

CITY OF SCOTTS VALLEY

CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

INITIAL STUDY

Mitigated Negative Declaration EA18-008

for

Creamer Two-Lot Minor Land Division - 33 Polo Heights
Assessor's Parcel Number 024-021-28

General Plan Amendment No. GPA18-002

Zone Change No. 18-002

Minor Land Division No. MLD18-004

Design Review No. DR19-013

Tree Removal Permit

Todd Creamer, Owner/Applicant

December 13, 2019

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Address where documents may be obtained: City of Scotts Valley, Planning Department, One Civic Center Drive, Scotts Valley, CA 95066, (831) 440-5633

Online at this link: http://www.scottsvally.org/planning/current_projects.html

CEQA APPENDIX G

ENVIRONMENTAL CHECKLIST FOR

1. Project title: Creamer Two-Lot Minor Land Division - 33 Polo Heights

2. Lead agency name and address:

City of Scotts Valley, Planning Department, 1 Civic Center Drive, Scotts Valley, CA 95066

3. Contact person and phone number: Scott Harriman, Contract Planner (650) 587-7300 ext. 66

4. Project location: 33 Polo Heights, APN 024-021-028

5. Project sponsor's name and address:

Todd Creamer, 33 Polo Heights, Scotts Valley, CA 95066

6. General plan designation: Estate Residential and Rural Residential

7. Zoning: R-1-40, Estate Residential and R-R- 2.5, Rural Residential

8. Description of project: (Describe the whole action involved, including but not limited to later phases of the project, and any secondary, support, or off-site features necessary for its implementation. Attach additional sheets if necessary.)

Project proposes to subdivide an existing 3.73-acre site currently developed with one single-family home into two lots (1.70 and 1.76 acres net), to allow development of one new single-family home and accessory dwelling unit.

The project requires a General Plan Amendment and Rezoning to unify the site into one general plan and zoning designation. The project is also requesting Design Review and Tree Removal permit approval for the proposed home and site improvements.

9. Surrounding land uses and setting: (Briefly describe the project's surroundings)

The project site is surrounded on the north, south and east by rural and estate residential development, with residential densities of one unit per one to two and one-half acres. State highway, Route 17, runs along the project sites westerly boundary. The project site and surrounding area is considered hillside development.

10. Other public agencies whose approval is required: (e.g., permits, financing approval, or participation agreement.)

Scotts Valley Water District

California Department of Forestry (CalFire)

11. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?

No consultation requests from California Native American tribes have been received by the City of Scotts Valley.

However, notice of this pending project has been provided to local tribal groups.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a “Potentially Significant Impact,” as indicated by the checklist on the following pages.

<input checked="" type="checkbox"/> Aesthetics	<input type="checkbox"/> Agriculture / Forestry Resources	<input type="checkbox"/> Air Quality
<input checked="" type="checkbox"/> Biological Resources	<input type="checkbox"/> Cultural Resources	<input type="checkbox"/> Energy
<input type="checkbox"/> Geology/Soils	<input type="checkbox"/> Greenhouse Gas Emissions	<input type="checkbox"/> Hazards and Hazardous Materials
<input type="checkbox"/> Hydrology/Water Quality	<input type="checkbox"/> Land Use / Planning	<input type="checkbox"/> Mineral Resources
<input type="checkbox"/> Noise	<input type="checkbox"/> Population / Housing	<input type="checkbox"/> Public Services
<input type="checkbox"/> Recreation	<input type="checkbox"/> Transportation	<input type="checkbox"/> Tribal Cultural Resources
<input type="checkbox"/> Utilities / Service Systems	<input type="checkbox"/> Wildfire	<input type="checkbox"/> Mandatory Findings of Significance

DETERMINATION

On the basis of this initial evaluation:

I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

Signature: Scott Harriman

Date: December 13, 2019

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
I. AESTHETICS. Except as provided in Public Resources Code Section 21099, would the project:				
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) In nonurbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
II. AGRICULTURE AND FORESTRY RESOURCES. In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
III. AIR QUALITY. Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
IV. BIOLOGICAL RESOURCES. Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
V. CULTURAL RESOURCES. Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
VI. ENERGY. Would the project:				
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
VII. GEOLOGY AND SOILS. Would the project:				
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map, issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Belocated on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Belocated on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

VIII. GREENHOUSE GAS EMISSIONS. Would the project:

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

IX. HAZARDS AND HAZARDOUS MATERIALS. Would the project:

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code § 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

X. HYDROLOGY AND WATER QUALITY. Would the project:

a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
i) result in a substantial erosion or siltation on- or off-site;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv) impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
XI. LAND USE AND PLANNING. Would the project:				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
XII. MINERAL RESOURCES. Would the project:				
a) Result in the loss of availability of a known mineral resource that would be a value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
XIII. NOISE. Would the project result in:				
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
XIV. POPULATION AND HOUSING. Would the project:				
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
XV. PUBLIC SERVICES. Would the project:				
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
XVI. RECREATION.				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
XVII. TRANSPORTATION. Would the project:				
a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
XVIII. TRIBAL CULTURAL RESOURCES.				
a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code § 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code § 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code § 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
XIX. UTILITIES AND SERVICE SYSTEMS. Would the project:				
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Issues		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
b)	Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c)	Result in a determination by the waste water treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d)	Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e)	Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

XX. WILDFIRE. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:

a)	Substantially impair an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b)	Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c)	Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d)	Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

XXI. MANDATORY FINDINGS OF SIGNIFICANCE.

a)	Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b)	Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c)	Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Creamer Two-lot Minor Land Division - 33 Polo Heights
General Plan Amendment, Zone Change, Minor Land Division, Environmental Review, Design
Review, Tree Removal
Assessor's Parcel Number 024-021-28
Application File No.s GPA18-002, ZC18-002, MLD18-004, EA18-008, DR19-013

Mitigated Negative Declaration Mitigation Measures

Mitigation Measure #1 - Aesthetics:

A five-year landscape and tree monitoring plan shall be established and recorded to ensure the health and vigor of the required plantings are appropriately maintained to enhance the visual scenic qualities of the corridor and provide visual screening the proposed home from Highway 17.

Mitigation Measure #2 - Biological Resources, Tree Preservation and Forest Habitat

- a. Plan housing sites to minimize removal of trees, particularly trees greater than 24 inches in diameter.
- b. Plan all tree removal and grading to occur during late summer and fall (August 1 to October 31 is recommended), to avoid impacting nesting birds. Several State-protected bird species (e.g. Cooper's hawk) may nest in habitat on site, as well as many migratory birds (e.g., golden-crowned kinglet) that are protected by the federal Migratory Bird Treat Act.
- c. Hire a qualified bat ecologist to evaluate trees that will be removed for potential presence of protected bat species (e.g., pallid bat). If bats are present, implement a plan recommended by bat ecologist to minimize impacts to bat. Such measures may include scheduling tree removal in late summer or fall after bat breeding season, and/or hiring a bat ecologist with appropriate state and federal permits to place bat exclusion devices on occupied trees immediately prior to tree removal.
- d. Avoid all grading and tree removal within 100 feet of seasonal drainage, as measured from the creek centerline.
- e. Restrict residential development and landscaping to the minimum footprint necessary. Develop a plan that preserves the forest habitat on the remainder of each parcel (e.g., specify that only hazard trees may be removed, etc.)
- f. For trees to be retained that occur within 30 feet of road construction, utility trenching or rough grading for home construction, the trees shall be protected by the placement of 6-foot high plastic construction fencing. Fencing shall be placed along the outside edge of the dripline of the tree or grove of trees. That fencing shall be maintained throughout the site construction period and shall be inspected periodically for damage and proper functioning.
- g. If construction activities are proposed within the dripline of trees to be retained, the following construction guidelines should be implemented (or other measures, as specified by a certified arborist): minimize grading, filling, or other type of soil disturbance within 10 feet of the tree trunk. If one-third or more of the roots are disturbed, the injured tree shall be watered so that the ground is soaked to a depth of 18 inches, extending outward to the dripline of the tree.

- h. If evidence of the fungus responsible for Sudden Oak Death (*Phytophthora* sp.) is detected on the property, the home owners should implement measures to prevent/control the spread of this fungus both on and off-site. Homeowners should be responsible for implementing the most current disease-preventing measures for the use, storage and/or transporting of oak firewood as a means of minimizing the spread of the disease within the County and the State of California. Current information on this disease and recommended treatment is available through the University of California Cooperative Extension, Sudden Oak Death website.
- i. Landowners should avoid using invasive, non-native plant species in their landscaping. Plant species to be avoided include: all brooms (i.e., French broom, Spanish broom, Scotch broom), periwinkle (*vinca* sp.), German (or Cape) ivy, Algerian ivy, acacia (all kinds), eucalyptus (all kinds) and Monterey pine.
- j. Areas disturbed during site grading should be seeded with native grasses to discourage the colonization of invasive, non-native plants. Wild rye (*Elymus glaucus*) and California brome (*Bromus carinatus*) are recommended.

Mitigation Measure #3 - Biological Resources, CalFire Permit

To comply with the California Department of Forestry (CalFire) requirements, the developer shall obtain a CalFire permit before issuance of any grading or earth disturbance and shall implement all permit requirements.

Discussion Section

I. Aesthetics

Discussion: The proposed development site (proposed Lot A) is adjacent to Highway 17 and within a hillside site containing 162 protected trees over eight inches in diameter. The proposed development of the 1.76-acre project site (Lot A) proposes to remove approximately 83 trees, in various states of health and condition. The proposed residence is subject to the City of Scotts Valley Design Review process due to its hillside location. State Route Highway 17 is eligible for listing as a scenic highway as shown on the State Department of Transportation (Caltrans) list of eligible and officially designated state scenic highways. Currently, the site is heavily wooded, with tree and brush cover that provides sufficient vegetative screening to block views of the existing home on the site from Highway 17. Providing adequate vegetative screening and tree cover is important to maintain the scenic highway eligibility, and helps reduce the potential for visual distractions for drivers commuting along Highway 17.

The proposed tentative subdivision map includes a landscape easement agreement, which is intended to insure that the area adjacent to Highway 17 is planted and maintained with extensive tree coverage. Conditions of project approval require the landscape easement to exclude any outdoor parking and/or storage of equipment, vehicles or materials in areas designated on the proposed tentative parcel map. The landscape easement also prevents the construction of accessory structures within the landscape easement area that would otherwise be allowed by the existing and proposed residential zoning. As a landscape easement is proposed and is a part of the development application, no further mitigation is necessary to eliminate the potential for outdoor storage of equipment, vehicles and materials, or the placement of accessory structures along the westerly, Highway 17, boundary.

Given the importance of the maintaining the scenic qualities of Highway 17, landscape and tree plantings proposed with the development plan should be monitored for a period of five years to ensure that the proposed foliage and tree plantings are appropriately established to maintain important scenic qualities and visual screening as viewed from Highway 17. This mitigation measure would reduce potential visual impacts to less than significant levels.

Mitigation Measure #1 Aesthetics. A five-year landscape and tree monitoring plan shall be established and recorded to ensure the health and vigor of the required plantings are appropriately maintained to enhance the visual scenic qualities of the corridor and provide visual screening the proposed home from Highway 17.

Finding: For the “Aesthetics” category, the threshold of significance has been potential exceeded regarding impacts associated with maintaining the eligibility of Highway 17 as a designated state scenic highway. With the implementation of the above mitigation measure all impacts can be reduced or otherwise mitigated to levels of less than significant.

II. Agriculture and Forestry Resources

Discussion: The project site is not located on land that is classified as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance by the Farmland Mapping and Monitoring Program of the California Resource Agency. The site is located in a portion of the city zoned for residential use. Therefore, no impacts would occur as a result of the project.

Finding: For the “Agricultural” category, the thresholds of significance have not been exceeded. There would be no impact to agricultural resources. Therefore no mitigation is required.

III. Air Quality

Discussion: The Monterey Bay Air Resources District (MBARD) is responsible for limiting the amount of emissions that can be generated through the basin by various stationary sources. Specific rules and regulations have been adopted in the Air Quality Management Plan of 2012-2015, adopted March 15, 2017, which limit the emissions that can be generated by various uses and/or activities, and identify specific pollution reduction measures which must be implemented in association with various uses and activities. Emission sources subject to these rules are regulated through the MBARD’s permitting process. Any emissions sources that would be generated as part of the proposed project would be subject to the MBARD rules and regulations. The proposed development of one new residential dwelling unit on a 1.73-acre site (the point source) does not include any processes or activities that would emit air pollutants. Therefore, the proposed use does not have the potential for significant impacts that would conflict with the Air Quality Management Plan. For non-point source pollutants such as traffic, which is regulated by the State Air Resources Board (ARB), the project will generate emissions from automobiles associated with regular vehicular travel. It is anticipated that the one new residential unit proposed as the project would generate an average of ten-vehicle trips/day, which is the normal trip generation for a residential project of this size. As such, these impacts will not be significant.

Standard conditions of approval to reduce dust generation from project grading and construction to minimal levels require the grading contractor to implement best management practices for dust control, including watering down exposed earth surfaces each non-rainfall day at intervals that attenuate dust problems. Further, any dirt tracked on to Polo Heights (Road) shall be removed daily in a manner that does not create substantial airborne dust. These requirements shall be included in the construction contract for the project.

The proposed project does not have the potential to create objectionable odors.

Finding: Compliance with standard conditions of approval, as monitored through regular and routine City Building and Engineering Department inspections will reduce the impact to less than significant levels.

IV. Biological Resources

Discussion: A Biological Assessment, prepared by Biotic Resources Group, Kathleen Lyons, Plant Ecologist, and Dana Bland and Associates, Wildlife Biologist, was prepared for the site in 2003 as part of the Timber Ridge Road Parcels Subdivision that established the subject parcel. The assessment analyzed the existing biotic resources including special status plant and wildlife species and habitat. The biological resources report identified a number of potential significant impacts pertaining to tree removals and associated impacts to nesting birds. The report also recommended that a qualified ecologist evaluate trees that will be removed for the potential presence of protected bat species. In addition, the report made a number of landscape recommendations to avoid using non-native plant species and that areas disturbed during site grading be seeded with native grasses.

In May 2018, a report was prepared evaluating the 2003 biological assessment and a site inspection was conducted to evaluate current site conditions. Recommendations from the 2003 report were reviewed to determine if the measures remain applicable to the current minor subdivision project. The 2018 report concludes that site conditions have not changed significantly since the 2003 report and that findings from the 2003 report remain applicable to the currently proposed minor subdivision. The property is unlikely to support any special status plant species, however the following special status wildlife species may nest on the site: Coopers hawk, sharp-shinned hawk, and long-ear owl. Pallid bat may roost in large tree hollows. Recommendations presented in the 2003 report pertaining to tree removal (retaining large trees, scheduling tree removal outside the breeding season) are still applicable to the current project. Recommendations presented on the 2003 report pertaining to protecting native trees, implementing measures to minimize impacts on trees located adjacent to construction, and avoiding use of invasive, non-native plant species for landscaping are also still applicable. The following potentially significant impacts were identified that affect either:

Significant Impacts:

- a. A species (or its habitat) listed or proposed for listing by State or Federal governments as rare or endangered.
- b. Breeding / nesting habitat for a State species of special concern (e.g., Cooper's hawk);
- c. A plant considered rare (i.e., List 1B, on 2003 analysis) by California Native Plant Society (CNPS).
- d. A habitat regulated by State or Federal law, or
- e. Movement of native resident or migratory species.
- f. A habitat recognized as sensitive by CDFG and/or the City of Scotts Valley.

Mitigation Measure #2 Biological Resources – Tree Preservation and Forest Habitat.

- a. Plan housing sites to minimize removal of trees, particularly trees greater than 24 inches in diameter.
- b. Plan all tree removal and grading to occur during late summer and fall (August 1 to October 31 is recommended), to avoid impacting nesting birds. Several State-protected bird species (e.g. Cooper's hawk) may nest in habitat on site, as well as many migratory birds (e.g., golden-crowned kinglet) that are protected by the federal Migratory Bird Treaty Act.

- c. Hire a qualified bat ecologist to evaluate trees that will be removed for potential presence of protected bat species (e.g., pallid bat). If bats are present, implement a plan recommended by bat ecologist to minimize impacts to bat. Such measures may include scheduling tree removal in late summer or fall after bat breeding season, and/or hiring a bat ecologist with appropriate state and federal permits to place bat exclusion devices on occupied trees immediately prior to tree removal.
- d. Avoid all grading and tree removal within 100 feet of seasonal drainage, as measured from the creek centerline.
- e. Restrict residential development and landscaping to the minimum footprint necessary. Develop a plan that preserves the forest habitat on the remainder of each parcel (e.g., specify that only hazard trees may be removed, etc.)
- f. For trees to be retained that occur within 30 feet of rad construction, utility trenching or rough grading for home construction, the trees shall be protected by the placement of 6-foot high plastic construction fencing. Fencing shall be placed along the outside edge of the dripline of the tree or grove of trees. That fencing shall be maintained throughout the site construction period and shall be inspected periodically for damage and proper functioning.
- g. If construction activities are proposed within the dripline of trees to be retained, the following construction guidelines should be implemented (or other measures, as specified by a certified arborist): minimize grading, filling, or other type of soil disturbance within 10 feet of the tree trunk. If one-third or more of the roots are disturbed, the injured tree shall be watered so that the ground is soaked to a depth of 18 inches, extending outward to the dripline of the tree.
- h. If evidence of the fungus responsible for Sudden Oak Death (*Phytophthora* sp.) is detected on the property, the home owners should implement measures to prevent/control the spread of this fungus both on and off-site. Homeowners should be responsible for implementing the most current disease-preventing measures for the use, storage and/or transporting of oak firewood as a means of minimizing the spread of the disease within the County and the State of California. Current information on this disease and recommended treatment is available through the University of California Cooperative Extension, Sudden Oak Death website.
- i. Landowners should avoid using invasive, non-native plant species in their landscaping. Plant species to be avoided include: all brooms (i.e., French broom, Spanish broom, Scotch broom), periwinkle (*vinca* sp.), German (or Cape) ivy, Algerian ivy, acacia (all kinds), eucalyptus (all kinds) and Monterey pine.
- j. Areas disturbed during site grading should be seeded with native grasses to discourage the colonization of invasive, non-native plants. Wild rye (*Elymus glaucus*) and California brome (*Bromus carinatus*) are recommended.

Mitigation Measure #3 Biological Resources – CalFire Permit Required. To comply with the California Department of Forestry (CalFire) requirements, the developer shall obtain a CalFire permit before issuance of any grading or earth disturbance and shall implement all permit requirements.

V. Cultural Resources

Discussion: The site does not contain any historical resources, however the Scotts Valley General Plan, Archaeological Sensitivity Zones Map, Figure OS-2, depicts the site as being within a HMS Zone, Moderate Sensitivity Zones. Over the years several cultural resource evaluations have been prepared for properties in the general vicinity of the project site with the recommendation that earth moving activities monitored by a qualified archaeologist.

Standard conditions of approval for development require that the applicant and construction contractor ensure that any cultural resource, including archaeological, paleontological, or human remains are not destroyed if accidentally discovered during project grading or other subsurface work.

As part of the standard conditions of approval, the developer shall submit a copy of a contract with a qualified/registered archaeologist to conduct monitoring of all earth disturbing activities for review and approval by the Community Development Director, before grading permit issuance. The developer shall include this requirement in the contract for all contractors involved with grading and subsurface work. The qualified/registered archaeologist shall monitor all earthwork activity as described below.

- a. An archaeologist shall monitor the grading or excavation of soils at the development site in order to determine if important cultural remains are present. Such monitoring shall begin before and occur during subsurface earth moving activities;
- b. The duration and period of archaeological monitoring of project development activities shall be at the discretion of the professional archaeologist. At a minimum, however, any activity that initially displaces or removes original soil from its present context shall be monitored by an archaeologist on a continuous basis;
- c. Monitoring activities such as replacing soils in trenches, redistributing displaced soil elsewhere on the development site, or removing stockpiled excavated soil may not require monitoring;
- d. Monitoring may include the periodic sampling and screening of soils in order to better determine if cultural remains are present; and,
- e. If any cultural resources are discovered, the project contractor shall immediately stop all earth disturbing work within a 150-foot radius of the discovery to allow for inspection, evaluation, and potential recovery of resources by the supervising project archaeologist, before resuming any earth-disturbing construction activities. The developer shall also contact the Planning Department and Building Official as soon as work has been stopped. It may be necessary to resume grading or excavation activities under the direction of the supervising archaeologist in order to locate or expose cultural remains.

Standard conditions of approval require that the applicant and construction contractor ensure that paleontological resources are not destroyed during project grading, the project proponent will include the following measures:

- a. Provide the project paleontologist with a copy of the final grading plans for review prior to any project grading;

- b. Provide for daily monitoring during grading activities by the project paleontologist to determine if paleontological resources are encountered in excavated areas;
- c. Allow for the recovery of any discovered paleontological resources according to a recovery plan/methods specified by the project paleontologist, including the donation of the recovered resources to a suitable repository (museum, school, etc.);
- d. If recovery occurs, ensure that the project paleontologist prepare a recovery report that details the type of resources recovered and the repository locations where they were taken; and,
- e. Specify in the construction contract with the project grading contractor(s), that grading personnel are to cooperate with and assist the project paleontologist during monitoring and any recovery activities, including assisting with recovery efforts if necessary.

Human remains. A cemetery or known burial site does not exist on the property. If human remains are unexpectedly encountered during project grading, the actions required to mitigate for impacts to cultural resources will be followed. This will effectively preserve any human remains for proper burial.

Finding: For the "Cultural Resources" category, compliance with standard conditions of approval, as monitored through the regular and routine Building and Engineering Division inspections will reduce the impacts to less than significant levels.

VI. Energy

Discussion: The project proposes to construct one new residential home and an attached accessory dwelling unit, both of which will be designed to meet Building Codes and Title 24 energy standards through the building permit process. The project proposes infrastructure, such as grading, driveway pavement, water and solid waste systems, which reduces unnecessary consumption of energy during construction and operations.

Finding: For the "Energy" category, standard conditions of approval will reduce impacts to less than significant levels.

VII. Geology and Soils

Discussion: The project proposes one new residential dwelling unit within a seismically active area will subject the dwellings and their inhabitants to periodic seismic shaking associated with the San Andreas Fault and other active faults within the Monterey Bay Area. A geotechnical feasibility study was prepared for the site by a registered professional engineer, dated April 30, 2018. The report evaluates the geology and geological setting of the 3.73-acre site, which would be split into two lots for the development of one new single-family dwelling. The report evaluates subsurface soil conditions, site drainage, slope stability, seismic hazards, and the potential for liquefaction.

The report states that the proposed homesite is mapped as being underlain by Monterey Formation, however Purisima Formation sandstone was encountered in the existing homesite on the northern portion of the project site. Purisima Formation was also encountered on the ridge across the street from the project site. The soils report states that the pro-

ject site is likely to be underlain by shallow Purisima Sandstone. No signs of slope instability were observed during the site reconnaissance, however recommends evaluating slopes during the plan development to ensure that improvements are setback from potentially unstable slopes and constructed on stable ground. The proposed homesite is expected to be underlain by shallow bedrock with a low to nil potential for liquefaction.

The report identifies primary geotechnical concerns for the project include embedding foundations into firm uniform native soil or engineered fill, setting structures back from steep slopes, controlling site drainage and designing structures to resist strong seismic shaking.

Standard conditions of approval require building and grading permits for the project structures designed to Uniform Building Code standards for the design level earthquake for the area. Design-level geotechnical investigations will be required as part of the development and building plans submitted to the City for a Building Permit.

Finding: Compliance with standard conditions of approval will reduce all impacts to levels of less than significant. No further mitigation is necessary or required.

VIII. Greenhouse Gas Emissions

Discussion: Significant changes to global climate have been attributed to the accumulation of greenhouse gases (GHG) in the atmosphere. The most common GHG is carbon dioxide (CO₂). The primary contributor to CO₂ emissions in the state is transportation (vehicle exhaust). California's Global Warming Solutions Act of 2006 (AB 32) and the Governor's Executive Order S-3-05 both require reductions in GHGs. Their statutory goals are to achieve 1990 GHG emission levels by 2020 and reduce emission levels to 80% of the 1990 levels by 2050. The California Air Resources Board (CARB) is the lead agency implementing AB 32. CARB has completed a statewide inventory of GHGs, which shows transportation contributes 38% of all CO₂ emissions. Industry is the second greatest source, contributing 21%. Other contributors are electric power generation, agriculture and various commercial and residential uses.

Most individual projects do not generate sufficient GHGs to create a project-specific impact to significantly influence climate change; therefore this impact typically involves an analysis to determine if a project's GHG emissions are cumulatively considerable (significant cumulative impact). The project proposes one new residential unit. Locally, the Monterey Bay Air Resources District (MBARD), the County of Santa Cruz, or the City have not yet adopted a significance threshold for GHGs. MBARD is currently in the process of developing threshold standards for evaluating projects under CEQA. Currently, MBARD recommends using a threshold of 2,000 metric tons of CO₂/year for determining if a project GHGs are cumulatively considerable. A new residential project will generate 9.5 average daily trips for residential use. The GHGs generated from this level of traffic is below 2,000 metric tons. Energy use of the one completed single family home and an attached accessory dwelling unit will be less than similar units constructed in previous years because their construction is required to comply with the energy efficiency standards of the California Build-

ing Code. All these factors result in a project that will not significantly contribute to a cumulative GHG impact.

AMBAG has established a GHG reduction target of 0% by 2020 (i.e. no GHG increase) and 5% reduction by 2035. The proposed project would not conflict with this target. The project would not conflict with the State's Global Warming Solution Act or Executive Order S-3-05.

Finding: While some GHGs will be generated by the project, its contribution to GHGs will not be cumulatively considerable and there will not be any significant impacts associated with GHGs.

IX. Hazards and Hazardous Materials

Discussion: The project proposes to construct one new residential unit and associated driveway and landscape improvements. The proposed single-family residential use does not involve the use or storage of hazardous/combustible materials. Therefore, the risk of accidental explosion and/or release of a hazardous substance is remote.

Residential uses, like that proposed for this project, are not generators of hazardous emissions. During the construction phase of this project dust will be generated and vehicle exhaust will be emitted. Compliance with best management practices through standard conditions of approval will reduce potential impacts to less than significant levels.

To prevent accidental discharge of construction related fuels, lubricants or other contaminants into the right-of-way, the project site or other properties, the project proponent shall have the construction contractor implement the approved erosion control plan and best management practices during the entire time construction activities are occurring. Standard conditions of approval require that a hazardous materials containment plan shall be approved by City Building staff prior to commencement of land alteration and construction activities for the project. It shall contain the following elements:

1. Stationary equipment such as motors, pumps, welding equipment shall be placed over drip pans or other containment apparatus;
2. Any petroleum, lubricants or other hazardous materials used during construction shall be stored in a special storage location equipped with double containment and this location shall be shown on the erosion control plan and approved by the agencies that review this plan.
3. All grading and construction activities shall comply with standard conditions of approval to reduce dust generation to minimal levels through implementation of best management practices for dust control, including watering down exposed earth surfaces each non-rainfall day at intervals that attenuate dust problems as discussed in the Air Quality section above.

No further mitigation is required.

Finding: For this "Hazards and Hazardous Substances" category, compliance with standard

conditions of approval as discussed above will reduce potential impacts to less than insignificant levels.

X. Hydrology and Water Quality

Discussion: The proposed residential project would not violate water quality standards or waste discharge requirements. The project site is served by existing water supply by the Scotts Valley Water District, which has adequate access to accommodate demand from development on the project site.

The project will result in approximately 4,300 square feet (0.10-acre) of impervious surfacing on the 1.73-acre site, not currently covered by impervious surfaces within the Santa Margarita aquifer. The project drainage system is private and will not be maintained by the City. The project proposes and will be required to construct storm drain facilities in conformance with the City of Scotts Valley Storm Drain Master Plan, as required by the City Public Works Department. Compliance with standard conditions of approval will reduce potential hydrology impacts to less than significant levels.

The project site is not located in any mapped area of "Potential Groundwater Recharge/High Management Recharge" in the General Plan Conservation and Open Space Element Figure OS-5 (Hydrological Resources). Standard conditions of approval require that the project comply with the City Public Works Department storm water management guidelines for single family dwellings.

The site is served by the Scotts Valley Water District, which has adopted an impact fee to fund aquifer replenishment projects. Standard conditions of approval require payment of this fee to mitigate the cumulative impact of new homes procuring water from the public water system.

Finding: For this "Hydrology and Water Resources" category, compliance with standard conditions of approval will reduce impacts to less than significant levels.

XI. Land Use Planning

Discussion: The 3.73-acre project property is located in northern part of Scotts Valley on the east of and adjacent to Highway 17. The project site was established through a minor four-lot subdivision in 2012 and contains one existing single-family home constructed in 2012-2013. Other single-family residential homes are present to the north, south and east, with Highway 17 sharing a boundary to the west. The project proposes to subdivide the existing 3.73-acre lot into two lots allowing for one new single-family home. The immediate vicinity of the project site is residential in nature and no aspect of the project would physically divide the community.

Historically, the 3.73-acre project site has two General Plan designations; approximately three-quarters of the site (northern portion) site is designated Rural Residential allowing one unit on a 2.5-acre minimum lot size. The southern portion of the site is designated Es-

tate Residential, which allows one unit on a 40,000-square foot minimum lot size. The application proposes to unify the site into the Estate Residential General Plan and zoning designations, which would allow the subdivision and one new single family home.

Finding: For this "Land Use Planning" category, compliance with the standard conditions of approval for the development of one new home and mitigation measures identified in this document would reduce potential impacts to less than significant levels.

XII. Mineral Resources

Discussion: The site has not been used for mining in the past. The Scotts Valley General Plan does not designate the site for mineral resource extraction. General Plan Figure OS-4 indicates that the site is in an area where mineral resources have not been determined.

Finding: For this "Mineral Resources" category, the project would have no impact and therefore no mitigation is required.

XIII. Noise

Discussion: The Noise Element of the Scotts Valley General Plan utilizes the 24-hour average day-night noise level (DNL) for defining community noise impacts. The maximum standard is 60 decibels (dB) DNL of exterior noise and 45 dB DNL for interior noise. The project site is located along Highway 17, which is a significant noise source as identified in the General Plan. A noise analysis of the site was prepared by Charles M. Salter Associates, in August 2005 as part of the review that established the project site. The analysis examined existing and projected noise from Highway 17 and provided measures to reduced interior and exterior noise levels to acceptable levels.

A review of that original analysis was prepared by Charles M. Salter Associates, dated August 2019, to confirm and update the findings of the 2005 report as they relate to the proposed lot split and construction of a new home. The report estimated a 1.6% increase in traffic volume since the acoustical measurements were conducted in 2005, which results in an increase in noise levels of less than one decibel (dB). The report identifies that the proposed dwelling would be similar to or a slightly greater distance from the freeway as the existing home on the project site. The report also notes that the outdoor use areas, on the southeast side of the house, will be shielded from traffic noise by the house and soundwall design. The report recommends sound rated windows and doors on any side of the house that has line of sight to Highway 17 and an alternative means of delivering outside air into the house with windows closed to achieve interior noise levels of DNL 45 dB, consistent with General Plan Policy NP-451. The project proposes and conditions of approval require an HVAC system to provide interior air levels consistent with building code standards for residential construction with windows in the normally-closed condition.

The grading and construction activities to build project improvements and dwelling will include large vehicles, heavy machinery and power tools; all of which will generate noise that will likely travel beyond the boundaries of the property. Other homes in the immediate vi-

cinity of the project site are within the Rural Residential and Estate Residential zoning with lots ranging from one acre to two and one-half acres in size, therefore the impact from construction is anticipated to be minimal. This is a temporary impact that will be limited to the construction phase of the project. This impact cannot be avoided but it can be minimized to reduce its affect to neighboring inhabitants to acceptable levels.

Scotts Valley Municipal Code and standard conditions of approval require all contractors to limit their work to 8:00 A.M. to 6:00 P.M. on weekdays; 9:00 A.M. to 5:00 P.M. on Saturdays and no construction on Sundays as required by Section 17.46.160 of the Scotts Valley Municipal Code. If gasoline generators are used, they shall be contained in an enclosure that prevents their noise from being heard at properties south of the project site.

Further, to ensure any unanticipated construction noise problems are resolved immediately, conditions of approval require that the project proponent shall post the name and phone number of the construction disturbance coordinator on a sign that is easily readable from Polo Heights. The coordinator shall be the person responsible for receiving and resolving citizen complaints and inquiries about excessive noise generation. The coordinator shall be available to receive calls and respond to them each day grading and construction is occurring.

The project site is not located near an airport or a private airstrip.

Finding: As discussed above, the proposed project would exceed noise thresholds, but only during the construction phase. Standard conditions of approval reduce noise related impacts to a level of insignificance. As proposed and conditioned, the addition of one new single family dwelling on this property will not substantially generate noise greater than that currently existing on the site. This impact will be less than significant.

XIV. Population and Housing

Discussion: The project will provide one new dwelling and accessory dwelling unit along an existing street in the immediate vicinity to other homes. No existing housing units or persons are displaced as a result of this proposal. No new roadways or infrastructure is proposed as part of the proposed development. Project plans show the dwelling to have three bedrooms and will include a one-bedroom accessory dwelling unit above the proposed attached three-car garage. This is not a significant increase in the population of the City.

Finding: The amount of growth generated by this project will be minimal and anticipated by the General Plan. There is no potential for displacing housing or people either directly or indirectly. For this "Population and Housing" category, the project will have either a less than significant impact or no impact and therefore no mitigation is required.

XV. Public Services

Discussion: The Scotts Valley Fire Protection District and Police Department have reviewed the project and have determined that the additional services will not generate a demand beyond what the police or fire departments can accommodate.

The project will add new residents to the City, which may have children that will be students at schools within the Scotts Valley School District. However, these additional students will not generate educational demands beyond what the schools can accommodate.

The project will add new residents to the City who will occasionally utilize City parks and recreational programs, but this additional use will not generate a demand beyond what the City Parks Department can accommodate. This issue is also discussed in the following section.

Water service is provided and available to the project site by the Scotts Valley Water District. The Water District issued a "Will Serve" letter, dated September 27, 2019, for the proposed project. The project does not have the potential to affect other public facilities, in excess of that previously considered by the General Plan.

Finding: The project's generated need for additional services are negligible. For this "Public Service" category, the project's effects are limited to less than significant impacts and therefore no mitigation is required.

XVI. Recreation

Discussion: Scotts Valley has a total of seven parks, ranging in size from a 0.5 acre to 7.5 acres. Recreational facilities and activities are also available at local schools, the Vine Hill Recreation Center, and the Scotts Valley Senior Center. The additional population generated by one new dwelling and an accessory dwelling will be negligible compared to the existing user population of these facilities.

Due to the negligible population increase generated by the project, there will not be a need to construct or expand new City recreational facilities. The project will be subject to payment into a City parks impact fee fund at time of Building Permit issuance for their share of cumulative recreational needs.

Finding: For this "Recreation" category, the project would not have any significant impacts and therefore no mitigation is required.

XVII. Transportation

Discussion: The addition of one new dwelling and accessory dwelling along an existing roadway will not generate a significant increase in traffic level. The project will add one driveway onto the local street, Polo Heights, which has adequate capacity to handle this minor increase in traffic. The driveway approach and site features have been designed to provide clear line-of-sight of on-coming vehicles when exiting the driveway.

The property owner/project applicant has acknowledged that the existing 33 Polo Heights parcel, as documented on the property deed, does not have access rights to either of the two existing nearby spur roads, Timber Ridge Lane and Orchard Run. As such, the applicant does not have ownership or any authority, through this development proposal, to cause the closure of these spur access points. However, the project applicant has agreed and conditions of project approval require that the developer prepare an agreement to be recorded, suitable to the City Attorney, relinquishing any future rights to use these spur road access points for ingress or egress from Highway 17. The agreement will also prohibit the applicant or any subsequent property owner(s) of the proposed two-lot subdivision, to file objections to the future closure of either or both of the spur roads; or to request any compensation for loss of access to either or both of the spur access roads for ingress or egress from Highway 17. In addition, conditions of project approval require that the tentative map include a one-foot “no-vehicle access” easement along the project sites property line adjacent to Highway 17 to prevent any future vehicle access from the subject parcel.

Finding: For the “Transportation” category, the project would not have any significant impacts and therefore no mitigation is required.

XVIII. Tribal Cultural Resources

Discussion: The project site is designated as having “Moderate Sensitivity” on the General Plan Cultural Resources map. Insofar as much of the land within the City of Scotts Valley is considered moderately sensitive with regards to cultural sensitivity, the City has adopted a standard development policy that requires archaeological monitoring during any earthwork activities. Standard conditions of approval for this project require archaeological monitoring during any earthwork activities as described in the Cultural Resources section of this document, therefore the project will not adversely impact any tribal cultural resources.

With regards to AB-52, the City of Scotts Valley has not received inquiries or notifications from local tribal representatives requesting to be notified of development application, and would therefore not be required to perform further outreach. However, the City has provided notice of the development proposal to local tribal groups.

Finding: For the “Tribal Cultural Resources” category, the project would have no impacts and therefore no mitigation is required.

XIX. Utilities and Service Systems

Discussion: The proposed project does not have the potential to affect utility services, in excess of that previously considered by the General Plan. The Scotts Valley Water District has reviewed the application and has determined that existing water resources will support the proposed development. The project site is not within close proximity to an existing public sanitary sewer line and is beyond the 1,400-foot distance requiring that the sanitary sewer be extended to serve the project. Information submitted as part of the project review includes field test data verifying soil percolation rates to support an on-site solid waste system. The project proposes on-site solid waste disposal through a septic tank and leach field,

similar to other systems in the surrounding area. The City of Scotts Valley has an established procedure to review and permit septic systems through the standard building permit process.

Finding: For this "Utility and Service Systems" category, the project would have no impacts and therefore no mitigation is required.

