

# Session 3

## “How to Speak IOR”

June 17, 2020

Presented by

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# Agenda

- How to Succeed
- IOR Safety
- What is a TIO?
- Who is responsible for what?
- IORs and Inspections
- IORs and OSHPD
- IOR Daily Reports and Field Records



# Agenda

- Construction Deviations
- Notices to OSHPD
- California Energy Commission Forms



# HOW TO SUCCEED



# Successful IOR... How?

- OSHPD **certification is not enough!**
  - Need to have knowledge comparable to the types of projects your assigned to
  - Background / Experience
  - IORs help projects **succeed**
    - Good Communication
    - Good code of ethics



# Professionalism?

IORS are employed by the Hospital Governing Board or Authority approved by OSHPD and under direction of DPOR

- Duty to the Project
  - Avoid contingent arrangements (quid pro quo)
  - Do not accept gifts from:
    - Approved agencies / special inspectors / third-parties
    - DPORs / construction managers



# Professionalism? Cont.

- Duty to the Public
  - Be a professional
  - Only inspect things in your area of understanding
  - Be objective in your inspections and reporting
  - Be fair, honest and act in good faith in the performance of your duties



# Poll Question

## Who employs the IOR?

- a. Design Professional of Record
- b. Hospital Governing Board or Authority
- c. Project Manager
- d. Contractor





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# IOR Safety



# Personal Protective Equipment (PPE)

The California Department of Public Health (CDPH) provided precautionary measures and a list of PPEs to help prevent respiratory illness, including COVID-19. **We all need to do our part so that IORS, OSHPD personnel and other stakeholders at health care facilities are safe.** CDPH recommends the following precautionary measures to prevent respiratory illness including COVID-19.



# Precautionary Measures

- Washing hands with soap and water.
- Clean and disinfect frequently touched surfaces daily. If surfaces are dirty, clean them using detergent or soap and water prior to disinfection.
- Avoid touching eyes, nose or mouth with unwashed hands.



# Precautionary Measures Cont.

- Cover your cough or sneeze with a tissue or your elbow.
- Avoiding close contact with people who are sick.
- Staying away from work, school or other people if you become sick with respiratory symptoms like fever and cough.



# Personal Protective Equipment (PPE)

All personnel shall wear the following PPE during IOR field inspections and OSHPD Field Observations:

- Everybody wears a mask,

**Additional** Items considered by the CDPH as PPE

- Gowns / aprons,
- Goggles, face shields, facemasks, and
- respirators.
- Gloves



# IOR Safety – Field Inspections

The following shall be followed to maintain the health and safety of IORS, OSHPD personnel and other stakeholders during a pandemic.

- Safe meeting place where you can maintain social distancing (min 6') from each other.
- Limit number of people to join IORs during IOR field inspections i.e. DPORs., CM, Installing Contractors



# IOR Safety – Field Inspections Cont.

- Inspections shall be limited to inspecting the area of work only.
- IORs **shall not** be taken into non-construction related areas of the facility
- If the area of construction involves Covid-19 patients, proper PPE shall be worn by all before entering into the area.





# IOR Safety – Roof Inspections

If area of inspection involves roof construction, the person responsible for guiding the IORs on the roof shall identify:

- Roof vents
- What area of the facility the vents are exhausting i.e. COVID-19 isolation rooms, OR, ICU, Laundry, etc.

steering IORs and OSHPD staff away from those areas.

