



مدیریت ادعاء و اختلافات در طول چرخه حیات پروژه

بخش چهارم:

برنامه ریزی فاز تدارکات/مناقصه (Procurement/Bidding Phase) برای مدیریت ادعاء و جلوگیری از دعاوی و اختلافات در پروژه

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What we will learn?

- ☐ Procedure of procurement/bidding phase
- ☐ Recommendations for general contractors at the time of bidding
- ☐ Contract risk management
 - ❖ By GC/CM
 - ❖ By SC

Procedure of Procurement/Bidding Phase



Procedure

☐ The procedure includes the following:

1. Bidder pre-qualification and review
2. Pre-bid inquiries
3. Addendums
4. Bid reviews
5. Pre-purchase of special equipment or materials
6. Award recommendations
7. Notice to proceed
8. Subcontractor and product lists
9. Schedule of values



Bidder pre-qualification review

- ❑ The **owner** may **desire**, or be **required**, to **pre-qualify** potential bidders.
 - ❖ The **CM** should assist in developing a **list of relevant qualifications**.
- ❑ The **request for qualifications (RFQ)** should be **sent** to a wide range of **potential bidders** and advertised as required by **code and local jurisdictions**.
 - ❖ The **qualification criteria** should be **detailed** in the **RFQ** to be sure all respondents are **aware** of the **desired factors**.
- ❑ The **CM** develops a **scoring or ranking system** for objective review of the qualification packages received, which can be **included in the RFQ**.
- ❑ Specific project and contract circumstances **may** warrant pre-qualification of **subcontractors**.



Bidder pre-qualification review

- ❑ The **qualification packages** should be reviewed by a **committee** set up for this **specific purpose**.
 - ❖ It is **advisable** that the **CM** and **design** professional be on the **committee** or at least serve as **committee advisors**.
 - ❖ The **committee** should adhere to the **scoring methodology** proposed and distributed during the **RFQ process**.

*By doing so, the **likelihood** that an **unqualified bidder** may be awarded the contract for construction is **reduced** and the ensuing **problems** that would arise during construction are **avoided**.*



Pre-bid inquiries

- ❑ **Potential bidders** should be allowed adequate **time to review** the bid documents and transmit any **questions** prior to preparing their bid.
- ❑ The **bid documents** should clearly identify a **single point of contact** to whom **all such questions** should be directed.
- ❑ A **pre-bid meeting** should be held to discuss the **project requirements**.
 - ❖ It should be clearly established **if attendance** at the **pre-bid meeting** is a **mandatory requirement** for a bid to be **accepted**.
 - ✓ Coordinating the meeting with a **site visit or “showing.”**
 - ❖ **Any questions** rendered at this meeting should be **addressed** by **addendum to the bid documents (if correction needed, correct the documents)**.
 - ❖ Prepare and issue **meeting minutes** as an **addendum**
 - ❖ **Answer** pre-bid questions promptly and in **writing**



Pre-bid inquiries

☐ The **CM** should also, in **conjunction with the designer and the owner**,

set a **closing date for questions** allowing sufficient time to

1. Address the questions
2. Issue addenda

*By **clearly documenting and responding to all such inquiries**, the CM has established any information or **clarifications provided to bidders** and which may subsequently become the subject of disputes or claims.*



Addendums

❑ The owner, CM, or design professional **may have information** that was **not available** when the bid documents were issued.

❖ **These questions** must be addressed by **addendum issued to all bidders**.

✓ Where possible, **addenda** should **answer questions** by **directing** the bidder to the **pertinent section of the bid documents**.

Addenda

Precontract revisions include revisions made prior to signing the agreement. Such revisions include written addenda or graphic information issued to clarify, revise, add to, or delete information in the original procurement documents or in previous addenda. Typically, an addendum is issued prior to the receipt of bids or proposals. Other revisions may include items affecting the contract documents are contract document revisions and should be enforced during the administration of the contract.

Contract Modifications

Contract modifications include modifications after the construction agreement has been signed and may include additions to, deletions from, or modifications of the work to be done. These are accomplished by change orders, change directives, field orders, and minor changes. These can be issued at any time during the contract period.



Addendums

- ☐ The CM should **advise the owner** that the **bidding period may need to be extended** in the event the **scope of the information** included in the **addenda** would warrant such an extension.

*It is critical that the scope of the work is clearly stated, **through the issuance of addenda**, so that subsequent disputes and claims regarding the intent of the contract documents are **avoided**.*



Bid reviews

❑ The **CM** should **review all bids** received for **compliance with the bid requirements** for submission in the following order.

1. Pre-qualify per process mentioned (if used).
2. License as required by local jurisdictions.
3. Submit all required documents and affidavits.
4. Properly complete and sign bid form.
5. Properly complete and sign bond form.
6. Ensure bid does not contain irregularities, omissions, or non-requested stipulations and exceptions.



Bid reviews

If the bidder(s) **pass all the points mentioned** satisfactorily, then the **following steps** should be taken:

1. Review all bids for proper mathematical calculations and extensions.
2. Tabulate all bids for comparison of individual and total prices.
3. Compare tabulation with the engineer's estimate for the project.
4. Compare the bids for obvious discrepancies or unbalanced pricing.
5. If applicable, identify the bid scoring criteria established in the RFP.



Bid reviews

- ❑ Once the **lowest and responsive bidder** is identified,
the bid should be **reviewed** to determine if any **bid items vary significantly** from the **other bidders** or the **engineer's estimate**.
 - ❖ If a **significant variance** is identified, the bid should be **confirmed** with the **contractor**.

Additionally, the **CM** should advise the owner to **include language** in the bid documents to **prohibit unbalanced bids**.

*The **CM** should perform these tasks **objectively and promptly** to **avoid unnecessary delays** to the **award of the contract**.*



Pre-purchase of special equipment or materials

- ❑ In some projects, the **design cannot be completed** unless
the **exact equipment and/or material** is **known**.
- ❖ For this reason, this **equipment or material** may be purchased by the **owner**
before a contractor is **awarded the contract**.
 - ✓ This **pre-purchase** should be **managed by the CM** and executed in a
manner that is **consistent** with the **terms of the construction contract**
to
*both facilitate installation and to avoid potential disputes or
claims by the contractor.*



Award recommendations

- ❑ The **CM** should assemble the **proposal evaluations** and **scoring**
- ❑ The **CM** then should **present the findings** in a **written report** to the owner.

Any discrepancies, abnormalities, and resulting actions taken should be noted in the report.

- ❑ The **CM** should also offer considerations for **differences between the contractors** or the **cost estimate**.
- ❑ The **CM** should **recommend award** or **rejection of bid(s)** and the **justification** for this recommendation.
 - ❖ *If the apparent low bidder is **significantly** and **unreasonably** below other bidders, there is the **potential** that the contractor will **try to recover its flawed bid** by **aggressively pursuing changes** on the project.*

This will likely lead to disputes and claims.



Notice to proceed

- ☐ The **notice to proceed** establishes the **beginning date of construction** and directs the contractor to begin the project.
- ☐ The **CM** or **architect/engineer (A/E)** may prepare the **notice to proceed**;
however, it is **signed by the owner** because the owner's signature is required on **contractual authorizations** to the contractor.



Notice to proceed

❑ Contracts that contain **liquidated damages** or **penalty/bonus clauses** commonly use the **notice to proceed** to officially announce the **start of construction** and the beginning of the time **allowed by the contract** for the project.

❖ Because of the **importance of this document**,
*it should be **delivered to the contractor** by a method that **documents receipt**.*

(۴-ج)

تاریخ **شروع** کار، تاریخ نخستین صورت مجلس تحویل کارگاه است که پس از مبادله پیمان، تنظیم می شود.

(۲۸-ب)

کارفرما پس از مبادله پیمان، تاریخ **تحویل کارگاه** را که نباید بیشتر از ۳۰ روز از تاریخ مبادله پیمان باشد، به پیمانکار اعلام می کند. پیمانکار باید در تاریخ تعیین شده در محل کار حاضر شود و طی صورت مجلس هایی، اقدام به تحویل گرفتن کارگاه نماید. در صورتیکه حداکثر ۳۰ روز از تاریخ تعیین شده برای **تحویل کارگاه** حاضر نشود، کارفرما حق دارد که طبق **ماده ۴۶**، پیمان را فسخ کند.

ODCC

NOTICE TO PROCEED

Date: _____ Project: _____

Owner: _____ Owner's Contract Number: _____

Contract: _____ Engineer's Project Number: _____

Contractor: _____

Contractor's Address (send certified mail, return receipt requested): _____

You are notified that the Contract Times under the above Contract will commence to run on _____ . On or before that date, you are to start performing your obligations under the Contract Documents. In accordance with Article 4 of the agreement the date of Substantial Completion is _____ , and the date of readiness for the final payment is _____ [(or) the number of days to achieve Substantial Completion is _____ , and the number of days to achieve readiness for the final payment is _____].

Before you may start any Work at the Site, Paragraph 2.01.B of the General Conditions provides that you and Owner must each deliver to the other (with copies to Engineer and other identified additional insureds and loss payees) certificates of insurance which is required to purchase and maintain in accordance with the Contract Documents.

Also, before you may start any Work at the site, you must:

_____ [add other requirements].

Owner

Give by:

Authorized signature

Title

Date

☐ Notice to Proceed

❖ Engineers Joint Contract

Documents Committee (EJCDC

C-550)



و جلوگیری از دعاوی و اختلافات در پروژه

Notice to proceed

☐ Notice to Proceed by
Construction Specification
Institute (CSI)



Knowledge for Creating
and Sustaining
the Built Environment

NOTICE TO PROCEED

Project: _____

Date: _____

A/E Project Number: _____

To: _____

Contract For: _____

You are hereby notified that the Contract Times stated for the Project will commence on _____. On that date, start performing the obligations required by the Contract Documents. (Date)

Before commencing Work at the Project Site, deliver the certificates of insurance to the Owner as required by the Contract Documents.

Also before commencing Work at the Project Site, perform:

Authorized By: _____
(Owner)

(Authorized Signature)

(Title)

Accepted By: _____
(Contractor)

(Authorized Signature)

(Title)

(Date)

☐ Attachments

Copies: ☐ Owner ☐ A/E ☐ Consultants ☐ _____ ☐ _____ ☐ _____ ☐ File

Subcontractor and product lists

ماده ۵ - تاریخ شروع اعتبار، شروع کار و مدت پیمان

۱-۵ تاریخ شروع اعتبار:

این پیمان پس از تسلیم تضمین انجام تعهدات، امضای پیمان و مبادله (یا ابلاغ از سوی کارفرما) معتبر و نافذ است. تسلیم تضمین انجام تعهدات قبل از امضا و مبادله پیمان الزامی است.

۲-۵ تاریخ شروع کار:

تاریخ شروع کار حداکثر ۲۸ (بیست و هشت) روز پس از تاریخ شروع اعتبار پیمان است که باید توسط کارفرما به پیمانکار ابلاغ شود. در غیر این صورت پایان مهلت ۲۸ (بیست و هشت) روز، تاریخ شروع کار تلقی می شود. تاریخ صدور ابلاغیه شروع کار توسط کارفرما نباید کمتر از ۱۴ (چهارده) روز قبل از تاریخ شروع کار باشد.

تبصره: چنانچه شروع کار منوط به تحقق شرایطی از جمله پرداخت بخشی از پیش پرداخت^{۱۰} پس از ارائه تضمین پیش پرداخت توسط پیمانکار، گشایش اعتبار اسنادی یا تحویل زمین توسط کارفرما باشد، باید این شرایط و مهلت کارفرما برای ابلاغ تاریخ شروع کار، در شرایط خصوصی بیان شود. در صورت عدم تحقق شرایط شروع کار توسط کارفرما مطابق شرایط خصوصی، پیمانکار می تواند مطابق ماده ۶۹ شرایط عمومی، پیمان را خاتمه دهد.



Subcontractor and product lists

بخش اول – موافقتنامه

- ۱- تغییر، حذف یا اصلاح جملات و عبارات موافقتنامه به هیچ نحوی مجاز نمی باشد و تنها جاهای خالی که در موافقتنامه پیش بینی شده است باید تکمیل گردد.
- ۲- در ماده ۱، نام پروژه و محل احداث آن در محل مربوط ذکر می شود.
- ۳- در ماده ۳، مبلغ مشروط مجموع مبالغ مشروطی است که در پیوست شماره ۱ ذکر شده است که نباید از ۱۰ (ده) درصد مبلغ پیمان تجاوز نماید.
- ۴- در تبصره ذیل بند ۵-۲ موافقتنامه، چنانچه شروع کار توسط پیمانکار منوط به انجام برخی کارها توسط کارفرما باشد، باید جزئیات مربوط به این کارها در شرایط خصوصی پیمان بیان شود.



Subcontractor and product lists

- ❑ **FIDIC and AIA general conditions** require the contractor to **submit a list of proposed subcontractors.**
- ❑ **Some owners** may require these to be **submitted** with the **contractor's bid or proposal.**
- ❑ These lists are **prepared by the contractor, submitted to the CM or A/E for review,** and **forwarded by the CM or A/E to the owner for final approval.**

(۲۴-ب)

پیمانکار می‌تواند به منظور تسهیل و تسریع در اجرای قسمت یا قسمت‌هایی از عملیات موضوع پیمان، پیمان‌هایی با پیمانکاران جزء ببندد، مشروط به آنکه آنان را از واگذاری کار به دیگران ممنوع کند. در صورتیکه در اسناد و مدارک پیمان، کارفرما، لزوم تأیید صلاحیت پیمانکاران جزء را پیش‌بینی کرده باشد، پیمانکار موظف است که، تأیید کارفرما را در این مورد تحصیل نماید. این واگذاری نباید از پیشرفت کار طبق برنامه زمانی اجرای کار بکاهد، و به هر حال به هیچ روی، از مسئولیت و تعهدات پیمانکار نمی‌کاهد. پیمانکار مسئول تمام عملیاتی است که توسط پیمانکاران جزء یا کارکنان آنها انجام می‌شود. در پیمان‌های بین پیمانکار و پیمانکاران جزء باید نوشته شود که در صورت بروز اختلاف بین آنها، کارفرما حق دارد، در صورتی که مقتضی بداند، به مورد اختلاف رسیدگی کند. پیمانکار و پیمانکار جزء نیز می‌پذیرند که نظر کارفرما در این مورد قطعی است و تعهد می‌کنند که الزاماً آن را اجرا کنند.



