

INFORMATION CALENDAR December 3, 2019

To: Honorable Mayor and Members of the City Council

From: Dee Williams-Ridley, City Manager

Submitted by: Timothy Burroughs, Director, Planning and Development Department

Subject: LPO NOD: 2234 Haste Street/#LMSAP2016-0002

INTRODUCTION

The attached Landmarks Preservation Commission Notice of Decision (NOD) is presented to the Mayor and City Council pursuant to Berkeley Municipal Code/Landmarks Preservation Ordinance (BMC/LPO) Section 3.24.240.A, which requires that "a copy of the Notice of Decision shall be filed with the City Clerk, and the City Clerk shall present said copy to the City Council at its next regular meeting."

CURRENT SITUATION AND ITS EFFECTS

The Landmark Preservation Commission (LPC/Commission) has approved a Structural Alteration Permit (SAP) for the subject City Landmark property. This action is subject to a 15-day appeal period, which began on November 18, 2019.

BACKGROUND

BMC/LPO Section 3.24.300 allows City Council to review any action of the Landmarks Preservation Commission in granting or denying a Structural Alteration Permit. In order for Council to review the decision on its merits, Council must appeal the Notice of Decision. To do so, a Council member must move this Information Item to Action and then move to set the matter for hearing on its own. Such action must be taken within 15 days of the mailing of the Notice of Decision, or by December 3, 2019. Such certification to Council shall stay all proceedings in the same manner as the filing of an appeal.

If the Council chooses to appeal the action of the Commission, then a public hearing will be set. The Council must rule on the application within 30 days of closing the hearing, otherwise the decision of the Commission is automatically deemed affirmed.

Unless the Council wishes to review the determination of the Commission and make its own decision, the attached NOD is deemed received and filed.

INFORMATION CALENDAR December 3, 2019

LPO NOD: 2234 Haste Street/#LMSAP2016-0002

ENVIRONMENTAL SUSTAINABILITY

Landmark designation provides opportunities for the adaptive re-use and rehabilitation of historic resources within the City. The rehabilitation of these resources, rather than their removal, achieves construction and demolition waste diversion, and promotes investment in existing urban centers.

POSSIBLE FUTURE ACTION

The Council may choose to appeal the decision, in which case it would conduct a public hearing at a future date.

FISCAL IMPACTS OF POSSIBLE FUTURE ACTION

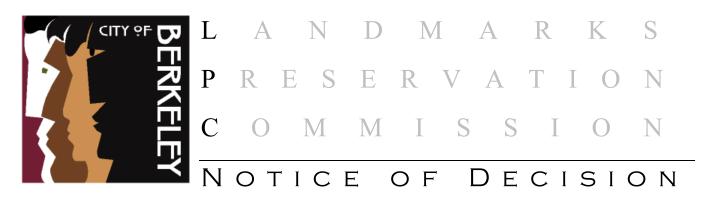
There are no known fiscal impacts associated with this action.

CONTACT PERSON

Fatema Crane, Landmarks Preservation Commission Secretary, Planning and Development, 510-981-7410

Attachments:

1: Notice of Decision – #LMSAP2016-0002 for 2234 Haste Street



DATE OF BOARD DECISION: October 3, 2019
DATE NOTICE MAILED: November 18, 2019
APPEAL PERIOD EXPIRATION: December 3, 2019
EFFECTIVE DATE OF PERMIT (Barring Appeal or Certification): December 4, 2019¹

2234 Haste Street Brower Houses & David Brower Redwood

Structural Alteration Permit #LMSAP2016-0002 to replace the building foundation, to introduce new windows and light wells at the basement level, and to modify an existing, projecting deck on an upper story of a multi-unit residential City Landmark building.

The Landmarks Preservation Commission of the City of Berkeley, **APPROVED** the Structural Alteration Permit for this project.

APPLICANT: William Coburn, 1224 Center Street, Oakland, CA 94607

ZONING DISTRICT: C-DMU Core, Downtown Mixed-Use Core

ENVIRONMENTAL REVIEW STATUS: Categorically exempt from environmental review pursuant to Section 15331 of the CEQA Guidelines for Historical Resource Rehabilitation.

The Application materials for this project are available online at: http://www.cityofberkeley.info/zoningapplications

_

¹ Pursuant to BMC Section 1.04.070, if the close of the appeal period falls on a weekend or holiday, then the appeal period expires the following business day. Pursuant to BMC Section 3.24.190, the City Council may "certify" any decision of the LPC for review, within fifteen days from the mailing of the NOD. Such certification shall stay all proceedings in the same manner as the filing of a notice of appeal.

LANDMARKS PRESERVATION COMMISSION NOTICE OF DECISION LMSAP2016-0002 2234 Haste Street November 18, 2019 Page 2 of 4

FINDINGS, CONDITIONS AND APPROVED PLANS ARE ATTACHED TO THIS NOTICE

COMMISSION VOTE: 5-2-0-2

YES: ADAMS, ALLEN, NARAHARI, OLSON, SCHWARTZ

NO: ABRANCHES DA SILVA, MONTGOMERY

ABSTAIN: NONE

ABSENT: ENCHILL (recused), FINACOM

TO APPEAL THIS DECISION (see Section 3.24.300 of the Berkeley Municipal Code):

To appeal a decision of the Landmarks Preservation Commission to the City Council you must:

- 1. Submit a letter clearly and concisely setting forth the grounds for the appeal to the City Clerk, located at 2180 Milvia Street, 1st Floor, Berkeley. The City Clerk's telephone number is (510) 981-6900.
 - a. Pursuant to BMC Section 3.24.300.A, an appeal may be taken to the City Council by the application of the owners of the property or their authorized agents, or by the application of at least fifty residents of the City aggrieved or affected by any determination of the commission made under the provisions of Chapter 3.24.
- 2. Submit the required fee (checks and money orders must be payable to 'City of Berkeley'):
 - a. The basic fee for persons other than the applicant is \$500. This fee may be reduced to \$100 if the appeal is signed by persons who lease or own at least 50 percent of the parcels or dwelling units within 300 feet of the project site, or at least 25 such persons (not including dependent children), whichever is less. Signatures collected per the filing requirement in BMC Section 3.24.300.A may be counted towards qualifying for the reduced fee, so long as the signers are qualified. The individual filing the appeal must clearly denote which signatures are to be counted towards qualifying for the reduced fee.
 - b. The fee for appeals of affordable housing projects (defined as projects which provide 50 percent or more affordable units for households earning 80% or less of Area Median Income) is \$500, which may not be reduced.
 - c. The fee for all appeals by Applicants is \$2500.
- 3. The appeal must be received prior to 5:00 p.m. on the "APPEAL PERIOD EXPIRATION" date shown above (if the close of the appeal period falls on a weekend or holiday, then the appeal period expires the following business day).

If no appeal is received, the landmark designation will be final on the first business day following expiration of the appeal period.

LANDMARKS PRESERVATION COMMISSION NOTICE OF DECISION LMSAP2016-0002 2234 Haste Street November 18, 2019 Page 3 of 4

STRUCTURAL ALTERATION PERMIT ISSUANCE:

If no appeal is received, the Structural Alteration permit will be issued on the first business day following expiration of the appeal period, and the project may proceed at that time. Information about the Building Permit process can be found at the following link: http://www.ci.berkeley.ca.us/permitservicecenter/.

NOTICE CONCERNING YOUR LEGAL RIGHTS:

If you object to this decision, the following requirements and restrictions apply:

- If you challenge this decision in court, you may be limited to raising only those issues you
 or someone else raised at the public hearing described in this notice, or in written
 correspondence delivered to the Landmarks Preservation Commission at, or prior to, the
 public hearing.
- You must appeal to the City Council within fifteen (15) days after the Notice of Decision of the action of the Landmarks Preservation Commission is mailed. It is your obligation to notify the Land Use Planning Division in writing of your desire to receive a Notice of Decision when it is completed.
- 3. Pursuant to Code of Civil Procedure Section 1094.6(b) and Government Code Section 65009(c)(1), no lawsuit challenging a City Council decision, as defined by Code of Civil Procedure Section 1094.6(e), regarding a use permit, variance or other permit may be filed more than ninety (90) days after the date the decision becomes final, as defined in Code of Civil Procedure Section 1094.6(b). Any lawsuit not filed within that ninety (90) day period will be barred.
- 4. Pursuant to Government Code Section 66020(d)(1), notice is hereby given to the applicant that the 90-day protest period for any fees, dedications, reservations, or other exactions included in any permit approval begins upon final action by the City, and that any challenge must be filed within this 90-day period.
- 5. If you believe that this decision or any condition attached to it denies you any reasonable economic use of the subject property, was not sufficiently related to a legitimate public purpose, was not sufficiently proportional to any impact of the project, or for any other reason constitutes a "taking" of property for public use without just compensation under the California or United States Constitutions, your appeal of this decision must including the following information:
 - A. That this belief is a basis of your appeal.
 - B. Why you believe that the decision or condition constitutes a "taking" of property as set forth above.
 - C. All evidence and argument in support of your belief that the decision or condition constitutes a "taking" as set forth above.

Page 6 of 50

LANDMARKS PRESERVATION COMMISSION NOTICE OF DECISION LMSAP2016-0002 2234 Haste Street November 18, 2019 Page 4 of 4

If you do not do so, you will waive any legal right to claim that your property has been taken, both before the City Council and in court.

PUBLIC COMMENT:

Communications to Berkeley boards, commissions or committees are public record and will become part of the City's electronic records, which are accessible through the City's website. Please note: e-mail addresses, names, addresses, and other contact information are not required, but if included in any communication to a City board, commission or committee, will become part of the public record. If you do not want your e-mail address or any other contact information to be made public, you may deliver communications via U.S. Postal Service or in person to the secretary of the relevant board, commission or committee. If you do not want your contact information included in the public record, please do not include that information in your communication. Please contact the secretary to the relevant board, commission or committee for further information.

FURTHER INFORMATION:

Questions about the project should be directed to the project planner, Fatema Crane, at (510) 981-7410 or fcrane@cityofberkeley.info. All project application materials, including full-size plans, may be viewed at the Permit Service Center (Zoning counter), 1947 Center Street, between 8 a.m. and 4 p.m., Monday through Friday.

ATTACHMENTS:

1. Approved Findings and Conditions

2. Project Plans, received AUGUST 27, 2019

Fatema Crane, Secretary Landmarks Preservation Commission

ATTEST:

cc: City Clerk

Applicant: William Coburn

1224 Center Street Oakland, CA 94607

Owner: Everest Properties

2228 Shattuck Avenue Berkeley, CA 94704

FINDINGS AND CONDITIONS

2234 Haste Street - Brower Houses and David Brower Redwood Tree

Structural Alteration Permit #LMSAP2016-0002

To replace the building foundation, to introduce new windows and light wells at the basement level, and to modify an existing, projecting deck on an upper story of a multi-unit residential City Landmark building.

CEQA FINDINGS

1. The project is categorically exempt from the provisions of the California Environmental Quality Act (CEQA, Public Resources Code §21000, et seq. and California Code of Regulations, §15000, et seq.) pursuant to Section 15331 of the CEQA Guidelines ("Historic Resource Restoration/Rehabilitation"). Furthermore, none of the exceptions in CEQA Guidelines Section 15300.2 apply, as follows: (a) the site is not located in an environmentally sensitive area, (b) there are no cumulative impacts, (c) there are no significant effects, (d) the project is not located near a scenic highway, (e) the project site is not located on a hazardous waste site pursuant to Government Code Section 65962.5, and (f) the project will not affect any historical resource.

SECRETARY OF THE INTERIOR'S STANDARDS FINDINGS

Regarding the Secretary of the Interior's Standards for Rehabilitation, the Landmarks Preservation Commission of the City of Berkeley makes the following findings:

- 1. The subject property will continue its residential use with this proposed rehabilitation project.
- The project does not include removal or alteration of distinctive materials, characterdefining features or those "to-be-preserved," as identified in the 2008 City Landmarks designation for this site.
- 3. The proposed rehabilitation project for the rear building at this City Landmark site would render it -- as well as the front building -- primarily intact and able to convey their unique identities as physical records of time. No introduction of conjectural features has been proposed.
- 4. No changes to this property that have acquired historic significance in their own right are the subject of this proposal.
- 5. Distinctive features, such as the building's wood shingles, will be preserved with this proposal. Shingles which have deteriorated will be replaced in kind. No other

- distinctive materials, finished or construction techniques, or examples of craftsmanship, would be removed or affected by this project.
- 6. Deteriorated historic features will be repaired rather than replaced, as conditioned herein. Where the severity of deterioration requires replacement of a distinctive feature, the new feature will match the old in design, color, texture, and, where possible, materials.
- 7. Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials are prohibited, as conditioned herein.
- 8. Archeological resources are not known to exist at this site. However, as conditioned herein, procedures and measures for protection will be untaken if resources are unexpectedly discovered.
- 9. None of the aspects of this proposal are expected to result in the destruction of historic materials, features and spatial relationships that characterize this City Landmark property. New work, such as basement-level windows and guardrails, will be compatible with and yet differentiated in style from the Victorian-era construction.
- 10. The proposed new construction will be undertaken in such a manner that, if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

LANDMARK PRESERVATION ORDINANCE FINDINGS

- 1. As required by Section 3.24.260 of the Landmarks Preservation Ordinance, the Commission finds that proposed work is appropriate for and consistent with the purposes of the Ordinance, and will preserve and enhance the characteristics and features specified in the designation for this property. Specifically:
 - The proposed project includes a limited scope of work that will result in exterior changes, and none of these changes are expected to permanently or significantly impair the integrity, or alter the character-defining features, of this Victorian-era building.

STANDARD CONDITIONS

The following conditions, as well as all other applicable provisions of the Landmarks Preservation Ordinance, apply to this Permit:

1. Conditions Shall be Printed on Plans

The conditions of this Permit shall be printed on the *second* sheet of each plan set submitted for a building permit pursuant to this Permit, under the title 'Structural Alteration Permit Conditions'. *Additional sheets* may also be used if the *second* sheet is not of sufficient size to list all of the conditions. The sheet(s) containing the conditions shall be of the same size as those sheets containing the construction drawings; 8-1/2" by 11" sheets are not acceptable.

2. Plans and Representations Become Conditions

Except as specified herein, the site plan, floor plans, building elevations and/or any additional information or representations, whether oral or written, indicating the proposed structure or manner of operation submitted with an application or during the approval process are deemed conditions of approval.

3. Subject to All Applicable Laws and Regulations

The approved use and/or construction is subject to, and shall comply with, all applicable City Ordinances and laws and regulations of other governmental agencies. Prior to construction, the applicant shall identify and secure all applicable permits from the Building and Safety Division, Public Works Department and other affected City divisions and departments.

4. Exercise and Lapse of Permits (Section 23B.56.100)

- B. A permit for the construction of a building or structure is deemed exercised when a valid City building permit, if required, is issued, and construction has lawfully commenced.
- A. A permit may be declared lapsed and of no further force and effect if it is not exercised within one year of its issuance, except that permits for construction or alteration of structures or buildings may not be declared lapsed if the permittee has: (1) applied for a building permit; or, (2) made substantial good faith efforts to obtain a building permit and begin construction, even if a building permit has not been issued and/or construction has not begun.

5. Indemnification Agreement

The applicant shall hold the City of Berkeley and its officers harmless in the event of any legal action related to the granting of this Permit, shall cooperate with the City in defense of such action, and shall indemnify the City for any award of damages or attorneys fees that may result.

ADDITIONAL CONDITIONS

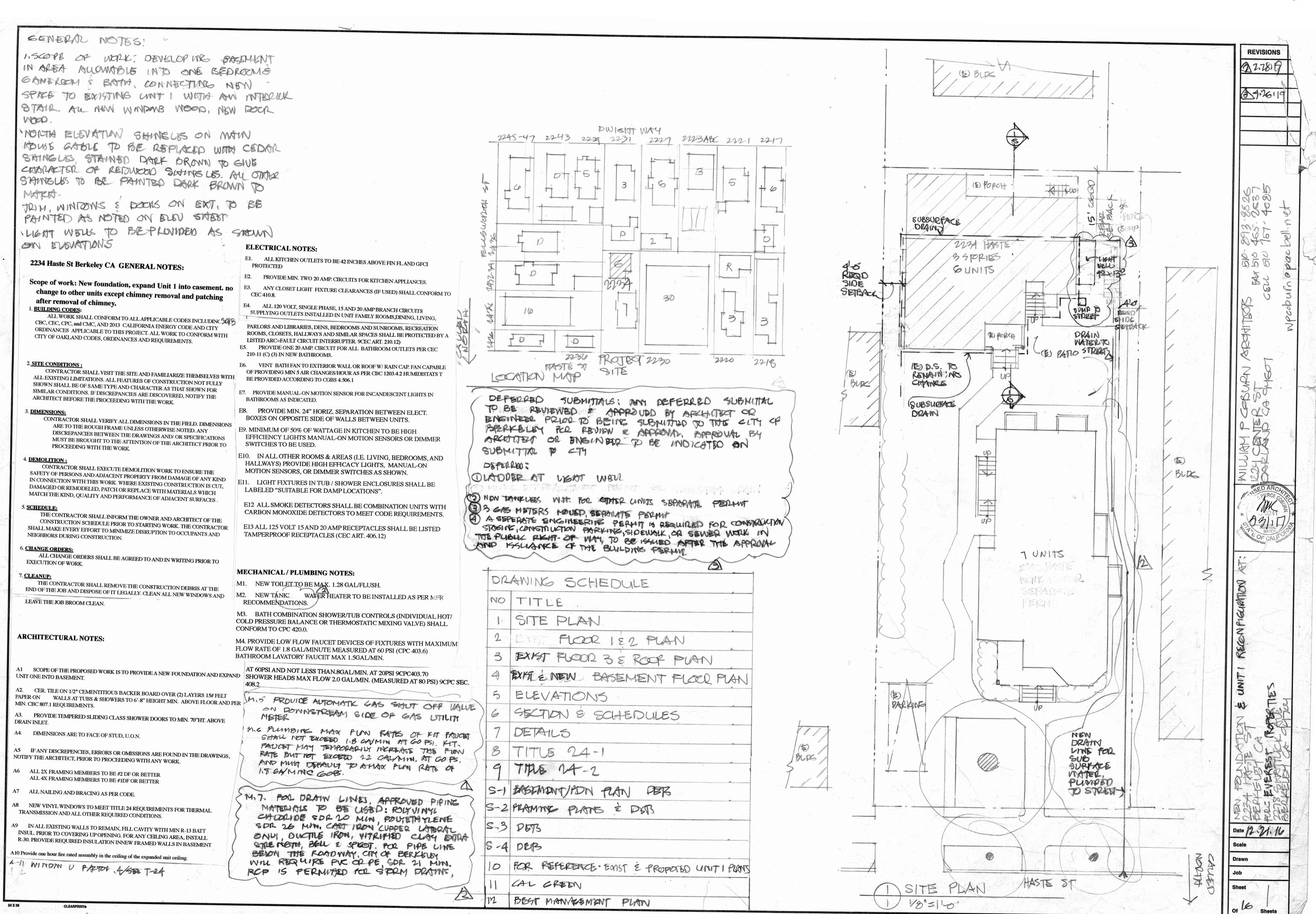
The following additional conditions are attached to this Permit:

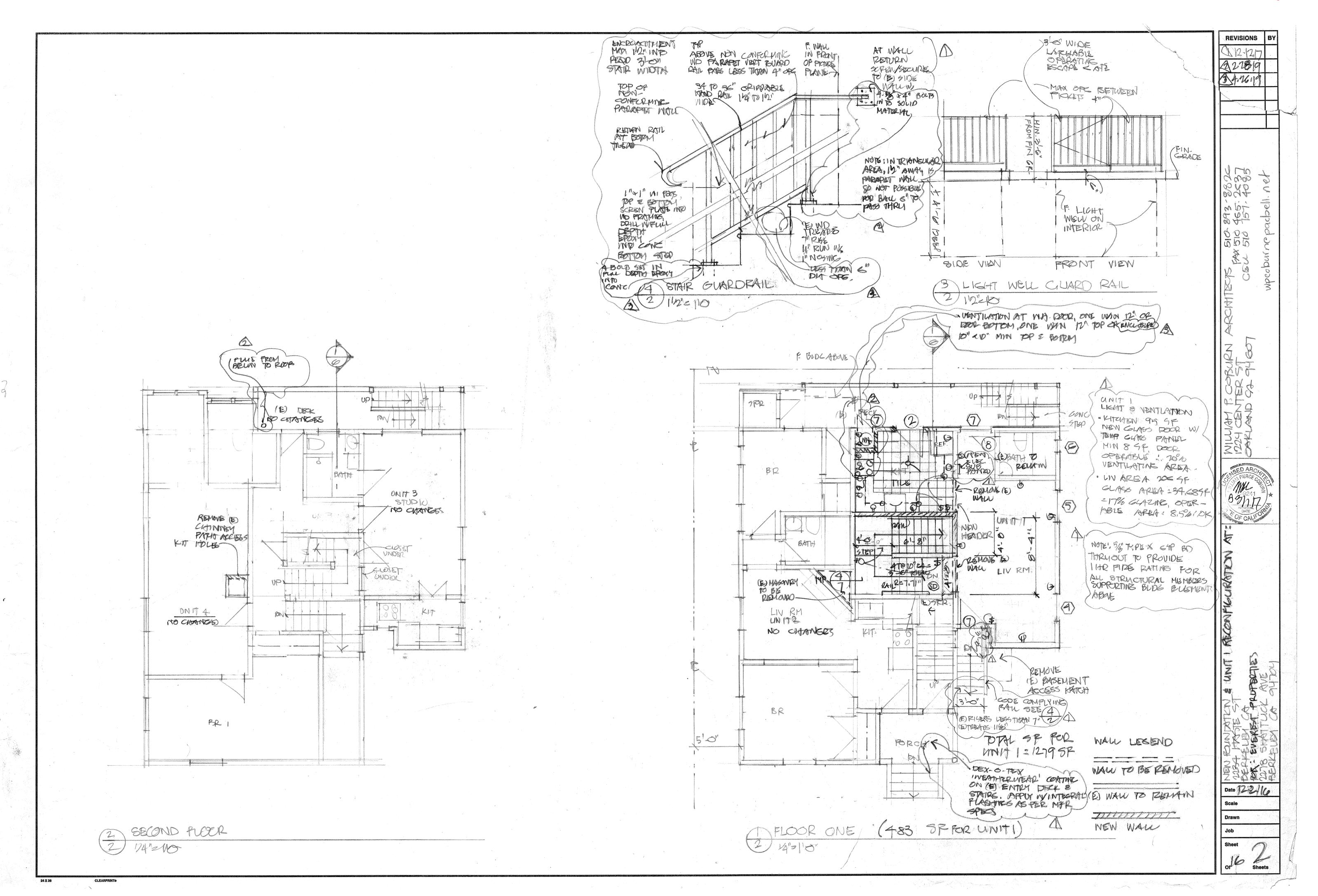
- 6. Halt Work/Unanticipated Discovery of Tribal Cultural Resources. In the event that cultural resources of Native American origin are identified during construction, all work within 50 feet of the discovery shall be redirected. The project applicant and project construction contractor shall notify the City Planning Department within 24 hours. The City will again contact any tribes who have requested consultation under AB 52, as well as contact a qualified archaeologist, to evaluate the resources and situation and provide recommendations. If it is determined that the resource is a tribal cultural resource and thus significant under CEQA, a mitigation plan shall be prepared and implemented in accordance with State guidelines and in consultation with Native American groups. If the resource cannot be avoided, additional measures to avoid or reduce impacts to the resource and to address tribal concerns may be required.
- **7. Archaeological Resources** (*Ongoing throughout demolition, grading, and/or construction*). Pursuant to CEQA Guidelines section 15064.5(f), "provisions for historical or unique archaeological resources accidentally discovered during construction" should be instituted. Therefore:
 - A. In the event that any prehistoric or historic subsurface cultural resources are discovered during ground disturbing activities, all work within 50 feet of the resources shall be halted and the project applicant and/or lead agency shall consult with a qualified archaeologist, historian or paleontologist to assess the significance of the find.
 - B. If any find is determined to be significant, representatives of the project proponent and/or lead agency and the qualified professional would meet to determine the appropriate avoidance measures or other appropriate measure, with the ultimate determination to be made by the City of Berkeley. All significant cultural materials recovered shall be subject to scientific analysis, professional museum curation, and/or a report prepared by the qualified professional according to current professional standards.
 - C. In considering any suggested measure proposed by the qualified professional, the project applicant shall determine whether avoidance is necessary or feasible in light of factors such as the uniqueness of the find, project design, costs, and other considerations.
 - D. If avoidance is unnecessary or infeasible, other appropriate measures (e.g., data recovery) shall be instituted. Work may proceed on other parts of the project site while mitigation measures for cultural resources is carried out.
 - E. If significant materials are recovered, the qualified professional shall prepare a report on the findings for submittal to the Northwest Information Center.
- 8. Human Remains (Ongoing throughout demolition, grading, and/or construction). In the event that human skeletal remains are uncovered at the project site during ground-disturbing activities, all work shall immediately halt and the Alameda County Coroner shall be contacted to evaluate the remains, and following the procedures and protocols pursuant to Section 15064.5 (e)(1) of the CEQA Guidelines. If the County Coroner determines that the remains are Native American, the City shall contact the California Native American Heritage Commission (NAHC), pursuant to subdivision (c) of Section 7050.5 of the Health and Safety Code, and all excavation and site preparation activities

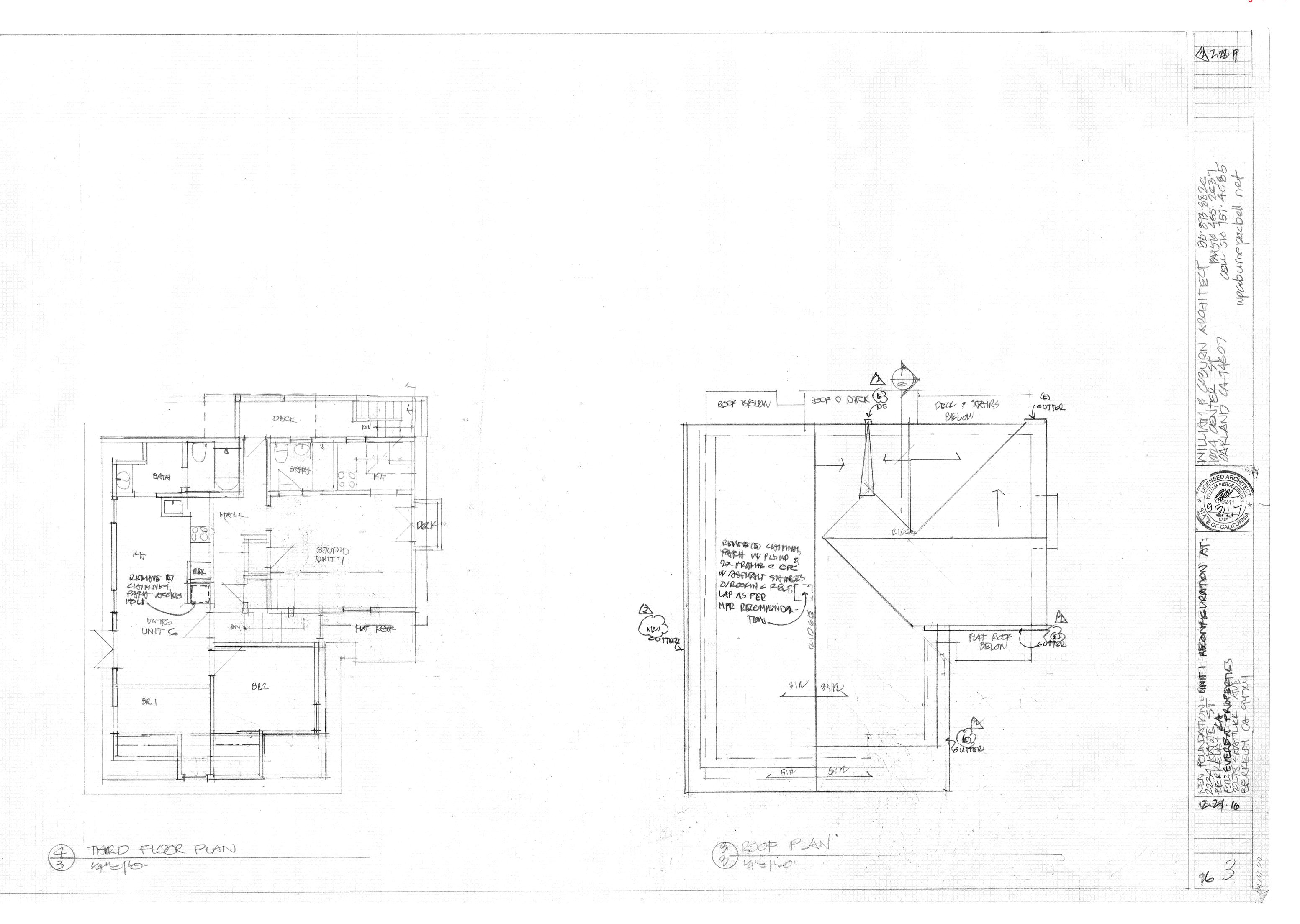
shall cease within a 50-foot radius of the find until appropriate arrangements are made. If the agencies determine that avoidance is not feasible, then an alternative plan shall be prepared with specific steps and timeframe required to resume construction activities. Monitoring, data recovery, determination of significance and avoidance measures (if applicable) shall be completed expeditiously.

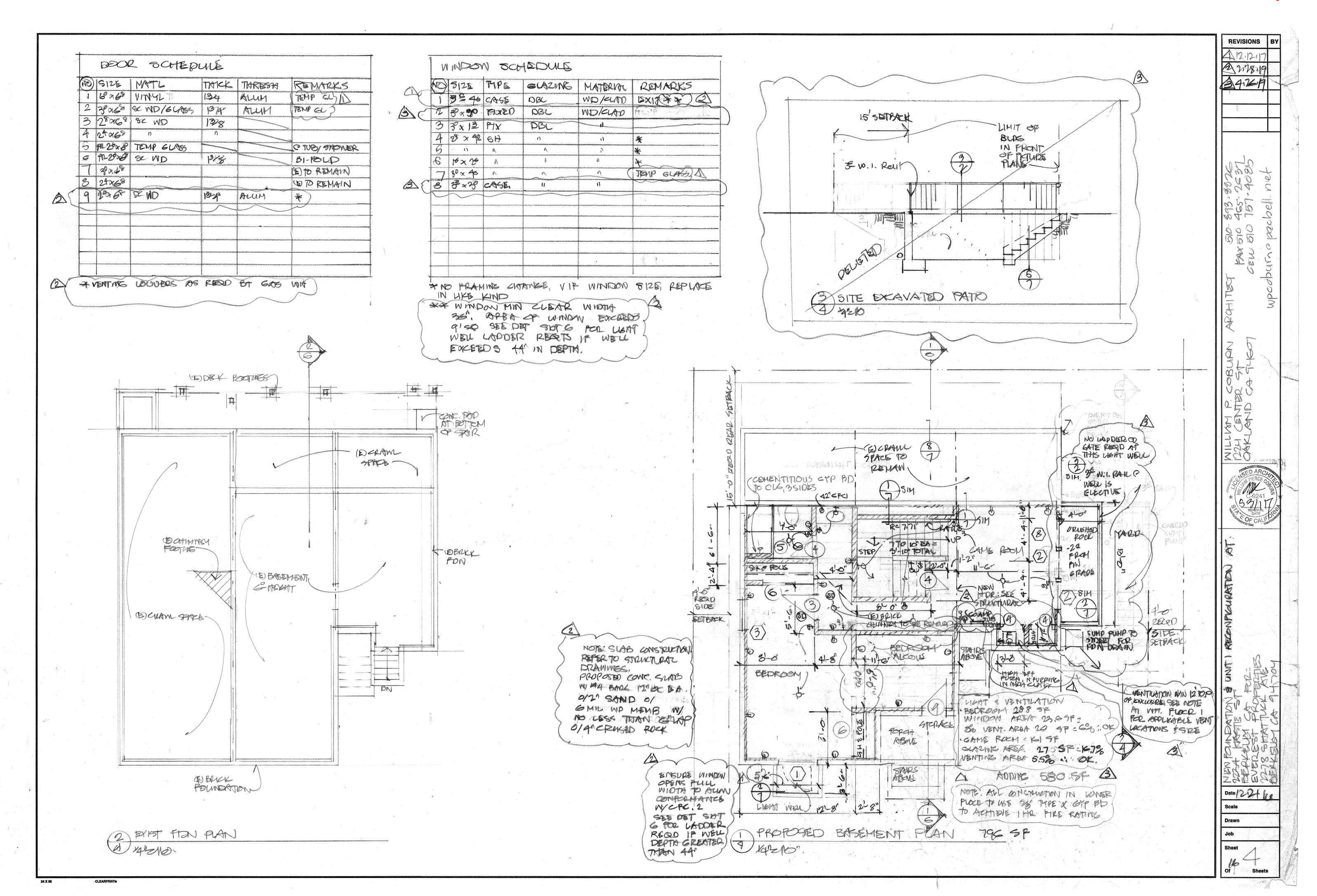
- 9. Paleontological Resources (Ongoing throughout demolition, grading, and/or construction). In the event of an unanticipated discovery of a paleontological resource during construction, excavations within 50 feet of the find shall be temporarily halted or diverted until the discovery is examined by a qualified paleontologist (per Society of Vertebrate Paleontology standards [SVP 1995,1996]). The qualified paleontologist shall document the discovery as needed, evaluate the potential resource, and assess the significance of the find. The paleontologist shall notify the appropriate agencies to determine procedures that would be followed before construction is allowed to resume at the location of the find. If the City determines that avoidance is not feasible, the paleontologist shall prepare an excavation plan for mitigating the effect of the project on the qualities that make the resource important, and such plan shall be implemented. The plan shall be submitted to the City for review and approval.
- 10. Repair and replacement of character-defining features. Deteriorated historic features shall be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature shall match the old or historic feature in design, color, texture, and, where possible, materials. Replacement of missing features will be substantiated by documentary and physical evidence, to the satisfaction of City staff.
- **11. Chemical Treatments.** Any chemical treatments needed as construction progresses will be undertaken using the gentlest means possible.
- **12. Clear glass.** All glass is assumed to be clear glass. Any proposed glass that is not clear glass shall be indicated on all drawings, and shall be reviewed for approval by historic preservation staff, prior to approval of any building permit for this project.
- **13. Exterior Lighting**. Exterior lighting, including for signage, shall be downcast and not cause glare on the public right-of-way and adjacent parcels.
- **14. Colors & Materials.** Prior to staff sign-off of the building permit set of drawings, the applicant shall submit color and materials information for review and approval by staff.
- **15. Window Detail.** Prior to staff sign-off of the building permit set of drawings, the applicant shall submit section drawings with details to provide dimensional relief and articulation for all new windows on basement level, for review and approval by staff.
- **16. Certified arborist report.** Prior to submittal of any building permit for this project, the applicant shall obtain a certified arborist report with recommendation on the assessment and protection of the Brower redwood tree during project construction. The building permit plans for this project shall incorporate the recommendations of this report.