XX. Wildfire

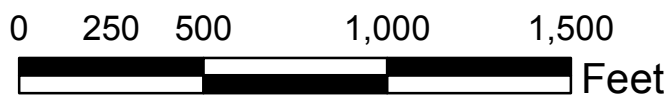
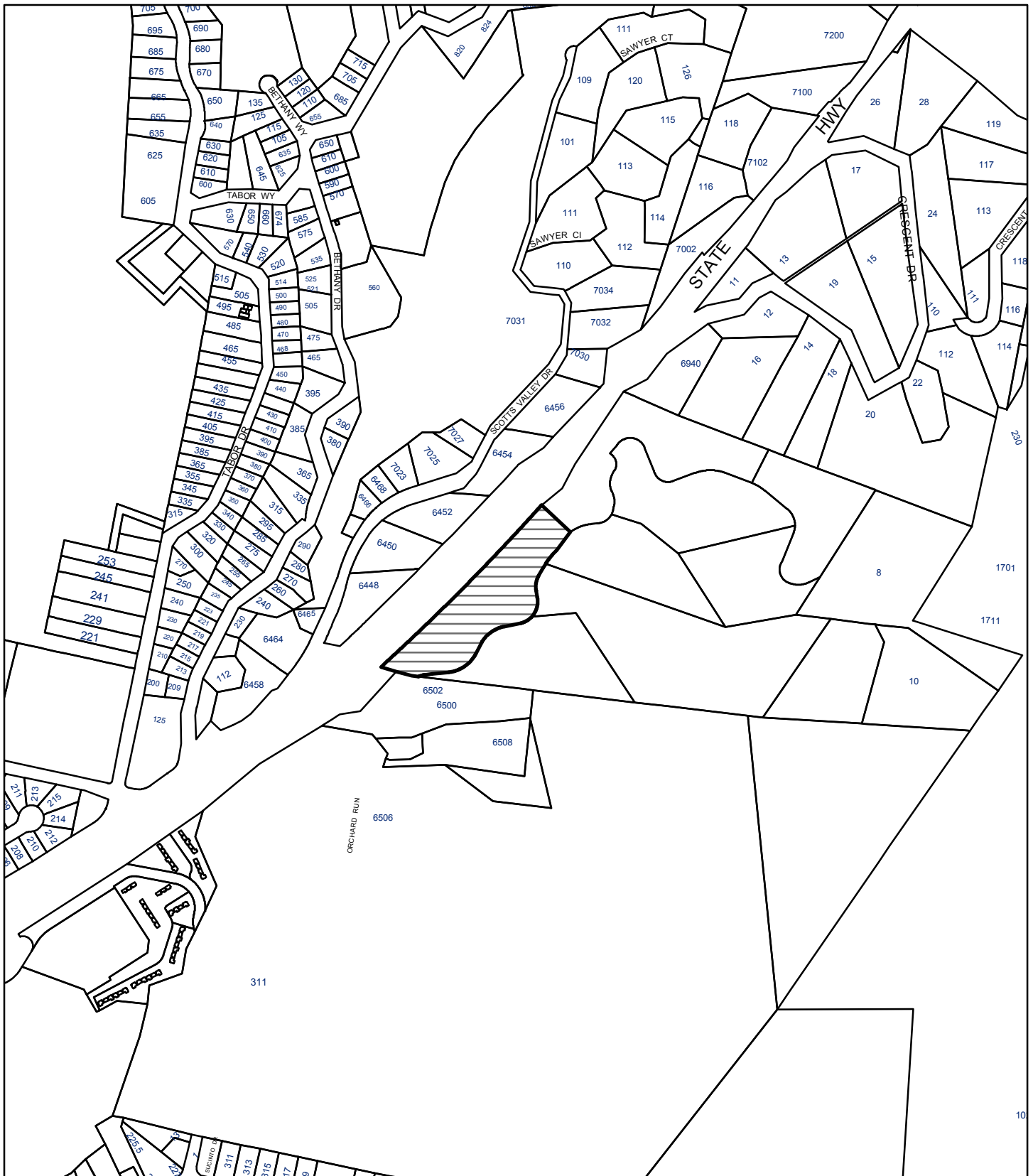
Discussion: The addition of one new residential structure in an existing residentially zoned area will not substantially impair emergency response or evacuation or otherwise increase the risk of wildfire. The new home will be served by the municipal water system and will be constructed to meet all building and fire codes through the issuance of required building permits. The proposed dwelling is within 150-feet of an existing roadway and will have paved access to the residential structure.


Finding: For this "Wildfire" category, the project would have no impacts and therefore no mitigation is required.

XXI. Mandatory Findings of Significance

The project will generate potentially significant impacts in the area of aesthetics and biological resources. The potential to significantly degrade the quality of the environment, including effects on scenic resources, animals and protected trees can be reduced or otherwise mitigated to levels of less than significant with the mitigation measures provided in this Initial Study.

33 Polo Heights / APN 024-021-28



 024-021-28


Location Map

33 Polo Heights / APN 024-021-28



0 250 500 1,000 1,500
Feet

Project Site

 024-021-28

Biotic Resources Group

Biotic Assessments ♦ Resource Management ♦ Permitting

May 31, 2018

Todd Creamer
4444 Scotts Valley Drive, Suite 6
Scotts Valley, CA 95066

RE: Results of Biological Review: Polo Heights, Creamer Lot APN 024-021-27 Minor Land Division

Dear Mr. Creamer,

The Biotic Resources Group has conducted a review of the proposed minor land division of APN 024-021-27, a parcel on Polo Heights Road within the Timber Ridge area of Scotts Valley, as per your request. The review focused on reviewing the current plan and evaluating whether any site conditions have changed since our biological assessment, dated May 21, 2003 (and our supplemental review in 2013), and whether the recommendations in that report are still valid. The results of this review are described herein.

EVALUATION METHODOLOGY

In May 2018, the previous biological assessment was reviewed. A site visit to the parcel was conducted on May 31, 2018 to evaluate current site conditions. Recommendations from the 2003 report were reviewed to determine if the measures remain applicable to the current project.

EVALUATION RESULTS

Site conditions on the subject property have not changed significantly since our previous review. No new habitat types or biotic resources were observed or are expected. The findings from the 2003 report remain applicable to the proposed minor land division.

Our evaluation of the potential presence of species on the property remains the same as presented in 2003: the property is unlikely to support any species status plant species; however, the following special status wildlife species may nest on site: Coopers hawk, sharp-shinned hawk, and long-eared owl. Pallid bat may roost in large tree hollows. Recommendations presented in the 2003 report pertaining to tree removal (retaining large trees, scheduling tree removal outside the breeding season) are still applicable to the currently proposed project. No additional measures pertaining to special status wildlife are recommended. Recommendations presented in the 2003 report pertaining to protecting native trees, implementing measures to minimize impacts on trees located adjacent to construction, and avoiding use of invasive, non-native plant species for landscaping, are still applicable to the currently proposed project. No additional measures pertaining to special status plant species are recommended.

Please let me know if you have any questions on these findings.

Sincerely,



Kathleen Lyons
Plant Ecologist

Biotic Resources Group

Biotic Assessments ♦ Resource Management ♦ Permitting

Timber Ridge Road Parcels Scotts Valley, CA

Biological Assessment

Prepared for:
George Smith

Prepared by:
Biotic Resources Group
Kathleen Lyons, Plant Ecologist

With

Dana Bland & Associates
Dana Bland, Wildlife Biologist

May 21, 2003

RECEIVED

FEB 28 2005

CITY OF SCOTTS VALLEY

MLD05-002

INTRODUCTION

This property is located in the City of Scotts Valley, east of Highway 17. The project consists of three parcels (APN 024-02-15, 024-02-16 and 024-02-24) that are accessed from Timber Ridge Road and a private driveway. In total, the three parcels encompass approximately 25 acres. Rural residential development occurs to the north and east (Figure 1). The applicant proposes to divide each parcel into four separate lots, thereby creating 12 lots. Each lot would support a single-family residence. A specific development plan has not yet been prepared.

The Biotic Resources Group and Dana Bland & Associates assessed the biotic resources within the three parcels in late spring 2003 for George Smith. The focus of the assessment was to identify sensitive biotic resources on the property that may affect future proposed development.

Specific tasks conducted for this study include:

- Characterize and map the major plant communities within the three parcels;
- Identify sensitive biotic resources, including plant and wildlife species of concern and native trees, within the three parcels, and
- Evaluate the potential effects of the proposed land use on sensitive biotic resources and recommend measures to avoid or reduce such impacts.

Intended Use of this Report

The findings presented in this biological report are intended for the sole use of George Smith and the City of Scotts Valley in evaluating the proposed land division for the subject parcels. The findings presented by the Biotic Resources Group in this report are for information purposes only; they are not intended to represent the interpretation of any State, Federal or City laws or ordinances pertaining to permitting actions within sensitive habitat or endangered species. The interpretation of such laws and/or ordinances is the responsibility of the applicable governing body.

RECEIVED

FEB 28 2005

WILSON COUNTY

EXISTING BIOTIC RESOURCES

METHODOLOGY

The biotic resources of the Timber Ridge Road Parcels were assessed through literature review and field observations. The site was surveyed in May 2003. The major plant communities on the site were identified during the field reconnaissance visits and review of a 2000 aerial photograph. The plant communities were mapped onto the project base map (Figure 2).

To assess the potential occurrence of special status biotic resources, two electronic databases were accessed to determine recorded occurrences of sensitive plant communities and sensitive species. Information was obtained from the California Native Plant Society's (CNPS) Electronic Inventory (2002), and California Department of Fish & Game's (CDFG) RareFind database (CDFG, 2003). The parcels are located on the USGS Laurel quadrangle (as depicted on Figure 1). Both the Felton and Laurel U.S.G.S. quadrangles were searched for special status species and habitats.

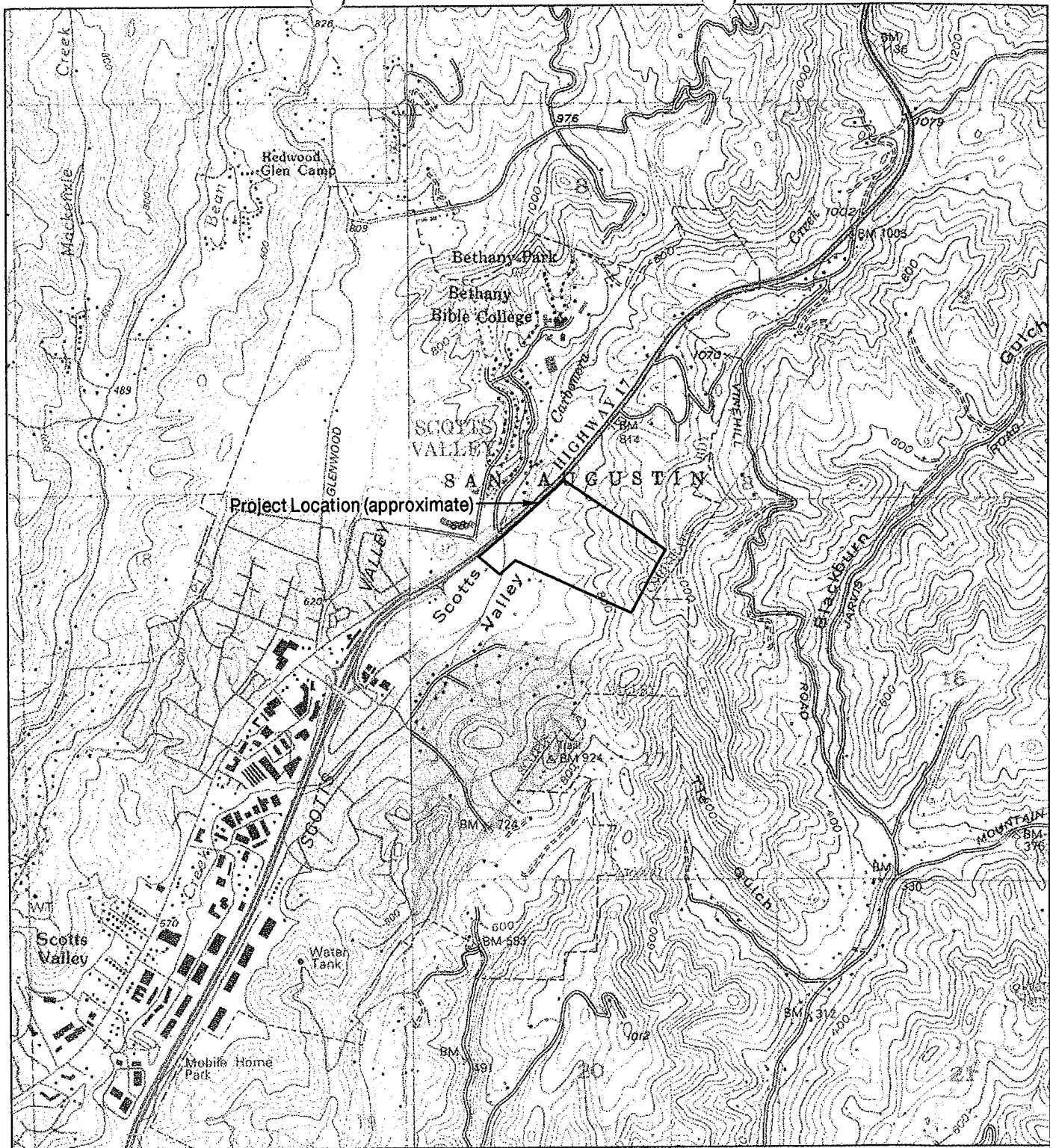
This report summarizes the findings of the biotic assessment. The potential impacts of the proposed development (i.e., establishment of twelve lots; each with a single-family residence) on sensitive resources are discussed below. Although specific building sites have not been identified, general measures that can be implemented to reduce impacts to biological resources are recommended.

EXISTING BIOTIC RESOURCES

Two plant communities were observed on the three parcels: redwood forest and mixed evergreen forest. The distribution of these two plant communities on the three parcels is depicted on Figure 2. Two paved roads traverse the parcels; the approximate location of these roads is depicted on Figure 2.

Mixed Evergreen Forest

The mixed evergreen forest inhabits the ridges and relatively dry slopes of the project area. The tree cover is dense with a mixture evergreen trees: Douglas fir (*Pseudotsuga menziesii*), tanoak (*Lithocarpus densiflorus*), and California bay (*Umbellularia californica*), forming a Douglas fir – tanoak- California bay plant association. Other tree species include madrone (*Arbutus menziesii*), hazel nut (*Corylus cornuta*) and scattered occurrences of coast live oak (*Quercus agrifolia*). The understory includes a relatively high diversity of shrubs and herbaceous plant species, including California blackberry (*Rubus ursinus*), thimbleberry (*Rubus parviflorus*), blue blossom (*Ceanothus thrysiflorus*), poison oak (*Toxicodendron diversilobum*), and bracken fern (*Pteridium aquilinum*). Herbaceous plants observed during the May 2003 field survey include starflower (*Trientalis arvensis*), hounds tongue (*Cynoglossum grande*), scarlet pimpernel (*Anagallis arvensis*), bull thistle (*Cirsium arvense*), bindweed (*Convolvulus arvensis*), and cat's ear (*Hypochaeris radicata*). A dry slope in Lot 18 supports a small patch of toyon (*Heteromeles arbutifolia*) and big-berried manzanita (*Arctostaphylos glauca*) intermixed with tanoak and Douglas fir. Edges of the existing roads were also observed to support thickets of French broom (*Genista monspessulana*).



Source: Laurel USGS 7.5' Quadrangle



SCALE: 1" = 2,000'

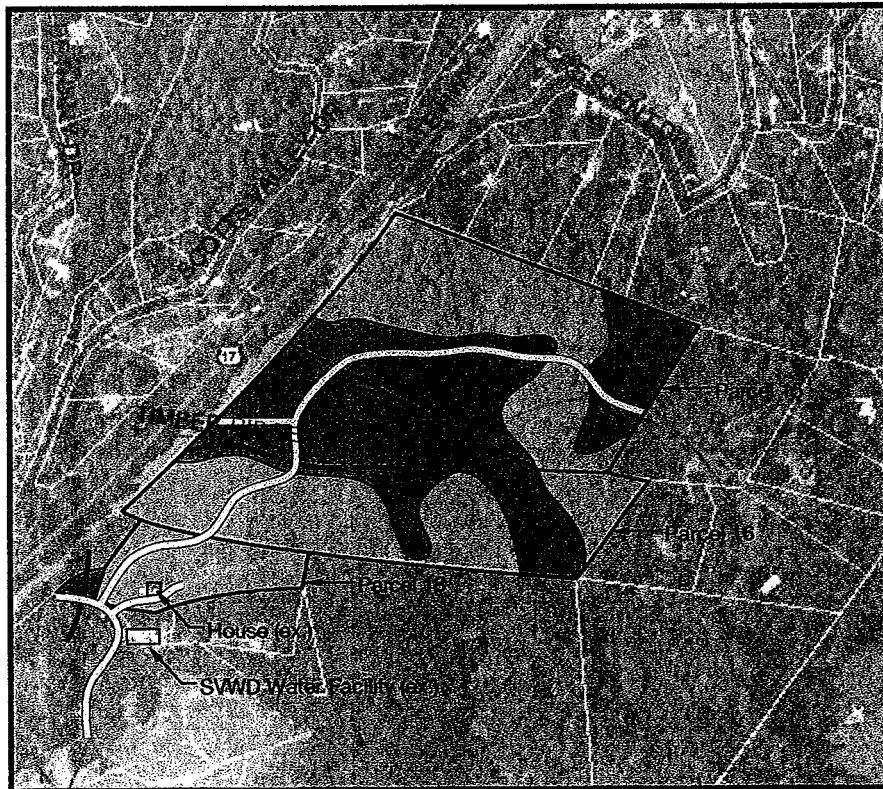
0 2,000' 4,000'

Biotic Resources Group





2551 S. Rodeo Gulch # 12 ♦ Soquel, California 95073
(831) 476-4803 ♦ Fax (831) 476-8038

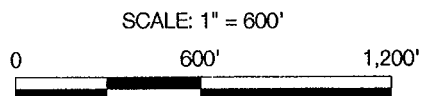
Timber Ridge Road Parcels
Location Map

Figure 1
5/03
401-01



LEGEND

-  Redwood Forest
(Redwood/Madrone Association and Redwood/Redwood Oxalis Association)
-  Mixed Evergreen Forest
(Douglas fir/Tan Oak/California Bay Association)
-  Existing Road (approximate location)
-  Intermittent Drainage



Biotic Resources Group

2551 S. Rodeo Gulch # 12 ♦ Soquel, California 95073
(831) 476-4803 ♦ Fax (831) 476-8038

Timber Ridge Road Parcels
Biological Assessment

Figure 2
5/03
401-01

The wildlife value of the mixed evergreen forest varies with the degree of canopy cover and density and diversity of understory plant species present. In general, the wildlife species diversity and abundance are highest where vegetation is highly stratified, offering a greater variety of niches for wildlife species. The Timber Ridge properties currently have a dense and diverse assemblage of vegetation in the mixed evergreen forest, and are likewise expected to support diverse and abundant fauna.

Where tanoak and coast live oak occur in the mixed evergreen forest, the acorns provide a seasonal food source important for the survival of many species of wildlife in fall and winter. Mature live oak trees bear natural cavities that are important resources for cavity-nesting birds and small mammals. Standing dead trees (called snags) in the mixed evergreen forest are important wildlife habitat. Snags are valuable resources for woodpeckers, which prefer dead trees and limbs for excavation of roost and nest sites. Subsequently, snags receive high levels of use by secondary cavity-nesting birds (e.g., chickadees and wrens). Snags also support wood-boring insects, which provide food for bark-gleaning insectivorous birds. Some of the other important food plants for wildlife that occur in this habitat include madrone, California hazelnut, toyon, coffee berry, blackberry, and poison oak. These plants provide seasonal wildlife food (e.g., berries and nuts) that are consumed by many bird and mammal species.

Another important feature of the mixed evergreen forest is the abundance of fallen woody debris (e.g., limbs and logs). Woody debris adds structural complexity to the forest habitat, and is important as cover, nesting, roosting, and foraging substrate for wildlife. Downed wood also helps moderate arid conditions, affords a substrate for fungi and slime molds, creating microclimates suitable for amphibians and reptiles.

The mesic microclimate resulting from the shade of canopy trees and the presence of downed woody debris offers suitable cover for many amphibians. Downed woody debris provides suitable breeding and cover sites for species such as arboreal salamander (*Aneides lugubris*), Ensatina (*Ensatina eschscholtzi*) and California slender salamander (*Batrachoseps attenuatus*). Aquatic breeding species, (e.g., California newt (*Taricha torosa*)) spend their terrestrial existence in rodent burrows or under woody debris in adjacent forests.

The mixed evergreen forest supports a high diversity of reptiles due to the abundant prey and cover provided by understory vegetation and fallen woody material. Common reptiles that utilize the drier portions of this habitat are the western fence lizard and southern alligator lizard (*Gerrhonotus multicarinatus*).

Bird species richness and abundance is high in the mixed evergreen forest, especially where the understory is stratified and dense. This habitat is especially important to cavity-nesters and those species that consume acorns. Because of many factors (i.e., migratory and local movements, reproduction, mortality, and seasonally changing habitat requirements), bird populations are distinctly different from season to season.

Typical cavity-nesting birds include chestnut-backed chickadee (*Poecile rufescens*), oak titmouse (*Baeolophus inornatus*), western screech owl (*Otus kennicotti*), hairy woodpecker (*Picoides villosus*), Nuttall's woodpecker (*Picoides nuttallii*), and acorn woodpecker (*Melanerpes formicivorus*). Birds that are dependent on acorns as a seasonal food include acorn woodpecker, scrub jay, band-tailed pigeon (*Columba fasciata*), and California quail (*Callipepla californica*). The insects in the trees are prey for several birds such as bushtit (*Psaltiriparus minimus*), ruby-crowned kinglet (*Regulus calendula*), and yellow-rumped warbler (*Dendroica coronata*). California towhees forage for insects on the ground beneath trees. Great horned owls (*Bubo virginianus*), western screech-owls, and northern pygmy-owls (*Glaucidium*

gnoma) nest in mixed evergreen forest and prey on rodents that are active at night. Diurnal raptors in this habitat include red-tailed hawk (*Buteo jamaicensis*), Cooper's hawk (*Accipiter cooperii*), and sharp-shinned hawk (*Accipiter striatus*). These raptors feed primarily on other birds and small mammals.

Most of the mammals that occur in this habitat are essentially year-round residents. Where the duff layer is abundant creating moist ground conditions, large invertebrate populations occur, providing prey for insectivores, such as Ornate shrew (*Sorex ornatus*) and broad-footed mole (*Scapanus latimanus*). Acorns provide a valuable seasonal food for black-tailed deer (*Odocoileus hemionus*) and western gray squirrel (*Sciurus griseus*), and oaks and redwoods offer suitable denning sites for cavity-dwelling mammals such as striped skunk (*Mephitis mephitis*). Trees and the aerial habitat of the mixed evergreen forest are used by a variety of bat species. The areas of denser vegetation provide good escape cover during the day for larger wildlife that feed at dusk and at night, such as deer and ringtail (*Bassariscus astutus*). Representative species that utilize this habitat include broad-footed mole, dusky-footed woodrat (*Neotoma fuscipes annectens*), deer mouse, pinon mouse (*Peromyscus truei*), black-tailed deer, western gray squirrel, bobcat, gray fox, striped skunk, Virginia opossum (*Didelphis virginiana*), and California myotis (*Myotis californicus*).

Redwood Forest

The ravines and north-facing slopes of the project area (three parcels) support redwood forest. The forest is dominated by second-growth coast redwood (*Sequoia sempervirens*); old growth stumps are evident within the forest. Two plant associations were observed within the redwood forest during the May 2003 field survey: redwood-madrone association and redwood-redwood sorrel association. The redwood madrone association includes trees of madrone and lesser amounts of tan oak, hazel nut, and some young Douglas fir. The understory is vegetated with thimbleberry, hedge nettle (*Stachys* sp.), starflower, snowberry (*Symphoricarpos* sp.), wood fern (*Dryopteris arguta*), Solomon's seal (*Smilicina* spp.), and wake robin (*Trillium ovatum*). The redwood – redwood sorrel association occurs along the more mesic areas and is characterized a dense understory of redwood sorrel (*Oxalis oregona*). Associated species include sword fern (*Polystichum munitum*), forget-me-not (*Myosotis latifolia*), trail plant (*Adenocaulon bicolor*), Hooker's fairy bells (*Disporum hookeri*), wake robin, and wood rose (*Rosa gymnocarpa*). Intermittent drainages traverse through the redwood forest; these drainages were dry during the May 2003 field survey.

The redwood forest has native understory plants with abundant fruit and seeds, such as blackberry and California hazelnut that provide forage for wildlife. The natural cavities in redwood forest trees provide opportunities for nesting by birds, cover for small mammals such as raccoons, and roosting by bats. The cool, damp microclimate of the redwoods attracts more amphibians than the drier climates of mixed evergreen forest. Western skink (*Eumeces skiltonianus*), common kingsnake (*Lampropeltis getulus*), and ringneck snake (*Diadophis punctatus*) are common reptiles found in the moist, wooded drainage bottoms. Common wildlife that may inhabit this forest includes arboreal salamander, Steller's jay (*Cyanocitta stelleri*), northern pygmy-owl, and several species of bats. As described above for mixed evergreen, the redwood forest provides nesting and wintering habitat for a diverse assemblage of birds.

SENSITIVE BIOTIC RESOURCES

Sensitive Habitats

Sensitive habitats are defined by local, State, or Federal agencies as those habitats that support special status species, provide important habitat values for wildlife, represent areas of unusual or regionally restricted habitat types, and/or provide high biological diversity. No plant communities on the property are considered sensitive habitats according to CDFG or the City of Scotts Valley; however, the intermittent drainages that traverse through the forested areas of the three parcels may meet the definition of waterways by the City and "Waters of the U.S." under the Clean Water Act.

Special Status Plant Species

Plant species of concern include those listed by either the Federal or State resource agencies as well as those identified as rare (i.e., List 1B) by CNPS. The search of the CNPS and CNDDDB inventories for the Felton and Laurel quadrangles, queried for woodland habitats, resulted in eight special status species of concern with potential to occur in the project area. As depicted on Table 1, these species were evaluated for potential presence on the site and searched for during the May 2003 field survey. The May 2003 survey did not reveal the occurrence of any listed plant species on the subject parcels. Although the subject properties are relatively close to known occurrences of rare plants (i.e., Scotts Valley spineflower and Scotts Valley polygonum at the Polo Ranch site), the three parcels do not support grassland habitat suitable for these species.

Special Status Wildlife Species

Special status wildlife species include candidate species for listing, those proposed for listing, or listed as threatened or endangered under either state or federal endangered species laws. Species listed by the State as California Species of Special Concern also received special protection under Fish and Game Code. Migratory birds are protected under the Migratory Bird Act, and all raptor nests are protected by CDFG Code. Table 2 lists special status wildlife species that occur in the general region, and evaluates their potential to occur on the Timber Ridge Property. Those species expected to occur on this property are described below in more detail.

Table 1. List Of Special Status Plant Species with Potential to Occur In The Vicinity Of the Timber Ridge Parcels, City of Scotts Valley, California

Species	CNPS	State Status	Federal Status	Habitat Type Known or Potential Occurrence on Site?
California bottlebrush grass (<i>Elymus californicus</i>)	None	None	None	Oak Woodland Potential, but not observed
Silver-leaved manzanita (<i>Arctostaphylos silvicola</i>)	List 1B	None	None	Chaparral/Ponderosa Pine Forests No, unlikely to Occur
Ben Lomond spineflower (<i>Chorizanthe pungens</i> var. <i>hartwegiana</i>)	List 1B	None	Endangered	Chaparral/ Ponderosa Pine Forests No, unlikely to Occur
Ben Lomond Wallflower (<i>Erysimum teretifolium</i>)	List 1B	Endangered	Endangered	Chaparral/ Ponderosa Pine Forests No, unlikely to Occur
San Francisco popcorn flower (<i>Plagiobothrys diffusus</i>)	List 1B	Endangered	Species of Special Concern	Grasslands/edges of Oak Woodland No, unlikely to Occur
Small-leaved lomatium (<i>Lomatium parviflorum</i>)	List 4	None	None	Oak Woodland Potential, but not observed
Santa Cruz microseris (<i>Microseris decipiens</i>)	List 4	None	Species of Special Concern	Grasslands No, unlikely to Occur
Michael's piperia (<i>Piperia michaelii</i>)	List 1B	None	Species of Special Concern	Oak Woodland/Scrub No, unlikely to Occur

CNPS Status:

List 1B: These plants (predominately endemic) are rare through their range and are currently vulnerable or have a high potential for vulnerability due to limited or threatened habitat, few individuals per population, or a limited number of populations. List 1B plants meet the definitions of Section 1901, Chapter 10 of the CDFG Code.

List 3: This is a review list of plants that lack sufficient data to assign them to another list.

List 4: List 4 is a watch list of plants with limited distribution in the state that have low vulnerability and threat at this time. These plants are uncommon, often significant locally, and should be monitored.

Table 2. List Of Special Status Wildlife Species with Potential to Occur In The Vicinity Of the Timber Ridge Residential Development Project Area, City of Scotts Valley, California, May 2003.

SPECIES	STATUS ¹	HABITAT	POTENTIAL OCCURRENCE ON SITE
Invertebrates			
Ohlone tiger beetle <i>Cicindela ohlone</i>	FE	Coastal terrace prairie	None, no suitable habitat
Mt. Hermon June beetle <i>Polyphylla barbata</i>	FE	Sand parkland habitat with Douglas fir	None, no suitable habitat
Zayante band-winged grasshopper <i>Trimerotropis infantilis</i>	FE	Sand parkland habitat with open, sunny areas	None, no suitable habitat
Fish			
Coho salmon <i>Oncorhynchus kisutch</i>	FT, SE	Rivers and perennial tributaries	None, no suitable habitat; drainages on site are only ephemeral
Steelhead <i>Oncorhynchus mykiss</i>	FT, CSC	Creeks and rivers	None, no suitable habitat; drainages on site are only ephemeral
Amphibians			
California red-legged frog <i>Rana aurora draytonii</i>	FT, CSC	Riparian, marshes, estuaries and ponds.	None, no suitable habitat; drainages on site only ephemeral, no other ponds or water nearby
Foothill yellow-legged frog <i>Rana boylei</i>	FSC, CSC	Creeks with perennial water and cobbles for egg attachment	None, no suitable habitat
Reptiles			
Southwestern pond turtle <i>Clemmys marmorata pallida</i>	CSC	Creeks and ponds, grasslands for nesting.	None, no suitable habitat; drainages on site are only ephemeral
Birds			
Cooper's hawk <i>Accipiter cooperii</i>	CSC	Nests in riparian and oak habitats	May nest in mixed evergreen woodland on site
Sharp-shinned hawk <i>Accipiter striatus</i>	CSC	Nests in coniferous forests with dense canopy	May nest in mixed evergreen with Douglas fir or redwood forest on site
Long-eared owl <i>Asio otus</i>	CSC	Nests in mixed evergreen forest with Douglas fir	May nest in mixed evergreen with Douglas fir on site
Mammals			
Pallid bat <i>Antrozous pallidus pacificus</i>	CSC	Roosts in tree hollows as well as man-made structures	May occur in large tree hollows on site
San Francisco dusky-footed woodrat <i>Neotoma fuscipes annectens</i>	FSC, CSC	Riparian and upland forest habitats	May occur on site

¹ Key to status:

FSC = Federal species of concern
 FE = Federally listed as endangered species
 FT = Federally listed as threatened species
 SE = State listed as endangered species
 ST = State listed as threatened species
 CSC = California species of special concern

The Cooper's hawk is a State species of special concern. Like the sharp-shinned hawk, this species is a rare breeder in the Santa Cruz Mountains, but is somewhat more numerous than the former. Cooper's hawks prefer forested habitats in mountainous regions, but also use riparian woodlands. Cooper's hawks feed primarily on small birds, but also take small mammals, reptiles, and amphibians. Foraging occurs in both dense cover, and open habitats. Nests are constructed in a variety of trees, but stands of live oaks may be preferred. The nest site is vigorously defended by the adults. Cooper's hawks build stick nests in similar situations as the sharp-shinned hawk. The local breeding season probably spans March/April through July (Suddjian 1990). Cooper's hawks are uncommon migrants and winter visitors. Migrant and wintering individuals occur in a variety of habitats, including oak woodland, conifer and mixed broadleaf forests, grasslands, residential areas and riparian woodland. Habitat destruction and falconry practices have been attributed to this species' decline in California (Remsen 1978).

Potential nesting habitat for Cooper's hawk at the Timber Ridge project site occurs in the mixed evergreen forest woodland.

The sharp-shinned hawk is a State species of special concern. This species may be the rarest breeding raptor in the Santa Cruz Mountains (Suddjian 1990). Potentially suitable breeding habitat occurs over much of the forested mountainous terrain of the Santa Cruz Mountains. Sharp-shinned hawks prefer to build their stick nests in conifers in thick cover (Zeiner *et al.* 1990; Ehrlich *et al.* 1988).. Migrant and wintering individuals frequent a variety of habitats, but favor edges of wooded habitats. Sharp-shinned Hawks prey mostly on small song birds. The local breeding season spans April to July. This species is uncommon throughout the study region from September to early May.

Sharp-shinned hawks may nest in the mixed evergreen forest or redwood forest on the project site.

The long-eared owl is a State species of special concern and is considered a sensitive species in the Santa Cruz Mountains Bioregion. This species is a rare breeding species in the Santa Cruz Mountains (Suddjian 1990). Long-eared owls occur in a variety of wooded habitats. However, all of the breeding season sightings in the Santa Cruz Mountains have been in mixed-evergreen forests with Douglas firs and live oaks (Suddjian 1990). They typically use abandoned nests of other raptors and tree squirrels, occasionally in tree cavities, and rarely in hollows on the ground (Harrison 1978). The local breeding season spans February through July (Suddjian 1990).

Long-eared owls may nest in the mixed evergreen forests at the Timber Ridge project site.

The pallid bat is a state species of special concern. Pallid bats are found in a variety of habitats. This species moves about locally on a seasonal basis, but is not considered migratory (Jameson and Peeters 1988). During the day pallid bats roost in buildings, bridges, crevices, caves, mines, and hollow trees (Williams 1986). Maternity roosts are colonial, while males and feeding bats roost singly. This species is very sensitive to disturbances at roost sites (E. Pierson, pers. comm.). During the night, pallid bats glean moths from leaves and forage on the ground for invertebrates, especially Jerusalem crickets.

Snags, trees with hollows may provide roosting habitat for the pallid bat at the Timber Ridge project site.

San Francisco dusky-footed woodrat is a State species of special concern. These small mammals build large stick nests at the bases of trees and shrubs. They prefer forested habitat with a moderate canopy and brushy

understory, and are often found on the upper banks of riparian forests. This woodrat feeds on a variety of woody plants, fungi, flowers and seeds (Jameson and Peeters 1988).

Dusky-footed woodrat are expected to occur in the mixed evergreen forests at the Timber Ridge project site.

IMPACT DISCUSSION AND RECOMMENDATIONS

IMPACT CRITERIA

The thresholds of significance presented in the California Environmental Quality Act (CEQA) were used to evaluate project impacts and to determine if the proposed development of twelve lots (with single family residences) poses significant impacts to biological resources. In addition, State and City policies were used to develop the significance criteria. For this analysis, significant impacts are those that substantially affect either:

- A species (or its habitat) listed or proposed for listing by State or Federal governments as rare or endangered.
- Breeding/nesting habitat for a State species of special concern (e.g., Cooper's hawk);
- A plant considered rare (i.e., List 1B) by CNPS.
- A habitat regulated by State or Federal law, or
- Movement of native resident or migratory species,
- A habitat recognized as sensitive by CDFG and/or the City of Scotts Valley.

Impacts were not considered significant to vegetation communities or habitats that are not protected, are generally common, and do not support listed candidate or special concern.

RECOMMENDATIONS

As no specific development plan was evaluated, general recommendations to avoid or minimize impacts to biological resources are provided.

The following measures are recommended to reduce potential impacts of the project on native wildlife and habitats:

- Plan housing sites to minimize removal of trees, particularly trees greater than 24 inches in diameter.
- Plan all tree removal and grading to occur during late summer and fall (August 1 to October 31 is recommended), to avoid impacting nesting birds. Several State-protected bird species (e.g., Cooper's hawk) may nest in the habitat on site, as well as many migratory birds (e.g., golden-crowned kinglet) that are protected by the federal Migratory Bird Treat Act.
- Hire a qualified bat ecologist to evaluate trees that will be removed for potential presence of protected bat species (e.g., pallid bat). If bats are present, implement a plan as recommended by

bat ecologist to minimize impacts to bats. Such measures may include scheduling tree removal in late summer or fall after bat breeding season, and/or hiring a bat ecologist with appropriate state and federal permits to place bat exclusion devices on occupied trees immediately prior to tree removal.

- Avoid all grading and tree removal within 100 feet of the seasonal drainages, as measured from the creek centerline.
- Restrict residential development and landscaping to the minimum footprint necessary. Develop a plan that preserves the forest habitat on the remainder of each parcel (e.g., specify that only hazard trees may be removed, etc.).
- For trees to be retained that occur within 30 feet of road construction, utility trenching or rough grading for home construction, the trees shall be protected by the placement of 6-foot high plastic construction fencing. Fencing shall be placed along the outside edge of the dripline of the tree or grove of trees. The fencing shall be maintained throughout the site construction period and shall be inspected periodically for damage and proper functioning.
- If construction activities are proposed within the dripline of trees to be retained, the following construction guidelines should be implemented (or other measures, as specified by a certified arborist): minimize grading, filling, or other type of soil disturbance within 10 feet of the tree trunk. If 1/3 or more of the roots are disturbed, the injured tree shall be watered so that the ground is soaked to a depth of 18 inches, extending outward to the dripline of the tree.
- If evidence of the fungus responsible for Sudden Oak Death (*Phytophthora* sp.) is detected on the property, the homeowners should implement measures to prevent/control the spread of this fungus both on and off-site. Homeowners should be responsible for implementing the most current disease-preventing measures for the use, storage and/or transporting of oak firewood as a means of minimizing the spread of the disease with the County and the State of California. Preventative and treatment measures will also be implemented as recommended. Current information on this disease and recommended treatments is available through the University of California Cooperative Extension, Sudden Oak Death website.
- Landowners should avoid using invasive, non-native plant species in their landscaping. Plant species to be avoided include: all brooms (i.e., French broom, Spanish broom and Scotch broom), periwinkle (*Vinca* sp.), German (or Cape) ivy, English ivy, Algerian ivy, acacia (all kinds), eucalyptus (all kinds) and Monterey pine.
- Areas disturbed during site grading should be seeded with native grasses to discourage the colonization of invasive, non- native plants. Wild rye (*Elymus glaucus*) and California brome (*Bromus carinatus*) are recommended.

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ARBORIST REPORT-

Tree Inventory, Resource Analysis & Preliminary Impact
Assessment for Development at:
Polo Heights, Scotts Valley, CA
APN: 024-021-27

Prepared for:
Mr. Todd Creamer
4444 Scotts Valley Drive, Suite
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April 5, 2018

Revised: July 25, 2019

Prepared By:
Kurt Fouts
ISA – Certified Arborist WE-0681A



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Glossary of Terms

Appendix A – Tree Assessment Chart

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- Protecting Trees During Construction
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- Tree Protection Fencing
- Tree Protection Signs
- Monitoring
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- Tree Work Standards & Qualifications
- City of Scotts Valley Protected Trees

Appendix G - Assumptions & Limiting Conditions

SUMMARY

The subject property is an undeveloped parcel, located adjacent to Polo Heights Road, in Scotts Valley. The parcel slopes down from Polo Heights Road to Highway 17 and is zoned "Hillside Residential", meaning all trees 8 inches in diameter or greater are 'protected'. One hundred sixty-two trees, comprised of five different species were assessed. Ninety two percent of the trees assessed are "protected" trees.

The dominant tree species is Coast Live Oak, comprising 39% of the tree population. Madrones were the second most common tree and Douglas Fir was third. Most of the tree population is in poor condition. Nearly two-thirds (62%), is not suitable for preservation based on their condition.

Fifty five percent, or 76 of the 137 trees (25 dead trees were not included in the impact ratings), *will not* be highly affected by the proposed development and can remain, although many not highly affected (43 trees), are in poor condition. Trees in poor condition evaluated in an urban location would typically be recommended for removal. However, in this woodland environment consideration should be given to retaining some of these trees for utilitarian reasons, such as erosion control and habitat.

Seven trees will be *moderately* affected by the proposed parcel improvements and will require tree protection measures. Two of these six trees (Douglas firs), are between 55 & 85 feet tall, have a risk classification of "medium hazard", are located immediately adjacent to the proposed development area and should be re-evaluated for structural stability, as conditions can change, prior to final submittals for development.

Eighty-three trees are proposed for removal. This includes 58 trees highly impacted, and 25 dead trees.

Replacement trees for trees removed will be required at a 2:1 replacement ratio.

Background

Preliminary plans will be submitted to the City of Scotts Valley for parcel improvements on a property located adjacent to Polo Heights Road, (APN:024-021-27). There are 162 trees on the property.

