INSPECTION GUIDELINES:
SPECIAL INSPECTION REQUIREMENTS

INSPECTION CODE: N/A

SCOPE: RESIDENTIAL AND COMMERCIAL

APPLICABLE CODES: 2016 CBC, CRC, CPC, CMC, CEC, CALGreen, CEnC, and PAMC

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.

IMPORTANT
- Failure to complete the items below prior to the City of Palo Alto (CPA) inspection will result in a re-inspection fee.
- Address and the construction hours sign shall be posted on all job site prior to inspection. (PAMC 9.10.060, CBC 501.2)
- Gas and electric utilities will be removed if found to be unsafe at time of inspection. (CBC 3303.6)

DEFINITION OF SPECIAL INSPECTOR
- A special inspector is defined as a person that holds an ICC Special Inspection Certification for the particular type of construction or operation requiring special inspection. See approved list of “Special Inspection Agencies.”
- The Engineer of Record (EOR) is not a special inspector unless he or she is ICC certified. (CBC 1704.2.1)
- The EOR may only observe placement of epoxy anchors for residential construction. (CBC 1704.2.1, CBC 1704.6)
- City of Palo Alto Building Inspectors are not considered special inspectors. (CBC 1704.2.1)

GENERAL REQUIREMENTS

DOCUMENTATION
- At time of inspection, provide the CPA inspection with copies of the special inspection field report. (CBC 1704.2.4)
- The special inspection agency shall send the Special Inspector’s reports to the City of Palo Alto and it shall include the job address, permit number, and type of inspection (i.e. shear nailing). (CBC 1704.2.4)
SPECIAL INSPECTOR IDENTIFICATION AND REQUIREMENTS

☐ The Special inspector shall have a current ICC certificate and photo identification. The City of Palo Alto does not accept an identification card from the testing agency certifying the special inspector.

☐ The Special Inspector shall be ICC Certified for the type of inspection he or she is performing (see Table 1705.3).

☐ The special inspector shall observe the work assigned for conformance to the approved design drawings and specifications (CBC 1704.3.1, CBC 1705).

☐ Shop drawings must be pre-approved by the project engineer and CPA plan check engineer. Shop drawings shall bear the City and engineer stamp. (CBC 1704.1)

☐ Daily inspection records shall be provided to the city inspector. (CBC 1704.2.4)

☐ Special inspectors shall only use RFI that have been reviewed and approved by the project engineer and city plan check engineer or city field inspector. (PAMC)

SOILS REPORT

☐ Provide the CPA inspector with the soils engineer report. (CBC 1704.6, CBC 1705.6)

ENGINEER OF RECORD OBSERVATION REPORT

☐ Provide the CPA inspector with the EOR report. (CBC 1704.6)

ANCHORAGE REQUIREMENTS

☐ Specific requirements for special inspection shall be included in the research report for the anchor issued by approved source in accordance with 17.8.2 in ACI 318, or other qualification procedures. Where specific requirements are not provided, special requirements shall be specified by the registered design professional and shall be approved by the building official prior to the commencement of the work. (CBC Table 1705.3)

EXPANSION ANCHORS

☐ Special inspection is required for the installation, including torque (verify the manufacturer’s specifications for special inspection requirements). (CBC Table 1705.3, Manufacturer’s Specifications)
  o Expansion anchor bolts shall have a clearance not less than 2-1/2” from the foundation, the slab, or the CMU edge (2x6 mudsills and larger works with this requirement, 2x4 mudsill does not work.)
  o Verify that the expansion anchor bolt is the correct size for the mudsill, cross check the symbol on top of anchor bolt with the manufacturer’s table.
  o Tolerance: Maximum 5 degree offset.
EPOXY ANCHORS

☐ Special inspection is required for epoxy anchor bolt installation (verify the manufacturer’s specifications for special inspection requirements). (CBC Table 1705.3, Manufacturer’s Specifications)
  - Oversized holes are no longer acceptable or allowed (the maximum oversize tolerance is 1/8”).
  - On CMU walls, verify if fire rated walls or systems allow for epoxy anchor bolts (epoxy is not recommended because it melts under high heat and expansion anchor bolts are recommended).

