





# DSA 103-19: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (SOILS), 2019 CBC

Table 1705A.6, Table 1705A.7, Table 1705A.8

<b>Application Number:</b> 03-122209	<b>School Name:</b> Mountain View High School	<b>School District:</b> El Monte Unified School District
<b>DSA File Number:</b>	<b>Increment Number:</b>	<b>Date Created:</b> 2022-11-16 13:52:44

<b>S3. DRIVEN DEEP FOUNDATIONS (PILES):</b>				
	<b>Test or Special Inspection</b>	<b>Type</b>	<b>Performed By</b>	<b>Code References and Notes</b>
<input type="checkbox"/>	<b>a.</b> Verify pile materials, sizes and lengths comply with the requirements.	<b>Continuous</b>	<b>GE*</b>	* By geotechnical engineer or his or her qualified representative.
<input type="checkbox"/>	<b>b.</b> Determine capacities of test piles and conduct additional load tests as required.	<b>Test</b>	<b>LOR*</b>	* Under the supervision of the geotechnical engineer.
<input type="checkbox"/>	<b>c.</b> Inspect driving operations and maintain complete and accurate records for each pile.	<b>Continuous</b>	<b>GE*</b>	* By geotechnical engineer or his or her qualified representative.
<input type="checkbox"/>	<b>d.</b> Verify locations of piles and their plumbness, confirm type and size of hammer, record number of blows per foot of penetration, determine required penetrations to achieve design capacity, record tip and butt elevations and record any pile damage.	<b>Continuous</b>	<b>GE*</b>	* By geotechnical engineer or his or her qualified representative.
<input type="checkbox"/>	<b>e.</b> Steel piles.	Provide tests and inspections per STEEL section below.		
<input type="checkbox"/>	<b>f.</b> Concrete piles and concrete filled piles.	Provide tests and inspections per CONCRETE section below.		
<input type="checkbox"/>	<b>g.</b> For specialty piles, perform additional inspections as determined by the registered design professional in responsible charge.	*	*	* As defined on drawings or specifications.

<b>S4. CAST-IN-PLACE DEEP FOUNDATIONS (PIERS):</b>				
	<b>Test or Special Inspection</b>	<b>Type</b>	<b>Performed By</b>	<b>Code References and Note</b>
<input type="checkbox"/>	<b>a.</b> Inspect drilling operations and maintain complete and accurate records for each pier.	<b>Continuous</b>	<b>GE*</b>	* By geotechnical engineer or his or her qualified representative. (See Appendix for exemptions.)

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Table 1705A.6, Table 1705A.7, Table 1705A.8

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Table 1705A.6, Table 1705A.7, Table 1705A.8

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<b>S6. OTHER SOILS:</b>				
	<b>Test or Special Inspection</b>	<b>Type</b>	<b>Performed By</b>	<b>Code References and Notes</b>
<input type="checkbox"/>	<b>a. Soil Improvements</b>	<b>Test</b>	<b>GE*</b>	Submit a comprehensive report documenting final soil improvements constructed, construction observation and the results of the confirmation testing and analysis to CGS for final acceptance. * By geotechnical engineer or his or her qualified representative.
<input type="checkbox"/>	<b>b. Inspection of Soil Improvements</b>	<b>Continuous</b>	<b>GE*</b>	* By geotechnical engineer or his or her qualified representative.
<input type="checkbox"/>	<b>c.</b>			

# **DSA 103-19: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (CONCRETE), 2019 CBC**

Table 1705A.3; ACI 318-14 Sections 26.12 & 26.13

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**Application Number:**

03-122209

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# **DSA 103-19: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (CONCRETE), 2019 CBC**

Table 1705A.3; ACI 318-14 Sections 26.12 & 26.13

Application Number:

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# DSA 103-19: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (CONCRETE), 2019 CBC

Table 1705A.3; ACI 318-14 Sections 26.12 & 26.13

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C5. POST-INSTALLED ANCHORS:				
	Test or Special Inspection	Type	Performed By	Code References and Notes
<input checked="" type="checkbox"/>	a. Inspect installation of post-installed anchors	See Notes	SI*	1617A.1.19, Table 1705A.3 Item 4a (Continuous) & 4b (Periodic), 1705A.3.8 (See Appendix for exemptions). ACI 318-14 Sections 17.8 & 26.13. * May be performed by the project inspector when specifically approved by DSA.
<input checked="" type="checkbox"/>	b. Test post-installed anchors.	Test	LOR	1910A.5. (See Appendix for exemptions.)

