSTALLED PER MANUFACTURER RECOMMENDATIONS. IF THERE IS A CONFLICT BETWEEN MANUFACTURER RECOMMENDATIONS, AND THE DESIGN PLANS, THE PROJECT ENGINEER SHALL BE CONTACTED FOR APPROVAL OF INSTALLATION CONFIGURATION.

5. LEACHFIELDS

THE LEACHFIELD SYSTEM SHALL PROVIDE ADDITIONAL TREATMENT AND DISPOSAL OF THE WASTEWATER. THE SYSTEM SHALL BE CONSTRUCTED AS SHOWN ON PLANS.

5.1. CLEAN DRAIN ROCK
THE DRAIN ROCK SHALL BE LOCATED AS SHOWN IN THE ACCOMPANYING PLANS. THE ROCK SHALL BE CLEAN, DOUBLE WASHED GRAVEL RANGING FROM 3/4"Ø TO 1-½"Ø WITH FINES LESS THAN 1%.

5.2. FILTER FABRIC
THE FILTER FABRIC SHALL BE PLACED ON TOP OF THE GRAVEL ROCK BED. THE FABRIC SHALL BE A GEOTEXTILE SYNTHETIC FILTER FABRIC SUCH AS MIRAFI 1100N, DUPONT TYPAR (4 OR 6 OZ/SQ YD), OR APPROVED EQUIVALENT. THE FABRIC SHALL COVER AN AREA SUCH THAT IT EXTENDS 1 FOOT BEYOND THE TRENCH IN EACH DIRECTION.

5.3. SOIL COVER
THE SOIL COVER SHALL BE PLACED OVER THE LEACHFIELDS TO REDUCE EROSION AND SLOPE INSTABILITY. THE SOIL SHALL BE A SANDY LOAM TO INCREASE THE POTENTIAL FOR AIR THROUGH THE DEPTH OF THE SOIL. THE SOIL SHALL BE COMPACTED TO A MINIMUM OF 90% RELATIVE COMPACTION IN LANDSCAPE AREAS AND 95% RELATIVE COMPACTION IN DRIVEWAYS AND ROADWAYS.

CONSTRUCTION SPECIFICATIONS

THE CONSTRUCTION OF THE PROJECT SHALL CONFORM TO THE PLANS AND FOLLOWING SPECIFICATIONS. ALL NECESSARY CONSTRUCTION PERMITS SHALL BE OBTAINED PRIOR TO COMMENCEMENT OF ALL SITE WORK.

1. PRECONSTRUCTION CONFERENCE

THE CONTRACTOR SHALL HAVE A PRECONSTRUCTION MEETING WITH THE ENGINEER AND OWNER AT LEAST ONE WEEK PRIOR TO COMMENCEMENT OF SITE WORK. THE ENGINEER SHALL BE CONTACTED 48 HOURS PRIOR TO THE MEETING CONFERENCE. THE MEETING SHOULD BE CONDUCTED TO REVIEW THE DESIGN, MATERIAL, AND CONSTRUCTION SPECIFICATIONS. ALL CONTRACTOR PROPOSED REVISIONS IN THE DESIGN SHALL BE APPROVED BY THE ENGINEER. THE INSTALLATION MUST BE INSPECTED BY THE ENGINEER FOR CONFORMANCE TO THE DESIGN.

2. STAKING

THE CONTRACTOR WILL PROVIDE SUFFICIENT HORIZONTAL AND VERTICAL CONTROL FOR INSTALLATION OF THE WORK AT DATUM POINTS NECESSARY TO ESTABLISH ALIGNMENT AND GRADE. THE PROTECTION AND CARE OF THE STAKES ONCE SET, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

3. EXCAVATION

ALL EXCAVATION WORK SHALL BE MADE TO THE LINES, GRADES AND DIMENSIONS SHOWN IN THE ACCOMPANIED PLANS. EXCAVATIONS SHALL BE PERFORMED IN THE DAY AND IN A MANNER THAT MINIMIZES EROSION, FLOODING AND SEDIMENTATION. EXCAVATED SOILS THAT ARE TO BE STOCKPILED ON-SITE SHALL BE PLACED IN A LOCATION AND MANNER THAT MINIMIZES EROSION AND CONTROLS SEDIMENTATION.

