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SPECIAL INSPECTIONS

PREFACE

Special inspection can be best defined as a quality control measure intended to ensure that certain critical structural or fire and life safety design features incorporated into a building or structure are constructed properly. This requires inspection by persons with specialized skills to verify that the material and workmanship comply with the approved plans and specifications. Some aspects of the construction may require periodic inspection, while some aspects of the construction require continuous inspection. Chapter 17 of the 2019 California Building Code provides for special inspection of these critical elements and phases.

SPECIAL INSPECTION BULLETIN

This project requires special inspection(s) in accordance with California Building Code Section 1701. The owner, or the registered design professional in responsible charge acting as the owner’s agent, is responsible to employ one or more qualified special inspectors or approved agencies to perform special inspections during construction.

Attached to this bulletin is a *Statement of Special Inspection* and *Special Inspection and Testing Schedules A through H*. These forms shall be completed for each project requiring special inspection. These forms must be reviewed and approved by the Building Inspection Division before a building permit can be issued for this project.

For commercial projects and engineered residential projects, the *Statement of Special Inspections* shall be signed by the registered design professional in responsible charge.

A special inspector shall be a qualified person employed or retained by an approved agency and approved by the Building Inspection Division as having the competence necessary to inspect a particular type of construction requiring special inspection

PRE-CONSTRUCTION CONFERENCE

The Building Inspection Division may require a preconstruction conference before a permit is issued. The purpose of this conference is to clarify code requirements, procedures and policies. The conference participants shall include representatives of the registered design professional in responsible charge, the contractor, the special inspector and the Building Inspection Division.

Pre-construction Conference Waived.

Pre-construction Conference Required.

Please contact _____
At (530) 225-4403 at least one working day in advance to schedule a Pre-construction conference.

Project Address: _____

Plan Check No.: _____

City of Redding
Building Inspection Division
Statement of Special Inspection

Project Address _____ **Plan Check #** _____

BEFORE A PERMIT CAN BE ISSUED: The owner, or the registered design professional of record acting as the owner’s agent, shall employ one or more qualified special inspectors or approved agencies and shall complete this agreement and Special Inspection and Testing Schedules A through H as may be applicable. A preconstruction conference with the parties involved shall be required to review the special inspection requirements and procedures, unless waived by the building official.

APPROVAL OF SPECIAL INSPECTORS: Each special inspector, approved agency and special inspection laboratory shall be approved by the Building Inspection Division (BID) prior to performing any duties. Special inspectors shall display approved identification, as stipulated by the BID, when performing the function of a special inspector.

Special inspection and testing shall meet the minimum requirements of Chapter 17 of the 2019 California Building Code (CBC). The following conditions are also applicable:

A. Duties and Responsibilities of the Special Inspector and/or Approved Agency

1. **List of qualified inspectors.** Submit a list of qualified inspectors and the portions of the work each individual will be inspecting. Obtain prior written approval from the BID when the inspections will be performed by inspectors other than those listed on original approval.
2. **Observe work.** The special inspector shall observe, sample, and test the work for conformance with the BID approved (stamped) design drawings and specifications and applicable workmanship provisions of the CBC. Architect/engineer-reviewed shop drawings may be used only as an aid to inspection.
3. **Report nonconforming items.** The special inspector shall bring nonconforming items to the immediate attention of the contractor and note all such items in the daily report. If any item is not resolved in a timely manner or is about to be incorporated in the work, the special inspector shall immediately provide written notification to the BID, registered design professional in responsible charge and post a discrepancy note on the job site.
4. **Furnish daily reports.** Each special inspector shall complete and sign both the special inspection record and the daily report form for each day’s inspections to remain at the job site with the contractor for review by the building inspector.
5. **Furnish periodic reports.** The special inspector or approved agency may be required to furnish periodic reports of tests and inspections directly to the BID, registered design professional in responsible charge and others as designated. These reports must include the following:
 - a. Summary of daily inspections and tests made with applicable locations.
 - b. Listing of all nonconforming items.
 - c. Report on how nonconforming items were resolved or unresolved as applicable.
 - d. Itemized changes authorized by the registered design professional in responsible charge and BID if not included in nonconformance items.
6. **Furnish final report.** The special inspector or special inspection agency shall submit a final signed report to the BID. This report must state that all items requiring special inspection and testing were fulfilled and reported and, to the best of his/her knowledge, in conformance with the approved design drawings, specification, approved change orders, and the applicable workmanship provisions of the CBC. Items not in conformance, unresolved items, or any discrepancies in inspection coverage (i.e., missed inspections, periodic inspections when continuous was required, etc.) shall be specifically itemized in this report.

B. Contractor Responsibilities

1. **Notify the special inspector.** The contractor is responsible for notifying the special inspector or approved agency regarding individual inspections for items listed on the attached schedule and as noted on the BID approved plan. Adequate notice shall be provided so that the special inspector has time to become familiar with the project.

City of Redding

Building Inspection Division

Statement of Special Inspection

Project Address _____ **Plan Check #** _____

2. **Provide access to approved plans.** The contractor is responsible for providing the special inspector access to approved plans at the job site.
3. **Retain special inspection records.** The contractor is also responsible for retaining at the job site all special inspection records submitted by the special inspector and providing these records for review by the building inspector upon request.