C6. OTHER CONCRETE:				
	Test or Special Inspection	Type	Performed By	Code References and Notes
<input type="checkbox"/>	a.			





# DSA 103-19: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (MASONRY), 2019 CBC

1705A.4; TMS 602-16, Tables 3 and 4.

<b>Application Number:</b> 03-122209	<b>School Name:</b> Mountain View High School	<b>School District:</b> El Monte Unified School District
<b>DSA File Number:</b>	<b>Increment Number:</b>	<b>Date Created:</b> 2022-11-16 13:52:44

	Test or Special Inspection	Type	Performed By	Code References and Notes
<input checked="" type="checkbox"/>	<b>k.</b> Inspect placement of reinforcement, anchor bolts, and connectors.	<b>Continuous</b>	<b>SI</b>	TMS 602-16 Table 4 Item 2c.
<input checked="" type="checkbox"/>	<b>l.</b> Placement, consolidation, and reconsolidation of grout.	<b>Continuous</b>	<b>SI</b>	TMS 602-16 Table 4 Item 3h.
<input checked="" type="checkbox"/>	<b>m.</b> Inspect placement of masonry units and construction of mortar joints.	<b>Periodic</b>	<b>SI</b>	TMS 602-16 Table 4 Item 3b.
<input checked="" type="checkbox"/>	<b>n.</b> Verify preparation, construction and protection of masonry during cold weather (temperature below 40 % F) or hot weather (temperature above 90 % F).	<b>Periodic</b>	<b>SI*</b>	TMS 602-16 Table 4 Item 3f. * May be performed by the project inspector when specifically approved by DSA.
<input checked="" type="checkbox"/>	<b>o.</b> Inspect type, size and location of anchors and all other items to be embedded in masonry including other details of anchorage of masonry to structural members, frames and other construction.	<b>Continuous</b>	<b>SI</b>	TMS 602-16 Table 4 Item 3d.
<input checked="" type="checkbox"/>	<b>p.</b> Inspect grout space, including mortar protrusions, prior to placement of grout.	<b>Continuous</b>	<b>SI</b>	TMS 602-16 Table 4 Item 2a.
<input type="checkbox"/>				



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	Test or Special Inspection	Type	Performed By	Code References and Notes
<input checked="" type="checkbox"/>	b. Test post-installed anchors.	Test	LOR	1705A.4, 1910A.5. (See Appendix for exemptions.)

M4. OTHER MASONRY:				
	Test or Special Inspection	Type	Performed By	Code References and Notes
<input type="checkbox"/>	a.			

# DSA 103-19: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (STEEL AND ALUMINUM), 2019 CBC

1705A.2.1, Table 1705A.2.1; AISC 303-16, AISC 341-16, AISC 358-16, AISC 360-16; AISI S100-16; RCSC 2014; AWS D1.1, AWS D1.2, AWS D1.3, AWS D1.4, AWS D1.8

<b>Application Number:</b> 03-122209	<b>School Name:</b> Mountain View High School	<b>School District:</b> El Monte Unified School District
<b>DSA File Number:</b>	<b>Increment Number:</b>	<b>Date Created:</b> 2022-11-16 13:52:44