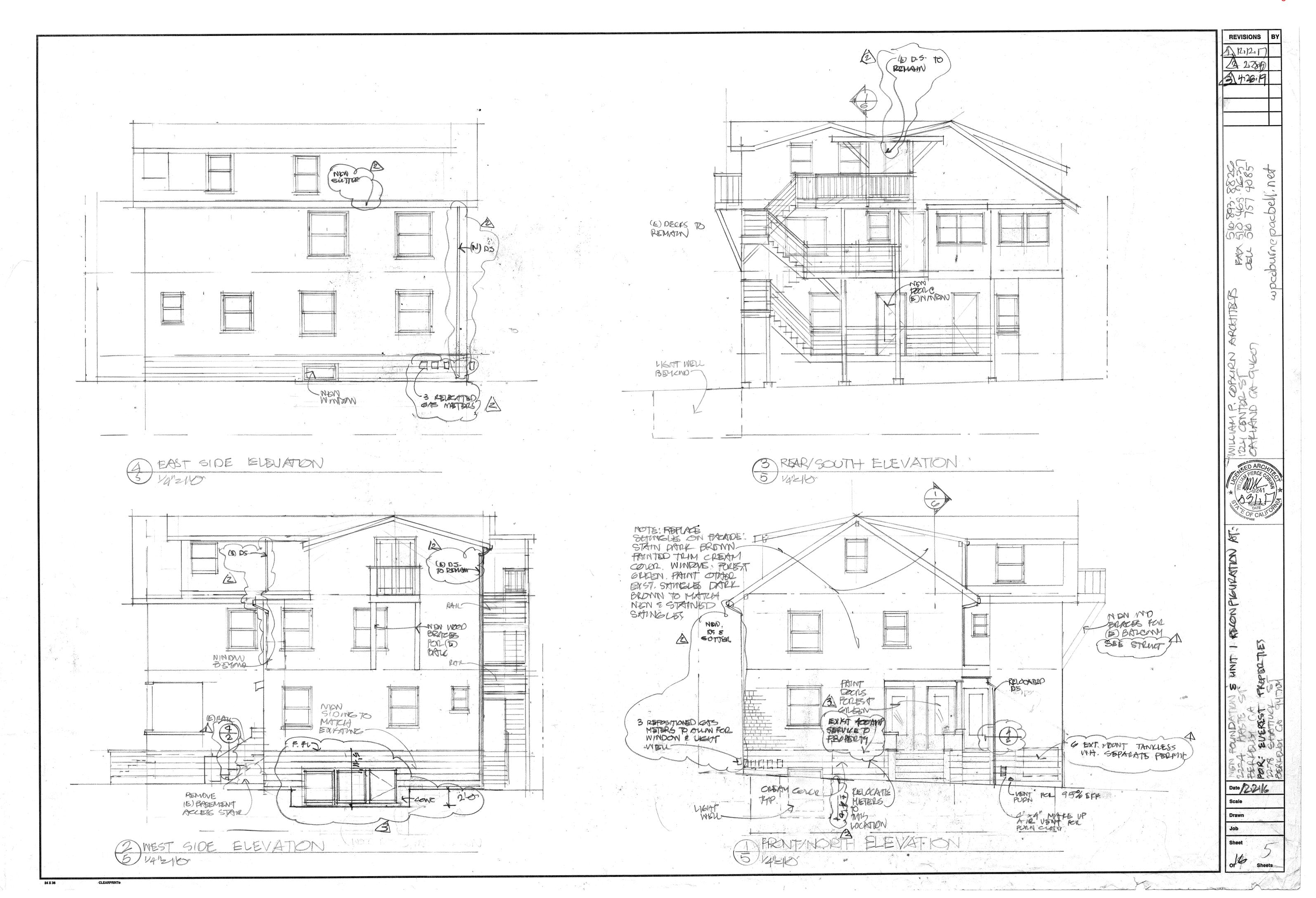
- **17. Plaque**. Prior to submittal of any building permit for this project, the applicant shall indicate on the building permit plans, the location and design of a plaque with information about the historic significance of this Landmark site.
- 18. Upon completion of this project, the property owner shall remove or relocate (and screen, subject to BMC Chapter 23) the dumpster currently stored in the driveway/parking area. The applicant shall consult with the City's Zero Waste Division for guidance on improving and maintaining adequate collection and storage of debris and recycling for this site.

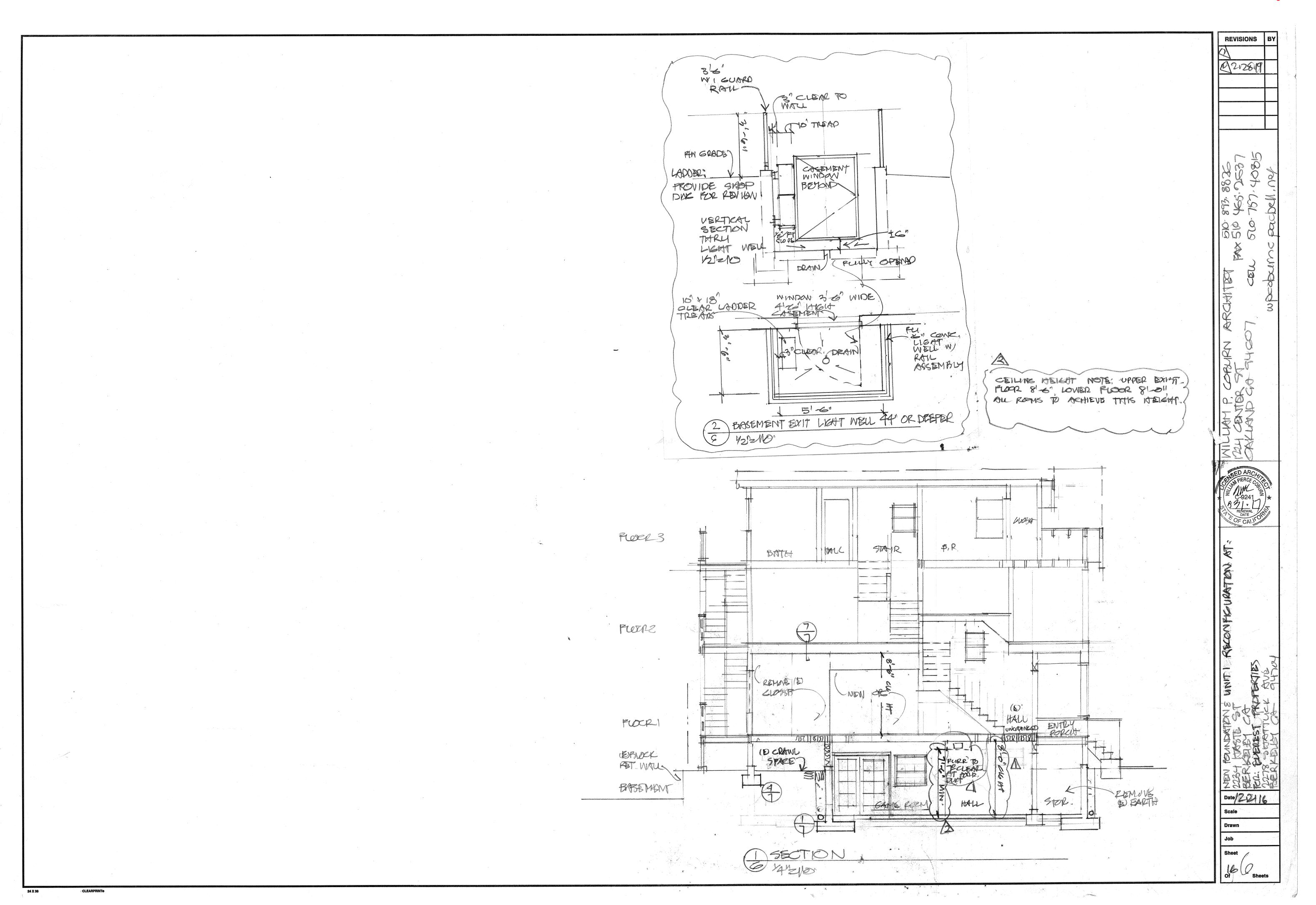


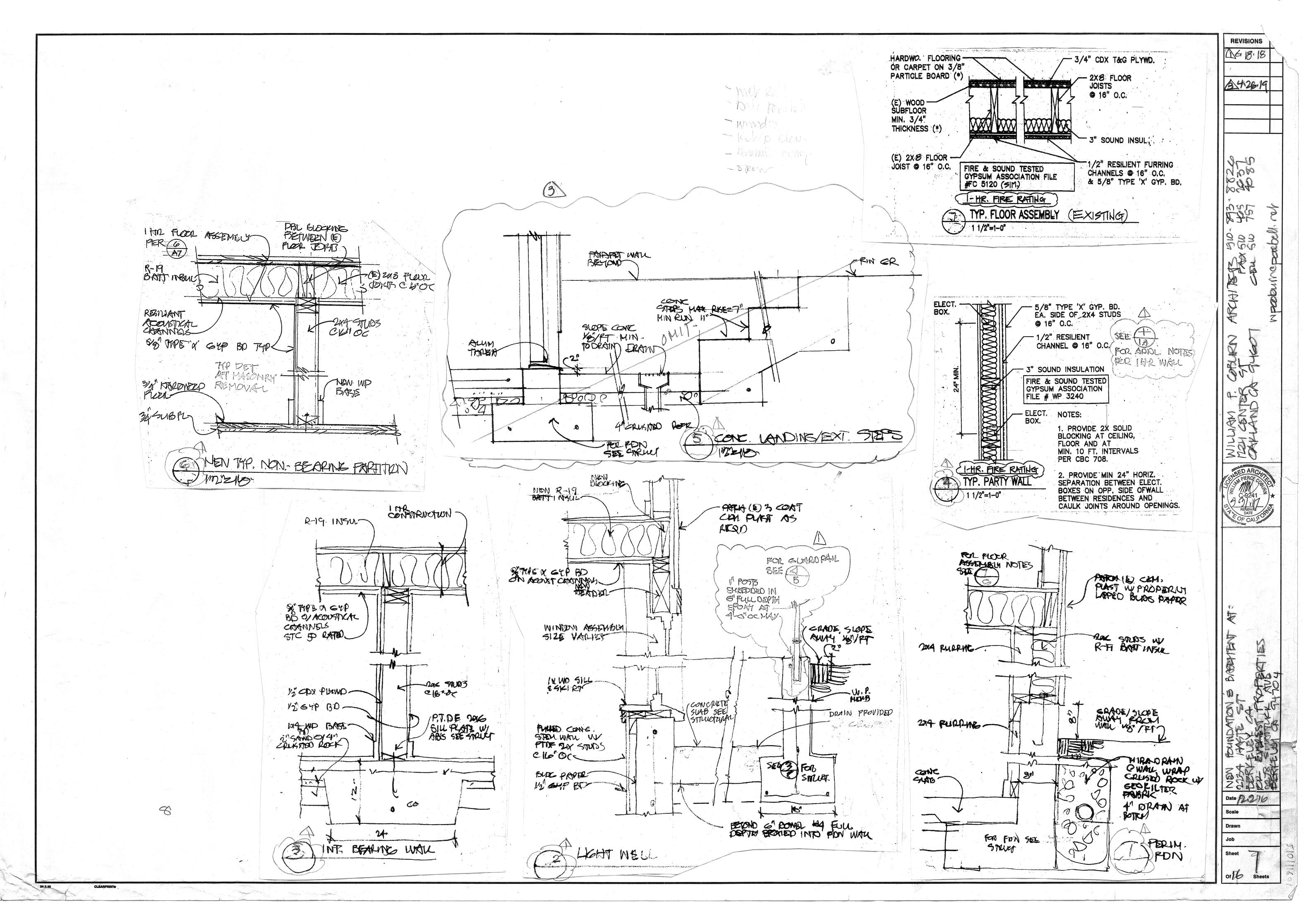












§150.0(h)1:

§150.0(h)3A:

in §150.0(h)2.

REVISIONS B

<u> 2013 Low</u>	-Rise Residential Mandatory Measures Summary Any pool or spa heating equipment shall be installed with at least 36 inches of pipe between filter and heater or dedicated suction
§110.4(b)1:	and return lines, or built-up connections for future solar heating.
§110.4(b)2:	Outdoor pools or spas that have a heat pump or gas heater shall have a cover.
§110.4(b)3:	Pools shall have directional inlets that adequately mix the pool water, and a time switch that will allow all pumps to be set or programmed to run only during off-peak electric demand periods.
§110.5:	Natural gas pool and spa heaters shall not have a continuous burning pilot light.
§150.0(p):	Residential pool systems or equipment shall meet specified pump sizing, flow rate, piping, filters, and valve requirements.
Lighting Measu	
§110.9:	All lighting control devices and systems, ballasts, and luminaires shall meet the applicable requirements of §110.9.
§150.0(k)1A:	Installed luminaires shall be classified as high-efficacy or low-efficacy for compliance with §150.0(k) in accordance with TABLE 150.0-A or TABLE 150.0-B, as applicable.
§150.0(k)1B:	When a high efficacy and low efficacy lighting system are combined in a single luminaire, each system shall separately comply with the applicable provisions of §150.0(k). The wattage and classification of permanently installed luminaires in residential kitchens shall be determined in accordance with
§150.0(k)1C:	§130.0(c). In residential kitchens, the wattage of electrical boxes finished with a blank cover or where no electrical equipment has been installed, and where the electrical box can be used for a luminaire or a surface mounted ceiling fan, shall be calculated as 180 watts of low efficacy lighting per electrical box.
§150.0(k)1D:	Ballasts for fluorescent lamps rated 13 watts or greater shall be electronic and shall have an output frequency no less than 20 kHz.
§150.0(k)1E:	Permanently installed night lights and night lights integral to installed luminaires or exhaust fans shall be rated to consume no more than 5 watts of power per luminaire or exhaust fan as determined in accordance with §130.0(c). Night lights do not need to be controlled by vacancy sensors.
§150.0(k)1F:	Lighting integral to exhaust fans (except when installed by the manufacturer in kitchen exhaust hoods) shall meet the applicable requirements of §150.0(k).
§150.0(k)2A:	High efficacy luminaires must be switched separately from low efficacy luminaires.
§150.0(k)2B:	Exhaust fans shall be switched separately from lighting systems.
§150.0(k)2C:	Luminaires shall be switched with readily accessible controls that permit the luminaires to be manually switched ON and OFF.
§150.0(k)2D:	Controls and equipment are installed in accordance with manufacturer's instructions.
§150.0(k)2E:	No control shall bypass a dimmer or vacancy sensor function if the control is installed to comply with §150.0(k).
§150.0(k)2F:	Lighting controls comply with applicable requirements of §110.9.
§150.0(k)2G:	An Energy Management Control System (EMCS) may be used to comply with dimmer requirements if: it functions as a dimmer according to §110.9; meets Installation Certificate requirements of §130.4; the EMCS requirements of §130.5; and all other requirements in §150.0(k)2.
§150.0(k)2H:	An Energy Management Control System (EMCS) may be used to comply with vacancy sensor requirements of §150.0(k) if: it functions as a vacancy sensor according to §110.9; meets Installation Certificate requirements of §130.4; the EMCS requirements of §130.5; and all other requirements in §150.0(k)2.
§150.0(k)2I:	A multiscene programmable controller may be used to comply with dimmer requirements of this section if it provides the functionality of a dimmer according to §110.9, and complies with all other applicable requirements in §150.0(k)2.
§150.0(k)3A:	A minimum of 50 percent of the total rated wattage of permanently installed lighting in kitchens shall be high efficacy.
§150.0(k)3B:	Kitchen lighting includes all permanently installed lighting in the kitchen except internal lighting in cabinets that illuminate only the inside of the cabinets. Lighting in areas adjacent to the kitchen, including but not limited to dining and nook areas, are considered kitchen lighting if they are not separately switched from kitchen lighting.
§150.0(k)4:	Permanently installed lighting that is internal to cabinets shall use no more than 20 watts of power per linear foot of illuminated cabinet.
§150.0(k)5:	A minimum of one high efficacy luminaire shall be installed in each bathroom; and all other lighting installed in each bathroom shall be high efficacy or controlled by vacancy sensors.
§150.0(k)6:	Lighting installed in attached and detached garages, laundry rooms, and utility rooms shall be high efficacy luminaires and controlled by vacancy sensors. Lighting installed in rooms or areas other than in kitchens, bathrooms, garages, laundry rooms, and utility rooms shall be high
§150.0(k)7:	efficacy, or shall be controlled by either dimmers or vacancy sensors. Luminaires recessed into ceilings shall: be listed for zero clearance insulation contact (IC) by Underwriters Laboratories or other
§150.0(k)8:	nationally recognized testing/rating laboratory; have a label that certifies that the luminaire is airtight with air leakage less than 2.0 CFM at 75 Pascals when tested in accordance with ASTM E283; be sealed with a gasket or caulk between the luminaire housing and ceiling, and shall have all air leak paths between conditioned and unconditioned spaces sealed with a gasket or caulk; and allow ballast maintenance and replacement without requiring cutting holes in the ceiling. For recessed compact fluorescent luminaries with ballasts to qualify as high efficacy for compliance with §150.0(k), the ballasts shall be certified to the Energy Commission to comply with the applicable requirements in §110.9.
§150.0(k)9A:	For single-family residential buildings, outdoor lighting permanently mounted to a residential building or other buildings on the same lot shall be high efficacy, or may be low efficacy if it meets all of the following requirements: i. Controlled by a manual ON and OFF switch that does not override to ON the automatic actions of Items ii or iii below; and ii. Controlled by a motion sensor not having an override or bypass switch that disables the motion sensor, or controlled by a motion sensor having a temporary override switch which temporarily bypasses the motion sensing function and automatically reactivates the motion sensor within 6 hours; and iii. Controlled by one of the following methods:

§150.0(j)2C:	Pipe for cooling system lines shall be insulated as specified in §150.0(j)2A. Piping insulation for steam and hydronic heating systems or hot water systems with pressure > 15 psig shall meet the requirements in TABLE 120.3-A.
150.0(j)3:	Insulation is protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind.
i150.0(j)3A:	Insulation exposed to weather shall either be rated for outdoor use or installed with a cover suitable for outdoor service. For example, protected by aluminum, sheet metal, painted canvas, or plastic cover. Cellular foam insulation protected as specified or painted with coating that is water retardant and provides shielding from solar radiation that degrades the material.
§150.0(j)3B:	Insulation covering chilled water piping and refrigerant suction piping located outside the conditioned space shall have a Class I or Class II vapor retarding facing, or the insulation shall be installed at the thickness that qualifies as a Class I or Class II vapor retarder.
§150.0(n)1:	Systems using gas or propane water heaters to serve individual dwelling units shall include: a 120V electrical receptacle within 3 feet of the water heater; a Category III or IV vent, or a Type B vent with straight pipe between the outside termination and the space where the water heater is installed; a condensate drain that is no more than 2 inches higher than the base of the installed water heater, and allows natural draining without pump assistance; and a gas supply line with a capacity of at least 200,000 Btu/hr.
§150.0(n)2:	Recirculating loops serving multiple dwelling units shall meet the requirements of §110.3(c)5.
§150.0(n)3:	Solar water-heating systems and collectors shall be certified and rated by the Solar Rating and Certification Corporation (SRCC) or by a testing agency approved by the Executive Director.
Ducts and Fans	Measures:
§150.0(m)1:	All air-distribution system ducts and plenums installed are sealed and insulated to meet the requirements of CMC §601.0, §602.0, §603.0, §604.0, §605.0 and ANSI/SMACNA-006-2006 HVAC Duct Construction Standards Metal and Flexible 3rd Edition. Supply-air and return-air ducts and plenums are insulated to a minimum installed level of R-6.0 (or higher if required by CMC §605.0) or enclosed entirely in directly conditioned space as confirmed through field verification and diagnostic testing (RA3.1.4.3.8). Connections of metal ducts and inner core of flexible ducts are mechanically fastened. Openings shall be sealed with mastic, tape, or other duct-closure system that meets the applicable requirements of UL 181, UL 181A or UL 181B or aerosol sealant that meets the requirements of UL 723. If mastic or tape is used to seal openings greater than ½ inch, the combination of mastic and either mesh or tape shall be used. Building cavities, support platforms for air handlers, and plenums defined or constructed with materials other than sealed sheet metal, duct board or flexible duct shall not be used for conveying conditioned air. Building cavities and support platforms may contain ducts. Ducts installed in cavities and support platforms shall not be compressed to cause reductions in the cross-sectional area of the ducts.
§150.0(m)2:	Factory-Fabricated Duct Systems shall comply with specified requirements for duct construction, connections, and closures; joints and seams of duct systems and their components shall not be sealed with cloth back rubber adhesive duct tapes unless such tape is used in combination with mastic and draw bands.
§150.0(m)3-6:	Field-Fabricated Duct Systems shall comply with requirements for: pressure-sensitive tapes, mastics, sealants, and other requirements specified for duct construction; duct insulation R-value ratings; duct insulation thickness; and duct labeling.
§150.0(m)7:	All fan systems that exchange air between the conditioned space and the outside of the building must have backdraft or automatic dampers.
§150.0(m)8:	Gravity ventilating systems serving conditioned space have either automatic or readily accessible, manually operated dampers except combustion inlet and outlet air openings and elevator shaft vents. Insulation shall be protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind but not
§150.0(m)9:	limited to the following: insulation exposed to weather shall be suitable for outdoor service. For example, protected by aluminum, sheet metal, painted canvas, or plastic cover. Cellular foam insulation shall be protected as above or painted with a coating that is water retardant and provides shielding from solar radiation.
§150.0(m)10:	Flexible ducts cannot have porous inner cores.
§150.0(m)11:	When space conditioning systems use forced air duct systems to supply conditioned air to an occupiable space, the ducts shall be sealed and duct leakage tested, as confirmed through field verification and diagnostic testing, in accordance with Reference Residential Appendix RA3.
§150.0(m)12:	Mechanical systems that supply air to an occupiable space through ductwork exceeding 10 feet in length and through a thermal conditioning component, except evaporative coolers, shall be provided with air filter devices that meet the requirements of \$150.0(m)12.
§150.0(m)13:	Space conditioning systems that utilize forced air ducts to supply cooling to an occupiable space shall have a hole for the placement of a static pressure probe (HSPP), or a permanently installed static pressure probe (PSPP) in the supply plenum. The space conditioning system must also demonstrate airflow ≥ 350 CFM per ton of nominal cooling capacity through the return grilles, and an air-handling unit fan efficacy ≤ 0.58 W/CFM as confirmed by field verification and diagnostic testing, in accordance with Reference Residential Appendix RA3.
§150.0(m)15:	Zonally controlled central forced air cooling systems shall be capable of simultaneously delivering, in every zonal control mode, an airflow from the dwelling, through the air handler fan and delivered to the dwelling, of ≥ 350 CFM per ton of nominal cooling capacity, and operating at an air-handling unit fan efficacy of ≤ 0.58 W/CFM as confirmed by field verification and diagnostic testing, in accordance with Reference Residential Appendix RA3.
§150.0(o):	All dwelling units shall meet the requirements of ASHRAE Standard 62.2. Neither window operation nor continuous operation of central forced air system air handlers used in central fan integrated ventilation systems are permissible methods of providing the Whole Building Ventilation.
§150.0(o)1A:	Whole Building Ventilation airflow shall be confirmed through field verification and diagnostic testing, in accordance with Reference Residential Appendix RA3.
Pool and Spa l	Heating Systems and Equipment Measures:
§110.4(a):	Any pool or spa heating system shall be certified to have: a thermal efficiency that complies with the Appliance Efficiency Regulations; an on-off switch mounted outside of the heater that allows shutting off the heater without adjusting the thermostat setting; a permanent weatherproof plate or card with operating instructions; and shall not use electric resistance heating.

2013 Low-Rise Residential Mandatory Measures Summary

<u>NOTE:</u> Low-rise residential buildings subject to the Standards must comply with all applicable mandatory measures listed, regardless of the compliance approach used. Exceptions may apply. Review the respective code section for more information. **Building Envelope Measures:** Doors and windows between conditioned and unconditioned spaces are manufactured to limit air leakage. Fenestration products (except field-fabricated windows) have a label listing the certified U-Factor, certified Solar Heat Gain Coefficient (SHGC), and infiltration that meets the requirements of §10-111(a). Exterior doors and windows are weatherstripped; all joints and penetrations are caulked and sealed. Insulation specified or installed meets Standards for Insulating Material. Indicate type and include on the CF2R. The thermal emittance and aged solar reflectance values of the cool roofing material meets the requirements of §110.8(i) when the installation of a cool roof is specified on the CF1R. A radiant barrier shall have an emittance of 0.05 or less when the installation of a radiant barrier is specified on the CF1R. Minimum R-30 insulation in wood-frame ceiling; or the weighted average U-factor shall not exceed 0.031. Minimum R-19 in a rafter roof alteration. Attic access doors shall have permanently attached insulation using adhesive or mechanical fasteners. The attic access shall be gasketed to prevent air leakage. Loose fill insulation shall conform with manufacturer's installed design labeled R-value. Minimum R-13 insulation in 2x4 inch wood framing wall or have a U-factor of 0.102 or less (R-19 in 2x6 or 0.074 maximum U-§150.0(c): Minimum R-19 insulation in raised wood-frame floor or 0.037 maximum U-factor. In Climate Zones 14 and 16 a Class II vapor retarder shall be installed on the conditioned space side of all insulation in all exterior walls, vented attics and unvented attics with air-permeable insulation. In Climate Zones 1-16 with unvented crawl spaces the earth floor of the crawl space shall be covered with a Class I or Class II §150.0(g)2: In a building having a controlled ventilation crawl space, a Class I or Class II vapor retarder shall be placed over the earth floor of the crawl space to reduce moisture entry and protect insulation from condensation, as specified in the exception to Section Slab edge insulation shall: have a water absorption rate, for the insulation material alone without facings, no greater than 0.3%; have water vapor permeance rate is no greater than 2.0 perm/inch, be protected from physical damage and UV light deterioration; and when installed as part of a heated slab floor meets the requirements of §110.8(g). Fenestration, including skylights, separating conditioned space from unconditioned space or outdoors shall have a maximum U-factor of 0.58; or the weighted average U-factor of all fenestration shall not exceed 0.58. Fireplaces, Decorative Gas Appliances and Gas Log Measures: Masonry or factory-built fireplaces have a closable metal or glass door covering the entire opening of the firebox. Masonry or factory-built fireplaces have a combustion outside air intake, which is at least six square inches in area and is equipped with a readily accessible, operable, and tight-fitting damper or a combustion-air control device. §150.0(e)1C: Masonry or factory-built fireplaces have a flue damper with a readily accessible control. Continuous burning pilot lights and the use of indoor air for cooling a firebox jacket, when that indoor air is vented to the outside of the building, are prohibited. Space Conditioning, Water Heating and Plumbing System Measures: 110.0-§110.3: HVAC equipment, water heaters, showerheads, faucets and all other regulated appliances are certified to the Energy Commission. Water heating recirculation loops serving multiple dwelling units meet the air release valve, backflow prevention, pump isolation valve, and recirculation loop connection requirements of §110.3(c)5. Continuously burning pilot lights are prohibited for natural gas: fan-type central furnaces, household cooking appliances (appliances without an electrical supply voltage connection with pilot lights that consume less than 150 Btu/hr are exempt), and pool and spa heaters.

Heating and/or cooling loads are calculated in accordance with ASHRAE, SMACNA or ACCA using design conditions specified

Installed air conditioner and heat pump outdoor condensing units shall have a clearance of at least five feet from the outlet of any

Storage gas water heaters with an energy factor equal to or less than the federal minimum standards shall be externally wrapped

Unfired hot water tanks, such as storage tanks and backup storage tanks for solar water-heating systems, have R-12 external

For domestic hot water system piping, whether buried or unburied: the first 5 feet of hot and cold water pipes from the storage

All domestic hot water pipes that are buried below grade must be installed in a water proof and non-crushable casing or sleeve

tank, all piping with a nominal diameter of 3/4 inch or larger, all piping associated with a domestic hot water recirculation system regardless of the pipe diameter, piping from the heating source to storage tank or between tanks, piping buried below grade, and all hot water pipes from the heating source to kitchen fixtures must be insulated according to the requirements of TABLE 120.3-

insulation or R-16 internal insulation where the internal insulation R-value is indicated on the exterior of the tank.

Heating systems are equipped with thermostats that meet the setback requirements of §110.2(c).

that allows for installation, removal, and replacement of the enclosed pipe and insulation.

with insulation having an installed thermal resistance of R-12 or greater.

IVEO	DEIX II		SURES SU) Y Y /-	11 5 1						RMS
Project N		D -		Buildi	ng Type		gle Famil ti Family	y 🗆 Additio	on Alone ng+ Addition	/Altoration	Date 12/9/20
		& Remodel		Calife	mia Ena	rgy Climat	•	Total Cond.		Addition	# of U
Project A		eet Berkele	21/			ite Zon		1,2	1	796	1 1
	ATION	or Bornore	, y	0,		Area	0 00	1,2	,,,	700	
	truction	Type		Cavi		(ft^2)	9,	oecial Fe	aturae		Status
				***************************************	· Ly		<u> </u>	Jeciai i e	atures		
Wall	Wood Fra			R 13	./-4:	768	Perim =	. 400!			New
Slab		l Slab-on-Grade		- no inst		796	Perim =	120	······································		New
Demising				- no insi		300	····				New
Wall Floor	Wood Fra	amed w/o Crawl	0	- no insi - no insi		407 180				··	Existing Existing
7 1001	77000177	anea woo Graw	- Copace	110 1110		700					LAIGHING
FENE	STRATIO	ON	Total Area:	165	Claring	Percentaç	70. 12	2.9 % New/A	Ntorod Avora	ge U-Factor:	0.40
1		Area(ft ²)			Overh		Sidefi		erior Sha	<u> </u>	Status
Front (N)		15.0	0.400	0.70	none	9	none		Screen		New
Left (E)		6.0	0.400	0.70	none		none		Screen		New
Right (W)		87.0	0.400	0.70	none		none		Screen		New
							none	Bua	Screen		Existina
Front (N) Rear (S)		20.0	0.990	0.74	none none		none none		Screen Screen		Existing New
Front (N) Rear (S)		20.0	0.990	0.74	none						
Front (N) Rear (S) HVAC	SYSTE	20.0 37.0	0.990	0.74	none		none		Screen	mostat	
Front (N) Rear (S) HVAC	SYSTE	20.0 37.0	0.990	0.74 0.70	none		Min	Bug	Screen	mostat	New
HVAC Qty.	SYSTE Heating Central Fun	20.0 37.0 MS J nace	0.990 0.400 Min. Eff	0.74 0.70	none	Duc	Min	Bug . Eff SEER	Ther Setback	mostat uct -Value	New

Gallons Min. Eff Distribution

ID: 161218

0.60

Qty. Type

1 Small Storage Gas

EnergyPro 6. by EnergySoft User Number: 3385

								CF1R-PRF-01
ERTIFICATE OF COMPLIAN	CE - RESIDENTIAL PERFORI	MANCE COMPLIANC	E METHO	DD				Page 2 of 7
Project Name: Unit 1 Addition			Calculat	tion Date/Tin	ne: 14:40, Fri, Dec 0			rage 2 of
calculation Description: Title			Input Fi	ile Name: cob	ourn 2234 haste unit	I.ribax		
REQUIRED SPECIAL FEATURES		-						
he following are features that mus	st be installed as condition for meet	ing the modeled energy	performance	ce for this compu	uter analysis.			
IO SPECIAL FEATURES REQUI								
HERS FEATURE SUMMARY						f for this comp	utor and	alveis Additional detail i
The following is a summary of the provided in the building componen	features that must be field-verified ts tables below.	by a certified HERS Rate	er as a cond	dition for meeting	g the modeled energy	performance for this comp	Julei and	- Additional dotains
Cooling System Verifications: None HVAC Distribution System Verifi Duct Sealing		·						
ENERGY DESIGN RATING This is the sum of the annual TDV TDV energy consumption for lightion-site renewable energy system. Total Energy (kTDV/f2-	energy consumption for energy using and components not regulated Refere	ence Energy Use	n the perfor as domestic	Energy D	nce approach for the S d consumer electronics resign Rating	tandard Design Building () and accounting for the a Margin 0.91		Budget) and the annual DV energy offset by an ercent Improvement 1.0%
ENERGY DESIGN RATING This is the sum of the annual TDV TDV energy consumption for lighti on-site renewable energy system. Total Energy (kTDV/f2- * includes calculated Appliances a	renergy consumption for energy using and components not regulated Refere -yr)* and Miscellaneous Energy Use (AMMATION	ence Energy Use 95.30		Energy D	pesign Rating 94.39	Margin		ercent Improvement
ENERGY DESIGN RATING This is the sum of the annual TDV TDV energy consumption for lighti on-site renewable energy system. Total Energy (kTDV/f2- * includes calculated Appliances at BUILDING - FEATURES INFORM	renergy consumption for energy using and components not regulated Refere -yr)* and Miscellaneous Energy Use (AMMATION 02	95.30 O3 Number of Dwelling		Energy D	Pesign Rating 94.39 05	Margin 0.91	ation	1.0%
TDV energy consumption for lightion-site renewable energy system. Total Energy (kTDV/f2- * includes calculated Appliances a BUILDING - FEATURES INFORM 01 Project Name	renergy consumption for energy using and components not regulated Refere -yr)* and Miscellaneous Energy Use (AMMATION 02 Conditioned Floor Area (ft2)	ence Energy Use 95:30 MEU) 03 Number of Dwelling Units	Number o	Energy D	pesign Rating 94.39	Margin 0.91 06 Number of Ventila	ation	1.0% 07 Number of Water
ENERGY DESIGN RATING This is the sum of the annual TDV TDV energy consumption for lightion-site renewable energy system. Total Energy (kTDV/f2- * includes calculated Appliances at BUILDING - FEATURES INFORM	renergy consumption for energy using and components not regulated Refere -yr)* and Miscellaneous Energy Use (AMMATION 02	95.30 O3 Number of Dwelling	Number o	Energy D	Pesign Rating 04.39 05 Number of Zones	06 Number of Ventile Cooling Syster	ation	1.0% 07 Number of Water Heating Systems
ENERGY DESIGN RATING This is the sum of the annual TDV TDV energy consumption for lighti on-site renewable energy system. Total Energy (kTDV/f2- * includes calculated Appliances at BUILDING - FEATURES INFORM 01 Project Name	renergy consumption for energy using and components not regulated Refere -yr)* and Miscellaneous Energy Use (AMMATION 02 Conditioned Floor Area (ft2) 1279	95.30 O3 Number of Dwelling Units	Number o	Energy D O4 of Bedrooms	04.39 05 Number of Zones	06 Number of Ventile Cooling Syster	ation	1.0% 07 Number of Water Heating Systems
ENERGY DESIGN RATING This is the sum of the annual TDV TDV energy consumption for lightion-site renewable energy system. Total Energy (kTDV/f2- * includes calculated Appliances a BUILDING - FEATURES INFORM 01 Project Name Unit 1 Addition Remodel	renergy consumption for energy using and components not regulated Refere -yr)* and Miscellaneous Energy Use (AMMATION 02 Conditioned Floor Area (ft2)	ence Energy Use 95:30 MEU) 03 Number of Dwelling Units	Number o	Energy D S O4 of Bedrooms 1	04.39 05 Number of Zones 2 05	06 Number of Ventile Cooling System	ation	07 Number of Water Heating Systems
ENERGY DESIGN RATING This is the sum of the annual TDV TDV energy consumption for lighti on-site renewable energy system. Total Energy (kTDV/f2- * includes calculated Appliances a BUILDING - FEATURES INFORM 01 Project Name Unit 1 Addition Remodel ZONE INFORMATION	renergy consumption for energy using and components not regulated Refere -yr)* and Miscellaneous Energy Use (AMMATION 02 Conditioned Floor Area (ft2) 1279	95.30 O3 Number of Dwelling Units	Number o	Energy D O4 of Bedrooms 1 O4 Zone Floor A (ft²)	04.39 05 Number of Zones 2 05 rea Avg. Ceiling Height	06 Number of Ventila Cooling System 0 Water Heating System	ation	07 Number of Water Heating Systems
ENERGY DESIGN RATING This is the sum of the annual TDV TDV energy consumption for lighti on-site renewable energy system. Total Energy (kTDV/f2- * includes calculated Appliances at BUILDING - FEATURES INFORM 01 Project Name Unit 1 Addition Remodel ZONE INFORMATION 01	renergy consumption for energy using and components not regulated Refere -yr)* and Miscellaneous Energy Use (AMMATION 02 Conditioned Floor Area (ft2) 1279	95:30 03 Number of Dwelling Units 1	Number o	Energy D S O4 Of Bedrooms 1 O4 Zone Floor A	04.39 05 Number of Zones 2 05 rea Avg. Ceiling	Margin 0.91 06 Number of Ventile Cooling System 0	ation	07 Number of Water Heating Systems 1

(egistration number: 216-A0438140A-00000000-0000	Registration Date/Time:	2016-12-09 14:45:38	HERS Provider: Ca	ICERTS inc.
	Report Version - CF1R-081620	016-433	Report Generated at: 2016-12-09 14	4:40:47

roject Na	me: Unit 1 Addition Remodel		Calculation Date/Time: 14:40, Fri, Dec 09, 2016					
alculation	n Description: Title 24 Analysis	In	Input File Name: coburn 2234 haste unit1.ribdx					
ENERAL II	NFORMATION							
01	Project Name	Unit 1 Addition Remodel						
02	Calculation Description	Title 24 Analysis						
03	Project Location	2234 Haste Street						
04	City	Berkeley	05	Standards Version				
06	Zip Code		07	Compliance Manager Version	BEMCmpMgr 2013-4b (433)			
08	Climate Zone	CZ3	09	Software Version	EnergyPro 6.8			
10	Building Type	Single Family	11	Front Orientation (deg/Cardinal)	350			
12	Project Scope	Addition and/or Alteration	13	Number of Dwelling Units	1			
14	Total Cond. Floor Area (ft ²)	1279	15	Number of Zones	2			
16	Slab Area (ft²)	796	17	Number of Stories	2			
18	Addition Cond. Floor Area	796	19	Natural Gas Available	Yes			
20	Addition Slab Area (ft ²)	796	21	Glazing Percentage (%)	12.9%			
OMPLIAN	CE RESULTS							
01	Building Complies with Compu	iter Performance						
02	This building incorporates feat	ures that require field testing and/or verif	ication by	a certified HERS rater under the supervision	of a CEC-approved HERS provider.			
	4		***					

