



City of Long Beach
Department of Development Services
Building and Safety Bureau

Information
Bulletin
BU-032
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Structural Observation

This Information Bulletin stipulates the policy and procedure of the Building and Safety Bureau (Bureau) in regard to structural observation as mandated by §1704.5 of the 2013 Edition of the California Building Code (CBC) and amended by §18.40.160 of the Long Beach Municipal Code (LBMC). This Information Bulletin describes the responsibility of all parties involved in compliance with the structural observation requirement.

PART 1: PURPOSE OF STRUCTURAL OBSERVATION

Structural observation is the visual observation of the structural system by a Registered Design Professional (i.e., licensed engineer or architect) for general conformance to the approved construction documents. Structural observation is intended to assist and supplement the work of the Building Inspector. Structural observation by itself does not certify, guarantee, or ensure conformance with all of the specific requirements of the approved construction documents. It does not provide the quality assurance of continuous inspection, nor does it include or waive the responsibility for progress or continuous inspections by the Building Inspector or the Registered Deputy Inspector that the Owner may be required to employ.

The requirement for having a Registered Design Professional present during key construction phases provides an additional observation of the gravity and/or lateral load structural systems by a knowledgeable observer. This will substantially increase the likelihood that the structural system will be in general conformance with the approved construction documents by tracking the load paths to prevent gross errors and omissions. The Registered Design Professional who performs the structural observation is known herein as the "Structural Observer."

PART 2: STRUCTURAL OBSERVATION REQUIREMENTS

LBMC §18.40.160, which amends §1704.5 of the CBC, reads as follows:

Structural observations. Where required by the provisions of CBC §1704.5.1 or §1704.5.2, the Owner shall employ a Structural Observer to perform structural observations as defined in §1702. The Structural Observer shall be one of the following individuals:

1. The Registered Design Professional responsible for the structural design, or
2. A Registered Design Professional designated by the Registered Design Professional responsible for the structural design.

Prior to the commencement of observations, the Structural Observer shall submit to the Building Official a written statement identifying the frequency and extent of structural observations.

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The Owner or Owner's representative shall coordinate and call a preconstruction meeting between the Structural Observer, Contractors, affected Subcontractors and Registered Deputy Inspector. The Structural Observer shall preside over the meeting. The purpose of the meeting shall be to identify the major structural elements and connections that affect the vertical and lateral load resisting systems of the structure and to review scheduling of the required observations. A record of the meeting shall be included in the report submitted to the Building Official.

Observed deficiencies shall be reported in writing to the Owner or Owner's representative, Registered Deputy Inspector, Contractor and the Building Official. Upon the form prescribed by the Building Official, the Structural Observer shall submit to the Building Official a written statement at each significant construction stage stating that the site visits have been made and identifying any reported deficiencies which, to the best of the Structural Observer's knowledge, have not been resolved. A final report by the Structural Observer which states that all observed deficiencies have been resolved is required before acceptance of the work by the Building Official.

PART 3: DOCUMENTATION OF STRUCTURAL OBSERVATION

Prior to the issuance of a building permit, the Registered Design Professional responsible for the structural design shall specify structural observation at each construction stage identified in CBC §1704.5.1 or §1704.5.2 and designate the Structural Observer on the "Structural Observation Designation" form (Appendix A) prescribed by the Bureau. The "Structural Observation" portion (see below) of this form shall be made a part of the approved construction documents:

