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*Rental Rate Blue Book Introduction reproduced by permission of PRIMEDIA Business Magazines & Media, Inc.

I. Introduction

Managing DelDOT Highway Contract Claims: Analysis and Avoidance is a two-and-a-half-day training course designed to give DelDOT transportation infrastructure construction management personnel the tools to avoid and manage the disputes that arise on their highway construction projects.

II. Executive Summary

Significant to the success of DelDOT's highway construction program is the management of the disputes that can arise between transportation agencies and their contractors. Avoiding as many disputes as possible and providing for the timely and equitable resolution of disputes that cannot be avoided benefits all parties. It allows DelDOT and its contractors to focus on the business of building better roads and not claims.

The purpose of this course is 1) to focus the discussion on preventing claims; 2) provide the latest theory and practice in handling claims; and 3) address the means to resolve disputes. The goal is to teach participants how to avoid claims on their projects, how to handle claims that are filed, and how to resolve disputes fairly and timely with a minimum expenditure of resources.

III. Target Audience

Managing DelDOT Highway Contract Claims: Analysis and Avoidance is a two-and-a-half-day course for personnel employed by, or contracted by, DelDOT, who are involved in construction contract claims avoidance, and the review, analysis, and resolution of claims.

IV. Course Goal and Outcomes

Course Goal

The goal of this course is to provide participants with best practices in handling disputes so as to avoid claims on their projects, handling claims that are filed, and resolving disputes fairly with a minimum expenditure of resources.

Course Outcomes

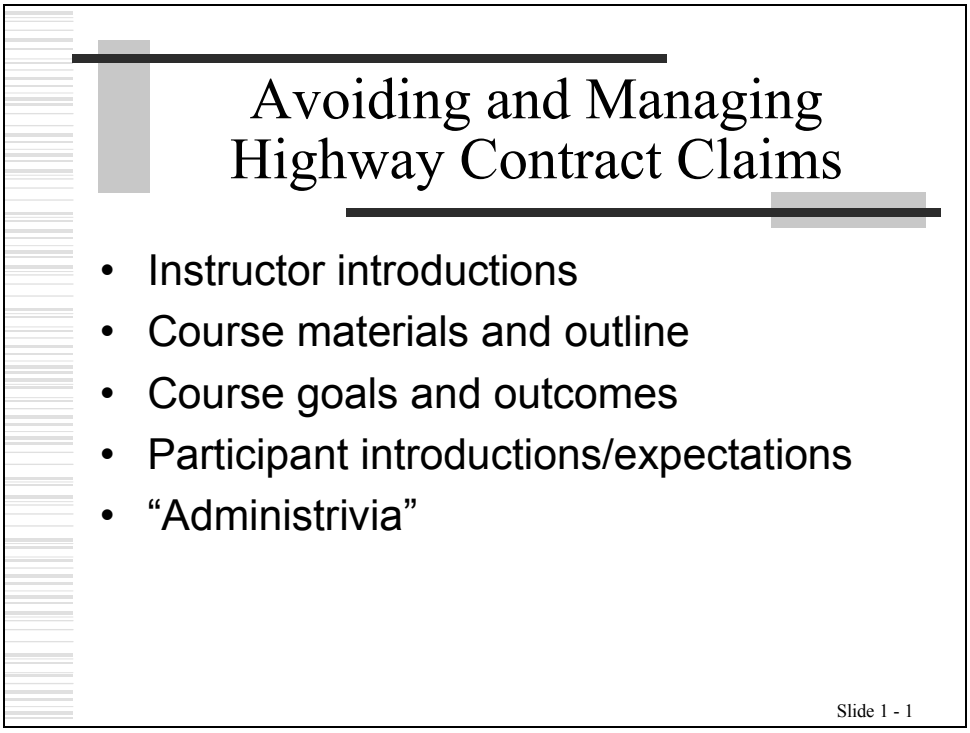
Upon completion of the course, participants will be able to:

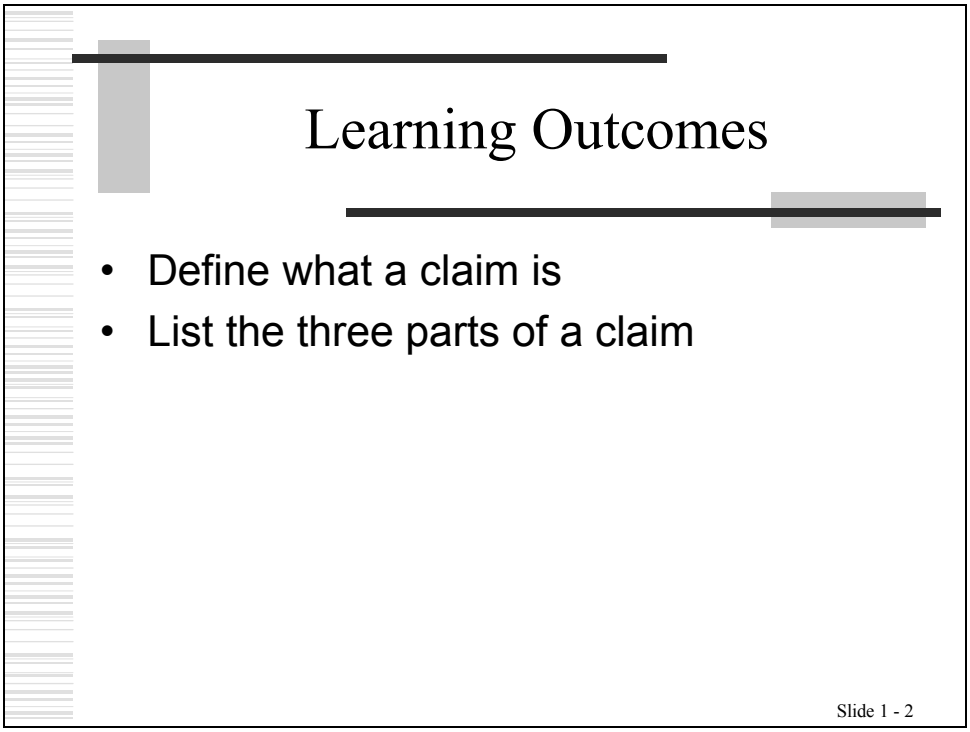
1. Define the recommended terminology associated with claims and the accompanying dispute resolution processes.
2. Identify the three key elements of a claim.
3. Determine whether or not a change has occurred.
4. Measure the impacts of the change.
5. Calculate the resultant cost of the change.
6. Explain the value of a systems approach to claims avoidance.
7. Identify the dispute resolution procedures available to the host.

MODULE I: COURSE INTRODUCTION

References

- FAR 52.233-1 DISPUTES
- DelDOT Standard Specifications — 2016


Avoiding and Managing
Highway Contract Claims
• Instructor introductions
• Course materials and outline
• Course goals and outcomes
• Participant introductions/expectations
• “Administrivia”
Slide 1 - 1


Learning Outcomes
• Define what a claim is
• List the three parts of a claim
Slide 1 - 2

Definition of Change

A **change** is the difference between the contract requirements at the time of bid and the actual requirements imposed during construction.

