

Special Inspection FINAL Compliance Report

9.2.22

Attention: Special Inspection Coordinator
Permit and Resource Management Department County of Sonoma
2550 Ventura Avenue
Santa Rosa, CA 95403

Re: 23210 Arnold Drive Permit Number: **BLD21-1119** FINAL special inspection report

In accordance with Sections 1704 and 1705 of the 2019 California Building Code, I have provided special inspection for the following items:

RESIDENTIAL SPECIAL INSPECTIONS CNI-033R;

-Fabricated Items

-Structural Steel

-A325 Bolting

-Moment Frames and their foundations

-Braced Frames and their foundations

1704.2.5 & 1705.10 - Fabricated Items

Fabrication and implementation

Fabricator approval and certificate of compliance

Notes/ Referenced Standards CBC 1704.2.5.1

My previous site visits and subsequent follow ups found these items satisfactory.

1705.2 – Steel Construction, Quality Assurance per AISC 360

A. Fabricator and erector documents (verify reports and certificates as listed in AISC 360, chapter N, paragraph 3.2 for compliance with construction documents. Includes structural steel, castings, forgings, fasteners, rods, welding, anchors, braces, stiffeners, member locations, joint details, etc.)

Notes/ Referenced Standards AISC 360: Chapter N

B. Identification markings for structural steel materials conform to ASTM standards specified in the approved construction documents (e.g., structural shapes, castings, forgings, bolts, washers, nuts, rods, consumables for welding, anchors, etc.)

Notes/ Referenced Standards AISC 360: A3

C. Embedments (verify diameter, grade, type, length, and depth of embedded item)

Notes/ Referenced Standards AISC 360: N5.8

D. Verify compliance with details on the construction documents, such as braces, stiffeners, member locations, and proper application of joint details at each connection

Notes/ Referenced Standards AISC 360: N5.8

F. Inspection of High-Strength Bolting

1. Inspection tasks Prior to Bolting (Observe, or perform tasks for each bolted connection, in accordance with QA tasks listed in AISC 360, Table N5.6-1)
2. Inspection tasks During Bolting (Observe the QA tasks listed in AISC 360, Table N5.6-2)
 - a. Pre-tensioned and slip critical joints
 - b. Snug-tight joints
3. Inspection tasks After Bolting (Perform tasks for each bolted connection in accordance with QA tasks listed in AISC 360, Table N5.6-3)

My previous site visits and subsequent follow ups found these items satisfactory.

Table 1705.3 Concrete Construction

A. Inspection reinforcement, including prestressing tendons, and verify placement.

Notes/ Referenced Standards - ACI 318 Ch. 20, 25.2, 25.3, 26.6.1-26.6.3, CBC 1908.4

On 3.7.22 I visited the site and the rebar was in conformance with the approved plans and in the correct location. I followed up with subsequent inspections and review of the material testing

C. Inspect anchors cast in concrete.

Notes/ Referenced Standards - ACI 318: 17.8.2

On 3.7.22 I visited the site and the rebar was in conformance with the approved plans and in the correct location.

E. Verify use of required design mix.

Notes/ Referenced Standards ACI 318: Ch. 19, 26.4.3, 26.4.4, CBC 1904.1, 1904.2, 1908.2, 1908

The slab was poured on March 22nd 2022 with the correct mix and design strengths.

G. Inspect concrete and shotcrete placement for proper application techniques.

Notes/ Referenced Standards ACI 318: 26.5, CBC 1908.6, 1908.7, 1908.8

The slab was poured on March 22nd 2022 with the correct mix and design strengths. I observed placement and took cylinder tests. Concrete was tested by Construction Testing Services and met the 28-day strength requirement.

L. Inspect formwork for shape, location, and dimensions of the concrete member being formed.

Notes/ Referenced Standards ACI 318: 26.10.1(b)

My 3.7.22 site inspection found the forms to be satisfactory

Table 1705.6 – Verification and Inspection of Soils

A. Verify materials below shallow foundations are adequate to achieve the design bearing capacity

On 3.2.22 I visited the site and the ground was in conformance with industry standards. It was compacted and firm and non-yielding under my probe. It will meet the minimum requirements of the design bearing capacity (1500 psf)

1705.12 – Verification and Inspection for Seismic Resistance

A. Structural Steel

1. Seismic force-resisting systems, 1705.12.1.1: Joint Details, Connection Details, Welding, Nondestructive Testing, High-strength Bolting, Composite Structures, Piling, etc.

