

 <p>CITY OF PALO ALTO DEVELOPMENT SERVICES</p>	<p><b>RESIDENTIAL GREEN BUILDING INSPECTION GUIDELINES</b></p> <p>City of Palo Alto (CPA) Building Inspection Division 285 Hamilton Ave. Inspection Request: 650 329-2496</p>	<p>Revision Date: 3/27/18</p>
	<p><b>IVR# 151, 152, 153</b></p>	<p>General Requirements/Checklist for:</p> <p>Codes Enforced: 2016 California Green Building Code Palo Alto Municipal Code 16.14 (PAMC) <i>Effective for Permit Applications Submitted on or after 1/1/2017</i></p>
<p>The information provided in this document is general and intended as a guide only. Each project is unique and additional requirements may be enforced as deemed appropriate.</p>		

## GREEN BUILDING INSPECTION PROCEDURES

### GREEN BUILDING SPECIAL INSPECTOR REQUIREMENT

In accordance with PAMC 16.14, Residential projects triggering Tier 1 or Tier 2 shall be third-party verified by a Green Building Special Inspector. For CALGreen Tier 1 and Tier 2 information, consult the [Development Services Green Building webpage](#). Special Inspectors must be selected from the pre-approved list of Green Building Special Inspectors. The Special Inspector shall perform inspections in accordance with the project’s “GB-1” sheet, the Development Services webpage instructions, and this checklist. The Special Inspector shall consult the “Compliance Resources” listed at the end of this guideline. Where requirements are unclear, Special Inspectors may consult City Staff for clarification and case-by-case interpretations.

### RESIDENTIAL GREEN BUILDING TRIGGERS

**CALGreen Mandatory:** All residential remodels or additions under 1,000 square feet that increases the project’s conditioned area, volume, or size.

**CALGreen Mandatory + Tier 1:** All residential remodels and or additions over 1,000 square feet.

**CALGreen Mandatory + Tier 2:** All new residential construction of any size.

### PROJECTS SUBJECT TO CALGREEN MANDATORY AND NOT TIER 1 OR TIER 2

Residential projects triggering only CALGreen Mandatory, and not Tier 1 or Tier 2, shall also use this checklist. For these projects, the City of Palo Alto (CPA) Building Inspector shall perform the responsibilities of the Special Inspector as identified in this guideline. All reference to “Green Building Special Inspector” shall be replaced with “CPA Building Inspector”.

### NOTE TO GENERAL CONTRACTORS SUBJECT TO SPECIAL INSPECTION:

MONTHLY GREEN BUILDING INSPECTION REPORTS MUST BE SUBMITTED BY THE GENERAL CONTRACTOR IN WRITING TO THE GREEN BUILDING SPECIAL INSPECTOR FOR APPLICABLE PROVISIONS WHEN INDICATED BY THIS ICON.

MONTHLY  
REPORTING  
REQUIRED

WRITTEN PRE-APPROVAL OF PRODUCTS TO BE INSTALLED IS REQUIRED FOR PROVISIONS WHEN INDICATED BY THIS ICON.

SPECIAL  
INSPECTION  
PRE-APPROVAL  
REQUIRED

**Pre-Construction Green Building Meeting (#151):**

The contractor shall contact the City of Palo Alto Building Inspection Request line to schedule the Green Building Pre-Construction Meeting. The contractor shall coordinate this meeting with the Green Building Special Inspector. The Green Building Special Inspector shall be physically present and shall lead the meeting. When scheduling this meeting, use the “IVR Code #151” for a “Green Building Pre-Construction Meeting”

- Pre-Construction Meeting Agenda:

1. **GB-1.** Inspector shall review the “GB-1” sheet in the approved permit plan set.
2. **Communicate and confirm requirements.** Overview of the construction phase requirements applicable to the project. Confirm if the project requires Mandatory, Tier 1, or Tier 2 Inspection.
3. **Review Checklist.** Review Green Building Inspection Checklist (this document).
4. **Expectations.** Discuss compliance expectations throughout construction and during the Green Building Incremental Verification (#152) and the Green Building Final Inspection (#153).

- **MONTHLY GREEN BUILDING INSPECTION REPORTS**

The General Contractor shall submit monthly Green Building Progress report to the Special Inspector and shall provide an on-going update on the progress of the green building provisions.

- **PRE-VERIFICATION OF POLLUTANT CONTROL 4.504**

ALL products listed under 4.504 Pollutant Control must be pre-verified in writing by the Green Building Special Inspector prior to installation.

**IMPORTANT:** If one or more non-compliant materials listed under 4.504 are installed within this provision, the project is subject to an **automatic 14-day continuous flush-out** at the end of construction and occupancy may not occur until this flush-out is completed. The building flush-out must supply a total air volume of 14,000 cubic feet of outdoor air per square foot of floor area while maintaining an internal temperature of at least 60 degrees F and relative humidity no higher than 60%. A HEPA vacuum may be used to bring in outside air if the mechanical system will not accommodate the flush out.

5. **Submittals.** Review importance of maintaining submittal paperwork requirements to prevent delays in the successful completion of the Green Building Final.
6. **Resources.** Review resources available to the construction team.
7. **Q&A.** Questions and Answers
8. **Sign Permit Card.** Upon completion of the Green Building Pre-Construction Meeting, the CPA Inspector shall sign and date the permit card next to code “151”.
9. **Pre-Schedule Incremental Verification with Special Inspector.** Contractor shall schedule the approximate date of the first Green Building Incremental Verification with the Green Building Special Inspector. Should the project schedule change, the contractor shall reschedule the incremental inspection for a different day.
10. **Field Notes.** The Green Building Special Inspector shall keep field notes of the meeting and items discussed.

**Green Building Incremental Verification (#152):**

The General Contractor must be in on-going communication with the Special Inspector to verify all Green Building Incremental Verification (#152) requirements. The contractor must submit monthly Green Building Inspection Reports to the Special Inspector. The Special Inspector may conduct up to three site visits to verify that all “Green Building Incremental Verification” requirements have been met. Once all Green Building Incremental Verification (#152) requirements have been confirmed as complete by Green Building Special Inspector, and prior to the installation of drywall, the contractor shall contact the Inspection Request line to schedule the Green Building Incremental Verification (#152). The Green Building Incremental Verification (#152) must be completed prior to the installation of drywall.

- **Green Building Incremental Verification - Inspection Procedures:**

1. **GB-1.** Inspector shall review the “GB-1” sheet in the approved permit plan set.
2. **Contractor Submittal Preparation (Part 1).** Contractor shall prepare and deliver the submittals as listed under “*Green Building Incremental Verification – Contractor Submittals*”.
3. **Special Inspector Submittal Inspection (Part 1).** Request and review submittals or supplemental documentation as listed for “*Green Building Incremental Verification- Part 1 Submittals*”. This activity may be performed remotely.
4. **Special Inspector Site Inspection (Part 2).** Review Green Building Inspection Checklist (this document) and inspect all items listed as “*Green Building Incremental Verification - Part 2 On-Site Inspection*”.
5. **City Inspector Site Inspection.** Upon completion of the Green Building Incremental Verification, the contractor shall schedule a CPA Green Building Incremental Verification with the Building Department. During this inspection, the contractor and Special Inspector shall review the Green Building Incremental Verification measures to the Building Inspector assigned to the project.
  - Note: The Green Building Special Inspector shall have all submittals, photos, and other documents assembled in preparation for this inspection.
6. **Sign-off by the City Inspector.** Upon completion of the Green Building Incremental Verification, the CPA Building Inspector shall sign and date the permit card next to code “152”.
7. **Incremental Verification Provisions:**