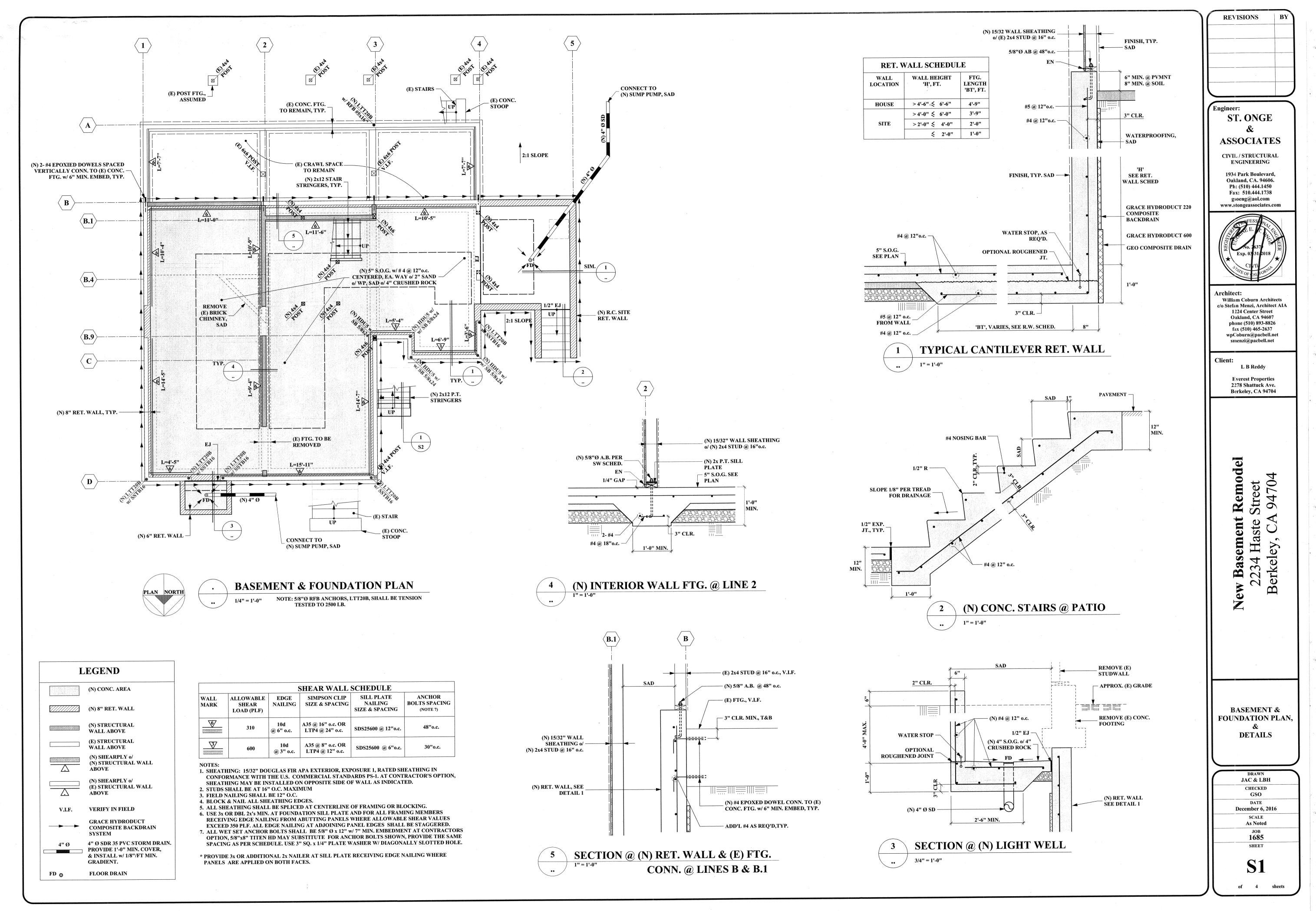
	ENER	GY USE SUMMARY		
04	05	06	. 07	08
Energy Use (kTDV/ft ² -yr)	Standard Design	Proposed Design	Compliance Margin	Percent Improvement
Space Heating	22.63	20.38	2.25	9.9%
Space Cooling	0.73	2.07	-1.34	-183.6%
IAQ Ventilation	0.00	0.00	0.00	0.0%
Water Heating	12.55	12.55	0.00	0.0%
Photovoltaic Offset		0.00	0.00	
Compliance Energy Total	35.91	35.00	0.91	2.5%

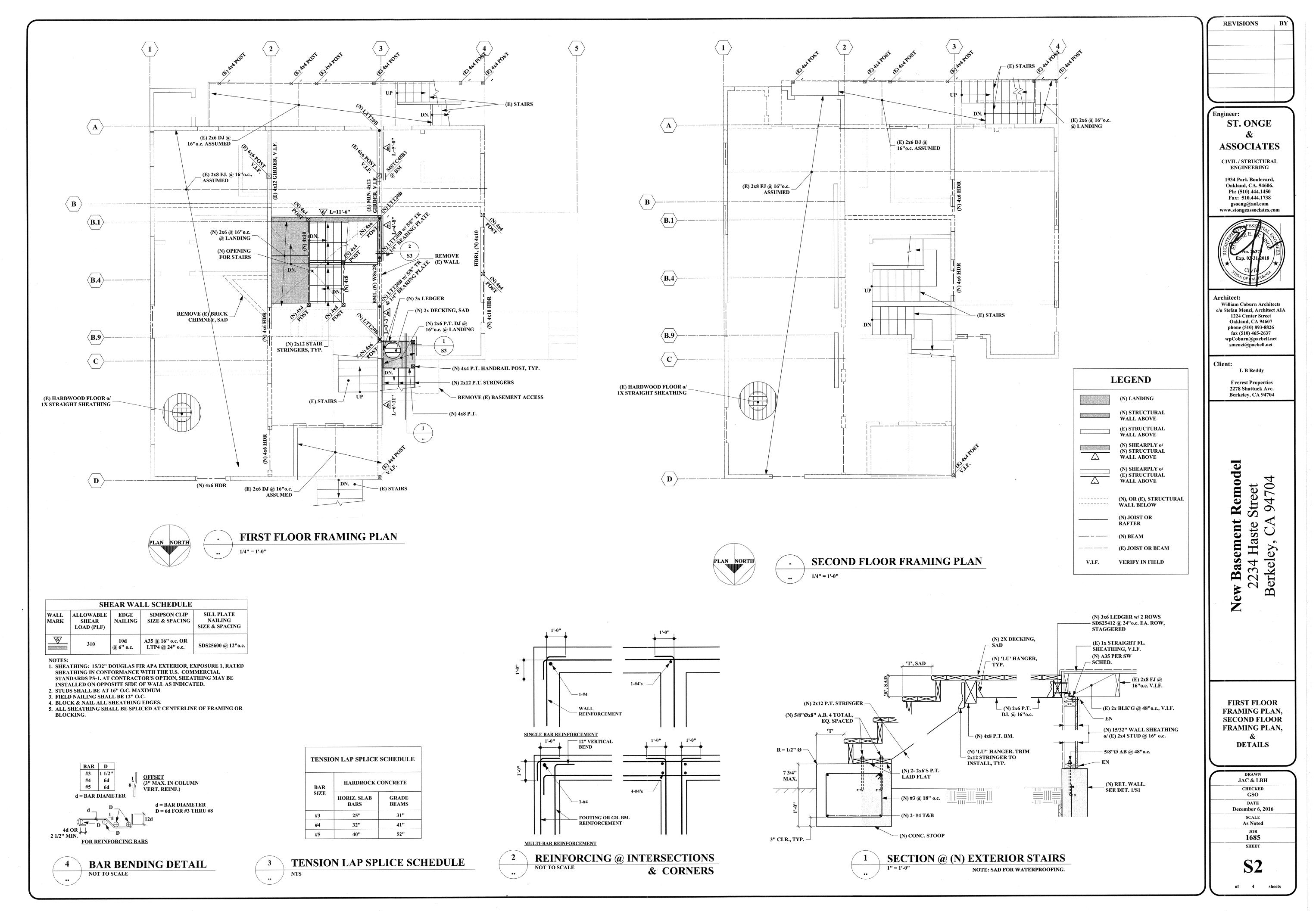
Registration Number: 216-A0456140A-000000000-00000 Registration Date/Time: 2016-12-09 14:45:38 HERS Provider: CA Building Energy Efficiency Standards - 2013 Residential Compliance Report Version - CF1R-08162016-433 Report Generated at: 2016-12-09 18

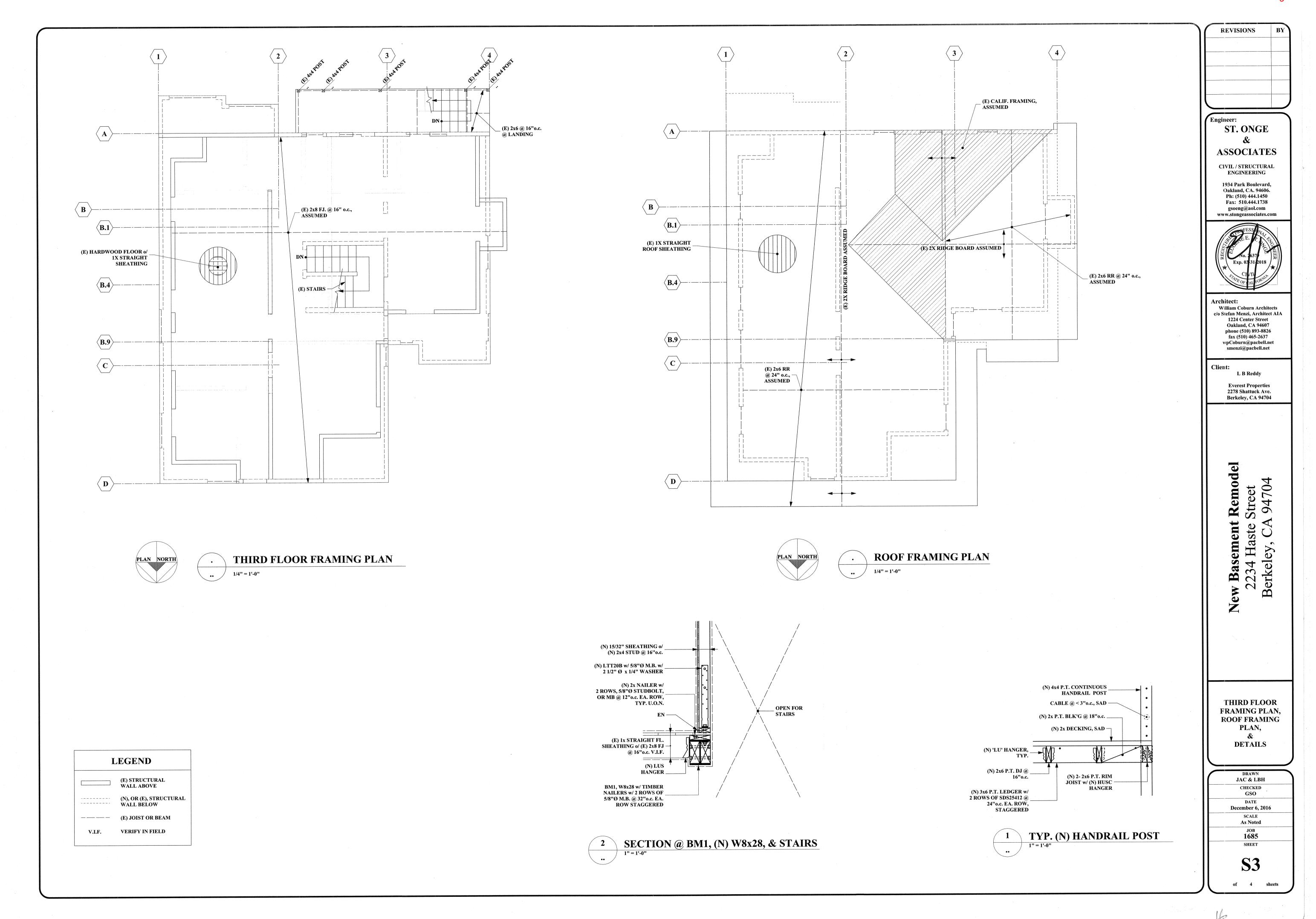
	a. Photocontrol not having an override or bypass switch that disables the photocontrol; or b. Astronomical time clock not having an override or bypass switch that disables the astronomical time clock, and which is programmed to automatically turn the outdoor lighting OFF during daylight hours; or c. Energy management control system which meets all of the following requirements: At a minimum provides the functionality an astronomical time clock in accordance with §110.9; meets the Installation Certification requirements in §130.4; meets the requirements for an EMCS in §130.5; does not have an override or bypass switch that allows the luminaire to be always ON; as is programmed to automatically turn the outdoor lighting OFF during daylight hours.
§150.0(k)9B:	For low-rise multifamily residential buildings, outdoor lighting for private patios, entrances, balconies, and porches; and outdo lighting for residential parking lots and residential carports with less than eight vehicles per site shall comply with one of the following requirements: i. Shall comply with §150.0(k)9A; or ii. Shall comply with the applicable requirements in §110.9, §130.0, §130.2, §130.4, §140.7 and §141.0.
§150.0(k)9C:	For low-rise residential buildings with four or more dwelling units, outdoor lighting not regulated by §150.0(k)9B or 150.0(k)9 shall comply with the applicable requirements in §110.9, §130.0, §130.2, §130.4, §140.7 and §141.0.
§150.0(k)9D:	Outdoor lighting for residential parking lots and residential carports with a total of eight or more vehicles per site shall comply with the applicable requirements in §110.9, §130.0, §130.2, §130.4, §140.7 and §141.0.
§150.0(k)10:	Internally illuminated address signs shall comply with §140.8; or shall consume no more than 5 watts of power as determined according to §130.0(c).
§150.0(k)11:	Lighting for residential parking garages for eight or more vehicles shall comply with the applicable requirements for nonresidential garages in §110.9, §130.0, §130.1, §130.4, §140.6, and §141.0.
§150.0(k)12A:	In a low-rise multifamily residential building where the total interior common area in a single building equals 20 percent or les the floor area, permanently installed lighting for the interior common areas in that building shall be high efficacy luminaires or controlled by an occupant sensor.
§150.0(k)12B:	In a low-rise multifamily residential building where the total interior common area in a single building equals more than 20 percent of the floor area, permanently installed lighting in that building shall: i. Comply with the applicable requirements in §110.9, §130.0, §130.1, §140.6 and §141.0; and ii. Lighting installed in corridors and stairwells shall be controlled by occupant sensors that reduce the lighting power in each space by at least 50 percent. The occupant sensors shall be capable of turning the light fully On and Off from all designed path ingress and egress.
Solar Ready Bu	
§110.10(a)1:	Single family residences located in subdivisions with ten or more single family residences and where the application for a tentative subdivision map for the residences has been deemed complete, by the enforcement agency, on or after January 1, 201 shall comply with the requirements of §110.10(b) through §110.10(e).
§110.10(a)2:	Low-rise multi-family buildings shall comply with the requirements of §110.10(b) through §110.10(d).
§110.10(b)1:	The solar zone shall have a minimum total area as described below. The solar zone shall comply with access, pathway, smoke ventilation, and spacing requirements as specified in Title 24, Part 9 or other Parts of Title 24 or in any requirements adopted by local jurisdiction. The solar zone total area shall be comprised of areas that have no dimension less than 5 feet and are no less to square feet each for buildings with roof areas less than or equal to 10,000 square feet or no less than 160 square feet each for buildings with roof areas greater than 10,000 square feet. For single family residences the solar zone shall be located on the roof or overhang of the building and have a total area no less than 250 square feet. For low-rise multi-family buildings the solar zone shall be located on the roof or overhang of the building on the roof or overhang of another structure located within 250 feet of the building or on covered parking installed with the building project and have a total area no less than 15 percent of the total roof area of the building any skylight area.
§110.10(b)2:	All sections of the solar zone located on steep-sloped roofs shall be oriented between 110 degrees and 270 degrees of true north
§110.10(b)3A:	No obstructions, including but not limited to, vents, chimneys, architectural features, and roof mounted equipment, shall be located in the solar zone.
§110.10(b)3B:	Any obstruction, located on the roof or any other part of the building that projects above a solar zone shall be located at least to the distance, measured in the horizontal plane, of the height difference between the highest point of the obstruction and the horizontal projection of the nearest point of the solar zone, measured in the vertical plane.
§110.10(b)4:	For areas of the roof designated as solar zone, the structural design loads for roof dead load and roof live load shall be clearly indicated on the construction documents.
§110.10(c):	The construction documents shall indicate: a location for inverters and metering equipment and a pathway for routing of conduction from the solar zone to the point of interconnection with the electrical service (for single family residences the point of interconnection will be the main service panel); a pathway for routing of plumbing from the solar zone to the water-heating system.
§110.10(d):	A copy of the construction documents or a comparable document indicating the information from §110.10(b) through §110.10 shall be provided to the occupant.
§110.10(e)1:	The main electrical service panel shall have a minimum busbar rating of 200 amps.
§110.10(e)2:	The main electrical service panel shall have a reserved space to allow for the installation of a double pole circuit breaker for a future solar electric installation. The reserved space shall be: positioned at the opposite (load) end from the input feeder location main circuit location, and permanently marked as "For Future Solar Electric".

eet Sheets

REVISIONS BY CF1R-PRF-01 CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD CF1R-PRF-01 Page 3 of 7 CF1R-PRF-01 Project Name: Unit 1 Addition Remodel Calculation Date/Time: 14:40, Fri, Dec 09, 2016 CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD Page 4 of 7 Calculation Date/Time: 14:40, Fri, Dec 09, 2016 Project Name: Unit 1 Addition Remodel Page 5 of 7 Input File Name: coburn 2234 haste unit1.ribdx Calculation Date/Time: 14:40, Fri, Dec 09, 2016 Calculation Description: Title 24 Analysis Project Name: Unit 1 Addition Remodel Input File Name: coburn 2234 haste unit1.ribdx Calculation Description: Title 24 Analysis Input File Name: coburn 2234 haste unit1.ribdx Calculation Description: Title 24 Analysis OPAQUE SURFACES OPAQUE SURFACE CONSTRUCTIONS 01 02 04 05 06 05 06 WATER HEATING - HERS VERIFICATION Total Cavity Winter Design R-value U-value 04 05 Assembly Layers Surface Type R-value **Construction Name** Orientation Gross Area (ft²) Area (ft²) (deg) Name Construction Recirculation with New N/A ompact Distribution Front Addition: R-13 Wall Front Manual Control Point-of Use Pipe Insulation Cavity / Frame: R-13 / 2x4 Left n/a n/a R 13 0.101 Exterior Finish: 3 Coat Stucco Wood Framed Wall 2x4 @ 16 in. O.C. n/a Exterior Walls R-13 Wall n/a DHW Sys 1 R-13 Wall Rear 170 Back Addition Inside Finish: Gypsum Board Cavity / Frame: no insul. / 2x4 Right R-13 Wall Right SPACE CONDITIONING SYSTEMS Wood Framed Wall 2x4 @ 16 in. O.C. Exterior Finish: 3 Coat Stucco Exterior Walls R-0 Wall1 05 Front 2 Existing R-0 Wall1 04 Floor Surface: Carpeted Left 90 Existing No Left 2 Existing R-0 Wall1 Floor Deck: Wood Siding/sheathing/d 350 Verified Existing Exterior Floors 2x12 @ 16 in. O.C. Cavity / Frame: no insul. / 2x12 R-0 Floor No Crawlspace Rear 2 R-0 Wall1 Back 90 Existing No Condition System Served System Name System Type R-0 Wall1 Right 90 Existing No Right 2 SLAB FLOORS Cooling Component 1 No 1279 Existing No Heating R-0 Floor No Crawlspace Raised Floor Existing 894 Yes 02 03 | 04 **HVAC - HEATING SYSTEMS** 0.8 No New Verified Existing Condition 796 120 None Slab-on-Grade 02 Type Efficiency BUILDING ENVELOPE - HERS VERIFICATION 15.0 0.40 0.70 Insect Screen (default) New Window Front (Front-350) CntrlFurnace - Fuel-fired central furnace Heating Component 1 1 6.0 0.40 0.70 Insect Screen (default) New Left (Left-80) Window 2 CFM50 Quality Insulation Installation (QII) Quality Installation of Spray Foam Insulation Right (Right-260) 1 51.0 0.40 0.70 Insect Screen (default) Window 3 **HVAC - COOLING SYSTEMS** Not Required 07 Front 2 (Front-350) Window 4 1 37.0 0.40 0.70 Insect Screen (default) New Rear 2 (Back-170) Window 5 Multi-speed WATER HEATING SYSTEMS **HERS Verification** 1 36.0 0.40 0.70 Insect Screen (default) New **Zonally Controlled** Compressor Right 2 (Right-260) Window 6 System Type 06 07 08 N/A Cooling Component 1 NoCooling - No cooling equipment N/A Verified Existing Fraction Number of (%) Status Condition **Distribution Type** Water Heater Heaters System Type HVAC - DISTRIBUTION SYSTEMS Annual New DHW Sys 1 DHW DHW Heater 1 06 05 HERS Verification Insulation R-value Return Duct Supply Duct Condition Location Location WATER HEATERS 07 01 System 1-hers-dist Ducts located in outdoor None Air Distribution Outside Outside Energy Factor or Efficiency Tank Exterior Tank Volume Tank Type (gal) Input Rating Insulation R-value (Fraction) **Heater Element Type** 0.6 EF 40000-Btu/hr 50 DHW Heater 1 Natural Gas Small Storage Registration Date/Time: CalCERTS inc. HERS Provider: Registration Number: 216-A0456140A-000000000-0000 2016-12-09 14:45:38 HERS Provider: CalCERTS inc. Registration Date/Time: 2016-12-09 14:45:38 Registration Number: 216-A0456140A-000000000-0000 Report Generated at: 2016-12-09 14:40:47 CA Building Energy Efficiency Standards - 2013 Residential Compliance Report Version - CF1R-08162016-433 HERS Provider: CalCERTS inc. 2016-12-09 14:45:38 Registration Date/Time: Report Version - CF1R-08162016-433 Report Generated at: 2016-12-09 14:40:47 Registration Number: 216-A0456140A-000000000-0000 CA Building Energy Efficiency Standards - 2013 Residential Compliance Report Generated at: 2016-12-09 14:40:47 Report Version - CF1R-08162016-433 CA Building Energy Efficiency Standards - 2013 Residential Compliance CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD CF1R-PRF-01 CF1R-PRF-01 CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD Project Name: Unit 1 Addition Remodel Calculation Date/Time: 14:40, Fri, Dec 09, 2016 Page 6 of 7 Calculation Date/Time: 14:40, Fri, Dec 09, 2016 Project Name: Unit 1 Addition Remodel Calculation Description: Title 24 Analysis Input File Name: coburn 2234 haste unit1.ribdx Input File Name: coburn 2234 haste unit1.ribdx Calculation Description: Title 24 Analysis HVAC DISTRIBUTION - HERS VERIFICATION DOCUMENTATION AUTHOR'S DECLARATION STATEMENT 1. I certify that this Certificate of Compliance documentation is accurate and complete. **Duct Leakage** Verified Duct Design Documentation Author Signature: Documentation Author Name: Target (%) **Verified Duct Location** Non Air Distribution System 1-hers-dist TECC 2016-12-09 14:45:38 HVAC - FAN SYSTEMS & HERS VERIFICATION CEA/HERS Certification Identification (If applicable): 6367 Swainland Road r13-13-10023 **HERS Verification** Fan Power (Watts/CFM) City/State/Zip: Single Speed PSC Furnace Fan HVAC Fan 1 510-387-2756 Oakland, CA 94611 IAQ (Indoor Air Quality) FANS RESPONSIBLE PERSON'S DECLARATION STATEMENT certify the following under penalty of perjury, under the laws of the State of California: I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design identified on this Certificate of Compliance. IAQ CFM I certify that the energy features and performance specifications identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of SFam IAQVentRpt Not Required The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application. sponsible Designer Name: Robert Mao TECC c70157 6367 Swainland Road City/State/Zip: 510-387-2756 Oakland, CA 94611 Digitally signed by CalCERTS. This digital signature is provided in order to secure the content of this registered document, and in no way implies Registration Provider responsibility for the accuracy of the information. Registration Number: 216-A0456140A-000000000-0000 Registration Date/Time: 2016-12-09 14:45:38 CalCERTS inc. Registration Number: 216-A0456140A-000000000-0000 Registration Date/Time: 2016-12-09 14:45:38 CA Building Energy Efficiency Standards - 2013 Residential Compliance Report Version - CF1R-08162016-433 Report Generated at: 2016-12-09 14:40:47 Report Generated at: 2016-12-09 14:40:47 CA Building Energy Efficiency Standards - 2013 Residential Compliance Report Version - CF1R-08162016-433







Date: December 6, 2016
Time: 11:56:32 AM
File name: 1685.15 2234 Haste St Berkeley.mcd

- APPLYING TO ALL STRUCTURAL FEATURES UNLESS OTHERWISE SHOWN OR NOTED.
- 1. ALL WORK SHALL BE PERFORMED IN CONFORMANCE WITH THE 2013 CALIFORNIA BUILDING CODE (CBC) WITH CITY OF BERKELEY AMENDMENTS. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND SITE CONDITIONS BEFORE STARTING WORK. THE
- ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION. UNLESS OTHERWISE SHOWN OR NOTED, ALL TYPICAL DETAILS SHALL BE USED WHERE APPLICABLE. ALL
- DETAILS SHALL BE CONSIDERED TYPICAL AT SIMILAR CONDITIONS. UNLESS OTHERWISE SHOWN OR NOTED, FOLLOW MANUFACTURER'S INSTALLATION RECOMMENDATIONS FOR ALL STRUCTURAL PRODUCTS USED ON THIS PROJECT.
- 5. THE APPROVED DRAWINGS SHALL BE KEPT ON THE JOB SITE AND SHALL BE AVAILABLE TO AUTHORIZED REPRESENTATIVES OF THE BUILDING OFFICIAL. THERE SHALL BE NO DEVIATION FROM THE STAMPED
- DRAWINGS WITHOUT OFFICIAL APPROVAL SAFETY MEASURES: AT ALL TIMES, THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR THE CONDITIONS OF THE JOB SITE INCLUDING SAFETY OF PEOPLE AND PROPERTY, AND FOR ALL
- NECESSARY INDEPENDENT ENGINEERING REVIEWS OF THESE CONDITIONS. SHORING AND BRACING OF THE SOIL, AND THE EXISTING STRUCTURES, SHALL BE INSTALLED WHERE NECESSARY TO ADEQUATELY SUPPORT THE IMPOSED VERTICAL AND LATERAL LOADS, AND SHALL BE MAINTAINED UNTIL THE NEW STRUCTURE CAN SUPPORT THE ANTICIPATED LOADS. UNDERPINNING AND/OR SHORING IS REQUIRED AT ALL ELEVATIONS ADJACENT TO, AND TO ELEVATIONS BELOW, EXISTING FOUNDATIONS, AND WHERE PARTIAL REMOVAL OF EXISTING FOUNDATIONS IS CALLED FOR ON THE DRAWINGS. THE ENGINEER'S JOB SITE VISITS ARE NOT INTENDED TO INCLUDE REVIEW OF THE ADEQUACY OF THE CONTRACTOR'S SAFETY MEASURES. ALL
- (OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION DIVISION OF DEPT. OF INDUSTRIAL SAFETY, STATE OF ANY OPENING, HOLES, CUTS OR DISCONTINUITIES NOT SHOWN ON THE STRUCTURAL DRAWINGS AND EXTENDING INTO OR THROUGH STRUCTURAL ELEMENTS REQUIRE THE PRIOR APPROVAL OF THE ENGINEER, AND MAY

SAFETY -RELATED MEASURES SHALL BE CARRIED OUT IN ACCORDANCE WITH THE REQUIREMENTS OF CAL-OSHA

- REQUIRE SPECIAL STRUCTURAL DETAILING. CONTRACTORS SHALL SCHEDULE WORK TO MINIMIZE INTERRUPTION AND INCONVENIENCE TO THE ACTIVITIES
- OF THE ADJACENT BUILDING TENANTS. . CONTRACTOR SHALL MAINTAIN A CLEAN AND SAFE WORKING AREA.
- 10. CONTRACTOR SHALL COMPLY WITH CITY OF BERKELEY, CA, REQUIREMENTS FOR THE PROTECTION OF PUBLIC RIGHT-OF-WAY (SIDEWALKS). 1. THE LOCATION OF EXISTING UTILITY LINES IS THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR
- SHALL ENDEAVOR TO MAINTAIN IN SERVICE ALL UTILITIES TO THE TENANTS FOR THE DURATION OF THE PROJECT IF CERTAIN FEATURES ARE NOT FULLY SHOWN OR CALLED FOR ON THE DRAWINGS OR SPECIFICATIONS, THEIR
- CONSTRUCTION SHALL BE OF THE SAME CHARACTER AS FOR SIMILAR CONDITIONS THAT ARE SHOWN OR
- 3. REFERENCE TO OTHER DRAWINGS: 13.1 SEE DRAWINGS OTHER THAN STRUCTURAL FOR KINDS OF FLOOR FINISH AND THEIR LOCATION,FOR DEPRESSIONS IN FLOOR SLABS, FOR OPENINGS IN WALLS AND FLOORS REQUIRED BY ARCHITECTURAL AND
- MECHANICAL FEATURES, FOR DRIVEWAY PAVING, WALKS, RAMPS, STAIRS, CURBS, ETC. 13.2 HOLES AND OPENINGS THROUGH WALLS AND FLOORS FOR DUCTS, PIPING AND VENTILATION SHALL BE CHECKED BY THE CONTRACTOR WHO SHALL VERIFY SIZES AND LOCATION OF SUCH HOLES OR OPENINGS WITH THE PLUMBING, HEATING, VENTILATING AND ELECTRICAL DRAWINGS AND SUB-CONTRACTORS.

1. CODE: 2013 CBC 2. DESIGN VERTICAL LOADS: -- 12 PSF 20 PSF ---- 12 PSF 40 PSI INT. WALL ----

V=0.17W (ASD) [SS= 2.35, S1= 0.98, SITE CLASS D, R=6.5, I= 1.0, SITE DES. CAT. E, SD1= 0.98, SDS=1.57]

H=12.8 PSF (ASD)

TESTS & SPECIAL INSPECTIONS

- PROVIDE TESTS AND INSPECTIONS FOR ALL ITEMS AS REQUIRED BY THE 2013 CALIFORNIA BUILDING CODE (CBC). 2. THE OWNER SHALL RETAIN AN INDEPENDENT TESTING LAB TO PERFORM ALL REQUIRED TESTING AND INSPECTIONS. 3. THE CONTRACTOR SHALL PROVIDE THE TESTING LAB WITH CONSTRUCTION SCHEDULES TO ENSURE PROPER
- 4. THE FOLLOWING SPECIFIC ITEMS SHALL BE INSPECTED BY A PROJECT ENGINEER, CITY'S INSPECTOR OR TESTED BY THE TESTING LAB
- 4.1. PLACEMENT OF REINFORCEMENT STEEL (WITH ADEQUATE LEAD TIME TO MAKE ANY REQUIRED CORRECTIONS.) 4.2 EPOXY INSTALLED ANCHORS.

FOUNDATIONS

- . CBC SITE CLASS 5 IS ASSUMED FOR FOUNDATION DESIGN.
- ALLOWABLE SOIL BEARING PRESSURE: 1500 PSF FOR DEAD PLUS LIVE LOADS, 2000 PSF FOR ALL LOADS
- 8. EXCEPT WHERE OTHERWISE SHOWN, EXCAVATIONS SHALL BE MADE AS NEAR AS POSSIBLE TO THE NEAT LINES REQUIRED BY THE SIZE AND SHAPE OF THE STRUCTURE. ALL FOUNDATIONS SHALL BE PLACED WITHOUT THE USE OF SIDE FORMS WHEREVER POSSIBLE. IF THE TRENCHES CANNOT STAND, FULLY FORM SIDES TO
- DO NOT ALLOW WATER TO STAND IN TRENCHES. IF BOTTOMS OF TRENCHES BECOME SOFTENED DUE TO RAIN OR OTHER WATER BEFORE CONCRETE IS CAST, EXCAVATE SOFTENED MATERIAL AND REPLACE WITH PROPERLY COMPACTED BACKFILL OR CONCRETE AT NO COST TO THE OWNER.
- ALL EXCAVATIONS, FORMS AND REINFORCING ARE TO BE INSPECTED BY THE LOCAL BUILDING INSPECTOR PRIOR TO PLACING CONCRETE.
- . CLAYEY SOIL SHOULD BE MOISTURE CONDITIONED TO AT LEAST 3 PERCENT OVER OPTIMUM WATER CONTENT AND COMPACTED TO AT LEAST 90 PERCENT RELATIVE COMPACTION. SANDY SOILS SHOULD BE MOISTURE CONDITIONED TO NEAR OPTIMUM WATER CONTENT AND COMPACTED TO AT LEAST 95 PERCENT RELATIVE

CONCRETE

- . CONCRETE CEMENT SHALL CONFORM TO 2013 CBC STND. NO. 19-1, AND SHALL BE TYPE II. TYPE I CEMENT MAY BE USED IN AREAS NOT IN CONTACT WITH EARTH. AGGREGATE SHALL BE HARDROCK, CONFORMING TO ASTM C-33, AND FREE OF ALKALI-REACTIVITY. WATER/CEMENT RATIO SHALL NOT EXCEED 55%. ACID SOLUBLE CHLORIDE CONTENT SHALL NOT EXCEED 0.2 PERCENT OF CEMENT WEIGHT. CHLORIDE-FREE ADMIXTURES AND PLASTICIZERS FOR WORKABILITY MAY BE USED IF APPROVED BY THE TESTING LABORATORY AND ENGINEER. BECAUSE EXCESS WATER REDUCES CONCRETE STRENGTH, ADDING WATER AT THE SITE IS DISCOURAGED AND SHALL NOT EXCEED ONE
- GALLON PER CUBIC YARD. INSTALL ALL INSERTS, BOLTS, ANCHORS, AND REINFORCING BARS AND SECURELY TIE PRIOR TO PLACING CONCRETE. 3. CONCRETE SHALL ATTAIN A MINIMUM ULTIMATE COMPRESSIVE STRENGTHS OF 2500 PSI AT 28 DAYS.
- 4. CONCRETE SHALL BE PLACED IN A CONTINUOUS OPERATION BETWEEN PREDETERMINED CONSTRUCTION JOINTS. 5. CONCRETE SHALL BE CONTINUOUSLY CURED FOR 5 DAYS AFTER PLACEMENT IN ANY APPROVED MANNER.
- 6. THE LOCATION AND PROTECTION OF EXISTING UTILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IF UTILITY PIPES RUN THROUGH, OR WITHIN 24" BELOW, ANY NEW CONCRETE CONSTRUCTION.
- PIPE OR DUCTS EXCEEDING ONE-THIRD THE SLAB OR WALL THICKNESS SHALL NOT BE PLACED IN STRUCTURAL CONCRETE UNLESS SPECIFICALLY DETAILED. . PIPES MAY PASS THROUGH STRUCTURAL CONCRETE IN SLEEVES, BUT SHALL NOT BE EMBEDDED THEREIN.
- 9. CONCRETE SHALL NOT BE ALLOWED TO CURE IN TEMPERATURES LESS THAN 40° FAHRENHEIT FOR THE FIRST THREE
- 10. MAXIMUM SLUMP: 4 INCHES.

REINFORCING STEEL

- 1 USE ASTM A615 REINFORCEMENT FOR ALL BARS, GRADE 60.
- 2 ALL REINFORCEMENT SHALL BE CONTINUOUS. STAGGER SPLICES WHERE POSSIBLE. LAPS FOR SPLICES SHALL BE AS PER THE LAP SPLICE SCHEDULE SHOWN IN THESE DRAWINGS. 3 HOLD REINFORCEMENT IN ITS TRUE HORIZONTAL AND VERTICAL POSITION WITH DEVICES SUFFICIENTLY NUMEROUS TO PREVENT DISPLACEMENT.