THE CONTRACTOR SHALL TAKE EXTRA PRECAUTION WHERE EXCAVATION EQUIPMENT MAY ENCOUNTER EXISTING UNDERGROUND UTILITIES AND OTHER FACILITIES OF ANY NATURE. CONTRACTOR SHALL PERSON HIS OPERATION IN SUCH A MANNER AND SHALL EXERCISE THE GREATEST OF CARE SO AS NOT TO INJURE IN ANY MANNER EXISTING UNDERGROUND UTILITIES, MAINS OR FACILITIES OF ANY NATURE. SHOULD THE CONTRACTOR INJURE, BREAK OR DAMAGE EXISTING UNDERGROUND UTILITIES, MAINS, OR FACILITIES OF ANY NATURE IN ANY MANNER, THEY SHALL REPAIR THE SAME AT THEIR OWN EXPENSE. IF IT DOES NOT APPEAR FEASIBLE THAT THE CONTRACTOR CAN MAKE NEEDED REPAIRS, THEN SUCH REPAIRS SHALL BE MADE BY THE OWNER AND THE CONTRACTOR SHALL BE CHARGED FOR SUCH REPAIRS.

4. POLLUTION CONTROL

4.1. WATER POLLUTION
THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT ALL PERMITTING REQUIREMENTS RELEVANT TO THE CONSTRUCTION OF THE PROJECT ARE MET AT ALL TIMES. ACTIONS BY THE CONTRACTOR, THE SUBCONTRACTORS OR EMPLOYEES THEREOF RESULTING IN NONCOMPLIANCE OF PERMITTING REQUIREMENTS MAY BE GROUNDS FOR TERMINATION OF THIS CONTRACT.

4.2. NOISE POLLUTION
IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO KEEP NOISE POLLUTION, DUE TO THESE CONSTRUCTION ACTIVITIES, AS LOW AS POSSIBLE.

4.3. SOIL CONTAMINATION
THE CONTRACTOR SHALL NOT ALLOW REGULATED MATERIALS TO SPILL ON THE PROJECT SITE. ANY SPILLAGE OR REGULATED MATERIALS RESULTING FROM THE CONTRACTOR'S OPERATION SHALL BE REMOVED IMMEDIATELY BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.

4.4. STORAGE OF REGULATED MATERIALS
THE STORAGE AND USE OF ANY REGULATED MATERIALS SHALL MEET ALL REQUIREMENTS OF LOCAL, STATE, AND FEDERAL REGULATORY AGENCIES. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO SATISFY THE REQUIREMENTS OF ANY REGULATORY AGENCY FOR THE STORAGE, MONITORING, USAGE, TRANSPORTATION, SAFETY, REPORTING, OR ANY OTHER REQUIREMENTS REGARDING THE MANAGEMENT OF REGULATED MATERIALS ON AND OFF THE PROJECT SITE.

5. SITE WORK

5.1. MOBILIZATION
THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PREPARATORY WORK AND PLACEMENT OF MATERIALS IN A STAGING AREA REQUIRED FOR CONSTRUCTION OPERATIONS INCLUDING, BUT NOT LIMITED TO, THOSE NECESSARY FOR THE MOVEMENT OF PERSONNEL, EQUIPMENT, SUPPLIES, AND INCIDENTALS TO THE PROJECT SITE; FOR THE ESTABLISHMENT OF FACILITIES NECESSARY FOR WORK ON THE PROJECT; PROVIDING POLLUTION CONTROL MEASURES; AND FOR ALL OTHER WORK AND OPERATIONS WHICH MUST BE PERFORMED.

THE CONTRACTOR SHALL PROVIDE MATERIALS, NOT SPECIFICALLY DESCRIBED BUT REQUIRED FOR PROPER COMPLETION OF THE WORK OF THIS SECTION, AS SELECTED BY THE CONTRACTOR SUBJECT TO THE APPROVAL OF THE COUNTY.