CALGREEN MANDATORY 4.406.1 Rodent Proofing 4.504.1 Covering of duct openings and protection of mechanical equipment during construction 4.504.2 Finish Material Pollutant Control 4.505.2.1 Concrete Slab Foundations: Capillary Break 4.505.3 Moisture Content of Building Materials CALGREEN TIER 1 AND TIER 2 A4.106.2.2 Soil Protection A4.106.2.3 Top Soil Protection A4.106.4 Water Permeable Surfaces A4.305.1 Graywater A4.305.2 Recycled Water Piping
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CALGREEN TIER 1 AND TIER 2 (cont.) A4.305.4 Recycled Water Infrastructure on Multi-Family A4.305.5 Laundry-to-Landscape Ready Infrastructure A4.404.4 Lumber Size A4.404.2 Building Dimensions and Layouts A4.404.3 Building Systems A4.405.1 Drainage around foundations A4.407.3 Flashing Details A4.407.4 Material Protection A4.504.1 No Added Formaldehyde for Composite Wood A4.504.2 Resilient Flooring A4.504.3 Thermal Insulation
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**Green Building Final Inspection (#153):**

The contractor shall contact the Green Building Special Inspector for inspection of the items listed under Green Building Final Inspection (#153). This step must be completed prior to scheduling the Building Final Inspection.

Once all Green Building Final Inspection (#153) requirements have been confirmed as complete by Green Building Special Inspector, and prior to scheduling the overall Final Inspection, the contractor shall contact the Inspection Request line to schedule the Green Building Final Inspection (#153).

- **Green Building Final Inspection Procedures:**

1. **GB-1.** Inspector shall review the “GB-1” sheet in the approved permit plan set.
2. **Special Inspector Submittal Inspection (Part 1).** Request submittals or supplemental documentation as listed. Inspect compliance of project submittals and supplemental documentation. This activity may be performed remotely.
3. **Special Inspector Site Inspection (Part 2).** Review Green Building Inspection Checklist (this document) and inspect all items listed as “*Green Building Final Inspection*”.
4. **City Inspector Site Inspection.** Once all Green Building Final Inspection (#153) requirements have been confirmed as complete by Green Building Special Inspector, the contractor shall schedule a “*Green Building Final Inspection*” with the Building Department. During this inspection, the contractor and Special Inspector shall review the “*Green Building Final Inspection*” measures to the CPA Building Inspector assigned to the project.
  - Note: The Green Building Special Inspector shall have all submittals, photos, and other documents assembled in preparation for this inspection.
5. **Sign-off by the CPA Building Inspector.** Upon completion of the Green Building Incremental Verification, the Green Building Special Inspector shall sign and date the permit card next to code “153”.

**Administrative Notes for the Final Green Building Special Inspection:****Instructions to General Contractor:**

It is the responsibility of the General Contractor to prepare all submittals and schedule all inspections in accordance with this document. **The Green Building Special Inspector is not responsible to perform any work on behalf of the contractor.** The Green Building Special Inspections shall be performed similar to other Special Inspections.

**Instructions to Special Inspector:**

It is the responsibility of the Special Inspector to review all required documentation and deliver to the City along with the project Field Notes and Certificates of Compliance for submission to the CPA Building Inspector using the approved format. The Special Inspector may consult the “Compliance Resources” listed at the end of this guideline. Where requirements are unclear, the Special Inspector may consult City Staff for clarification and case-by-case interpretations.

Submittal Format:

Prepare a Flash Drive, and 3-ring binder (for City record) containing the following items for the Green Building Final. *Isolate all relevant submittals for and omit all submittals un-related to the Green Building Final Inspection.*

**1. Part 1 – Administrative Final Inspection**

- **Sign and scan** a copy of the GB-1 Sheet in your approved plan set for our records. **GB-1 sheet must have the Permit Number shown.**
- Contractor submittals and supporting documentation shall be delivered on a Flash drive, and three-ring binder (for our records) showing installation details for all provisions that were identified as “Y” on the GB-1 sheet. Label the Flash drive with the permit number. **Highlight applicable requirements on the submittals.**
- Photos and other required documentation provide by the Special Inspector shall be submitted on the same Flash Drive, and three-ring binder, under a separate tab or folder entitled “Green Building Special Inspection”.
- After inspection, re-submit any outstanding submittal documentation to the Inspector on a separate Flash Drive, and include the original submission documents.

**Green Building Special Inspection Requirements:****Division 4.1 – Planning and Design – Mandatory Measures****A4.105.3 Deconstruction Survey**

*The City of Palo Alto requires all single-family residential dwelling units required to obtain a demolition permit to complete a deconstruction survey provided by a third party approved by the Chief Building Official.*

**4.106.2 Stormwater drainage and retention**

*Enforcement in the public right of way is managed through the Public Works department.*

**4.106.3 Grading and Paving**

- Green Building Final Inspection – Part 1 Submittals: The Special Inspector shall review the permit set of plans and review the grading and paving areas of work. Note the grading plan as designed.
- Green Building Final Inspection – Part 2 On-Site Inspection: Verify that that installed paving and associated grade supports groundwater flows away from the building at all areas included in the scope. The Special Inspector shall take photos of hardscape installed indicating the drainage direction.

**4.106.4 Electric Vehicle Charging (locally amended)**

*All electrical inspections are outside the scope of the Green Building Special Inspector. General Contractor shall refer to the EVSE Installation Checklist for additional details.*

- Green Building Final Inspection – Part 1 Submittals: The Special Inspector shall review the permit set of plans and review the location of the EV infrastructure.
- Green Building Final Inspection – Part 2 On-Site Inspection: The Special Inspector shall verify that the electric vehicle pre-wiring infrastructure for single-family, and EVSE ready and EVSE installed for multi-family, has been installed. The function of this inspection is to verify that the required infrastructure has been installed. All electrical inspections are outside the scope of the Green Building Special Inspector.

**Division 4.2 and A4.2– Energy Efficiency**

*Tier 1 and Tier 2 Measures within A4.2 Energy Efficiency have not been adopted by the City of Palo Alto. Applicants must consult PAMC 16.17 for the local Energy Reach Code requirements.*

**Division 4.3 – Water Efficiency and Conservation – Mandatory Measures****4.303 Indoor Water Use**

- Green Building Final Inspection – Contractor Submittals: Contractor shall prepare and deliver all covered water fixture submittals showing that the performance values below are met.
- Green Building Final Inspection – Part 1 Submittals: The Special Inspector shall verify that the flow and flush rates specified have been installed. First, review the Plumbing Fixture Schedule and associated water use rates. The fixtures are measured in Gallons Per Minute

(GPM) for lavatories and kitchen sinks, and Gallons Per Flush (GPF) for toilets and urinals. Second, review each fixture specification cut sheet and verify that rates shown on the Plumbing Fixture Schedule matches the fixture cut sheet. Plumbing Fixtures and Fittings shall not exceed the following minimums:

- Water Closets, 1.28 GPF
  - Urinals, 0.125 GPF
  - Single Showerhead, 2.0 GPF at 80 psi
  - Multiple Showerheads Serving One Shower, 2.0 GPF at 80 psi (max. flow rate of all showerheads combined if controlled by a single valve)
  - Residential lavatory faucets, 1.2 GPM @ 60 psi
  - Metering faucets, 0.25 gallons/cycle
  - Kitchen faucets, 1.8 GPM @ 60 psi
- Green Building Final Inspection – Part 2 On-Site Inspection: The Special Inspector shall field verify that the fixture cut sheet matches the fixture that was installed. Make sure to have the cut sheets on-site to verify installation.