The guide shall provide the inspection team a roof plan of this information **prior to climbing on the roof.**



# Poll Question

**When guiding the inspection team through a facility, the guide shall be responsible for:**

- a. Avoiding non-construction related areas
- b. Avoiding all areas with COVID-19 patients
- c. Identify all roof vents exhausting COVID-19 areas
- d. Provide the inspection team a roof plan
- e. All of the above



# Poll Question

**When guiding the inspection team through a facility, the guide shall be responsible for:**

- a. Avoiding non-construction related areas
- b. Avoiding all areas with COVID-19 patients
- c. Identify all roof vents exhausting COVID-19 areas
- d. Provide the inspection team a roof plan
- e. **All of the above**



# **WHAT IS THE TESTING, INSPECTION AND OBSERVATION (TIO) Program?**



# What is the Testing, Inspection and Observation (TIO) Program?

A Guide to assist **Design Professionals** in the administration of construction projects under OSHPD's jurisdiction and increases:

- Collaboration, accountability, and cooperation,
- Provides assistance for the efficient development and implementation of the code-required test,
- Clarifies the roles and responsibilities of the parties involved,
- Better defines the milestones in each project.



# What is the (TIO) Program? Cont.

SECTION B		NOTE: Approved agencies, individuals, and all changes to the TIO program shall be identified, evaluated by the DPOR and approved by OSHPD prior to proceeding with the related work.				
Facility #:		Facility Name:		Project #:		Sub #:
DURING CONSTRUCTION DOCUMENT			DURING CONSTRUCTION			
Index #	REQUIRED (Select)	TESTS	RESPONSIBLE APPROVED AGENCY AND/OR INDIVIDUAL	COMPLIANCE VERIFICATION BY IOR (Initial/Date)	OSHPD/FDD USE (Initial/Date)	
<b>STRUCTURAL TESTS</b>						
<b>Foundation</b>						
B-F1	B-F1	Soil fill CBC 1705A.6 Fill material acceptance test				DSE:
B-F2	B-F2	Soil fill CBC 1705A.6 Compaction test				DSE:
B-F3	B-F3	Soil and rock anchors CBC 1811A Load test				DSE:
B-F4	B-F4	Deep foundation elements CBC 1810A.3.3.1.2, 1810A.3.3.1.3, 1810A.3.3.2, & 1810A.3.10.4 Load test				DSE:
B-F5	B-F5	Shoring CBC 1812A Tie-Back Anchors				DSE:
B-F6	B-F6	Vibro Stone Columns (VSC) CBC 1813A Acceptance Test				DSE:
B-F7	B-F7					
B-F8	B-F8					

Sample



# What is the TIO Program? Cont.

## Maintenance and Administration

- TIO is a required element for OSHPD projects
- Design Professional of Record (DPOR) maintains all aspects of the TIO program current.
- Evolving projects. OSHPD projects are rarely static.....
- OSHPD projects are dynamic and require team collaboration and regular reference to the TIO for milestones.



# What is the TIO Program? Cont.

## Format

- TIO form on OSHPD website is not required. DPOR may **develop their own** for hospital-specific projects to better serve the project(s).
- TIO in any format should not change the intent of the original approved plans, specifications or code required test or inspections





# What is the TIO Program? Cont.

## Instructions

- TIO instructions should clearly define the responsibilities of all the project participants
- Instructions are optional but are a good tool **to help clarify test, inspections and responsibilities.**



# IOR Monitoring of the TIO

Although the **DPORs** bear the responsibility to **administer the TIO**, IORs also have play an important role in monitoring the TIO. Monitoring of the TIO program includes verifying that **tests and special inspections** are appropriately:

- Performed (on and off site),
- Performed by qualified and OSHPD approved entities,
- Performed by independent entities, and
- Reported, including a clear description of the work tested or inspected as well as a definitive compliance statement.



# Poll Question

## What is the TIO program used for?

- a. Used to identify all test for the project
- b. Used to identify all inspections for the project
- c. Used to identify all IORs on the project
- d. All of the above



# Poll Question

## What is the TIO program used for?

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- b. Used to identify all inspections for the project
- c. Used to identify all IORs on the project
- d. All of the above



# WHO'S RESPONSIBLE FOR WHAT?



# Who's Responsible for What?

## Owner

- Funding the project,
- General Oversight of project progress and performance of other associated with development and implementation to the TIO.
- Employ the IOR



# Who's Responsible for What? Cont.

## Design Professional of Record (DPOR)

- Coordination with:
  - Owner, OSHPD Staff, IOR, and Design Team,
- Gather and distribute all “Verified Compliance Reports” (VCR) and Test and Special Inspection Reports,
- TIO program.