Subcontractor and product lists

What happens if the owner or the A/E objects to any of the proposed subcontractors?



Subcontractor and product lists

What happens if the owner or the A/E objects to any of the proposed subcontractors?

- ❑ If the **owner or the A/E objects** to any of the proposed subcontractors, the **A/E notifies the contractor** of the objection in **writing**.
- ❑ **Changes to the lists** may entitle the contractor to changes in the **contract sum** if the contractor **incurs additional costs** because of the changes.

*The standard AIA and EJCDC general conditions state that the contractor will **not be forced** to use subcontractors to which the contractor has an objection.*

محل مسکوت در ۴۳۱۱؟



Subcontractor and product lists

§5.2.3 If the Owner or Architect has reasonable objection to a person or entity proposed by the Contractor, the Contractor shall propose another to whom the Owner or Architect has no reasonable objection. If the proposed but rejected Subcontractor was reasonably capable of performing the Work, the Contract Sum and Contract Time shall be increased or decreased by the difference, if any, occasioned by such change, and an appropriate Change Order shall be issued before commencement of the substitute Subcontractor's Work. However, no increase in the Contract Sum or Contract Time shall be allowed for such change unless the Contractor has acted promptly and responsively in submitting names as required.



Subcontractor and product lists



Knowledge for Creating
and Sustaining
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**SUBCONTRACTORS AND
MAJOR MATERIAL SUPPLIERS LIST**

Project: _____

To (A/E): _____

From (Contractor): _____

Date: _____

A/E Project Number: _____

Contract For: _____

List Subcontractors and Major Material Suppliers proposed for use on this Project as required by the Construction Documents. Attach supplemental sheets if necessary.

Section Number	Section Title	Firm	Address	Phone Number (Fax Number)	Contact

☐ Attachments

Signed by: _____

Date: _____

Copies: ☐ Owner ☐ Consultants ☐ _____ ☐ _____ ☐ _____ ☐ _____ ☐ _____ ☐ _____ ☐ File

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110 South Union Street, Suite 100, Alexandria, VA 22314

Page ____ of ____

Form Version: July 1994
CSI Form 1.5A





Subcontractor and product lists

❑ **Product lists** may also be **required** and are a **means** for the **CM** or **A/E** to **verify** that the contractor will use **only specified products** or approved substitutions.

❖ **Product lists** are **not to be used** to propose **substitutions**.

✓ Even the smallest project contains hundreds of products, and **these lists** can be **extensive and time consuming** to produce.

***Only critical products** are usually important enough to be listed and verified, and the **contract documents need to be clear** about which products need to be included.*



Schedule of values

- ❑ **Many standard conditions of the contract**, including general conditions prepared by **AIA and FIDIC**, require the **contractor to submit a schedule of values** before beginning the work.
 - ❖ It is **prepared by the contractor** for use as the basis of the **contractor's applications for payment**.
 - ❖ The **schedule of values** breaks the work down into **smaller, measurable** portions that the **A/E and owner** are able to observe, measure, and use to **determine the percent complete**.
 - ❖ **Separation of work activities** into separate **labor and material** categories makes for easier review that allows for **easier processing**.

The AIA publishes a standard form for this purpose, AIA Document G703,

Continuation Sheet.



Schedule of values

- ❑ The schedule of values is **submitted to the A/E and approved before** work on the project begins or prior to submission of the initial pay application.
- ❑ A **draft schedule** is often submitted by the contractor to **ensure** that it **contains sufficient detail** to meet with the A/E's approval **prior** to the contractor preparing the **final schedule of values**.
- ❑ *Front-end loading* is a **deceptive technique**, raising the amount of mobilization costs, supervision, or early work activities to improve contractor cash flow.
- ❑ As construction proceeds, the **schedule is updated** to include amounts authorized by change order.

Schedule of values – AIA: G703 – 1992

Continuation Sheet

AIA Document G702, APPLICATION AND CERTIFICATION FOR PAYMENT, containing Contractor's signed certification is attached.

In tabulations below, amounts are stated to the nearest dollar.

Use Column I on Contracts where variable retainage for line items may apply.

APPLICATION NO:

APPLICATION DATE:

PERIOD TO:

ARCHITECT'S PROJECT NO:

[illegible]



Schedule of values – AIA: G703 – 1992

Schedule of Values

Project Name:

Project #:

Contractor:

Application #:

Application Date:

Period to:

Item #	Description of Work	Scheduled Value	WORK COMPLETED		Stored Materials (not in Work Completed)	Total Completed Stored to Date	% Complete	Balance to Finish	Retainage*
			Previous Application	This Period					10%
9970	Demolition	\$ 3,000.00	\$ 2,000.00	\$ -	\$ -	\$ 2,000.00	67%	\$ 1,000.00	\$ 200.00
9955	Drywall & Carpentry	\$ 36,000.00	\$ 11,000.00	\$ 4,200.00	\$ 1,800.00	\$ 17,000.00	47%	\$ 19,000.00	\$ 1,700.00
9940	Doors & Hardware	\$ 1,000.00	\$ -	\$ 500.00	\$ -	\$ 500.00	50%	\$ 500.00	\$ 50.00
9943	Electrical	\$ 7,000.00	\$ 1,000.00	\$ 3,000.00	\$ 850.00	\$ 4,850.00	69%	\$ 2,150.00	\$ 485.00
Totals		\$ 47,000.00	\$ 14,000.00	\$ 7,700.00	\$ 2,650.00	\$ 24,350.00	52%	\$ 22,650.00	\$ 2,435.00

Recommendations for General Contractors at the Time of Bidding



General contractor's considerations

These considerations parallel those of the Owner, with a slightly different perspective.



General contractor's considerations – Assess the time allowed in the contract

- ❑ Like the Owner, the General Contractor also **must assess** the **risks of delays** to the Contract completion.
- ❑ The Contractor should **assess the time allowed** by the Contract to determine if **enough time** is **provided** to perform the work without the use of extraordinary resources.
 - ❖ The Contractor must include in its bid the cost for additional effort (such as overtime) required to meet the Contract completion date.



General contractor's considerations – Assess exculpatory language

- ❑ If the Contract is dominant with **exculpatory language**, especially in the area of **no-damages-for-delay**, the Contractor should carefully consider **accepting the risks** involved.
 - ❖ Some projects are **not worth** the **risk of bidding**.
- ❑ The **Contractor** should **consult** with **qualified counsel** before entering into a **highly restrictive Contract** with **exculpatory language**.
 - ❖ Again, if the **risk is too great**, the Contractor may consider **not bidding** on the project or **pricing** it accordingly.



General contractor's considerations – Assess exculpatory language

- ❑ **Not only** must Contractors assess the **risk of exculpatory language** in a Contract, but they must also **read, understand, and comply** with the **Contract provisions**, particularly with respect to **changes** and **claims**.

*For instance, the Contract may specify a **time limit** for issuing notice of a **change** or for **filing a claim**.*

*The **Contractor** must **comply** with these requirements.*

*Also, the **Contractor** should make sure to **submit all information** and **documentation** required by the **Contract**.*

Contract Risk Management

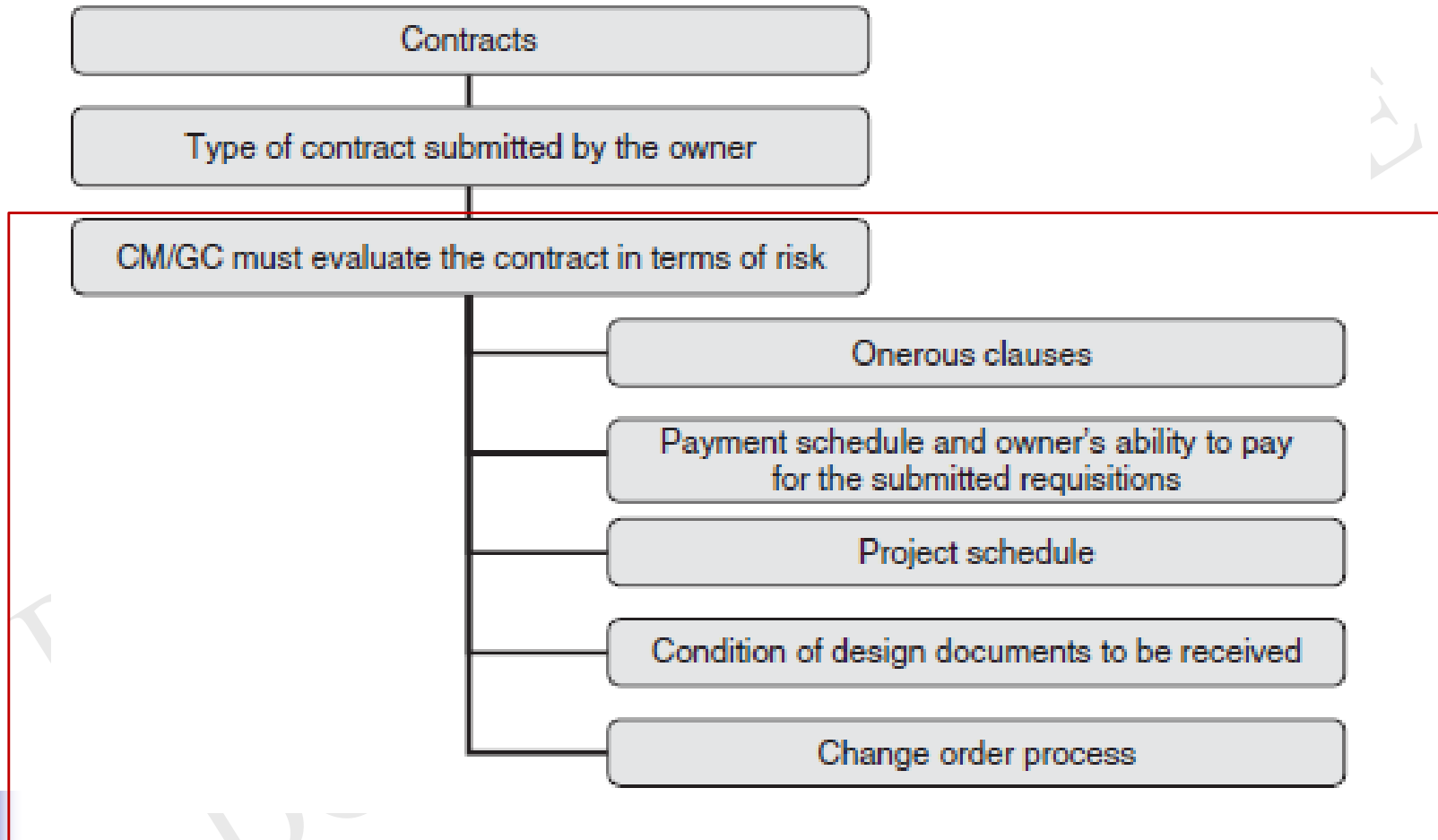
(By GC/CM)



Preparing for contract risk management

- ☐ The **risks** are too numerous, too great, and too detailed to be completed **solely by the owner** of the company.
- ☐ It is the **responsibility** of the **owner** of the company to know the **management responsibilities** in the **contract**.
- ☐ The **risk management team** and their **respective roles** are described later in this section.

Preparing for contract risk management





Contract provisions that must be reviewed for clarification

1. Owner's responsibility

- Drawings and specifications (construction documents)
- Site layout
- Soil borings and site conditions
- Environmental reports and approvals
- Reduction of any hazardous material
- Special studies (traffic, water, utilities)
- Permits clarification
- Utilities
- Disputes with adjacent owners or municipality
- Testing responsibility
- Other areas where the owner has control and must submit the information



Contract provisions that must be reviewed for clarification

2. Schedule

- Type that has to be prepared
- Updates required
- Penalty clauses
- Substantial completion provisions
- Delays (not covered by force majeure)
- Extensions
- Delays caused by owner or owner's subcontractors or vendors



Contract provisions that must be reviewed for clarification

3. Costs

- As defined in the contract
- Allowances and how to be used
- Definition of allowance items
- Contingency and how it is to be used and who controls it?
- General condition's clarifications (what is included and what is excluded?)
- Inflation clause
- Costs covered by the owner
- Value engineering
- New regulations by municipal and government agencies
- Auditing of project by the owner



Contract provisions that must be reviewed for clarification

4. Change orders

- How defined
- Method for developing costs
- Approval process
- Who signs off on any change orders?
- Will rates change if new agreements are agreed upon?



Contract provisions that must be reviewed for clarification

5. Dispute resolution

- Records that have to be kept
- Type of daily reports that have to be maintained
- Owner and CM/GC executive review
- Independent review board
- Mini trials
- Mediation
- Arbitration
- Other legal means, including litigation
- Notice provisions



Contract provisions that must be reviewed for clarification

6. Requisitions and retainer

- Schedule of values required? When is it paid and how often?
- What is required with submittal?
- Waiver of liens and from whom?

A construction lien is a claim made against a property by a contractor or subcontractor who has not been paid for work done on that property.

- Subcontractors invoices
- Percentage of retainer
- When will the retainer be released?
- Will retainer be held on fee, bonds, or insurance?
- Final payment (In what manner?)

The construction retainer is the final payment



Contract provisions that must be reviewed for clarification

7. Insurance

- Coverage
- Is builder's all risk policy required?
- Will wrap-up insurance be considered?

*A liability policy that serves as **all-encompassing insurance** which protects all contractors and subcontractors working on a large project.*

- Understanding the requirements
- Who is to be covered?



Contract provisions that must be reviewed for clarification

8. Bonds

- Types (i.e., bid, performance, payment, lien)
- Enforcement
- Circumstances in which they will be evoked



Contract provisions that must be reviewed for clarification

9. Unforeseen conditions

- Foundations and bearing capacity
- Property lines
- Utilities



Contract provisions that must be reviewed for clarification

10. Owner's representative, architect, and consultants

- Definition of role
- Changes of scope
- Means and methods
- Review shop drawings and RFIs

Contract provisions that must be reviewed for clarification

11. Coordinated drawings

- CM/GC vs. the design team
- What is to be coordinated?



Contract provisions that must be reviewed for clarification

12. Close-out

- Punch lists
- Final waiver of liens and claims
- Department of Buildings sign off
- Close-out documents
- Warranties (what is covered and when does it start?)
- Maintenance agreements (if any)
- Specific equipment use and maintenance classes
- Maintenance costs required?



Contract provisions that must be reviewed for clarification

13. Termination

- Under what circumstances?
- Define payment

Is it enough? No!