ROUGH CARPENTRY

- . FOR SCHEDULE OF MINIMUM NAILING SEE TABLE 2304.9.1, 2013 CBC. UNLESS OTHERWISE NOTED, ALL NAILS SHALL
- BE COMMON NAILS. 2. PLACE JOINTS WITH CROWN UP.
- . ADD ONE ADDITIONAL JOIST UNDER ALL PARALLEL PARTITIONS. 4. BLOCK ALL JOISTS AT SUPPORTS AND UNDER ALL PARTITIONS WITH MINIMUM 2X SOLID BLOCKING.
- . METAL FRAMING DEVICES: PROVIDE TYPICAL CONNECTORS FOR WOOD FRAMING BY SIMPSON CO. OR EQUAL. ALL CONNECTIONS SHALL BE 16 GA. GALVANIZED SHEET METAL OR THICKER, U.O.N., FULLY NAILED IN ALL PUNCHED HOLES WITH NAILS OF SIZE AND LENGTH SPECIFIED AND/OR PROVIDED BY MANUFACTURER. IF CONNECTORS ARE AVAILABLE IN DIFFERENT SIZES. THE SIZE USED SHALL BE AS SHOWN IN DETAILS OR ELSE THE LARGEST SIZE MADE FOR THE DEPTH OF MEMBER BEING FRAMED. COMPARABLE FASTENERS BY OTHER MANUFACTURERS MAY BE USED IF APPROVED IN ADVANCE BY THE DESIGN ENGINEER. UNLESS OTHERWISE NOTED, PROVIDE THE FOLLOWING
- FRAMING CONNECTIONS: - SAWN LUMBER JOIST-TO-BEAM: SIMPSON U - BEAM-TO-POST: SIMPSON CC OR ECC
- SIMPSON BC - POST-TO-BEAM:
- POST-TO-FOUNDATION: SIMPSON CBSO . ALL FRAMING LUMBER SHALL BE GRADE STAMPED S-DRY (19% MOISTURE CONTENT AT TIME OF INSTALLATION) U.O.N. ALL SAWN LUMBER SHALL BE DOUGLAS FIR LARCH (COAST REGION), GRADED AND MARKED IN
- ACCORDANCE WITH THE STANDARD GRADING RULES NUMBER 16 OF THE WEST COAST LUMBER INSPECTION
- POSTS, JOISTS, RAFTERS & BEAMS -----NO. 1 GRADE STUD GRADE
- STRUCTURAL STUD WALLS: 8.1 USE SINGLE BOTTOM PLATE AND DOUBLE TOP PLATE UNLESS OTHERWISE NOTED OR SHOWN. STAGGER JOINTS IN UPPER AND LOWER MEMBERS OF TOP PLATES NOT LESS THAN 4'-0".
- 8.2 BOLT SILL PLATE TO CONCRETE AS PER ANCHOR BOLT SCHEDULE. ONE BOLT SHALL BE WITHIN 9" OF EACH END OF EACH PIECE OF PLATE. PROVIDE 2 BOLTS MINIMUM PER PIECE.
- 8.3 PROVIDE SIMPSON ANGLE A35 CLIP @ 16" O.C. BETWEEN DBL. TOP PLATES AND BLOCKING AND RIM JOIST TYPICAL, U.O.N PER PLAN OR SHEARWALL SCHEDULE.

- 9.1 BOLTS SHALL BE PER ASTM A307, U.O.N.
- 9.2 BOLT HOLES 1/16" OVERSIZE. THREADS SHALL NOT BEAR ON WOOD OR STEEL 9.3 USE STANDARD MALLEABLE IRON WASHERS AGAINST WOOD. 2 3/4" ØX 5/16" THICK FOR 5/8" BOLTS. 3" ØX7/16"
- 9.4 ALL BOLTS EXPOSED TO WETHER OR PROLONGED DAMPNESS SHALL BE HOT-DIPPED GALVANIZED.
- 10. SCREWS: 10.1 (WOOD OR LAG) SCREWS SHALL BE SCREWED AND NOT DRIVEN INTO PLACE 10.2 IN SPACING SCREWS, THE HOLES SHALL BE BORED TO THE SAME DIAMETER AND DEPTH OF THE SCREW SHANK. THE HOLES FOR THE THREADED PORTION OF THE SCREWS SHALL BE BORED WITH A BIT NOT
- 11. WOOD PRESERVATIVE: ALL WOOD FRAMING IN CONTACT WITH CONCRETE AND/OR EXPOSED TO WEATHER OR PROLONGED DAMPNESS SHALL BE TREATED WITH 'CELLOW" AT THE RATE OF 0.23 POUNDS PER CUBIC FOOT IN ACCORDANCE WITH AWPA SPECIFICATIONS, OR SHALL BE WOOD OF NATURAL RESISTANCE TO DECAY.

- 1. U.O.N., USE DOUGLAS FIR APA EXTERIOR, EXPOSURE1, RATED SHEATHING IN CONFORMANCE WITH THE U.S. COMMERCIAL STANDARDS PSI-95, PS2-92, OR NER-108 (PRP-108). INSTALL WITH FACE GRAIN
- 2. FLOOR SHEATHING SHALL BE 3/4" T&G w/ EDGES LOCATED OVER BLOCKING AND NAILED
- w/ 10d @ 6"o.c. EDGE NAILING & 12"o.c. FIELD NAILING, U.O.N. SPAN RATING 48/24, UNBLOCKED. GLUE TO FLOOR JOISTS, U.O.N.

STRUCTURAL STEEL

STRUCTURAL STEEL SECTIONS -----PLATES & SHAPES ----

LARGER THAN THE DIAMETER OF THE BASE OF THE THREAD.

ALL BOLTS SHALL CONFORM TO ASTM A307 AND SHALL BE

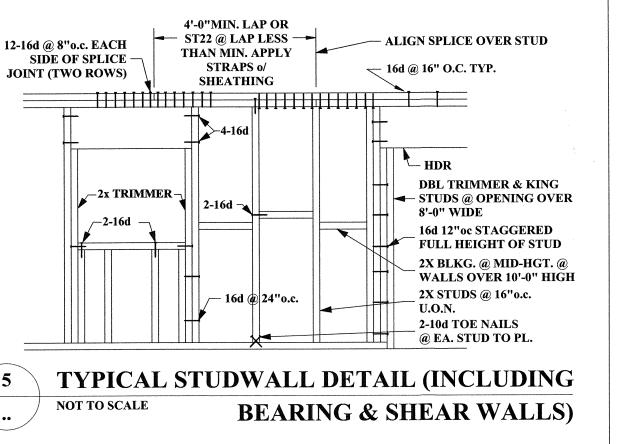
INSTALLED TO A 'SNUG-TIGHT' CONDITION.

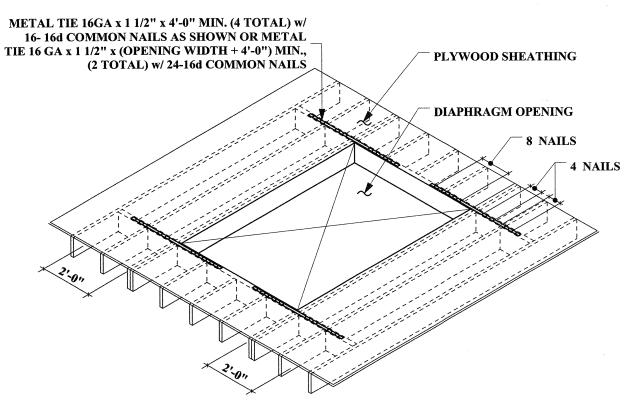
- ALL EXPOSED METAL SHALL BE GALVANIZED OR PAINTED AND PROTECTED USING
- AN EXTERIOR METAL PRIMING PAINT AND A FINISH COAT.
- COMPLY WITH AMERICAN INSTITUTE OF STEEL CONSTRUCTION "SPECIFICATIONS FOR DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS", CURRENT EDITION
- COMPLY WITH AMERICAN WELDING SOCIETY "STRUCTURAL WELDING CODE-STEEL" ANSI/AWS D1.1. CURRENT EDITION, AND "STRUCTURAL WELDING CODE - SHEET STEEL" AWS D1.3, CURRENT EDITION. USE "E70" OR EQUAL ELECTRODES. ALL WELDING TO BE
- 4. THE STRUCTURAL STEEL FABRICATOR'S SHOP DRAWINGS SHALL BE SUBMITTED TO THE PROJECT ENGINEER-OF-RECORD FOR REVIEW PRIOR TO SUBMITTAL TO THE

EPOXIED ANCHORS

BUILDING DEPARTMENT

- . WHERE EPOXIED ANCHORS (REINFORCING BARS OR ALL-THREADED RODS) ARE CALLED FOR IN THE STRUCTURAL DRAWINGS, THE EPOXY USED SHALL BE THE SIMPSON (SET-XP) ANCHORING ADHESIVE, OR EQUAL. SUBMIT MANUFACTURER'S LITERATURE FOR SUBSTITUTE SYSTEM(S) TO ENGINEER FOR REVIEW AND APPROVAL. PRE-MEASURED EPOXIES IN DISPOSABLE, TWO-PART CARTRIDGES DISPENSED THROUGH PROPRIETARY MIXING NOZZLES ARE ACCEPTABLE. POLYSTER RESINS SHALL NOT BE SUBSTITUTED FOR EPOXY. INSTALL DOWELS IN EXISTING CONCRETE PER MANUFACTURER'S RECOMMENDATIONS.
- 2.1. ANCHORS IN CONCRETE
- 2.1.1. EPOXIED ANCHORS IN CONCRETE SHALL BE INSPECTED AND TENSION TESTED BASED ON THE REQUIRED TEST
- $1.\,5/8"\emptyset\ BOLT-2,\!500\#\ [BASED\ ON\ 1.5\ TIMES\ DESIGN\ LOAD\ OF\ 1,\!667\#]\ FOR\ HOLDOWNS\ LTT20B'S.$. AGE OF CONCRETE FOR INSTALLATION PER ACI 318-2011 (SECTION D.2.2) ADHESIVE ANCHORS SHALL BE INSTALLED IN CONCRETE HAVING A MINIMUM AGE OF 21 DAYS AT TIME OF ANCHOR INSTALLATION. FOR INSTALLATIONS SOONER THAN 21 DAYS CONSULT ADHESIVE MANUFACTURER.







ROD THREADED EA. END
PANEL EDGE STUD

CATALOG FOR ROD SIZE $\setminus \not \models \Rightarrow$ OR POST, SEE PLAN

HOLDOWN TO HOLDOWN OPTION

TYPICAL HOLDOWN DETAIL

SEE PLAN & DETAILS FOR ___ \

FLOOR CONSTRUCTION

OPTIONAL ANCHOR

PLYWOOD EDGE NAIL, SEE PLAN

POST, SEE PLAN

& SHEAR WALL SCHEDULE

CONTINUOUS TO FNDN.

PANEL EDGE STUD OR ____

HD ANCHOR, SEE

PLAN & SCHED.

USE INVERTED HOLDOWN OR

ALL HOLDOWNS ARE BY

SIMPSON COMPANY, OR

APPROVED EQUAL, SEE

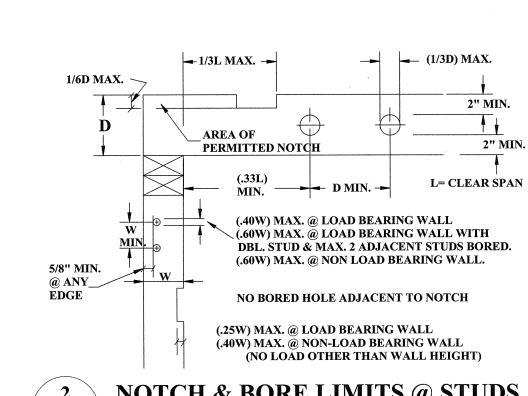
DEPENDING ON HEIGHT OF CRAWL

CATALOG FOR SIZE & SPACING

CONTINUOUS THREADED ROD

SPACE

OF BOLTS



NOTE: IN BEARING WALLS, NOTCHES ARE NOT PERMITTED WITHOUT PRIOR APPROVAL OF STRUCTURAL ENGINEER.

NOTCH OR BORE @ TOP PLATE

LOCATE HOLE @ G.-

SIMPSON NS-16 @ HOLES /

TO 1 3/4" DIA. @ EA.

SIDE @ EA. 2X PLATE

IF NOTCH OR BORE IS LARGER THAN

1/2 PLATE WIDTH, ADD STRAP @ EA.

SIMPSON MSTAM36 W/ MIN.

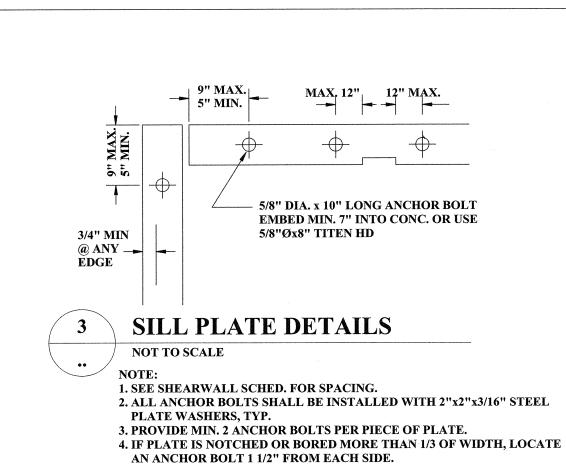
BETWEEN STUDS

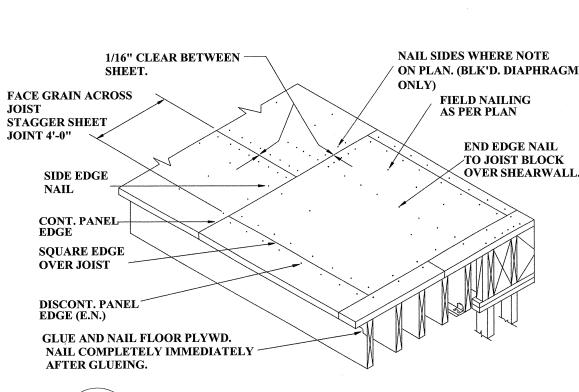
BELOW STRAP.

8 NAILS @ EA. SIDE OF

NOTCH OR HOLE.







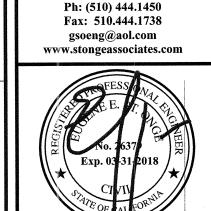
TYP. FLOOR NAILING DETAIL NOT TO SCALE

TYP. FOR BLOCKED AND UNBLOCKED DIAPHRAGM SEE GENERAL NOTES @ LEFT FOR SHEARPLY & NAILING SPEC'S

REVISIONS Engineer: ST. ONGE

ASSOCIATES

CIVIL / STRUCTURAL **ENGINEERING** 1934 Park Boulevard, Oakland, CA. 94606.



William Coburn Architects c/o Stefan Menzi, Architect AIA 1224 Center Street Oakland, CA 94607 phone (510) 893-8826 fax (510) 465-2637 wpCoburn@pacbell.net smenzi@pacbell.net

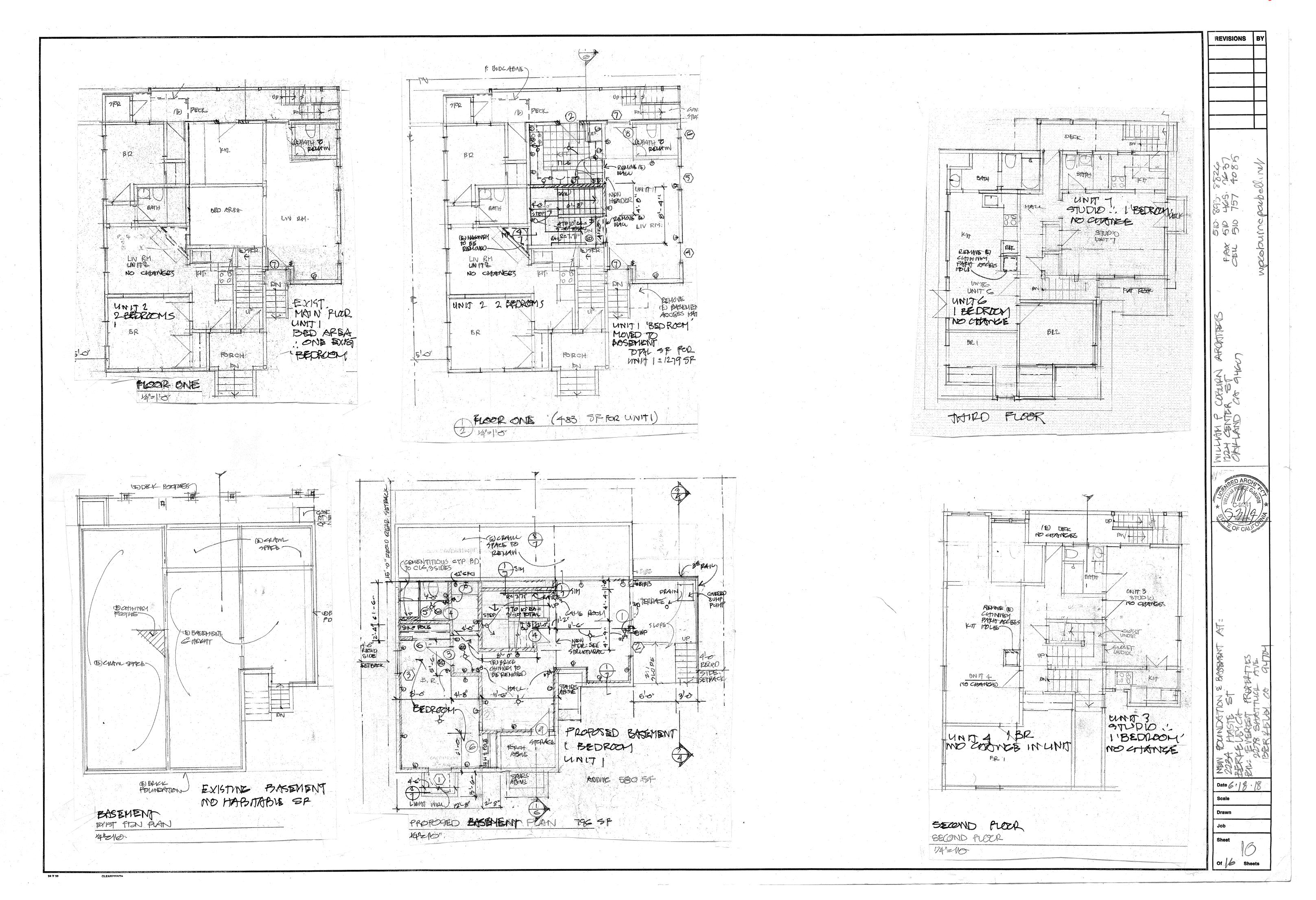
L B Reddy

Everest Properties 2278 Shattuck Ave. Berkeley, CA 94704

Remod asement 4 Haste Berkel

GENERAL NOTES DETAILS

JAC & LBH CHECKED GSO December 6, 2016 SCALE As Noted 1685 SHEET



REVISIONS

242

	Dans Of the Control o	
	Code Compliance Checklist - CALGREEN RESIDENTIAL Page 2	OT 4
	WATER EFFICIENCY & CONSERVATION Indoor Water Use	
	4.303.1.1 Water closets. The effective flush volume of all water closets shall not exceed 1.28 gallons per flush Tank-type water closets shall be certified to the performance criteria of the US EPA WaterSense Specification Tank-type Toilets.	tor
	4.303.1.2 Urinals. The effective flush volume of wall-mounted urinals shall not exceed 0.125 gallons per flush effective flush volume of all other urinals shall not exceed 0.5 gallons per flush.	The
	Showerheads 4.303.1.3.1 Single showerhead. Showerheads shall have a maximum flow rate of not more than 2.0 gallons per minute at 80 psi. Showerheads shall be certified to the performance criteria of the US EPA WaterSense	
and the same of th	Specification for Showerheads. 4.303.1.3.2 Multiple showerheads serving one shower. When a shower is served by more than one showerhead, the combined flow rate of all showerheads and/or other shower outlets controlled by a single value shall not exceed 2.0 gallons per minute at 80 psi, or the shower shall be designed to allow only one shower out to be in operation at a time. Note: A hand-held shower shall be considered a showerhead.	/e itlet
	Faucets 4.303.1.4.1 Residential lavatory faucets. The maximum flow rate of residential lavatory faucets shall not exc 1.2 gallons per minute at 60 psi. The minimum flow rate of residential lavatory faucets shall not be less than 0	eed .8
	gallons per minute at 20 psi. 4.303.1.4.2 Lavatory faucets in common and public use areas. The maximum flow rate of lavatory faucets installed in common and public use areas (outside of dwelling or sleeping units) shall not exceed 0.5 gallons p minute at 60 psi.	er
2	4.303.1.4.3 Metering faucets. Metering faucets shall not deliver more than 0.25 gallons per cycle. 4.303.1.4.4 Kitchen faucets. The maximum flow rate of kitchen faucets shall not exceed 1.8 gallons per minute 60 psi. Kitchen faucets may temporarily increase the flow above the maximum rate, but not to exceed 2.2 gallon per minute at 60 psi, and must default to a maximum flow rate of 1.8 gallons per minute at 60 psi. Where comfaucets are unavailable, aerators or other means may be used to achieve reduction.	ons
	 Outdoor Water Use 4.304.1 Outdoor potable water use in landscape areas. [N] New residential developments with an aggregal landscape area equal to or greater than 500 square feet shall comply with one of the following: Current California Department of Water Resources' Model Water Efficient Landscape Ordinance (MWELO) Projects with aggregate landscape areas less than 2,500 square feet may comply with the MWELO's Appel D Prescriptive Compliance Option.).
	MATERIAL CONSERVATION AND RESOURCE EFFICIENCY	
	Enhanced Durability and Reduced Maintenance 4.406.1 Rodent proofing. Annular spaces around pipes, electric cables, conduits, or other openings in sole/be plates at exterior walls shall be protected against the passage of rodents by closing such openings with ceme mortar, concrete masonry or similar method acceptable by the City of Berkeley.	ottom nt
1	Construction Waste Reduction, Disposal and Recycling 4.408.1 Construction waste management. Recycle and/or salvage for reuse a minimum of 65 percent of the nonhazardous construction and demolition waste and a minimum of 100 percent of excavated soil, land-clear debris, concrete and asphalt. Provide a completed City of Berkeley Construction Waste Management Plan. Use	ing
	waste facilities that can provide verifiable documentation that the percentage of construction water material diverted from the landfill complies with this section. Building Maintenance and Operation 4.410.1 Operation and maintenance manual. At the time of final inspection, a manual which includes all of the information listed in CALGreen section 4.410.1 items 1 through 10 shall be presented to the building inspecto	the
	waste facilities that can provide verifiable documentation that the percentage of construction water material	the r and ng or
	waste facilities that can provide verifiable documentation that the percentage of construction water material diverted from the landfill complies with this section. Building Maintenance and Operation 4.410.1 Operation and maintenance manual. At the time of final inspection, a manual which includes all of information listed in CALGreen section 4.410.1 items 1 through 10 shall be presented to the building inspecto placed in the building, for the building occupant or owner, prior to final inspection sign off. 4.410.2 Recycling by occupants. [N] Where 5 or more multifamily dwelling units are constructed on a building site, provide readily accessible area(s) that serve the entire building or buildings on the site and is identified for the depositing, storage and collection of non-hazardous materials for recycling, including (at a minimum) paper	the r and ng or
Land Land	waste facilities that can provide verifiable documentation that the percentage of construction water material diverted from the landfill complies with this section. Building Maintenance and Operation 4.410.1 Operation and maintenance manual. At the time of final inspection, a manual which includes all of information listed in CALGreen section 4.410.1 items 1 through 10 shall be presented to the building inspecto placed in the building, for the building occupant or owner, prior to final inspection sign off. 4.410.2 Recycling by occupants. [N] Where 5 or more multifamily dwelling units are constructed on a building site, provide readily accessible area(s) that serve the entire building or buildings on the site and is identified for the depositing, storage and collection of non-hazardous materials for recycling, including (at a minimum) paper corrugated cardboard, glass, plastics, organic waste, and metals.	the r and ng or er,
	waste facilities that can provide verifiable documentation that the percentage of construction water material diverted from the landfill complies with this section. Building Maintenance and Operation A4.10.1 Operation and maintenance manual. At the time of final inspection, a manual which includes all of the information listed in CALGreen section 4.410.1 items 1 through 10 shall be presented to the building inspector placed in the building, for the building occupant or owner, prior to final inspection sign off. 4.410.2 Recycling by occupants. [N] Where 5 or more multifamily dwelling units are constructed on a building site, provide readily accessible area(s) that serve the entire building or buildings on the site and is identified for the depositing, storage and collection of non-hazardous materials for recycling, including (at a minimum) paper corrugated cardboard, glass, plastics, organic waste, and metals. Code Compliance Checklist - CALGREEN RESIDENTIAL Page Chain of custody certifications. Product labeled and invoiced as meeting the Composite Wood Products regulation per California Code of	the r and ng or er, 4 of 4
	waste facilities that can provide verifiable documentation that the percentage of construction water material diverted from the landfill complies with this section. Building Maintenance and Operation A.410.1 Operation and maintenance manual. At the time of final inspection, a manual which includes all of information listed in CALGreen section 4.410.1 items 1 through 10 shall be presented to the building inspector placed in the building, for the building occupant or owner, prior to final inspection sign off. 4.410.2 Recycling by occupants. [N] Where 5 or more multifamily dwelling units are constructed on a building site, provide readily accessible area(s) that serve the entire building or buildings on the site and is identified for the depositing, storage and collection of non-hazardous materials for recycling, including (at a minimum) paper corrugated cardboard, glass, plastics, organic waste, and metals. Code Compliance Checklist - CALGREEN RESIDENTIAL Page • Chain of custody certifications. • Product labeled and invoiced as meeting the Composite Wood Products regulation per California Code of Regulations, Title 17. • Exterior grade products marked as meeting the PS-1 or PS-2 standards of the Engineered Wood Associathe Australian ASINZS 2269, European 636 3S, or Canadian CSA 0121, 0151, 0153 and 0325 standards.	the r and ng or er,
	waste facilities that can provide verifiable documentation that the percentage of construction water material diverted from the landfill complies with this section. Building Maintenance and Operation 4.410.1 Operation and maintenance manual. At the time of final inspection, a manual which includes all of the information listed in CALGreen section 4.410.1 items 1 through 10 shall be presented to the building inspector placed in the building, for the building occupant or owner, prior to final inspection sign off. 4.410.2 Recycling by occupants. [N] Where 5 or more multifamily dwelling units are constructed on a building site, provide readily accessible area(s) that serve the entire building or buildings on the site and is identified for the depositing, storage and collection of non-hazardous materials for recycling, including (at a minimum) paper corrugated cardboard, glass, plastics, organic waste, and metals. Code Compliance Checklist - CALGREEN RESIDENTIAL Page • Chain of custody certifications. • Product labeled and invoiced as meeting the Composite Wood Products regulation per California Code of Regulations, Title 17. • Exterior grade products marked as meeting the PS-1 or PS-2 standards of the Engineered Wood Associate the Australian ASINZS 2269, European 636 3S, or Canadian CSA 0121, 0151, 0153 and 0325 standards. • Other methods acceptable to the City of Berkeley. Interior Moisture Control 1. 4.505.2.1 Capillary break. Concrete slab foundations required to have a vapor retarder shall have a capillary	the r and ng or er, 4 of 4
	waste facilities that can provide verifiable documentation that the percentage of construction water material diverted from the landfill complies with this section. Building Maintenance and Operation A.410.1 Operation and maintenance manual. At the time of final inspection, a manual which includes all of information listed in CAL Green section 4.410.1 items 1 through 10 shall be presented to the building inspecto placed in the building, for the building occupant or owner, prior to final inspection sign off. 4.410.2 Recycling by occupants. [M] Where 5 or more multifamily dwelling units are constructed on a buildi site, provide readily accessible area(s) that serve the entire building or buildings on the site and is identified for the depositing, storage and collection of non-hazardous materials for recycling, including (at a minimum) paper corrugated cardboard, glass, plastics, organic waste, and metals. Code Compliance Checklist - CALGREEN RESIDENTIAL Page Chain of custody certifications. Product labeled and invoiced as meeting the Composite Wood Products regulation per California Code of Regulations, Title 17. Exterior grade products marked as meeting the PS-1 or PS-2 standards of the Engineered Wood Associathe Australian ASINZS 2269, European 636 3S, or Canadian CSA 0121, 0151, 0153 and 0325 standards. Other methods acceptable to the City of Berkeley. Interior Moisture Control 4.505.2.1 Capillary break. Concrete slab foundations required to have a vapor retarder shall have a capillary break installed in compliance with at least one of the following: A 4-inch-thick base of ½ inch or larger clean aggregate shall be provided with a vapor retarder in direct co with concrete and a concrete mix design, which will address bleeding, shrinkage, and curling shall be use	the r and ng or er, 4 of 4
	waste facilities that can provide verifiable documentation that the percentage of construction water material diverted from the landfill complies with this section. Building Maintenance and Operation A410.1 Operation and maintenance manual. At the time of final inspection, a manual which includes all of information listed in CALGreen section 4.410.1 items 1 through 10 shall be presented to the building inspector placed in the building, for the building occupant or owner, prior to final inspection sign off. 4.410.2 Recycling by occupants. [N] Where 5 or more multifamily dwelling units are constructed on a buildiste, provide readily accessible area(s) that serve the entire building or buildings on the site and is identified for the depositing, storage and collection of non-hazardous materials for recycling, including (at a minimum) paper corrugated cardboard, glass, plastics, organic waste, and metals. Code Compliance Checklist - CALGREEN RESIDENTIAL Page • Chain of custody certifications. • Product labeled and invoiced as meeting the Composite Wood Products regulation per California Code of Regulations, Title 17. • Exterior grade products marked as meeting the PS-1 or PS-2 standards of the Engineered Wood Associate the Australian ASINZS 2269, European 636 3S, or Canadian CSA 0121, 0151, 0153 and 0325 standards. • Other methods acceptable to the City of Berkeley. Interior Moisture Control 4.505.2.1 Capillary break. Concrete slab foundations required to have a vapor retarder shall have a capillary break installed in compliance with at least one of the following: • A 4-inch-thick base of ½ inch or larger clean aggregate shall be provided with a vapor retarder in direct cowith concrete and a concrete mix design, which will address bleeding, shrinkage, and curling shall be use to the certification. Other equivalent methods approved by the City of Berkeley. • A slab design specified by a licensed design professional.	the r and ng or er, 4 of 4
	waste facilities that can provide verifiable documentation that the percentage of construction water material diverted from the landfill complies with this section. Building Maintenance and Operation 4.410.1 Operation and maintenance manual. At the time of final inspection, a manual which includes all of information listed in CALGreen section 4.410.1 items 1 through 10 shall be presented to the building inspecto placed in the building, for the building occupant or owner, prior to final inspection sign off. 4.410.2 Recycling by occupants. [N] Where 5 or more multifamily dwelling units are constructed on a building step provide readily accessible area(s) that serve the entire building or buildings on the site and is identified for the depositing, storage and collection of non-hazardous materials for recycling, including (at a minimum) paper corrugated cardboard, glass, plastics, organic waste, and metals. Code Compliance Checklist - CALGREEN RESIDENTIAL Page * Chain of custody certifications. Product labeled and invoiced as meeting the Composite Wood Products regulation per California Code of Regulations, Title 17. * Exterior grade products marked as meeting the PS-1 or PS-2 standards of the Engineered Wood Associate the Australian ASINZS 2269, European 636 3S, or Canadian CSA 0121, 0151, 0153 and 0325 standards. * Other methods acceptable to the City of Berkeley. Interior Moisture Control 1.4505.2.1 Capillary break. Concrete slab foundations required to have a vapor retarder shall have a capillary break installed in compliance with at least one of the following: * A 4-inch-thick base of ½ inch or larger clean aggregate shall be provided with a vapor retarder in direct co with concrete and a concrete mix design, which will address bleeding, shrinkage, and curling shall be use. Other equivalent methods approved by the City of Berkeley. A slab design specified by a licensed design professional. 1.4505.3 Moisture content of building materials. Building materials with visible signs of water damage shall	the r and ng or er, 4 of 4 distinct d.
	waste facilities that can provide verifiable documentation that the percentage of construction water material diverted from the landfill complies with this section. Building Maintenance and Operation 4.410.1 Operation and maintenance manual. At the time of final inspection, a manual which includes all of information listed in CALGreen section 4.410.1 items 1 through 10 shall be presented to the building inspecto placed in the building, for the building occupant or owner, prior to final inspection sign off. 4.410.2 Recycling by occupants. [N] Where 5 or more multifamily dwelling units are constructed on a building site, provide readily accessible area(s) that serve the entire building or buildings on the site and is identified for the depositing, storage and collection of non-hazardous materials for recycling, including (at a minimum) paper corrugated cardboard, glass, plastics, organic waste, and metals. Code Compliance Checklist - CALGREEN RESIDENTIAL Page • Chain of custody certifications. • Product labeled and invoiced as meeting the Composite Wood Products regulation per California Code of Regulations, Title 17. • Exterior grade products marked as meeting the PS-1 or PS-2 standards of the Engineered Wood Associate the Australian ASINZS 2269, European 636 35, or Canadian CSA 0121, 0151, 0153 and 0325 standards. • Other methods acceptable to the City of Berkeley. Interior Moisture Control 4.505.2.1 Capillary break. Concrete slab foundations required to have a vapor retarder shall have a capillary break installed in compliance with at least one of the following: • A4-inch-thick base of ½ inch or larger clean aggregate shall be provided with a vapor retarder in direct conditions with a compliance with at least one of the following: • A4-inch-thick base of ½ inch or larger clean aggregate shall be provided with a vapor retarder in direct conditions with a compliance with at least one of the following: • A4-inch-thick base of ½ inch or larger clean aggregate shall be provided with a vapor retarder in	the r and ng or er, 4 of 4 distinct d.
	waste facilities that can provide verifiable documentation that the percentage of construction water material diverted from the landfill complies with this section. Building Maintenance and Operation A.410.1 Operation and maintenance manual. At the time of final inspection, a manual which includes all off information listed in CALGreen section 4.410.1 items 1 through 10 shall be presented to the building inspecto placed in the building, for the building occupant or owner, prior to final inspection sign off. 4.410.2 Recycling by occupants. [N] Where 5 or more multifamily dwelling units are constructed on a building site, provide readily accessible area(s) that serve the entire building or buildings on the site and is identified for the depositing, storage and collection of non-hazardous materials for recycling, including (at a minimum) pape corrugated cardboard, glass, plastics, organic waste, and metals. Product labeled and invoiced as meeting the Composite Wood Products regulation per California Code of Regulations, Title 17. Exterior grade products marked as meeting the PS-1 or PS-2 standards of the Engineered Wood Associathe Australian ASINZS 2269, European 636 3S, or Canadian CSA 0121, 0151, 0153 and 0325 standards. Other methods acceptable to the City of Berkeley. Interior Moisture Control 4.505.2.1 Capillary break. Concrete slab foundations required to have a vapor retarder shall have a capillary break installed in compliance with at least one of the following: A 4-inch-thick base of ½ inch or larger clean aggregate shall be provided with a vapor retarder in direct co with concrete and a concrete mix design, which will address bleeding, shrinkage, and curling shall be use. Other equivalent methods approved by the City of Berkeley. A slab design specified by a licensed design professional. 4.505.3 Moisture content of building materials. Building materials with visible signs of water damage shall be installed. Wall and floor framing shall not be enclosed when the framing members exceed 19 percen	the r and ng or er, 4 of 4 dintact d. not ture
	waste facilities that can provide verifiable documentation that the percentage of construction water material diverted from the landfill complies with this section. Building Maintenance and Operation 4.10.1 Operation and maintenance manual. At the time of final inspection, a manual which includes all of information listed in CALGreen section 4.110.1 items 1 through 10 shall be presented to the building inspector placed in the building, for the building occupant or owner, prior to final inspection sign off. 4.10.2 Recycling by occupants. [N] Where 5 or more multifamily dwelling units are constructed on a buildi site, provide readily accessible area(s) that serve the entire building or buildings on the site and is identified for the depositing, storage and collection of non-hazardous materials for recycling, including (at a minimum) paper corrugated cardboard, glass, plastics, organic waste, and metals. Code Compliance Checklist - CALGREEN RESIDENTIAL Page • Chain of custody certifications. • Product labeled and invoiced as meeting the Composite Wood Products regulation per California Code of Regulations, Title 17. • Exterior grade products marked as meeting the PS-1 or PS-2 standards of the Engineered Wood Associate haustralian ASINES 2269, European 636 3S, or Canadian CSA 0121, 0151, 0153 and 0325 standards. • Other methods acceptable to the City of Berkeley. Interior Moisture Control 4.505.2.1 Capillary break. Concrete slab foundations required to have a vapor retarder shall have a capillary break installed in compliance with at least one of the following: • A 4-inch-thick base of ½ inch or larger clean aggregate shall be provided with a vapor retarder in direct co with concrete and a concrete mix design, which will address bleeding, shrinkage, and curling shall be use the city of Berkeley. • A slab design specified by a licensed design professional. 4.505.3 Moisture content of building materials. Building materials with visible signs of water damage shall be installed. Wall and floor framing shal	the r and ng or er, 4 of 4 dintact d. not ture
	waste facilities that can provide verifiable documentation that the percentage of construction water material diverted from the landfill complies with this section. Building Maintenance and Operation	the r and ng or er, 4 of 4 of 4 of ture and in or rying ring:

combination.

A humidity control may be a separate component to the exhaust fan and is not required to be integral.

4.507.2 Heating and air-conditioning system design. Heating and air-conditioning systems shall be sized,

Calculation), ASHRAE handbooks or other equivalent design software or methods.

temperatures necessary to ensure the systems function are acceptable

handbooks or other equivalent design software or methods.