STRUCTURAL OBSERVATION <small>(Please specify or check the structural elements/connections below that requires Structural Observation and identify the scheduled interval or stage of construction when the Structural Observation will be performed.)</small>		
TYPE	STRUCTURAL ELEMENTS OR CONNECTIONS TO BE OBSERVED	SCHEDULED INTERVAL OR STAGE OF CONSTRUCTION
FOUNDATIONS	<input type="checkbox"/> Footing, Stem Wall	
	<input type="checkbox"/> Mat Foundation, Prestressed Conc. Slab	
	<input type="checkbox"/> Caisson, Pile, Grade Beam	
	<input type="checkbox"/> Foundation Pad, Anchor	
	<input type="checkbox"/> Other:	
WALLS	<input type="checkbox"/> Concrete	
	<input type="checkbox"/> Masonry	
	<input type="checkbox"/> Wood Shear Wall Panel	
	<input type="checkbox"/> Other:	
FRAMES	<input type="checkbox"/> Steel Moment Frame	
	<input type="checkbox"/> Steel Braced Frame	
	<input type="checkbox"/> Concrete Moment Frame	
	<input type="checkbox"/> Masonry Wall Frame	
	<input type="checkbox"/> Other:	
DIAPHRAGMS <small>(Floor/Roof)</small>	<input type="checkbox"/> Concrete	
	<input type="checkbox"/> Steel Deck	
	<input type="checkbox"/> Wood	
	<input type="checkbox"/> Other:	

In addition, for repetitive work involving similar or identical construction (i.e., floor construction at multi-story buildings), the Registered Design Professional responsible for the structural design shall specify the location and/or frequency of structural observation required on the construction documents.

PART 4: PERFORMANCE OF STRUCTURAL OBSERVATION

The Structural Observer shall perform structural observation at each construction stage identified on the approved construction documents and the “Structural Observation Designation” form. Upon completion of structural observation at each construction stage, the Structural Observer shall complete and submit a “Structural Observation Report” form (Appendix B) to the Building Inspector.

When a deficiency is noted in the “Structural Observation Report” form, the Structural Observer shall give this form to the Owner or Owner’s representative, Contractors, affected Subcontractors, Registered Deputy Inspector, and Building Inspector. The Structural Observer shall note on the form whether the correction of the deficiency needs to be verified through re-observation by him/her. At the discretion of the Structural Observer and with prior approval by the Building Inspector, the Registered Deputy Inspector may verify structural observation of the corrected deficiency. In such cases, the Registered Deputy Inspector shall state that the deficiency was corrected and shall complete and submit the “Registered Deputy Daily Inspection Report” form prescribed by the Bureau to the Building Inspector.

The Structural Observer shall submit a final “Structural Observation Report” form upon completion of the structural system to the Building Inspector. The Structural Observer must state that the structural system generally conforms to the approved construction documents and that all observed deficiencies have been corrected. No final approval or acceptance of the structural work by the Building Inspector will occur without this final “Structural Observation Report” form.

PART 5: STRUCTURAL OBSERVATION NOTE ON CONSTRUCTION DOCUMENTS

The Registered Design Professional responsible for the structural design shall identify the frequency and extent of required structural observations. As a minimum, the following structural observation note and frequency of required structural observations shall be made part of the approved construction documents.

STRUCTURAL OBSERVATION

- 1 Structural observation is the visual observation of the elements and connections of the structural system by a Registered Design Professional for general conformance to the approved construction documents at significant construction stages and at the completion of the structural system. Structural observation does not include or waive the responsibility for the inspection required by LBMC §18.07.050, CBC §1704 or other sections of the LBMC or CBC. Structural observation shall be provided in accordance with the CBC §1704 and as amended by LBMC §18.40.160.
- 2 Where structural observation is required, a “Structural Observation Designation” form shall be completed, signed and submitted to the Bureau naming the Structural Observer who is to perform

the required structural observation and describing the stages of construction and frequency at which structural observation is to occur.