5.2. CLEARING AND GRUBBING
CLEAR THE SITE AS SHOWN ON THE DRAWINGS AND AS SPECIFIED IN THIS SECTION. CLEARING AND GRUBBING SHALL CONSIST OF ALL WORK INCLUDING, BUT NOT LIMITED TO, SALVAGED MATERIALS REMOVAL, PROVIDING AND INSTALLING TEMPORARY EROSION CONTROL, AND PLACEMENT OF TREES, TREE BRANCHES, TREE STUMPS, BRUSH, ROOTS, BOULDERS, SHRUBS, SEDIMENT, AND ALL OBJECTIONABLE MATERIALS IN AN AGREED UPON LOCATION ADJACENT TO THE WORK SITE.

EXAMINE THE AREAS AND CONDITIONS UNDER WHICH THE WORK OF THIS SECTION WILL BE PERFORMED. CORRECT CONDITIONS DETRIMENTAL TO TIMELY AND PROPER COMPLETION OF THE WORK. DO NOT PROCEED UNTIL UNSATISFACTORY CONDITIONS ARE CORRECTED.

ALL WASTES DISPOSAL SHALL BE CONDUCTED AS FOLLOWS:
A. REMOVE WASTE FROM CLEARING OPERATIONS.
B. DISPOSE OF AWAY FROM THE SITE IN A LEGAL MANNER.
C. DO NOT STORE OR PERMIT DEBRIS TO ACCUMULATE ON THE JOB SITE.
D. DO NOT BURN DEBRIS AT THE SITE.

6. DELETERIOUS MATERIALS

MATERIALS CONTAINING AN EXCESS OF 5% (BY WEIGHT) OF VEGETATION OR OTHER DELETERIOUS MATTER MAY BE UTILIZED IN AREAS OF LANDSCAPING OR OTHER NON-STRUCTURAL FILLS. DELETERIOUS MATERIAL INCLUDES ALL VEGETATIVE AND NON-MINERAL MATTER, AND ALL NON-REDUCIBLE STONE, RUBBLE AND/OR MINERAL MATTER OF GREATER THAN 6 INCHES.

7. UTILITY TRENCHES

A. A SELECT, NONCORROSIVE, GRANULAR, EASILY COMPACTED MATERIAL SHOULD BE USED AS BEDDING AND SHADING IMMEDIATELY AROUND UTILITY PIPES. THE SITE SOILS MAY BE USED FOR TRENCH BACKFILL ABOVE THE SELECT MATERIAL. IF OBTAINING COMPACTION IS DIFFICULT WITH THE SITE SOILS, USE OF A MORE EASILY COMPACTED SAND MAY BE DESIRABLE. THE UPPER FOOT OF BACKFILL IN LANDSCAPED OR OTHER OPEN AREAS SHOULD CONSIST OF NATIVE MATERIAL TO REDUCE THE POTENTIAL FOR SEEPAGE OF WATER INTO THE BACKFILL.
B. TRENCH BACKFILL IN THE UPPER 12 INCHES OF SUBGRADE BENEATH AREAS TO RECEIVE PAVEMENT SHOULD BE COMPACTED TO A MINIMUM OF 95 PERCENT OF MAXIMUM DRY DENSITY. TRENCH BACKFILL IN OTHER AREAS SHOULD BE COMPACTED TO A MINIMUM OF 90 PERCENT OF MAXIMUM DRY DENSITY. JETTING OF UTILITY TRENCH BACKFILL SHOULD NOT BE ALLOWED.

8. PIPE INSTALLATION

8.1. GENERAL
PIPE SHALL BE JOINED BY SOCKET TYPE SOLVENT-WELDED FITTINGS OR THREADED FITTINGS. PLASTIC PIPE SHALL BE CUT SQUARE, EXTERNALLY CHAMFERED APPROXIMATELY 10 TO 15 DEGREES, AND ALL BURRS AND FINS REMOVED. SOLVENT-WELDED JOINTS SHALL BE MADE IN ACCORDANCE WITH ASTM D 2855. THE SOLVENT RECOMMENDED BY THE MANUFACTURER SHALL BE USED.