Selection) or other equivalent design software or methods.

designed and have their equipment selected using the following methods, except when the use of alternate design

• The heat loss and heat gain is established according to ANSI/ ACCA 2 Manual J-2011 (Residential Load

Duct systems are sized according to ANSI/ACCA 1 Manual D-2014 (Residential Duct Systems), ASHRAE

• Select heating and cooling equipment according to ANSI/ACCA 3 Manual S-2011 (Residential Equipment

Note: For the purposes of this section a bathroom is a room which contains a bathtub, shower, or tub/shower

Last Revised 03/31/18 Checklist - CALGREEN RESIDENTIAL Page 2 of 4 **Code Compliance Checklist** CONSERVATION CALGREEN RESIDENTIAL ets. The effective flush volume of all water closets shall not exceed 1.28 gallons per flush. shall be certified to the performance criteria of the US EPA WaterSense Specification for e effective flush volume of wall-mounted urinals shall not exceed 0.125 gallons per flush. The **Building and Safety** Project Information of all other urinals shall not exceed 0.5 gallons per flush. **Permit Service Center** owerhead. Showerheads shall have a maximum flow rate of not more than 2.0 gallons Newly constructed howerheads shall be certified to the performance criteria of the US EPA WaterSense residential buildings and New Building [N] Addition [A] Alteration additions or alterations showerheads serving one shower. When a shower is served by more than one to existing residential nined flow rate of all showerheads and/or other shower outlets controlled by a single valve buildings, which allons per minute at 80 psi, or the shower shall be designed to allow only one shower outlet increase an existing time. Note: A hand-held shower shall be considered a showerhead. PLANNING AND DESIGN dwelling's conditioned area, volume, or size are ial lavatory faucets. The maximum flow rate of residential lavatory faucets shall not exceed 4.106.2 Stormwater drainage and retention during construction. In order to subject to the provisions e at 60 psi. The minimum flow rate of residential lavatory faucets shall not be less than 0.8 manage stormwater drainage during construction, one or more of the following of the California Green measures shall be implemented to prevent flooding of adjacent property, prevent Building Standards erosion and retain soil runoff on the site: faucets in common and public use areas. The maximum flow rate of lavatory faucets Code. This checklist nd public use areas (outside of dwelling or sleeping units) shall not exceed 0.5 gallons per · Retention basins of sufficient size shall be utilized to retain storm water on the site. is provided by the City of Berkeley in order to • Where stormwater is conveyed to a public drainage system, collection point, gutter faucets. Metering faucets shall not deliver more than 0.25 gallons per cycle. or similar disposal method, water shall be filtered by use of a barrier system, wattle demonstrate compliance with the code and or other approved method. aucets. The maximum flow rate of kitchen faucets shall not exceed 1.8 gallons per minute at s may temporarily increase the flow above the maximum rate, but not to exceed 2.2 gallons facilitate permit Stormwater management requirements per Title 17 of the City of Berkeley and must default to a maximum flow rate of 1.8 gallons per minute at 60 psi. Where complying approval. Municipal Code. e, aerators or other means may be used to achieve reduction. 4.106.3 Grading and Paving. Construction plans shall indicate how the site grading or Instructions: drainage system will manage all surface water flows. 1. Read and understand able water use in landscape areas. [N] New residential developments with an aggregate Electrical Vehicle Charging the requirements of all to or greater than 500 square feet shall comply with one of the following: mandatory measures 4.106.4.1 New one- and two-family dwellings and townhouses with attached Department of Water Resources' Model Water Efficient Landscape Ordinance (MWELO). listed in this checklist. private garages. [N] For each dwelling unit, install a listed raceway to accommodate regate landscape areas less than 2,500 square feet may comply with the MWELO's Appendix a dedicated 208/240-volt branch circuit. The service panel and/or subpanel shall 2. Mark all mandatory mpliance Option. provide capacity to install a 40-ampere minimum dedicated branch circuit and space(s) measures that are reserved to permit installation of a branch circuit overcurrent protective device. ATION AND RESOURCE EFFICIENCY applicable to the 4.106.4.1.1 Identification. [N] The service panel or subpanel circuit directory shall proposed project. Reduced Maintenance identify the overcurrent protective device space(s) reserved for future EV charging as fing. Annular spaces around pipes, electric cables, conduits, or other openings in sole/bottom 3. Coordinate the "EV CAPABLE". The raceway termination location shall be permanently and visibly s shall be protected against the passage of rodents by closing such openings with cement construction drawings marked as "EV CAPABLE". onry or similar method acceptable by the City of Berkeley. with the mandatory 4.106.4.2 New multifamily dwellings. [N] Where 17 or more multifamily dwelling units duction, Disposal and Recycling measures. are constructed on a building site, 3 percent of the total number of parking spaces waste management. Recycle and/or salvage for reuse a minimum of 65 percent of the provided for all types of parking facilities, but in no case less than one, shall be electric 4. Incorporate this uction and demolition waste and a minimum of 100 percent of excavated soil, land-clearing vehicle charging spaces (EV spaces) capable of supporting future EVSE. Calculations checklist into the asphalt. Provide a completed City of Berkeley Construction Waste Management Plan. Use for the required number of EV spaces shall be rounded up to the nearest whole submitted set of an provide verifiable documentation that the percentage of construction water material construction drawings Ifill complies with this section. 4.106.4.2.1 EV Space Locations. Construction documents shall indicate the location on full sized sheets. of future EV spaces. nd Operation nd maintenance manual. At the time of final inspection, a manual which includes all of the 4.106.4.2.5 Identification. [N] The service panel or subpanel circuit directory shall identify the overcurrent protective device space(s) reserved for future EV charging ALGreen section 4.410.1 items 1 through 10 shall be presented to the building inspector and , for the building occupant or owner, prior to final inspection sign off. purposes as "EV CAPABLE" in accordance with the California Electrical Code. **Building and Safety** 1947 Center St. 3rd floor occupants. [N] Where 5 or more multifamily dwelling units are constructed on a building ccessible area(s) that serve the entire building or buildings on the site and is identified for Berkeley, CA 94704 510-981-7440 TDD 7450 ge and collection of non-hazardous materials for recycling, including (at a minimum) paper, permits@cityofberkeley.info glass, plastics, organic waste, and metals.

Page 4 of 4

Code Compliance Checklist - CALGREEN RESIDENTIAL Page 3 of 4 **ENVIRONMENTAL QUALITY 4.503.1 General.** Any installed gas fireplace shall be a direct vent sealed-combustion type. Any installed woodstove or pellet stove shall comply with U.S. EPA New Source Performance Standards (NSPS) emission limits as applicable, and shall have a permanent label indicating they are certified to meet the emission limits.

ventilating equipment, all duct and other related air distribution component openings shall be covered with tape, plastic, sheetmetal or other methods acceptable by the City of Berkeley to reduce the amount of water, dust and debris, which may enter the system. Pollutant Control: Finish Material 4.504.2.1 Adhesives, sealants and caulks. Adhesives, sealants and caulks used on the project shall comply with CALGreen Table 4.504.1 or 4.504.2 for VOC limits. Product units which do not weigh more than 1 pound and

4.504.1 Covering of new duct openings and protection of mechanical equipment during construction. At the time of rough installation, during storage on the construction site and until final startup of the heating, cooling and

do not consist of more than 16 fluid ounces shall comply with statewide VOC standards and California Code of Regulations, Title 17. 4.504.2.2 Paints and Coatings. Architectural paints and coatings shall comply with VOC limits in CALGreen Table

4.504.2.3 Aerosol paints and coatings. Aerosol paints and coatings shall meet the Product-weighted MIR Limits for ROC in California Code of Regulations, Title 17 and the Bay Area Air Quality Management District percent VOC by weight of product limits of Regulation 8, Rule 49.

4.504.3 Carpet systems. All carpet installed in the building interior shall meet the testing and product requirements of one of the following: Carpet and Rug Institute's Green Label Plus Program.

 California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers," Version 1.1, February 2010 (also known as Specification 01350.) NSF/ANSI 140 at the Gold level. Scientific Certifications Systems Indoor Advantage™ Gold.

4.504.3.1 Carpet cushion. All carpet cushion installed in the building interior shall meet the requirements of the Carpet and Rug Institute's Green Label program.

Pollutant Control: Mechanical Systems

4.504.3.2 Carpet Adhesive. All carpet adhesives shall meet the requirements of CALGreen Table 4.504.1. Resilient Flooring 4.504.4 Resilient flooring systems. Where resilient flooring is installed, at least 80 percent of the floor area

receiving resilient flooring shall comply with one or more of the following: • VOC emission limits defined in the Collaborative for High Performance Schools (CHPS) High Performance

Products Database. • Products compliant with CHPS criteria certified under the Greenguard Children & Schools program.

 Certification under the Resilient Floor Covering Institute (RFCI) FloorScore program. • Meet the California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile

Organic Chemical Emissions from Indoor Sources Using Environmental Chambers," Version 1.1, February 2010 (also known as Specification 01350). Composite Wood Products

4.504.5 Composite wood products. Hardwood plywood, particleboard and medium density fiberboard composite

wood products used on the interior or exterior of the building shall meet the requirements for formaldehyde as shown in CALGreen Table 4.504.5. 4.504.5.1 Documentation. Verification of compliance shall be provided as requested by the City of Berkeley. Documentation shall include at least one of the following:

Product certifications and specifications.

Date Scale Drawn

City of Berkeley's Pollution Prevention - It's Part of the Plan

Make sure your crews and subs do the job right!

Runoff from streets and other paved areas is a major source of pollution and damage to creeks and the San

and crews plan ahead to keep dirt, debris, and other construction waste away from storm drains and local

creeks. Following these guidelines and the project specifications will ensure your compliance with City of

Francisco Bay. Construction activities can directly affect the health of creeks and the Bay unless contractors

Materials storage & spill cleanup

Non-hazardous materials management

- ✓ Sand, dirt, and similar materials must be stored at least 10 feet (3 meters) from catch basins. All construction material must be covered with a tarp and contained with a perimeter control during wet weather or when rain is forecasted or when not actively being used within 14 days.
- ✓ Use (but don't overuse) reclaimed water for dust control as needed.
- ✓ Sweep or vacuum streets and other paved areas daily. Do not wash down streets or work areas with water!
- Recycle all asphalt, concrete, and aggregate base material from demolition activities Comply with City of Berkeley Ordinances for recycling construction materials, wood, gyp board, pipe, etc.
- ✓ Check dumpsters regularly for leaks and to make sure they are not overfilled. Repair or replace leaking dumpsters promptly.
- Cover all dumpsters with a tarp at the end of every work day or during wet weather.

Hazardous materials management

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

Spill prevention and control

- ✓ Keep a stockpile of spill cleanup materials (rags, absorbents, etc.) available at the construction site at all times.
- When spills or leaks occur, contain them immediately and be particularly careful to prevent leaks and spills from reaching the gutter, street, or storm drain.

 Never wash spilled material into a gutter, street, storm drain, or creek!
- Dispose of all containment and cleanup materials properly.
- Report any hazardous materials spills immediately! Dial 911 or the City of Berkeley's Public Works Department by dialing 311

Construction Entrances and Perimeter

- Establish and maintain effective perimeter controls and stabilize all construction entrances and exits to sufficiently control erosion and sediment discharges from site and tracking off site.
- ✓ Sweep or vacuum any street tracking immediately and secure sediment source to prevent further tracking.

Vehicle and equipment maintenance & cleaning

Berkeley requirements.

- ✓ Inspect vehicles and equipment for leaks
 frequently. Use drip pans to catch leaks
 until repairs are made; repair leaks
 promptly.
 ✓ Fuel and maintain vehicles on site only
- in a bermed area or over a drip pan that is big enough to prevent runoff.
- If you must clean vehicles or equipment on site, clean with water only in a bermed area that will not allow rinse water to run into gutters, streets, storm drains, or creeks.
- Do not clean vehicles or equipment on-site using soaps, solvents, degreasers, steam cleaning equipment, etc.

Earthwork & contaminated soils

- ✓ Keep excavated soil on the site where it will not collect in the street.
- ✓ Transfer to dump trucks should take place on the site, not in the street.
- ✓ Use fiber rolls, silt fences, or other control measures to minimize the flow of silt off the site.



- Earth moving activities
 are only allowed during dry weather
 by permit and as approved by the City
 Inspector in the Field.
 Mature vegetation is the best form of erosion control. Minimize disturbance to
- existing vegetation whenever possible.

 If you disturb a slope during construction, prevent erosion by securing the soil with erosion control fabric, or seed with fast-growing grasses as soon as possible. Place

fiber rolls down-slope until soil is secure.

✓ If you suspect contamination (from site history, discoloration, odor, texture, abandoned underground tanks or pipes, or buried debris), call the Engineer for help in determining what should be done, and manage disposal of cntaminated soil according to their instructions.

Dewatering operations

- ✓ Effectively manage all run-on, all runoff within the site, and all runoff that discharges from the site. Run-on from off site shall be directed away from all disturbed areas or shall collectively be in compliance.
- Reuse water for dust control, irrigation, or another on-site purpose to the greatest extent possible.
- Be sure to notify and obtain approval from the Engineer before discharging water to a street, gutter, or storm drain. Filtration or diversion through a basin, tank, or sediment trap may be required.
- ✓ In areas of known contamination, testing is required prior to reuse or discharge of groundwater.

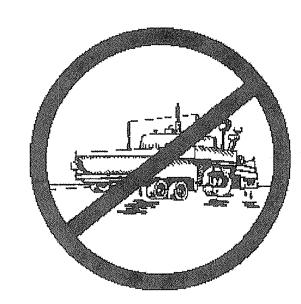
 Consult with the Engineer to determine what testing is required and how to interpret results.

 Contaminated groundwater must be treated or hauled off-site for proper disposal.

Saw cutting

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

Paving/asphalt work



- ✓ Always cover storm drain inlets and manholes when paving or applying seal coat, tack coat, slurry seal, or fog seal.
- ▶ Protect gutters, ditches, and drainage courses
- ✓ Do not sweep or wash down excess sand from sand sealing into gutters, storm drains, or creeks. Collect sand and return it to the

stockpile, or dispose of it as trash.

with sand/gravel bags, or earthen berms.

✓ Do not use water to wash down fresh asphalt concrete pavement.

Concrete, grout, and mortar storage & waste disposal

- Store concrete, grout, and mortar under cover, on pallets, and away from drainage areas. These materials must never reach a storm drain.
- ✓ Wash out concrete equipment/trucks off-site or into contained washout areas that will not allow discharge of wash water onto the underlying soil or onto the surrounding areas.



Collect the wash water from washing exposed aggregate concrete and remove it for appropriate disposal off site.

Painting

- Never rinse paint brushes or
 materials in a gutter or street!
 Paint out excess water-based paint before rinsing brushes,
 rollers, or containers in a sink.
- Paint out excess oil-based paint before cleaning brushes in thinner.
 Filter paint thinners and solvents for reuse whenever possible.
 Dispose of oil-based paint sludge and unusable thinner as
- Dispose of oil-based paint sludge and unusable thinner as hazardous waste.

Landscape Materials

- Contain, cover, and store on pallets all stockpiled landscape materials (mulch, compost, fertilizers, etc.) during wet weather or when rain is forecasted or when not actively being used within 14 days.
- ✓ Discontinue the application of any erodible landscape material within 2 days of forecasted rain and during wet weather.

For references and more detailed information: www.cleanwaterprogram.org www.cabmphandbooks.com

WORK PUBLIC **PREVENTION**

Storm drain polluters may be liable for fines of \$10,000 or more per day!

FINDINGS AND CONDITIONS

2234 Haste Street - Brower Houses and David Brower Redwood Tree

Structural Alteration Permit #LMSAP2016-0002

To replace the building foundation, to introduce new windows and light wells at the basement level, and to modify an existing, projecting deck on an upper story of a multi-unit residential City Landmark building.

CEQA FINDINGS

1. The project is categorically exempt from the provisions of the California Environmental Quality Act (CEQA, Public Resources Code §21000, et seq. and California Code of Regulations, §15000, et seq.) pursuant to Section 15331 of the CEQA Guidelines ("Historic Resource Restoration/Rehabilitation"). Furthermore, none of the exceptions in CEQA Guidelines Section 15300.2 apply, as follows: (a) the site is not located in an environmentally sensitive area, (b) there are no cumulative impacts, (c) there are no significant effects, (d) the project is not located near a scenic highway, (e) the project site is not located on a hazardous waste site pursuant to Government Code Section 65962.5, and (f) the project will not affect any historical resource.

SECRETARY OF THE INTERIOR'S STANDARDS FINDINGS

Regarding the Secretary of the Interior's Standards for Rehabilitation, the Landmarks Preservation Commission of the City of Berkeley makes the following findings:

- 1. The subject property will continue its residential use with this proposed rehabilitation project.
- 2. The project does not include removal or alteration of distinctive materials, characterdefining features or those "to-be-preserved," as identified in the 2008 City Landmarks designation for this site.
- 3. The proposed rehabilitation project for the rear building at this City Landmark site would render it -- as well as the front building -- primarily intact and able to convey their unique identities as physical records of time. No introduction of conjectural features has been proposed.
- 4. No changes to this property that have acquired historic significance in their own right are the subject of this proposal.
- 5. Distinctive features, such as the building's wood shingles, will be preserved with this proposal. Shingles which have deteriorated will be replaced in kind. No other

- distinctive materials, finished or construction techniques, or examples of craftsmanship, would be removed or affected by this project.
- 6. Deteriorated historic features will be repaired rather than replaced, as conditioned herein. Where the severity of deterioration requires replacement of a distinctive feature, the new feature will match the old in design, color, texture, and, where possible, materials.
- 7. Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials are prohibited, as conditioned herein.
- 8. Archeological resources are not known to exist at this site. However, as conditioned herein, procedures and measures for protection will be untaken if resources are unexpectedly discovered.
- 9. None of the aspects of this proposal are expected to result in the destruction of historic materials, features and spatial relationships that characterize this City Landmark property. New work, such as basement-level windows and guardrails, will be compatible with and yet differentiated in style from the Victorian-era construction.
- 10. The proposed new construction will be undertaken in such a manner that, if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

LANDMARK PRESERVATION ORDINANCE FINDINGS

- 1. As required by Section 3.24.260 of the Landmarks Preservation Ordinance, the Commission finds that proposed work is appropriate for and consistent with the purposes of the Ordinance, and will preserve and enhance the characteristics and features specified in the designation for this property. Specifically:
 - The proposed project includes a limited scope of work that will result in exterior changes, and none of these changes are expected to permanently or significantly impair the integrity, or alter the character-defining features, of this Victorian-era building.

STANDARD CONDITIONS

The following conditions, as well as all other applicable provisions of the Landmarks Preservation Ordinance, apply to this Permit:

1. Conditions Shall be Printed on Plans

The conditions of this Permit shall be printed on the *second* sheet of each plan set submitted for a building permit pursuant to this Permit, under the title 'Structural Alteration Permit Conditions'. *Additional sheets* may also be used if the *second* sheet is not of sufficient size to list all of the conditions. The sheet(s) containing the conditions shall be of the same size as those sheets containing the construction drawings; 8-1/2" by 11" sheets are not acceptable.

2. Plans and Representations Become Conditions

Except as specified herein, the site plan, floor plans, building elevations and/or any additional information or representations, whether oral or written, indicating the proposed structure or manner of operation submitted with an application or during the approval process are deemed conditions of approval.

3. Subject to All Applicable Laws and Regulations

The approved use and/or construction is subject to, and shall comply with, all applicable City Ordinances and laws and regulations of other governmental agencies. Prior to construction, the applicant shall identify and secure all applicable permits from the Building and Safety Division, Public Works Department and other affected City divisions and departments.

4. Exercise and Lapse of Permits (Section 23B.56.100)

- B. A permit for the construction of a building or structure is deemed exercised when a valid City building permit, if required, is issued, and construction has lawfully commenced.
- A. A permit may be declared lapsed and of no further force and effect if it is not exercised within one year of its issuance, except that permits for construction or alteration of structures or buildings may not be declared lapsed if the permittee has: (1) applied for a building permit; or, (2) made substantial good faith efforts to obtain a building permit and begin construction, even if a building permit has not been issued and/or construction has not begun.

5. Indemnification Agreement

The applicant shall hold the City of Berkeley and its officers harmless in the event of any legal action related to the granting of this Permit, shall cooperate with the City in defense of such action, and shall indemnify the City for any award of damages or attorneys fees that may result.

ADDITIONAL CONDITIONS

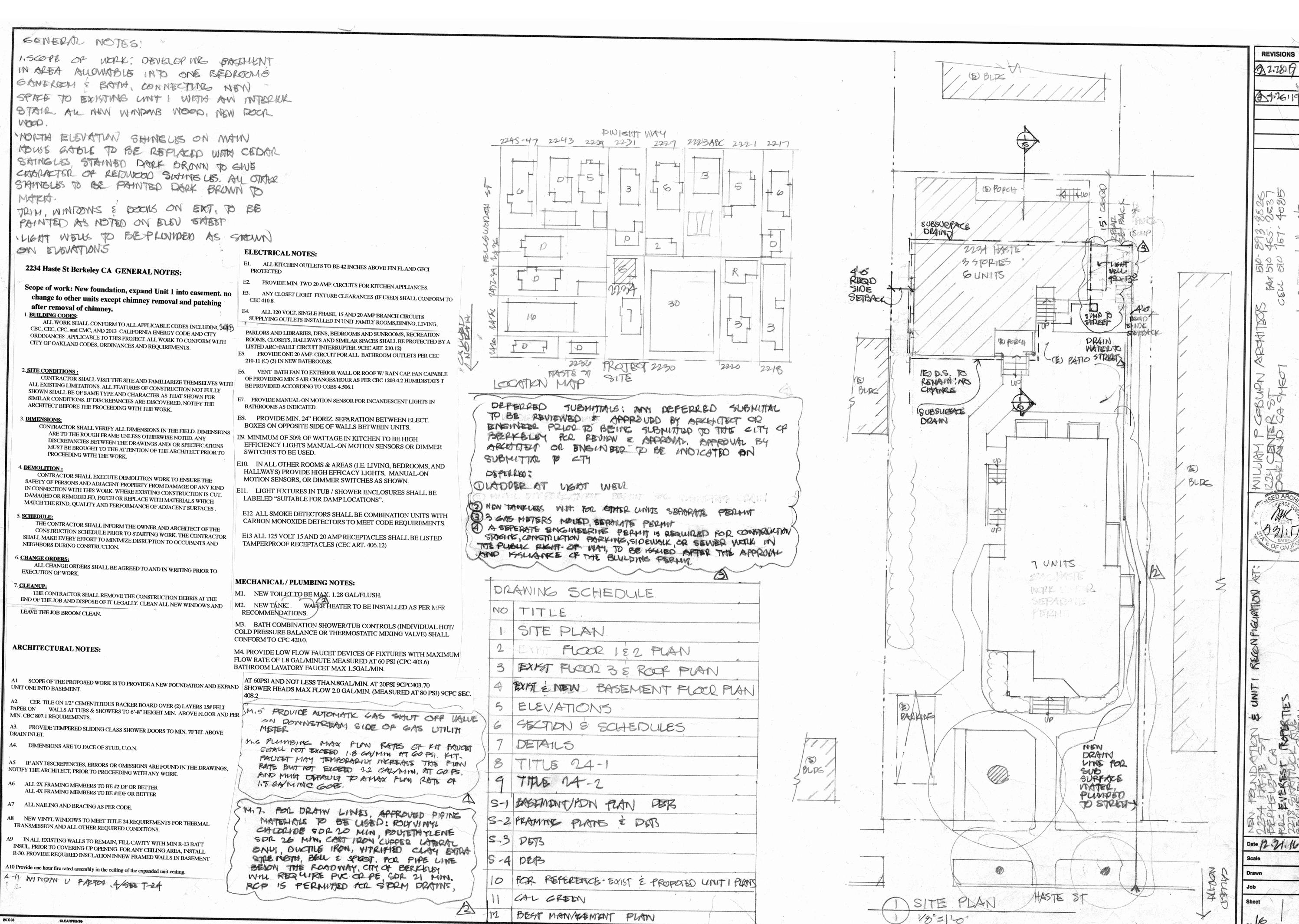
The following additional conditions are attached to this Permit:

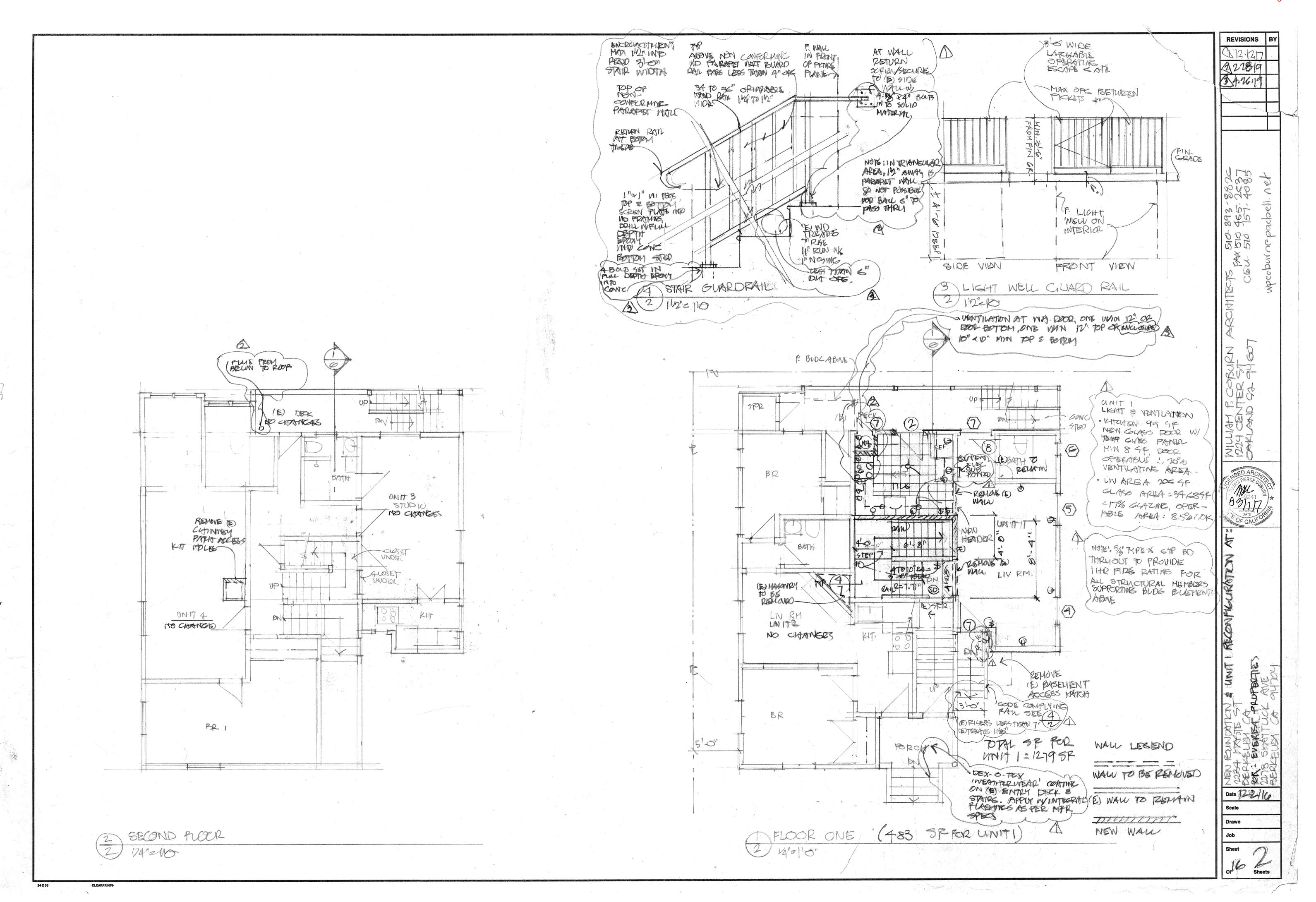
- 6. Halt Work/Unanticipated Discovery of Tribal Cultural Resources. In the event that cultural resources of Native American origin are identified during construction, all work within 50 feet of the discovery shall be redirected. The project applicant and project construction contractor shall notify the City Planning Department within 24 hours. The City will again contact any tribes who have requested consultation under AB 52, as well as contact a qualified archaeologist, to evaluate the resources and situation and provide recommendations. If it is determined that the resource is a tribal cultural resource and thus significant under CEQA, a mitigation plan shall be prepared and implemented in accordance with State guidelines and in consultation with Native American groups. If the resource cannot be avoided, additional measures to avoid or reduce impacts to the resource and to address tribal concerns may be required.
- **7. Archaeological Resources** (*Ongoing throughout demolition, grading, and/or construction*). Pursuant to CEQA Guidelines section 15064.5(f), "provisions for historical or unique archaeological resources accidentally discovered during construction" should be instituted. Therefore:
 - A. In the event that any prehistoric or historic subsurface cultural resources are discovered during ground disturbing activities, all work within 50 feet of the resources shall be halted and the project applicant and/or lead agency shall consult with a qualified archaeologist, historian or paleontologist to assess the significance of the find.
 - B. If any find is determined to be significant, representatives of the project proponent and/or lead agency and the qualified professional would meet to determine the appropriate avoidance measures or other appropriate measure, with the ultimate determination to be made by the City of Berkeley. All significant cultural materials recovered shall be subject to scientific analysis, professional museum curation, and/or a report prepared by the qualified professional according to current professional standards.
 - C. In considering any suggested measure proposed by the qualified professional, the project applicant shall determine whether avoidance is necessary or feasible in light of factors such as the uniqueness of the find, project design, costs, and other considerations.
 - D. If avoidance is unnecessary or infeasible, other appropriate measures (e.g., data recovery) shall be instituted. Work may proceed on other parts of the project site while mitigation measures for cultural resources is carried out.
 - E. If significant materials are recovered, the qualified professional shall prepare a report on the findings for submittal to the Northwest Information Center.
- 8. Human Remains (Ongoing throughout demolition, grading, and/or construction). In the event that human skeletal remains are uncovered at the project site during ground-disturbing activities, all work shall immediately halt and the Alameda County Coroner shall be contacted to evaluate the remains, and following the procedures and protocols pursuant to Section 15064.5 (e)(1) of the CEQA Guidelines. If the County Coroner determines that the remains are Native American, the City shall contact the California Native American Heritage Commission (NAHC), pursuant to subdivision (c) of Section 7050.5 of the Health and Safety Code, and all excavation and site preparation activities

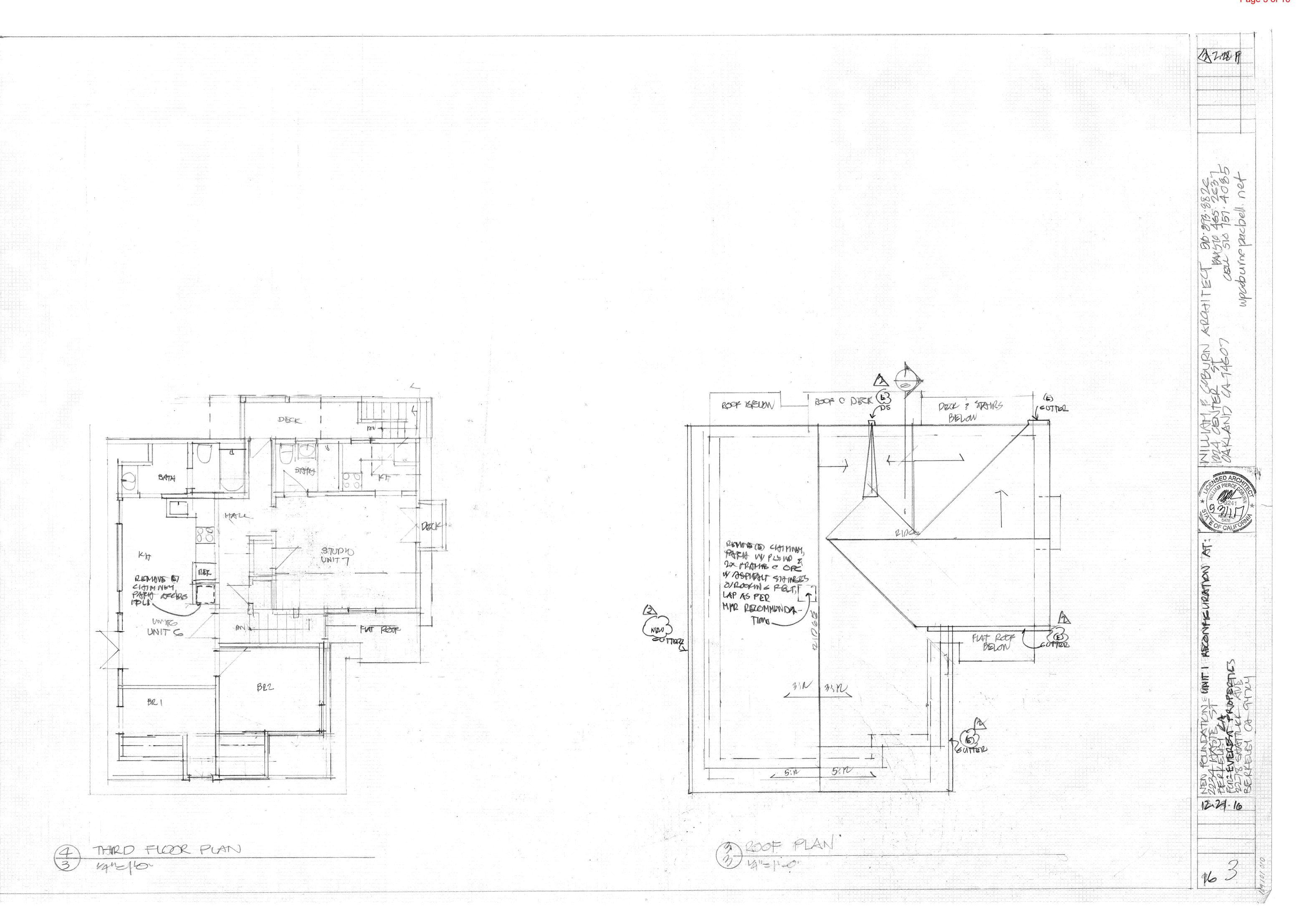
shall cease within a 50-foot radius of the find until appropriate arrangements are made. If the agencies determine that avoidance is not feasible, then an alternative plan shall be prepared with specific steps and timeframe required to resume construction activities. Monitoring, data recovery, determination of significance and avoidance measures (if applicable) shall be completed expeditiously.