C. Building Inspection Division Responsibilities

1. **Approve special inspection.** The BID shall approve all special inspectors and special inspection requirements.
2. **Monitor special inspection.** Work requiring special inspection and the performance of special inspectors shall be monitored by the building inspector. His/her approval must be obtained prior to placement of concrete or other similar activities in addition to that of the special inspector.
3. **Issue Certificate of Occupancy.** The Building Inspection Division will not issue a Certificate of Occupancy until all special inspection reports and the final report have been submitted and accepted.

D. Schedule of Special Inspections and Testing (To be Completed by Registered Design Professional)

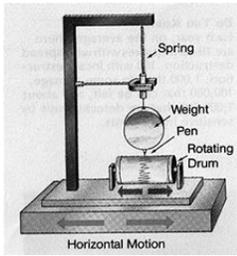
Please check mark below if the item is ATTACHED or NOT APPLICABLE:

Attached	Not Applicable	Schedule	Subject
		A	Seismic Resistance
		B	Steel
		C	Concrete
		D1	Masonry – Level B
		D2	Masonry – Level C
		E	Timber
		F	Anchors
		G	Soils
		H	Miscellaneous

E. Project Specific

List of qualified special inspectors. List qualified special inspectors and the portions of the work each individual will be inspecting. Obtain prior written approval from the BID when the inspections will be performed by special inspectors other than those listed below.

Inspectors Name	Agency Name	Inspection Type
1. _____	_____	_____
2. _____	_____	_____
3. _____	_____	_____
4. _____	_____	_____
5. _____	_____	_____



City of Redding Building Inspection Division

Schedule A - Special Inspections for Seismic Resistance (1 of 3)

Project Address _____ **Plan Check #** _____

Required Frequency Verification/Inspection

WIND/SEISMIC FORCE-RESISTING SYSTEMS - CBC 1705.11 & CBC 1705.12

- P 1. Inspect the wind/seismic force-resisting systems.

STRUCTURAL STEEL AND WELDING - CBC 1705.12.1

- C 1. Special inspection and testing for structural steel and welding in accordance with AISC 341-16 Seismic Provisions.

STRUCTURAL WOOD - CBC 1705.12.2 & 1705.11.1

- C 1. Inspect field gluing operations of elements of the seismic force-resisting system.
- P 2. Inspect nailing, bolting, anchoring, and other fastening of components within the seismic force-resisting system, including:
- wood shear walls
 - wood diaphragms
 - collectors (drag struts)
 - braces
 - shear panels
 - hold-downs

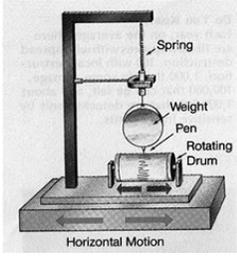
COLD-FORMED STEEL LIGHT-FRAME CONSTRUCTION - CBC 1705.12.3 & CBC 11.2

- P 1. Inspect welding of elements of the seismic force-resisting system.
- P 2. Inspect screw attachments, bolting, anchoring, and other fastening of components within the seismic force-resisting system, including:
- shear walls
 - diaphragms
 - collectors (drag struts)
 - braces
 - hold-downs

DESIGNATED SEISMIC SYSTEMS - CBC 1705.12.4 (equipment & nonstructural components with $I_p = 1.5$)

- O 1. Obtain certification for seismic testing and qualification per ASCE 7-16 §13.2.2 and CBC 1705.13.3
- O 2. Verify that the label, anchorage and mounting conforms to the certificate of compliance.

C = Continuous P = Periodic O = One-Time Activity ---- = Frequency is Defined in Some Other Manner



City of Redding
Building Inspection Division

Schedule A - Special Inspections for Seismic Resistance (2 of 3)

Project Address _____ **Plan Check #** _____

Required	Frequency	Verification/Inspection
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ARCHITECTURAL COMPONENTS - CBC 1705.12.5

- | | | |
|--------------------------|---|---|
| <input type="checkbox"/> | P | 1. Inspect erection and fastening of exterior cladding weighing more than 5 psf. |
| <input type="checkbox"/> | P | 2. Inspect erection and fastening of interior and exterior veneer weighing more than 5 psf., and/or more than 30 ft above grade or walking surface. |
| <input type="checkbox"/> | P | 3. Inspect erection and fastening of interior and exterior non-bearing walls weighing more than 15 psf. |
| <input type="checkbox"/> | P | 4. Inspect anchorage of access floors. |