CARE SHALL BE EXERCISED IN ASSEMBLING A PIPELINE WITH SOLVENT WELDED JOINTS SO THAT STRESS ON PREVIOUSLY MADE JOINTS IS AVOIDED. HANDLING OF THE PIPES FOLLOWING JOINTING, SUCH AS LOWERING THE ASSEMBLED PIPELINE INTO THE TRENCH, SHALL NOT OCCUR PRIOR TO THE SET TIMES SPECIFIED BY THE MANUFACTURER.
SOLVENTS SHALL BE APPLIED TO PIPE ENDS IN SUCH A MANNER THAT NO MATERIAL IS DEPOSITED ON THE INTERIOR SURFACE OF THE PIPE OR EXTRUDED INTO THE INTERIOR OF THE PIPE DURING JOINTING. EXCESS CEMENT ON THE EXTERIOR OF THE JOINT SHALL BE WIPED CLEAN IMMEDIATELY AFTER ASSEMBLY.

THREADED PIPE JOINTS SHALL BE MADE USING TEFLON TAPE OR OTHER APPROVED JOINTING MATERIAL. SOLVENT SHALL NOT BE USED WITH THREADED JOINTS. PLASTIC PIPE WHICH HAS BEEN NICKED, SCARRED, OR OTHERWISE DAMAGED SHALL BE REMOVED AND REPLACED. PLASTIC PIPE SHALL BE SNAKED FROM SIDE TO SIDE IN THE TRENCH TO ALLOW 1 FOOT OF EXPANSION AND CONTRACTION PER 100 FEET OF STRAIGHT RUN.
THE PIPELINE SHALL NOT BE EXPOSED TO WATER FOR 24 HOURS AFTER THE LAST SOLVENT-WELDED JOINT IS MADE.

8.2 GRAVITY PIPE
GRAVITY PIPE FOR WASTEWATER SHALL PROVIDE 2 FT VERTICAL AND 10 FT HORIZONTAL CLEARANCE FROM WATER LINES, AND SHALL CROSS SUCH LINES AS NEARLY AS POSSIBLE TO 90 DEGREES, IF CROSSING CAN NOT BE AVOIDED.

PIPE SLOPES SHALL NOT BE LESS THAN 2% FOR 4"Ø PIPE. PIPES SHALL ENTER AND LEAVE CONNECTIONS AS CLOSE TO PARALLEL AS POSSIBLE, BUT IN NO WAY TO EXCEED AN ANGLE OF 45°. 90° TEE CONNECTIONS ARE NOT ALLOWED.

8.3 GENERAL TRENCHING
EXCAVATION OF PIPE TRENCHES SHALL FOLLOW NEAT AND PARALLEL LINES, WITH TRENCH WIDTH, IN GENERAL, TO BE ONE FOOT, WITH SUCH WIDENING, AS REQUIRED TO PLACE VALVES AND FITTINGS WITH A MINIMUM OF 4 INCH CLEARANCE TO TRENCH WALL. THE TRENCH SHALL BE NO LESS THAN 24 INCHES DEEP, EXCEPT WHEN IT IS NECESSARY, TO AVOID UNDERGROUND OBSTRUCTIONS OR ROCKY CONDITIONS. IN ALL CASES, THE PIPE SHALL BE PLACED ON A BEDDING OF IMPORTED OR NATIVE MATERIAL PROVIDING CONTINUOUS SUPPORT THROUGHOUT ITS LENGTH.

BACKFILL FOR THE PIPE TO THE TOP OF THE PIPE PLUS 4 INCHES SHALL BE SELECTED OR IMPORTED SANDY MATERIAL, FREE OF STONE, CLAY, LIMBS OR OTHER DELETERIOUS MATERIALS IN EXCESS OF 1/2 INCH MAXIMUM DIMENSION, PLACED AND TAMPED AND/OR PADDLED ABOUT THE PIPE TO ENSURE PROPER BEDDING PRIOR TO COMPLETION OF TRENCH FILL. THE REMAINING BACKFILL SHALL BE PLACED AT 90% RELATIVE COMPACTION.