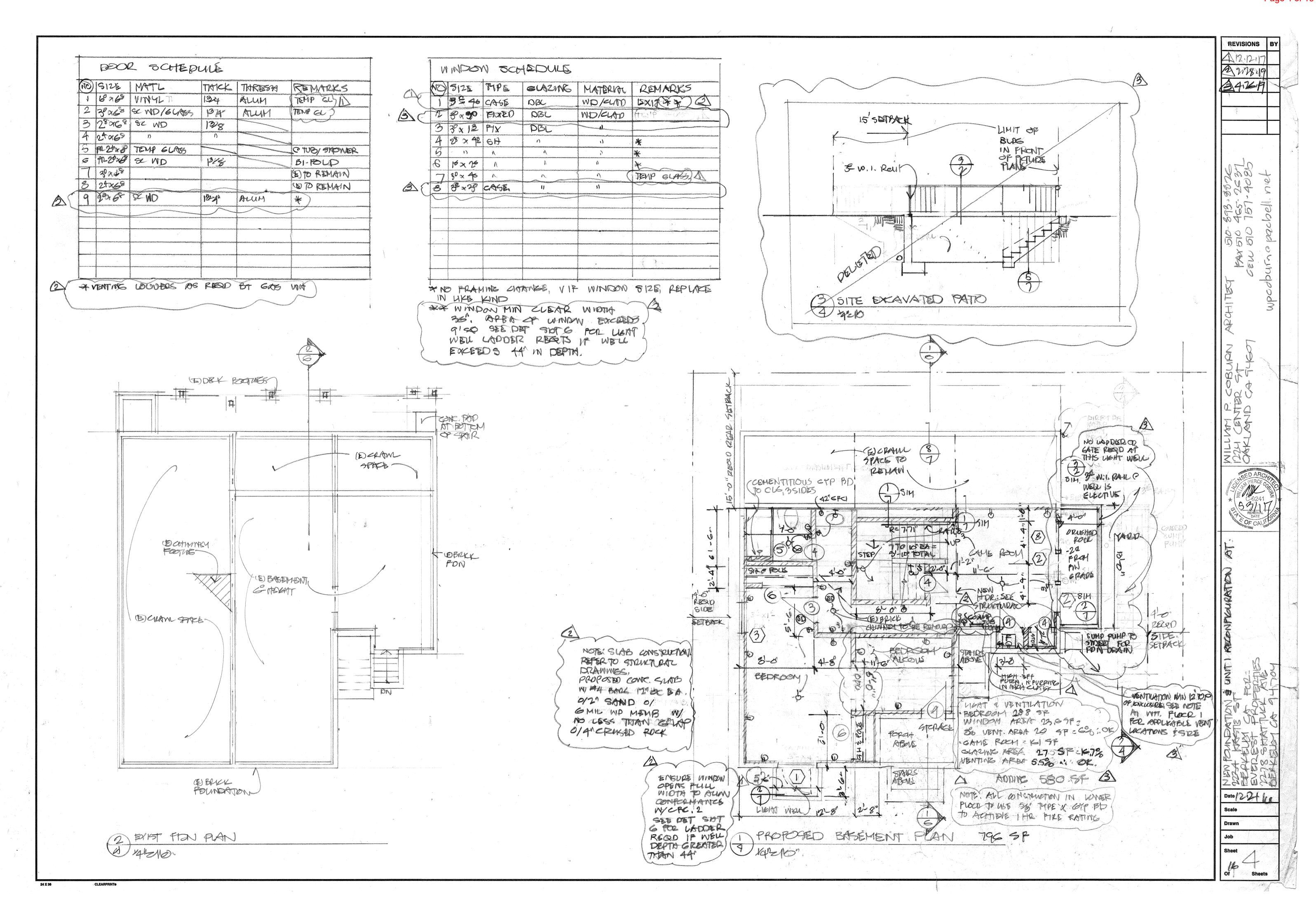
- 9. Paleontological Resources (Ongoing throughout demolition, grading, and/or construction). In the event of an unanticipated discovery of a paleontological resource during construction, excavations within 50 feet of the find shall be temporarily halted or diverted until the discovery is examined by a qualified paleontologist (per Society of Vertebrate Paleontology standards [SVP 1995,1996]). The qualified paleontologist shall document the discovery as needed, evaluate the potential resource, and assess the significance of the find. The paleontologist shall notify the appropriate agencies to determine procedures that would be followed before construction is allowed to resume at the location of the find. If the City determines that avoidance is not feasible, the paleontologist shall prepare an excavation plan for mitigating the effect of the project on the qualities that make the resource important, and such plan shall be implemented. The plan shall be submitted to the City for review and approval.
- 10. Repair and replacement of character-defining features. Deteriorated historic features shall be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature shall match the old or historic feature in design, color, texture, and, where possible, materials. Replacement of missing features will be substantiated by documentary and physical evidence, to the satisfaction of City staff.
- **11. Chemical Treatments.** Any chemical treatments needed as construction progresses will be undertaken using the gentlest means possible.
- **12. Clear glass.** All glass is assumed to be clear glass. Any proposed glass that is not clear glass shall be indicated on all drawings, and shall be reviewed for approval by historic preservation staff, prior to approval of any building permit for this project.
- **13. Exterior Lighting**. Exterior lighting, including for signage, shall be downcast and not cause glare on the public right-of-way and adjacent parcels.
- **14. Colors & Materials.** Prior to staff sign-off of the building permit set of drawings, the applicant shall submit color and materials information for review and approval by staff.
- **15. Window Detail.** Prior to staff sign-off of the building permit set of drawings, the applicant shall submit section drawings with details to provide dimensional relief and articulation for all new windows on basement level, for review and approval by staff.
- **16. Certified arborist report.** Prior to submittal of any building permit for this project, the applicant shall obtain a certified arborist report with recommendation on the assessment and protection of the Brower redwood tree during project construction. The building permit plans for this project shall incorporate the recommendations of this report.

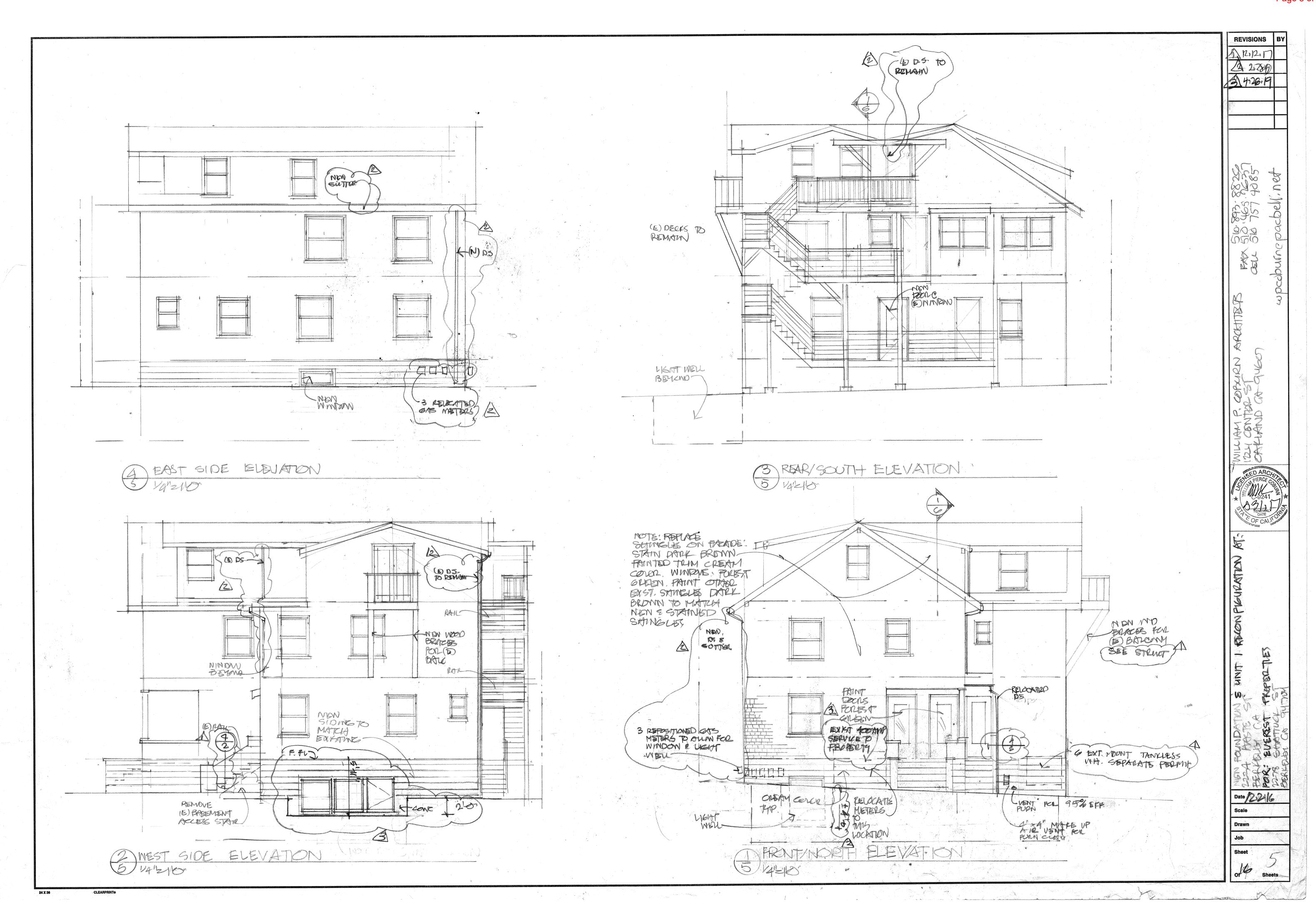
- **17. Plaque**. Prior to submittal of any building permit for this project, the applicant shall indicate on the building permit plans, the location and design of a plaque with information about the historic significance of this Landmark site.
- 18. Upon completion of this project, the property owner shall remove or relocate (and screen, subject to BMC Chapter 23) the dumpster currently stored in the driveway/parking area. The applicant shall consult with the City's Zero Waste Division for guidance on improving and maintaining adequate collection and storage of debris and recycling for this site.

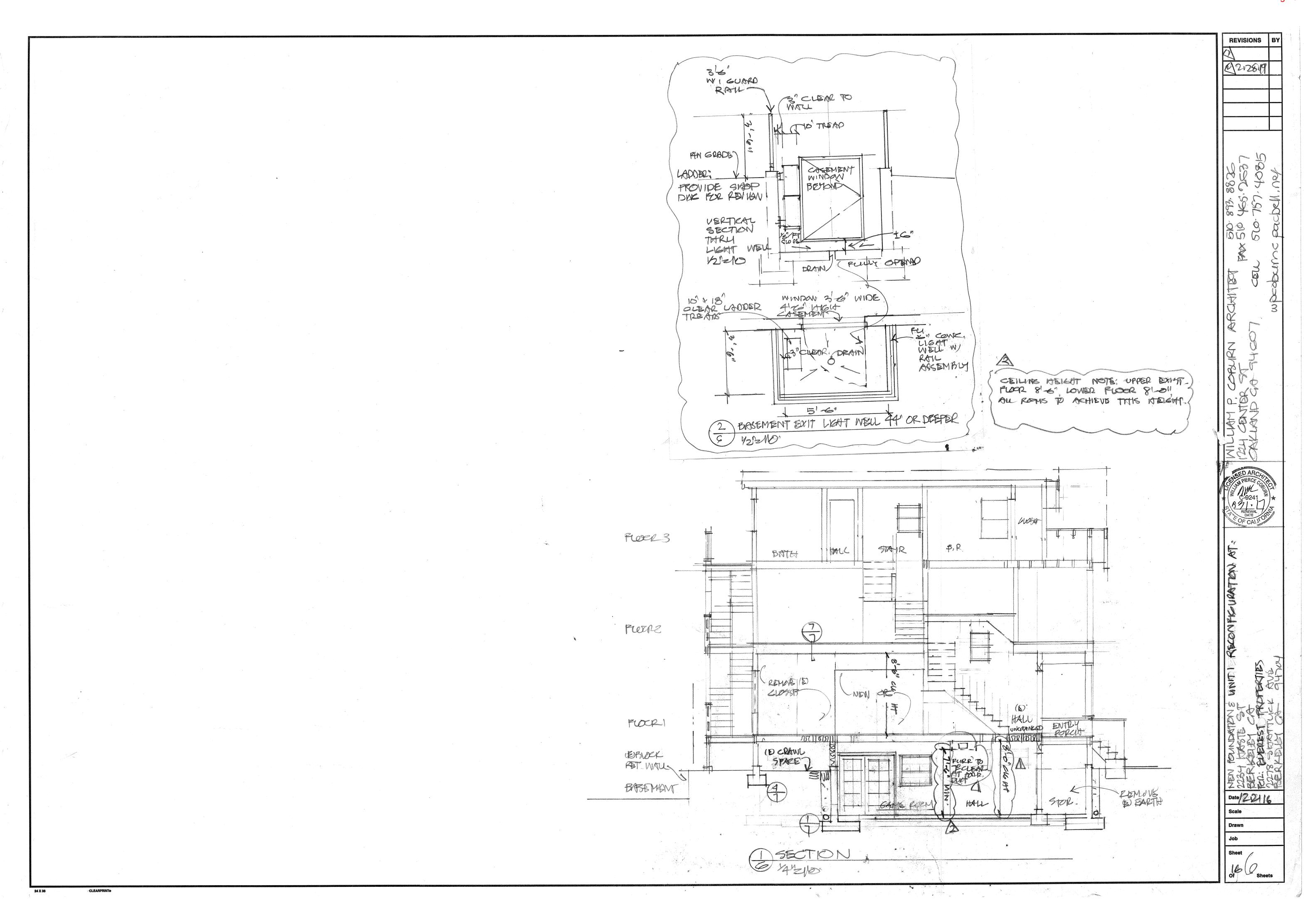


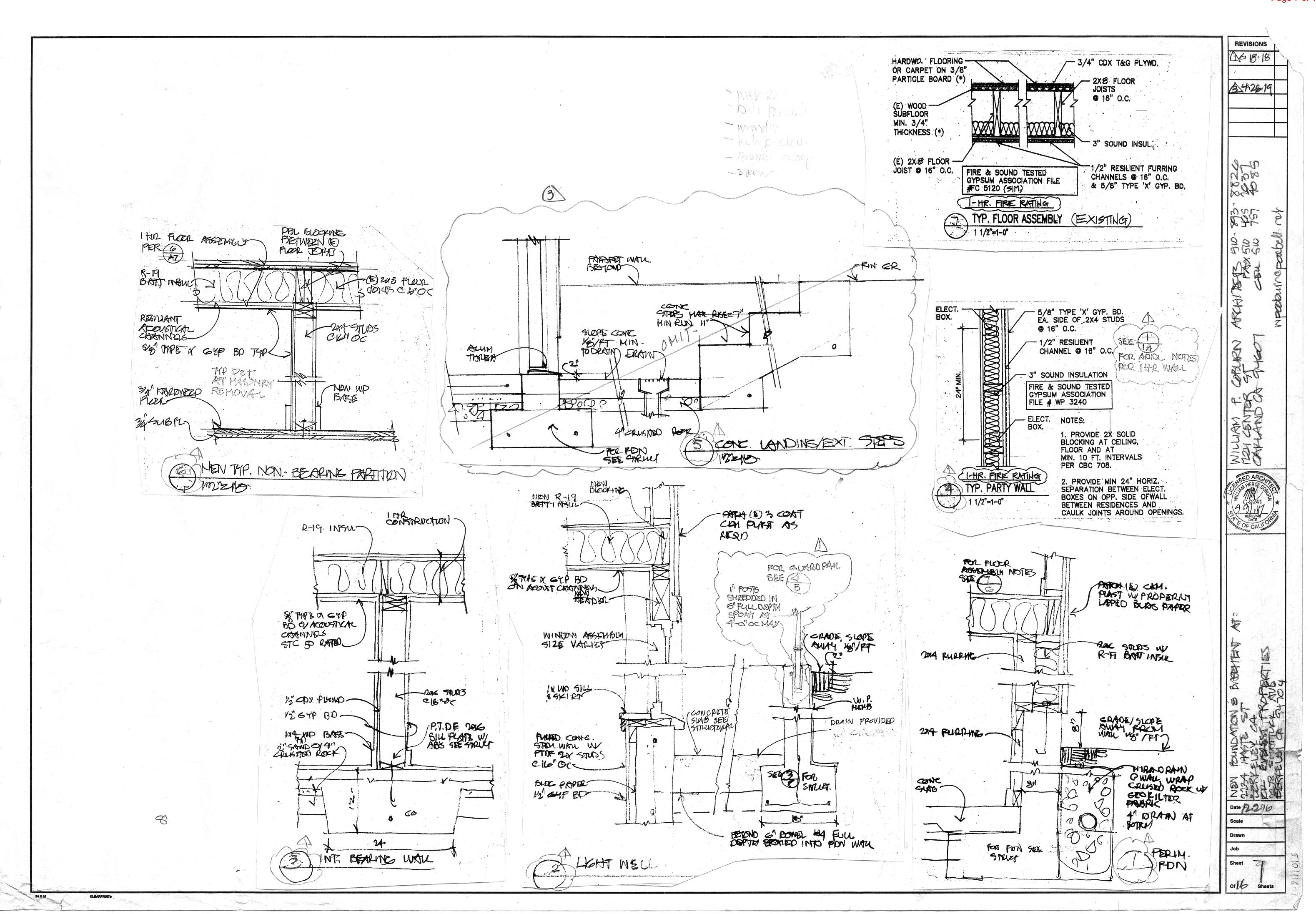












REVISIONS B

2013 Low-Rise Residential Mandatory Measures Summary Any pool or spa heating equipment shall be installed with at least 36 inches of pipe between filter and heater or dedicated suction and return lines, or built-up connections for future solar heating. Outdoor pools or spas that have a heat pump or gas heater shall have a cover. Pools shall have directional inlets that adequately mix the pool water, and a time switch that will allow all pumps to be set or pro-§110.4(b)3: grammed to run only during off-peak electric demand periods. Natural gas pool and spa heaters shall not have a continuous burning pilot light. §150.0(p): Residential pool systems or equipment shall meet specified pump sizing, flow rate, piping, filters, and valve requirements. All lighting control devices and systems, ballasts, and luminaires shall meet the applicable requirements of \$110.9. Installed luminaires shall be classified as high-efficacy or low-efficacy for compliance with §150.0(k) in accordance with TABLE 150.0-A or TABLE 150.0-B, as applicable. When a high efficacy and low efficacy lighting system are combined in a single luminaire, each system shall separately comply §150.0(k)1B: with the applicable provisions of §150.0(k). The wattage and classification of permanently installed luminaires in residential kitchens shall be determined in accordance with §130.0(c). In residential kitchens, the wattage of electrical boxes finished with a blank cover or where no electrical equipment has been installed, and where the electrical box can be used for a luminaire or a surface mounted ceiling fan, shall be calculated as 180 watts of low efficacy lighting per electrical box. §150.0(k)1D: Ballasts for fluorescent lamps rated 13 watts or greater shall be electronic and shall have an output frequency no less than 20 kHz. Permanently installed night lights and night lights integral to installed luminaires or exhaust fans shall be rated to consume no §150.0(k)1E: more than 5 watts of power per luminaire or exhaust fan as determined in accordance with §130.0(c). Night lights do not need to be controlled by vacancy sensors. Lighting integral to exhaust fans (except when installed by the manufacturer in kitchen exhaust hoods) shall meet the applicable §150.0(k)1F: requirements of §150.0(k). §150.0(k)2A: High efficacy luminaires must be switched separately from low efficacy luminaires. §150.0(k)2B: Exhaust fans shall be switched separately from lighting systems. §150.0(k)2C: Luminaires shall be switched with readily accessible controls that permit the luminaires to be manually switched ON and OFF. §150.0(k)2D: Controls and equipment are installed in accordance with manufacturer's instructions. §150.0(k)2E: No control shall bypass a dimmer or vacancy sensor function if the control is installed to comply with §150.0(k). §150.0(k)2F: Lighting controls comply with applicable requirements of §110.9. An Energy Management Control System (EMCS) may be used to comply with dimmer requirements if: it functions as a dimmer §150.0(k)2G: according to §110.9; meets Installation Certificate requirements of §130.4; the EMCS requirements of §130.5; and all other requirements in §150.0(k)2.

An Energy Management Control System (EMCS) may be used to comply with vacancy sensor requirements of §150.0(k) if: it §150.0(k)2H: functions as a vacancy sensor according to §110.9; meets Installation Certificate requirements of §130.4; the EMCS requirements of §130.5; and all other requirements in §150.0(k)2. A multiscene programmable controller may be used to comply with dimmer requirements of this section if it provides the functionality of a dimmer according to §110.9, and complies with all other applicable requirements in §150.0(k)2. §150.0(k)3A: A minimum of 50 percent of the total rated wattage of permanently installed lighting in kitchens shall be high efficacy. Kitchen lighting includes all permanently installed lighting in the kitchen except internal lighting in cabinets that illuminate only §150.0(k)3B: the inside of the cabinets. Lighting in areas adjacent to the kitchen, including but not limited to dining and nook areas, are considered kitchen lighting if they are not separately switched from kitchen lighting. Permanently installed lighting that is internal to cabinets shall use no more than 20 watts of power per linear foot of illuminated §150.0(k)4: A minimum of one high efficacy luminaire shall be installed in each bathroom; and all other lighting installed in each bathroom shall be high efficacy or controlled by vacancy sensors. Lighting installed in attached and detached garages, laundry rooms, and utility rooms shall be high efficacy luminaires and controlled by vacancy sensors. Lighting installed in rooms or areas other than in kitchens, bathrooms, garages, laundry rooms, and utility rooms shall be high efficacy, or shall be controlled by either dimmers or vacancy sensors. Luminaires recessed into ceilings shall: be listed for zero clearance insulation contact (IC) by Underwriters Laboratories or other nationally recognized testing/rating laboratory; have a label that certifies that the luminaire is airtight with air leakage less than 2.0 CFM at 75 Pascals when tested in accordance with ASTM E283; be sealed with a gasket or caulk between the luminaire housing and ceiling, and shall have all air leak paths between conditioned and unconditioned spaces sealed with a gasket or caulk; and allow ballast maintenance and replacement without requiring cutting holes in the ceiling. For recessed compact fluorescent luminaries with ballasts to qualify as high efficacy for compliance with §150.0(k), the ballasts shall be certified to the Energy Commission to comply with the applicable requirements in §110.9. For single-family residential buildings, outdoor lighting permanently mounted to a residential building or other buildings on the same lot shall be high efficacy, or may be low efficacy if it meets all of the following requirements: i. Controlled by a manual ON and OFF switch that does not override to ON the automatic actions of Items ii or iii below; and ii. Controlled by a motion sensor not having an override or bypass switch that disables the motion sensor, or controlled by a motion sensor having a temporary override switch which temporarily bypasses the motion sensing function and automatically reactivates the motion sensor within 6 hours; and iii. Controlled by one of the following methods:

§150.0(j)2C:	Pipe for cooling system lines shall be insulated as specified in §150.0(j)2A. Piping insulation for steam and hydronic heating systems or hot water systems with pressure > 15 psig shall meet the requirements in TABLE 120.3-A.
§150.0(j)3:	Insulation is protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind.
§150.0(j)3A:	Insulation exposed to weather shall either be rated for outdoor use or installed with a cover suitable for outdoor service. For example, protected by aluminum, sheet metal, painted canvas, or plastic cover. Cellular foam insulation protected as specified or painted with coating that is water retardant and provides shielding from solar radiation that degrades the material.
§150.0(j)3B:	Insulation covering chilled water piping and refrigerant suction piping located outside the conditioned space shall have a Class I or Class II vapor retarding facing, or the insulation shall be installed at the thickness that qualifies as a Class I or Class II vapor retarder.
§150.0(n)1:	Systems using gas or propane water heaters to serve individual dwelling units shall include: a 120V electrical receptacle within 3 feet of the water heater; a Category III or IV vent, or a Type B vent with straight pipe between the outside termination and the space where the water heater is installed; a condensate drain that is no more than 2 inches higher than the base of the installed water heater, and allows natural draining without pump assistance; and a gas supply line with a capacity of at least 200,000 Btu/hr.
§150.0(n)2:	Recirculating loops serving multiple dwelling units shall meet the requirements of §110.3(c)5.
§150.0(n)3:	Solar water-heating systems and collectors shall be certified and rated by the Solar Rating and Certification Corporation (SRCC) or by a testing agency approved by the Executive Director.
Ducts and Fan	
§150.0(m)1:	All air-distribution system ducts and plenums installed are sealed and insulated to meet the requirements of CMC §601.0, §602.0, §603.0, §604.0, §605.0 and ANSI/SMACNA-006-2006 HVAC Duct Construction Standards Metal and Flexible 3rd Edition. Supply-air and return-air ducts and plenums are insulated to a minimum installed level of R-6.0 (or higher if required by CMC §605.0) or enclosed entirely in directly conditioned space as confirmed through field verification and diagnostic testing (RA3.1.4.3.8). Connections of metal ducts and inner core of flexible ducts are mechanically fastened. Openings shall be sealed with mastic, tape, or other duct-closure system that meets the applicable requirements of UL 181, UL 181A, or UL 181B or aerosol sealant that meets the requirements of UL 723. If mastic or tape is used to seal openings greater than ½ inch, the combination of mastic and either mesh or tape shall be used. Building cavities, support platforms for air handlers, and plenums defined or constructed with materials other than sealed sheet metal, duct board or flexible duct shall not be used for conveying conditioned air. Building cavities and support platforms may contain ducts. Ducts installed in cavities and support platforms shall not be compressed to cause reductions in the cross-sectional area of the ducts.
§150.0(m)2:	Factory-Fabricated Duct Systems shall comply with specified requirements for duct construction, connections, and closures; joints and seams of duct systems and their components shall not be sealed with cloth back rubber adhesive duct tapes unless such tape is used in combination with mastic and draw bands.
§150.0(m)3-6:	Field-Fabricated Duct Systems shall comply with requirements for: pressure-sensitive tapes, mastics, sealants, and other requirements specified for duct construction; duct insulation R-value ratings; duct insulation thickness; and duct labeling.
§150.0(m)7:	All fan systems that exchange air between the conditioned space and the outside of the building must have backdraft or automatic dampers.
§150.0(m)8:	Gravity ventilating systems serving conditioned space have either automatic or readily accessible, manually operated dampers except combustion inlet and outlet air openings and elevator shaft vents.
§150.0(m)9:	Insulation shall be protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind but not limited to the following: insulation exposed to weather shall be suitable for outdoor service. For example, protected by aluminum, sheet metal, painted canvas, or plastic cover. Cellular foam insulation shall be protected as above or painted with a coating that is water retardant and provides shielding from solar radiation.
§150.0(m)10:	Flexible ducts cannot have porous inner cores.
§150.0(m)11:	When space conditioning systems use forced air duct systems to supply conditioned air to an occupiable space, the ducts shall be sealed and duct leakage tested, as confirmed through field verification and diagnostic testing, in accordance with Reference Residential Appendix RA3.
§150.0(m)12:	Mechanical systems that supply air to an occupiable space through ductwork exceeding 10 feet in length and through a thermal conditioning component, except evaporative coolers, shall be provided with air filter devices that meet the requirements of §150.0(m)12.
§150.0(m)13:	Space conditioning systems that utilize forced air ducts to supply cooling to an occupiable space shall have a hole for the placement of a static pressure probe (HSPP), or a permanently installed static pressure probe (PSPP) in the supply plenum. The space conditioning system must also demonstrate airflow ≥ 350 CFM per ton of nominal cooling capacity through the return grilles, and an air-handling unit fan efficacy ≤ 0.58 W/CFM as confirmed by field verification and diagnostic testing, in accordance with Reference Residential Appendix RA3.
§150.0(m)15:	Zonally controlled central forced air cooling systems shall be capable of simultaneously delivering, in every zonal control mode, an airflow from the dwelling, through the air handler fan and delivered to the dwelling, of ≥ 350 CFM per ton of nominal cooling capacity, and operating at an air-handling unit fan efficacy of ≤ 0.58 W/CFM as confirmed by field verification and diagnostic testing, in accordance with Reference Residential Appendix RA3.
§150.0(o):	All dwelling units shall meet the requirements of ASHRAE Standard 62.2. Neither window operation nor continuous operation of central forced air system air handlers used in central fan integrated ventilation systems are permissible methods of providing the Whole Building Ventilation.
§150.0(o)1A:	Whole Building Ventilation airflow shall be confirmed through field verification and diagnostic testing, in accordance with Reference Residential Appendix RA3.
Pool and Spa l	Heating Systems and Equipment Measures:
§110.4(a):	Any pool or spa heating system shall be certified to have: a thermal efficiency that complies with the Appliance Efficiency Regulations; an on-off switch mounted outside of the heater that allows shutting off the heater without adjusting the thermostat setting; a permanent weatherproof plate or card with operating instructions; and shall not use electric resistance heating.

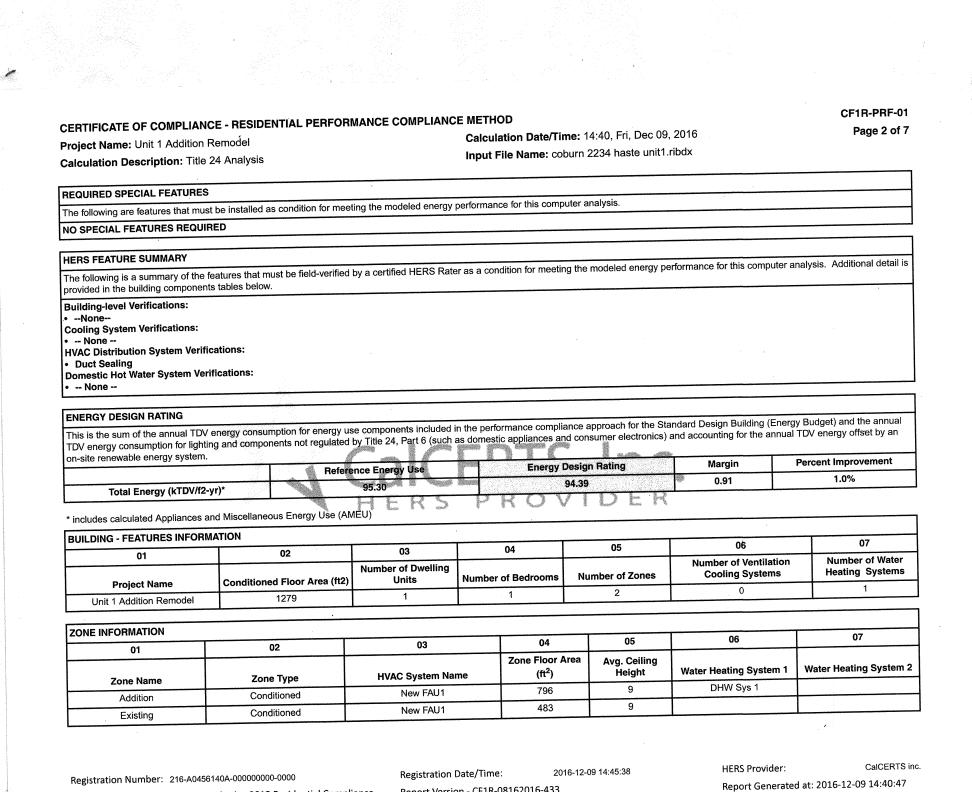
2013 Low-Rise Residential Mandatory Measures Summary

<u>NOTE:</u> Low-rise residential buildings subject to the Standards must comply with all applicable mandatory measures listed, regardless of the compliance approach used. Exceptions may apply. Review the respective code section for more information.

Building Envel	ope Measures:
§110.6(a)1:	Doors and windows between conditioned and unconditioned spaces are manufactured to limit air leakage.
§110.6(a)5:	Fenestration products (except field-fabricated windows) have a label listing the certified U-Factor, certified Solar Heat Gain Coefficient (SHGC), and infiltration that meets the requirements of §10-111(a).
§110.7:	Exterior doors and windows are weatherstripped; all joints and penetrations are caulked and sealed.
§110.8(a):	Insulation specified or installed meets Standards for Insulating Material. Indicate type and include on the CF2R.
§110.8(i):	The thermal emittance and aged solar reflectance values of the cool roofing material meets the requirements of §110.8(i) when the installation of a cool roof is specified on the CF1R.
§110.8(j):	A radiant barrier shall have an emittance of 0.05 or less when the installation of a radiant barrier is specified on the CF1R.
§150.0(a):	Minimum R-30 insulation in wood-frame ceiling; or the weighted average U-factor shall not exceed 0.031. Minimum R-19 in a rafter roof alteration. Attic access doors shall have permanently attached insulation using adhesive or mechanical fasteners. The attic access shall be gasketed to prevent air leakage.
§150.0(b):	Loose fill insulation shall conform with manufacturer's installed design labeled R-value.
§150.0(c):	Minimum R-13 insulation in 2x4 inch wood framing wall or have a U-factor of 0.102 or less (R-19 in 2x6 or 0.074 maximum U-factor).
§150.0(d):	Minimum R-19 insulation in raised wood-frame floor or 0.037 maximum U-factor.
§150.0(g)1:	In Climate Zones 14 and 16 a Class II vapor retarder shall be installed on the conditioned space side of all insulation in all exterio walls, vented attics and unvented attics with air-permeable insulation.
§150.0(g)2:	In Climate Zones 1-16 with unvented crawl spaces the earth floor of the crawl space shall be covered with a Class I or Class II vapor retarder.
§150.0(g)3:	In a building having a controlled ventilation crawl space, a Class I or Class II vapor retarder shall be placed over the earth floor of the crawl space to reduce moisture entry and protect insulation from condensation, as specified in the exception to Section 150.0(d).
§150.0(1):	Slab edge insulation shall: have a water absorption rate, for the insulation material alone without facings, no greater than 0.3%; have water vapor permeance rate is no greater than 2.0 perm/inch, be protected from physical damage and UV light deterioration and when installed as part of a heated slab floor meets the requirements of §110.8(g).
§150.0(q):	Fenestration, including skylights, separating conditioned space from unconditioned space or outdoors shall have a maximum U-factor of 0.58; or the weighted average U-factor of all fenestration shall not exceed 0.58.
Fireplaces, Dec	orative Gas Appliances and Gas Log Measures:
§150.0(e)1A:	Masonry or factory-built fireplaces have a closable metal or glass door covering the entire opening of the firebox.
§150.0(e)1B:	Masonry or factory-built fireplaces have a combustion outside air intake, which is at least six square inches in area and is equipped with a readily accessible, operable, and tight-fitting damper or a combustion-air control device.
§150.0(e)1C:	Masonry or factory-built fireplaces have a flue damper with a readily accessible control.
§150.0(e)2:	Continuous burning pilot lights and the use of indoor air for cooling a firebox jacket, when that indoor air is vented to the outside of the building, are prohibited.
Space Condition	ning, Water Heating and Plumbing System Measures:
§110.0-§110.3:	HVAC equipment, water heaters, showerheads, faucets and all other regulated appliances are certified to the Energy Commission
§110.3(c)5:	Water heating recirculation loops serving multiple dwelling units meet the air release valve, backflow prevention, pump isolation valve, and recirculation loop connection requirements of §110.3(c)5.
§110.5:	Continuously burning pilot lights are prohibited for natural gas: fan-type central furnaces, household cooking appliances (appliances without an electrical supply voltage connection with pilot lights that consume less than 150 Btu/hr are exempt), and pool and one hosters
§150.0(h)1:	and spa heaters. Heating and/or cooling loads are calculated in accordance with ASHRAE, SMACNA or ACCA using design conditions specified in \$150.0(h)2.
§150.0(h)3A:	Installed air conditioner and heat pump outdoor condensing units shall have a clearance of at least five feet from the outlet of any dryer vent.
§150.0(i):	Heating systems are equipped with thermostats that meet the setback requirements of §110.2(c).
§150.0(j)1A:	Storage gas water heaters with an energy factor equal to or less than the federal minimum standards shall be externally wrapped with insulation having an installed thermal resistance of R-12 or greater.
§150.0(j)1B:	Unfired hot water tanks, such as storage tanks and backup storage tanks for solar water-heating systems, have R-12 external insulation or R-16 internal insulation where the internal insulation R-value is indicated on the exterior of the tank.
§150.0(j)2A:	For domestic hot water system piping, whether buried or unburied: the first 5 feet of hot and cold water pipes from the storage tank, all piping with a nominal diameter of 3/4 inch or larger, all piping associated with a domestic hot water recirculation system regardless of the pipe diameter, piping from the heating source to storage tank or between tanks, piping buried below grade, and all hot water pipes from the heating source to kitchen fixtures must be insulated according to the requirements of TABLE 120.3-A.
§150.0(j)2B:	All domestic hot water pipes that are buried below grade must be installed in a water proof and non-crushable casing or sleeve that allows for installation, removal, and replacement of the enclosed pipe and insulation.

that allows for installation, removal, and replacement of the enclosed pipe and insulation.