GC/CM should also check potential Onerous Contract Clauses



Potential onerous contract clauses

The **CM/GCs** should review certain clauses in the contract to make sure that any potential risk involved is within acceptable levels, including, but not limited to the following:

1. Payment
2. Retainage or Retention
3. Change orders
4. Authorization
5. Liquidated damages or consequential damages
6. Force majeure
7. No damages for delay (by the owner)
8. Warranty
9. Allowances
10. Construction documents
11. Dispute resolution
12. Construction acceleration
13. Schedule
14. Approval process
15. Implied warranty
16. Coordination of drawings
17. Unforeseen conditions
18. Owner's responsibility
19. Inflation clauses
20. Shop drawings

Contract Risk Management

(By SC)

Contract risk management by specialty contractor

Contract risk assignments

Contract clause	Specialty contractor's owner	Project manager	Construction superintendent	Estimator	Scheduler	Insurance agent	Attorney
Indemnification	•					•	•
Coordination of trades		•	•		•		
Schedule acceleration		•	•		•		
Waiver of future claims	•	•					
Concealed conditions			•	•			
No damages for delay				•	•		
Time extensions		•	•	•	•		
Extras and changes	•	•	•				
Pass through	•	•	•				
Pay when paid	•	•					

- ❑ The **indemnification clause** **contractually shifts** the **risk of economic loss** from one party to another. Through the indemnification clause, the **specialty contractor** may be required to assume certain liabilities of the owner, prime contractor, or other specialty contractors.
- ❑ **Pass-through clauses** **bind specialty contractors** to the **provisions of the prime contract** that affect their work. The main purpose is to **require the specialty contractor to be bound by the same performance standards** as the prime contractor **even though** these obligations are **not expressly contained in the subcontract**.



مدیریت ادعاء و اختلافات در طول چرخه حیات پروژه

بخش پنجم:

اجرای برنامه و مدیریت ادعاء، دعاوی و اختلافات در فاز ساخت/اجرا (Construction Phase)

ارائه دهنده:

سید محمدرضا علوی پور

(PhD, PMP, CMIT)

دانشگاه Illinois Tech آمریکا

What we will learn?

☐ Claims management

- ❖ Introduction
- ❖ Project and claim documentation
- ❖ Contract and claim administration
- ❖ Types of claim
- ❖ Claim and dispute notification
- ❖ Claim and dispute tracking and processing
- ❖ Notes to consider before writing the claim

☐ Claims and disputes resolution

- ❖ Resolution methods
- ❖ Contract forms

What we will learn?

☐ Parties' considerations

- ❖ Construction manager
- ❖ General contractor and subcontractors
- ❖ Design consultant

☐ Lessons learned from case studies

- ❖ Recommendations
- ❖ Examples

☐ Final recommendations

Claims Management

(Introduction)

While virtually all the actions taken in the pre-design and design phases represent measures that help the owner avoid claims, the actions taken by the CM during the construction phase also help mitigate the potential impacts of unforeseen issues that may develop into disputes and claims.

Suggested terminology by CMAA

❑ A **typical hierarchy** of **potential disagreements** may include the following:

1. *A request for change*
2. *A request for equitable adjustment*
3. *A formal claim*
4. *Litigation*



Suggested terminology by CII

If the **owner admits** the claim of contractor and **grants him extension of time or reimbursement of additional cost**, or both,
the issue is sorted out.

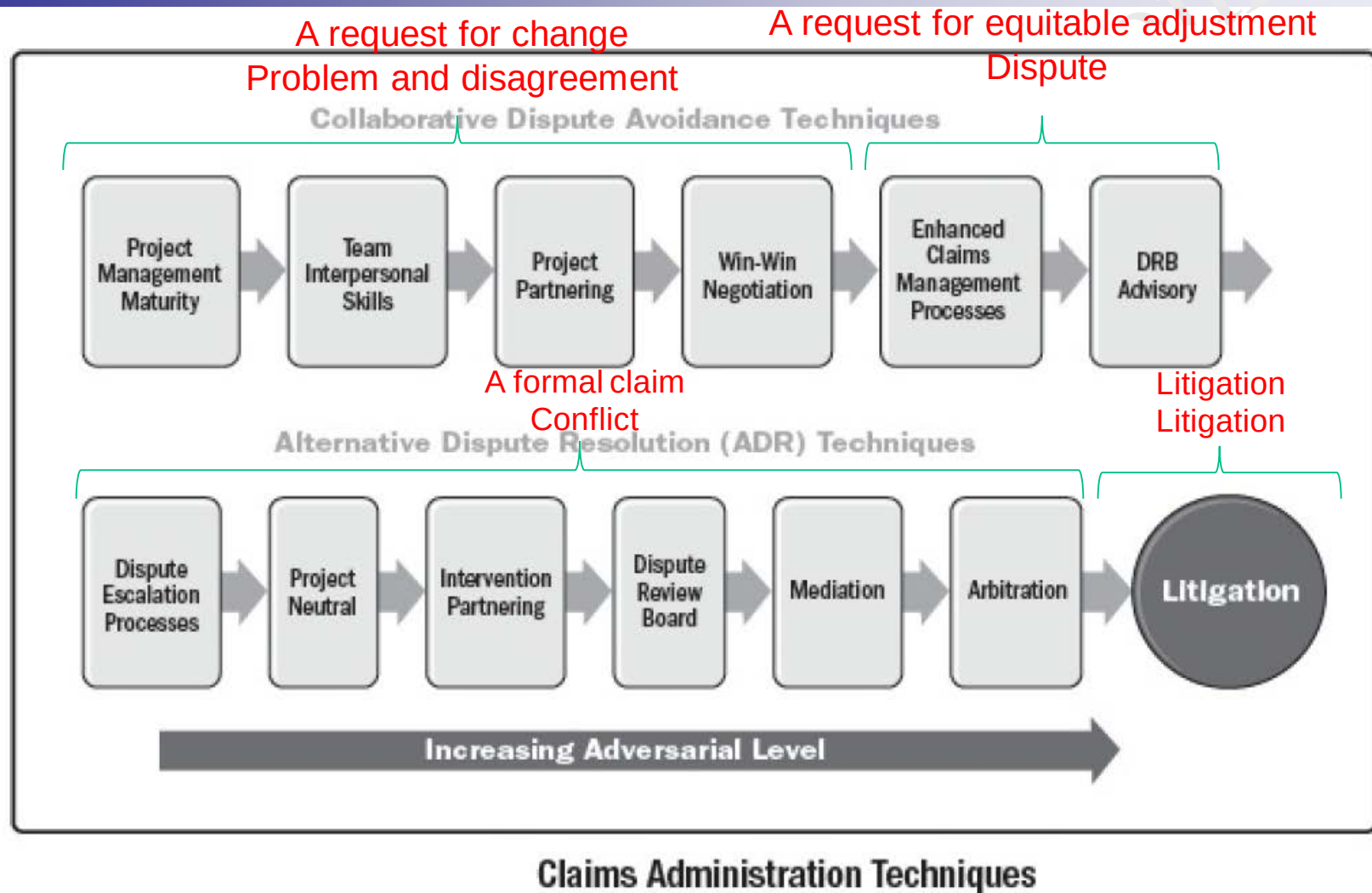
However, if the **owner does not agree** to the claim put out by contractor and there are **differences in the interpretations**,
the issue takes the form of a dispute

Dispute

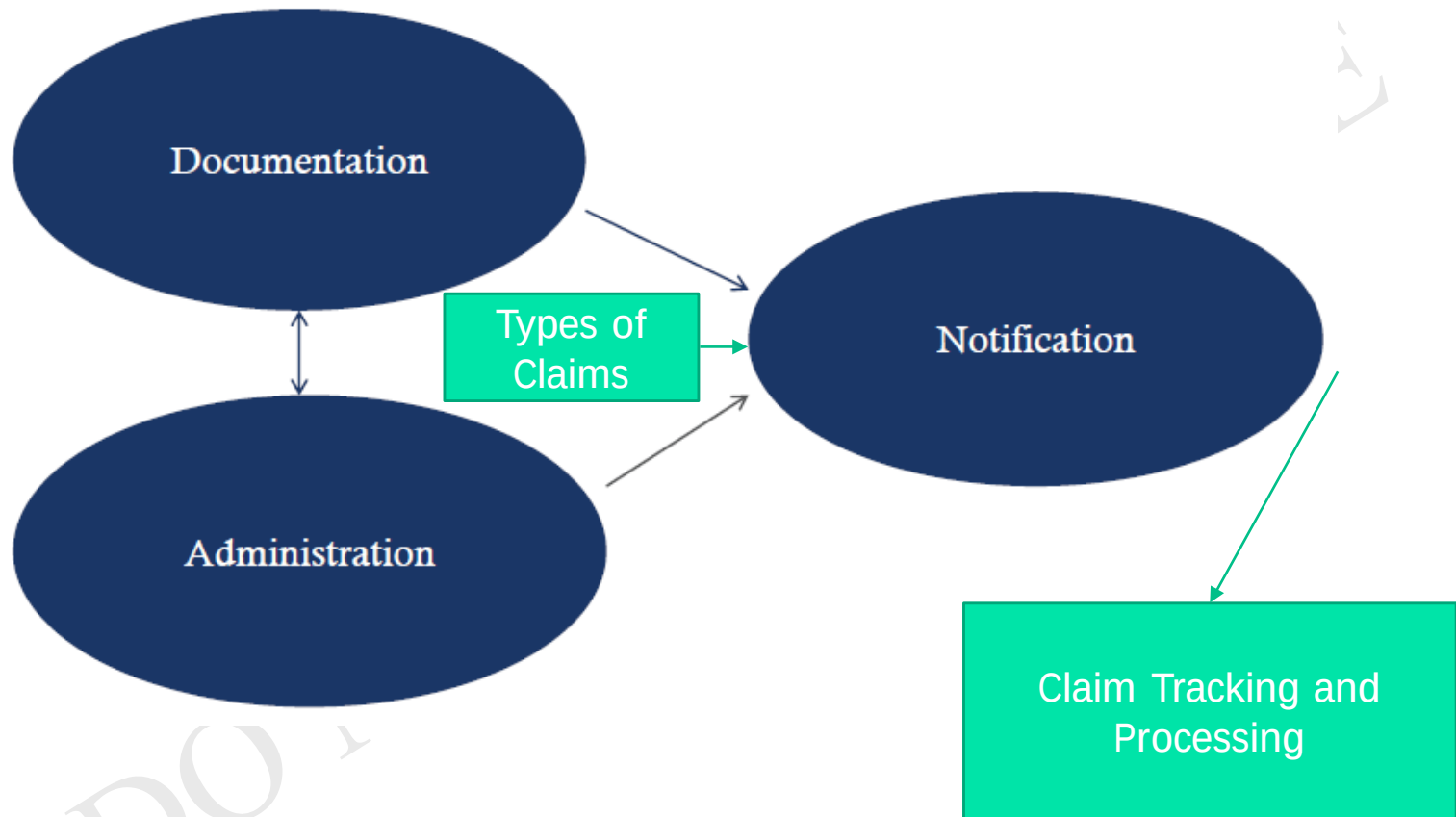
It is “**any contract question or controversy** that must be settled **beyond** the jobsite management”

Individuals Involved	Stages in the Claims Process				
	Problem	Disagreement	Dispute	Conflict	Litigation
Litigators					Formal court documentation and proceedings
Consultants & Neutrals				Assist with quantification and entitlement on an issue-by-issue basis	
Sponsors, Standing Advisors & Standing Neutrals			Attempts at resolution removed from day-to-day management		
Project Managers	Routine discussions & negotiations	Substantial honest negotiation on defined problem			
Level of Resolution	← On the Project →			← Removed from the Project →	

Suggested terminology by PMI



Suggested terminology for claim management in Construction Phase





Elements of every claim

❑ Every claim consists of **three elements**:

(1) **Identification of and entitlement to recovery**

- ❖ To identify a possible claim, **project personnel** must **understand** the **conditions entitling the contractor** to pursue such relief.

(2) **Impacts**

- ❖ The **contractor** must be able to **demonstrate** the **impacts** of the **change**.

(3) **Quantification**

- ❖ Quantification defines the **dollars and days** for which you believe you are **entitled to recover**.
 - ❖ These are your **“damages.”**
 - ❖ This often requires **proof** that:
 - Owner** proximately **caused** the breach
 - Resultant damages** were reasonably **foreseeable**

Claims Management

(Project and Claim Documentation)

Importance of complete project documentation

KEY POINT:

- ❑ The **standard dictum** of **“put everything in writing”** applies here.
- ❑ It is to be noted in this regard that, to be effective,
*documentation **must be prepared during the construction process.***
 - ❖ Records created **after the fact** will **not** generally receive **consideration.**
- ❑ **Project photographs, dated and identified,** can be **very effective** when documenting for claims.

Importance of complete project documentation

KEY POINT:

It is also noted that frequently when a dispute arises and when the **contractor presents his documentation** or evidence to support his position, including photographs, *the other party will frequently seek to reach a settlement rather than allowing the claim and the dispute resolution process to proceed.*

Thorough and complete documentation is the key.

Importance of complete project documentation

- ❑ **Avoid** claims and disputes or at least **reduce** disputed issues.
- ❑ **Preserve** **right** to claim
 - ❖ A sense of entitlement **without proof** of **entitlement** leads **nowhere**
- ❑ **Defend** against **claims of others**

Remember that many claims and disputes **don't happen** on the
real time on the project,
but **significant disputes** happen **years after the claim arises.**

Remember that you don't know what is going to happen!

What to document?

Choose what data and level of detail should be tracked for defending against a claim

Remember the documents we mentioned in delay analysis course?

1. Programme records
2. Progress records
3. Resource records
4. Costs records
5. Correspondence and administration records
6. Contract and tender documents

Claims Management

(Project and Claim Documentation)

Record keeping and reporting by construction contract administration (CCA)

Introduction

- ☐ Documentation created by **construction contract administration (CCA)** is effective for
 1. **Communication** of the construction stage activity.
 2. **Historical record** of the construction stage activity.
- ☐ The documentation should be **maintained in a format** that can be **easily retrieved**.

Let's see some of them!



Non-conforming work notice

❑ **AIA Document A201** states that work **not conforming to the requirements** of the contract documents may be considered **defective**.