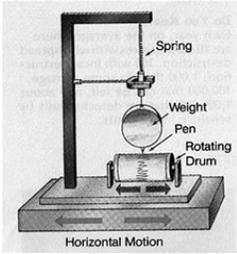
PLUMBING, MECHANICAL AND ELECTRICAL COMPONENTS - CBC 1705.12.6

- | | | |
|--------------------------|---|--|
| <input type="checkbox"/> | P | 1. Inspect anchorage of electrical equipment for emergency or stand-by power systems. |
| <input type="checkbox"/> | P | 2. Inspect anchorage of non-emergency electrical equipment. |
| <input type="checkbox"/> | P | 3. Inspect installation and anchorage of piping systems and associated mechanical units carrying flammable, combustible, or highly toxic contents. |
| <input type="checkbox"/> | P | 4. Inspect installation and anchorage of HVAC ductwork that carries hazardous materials. |
| <input type="checkbox"/> | P | 5. Inspect installation and anchorage of vibration isolation systems where required by Section 1705.12.6.5 & 1705.12.8 |
| <input type="checkbox"/> | O | 6. Verify that the equipment label and anchorage or mounting conforms to the Certificate of compliance when mechanical and electrical equipment must be seismically qualified per CBC 1705.13.2. |

STORAGE RACKS - 1705.12.7

- | | | |
|--------------------------|---|--|
| <input type="checkbox"/> | P | 1. Inspect anchorage of storage racks 8 feet or greater in height. |
|--------------------------|---|--|

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City of Redding
Building Inspection Division

Schedule A - Special Inspections for Seismic Resistance (3 of 3)

Project Address _____ **Plan Check #** _____

MASONRY TESTING FOR SEISMIC RESISTANCE - ACI 530.1 LEVEL C QUALITY ASSURANCE

- O Verify certificates of compliance prior to construction.
- O Verification of f'_m and f'_{AAC} prior to construction.
- P Verification of f'_m and f'_{AAC} every 5000 square feet during construction (Level C Q.A.).
- P Verification of proportions of materials in mortar and grout as delivered to the site (Level C Q.A.).

REINFORCING & PRESTRESSING STEEL - CBC 1706

- O Obtain mill certificates for reinforcing steel, verify compliance with approved construction documents, and verify steel supplied corresponds to certificate.

SEISMICALLY ISOLATED STRUCTURES - CBC 1705.13.4

- O Obtain system tests as required by ASCE 7-16 Section 17.8.

Additional Instructions or Other Tests and Inspections:

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City of Redding Building Inspection Division

Schedule B - Steel (1 of 5)

Project Address _____ Plan Check # _____

Required Frequency Verification/Inspection

STRUCTURAL STEEL - CBC 1705.2.1, AISC 360 CHAPTER N, AISC 341 CHAPTER J, AWS D1.1 & AWS D1.8

- | | | |
|--------------------------|---|--|
| <input type="checkbox"/> | E | 1. Material verification of structural steel (type/grade). |
| <input type="checkbox"/> | E | a. Identification markings to conform to ASTM or other material standards specified in the approved construction documents. |
| <input type="checkbox"/> | E | b. Manufacturer's mill test reports. |
| <input type="checkbox"/> | E | 2. Inspection Tasks Prior to Welding, AISC 360-16 Table N5.4-1: |
| <input type="checkbox"/> | E | a. Welding Procedure Specifications (WPS) available. |
| <input type="checkbox"/> | P | b. Manufacturer certifications for welding consumables. |
| <input type="checkbox"/> | P | c. Welding personnel identification system. |
| <input type="checkbox"/> | P | d. Fit-up of <u>groove welds</u> (including joint geometry): joint preparation; dimensions (alignment, root opening, root face, bevel); cleanliness (condition of steel surfaces); tacking (tack weld quality and location); backing type and fit (if applicable). |
| <input type="checkbox"/> | P | e. Configuration and finish of access holes. |
| <input type="checkbox"/> | P | f. Fit up of <u>fillet welds</u> : dimensions (alignment, gaps at root); cleanliness (condition of steel surfaces); tacking (tack weld quality and location). |
| <input type="checkbox"/> | P | g. Fit up of CJP groove weld of HSS (T, Y & K) joints without backing (including joint geometry): joint preparation; dimensions (alignment, root opening, root face, bevel); cleanliness (condition of steel surfaces); tacking (tack weld fraction and location). |
| <input type="checkbox"/> | E | h. Fit-up Inspection of each weld in the seismic force resisting system |
| <input type="checkbox"/> | P | i. Check welding equipment. |
| <input type="checkbox"/> | P | 3. Inspection Tasks During Welding, AISC 360-10 Table N5.4-2 |
| <input type="checkbox"/> | P | a. Use of qualified welding personnel. |
| <input type="checkbox"/> | P | b. Control and handling of welding consumables: packaging; exposure control. |
| <input type="checkbox"/> | P | c. No welding over cracked tack welds. |
| <input type="checkbox"/> | P | d. Environmental conditions; wind speed within limits; precipitation and temperature. |
| <input type="checkbox"/> | P | e. WPS followed: settings on welding equipment; travel speed; selected welding materials; shielding gas type/flow rate; preheat applied; interpass temperatures maintained (min/max); proper position (F, V, H, OH). |

C = Continuous P = Periodic O = One-Time Activity E = Perform this Task for Each Joint or Member ---- = Frequency is Defined in Some Other Manner



City of Redding Building Inspection Division

Schedule B - Steel (2 of 5)