# Who's Responsible for What? Cont.

## Design Professional (Delegate)

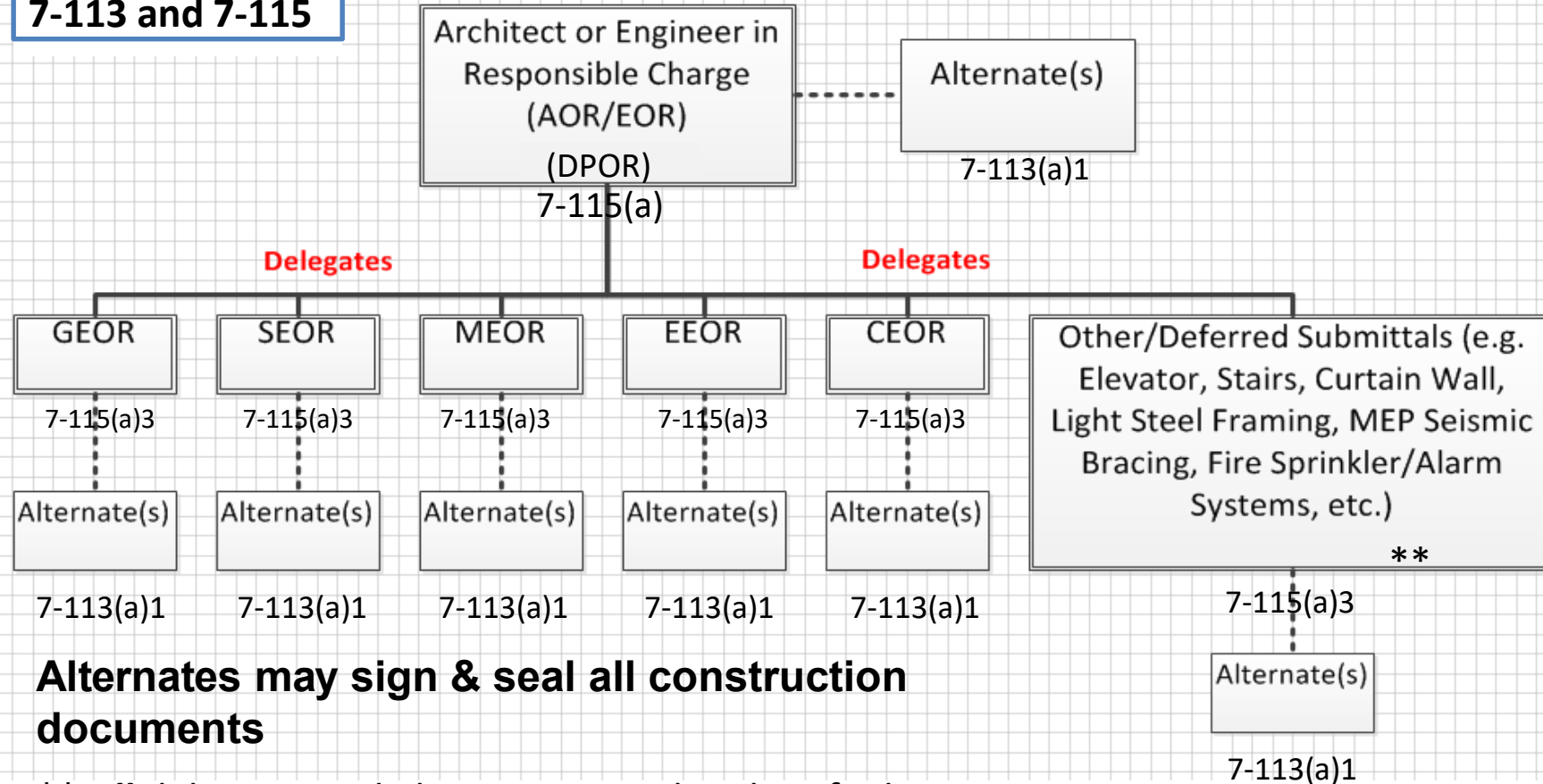
- Coordinate with DPOR for all testing and inspections required on project
- Conducting field visits to observe and report conditions relative to their design.
- Submitting VCRs at preidentified milestones on the TIO