- ❖ The A/E has the authority to **reject work** that does not conform to the requirements of the contract documents.
- ❖ Only the owner **can accept nonconforming work**; the **A/E is not authorized** to do so.
- ❖ The A/E, upon **discovery of nonconforming work**, should
 1. **Document** the **deficiencies in a field observation report** and
 2. **Present copies** to the contractor and the owner
- ✓ A specific document in the **form of a Notice of Nonconforming Work** is an aid in **documenting and tracking nonconforming work** and the remedy.

NONCONFORMING WORK NOTICE

Project: _____ Report Number: _____
 _____ From: _____
 To: _____ Date Observed: _____ Date Reported: _____
 _____ A/E Project Number: _____
 Re: _____ Contract For: _____

Specification Section:	Paragraph:	Drawing Reference:	Detail:
------------------------	------------	--------------------	---------

Nature of Nonconformance:

Signed by: _____ Date: _____ Date Response Needed: _____

Proposed Correction (Response):

Amount of Time for Correction:

☐ Attachments

Response From:	To:	Date Rec'd:	Date Ret'd:
----------------	-----	-------------	-------------

Signed by: _____ Date: _____

Copies: ☐ Owner ☐ A/E ☐ Consultants ☐ _____ ☐ _____ ☐ _____ ☐ File

Field observation reports

- ❑ The **A/E's record of site visits** consists basically of
 1. Site observations and
 2. Communications
- ❑ Having the **previous site report** in hand while performing the **new observation** **provides continuity** as well as an opportunity to **update and close open items**.
- ❑ These reports are for the **benefit of the A/E** and may be used as **a means of communication** with the owner and the contractor.
 - ❖ AIA Document G711, Architect's Field Report, is a useful format.

*What should be included in the **field observation reports**?*



Field observation reports

❑ **Field observation reports** include the following standard information:

- Project name
- A/E project number
- Date of visit (including day of week)
- Report number
- Weather (clear, overcast, rainy, misting, foggy, hot, warm, cold, windy, etc.)
- Approximate temperature range
- Site conditions (clear, muddy, dusty)
- Time and duration of visit
- Others present during the visit
- Remarks:
- Status of project, work in progress, work completed
- Products delivered/stored materials onsite
- Items discussed
- Deficiencies noted
- Contractor comments/queries
- Signature and date of report



Field observation reports



Knowledge for Creating
and Sustaining
the Built Environment

PERIODIC FIELD OBSERVATION REPORT

Project: _____ Report Number: _____

Owner: _____ Date: _____ Time: _____

Re: _____ A/E Project Number: _____

Weather

☐ Clear ☐ Snow ☐ Warm
☐ Overcast ☐ Foggy ☐ Hot
☐ Rain ☐ Cold ☐ _____

Site Conditions

☐ Clear ☐ Dusty
☐ Muddy ☐ _____
☐ Temperature Range _____

Day

☐ Monday ☐ Thursday
☐ Tuesday ☐ Friday
☐ Wednesday ☐ _____

Persons Contacted:

Work Observed:

Items Discussed:

Remarks:

☐ Attachments

Signed by:

Date:

Copies: ☐ Owner ☐ A/E ☐ Contractor ☐ Consultants ☐ _____ ☐ _____ ☐ File

By: Alavipour, PhD, PMP, CM

Project representative's documentation

- ❑ A full-time project representative normally keeps a **daily log (journal)** in which **important events** that penetrate on the project site are **recorded**.
 - ❖ The **log** should contain **only facts** related to the project.
 - ❖ **Logs** should contain **sequential entries** with **no gaps**.
 - ❖ **Weekends** and holidays should be **accounted** for, **even if a “No Work” entry is required.**
 - ❖ Each entry can be **separated** by a **line and date or time**.
 - ❖ An entry made in error should **not be erased** but **crossed out with a single neat line.**
 - ❖ **Logs** should **not have the appearance** of information **inserted or removed** at a **time other than** when the **original** entry was made.

Project representative's documentation

- ❑ A **full-time project representative** normally keeps a **daily log (journal)** in which **important events** that penetrate on the project site are **recorded**.
 - ❖ In addition to the field reports addressed earlier, the daily log contains the following information:
 - ✓ Work performed, start or completion of any unit of work
 - ✓ Delivery of products
 - ✓ Construction problems and remedies
 - ✓ Documentation of significant delays
 - ✓ Documentation of oral instructions and questions
 - ✓ Observation of nonconforming work and actions taken
 - ✓ Visitors to the site
 - ✓ Inspections performed, tests taken
 - ✓ Signature and date of report

Project representative's documentation

- ❑ The A/E's project representative may be required to **complete and distribute weekly and monthly reports**.
 - ❖ The weekly/monthly reports **summarize** the **daily log** and specifically **address important issues** that remain unresolved.
 - ❖ The report also **addresses important activities** that occurred during the report period.
 - ❖ These reports give an **overview of construction activity and progress** in relation to the construction **progress** schedule.
 - ❖ **Attention** should be **drawn to items** that may **impact** the **schedule or the construction cost**.

Project: _____ Report Number: _____
Owner: _____ Date: _____ Time: _____
Re: _____ A/E Project Number: _____

Weather

☐ Clear ☐ Snow ☐ Warm
☐ Overcast ☐ Foggy ☐ Hot
☐ Rain ☐ Cold ☐ _____

Site Conditions

☐ Clear ☐ Dusty
☐ Muddy ☐ _____
☐ Temperature Range _____

Day

☐ Monday ☐ Thursday
☐ Tuesday ☐ Friday
☐ Wednesday ☐ _____

Persons Contacted:

Work Observed:

Items Discussed:

Materials Delivered:

Requested Revisions or Interpretations:

Nonconforming Work Reported this Date to Contractor:

Remarks:

☐ Attachments

Signed by:

Date:

Copies: ☐ Owner ☐ A/E ☐ Contractor ☐ Consultants ☐ _____ ☐ _____ ☐ File

WEEKLY / MONTHLY PROGRESS REPORT

Project: _____ Report Number: _____

Owner: _____ Report Date: _____

Contractor: _____ A/E Project Number: _____

Contract Completion Date/Time: _____ Approved Time Extensions (Days): _____

Date Construction Started: _____ Contract Completion Date/Days: _____

Revised Completion Date: _____ Percent of Project Completion: _____

Percent of Time Used: _____ Days Elapsed: _____

Is Project on Schedule: _____ If not, why? _____

Summary of Construction Activities Since Last Report:

☐ Attachments

Signed by: _____

Date: _____

Copies: ☐ Owner ☐ A/E ☐ Contractor ☐ Consultants ☐ _____ ☐ _____ ☐ File

Review, analysis, and evaluation

- ☐ **Feedback** should occur **during each stage of a project**, especially during the **construction stage**.
- ☐ During **large or complex projects**, feedback to the project team should be **continuous rather than periodic**.
- ☐ Documentation in the form of **photos or video recordings** of both **successful and less-than-desirable** execution of the project helps to transition the **review from the field** to in-house personnel.



By: Alavipour, PhD, PMP, CM

Project: _____ ☐ Specification Item: _____
 _____ ☐ Drawing Item: _____
 To: _____ Date: _____
 _____ A/E Project Number: _____
 Re: _____ Contract For: _____

Detailed Explanation:

Suggested Improvement:

Supporting Data Attached: ☐ Specification ☐ Drawing ☐ Photograph ☐ Video ☐ _____

Signed by:

Date:

[illegible]



Request for interpretations

- ❑ The acronym **RFI** is sometimes used to mean **request for information**.
- ❑ **AIA Document A201 and FIDIC** state that the architect will **review and respond** to requests for information about the contract documents.
 - ❖ **RFIs** should be **limited** to **requesting an interpretation** of the documents or may be a request for information that may be **missing**.
 - ❖ The **A/E requirement** to respond to RFIs should **not give rise** to a practice of a contractor or subcontractor **not reviewing the documents** and **simply asking** where to find a particular piece of information.
- Construction Specifications Institute (CSI) uses the acronym RFI to mean a request for interpretation, since that is a specific contractual obligation.*
- ❖ RFIs asking for interpretation of an item in the contract documents, **may be initiated** by the **owner or by the contractor**.

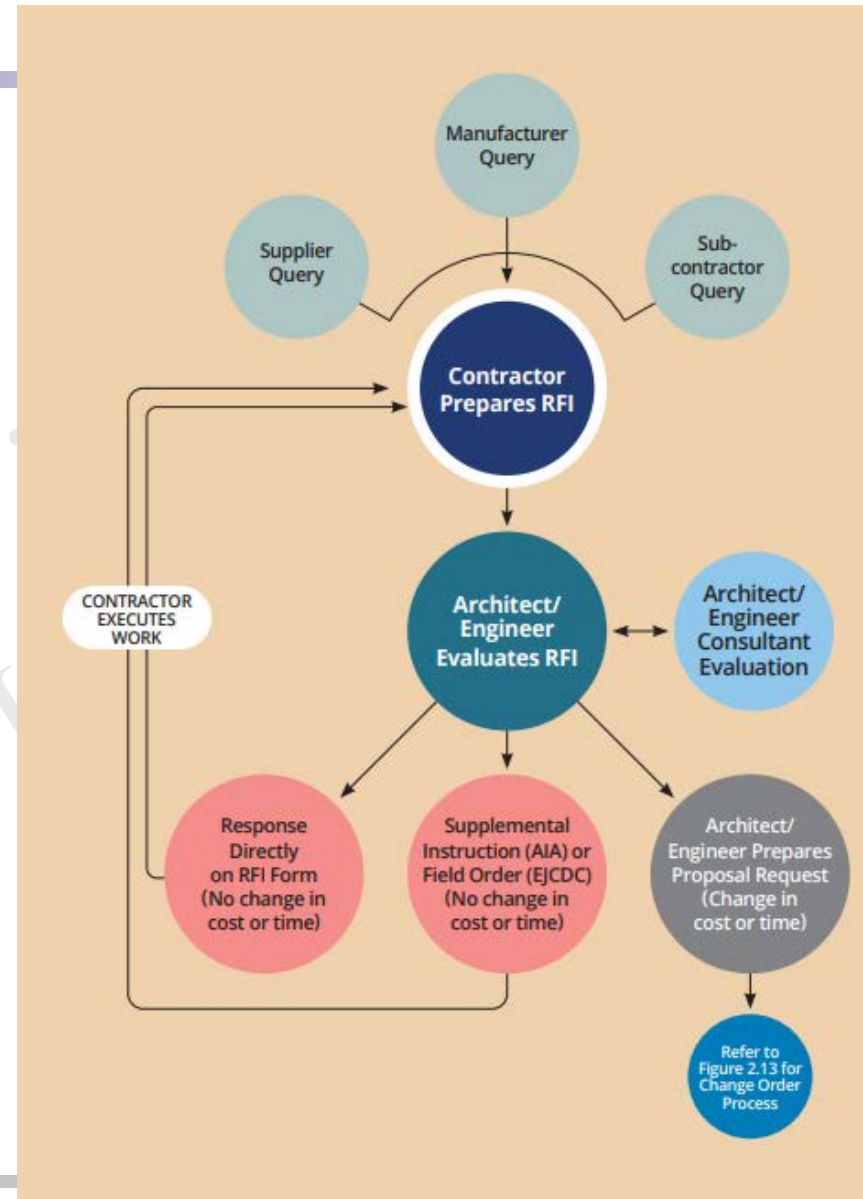
Request for interpretations

*Procedures should be established among the parties to the contract for the **management of RFIs**.*

Depending on the nature of the RFI, there are **several possible responses**.

The **reply** to the contractor could be:

1. Written directly on the RFI form as a **clarification**, or
2. **Minor change** in the work.
3. Revised drawings, revised specifications, or a **proposal request**.





REQUEST FOR
INTERPRETATION

Project: _____ R.F.I. Number: _____
From: _____
To: _____ Date: _____
A/E Project Number: _____
Re: _____ Contract For: _____

Specification Section: _____ Paragraph: _____ Drawing Reference: _____ Detail: _____

Request:

Signed by: _____ Date: _____

Response:

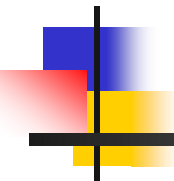
☐ Attachments

Response From: _____ To: _____ Date Rec'd: _____ Date Ret'd: _____

Signed by: _____ Date: _____

Copies: ☐ Owner ☐ Consultants ☐ _____ ☐ _____ ☐ _____ ☐ _____ ☐ File

- ☐ Rec'd = Received
- ☐ Ret'd = Returned



By: Alavipour, PhD, PMP,

1.9

Delayed Drawings or Instructions

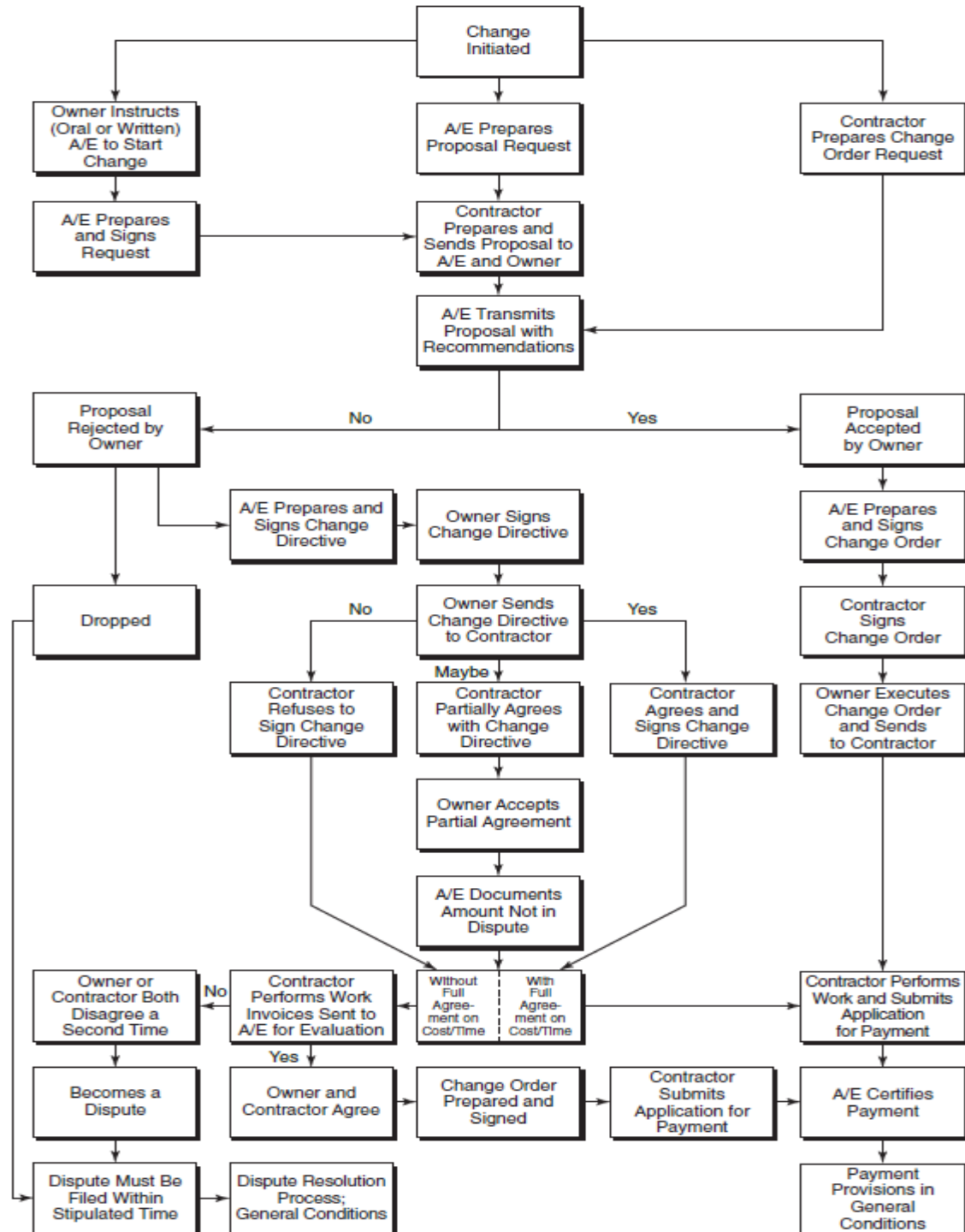
The Contractor shall give a Notice to the Engineer whenever the Works are likely to be delayed or disrupted if any necessary drawing or instruction is not issued to the Contractor within a particular time, which shall be reasonable. The Notice shall include details of the necessary drawing or instruction, details of why and by when it should be issued, and details of the nature and amount of the delay or disruption likely to be suffered if it is late.

If the Contractor suffers delay and/or incurs Cost as a result of a failure of the Engineer to issue the notified drawing or instruction within a time which is reasonable and is specified in the Notice with supporting details, the Contractor shall be entitled subject to Sub-Clause 20.2 [*Claims For Payment and/or EOT*] to EOT and/or payment of such Cost Plus Profit.

However, if and to the extent that the Engineer's failure was caused by any error or delay by the Contractor, including an error in, or delay in the submission of, any of the Contractor's Documents, the Contractor shall not be entitled to such EOT and/or Cost Plus Profit.

Change orders

Remember this?
Let's see more details!



Proposal request

- ❑ A proposal request is a **written document**,
usually prepared by the **A/E**, that describes a **proposed change** to the project.
 - ❖ A proposal request is for **information only** and is not an instruction to
 1. Execute the proposed changes or
 2. Stop work in progress.

Proposal request

- ❑ The proposal request must include **enough detail** for the contractor to accurately estimate the **cost and time impact** of the proposed change on the project.
 - ❖ The proposal request should state the **reasons** for the **proposed change**.
 - ❖ This is not a change order or a directive to make changes to the project.
 - ✓ It is only a request for the contractor to **prepare** and submit a written and itemized quotation of changes in the contract sum or time that **would result** from the proposed change
if accepted.

Remember that I emphasized on TIA before ordering a change order?

Proposal request

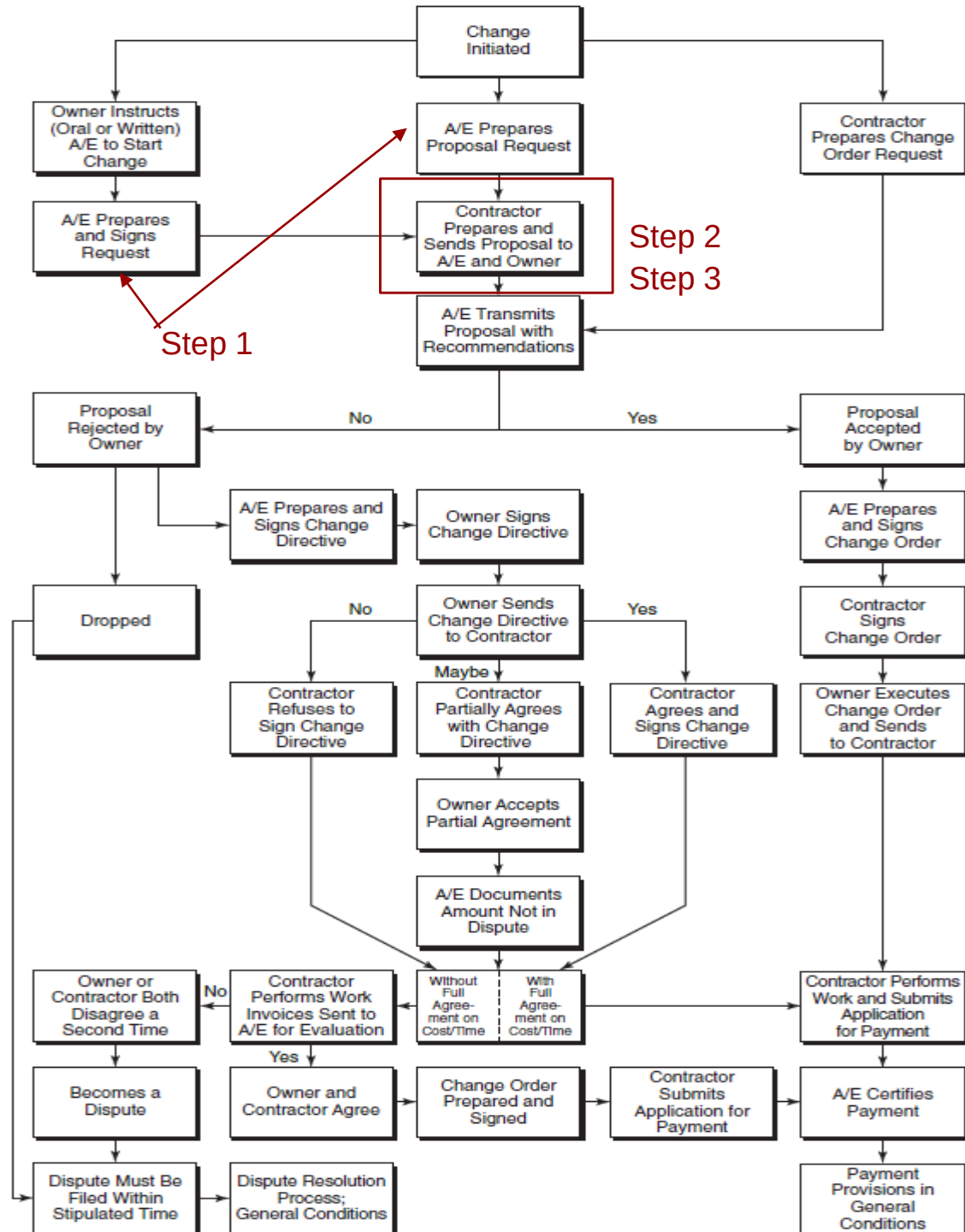
1. The **A/E can initiate** a **proposal request** by issuing a form similar to **AIA Document G709, Work Changes Proposal Request**.

❖ The request may be **supplemented** by additional or revised drawings and specifications.

2. The **proposal request** is sent to the **contractor for evaluation** of how the proposed change will *affect the contract sum and time*.

3. The **contractor then responds** to the owner with a **change order request** itemizing changes to the contract sum, the contract time, or both.

❖ The **change order request** should not be confused with a **proposal request**.





(Constru

Proposal request



AIA® Document G709™ – 2018

Proposal Request

PROJECT: *(name and address):*

CONTRACT INFORMATION:

Contract For:

Date:

Architect's Project number:

Proposal Request Number:

Proposal Request Date:

OWNER: *(name and address):*

ARCHITECT: *(name and address):*

CONTRACTOR: *(name and address):*

The Owner requests an itemized proposal for changes to the Contract Sum and Contract Time for proposed modifications to the Contract Documents described herein. The Contractor shall submit this proposal within _____ () days or notify the Architect in writing of the anticipated date of submission.

(Insert a detailed description of the proposed modifications to the Contract Documents and, if applicable, attach or reference specific exhibits.)

THIS IS NOT A CHANGE ORDER, A CONSTRUCTION CHANGE DIRECTIVE, OR A DIRECTION TO PROCEED WITH THE WORK DESCRIBED IN THE PROPOSED MODIFICATIONS.

REQUESTED BY THE ARCHITECT:

PRINTED NAME AND TITLE

By: Alavipour, PhD, PMP, CMIT

www.dr

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Proposal request

☐ CHANGE ORDER TECHNICAL JUSTIFICATION [FORM 03]

- ❖ This form is usually **prepared** by the owner's representative or a project engineer.
- ❖ The **intent** of this form is to **provide the owner** with documented credibility and justification relative to **completing** the work scope for a **potential Change Order**.

CHANGE ORDER TECHNICAL JUSTIFICATION

	Potential Change Order No. _____ Contract Change Order No. _____
Contractor _____	
Contract No. _____	
Prepared / Submitted By ☐ Owner's Representative ☐ Engineer	
Name _____	Date _____

Description of Change _____

Reason for Change _____

Alternatives Considered _____

Impact of Non-Incorporation _____

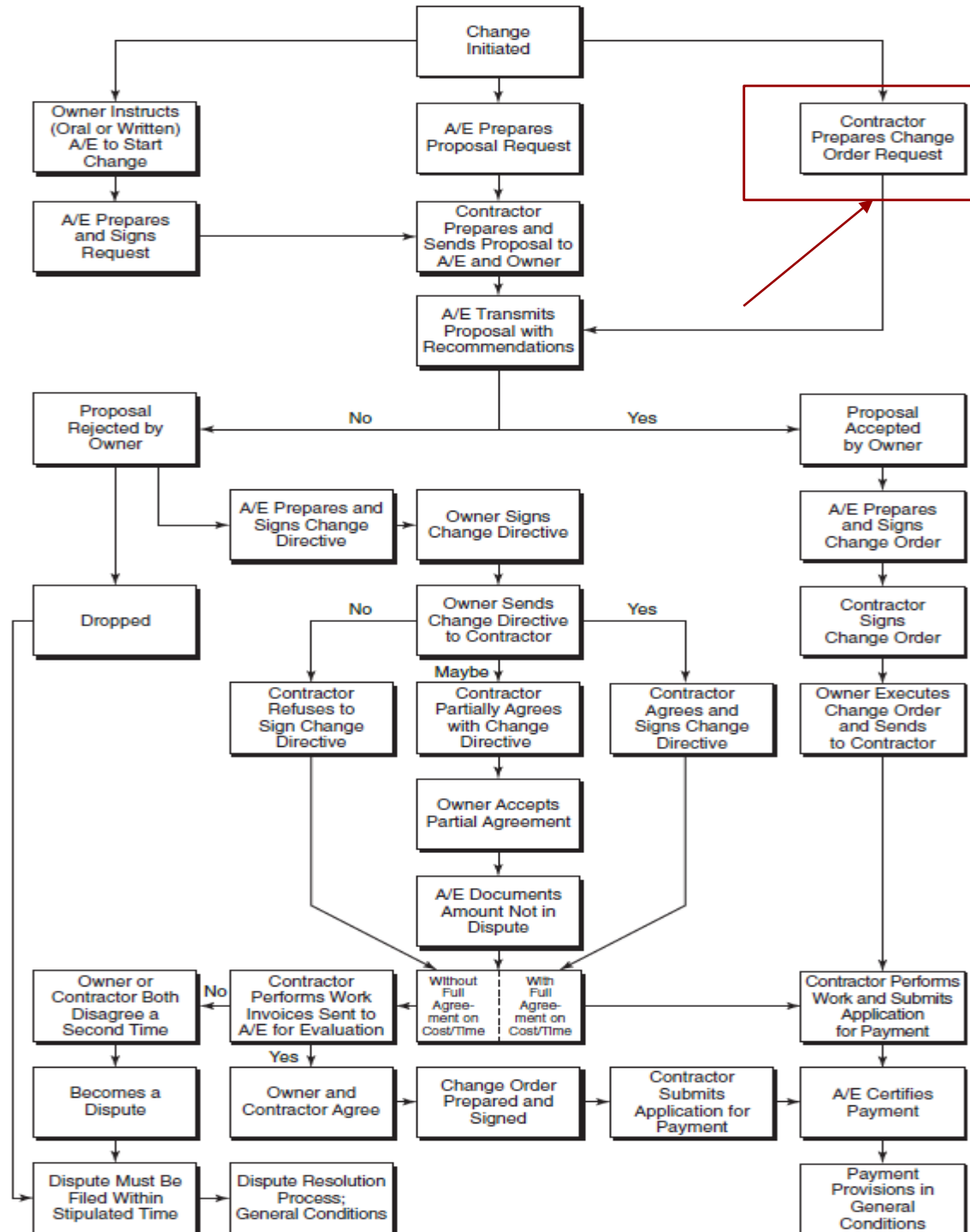
Approved _____	_____
OWNER	DATE

Change order request

A change order request may be **used by the contractor** to initiate **proposed changes** that the contractor **deems necessary**.

❑ A contractor-initiated change order request should

1. State **reasons** for the proposed change
2. State an **itemization of time and costs** for labor, material, taxes, subcontracts, bonds, insurance, and overhead and profit.
3. Reference the portion of the **drawings or specifications** generating the need for change.



CHANGE ORDER REQUEST (PROPOSAL)

Project: _____ Change Order Request Number: _____

 From (Contractor): _____
 To: _____ Date: _____

 A/E Project Number: _____
 Re: _____ Contract For: _____

This Change Order Request (C.O.R.) contains an itemized quotation for changes in the Contract Sum or Contract Time in response to proposed modifications to the Contract Documents based on Proposal Request No. _____.

Description of Proposed Change:

Attached supporting information from: ☐ Subcontractor ☐ Supplier ☐ _____ ☐ _____

Reason For Change:

Does Proposed Change involve a change in Contract Sum? ☐ No ☐ Yes [Increase] [Decrease] \$ _____
 Does Proposed Change involve a change in Contract Time? ☐ No ☐ Yes [Increase] [Decrease] _____ days.