TITEN HD – POST-INSTALLED SILL PLATE ANCHORAGE

☐ ICC ESR-2713 report requires Special Inspection OR engineer of record observation report.
  - Placement of individual anchors for missing bolts may be inspected by project engineer.
  - Requires 3”x3” plate washer.
  - Minimum size 3/4” diameter.

---

**TABLE 1705.3**

<table>
<thead>
<tr>
<th>Required Special Inspections and Tests of Concrete Construction</th>
<th>Continuous Special Inspection</th>
<th>Periodic Special Inspection</th>
<th>Referenced Standard</th>
<th>ICC Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Inspect reinforcement, including prestressing tendons, and verify placement.</td>
<td>—</td>
<td>X</td>
<td>ACI 318 Ch. 20, 25.2, 25.3, 26.3.1-26.3.3</td>
<td>1908.4</td>
</tr>
<tr>
<td>2. Reinforcing bar welding: a. Verify weldability of reinforcing bars other than ASTM A706; b. Inspect single-pass fillet welds, maximum Y = 8&quot;, and c. Inspect all other welds.</td>
<td>—</td>
<td>X</td>
<td>ACI 318: 26.5.4</td>
<td>—</td>
</tr>
<tr>
<td>3. Inspect anchors cast in concrete.</td>
<td>—</td>
<td>X</td>
<td>ACI 318: 17.8.2</td>
<td>—</td>
</tr>
<tr>
<td>4. Inspect anchors post-installed in hardened concrete members: a. Adhesive anchors installed in horizontally or upwardly inclined orientations to resist sustained tension loads; b. Mechanical anchors and adhesive anchors not defined in 4.a.</td>
<td>X</td>
<td>—</td>
<td>ACI 318: 17.8.2</td>
<td>—</td>
</tr>
<tr>
<td>5. Verify use of required design mix.</td>
<td>—</td>
<td>X</td>
<td>ACI 318: Ch. 19, 26.4.3, 26.4.4</td>
<td>1904.1, 1904.2, 1908.2, 1908.3</td>
</tr>
<tr>
<td>6. Prior to concrete placement, fabricate specimens for strength tests, perform slump and air content tests, and determine the temperature of the concrete.</td>
<td>X</td>
<td>—</td>
<td>ASTM C172 ASTM C31 ACI 318: 26.4.5, 26.12</td>
<td>1908.10</td>
</tr>
<tr>
<td>7. Inspect concrete and shotcrete placement for proper application techniques.</td>
<td>X</td>
<td>—</td>
<td>ACI 318: 26.4.5</td>
<td>1908.6, 1908.7, 1908.8</td>
</tr>
<tr>
<td>8. Verify maintenance of specified curing temperature and techniques.</td>
<td>—</td>
<td>X</td>
<td>ACI 318: 26.4.7-26.4.9</td>
<td>1908.9</td>
</tr>
<tr>
<td>10. Inspect erection of precast concrete members.</td>
<td>—</td>
<td>X</td>
<td>ACI 318: Ch. 26.8</td>
<td>—</td>
</tr>
<tr>
<td>11. Verify in-situ concrete strength, prior to stressing of tendons in post-tensioned concrete and prior to removal of shores and forms from beams and structural slabs.</td>
<td>—</td>
<td>X</td>
<td>ACI 318: 26.10.2</td>
<td>—</td>
</tr>
<tr>
<td>12. Inspect formwork for shape, location and dimensions of the concrete member being formed.</td>
<td>—</td>
<td>X</td>
<td>ACI 318: 26.10.1(b)</td>
<td>—</td>
</tr>
</tbody>
</table>

For SI: 1 inch = 25.4 mm.

a. Where applicable, see also Section 1705.12, Special inspections for seismic resistance.
b. Specific requirements for special inspection shall be included in the research report for the anchor issued by an approved source in accordance with 17.8.2 in ACI 318, or other qualification procedures. Where specific requirements are not provided, special inspection requirements shall be specified by the registered design professional and shall be approved by the building official prior to the commencement of the work.
STRUCTURAL WOOD

Periodic special inspection is required for nailing, bolting, anchoring and other fastening of elements that make up the lateral force-resisting system including wood shear walls, wood diaphragms, drag struts, braces, and hold-downs. Special inspection is required for shear walls where the fastener spacing of the sheathing is 4” or less. (CBC 1705.11.1)