# DPOR, Delegates and Alternates

7-113 and 7-115



**Alternates may sign & seal all construction documents**

\*\* All delegates and alternates must be identified in eSP



# Who's Responsible for What? Cont.

## Inspector of Record (IOR)

- Oversee overall quality assurance of the project, and
- Reporting and validating the work done by:
  - Testing laboratories,
  - Owner provided third-party agencies (installing contractors)
  - Owner provided third-party special inspectors



# Who's Responsible for What? Cont.

## Inspector of Record (IOR)

- Gathering, maintaining and validating related test and inspection documentation such as:
  - Credentials of Special Inspectors (CAC 7-144),
  - Collection of OSHPD “Test and Special Inspection” forms,
  - Distribution of OSHPD staff field reports to contractor, owner and DPOR.



# Who's Responsible for What? Cont.

## Inspector of Record (IOR)

- Validating the work done by contractors,
- Submitting “Verified Compliance Reports” (VCRs) to the DPOR as identified on TIO milestones,
- Keeping records relative to “Sign Offs”, and
- Performing all IOR test and inspections identified on TIO as IOR responsibility.



# What do You do If There is more Than One IOR on a Job?

## Inspection (CAC 7-144)

The hospital shall provide for competent, adequate and continuous inspection by one or more IORs. **When** the hospital proposes more than one:

- A lead IOR shall be identified to coordinate and communicate with the Office.
- IORs shall be approved by OSHPD prior to working on the project.



# Poll Question

## Who is responsible for the TIO?

- a. IOR
- b. Hospital Owner
- c. DPOR
- d. Contractor



# Poll Question

## Who is responsible for the TIO?

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- d. Contractor



# IORs AND INSPECTIONS





# IORs and Inspections

## Competent Inspections:

- Reporting all inconsistencies or seeming errors in the approved construction documents,
- Preparing complete accurate field reports for each day or portion of a day present at the jobsite,
- Noting all construction deficiencies or deviations from the approved construction documents, and
- The date, time and method of correction for the deficiencies, and notifying the contractor, in writing, of any deviations from the approved construction documents which have not been immediately corrected by the contractor.



# IORs and Inspections Cont.

## IOR Personal Knowledge (H&SC Sec. 129830)

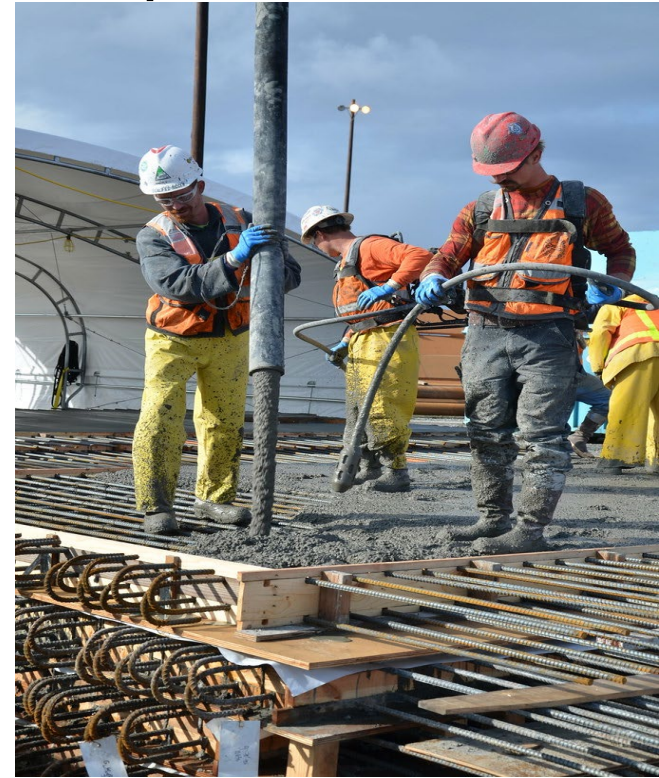
- The inspector's personal continuous inspection of the work of construction in all stages of its progress at the site where the inspector is responsible for inspection,
- When work is carried out away from the site, that personal knowledge that is obtained from the reporting of others on the testing or inspection of materials and workmanship, for compliance with plans, specifications, or applicable standards.