Attached pages: ☐ Proposal Worksheet Summary: _____
☐ Proposal Worksheet Detail(s): _____

Signed by:

Date:

By: Alavipour, PhD, PM



PROPOSAL WORKSHEET SUMMARY

Project: _____ Change Order Request Number: _____

To: _____ From: _____

Re: _____ Date: _____

Proposal Request Number: _____ A/E Project Number: _____

Complete and attach Proposal Worksheet Detail for each element of Work. Enter Worksheet Information below.

ADDITIONS:

	Sheet	Description	Material	Labor	Subtotal
1					
2					
3					
4					
5					
6					
7					
Subtotal					

DEDUCTIONS:

	Sheet	Description	Material	Labor	Subtotal
1					
2					
3					
4					
5					
6					
7					
Subtotal					

Subcontractor's Net: _____

Subcontractor's OH&P: _____

Subcontractor's Bond: _____

Subcontractor's Total: \$ _____

Contractor's OH&P: _____

Contractor's Bond: _____

Insurance: _____

Tax: _____

WORKSHEET TOTAL: \$ _____



Change order request



Knowledge for Creating
and Sustaining
the Built Environment

PROPOSAL WORKSHEET DETAIL

Project: _____

Change Order Request Number: _____

To: _____

From: _____

Contact: _____

Re: _____

Date: _____

Proposal Request Number: _____

A/E Project Number: _____

SHADED AREAS FOR A/E USE

ADDITIONS					UNIT PRICES				SUBTOTALS				TOTAL	
	Ref. No.	Item Description	Quantity		Materials		Labor		Materials		Labor			
1														
2														
3														
4														
Subtotal (Enter this number on Worksheet Summary.)														

DEDUCTIONS					UNIT PRICES				SUBTOTALS				TOTAL	
	Ref. No.	Item Description	Quantity		Materials		Labor		Materials		Labor			
1														
2														
3														
4														
Subtotal (Enter this number on Worksheet Summary.)														

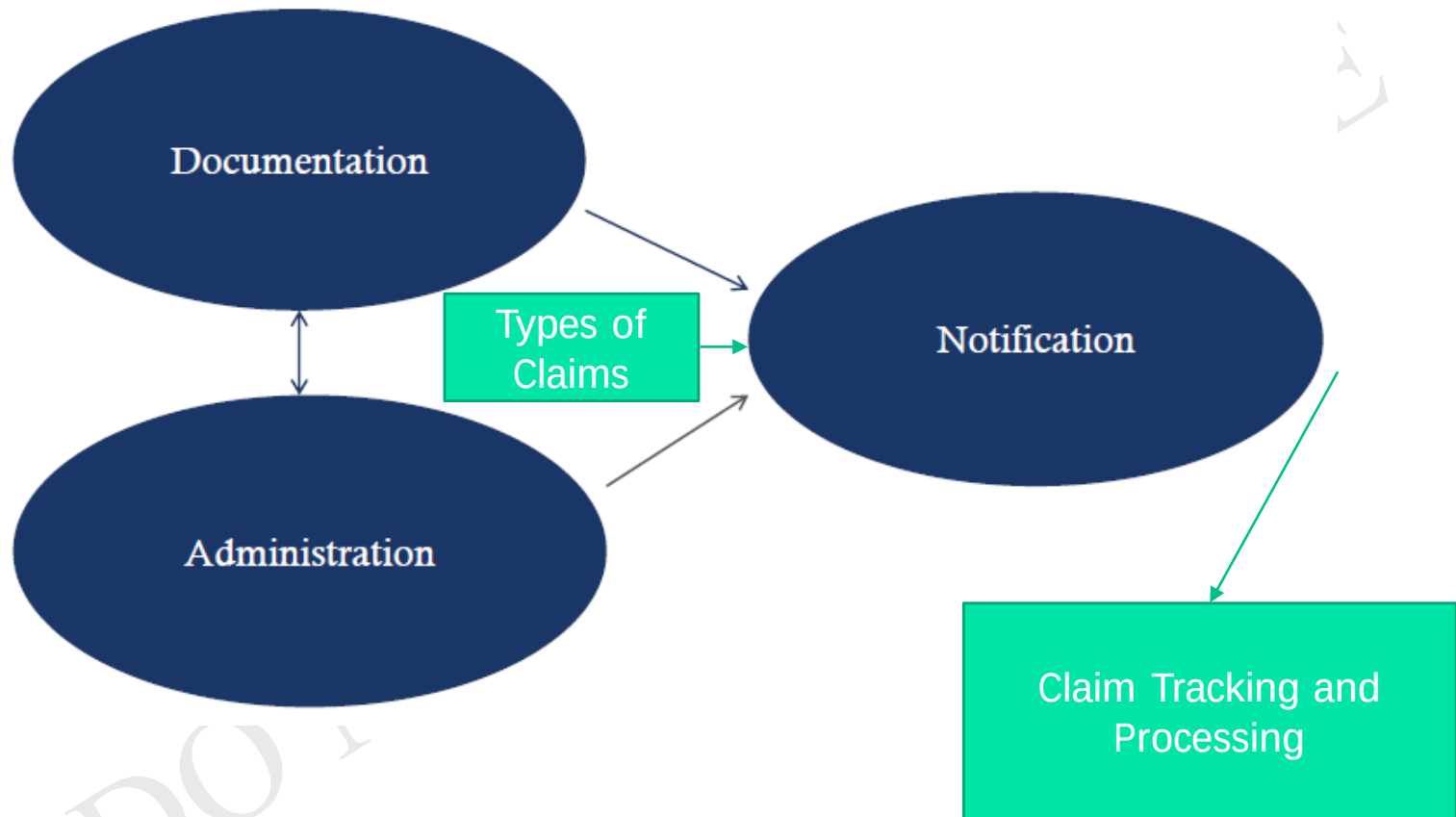
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Claims Management

(Project and Claim Documentation)

Record keeping and reporting by Contractor

Suggested terminology for claim management in Construction Phase



Typical project documentation

In addition to typical CCA records, the contractor's project manager should maintain records of items specific to the construction of the project. Some of these include:

- ☐ Bid documentation
- ☐ Estimates, manpower analysis, and quantity takeoffs
- ☐ Time cards
- ☐ Job cost accounting system
- ☐ Production reporting
- ☐ Material and delivery receipts
- ☐ Schedules and progress reporting
- ☐ Cash flows
- ☐ Correspondence, transmittal, and submittal logs
- ☐ Daily reports
- ☐ Photographs and videos
- ☐ Change orders
- ☐ Periodic reviews
- ☐ E-Mail and social media

We will talk about these items later

Typical project documentation

- ☐ Contract documents
- ☐ Payrolls
- ☐ Purchase orders
- ☐ Invoices
- ☐ Notice of commencement
- ☐ Notice of furnishing
- ☐ Meeting minutes
- ☐ RFIs and RFI responses and logs
- ☐ Request for change / Notices claims
- ☐ Punchlist
- ☐ Site access logs
- ☐ Funding sources
- ☐ Permits
- ☐ Payment applications

And many mores

Typical project documentation

Keeping accurate records of costs for equipment, overhead, direct cost items, and work orders is very important.

If the contractor combines **too many different cost items** into a **single job cost account**,
*the data can become meaningless particularly when used to **prepare analysis of damages**.*

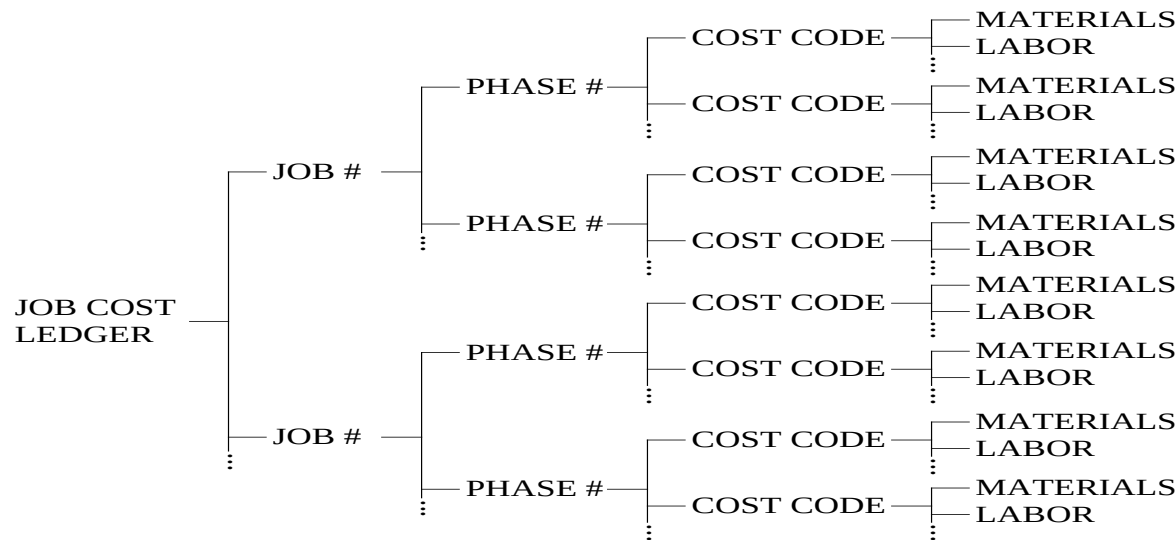
Let's look at some of these documents

Bid, estimate, and budgets

- ❑ Cost estimates could become one of the **key foundational documents** should a **claim** arise during project execution.
- ❑ The information contained in the estimate and supporting documentation can be used to establish
 1. Contractor's original quantities
 2. Production rates
 3. Anticipated costs
- ❖ Most job cost accounting systems allow the contractor to
 1. Record budgeted costs
 2. Compare them with actual costs
- ❖ The budget should be **developed at a level of detail consistent** with
 1. Cost coding reflected in the **job cost accounting system**
 2. Any billing or contractual requirements.



Bid, estimate, and budgets



Bid, estimate, and budgets

❑ Because the **bid estimate** is only an estimate,

contracting agencies **hesitate** to **allow** the bid estimate to **serve as the sole basis** for claiming extra costs,

but under extreme circumstances it may be the **only reasonable method** available.

Do you remember total cost method?

1. Actual cost to perform compared with the original bid estimated cost to perform,
2. Actual cost to perform compared with a “reasonable” estimated cost to perform, and
3. Actual cost to perform compared with actual cost of identical work
 - i. Performed under normal conditions on the affected project
 - ii. Performed under another **similar project**.



Time cards

- ❑ The **time card**, which usually serves as the **input source** for the **job payroll**,
 - ❖ **Individual's time spent** working on a **particular project** for each payroll period.
 - ❖ **Which individuals** worked on **any given day** and for **how long**.
 - ❖ **Number of hours** worked **overtime**, if any
 - ❖ **Number of hours** worked on **each task performed** that day.
 - ❖ **Each task or item** worked should be **coded to correspond** to the **cost code** reflected in the contractor's **job cost accounting system**.
 - ❖ **Record daily production** for each item worked if units installed are recorded along with the **actual time expended**.

*Time cards are usually prepared at the **foreman level** and then **later reviewed** by **supervisory and administrative** personnel.*



Time cards

مدیریت ادعاء و اختلافات در طول چرخه حیات پروژه
اجرای برنامه و مدیریت ادعاء، دعاوی و اختلافات در فاز ساخت/اجرا (Construction Phase)

Labor Time Reporting

Daily Labor Time Card

Project Highway Bridge
Date July 20

Project No. 200808-05

Wea ther Cloudy-windy
Prepared by G.A.S.

Employee Number	Name	Craft	Time Classification	Hourly Rate	Cost Code					Total Hours	Gross Amount
					03157.10.3	03157.20.3					
132	Winnowich, N.	F	ST	34.00		8				8	\$272.00
			OT								
221	Clouten, S.	C	ST	\$31.00		8				8	\$248.00
			OT								
248	Schluder, L.	C	ST	\$31.00		8				8	\$248.00
			OT								
319	Mills, R.	O	ST	\$33.00		2				2	\$66.00
			OT	0							
143	Gibson, E.	L	ST	\$22.00		8				8	\$176.00
			OT								
417	Sears, K.	L	ST	\$22.00		8				8	\$176.00
			OT								
176	Sibanda, M.	L	ST	\$22.00	2	6				8	\$176.00
			OT								
Total Hours					2	48				50	
Total Cost					\$44.00	\$1,318.00					\$1,362.00

Highway bridge, daily labor time card



Job cost accounting system

❑ The **job cost accounting system**, which is the **computer application** that **project costs** are **entered into**,

should include the **same activity list** that was contained in the **original estimate**.

In other words, assuming the **estimate** was made in **sufficient detail**, the **cost coding breakdown** should **bear some resemblance in format** to the system used in the **bid estimate**.

Remember how much I emphasized on this?

Cost estimating-Scheduling-Cost control

Departments should be unified!

Job cost accounting system

- ❑ With the **bid estimate** loaded into the **cost accounting system**, performing a **variance analysis** when **activity completion percentages** are **known** is somewhat **easy**.
- ❑ To the extent that the **cause of the variance** is the **responsibility** of the **owner**,
the **contractor** should
 1. ***Timely notify the owner***
 2. ***Request a change order for the impact***



Job cost accounting system

Weekly Labor Cost Report

Project Highway Bridge
Week ending July 21 (working day 27)

Project No. 200808-05
Prepared by S.K.S.