S/A1. STRUCTURAL STEEL, COLD-FORMED STEEL AND ALUMINUM USED FOR STRUCTURAL PURPOSES				
	Test or Special Inspection	Type	Performed By	Code References and Notes
<input checked="" type="checkbox"/>	a. Verify identification of all materials and: • Mill certificates indicate material properties that comply with requirements. • Material sizes, types and grades comply with requirements.	Periodic	*	Table 1705A.2.1 Item 3a 3c. 2202A.1; AISI S100-16 Section A3.1 & A3.2, AISI S240-15 Section A3 & A5, AISI S220-15 Sections A4 & A6. * By special inspector or qualified technician when performed off-site.
<input checked="" type="checkbox"/>	b. Test unidentified materials	Test	LOR	2202A.1.
<input checked="" type="checkbox"/>	c. Examine seam welds of HSS shapes	Periodic	SI	DSA IR 17-3.
<input checked="" type="checkbox"/>	d. Verify and document steel fabrication per DSA-approved construction documents.	Periodic	SI	Not applicable to cold-formed steel light-frame construction, except for trusses (1705A.2.4).
<input type="checkbox"/>	e. Buckling restrained braces.	Test	LOR	Testing and special inspections in accordance with IR 22-4.

S/A2. HIGH-STRENGTH BOLTS:				
	Test or Special Inspection	Type	Performed By	Code References and Notes
<input checked="" type="checkbox"/>	a. Verify identification markings and manufacturer's certificates of compliance conform to ASTM standards specified in the DSA-approved documents.	Periodic	SI	Table 1705A.2.1 Items 1a & 1b, 2202A.1; AISC 360-16 Section A3.3, J3.1, and N3.2; RCSC 2014 Section 1.5 & 2.1; DSA IR 17-8 & DSA IR 17-9.
<input checked="" type="checkbox"/>	b. Test high-strength bolts, nuts and washers.	Test	LOR	Table 1705A.2.1 Item 1c, 2213A.1; RCSC 2014 Section 7.2; DSA IR 17-8.
<input checked="" type="checkbox"/>	c. Bearing-type ("snug tight") connections.	Periodic	SI	Table 1705A.2.1 Item 2a, 1705A.2.6, 2204A.2; AISC 360-16 J3.1, J3.2, M2.5 & N5.6; RCSC 2014 Section 9.1; DSA IR 17-9.
<input checked="" type="checkbox"/>	d. Pretensioned and slip-critical connections.	*	SI	Table 1705A.2.1 Items 2b & 2c, 1705A.2.6, 2204A.2; AISC 360-16 J3.1, J3.2, M2.5 & N5.6; RCSC 2014 Sections 9.2 & 9.3; DSA IR 17-9. * "Continuous" or "Periodic" depends on the tightening method used.

# DSA 103-19: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (STEEL AND ALUMNINUM), 2019 CBC

1705A.2.1, Table 1705A.2.1; AISC 303-16, AISC 341-16, AISC 358-16, AISC 360-16; AISI S100-16; RCSC 2014; AWS D1.1, AWS D1.2, AWS D1.3, AWS D1.4, AWS D1.8

<b>Application Number:</b> 03-122209	<b>School Name:</b> Mountain View High School	<b>School District:</b> El Monte Unified School District
<b>DSA File Number:</b>	<b>Increment Number:</b>	<b>Date Created:</b> 2022-11-16 13:52:44

S/A3. WELDING:				
	Test or Special Inspection	Type	Performed By	Code References and Notes
<input checked="" type="checkbox"/>	a. Verify weld filler material identification markings per AWS designation listed on the DSA-approved documents and the WPS.	Periodic	SI	1705A.2.5, Table 1705A.2.1 Items 4 & 5; AWS D1.1 and AWS D1.8 for structural steel; AWS D1.2 for Aluminum; AWS D1.3 for cold-formed steel; AWS D1.4 for reinforcing steel; DSA IR 17-3.
<input checked="" type="checkbox"/>	b. Verify weld filler material manufacturer's certificate of compliance.	Periodic	SI	DSA IR 17-3.
<input type="checkbox"/>				

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1705A.2.1, Table 1705A.2.1; AISC 303-16, AISC 341-16, AISC 358-16, AISC 360-16; AISI S100-16; RCSC 2014; AWS D1.1, AWS D1.2, AWS D1.3, AWS D1.4, AWS D1.8