3. The Owner shall employ a Structural Observer to perform structural observations as defined in CBC §1702. Pursuant to LBMC §18.40.160, the Structural Observer should be one of the following individuals:
 - A. The Registered Design Professional responsible for the structural design, or
 - B. A Registered Design Professional designated by the Registered Design Professional responsible for the structural design.
4. Pre-construction meeting:
 - A. Prior to construction commencement, the Structural Observer, as Owner's representative, shall coordinate and preside over a pre-construction meeting with the Registered Design Professional responsible for the structural design (if different than the Structural Observer), Owner, Contractors, affected Subcontractors, Registered Deputy Inspectors and the Building Inspector.
 - B. The purpose of the pre-construction meeting is to identify the major structural elements and connections that affect the vertical and lateral force-resisting systems of the structure and to review the scheduling of required structural observations.
 - C. The first report to the Building Inspector shall include a record of the pre-construction meeting and name of the designated Structural Observer to perform the structural observation program.
 - D. Additional construction meetings may be required at different stages and/or for different trades.
5. The Structural Observer shall complete, sign, wet stamp and submit a "Structural Observation Report" form after each site visit requiring structural observations.
6. Observation schedule:

Where the structural observation is required, the Structural Observer shall perform site visits at each significant construction stages in the progress of the work that allow for correction of deficiencies without substantial effort or uncovering of the work involved. The Structural Observer shall, as a minimum, perform structural observation for the following structural elements and their connections at the scheduled intervals or stages of construction.
7. Observed deficiencies:
 - A. Observed deficiencies by the Structural Observer shall be reported in writing on the "Structural Observation Report" form to the Owner, Registered Design Professional responsible for the

structural design (if different than the Structural Observer), Contractors, affected Subcontractors, Registered Deputy Inspectors and the Building Inspector.

- B. The Contractor shall resolve all identified deficiencies to the satisfaction of the Structural Observer and Building Inspector prior to requesting the next inspection.
 - C. At the conclusion of the project, the Structural Observer shall submit to the Building Inspector a final written statement on the “Structural Observation Report” form that the site visits have been made and report that all observed deficiencies, to the best of the Structural Observer’s knowledge, has been resolved and that the structural system generally conforms to the approved construction documents.
8. When the Owner elects to change the Structural Observer, the Owner shall:
- A. Notify the Building Inspector in writing and receive approval before requesting the next inspection,
 - B. Call for a new pre-construction meeting and notify to the Building Inspector in writing that the meeting was conducted, and
 - C. Furnish the new Structural Observer with copies of all previous structural observation reports.

The new Structural Observer shall approve the correction of all deficiencies identified in the previous reports unless otherwise approved by the Building Inspector.



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Department of Development Services
 333 West Ocean Blvd., 4th Floor
 Long Beach, CA 90802
 Phone: (562) 570-5237 Fax: (562) 570-6753
 Website: www.lbds.info

Structural Observation Designation

STRUCTURAL OBSERVATION DESIGNATION shall be provided as required by CBC Section 1704.5 and amended by LBMC Sections 18.40.160. The Registered Design Professional responsible for the structural design shall identify the frequency and extent of required structural observations. The required structural observations shall be made part of the approved construction documents. This form shall be completed, signed and submit to the Building and Safety Bureau prior to the issuance of the building permit or commencement of structural observations.

PROJECT INFORMATION			
Project Address:	Project No.:	Owner:	Phone No. of Owner:
Registered Design Professional (RDP) responsible for structural design:		Professional Lic./Reg. No.:	Phone No. of RDP:

DESIGNATE THE STRUCTURAL OBSERVER		
Structural Observer of Record (SOR):	Professional Lic./Reg. No.:	Phone No. of SOR:

STRUCTURAL OBSERVATION		
(Please specify or check the structural elements/connections below that requires Structural Observation and identify the scheduled interval or stage of construction when the Structural Observation will be performed.)		
TYPE	STRUCTURAL ELEMENTS OR CONNECTIONS TO BE OBSERVED	SCHEDULED INTERVAL OR STAGE OF CONSTRUCTION
FOUNDATIONS	<input type="checkbox"/> Footing, Stem Wall	
	<input type="checkbox"/> Mat Foundation, Prestressed Conc. Slab	
	<input type="checkbox"/> Caisson, Pile, Grade Beam	
	<input type="checkbox"/> Foundation Pad, Anchor	
	<input type="checkbox"/> Other:	
WALLS	<input type="checkbox"/> Concrete	
	<input type="checkbox"/> Masonry	
	<input type="checkbox"/> Wood Shear Wall Panel	
	<input type="checkbox"/> Other:	
FRAMES	<input type="checkbox"/> Steel Moment Frame	
	<input type="checkbox"/> Steel Braced Frame	
	<input type="checkbox"/> Concrete Moment Frame	
	<input type="checkbox"/> Masonry Wall Frame	
	<input type="checkbox"/> Other:	
DIAPHRAGMS (Floor/Roof)	<input type="checkbox"/> Concrete	
	<input type="checkbox"/> Steel Deck	
	<input type="checkbox"/> Wood	
	<input type="checkbox"/> Other:	