# What are Continuous Inspections?

Continuous inspections are complete inspections of every part of the work which can only be inspected as its placed or assembled.

- Concrete pour(s)
- Masonry
- Spray applied fire proofing
- Etc.



# IORs and Inspections Cont.

## Reporting of Others:

Reasonable diligence shall be exercised in obtaining the facts, such as:

- Confirming the Special Inspector's **qualifications**,
- Periodic visits to the location where the off-site work is being performed to ensure that the **appropriate qualified staff are present**,
- Ensure appropriate staff are performing their work in a competent, **code-compliant** manner.



# What are Periodic Inspections?

Periodic inspections is the inspection of work which does not require constant presence of the IOR. This type of work may be completely inspected after the work is installed without the disassembly or deconstruction.

- Rough in electrical
- Rough in plumbing
- Rough in Mechanical
- Rough in structural members



# What are Periodic Inspections?

It is important to note that the IOR shall not have or assume any duties which will prevent continuous inspection on those projects which he has been approved for. (CAC 7-145(a)2)



# Poll Question

**Should an IOR assume jobs even if it will prevent him/her from providing continuous inspection?**

- a. Yes
- b. Yes, if approved by design professional of record
- c. Yes, if jobs are close to each other
- d. No



# Poll Question

Should an IOR assume jobs even if it will prevent him/her from providing continuous inspection?

- a. Yes
- b. Yes, if approved by design professional of record
- c. Yes, if jobs are close to each other
- d. **No**





# IORs AND OSHPD



# IORs and OSHPD

## **OBSERVATION by OSHPD**

During the construction, of any health facility, the Office shall make such observation as in its judgment is necessary or proper for the enforcement of these regulations and all applicable parts of the *California Building Standards Code*.

***This includes scheduled and unscheduled visits by OSHPD***

**Best Practice: Communicate and establish with FDD Field Staff their intended observation plan and milestones and IOR inspection expectations.**



# IORs and OSHPD

## OSHPD Field Staff Site Visits

- IOR shall prepare documentation for:
  - Various inspections (to ensure inspections were adequately and competently conducted)
  - Up to date codes, plans and specifications (approved Changes)



# IORs and OSHPD

## OSHPD Field Staff Site Visits Cont.

- Updated TIO
- Outstanding RFI's waiting on direction from DPOR
- Show OSHPD how inspections and results have been organized
- Discuss project progress



# IORs and OSHPD

## OSHPD Field Staff Site Visits Cont.

- Any problems being faced in the field
- Discuss IOR and DPOR communication frequency (meetings)
- Provide OSHPD a tour of facility to outline progress/concerns



# IORs and OSHPD

## OSHPD Field Staff Site Visits Cont.

OSHPD representatives are a valuable resource.

- Communicate with OSHPD Field Staff RCOs, COs, DSEs and FLSOs
- Establish a meeting frequency i.e. phone call, virtual meeting
- Contact various OSHPD reps. for advice on each specialty i.e. CO, DSE, FLSO.



