

COVID19 :: LESSONS FROM THE FIELD



EMERGING ISSUES IN CONSTRUCTION:

**PROTECTING
OWNERS, WORKERS, & OCCUPANTS**

COVID19 :: LESSONS FROM THE FIELD



AGENDA:

- Quick introductions
- Lessons learned from the field
 - Protect schedule and budget
 - Protect construction employees and occupants
- Wrap-up Q&A

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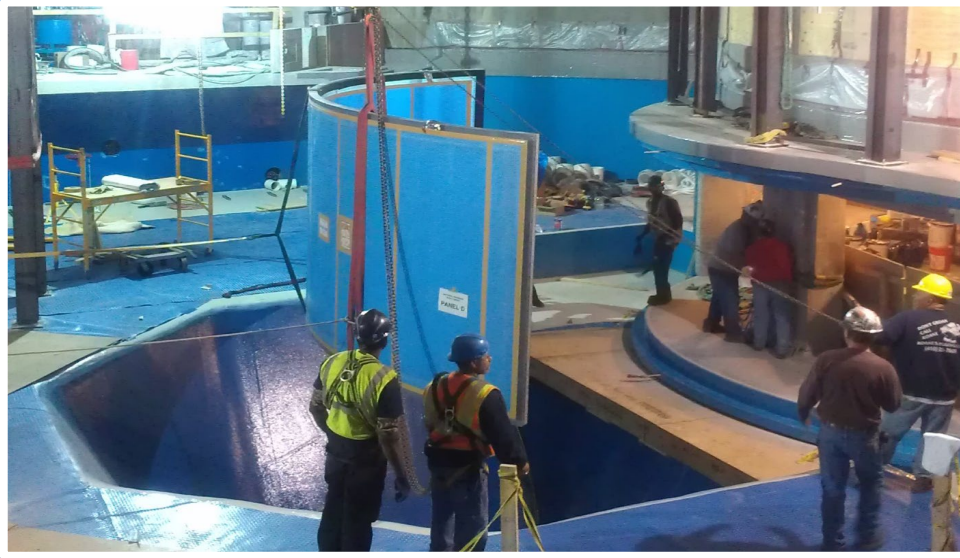
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= Topic you can address for your Clients

COVID19 :: LESSONS FROM THE FIELD



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COVID19 :: LESSONS FROM THE FIELD



Cap Ex Advisory Group is a specialized consulting company providing a service commonly known as Owner's Representation.

Cap Ex Advisory Group serves non-profits, mission-based organizations, and governments by bringing complex capital projects to life. In doing so, the company oversees the work of designers, builders, attorneys, and various financing sources.

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PROTECT SCHEDULE AND BUDGET: Strategy 1 : Expanded Schedule Tracking

How does coordination usually happen?

The “normal” process inside the OAC mtg:

- Track progress of workflow
- Coordinate subcontractors
- Reconcile interdependent activities

Construction Activities	175 days	Fri 4/3/20	Thu 12/3/20
Phase 1	65 days	Fri 4/3/20	Thu 7/2/20
Exposed Aggregate Mockups	50 days	Fri 4/3/20	Thu 6/11/20
Capture Phase and Setup Hydro Capture	5 days	Fri 4/3/20	Thu 4/9/20
Topping Slab Demolition and Excavation	20 days	Fri 4/10/20	Thu 5/7/20
Waterproofing Removal (Hydro)	10 days	Fri 5/8/20	Thu 5/21/20
Waterproofing Installation	15 days	Fri 5/22/20	Thu 6/11/20
Exposed Aggregate Topping Installation	15 days	Fri 6/12/20	Thu 7/2/20
Phase 2	55 days	Fri 7/3/20	Thu 9/17/20
Capture Phase and Setup Hydro Capture	5 days	Fri 7/3/20	Thu 7/9/20
Topping Slab Demolition	10 days	Fri 7/10/20	Thu 7/23/20
Waterproofing Removal (Hydro)	10 days	Fri 7/24/20	Thu 8/6/20
Waterproofing Installation	15 days	Fri 8/7/20	Thu 8/27/20
Exposed Aggregate Topping Installation	15 days	Fri 8/28/20	Thu 9/17/20
Phase 3	55 days	Fri 9/18/20	Thu 12/3/20
Capture Phase and Setup Hydro Capture	5 days	Fri 9/18/20	Thu 9/24/20
Demolition and Excavation	10 days	Fri 9/25/20	Thu 10/8/20
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PROTECT SCHEDULE AND BUDGET: Strategy 1 : Expanded Schedule Tracking

COVID impacts?