DECLARATION AND ACKNOWLEDGEMENT STATEMENT

DECLARATION BY OWNER (or authorized representative)

I, the Owner of the project, declare that the above listed individual is hired by me to be the Structural Observer of Record. Should I elect to retain a different Structural Observer during the course of the project, I acknowledge my responsibility to:

1. Notify the Building Official in writing and receiving his/her approval before requesting the next inspection;
2. Call for a new pre-construction meeting and certifying to the Building Official in writing that the meeting was conducted;
3. Furnish the new Structural Observer with copies of all previous structural observation reports; and
4. The new Structural Observer shall approve the correction of all deficiencies identified in the previous reports unless otherwise approved by the Building Official.

SIGNATURE OF OWNER (OR AUTHORIZED REPRESENTATIVE)

DATE

DECLARATION BY REGISTERED DESIGN PROFESSIONAL (required if the Structural Observer of Record is different from the Registered Design Professional responsible for the structural design)

I, the Registered Design Professional responsible for the structural design, declare that the above listed individual is designated by me to be responsible for the Structural Observation.

SIGNATURE OF REGISTERED DESIGN PROFESSIONAL RESPONSIBLE FOR THE STRUCTURAL DESIGN

DATE



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Department of Development Services
 333 West Ocean Blvd., 4th Floor
 Long Beach, CA 90802
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Structural Observation Report

STRUCTURAL OBSERVATION is the visual observation of the structural system by a registered design professional for general conformance to the approved construction documents at significant construction stages and at completion of the structural system. Structural observation does not include or waive the responsibility for the inspection required by LBMC Section 18.40.160, CBC Section 1704.5 or other sections of the LBMC or CBC.

This report includes all construction work through _____ day of _____, Report No.: _____ Page No.: _____ of 20_____.

Project Address:	Structural Observer of Record (SOR):	Professional Lic./Reg. No.:	Phone No. of SOR:
Building Permit No.:	Structural Observer (SO), if not by SOR:	Professional Lic./Reg. No.:	Phone No. of SO:

PLEASE INDICATE OBSERVED STRUCTURAL ELEMENTS AND THEIR CONNECTIONS (check applicable box)					
FOUNDATIONS	WALLS	FRAMES	DIAPHRAGMS (Floor/Roof)	IF PORTION OF BLDG WAS OBSERVED, INDICATE LOCATION	DATE
<input type="checkbox"/> Footing, Stem Wall	<input type="checkbox"/> Concrete	<input type="checkbox"/> Steel Moment Frame	<input type="checkbox"/> Concrete		
<input type="checkbox"/> Mat Foundation, Prestressed Conc. Slab	<input type="checkbox"/> Masonry	<input type="checkbox"/> Steel Braced Frame	<input type="checkbox"/> Steel Deck		
<input type="checkbox"/> Caisson, Pile, Grade Beam	<input type="checkbox"/> Wood Shear Wall Panel	<input type="checkbox"/> Concrete Moment Frame	<input type="checkbox"/> Wood		
<input type="checkbox"/> Foundation Pad, Anchor	<input type="checkbox"/> Other:	<input type="checkbox"/> Masonry Wall Frame	<input type="checkbox"/> Other:		
<input type="checkbox"/> Other:	<input type="checkbox"/> Other:	<input type="checkbox"/> Other:	<input type="checkbox"/> Other:		

ITEMS CHECKED ABOVE ARE APPROVED AND WITHOUT DEFICIENCIES.