#### **4.304.1 Outdoor Potable Water Use In Landscaped Areas (Emergency Regulations effective for permit applications submitted after June 1, 2015 – Formerly a voluntary measure found in A4.304.1)**

- Green Building Final Inspection – Contractor Submittals: Irrigation Contractor shall prepare and deliver the Water Efficient Landscape Ordinance (MWELo) Certificate of Installation and associated documentation.
- Green Building Final Inspection – Part 1 Submittals: The Special inspector shall collect the Model Water Efficient Landscape Ordinance (MWELo) Certificate of Compliance from the licensed landscape contractor demonstrating compliance with the permit plans. See “Compliance Resources” section for a link to the certificate.

### **Division 4.4 – Material Conservation and Resource Efficiency – Mandatory Measures**

#### **4.406.1 Rodent Proofing**

- Green Building Incremental Verification – Part 2 On-Site Inspection: The Special Inspector shall field verify at rough inspection that annular spaces have been protected by closing the openings with approved material. The Special Inspector shall take photographs of all compliant annular spaces.
  - Note: This requirement applies to the openings under a bathtub per the CBC.

#### **4.408 Enhanced Construction Waste Reduction (Locally amended A4.408.1 moved from Appendix A4 to Chapter 4 Mandatory Measures**

*This requirement is enforced within the Green Halo system and is managed by the C&D Planner. No Green Building Special Inspection required.*

#### **4.410.1 Building Maintenance and Operation Manual**

- Green Building Final Inspection – Contractor Submittals: General Contractor shall prepare and deliver the Operations and Maintenance (O&M) Manual to the owner and Special Inspector in accordance with the

approved format from HCD residential guide for the manual format. See “Compliance Resources” for a link to the approved format.

- Green Building Final Inspection – Part 1 Submittals:* The Special Inspector shall verify that the Operations and Maintenance (O&M) Manual is completed in accordance with the HCD residential guide for the manual format. See “Compliance Resources” for a link to the approved format.

## Division 4.5 – Environmental Quality – Mandatory Measures

### 4.503 Fireplaces

- Green Building Final Inspection – Contractor Submittals:* General Contractor shall prepare and deliver product cut sheets showing the requirements listed to the Green Building Special Inspector.
- Green Building Final Inspection – Part 1 Submittals:* The Special Inspector shall review cut sheet for any gas fireplace installed to confirm it meets the direct-vent sealed combustion type requirements. The Special Inspector shall review cut sheet for woodstove or pellet stove installed to confirm it complies U.S. EPA Phase II emission limits.
- Green Building Final Inspection – Part 2 On-Site Inspection:* The Special Inspector shall field verify that fireplaces and/or woodstoves and/or pellet stoves matches the cut sheet provided.

### 4.504.1 Covering of duct openings and protection of mechanical equipment during construction

MONTHLY  
REPORTING  
REQUIRED

- Green Building Incremental Verification – Contractor Submittals:* General Contractor shall prepare and deliver a monthly update with updated photographs of the protected ducts to the Green Building Special Inspector regarding the progress of this item.
- Green Building Incremental Verification – Part 2 On-Site Inspection:* The Special Inspector shall field verify that all duct and other related air distribution component openings are covered to reduce the amount of dust, water, and debris which may enter the building. The Special Inspector shall take photographs demonstrating compliance at one point during construction.

### 4.504.2 Finish Material Pollutant Control

SPECIAL  
INSPECTOR  
PRE-APPROVAL  
REQUIRED

- Green Building Incremental Verification – Contractor Submittals:* General Contractor shall prepare and deliver product cut sheets and/or pictures of containers showing compliance for all product types listed for **4.504.2.1 through 4.504.5** to the Green Building Special Inspector prior to installation. Contractor must obtain pre-verification of product compliance from the Green Building Special Inspector. It is recommended to batch multiple products for review to reduce the administrative review time.
- IMPORTANT** It is the responsibility of the Contractor to initiate this pre-verification and deliver the product cut sheets of predicted products to be installed. The Contractor shall deliver the products cut sheets in writing, with no fewer than 10 business days for pre-verification review, to the Green Building Special Inspector, prior to performing the installation.
- Green Building Incremental Verification – Part 1 Submittals:* The Special Inspector shall verify compliance with required VOC levels, and associated product labels, by reviewing all product cutsheets provided by the general contractor and pre-verify products within 10 business days of receipt.



- *Green Building Final Inspection – Part I Submittals:* The Special Inspector shall verify compliance with required VOC levels, and associated product labels, by reviewing all the VOC Compliance Spreadsheet and associated product cut sheets. See “Compliance Resources” section for a link to the spreadsheet.
  - **4.504.2.1 Adhesives, Adhesive bonding primers, adhesive primers, sealants, sealant primers, and caulks** Product VOC levels shall not exceed Table 4.504.1 and Table 4.504.2 as applicable.

**TABLE 4.504.1 ADHESIVE VOC LIMITS**

ARCHITECTURAL APPLICATIONS	VOC LIMIT
Indoor carpet adhesives	50
Carpet pad adhesives	50
Outdoor carpet adhesives	150
Wood flooring adhesive	100
Rubber floor adhesives	60
Subfloor adhesives	50
Ceramic tile adhesives	65
VCT and asphalt tile adhesives	50
Drywall and panel adhesives	50
Cove base adhesives	50
Multipurpose construction adhesives	70
Structural glazing adhesives	100
Single-ply roof membrane adhesives	250
Other adhesives not specifically listed	50

SPECIALTY APPLICATIONS	VOC LIMIT
PVC welding	510
CPVC welding	490
ABS welding	325
Plastic cement welding	250
Adhesive primer for plastic	550
Contact adhesive	80
Special purpose contact adhesive	250
Structural wood member adhesive	140
Top and trim adhesive	250
SUBSTRATE SPECIFIC APPLICATIONS	
Metal to metal	30
Plastic foams	50
Porous material (except wood)	50
Wood	30
Fiberglass	80

**TABLE 4.504.2 SEALANT VOC LIMIT**

SEALANTS	VOC LIMIT
Architectural	250
Marine deck	760
Nonmembrane roof	300
Roadway	250
Single-ply roof	450

membrane	
Other	420
SEALANT PRIMERS	VOC LIMIT
Architectural	
Nonporous	250
Porous	775

Modified bituminous	500	Other	750
Marine deck	760		

- **4.504.2.2 Paints and Coatings** Product VOC levels shall not exceed Table 4.504.3

**TABLE 4.504.3 ARCHITECTURAL COATINGS VOC LIMIT**

COATING CATEGORY	VOC LIMIT
Flat coatings	50
Nonflat coatings	100
Nonflat-high gloss coatings	150
<b>SPECIALTY COATINGS</b>	
Aluminum roof coatings	400
Basement specialty coatings	400
Bituminous roof coatings	50
Bituminous roof primers	350
Bond breakers	350
Concrete curing compounds	350
Concrete/masonry sealers	100
Driveway sealers	50
Dry fog coatings	150
Faux finishing coatings	350
Floor Coatings	100
Form-release compounds	250
Graphic arts coatings (sign paints)	500
High temperature coatings	420
Industrial maintenance coatings	250
Low solids coatings	120
Mastic texture coatings	100
Metallic pigmented coating	500

Multicolor coatings	250
Pretreatment wash primers	420
Primers, sealers, and undercoaters	100
Reactive penetrating sealers	350
Recycled coatings	250
Roof coatings	50
Rust preventative coatings	250
Shellacs	
Clear	730
Opaque	550
Specialty primers, sealers and undercoaters	100
Stains	250
Stone consolidants	450
Swimming pool coating	340
Traffic marking coatings	100
Tub and tile refinish coatings	420
Waterproofing membranes	250
Wood coatings	275
Wood preservatives	350
Zinc-rich primers	340

Grams of VOC per liter of coating, including water and including exempt compounds

**SPECIAL INSPECTOR PRE-APPROVAL REQUIRED**

- **4.504.2.3 Aerosol Paints and Coatings** Products shall meet the Product-weighted MIR Limits for ROC in Section 94522(a)(3) and other restrictions within Sections 94522(c)(2) and (d)(2) of Title 17. In addition, in accordance with BAAQMD, products must comply with the percent VOC by weight of product limits of Regulation 8, Rule 49.