Cost Code (1)	Work Type (2)	Unit (3)	Total Quantity Budgeted (4)	Total Quantity to Date (5)	Percent Completed (6)	Budgeted Direct Labor (7)	Budgeted Labor to Date (8)	Actual Labor to Date (9)	Cost Difference (10)	Deviation (11)
31220.10.3	Excavation, unclassified	cy	1,667	1,667	100.00%	\$2,643	\$2,643	\$2,459	(\$184)	0.93
31222.10.3	Excavation, structural	cy	120	120	100%	\$2,985	\$2,985	\$3,353	\$368	1.12
31350.00.3	Pile-driving rig, mob. & demob.	job	—	—	100%	*\$4,374	\$4,374	\$4,004	(\$370)	0.92
31361.10.3	Piling, steel, driving	lf	2,240	2,016	90%	\$8,221	\$7,399	\$15,762	\$8,363	2.13
03150.10.3	Footing forms, fabricate	sf	360	360	100%	\$936	\$936	\$963	\$27	1.03
03150.20.3	Abutment forms, prefabricate	sf	1,810	1,810	100%	\$3,548	\$3,548	\$2,780	(\$768)	0.78
03157.10.3	Footing forms, place	sf	720	360	50%	\$360	\$180	\$165	(\$15)	0.92
03159.10.3	Footing forms, strip	sf	720	360	50%	\$158	\$79	\$48	(\$31)	0.61
03157.20.3	Abutment forms, place	sf	3,620	1,810	50%	\$7,312	\$3,656	\$3,504	(\$152)	0.96
03311.10.3	Concrete, footing, place	cy	120	60	50%	\$1,200	\$600	\$554	(\$46)	0.92
Totals to Date							\$26,400	\$33,592	\$7,192	1.27

*67% of budget for mobilization

Highway bridge, weekly labor cost report (#2)

Production reporting

❑ In the case of **loss of efficiency claims**,

one of the **preferred methods** for calculating and quantifying that loss relies on **actual production rates**

(REMEMBER MEASURED MILE METHOD?)

❖ To **utilize this method**,

having **access to actual production data**,

which typically **include information** about

1. **Actual labor and/or equipment hours**
 2. Corresponding **actual work units** installed,
- is essential.

*Sometimes, this information is recorded as **part of the daily reports** prepared under the contractor's supervision; however, it **can be recorded in a separate report**.*

Production reporting – Methods of quantifying the cost of lost productivity

❑ Example of poorly written daily report

Description	Begin Time	End Time	Quantity (LF)
Excavating Soil	700	913	
Excavating Rock	913	1400	
Excavation Soil	1400	1500	

Quantity 14.5

Duration 8

❑ Information captured to perform productivity analysis

Description	Begin Time	End Time	Duration	Quantity (LF)	Productivity
Excavating Soil	700	910	2.1	20	9.52
Excavating Rock	910	1400	4.9	10	2.04
Excavation Soil	1400	1500	1	10	10.00

Material and delivery receipts

❑ The **contractor** must be able to **prove** that it procured **permanent materials** and **equipment** and **temporary construction materials** in a **timely manner**, thus

1. Avoiding **unnecessary delays**
2. Potential **price escalations**

Remember how materials and purchase orders managed in **Financial Management Course**?

- ❖ Material records, including **purchase orders and invoices**, are required to
 - i. Verify **escalation costs**
 - ii. Establish proof that the **contractor did not cause delays** due to failure to have material on time
 - ✓ These **records also serve** as the basis on
 1. **Which escalation determinations** are made
 2. **Amounts** that will be allowed

Remember how we calculated **escalation cost** in **Delay Analysis Course**?



Schedules and progress reporting

❑ The primary value of schedules for claims is their use

as a tool to **prove or disprove** the effect of changes and/or delays on

1. Contractual interim milestones

2. Overall project completion

❖ Electronic native files of each CPM schedule

❖ Hard copies of each CPM schedule

should be preserved for **future review**

Schedules and progress reporting

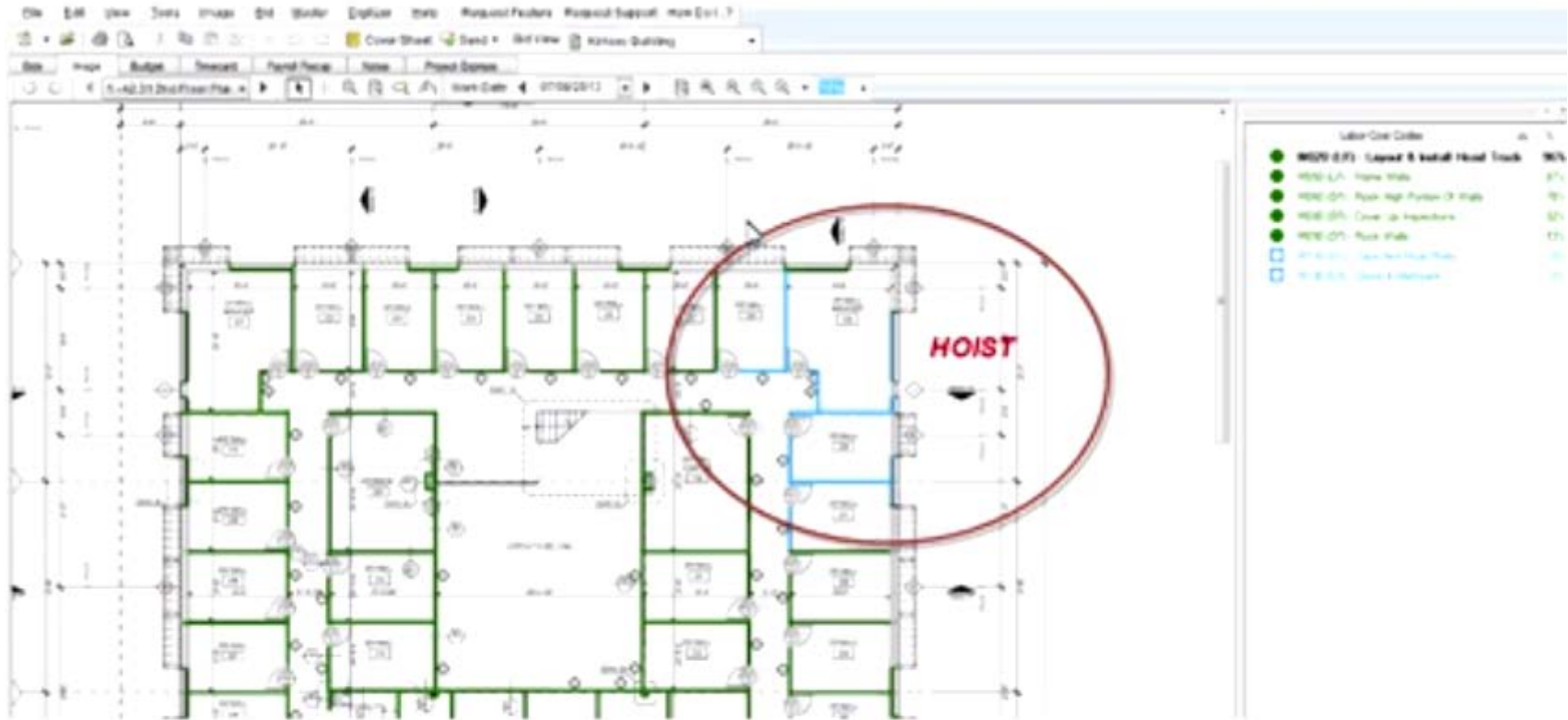
❑ This **practice includes**:

1. **Baseline**, or as-planned schedule
2. **Every update** prepared and submitted to the owner
3. **Any schedule analysis** for changes and delays
4. **Periodic** progress report
5. Schedule **narrative report**
6. **Notice** to the owner of any issues that are or will be delaying

Contractor's ability to progress the work and complete the project on time

Contractors, CM, and owners should consider use of a **schedule log** to **track the submission dates** of CPM schedule **updates** and their **approvals**

Schedules and progress reporting – Example of measuring progress by measuring quantities



Digital
Production
Control™

Schedules and progress reporting – Example of documentation for delays

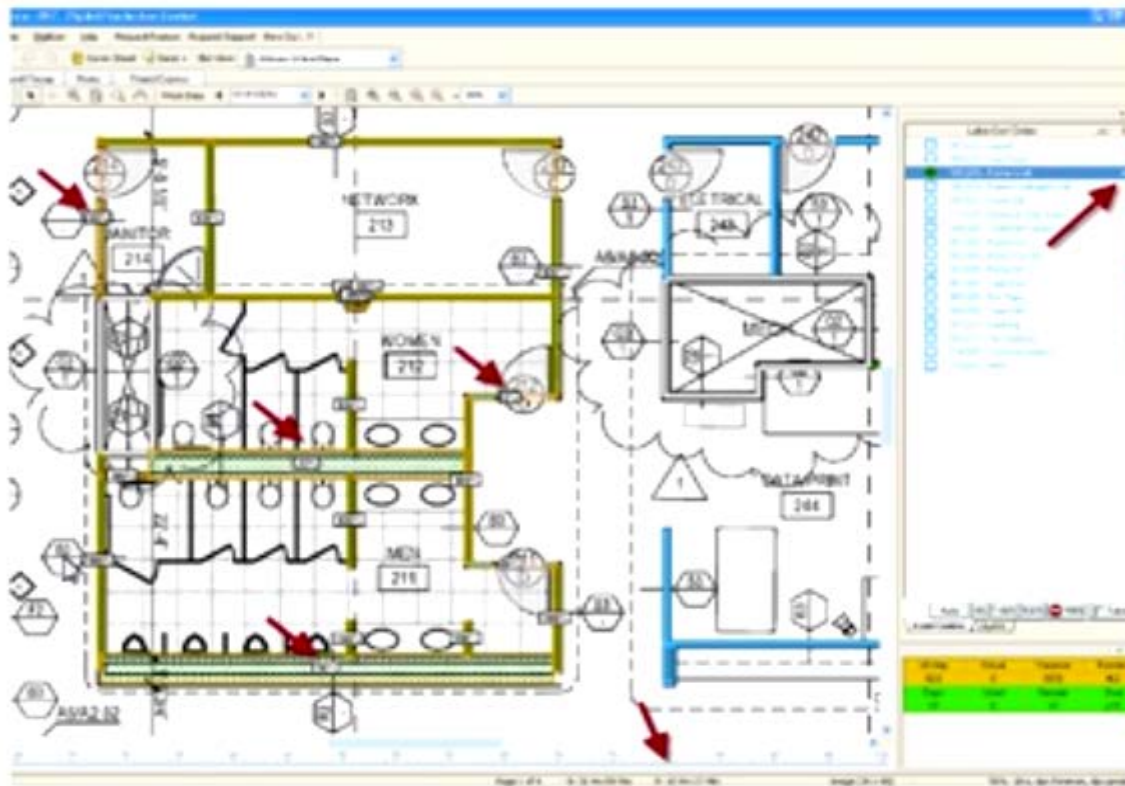
- ❑ This example documented the fragnets

ABC Office Building
Delays to Scheduled Activities
07/17/12

ID	Area	Activity	Delay		Elapsed
			Start	End	Time
1	2nd Floor	Unable to Proceed with metal framing until shoring is removed	6/1/2012	6/15/2012	11
2	2nd Floor	Unable to Complete metal framing due to delay of window mullions	6/18/2012		22
3	2nd Floor	Unable to Complete shaftwall due to delay in elevator fronts	5/11/2012		48

Schedules and progress reporting – Example of documentation for delays

- ❑ This shows the duration and location of a delay
 - ❖ You can easily prove your claim by using this documentation system
 - ❖ You can also add photo, video, etc.



Correspondence, transmittal, and submittal logs

❑ A good idea is for the **contractor** to **keep up-to-date**

1. Logs of all correspondence
2. Logs of all drawing transmittals
3. Logs of all submittals

❖ These logs should be **prepared and maintained separately**

❖ These logs should **track** the **sender** and **who received** each piece of correspondence, transmittal, or submittal.

✓ **This allows the contractor**

1. Easy access

2. Opportunity to pinpoint quickly those items that are **lagging in response or need action.**

3. References when preparing **new correspondence**.

Correspondence, transmittal, and submittal logs

- ❑ Some of other logs
 - ❖ Request for information (RFIs)
 - ❖ Proposed change order requests (CORs)
 - ❖ Site photographs

*This information is, of course, in the **contractor's files** and can be researched when needed for further detail.*

*But, the speed and convenience of having the information summarized in a log pays off when the **contractor must claim** on a prompt basis is important.*

Commercial software is available to **manage this process**.

Correspondence, transmittal, and submittal logs – Request for information (RFI) tracking

- ❑ RFIs is another **key factor** for dispute and claims.
 - ❖ The **duration of the response process**, particularly on critical items, can **impact** the progress of a project.
- ❑ It is critical that **CCA**
 1. Maintains a log of the RFIs
 2. Categorizes the basis of each RFI and monitor and track each document

Correspondence, transmittal, and submittal logs – Request for information (RFI) tracking

- ☐ The **RFI log** should **contain** the
 1. Specification section and/or
 2. Drawing number that the RFI pertains to
 3. Response duration for each RFI

Everything that is done for submittal tracking should be done for RFI as well

Correspondence, transmittal, and submittal logs – Request for information (RFI) tracking

What if the contractor submit improper RFIs such as providing notice?