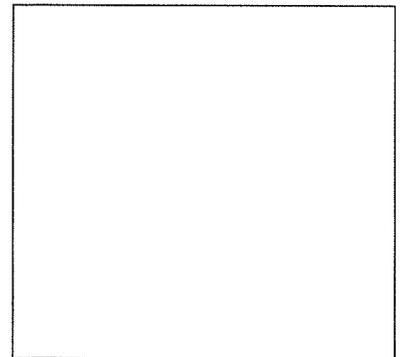
FINAL STRUCTURAL OBSERVATION FOR THE PROJECT IS 100% COMPLETE WITHOUT ANY DEFICIENCIES.

OBSERVED DEFICIENCIES AND COMMENTS:

ADDITIONAL DEFICIENCIES CONTINUED ON ATTACHED PAGES.

I declare that the following statements are true to the best of my knowledge:

1. I am the Registered Design Professional retained by the Owner to be in responsible charge of the structural observation in accordance with the requirements of the City of Long Beach;
2. I, or another Registered Design Professional whom I have designated above and is under my responsible charge, has performed the required site visits at each significant construction stage to verify that the structure is in general conformance with the approved construction documents;
3. I understand that all deficiencies which I have documented must be corrected and a new structural observation report must be issued clearing these deficiencies; and
4. I understand that final acceptance of the structural systems by the Building and Safety Bureau cannot occur without the correction of all observed deficiencies.



SIGNATURE OF STRUCTURAL OBSERVER OF RECORD

DATE

STAMP OF STRUCTURAL OBSERVER OF RECORD

STRUCTURAL OBSERVATION REPORT INSTRUCTION

STRUCTURAL OBSERVATION REPORT:

Where the structural observation is required, the Structural Observer shall perform site visits at each significant construction stages in the progress of the work that allow for correction of deficiencies without substantial effort or uncovering of the work involved.

Upon completion of structural observation at each construction stage, the Structural Observer shall complete, sign, wet stamp and submit a "Structural Observation Report" form to the Building Inspector.

The Structural Observer shall perform structural observation at each construction stage identified on the approved construction documents and the "Structural Observation Designation" form.

PRE-CONSTRUCTION MEETING:

Prior to construction commencement, the Structural Observer, as Owner's representative, shall coordinate and preside over a pre-construction meeting with the Registered Design Professional responsible for the structural design (if different than the Structural Observer), Owner, Contractors, affected Subcontractors, Registered Deputy Inspectors and the Building Inspector.

The purpose of the pre-construction meeting is to identify the major structural elements and connections that affect the vertical and lateral force-resisting systems of the structure and to review the scheduling of required structural observations.

The first report to the Building Inspector shall include a record of the pre-construction meeting and name of the designated Structural Observer to perform the structural observation program.

OBSERVED DEFICIENCY:

When a deficiency is noted in the "Structural Observation Report" form, the Structural Observer shall give this form to the Owner or Owner's representative, Contractors, affected Subcontractors, Registered Deputy Inspector, and Building Inspector. The Structural Observer shall note on the form whether the correction of the deficiency needs to be verified through re-observation by him/her.

The Contractor shall resolve all identified deficiencies to the satisfaction of the Structural Observer and Building Inspector prior to requesting the next inspection.

FINAL OBSERVATION REPORT:

The Structural Observer shall submit a final "Structural Observation Report" form upon completion of the structural system to the Building Inspector. The Structural Observer must state that the structural system generally conforms to the approved construction documents and that all observed deficiencies have been corrected. No final approval or acceptance of the structural work by the Building Inspector will occur without this final "Structural Observation Report" form.

ADDITIONAL INFORMATION:

Refer to Information Bulletin BU-032 "Structural Observation" for additional information regarding the structural observation program.

FOR DEPARTMENT USE ONLY

STRUCTURAL OBSERVATION REPORT RECEIVED BY: _____ DATE: _____