RES	DENT	IAL MEA	SURES S	SUMM	ARY						RMS-
Project N	lame				ding Type				ddition Alone		Date
		& Remode	el		,		ti Family		xisting+ Addition		12/9/201
Project A		eet Berke	lev			ergy Clima ate Zon		rotai C	ond. Floor Area 1,279	Addition 796	# of Uni
	LATION		, o y		7. 011111	Area	0 00		.,_,	, 00	<u> </u>
		Type		Cav	/itv	(ft^2)	Sr	oecia	l Features	ı	Status
Wall	Wood Fi			R 13		768					New
Slab	Unheate	ed Slab-on-Grad	de	- no in	sulation	796	Perim =	: 120'			New
Demising	Wood Fi	ramed		- no in	sulation	300		***************************************			New
Wall	Wood Fi	ramed		- no in	sulation	407					Existing
Floor	Wood Fi	ramed w/o Crav	vl Space	- no in	sulation	180					Existing
Orien		Area(ft ²)	*******	SHGC	Overl	Percentag nang	Sidefi	ns l	New/Altered Ave		0.40 Status
Front (N)		15.0	0.400	0.70	none		none		Bug Screen		New
Left (E)		6.0	0.400	0.70	none		none		Bug Screen		New
Right (W)		87.0	0.400	0.70	none		none		Bug Screen		New
Front (N) Rear (S)		20.0 37.0	0.990	0.74	none none		none		Bug Screen Bug Screen		Existing New
HVAC	SYSTI Heatin		Min. E	ff Co	oling		Min	. Eff	The	ermostat	Status
1	Central Fu	ırnace	80% AFU	IE No	Cooling	, , , , , , , , , , , , , , , , , , ,	14.0	SEER	Setbad	ck	New
Locat	ion		eating		oling		t Loca	ition		Duct R-Value	Status
New FAL	J	Duct	ed	Duc	ted	Outdoo	ors			6.0	Altered
W/ATE	ER HEA	TING			B#:		Distril				Status
Qty.		orage Gas	Ga	llons	Min.	<u> </u>	וווואוט	Julio	[]		Status



CA Building Energy Efficiency Standards - 2013 Residential Compliance Report Version - CF1R-08162016-433

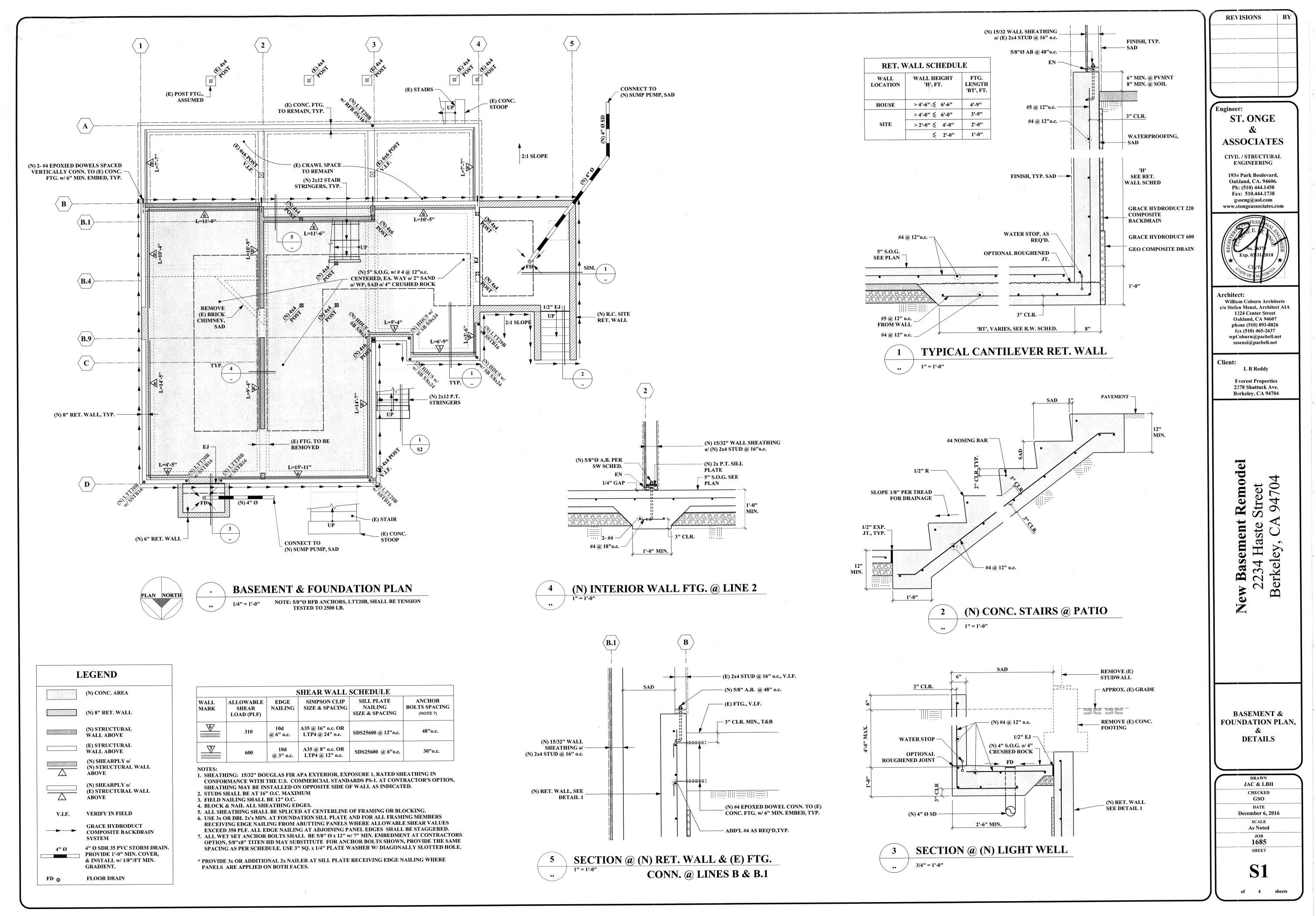
CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANC Project Name: Unit 1 Addition Remodel			Calculation	Page 1 of 1	
-	Description: Title 24 Analysis	ı	nput File N		
SENERAL INF	ORMATION				
01	Project Name	Unit 1 Addition Remodel			
02	Calculation Description	itle 24 Analysis			
03	Project Location	2234 Haste Street			
04	City	Berkeley	05	Standards Version	<u> </u>
06	Zip Code		07	Compliance Manager Version	
08	Climate Zone	CZ3	09	Software Version	
10	Building Type	Single Family	11	Front Orientation (deg/Cardinal)	350
12	Project Scope	Addition and/or Alteration	13	Number of Dwelling Units	1
14	Total Cond. Floor Area (ft ²)	1279	15	Number of Zones	2
16	Slab Area (ft ²)		17	Number of Stories	2
18	Addition Cond. Floor Area		19	Natural Gas Available	Yes
20	Addition Slab Area (ft ²)	796	21	Glazing Percentage (%)	12.9%
COMPLIANCE	RESULTS				
01	Building Complies with Compu	ter Performance			
			ification by	a certified HERS rater under the supervision	of a CEC-approved HERS provider.
02	Inis building incorporates lead	ures (flat require field testing and/or ver	meation by t	g oct times in a transfer of the transfer of t	
			0 13	ovider	
			* * *	AND	

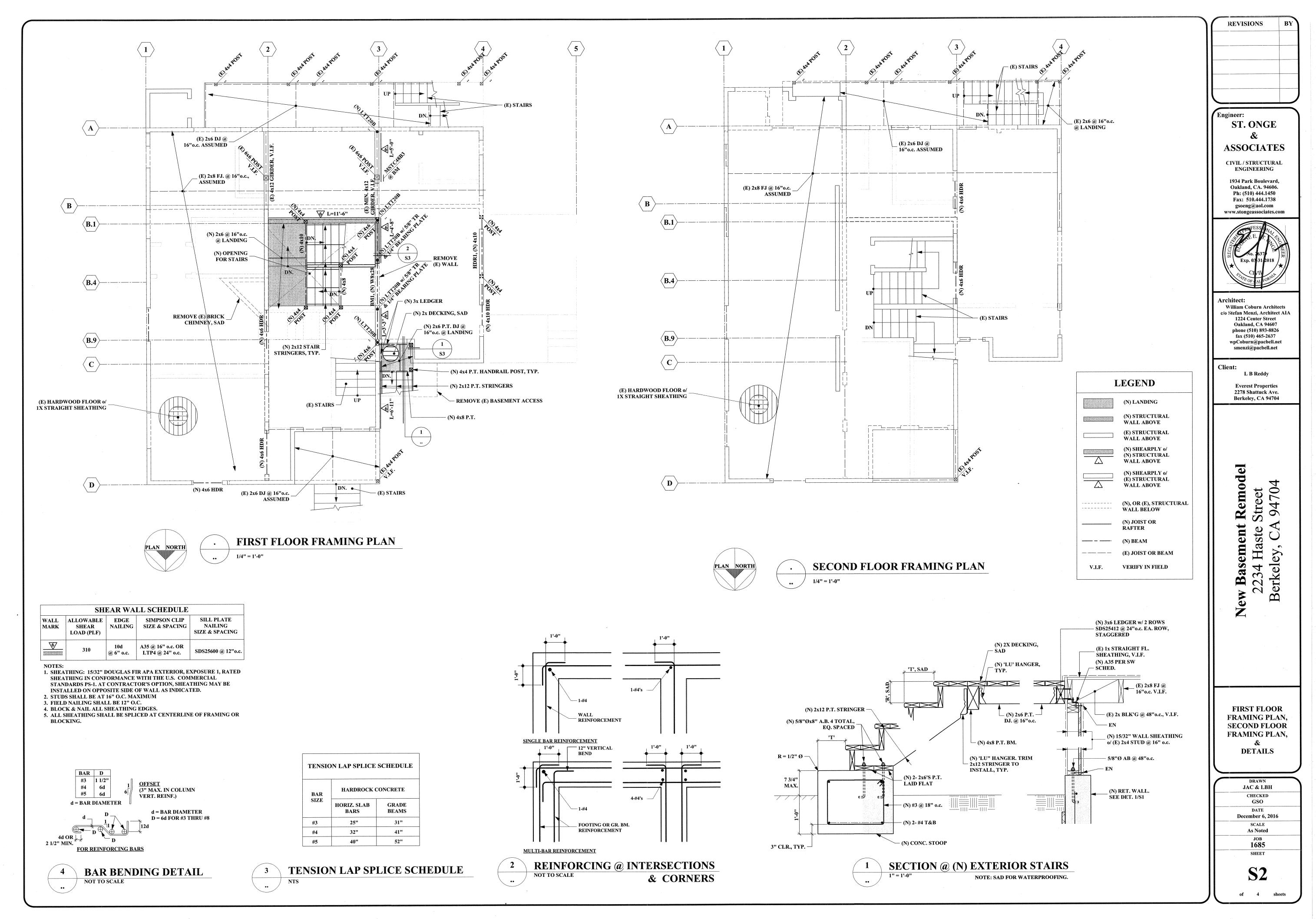
	ENER	IGY USE SUMMARY		
04	05	06	. 07	08
Energy Use (kTDV/ft²-yr)	Standard Design	Proposed Design	Compliance Margin	Percent Improvement
Space Heating	22.63	20.38	2.25	9.9%
Space Cooling	0.73	2.07	-1.34	-183.6%
IAQ Ventilation	0.00	0.00	0.00	0.0%
Water Heating	12.55	12.55	0.00	0.0%
Photovoltaic Offset		0.00	0.00	
Compliance Energy Total	35.91	35.00	0.91	2.5%

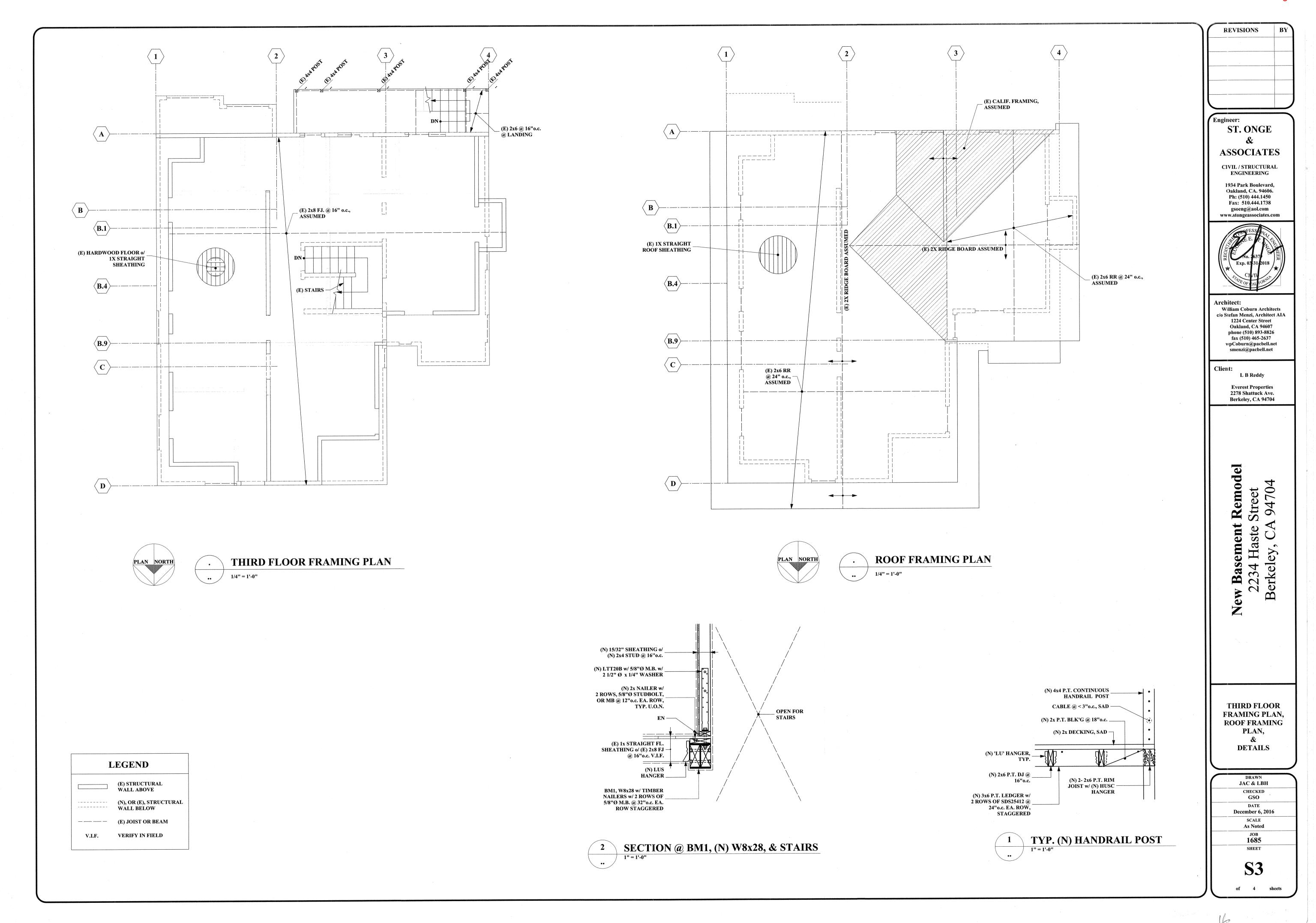
Registration Number: 216-A0456140A-000000000-0000 Registration Date/Time: 2016-12-09 14:45:38 HERS Provider: CalCERTS in Calce

EnergyF10 0.	by EnergySoft User Number: 3385 Page 10 of 2
*	
013 I ow	-Rise Residential Mandatory Measures Summary
UIS LUW	a. Photocontrol not having an override or bypass switch that disables the photocontrol; or
	b. Astronomical time clock not having an override or bypass switch that disables the astronomical time clock, and which is programmed to automatically turn the outdoor lighting OFF during daylight hours; or
	c. Energy management control system which meets all of the following requirements: At a minimum provides the functionality of
	an astronomical time clock in accordance with §110.9; meets the Installation Certification requirements in §130.4; meets the requirements for an EMCS in §130.5; does not have an override or bypass switch that allows the luminaire to be always ON; and,
	is programmed to automatically turn the outdoor lighting OFF during daylight hours. For low-rise multifamily residential buildings, outdoor lighting for private patios, entrances, balconies, and porches; and outdoor
	lighting for residential parking lots and residential carports with less than eight vehicles per site shall comply with one of the
§150.0(k)9B:	following requirements: i. Shall comply with §150.0(k)9A; or
	ii. Shall comply with the applicable requirements in §110.9, §130.0, §130.2, §130.4, §140.7 and §141.0.
§150.0(k)9C:	For low-rise residential buildings with four or more dwelling units, outdoor lighting not regulated by §150.0(k)9B or 150.0(k)9D shall comply with the applicable requirements in §110.9, §130.0, §130.2, §130.4, §140.7 and §141.0.
§150.0(k)9D:	Outdoor lighting for residential parking lots and residential carports with a total of eight or more vehicles per site shall comply
	with the applicable requirements in §110.9, §130.0, §130.2, §130.4, §140.7 and §141.0. Internally illuminated address signs shall comply with §140.8; or shall consume no more than 5 watts of power as determined
§150.0(k)10:	according to §130.0(c). Lighting for residential parking garages for eight or more vehicles shall comply with the applicable requirements for
§150.0(k)11:	nonresidential garages in §110.9, §130.0, §130.1, §130.4, §140.6, and §141.0.
§150.0(k)12A:	In a low-rise multifamily residential building where the total interior common area in a single building equals 20 percent or less o the floor area, permanently installed lighting for the interior common areas in that building shall be high efficacy luminaires or
3	controlled by an occupant sensor. In a low-rise multifamily residential building where the total interior common area in a single building equals more than 20
.*	percent of the floor area, permanently installed lighting in that building shall:
§150.0(k)12B:	i. Comply with the applicable requirements in §110.9, §130.0, §130.1, §140.6 and §141.0; and ii. Lighting installed in corridors and stairwells shall be controlled by occupant sensors that reduce the lighting power in each
	space by at least 50 percent. The occupant sensors shall be capable of turning the light fully On and Off from all designed paths o
Solar Ready Bu	ingress and egress.
Solai Ready Do	Single family residences located in subdivisions with ten or more single family residences and where the application for a
§110.10(a)1:	tentative subdivision map for the residences has been deemed complete, by the enforcement agency, on or after January 1, 2014, shall comply with the requirements of §110.10(b) through §110.10(e).
§110.10(a)2:	Low-rise multi-family buildings shall comply with the requirements of §110.10(b) through §110.10(d). The solar zone shall have a minimum total area as described below. The solar zone shall comply with access, pathway, smoke
	ventilation, and spacing requirements as specified in Title 24, Part 9 or other Parts of Title 24 or in any requirements adopted by a local jurisdiction. The solar zone total area shall be comprised of areas that have no dimension less than 5 feet and are no less than 80 square feet each for buildings with roof areas less than or equal to 10,000 square feet or no less than 160 square feet each for
§110.10(b)1:	buildings with roof areas greater than 10,000 square feet.
	For single family residences the solar zone shall be located on the roof or overhang of the building and have a total area no less than 250 square feet. For low-rise multi-family buildings the solar zone shall be located on the roof or overhang of the building or
	on the roof or overhang of another structure located within 250 feet of the building or on covered parking installed with the building project and have a total area no less than 15 percent of the total roof area of the building excluding any skylight area.
§110.10(b)2:	All sections of the solar zone located on steep-sloped roofs shall be oriented between 110 degrees and 270 degrees of true north.
§110.10(b)3A:	No obstructions, including but not limited to, vents, chimneys, architectural features, and roof mounted equipment, shall be located in the solar zone.
	Any obstruction, located on the roof or any other part of the building that projects above a solar zone shall be located at least twice
§110.10(b)3B:	the distance, measured in the horizontal plane, of the height difference between the highest point of the obstruction and the horizontal projection of the nearest point of the solar zone, measured in the vertical plane.
§110.10(b)4:	For areas of the roof designated as solar zone, the structural design loads for roof dead load and roof live load shall be clearly
	indicated on the construction documents. The construction documents shall indicate: a location for inverters and metering equipment and a pathway for routing of conduit
§110.10(c):	from the solar zone to the point of interconnection with the electrical service (for single family residences the point of interconnection will be the main service panel); a pathway for routing of plumbing from the solar zone to the water-heating system.
§110.10(d):	A copy of the construction documents or a comparable document indicating the information from §110.10(b) through §110.10(c)
§110.10(e)1:	shall be provided to the occupant. The main electrical service panel shall have a minimum busbar rating of 200 amps.
§110.10(e)2:	The main electrical service panel shall have a reserved space to allow for the installation of a double pole circuit breaker for a future solar electric installation. The reserved space shall be: positioned at the opposite (load) end from the input feeder location of main circuit location, and permanently marked as "For Future Solar Electric".
	main onvent totation, and permanently marked as 1011 duale botal bloods.

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD Project Name: Unit 1 Addition Remodel Calculation Description: Title 24 Analysis Calculation Description: Title 24 Analysis CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD Calculation Date/Time: 14:40, Fri, Dec 09, 2016 Input File Name: coburn 2234 haste unit1.ribdx	CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD Page 5 of 7 Project Name: Unit 1 Addition Remodel Calculation Description: Title 24 Analysis Input File Name: coburn 2234 haste unit1.ribdx OPAQUE SURFACE CONSTRUCTIONS CF1R-PRF-01 Page 4 of 7 Calculation Description: Title 24 Analysis	CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD Project Name: Unit 1 Addition Remodel Calculation Description: Title 24 Analysis CPAQUE SURFACES 01 02 03 04 05 06 07 08 09 10
Name Pipe Insulation Parallel Piping Compact Distribution Point-of Use Manual Control Second Property of Second Prop	O1	Name Zone Construction Azimuth Orientation Gross Area (It ²) Window & Door Tilt (deg) Status Condition Condition
HVAC - COOLING SYSTEMS 01 02 03 04 05 06 Efficiency Multi-speed	Quality Insulation Installation (QII) Quality Installation of Spray Foam Insulation Building Envelope Air Leakage CFM50	Window 3
	CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD Project Name: Unit 1 Addition Remotel Calculation Description: Title 24 Analysis Input File Name: column 2234 histic unit1 ribut. PAGE OF TAMPIS OF THE Name: column 2234 histic unit1 ribut. PAGE OF TAMPIS OF THE Name: column 2234 histic unit1 ribut. PAGE OF TAMPIS OF TAMPI	CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD Project Name: Unit it Addition Remodel Collectation Descriptors: The 24 Analysis of Impact File Name: cuture 2234 haster unit indust. Page 7 of 7 Inpact File Name: cuture 2234 haster unit indust. DOCUMENTATION ANTIONES DECLARATION STATEMENT I. I is will be placed a complete of the Complete
	Registration Number: 216-A0456140A-00000000-0000 Registration Date/Time: 2016-12-09 14:45:38 HERS Provider: CalCERTS inc. CA Building Energy Efficiency Standards - 2013 Residential Compliance Report Version - CF1R-08162016-433 Report Generated at: 2016-12-09 14:40:47	Registration Number: 216-A0456140A-00000000-0000 Registration Date/Time: 2016-12-09 14:45:38 HERS Provider: CalCERTS inc. CA Building Energy Efficiency Standards - 2013 Residential Compliance Report Version - CF1R-08162016-433 Report Generated at: 2016-12-09 14:40:47
		Date Date Scale Drawn







Date: December 6, 2016 Time: 11:56:32 AM File name: 1685,15 2234 Haste St Berkeley.mcd

- APPLYING TO ALL STRUCTURAL FEATURES UNLESS OTHERWISE SHOWN OR NOTED.
- 1. ALL WORK SHALL BE PERFORMED IN CONFORMANCE WITH THE 2013 CALIFORNIA BUILDING CODE (CBC) WITH CITY OF BERKELEY AMENDMENTS. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND SITE CONDITIONS BEFORE STARTING WORK. THE
- ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION. UNLESS OTHERWISE SHOWN OR NOTED, ALL TYPICAL DETAILS SHALL BE USED WHERE APPLICABLE. ALL
- DETAILS SHALL BE CONSIDERED TYPICAL AT SIMILAR CONDITIONS. UNLESS OTHERWISE SHOWN OR NOTED, FOLLOW MANUFACTURER'S INSTALLATION RECOMMENDATIONS FOR
- ALL STRUCTURAL PRODUCTS USED ON THIS PROJECT. 5. THE APPROVED DRAWINGS SHALL BE KEPT ON THE JOB SITE AND SHALL BE AVAILABLE TO AUTHORIZED
- REPRESENTATIVES OF THE BUILDING OFFICIAL. THERE SHALL BE NO DEVIATION FROM THE STAMPED DRAWINGS WITHOUT OFFICIAL APPROVAL SAFETY MEASURES: AT ALL TIMES, THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR THE CONDITIONS OF THE JOB SITE INCLUDING SAFETY OF PEOPLE AND PROPERTY, AND FOR ALL
- NECESSARY INDEPENDENT ENGINEERING REVIEWS OF THESE CONDITIONS. SHORING AND BRACING OF THE SOIL, AND THE EXISTING STRUCTURES, SHALL BE INSTALLED WHERE NECESSARY TO ADEQUATELY SUPPORT THE IMPOSED VERTICAL AND LATERAL LOADS, AND SHALL BE MAINTAINED UNTIL THE NEW STRUCTURE CAN SUPPORT THE ANTICIPATED LOADS. UNDERPINNING AND/OR SHORING IS REQUIRED AT ALL ELEVATIONS ADJACENT TO, AND TO ELEVATIONS BELOW, EXISTING FOUNDATIONS, AND WHERE PARTIAL REMOVAL OF EXISTING FOUNDATIONS IS CALLED FOR ON THE DRAWINGS. THE ENGINEER'S JOB SITE VISITS
- ARE NOT INTENDED TO INCLUDE REVIEW OF THE ADEQUACY OF THE CONTRACTOR'S SAFETY MEASURES. ALL SAFETY -RELATED MEASURES SHALL BE CARRIED OUT IN ACCORDANCE WITH THE REQUIREMENTS OF CAL-OSHA (OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION DIVISION OF DEPT. OF INDUSTRIAL SAFETY, STATE OF
- ANY OPENING, HOLES, CUTS OR DISCONTINUITIES NOT SHOWN ON THE STRUCTURAL DRAWINGS AND EXTENDING INTO OR THROUGH STRUCTURAL ELEMENTS REQUIRE THE PRIOR APPROVAL OF THE ENGINEER, AND MAY REQUIRE SPECIAL STRUCTURAL DETAILING.
- CONTRACTORS SHALL SCHEDULE WORK TO MINIMIZE INTERRUPTION AND INCONVENIENCE TO THE ACTIVITIES OF THE ADJACENT BUILDING TENANTS. . CONTRACTOR SHALL MAINTAIN A CLEAN AND SAFE WORKING AREA.
- 10. CONTRACTOR SHALL COMPLY WITH CITY OF BERKELEY, CA, REQUIREMENTS FOR THE PROTECTION OF PUBLIC RIGHT-OF-WAY (SIDEWALKS).
- 1. THE LOCATION OF EXISTING UTILITY LINES IS THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL ENDEAVOR TO MAINTAIN IN SERVICE ALL UTILITIES TO THE TENANTS FOR THE DURATION OF THE PROJECT
- IF CERTAIN FEATURES ARE NOT FULLY SHOWN OR CALLED FOR ON THE DRAWINGS OR SPECIFICATIONS, THEIR CONSTRUCTION SHALL BE OF THE SAME CHARACTER AS FOR SIMILAR CONDITIONS THAT ARE SHOWN OR
- 3. REFERENCE TO OTHER DRAWINGS: 13.1 SEE DRAWINGS OTHER THAN STRUCTURAL FOR KINDS OF FLOOR FINISH AND THEIR LOCATION, FOR
- MECHANICAL FEATURES, FOR DRIVEWAY PAVING, WALKS, RAMPS, STAIRS, CURBS, ETC. 13.2 HOLES AND OPENINGS THROUGH WALLS AND FLOORS FOR DUCTS, PIPING AND VENTILATION SHALL BE CHECKED BY THE CONTRACTOR WHO SHALL VERIFY SIZES AND LOCATION OF SUCH HOLES OR OPENINGS WITH THE PLUMBING, HEATING, VENTILATING AND ELECTRICAL DRAWINGS AND SUB-CONTRACTORS.

DEPRESSIONS IN FLOOR SLABS, FOR OPENINGS IN WALLS AND FLOORS REQUIRED BY ARCHITECTURAL AND

DESIGN DATA

1. CODE: 2013 CBC		
2. DESIGN VERTICAL LOADS:	\mathbf{DL}	LL
ROOF	12 PSF	20 PSF
FLOOR	- 12 PSF	40 PSF
EXT. WALL	10 PSF	*****
INT. WALL	7 PSF	

V=0.17W (ASD) [SS= 2.35, S1= 0.98, SITE CLASS D, R=6.5, I= 1.0, SITE DES. CAT. E, SD1= 0.98, SDS=1.57]

H=12.8 PSF (ASD)

TESTS & SPECIAL INSPECTIONS

- PROVIDE TESTS AND INSPECTIONS FOR ALL ITEMS AS REQUIRED BY THE 2013 CALIFORNIA BUILDING CODE (CBC). 2. THE OWNER SHALL RETAIN AN INDEPENDENT TESTING LAB TO PERFORM ALL REQUIRED TESTING AND INSPECTIONS. 3. THE CONTRACTOR SHALL PROVIDE THE TESTING LAB WITH CONSTRUCTION SCHEDULES TO ENSURE PROPER
- 4. THE FOLLOWING SPECIFIC ITEMS SHALL BE INSPECTED BY A PROJECT ENGINEER, CITY'S INSPECTOR OR TESTED BY THE TESTING LAB
- 4.1. PLACEMENT OF REINFORCEMENT STEEL (WITH ADEQUATE LEAD TIME TO MAKE ANY REQUIRED CORRECTIONS.)
- 4.2 EPOXY INSTALLED ANCHORS.

FOUNDATIONS

- . CBC SITE CLASS 5 IS ASSUMED FOR FOUNDATION DESIGN.
- ALLOWABLE SOIL BEARING PRESSURE: 1500 PSF FOR DEAD PLUS LIVE LOADS, 2000 PSF FOR ALL LOADS
- 8. EXCEPT WHERE OTHERWISE SHOWN, EXCAVATIONS SHALL BE MADE AS NEAR AS POSSIBLE TO THE NEAT LINES REQUIRED BY THE SIZE AND SHAPE OF THE STRUCTURE. ALL FOUNDATIONS SHALL BE PLACED WITHOUT THE USE OF SIDE FORMS WHEREVER POSSIBLE. IF THE TRENCHES CANNOT STAND, FULLY FORM SIDES TO
- DO NOT ALLOW WATER TO STAND IN TRENCHES. IF BOTTOMS OF TRENCHES BECOME SOFTENED DUE TO RAIN OR OTHER WATER BEFORE CONCRETE IS CAST, EXCAVATE SOFTENED MATERIAL AND REPLACE WITH PROPERLY COMPACTED BACKFILL OR CONCRETE AT NO COST TO THE OWNER.
- ALL EXCAVATIONS, FORMS AND REINFORCING ARE TO BE INSPECTED BY THE LOCAL BUILDING INSPECTOR PRIOR TO PLACING CONCRETE.
- . CLAYEY SOIL SHOULD BE MOISTURE CONDITIONED TO AT LEAST 3 PERCENT OVER OPTIMUM WATER CONTENT AND COMPACTED TO AT LEAST 90 PERCENT RELATIVE COMPACTION. SANDY SOILS SHOULD BE MOISTURE CONDITIONED TO NEAR OPTIMUM WATER CONTENT AND COMPACTED TO AT LEAST 95 PERCENT RELATIVE

CONCRETE

- . CONCRETE CEMENT SHALL CONFORM TO 2013 CBC STND. NO. 19-1, AND SHALL BE TYPE II. TYPE I CEMENT MAY BE USED IN AREAS NOT IN CONTACT WITH EARTH. AGGREGATE SHALL BE HARDROCK, CONFORMING TO ASTM C-33, AND FREE OF ALKALI-REACTIVITY. WATER/CEMENT RATIO SHALL NOT EXCEED 55%. ACID SOLUBLE CHLORIDE CONTENT SHALL NOT EXCEED 0.2 PERCENT OF CEMENT WEIGHT. CHLORIDE-FREE ADMIXTURES AND PLASTICIZERS FOR WORKABILITY MAY BE USED IF APPROVED BY THE TESTING LABORATORY AND ENGINEER. BECAUSE EXCESS WATER REDUCES CONCRETE STRENGTH, ADDING WATER AT THE SITE IS DISCOURAGED AND SHALL NOT EXCEED ONE
- GALLON PER CUBIC YARD. INSTALL ALL INSERTS, BOLTS, ANCHORS, AND REINFORCING BARS AND SECURELY TIE PRIOR TO PLACING CONCRETE. 3. CONCRETE SHALL ATTAIN A MINIMUM ULTIMATE COMPRESSIVE STRENGTHS OF 2500 PSI AT 28 DAYS.
- 4. CONCRETE SHALL BE PLACED IN A CONTINUOUS OPERATION BETWEEN PREDETERMINED CONSTRUCTION JOINTS. 5. CONCRETE SHALL BE CONTINUOUSLY CURED FOR 5 DAYS AFTER PLACEMENT IN ANY APPROVED MANNER. 6. THE LOCATION AND PROTECTION OF EXISTING UTILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR. THE
- CONTRACTOR SHALL NOTIFY THE ENGINEER IF UTILITY PIPES RUN THROUGH, OR WITHIN 24" BELOW, ANY NEW CONCRETE CONSTRUCTION. PIPE OR DUCTS EXCEEDING ONE-THIRD THE SLAB OR WALL THICKNESS SHALL NOT BE PLACED IN STRUCTURAL
- CONCRETE UNLESS SPECIFICALLY DETAILED. . PIPES MAY PASS THROUGH STRUCTURAL CONCRETE IN SLEEVES, BUT SHALL NOT BE EMBEDDED THEREIN. 9. CONCRETE SHALL NOT BE ALLOWED TO CURE IN TEMPERATURES LESS THAN 40° FAHRENHEIT FOR THE FIRST THREE
- 10. MAXIMUM SLUMP: 4 INCHES.

REINFORCING STEEL

- 1 USE ASTM A615 REINFORCEMENT FOR ALL BARS, GRADE 60.
- 2 ALL REINFORCEMENT SHALL BE CONTINUOUS. STAGGER SPLICES WHERE POSSIBLE. LAPS FOR SPLICES SHALL BE AS PER THE LAP SPLICE SCHEDULE SHOWN IN THESE DRAWINGS. 3 HOLD REINFORCEMENT IN ITS TRUE HORIZONTAL AND VERTICAL POSITION WITH DEVICES SUFFICIENTLY NUMEROUS TO PREVENT DISPLACEMENT.

ROUGH CARPENTRY

- . FOR SCHEDULE OF MINIMUM NAILING SEE TABLE 2304.9.1, 2013 CBC. UNLESS OTHERWISE NOTED, ALL NAILS SHALL
- BE COMMON NAILS. 2. PLACE JOINTS WITH CROWN UP.
- . ADD ONE ADDITIONAL JOIST UNDER ALL PARALLEL PARTITIONS. 4. BLOCK ALL JOISTS AT SUPPORTS AND UNDER ALL PARTITIONS WITH MINIMUM 2X SOLID BLOCKING.
- . METAL FRAMING DEVICES: PROVIDE TYPICAL CONNECTORS FOR WOOD FRAMING BY SIMPSON CO. OR EQUAL. ALL CONNECTIONS SHALL BE 16 GA. GALVANIZED SHEET METAL OR THICKER, U.O.N., FULLY NAILED IN ALL PUNCHED HOLES WITH NAILS OF SIZE AND LENGTH SPECIFIED AND/OR PROVIDED BY MANUFACTURER. IF CONNECTORS ARE AVAILABLE IN DIFFERENT SIZES. THE SIZE USED SHALL BE AS SHOWN IN DETAILS OR ELSE THE LARGEST SIZE MADE FOR THE DEPTH OF MEMBER BEING FRAMED. COMPARABLE FASTENERS BY OTHER MANUFACTURERS MAY BE USED IF APPROVED IN ADVANCE BY THE DESIGN ENGINEER. UNLESS OTHERWISE NOTED, PROVIDE THE FOLLOWING
- FRAMING CONNECTIONS: - SAWN LUMBER JOIST-TO-BEAM: SIMPSON U - BEAM-TO-POST: SIMPSON CC OR ECC SIMPSON BC - POST-TO-BEAM:
- POST-TO-FOUNDATION: SIMPSON CBSO . ALL FRAMING LUMBER SHALL BE GRADE STAMPED S-DRY (19% MOISTURE CONTENT AT TIME OF INSTALLATION)
- U.O.N. ALL SAWN LUMBER SHALL BE DOUGLAS FIR LARCH (COAST REGION), GRADED AND MARKED IN ACCORDANCE WITH THE STANDARD GRADING RULES NUMBER 16 OF THE WEST COAST LUMBER INSPECTION
- POSTS, JOISTS, RAFTERS & BEAMS -----NO. 1 GRADE STUD GRADE
- STRUCTURAL STUD WALLS: 8.1 USE SINGLE BOTTOM PLATE AND DOUBLE TOP PLATE UNLESS OTHERWISE NOTED OR SHOWN. STAGGER
- JOINTS IN UPPER AND LOWER MEMBERS OF TOP PLATES NOT LESS THAN 4'-0". 8.2 BOLT SILL PLATE TO CONCRETE AS PER ANCHOR BOLT SCHEDULE. ONE BOLT SHALL BE WITHIN 9" OF EACH
- END OF EACH PIECE OF PLATE. PROVIDE 2 BOLTS MINIMUM PER PIECE. 8.3 PROVIDE SIMPSON ANGLE A35 CLIP @ 16" O.C. BETWEEN DBL. TOP PLATES AND BLOCKING AND RIM JOIST TYPICAL, U.O.N PER PLAN OR SHEARWALL SCHEDULE.

- 9.1 BOLTS SHALL BE PER ASTM A307, U.O.N.
- 9.2 BOLT HOLES 1/16" OVERSIZE. THREADS SHALL NOT BEAR ON WOOD OR STEEL 9.3 USE STANDARD MALLEABLE IRON WASHERS AGAINST WOOD. 2 3/4" ØX 5/16" THICK FOR 5/8" BOLTS. 3" ØX7/16" THICK FOR 3/4" BOLTS
- 9.4 ALL BOLTS EXPOSED TO WETHER OR PROLONGED DAMPNESS SHALL BE HOT-DIPPED GALVANIZED. 10. SCREWS:
- 10.1 (WOOD OR LAG) SCREWS SHALL BE SCREWED AND NOT DRIVEN INTO PLACE 10.2 IN SPACING SCREWS, THE HOLES SHALL BE BORED TO THE SAME DIAMETER AND DEPTH OF THE SCREW SHANK. THE HOLES FOR THE THREADED PORTION OF THE SCREWS SHALL BE BORED WITH A BIT NOT LARGER THAN THE DIAMETER OF THE BASE OF THE THREAD.
- 11. WOOD PRESERVATIVE: ALL WOOD FRAMING IN CONTACT WITH CONCRETE AND/OR EXPOSED TO WEATHER OR PROLONGED DAMPNESS SHALL BE TREATED WITH 'CELLOW" AT THE RATE OF 0.23 POUNDS PER CUBIC FOOT IN ACCORDANCE WITH AWPA SPECIFICATIONS, OR SHALL BE WOOD OF NATURAL RESISTANCE TO DECAY.