Notes/ Referenced Standards CBC 1705.12.1, AISC 341: Chapter J Quality Control and Quality Assurance

SPECIAL INSPECTIONS STEEL APPENDIX CNI-033A

TABLE J7.1	QC	QC	QA	QA	✓ if
Inspection Tasks Prior to Bolting	Task	Doc.	Task	Doc.	Required
Proper fasteners selected for the joint detail	O	NR	O	NR	☒
Proper bolting procedure selected for joint detail	O	NR	O	NR	☒
Connecting elements, including the appropriate faying surface condition and hole preparation, if specified, meet applicable requirements	O	NR	O	NR	☒
Pre-installation verification testing by installation personnel observed for fastener assemblies and methods used	P	D	O	D	☒
Proper storage provided for bolts, nuts, washers and other fastener components	O	NR	O	NR	☒

TABLE J7.2	QC	QC	QA	QA	✓ if
Inspection Tasks During Bolting	Task	Doc.	Task	Doc.	Required
Fastener assemblies placed in all holes and washers (if required) are positioned as required	O	NR	O	NR	☒
Joint brought to the snug tight condition prior to the pretensioning operation	O	NR	O	NR	☐
Fastener component not turned by the wrench prevented from rotating	O	NR	O	NR	☒
Bolts are pretensioned progressing systematically from the most rigid point toward the free edges	O	NR	O	NR	☒

NO welding performed on site. All connections were bolted. All bolting satisfactory.

Based upon inspections performed and my substantiating reports, it is my professional judgment that, to the best of my knowledge, the inspected work was performed in accordance with the approved plans, specifications and applicable workman provisions of the California Building Code.

The special inspections are complete on this permit

Signed: *Erwin O Toole*

Erwin J O'Toole PE

Cc: (Sean Briody Owner)



Field Number: 1		Laboratory Compression Test	
Project Name: 23210 Arnold Drive		Permit # : BLD21-1119	
Project No.: 18730	Sampled by: Other	Report Date: 04/22/2022	
Client: Erwin OToole	Date of Sampling: 03/22/2022	Lab Log No.: 248040	

Information provided by Field Technician							
Mix #: 5012		Supplier: Central Concrete			Contractor: Owner		
Set: 1 of 1		Truck #: m-22			Design Strength (psi): 3,000 @28 days		Ticket#: N/A
Sample Material/Shape: ASTM C39 Compressive Strength of Cylindrical Concrete Specimens (4x8)					Type of Structure: Footings		
Location: Onsite Location for overall pour: SOG							
Location when sampled: SOG							
Concrete Quality	Actual	Req'ment		Actual	Req'ment	Actual	Req'ment
Mix Temperature (°F):	70	50-90	Slump or Spread (in.):	5	3-5	Unit Wt (#cu ft):	N/A
Air Temperature (°F):	65	>40	Air Content (%):	na	N/A	Time Sampled:	10:00 AM
Aggregate Size (in):	3/4	N/A	Batch Time:	9:30 AM		Time in Truck:	30 minutes <90 Mins

Information supplied by Laboratory Technician										
Date Received: 03/23/2022					Technician that received: SH					
Test #	Age of Test (Days)	Date	Technician	Diameter	Length	Area (in²)	Cure Loc	Ultimate Load (lbs)	Compressive Strength (psi)	Type of Fracture
A	7	03/29/2022	A. Alvarez	4.00	8.00	12.57	Lab	53,690	4,270 psi	Type 3
B	28	04/22/2022	A. Alvarez	4.00	8.00	12.57	Lab	78,374	6,240 psi	Type 3
C	28	04/22/2022	A. Alvarez	4.00	8.00	12.57	Lab	77,797	6,190 psi	Type 3
D	28	04/22/2022	A. Alvarez	4.00	8.00	12.57	Lab	77,874	6,200 psi	Type 3
E	H	H		4.00	8.00	12.57	Lab			

MEETS DESIGN STRENGTH

28 Day Avg.: 6,210 psi

Remarks: Received Sample Condition: Acceptable and/or Satisfactory



Reviewed by: Kaung Thu, Staff Engineer

04/22/2022

Date

ASTM Standards Used: Unless noted, material was sampled and tested in accordance with ASTM C172, C31, C143, C231, C470, C511, C1077, C1231, C1064, C138 and E4. Compressive strength tests per ASTM C39.

Testing was performed by qualified personnel in accordance with generally accepted industry practice, material testing consultants procedures and the above reference standards. This report is applicable only to the items listed herein. The test performed and in this report are not intended to be considered as any guarantee or warranty of suitability for service or fitness of use of items tested and it should not be relied on as such. The report has been prepared for the exclusive use of the client and any partial or whole reproduction without the consent of the client is prohibited.