Definition of a Claim

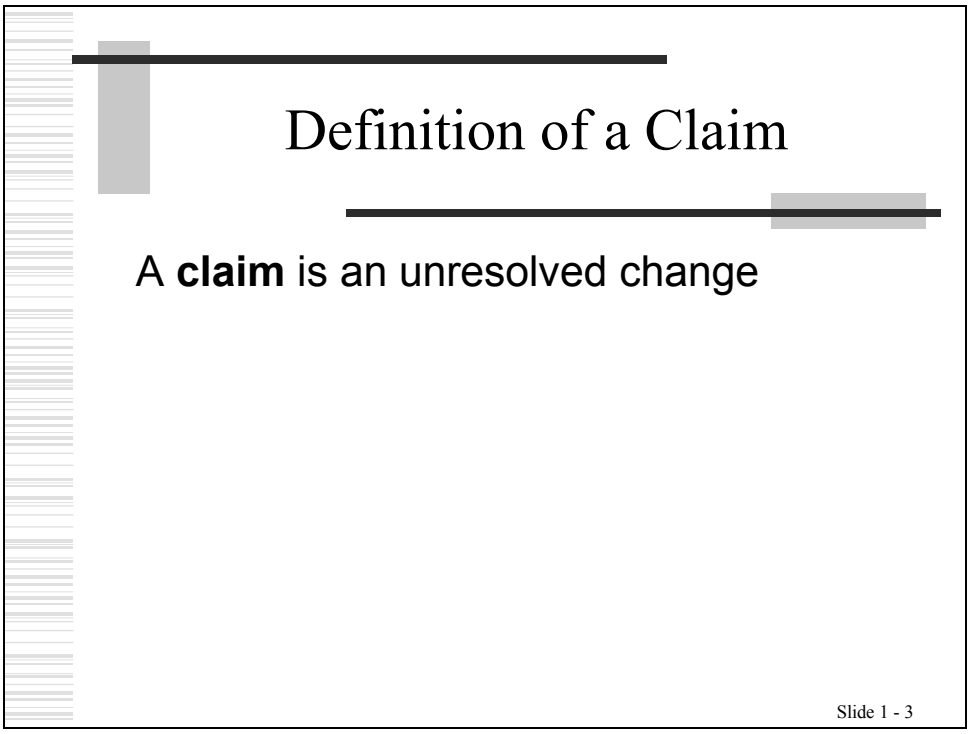
A claim is an unresolved change. It is a demand for money, time, or some other adjustment in contract terms. A claim can exist when:

1. A contractor believes a change exists, but the owner disagrees, or

2. Both parties agree that a change exists, but cannot agree on the impacts or costs of the change.

(See Appendix B)

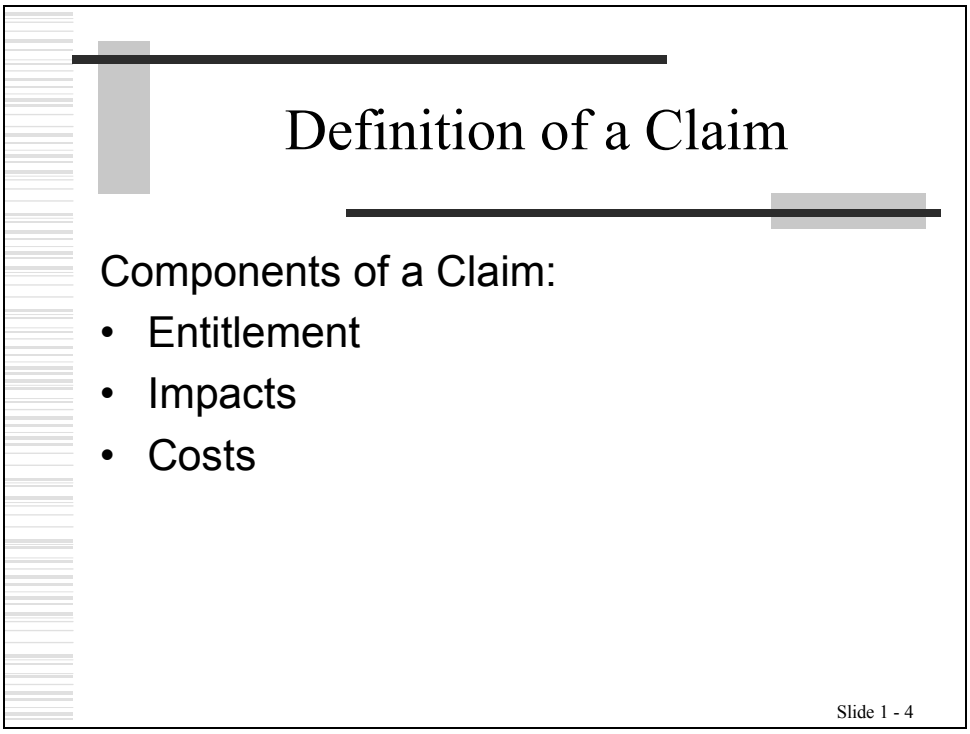
Claims Avoidance Tip – Based on this definition of a claim, the essence of claims avoidance is reducing potential changes and providing dispute resolution mechanisms.

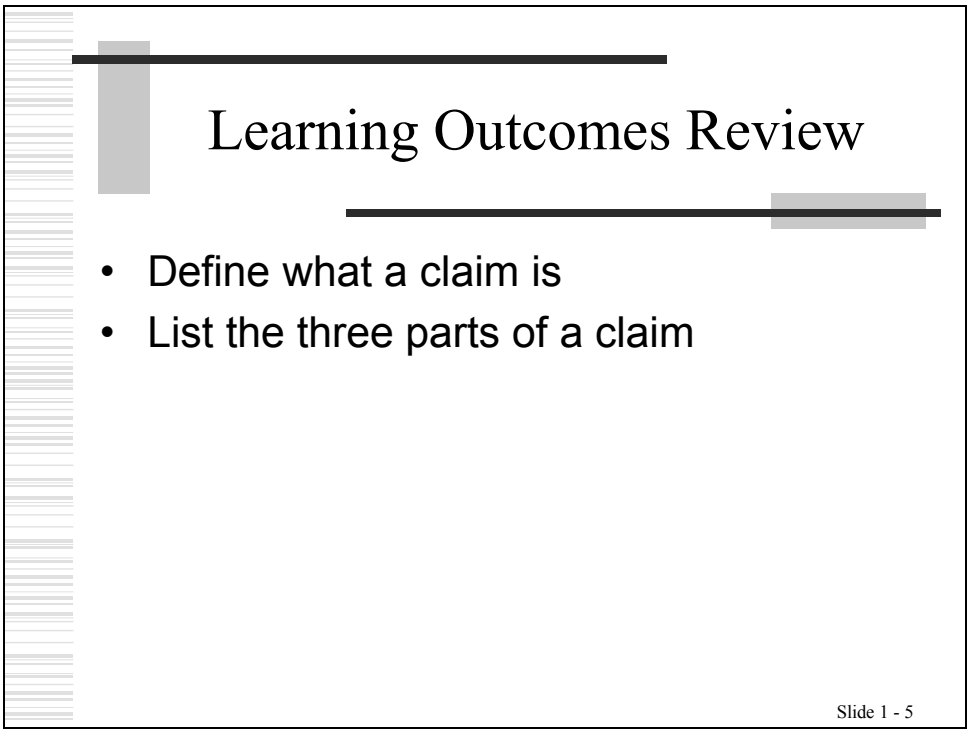

Definition of a Claim
A **claim** is an unresolved change
Slide 1 - 3

Analysis of a Claim

In order to analyze a claim, it must be broken down into three fundamental components.