# IORs and OSHPD

## OSHPD Field Staff Site Visits Cont.

- If OSHPD becomes the Inspector of the work of construction; something has gone wrong. OSHPD will move to correct the condition. CAC Section 7-213,
- IOR needs to have good communication skills to minimize misunderstandings,
- An IOR can help move the project along with a thorough understanding of the CAC, timely inspections and communication



# Poll Question

**What is one of the main factors for an IORs success?**

- a. Communication
- b. Up to date plans
- c. Organization of files and plans
- d. All of the above





# Poll Question

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- a. Communication
- b. Up to date plans
- c. Organization of files and plans
- d. All of the above



# **IOR DAILY REPORTS AND FIELD RECORDS**



# IOR Daily Reports

## **Field Records (CAC 7-145(a)6))**

The CAC requires IORs to provide a “daily report” while on the job. The report shall include:

- Time of arrival and departure
- Summary of work in progress
- Deficiencies in construction and deviations from approved construction documents
- Date, time and method of correction for deficiencies and deviations



# IOR Field Records.

The IOR shall maintain field records **on-site** including:

- IOR daily reports
- All test and special inspection reports
- A list of test reports of all non-conforming materials or defective workmanship and shall indicate the method of correction
- Approved construction documents (Complete plans, specs., addenda, deferred approvals, C.O.s, etc.)
- TIO program form
- Building permit



# IOR Field Records Cont.

Field records for **concrete** (CAC 7-145(a)6A)) shall also include:

- Time/date of placing
- Time/date of removal of forms and shoring
- Location of defective concrete, and
- Time/date and method of correction
- Log of Changes. (includes OSHPD's determination of material change or not)



# IOR Field Records Cont.

Field records for welding (CAC 7-145(a)6B)) shall also include:

- ID marks of welders
- List of defective welds
- Manner of correction of defects and other related events



# IOR Field Records Cont.

Field records for **driven pile foundations** (CAC 7-145(a)6D)) shall also include:

- Location (i.e. gridlines, in proximity to...)
- Length
- Penetration under the last ten blows for each pile
- Description of the piles used:
  - Name
  - Model number
  - General description of the equipment condition.



# Poll Question

**Are IORs required to maintain daily reports for every day or portion of the day when on the jobsite?**

- a. Yes
- b. No
- c. Sometimes





# Poll Question

Are IORs required to maintain daily reports for every day or portion of the day when on the jobsite?

- a. Yes
- b. No
- c. Sometimes



# CONSTRUCTION DEVIATIONS



# Deviations from Plans? What do you do?

Hospital Construction projects are often very complicated. Because of their complexity the project often require request for information (RFIs) which at times changes the details and other aspects of construction and subsequently requires the project be built out of line from the “Approved Construction Documents”.

So, what do you do?



# Deviations from Plans? What do you do?

If the IOR encounters deviations from the approved construction documents the IOR shall:

- Make the contractor aware of the deviations.
- Deviations not corrected immediately, notify the contractor, architect / engineer and OSHPD in writing,
- Copies of those notifications shall be forwarded to the DPOR, owner and OSHPD



# Poll Question

**Is the IOR required to notify the owner and OSHPD in writing of all construction deviations?**

- a. Yes
- b. No
- c. Only if its not corrected immediately by the contractor
- d. No vote



# Poll Question

Is the IOR required to notify the owner and OSHPD in writing of all construction deviations?

- a. Yes
- b. No
- c. Only if its not corrected immediately by the contractor
- d. No vote



# NOTICES TO OSHPD



# Notices to OSHPD

The inspector shall notify the Office:

- Copies of the **deviations from the approved construction** document notices
- When the work is started or resumed on the project,
- At least 48 hours in advance of the time when **foundation trenches will be complete**, ready for footing forms,
- At least 48 hours in advance of the **first placing of concrete**
- When work has **been suspended** for a period of more than two weeks.





# **CALIFORNIA ENERGY COMMISSION FORMS**



# Who fills out the California Energy Compliance Forms?

The forms identified on the TIO by the DPOR are required to be **completed under the purview of the installing contractor** to document what was installed to meet the requirements of the California Energy Code and outlined in the Non-residential Code Compliance forms.