- Labor disruptions (call outs)
- Staggered shifts
- Moratoriums on construction
- Permit review delays
- Regulatory & financing inspection delays

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PROTECT SCHEDULE AND BUDGET: Strategy 1 : Expanded Schedule Tracking

New risks for an Owner...

- Schedule creep
- Liquidated Damage Calcs
- Financing implications
- Temp facilities if project is delayed
- Cost increase



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Recommended Actions:

- Modify schedule/budget contingencies
- Modify Const/Perm loan terms & conds
- Freq. reports to forecast new duration
- New contract language for Contractor

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§ 9.3 APPLICATIONS FOR PAYMENT

§ 9.3.1 ~~At least ten days before the date established for each progress payment~~ On or before the 25th of each month, the Contractor shall submit to the Architect an itemized Application for Payment prepared in accordance with the schedule of values, if required under Section 9.2, for completed portions of the Work. Such application shall be notarized, if required, and supported by such data substantiating the Contractor's right to payment as the Owner or Architect may require, such as copies of requisitions from Subcontractors and material suppliers, and shall reflect retainage if provided for in the Contract Documents.

§ 9.3.1.1 As provided in Section 7.3.9, such applications may include requests for payment on account of changes in the Work that have been properly authorized by Construction Change Directives, or by interim determinations of the Architect, but not yet included.

Our normal insertion into AIA A201

§ 9.3.1.2 Applications for Payment shall not include requests for payment for portions of the Work for which the Contractor does not intend to pay a Subcontractor or material supplier, or for such Work has been performed by others whom the Contractor intends to pay. Subject to further coordination with the Owner and the Owner's financing sources, each Application for Payment shall include a) an updated schedule including any impacts related to pandemics, and b) notarized conditional lien releases for the current Application for Payment and unconditional lien releases for all prior Applications for Payment.

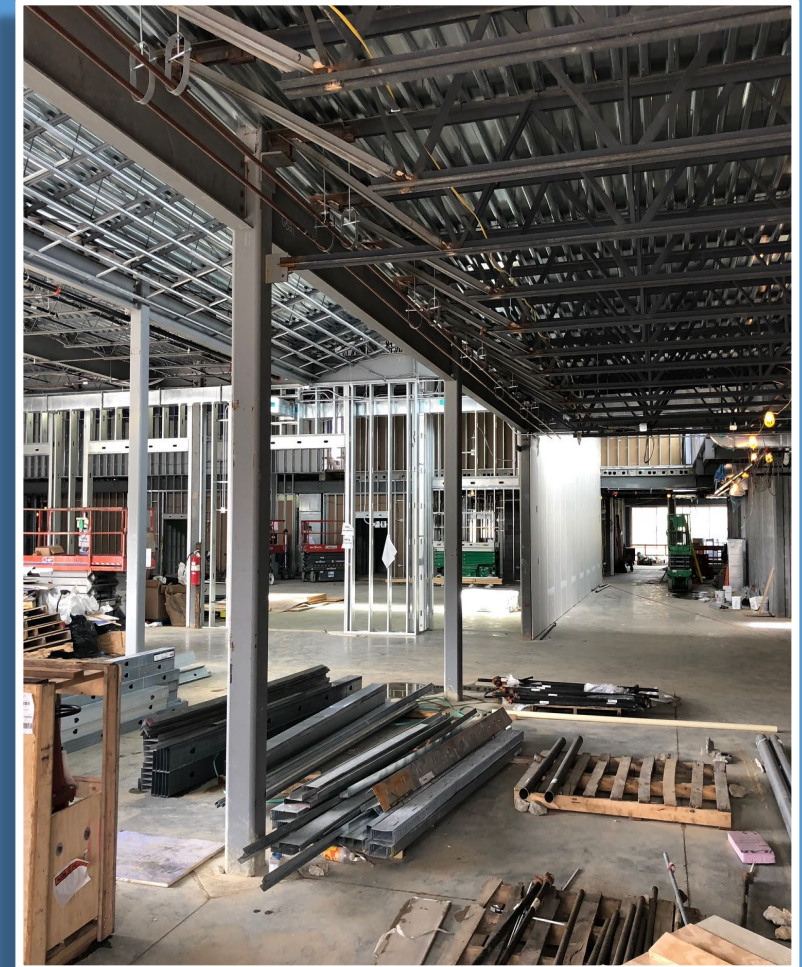
New insertion into AIA A201

PROTECT SCHEDULE AND BUDGET: Strategy 2 : Expedited Procurement

How does material sourcing usually happen?