The developer Mr. Todd Creamer, has requested my services, to assess the condition of the trees on this site and the impacts that may affect them. Further, to provide a report with my findings and recommendations to meet City of Scotts Valley planning requirements.

Assignment

To complete this assignment, the following services were performed:

- **Tree Resource Evaluation:** Inventory, evaluate and assign suitability for preservation ratings for subject trees.
- **Plan Review:** Reviewed provided plans including: Arborist Exhibit Map, Sheet CEO.1 by C2G/Civil Consultants Group, INC., dated 11-29-2017
- **Construction Impact Assessment:** Combine tree resource data with anticipated construction impacts (From Arborist Exhibit Map, Sheet CEO.1), to provide recommendations for removal or retention of trees.
- **Mapping:** Tagged tree numbers were plotted by owner onto Tree Inventory Plan, Sheet C4.1, by C2G/Civil Consultants Group, INC., dated 11/29/2017.

Limits of the Assignment

- The information contained in this report covers only those items that were examined and reflects the condition of those items at the time of inspections in February and March 2018.
- The inspection is limited to visual examination of accessible items without climbing, dissection, excavation, probing, or coring. There is no warranty or guarantee, expressed or implied, that problems or deficiencies of the trees in questions may not arise in the future.

Purpose and use of the report

The report is intended to identify all the trees within the plan area that could be affected by a project. The report is to be used by the developer, their agents, and the City of Scotts Valley as a reference for existing tree conditions and to help satisfy the City of Scotts Valley planning requirements.

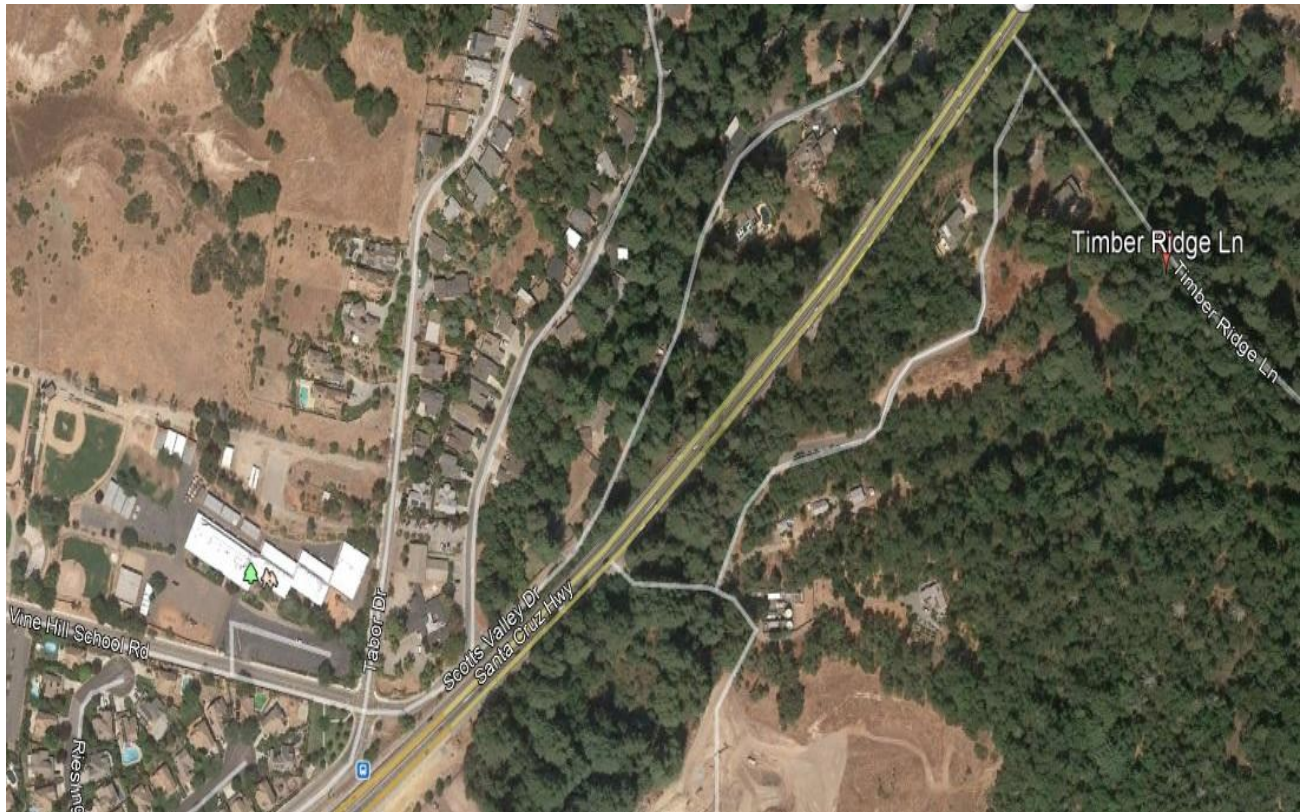
Resources

All information within this report is based on site plans as of the date of this report.
Resources are as follows:

- Arborist Exhibit Map, Sheet CEO.1 by C2G/Civil Consultants Group, INC., dated 11-29-2017
- Site Visit, Tree Inventory & Condition Evaluation in February and March 2018.
- City of Scotts Valley Municipal Code – Section :17.44.080 – *Tree Protection Regulations* (applicable sections).

SITE DESCRIPTION

The undeveloped parcel slopes down from Polo Heights Road to Highway 17, is heavily wooded and varies in percentage of slope. The tree population includes coast live oak, madrone, Douglas fir, coast redwood and California bay laurel, with coast live oak the dominant species. All tree species are native to our area.



DISCUSSION

Tree Condition Observations

Much of the tree population has significant basal (lower trunk area), wood decay and cavities, with active wood decay fungi. (Image #1). Wood decay causes a loss of structural wood and increases tree failure potential over time. Many of the previous tree failures on the property have occurred due to loss of sound wood by fungal activity in the trunk basal area (Image #2). Nearly all the madrone trees have minor to significant trunk decay and many have succumbed due to extensive decay. Because of the pervasive trunk decay, a low percentage of the madrone population has been recommended for retention.

Decay was also found in the trunk basal area of many oaks (Image #3), and some Douglas fir.

Another common defect found in a high percentage of trees was trunk lean and horizontal trunk growth (image #4). Trunk lean may increase the potential for failure, especially in conjunction with excessive crown weight and/or unbalanced canopies and if decay is present in the plane of the lean. This combination of defects was found in many of the subject trees.

A percentage of the Douglas firs have a low live crown ratio (see glossary for definition). A LCR of 30% or less is considered a threshold value for conifers. Trees with 30% LCR or less have a greater potential for failure, by windthrow, especially if trees around them are removed.

There are three mature coast redwoods, in the northwest quadrant of the property, each with several younger 'sprouts' from the parent tree growing around it (Image #5). At some point in the past, the three mature trees were 'topped', and as a result, their upper canopy structure is poorly developed. The largest of the three trees, tree number 161, has a significant lean and a very large basal cavity but appears stable. However, these trees are located far enough from the proposed development area that in the event of whole tree failure they would not reach the proposed development area.

The tallest and largest tree on the property is a Douglas fir, tree number 200. This tree is in good health but has a structural deficiency, with two co-dominant trunks formed at 50 feet above grade. In the event one of these two trunks failed, it would not reach the proposed development.

Species List

TOTAL SUBJECT TREES: 162 Trees

Protected:

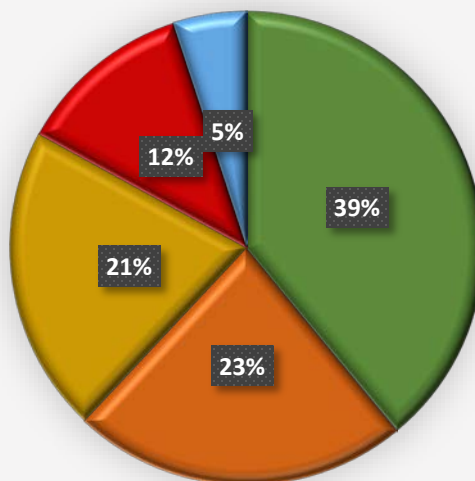
59	Coast Live Oak	(<i>Quercus agrifolia</i>)
36	Madrone	(<i>Arbutus menzeisii</i>)
30	Douglas Fir	(<i>Pseudotsuga menzeisii</i>)
20	Coast Redwood	(<i>Sequoia sempervirens</i>)
4	California Bay Laurel	(<i>Umbellularia californica</i>)

Not Protected:

2	Coast Live Oak	(<i>Quercus agrifolia</i>)
2	Madrone	(<i>Arbutus menzeisii</i>)
5	Douglas Fir	(<i>Pseudotsuga menzeisii</i>)
4	California Bay Laurel	(<i>Umbellularia californica</i>)

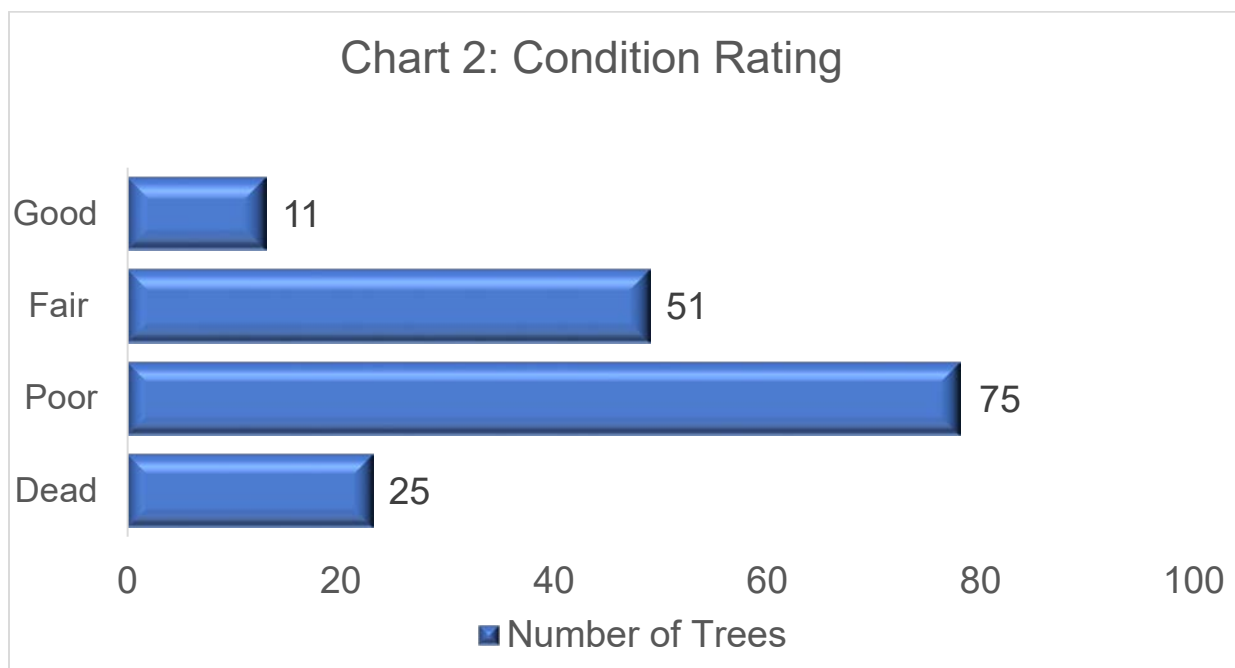
Chart 1: Population by Species

- Coast Live Oak
- Madrone
- Douglas Fir
- Coast Redwood
- Bay



Condition Rating

A tree's condition is determined by assessing both the **health** and **structure**, then combining the two factors to reach a *condition rating*. Tree condition is rated as good, fair, poor, or dead. The quantity of trees assigned for each category (good, fair or poor, dead), is indicated below:

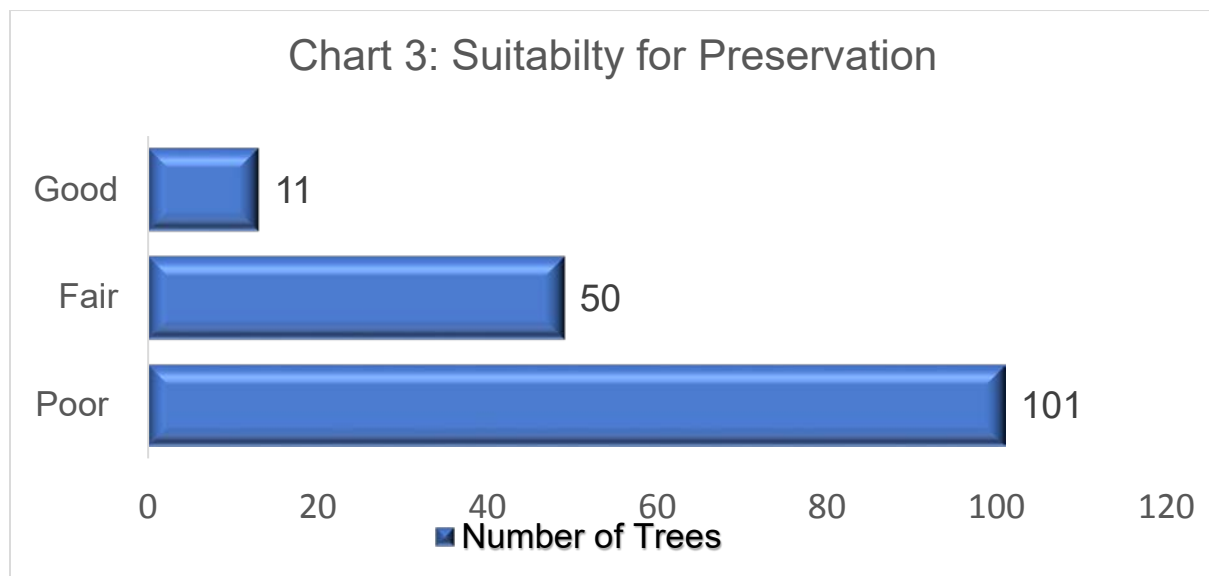


Detailed descriptions for tree assessment methodology used in the **Condition Rating** above and Tree Assessment Chart- Appendix A, are included in *Criteria for Tree Assessment – Appendix B*, of this report.

Suitability Rating

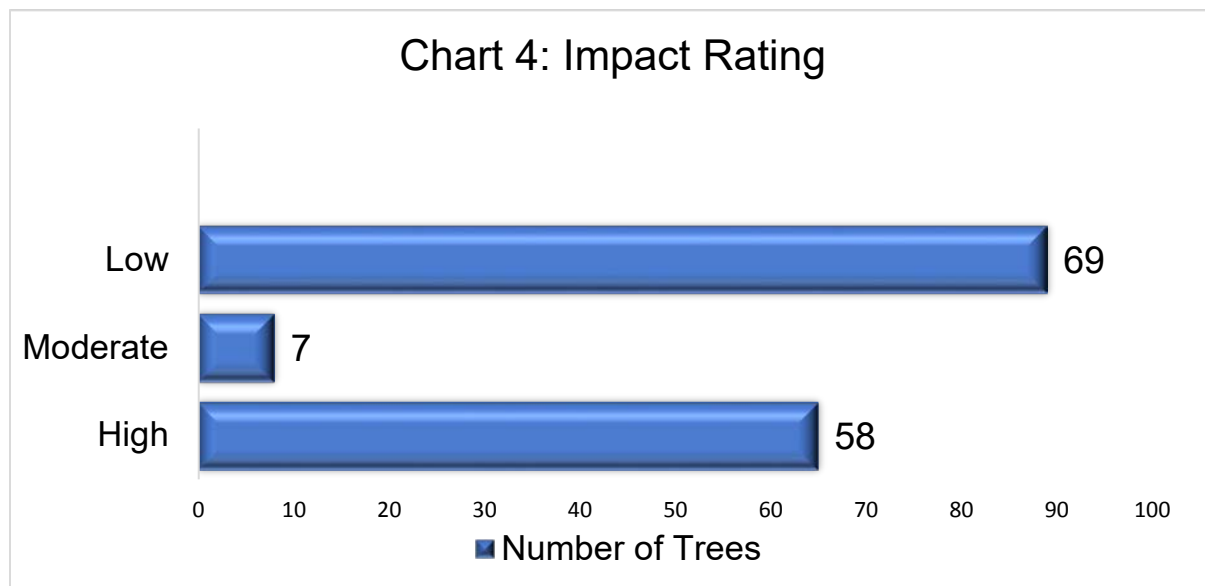
A tree's suitability for preservation is determined based on its health, structure, age, species characteristics and longevity using a scale of good, fair or poor. The quantity of trees assigned to each category (good, fair or poor), is listed below.

Sixty two percent of the trees evaluated were not suitable for preservation, due to either poor health, poor structure or the tree was dead.



Impact Level

Impact level rates the degree a tree may be impacted by construction activity and is primarily determined by how close the construction procedures occur to the tree. Construction impacts are rated as low, moderate, high. The quantity of trees assigned for each category (low, moderate, high), is indicated below:



- Sixty-nine trees are in areas that are far enough away from proposed grading and excavation activities that they will not be affected.
- Seven trees are located close to grading limit or excavation areas but will only be moderately affected.
- Fifty-eight trees are in or *very close* to the proposed grading limits or excavation areas for parcel improvements and will be highly impacted by grading activities.
- Dead trees (25), were not included in impact rating evaluation.

Trees that are moderately affected can be retained and may require pre-construction treatments such as tree protection fencing, silt fencing and tree wells to reduce grade changes around the root zone areas.

Polo Heights – Tree Removal Summary Table

A	B	C	D	E	F	G	H
Number of trees inventoried	Trees proposed for removal	Trees proposed for removal due to construction impacts	Trees proposed for removal due to condition	Trees proposed for removal due to construction impacts that meet "protected criteria"	Trees proposed for removal due to condition that meet "protected criteria".	Dead trees "protected" size, not to be included in mitigation total	Total number of "protected" trees to be removed that require mitigation. Add columns E and F subtract column G
162	84	28	56	26	52	23	55

Tree Replacement

A total of 55 trees will be removed that require mitigation. Compensation for trees removed will be at a 2:1 replacement ratio. Replacement trees should be 15-gallon nursery grown container trees for areas on the grading envelope along Polo Heights road and 5-gallon container trees in areas between the grading envelope, and the bottom of the property.

Trees recommended for areas on the grading envelope along Polo Heights road include:

- Canary Island Pine *Pinus canariensis*
- Aleppo Pine *Pinus halepensis*

Trees recommended for areas between the grading envelope and the bottom of the property include:

- Coast Live Oak *Quercus agrifolia*
- Interior Live Oak *Quercus wislizenii*
- Big leaf maple *Acer Macrophyllum*
- Pacific Dogwood *Cornus nuttalli*
- Coast Redwood *Sequoia sempervirens*

Planting Trees on Slopes

- Choose locations on the parcel with a moderate gradient (30 percent or less).
- Minimum planting distance from existing trees is 15 feet.
- Create a flattened area 2 to 3 times the diameter of the container.
- Dig a pit a minimum of 2 times the diameter of the container, and deeper on the uphill side to ensure the tree will be upright.
- Install the plant root ball, 1-2 inches above finish grade.
- Build a berm on the downhill side to help retain water.
- Install a 2-4-inch layer of mulch keeping it away from the tree trunk.
- New tree must be irrigated during dry season to meet water needs, for initial two-year establishment period.

Planting Trees on Compacted Soils and/or Engineered Fill

Compacted soils and engineered fill reduce water infiltration and drainage. Over watering during the establishment of container plants is a common problem. Over watered container grown plants in compacted soils or those with engineered fill, can create anerobic soil conditions, causing root mortality. Anaerobic disease organisms and increased soil compaction are additional problems from overwatering. This is particularly true during the tree establishment period (first two years). *Proper soil preparation is imperative.*

- Loosen soil planting pit a minimum of 2 to 3 times the diameter of the container. Use water as an “amendment” to loosen compacted soil during excavation.
- Dig hole a minimum of 1 ½ to 2 times the depth of the container to loosen soil and increase water percolation.
- Use of a post hole power auger can reduce labor effort.
- Install the plant root ball, 1-2 inches above finish grade.
- Build a berm to retain water.
- Install a 2-4-inch layer of mulch keeping it away from the tree trunk.
- Monitor soil moisture level with a probe type moisture meter.
- Overwatering in compacted soils creates an environment for disease fungi to propagate.
- New tree must be irrigated during dry season to meet water needs, for initial two-year establishment period.

Trees Located Near the Proposed Development Area

There are two Douglas fir trees with fair or good structure ratings, located less than 6 feet from the grading limits that could be moderately impacted by parcel improvements, including trees number 114 & 132 (see Appendix D - Tentative Map). The height of these trees is 85 feet and 55 feet, making them within range of striking a home built in the improvement area. This species can be subject to whole tree failure in our region. Several dead and fallen Douglas Firs (not inventoried), were observed on the property. These trees should be re-evaluated prior to final plan submittal for structural integrity, since the introduction of a target (new home), creates a risk. Douglas firs may suffer, “root failure due to root rot, trunk failure from internal decay and are ranked as a *“medium hazard”*, *Evaluation of Hazard Trees in Urban Areas, Second Edition, J. Clark & N. Matheny, 1994.*

Tree Evaluation and Recording Methods

Trees were tagged and numbered with metal tags by the property owner, in November and December 2017, prior to my site evaluations. Site evaluations were made on multiple days in February and March 2018. During my site evaluations, an additional 33 trees were identified for inclusion in survey. These trees were not tagged but were evaluated and their locations were plotted on the Tree Inventory Plan. *The inventory included all protected (and 13 unprotected) trees, located within the property boundaries.*

The health and structural **condition** of each tree was assessed and recorded. Based on the trees health and structural condition, each trees **suitability for preservation** was rated and recorded.

The recorded data is included in the *Tree Assessment Chart, Appendix A*, of this report. Tree numbers were plotted on the attached *Tree Inventory Plan*. **To correlate the data in the Tree Assessment Chart to the tree’s location on the site, refer to the Tree Inventory Plan- Appendix C.**

Descriptions for tree assessment methodology used in the Tree Assessment Chart are included in *Criteria for Tree Assessment - Appendix B*, of this report.

Tree Protection Zone

The tree protection zone (TPZ), is a defined area within which certain activities are prohibited or restricted to minimize potential injury to designated trees during construction.

The size of the optimal TPZ can be determined by a formula based on: 1) trunk diameter 2) species tolerance to construction impacts, and 3) tree age (Matheny, N. and Clark, J 1998). In some instances, tree drip line is used as the TPZ. Development constraints can also influence the final size of the tree protection zone.

Fencing is installed to delineate the (TPZ), and to protect tree roots, trunk, and scaffold branches from construction equipment. *The fenced protection area may be smaller than the optimal or designated TPZ area in some circumstances.* Tree protection may also involve the armoring of the tree trunk and/or scaffold limbs with barriers to prevent mechanical damage from construction equipment. See *Tree Protection Guidelines & Restrictions – Appendix C*

Once the TPZ is delineated and fenced (prior to any site work, equipment and materials move in), construction activities are only to be permitted within the TPZ if allowed for and specified by the project arborist.

Data has been entered in the *Tree Assessment Chart – Appendix A*, which indicates the Tree Protection Zone for each tree.

Additional general tree protection guidelines are included in *Tree Protection Guidelines & Restrictions – Appendix C*.

Critical Root Zone

Critical Root Zone (CRZ) is the area of soil around the trunk of a tree where roots are located that provide critical stability, uptake of water and nutrients required for a tree's survival. The CRZ is the minimum distance from the trunk that trenching that requires root cutting should occur and can be calculated as three to the five times the trunk Diameter at Breast Height (DBH). For example, if a tree is one foot in trunk diameter then the CRZ is three to five feet from the trunk location. We will often average this as four times the trunk diameter or 1ft. DBH = 4ft. CRZ (Smiley, E.T., Fraedrich, B. and Hendrickson, N. 2007).

CONCLUSION

The property is an undeveloped woodland parcel adjacent to Polo Heights Road, in Scotts Valley. One hundred sixty-two trees containing five species were evaluated. One hundred forty-nine of the trees are 'protected'. Coast Live Oak is the dominant species on the property comprising 39% of all trees.

Most of the tree population is in poor condition. Nearly two-thirds (62%), is not suitable for preservation based on their condition. Sixty-two trees are in good or fair condition, seventy-five are in poor condition and 25 trees evaluated were dead.

Fifty-eight trees are recommended for removal due to high anticipated development impacts.

Seven trees are located close to the grading limits, will be moderately impacted and will require tree protection measures, including the establishment of a Tree Protection Zone (TPZ), prior to development.

Two of these seven trees (Douglas firs), are between 55 and 85 feet tall, have a risk classification of "medium hazard", are located immediately adjacent to the proposed development area and should be re-evaluated for structural stability, as conditions can change, prior to final submittals for development.

Forty-three trees in poor condition are outside the disturbance limits and will not be highly affected by the proposed development. The decision to remove this set of forty-three trees, should be done on a case by case basis, with consideration to best forestry practices and the utility of retaining them for reasons such as erosion control and habitat.

Eighty-three trees are proposed for removal. This includes 58 trees highly impacted, and 25 dead trees.

Fifty-five "protected" trees will be removed and require replacement trees as mitigation.

Replacement trees for trees removed will be required at a 2:1 replacement ratio.

Detailed specifications for planting trees on slopes and in compacted soil or engineered fill is included in this report.

RECOMMENDATIONS

1. Obtain all necessary permits prior to removing or significantly altering any trees on site.
2. Remove all dead trees and those highly affected by the project.
3. Plant replacement trees for trees removed.
4. Re-evaluate Douglas Fir trees #114 & 132 prior to final plan submittal.
5. Tree protection measures for moderately impacted trees to be retained, will be required in an addendum to this report.

Respectfully submitted,

Kurt Fouts 7/25/2019

Kurt Fouts ISA Certified Arborist WE0681A



Glossary of Terms

Basal rot: decay of the lower trunk, trunk flare, or buttress roots.

Critical Root Zone (CRZ): Area of soil around a tree where a minimum number of roots considered critical to the structural stability or health of the tree are located. CRZ determination is sometimes based on the drip line or a multiple of the DBH, but because root growth can be asymmetric due to site conditions, on-site investigation may be required.

Codominant branches/stems: Forked branches (or trunks), nearly the same size in diameter, arising from a common junction and lacking a normal branch union, may have included bark.

Crown: Upper part of a tree, measured from the lowest branch, including all branches and foliage.

Defect: An imperfection, weakness, or lack of something necessary. In trees defects are injuries, growth patterns, decay, or other conditions that reduce the tree's structural strength.

Diameter at breast height (DBH): Measurement of trunk diameter at 4.5 feet above grade.

Live Crown Ratio (LCR): Ratio of the height of the crown containing live foliage to overall height of the tree.

Scaffold branches: Permanent or structural branches that form the scaffold architecture or structure of a tree.

Suppressed: Trees that have been overtopped and occupy an understory position within a group or grove of trees. Suppressed trees often have poor structure.

Tree Protection Zones (TPZ): Defined area within which certain activities are prohibited or restricted to prevent or minimize potential injury to designated trees, especially during construction or development.

Trunk flare: Transition zone from trunk to roots where the trunk expands into the buttress or structural roots.

This Glossary of Terms was adapted from the *Glossary of Arboricultural Terms* (ISA, 2015)

Polo Heights, Scotts Valley, APN: 024-021-27

Tree Assessment Chart - Appendix A

Suitability for Preservation Ratings:

Good: Trees in good health and structural condition with potential for longevity on the site

Fair: Trees in fair health and/or with structural defects that may be reduced with treatment procedures

Poor: Trees in poor health and/or with poor structure that cannot be effectively abated with treatment

Retention or Removal Code:


RT: Retain Tree

RI: Remove Due to Construction Impacts

I.M. Impacts Can Be Mitigated With Pre-Construction Treatments


R.C. Remove Due to Condition

Protected Tree City of Scotts Valley Any tree 13 inches or greater in diameter measured at 4.5 feet above grade. Any oak 8 inches or greater. Any tree 8 inches or greater if within 20' of a slope > 20%.

Tree #	Species	Trunk Diameter @ 4.5' a.g.	Protected Tree	Crown Height & Spread	Health Rating	Structural Rating	Suitability for Preservation (Based on Condition)	Impact Rating	Insects/ Disease	Retention or Removal Code	Comments
75	California bay laurel (<i>Umbellularia californica</i>)	13 trunks	Yes	70'X80'	Good	Fair	Fair	Low		RT	Multi-trunk structure.
76	California bay laurel	>10 trunks	Yes	70'X80'	Good	Fair	Fair	Low		RT	Multiple leaning and bowed trunks, some horizontal.
77	coast redwood (<i>Sequoia sempervirens</i>)	30"	Yes	100'X30'	Fair	Fair	Fair	Moderate		RT	Lowest limbs 50' above grade. Canopy density less than average for species. New growth is less than average for species. On edge of grading limits.
78	coast redwood	12"	Yes	40'X25'	Fair	Fair	Fair	Moderate		RT	Broken terminal (leader), at 40' above grade. Reduced branching structure. Canopy density less than average for species. Within 2' of grading limits (fill).
79	madrone (<i>Arbutus menziesii</i>)	20"	Yes	35'X20'	Poor	Poor	Poor	High	Fungal disease	RC	Co-dominant trunks at 3' above grade. Smaller of two trunks dead. Basal cavity & deadwood. Significant tip dieback/ leaf spotting, likely due to two separate fungal diseases.
80	coast live oak (<i>Quercus agrifolia</i>)	8"	Yes	35'X20'	Fair	Fair	Fair	High		RI	Within 2' of road cut. 90% of canopy covered with poison oak. Poison oak will require removal if tree is retained.
 <p>826 Monterey Avenue Capitola, CA 95010 831-359-3607 kurtfouts1@outlook.com</p>							Page 1 of 17				7/25/2019


Polo Heights, Scotts Valley, APN: 024-021-27

Tree Assessment Chart - Appendix A

Tree #	Species	Trunk Diameter @ 4.5' a.g.	Protected Tree	Crown Height & Spread	Health Rating	Structural Rating	Suitability for Preservation (Based on Condition)	Impact Rating	Insects/ Disease	Retention or Removal Code	Comments
81	coast live oak	15"	Yes	55'X15'	Fair	Fair	Fair	High		RI	Limited branching structure. Basal cavity and decay.
82	coast live oak	14"	Yes	55'X30'	Fair	Fair	Fair	High		RI	All structure in top half of trunk.
83	Douglas fir (Pseudotsuga menziesii)	18"	Yes	70'X30'	Fair	Fair	Fair	High		RI	Canopy density < average for species. Limited branching structure.
84	coast live oak	11"	Yes	55'X10'	Fair	Poor	Poor	High		RC	Trunk bowed at midpoint. Limited branching structure.
85	Douglas fir	12"	Yes	65'X10'	Poor	Poor	Poor	N/A		RC	Dead.
86	madrone	14"	Yes	50'x15'	Poor	Poor	Poor	High	Boring insects/fungal disease	RC	Co-dominant trunks at grade. Declining. Basal cavity and decay. Deadwood along mid trunk. Evidence of boring insects in trunk. Significant tip dieback/ leaf spotting, likely due to two separate fungal diseases.
87	madrone	20"	Yes	55'X35'	Poor	Fair	Poor	High		RC	Co-dominant trunks at 2' above grade. Smaller trunk dead. Declining. Basal decay and cavity. Deadwood on trunk up to 7' above grade.
88	madrone	10", 8"	Yes	50'X20'	Poor	Poor	Poor	High		RC	Co-dominant trunks at grade. Declining. Significant basal cavity. Significant tip dieback / leaf spotting likely due to two separate fungal diseases.
89	coast live oak	17"	Yes	50'X30'	Poor	Poor	Poor	High		RC	Significant trunk lean to west. Limited canopy density and branching structure. Significant basal decay and deadwood. High failure risk.
90	coast live oak	10"	Yes	35'X10'	Fair	Poor	Poor	High		RC	Significant trunk lean to west. Limited canopy density and branching structure. Significant basal decay and deadwood. Canopy structure limited to upper 25% of trunk.
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Polo Heights, Scotts Valley, APN: 024-021-27

Tree Assessment Chart - Appendix A

Tree #	Species	Trunk Diameter @ 4.5' a.g.	Protected Tree	Crown Height & Spread	Health Rating	Structural Rating	Suitability for Preservation (Based on Condition)	Impact Rating	Insects/ Disease	Retention or Removal Code	Comments
91	coast live oak	14"	Yes	50'15'	Fair	Fair	Fair	High		RI	Branching structure limited to upper 25% of canopy. Thin canopy.
92	coast live oak	12"	Yes	35'X5'	Poor	Poor	Poor	High		RC	Nearly dead. Basal cavity. Significant lean.
93	coast redwood	30"	Yes	55'X30'	Poor	Poor	Poor	Low		RT	Topped at 55' above grade. Live crown ratio 20%. Thinning growth.
94	Douglas fir	18"	Yes	75'X20'	Fair	Fair	Fair	High		RI	Live crown ratio 50%.
95	madrone	26"	Yes	65'X25'	Poor	Poor	Poor	High		RC	Co-dominant trunks at 18' above grade. Live crown ratio 25%. Large cavity and basal decay. Dieback and foliar fungal disease.
96	coast redwood	8"	Yes	30'X15'	Poor	Poor	Poor	High		RC	Extremely limited branch structure and foliar development.
97	madrone	14"	Yes	55'X10'	Poor	Poor	Poor	High		RC	Significant lean to west. Deadwood in lower trunk. Significant canopy dieback.
98	madrone	10"	Yes	40'X10'	Fair	Fair	Fair	High		RI	Limited branch structure. Canopy growth is limited to upper 25% of trunk.
99	coast live oak	12",11",11",6"	Yes	50'X50'	Fair	Fair	Fair	High		RI	Co-dominant trunks at grade. Four trunks. Significant lean to west. Cavity and deadwood at 6' above grade. Basal decay. Canopy growth is limited to 30% of trunk.
100	coast live oak	11"	Yes	40'X15'	Fair	Poor	Poor	High		RC	Limited branch structure. Extremely thin canopy with significant dieback in stems up to 1/4" in diameter.
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Tree Assessment Chart - Appendix A