1. Entitlement – Was there a change? Who is responsible for the change?
2. Impacts – The effect of the change on the project.
3. Costs – The resultant cost of impacts associated with the change.

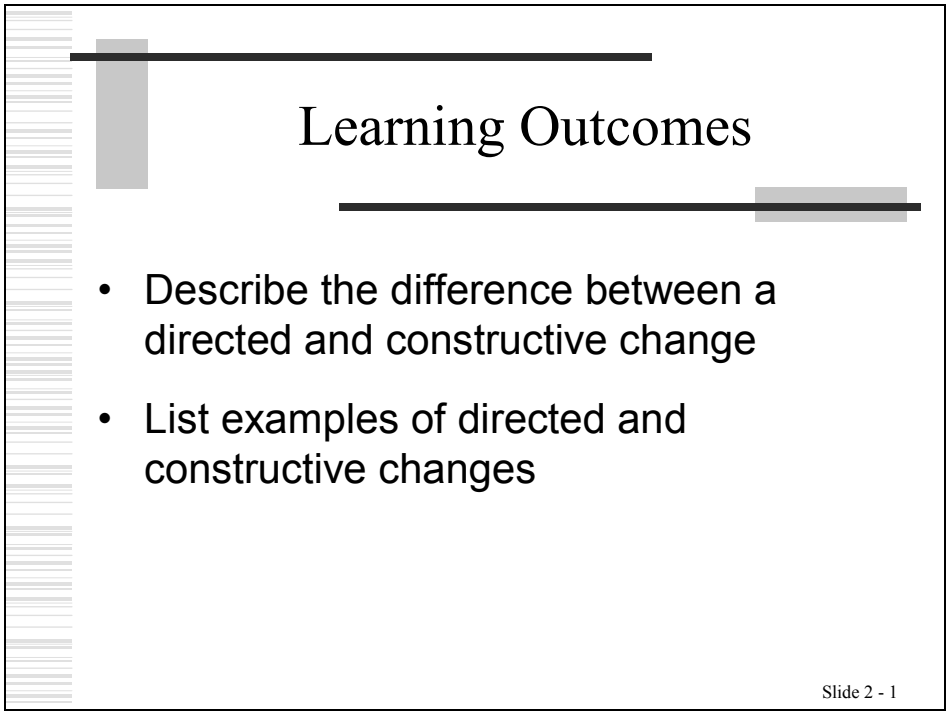

Definition of a Claim
Components of a Claim:
• Entitlement
• Impacts
• Costs
Slide 1 - 4

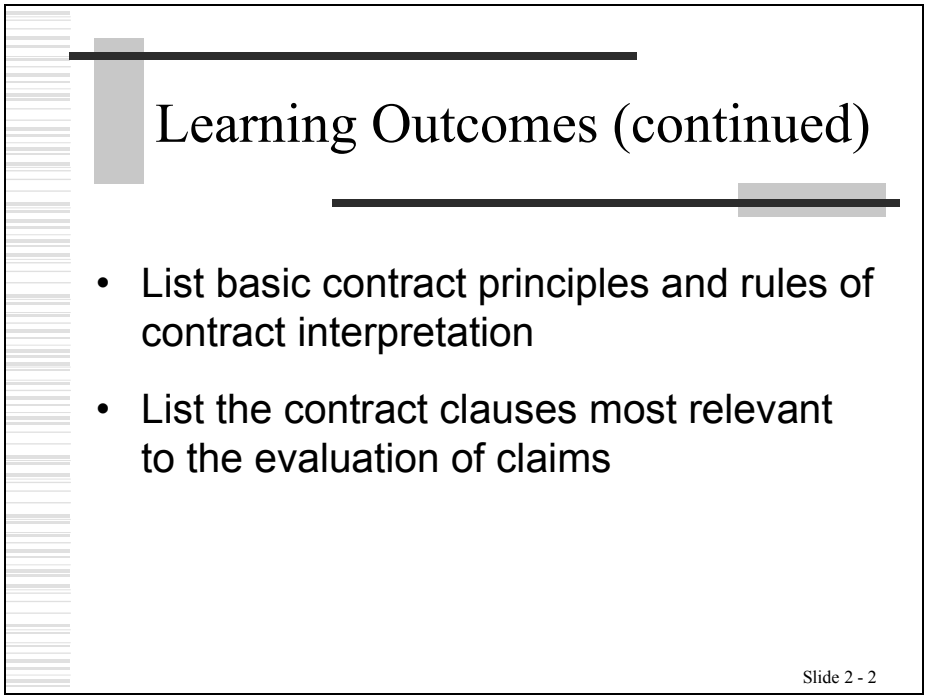

Learning Outcomes Review
• Define what a claim is
• List the three parts of a claim
Slide 1 - 5

MODULE 2: ENTITLEMENT

References

- FHWA National Specifications website
- DelDOT Standard Specifications — 2016


Learning Outcomes
• Describe the difference between a directed and constructive change
• List examples of directed and constructive changes
Slide 2 - 1


Learning Outcomes (continued)
• List basic contract principles and rules of contract interpretation
• List the contract clauses most relevant to the evaluation of claims
Slide 2 - 2

Definition of Change

1. A **change** is the difference between the contract requirements at the time of bid and the actual requirements imposed during construction. Unresolved changes can lead to disputes, which can lead to claims.

2. **Changes** are inevitable.