The “normal” process inside the OAC mtg:

- Procurement follows workflow**
- Architect reviews submittals accordingly**
- Follow financing & B.R. Ins. limits on buying**



SUBMITTALS Number	Spec Section	Item	Planned Submittal Date	Review Period (Days)
73	050170.61 - DECORATIVE METAL REPAIR			14
74	050170.61 - DECORATIVE METAL REPAIR			14
75	050170.61 - DECORATIVE METAL REPAIR	Masking Tape	6/10/2020	14
76	057313 - GLAZED DECORATIVE METAL RAILINGS	Product Data	6/10/2020	14
77	057313 - GLAZED DECORATIVE METAL RAILINGS	Shop Drawings	6/10/2020	14
78	057313 - GLAZED DECORATIVE METAL RAILINGS	Samples for Verification	6/10/2020	14
79	057313 - GLAZED DECORATIVE METAL RAILINGS	Delegated-Design Submittal	6/10/2020	14
80	057313 - GLAZED DECORATIVE METAL RAILINGS	Qualification Data	6/10/2020	14
81	057313 - GLAZED DECORATIVE METAL RAILINGS	Product Test Reports	6/10/2020	14
82	057313 - GLAZED DECORATIVE METAL RAILINGS	Preconstruction test reports	6/10/2020	14
83	057313 - GLAZED DECORATIVE METAL RAILINGS	Evaluation Reports	6/10/2020	14
84	075556.13 - Hot Rubberized Asphalt Protected Membrane Roofing		5/10/2020	14
85	075556.13 - Hot Rubberized Asphalt Protected Membrane Roofing		5/10/2020	14
86	075556.13 - Hot Rubberized Asphalt Protected Membrane Roofing	ISO Certification	5/10/2020	14
87	075556.13 - Hot Rubberized Asphalt Protected Membrane Roofing	Manufacturer's Details	5/10/2020	14

Architect's required review period is normally established via AIA B101.

TYPICAL SUBMITTAL LOG

Dates vary based on workflow.

TYPICAL PAY APPLICATION – G703 SUMMARY

Contracting Company

CONTINU

Page: 3

AIA DOCUMENT G702, APPLICATION AND CERTIFICATE FOR PAYMENT, containing Contractor's signed Certification is attached.
In tabulation below, amounts are stated to the nearest cent.
Use Column I on Contracts where variable retainage for line items may apply.

APPLICATION NUMBER: 8

APPLICATION DATE: 04/28/2020

PERIOD TO: 04/30/2020

PROJECT NO: 017695

INVOICE NO.:

017695-0008

A ITEM NO.	B DESCRIPTION OF WORK	C SCHEDULED VALUE			D WORK COMPLETED (D+E)		F MATERIAL PRESENTLY STORED	G TOTAL COMPLETED AND STORED TO DATE	PER-% (G / C)	H BALANCE TO FINISH	I RETAINAGE
		ORIGINAL	CHANGE ORDERS	CURRENT	FROM PREVIOUS APPLICATION	THIS PERIOD					
32A0000	Landscaping	19,225.00				0.00	0.00	0.00	0	27,275.00	0.00
32B0000	Fencing	43,050.00					0.00	0.00	0	33,350.00	0.00
8500000	Construction Contingency	112,482.00					0.00	0.00	0	106,928.00	0.00
8500001	Design Contingency	153,693.53				0.00	0.00	0.00	0	52,193.53	0.00
8500002	MBE/WBE MarkUp	105,094.00				0.00	0.00	0.00	0	63,422.00	0.00
9000000	General Liability Insurance	43,836.00	3,742.00	47,578.00	11,849.50	2,899.68	0.00	14,749.18	31	32,828.82	0.00
9300000	Fee	176,608.27	15,005.00	191,613.27	47,706.57	11,693.54	0.00	59,400.11	31	132,213.16	0.00
Project Total:		6,247,475.00	188,972.90	6,436,447.90	1,597,629.38	422,175.87	0.00	2,019,805.25	31	4,416,642.65	142,155.10

Cannot exceed Financing
or B.R. Ins. limits.