Tree #	Species	Trunk Diameter @ 4.5' a.g.	Protected Tree	Crown Height & Spread	Health Rating	Structural Rating	Suitability for Preservation (Based on Condition)	Impact Rating	Insects/ Disease	Retention or Removal Code	Comments
101	coast live oak	11"	Yes	35'X15'	Fair	Poor	Poor	High		RC	Significant lean to east. Basal decay. Cavity and deadwood at 6' above grade. Canopy growth limited to upper 30% of trunk.
102	madrone	12"	Yes	55'X15'	Fair	Poor	Poor	High		RC	Trunk bows to west. Canopy growth limited to upper half of trunk.
103	coast live oak	9"	Yes	45'X10'	Poor	Poor	Poor	High		RC	Significant lean to west. Minimal branch structure and canopy at top 10% of trunk.
104	coast live oak	14",9"	Yes	40'X40'	Fair	Poor	Poor	High		RC	Co-dominant trunks at grade. Basal decay. Canopy development limited & suppressed by larger adjacent trees.
105	coast live oak	8",8",7"	Yes	30'x10'	Fair	Poor	Poor	High		RC	Co-dominant trunks at grade. Basal decay. Canopy development limited & suppressed by larger adjacent trees.
106	Douglas fir	36"	Yes	110'X40'	Good	Good	Good	High		RI	
107	Douglas fir	7"	No	38'X20'	Fair	Fair	Fair	High		RI	Limited branch structure and canopy development.
108	coast live oak	15"	Yes	45'X22'	Good	Fair	Fair	High		RI	Unbalanced canopy with all limbs on s.e. side of trunk.
109	Douglas fir	10"	Yes	65'X25'	Fair	Fair	Fair	High		RI	
110	Douglas fir	12"	Yes	80'X30'	Fair	Fair	Fair	High		RI	In disturbance area for septic lines.
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Tree #	Species	Trunk Diameter @ 4.5' a.g.	Protected Tree	Crown Height & Spread	Health Rating	Structural Rating	Suitability for Preservation (Based on Condition)	Impact Rating	Insects/ Disease	Retention or Removal Code	Comments
111	madrone	12",10",9",7"	Yes	50'X30'	Poor	Poor	Poor	N/A		RC	Dead. Trunk partially fallen.
112	coast live oak	8",7"	Yes	35'X20'	Fair	Fair	Fair	High		RI	Co-dominant trunks at grade. Good canopy density and foliar color.
113	coast live oak	12"	Yes	50'X25'	Fair	Fair	Fair	High		RI	Majority of branching structure in upper 25% of trunk. Thin canopy.
114	Douglas fir	18"	Yes	85'X25'	Good	Good	Good	Moderate		RT	Appears vigorous. Within 5' of grading limits (fill).
115	coast live oak	12"	Yes	50'X25'	Fair	Fair	Fair	High		RI	Majority of branching structure in upper 25% of trunk. Thin canopy.
116	Douglas fir	13"	Yes	75'X25'	Good	Fair	Fair	High		RI	Live crown ratio 50%.
117	coast live oak	10"	Yes	55'X15'	Fair	Fair	Fair	High		RI	Limited branching structure.
118	Douglas fir	10"	Yes	75'X20'	Poor	Poor	Poor	High	Basal canker	RC	Cavity and basal canker. Failure risk. Recommend removal.
119	Douglas fir	11"	Yes	70'X20'	Fair	Fair	Fair	High		RI	Live crown ratio 60%. Limited branching structure.
120	madrone	11",9"	Yes	55'X20'	Poor	Poor	Poor	High		RC	Co-dominant trunks at grade. Significant basal cavity. One trunk dead.
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121	Douglas fir	8"	Yes	40'X30'	Poor	Poor	Poor	High		RC	Limited branching structure and foliar canopy.
122	coast live oak	14"	Yes	60'X25'	Fair	Fair	Fair	High		RI	Trunk leans 30% to east. Branching structure limited to upper 30% of trunk.
123	Douglas fir	12"	Yes	75'X15'	Fair	Fair	Fair	High		RI	Live crown ratio 20%. No lower structure.
124	coast live oak	8"	Yes	24'X4'	Poor	Poor	Poor	High		RC	Nearly dead. Basal decay.
125	coast live oak	11"	Yes	50'X10'	Fair	Poor	Poor	High		RC	Basal cavity and decay. Live crown ratio 15%.
126	Douglas fir	11"	Yes	80'X15'	Fair	Fair	Fair	High		RI	Live crown ratio 20%. No lower structure.
127	madrone	12"	Yes		Poor	Poor	Poor	N/A		RC	Tree is dead and fallen.
128	California bay laurel	30"	Yes	55'X50'	Good	Fair	Fair	High		RI	Three co-dominant trunks at grade. Significant lean and bowed trunks.
129	coast live oak	12"	Yes	35'X20'	Fair	Poor	Poor	High		RC	Co-dominant trunks at 10' above grade. Trunks separate and are wedged around trunk of tree #130.
130	Douglas fir	20"	Yes	90'X40'	Fair	Fair	Fair	High		RI	Live crown ratio 45%.
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131	madrone	12"	Yes	45'X8'	Poor	Poor	Poor	N/A		RC	Dead
132	Douglas fir	18"	Yes	100'X35'	Good	Fair	Fair	Moderate		RT	Live crown ratio 60%. Within 5' of grading limits (fill).
133	Douglas fir	20"	Yes	85'X25'	Fair	Fair	Fair	Low		RT	Significant lean to west. Live crown ratio 60%.
134	coast live oak	22"	Yes	45'X25'	Fair	Poor	Poor	Low		RT	Significant cavity with dead wood and decay at 6' above grade. Branch dieback. Risk of whole tree failure due to lack of sound wood at cavity.
135	coast live oak	8",6"	Yes	20'X1'	Poor	Poor	Poor	Low		RT	Nearly dead. Less than 5% live canopy.
136	coast live oak	10",8"	Yes	50'X10'	Poor	Poor	Poor	Low		RT	Co-dominant trunks at 1' above grade. Basal decay. Limited branching structure. One trunk is dead.
137	Douglas fir	8"	Yes	65'X15'	Poor	Poor	Poor	Low		RT	Live crown ratio 50%. Limited branching structure.
138	Douglas fir	9"	Yes	60'X15'	Poor	Fair	Poor	Low		RT	Live crown ratio 35%. Limited branching structure.
139	coast live oak	22",18"	Yes	45'X60'	Fair	Poor	Poor	Low		RT	Co-dominant trunks at grade. Significant bow in both trunks to near horizontal. Cavity and basal decay in one trunk.
140	coast live oak	10", 8", 4"	Yes	40'X15'	Poor	Poor	Poor	Low		RT	Co-dominant trunks at grade. One leans 45% to west. Deadwood and decay in trunks. Limited branching structure and canopy development.
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141	coast live oak	10"	Yes	45'X15'	Fair	Fair	Fair	High		RT	Significant 35% lean to west. Limited branching structure. In diturbance area for septic lines.
142	coast live oak	12",10",8",6"	Yes	55'X15'	Poor	Poor	Poor	Moderate		RT	Basal decay. Limited branching structure. Less than 5% live canopy.
143	Douglas fir	14"	Yes	70'X25'	Fair	Fair	Fair	High		RT	Live crown ratio 50%..
144	Douglas fir	6"	No	60'X15'	Poor	Poor	Poor	Low		RT	Live crown ratio 15%. Very limited branching structure and canopy development.
145	Douglas fir	6"	No	60'X20'	Poor	Poor	Poor	Low		RT	Suppressed growth. Very limited branching structure.
146	coast live oak	11"	Yes	55'X25'	Fair	Fair	Fair	Moderate		RT	Limited branching structure.
147	Douglas fir	6"	No	55'X10'	Fair	Fair	Fair	Low		RT	Live crown ratio 30%.
148	Douglas fir	10"	Yes	65'X15'	Fair	Fair	Fair	Low		RT	Live crown ratio 40%.
149	coast live oak	9", 8", 6"	Yes	40'X20'	Poor	Poor	Poor	Moderate		RT	Co-dominant trunks at 1' above grade. Basal decay. Very limited branching structure and canopy development.
150	Douglas fir	10"	Yes	70'X25'	Fair	Fair	Fair	Low		RT	Live crown ratio 50%.
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151	madrone	13"	Yes	50'X10'	Poor	Poor	Poor	Low		RT	
152	madrone	14",9",9"	Yes	50'X20'	Poor	Poor	Poor	N/A		RC	Dead
153	coast live oak	14",4"	Yes	33'X20'	Fair	Fair	Fair	Low		RT	
154	coast live oak	10"	Yes	18'X15'	Fair	Fair	Fair	Low		RT	Co-dominant trunks at grade. 13' from road.
155	coast live oak	15", 14"	Yes	40'X10'	Fair	Fair	Fair	Low		RT	Co-dominant trunks at 8' above grade. 12' from road.
156	California bay laurel	6"	No	25'X15'	Good	Good	Good	Low		RT	
157	madrone	12"	Yes	40'X10'	Poor	Poor	Poor	N/A		RC	Dead
158	madrone	12"	Yes	45'X15'	Poor	Poor	Poor	N/A		RC	Dead
159	coast redwood	36"	Yes	65'X35'	Fair	Fair	Fair	Low		RT	Topped at 60'. Live crown ratio 40%.
160	madrone	13"	Yes	45'X10'	Fair	Fair	Fair	Low		RT	Live crown ratio 20%. Limited branching structure.
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Tree #	Species	Trunk Diameter @ 4.5' a.g.	Protected Tree	Crown Height & Spread	Health Rating	Structural Rating	Suitability for Preservation (Based on Condition)	Impact Rating	Insects/ Disease	Retention or Removal Code	Comments
161	coast redwood	88"	Yes	60'x60'	Fair	Poor	Poor	Low		RC	Main trunk has been topped. Significant 40 degree lean. Very large basal cavity has burned in past. Appears stable, but should be removed if targets are present.
162	madrone	11"	Yes	55'X10'	Fair	Fair	Fair	Low		RT	
163	coast redwood	21"	Yes	45'X20'	Poor	Poor	Poor	Low		RT	Topped at 45'. Very limited branching structure and canopy.
164	madrone	16"	Yes	45'X15'	Poor	Poor	Poor	Low		RT	Nearly dead. Less than 40% sound wood at basal cavity and decay. Likely to fail at any time
165	California bay laurel	6"	No	25'X10'	Poor	Poor	Poor	Low		RT	Very limited branching structure and canopy development.
166	California bay laurel	7"	No	55'X10'	Fair	Poor	Poor	Low		RT	Very limited branching structure and canopy development.
167	madrone	12"	Yes	25'X5'	Poor	Poor	Poor	N/A		RC	Dead
168	California bay laurel	9"	Yes	50'X10'	Fair	Poor	Poor	Low		RI	Very limited branching structure and canopy development. Within 5' of septic area footprint.
169	Douglas fir	13"	Yes	75'X25'	Fair	Fair	Fair	Low		RT	
170	coast live oak	7"	No	20'X5'	Poor	Poor	Poor	Low		RI	Trunk is broken at 20' above grade. Within septic area footprint.
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171	coast live oak	10"	Yes	40'X25'	Fair	Fair	Fair	Low		RI	Limited structure and canopy. Weight bias to north.
172	Douglas fir	8"	Yes	50'X15'	Fair	Fair	Fair	Low		RT	Live crown ratio 30%.
173	madrone	11"	Yes	50'X10'	Poor	Poor	Poor	N/A		RC	Dead
174	madrone	14"	Yes	25'X3'	Poor	Poor	Poor	N/A		RC	Dead
175	madrone	12"	Yes	40'X15'	Poor	Poor	Poor	N/A		RC	Dead
176	madrone	17",9"	Yes	45'X15'	Poor	Poor	Poor	N/A		RC	Dead
177	coast live oak	19"	Yes	60'X40'	Fair	Fair	Fair	Low		RT	Co-dominant at 1' above grade.
178	coast live oak	11", 9", 7"	Yes	40'X40'	Poor	Fair	Fair	Low		RT	Co-dominant trunks at grade. Basal deadwood and decay. Very limited foliar growth and branching structure.
179	Douglas fir	13"	Yes	80'X20'	Fair	Fair	Fair	Low		RT	Live crown ratio 30%.
180	Douglas fir	10"	Yes	50'x10'	Fair	Poor	Poor	Low		RC	Cavity with deadwood. Trunk integrity may be compromised. Within septic area footprint.
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Tree #	Species	Trunk Diameter @ 4.5' a.g.	Protected Tree	Crown Height & Spread	Health Rating	Structural Rating	Suitability for Preservation (Based on Condition)	Impact Rating	Insects/ Disease	Retention or Removal Code	Comments
181	coast live oak	10"	Yes	25'x15'	Poor	Poor	Poor	N/A		RC	Dead
182	madrone	10",6"	Yes		Poor	Poor	Poor	N/A		RC	Dead
183	coast live oak	9"	Yes	15'X15'	Fair	Poor	Poor	Low		RC	Significant lean to south. Limited branching structure. Poison oak halfway up trunk. Within septic area footprint.
184	coast live oak	20", 18", 10"	Yes	45'X41'	Fair	Poor	Poor	Low		RC	Co-dominant trunks at grade. Significant lean. Dead wood and decay in basal area. Less than 5' from septic area and septic line.
185	coast live oak	9",9",8",6",6",5"	Yes	30'X20'	Good	Fair	Fair	Low		RT	Co-dominant trunks at grade. Clump of trunks, 8' from road.
186	coast live oak	11"	Yes	50'X10'	Fair	Fair	Fair	Low		RT	Trunk bows significantly.
187	Douglas fir	10"	Yes	60'X20'	Fair	Fair	Fair	Low		RT	Live crown ratio 50%.
188	coast live oak	10"	Yes	35'X25'	Fair	Poor	Poor	Low		RT	Extreme trunk bow. Trunk is horizontal.
189	coast live oak	12"	Yes	55'X15'	Fair	Fair	Fair	Low		RT	Significant lean to north. Dead wood and decay on lower scaffold.
190	madrone	10", 5", 4"	Yes	40'X10'	Poor	Poor	Poor	Low	foliar fungal disease	RT	Co- dominant at grade. Declining. Both smaller trunks dead.
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191	madrone	13"	Yes	45'X15'	Poor	Poor	Poor	Low	foliar fungal disease	RT	Significant cavity and basal decay. Declining
192	Douglas fir	10"	Yes	50'x20'	Fair	Fair	Fair	Low		RT	
193	coast live oak	7"	No	20'X15'	Poor	Poor	Poor	Low		RT	Significant lean to west. Dead wood and decay in one terminal.
194	Douglas fir	9"	Yes	50'x20'	Poor	Fair	Fair	Low		RT	Terminal leader is dead. Very limited foliar growth.
195	coast live oak	12",11"8",6"	Yes	35'X15'	Fair	Poor	Poor	Low	boring insects	RT	Clump of 4 trunks. Dead wood and decay in lower trunk. Boring insect exit holes. Within 2' of disturbance area for septic field.
196	coast live oak	20",18"	Yes	40'X35'	Fair	Poor	Poor	Low		RT	
197	coast live oak	10"	Yes	40'X15'	Fair	Poor	Poor	Low		RT	Co -dominant trunks at 15' above grade. Very limited branching structure. Within 21' of disturbance area for septic field.
198	coast live oak	14"	Yes	50'X20'	Fair	Fair	Fair	Low		RT	Co-dominant trunks at 12' above grade.
199	coast live oak	18"	Yes	40'X40'	Poor	Poor	Poor	Low		RT	In severe decline.
200	Douglas fir	60"	Yes	140'X75'	Good	Fair	Fair	High		RT	Largest Douglas fir on property. Co-dominant trunks at 50' above grade. Small 1'X6" cavity and basal decay on north side of trunk. Within 16' of disturbance area for septic lines.
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508	coast live oak	12"	Yes	25'X30'	Fair	Poor	Poor	High		RT	Significant lean to south. Canopy grows over road with 15' clearance. Grade has been raised around trunk.
TREES LISTED BELOW ARE REDWOODS LOCATED ADJACENT TO REDWOODS #159 ,161 & 163 (NO TAG)											
159-A	coast redwood	24"	Yes	45'X25'	Fair	Poor	Poor	Low		RT	Topped at 45'. Live crown ratio 25%. Very limited branching structure.
159-B	coast redwood	12"	Yes	45'X15'	Poor	Poor	Poor	Low		RT	Extremely limited branching structure. Unbalanced canopy.
159-C	coast redwood	14"	Yes	35'X20'	Poor	Poor	Poor	Low		RT	Extremely limited branching structure. Unbalanced canopy.
159-D	coast redwood	10"	Yes	45'X15'	Poor	Poor	Poor	Low		RT	Extremely limited branching structure. Unbalanced canopy.
161-A	coast redwood	30"	Yes	65'X15'	Fair	Poor	Poor	Low		RT	Live crown ratio 50%. Limited branching structure and foliar growth. Unbalanced canopy.
161-B	coast redwood	24"	Yes	65'X15'	Fair	Poor	Poor	Low		RT	Live crown ratio 25%. Limited branching structure and foliar growth. Unbalanced canopy.
161-C	coast redwood	18"	Yes	25'X15'	Poor	Poor	Poor	Low		RT	Very limited branching structure and foliar growth.
161-D	coast redwood	18"	Yes	40'X10'	Poor	Poor	Poor	Low		RT	Very limited branching structure and foliar growth.
163-A	coast redwood	10"	Yes	35'X15'	Poor	Poor	Poor	Low		RT	Very limited branching structure and foliar growth.
163-B	coast redwood	24"	Yes	80'X25'	Fair	Poor	Poor	Low		RT	
163-C	coast redwood	24"	Yes	80'X20'	Fair	Poor	Poor	Low		RT	
163-D	coast redwood	11"	Yes	30'X3'	Poor	Poor	Poor	Low		RT	Nearly dead.
163-E	coast redwood	24"	Yes	35'X15'	Poor	Poor	Poor	Low		RT	Broken leader. Very limited branching structure and foliar growth.
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TREES LISTED BELOW WERE DISCOVERED DURING FIELD INVENTORY (NO TAG)											
81-A	madrone	10"	Yes	40'X10'	Poor	Poor	Poor	N/A		RC	Dead.
83-A	madrone	16"	Yes	45'X10'	Poor	Poor	Poor	High		RT	Co-dominant trunks at 6' above grade. Significant lean to west. Significant basal cavity > 25% of trunk diameter.
91-A	coast live oak	12"	Yes	55'x15'	Fair	Fair	Fair	High		RT	Significant lean to southwest. Basal cavity and decay. Trunk appears poorly attached.
95-A	madrone	14"	Yes	60'X10'	Poor	Poor	Poor	N/A		RC	Dead.
99-A	madrone	7"	No	10'X2'	Poor	Poor	Poor	N/A		RC	Dead.
100-A	madrone	10"	Yes	45'X8'	Poor	Poor	Poor	N/A		RC	Dead.
100-B	coast live oak	11"	Yes	20'X30'	Good	Poor	Poor	High		RT	Extreme lean to west. Trunk nearly horizontal, but appears stable. Well developed branching structure.
101-A	coast live oak	10", 9"	Yes	35'X10'	Poor	Poor	Poor	High		RT	Tree is fallen. Basal decay. Limited canopy.
103-A	coast live oak	8"	Yes	45'X15'	Fair	Fair	Fair	High		RT	Significant lean to southwest. Limited branching structure and canopy growth.
106-A	madrone	11"	Yes	35'X5'	Poor	Poor	Poor	N/A	Boring insects	RC	Dead.
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106-B	madrone	11"	Yes	45'X5'	Poor	Poor	Poor	N/A		RC	Dead
117-A	madrone	10"	Yes	35'X5'	Poor	Poor	Poor	N/A		RC	Dead
118-A	madrone	11"	Yes	45'X5'	Poor	Poor	Poor	N/A		RC	Dead
122-A	Douglas fir	7"	No	65'X20'	Fair	Poor	Poor	High		RC	Very limited branching structure. Within septic area footprint.
170-A	Douglas fir	12"	Yes	75'X15'	Fair	Fair	Fair	Low		RI	Within septic area footprint.
173-A	madrone	9"	Yes	20'X5'	Poor	Poor	Poor	N/A		RC	Dead
173-B	madrone	7",6"	Yes	20'X5'	Poor	Poor	Poor	N/A		RC	Dead
173-C	California bay laurel	7"	No	45'X10'	Fair	Fair	Fair	Low		RT	
176-A	coast live oak	9"	Yes	35'X10'	Poor	Poor	Poor	Low		RT	Very limited branching structure and foliar canopy.
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Polo Heights, Scotts Valley, APN: 024-021-27

Tree Assessment Chart - Appendix A

Tree #	Species	Trunk Diameter @ 4.5' a.g.	Protected Tree	Crown Height & Spread	Health Rating	Structural Rating	Suitability for Preservation (Based on Condition)	Impact Rating	Insects/ Disease	Retention or Removal Code	Comments
190-A	madrone	7"	No	15'x5'	Poor	Poor	Poor	N/A		RC	Dead & partially fallen.
200-A	coast live oak	9"	Yes	40'X10'	Fair	Poor	Poor	High		RT	Significant lean and bowed trunk to west. Limited branching structure.
508-A	coast live oak	15", 11"	Yes	45'X45'	Fair	Poor	Poor	High		RC	Adjacent to road. Multiple scaffolds (main branches), attached at same location with included bark. Has been pruned very hard in past creating poor structure. Clearance pruned to 18' above road.
 <p>826 Monterey Avenue Capitola, CA 95010 831-359-3607 kurtfouts1@outlook.com</p>							Page 17 of 17				7/25/2019

APPENDIX B – CRITERIA FOR TREE ASSESSMENT CHART

Following is an explanation of the data used in the tree evaluations. The data is incorporated in the *Tree Assessment Chart, Appendix A*.

Trunk Diameter and Number of Trunks:

Trunk diameter as measured at 4.5 feet above grade. The number of trunks refers to a single or multiple trunked tree. Multiple trunks are measured at 4.5 feet above grade.

Health Ratings:

Good: A healthy, vigorous tree, reasonably free of signs and symptoms of disease

Fair: Moderate vigor, moderate twig and small branch dieback, crown may be thinning and leaf color may be poor

Poor: Tree in severe decline, dieback of scaffold branches and/or trunk, most of foliage from epicormics

Structure Ratings:

Good: No significant structural defects. Growth habit and form typical of the species

Fair: Moderate structural defects that might be mitigated with regular care

Poor: Extensive structural defects that cannot be abated.

Suitability for Preservation Ratings:

Rating factors:

Tree Health: Healthy vigorous trees are more tolerant of construction impacts such as root loss, grading and soil compaction, then are less vigorous specimens.

Structural integrity: Preserved trees should be structurally sound and absent of defects or have defects that can be effectively reduced, especially near structures or high use areas.

Tree Age: Over mature trees have a reduced ability to tolerate construction impacts, generate new tissue and adjust to an altered environment. Young to maturing specimens are better able to respond to change.

Species response: There is a wide variation in the tolerance of individual tree species to construction impacts.

Rating Scale:

Good: Trees in good health and structural condition with potential for longevity on the site

Fair: Trees in fair health and/or with structural defects that may be reduced with treatment procedures.

Poor: Trees in poor health and/or with poor structure that cannot be effectively abated with treatment. Trees can be expected to decline or fail regardless of construction impacts or management . The species or individual may possess characteristics that are incompatible or undesirable in landscape settings or unsuited for the intended use of the site.

Construction Impacts:

Rating Scale:

High: Development elements proposed that are located within the Tree Protection Zone that would severely impact the health and /or stability of the tree. The tree impacts cannot be mitigated without design changes. The tree may be located within the building footprint.

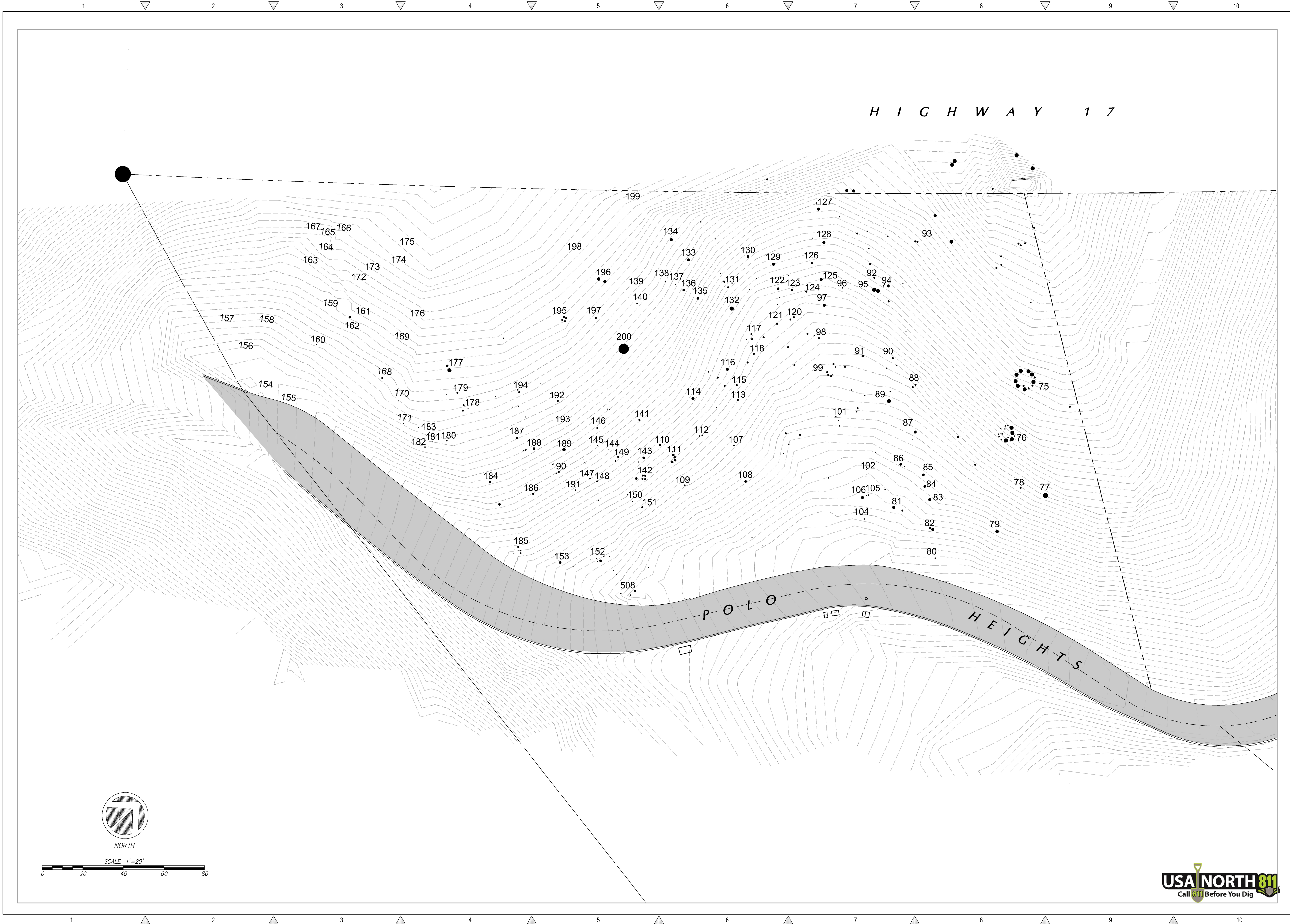
Moderate: Development elements proposed that are located within the Tree Protection Zone that will impact the health and/or stability of the tree and can be mitigated with tree protection treatments.

Low: Development elements proposed that are located within or near the Tree Protection Zone that will have a minor impact on the health of the tree and can be mitigated with tree protection treatments.

None: Development elements will have no impact on the health and stability of the Tree.

Tree Protection Zone (TPZ):

Defined area within which certain activities are prohibited or restricted to prevent or minimize potential injury to designated trees, particularly during construction or development.



REVISIONS		BY

TREE INVENTORY PLAN

REGISTERED PROFESSIONAL ENGINEER
TOM R. CREMER
No. C 64561
Exp. 6/30/19
CIVIL
STATE OF CALIFORNIA

C2G / CIVIL CONSULTANTS GROUP, INC.
Engineers/Planners
4444 Scotts Valley Drive / Suite 6
Scotts Valley, CA 95066
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**POLO HEIGHTS
SCOTT'S VALLEY, CALIFORNIA
APN 024-021-27**

Date: 11.29.17
Scale: 1" = 20'
Drawn: JB/TC
Job: 479-00
Sheet: **C4.1**
Of 6 Sheets

Drawing: 16179-00 Cremer - MEU (CAD) Models Sheets 179-00 - C4.1 - TREE INVENTORY
Last Saved: Fri Dec 08, 2017 - 10:11am
Last Plotted: Fri Dec 08, 2017 - 10:16am
By: jmc



Image #1 – Tree #89 - Coast Live Oak - Note loss of bark and extensive dead wood due to wood decay fungi. The lack of sound wood and significant lean increases the chances of tree failure.



Image #2 – There were many trees on the property that had failed due to root and basal decay from fungal activity.



Image #3 – Tree #139 – Coast Live Oak – Note loss of bark, wood decay and significant lean.



Image #4 – Tree #196 – Coast Live Oak – Note nearly horizontal growth pattern of main trunk.



Image #5 – Tree #163 (arrow) – Coast Redwood – ‘Parent’ redwood (arrow), with smaller trees (‘sprouts’), growing around it.

Appendix E - TREE PROTECTION GUIDELINES AND RESTRICTIONS

Protecting Trees During Construction:

- 1) Before the start of site work, equipment or materials move in, clearing, excavation, construction, or other work on the site, every tree to be retained shall be securely fenced- off as delineated in approved plans. Such fences shall remain continuously in place for the duration of the work undertaken in connection with the development.
- 2) If the proposed development, including any site work, will encroach upon the tree protection zone, special measures shall be utilized, as approved by the project arborist, to allow the roots to obtain necessary oxygen, water, and nutrients.
- 3) Underground trenching shall avoid the major support and absorbing tree roots of protected trees. If avoidance is impractical, hand excavation undertaken under the supervision of the project arborist may be required. Trenches shall be consolidated to service as many units as possible. Boring/tunneling under roots should be considered as an alternative to trenching.
- 4) Concrete or asphalt paving shall not be placed over the root zones of protected trees, unless otherwise permitted by the project arborist.
- 5) Artificial irrigation shall not occur within the root zone of native oaks, unless deemed appropriate on a temporary basis by the project arborist to improve tree vigor or mitigate root loss.
- 6) Compaction of the soil within the tree protection zone shall be avoided.
- 7) Any excavation, cutting, or filling of the existing ground surface within the tree protection zone shall be minimized and subject to such conditions as the project arborist may impose. Retaining walls shall likewise be designed, sited, and constructed to minimize their impact on protected trees.
- 8) Burning or use of equipment with an open flame near or within the tree protection zone shall be avoided. All brush, earth, and other debris shall be removed in a manner that prevents injury to the tree.
- 9) Oil, gas, chemicals, paints, cement, stucco or other substances that may be harmful to trees shall not be stored or dumped within the tree protection zone of any protected tree, or at any other location on the site from which such substances might enter the tree protection zone of a protected tree.
- 10) Construction materials shall not be stored within the tree protection zone of a protected tree.

Project Arborist Duties and Inspection Schedule:

The project arborist is the person(s) responsible for carrying out technical tree inspections, assessment of tree health, structure and risk, arborist report preparation, consultation with designers and municipal planners, specifying tree protection measures, monitoring, progress reports and final inspection.

A qualified project arborist (or firm) should be designated and assigned to facilitate and insure tree preservation practices. He/she/they should perform the following inspections:

Inspection of site: Prior to equipment and materials move in, site work, demolition, landscape construction and tree removal: The project arborist will meet with the general contractor, architect / engineer, and owner or their representative to review tree preservation measures, designate tree removals, delineate the location of tree protection fencing, specify equipment access routes and materials storage areas, review the existing condition of trees and provide any necessary recommendations.

Inspection of site: During excavation or any activities that could affect trees: Inspect site during any activity within the Tree Protection Zones of preserved trees and any recommendations implemented. Assess any changes in the health of trees since last inspection.

Final Inspection of Site: Inspection of site following completion of construction. Inspect for tree health and make any necessary recommendations.

Kurt Fouts shall be the Project Arborist for this project. All scheduled inspections shall include a brief Tree Monitoring report, documenting activities and provided to the City Arborist.

Tree Protection Fencing

Tree Protection fencing shall be installed prior to the arrival of construction equipment or materials. Fence shall be comprised of six -foot chain link fence mounted on eight - foot tall, 1 and 7/8-inch diameter galvanized posts, driven 24 inches into the ground and spaced on a minimum of 10-foot centers. Once established, the fence must remain undisturbed and be maintained throughout the construction process until final inspection.

A final inspection by the City Arborist at the end of the project will be required prior to removing any tree protection fencing.

Tree Protection Signs

All sections of fencing should be clearly marked with signs stating that all areas within the fencing are Tree Protection Zones and that disturbance is prohibited.

Monitoring

Any trenching, construction or demolition that is expected to damage or encounter tree roots should be monitored by the project arborist or a qualified ISA Certified Arborist and should be documented.

The site should be evaluated by the project arborist or a qualified ISA Certified Arborist after construction is complete, and any necessary remedial work that needs to be performed should be noted.

Root Pruning

Root pruning shall be supervised by the project arborist. When roots over two inches in diameter are encountered they should be pruned by hand with loppers, handsaw, reciprocating saw, or chain saw rather than left crushed or torn. Roots should be cut beyond sinker roots or outside root branch junctions and be supervised by the project arborist. When completed, exposed roots should be kept moist with burlap or backfilled within one hour.

Tree Work Standards and Qualifications

All tree work, removal, pruning, planting, shall be performed using industry standards of workmanship as established in the Best Management Practices of the International Society of Arboriculture (ISA) and the American National Standards Institute series, *Safety Requirements in Arboriculture Operations* ANSI Z133-2017,

Contractor licensing and insurance coverage shall be verified.

During tree removal and clearance, sections of the Tree Protection Fencing may need to be temporarily dismantled to complete removal and pruning specifications. After each section is completed, the fencing is to be re-installed.

Trees to be removed shall be cut into smaller manageable pieces consistent with safe arboricultural practices, and carefully removed so as not to damage any surrounding trees or structures. The trees shall be cut down as close to grade as possible. Tree removal is to be performed by a qualified contractor with valid City Business/ State Licenses and General Liability and Workman's Compensation insurance.

Development Site Tree Health Care Measures

RECOMMENDED TO PROVIDE OPTIMUM GROWING CONDITIONS, PHYSIOLOGICAL INVIGORATION AND STAMINA, FOR PROTECTION AND RECOVERY FROM CONSTRUCTION IMPACT.

Establish and maintain TPZ fencing, trunk and scaffold limb barriers for protection from mechanical damage, and other tree protection requirements as specified in the arborist report.

Project arborist to specify site-specific soil surface coverings (wood chip mulch or other) for prevention of soil compaction and loss of root aeration capacity.

Soil, water and drainage management is to follow the ISA BMP for "Managing Trees During Construction" and the ANSI Standard A300(Part 2)- 2011 Soil Management (a. Modification, b. 'Fertilization, c. Drainage.)

Fertilizer / soil amendment product(s) amounts and method of application to be specified by certified arborist.

City of Scotts Valley – Protected Trees

Chapter 17.44 – General and Special Regulations

Section :17.44.080 – *Tree Protection Regulations B. 7.*

a: "Protected tree" means a standing or upright tree meeting any one of the following: Any tree having a main stem or trunk which measures twenty-five inches or greater in circumference (eight 8 inches in diameter, approximately) measured fifty-four inches above natural grade, located in a hillside residential zone where the slope of the area within twenty feet of where the tree is located exceeds twenty percent.

ASSUMPTIONS AND LIMITING CONDITIONS

1. Any legal description provided by the appraiser/consultant is assumed to be correct. No responsibility is assumed for matters legal in character nor is any opinion rendered as the quality of any title.
2. The appraiser/consultant can neither guarantee nor be responsible for accuracy of information provided by others.
3. The appraiser/consultant shall not be required to give testimony or to attend court by reason of this appraisal unless subsequent written arrangements are made, including payment of an additional fee for services.
4. Loss or removal of any part of this report invalidates the entire appraisal/evaluation.
5. Possession of this report or a copy thereof does not imply right of publication or use for any purpose by any other than the person(s) to whom it is addressed without written consent of this appraiser/consultant.
6. This report and the values expressed herein represent the opinion of the appraiser/consultant, and the appraiser/consultant's fee is in no way contingent upon the reporting of a specified value nor upon any finding to be reported.
7. Sketches. Diagrams. Graphs. Photos. Etc., in this report, being intended as visual aids, are not necessarily to scale and should not be construed as engineering reports or surveys.
8. This report has been made in conformity with acceptable appraisal/evaluation/diagnostic reporting techniques and procedures, as recommended by the International Society of Arboriculture.
9. When applying any pesticide, fungicide, or herbicide, always follow label instructions.
10. No tree described in this report was climbed, unless otherwise stated. We cannot take responsibility for any defects which could only have been discovered by climbing. A full root collar inspection, consisting of excavating around the tree to uncover the root collar and major buttress roots, was not performed, unless otherwise stated. We cannot take responsibility for any root defects which could only have been discovered by such an inspection.

CONSULTING ARBORIST DISCLOSURE STATEMENT

Arborists are tree specialists who use their education, knowledge, training, and experience to examine trees, recommend measures to enhance the beauty and health of trees, and attempt to reduce risk of living near trees. Clients may choose to accept or disregard the recommendations of the arborist, or to seek additional advice.

Arborists cannot detect every condition that could possibly lead to the structural failure of a tree. Trees are living organisms that fail in ways we do not fully understand. Conditions are often hidden within trees and below ground. Arborists cannot guarantee that a tree will be healthy or safe under all circumstances, or for a specified period of time. Likewise, remedial treatments, like medicine, cannot be guaranteed.

Trees can be managed, but they cannot be controlled. To live near trees is to accept some degree of risk. The only way to eliminate all risk associated with trees is to eliminate all trees.





Dees & Associates, Inc.
Geotechnical Engineers

501 Mission Street, Suite 8A Santa Cruz, CA 95060

Phone (831) 427-1770 Fax (831) 427-1794

April 30, 2018

Project No. SCR-0745.1

TODD CREAMER
% C2G Civil Consultants Group
4444 Scotts Valley Drive, Suite 6
Scotts Valley, California 95066

Subject: Geotechnical Feasibility Study

Reference: Proposed Lot Split and New Single-Family Residence
Polo Heights Drive
APN 024-02-128
Scotts Valley, California

Dear Mr. Claassen:

As requested, we have performed a Geotechnical Feasibility Study to evaluate the feasibility of the lot-split and new residence proposed at the referenced site.

Purpose and Scope

The subject parcel is located on Polo Heights Road in Scotts Valley, California. A geotechnical investigation was performed for the parcel as part of a minor land division that created the parcel. The original geotechnical investigation was performed by Bauldry Engineering in 2005. Our firm took over geotechnical responsibility for the project in 2013 when Bauldry Engineering closed their business. Our firm provided geotechnical engineering services and performed construction observation and testing during the construction of the home on the subject parcel and the homes located near the subject parcel.

The purpose of this feasibility study was to make visual observations of the proposed homesite, review maps and other data in our files pertinent to the site and vicinity and determine the geotechnical feasibility of splitting the parcel and constructing a new single-family residence on the newly created parcel.

The specific scope of our services was as follows: 1) perform a site reconnaissance, 2) review data in our files regarding the site and vicinity, 3) review the preliminary layout of the proposed improvements, and 3) prepare this letter report presenting the results of our feasibility study.

Site and Project Description

The site is a 3.7-acre parcel located on the downslope side of Polo Heights Road in Scotts Valley, California. The long narrow parcel lies on a slope between Polo Heights Road and Highway 17 below. The site topography is characterized by two, narrow, spur ridges with a narrow valley between them.

A new single-family residence was constructed on the northern spur ridge in 2013-2014. The proposed project consists of splitting the parcel into two parcels then constructing a new single-family residence on the southern spur ridge.

The southern spur ridge is roughly 40 to 60 feet wide and about 100 feet long. The top of the ridge slopes at about a 20 to 25 percent slope gradient to the west. The northern side slope is very steep with slope gradients on the order of 50 to 60 percent and the southern side slope is steep with slope gradients on the order of 40 percent.

The proposed homesite is wooded and mostly un-accessible. We were able to walk a few feet into the homesite and we could see most of the proposed homesite and the southern slope. The northern slope is steep and difficult to access so we were not able to observe the entire slope as part of our initial site reconnaissance.

Subsurface Soil Conditions

The site is mapped as being underlain by the Monterey Formation but Purisima Formation sandstone was encountered in the existing homesite on the northern spur ridge. We also encountered Purisima Formation on the ridgeline across the street from the proposed homesite. Although we do not know for sure, we expect the site to be underlain by shallow Purisima Sandstone.

Site Drainage

Polo Heights road is sloped into the hillside and runoff from the road is directed to a storm drain system that discharges away from the proposed homesite. The proposed homesite is located on a well vegetated rounded spur ridge and there were no defined drainages observed in the homesite. We assume rainfall percolates into the ground then flows down the slopes in the form of shallow groundwater.

Slope Stability

The proposed homesite is located on a narrow ridgeline with steep side slopes. The southern side slope has a uniform rounded surface with slope gradients on the order of 40 percent. There were no signs of slope instability observed during our limited site reconnaissance. The northern side slope is very steep and we could not observe the slope itself so we do not know if there has been erosion or landsliding on the northern slope.

Based on our experience with the slopes in the project vicinity, we expect slope instability to be limited to surficial failures on steep slopes where concentrated drainage occurs. Improvements should be setback from potentially unstable slopes and constructed on stable ground. The ridge appears large enough to build a residence with adequate setbacks to the adjacent slopes. However, we recommend evaluating the slopes on either side of the ridge before developing plans for the site.

Seismic Hazards

The site is located in a seismically active region with several faults located in the vicinity of the site. The San Andreas Fault is the largest and most active of the faults in the site vicinity, however, each fault is considered capable of generating moderate to severe ground shaking. It is reasonable to assume that the proposed development will be subject to at least one moderate to severe earthquake from one of the faults during the next fifty years.

There are seismic hazards that would preclude development of the subject parcel. Structures designed and constructed in accordance with current building codes should react well to seismic shaking.

Liquefaction

Liquefaction occurs when saturated fine grained sands, silts and sensitive clays are subject to shaking during an earthquake and the water pressure within the pores builds up leading to loss of strength. The proposed homesite is expected to be underlain by shallow bedrock with a low to nil potential for liquefaction.

Discussions and Conclusions

The lot split and new single-family residence proposed at the site are feasible from a geotechnical standpoint provided a design-level geotechnical investigation is performed to develop recommendations and design criteria for the proposed improvements. Primary geotechnical concerns for the project include embedding foundations into firm uniform native soil or engineered fill, setting structures back from steep slopes, controlling site drainage and designing structures to resist strong seismic shaking.

We anticipate foundations will consist of conventional spread footings embedded into firm native soil or engineered fill. Foundations should be setback from steep slopes. The actual setback should be determined as part of a design-level geotechnical investigation.

The proposed improvements will increase the volume of runoff at the site. Runoff from the proposed improvements should be collected and either dispersed on the slopes south of the homesite or discharged at the base of the slope.

Perched groundwater should be expected along the contact of the upper soils and the underlying sandstone bedrock. Basements or crawlspaces excavated close to the bedrock contact could expose seepage zones. Subdrains should be installed to collect seepage where excavations expose potential seepage zones.

It is likely the proposed development will be subject to strong seismic shaking during its lifetime. Structures designed in accordance with current building codes should react well to seismic shaking.

A design-level geotechnical investigation should be performed prior to constructing improvements at the site. The design level investigation should include borings to

determine the subsurface soil conditions, laboratory testing to determine the soils' engineering characteristics, and development of site specific recommendations for site grading, foundations, concrete slabs, pavements, drainage, and erosion control.

The opinions expressed in this letter are based on a limited site reconnaissance and review of available data regarding the site and vicinity. While we believe that our conclusions are well founded, it is possible that there may be undiscovered conditions that would cause us to revise our opinions and/or recommendations. This letter, therefore, should not be construed to be any type of guarantee or insurance. A more detailed study should be undertaken to develop design-level geotechnical recommendations for the proposed new single-family residence.

Very truly yours,

DEES & ASSOCIATES, INC.