**SPECIAL INSPECTOR PRE-APPROVAL REQUIRED**

- **4.504.3 Carpet Systems** Carpet product cut sheets shall meet one of the following: 1. Carpet and Rug Institute’s Green label plus program, 2. California Department of Public Health Standard Practice for the testing of VOCs (Specification 01350), 3. NSF/ANSI 140 at the Gold Level. 4. Scientific Certifications Systems Indoor Advantage™ Gold. (4.504.3)

SPECIAL INSPECTOR PRE-APPROVAL REQUIRED

- **4.504.3.1 Carpet Cushion** Carpet cushion shall meet the requirements of the Carpet and Rug Institute Green Label Program, carpet adhesive shall meet the requirements of Table 4.504.1 (4.504.3.1, 4.504.3.2)

SPECIAL INSPECTOR PRE-APPROVAL REQUIRED

- **4.504.4 Resilient Flooring Systems** Where resilient flooring is installed, at least 80 percent of the floor area receiving resilient flooring shall meet one the requirements listed. Product cut sheets shall indicate compliance with one or more of the following: (4.504.4)
  1. Products compliant with the California Department of Public Health’s Specification 01350, certified as a CHPS Low-Emitting Material in the Collaborative for High Performance Schools (CHPS) High Performance Product Database.
  2. Products certified under UL GREENGUARD Gold (formerly the Greenguard Children & Schools program).
  3. Certification under the Resilient Floor Covering Institute (RFCI) FloorScore program.
  4. Meet the California Department of Public Health’s Specification 01350

SPECIAL INSPECTOR PRE-APPROVAL REQUIRED

- **4.504.5 Composite Wood Products** All hardwood plywood, particleboard, and medium density fiberboard composite wood products shall meet the requirements for Formaldehyde Limits in Table 4.504.5. (4.504.5)

**TABLE 4.504.5 MAX FORMALDEHYDE LIMITS (PARTS PER MILLION)**

COATING CATEGORY	VOC LIMIT
Hardwood plywood veneer core	0.05
Hardwood plywood composite core	0.05
Particleboard	0.09
Medium density fiberboard	0.11
Thin medium density fiberboard Max thickness of 5/16 inches (8mm)	0.13

**4.505.2.1 Concrete Slab Foundations: Capillary Break**

1. Green Building Incremental Verification – Part 1 Submittals: Concrete slab foundations required to have a vapor retarder by CBC, CCR Title 24, Part 2, Chapter 19 shall also comply with this section. A 4-inch thick base of ½-inch or larger clean aggregate, with a vapor barrier in direct contact with concrete, and a concrete mix design which will address bleeding, shrinkage, and curling. The Special Inspector shall collect the Individual Provision Certificate of Compliance from the general contractor for this measure.

**4.505.3 Moisture Content of Building Materials**

- Green Building Incremental Verification – Part 2 On-Site Inspection: The Special Inspector shall collect the Individual Provision Certificate of Compliance from the general contractor for this measure. The Special Inspector shall perform at least three random moisture readings on wall and floor framings in compliance with section 4.505.3 using

either a probe-type or contact-type moisture meter to verify compliance. The Special Inspector shall note the results of the moisture readings on the Field Notes.

#### **4.506.1 Bathroom Exhaust Fans**

- Green Building Final Inspection – Part 1 Submittals: The Special Inspector shall review the bathroom exhaust fan cutsheet to verify that it shows the ENERGY STAR label. The exhaust fan must be controlled by a humidity control unless the fan is operating as part of a whole house ventilation system. The Special Inspector shall review the humidity controls product cutsheet, or feature of the exhaust fan if integrated, for compliance. The humidity control shall be capable of adjustment between a relative humidity range of  $\leq 50$  percent to a maximum of 80 percent. A humidity control may utilize manual or automatic means of adjustment.

#### **4.507.2 Heating and Air Conditioning System Design**

- Green Building Final Inspection – Part 1 Submittals: The Special Inspector shall collect the Individual Provision Certificate of Compliance from the general contractor for this measure declaring that the systems have been installed in accordance with the Manual J, Manual D, and Manual S permit plan assumptions.

### **Division A4.1 - Planning and Design – Elective Measures**

#### **A4.104.1 Supervision and Education**

- Green Building Pre-Construction Meeting – Special Inspector Submittals: The Special Inspector shall prepare and deliver a written project-specific green building manual for the project and shall administer an in-person training outside of CPA specific inspections to all parties associated with the development of the project. The Special Inspector shall take attendance during the training and shall submit a copy of the written project manual and attendance log to the CPA Inspector.
  - NOTE: The Special Inspector performing the training may or may not be the same Special Inspector performing the Green Building Special Inspection in accordance with the remainder of this guideline.
- Green Building Final Inspection – Contractor Submittals: The Special Inspector shall deliver a copy of the written project manual used during the project.

#### **A4.105.1/PAMC 16.14 Deconstruction and Reuse of Existing Materials**

- Green Building Final Inspection – Contractor Submittals: General Contractor shall prepare a spreadsheet of the Deconstructed and Reused Materials in accordance with the code requirements and deliver to the Green Building Special Inspector. All reused materials must be code compliant. The contractor shall take photographs of all deconstructed and reused components. For partial remodels, the reuse must occur within the area of work for the project. The reuse of materials must include all associated building material within a project category to comply with the requirement (i.e. all doors and trim must be reused).
- Green Building Final Inspection – Part 1 Submittals: The Special Inspector shall review the spreadsheet of the Deconstructed and Reused Materials in accordance with the code to confirm that the project requirement is met.
- Green Building Final Inspection – Part 2 On-Site Inspection: The Special Inspector shall field verify that the images associated with the submittal have actually been reused

**A4.106.2.1 Soil Analysis**

- Green Building Final Inspection – Contractor Submittals: The Contractor or shall collect a soil analysis report performed by a licensed design professional on the physical and chemical properties of the soil type and the report shall identify any associated strengths and weaknesses. The report must have an addendum or supplemental summary describing how the soil analysis was utilized in the structural design.
- Green Building Final Inspection – Part 1 Submittals: The Special Inspector shall collect the Certificate of Compliance declaring compliance with the requirement from the Structural Engineer.

MONTHLY REPORTING REQUIRED
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**A4.106.2.2 Soil Protection** (Elective measure available to project not subject to C3 requirements)

- Green Building Incremental Verification – Contractor Submittals: The Contractor shall provide a monthly report and supporting photographs to the Special Inspector on the progress of this requirement.
- Green Building Incremental Verification – Part 2 On-Site Inspection: The Special Inspector shall field verify that soil protection measures have been installed and shall take photos as verification of the installation.
- Green Building Final Inspection – Contractor Submittals: The Contractor shall prepare and deliver one or more of the following 1) photographs and supporting documentation demonstrating erosion control measures implemented as indicated on the permit plans 2) a summary and supporting photographs demonstrating that site access has been accomplished by deliberately reducing the amount of cut and fill need to install access roads and driveways 3) a summary and supporting photographs demonstrating that all construction activities are coordinated to use the same trench (throughout the duration of construction) to minimize the amount of time disturbed soil is exposed and replaced.
- Green Building Final Inspection – Part 1 Submittals: The Special Inspector shall review the submittal documentation to verify that the requirements have been met.