Project Address _____ Plan Check # _____

Required	Frequency	Verification/Inspection
<input type="checkbox"/>	P	f. Welding techniques: interpass and final cleaning; each pass within profile limitations; each pass meets quality requirements.
<input type="checkbox"/>	E	g. Placement of steel headed stud anchors.
		4. Inspection Tasks After Welding, AISC 360-16 Table N5.4-3
<input type="checkbox"/>	P	a. Welds cleaned.
<input type="checkbox"/>	E	b. Size, length and location of welds.
<input type="checkbox"/>	E	c. Welds meet visual acceptance criteria: crack prohibition; weld/base metal fusion; crater cross section; weld profiles; weld size; undercut; porosity.
<input type="checkbox"/>	E	d. Arc strikes.
<input type="checkbox"/>	E	e. K-area: inspect member webs for cracks within 3" of welds near flanges.
<input type="checkbox"/>	E	f. Backing removed and weld tabs removed (unless noted otherwise on approved permit documents).
<input type="checkbox"/>	E	g. Repair activities.
<input type="checkbox"/>	E	h. Document acceptance or rejection of welded joint or member.
		5. Nondestructive Testing (NDT) of Welded Joints, AISC 360-16 N5.5, AISC 341-16 J6.2 & AWS D1.1
		a. CJP Groove Weld NDT in materials 5/16" thick or greater:
<input type="checkbox"/>	E	1) Ultrasonic Test (UT) all CJP welds in the seismic resisting system per AISC 341-16 J6.2a, except as noted
<input type="checkbox"/>	E	2) UT representative non-seismic CJP welds per AISC 360-16 N5.5b
<input type="checkbox"/>	E	3) Magnetic Particle Testing of representative seismic beam-to-column CJP welds per AISC 341-16 J6.2a
<input type="checkbox"/>	E	c. K-Area NDT for seismic resisting system splices & connections per AISC

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City of Redding
Building Inspection Division

Schedule B - Steel (3 of 5)

Project Address _____ **Plan Check #** _____

Required	Frequency	Verification/Inspection
<input type="checkbox"/>	E	b. Access Hole & Beam Cope NDT 1) Seismic resisting system splices and connections per AISC 341-10 J6.2d, when material thickness exceeds 1.5"
<input type="checkbox"/>	E	c. Base metal NDT for Lamellar Tearing and Laminations, seismic resisting system base metal thicker than 1.5" per AISC 341-16 J6.2c.
<input type="checkbox"/>	E	d. Reduced Beam Section Repair NDT: Seismic resisting system testing per AISC 341-16 J6.2e.
<input type="checkbox"/>	E	e. Weld Tab Removal Site NDT for seismic resisting system per AISC 341-16 J6.2f.
<input type="checkbox"/>	E	f. Welded Joints Subjected to Fatigue NDT per AISC 360-16 N5.5d.
<input type="checkbox"/>	E	g. Documentation: NDT report per AISC 360-16 N5.5g.
		6. Inspection of Pretensioned High-Strength Bolting, AISC 360-16 N5.6, AISC 341-16 J7 & RCSC. [Applies to pretentioned joints, slip critical joints and all bolted joints in the seismic resisting system, AISC 341-16 D2.2(d).]
		6.1 Inspection Tasks Prior to Bolting
<input type="checkbox"/>	-	a. Manufacturer's certifications available for fastener materials.
<input type="checkbox"/>	P	b. Fastener marking and labeling, in accordance with ASTM requirements.
<input type="checkbox"/>	P	c. Proper fasteners selected for the joint detail (grade, type, size, bolt length).
<input type="checkbox"/>	P	d. Proper bolting procedure selected for joint detail.
<input type="checkbox"/>	P	e. Connecting elements, including faying surface condition and hole preparation.
<input type="checkbox"/>	C	f. Pre-installation verification testing by installation personnel observed and documented for fastener assemblies and methods used.
<input type="checkbox"/>	P	g. Proper storage of bolts, nuts, washers and other fastener components.
		6.2 Inspection Tasks During Bolting
<input type="checkbox"/>	P	a. Fastener assemblies placed in all holes and washers, and nuts positioned as required.
<input type="checkbox"/>	P	b. Joint brought to snug tight condition prior to the pretensioning operation.
<input type="checkbox"/>	P	c. Fastener component not turned by the wrench prevented from rotating.
		d. Fasteners pretensioned in accordance with RCSC Specification, progressing from most rigid point toward free edges:
<input type="checkbox"/>	C	1) Calibrated wrench method or turn-of-nut method without match marking.
<input type="checkbox"/>	P	2) Turn-of-nut method with match marking, direct tension indicator method or twist-off-type tension control bolt method.