Rebecca L. Dees
Geotechnical Engineer
G.E. 2623



Attachments

Copies: 4 to Addressee

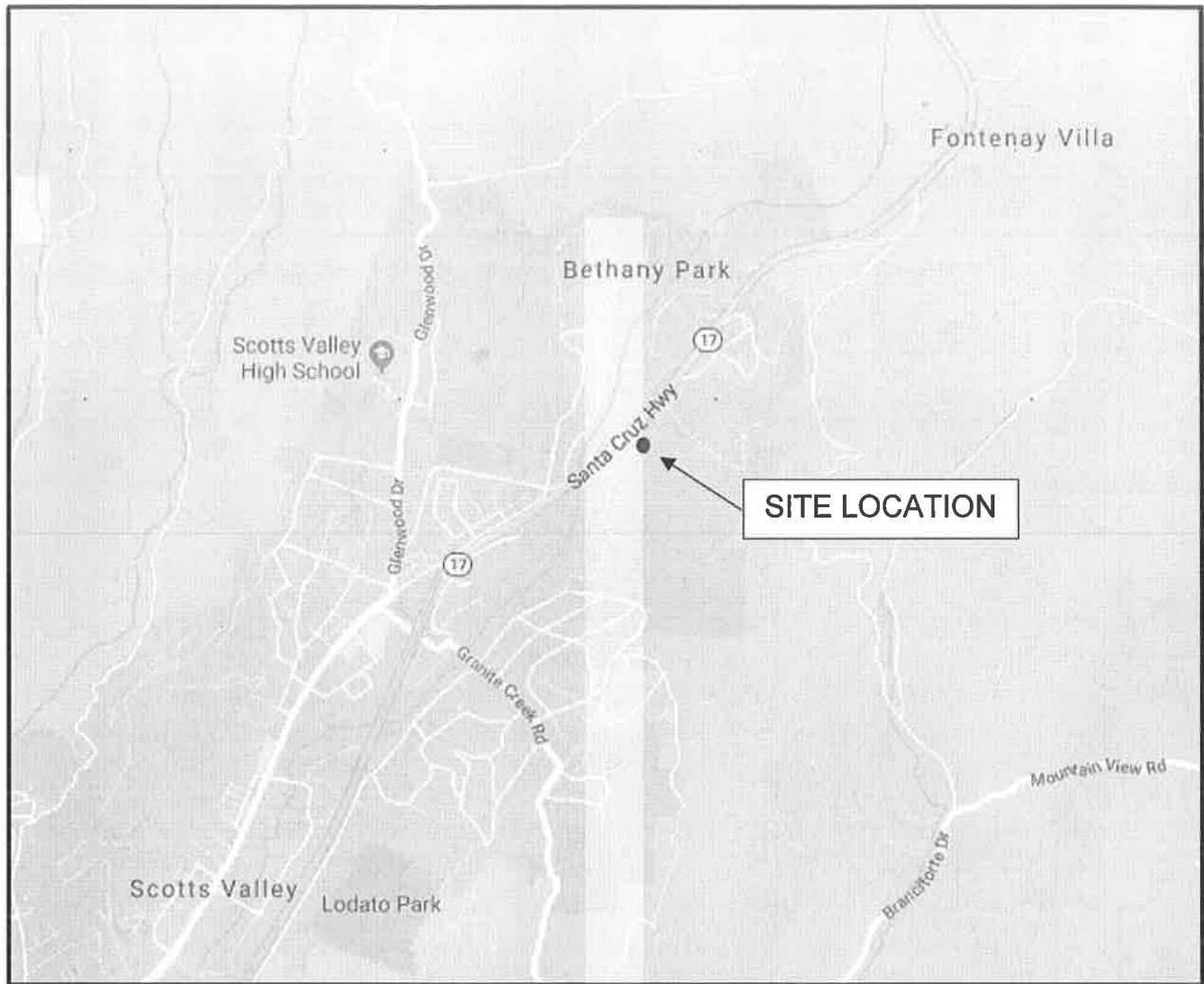
APPENDIX A

Site Vicinity Map

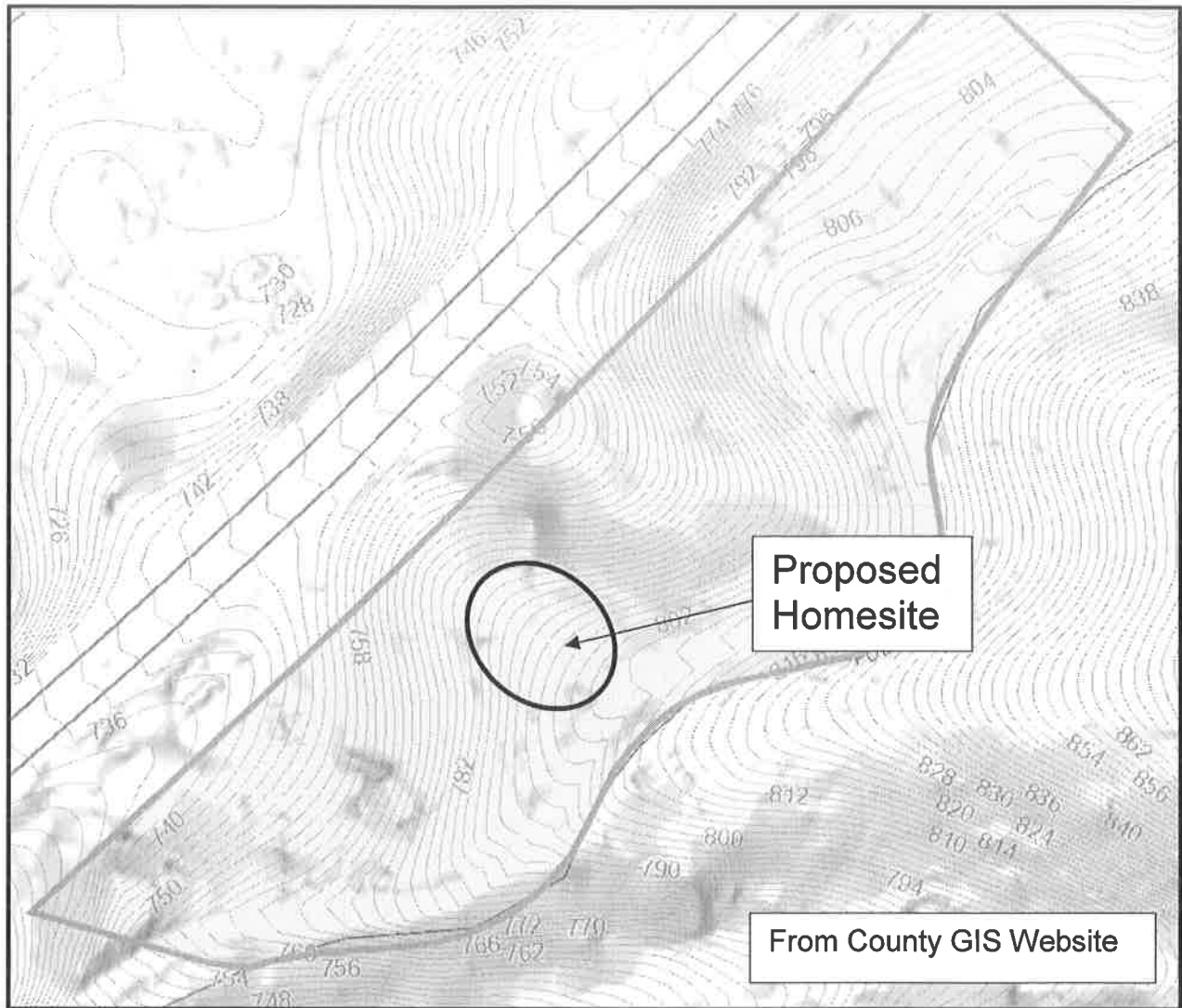
Topography Map

Site Map

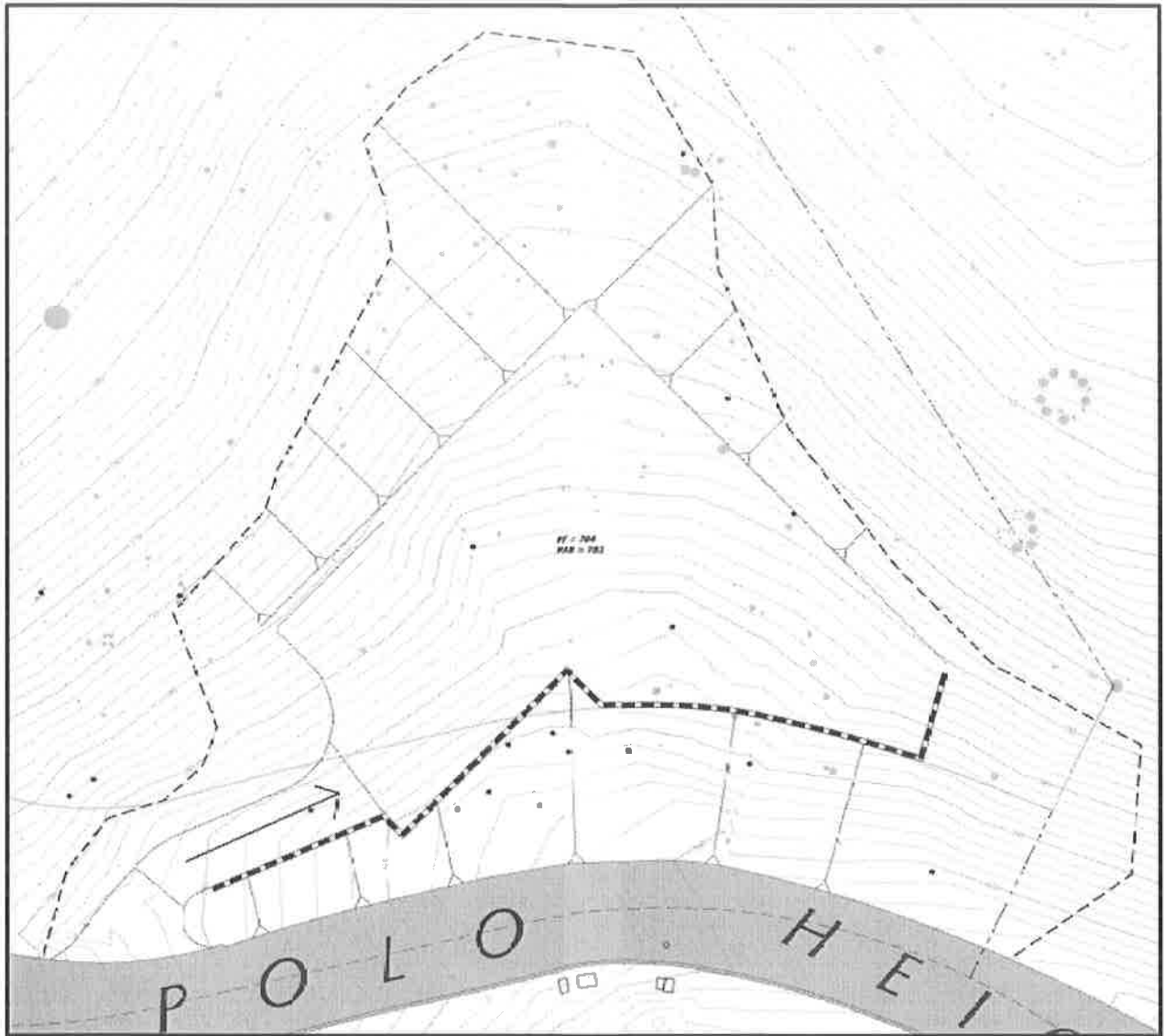
Geologic Map



SITE VICINITY MAP
Figure 1



TOPOGRAPHY MAP
Figure 2



SITE MAP
Figure 3



GEOLOGIC MAP
Figure 4

Acoustics

Audiovisual

Telecommunications

Security

29 August 2019

Todd Creamer
33 Polo Heights Road
Scotts Valley, CA 95006
Email: todd@c2gengrs.com

Subject: **33 Polo Heights Road Subdivision, Scotts Valley, CA**
Salter Project: 19-0427

Dear Mr. Creamer:

We have reviewed the proposed minor land division of APN 024-021-27 in the context of the environmental noise assessment completed in 2005 (see attached) for the entire lot, prior to subdivision. The proposed new lot is designated as Lot A, and the lot with the existing residence is Lot B (see Tentative Map and Grading Plan, attached).

In summary, for the new residence on Lot A, windows facing Highway 17 should have sound insulation ratings 1 STC¹ point higher than those recommended in the 2005 report. Otherwise, in our opinion, noise reduction recommendations from the 2005 analysis remain valid.

Analysis

1. **Traffic Volume Increase** - The Scotts Valley Noise Element shows a slowing rate of increase in traffic volumes from 1992 to 2010 on Segment 12 (Scotts Valley General Plan Noise Element, 1993). Assuming a conservatively estimated 1.6% annual increase in traffic volume since the acoustical measurements were conducted in 2005, the noise level increase would be less than 1 dB².
2. **Home Siting and Outdoor Use Space** - The distance from the Highway to the proposed residence on Lot A, as shown on the grading plan dated 29 November 2019, is similar to or slightly greater than the distance from the Highway to the existing residence on Lot B, so the new residence's exposure to traffic noise is likely to be similar. In addition, we understand that outdoor use areas associated with the house will be on the southeast side of the house where the house and a proposed sound wall will shield them from traffic noise. The topography is such that a 6 to 8 foot sound wall, as shown in the A1 & A2 drawings, is likely to be effective.

Conclusions

1. With traffic volume increase and distance from highway to structure, the estimated day-night

¹ STC (Sound Transmission Class) – A single-number rating defined in ASTM E90 that quantifies the airborne sound insulating performance of a partition under laboratory conditions. Increasing STC ratings correspond to improved airborne sound insulation.

² dB (Decibel) – A unit that describes the magnitude of a sound with respect to a reference sound level near the threshold of hearing.

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Skyler Carrico

Aidan Nelson

Kenny Chong

Andrena Rodriguez

Michael Hoef

- average sound level (DNL³) at the proposed Lot B house location is 70 dB, which complies with the 75 dB land use compatibility threshold in the Scotts Valley General Plan. This address General Plan Action NA-457.
2. As noted above, the 1 dB increase in estimated sound levels at the site results in a 1 dB increase in window sound insulation ratings recommended to achieve DNL 45 dB inside the new house. This addresses General Plan Action NA-452. Since windows must be closed to maintain this sound level, the house design should include an alternative means of delivering outside air without compromising sound isolation. The sound rated windows and doors (that meet the DNL 45 dB indoor target) would be required on any side of the house that has a line of site to Highway 17.
 3. Because the location of outdoor use spaces and sound walls is consistent with the previous report and the estimated traffic noise level increase is minimal, we see no need to modify the outdoor use area recommendations from the 2005 analysis. This addresses General Plan Action NA-454.

Please call if you have questions.

Sincerely,

CHARLES M. SALTER ASSOCIATES, INC.



Philip N. Sanders, LEED® AP
Senior Vice President

Enclosures as Noted

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³ DNL (Day-Night Average Sound Level) – A descriptor for a 24-hour A-weighted average noise level. DNL accounts for the increased acoustical sensitivity of people to noise during the nighttime hours. DNL penalizes sound levels by 10 dB during the hours from 10 PM to 7 AM. For practical purposes, the DNL and CNEL are usually interchangeable. DNL is sometimes written as L_{dn}.

Charles M Salter Associates Inc

22 August 2005

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Kevin M Powell
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Randy Waldeck
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Peter Holst
Ethan Salter
Elaine Y Hsieh
Timothy G Brown
Claudia Krahe
Kandice Lee
Rebecca Calger
Brian Robert
Ian Graven
Marva D Nunn
Candice Hays
Tribble Gains

George W. Smith
C/o Golden State Land Company
303 Potrero Street, # 42-204
Santa Cruz, CA 95060
E-mail: george@boltonhill.net

Subject: Minor Land Divisions, Lot 15, Scotts Valley – Acoustical Consulting
CSA Project No. 05-0295

Dear George:

This letter summarizes our environmental noise analysis for the subject project, consisting of four new single-family homes located east of State Highway 17. This analysis includes the results of our noise measurements, future traffic noise prediction, impact analyses, and recommendations to meet the City's noise goals.

Acoustical Goals

The 1993 Scotts Valley Noise Element (Chapter V) includes policies that require new (residential) developments to have noise attenuation measures to reduce existing noise to DNL¹ 60 dB or less at outdoor recreation areas. The noise attenuation measures would likely be in the form of noise barriers. Also, new residential developments should not be allowed in regions exceeding DNL 75 dB. The indoor noise criteria is DNL 45 dB for residential developments.

Noise Levels

On 13 to 14 June 2005, we conducted a 24-hour noise measurement near Parcel 1. The primary noise source is from vehicular activity along State Highway 17. At a distance of 120 feet east of the highway median centerline, we measured a DNL of 69 dB.

The Scotts Valley Noise Element contains Year 2010 traffic volume projections for Highway 17 in the vicinity of this project. By calculation, the associated future increase in noise would be less than 0.1 dB for this future year.

The Preliminary Improvement Plan for the project indicates the proposed building envelope for each of the four parcels. At the western building envelope line of Parcel 1, the parcel nearest Highway 17, the noise level would be DNL 69 dB as indicated by our 24-hour noise measurement. At Parcels 2, 3 and 4, the DNL would be no more than 60 dB.

¹ **Day-Night Average Sound Level (DNL)**--A descriptor established by the U.S. Environmental Protection Agency to describe the average day-night level with a penalty applied to noise occurring during the nighttime hours (10 pm - 7 am) to account for the increased sensitivity of people during sleeping hours.

George W. Smith
22 August 2005
Page 2

Analysis/Recommendations

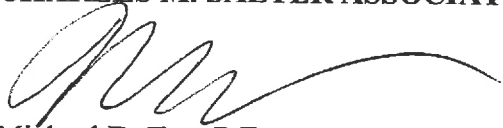
Outdoors: At Parcel 1, the outdoor noise level would be as loud as DNL 69 dB, 9 dB greater than the City's outdoor noise goal of DNL 60 dB. If the outdoor recreation area (backyard) is located entirely behind the proposed home on this parcel, then the City's outdoor noise goal could be achieved. We expect that the home building structure would reduce the freeway noise by 8 to 12 dB, depending on the pad and building heights. A 6 to 8-foot-tall noise barrier may also be necessary along the sides of parts of this parcel to address noise flanking around the ends of the home and into the backyard.

Indoors: At the two or three facades of the proposed home at Parcel 1 that would have a line-of-sight to Highway 17, sound-rated windows and exterior doors would be required to meet DNL 45 dB indoors. Assuming an exterior wall construction consisting of wood siding and a window percentage of no more than 35%, the window and exterior doors would need to achieve approximately STC² 30 on the ground floor, and, if there is a second floor, STC 32. Since windows and exterior doors would need to be in the closed position to achieve the City's indoor noise goal, consider an alternative source of ventilation (i.e. mechanical ventilation) for this home. This aspect of the project should be reviewed by a mechanical engineer. The other three homes at Lot 15 would not require sound-rated assemblies.

This concludes our environmental noise analysis for the subject project. Please call with any questions.

Sincerely,

CHARLES M. SALTER ASSOCIATES, INC.

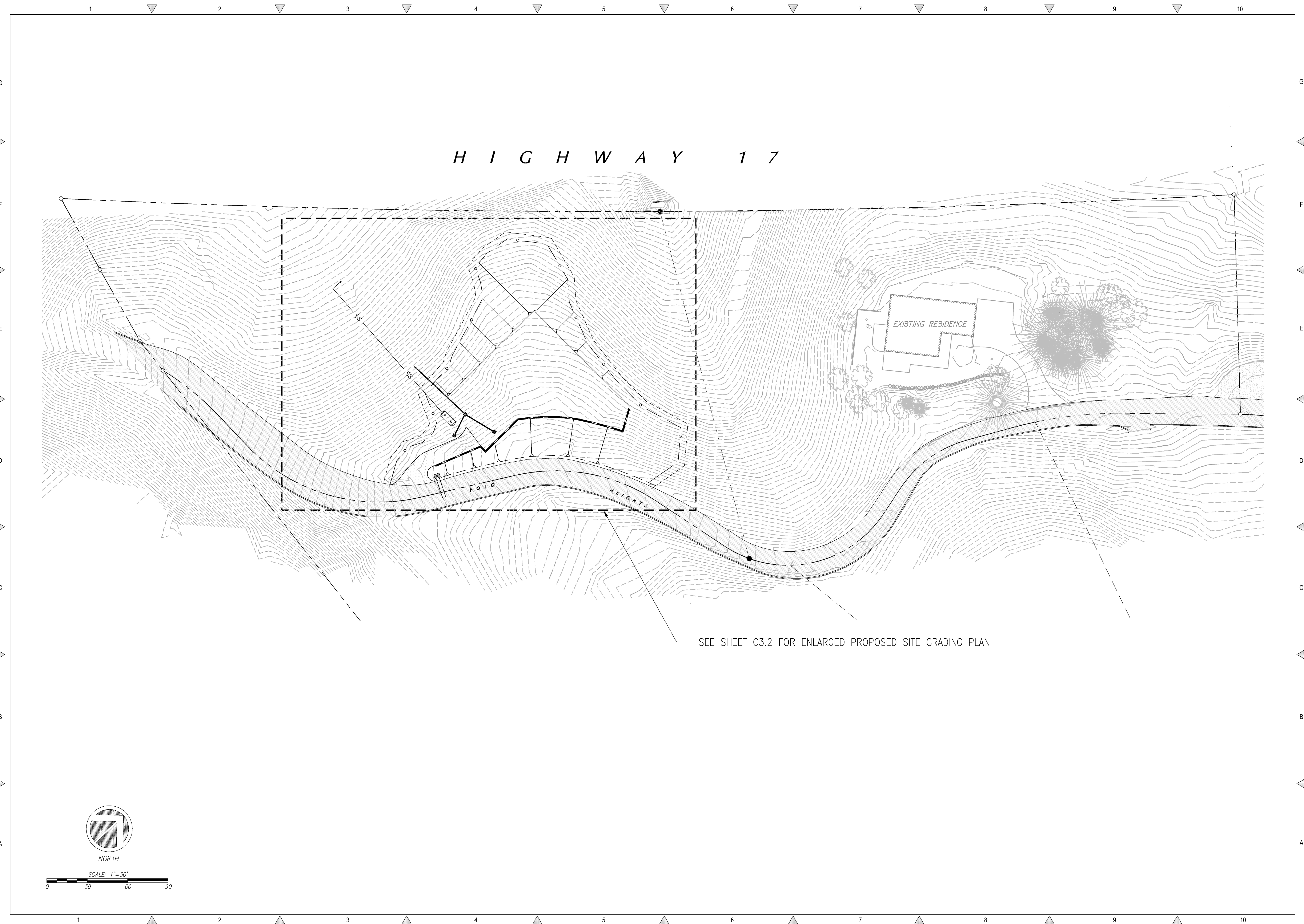


Michael D. Toy, P.E.
Principal Consultant

MDT/dg

P: 05August22_MDT_Minor Land Divisions, Lot 15, Scotts Valley - Acoustical Consulting


² Sound Transmission Class (STC)--A single-number rating derived from the sound insulation properties of a partition. Numerically, STC represents the number of decibels of speech sound reduction from one side of the partition to the other.



REVISIONS	BY

GRADING PLAN



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33 POLO HEIGHTS
SCOTT'S VALLEY, CALIFORNIA
APN 024-021-27

Date: 11.29.17

Scale: 1" = 30'

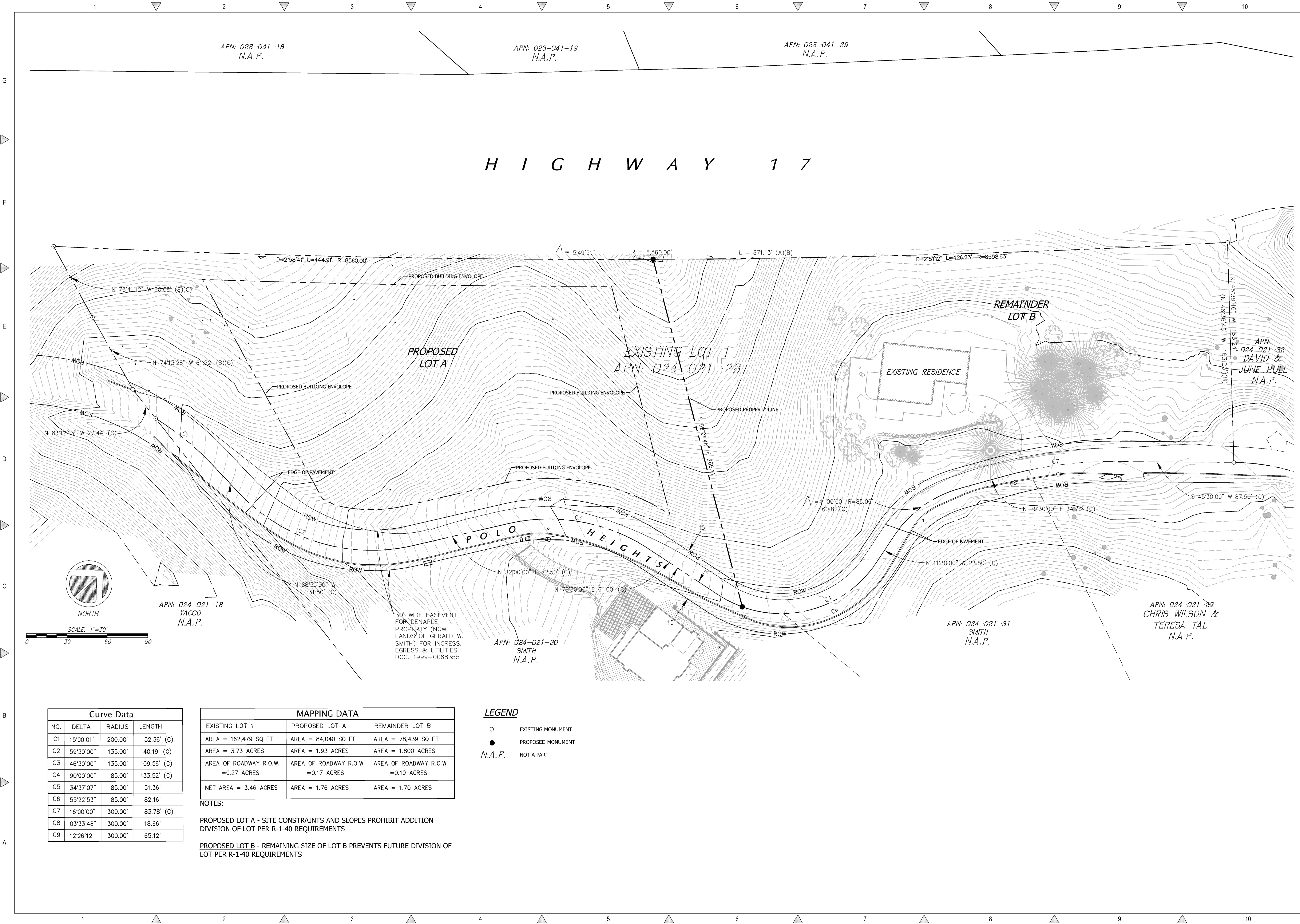
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Job: 479-00

Sheet:

C3.1

Of **7** Sheets



REVISIONS	BY

TENTATIVE MAP

REGISTERED PROFESSIONAL ENGINEER
TOM R. CREMER
No. C 64561
Exp. 6/30/19
CIVIL
STATE OF CALIFORNIA

C2G/CIVIL CONSULTANTS GROUP, INC.
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By: jma

33 POLO HEIGHTS
SCOTT'S VALLEY, CALIFORNIA
APN 024-021-27

Date: 11.29.17
Scale: 1" = 30'
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Job: 479-00
Sheet: C1.1
Of 7 Sheets

Drawing: 161479-00-Dwanner - 161479-00 (20) Models (Sheet) 1479-00 - C11 - TENTATIVE.dwg
Last Saved: Thu Feb 28, 2019 - 9:02am
Last Plotted: Thu Feb 28, 2019 - 9:02am
Legend: C11 - TM

HWY 17

ADU PLAN

GARAGE AREA 748 S.F.
ADU AREA 484 S.F.

SECOND FLOOR PLAN

FIRST FLOOR 1,538 S.F.
SECOND FLOOR 576 S.F.
TOTAL HEATED 2,114 S.F.

1 SITE AND BUILDING PLANS
SCALE: 1"=10'-0"

NORTH



CREAMER RESIDENCE
POLO HEIGHTS, SCOTT'S VALLEY, CALIFORNIA
SCHEMATIC SITE & BUILDING PLANS

DRAWING DATE: DECEMBER 20, 2017
CONSTRUCTION RELEASE:
CLIENT NAME: TODD CREAMER
PROJECT NAME: POLO HEIGHTS

[illegible]

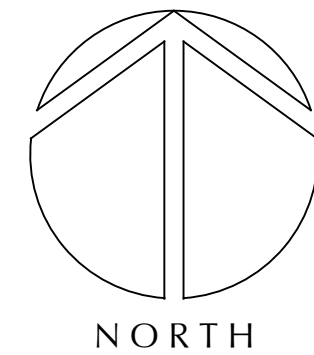
STAMP

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SHEET

A1





WILLIAM C. KEMP
ARCHITECT
1 Center Street, Suite
Santa Cruz, CA 95060
408-459-0951
www.wckempf.com

CREAMER RESIDENCE
POLO HEIGHTS, SCOTTS VALLEY, CA
ELEVATION VIEWS

TEAMER RESIDENT
POLO HEIGHTS, SCOTTS VALLEY, CA

ISSUE DATE:
JULY 30, 2019

$$N_{\text{eff}} =$$

NT NAME:
TODD CREAMER

ECT NAME:
POLO HEIGHTS

[illegible]

DISCLAIMER

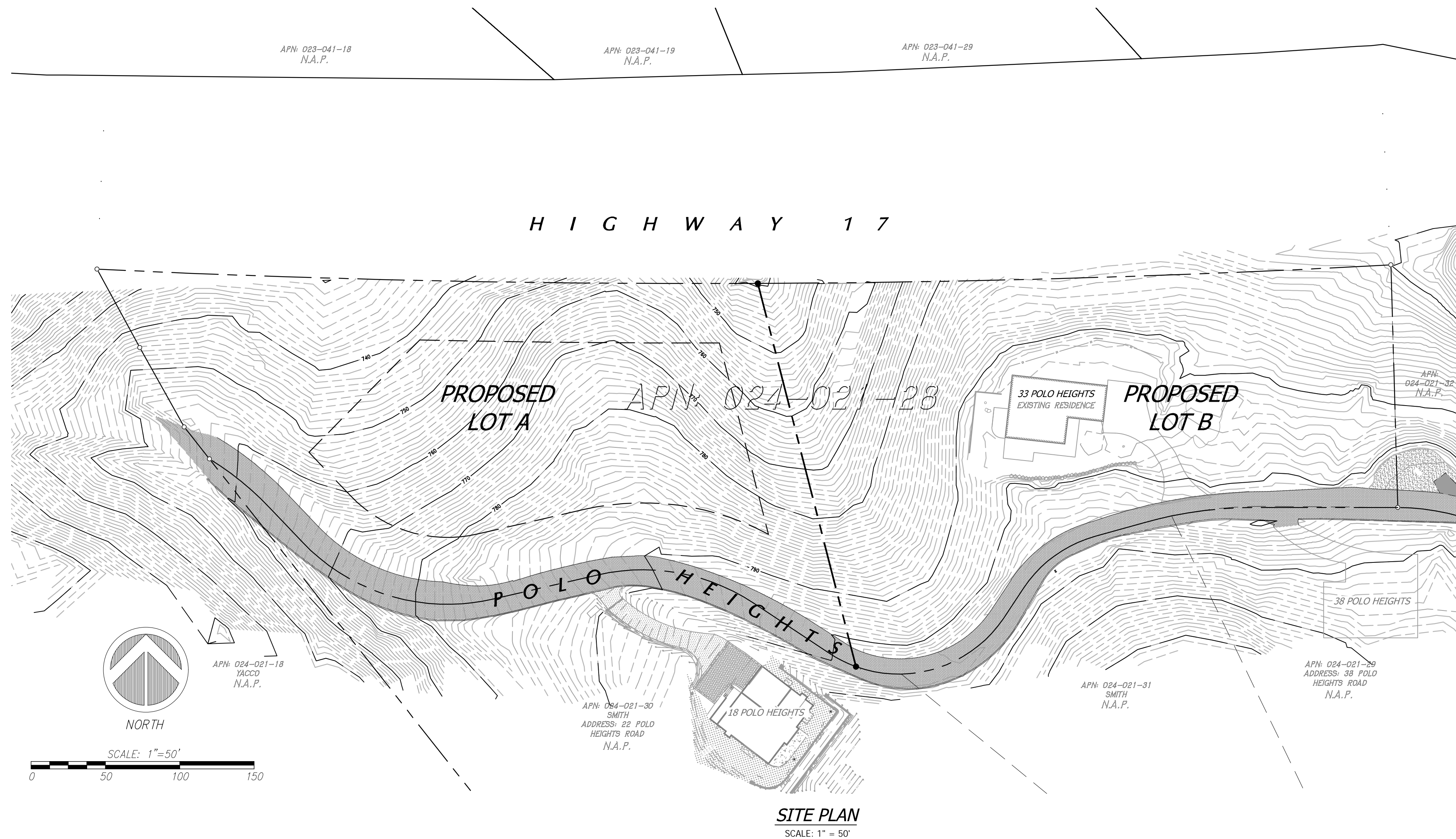
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A2

CREAMER 2-LOT MLD/ZONE CHANGE
SCOTT'S VALLEY, CALIFORNIA
APN: 024-021-28



CONTRACTOR RESPONSIBILITY

CONTRACTOR AGREES THAT HE SHOULD ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS, INCLUDING THE SAFETY OF ALL PERSONS AND PROPERTY, DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, AND THAT REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED DURING WORKING HOURS. THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER AND THE DESIGN PROFESSIONALS HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR DESIGN PROFESSIONAL.

DISCREPANCIES

IF THERE ARE ANY DISCREPANCIES BETWEEN THE CONSTRUCTION DOCUMENTS AND EXISTING CONDITIONS WHICH WILL AFFECT THE WORK, THE CONTRACTOR SHALL BRING SUCH DISCREPANCIES TO THE DESIGN PROFESSIONAL FOR ADJUSTMENT BEFORE PROCEEDING WITH THE WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER FITTING OF ALL WORK AND FOR THE COORDINATION OF ALL TRADES, SUBCONTRACTORS, AND PERSONS ENGAGED UPON THIS CONTRACT.

EROSION CONTROL NOTE

1. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE AND MAINTAIN EROSION CONTROL MEASURES AS REQUIRED THROUGHOUT THE LIFE OF THE PROJECT IN CONFORMANCE WITH THE CITY OF SCOTT'S VALLEY.
2. CONTRACTOR TO PROVIDE BACK-UP EROSION PREVENTION MEASURES (SOIL STABILIZATION) WITH SEDIMENT CONTROL MEASURES SUCH AS STRAW WATTLES, SILT FENCE, GRAVEL INLET FILTERS, AND/OR SEDIMENT TRAPS OR BASINS. ENSURE CONTROL MEASURES ARE ADEQUATE, IN PLACE, AND IN OPERABLE CONDITIONS. SEDIMENT CONTROLS, INCLUDING INLET PROTECTION, ARE NECESSARY BUT SHOULD BE A SECONDARY DEFENSE BEHIND GOOD EROSION CONTROL MEASURES.
3. ALL EROSION PREVENTION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED AND REPAIRED THROUGHOUT THE SEASON. REPLACEMENT SUPPLIES SHOULD BE KEPT ON SITE.
4. SITE INSPECTIONS SHALL BE CONDUCTED BEFORE AND AFTER EACH STORM EVENT, AND EVERY 24 HOURS FOR EXTENDED STORM EVENTS, TO IDENTIFY AREAS THAT CONTRIBUTE TO EROSION AND SEDIMENT PROBLEMS OR ANY OTHER POLLUTANT DISCHARGES. IF ADDITIONAL MEASURES ARE NEEDED, REVISE THE EROSION CONTROL PLAN AND IMPLEMENT THE MEASURES IMMEDIATELY. DOCUMENT ALL FINDINGS AND ACTIONS TAKEN.
5. CONTRACTOR SHALL USE BEST MANAGEMENT PRACTICES DURING CONSTRUCTION FOR CONTROL OF STORM WATER RUNOFF (E.G. GRAVEL BAGS AT CATCH BASIN INLETS).

CONSTRUCTION SURVEYING / STAKING

CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL SURVEYING AND OR STAKING BY A LICENSED SURVEYOR FOR ALL CONSTRUCTION PURPOSES.

UNAUTHORIZED CHANGES AND USES

CAUTION: THE ENGINEER PREPARING THESE PLANS WILL NOT BE RESPONSIBLE FOR, OR LIABLE FOR, UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS. ALL CHANGES TO THE PLANS MUST BE IN WRITING AND MUST BE APPROVED BY THE PREPARER OF THE PLANS

GENERAL NOTES

1. NO CHANGE TO THE PLANS SHALL BE PERMITTED WITHOUT PRIOR WRITTEN APPROVAL BY THE OWNER OR OWNERS REPRESENTATIVES AND THE CITY OF SCOTT'S VALLEY.
2. CONTRACTOR SHALL VERIFY LOCATIONS, ELEVATIONS AND INVERTS OF EXISTING UTILITY PRIOR TO COMMENCEMENT OF WORK AND SHALL NOTIFY OWNER OR OWNERS REPRESENTATIVES OF VARIANCE FROM THOSE SHOWN ON THE PLANS.
3. UNDERGROUND FACILITIES AND UTILITIES HAVE BEEN SHOWN BASED ON RECORD DRAWINGS AND VISIBLE EVIDENCE FOUND IN FIELD. NO WARRANTY IS MADE REGARDING THE COMPLETENESS OR ACCURACY OF SUCH INFORMATION. PRIOR TO CONSTRUCTION, DETERMINE THE EXACT LOCATION OF UNDERGROUND FACILITIES AND UTILITIES, AND PRESERVE SAME FROM DAMAGE. PRIOR TO CONSTRUCTION, VERIFY LOCATION AND ELEVATION OF EXISTING UNDERGROUND UTILITIES AT THE CROSSING POINTS WITH PROPOSED UTILITIES. THE CONTRACTOR SHALL NOTIFY THE OWNER OR OWNERS REPRESENTATIVES IF CONDITIONS DIFFER FROM THOSE SHOWN ON THE DRAWINGS AND SHALL NOT BEGIN CONSTRUCTION UNTIL THE CHANGED CONDITION HAS BEEN EVALUATED. CONTACT UNDERGROUND SERVICES ALERT (USA) (1-800-227-2600) TWO (2) WEEKS PRIOR TO DIGGING. REPAIR UNDERGROUND UTILITIES DAMAGED BY CONSTRUCTION OPERATIONS. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AND ALL DAMAGES ASSOCIATED WITH CONTRACTOR'S FAILURE TO EXACTLY LOCATED AND PRESERVE UNDERGROUND FACILITIES AND UTILITIES.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COORDINATION WITH THE APPROPRIATE UTILITY COMPANIES AND/OR AGENCIES TO VERIFY THE EXISTENCE AND/OR LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO COMMENCEMENT OF WORK. AND SHALL NOTIFY U.S.A. @ (800) 227-2600 AT LEAST 48-HOURS IN ADVANCE OF EXCAVATION.
5. IF ANY INDICATIONS OF ARCHEOLOGICAL REMAINS ARE ENCOUNTERED DURING GRADING ACTIVITIES FOR ANY DEVELOPMENT WITHIN THE PROJECT SITE, ALL WORK SHALL BE HALTED WITHIN 200 FOOT RADIUS OF THE FIND. OWNER SHALL RETAIN A QUALIFIED ARCHEOLOGIST RETAINED TO DETERMINE THE NATURE OF THE DISCOVERY AND RECOMMEND APPROPRIATE EVALUATION PROCEDURES.
6. CONTRACTOR SHALL BE FAMILIAR WITH, KEEP AND MAINTAIN A COPY OF THE MITIGATION MONITORING AND REPORTING PROGRAM (MMPR) ONSITE, IN THE JOB TRAILER AT ALL TIMES.