MONTHLY REPORTING REQUIRED
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**A4.106.2.3 Topsoil Protection (Tier 1 and Tier 2 Mandatory)**

- Green Building Incremental Verification – Contractor Submittals: The Contractor shall prepare and deliver photographs of the protected topsoil demonstrating compliance with the requirements. These photos shall be submitted during the monthly inspection report.
- Green Building Incremental Verification – Part 1 Submittals: The Special Inspector shall review the photographs submitted in the monthly report to verify compliance is maintained.
- Green Building Incremental Verification – Part 2 On-Site Inspection: The Special Inspector shall field verify that non-hazardous topsoil has been stockpiled for reuse in a designated area and covered or protected from erosion. Protection from erosion includes covering with tarps, straw, mulch, chipped wood or vegetative cover to protect the topsoil for later use. The Special Inspector shall take photos as verification of compliance.

MONTHLY REPORTING REQUIRED
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**A4.106.2.3 Topsoil Protection (Tier 2 Mandatory Only)**

- Green Building Incremental Verification – Contractor Submittals: The Contractor shall prepare and deliver photographs of the delineated fencing and flagging of the protected topsoil thereby limiting construction activity to the construction area. These photos shall be submitted during the monthly inspection report. These photos are in addition to the photos

taken for A4.106.2.1.

- Green Building Incremental Inspection – Part 1 Submittals: The Special Inspector shall review the photographs submitted in the monthly report to verify compliance is maintained.
- Green Building Incremental Inspection – Part 2 On-Site Inspection: The Special Inspector shall field verify that topsoil protection fencing and flagging has been utilized and shall take photos as verification of compliance.

#### **A4.106.3 Landscape design (locally amended)**

NOTE: Some provisions are related to the MWELo provisions found in 4.304.1.

- Green Building Final Inspection – Contractor Submittals: The Landscape Contractor shall sign the Certificate of Compliance declaring that a minimum one of the four requirements have been met. 1) Areas disturbed during construction are restored to be consistent with native vegetation 2) Turf areas are limited to 25% for Tier 1 and 10% for Tier 2 for the total landscaped area. 3) 75% of native or drought tolerant plants are utilized 4) Hydrozoning is utilized throughout the landscape.
- Green Building Final Inspection – Part 1 Submittals: The Special Inspector shall collect the Certificate of Compliance from the Landscape Contractor verifying that the requirements have been achieved.

#### **A4.106.4 Water Permeable Surfaces (Tier 1 and Tier 2 Mandatory)**

(Permeable surface area shall meet 20% for Tier 1 and 30 % Tier 2)

- Green Building Final Inspection – Contractor Submittals: The Contractor shall prepare and deliver product cut sheets for each water permeable paved material meeting the requirements as shown on the Water Permeable Surface Area calculations on the permit plans.
- Green Building Final Inspection – Part 1 Submittals: The Special Inspector shall review the product cut sheets to verify that the materials meet the permeable surface requirement. The paved surface area must match the permit plans.
- Green Building Final Inspection – Part 2 On-Site Inspection: The Special Inspector shall field verify that permeable surface materials have been installed and shall take photos as verification of the installation.

#### **A4.106.5 Cool Roof for Reduction of Heat Island Effect (Tier 2 Mandatory Only)**

- Green Building Final Inspection – Contractor Submittals: The Contractor shall prepare and deliver product cut sheets showing compliance with the SRI compliance on the permit plans.
- Green Building Final Inspection – Part 1 Submittals: The Special Inspector shall request a copy of the Roofing Submittal and shall verify that the SRI values meet the minimum requirements listed below. A higher SRI is most desirable.

Roof Slope	Minimum SRI
≤ 2:12 (Low-Slope)	78
> 2:12 (Steep Slope)	20

#### **A4.106.6 Vegetated Roof**

- Green Building Final Inspection – Contractor Submittals: The Contractor shall prepare and deliver vegetated roof product cut sheets meeting the requirements.

- Green Building Final Inspection – Part 1 Submittals: The Special Inspector shall review the vegetated roof submittals to verify compliance. The Special Inspector shall collect a Certificate of Compliance from the roofing installer declaring that the installation complies with this section and the California Building Code for roofing.
- Green Building Final Inspection – Part 2 On-Site Inspection: The Special Inspector shall field verify that the vegetated roof has been installed and shall take photos as verification of the installation.

**A4.106.10 Light pollution reduction**

- Green Building Final Inspection – Contractor Submittals: The Contractor shall prepare and exterior light fixture product cut sheets meeting the requirements.
- Green Building Final Inspection – Part 1 Submittals: The Special Inspector shall review the permit set of plans to count the exterior light fixtures. Verify that all light fixtures meet the required Backlight, Uplight, and Glare (BUG) Ratings by reviewing the light fixture cut sheets compared the figures listed in Table 4.106.8. The requirement for a specific fixture is based on the 1) Mounting height (MH) of the fixture, and 2) The linear distance between the fixtures location compared to the location of the property line. Palo Alto is in lighting zone LZ3.
- Green Building Final Inspection – Part 2 On-Site Inspection: The Special Inspector shall visually verify that the fixture installed matches the fixture on the cutsheet.

Table 4.106.8

Maximum Allowable Backlight, Uplight, and Glare (BUG) Ratings for Palo Alto

Allowable Rating	Lighting Zone 3
<b>Maximum Allowable Backlight Rating</b>	
Luminaire greater than 2 mounting heights (MH) from property line	No Limit
Luminaire back hemisphere is 1-2 mounting heights (MH) from property line	B4
Luminaire back hemisphere is 0.5-1 mounting heights (MH) from property line	B3
Luminaire back hemisphere is less than 0.5 mounting heights (MH) from property line	B2
<b>Maximum Allowable Uplight Rating</b>	
For area lighting	U0
For all other outdoor lighting, including decorative luminaires	U3
<b>Maximum Allowable Glare Rating</b>	
Luminaire greater than 2 mounting heights (MH) from property line	G3
Luminaire back hemisphere is 1-2 mounting heights (MH) from property line	G2
Luminaire back hemisphere is 0.5-1 mounting heights (MH) from property line	G1
Luminaire back hemisphere is less than 0.5 mounting heights (MH) from property line	G1

**A4.106.7 Reduction of the heat island effect for non-roof areas**

- Green Building Final Inspection – Contractor Submittals: The Contractor shall prepare and deliver product cut sheets meeting product requirements for high-

albedo materials as shown on the permit plans (requirement is an initial solar reflectance value of at least 0.30) based on ASTM Standard E 1918 or ASTM C1549. If applicable, the contractor shall prepare submittals demonstrating an open grid paving system or water permeable paving material.

- Green Building Final Inspection – Part 1 Submittals:* The Special Inspector shall review the paving material submittals to verify that the requirements have been met for 50% of the requirements.
- Green Building Final Inspection – Part 2 On-Site Inspection:* The inspector shall field verify that paving material has been installed and shall take photos as verification of the installation.

#### **A4.108.1 Innovative concepts and local environmental conditions**

- Green Building Final Inspection – Part 1 Submittals Appointment:* The Special Inspector shall review submittals supporting the installation of the approved innovative concept as reviewed during plan check.