- Field Technician = Installing contractor
- Licensed Installing Contractor = Responsible Person



# Who fills out the California Energy Compliance Forms? Cont.

FIELD TECHNICIAN'S DECLARATION STATEMENT		
<p>I certify the following under penalty of perjury, under the laws of the State of California:</p> <ol style="list-style-type: none"> <li>1. The information provided on this Certificate of Acceptance is true and correct.</li> <li>2. I am the person who performed the acceptance verification reported on this Certificate of Acceptance (Field Technician).</li> <li>3. The construction or installation identified on this Certificate of Acceptance complies with the applicable acceptance requirements indicated in the plans and specifications approved by the enforcement agency, and conforms to the applicable acceptance requirements and procedures specified in Reference Nonresidential Appendix NA7.</li> <li>4. I have confirmed that the Certificate(s) of Installation for the construction or installation identified on this Certificate of Acceptance has been completed and signed by the responsible builder/installer and has been posted or made available with the building permit(s) issued for the building.</li> </ol>		
Field Technician Name:	Field Technician Signature:	
Field Technician Company Name:	Position with Company (Title):	
Address:	CEA/HERS/ATT Certification Identification (If applicable):	
City/State/Zip:	Phone:	Date Signed:



# What is the “Responsible Person” for the CEC forms?

**RESPONSIBLE PERSON'S DECLARATION STATEMENT**

I certify the following under penalty of perjury, under the laws of the State of California:

1. I am the Field Technician, or the Field Technician is acting on my behalf as my employee or my agent and I have reviewed the information provided on this Certificate of Acceptance.
2. I am eligible under Division 3 of the Business and Professions Code in the applicable classification to accept responsibility for the system design, construction or installation of features, materials, components, or manufactured devices for the scope of work identified on this Certificate of Acceptance and attest to the declarations in this statement (responsible acceptance person).
3. The information provided on this Certificate of Acceptance substantiates that the construction or installation identified on this Certificate of Acceptance complies with the acceptance requirements indicated in the plans and specifications approved by the enforcement agency, and conforms to the applicable acceptance requirements and procedures specified in Reference Nonresidential Appendix NA7.
4. I have confirmed that the Certificate(s) of Installation for the construction or installation identified on this Certificate of Acceptance has been completed and is posted or made available with the building permit(s) issued for the building.
5. I will ensure that a completed, signed copy of this Certificate of Acceptance shall be posted, or made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a signed copy of this Certificate of Acceptance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Acceptance Person Name:		Responsible Acceptance Person Signature:	
Responsible Acceptance Person Company Name:		Position with Company (Title):	
Address:		CSLB License:	
City/State/Zip:		Phone:	Date Signed:



# What is IORs Responsibility?

Upon completion of all California Energy Commission forms identified on the TIO, the IOR will review for compliance with the approved construction documents and the TIO program and indicate their concurrence with an initial and date on the TIO.

These documents are submitted to the IOR by the author of the report. (CAC 7-141(l)) These records shall be made available upon request and submitted to the hospital owner upon project completion. (CAC 7-145(a)7))



# California Energy Commission Contact Information

**FOR MORE INFORMATION ON THE 2019 CALIFORNIA  
ENERGY CODE FORMS CONTACT THE ENERGY  
COMMISSION BUILDING ENERGY EFFICIENCY STANDARDS  
AT:**

**TOLL-FREE HOT LINE AT 800-772-3300  
OUTSIDE OF CALIFORNIA 916-654-5106  
EMAIL AT [title24@energy.ca.gov](mailto:title24@energy.ca.gov)**



# Poll Question

**Is the IOR required to complete the California Energy Code forms?**

- a. Yes
- b. No
- c. No vote



# Poll Question

Is the IOR required to complete / sign the California Energy Code forms?

- a. Yes
- b. **No**
- c. No vote





# Guest IOR

## David Karina



# Questions