C = Continuous P = Periodic O = One-Time Activity E = Perform this Task for Each Joint or Member ---- = Frequency is Defined in Some Other Manner



City of Redding
Building Inspection Division
Schedule B - Steel (4 of 5)

Project Address _____ **Plan Check #** _____

Required	Frequency	Verification/Inspection
<input type="checkbox"/>	E	7. Anchor Rods and Other Steel Embedded in Concrete, AISC 360-16 N5.8 Diameter, grade, type, length, quantity, spacing and extent or depth of embedment verified prior to placing concrete.
<input type="checkbox"/>	E	8. Fabricated Steel and Erected Steel Frame, AISC 360-16 N5.8 Inspect members and connections to verify compliance with details on approved construction documents including, but not limited to, braces, stiffeners, member locations, proper application of joint details.
<input type="checkbox"/>	E	9. Seismic Force Resisting System - other Inspections, AISC 341-16.J8 a. RBS requirements: contour and finish; dimensional tolerances.
<input type="checkbox"/>	E	b. Protected zone: no holes and unapproved attachments made by fabricator or erector.
<input type="checkbox"/>	E	10. Composite construction - Inspection of Steel Elements Prior to Concrete Placement, AISC 341- 16 J9 a. Placement and attachment of steel deck
<input type="checkbox"/>	P	1) Deck welding inspections shall include verification of welding consumables, WPS, qualification of welding personnel, observations of work in progress and visual inspection of all completed welds.
<input type="checkbox"/>	P	2) For deck fasteners other than welds: verify fasteners meet approved specifications prior to start; make observations of work in progress and visual inspection of completed installation to verify conformance with manufacturer's instructions and approved plans.
<input type="checkbox"/>	E	b. Placement and installation of headed steel anchors AWS D1.1 Chapter 7

STRUCTURAL CONSTRUCTION OTHER THAN STRUCTURAL STEEL - CBC 1705.2.2

<input type="checkbox"/>	P	1. Cold-formed steel material verification. a. Cold-formed steel deck Per SDI QS/QC requirements. 1) Identification marking to conform to ASTM standards/grades/strengths specified in approved construction documents.
<input type="checkbox"/>	P	2) Manufacturer's certified test reports.
<input type="checkbox"/>	P	b. Cold-formed steel studs, joists and other framing, per AISI-S-100 1) Identification markings to conform to ASTM standards/grades/strengths specified in approved construction documents.



City of Redding
Building Inspection Division
Schedule B - Steel (5 of 5)

Project Address _____ **Plan Check #** _____

Required	Frequency	Verification/Inspection
<input type="checkbox"/>	O	2) Manufacturer's certified test reports.
		2. Inspection of Welding & Fasteners
		a. Cold formed steel - AWS D1.3
<input type="checkbox"/>	P	1) Floor and roof deck welds
<input type="checkbox"/>	P	2) Other fasteners for floor and roof deck
<input type="checkbox"/>	P	3) Welding of cold-formed steel studs, joists and other framing
		b. Reinforcing steel - AWS D1.4 & ACI 318-14 Sect. 26.6.4
<input type="checkbox"/>	P	1) Verification of weldability of reinforcing steel other than ASTM A706
<input type="checkbox"/>	C	2) Reinforcing steel resisting flexural and axial forces in intermediate and special moment frames and boundary elements of special structural walls of concrete and shear reinforcement
<input type="checkbox"/>	C	3) Shear reinforcement
<input type="checkbox"/>	P	4) Other reinforcing steel
<input type="checkbox"/>	P	5) Welded studs and other steel elements embedded in concrete - AWS D1.4, AWS D1.1 Chapter 7

Additional Instructions or Other Tests and Inspections:



**City of Redding
Building Inspection Division**

Schedule C - Concrete

Project Address _____ **Plan Check #** _____

Required Frequency Verification/Inspection

CONCRETE - CBC TABLE 1705.3 & ACI 318-14

- | | | |
|--------------------------|-----|---|
| <input type="checkbox"/> | P | 1. Inspection of reinforcing steel, including prestressing tendons and placement. |
| | --- | 2. Inspection of reinforcing steel welding in accordance with CBC Table 1705.3 Item 2 (Note: If this item is required Schedule B must be completed and attached). |
| <input type="checkbox"/> | C | 3. Inspect bolts to be installed in concrete prior to and during placement of concrete where allowable loads have been increased or where strength design is used. |
| <input type="checkbox"/> | P | 4. Verifying use of required design mix. |
| <input type="checkbox"/> | C | 5. At time fresh concrete is sampled to fabricate specimens for strength tests, perform slump and air content tests and determine the temperature of the concrete. |
| <input type="checkbox"/> | C | 6. Inspection of concrete and shotcrete placement for proper application techniques. |
| <input type="checkbox"/> | P | 7. Inspection of maintenance of specified curing temperature and techniques. |
| | | 8. Inspection of prestress concrete. |
| <input type="checkbox"/> | C | a. Application of prestressing forces. |
| <input type="checkbox"/> | C | b. Grouting of bonded prestressing tendons in the seismic force-resisting system. |
| <input type="checkbox"/> | P | 9. Erection of precast concrete members. |
| <input type="checkbox"/> | P | 10. Verification of in-situ concrete strength, prior to stressing of tendons in postensioned concrete and prior to removal of shores and forms from beams and structural slabs. |
| <input type="checkbox"/> | P | 11. Inspect formwork for shape, location and dimensions of the concrete member being formed. |

Additional Instructions or Other Tests and Inspections:

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City of Redding
Building Inspection Division
Schedule D1 - Masonry (Level B) (1 of 2)

Project Address _____ Plan Check # _____

Required Frequency Verification/Inspection

LEVEL B MASONRY INSPECTIONS - CBC 1705.4, TMS402-16 & TMS602-16

1. Prior to masonry construction, verify compliance with specifications:
 - O a. Mortar mix designs
 - O b. Grout mix designs
 - O c. Test masonry units or prisms
 - O d. Verify f'm by Unit Strength Method or Prism Method
2. At the start of masonry construction verify the following to ensure compliance:
 - P a. Proportions of site-prepared mortar.
 - P b. Construction of mortar joints.
 - P c. Location of reinforcement, connectors, and anchorages.
3. Verify during construction:
 - P a. Size and location of structural elements.
 - P b. Type, size, and location of anchors, including other details of anchorage of masonry to structural members, frames or other construction.
 - P c. Specified size, grade, and type of reinforcement.
 - C d. Welding of reinforcing bars.
 - P e. Protection of masonry during cold weather (temperature below 40 degrees F) or hot weather (temperature above 90 degrees F).
4. Prior to grouting verify the following to verify compliance.
 - P a. Grout space is clean.
 - P b. Placement of reinforcement, connectors, and anchorages.
 - P c. Proportions of site-prepared grout.
 - P d. Construction of mortar joints.
- C 5. Verify grout placement to ensure compliance with code and construction document provisions.

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City of Redding
Building Inspection Division
Schedule D1 - Masonry (Level B) (2 of 2)

Project Address _____ Plan Check # _____

Required	Frequency	Verification/Inspection
<input type="checkbox"/>	C	6. Test grout:
<input type="checkbox"/>	C	a. Observe preparation and testing of required grout specimens, mortar specimens, and/or prisms.
<input type="checkbox"/>	C	b. If self-consolidating grout is used, verify slump flow & visual stability index
<input type="checkbox"/>	P	7. Verify compliance with required inspection provisions of the construction documents and the approved submittals.

Additional Instructions or Other Tests and Inspections:

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City of Redding
Building Inspection Division
Schedule D2 - Masonry (Level C) (2 of 2)

Project Address _____ **Plan Check #** _____

Required	Frequency	Verification/Inspection
<input type="checkbox"/>	P	4. Verify compliance with required inspection provisions of the construction documents and the approved submittals.

Additional Instructions or Other Tests and Inspections:

C = Continuous P = Periodic O = One-Time Activity ---- = Frequency is Defined in Some Other Manner



**City of Redding
Building Inspection Division**

Schedule E - Timber

Project Address _____ **Plan Check #** _____

Required Frequency Verification/Inspection

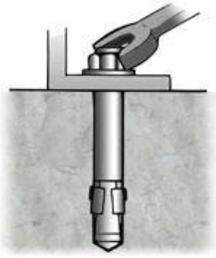
TIMBER - CBC 1705.5

- | | | |
|--------------------------|---|---|
| <input type="checkbox"/> | P | 1. Inspect prefabricated wood structural elements and assemblies in accordance with CBC 1704.2.5 |
| <input type="checkbox"/> | P | 2. Inspect high-load diaphragms - CBC 1705.5.1

The special inspector shall inspect the wood structural panel sheathing to ascertain whether it is of the grade and thickness shown on the approved building plans. Additionally, the special inspector must verify the nominal size of framing members at adjoining panel edges, the nail or staple diameter and length, the number of fastener lines and that the spacing between fasteners in each line and at edge margins agrees with the approved building plans. |
| <input type="checkbox"/> | P | 3. Metal plate connected trusses w/overall height of 60 in. or greater, or spanning 60 ft or more: verify installation of temporary & permanent restraint/bracing. |

Additional Instructions or Other Tests and Inspections:

C = Continuous P = Periodic O = One-Time Activity ---- = Frequency is Defined in Some Other Manner



**City of Redding
Building Inspection Division**

Schedule F - Anchors in Hardened Concrete or Masonry

Project Address _____ Plan Check # _____

Required Frequency Verification/Inspection

POST-INSTALLED ANCHORS - CBC TABLE 1705.3 Item 4

INSPECTION OF MECHANICAL ANCHORS IN CONCRETE OR MASONRY:

ICC ESR No. _____

- | | | |
|--------------------------|---|---|
| <input type="checkbox"/> | P | 1. The special inspector must make periodic inspections before and during anchor installation to verify anchor type, anchor dimensions, concrete type, concrete integrity, hole dimensions, hole cleaning procedures, anchor spacing, edge distances, concrete thickness, anchor embedment and tightening torque. |
| <input type="checkbox"/> | O | 2. Verification of concrete strength by obtaining and testing drilled cores by ASTM C42 methods. |

INSPECTION OF ADHESIVE ANCHORS IN CONCRETE OR MASONRY:

ICC ESR No. _____

- | | | |
|--------------------------|-----|--|
| <input type="checkbox"/> | C | 1. Verify hole drilling method; hole location, diameter and depth; hole cleaning; anchorage element type, material, diameter and length; adhesive brand, type and expiration date; concrete type; concrete integrity; continuous inspection of adhesive mixing and installation. |
| <input type="checkbox"/> | O | 2. Verification of concrete strength by obtaining and testing drilled cores by ASTM C42 methods. |
| <input type="checkbox"/> | --- | 3. Proof load testing. (Include testing instructions of the plans.) |

Additional Instructions or Other Tests and Inspections:

C = Continuous P = Periodic O = One-Time Activity --- = Frequency is Defined in Some Other Manner



City of Redding
Building Inspection Division

Schedule G - Soils

Project Address _____ **Plan Check #** _____

Required	Frequency	Verification/Inspection
----------	-----------	-------------------------

INSPECTION OF SOILS - CBC TABLE 1705.6

- | | | |
|--------------------------|---|--|
| <input type="checkbox"/> | P | 1. Verify materials below shallow foundations are adequate to achieve the desired bearing capacity. |
| <input type="checkbox"/> | P | 2. Verify excavations are extended to proper depth and have reached proper material. |
| <input type="checkbox"/> | P | 3. Perform classification and testing of controlled fill materials. |
| <input type="checkbox"/> | C | 4. Verify use of proper materials, densities and lift thicknesses during placement and compaction of compacted fill. |
| <input type="checkbox"/> | P | 5. Prior to placement of compacted fill, observe subgrade and verify that site has been prepared properly. |

Additional Instructions or Other Tests and Inspections:



City of Redding
Building Inspection Division

Schedule H - Miscellaneous (1 of 3)

Project Address _____ **Plan Check #** _____

Required	Frequency	Verification/Inspection
DRIVEN DEEP FOUNDATION ELEMENTS (PILES) - CBC TABLE 1705.7		
<input type="checkbox"/>	C	1. Verify pile materials, sizes and lengths comply with the requirements.
<input type="checkbox"/>	C	2. Determine capacities of test piles and conduct additional load tests, as required.
<input type="checkbox"/>	C	3. Observe driving operations and maintain complete and accurate records for each pile.
<input type="checkbox"/>	C	4. Verify locations of piles and their plumbness. <ul style="list-style-type: none"> a. Confirm type and size of hammer. b. Record number of blows per foot of penetration. c. Determine required penetrations to achieve design capacity. d. Record tip and butt elevations and record any damage to foundation element.
<input type="checkbox"/>	---	5. For steel piles, perform additional inspections in accordance with Section 1705.2.
<input type="checkbox"/>	---	6. For concrete piles and concrete-filled piles, perform additional inspections in accordance with CBC 1705.3.
<input type="checkbox"/>	---	7. For specialty piles, perform additional inspections as determined by the registered design professional in responsible charge.
CAST-IN-PLACE DEEP FOUNDATION ELEMENTS (PIERS) - CBC TABLE 1705.8		
<input type="checkbox"/>	C	1. Observe drilling operations and maintain complete and accurate records for each pier.
<input type="checkbox"/>	C	2. Verify locations of piers and their plumbness. Confirm: <ul style="list-style-type: none"> • Pier diameters, • Bell diameters (if applicable), • Lengths. • embedment into bedrock (if applicable), • Adequate end strata bearing capacity. • Record concrete or grout volumes
<input type="checkbox"/>	C	3. Perform test and additional concrete inspections in accordance with CBC Table 1705.3
HELICAL PILE FOUNDATIONS - CBC 1705.9		
<input type="checkbox"/>	C	1. Verify installation equipment used, pile dimensions, tip elevations, final depth, final installation torque. Verify compliance with approved geotechnical report and project specification.

C = Continuous P = Periodic O = One-Time Activity ---- = Frequency is Defined in Some Other Manner



City of Redding
Building Inspection Division

Schedule H - Miscellaneous (2 of 3)

Project Address _____ Plan Check # _____

Required	Frequency	Verification/Inspection
----------	-----------	-------------------------

SPRAYED FIRE-RESISTANT MATERIALS - CBC 1705.14

- | | | |
|--------------------------|---|--|
| <input type="checkbox"/> | P | 1. Inspect surface for accordance with the approved fire-resistance design and the approved manufacturer's written instructions. |
| <input type="checkbox"/> | P | 2. Verify minimum ambient temperature before and after application. |
| <input type="checkbox"/> | P | 3. Verify ventilation of area during and after application. |
| <input type="checkbox"/> | P | 4. Measure average thickness per ASTM E605 and CBC 1705.14.4. |
| <input type="checkbox"/> | P | 5. Verify density of material for conformance with the approved fire-resistant design and ASTM E605. |
| <input type="checkbox"/> | P | 6. Test cohesive/adhesive bond strength per CBC 1705.14.6. |

MASTIC AND INTUMESCENT FIRE-RESISTANT COATING - CBC 1705.15

- | | | |
|--------------------------|---|--|
| <input type="checkbox"/> | P | 1. Inspect Mastic and Intumescent Fire-Resistant Coating in accordance with AWCI 12-B and approved permit documents. |
|--------------------------|---|--|