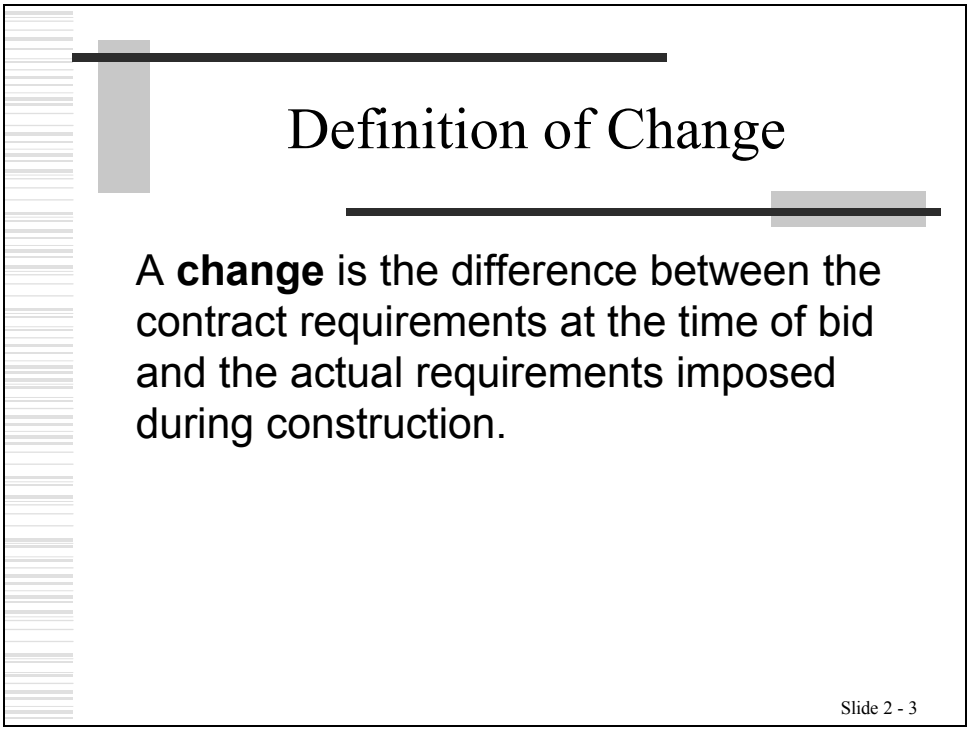
3. Changes may be **directed** or **constructive**.

4. Examples of causes of **changes** include:

    a. Errors and omissions.

    b. Differing site conditions.

    c. Design changes.


Definition of Change
A **change** is the difference between the contract requirements at the time of bid and the actual requirements imposed during construction.
Slide 2 - 3

Directed Changes

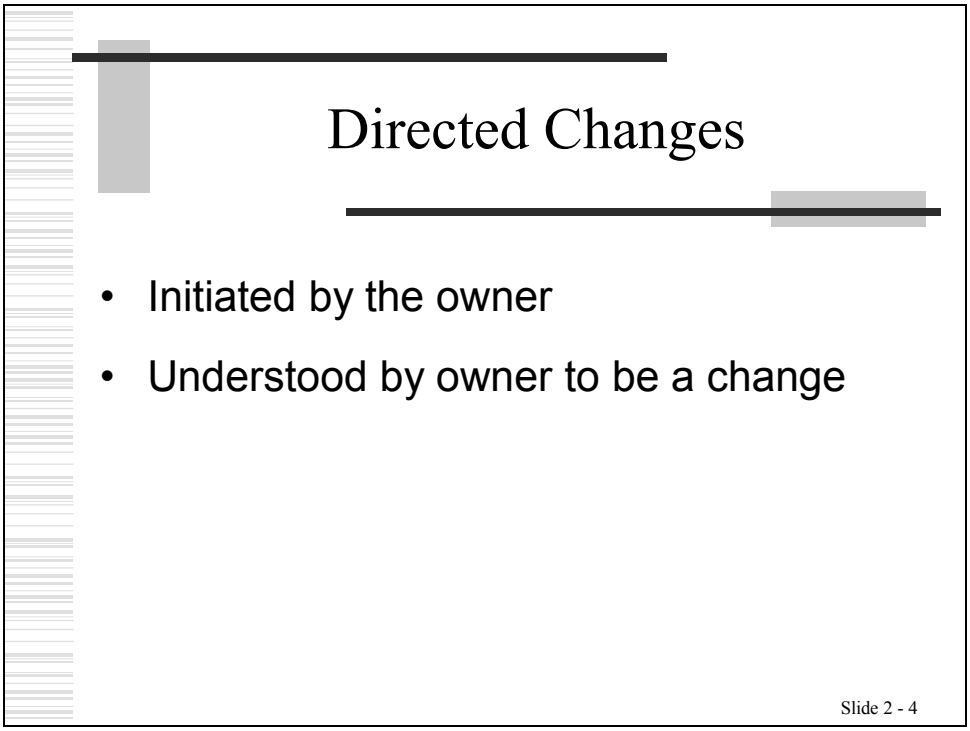
1. A **directed change** is an order to the contractor adding or deleting work to the contract or modifying the manner or method of work performance.

2. Examples of **directed changes** include:

   a. Addition or deletion of work.

   b. Changes in hours of operation.

   c. Changing the contract time available to perform the work.


Directed Changes
• Initiated by the owner
• Understood by owner to be a change
Slide 2 - 4

Constructive Changes

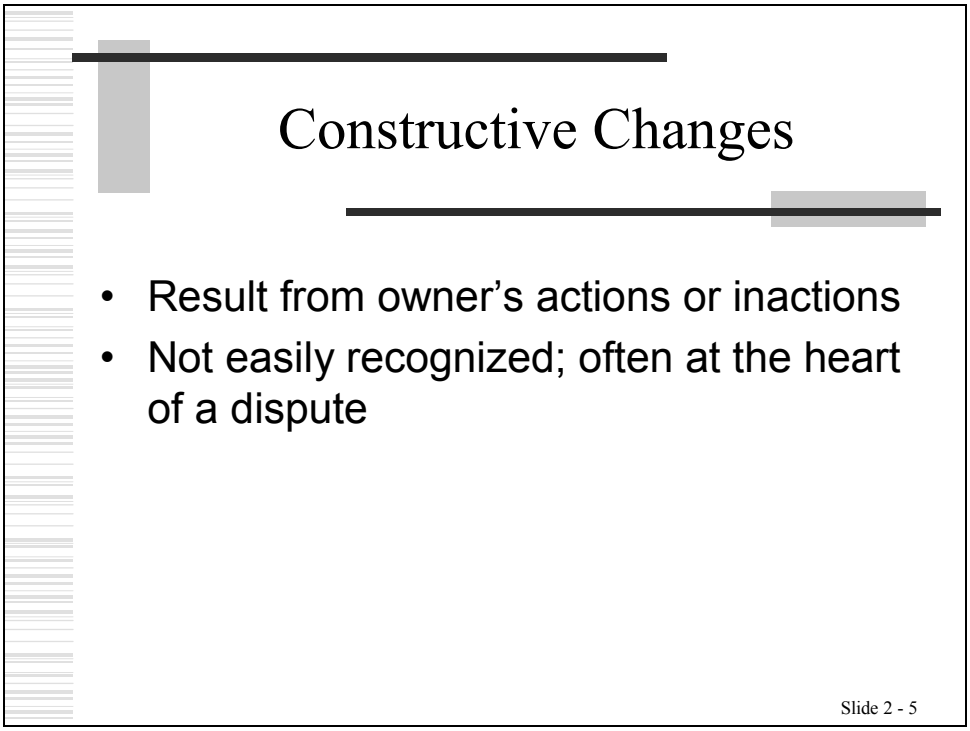
1. A **constructive change** is a change that results from the action or inaction of the owner and was not intended by the owner to be a change.