The CCA should reject the RFI and direct the contractor to submit the proper notice as required by the contract



Correspondence, transmittal, and submittal logs – Example of RFI with audit trail

RFI	Submittal	CD	Inspection	Punch List	T&M Tags	Permits	Non-Compliance	RFS
back	Copy New							
RFI # 45								
Created By General Contractor, Derrick Morgan			Status: Closed					
Date Created: 04/22/2014			Priority: Low					
Date Submitted: 04/22/2014			Due Date: 04/29/2014					
+ Additional Send & Assignment Information								
Subject: Question about 3" conduit E103								
Folder:								
File Index: 8 Construction								
History								
Apr 22 2014 3:55:20pm	Created By	General Contractor	Derrick Morgan					
Apr 22 2014 3:55:31pm	Submitted By	General Contractor	Derrick Morgan	Assigned To	Owner/Construction Manager	Priority: Low, Due Date: 04/29/2014		
Apr 22 2014 3:56:24pm	Read By	Owner/Construction Manager	Eric					
Apr 22 2014 3:56:47pm	Forwarded By	Owner/Construction Manager	Eric	Assigned To	Engineer	Priority: Low, Due Date: 04/29/2014		
Apr 22 2014 3:57:16pm	Read By	Engineer	Rodney Dawson					
Apr 22 2014 3:58:21pm	Responded to By	Engineer	Rodney Dawson	Response	1 - Engineer Response to RFI # 45			
Apr 22 2014 3:58:21pm	Forwarded By	Engineer	Rodney Dawson	To	Owner/Construction Manager			
Apr 22 2014 4:45:51pm	Forwarded By	Owner/Construction Manager	Eric	To	General Contractor			
Apr 22 2014 4:45:58pm	Official Response	Owner/Construction Manager	Eric	Response	RFI Response # 1 - Engineer Response to RFI # 45			
Apr 22 2014 4:45:58pm	Closed By	Owner/Construction Manager	Eric					



Correspondence, transmittal, and submittal logs – Example of RFI with audit trail

RFI

Submittal

CD

Inspection

Punch List

T&M Tags

Permits

Non-Con

[back](#)

RFI # 45

Created By	General Contractor, Derrick Morgan	Status:	Closed
Date Created:	04/22/2014	Priority:	Low
Date Submitted:	04/22/2014	Due Date:	04/29/2014

+ Additional Send & Assignment Information

Subject: Question about 3" conduit E103

RFI Response # 1

Closed

Subject: Engineer Response to RFI # 45

History

Apr 22 2014 3:58:16pm	Created By	Engineer	Rodney Dawson		
Apr 22 2014 3:58:21pm	Submitted By	Engineer	Rodney Dawson	To	Owner/Construction
Apr 22 2014 3:58:37pm	Read By	Owner/Construction Manager	Eric		
Apr 22 2014 4:45:51pm	Forwarded By	Owner/Construction Manager	Eric	To	General Contractor
Apr 22 2014 4:45:58pm	Marked Official By	Owner/Construction Manager	Eric	Shared With	General Contractor
Apr 22 2014 4:45:58pm	Marked Official By	Owner/Construction Manager	Eric	Shared With	Owner/Construction
Apr 22 2014 4:45:58pm	Marked Official By	Owner/Construction Manager	Eric	Shared With	Engineer
Apr 22 2014 4:46:47pm	Read By	General Contractor	Derrick Morgan		

Correspondence, transmittal, and submittal logs – Submittal tracking

- ☐ The **duration** of the **review process**, particularly on critical items, can **impact** the **progress** of a project.
- ☐ It is critical that the **CCA** **maintains** a **log of the submittals** and monitor and track the following information:
 1. The number of revisions for each submittal
 2. The duration of the review period
 3. Submittals for long-lead items

Correspondence, transmittal, and submittal logs – Submittal tracking

❑ Prior to each project meeting, the CM should compare

1. Status of submittals as reported by the contractor
2. Status of submittals as tracked by the CCA

❖ **Discrepancies** should be discussed at the **project meeting**

to resolve **differences** and

resolution should be documented in the meeting minutes.

Daily reports

❑ The contractor's project manager or superintendent prepares a **daily report**

❖ **Important events** that transpire on the project site are recorded.

❖ These reports should be objective, factual, and complete

❖ The following are the **most important records**.

✓ Diaries,

✓ Production records,

✓ General job progress reports

A **diary** is a record with **discreet entries** arranged by **date** reporting on **what has happened** over the course of a day or other period.



Daily reports

- ❖ **Michael S. Simon, a New York attorney** and author of legal reviews for **Engineering News-Record**, says,

- ❖ “I need to know what happened, when it happened, why it happened, who caused it to happen, and what we did about it.

I need to know all of this on a daily basis.

- ❖ As your legal counsel, I must say that no single document is more important than your daily reports.

The reports are often crucial to the outcome in negotiations or in court.

Write true and complete daily reports.

No one expects a job without problems.

*It's essential to **write down all the facts** that exist.”*

Contractor: _____
 Project Name: _____ Project No.: _____
 Address: _____
 Day and Date: _____ Report No.: _____
 Owner Name: _____ A/E Name: _____
 Telephone: _____ Telephone: _____
 Contact Name: _____ Contact Name: _____
 E-mail Address: _____ E-mail Address: _____

Weather:

Temperature at: 7:00 a.m. _____ 11:00 a.m. _____ 3:00 p.m. _____

Weather: _____ Wind Velocity: _____

Precipitation: _____ Total Precipitation to Date: _____

<u>Crew:</u>	<u>Name</u>	<u>Hours</u>	<u>OT Hours</u>	<u>DT Hours</u>	<u>Task or Activity Code</u>
Contractor:	_____	_____	_____	_____	_____
	_____	_____	_____	_____	_____
	_____	_____	_____	_____	_____
	_____	_____	_____	_____	_____
	_____	_____	_____	_____	_____
	_____	_____	_____	_____	_____

	<u>Company Name</u>	<u>Number of Workers</u>	<u>Hours Worked</u>
Subcontractors:	_____	_____	_____
	_____	_____	_____
	_____	_____	_____
	_____	_____	_____
	_____	_____	_____
	_____	_____	_____
	_____	_____	_____
	_____	_____	_____

	<u>Company Name</u>	<u>Visitor Name</u>	<u>Reason for Visit</u>
Visitors:	_____	_____	_____
	_____	_____	_____
	_____	_____	_____



Work Progress (include Areas and Quantities where appropriate):

Contractor:

Subcontractors:

Equipment on Site
(including rental
equipment):

<u>Company Name</u>	<u>Equipment Description</u>	<u>Hours Used</u>

Material Deliveries:

Meetings:

Yes ____ No ____

Led by:

Minutes:

Yes ____ No ____

Recorded by:

Safety Meeting:

Yes ____ No ____

Led by:

Items Discussed:

Safety Inspection:

Yes ____ No ____

Inspected by:

Comments:

Injury Today?

Yes ____ No ____

Describe:

Issues Raised or Resolved:

Reported by:

 Reviewed/Approved by:



Daily reports

- ☐ A form used to record track-work production on rapid transit rail system

مدیریت ادعاء و اختلافات در طول چرخه حیات پروژه

اجرای برنامه و مدیریت ادعاء، دعاوی و اختلافات در فاز ساخت/اجرا (Construction Phase)

Daily Production Report Form (Sample Form)

Contract 8A0033 Trackwork Constructors, Inc. Ballast Track Production Report

Job #204 Report No.: ____ Date: ____/____/____ Working Day No.: ____ Weather: ____

Operation*	Route	Track	Lane	From	To	Quantity	Comments
Excavation							
Embankment							
Subgrade preparation							
Subballast							
Top ballast (first lift)							
Distribute ties and track material							
Lay rail							
Gauge and spike							
Ballast (top off)							
Raise and line							
Adjust and anchor							
Other work							

Additional Information:

Contract No.: _____ Today's Date: _____ Weather: _____ Temperature Range: _

Contractor's Staff:	Supervisory	Craftsman	Job Location	*Work Performed	Hours Worked

Subcontractors on Job:

Contractor:	Supervisory	Craftsman	Job Location	Work Performed

* Should correlate



Daily reports

- ❑ A form used to demonstrate the disruptive effect of extra work and interference on the track-work contractor for the project

مدیریت ادعاء و اختلافات در طول چرخه حیات پروژه

اجرای برنامه و مدیریت ادعاء، دعاوی و اختلافات در فاز ساخت/اجرا (Construction Phase)

Job Report Summary of Effect of Disruptions and Interference (Sample Form)

Contract 8A0033

Trackwork Constructors

Summary Narrative of Extra Work and Disruptions on Ballasted Track

Excerpts taken from Supervisor and Management Daily Diaries

Week Ending: _____

Date	Entered by	Disruptions	Entered by	Extra Work

Number of Shifts _____ $\frac{\text{Extra Work Volume}}{\text{Direct Work Volume}} = \text{_____} \%$ $\frac{\text{Extra Work Volume}}{\text{Total Work Volume}} = \text{_____} \%$

Miscellaneous Comments:

Photographs and videos

- ❑ **Photographs** provide **one of the best**—if not the best—record of job progress.
- ❑ The contractor should endeavor to take pictures of representative job **progress regularly**, preferably **no less than weekly**, or more frequently if needed.
- ❑ The **time-lapsed photographs** are very beneficial
if a **dispute arises** in determining the status of construction
at **various points in time**.
- ❑ When using **digital photography**, the contractor should ensure that
 1. Photographs are digitally dated,
 2. In some cases time stamped.

Remember we talked about this in Planning and Scheduling course?



Photographs and videos

❑ Additionally, a **log** should be maintained for **each photograph** that records the following information:

- ❖ **Photograph number**

- ❖ **Specific format** should be tied to the **filename** of the electronic photograph

- ❖ **Date** the photograph was taken;

- ❖ **Who took** the photograph; and

- ❖ **A brief description** of

1. Location
2. What the photograph depicts
3. Orientation of the view

Photographs and videos

- ❑ Contractors also should consider **video recording** any **high-risk activities**
e.g., big lifts, and possibly from multiple angles, or equipment testing.

These videos will be very valuable if an incident occurs.

Change orders

❑ There are **several different types of documents** frequently associated with the **change order process**. These documents include:

1. **Design clarifications** **provided** by the **designer**
 - ❖ e.g., “plan clarifications” or “supplemental instructions” or “minor changes”
2. **Request for change orders**
 - ❖ e.g., “proposal request” and “change order request (COR)”
3. **Design revisions** **directed** by the **designer**
 - ❖ e.g., “change directive” and “change order”
4. **Change Order Log** **provided** by the **designer**
5. **Change Order Status (COS)** **provided** by the **contractor** (**for** unresolved changes)

Change orders

☐ The GC should

1. Have a **change order request (COR) form** for
 - i. Each change or
 - ii. Potential claim encountered
2. Should **immediately complete** the form upon **observance** of
 - i. Change situation
 - ii. Claim situation



Change orders

❑ If the **GC** is directed to proceed with **work** that the contractor **believes** is a **change** and the **CM believes** that it is a **minor change** or only a **clarification**, the **contractor** should record its efforts in an **extra work form** so the **specific details** regarding the **contractor's actual efforts** are recorded on a **daily basis**.

❖ If **changed or extra work** is being performed at **multiple locations**,

multiple forms are recommended.

*Additionally, the GC should **attempt to obtain** the **owner's acknowledgment** of the **changed or extra work performed** on a **daily basis**.*

SAME THING SHOULD OCCUR FOR SC IN RELATION TO GC

What if the owner or GC does not accept or approve them?



Change orders

What if the owner or GC does not accept or approve them?

- ❑ Although **either of these acknowledgments** will likely **not** be perceived as **approval** of a change order or claim,

it does **establish for the record** what **specific work was performed** by the contractor should entitlement to a **change be recognized** at a **later date**.

- ❖ This **form** should **identify and quantify**

- ✓ Actual work performed;
- ✓ Specific location;
- ✓ Contractor's labor, material, and equipment

such that the activity can be **priced out later**.



Change orders

Important note!

- ❑ A **separate file** should be kept for **each change**,
 - ❖ With a **copy** of the **initiation form** (**proposal request**, **change order request**, **change directive**, **change order**)
 - ❖ Pertinent **correspondence**,
 - ❖ Associated **invoices**,
 - ❖ Extra **work forms** and/or **time cards**,
 - ❖ **Memos-to-file**,
 - ❖ Any **other items** relevant to the change order or claim.

*Keeping a **separate folder** **exclusively** for copies of all initiation forms is also advisable.*

This will serve as a **handy reference** when making **periodic reviews of the status** of job claims and change orders.

Change orders

Important note!

- ❑ To keep the owner informed of the status of unresolved change orders and claims, the **contractor** should prepare and submit a **periodic (e.g., weekly or monthly) status report** to the owner

reflecting the open and unresolved change requests and/or claims.

*The **purpose** of such a report is to **show** the owner and/or its representatives*

1. Which items are still **in progress**,
2. Which are **awaiting** the owner's and/or architect's/engineer's **action**,
3. Which are **ready to be negotiated**, and
4. Which are **negotiated** and **awaiting formal modification**.



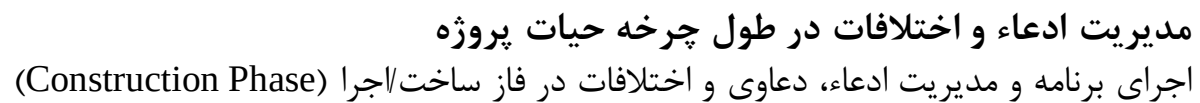
Change orders

مدیریت ادعاء و اختلافات در طول چرخه حیات پروژه
اجرای برنامه و مدیریت ادعاء، دعاوی و اختلافات در فاز ساخت/اجرا (Construction Phase)

☐ Change Order Status (COS) report

Contract No. _____ Date _____ Change Order Status Report No. _____

Extra Work Order #	Change Order #	Date Initiated	Description	Date of Request to Proceed	Date of Receipt of Notice to Proceed	Projected Cost (Ballpark Figure)	Proposal Submitted		Date Negotiated	Modification		Remarks (Current Status)
							Date	Amount		No.	Amount	



❑ Change Order Status (COS) report



Change orders

❑ Change Order Status (COS) report

[illegible]



Change orders

☐ Change Order Status (COS) cover letter

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اجرای برنامه و مدیریت ادعاء، دعاوی و اختلافات در فاز ساخت/اجرا (Construction Phase)

TRACKWORK CONSTRUCTORS, INC.

P.O. Box
City, State, Zip

April 8, 2007
Ref#: 433

Owner's Representative, Inc.
Main Rail Yard Project
Street Address
City, State, Zip

Attention: Mr. A. Jones
Resident Engineer

RE: Contract Number 8C0033
Change Order Status Report No. 24

Gentlemen:

Submitted herewith is our monthly *Change Order Status Report No. 24* outlining the current status of all unresolved claims and change orders. We call your attention to the following figures and request you take whatever action necessary to process these items into contract modifications.

1. Outstanding Change Orders ____.
2. Outstanding Work Order Accounts _____. These _____ represent, in addition to the outstanding change orders in (1) above, a combination of directives by the resident engineer (RE), claims by Trackwork Constructors, and changes initiated by us with the RE's concurrence. All but _____ of these have been reduced to writing, yet there have been no change orders issued for any of them by the owner.
3. Trackwork Constructors has submitted cost proposals for _____ outstanding change orders (totaling \$_____) and _____ outstanding work orders (totaling \$_____) for a total dollar value of \$_____.
4. The remaining claims and change orders represent a projected total dollar value of \$_____, of which \$_____ has been expended by us to date. We expect to have proposals for these items to you shortly.
5. Outstanding time extension requests not associated with any of the previously referenced changes and/or claims.

We look forward to your earliest attention to these open items. Thank you.

Very truly yours,

B. Johnson
Project Manager

Periodic review

☐ In addition to

1. Updating the project schedule each month
2. Producing a change order status report periodically

the GC should **endeavor to have a formal review session** of all documents to:

1. **Determine** whether **any actions** have been **overlooked** or
2. **Determine** whether **additional actions** need to be **taken**.

موسسه مهندسی و مدیریت ساخت علوی پور (ACEMI)

دفتر آموزش



تهران، بلوار فردوس شرق، مجتمع آبگینه، طبقه سوم اداری، واحد C42



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