AIA DOCUMENT G703 - APPLICATION AND CERTIFICATE FOR PAYMENT
THE AMERICAN INSTITUTE OF ARCHITECTS 1735 NEW YORK AVENUE NW WASHINGTON DC 20006

Policy Effective Date: OCTOBER 14, 2019			Coverage Effective Date: OCTOBER 14, 2019
Insurance is provided only for those coverages for which a specific limit is shown in the following coverage schedule.			
SCHEDULE			
LIMITS OF INSURANCE			
A. PROPERTY AT “JOB SITE”			
<u>Loc. No.</u>	<u>Bldg. No.</u>	<u>Description</u>	<u>Limit of Insurance</u>
1	1	TRAINING CNTR AND RESTAURANT	\$6,250,000
<div>TYPICAL BUILDER’S RISK POLICY</div>			
B. PROPERTY IN TRANSIT			\$250,000
C. PROPERTY AT ANY TEMPORARY STORAGE LOCATION			\$250,000
D. “FLOOD” IN THE AGGREGATE IN ANY ONE POLICY PERIOD			NOT COVERED
E. “EARTHQUAKE” IN THE AGGREGATE IN ANY ONE POLICY PERIOD			NOT COVERED
F. ALL COVERED PROPERTY AT ALL LOCATIONS			\$6,250,000

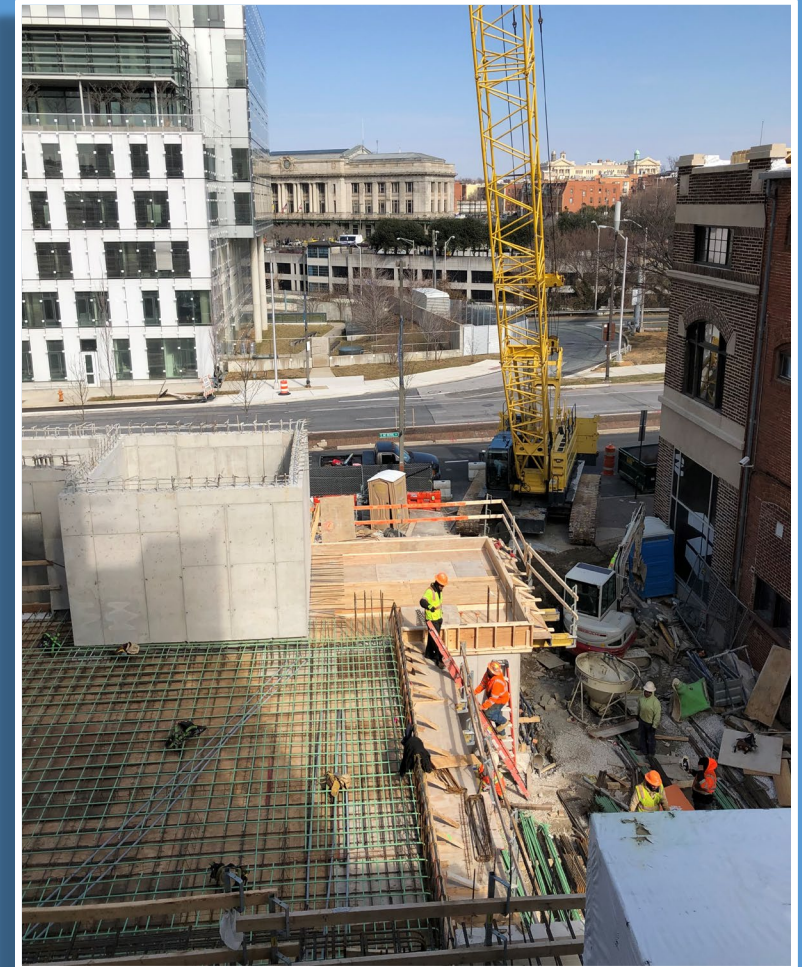
Stored material
limit found here.

PROTECT SCHEDULE AND BUDGET:

Strategy 2 : Expedited Procurement

COVID impacts?