STRUCTURAL STEEL

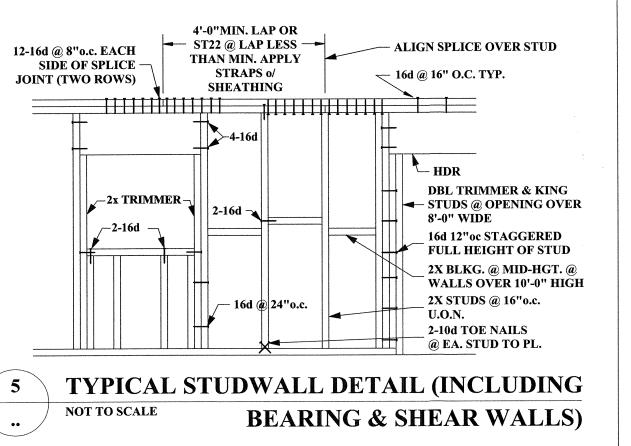
- 1. U.O.N., USE DOUGLAS FIR APA EXTERIOR, EXPOSURE1, RATED SHEATHING IN CONFORMANCE WITH THE U.S. COMMERCIAL STANDARDS PSI-95, PS2-92, OR NER-108 (PRP-108). INSTALL WITH FACE GRAIN
- 2. FLOOR SHEATHING SHALL BE 3/4" T&G w/ EDGES LOCATED OVER BLOCKING AND NAILED
- w/ 10d @ 6"o.c. EDGE NAILING & 12"o.c. FIELD NAILING, U.O.N. SPAN RATING 48/24, UNBLOCKED. GLUE TO FLOOR JOISTS, U.O.N.
- STRUCTURAL STEEL SECTIONS -----PLATES & SHAPES ----

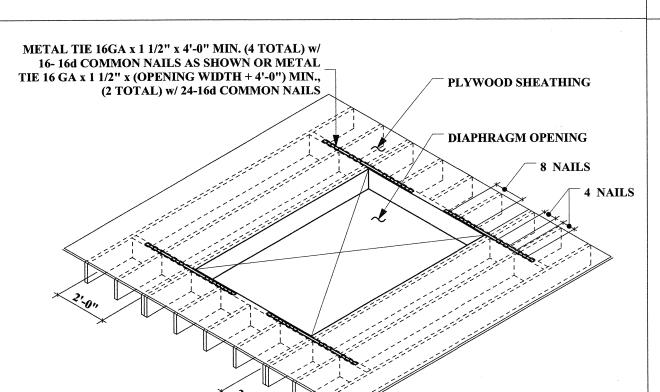
ALL BOLTS SHALL CONFORM TO ASTM A307 AND SHALL BE INSTALLED TO A 'SNUG-TIGHT' CONDITION.

- ALL EXPOSED METAL SHALL BE GALVANIZED OR PAINTED AND PROTECTED USING
- AN EXTERIOR METAL PRIMING PAINT AND A FINISH COAT.
- COMPLY WITH AMERICAN INSTITUTE OF STEEL CONSTRUCTION "SPECIFICATIONS FOR DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS", CURRENT EDITION
- COMPLY WITH AMERICAN WELDING SOCIETY "STRUCTURAL WELDING CODE-STEEL" ANSI/AWS D1.1, CURRENT EDITION, AND "STRUCTURAL WELDING CODE - SHEET STEEL"
- AWS D1.3, CURRENT EDITION. USE "E70" OR EQUAL ELECTRODES. ALL WELDING TO BE 4. THE STRUCTURAL STEEL FABRICATOR'S SHOP DRAWINGS SHALL BE SUBMITTED TO THE PROJECT ENGINEER-OF-RECORD FOR REVIEW PRIOR TO SUBMITTAL TO THE

BUILDING DEPARTMENT **EPOXIED ANCHORS**

- . WHERE EPOXIED ANCHORS (REINFORCING BARS OR ALL-THREADED RODS) ARE CALLED FOR IN THE STRUCTURAL DRAWINGS, THE EPOXY USED SHALL BE THE SIMPSON (SET-XP) ANCHORING ADHESIVE, OR EQUAL. SUBMIT MANUFACTURER'S LITERATURE FOR SUBSTITUTE SYSTEM(S) TO ENGINEER FOR REVIEW AND APPROVAL. PRE-MEASURED EPOXIES IN DISPOSABLE, TWO-PART CARTRIDGES DISPENSED THROUGH PROPRIETARY MIXING NOZZLES ARE ACCEPTABLE. POLYSTER RESINS SHALL NOT BE SUBSTITUTED FOR EPOXY. INSTALL DOWELS IN EXISTING CONCRETE PER MANUFACTURER'S RECOMMENDATIONS.
- 2.1. ANCHORS IN CONCRETE
- 2.1.1. EPOXIED ANCHORS IN CONCRETE SHALL BE INSPECTED AND TENSION TESTED BASED ON THE REQUIRED TEST
- $1.\,5/8"\emptyset\ BOLT-2,\!500\#\ [BASED\ ON\ 1.5\ TIMES\ DESIGN\ LOAD\ OF\ 1,\!667\#]\ FOR\ HOLDOWNS\ LTT20B'S.$. AGE OF CONCRETE FOR INSTALLATION PER ACI 318-2011 (SECTION D.2.2) ADHESIVE ANCHORS SHALL BE INSTALLED IN CONCRETE HAVING A MINIMUM AGE OF 21 DAYS AT TIME OF ANCHOR INSTALLATION. FOR INSTALLATIONS SOONER THAN 21 DAYS CONSULT ADHESIVE MANUFACTURER.







ROD THREADED EA. END
PANEL EDGE STUD

CATALOG FOR ROD SIZE $\setminus \not \models \Rightarrow$ OR POST, SEE PLAN

HOLDOWN TO HOLDOWN OPTION

TYPICAL HOLDOWN DETAIL

SEE PLAN & DETAILS FOR ___ \

FLOOR CONSTRUCTION

OPTIONAL ANCHOR

PLYWOOD EDGE NAIL, SEE PLAN

POST, SEE PLAN

& SHEAR WALL SCHEDULE

CONTINUOUS TO FNDN.

PANEL EDGE STUD OR ____

HD ANCHOR, SEE

PLAN & SCHED.

USE INVERTED HOLDOWN OR

ALL HOLDOWNS ARE BY

SIMPSON COMPANY, OR

APPROVED EQUAL, SEE

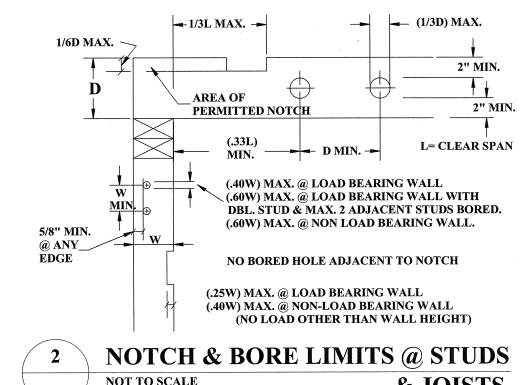
DEPENDING ON HEIGHT OF CRAWL

CATALOG FOR SIZE & SPACING

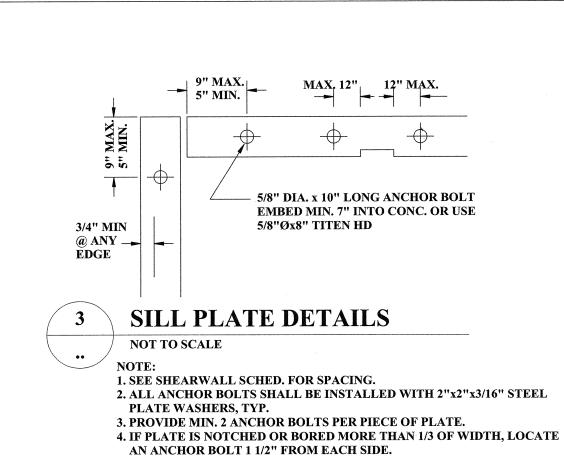
CONTINUOUS THREADED ROD

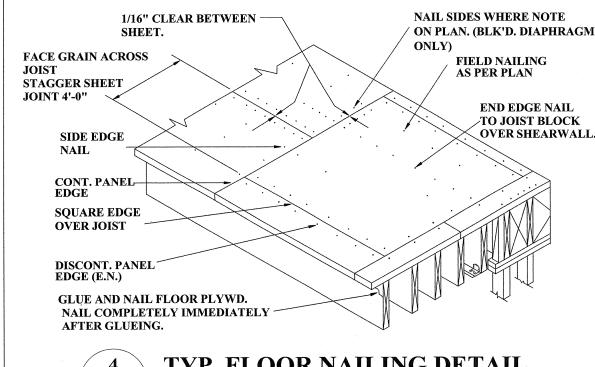
SPACE

OF BOLTS



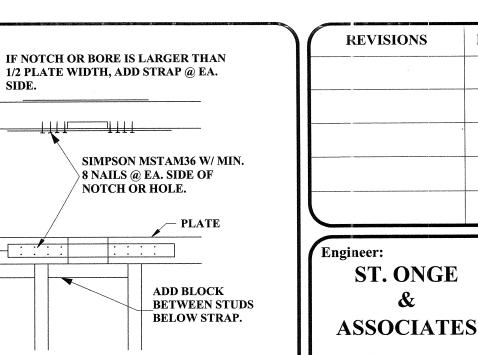






TYP. FLOOR NAILING DETAIL NOT TO SCALE

TYP. FOR BLOCKED AND UNBLOCKED DIAPHRAGM SEE GENERAL NOTES @ LEFT FOR SHEARPLY & NAILING SPEC'S



NOTE: IN BEARING WALLS, NOTCHES ARE NOT PERMITTED WITHOUT PRIOR APPROVAL OF STRUCTURAL ENGINEER.

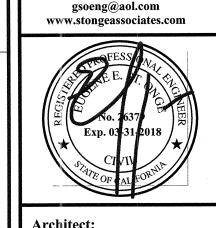
LOCATE HOLE @ G.-

SIMPSON NS-16 @ HOLES /

TO 1 3/4" DIA. @ EA.

SIDE @ EA. 2X PLATE

NOTCH OR BORE @ TOP PLATE



CIVIL / STRUCTURAL

ENGINEERING

1934 Park Boulevard,

Oakland, CA. 94606.

Ph: (510) 444.1450

Fax: 510.444.1738

William Coburn Architects c/o Stefan Menzi, Architect AIA 1224 Center Street Oakland, CA 94607 phone (510) 893-8826 fax (510) 465-2637 wpCoburn@pacbell.net smenzi@pacbell.net

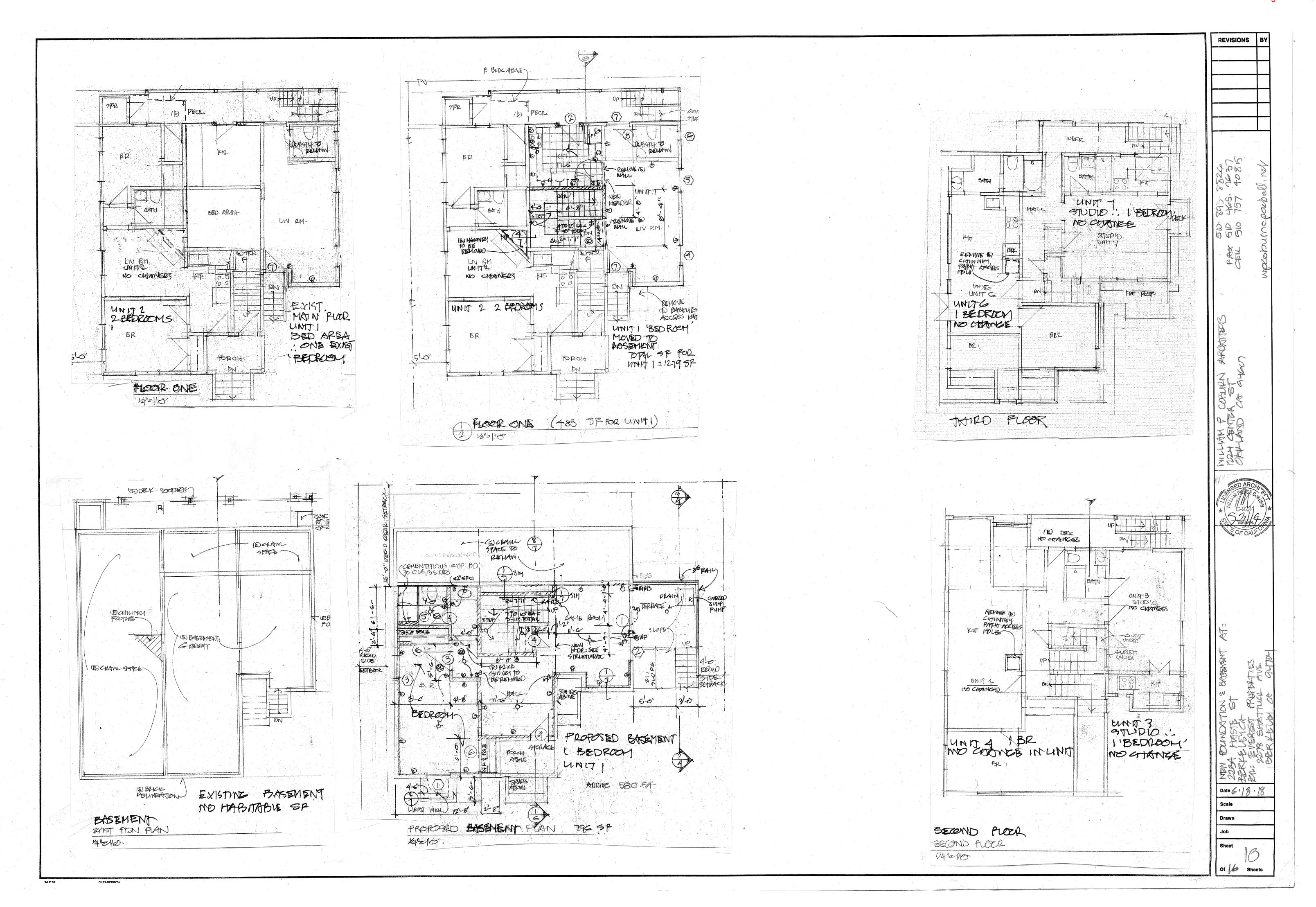
L B Reddy

Everest Properties 2278 Shattuck Ave. Berkeley, CA 94704

Remod asement 4 Haste Berkel

GENERAL NOTES DETAILS

JAC & LBH CHECKED GSO December 6, 2016 SCALE As Noted 1685 SHEET



REVISIONS

242

١ ١	Code Compliance Checklist - CALGREEN RESIDENTIAL Page 2 of 4
1	WATER EFFICIENCY & CONSERVATION
	ndoor Water Use 4.303.1.1 Water closets. The effective flush volume of all water closets shall not exceed 1.28 gallons per flush. Tank-type water closets shall be certified to the performance criteria of the US EPA WaterSense Specification for
	Tank-type Toilets. 4.303.1.2 Urinals. The effective flush volume of wall-mounted urinals shall not exceed 0.125 gallons per flush. The effective flush volume of all other urinals shall not exceed 0.5 gallons per flush.
	A.303.1.3.1 Single showerhead. Showerheads shall have a maximum flow rate of not more than 2.0 gallons per minute at 80 psi. Showerheads shall be certified to the performance criteria of the US EPA WaterSense
	Specification for Showerheads. 4.303.1.3.2 Multiple showerheads serving one shower. When a shower is served by more than one showerhead, the combined flow rate of all showerheads and/or other shower outlets controlled by a single valve shall not exceed 2.0 gallons per minute at 80 psi, or the shower shall be designed to allow only one shower outlet to be in operation at a time. Note: A hand-held shower shall be considered a showerhead.
	4.303.1.4.1 Residential lavatory faucets. The maximum flow rate of residential lavatory faucets shall not exceed 1.2 gallons per minute at 60 psi. The minimum flow rate of residential lavatory faucets shall not be less than 0.8
	gallons per minute at 20 psi. 4.303.1.4.2 Lavatory faucets in common and public use areas. The maximum flow rate of lavatory faucets installed in common and public use areas (outside of dwelling or sleeping units) shall not exceed 0.5 gallons per minute at 60 psi.
Sometimental Language and	4.303.1.4.3 Metering faucets. Metering faucets shall not deliver more than 0.25 gallons per cycle. 4.303.1.4.4 Kitchen faucets. The maximum flow rate of kitchen faucets shall not exceed 1.8 gallons per minute at 60 psi. Kitchen faucets may temporarily increase the flow above the maximum rate, but not to exceed 2.2 gallons per minute at 60 psi, and must default to a maximum flow rate of 1.8 gallons per minute at 60 psi. Where complying faucets are unavailable, aerators or other means may be used to achieve reduction.
Spendagawal	Outdoor Water Use 4.304.1 Outdoor potable water use in landscape areas. [N] New residential developments with an aggregate landscape area equal to or greater than 500 square feet shall comply with one of the following:
	 Current California Department of Water Resources' Model Water Efficient Landscape Ordinance (MWELO). Projects with aggregate landscape areas less than 2,500 square feet may comply with the MWELO's Appendix D Prescriptive Compliance Option.
	MATERIAL CONSERVATION AND RESOURCE EFFICIENCY
	Enhanced Durability and Reduced Maintenance 4.406.1 Rodent proofing. Annular spaces around pipes, electric cables, conduits, or other openings in sole/botton plates at exterior walls shall be protected against the passage of rodents by closing such openings with cement mortar, concrete masonry or similar method acceptable by the City of Berkeley.
7	Construction Waste Reduction, Disposal and Recycling 4.408.1 Construction waste management. Recycle and/or salvage for reuse a minimum of 65 percent of the nonhazardous construction and demolition waste and a minimum of 100 percent of excavated soil, land-clearing debris, concrete and asphalt. Provide a completed City of Berkeley Construction Waste Management Plan. Use waste facilities that can provide verifiable documentation that the percentage of construction water material diverted from the landfill complies with this section.
	Building Maintenance and Operation 4.410.1 Operation and maintenance manual. At the time of final inspection, a manual which includes all of the information listed in CALGreen section 4.410.1 items 1 through 10 shall be presented to the building inspector and placed in the building, for the building occupant or owner, prior to final inspection sign off. 4.410.2 Recycling by occupants. [N] Where 5 or more multifamily dwelling units are constructed on a building site, provide readily accessible area(s) that serve the entire building or buildings on the site and is identified for the depositing, storage and collection of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics, organic waste, and metals.
	Code Compliance Checklist - CALGREEN RESIDENTIAL Page 4 of
	 Chain of custody certifications. Product labeled and invoiced as meeting the Composite Wood Products regulation per California Code of Regulations, Title 17.
	 Exterior grade products marked as meeting the PS-1 or PS-2 standards of the Engineered Wood Association, the Australian ASINZS 2269, European 636 3S, or Canadian CSA 0121, 0151, 0153 and 0325 standards. Other methods acceptable to the City of Berkeley.
	Interior Moisture Control 4.505.2.1 Capillary break. Concrete slab foundations required to have a vapor retarder shall have a capillary break installed in compliance with at least one of the following:
	 A 4-inch-thick base of ½ inch or larger clean aggregate shall be provided with a vapor retarder in direct contact with concrete and a concrete mix design, which will address bleeding, shrinkage, and curling shall be used.
	Other equivalent methods approved by the City of Berkeley.
	 Other equivalent methods approved by the City of Berkeley. A slab design specified by a licensed design professional. 4.505.3 Moisture content of building materials. Building materials with visible signs of water damage shall not be installed. Wall and floor framing shall not be enclosed when the framing members exceed 19 percent moisture content. Moisture content shall be verified in compliance with the following:
	 Other equivalent methods approved by the City of Berkeley. A slab design specified by a licensed design professional. 4.505.3 Moisture content of building materials. Building materials with visible signs of water damage shall not be installed. Wall and floor framing shall not be enclosed when the framing members exceed 19 percent moisture
	 Other equivalent methods approved by the City of Berkeley. A slab design specified by a licensed design professional. 4.505.3 Moisture content of building materials. Building materials with visible signs of water damage shall not be installed. Wall and floor framing shall not be enclosed when the framing members exceed 19 percent moisture content. Moisture content shall be verified in compliance with the following: Moisture content shall be determined with either a probe-type or contact-type moisture meter. Equivalent moisture verification methods may be approved by the City of Berkeley and shall satisfy requirements found in

combination.

Last Revised 03/31/18 e Checklist - CALGREEN RESIDENTIAL Page 2 of 4 **Code Compliance Checklist** & CONSERVATION sets. The effective flush volume of all water closets shall not exceed 1.28 gallons per flush. CALGREEN RESIDENTIAL sets shall be certified to the performance criteria of the US EPA WaterSense Specification for he effective flush volume of wall-mounted urinals shall not exceed 0.125 gallons per flush. The **Building and Safety** Project Information e of all other urinals shall not exceed 0.5 gallons per flush. **Permit Service Center** howerhead. Showerheads shall have a maximum flow rate of not more than 2.0 gallons Newly constructed Showerheads shall be certified to the performance criteria of the US EPA WaterSense residential buildings and New Building [N] Addition [A] Alteration additions or alterations showerheads serving one shower. When a shower is served by more than one to existing residential nbined flow rate of all showerheads and/or other shower outlets controlled by a single valve buildings, which gallons per minute at 80 psi, or the shower shall be designed to allow only one shower outlet increase an existing a time. Note: A hand-held shower shall be considered a showerhead. PLANNING AND DESIGN dwelling's conditioned area, volume, or size are ntial lavatory faucets. The maximum flow rate of residential lavatory faucets shall not exceed 4.106.2 Stormwater drainage and retention during construction. In order to subject to the provisions te at 60 psi. The minimum flow rate of residential lavatory faucets shall not be less than 0.8 manage stormwater drainage during construction, one or more of the following of the California Green measures shall be implemented to prevent flooding of adjacent property, prevent Building Standards erosion and retain soil runoff on the site: faucets in common and public use areas. The maximum flow rate of lavatory faucets Code. This checklist and public use areas (outside of dwelling or sleeping units) shall not exceed 0.5 gallons per · Retention basins of sufficient size shall be utilized to retain storm water on the site. is provided by the City • Where stormwater is conveyed to a public drainage system, collection point, gutter of Berkeley in order to g faucets. Metering faucets shall not deliver more than 0.25 gallons per cycle. or similar disposal method, water shall be filtered by use of a barrier system, wattle demonstrate compliance or other approved method. n faucets. The maximum flow rate of kitchen faucets shall not exceed 1.8 gallons per minute at with the code and ets may temporarily increase the flow above the maximum rate, but not to exceed 2.2 gallons facilitate permit Stormwater management requirements per Title 17 of the City of Berkeley , and must default to a maximum flow rate of 1.8 gallons per minute at 60 psi. Where complying approval. Municipal Code. able, aerators or other means may be used to achieve reduction. 4.106.3 Grading and Paving. Construction plans shall indicate how the site grading or Instructions: drainage system will manage all surface water flows. 1. Read and understand stable water use in landscape areas. [N] New residential developments with an aggregate Electrical Vehicle Charging the requirements of all al to or greater than 500 square feet shall comply with one of the following: mandatory measures 4.106.4.1 New one- and two-family dwellings and townhouses with attached ia Department of Water Resources' Model Water Efficient Landscape Ordinance (MWELO). listed in this checklist. private garages. [N] For each dwelling unit, install a listed raceway to accommodate gregate landscape areas less than 2,500 square feet may comply with the MWELO's Appendix a dedicated 208/240-volt branch circuit. The service panel and/or subpanel shall 2. Mark all mandatory Compliance Option. provide capacity to install a 40-ampere minimum dedicated branch circuit and space(s) measures that are reserved to permit installation of a branch circuit overcurrent protective device. RVATION AND RESOURCE EFFICIENCY applicable to the 4.106.4.1.1 Identification. [N] The service panel or subpanel circuit directory shall proposed project. and Reduced Maintenance identify the overcurrent protective device space(s) reserved for future EV charging as pofing. Annular spaces around pipes, electric cables, conduits, or other openings in sole/bottom 3. Coordinate the "EV CAPABLE". The raceway termination location shall be permanently and visibly alls shall be protected against the passage of rodents by closing such openings with cement construction drawings marked as "EV CAPABLE". asonry or similar method acceptable by the City of Berkeley. with the mandatory 4.106.4.2 New multifamily dwellings. [N] Where 17 or more multifamily dwelling units Reduction, Disposal and Recycling measures. are constructed on a building site, 3 percent of the total number of parking spaces on waste management. Recycle and/or salvage for reuse a minimum of 65 percent of the provided for all types of parking facilities, but in no case less than one, shall be electric 4. Incorporate this struction and demolition waste and a minimum of 100 percent of excavated soil, land-clearing vehicle charging spaces (EV spaces) capable of supporting future EVSE. Calculations checklist into the asphalt. Provide a completed City of Berkeley Construction Waste Management Plan. Use for the required number of EV spaces shall be rounded up to the nearest whole submitted set of can provide verifiable documentation that the percentage of construction water material construction drawings ndfill complies with this section. 4.106.4.2.1 EV Space Locations. Construction documents shall indicate the location on full sized sheets. of future EV spaces. and Operation and maintenance manual. At the time of final inspection, a manual which includes all of the 4.106.4.2.5 Identification. [N] The service panel or subpanel circuit directory shall identify the overcurrent protective device space(s) reserved for future EV charging CALGreen section 4.410.1 items 1 through 10 shall be presented to the building inspector and ng, for the building occupant or owner, prior to final inspection sign off. purposes as "EV CAPABLE" in accordance with the California Electrical Code. **Building and Safety** by occupants. [N] Where 5 or more multifamily dwelling units are constructed on a building 1947 Center St. 3rd floor accessible area(s) that serve the entire building or buildings on the site and is identified for Berkeley, CA 94704 510-981-7440 TDD 7450 age and collection of non-hazardous materials for recycling, including (at a minimum) paper, permits@cityofberkeley.info rd, glass, plastics, organic waste, and metals.

Code Compliance Checklist - CALGREEN RESIDENTIAL

Page 3 of 4

ENVIRONMENTAL QUALITY

Page 4 of 4

4.506.1 Bathroom exhaust fans. Each bathroom shall be mechanically ventilated and comply with the following:

• Humidity controls shall be capable of adjustment between a relative humidity range of ≤ 50 percent to a

maximum of 80 percent. A humidity control may utilize manual or automatic means of adjustment.

A humidity control may be a separate component to the exhaust fan and is not required to be integral.

4.507.2 Heating and air-conditioning system design. Heating and air-conditioning systems shall be sized,

designed and have their equipment selected using the following methods, except when the use of alternate design

• The heat loss and heat gain is established according to ANSI/ ACCA 2 Manual J-2011 (Residential Load

Duct systems are sized according to ANSI/ACCA 1 Manual D-2014 (Residential Duct Systems), ASHRAE

• Select heating and cooling equipment according to ANSI/ACCA 3 Manual S-2011 (Residential Equipment

Note: For the purposes of this section a bathroom is a room which contains a bathtub, shower, or tub/shower

Unless functioning as a component of a whole house ventilation system, fans must be controlled by a humidity

• Fans shall be ENERGY STAR compliant and be ducted to terminate outside the building.

Calculation), ASHRAE handbooks or other equivalent design software or methods.

temperatures necessary to ensure the systems function are acceptable

handbooks or other equivalent design software or methods.

Selection) or other equivalent design software or methods.

4.503.1 General. Any installed gas fireplace shall be a direct vent sealed-combustion type. Any installed woodstove or pellet stove shall comply with U.S. EPA New Source Performance Standards (NSPS) emission limits as applicable, and shall have a permanent label indicating they are certified to meet the emission limits.

Pollutant Control: Mechanical Systems 4.504.1 Covering of new duct openings and protection of mechanical equipment during construction. At the time of rough installation, during storage on the construction site and until final startup of the heating, cooling and ventilating equipment, all duct and other related air distribution component openings shall be covered with tape,

plastic, sheetmetal or other methods acceptable by the City of Berkeley to reduce the amount of water, dust and debris, which may enter the system. Pollutant Control: Finish Material 4.504.2.1 Adhesives, sealants and caulks. Adhesives, sealants and caulks used on the project shall comply

4.504.2.2 Paints and Coatings. Architectural paints and coatings shall comply with VOC limits in CALGreen Table

do not consist of more than 16 fluid ounces shall comply with statewide VOC standards and California Code of

with CALGreen Table 4.504.1 or 4.504.2 for VOC limits. Product units which do not weigh more than 1 pound and

4.504.2.3 Aerosol paints and coatings. Aerosol paints and coatings shall meet the Product-weighted MIR Limits for ROC in California Code of Regulations, Title 17 and the Bay Area Air Quality Management District percent VOC by weight of product limits of Regulation 8, Rule 49.

4.504.3 Carpet systems. All carpet installed in the building interior shall meet the testing and product requirements of one of the following:

 Carpet and Rug Institute's Green Label Plus Program. California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers," Version 1.1, February 2010 (also known as Specification 01350.)

 Scientific Certifications Systems Indoor Advantage™ Gold. 4.504.3.1 Carpet cushion. All carpet cushion installed in the building interior shall meet the requirements of the Carpet and Rug Institute's Green Label program. 4.504.3.2 Carpet Adhesive. All carpet adhesives shall meet the requirements of CALGreen Table 4.504.1.

Resilient Flooring **4.504.4 Resilient flooring systems.** Where resilient flooring is installed, at least 80 percent of the floor area

receiving resilient flooring shall comply with one or more of the following: • VOC emission limits defined in the Collaborative for High Performance Schools (CHPS) High Performance Products Database.

• Products compliant with CHPS criteria certified under the Greenguard Children & Schools program.

 Certification under the Resilient Floor Covering Institute (RFCI) FloorScore program. • Meet the California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile

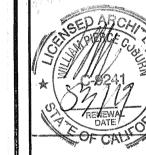
Organic Chemical Emissions from Indoor Sources Using Environmental Chambers," Version 1.1, February 2010 (also known as Specification 01350).

Composite Wood Products 4.504.5 Composite wood products. Hardwood plywood, particleboard and medium density fiberboard composite wood products used on the interior or exterior of the building shall meet the requirements for formaldehyde as

shown in CALGreen Table 4.504.5. 4.504.5.1 Documentation. Verification of compliance shall be provided as requested by the City of Berkeley. Documentation shall include at least one of the following:

Product certifications and specifications

NSF/ANSI 140 at the Gold level.



Date Scale

Drawn

City of Berkeley's Pollution Prevention - It's Part of the Plan

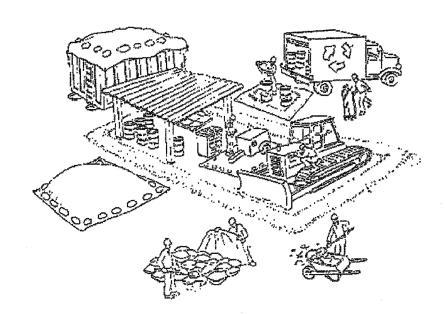
Make sure your crews and subs do the job right!

Runoff from streets and other paved areas is a major source of pollution and damage to creeks and the San

and crews plan ahead to keep dirt, debris, and other construction waste away from storm drains and local

creeks. Following these guidelines and the project specifications will ensure your compliance with City of

Francisco Bay. Construction activities can directly affect the health of creeks and the Bay unless contractors



Materials storage & spill cleanup

Non-hazardous materials management

- Sand, dirt, and similar materials must be stored at least 10 feet (3 meters) from catch basins. All construction material must be covered with a tarp and contained with a perimeter control during wet weather or when rain is forecasted or when not actively being used within 14 days.
- ✓ Use (but don't overuse) reclaimed water for dust control as needed.
- ✓ Sweep or vacuum streets and other paved areas daily. Do not wash down streets or work areas with water!
- ✓ Recycle all asphalt, concrete, and aggregate base material from demolition activities
 Comply with City of Berkeley Ordinances for recycling construction materials, wood,
 gyp board, pipe, etc.
- ✓ Check dumpsters regularly for leaks and to make sure they are not overfilled. Repair or replace leaking dumpsters promptly.
- Cover all dumpsters with a tarp at the end of every work day or during wet weather.

Hazardous materials management

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

Spill prevention and control

- ✓ Keep a stockpile of spill cleanup materials (rags, absorbents, etc.) available at the construction site at all times.
- When spills or leaks occur, contain them immediately and be particularly careful to prevent leaks and spills from reaching the gutter, street, or storm drain.

 Never wash spilled material into a gutter, street, storm drain, or creek!
- Dispose of all containment and cleanup materials properly.
- Report any hazardous materials spills immediately! Dial 911 or the City of Berkeley's Public Works Department by dialing 311

Construction Entrances and Perimeter

- Establish and maintain effective perimeter controls and stabilize all construction entrances and exits to sufficiently control erosion and sediment discharges from site and tracking off site.
- ✓ Sweep or vacuum any street tracking immediately and secure sediment source to prevent further tracking.

Vehicle and equipment maintenance & cleaning

Berkeley requirements.

- ✓ Inspect vehicles and equipment for leaks
 frequently. Use drip pans to catch leaks
 until repairs are made; repair leaks
 promptly.
 ✓ Fuel and maintain vehicles on site only
- in a bermed area or over a drip pan that is big enough to prevent runoff.

 If you must clean vehicles or equipment
- on site, clean with water only in a bermed area that will not allow rinse water to run into gutters, streets, storm drains, or creeks.
- ✓ Do not clean vehicles or equipment on-site using soaps, solvents, degreasers, steam cleaning equipment, etc.

Earthwork & contaminated soils

- ✓ Keep excavated soil on the site where it will not collect in the street.
- ✓ Transfer to dump trucks should take place on the site, not in the street.
- ✓ Use fiber rolls, silt fences, or other control measures to minimize the flow of silt off the site.



- ✓ Earth moving activities
 are only allowed during dry weather
 by permit and as approved by the City
 Inspector in the Field.
 ✓ Mature vegetation is the best form of
- erosion control. Minimize disturbance to existing vegetation whenever possible.

 If you disturb a slope during construction, prevent erosion by securing the soil with erosion control fabric, or seed with fast-growing grasses as soon as possible. Place

fiber rolls down-slope until soil is secure.

✓ If you suspect contamination (from site history, discoloration, odor, texture, abandoned underground tanks or pipes, or buried debris), call the Engineer for help in determining what should be done, and manage disposal of cntaminated soil according to their instructions.

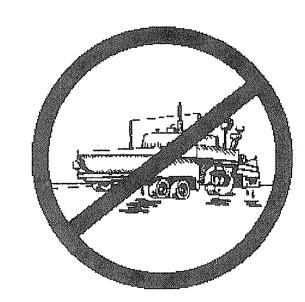
Dewatering operations

- ✓ Effectively manage all run-on, all runoff within the site, and all runoff that discharges from the site. Run-on from off site shall be directed away from all disturbed areas or shall collectively be in compliance.
- Reuse water for dust control, irrigation, or another on-site purpose to the greatest extent possible.
- Be sure to notify and obtain approval from the Engineer before discharging water to a street, gutter, or storm drain. Filtration or diversion through a basin, tank, or sediment trap may be required.
- ✓ In areas of known contamination, testing is required prior to reuse or discharge of groundwater. Consult with the Engineer to determine what testing is required and how to interpret results. Contaminated groundwater must be treated or hauled off-site for proper disposal.

Saw cutting

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

Paving/asphalt work



- Always cover storm drain inlets and manholes when paving or applying seal coat, tack coat, slurry seal, or fog seal.
- ✓ Protect gutters, ditches, and drainage courses with sand/gravel bags, or earthen berms.
- Do not sweep or wash down excess sand from sand sealing into gutters, storm drains, or creeks. Collect sand and return it to the stockpile, or dispose of it as trash.
- ✓ Do not use water to wash down fresh asphalt concrete pavement.

Concrete, grout, and mortar storage & waste disposal

- Store concrete, grout, and mortar under cover, on pallets, and away from drainage areas. These materials must never reach a storm drain.
- ✓ Wash out concrete equipment/trucks off-site or into contained washout areas that will not allow discharge of wash water onto the underlying soil or onto the surrounding areas.



Collect the wash water from washing exposed aggregate concrete and remove it for appropriate disposal off site.

Painting

hazardous waste.

- Never rinse paint brushes or
 materials in a gutter or street!
 Paint out excess water-based paint before rinsing brushes,
 rollers, or containers in a sink.
- Paint out excess oil-based paint before cleaning brushes in thinner.
 Filter paint thinners and solvents for reuse whenever possible.
 Dispose of oil-based paint sludge and unusable thinner as
- Tandanana Matariala

Landscape Materials

- Contain, cover, and store on pallets all stockpiled landscape materials (mulch, compost, fertilizers, etc.) during wet weather or when rain is forecasted or when not actively being used within 14 days.
- ✓ Discontinue the application of any erodible landscape material within 2 days of forecasted rain and during wet weather.

For references and more detailed information: www.cleanwaterprogram.org www.cabmphandbooks.com

WORK PUBLIC **PREVENTION**

Storm drain polluters may be liable for fines of \$10,000 or more per day!