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	Test or Special Inspection	Type	Performed By	Code References and Notes
	<b>S/A5. FIELD WELDING (IN ADDITION TO SECTION S/A3):</b>			
	Test or Special Inspection	Type	Performed By	Code References and Notes
<input type="checkbox"/>	a. Inspect groove welds, multi-pass fillet welds, single pass fillet welds > 5/16", plug and slot welds.	<b>Continuous</b>	<b>SI</b>	<b>Table 1705A.2.1 Items 5a.1 4;</b> AISC 360-16 (AISC 341-16 as applicable); DSA IR 17-3.re S BT 1 i 10 0 0 10 413.882 63 3C 341-16 as

DGS DSA 103-19 (Revised 09/29/2022)

# DSA 103-19: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (STEEL AND ALUMNINUM), 2019 CBC

1705A.2.1, Table 1705A.2.1; AISC 303-16, AISC 341-16, AISC 358-16, AISC 360-16; AISI S100-16; RCSC 2014; AWS D1.1, AWS D1.2, AWS D1.3, AWS D1.4, AWS D1.8

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	Test or Special Inspection	Type	Performed By	Code References and Notes
<b>S/A6. NONDESTRUCTIVE TESTING:</b>				
	Test or Special Inspection	Type	Performed By	Code References and Notes
<input type="checkbox"/>	a. Ultrasonic	Test	LOR	1705A.2.1, 1705A.2.5; AISC 341-16 J6.2, AISC 360-16 N5.5; ANSI/ASNT CP-189, SNT-TC-1A; AWS D1.1, AWS D1.8; DSA IR 17-2.
<input type="checkbox"/>	b. Magnetic Particle	Test	LOR	1705A.2.1, 1705A.2.5; AISC 341-16 J6.2, AISC 360-16 N5.5; ANSI/ASNT CP-189, SNT-TC-1A; AWS D1.1, AWS D1.8; DSA IR 17-2.
<input type="checkbox"/>	c.	Test	LOR	

<b>S/A7. STEEL JOISTS AND TRUSSES:</b>				
	Test or Special Inspection	Type	Performed By	Code References and Notes
<input type="checkbox"/>	a. Verify size, type and grade for all chord and web members as well as connectors and weld filler material; verify joist profile, dimensions and camber (if applicable); verify all weld locations, lengths and profiles; mark or tag each joist.	Continuous	SI	1705A.2.3, Table 1705A.2.3; AWS D1.1; DSA IR 22-3 for steel joists only. 1705A.2.4; AWS D1.3 for cold-formed steel trusses.



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1705A.2.1, Table 1705A.2.1; AISC 303-16, AISC 341-16, AISC 358-16, AISC 360-16; AISI S100-16; RCSC 2014; AWS D1.1, AWS D1.2, AWS D1.3, AWS D1.4, AWS D1.8

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Test or Special Inspection	Type	Performed By	Code References and Notes
<b>S/A8. SPRAY APPLIED FIRE-PROOFING:</b>			
Test or Special Inspection	Type	Performed By	Code References and Notes
<input type="checkbox"/> a. Examine structural steel surface conditions, inspect application, take samples, measure thickness and verify compliance of all aspects of application with DSA-approved documents.	Periodic	SI	1705A.14.
<input type="checkbox"/> b. Test bond strength.	Test	LOR	1705A.14.6.
<input type="checkbox"/> c. Test density.	Test	LOR	1705A.14.5.

<b>S/A9. ANCHOR BOLTS AND ANCHOR RODS:</b>			
Test or Special Inspection	Type	Performed By	Code References and Notes
<input checked="" type="checkbox"/> a. Anchor Bolts and Anchor Rods	Test	LOR	Sample and test anchor bolts and anchor rods not readily identifiable per procedures noted in DSA IR 17-11.
<input type="checkbox"/> b. Threaded rod not used for foundation anchorage.	Test	LOR	Sample and test threaded rods not readily identifiable per procedures noted in DSA IR 17-11.