9. FLUSHING AND TESTING

AFTER COMPLETION, ALL PIPELINES SHALL BE THOROUGHLY FLUSHED TO REMOVE DIRT, SCALE, OR OTHER MATERIAL. AFTER FLUSHING, THE LINE SHALL BE PRESSURE TESTED. ALL EQUIPMENT, MATERIALS AND LABOR NECESSARY TO PERFORM THE TESTS SHALL BE FURNISHED BY THE CONTRACTOR AND ALL TESTS SHALL BE CONDUCTED IN THE PRESENCE OF THE OWNER OR ENGINEER.

THE CONTRACTOR SHALL PERFORM A TEST TO DEMONSTRATE THAT THE TANKS AND BASINS ARE WATER TIGHT. THE INLET AND OUTLET PIPES OF THE TANKS SHALL BE CAPPED AND THE TANKS SHALL BE COMPLETELY FILLED WITH WATER. THE WATER LEVEL SHALL REMAIN CONSTANT FOR MORE THAN 24 HOURS, OR DURATION BY THE REVIEWING AGENCY JURISDICTION, WHICHEVER IS GREATER, TO DETERMINE IF IT IS WATER TIGHT.

10. OPERATIONAL TEST

THE PERFORMANCE OF ALL COMPONENTS OF THE SYSTEMS SHALL BE EVALUATED BY THE CONTRACTOR.

DURING THE TEST PERIOD AND AT LEAST 15 DAYS PRIOR TO FINAL INSPECTION, THE SYSTEM SHALL OPERATE SATISFACTORILY DURING SUCH PERIOD. ALL NECESSARY REPAIRS, REPLACEMENTS, AND ADJUSTMENTS SHALL BE MADE UNTIL ALL EQUIPMENT, ELECTRICAL WORK, CONTROLS, AND INSTRUMENTATION ARE FUNCTIONING IN ACCORDANCE WITH THE CONTRACTORS DOCUMENTS OR MANUFACTURER SPECIFICATIONS.

11. AS-BUILT DRAWINGS

THE CONTRACTOR SHALL PROVIDE THE OWNER WITH A SET OF AS-BUILT DRAWINGS OF THE LAYOUT AND CONSTRUCTION OF THE SYSTEM.

12. OTHER ITEMS

ANY PROCEDURES NOT NOTED OR INCLUDED IN THE ENGINEERING PLANS OR SPECIFICATIONS SHALL BE APPROVED BY THE PROJECT ENGINEER PRIOR TO IMPLEMENTATION.

EROSION CONTROL NOTES:

GENERAL. THE CONTRACTOR SHALL INSTALL, MAINTAIN AND INSPECT EROSION CONTROL AND TEMPORARY STORMWATER CONTROL MEASURES TO CONTROL SEDIMENT AND RUNOFF IN ACCORDANCE WITH THESE PLANS AND THE LOCAL JURISDICTION.

1.1. THE CONSTRUCTION OF THIS PROJECT IS NOT EXPECTED TO OCCUR DURING THE WINTER SEASON (OCTOBER 15TH THROUGH APRIL 15TH).

1.2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR EROSION AND SEDIMENT CONTROL BMP INSTALLATION AND MAINTENANCE.

1.3. ALL GRADING SHALL CONFORM TO THE LOCAL GRADING ORDINANCE, EROSION CONTROL ORDINANCES, AND CALIFORNIA BUILDING CODE.

1.4. ALL DISTURBED SURFACES SHALL BE PREPARED AND MAINTAINED TO CONTROL EROSION AND TO ESTABLISH NATIVE OR NATURALIZED VEGETATIVE GROWTH COMPATIBLE WITH THE AREA. THIS CONTROL SHALL CONSIST OF: A. EFFECT TEMPORARY PLANTING SUCH AS RYE GRASS, SOME OTHER FAST-GERMINATION SEED, AND MULCHING WITH STRAW AND/OR OTHER SLOPE STABILIZATION MATERIAL; B) PERMANENT PLANTING OF NATIVE OR NATURALIZED DROUGHT RESISTANT SPECIES OF SHRUBS, TREES, OR OTHER VEGETATION, PURSUANT TO THE COUNTY'S LANDSCAPE CRITERIA, WHEN THE PROJECT IS COMPLETED; C) MULCHING, FERTILIZING, WATERING OR OTHER METHODS MAY BE REQUIRED TO ESTABLISH NEW VEGETATION, ON SLOPES LESS THAN 20%, TOPSOIL SHOULD BE STOCKPILED AND REAPPLIED.