### **Division A5.3 – Water Efficiency and Conservation - Tier 1 & Tier 2 Measures**

#### **A4.303.3.1 Kitchen Faucets**

- Green Building Final Inspection – Contractor Submittals:* Contractor shall prepare and deliver all covered water fixture submittals showing that the performance values of 1.5 GPM @ 60 psi has been met.
- Green Building Final Inspection – Part 1 Submittals:* The Special Inspector shall verify that the flow rate specified for the kitchen faucet has been provided. First, review the Plumbing Fixture Schedule and associated water use rates for the kitchen faucet. Second, review each fixture specification cut sheet and verify that rates shown on the Plumbing Fixture Schedule matches the fixture cut sheet. The kitchen faucet flow rate shall not exceed 1.5 GPM @ 60 psi.
- Green Building Final Inspection – Part 2 On-Site Inspection:* The Special Inspector shall field verify that the fixture cut sheet matches the fixture that was installed. Make sure to have the cut sheets on-site to verify installation.

#### **A4.303.2 Alternate water sources for nonpotable applications (Indoor use of recycled water)**

- Green Building Final Inspection – Contractor Submittals:* The Contractor shall prepare and deliver a Certificate of Compliance demonstrating that alternate nonpotable water sources have been installed in accordance with the California Plumbing Code. The system must also be field verified by the Plumbing Engineer. The Plumbing Engineer shall provide a second Certificate of Compliance to the Special Inspector.
- Green Building Final Inspection – Part 1 Submittals:* The Special Inspector shall collect the Certificates of Compliance and review to confirm the requirement has been met.
- Green Building Final Inspection – Part 2 On-Site Inspection:* The Special Inspector shall field verify that the nonpotable indoor application has been installed and shall take photos as verification of the installation.

#### **A4.303.3 Appliances**



- Green Building Final Inspection – Contractor Submittals: The Contractor shall prepare and deliver the appliance product cut sheets meeting the requirements.
- Green Building Final Inspection – Part 1 Submittals: The Special Inspector shall review the permit set of plans to verify that the specified water-using appliances are installed. First, check that the appliance has an ENERGY STAR label or the product cut sheet lists the product as ENERGY STAR qualified. The product must also meet the applicable requirement below.

TYPE	Maximum Water Use
Standard Dishwater	4.25 Gallons Per Cycle
Compact Dishwasher	3.5 Gallons Per Cycle
Clothes Washer	Water factor of 6 Gallons per cubic feet of drum capacity.

- Green Building Final Inspection – Part 2 On-Site Inspection: Field verify that the fixture cut sheet matches the fixture that was installed. Make sure to have the cut sheets on-site to verify installation.

#### **A4.303.4 Nonwater Supplied Urinals and Waterless Toilets**

(Note: These systems must be in compliance with the Health Department requirements)

- Green Building Final Inspection – Contractor Submittals: The Contractor shall prepare and deliver the fixture product cut sheets meeting the requirements.
- Green Building Final Inspection – Part 1 Submittals: The Special Inspector shall review the product submittals to verify that the waterless component of the installation has been met.
- Green Building Final Inspection – Part 2 On-Site Inspection: The Special Inspector shall field verify that waterless fixture has been installed and shall take photos as verification of the installation.

#### **A4.304.1 Rainwater catchment systems**

- Green Building Final Inspection – Contractor Submittals: The Contractor shall prepare and deliver submittals in accordance with City of Palo Alto Rainwater Catchment System Submittals and Guidelines.  
<http://www.cityofpaloalto.org/civicax/filebank/documents/45607>
- Green Building Final Inspection – Part 1 Submittals: The Special Inspector shall review the submittals to verify that the requirements are met in accordance with the City of Palo Alto Rainwater Catchment System Submittals and Guidelines. The Special Inspector shall collect the Certificate of Compliance from the system installer declaring that the requirements are met in accordance with the California Building Code.
- Green Building Final Inspection – Part 2 On-Site Inspection: The Special Inspector shall field verify that rainwater catchment system has been installed and shall take photos as verification of the installation.

#### **A4.304.2 Irrigation Metering Device (PAMC 16.14/Tier 1 and Tier 2 Mandatory)**

- Green Building Final Inspection – Part 2 On-Site Inspection: For landscape projects over 1,000 sq. ft., the Special Inspector shall verify that a separate irrigation meter has been installed and/or verified by the Utilities department. *Applicant should contact Utilities for any questions related to installation.*

**A4.304.3 Potable Water Elimination (For Landscapes)**

- Green Building Final Inspection – Contractor Submittals: The Landscape Contractor shall prepare and deliver a Certificate of Compliance declaring that 100% of the landscape shall be irrigated using non-potable water via one or more of the following: 1) use of captured rainwater; 2) Use of recycled water using purple pipe (only in CPAU recycled water areas); 3) use of graywater.
- Green Building Final Inspection – Part 1 Submittals: The Special Inspector shall review the Certificate of Compliance to verify the requirement has been achieved.
- Green Building Final Inspection – Part 2 On-Site Inspection: The Special Inspector shall field verify that systems utilized to achieve the non-potable application has been installed and shall take photos as verification of the installation.

**A4.305.1 Graywater**

- Green Building Incremental Verification – Contractor Submittals: The Contractor shall prepare and deliver product cut sheets meeting the requirements listed in the City of Palo Alto Graywater Submittals and Guidelines.  
<http://www.cityofpaloalto.org/civicax/filebank/documents/17788>
- Green Building Incremental Verification – Part 1 Submittals: The Special Inspector shall collect the Certificate of Compliance from the Contractor declaring that the requirements have been met in accordance with this section and the City of Palo Alto Graywater Submittals and Guidelines.
- Green Building Incremental Verification – Part 2 On-Site Inspection: The Special Inspector shall field verify that the graywater system has been installed and shall take photos as verification of the installation.

**A4.305.2 Recycled Water Piping**

- Green Building Incremental Verification – Contractor Submittals: The Contractor shall prepare and deliver the Certificate of Compliance declaring that the requirements have been achieved.
- Green Building Incremental Verification – Part 1 Submittals: The Special Inspector shall collect the Certificate of Compliance from the installer declaring that the requirements have been met in accordance with this section.
- Green Building Incremental Verification – Part 2 On Site Inspection: The Special Inspector shall review the permit set of plans to verify that the dual piping is installed and labeled as specified in accordance with the plumbing code. If recycled water is immediately intended for use in the project, and not just pre-plumbed, the City building inspector should witness any testing of the system as required by the *California Plumbing Code* and collect the results of any tests. The Special Inspector shall take photographs verifying the installation of the system.

**A4.305.4 Recycled Water Infrastructure on Multi-Family Additions and Alterations**

- Green Building Incremental Verification – Contractor Submittals: The Landscape Contractor shall prepare and deliver the Certificate of Compliance declaring that the recycled water infrastructure (purple pipe) requirements have been achieved.

- Green Building Incremental Verification – Part 2 On Site Inspection:* Prior to the covering of purple pipe with soil and other organic material, the Special Inspector shall review the permit set of plans to showing the recycled water infrastructure (purple piping) and field verify that the infrastructure shown on the plans has been installed. The Special Inspector shall take photographs verifying the installation of the piping.

#### **A4.305.5 Laundry to Landscape Ready Infrastructure.**

- Green Building Incremental Verification – Part 2 On-Site Inspection:* The Special Inspector shall field verify that laundry to landscape diverter valve has been installed at washer drain line and shall take photos as verification of the installation. The diverter valve shall be capped until a future tie-in is made.
- Green Building Final Inspection – Part 2 On-Site Inspection:* If not completed during the Incremental Verification, the Special Inspector shall field verify that laundry to landscape diverter valve has been installed at the washer drain line and shall take photos as verification of the installation. The diverter valve shall be capped until a future tie-in is made.