2. Examples of **constructive changes** include:

   a. Failure on the part of the owner to disclose **material** information **(superior knowledge)**.

   b. Impossibility or impracticality of performing the work as designed (constructability).

   c. Joint occupancy or use before completion.


Constructive Changes
• Result from owner's actions or inactions
• Not easily recognized; often at the heart of a dispute
Slide 2 - 5

Basic Contract Principles

1. A **contract** is an agreement between two parties.

2. Construction contracts are unique because they include provisions for incorporating changes; typically identified as the *changes clause*.

3. A contract is a legal document. Refer to Appendix A for a list of legal terms applicable to construction contract law.

Key Rules of Contract Interpretation (Rules are usually implied rather than specified.)

1. Read contract as a whole, applying *coordination clause or order of precedence clause, which are* clauses that define the hierarchy of documents within the contract documents. **(See Appendix B)**

2. Evaluation of ambiguities, errors, and omissions. **Patent** means obvious and requires pre-bid inquiry; **Latent** means hidden.

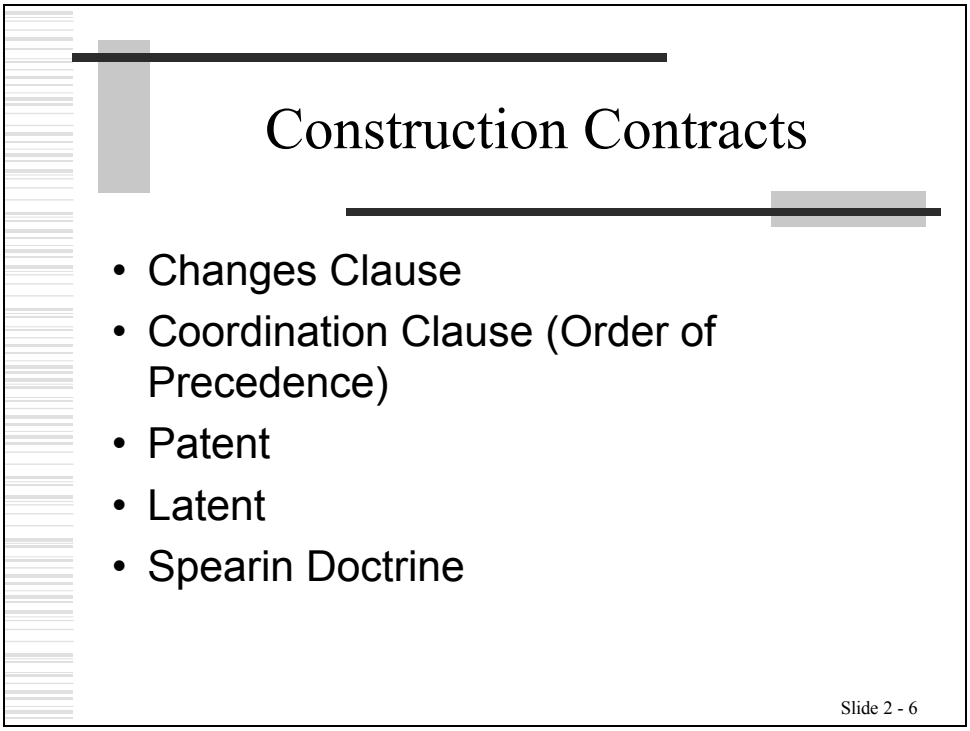
3. The drafter of the contract is responsible for ambiguities, errors, and omissions.

4. Trade custom and usage or prior courses of conduct are relevant only if contract is silent.

5. The contractor can rely on the completeness of the plans and specifications as well as the implied warranty that the project is constructible as designed (in Federal contracting law, this concept is known as the **Spearin doctrine**).

> *When one of the parties to a contract undertakes to prepare the specifications, that party is responsible for the correctness, adequacy and feasibility of the specifications, and the other party is under no obligation to check and verify the work product of the party who assumed responsibility for the preparation of the specifications, even though he may be as much or more of an expert than the party who prepared the specifications.*
>
> Administration of Government Contracts, 3rd edition

6. The owner will fulfill its obligations under the contract. For example: provide right of way, respond in accordance with the contract or industry practice for shop drawing submissions, etc.

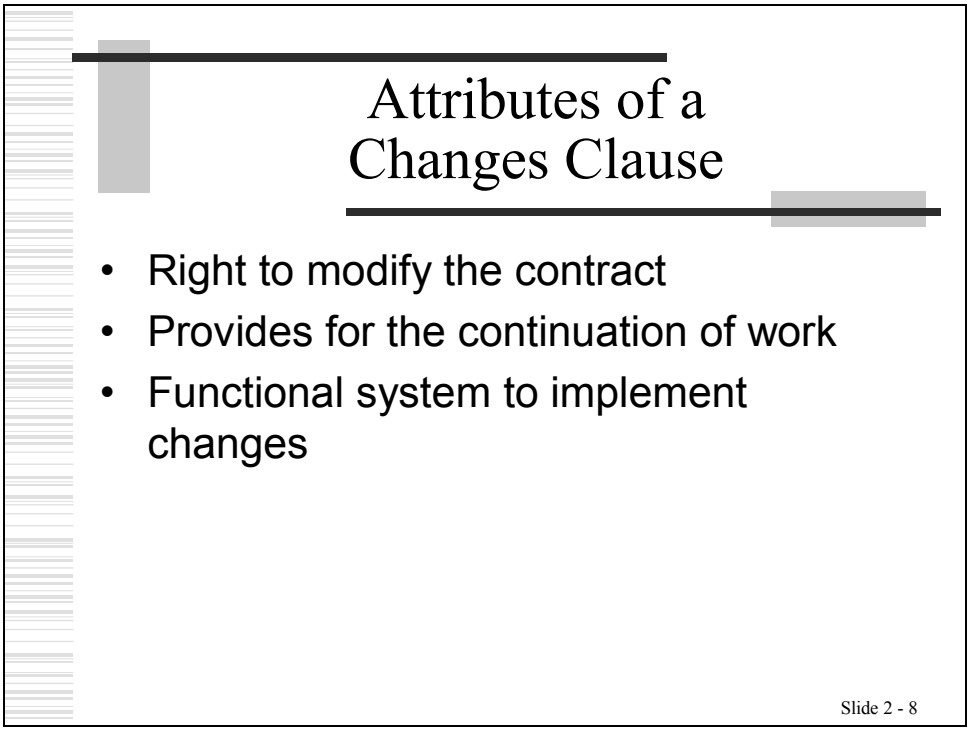

Construction Contracts
• Changes Clause
• Coordination Clause (Order of Precedence)
• Patent
• Latent
• Spearin Doctrine
Slide 2 - 6

Contract Clauses Governing Changes

Typical attributes of changes clauses.