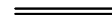

























NOTE:

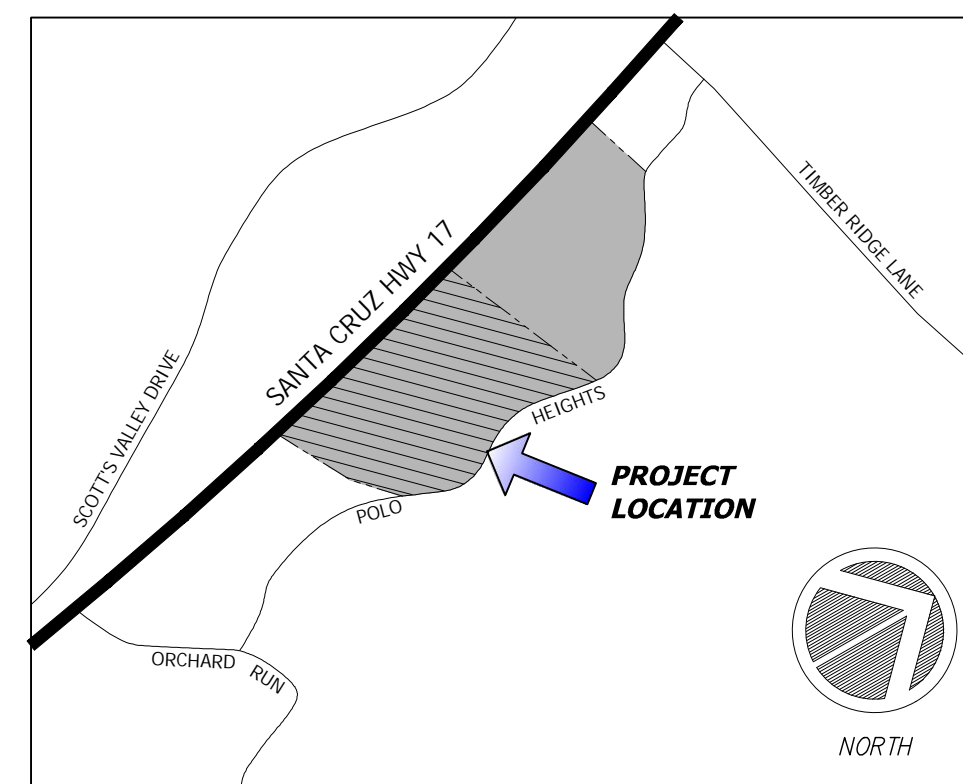
CONTRACTOR SHALL VERIFY ALL UTILITY LOCATIONS. CALL USA (800) 227-2600. CONTRACTOR TO NOTIFY ENGINEER OF ANY APPARENT CONFLICTS FOR RESOLUTION PRIOR TO START OF CONSTRUCTION.

ABBREVIATIONS

AB	AGGREGATE BASE
AC	ASPHALT CONCRETE
BFC	BOTTOM FACE OF CURB
BFS	BOTTOM FACE OF STEP
BLW	BOTTOM FACE OF WALL
BDWG	BUILDING
C	CONCRETE
CIP	CAST IRON PIPE
CL	CENTERLINE
CONC	CONCRETE
COR	CORNER
DWY	DRIVEWAY
EC	EDGE OF CONCRETE
EP	EDGE OF PAVEMENT
EG	EXISTING GRADE
ER	END OF RETURN
(E)	EXISTING
FC	FLUSH CURB
FF	FINISH FLOOR
FG	FINISH GRADE
FI	FINISH FLOOR
FL	FLOW LINE
GB	GRADE BREAK
HP	HIGH POINT
LP	LOW POINT
MAX	MAXIMUM
ME	MATCH EXISTING
MIN	MINIMUM
NP	NOT A PART
NG	NATURAL GROUND
PRO	PROPERTY LINE
R/W	RIGHT OF WAY
R/W	SLAB
STD	STANDARD
TC	TOP OF CURB

LEGEND

DESCRIPTION	PROPOSED	EXISTING
PROPERTY LINE		
EASEMENT LINE		
CENTERLINE		
CURB AND GUTTER		
STANDARD HOODED INLET		
FIRE HYDRANT		
STREET LIGHT		
WATER METER		
DOMESTIC WATER SERVICE		
SANITARY SEWER		
STORM DRAIN		
SANITARY MANHOLE		
STORM MANHOLE		
DRIVEWAY		
HANDICAP RAMP		
IRRIGATION METER AND BACK FLOW PREVENTER		
MONUMENT WELLS		



VICINITY MAP
SCALE: NTS

SHEET INDEX

- C0.1 - COVER SHEET
- TENTATIVE MAP**
- C1.1 - TENTATIVE MAP
- C1.2 - ZONING MODIFICATION
- C1.3 - SLOPE ANALYSIS
- C1.4 - SEPTIC TESTING EXHIBIT
- TENTATIVE ENGINEERING**
- C2.1 - TREE INVENTORY/SCHEDULE AND SET BACKS
- C3.1 - GRADING PLAN
- C3.2 - ENLARGED GRADING PLAN

LANDSCAPE ARCHITECTURE

- C4.1 - LANDSCAPE PLAN
- C4.2 - LANDSCAPE DETAILS

PRELIMINARY ARCHITECTURE

- A1 - SITE PLAN
- A2 - FLOOR PLANS
- A3 - EXTERIOR ELEVATIONS
- A3.1 - ARCHITECTURAL SECTIONS
- A4 - PERSPECTIVE VIEWS
- A5 - MATERIAL AND COLOR DISPLAY BOARD
- A6 - DETAILS

PROJECT TEAM

CIVIL ENGINEER
C2G CIVIL CONSULTANTS GROUP, INC.
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SCOTTS VALLEY, CA 95066
831.438.4420

SURVEYOR
ALPHA LAND SURVEY
4444 SCOTTS VALLEY DRIVE, SUITE 6
SCOTTS VALLEY, CA 95066
831.438.4420


GEOTECHNICAL
DEES AND ASSOCIATES
501 MISSION STREET, SUITE 8A
SANTA CRUZ, CA 95060
831.427.1770

ACOUSTIC CONSULTANT
CHARLES M SALTER ASSOCIATES, INC
130 SUTTER STREET
SANTA FRANCISCO, CA 94104
415.397.0442

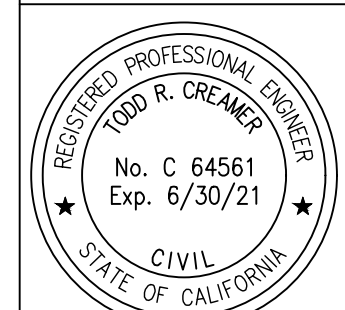
ARBORIST
KURT FOUTS ARBORIST CONSULTANT
826 MONTEREY AVENUE
CAPITOLA, CA 95010
831.359.3607

BIOLOGICAL
THE BIOTIC RESOURCES GROUP
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REVISIONS		BY
	PLANNING COMMENTS 8.15.19	JB

COVER SHEET



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33 POLO HEIGHTS
SCOTT'S VALLEY, CALIFORNIA
APN 024-021-28

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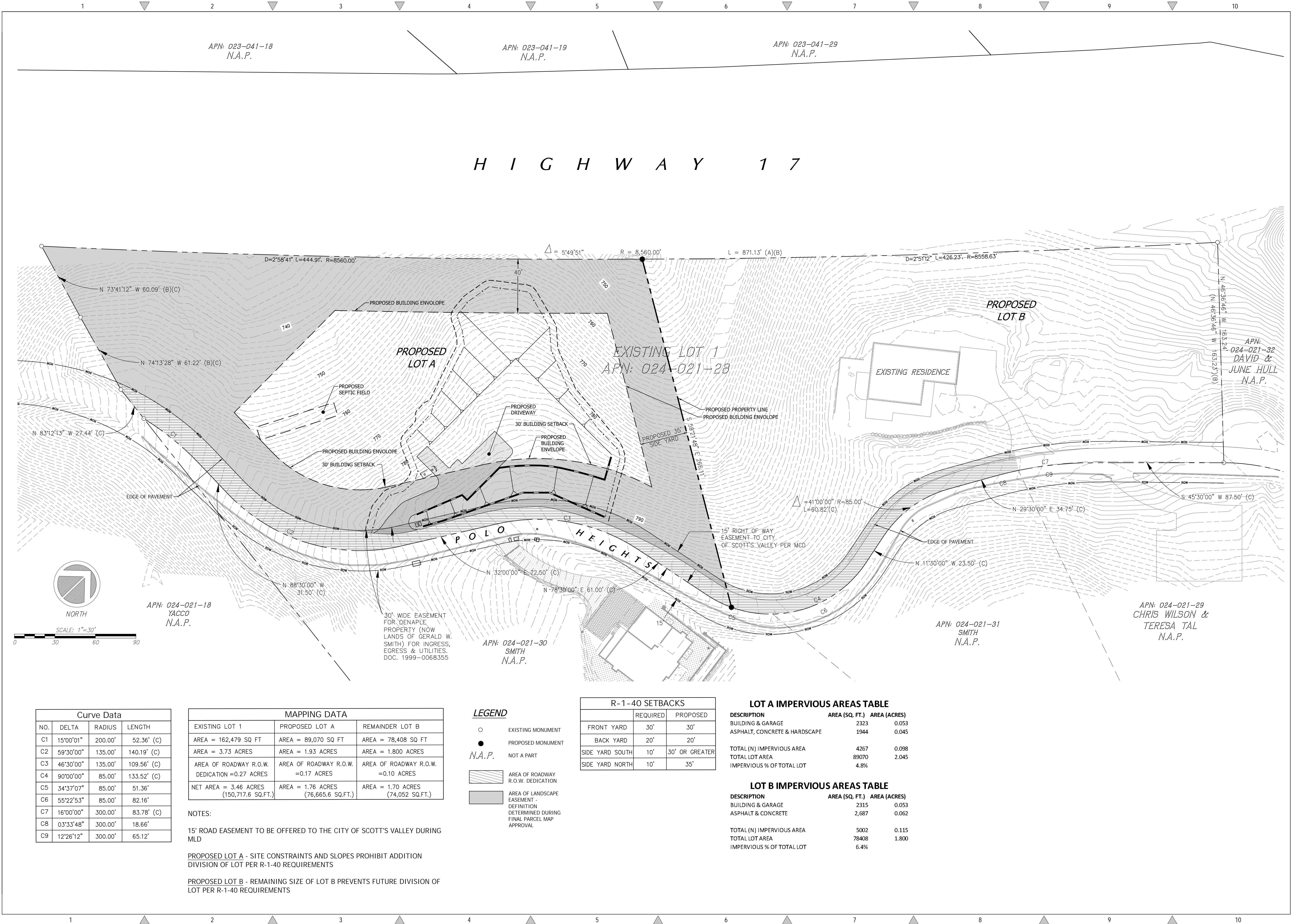
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Of 17 Sheets



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C3	46°30'00"	135.00'	109.56' (C)
C4	90°00'00"	85.00'	133.52' (C)
C5	34°37'07"	85.00'	51.36'
C6	55°22'53"	85.00'	82.16'
C7	16°00'00"	300.00'	83.78' (C)
C8	03°33'48"	300.00'	18.66'
C9	12°26'12"	300.00'	65.12'

MAPPING DATA		
EXISTING LOT 1	PROPOSED LOT A	REMAINDER LOT B
AREA = 162,479 SQ. FT.	AREA = 89,070 SQ. FT.	AREA = 78,408 SQ. FT.
AREA = 3.73 ACRES	AREA = 1.93 ACRES	AREA = 1.800 ACRES
AREA OF ROADWAY R.O.W. DEDICATION = 0.27 ACRES	AREA OF ROADWAY R.O.W. = 0.17 ACRES	AREA OF ROADWAY R.O.W. = 0.10 ACRES
NET AREA = 3.46 ACRES (150,717.6 SQ.FT.)	AREA = 1.76 ACRES (76,665.6 SQ.FT.)	AREA = 1.70 ACRES (74,052 SQ.FT.)

NOTES:

15' ROAD EASEMENT TO BE OFFERED TO THE CITY OF SCOTT'S VALLEY DURING MLD

PROPOSED LOT A - SITE CONSTRAINTS AND SLOPES PROHIBIT ADDITION DIVISION OF LOT PER R-1-40 REQUIREMENTS

PROPOSED LOT B - REMAINING SIZE OF LOT B PREVENTS FUTURE DIVISION OF LOT PER R-1-40 REQUIREMENTS

LEGEND

- EXISTING MONUMENT
- PROPOSED MONUMENT
- N.A.P. NOT A PART
- AREA OF ROADWAY R.O.W. DEDICATION
- AREA OF LANDSCAPE EASEMENT - DEFINITION DETERMINED DURING FINAL PARCEL MAP APPROVAL

R-1-40 SETBACKS		
	REQUIRED	PROPOSED
FRONT YARD	30'	30'
BACK YARD	20'	20'
SIDE YARD SOUTH	10'	30' OR GREATER
SIDE YARD NORTH	10'	35'

LOT A IMPERVIOUS AREAS TABLE

DESCRIPTION	AREA (SQ. FT.)	AREA (ACRES)
BUILDING & GARAGE	2323	0.053
ASPHALT, CONCRETE & HARDSCAPE	1944	0.045
TOTAL (N) IMPERVIOUS AREA	4267	0.098
TOTAL LOT AREA	89070	2.045
IMPERVIOUS % OF TOTAL LOT	4.8%	

LOT B IMPERVIOUS AREAS TABLE

DESCRIPTION	AREA (SQ. FT.)	AREA (ACRES)
BUILDING & GARAGE	2315	0.053
ASPHALT & CONCRETE	2,687	0.062
TOTAL (N) IMPERVIOUS AREA	5002	0.115
TOTAL LOT AREA	78408	1.800
IMPERVIOUS % OF TOTAL LOT	6.4%	

REVISIONS

BY

PLANNING

COMMENTS 8.15.19

JB

TENTATIVE MAP

REGISTERED PROFESSIONAL ENGINEER

TODD R. CREAGER

No. C 64561

Exp. 6/30/21

CIVIL

STATE OF CALIFORNIA

C2G

C2G CIVIL CONSULTANTS GROUP, INC.

Engineers/Planners

4444 Scotts Valley Road, Suite 6

Scotts Valley, CA 95066

T (831) 438-4420 F (831) 438-4420

33 POLO HEIGHTS

SCOTT'S VALLEY, CALIFORNIA

APN 024-021-28

Date: 11.29.17

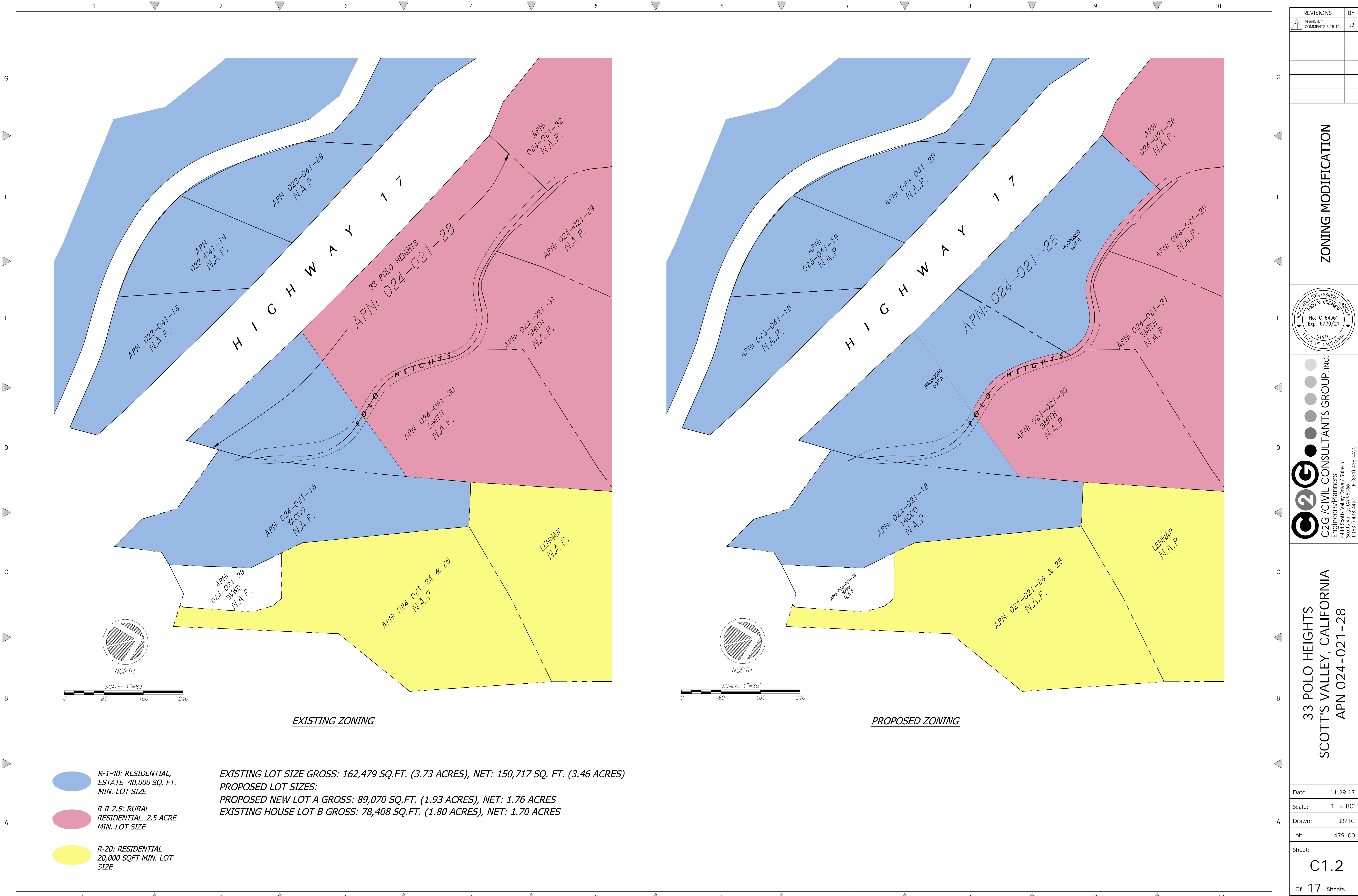
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Job: 479-00

Sheet: C1.1

Of 17 Sheets



REVISIONS		BY
1	PLANNING COMMENTS 8.15.19	JB

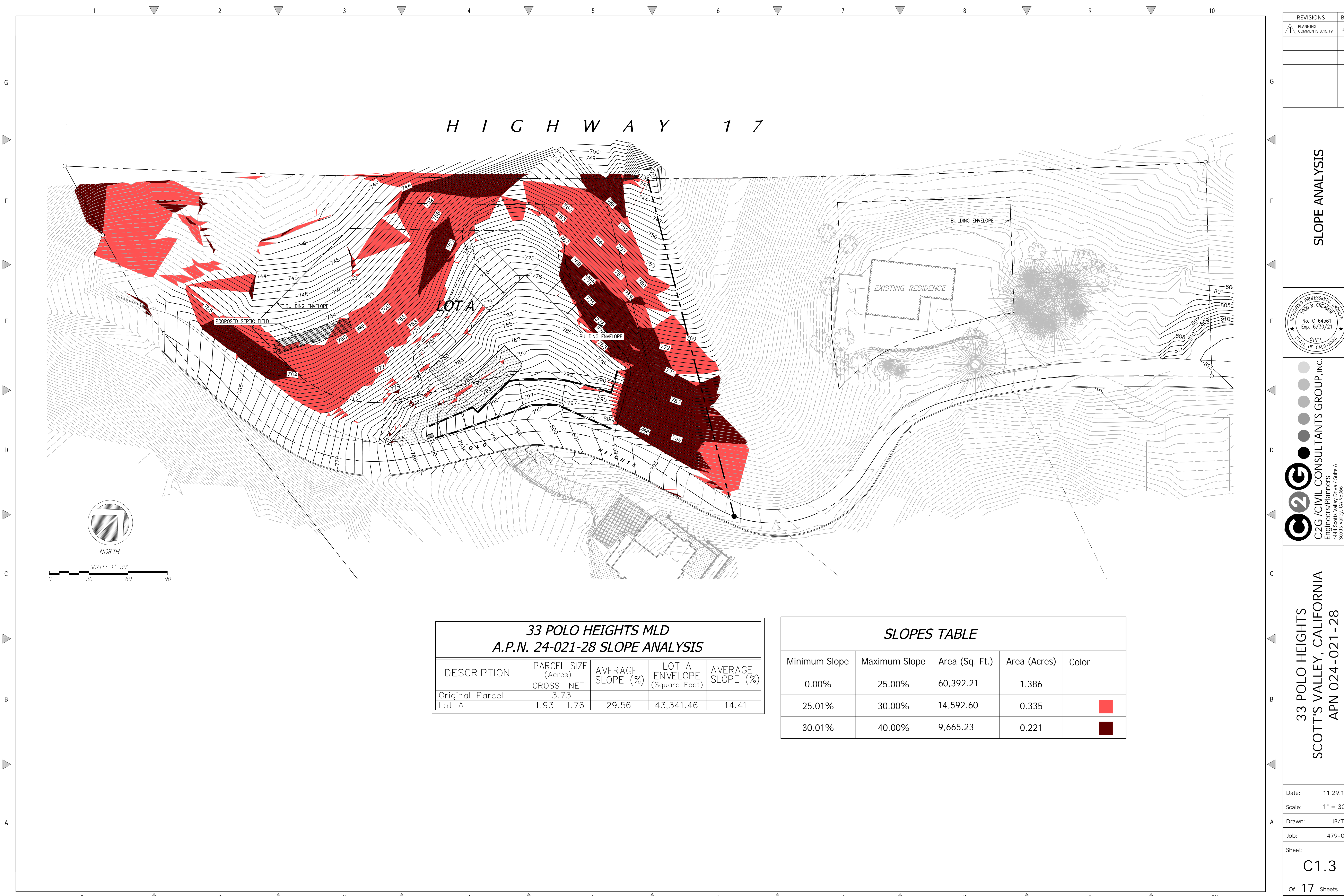
ZONING MODIFICATION

REGISTERED PROFESSIONAL ENGINEER
TODD R. CREMER
No. C 64561
Exp. 6/30/21
CIVIL
STATE OF CALIFORNIA

C2G CIVIL CONSULTANTS GROUP, INC.
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By: jmc

**33 POLO HEIGHTS
SCOTT'S VALLEY, CALIFORNIA
APN 024-021-28**

Date: 11.29.17
Scale: 1" = 80'
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Job: 479-00
Sheet: **C1.2**
Of 17 Sheets



33 POLO HEIGHTS MLD A.P.N. 24-021-28 SLOPE ANALYSIS					
DESCRIPTION	PARCEL SIZE (Acres)		AVERAGE SLOPE (%)	LOT A ENVELOPE (Square Feet)	AVERAGE SLOPE (%)
	GROSS	NET			
Original Parcel	3.73				
Lot A	1.93	1.76	29.56	43,341.46	14.41

SLOPES TABLE				
Minimum Slope	Maximum Slope	Area (Sq. Ft.)	Area (Acres)	Color
0.00%	25.00%	60,392.21	1.386	
25.01%	30.00%	14,592.60	0.335	
30.01%	40.00%	9,665.23	0.221	

REVISIONS

BY

PLANNING COMMENTS 8.15.19

JB

SLOPE ANALYSIS

REGISTERED PROFESSIONAL ENGINEER
TODD R. CREMER
No. C 64561
Exp. 6/30/21
CIVIL
STATE OF CALIFORNIA

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By: jmc

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SCOTT'S VALLEY, CALIFORNIA
APN 024-021-28

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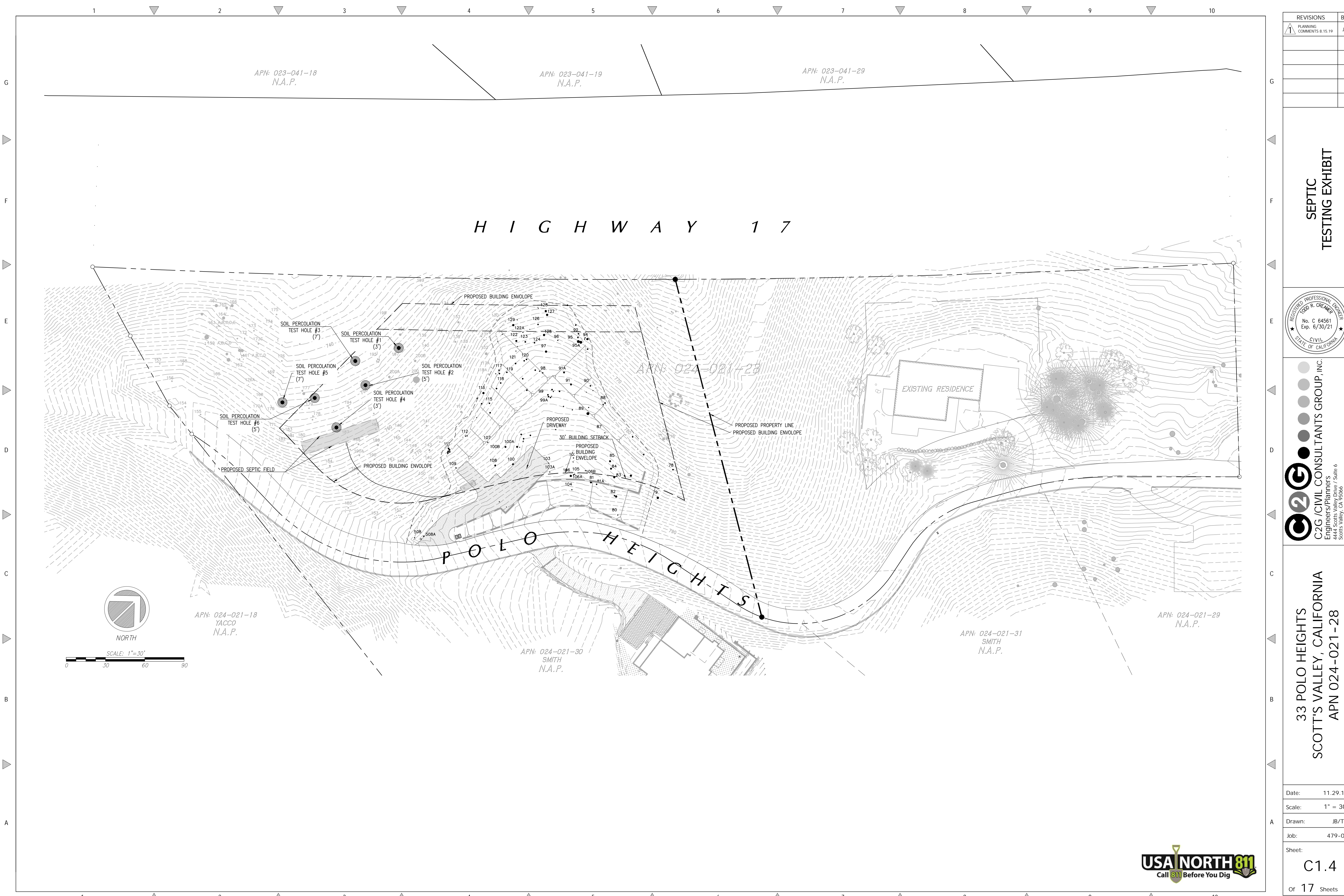
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Job: 479-00

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Of 17 Sheets

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1	PLANNING COMMENTS 8.15.19	JB

SEPTIC TESTING EXHIBIT

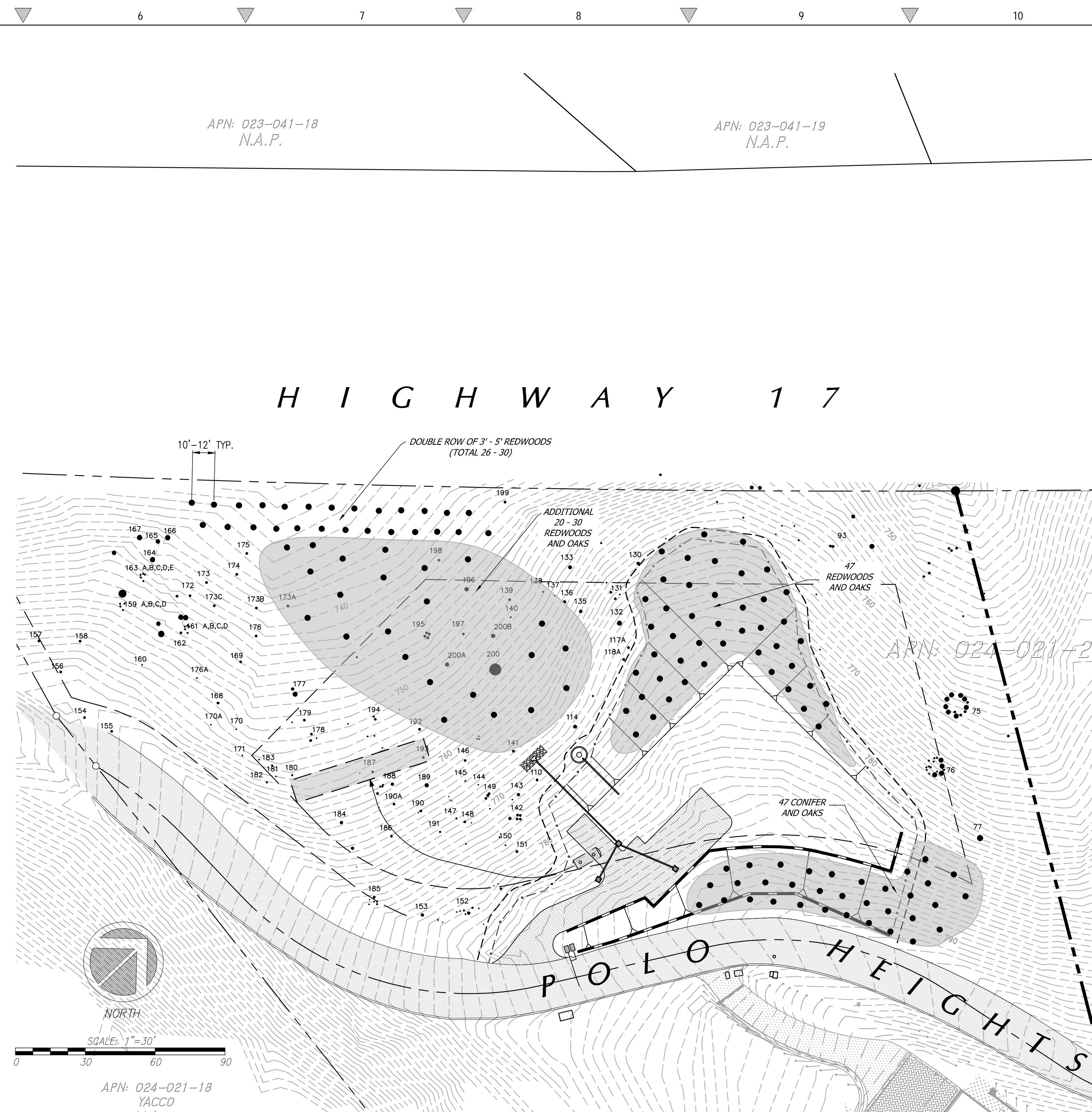
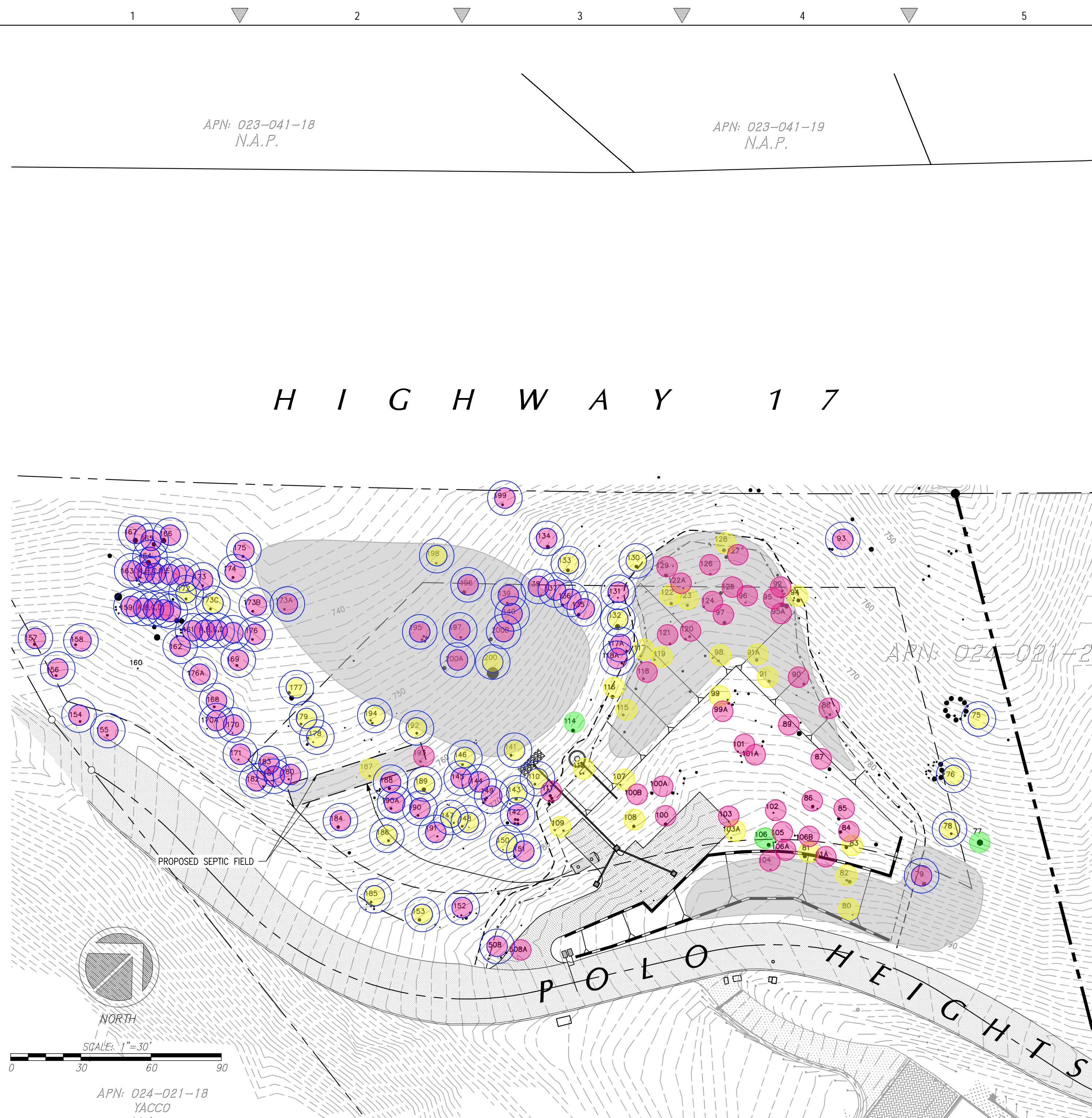
REGISTERED PROFESSIONAL ENGINEER
TODD R. CREMER
No. C 64561
Exp. 6/30/21
CIVIL
STATE OF CALIFORNIA

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By: jame

**33 POLO HEIGHTS
SCOTT'S VALLEY, CALIFORNIA
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Drawn: JB/TC
Job: 479-00
Sheet: **C1.4**
Of 17 Sheets











1 TREE REMOVAL/REMAIN/PROTECTED

Scale: 1"=30'

1 TREE PLANTING CONCEPT (SEE SHEETS C4-1 AND C4-2 FOR DETAILS)

Scale: 1"=30'

LEGEND

TREE AND NUMBER	CONDITION	REMOVING	TO REMAIN	AMOUNT TO REMAIN
 189	POOR	53	 189	67
 189	GOOD	2	 189	1
 189	FAIR	20	 189	27
		<u>TOTAL REMOVING</u> 65 (55 PROTECTED TREES)		<u>TOTAL AMOUNT TO REMAIN</u> 95 (95 PROTECTED TREES)