SEED AND MULCH. ALL AREAS ON- AND OFF-SITE EXPOSED DURING CONSTRUCTION ACTIVITIES, IF NOT PERMANENTLY LANDSCAPED PER PLAN, SHALL BE PROTECTED BY MULCHING AND/OR HAND BROADCASTING OF THE FOLLOWING STERIL, WEED FREE, SEED MIX AND INCORPORATED OVER ALL DISTURBED SLOPES:

BROMUS CARINATUS 10#/ACRE
LEYMUS TRITICOIDES 8#/AC.
HORDEUM BRACHYANTHERUM 5#/AC.
FESTUCA RUBRA 8#/AC.
DESCHAMPSIA CESPITOSA 8#/AC.

THE MIX/APPLICATION SHALL ALSO CONTAIN:
- FERTILIZER (6-3-3) SHALL BE HAND BROADCAST AND INCORPORATED AT 30-LB/ACRE OVER ENTIRE AREA.
- MYCHORRHIZAL FUNGI SHALL BE ADDED AT 50 LB/ ACRE.
- IF HYDROSEEDING, ADD MULCH AND TACKIFIER TO ABOVE.

ALL EXCAVATED MATERIAL SHALL BE REMOVED TO AN APPROVED DISPOSAL SITE OR DISPOSED OF ON-SITE IN A MANNER THAT WILL NOT CAUSE EROSION.

CONCRETE WASHOUT. TEMPORARY CONCRETE WASHOUT FACILITIES SHALL BE LOCATED A MINIMUM OF 50 FEET FROM STORM DRAIN INLETS, OPEN DRAINAGE FACILITIES, AND WATERCOURSES. THE CONCRETE WASHOUT FACILITY SHALL BE BELOW GRADE AND CONSTRUCTED WITH A MINIMUM LENGTH AND MINIMUM WIDTH OF 10 FEET. TEMPORARY CONCRETE FACILITIES SHALL BE CONSTRUCTED AND MAINTAINED IN SUFFICIENT QUANTITY AND SIZE TO CONTAIN ALL LIQUID AND CONCRETE WASTE GENERATED BY WASHOUT OPERATIONS. THE WASHOUT SHALL HAVE A 10 MIL POLYETHYLENE PLASTIC LINER. WHEN CONCRETE WASHOUT FACILITIES ARE NO LONGER REQUIRED FOR THE WORK, THE HARDENED CONCRETE AND MATERIALS FOR THE WASHOUT SHALL BE REMOVED AND DISPOSED OF. HOLES, DEPRESSIONS, OR OTHER GROUND DISTURBANCES CAUSED BY THE REMOVAL OF THE CONCRETE WASHOUT SHOULD BE BACKFILLED AND REPAIRED.

OTHER PROVISIONS. IF CONSTRUCTION OCCURS BETWEEN OCTOBER 15TH AND APRIL 15TH, EXPOSED SOIL NOT INVOLVED IN IMMEDIATE CONSTRUCTION ACTIVITY SHALL BE PROTECTED FROM EROSION AT ALL TIMES. AFTER APRIL 15TH, EROSION CONTROL MEASURES SHALL BE IN PLACE DURING INCLEMENT WEATHER.

EROSION CONTROL MEASURES SHALL BE KEPT IN PLACE BY THE CONTRACTOR UNTIL NATIVE VEGETATION HAS BEEN ESTABLISHED AND PROVIDES NECESSARY SLOPE COVER (MINIMUM 70% COVER).

No.	Revision/Issue	Date

WASTEWATER SYSTEM SPECIFICATIONS

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Drawn By	Checked By
PEM	PEM
Project No. 202029	Scale AS SHOWN
Date AUG 2023	
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