### **Division A5.4 – Material Conservation and Resource Efficiency - Tier 1 & Tier 2 Measures**

#### **A4.403.1 Reduction in Cement Use**

- Green Building Final Inspection – Contractor Submittals:* The Contractor shall prepare and deliver concrete mix submittal showing the percent of fly ash, slag, silica fume, or rice hull ash. Tier 1 projects require a minimum of 20% and Tier 2 projects require a 25% content of the listed materials. The Contractor shall submit the Certificate of Compliance declaring that the requirements of this provision have been met.
- Green Building Final Inspection – Part 1 Submittals:* The Special Inspector shall review the submittals to verify that the cement mix requirement has been specified. The Special Inspector shall collect the Certificate of Compliance declaring that the requirements of this provision have been met.

#### **A4.404.1 Lumber Size**

- Green Building Incremental Inspection – Contractor Submittals:* The Contractor shall prepare and deliver beams, headers, and trimmers product cut sheets meeting the requirements. The contractor shall sign the Certificate of Compliance declaring that the requirement has been met in accordance with CRC Tables R502.5 (1) and R502.5(2).
- Green Building Incremental Inspection – Part 1 Submittals:* The Special Inspector shall review the beams, headers, and trimmers submittals to verify that the requirements are met.

#### **A4.404.2 Building Dimensions and Layouts**

- Green Building Incremental Verification – Part 2 On-Site Inspection:* Prior to the installation of drywall, the Special Inspector shall field verify that building design dimensions of 2-foot increments have been installed and/or windows and doors are located at regular 16” or 24” stud positions as shown on the permit plans. The Special Inspector shall take photos as verification of the installation.

#### **A4.404.3 Building Systems**

- Green Building Incremental Inspection – Contractor Submittals:* The Contractor shall prepare and deliver product cut sheets meeting the pre-manufactured building system requirements have been met as shown on the permit plans. Options include 1) composite floor joist or pre-manufactured floor framing system, 2) composite roof rafters or pre-manufactured roof framing system 3) panelized (SIPS, ICF or similar) framing system.
- Green Building Final Inspection – Part 1 Submittals:* The Special Inspector shall review the pre-manufactured submittals to verify that the requirements have been met in accordance with the permit plans.
- Green Building Final Inspection – Part 2 On-Site Inspection:* The Special Inspector shall field verify that specified pre-manufactured products have installed and shall take photos as verification of the installation.

#### **A4.404.4 Pre-cut Materials and Details**

- Green Building Final Inspection – Contractor Submittals:* The Contractor shall prepare and deliver a Certificate of Compliance declaring that the Materials Lists prepared on the permit plans have been fully utilized in the field for construction.
- Green Building Final Inspection – Part 1 Submittals:* The Special Inspector shall review the Certificate of Compliance verify the requirement has been achieved.

#### **A4.405.1 Pre-finished Building Materials**

- Green Building Final Inspection – Contractor Submittals:* The Contractor shall prepare and deliver the pre-finished product cut sheets meeting the requirements as shown on the permit plans. Options include 1) exterior trim not requiring paint or stain; 2) windows not requiring paint or stain; 3) siding or exterior wall coverings which do not require paint or stain. The entirety of the installation shall be comprised of the pre-finished material.
- Green Building Final Inspection – Part 1 Submittals:* The Special Inspector shall review the product cut sheet to verify that the requirement has been met.

#### **A4.405.1 Concrete Floors**

- Green Building Final Inspection – Part 2 On-Site Inspection:* The inspector shall field verify that only concrete floors have been installed and no additional flooring material has been installed throughout the project. The Special Inspector shall take photos as verification of the installation.

#### **A4.405.3 Recycled Content**

- Green Building Final Inspection – Contractor Submittals:* The Contractor shall prepare and deliver product cut sheets showing the recycled content of each claimed material and shall complete the HCD Recycled Content worksheet. The link to this worksheet can be found at the end of this document.
- Green Building Final Inspection – Part 1 Submittals:* The Special Inspector shall verify through receipts and other product purchase documentation that the percentage of building materials containing recycled content meet the minimum thresholds:
  - Tier 1 = 10% Recycled Content
  - Tier 2 = 20% Recycled Content

#### **A4.405.4 Rapidly Renewable Materials**

- Green Building Final Inspection – Contractor Submittals:* The Contractor shall prepare and

deliver product cut sheets showing the rapidly renewable content of each claimed material.

- Green Building Final Inspection – Part 1 Submittals: The Special Inspector shall verify through receipts and other product purchase documentation that the rapidly renewable sources have been installed.

#### **A4.405.1 Drainage Around Foundations**

- Green Building Incremental Verification – Contractor Submittals: The Contractor shall prepare and deliver the Certificate of Compliance declaring that the requirements have been achieved in accordance with this section and the California Building Code.
- Green Building Incremental Verification – Part 1 Submittals: The Special Inspector shall collect the Certificate of Compliance from the Contractor declaring that the requirements have been met in accordance with this section.
- Green Building Incremental Verification – Part 2 On Site Inspection: The Special Inspector shall review the permit set of plans to verify that the foundation and landscape drains are installed. The Special Inspector shall take photographs verifying the installation of the system.

#### **A4.407.2 Roof Drainage**

- Green Building Final Inspection – Contractor Submittals: The Contractor shall prepare and deliver the Certificate of Compliance declaring that the gutter and downspout system have been installed to route water at least 5 feet away from the foundation or connect to landscape drains which discharge to a dry well, sump, bioswale, or rainwater capture system.
- Green Building Final Inspection – Part 1 Submittals: The Special Inspector shall collect the Certificate of Compliance from the Contractor declaring that the requirements have been met in accordance with this section.
- Green Building Final Inspection – Part 2 On Site Inspection: The Special Inspector shall review the permit set of plans to verify that the gutter and downspout systems are installed. The Special Inspector shall take photographs verifying the installation of the system.

#### **A4.407.3 Flashing Details**

- Green Building Incremental Verification – Contractor Submittals: The Contractor shall prepare and deliver the Certificate of Compliance declaring that the flashing details as shown on the permit plans have been installed in accordance with this section and the California Building Code.
- Green Building Incremental Verification – Part 1 Submittals: The Special Inspector shall collect the Certificate of Compliance from the Contractor declaring that the requirements have been met in accordance with this section.
- Green Building Incremental Verification – Part 2 On Site Inspection: The Special Inspector shall review the permit set of plans to verify that the flashing details on the building plans systems are installed. The Special Inspector shall verify flashing while it is exposed in cases when the design indicated concealed flashing. The Special Inspector shall take photographs verifying the installation of the system.

#### **A4.407.4 Material Protection**

- Green Building Incremental Verification – Contractor Submittals: The Contractor shall prepare and deliver monthly photographs demonstrating that all building materials delivered to the construction site are protected from rain and other sources of moisture. This

requirement must be fulfilled at all times throughout construction.

- Green Building Incremental Verification – Part 1 Submittals: The Special Inspector shall review the monthly report to verify that the requirement is met throughout construction.
- Green Building Incremental Verification – Part 2 On Site Inspection: The Special Inspector shall field verify that material protection is maintained. The Special Inspector shall take photographs verifying the installation of the system.

#### **A4.407.6 Door Protection**

(Exterior doors to the dwelling are covered to prevent water intrusion by one or more of the following: 1) install an awning at least 54 feet in depth, 2) the door is protected by a roof overhang at least 4 feet in depth 3) the door is recessed at least 4 feet 4) other methods which provide equivalent protection.

- Green Building Final Inspection – Part 2 On-Site Inspection: The Special Inspector shall field verify door protection measures have been installed at every exterior door and shall take photos as verification of the installation.