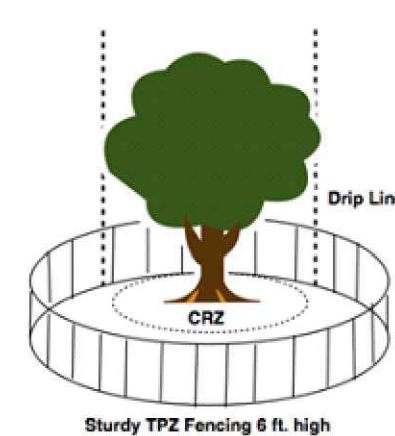


Figure 1: Tree protection distances

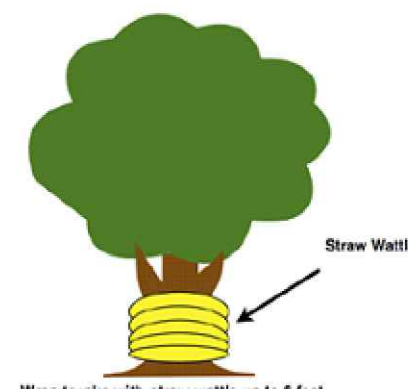


Figure 2: Trunk protection with straw wattle

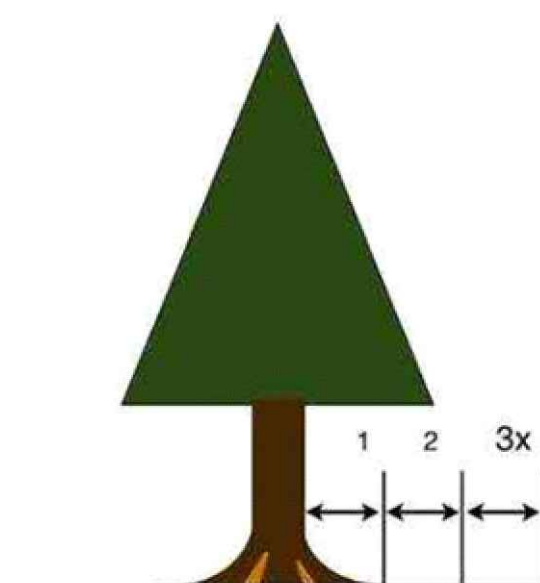
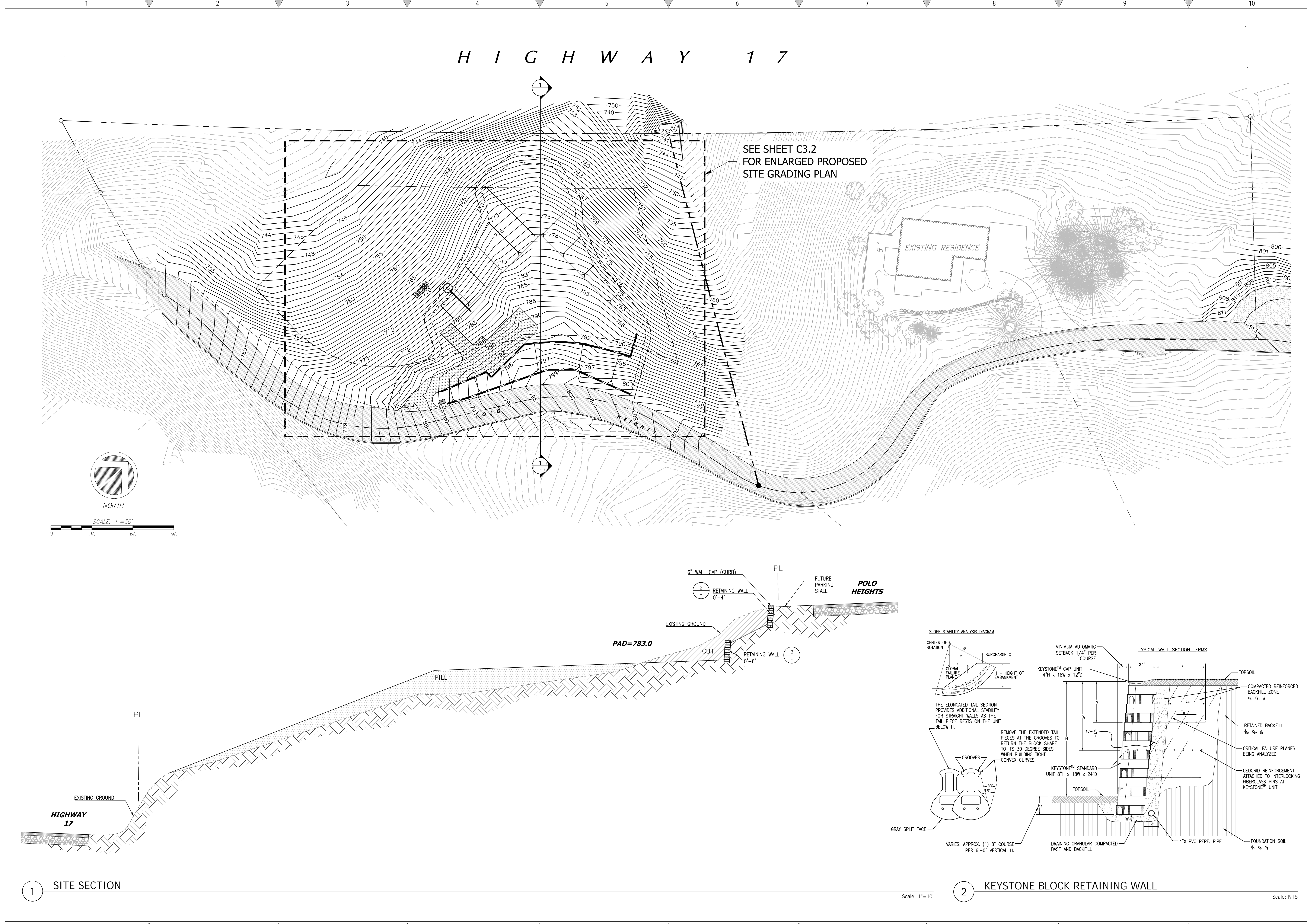
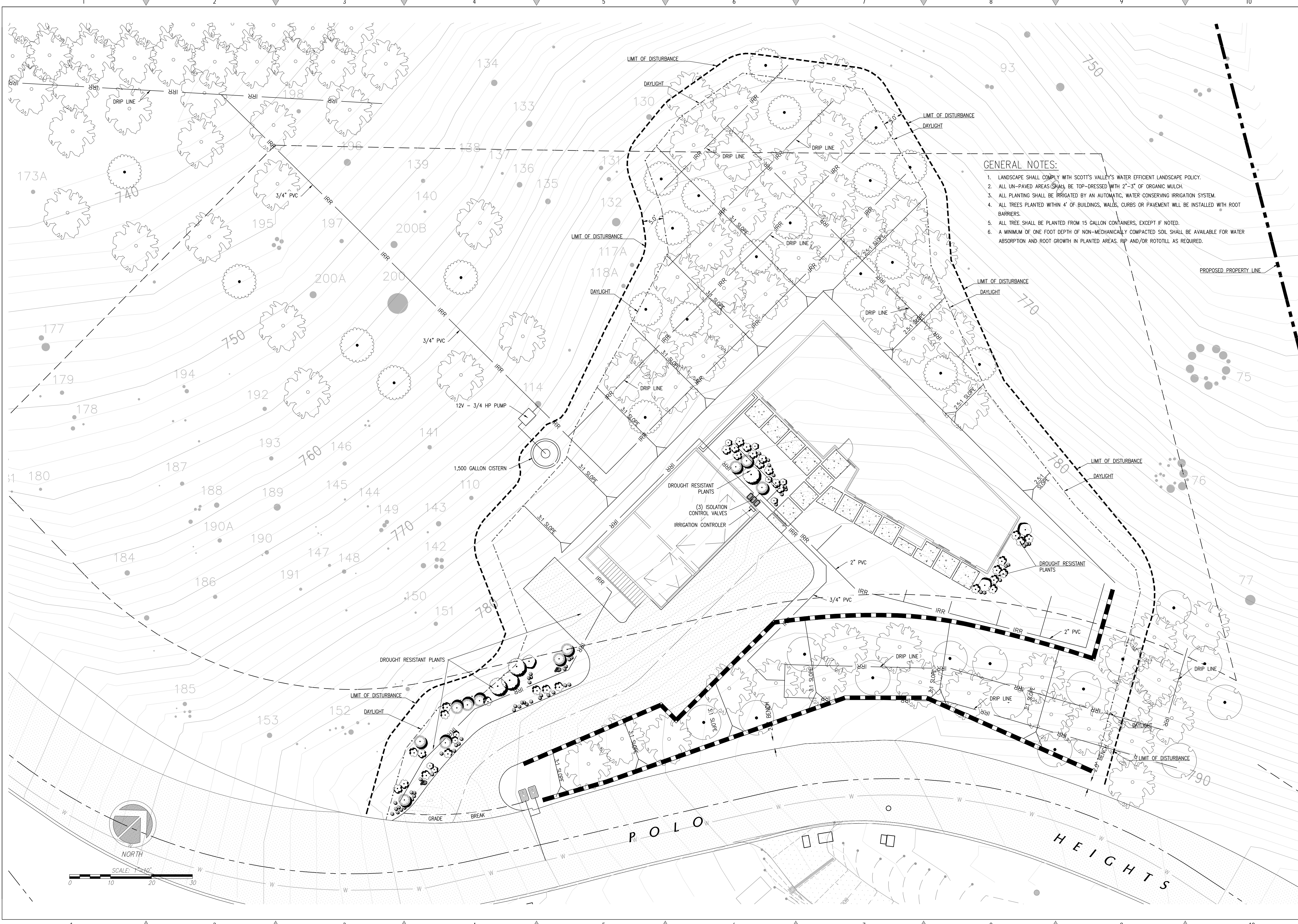


Figure 3: **Critical Root Zone (CRZ) = 3 to 5 times the trunk diameter on one side**





REVISIONS		BY
1	PLANNING COMMENTS 8.15.19	JB

LANDSCAPE PLAN

REGISTERED PROFESSIONAL ENGINEER
TODD R. CREMER
No. C 64561
Exp. 6/30/21
CIVIL
STATE OF CALIFORNIA

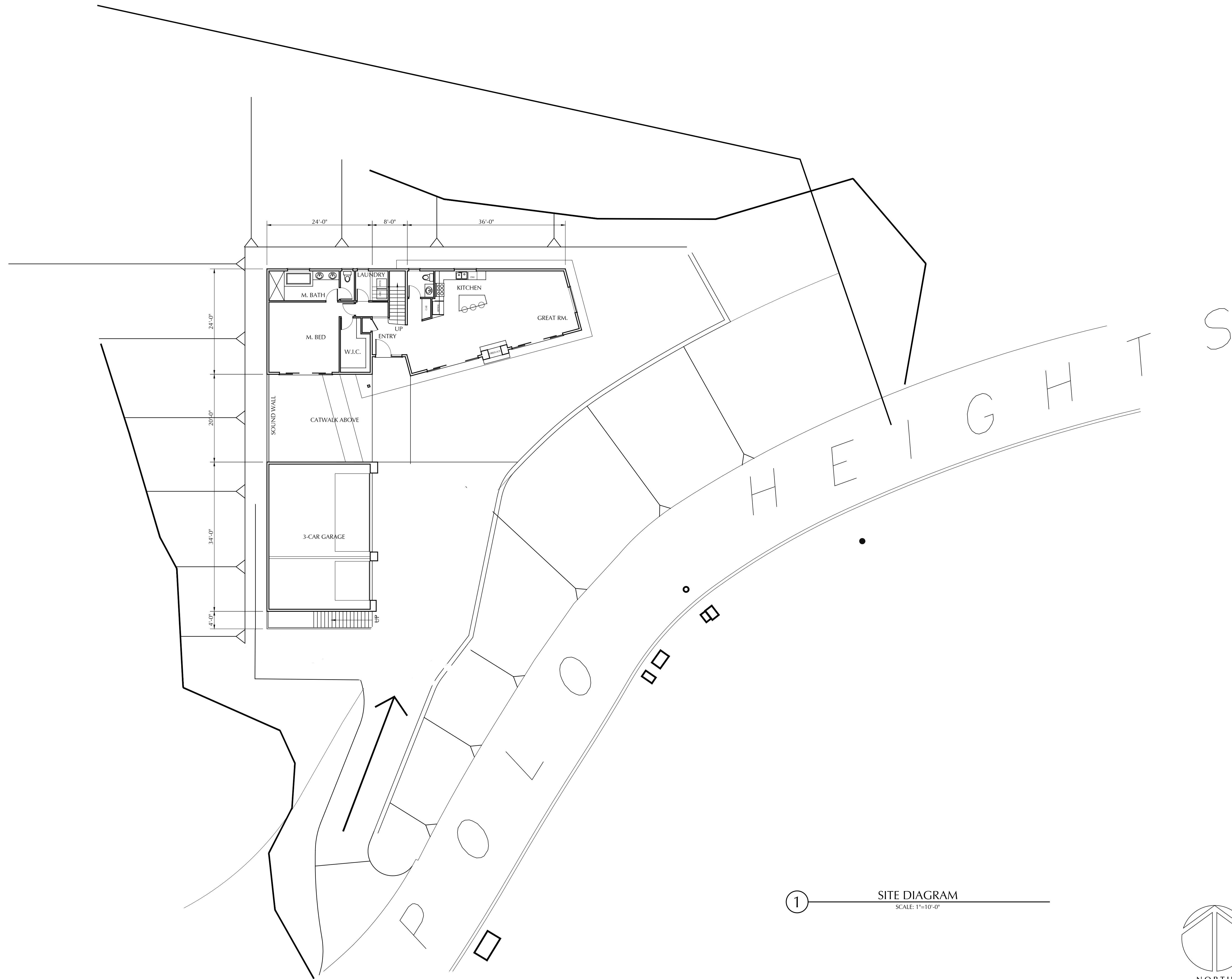
C2G CIVIL CONSULTANTS GROUP, INC.

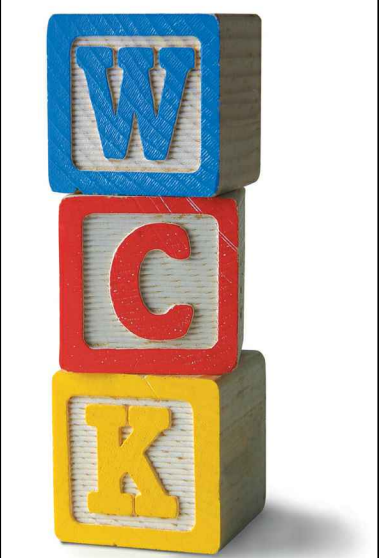
Engineers/Planners
4440 Valley View Road, Suite 6
Scott's Valley, CA 95066
T (931) 438-4420 F (931) 438-4420

33 POLO HEIGHTS
SCOTT'S VALLEY, CALIFORNIA
APN 024-021-28

Date: 11.29.17
Scale: 1" = 10'
Drawn: JB/TC
Job: 479-00
Sheet: C4.1
Of 17 Sheets

Drawing: 161479-00-Cremer - MJD (CAD Model) Sheet 1 of 17 - C4.1 - LANDSCAPE PLAN
Last Saved: Thu Dec 07, 2019 - 8:10am
Last Plotted: Mon Dec 03, 2019 - 4:09pm
By: jmc





WILLIAM C. KEMPF
ARCHITECT
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Santa Cruz, CA 95060
831 459-0951
www.wckempfl.com

NEW RESIDENCE FOR
POLO HEIGHTS
SCOTTS VALLEY, CALIFORNIA
SITE PLAN

DRAWING DATE:
AUGUST 13, 2019

A.P.N.

CLIENT NAME:
TODD CREAMER

PROJECT NAME:
POLO HEIGHTS

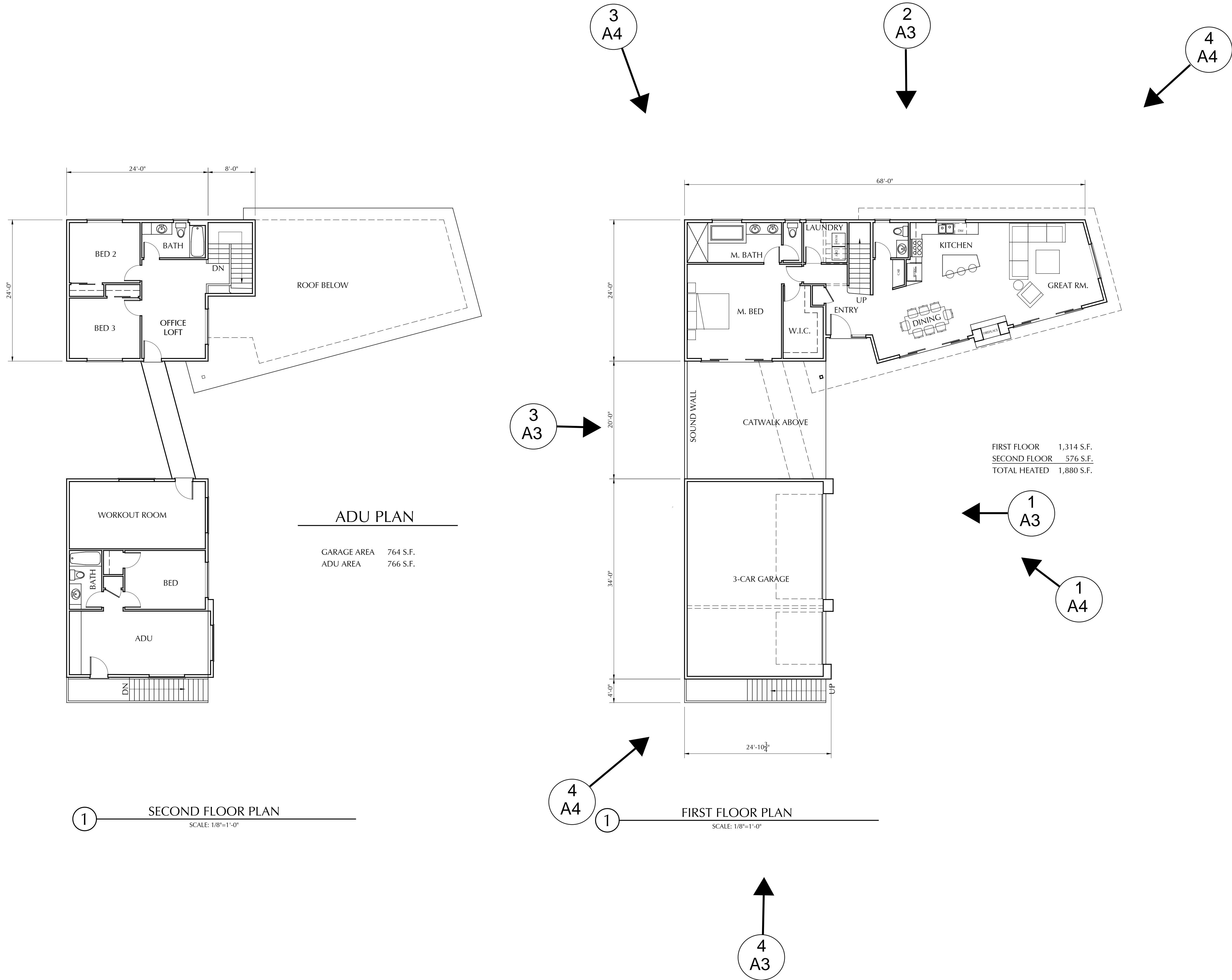
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No.	DESCRIPTION	DATE

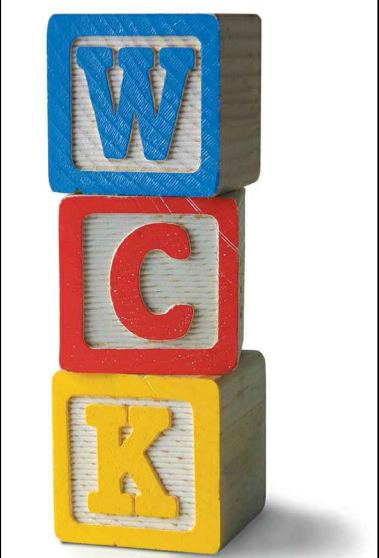
APPROVAL STAMP

STAMP

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NEW RESIDENCE FOR
POLO HEIGHTS
SCOTTS VALLEY, CALIFORNIA
FLOOR PLANS

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A.P.N.	
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PROJECT NAME:	POLO HEIGHTS

REVISIONS		
No.	DESCRIPTION	DATE

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DRAWING DATE:	AUGUST 13, 2019
A.P.N.	
CLIENT NAME:	TODD CREAMER
PROJECT NAME:	POLO HEIGHTS

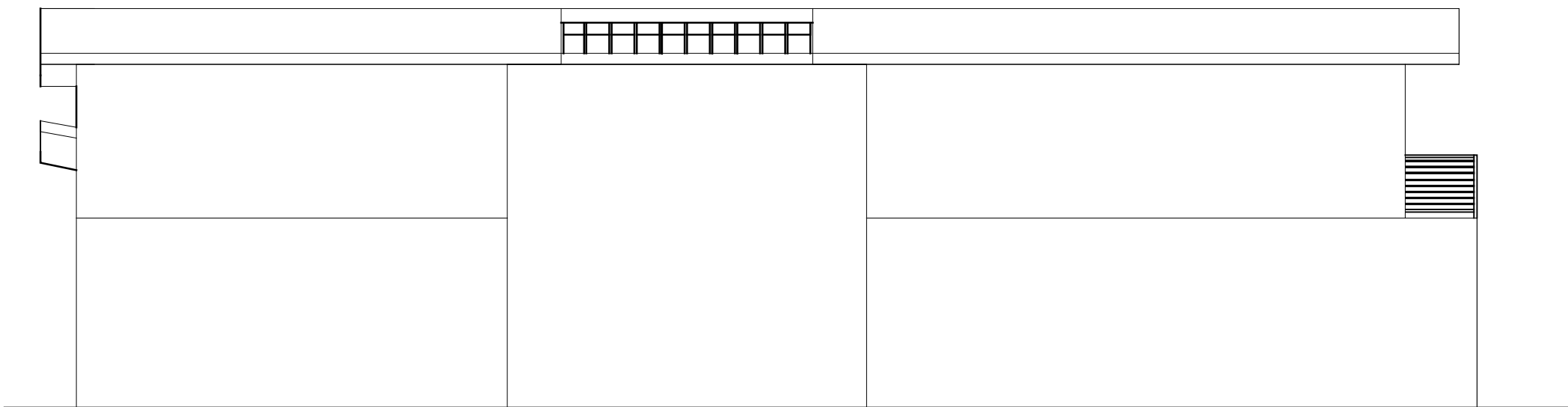
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No.	DESCRIPTION	DATE

APPROVAL STAMP

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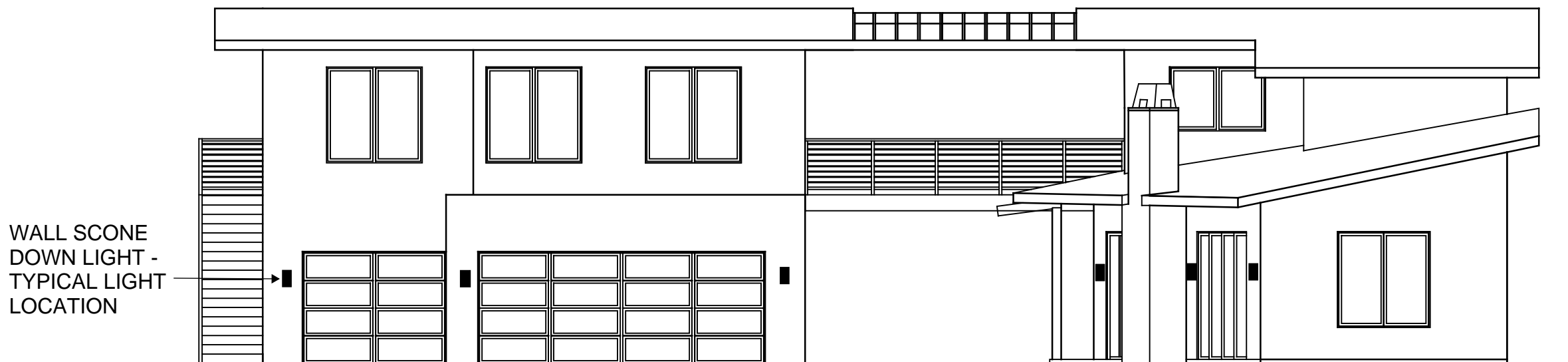
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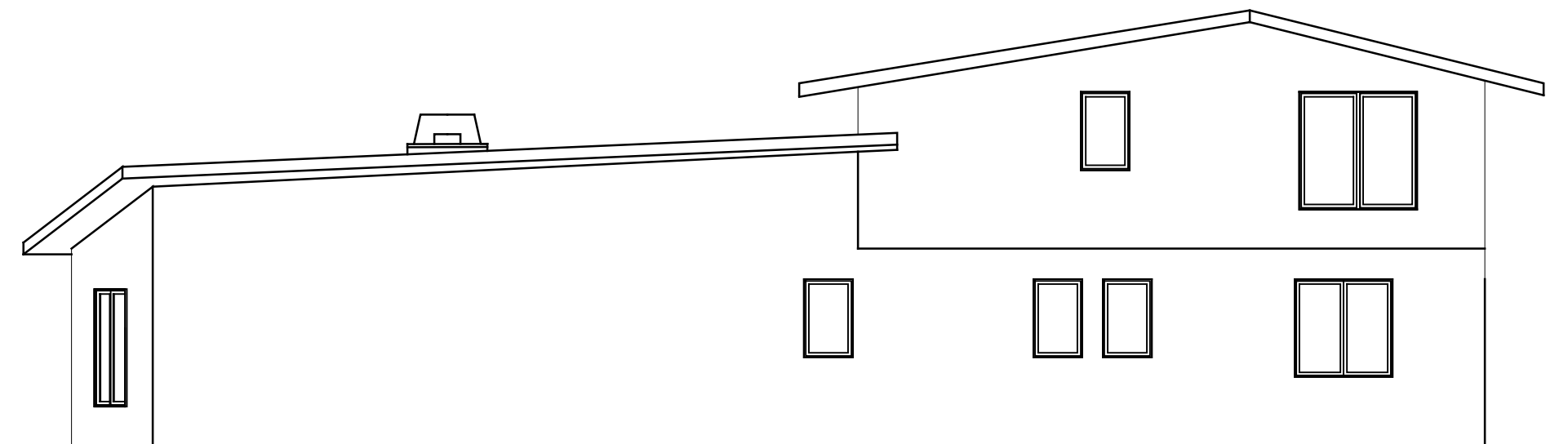
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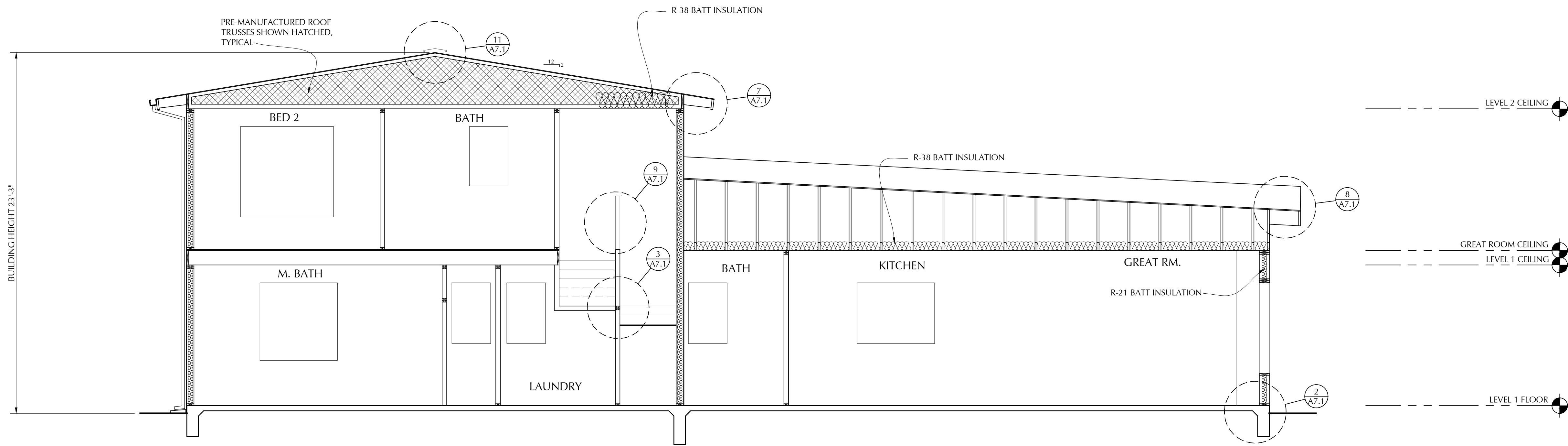
4 SOUTH ELEVATION
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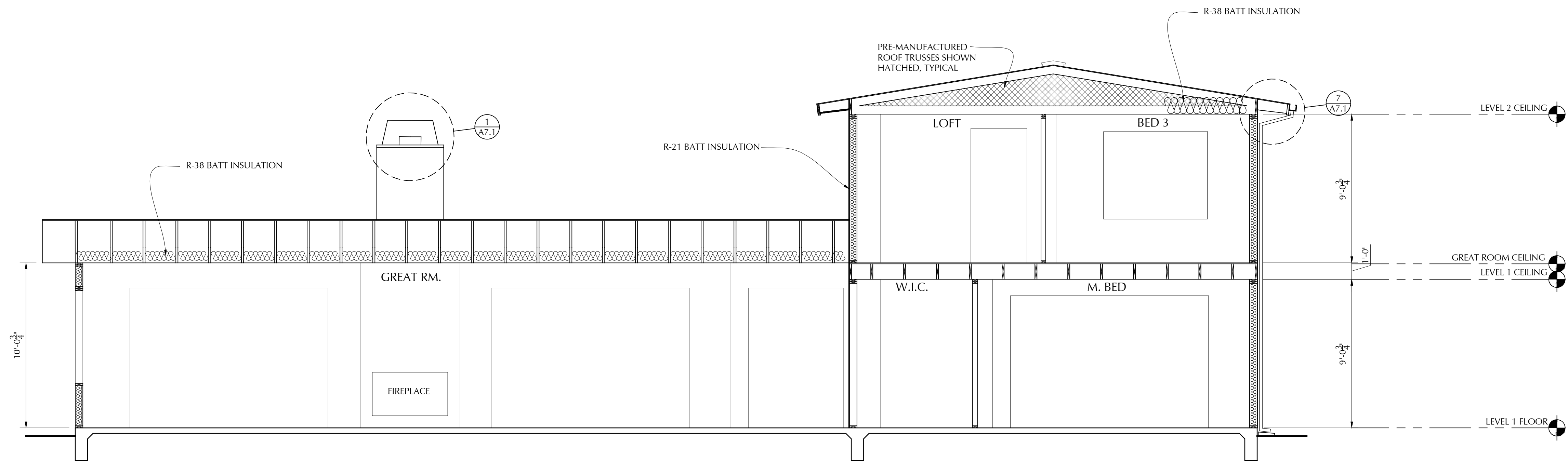
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SCALE: 1/8"=1'-0"



2 NORTH ELEVATION
SCALE: 1/8"=1'-0"



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



2 ARCHITECTURAL SECTION
SCALE: 1/4"=1'-0"



WILLIAM C. KEMPf
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NEW RESIDENCE FOR
POLO HEIGHTS
SCOTT'S VALLEY, CALIFORNIA
ARCHITECTURAL SECTIONS

DRAWING DATE:
DECEMBER 2, 2019
A.P.N.
024-021-28
CLIENT NAME:
TODD CREAMER
PROJECT NAME:
POLO HEIGHTS

REVISIONS		
No.	DESCRIPTION	DATE



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CREAMER RESIDENCE
POLO HEIGHTS, SCOTTS VALLEY, CA

PERSPECTIVE VIEWS

DRAWING DATE:	AUGUST 13, 2019
P.N.:	
CLIENT NAME:	TODD CREAMER
PROJECT NAME:	POLO HEIGHTS

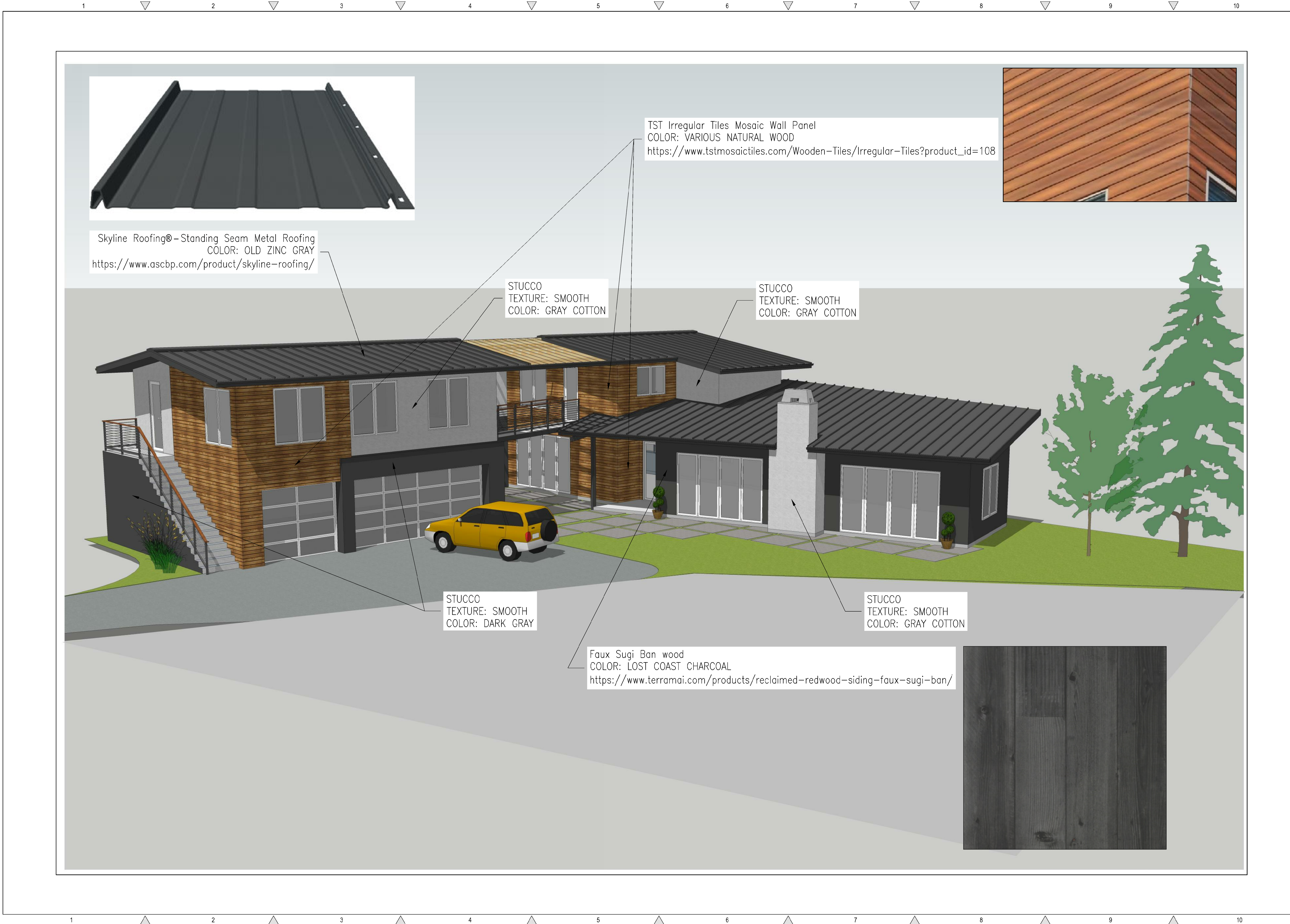
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ET

A4



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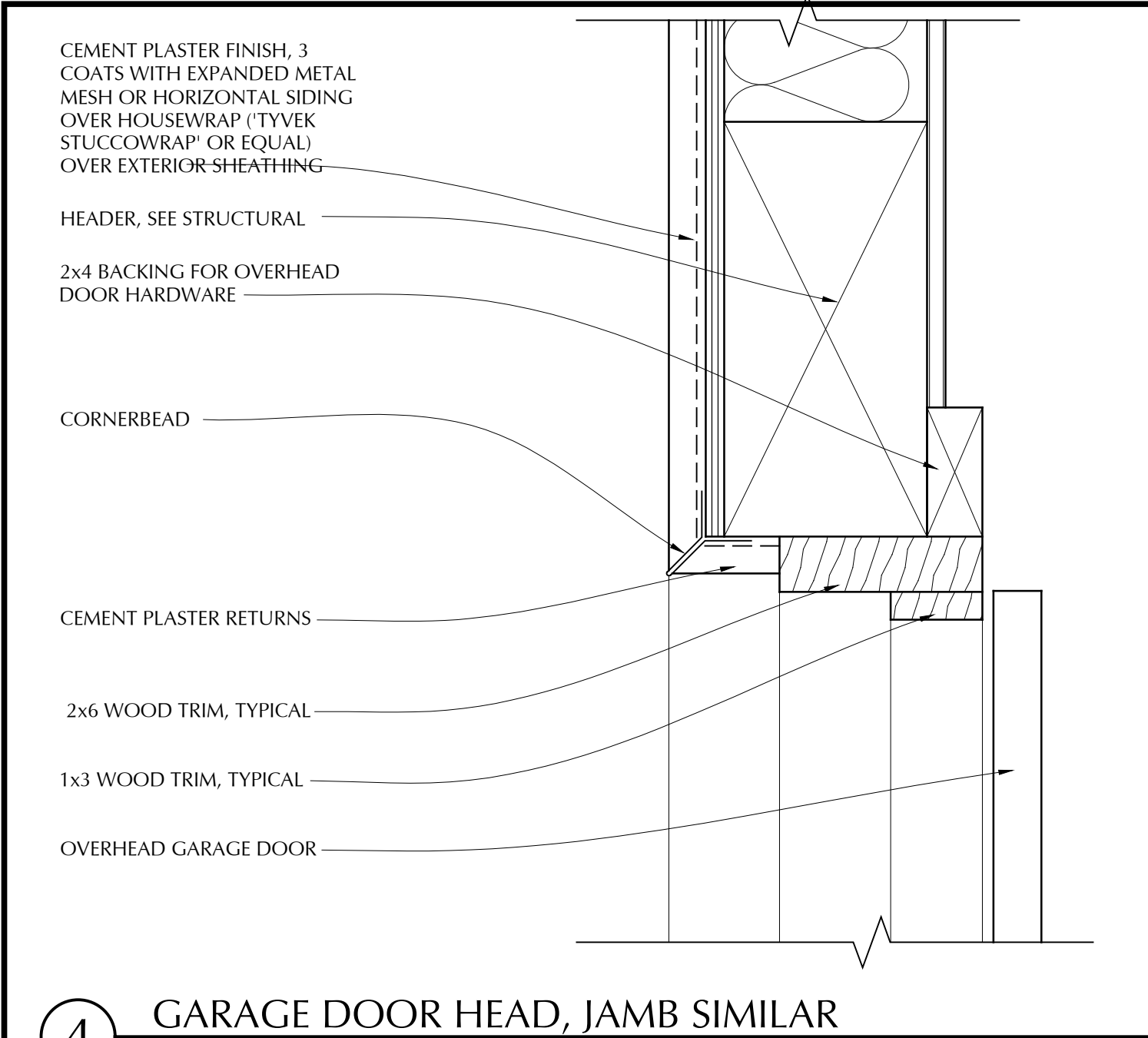
**MATERIAL AND COLOR
DISPLAY BOARD**

REGISTERED PROFESSIONAL ENGINEER
No. C 64561
Exp. 6/30/21
CIVIL
STATE OF CALIFORNIA

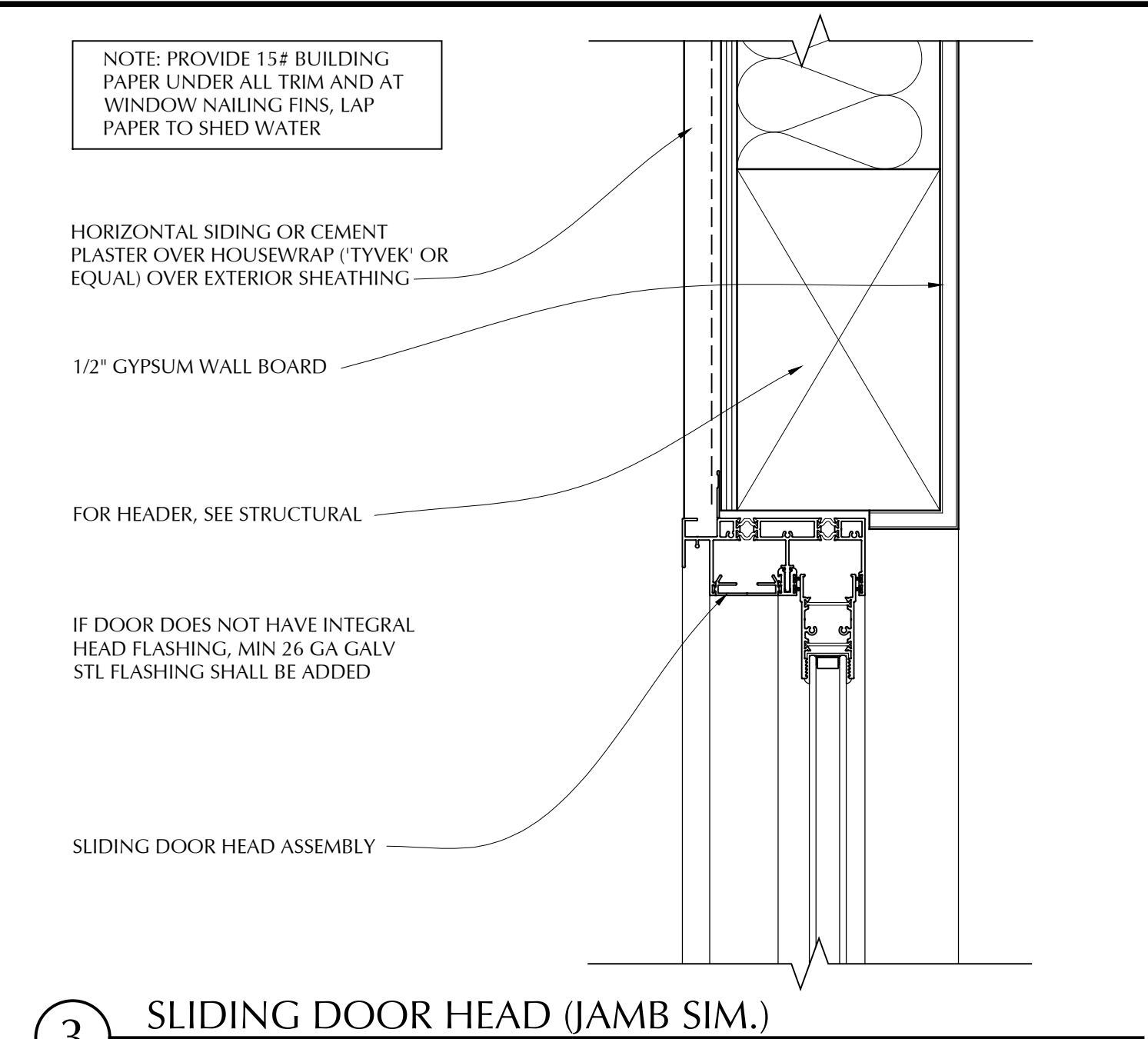
**33 POLO HEIGHTS
SCOTT'S VALLEY, CALIFORNIA
APN 024-021-28**