1. Gives the owner the right to modify requirements within the scope of the contract.
2. Provides for continuation of work.
3. It sets up a clear functional system for the implementation of changes.

(See Appendix B)


Attributes of a
Changes Clause
• Right to modify the contract
• Provides for the continuation of work
• Functional system to implement changes
Slide 2 - 8

Notice

1. A changes clause usually requires contractor to give written notice to owner of a condition that is potentially a change.

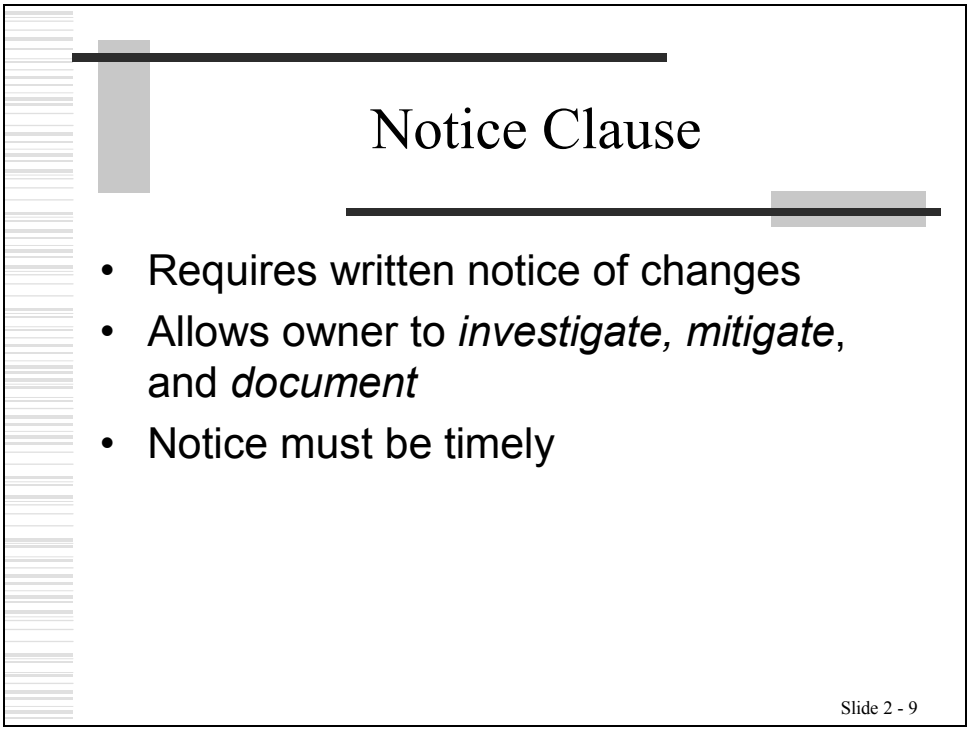
2. Allows owner to *investigate, mitigate*, and *document* the change.

3. Notice must be timely.

4. Clause is generally enforceable.

(See Appendix B)

Claims Avoidance Tip – Consider incorporating verbal notice into specifications as a means to provide for the earliest possible knowledge of a problem.


Notice Clause
• Requires written notice of changes
• Allows owner to *investigate, mitigate*, and *document*
• Notice must be timely
Slide 2 - 9

Types of Changes

1. **Significant Changes in Character of Work** — A significant variation in quantity, or change in the conditions under which the work is to be performed.

2. **Differing Site Conditions** — Subsurface or latent physical conditions that:

   Type I — Differ materially from those indicated in the contract documents; or

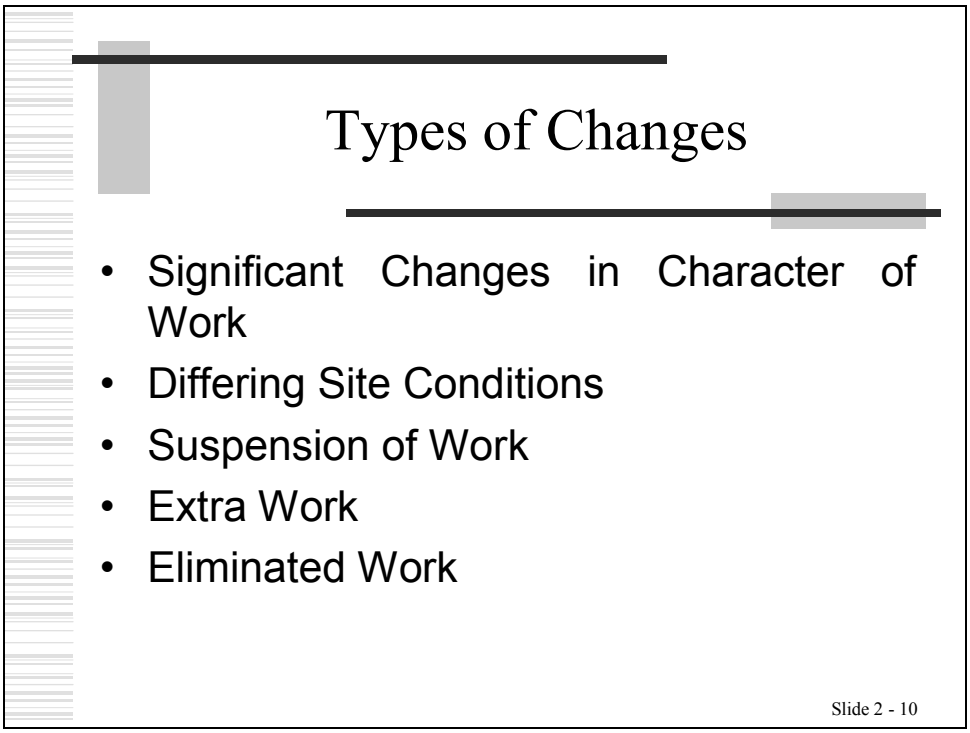
   Type II — Differ materially from conditions normally encountered, and generally recognized as inherent in the Work.

3. **Suspension of Work** — An order by the owner to stop the work, or elements of the work, for a period of time.

   The FHWA has found that it is good contract practice for agencies to incorporate standardized changed condition clauses for Differing Site Conditions, Significant Changes in Character of Work, and Suspension of Work. The standardized clauses must be included verbatim in all Federal-aid contracts unless prohibited or otherwise provided by state law.

4. **Extra Work** — Added work not provided for in the contract, but found essential for the satisfactory completion of the project.