EXTERIOR INSULATION AND FINISH SYSTEMS (EIFS) - CBC 1705.16

- | | | |
|--------------------------|---|---|
| <input type="checkbox"/> | P | 1. Inspect EIFS installation |
| <input type="checkbox"/> | P | 2. Inspect water resistant barrier coating ASTM E2570 |

FIRE RESISTANT PENETRATIONS AND JOINTS - CBC 1705.17

- | | | |
|--------------------------|---|--|
| <input type="checkbox"/> | P | 1. Inspect penetration firestops in accordance with ASTM E2174 |
| <input type="checkbox"/> | P | 2. Inspection fire-resistant joint systems in accordance with ASTM E2393 |

SMOKE CONTROL SYSTEMS - CBC 1705.18

- | | | |
|--------------------------|---|--|
| <input type="checkbox"/> | P | 1. Test leakage and record device locations during duct work erection and prior to concealment. |
| <input type="checkbox"/> | P | 2. Pressure difference testing, flow measurements, and detection and control verification prior to occupancy |

C = Continuous

P = Periodic

O = One-Time Activity

---- = Frequency is Defined in Some Other Manner



City of Redding
Building Inspection Division

Schedule H - Miscellaneous (3 of 3)

Project Address _____ **Plan Check #** _____

Required Frequency Verification/Inspection

MEDICAL GAS & VACUUM SYSTEMS - CPC 1319

- | | | |
|--------------------------|---|--|
| | | <input type="checkbox"/> Oxygen |
| | | <input type="checkbox"/> Nitrous |
| | | <input type="checkbox"/> Medical Air |
| | | <input type="checkbox"/> Medical Vacuum |
| | | <input type="checkbox"/> Non-Medical Air (Gas powered tools and drying) |
| <input type="checkbox"/> | O | Initial Pressure Test- Piped Gas System - CPC 1319.5 |
| <input type="checkbox"/> | O | Cross-connection Test - CPC 1319.6 |
| <input type="checkbox"/> | O | Final Standing Pressure Test - Piped Gas System - CPC 1319.7 |
| <input type="checkbox"/> | O | Purge and Particulate Test - NFPA 99 5.3.6.23 |
| <input type="checkbox"/> | O | Brazer Certification - NFPA 99 5.3.6.3 |
| <input type="checkbox"/> | O | Category 3 Non-Medical Air & Vacuum - Initial Test and Blow Down NFPA 99 - 5.3.9.2 |
| <input type="checkbox"/> | O | Category 3 Non-Medical Air & Vacuum - Final Standing Pressure Test |

Additional Instructions or Other Tests and Inspections:

City of Redding
 Building Inspection Division
 Recognized Special Inspection & Testing Agencies

AGENCY NAME	HQ ADDRESS	PHONE NO.	W	B	RC	SM	T	A	GE	MI
CGI Technical Services, Inc.	1612 Insight Place Redding, CA 96003	(530) 244-6277	X	X	X	X		X	X	X
Mid Pacific Engineering	2915 Innsbruck Drive, STE A Redding, CA 96003	(530) 246-9499	X	X	X	X		X	X	X
ELS Inspections	P.O. Box 494850 Redding, CA 96049	(530) 515-3438	X							
Pavement Engineering	20260 Skypark Drive Redding, CA 96002	(530) 224-4535							X	
Materials Testing, Inc.	8798 Airport Road Redding, CA 96002	(530) 222-1116	X	X	X	X		X	X	X
Terracon Consultants	50 Goldenland Court, STE 100 Sacramento, CA 95834	(916) 928-4690	X	X	X	X		X	X	X
Krazan & Associates	4320 Orange Avenue, Suites Grove E-F, Sacramento, CA 95841	(916) 564-2200	X	X	X	X		X	X	X
Moore Twining Associates, Inc.	2527 Fresno Street Fresno, CA 93721	(800) 268-7021	X	X	X	X		X	X	X
SHN Consulting Engineers & Geologists	350 Hartnell Ave, Ste. B Redding, CA 96002	(530) 221-5424	X	X	X	X		X	X	X
Professional Assurance and Testing, Inc.	345 Ash Street Red Bluff, CA 96080	(530) 727-9979	X	X	X	X		X	X	X
Salem Engineering Group	2211 Fortune Dr., Ste. C San Jose, CA 95131	(408) 577-1090	X	X	X	X		X	X	X
NV5 Special Inspection and Testing	48 Bellarmine Ct., Ste. 40 Chico, CA 95928	(530) 894-2487	X	X	X	X		X	X	X
BSK Associates	399 Lindbergh Ave. Livermore, CA 94551	(925) 315-3151	X	X	X	X		X	X	X
Korbmacher Engineering, Inc.	480 Preston Ct. Livermore, CA 94551	(925) 454-9033	X	X	X	X		X	X	X
ACS- Material Testing	7069 Danyeur Rd Redding CA 96001	(916) 742-5096								

Key Description: W- Welding B-Bolting RC – Reinforced Concrete SM – Structural Masonry
 T – Timber (Trusses, Eng. Wood) A – Anchors (Mechanical, Adhesive) GE – Soils MI – Miscellaneous (Piles, Piers, Etc)