Date:	11.29.17
Scale:	1" = 10'
Drawn:	JB/TC
Job:	479-00
Sheet:	A5

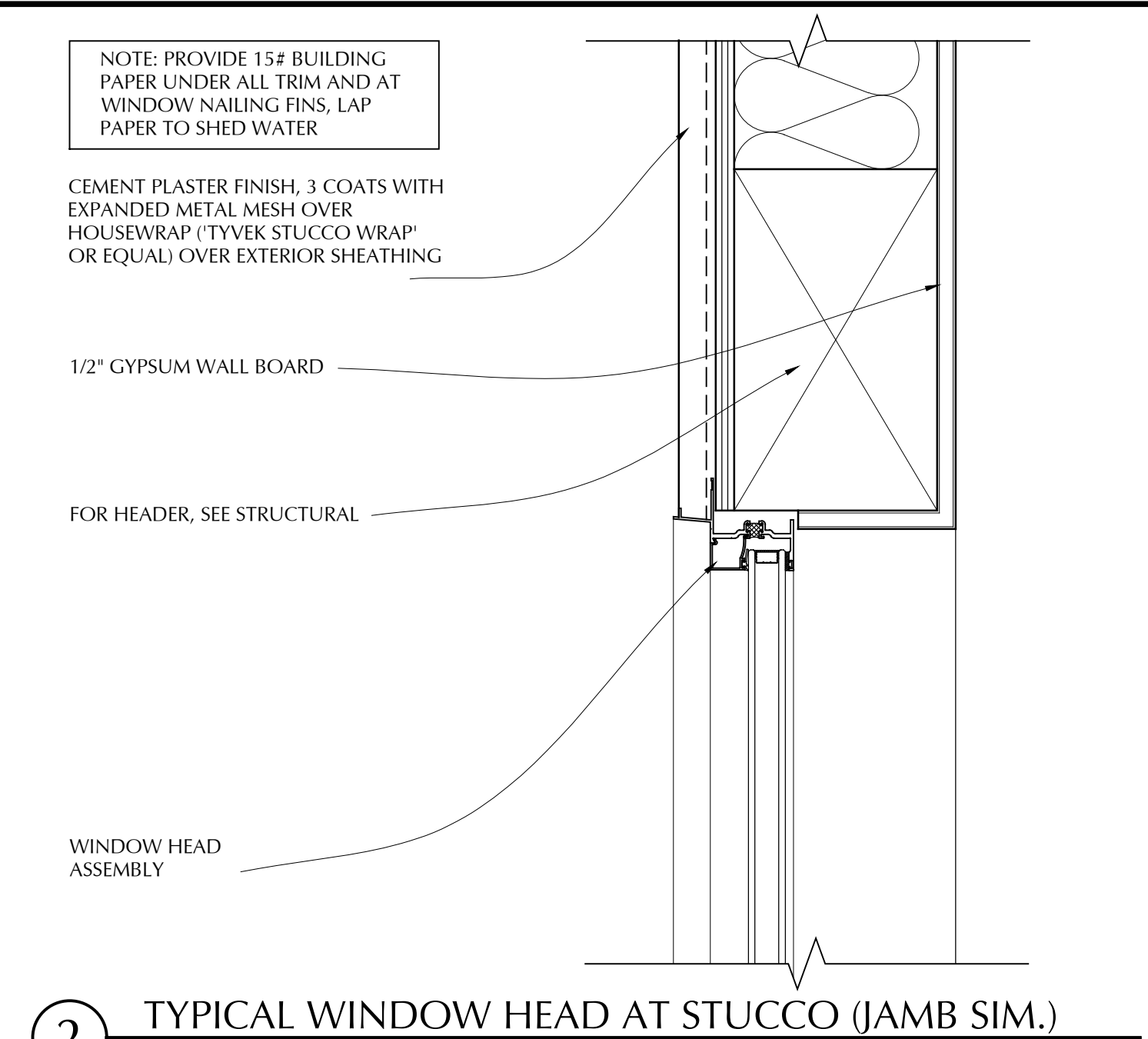
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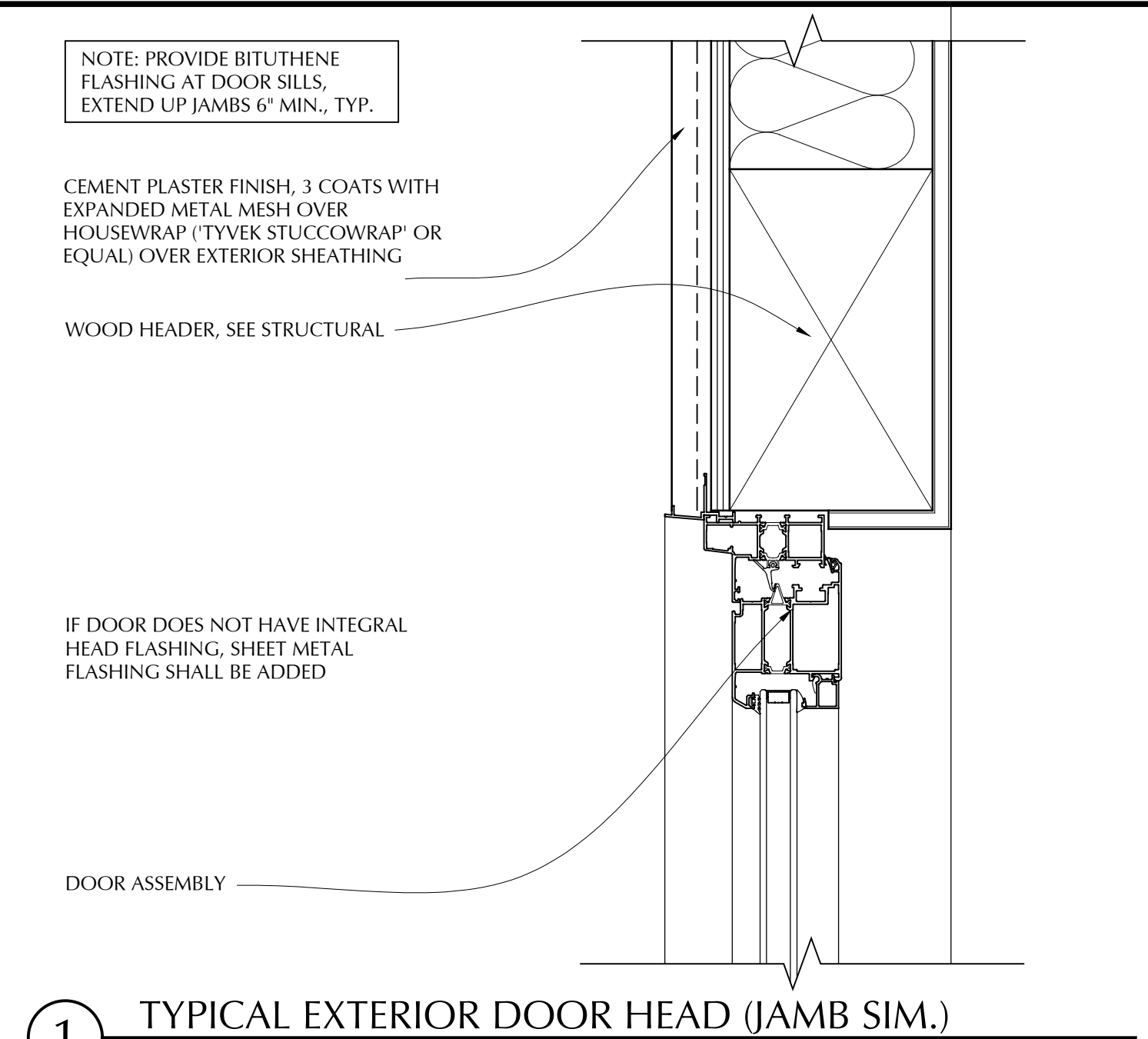
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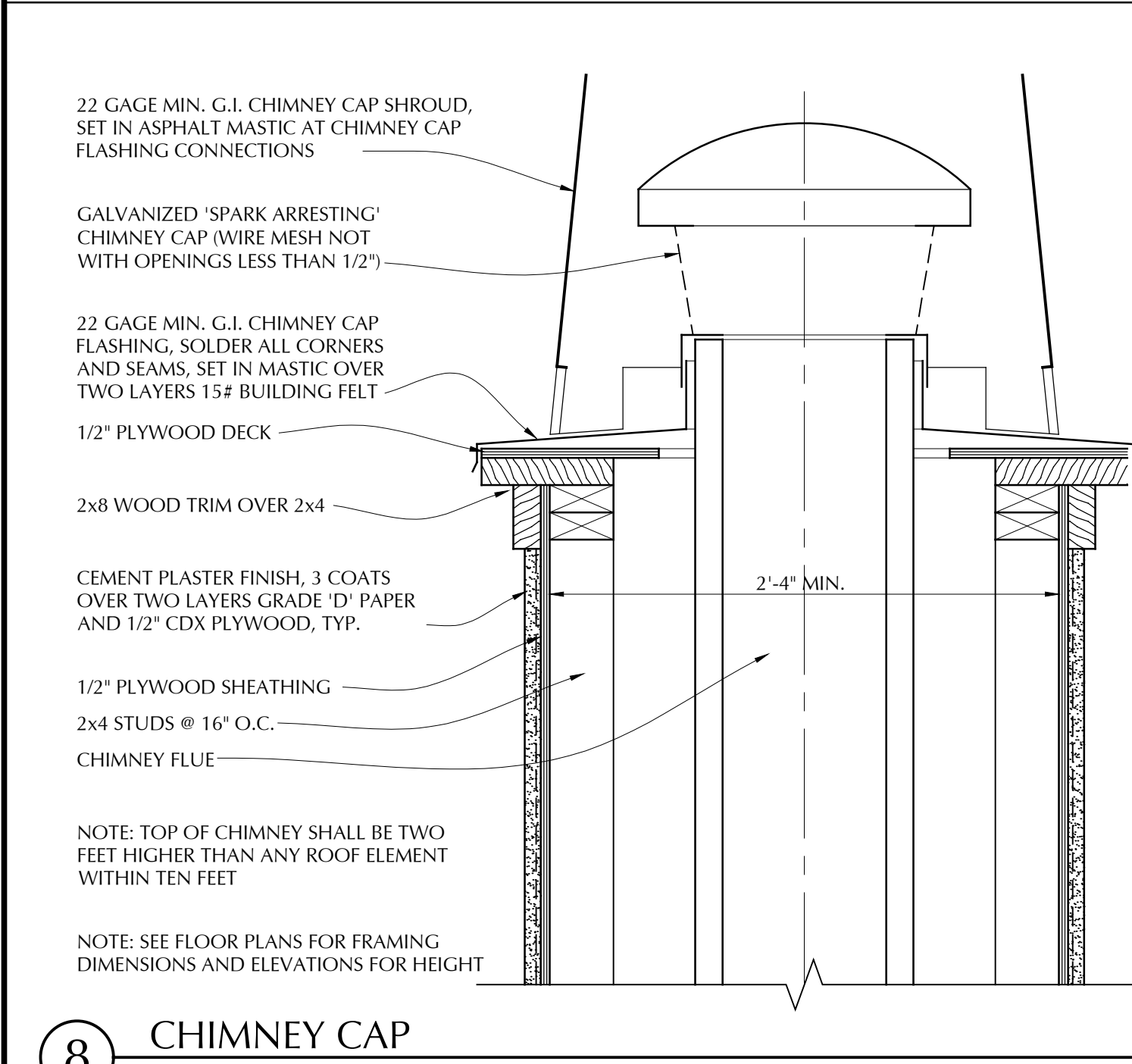
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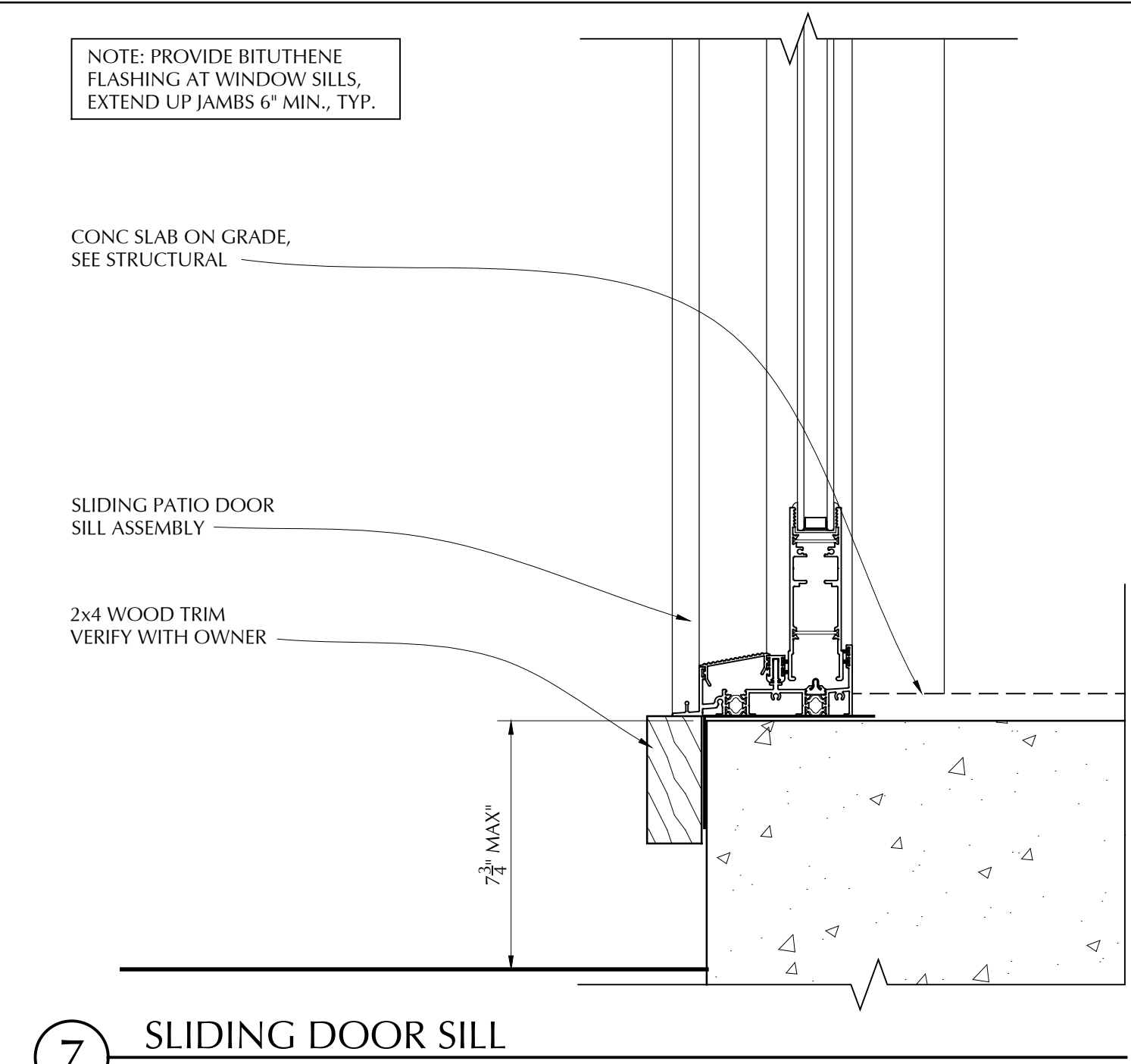
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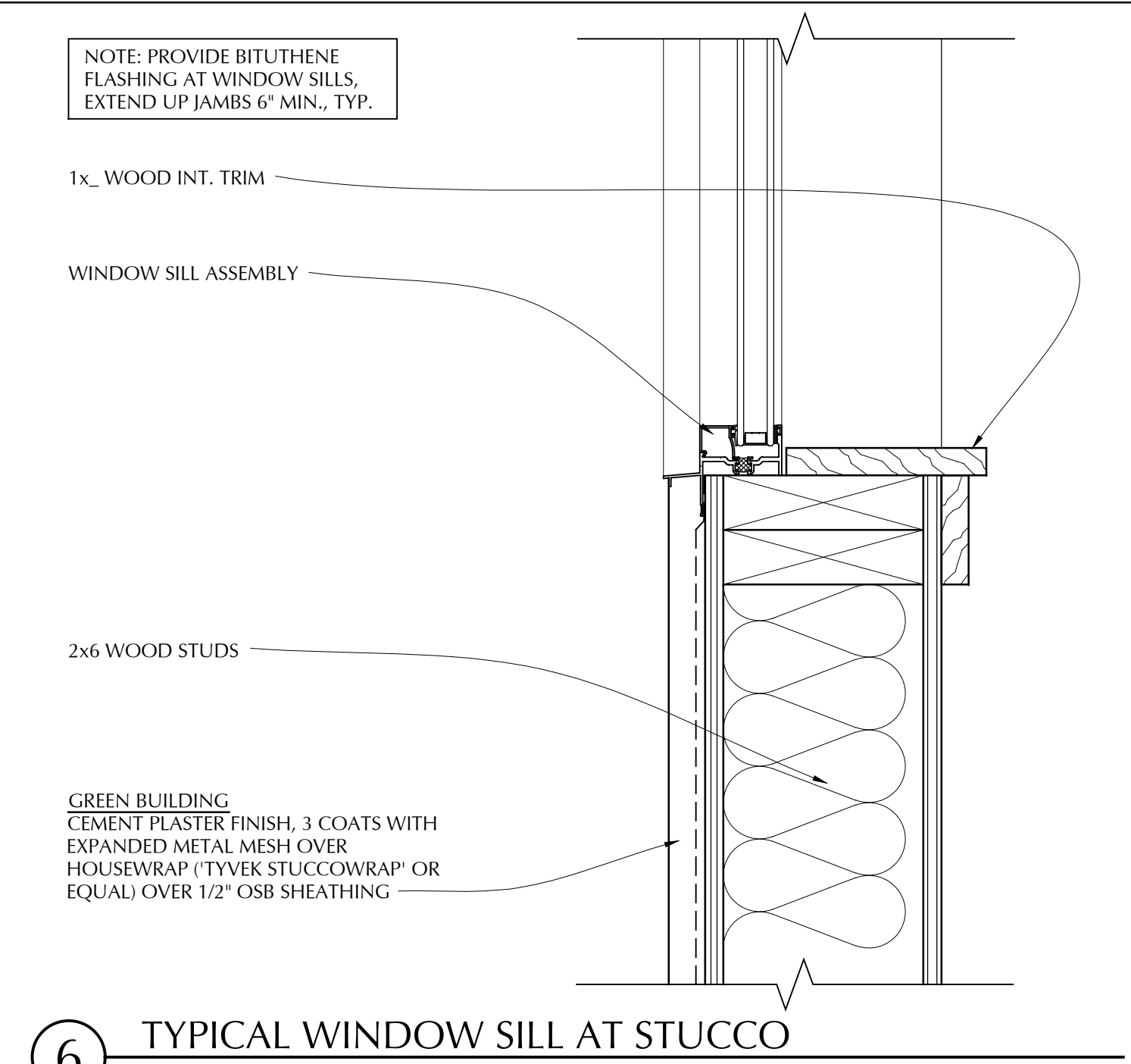
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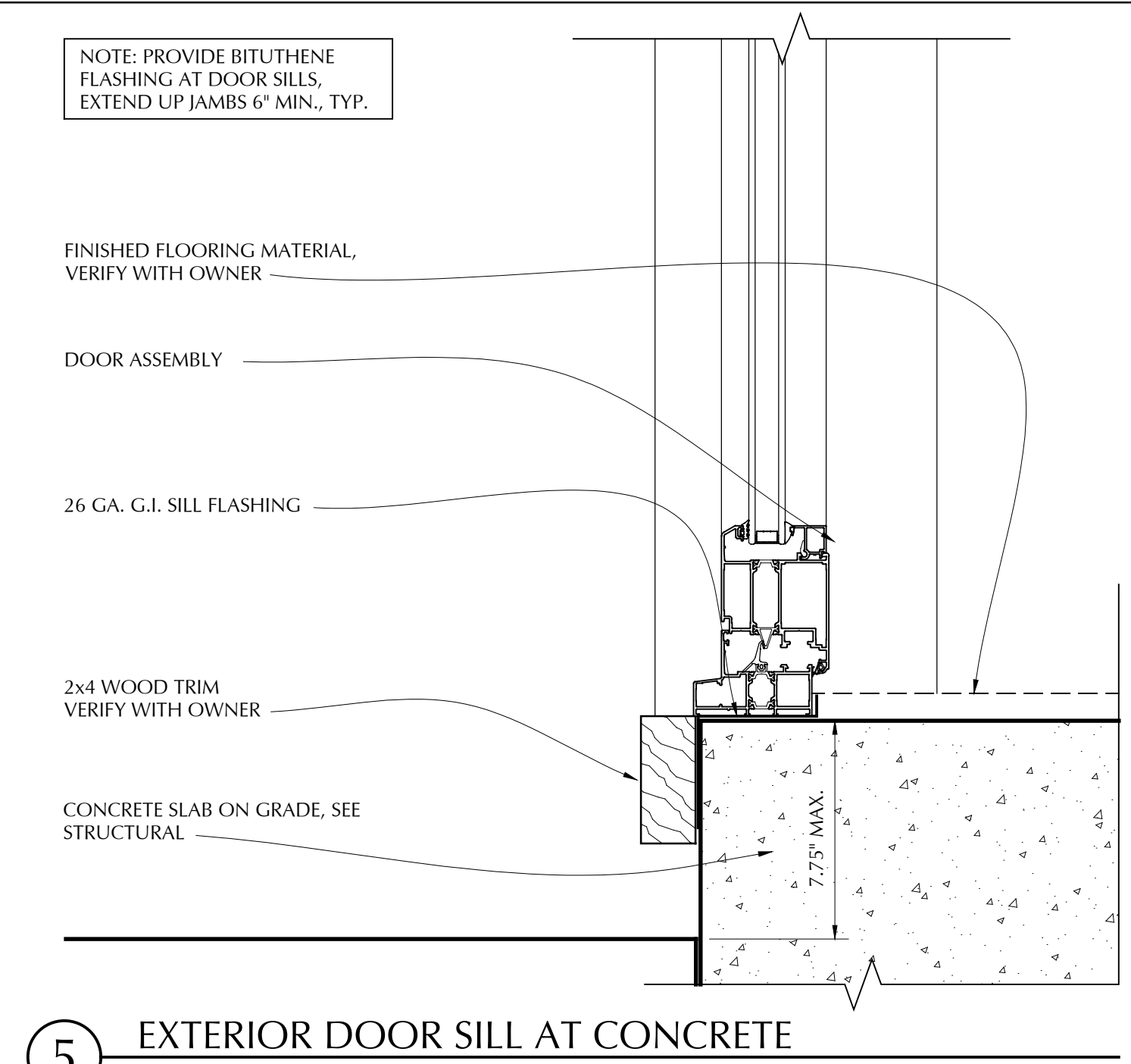
8 CHIMNEY CAP
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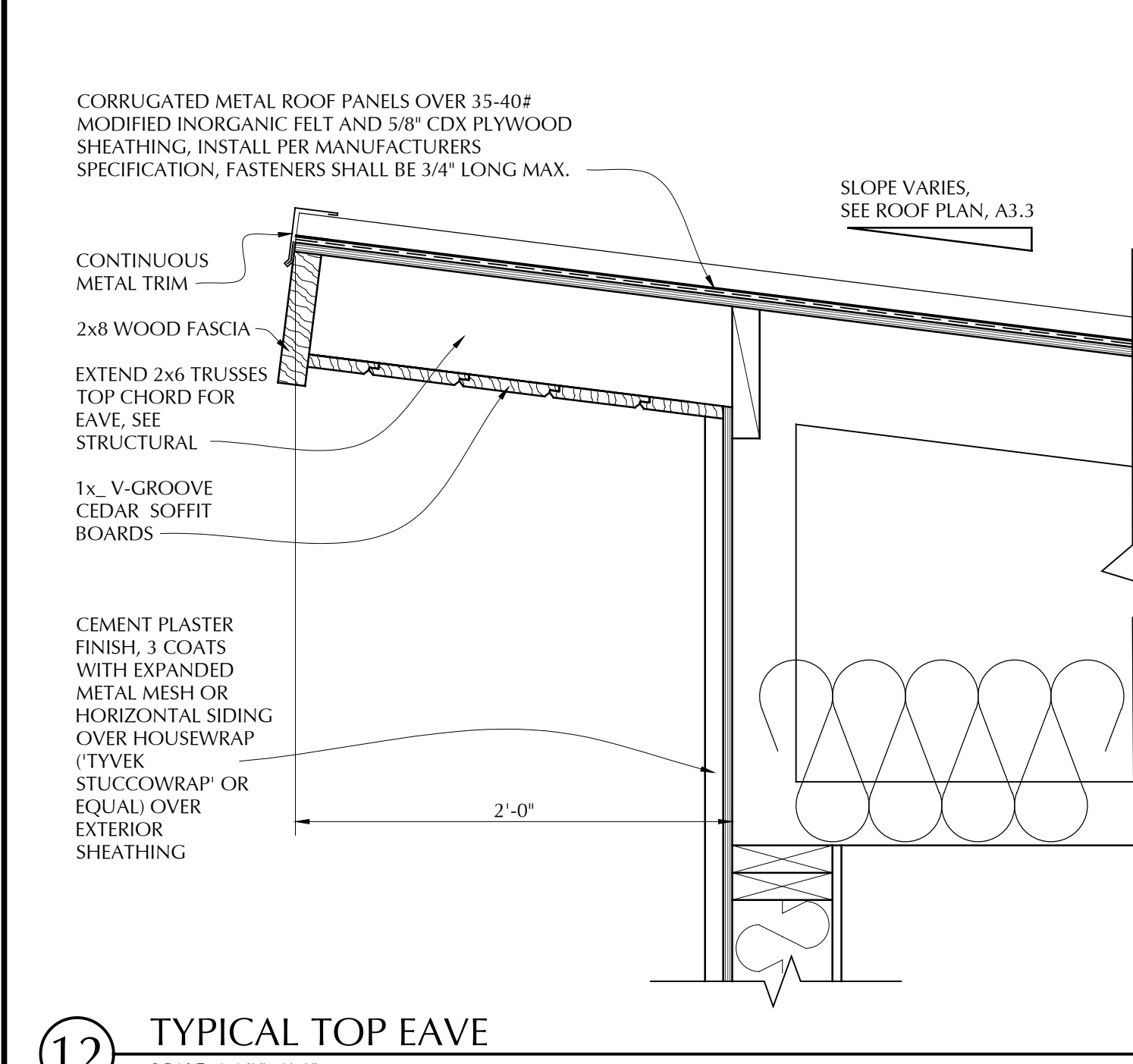
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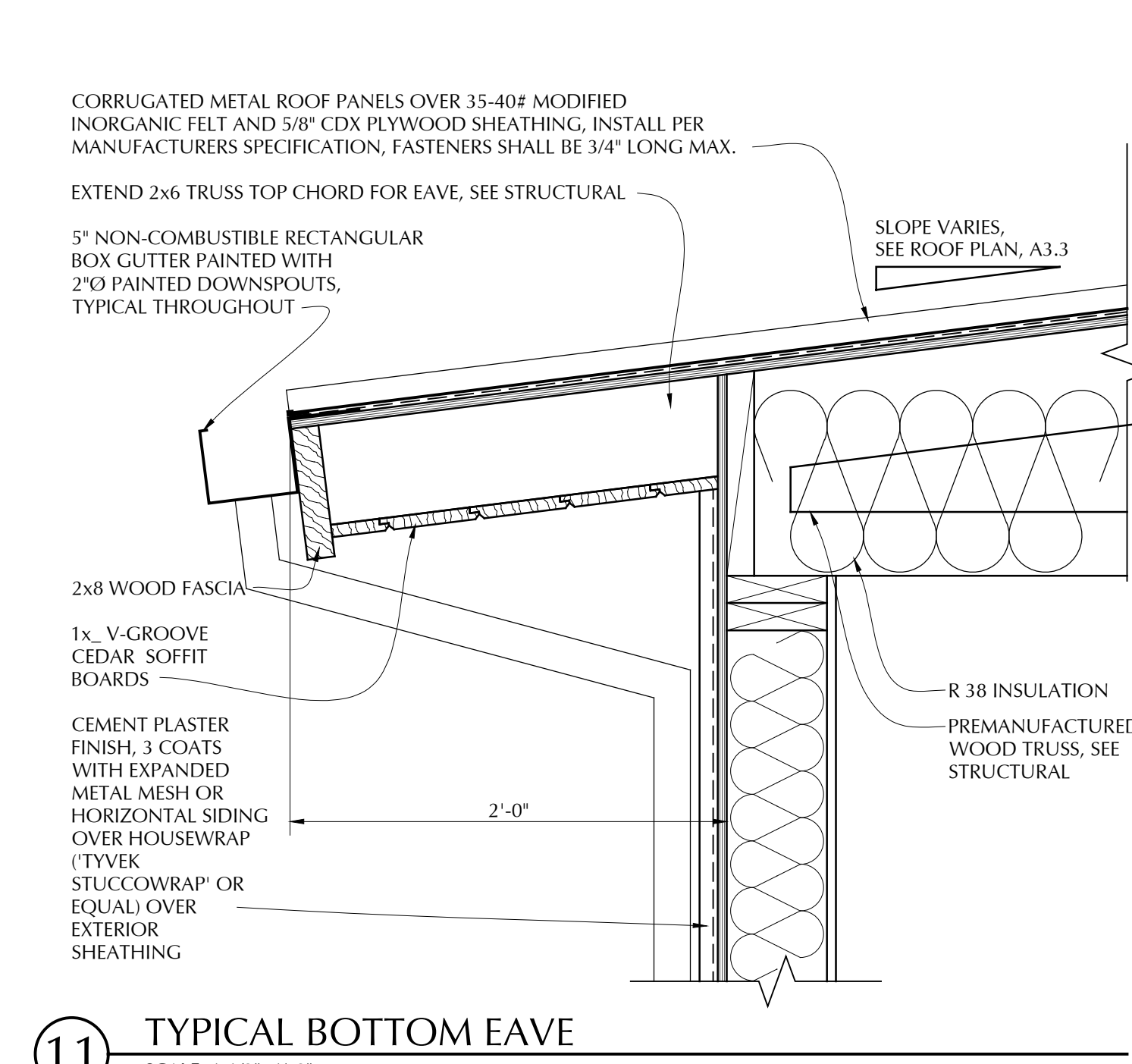
6 TYPICAL WINDOW SILL AT STUCCO
SCALE: 3"=1'-0" ADA & TITLE 24



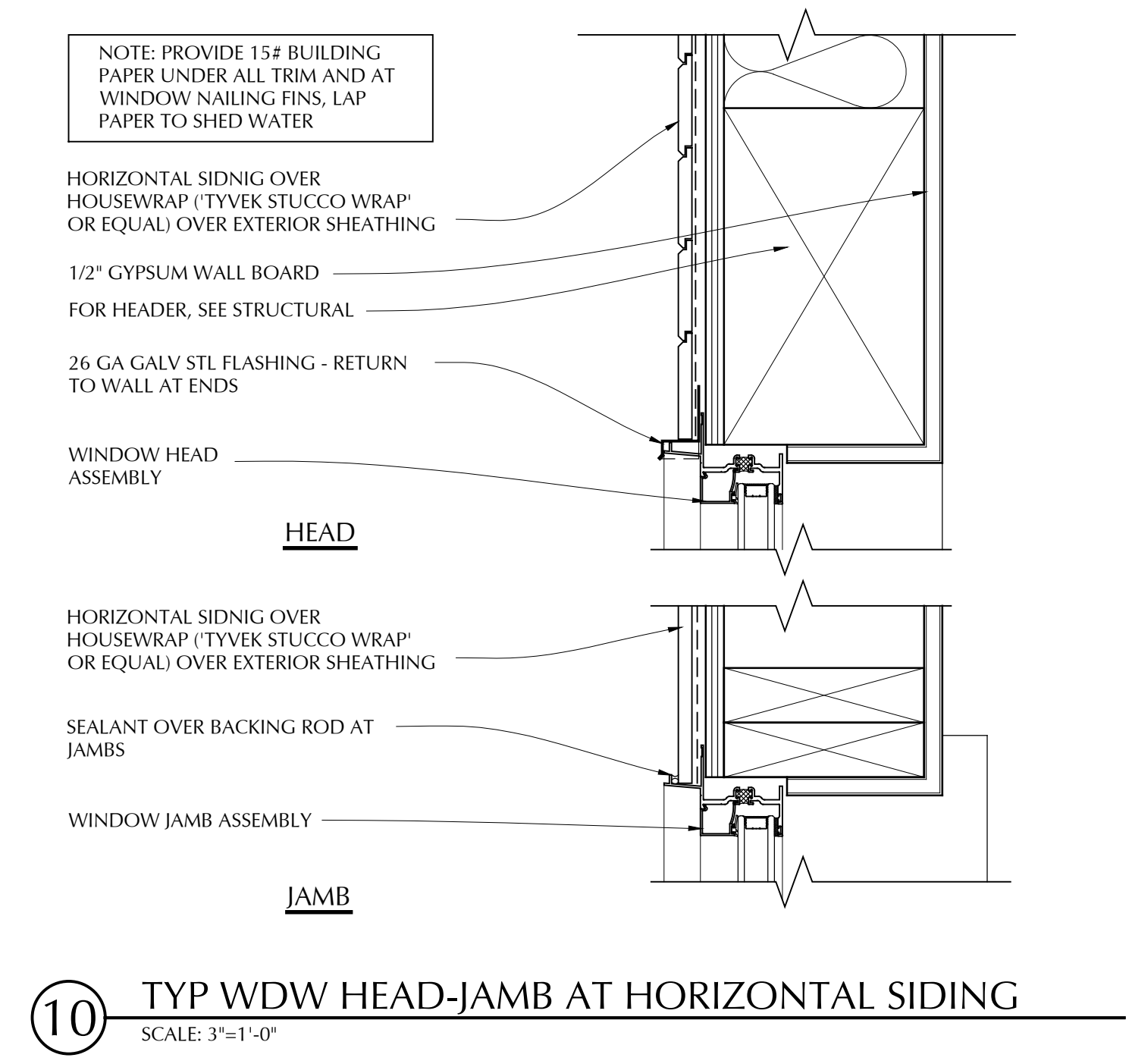
5 EXTERIOR DOOR SILL AT CONCRETE
SCALE: 3"=1'-0"



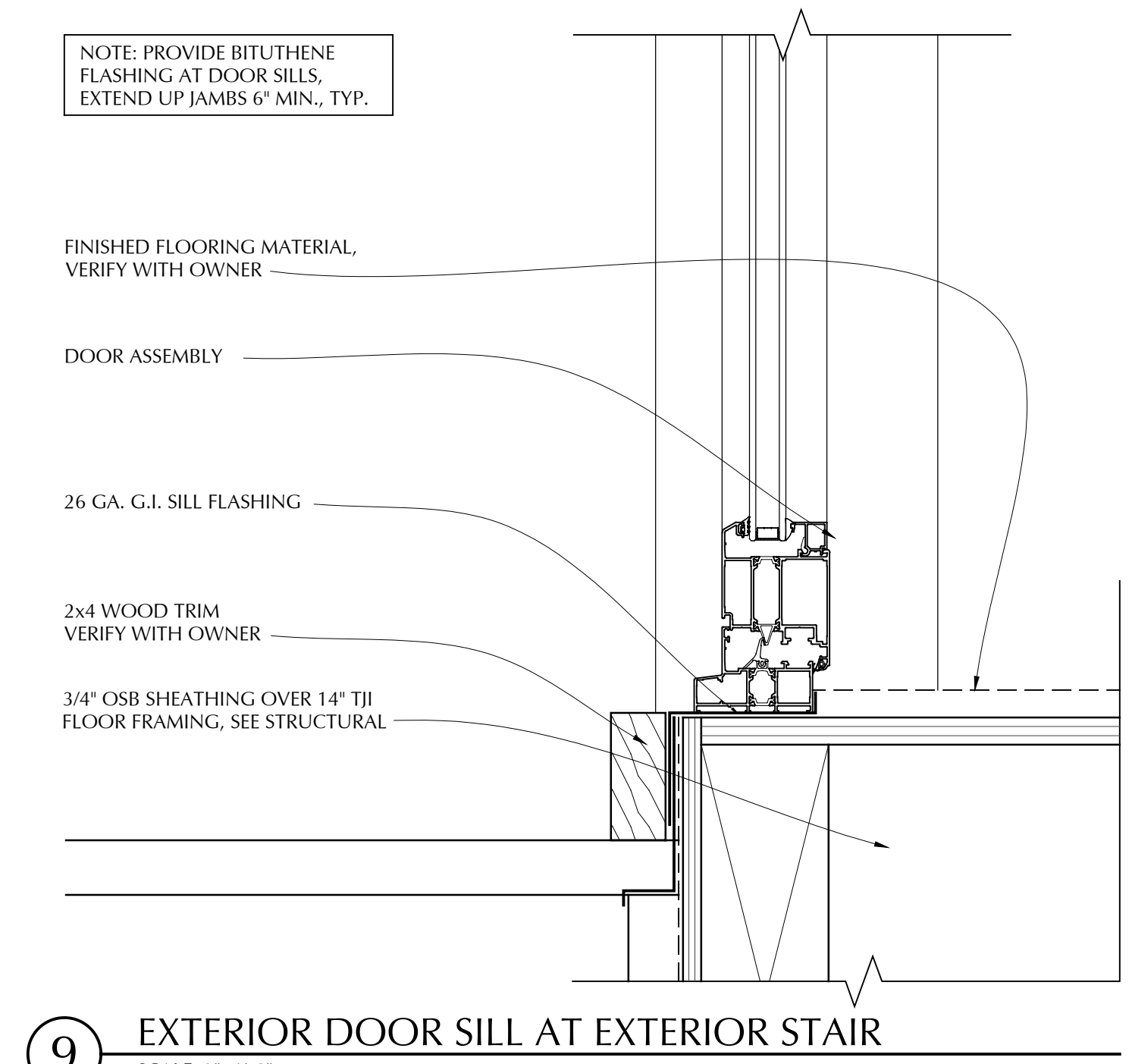
12 TYPICAL TOP EAVE
SCALE: 1 1/2"=1'-0"



11 TYPICAL BOTTOM EAVE
SCALE: 1 1/2"=1'-0"



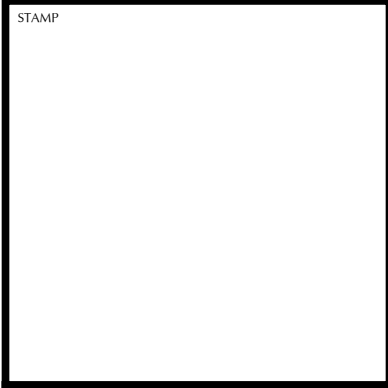
10 TYP WDW HEAD-JAMB AT HORIZONTAL SIDING
SCALE: 3"=1'-0"



9 EXTERIOR DOOR SILL AT EXTERIOR STAIR
SCALE: 3"=1'-0"

DRAWING DATE:	AUGUST 13, 2019
A.P.N.	
CLIENT NAME:	TODD CREAMER
PROJECT NAME:	POLO HEIGHTS

REVISIONS		
No.	DESCRIPTION	DATE



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