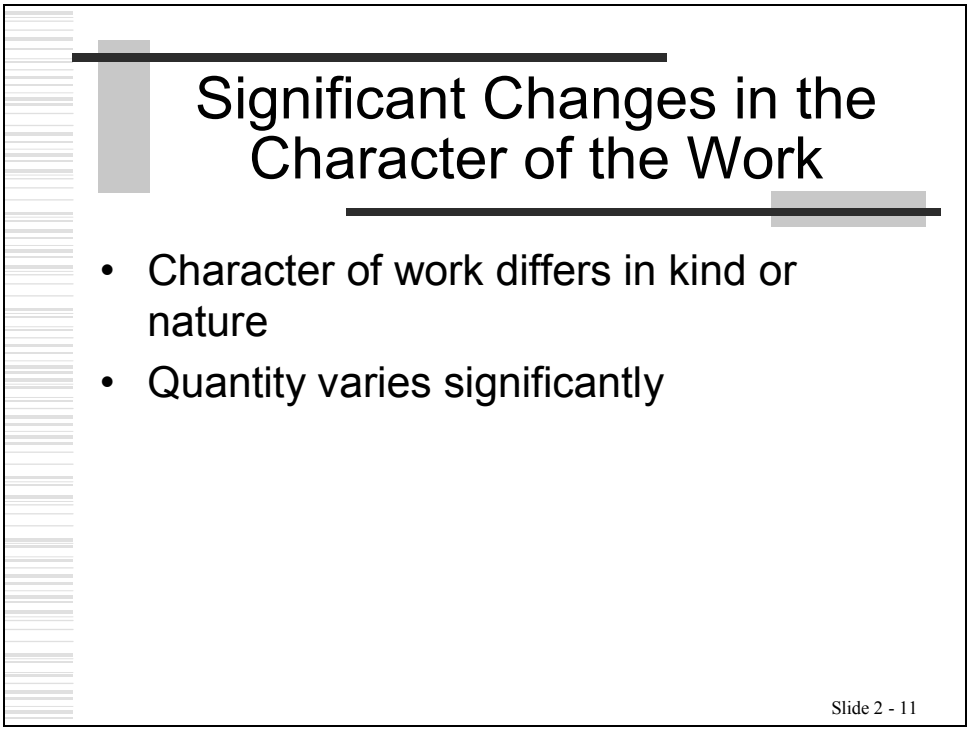
5. **Eliminated Work** — An element of original contract work that is removed from the project.


Types of Changes
• Significant Changes in Character of Work
• Differing Site Conditions
• Suspension of Work
• Extra Work
• Eliminated Work
Slide 2 - 10

Significant Changes in the Character of the Work

1. Work differs in kind or nature.
2. Variations in estimated quantities:
    a. Normally a specified percentage before it applies.
    b. Can benefit both the contractor and the owner.

(See Appendix B)


Significant Changes in the Character of the Work
• Character of work differs in kind or nature
• Quantity varies significantly
Slide 2 - 11

Differing Site Conditions

1. The use of a Differing Site Conditions clause takes the risk of differing site conditions out of the bidding process. Bidders need not include contingencies in their bid for differing site conditions.

2. Type I — Subsurface or latent physical conditions at the site that differ materially from those indicated in the contract.

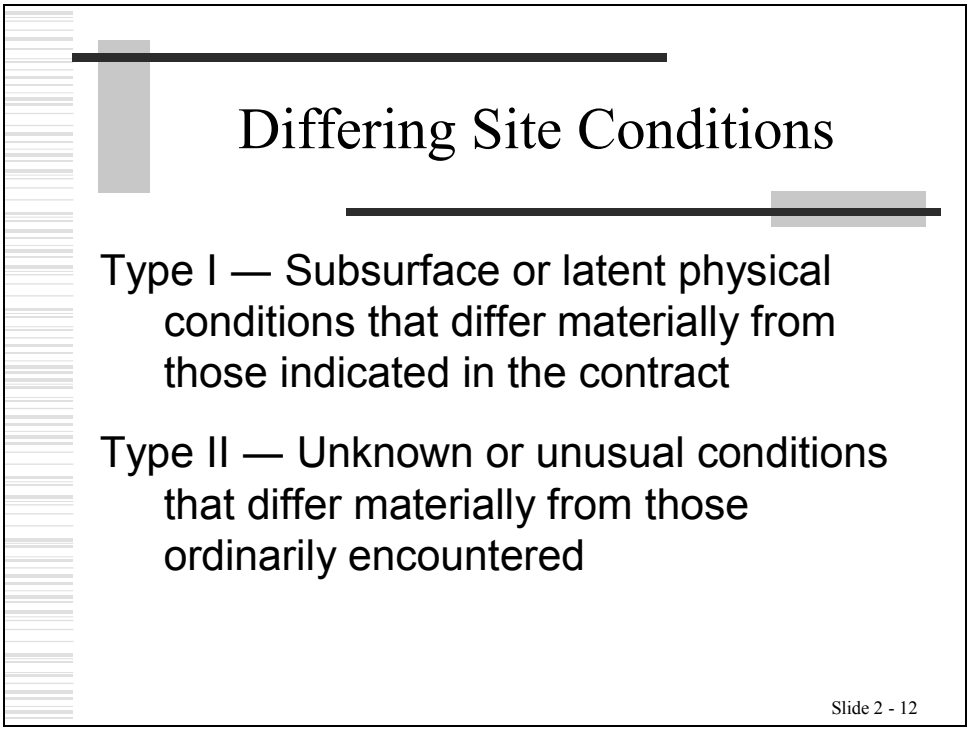
3. Type II — Unknown or unusual conditions that differ materially from those ordinarily encountered.

4. Usually requires timely, written notice after initial discovery.

5. Legal aspects: Be aware of the contractor's obligation to perform a reasonable pre-bid investigation and of related **exculpatory clauses**.

(See Appendix B)

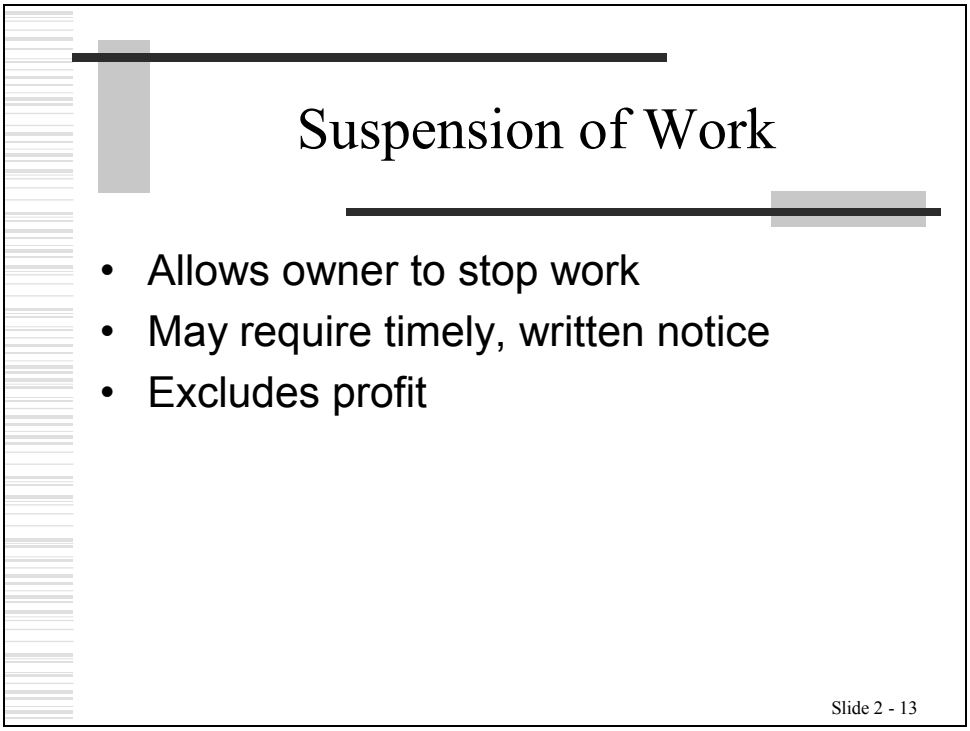
(See, also, Exercise 2-3, Page 2-36)