#### **A4.407.7 Roof Overhangs**

(A permanent overhang or awning at least 2 feet in depth is provided at all exterior walls)

- Green Building Final Inspection – Part 2 On-Site Inspection: The Special Inspector shall field verify that roof overhang measures have been installed at every exterior door and shall take photos as verification of the installation.

## **Division 5.5 – Environmental Quality – Tier 1 & Tier 2 Measures**

### **A4.504.1 No added formaldehyde for Composite Wood (MDF, particle board)**

SPECIAL  
INSPECTOR  
PRE-APPROVAL  
REQUIRED

- Green Building Final Inspection – Contractor Submittals: The Contractor shall prepare and deliver review the Material Safety Data Sheets (MSDS) for all composite wood products and obtain pre-approval from the Special Inspector prior to installation. The General Contractor shall allow 10 business days to review and approve the products. Composite wood is a material that is a mixture of wood fiber, plastic, and some type of binding agent (i.e. MDF, particle board). Verify that all data sheets are labeled as either “Approved by CARB” or “CARB Compliant” for either “No-added formaldehyde (NAF) or “Ultra-low emitting formaldehyde”.
- Green Building Incremental Verification – Part 1 Submittals: The Special Inspector shall verify compliance with required formaldehyde levels, and associated product labels, by reviewing all product cutsheets provided by the general contractor and pre-verify products within 10 business days of receipt.
- Green Building Final Inspection – Part 1 Submittals: The Special Inspector shall verify compliance with required formaldehyde levels, and associated product labels, by reviewing all associated product cut sheets.

### **A4.504.2 Resilient Flooring** (This elective is in addition to the requirements within 4.504.4)

SPECIAL  
INSPECTOR  
PRE-APPROVAL  
REQUIRED

- Green Building Incremental Verification – Contractor Submittals: The Special Inspector shall collect and review a summary spreadsheet and Material Safety Data Sheets (MSDS) for at least 90% for Tier 1 and 100% for Tier 2 of resilient flooring material (i.e. Vinyl,

VCT, linoleum). Each MSDS should show one of the requirements below. The summary spreadsheet shall list all materials and compliance methodology.

1. RFCI “Floorscore Certified”
  2. “Compliant with California Department of Public Health VOC Requirements” or “1350 Standard Compliant”
  3. Certified as a CHPS Low Emitting Material listed on the CHPS Low-Emitting Material Products Database
  4. Certified under the “UL GREENGUARD Gold (formerly Greenguard Children & Schools”
- Green Building Incremental Inspection – Part 1 Submittals: The Special Inspector shall review the product submittals to verify that the product requirement has been met and deliver the pre-approval in writing to the General Contractor within 10 business days.
  - Green Building Incremental Inspection – Part 2 On-Site Inspection: The Special Inspector shall field verify that the materials specified has been installed and shall take photos as verification of the installation.

SPECIAL INSPECTOR PRE-APPROVAL REQUIRED
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#### **A4.504.3 Thermal Insulation**

- Green Building Incremental Verification – Contractor Submittals: The Contractor shall prepare and deliver thermal insulation product cut sheets verifying that all thermal insulation has met one or more than the following for Tier 1. Tier 2 requires all thermal insulation meet one of the following plus does not contain any added formaldehyde.
  1. “Compliant with California Department of Public Health VOC Requirements” or “1350 Standard Compliant”
  2. Certified as a CHPS Low Emitting Material listed on the CHPS Low-Emitting Material Products Database
  3. Certified under the “UL GREENGUARD Gold (formerly Greenguard Children & Schools”
- Green Building Incremental Inspection – Part 1 Submittals: The Special Inspector shall review the product submittals to verify that the product requirement has been met and deliver the pre-approval in writing to the General Contractor within 10 business days.
- Green Building Incremental Inspection – Part 2 On-Site Inspection: The Special Inspector shall field verify that the materials specified has been installed and shall take photos as verification of the installation.

#### **A4.506.1 Filters**

- Green Building Final Inspection – Contractor Submittals: The Contractor shall prepare and deliver the MERV 6 product cut sheets meeting the requirements.
- Green Building Final Inspection – Part 1 Submittals: The Special Inspector shall review the product data sheets maintained by the contractor to verify that a MERV 6 rating has been installed on the HVAC system.
- Green Building Final Inspection – Part 2 On-Site Inspection: The Special Inspector shall field verify that MERV 6 filters have been installed and shall take photos as verification of the installation.

**A4.506.2 Construction Filters** (Only available to High Rise projects and therefore not applicable in Palo Alto)

#### **A4.506.3 Direct-vent Appliances**

(Direct-vent heating and cooling shall be utilized if the equipment will be located in the conditioned space or install the space heating and water heating equipment in an isolated mechanical room)

- Green Building Final Inspection – Contractor Submittals:* The Contractor shall prepare and deliver product cut sheets to the Special Inspector meeting the direct vent heating and cooling system requirements.
- Green Building Final Inspection – Part 1 Submittals:* The Special Inspector shall review the product cut sheets to verify that the equipment meets the direct vent requirements.
- Green Building Final Inspection – Part 2 On-Site Inspection:* The Special Inspector shall field verify that the direct vent heating and cooling equipment has been installed and shall take photos as verification of the installation.

**Compliance Resources:** The following resources are available to the construction team:

1. City of Palo Alto – Green Building Website  
[http://www.cityofpaloalto.org/gov/depts/ds/green\\_building/default.asp](http://www.cityofpaloalto.org/gov/depts/ds/green_building/default.asp)
  - *Green Building Requirements listed by project type and size*
  - *Green Building Compliance Process*
2. Building Standards Commission Resources: <http://www.bsc.ca.gov/Home/CALGreen.aspx>
  - *2013 California Green Building Standards Code*
  - *A Guide to the California Green Building Standards Code*
3. Model Water Efficient Landscape Ordinance(MWELO) Certificate of Installation  
[http://www.water.ca.gov/wateruseefficiency/docs/CERT\\_OF\\_INST\\_FORM.doc](http://www.water.ca.gov/wateruseefficiency/docs/CERT_OF_INST_FORM.doc)
4. City of Palo Alto Water Use Restrictions  
<http://www.cityofpaloalto.org/news/displaynews.asp?NewsID=2336&TargetID=235,310>
5. Housing and Community Development – Operations and Maintenance Manual Guideline  
*PDF* [http://hcd.ca.gov/codes/calgreen/BldgOp\\_MaintenanceManual.pdf](http://hcd.ca.gov/codes/calgreen/BldgOp_MaintenanceManual.pdf)  
*Word* [http://hcd.ca.gov/codes/calgreen/BldgOp\\_MaintenanceManual.doc](http://hcd.ca.gov/codes/calgreen/BldgOp_MaintenanceManual.doc)
6. Housing and Community Development – Pollutant Control Worksheets <http://hcd.ca.gov/calgreen.html>
7. ACCA Manual J, Residential Load Calculations <http://www.acca.org/technical-manual/manual-j/>
8. ACCA Manual D, Residential Duct Systems <http://www.acca.org/technical-manual/manual-d/>
9. ACCA Manual S, Residential Equipment Sizing <http://www.acca.org/technical-manual/manual-s/>
10. City of Palo Alto Rainwater Catchment System Submittals and Guidelines  
<http://www.cityofpaloalto.org/civicax/filebank/documents/45607>
11. City of Palo Alto Graywater System Submittals and Guidelines  
<http://www.cityofpaloalto.org/civicax/filebank/documents/17788>
12. Housing and Community Development – Recycled Content Worksheets <http://hcd.ca.gov/calgreen.html>