<b>S/A10. Other Steel</b>			
Test or Special Inspection	Type	Performed By	Code References and Notes
<input type="checkbox"/> a.			

## Appendix: Work Exempt from DSA Requirements for Structural Tests / Special Inspections

**Application Number:**  
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2022-11-16 13:52:44

Exempt items given in DSA IR A-22 or the 2019 CBC (including DSA amendments) and those items identified below with a check mark by the design professional are NOT subject to DSA requirements for the structural tests / special inspections noted. **Items marked as exempt shall be identified on the approved construction documents.** The project inspector shall verify all construction complies with the approved construction documents.

<b>SOILS:</b>	
<input type="checkbox"/>	1. Deep foundations acting as a cantilever footing designed based on minimum allowable pressures per CBC Table 1806A.2 and having no geotechnical report for the following cases: A) free standing sign or scoreboard, B) cell or antenna towers and poles less than 35'-0" tall (e.g., lighting poles, flag poles, poles supporting open mesh fences, etc.), C) single-story structure with dead load less than 5 psf (e.g., open fabric shade structure), or D) covered walkway structure with an apex height less than 10'-0" above adjacent grade.
<input type="checkbox"/>	2. Shallow foundations, etc. are exempt from special inspections and testing by a Geotechnical Engineer for the following cases: A) buildings without a geotechnical report and meeting the exception item #1 criteria in CBC Section 1803A.2 supported by native soil (any excavation depth) or fill soil (not exceeding 12" depth per CBC Section 1804A.6), B) soil scarification/recompaction not exceeding 12" depth, C) native or fill soil supporting exterior non-structural flatwork (e.g., sidewalks, site concrete ramps, site stairs, parking lots, driveways, etc.), D) unpaved landscaping and playground areas, or E) utility trench backfill.

<b>CONCRETE/MASONRY:</b>	
<input type="checkbox"/>	1. Post-installed anchors for the following: A) exempt non-structural components (e.g., mechanical, electrical, plumbing equipment - see item 7 for "Welding" in the Appendix below) given in CBC Section 1617A.1.18 (which replaces ASCE 7-16, Section 13.1.4) or B) interior nonstructural wall partitions meeting criteria listed in exempt item 3 for "Welding."
<input type="checkbox"/>	2. Concrete batch plant inspection is not required for items given in CBC Section 1705A.3.3.2 subject to the requirements and limitations in that section.
<input type="checkbox"/>	3. Non-bearing non-shear masonry walls may be exempt from certain DSA masonry testing and special inspection items as allowed per DSA IR 21-1.16. Refer to construction documents for specific exemptions accordingly for each applicable wall condition.
<input type="checkbox"/>	4. Epoxy shear dowels in site flatwork and/or other non-structural concrete.

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**School District:**  
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**Date Created:**  
2022-11-16 13:52:44

<b>CONCRETE/MASONRY:</b>	
<input type="checkbox"/>	5. Testing of reinforcing bars is not required for items given in CBC Section 1910A.2 subject to the requirements and limitations in that section.

<b>WELDING:</b>	
<input type="checkbox"/>	1. Solid-clad and open-mesh fences, gates with maximum leaf span of 10', and gates with a maximum rolling section of 10' all having an apex height less than 8'-0" above lowest adjacent grade. When located above circulation or occupied space below, these gates/fences are not located within 1.5x gate/fence height (max 8'-0") to the edge of floor or roof.
<input type="checkbox"/>	2. Handrails, guardrails, and modular or relocatable ramps associated with walking surfaces less than 30" above adjacent grade (excluding post base connections per the 'Exception' language in Section 1705A.2.1); fillet welds shall not be ground flush.
<input type="checkbox"/>	

eral responsible charge:

William H. Thorpe

## DSA 103-19: LIST OF REQUIRED VERIFIED REPORTS, CBC 2019

**Application Number:**

03-122209

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2022-11-16 13:52:44

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1. Soils Testing and Inspection: Geotechnical Verified Report Form DSA 293

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