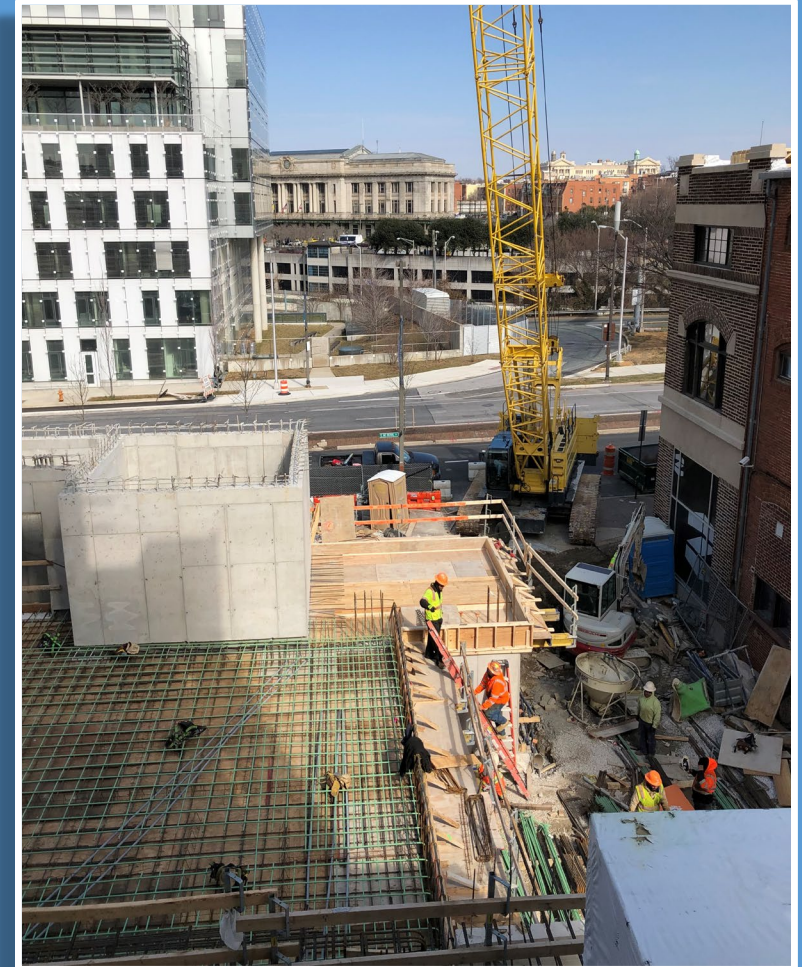
- Plant shut-downs disrupt material production
- Mandated shut-downs vary by State
- Domestic & Foreign materials are impacted
- Hoarding



PROTECT SCHEDULE AND BUDGET: Strategy 2 : Expedited Procurement

New risks for an Owner...

- Supply chain disruption
- Unanticipated material substitutions
- Procurement out of sequence
- Faster review by A/E team = cost
- Impropropriety



PROTECT SCHEDULE AND BUDGET: Strategy 2 : Expedited Procurement

New risks for an Owner...

- Supply chain disruption
- Unanticipated material substitutions
- Procurement out of sequence
- **Faster review by A/E team = cost**
- **Impropriety**



Recommended Actions:

- **Swap out hard-to-source materials**
- **Determine cost of storage**
- **Neg. higher storage limits w/B.R.**
- **Calc out-of-pocket risk for Owner**
- **Eval. storage v. delay risk (option)**
- **Procure materials early**
- **New contract language for Architect**

§ 3.6.4 Submittals

§ 3.6.4.1 The Architect shall review the Contractor's submittal schedule and shall not unreasonably delay or withhold approval of the schedule. The Architect's action in reviewing submittals shall be taken in accordance with the approved submittal schedule or, in the absence of an approved submittal schedule, with reasonable promptness while allowing sufficient time, in the Architect's professional judgment, to permit adequate review.

Sections of the AIA B101 that may require modification to enable accelerated review of submittals.

§ 4.2.2 To avoid delay in the Construction Phase, the Architect shall provide the following Additional Services, notify the Owner with reasonable promptness, and explain the facts and circumstances giving rise to the need. If, upon receipt of the Architect's notice, the Owner determines that all or parts of the services are not required, the Owner shall give prompt written notice to the Architect of the Owner's determination. The Owner shall compensate the Architect for the services provided prior to the Architect's receipt of the Owner's notice.

- .1** Reviewing a Contractor's submittal out of sequence from the submittal schedule approved by the Architect;

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AGENDA:

- Quick introductions
- **Lessons learned from the field**
 - Protect schedule and budget
 - **Protect construction employees and occupants**
- Wrap-up Q&A

SPECIAL FOCUS ON OCCUPIED RENOVATIONS



1

Certain facilities are occupied by at-risk populations. Healthcare, age-restricted housing, prisons, etc.

2

Owners of these facilities are often significant regional operators, provide highly regulated services.

3

Occupied renovations are often funded by complex capital arrangements, tax credits, bonds, etc.

4

Occupied renovations are required by these Owners due to funding mandates, continuous improvement, or inability to disrupt operations.

PROTECT WORKERS & OCCUPANTS:

Strategy 3 : Training & Implementation

What do typical guidance & training for occupied renovations cover?

- Access**
- Behavior**
- Basic job safety**
- Compliance**



PROTECT WORKERS & OCCUPANTS:

Strategy 3 : Training & Implementation

COVID Impacts?

- **Unclear safe behaviors**
- **Restricted access to work areas**
- **Lack of PPE**
- **Lack of clear guidance for the above**



PROTECT WORKERS & OCCUPANTS: Strategy 3 : Training & Implementation

New risks for an Owner...

- Failure to address uncertainty
- Improper new guidance & training
- Guidance is effective, but not affordable
- Guidance is affordable, but not effective
- Sloppy compliance w/new guidance



PROTECT WORKERS & OCCUPANTS:
Strategy 3 : Training & Implementation

- OSHA – Prepare Workplaces for COVID19
- OSHA – Bloodborne Pathogens
- CDC – Cleaning & Disinfecting your Facility
- CDC – Interim Guidance for Bus & Emps
- Others

Recommended Actions:

- Identify regulatory standards
- Hire specialty consultant(s)
- Develop a performance specification
- Follow best practices for training
- Integrate into existing training
- Screen worker health
- Require proof of compliance

PROTECT WORKERS & OCCUPANTS:
Strategy 3 : Training & Implementation

- Industrial Hygienist
- Infectious Disease
- Environmental Engineer
- Attorney(s)

Recommended Actions:

- Identify regulatory standards
- Hire specialty consultant(s)
- Develop a performance specification
- Follow best practices for training
- Integrate into existing training
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- Require proof of compliance

PROTECT WORKERS & OCCUPANTS:

Strategy 3 : Training & Implementation

- Performance v. prescriptive spec
- Guidance is broad
 - training, cleaning, compliance, etc.
- GC's produces a submittal in response
- Submittal identifies means & methods:
 - training plan, details, other actions
- Consultants review/approve submittal

Recommended Actions:

- Identify regulatory standards
- Hire specialty consultant(s)
- **Develop a performance specification**
- Follow best practices for training
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PROTECT WORKERS & OCCUPANTS:
Strategy 3 : Training & Implementation

- Training is live – not video or written
- “Live” fits OSHA’s interaction req.
- Trainer trains GC’s “competent” personnel
- GC trains sub’s “competent” personnel
- GC trains site visitors

Recommended Actions:

- Identify regulatory standards
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PROTECT WORKERS & OCCUPANTS:
Strategy 3 : Training & Implementation

Initial COVID training with updates as needed

Typical jobsite training:

- Activity hazard analysis, task specific
- Site specific, e.g. ambulance access
- **Insert COVID training here**
- Toolbox talks, themes (e.g. elec. safety)
- OSHA training, classroom

Recommended Actions:

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PROTECT WORKERS & OCCUPANTS:

Strategy 3 : Training & Implementation

- **Worker eligibility to access jobsite:**
 - Sick?
 - Exposed to someone sick?
 - Travel to CDC Level 3 risk areas?
 - Dismissed from job stopped by COVID?
- “Yes” triggers mandatory 14-days offsite
- Temperature checks open new issues

Recommended Actions:

- Identify regulatory standards
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PROTECT WORKERS & OCCUPANTS:
Strategy 3 : Training & Implementation

- GC uses compliance from its existing HSP
 - HSP = Health & Safety Plan
- Compliance verification may include:
 - Random sampling
 - Video monitoring
 - Unannounced inspections
- Frequency & format are for negotiation
- Tie compliance to pay app? A201 mods?

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 - Anticipate delays and keep a project on track
 - Protect construction employees and occupants
- **Wrap-up Q&A**