Differing Site Conditions
Type I — Subsurface or latent physical conditions that differ materially from those indicated in the contract
Type II — Unknown or unusual conditions that differ materially from those ordinarily encountered
Slide 2 - 12

Suspension of Work

1. Provides a vehicle for owner to stop work.
2. May require timely, written notice.
3. Excludes profit.

(See Appendix B)

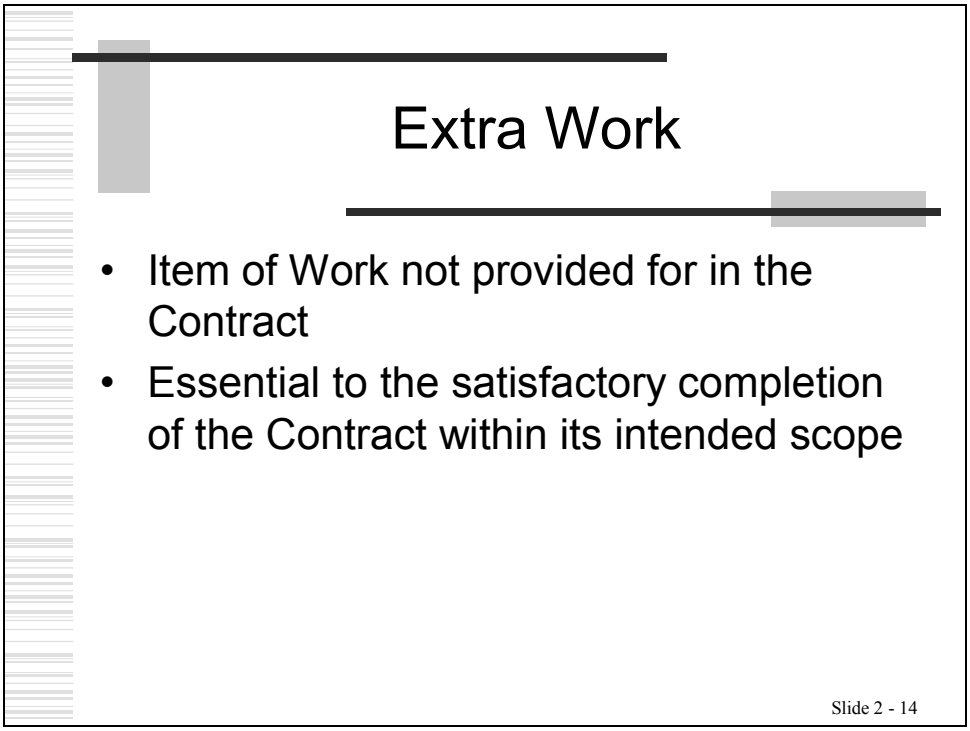

Suspension of Work
• Allows owner to stop work
• May require timely, written notice
• Excludes profit
Slide 2 - 13

Extra Work

1. Provides a vehicle for the owner to introduce additional elements of the work.

2. The changes clause does not give the owner an unrestricted right to order extra work. Changes beyond the scope of the contract are **cardinal changes;** and if ordered by the owner, constitute a *material breach of contract***.**

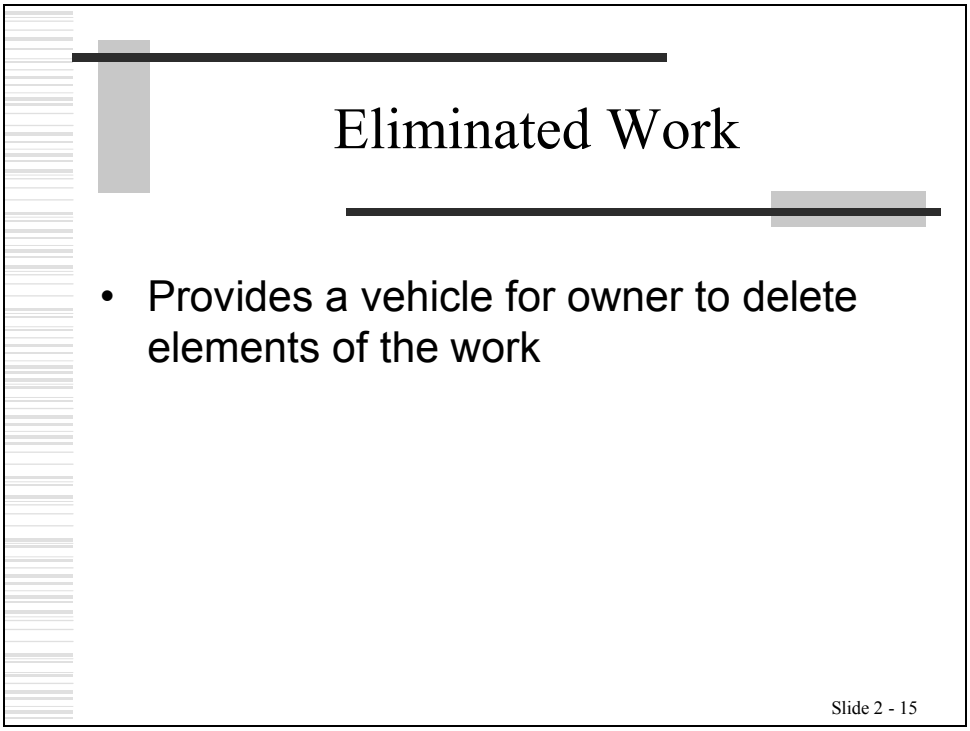
(See Appendix B)


Extra Work
• Item of Work not provided for in the Contract
• Essential to the satisfactory completion of the Contract within its intended scope
Slide 2 - 14

Eliminated Work

Provides a vehicle for owner to delete elements of the work.

(See Appendix B)


Eliminated Work
• Provides a vehicle for owner to delete elements of the work
Slide 2 - 15

FHWA's Specification Website

From FHWA:

"Due to challenges associated with maintenance, we have discontinued the National Highway Specification web site.

"A great alternative is the following Google State DOT search engine https://cse.google.com/cse/home?cx=006511338351663161139%3Acnk1qdck0dc"

MODULE 2: EXERCISES

Exercise No. 2-1: Ambiguities

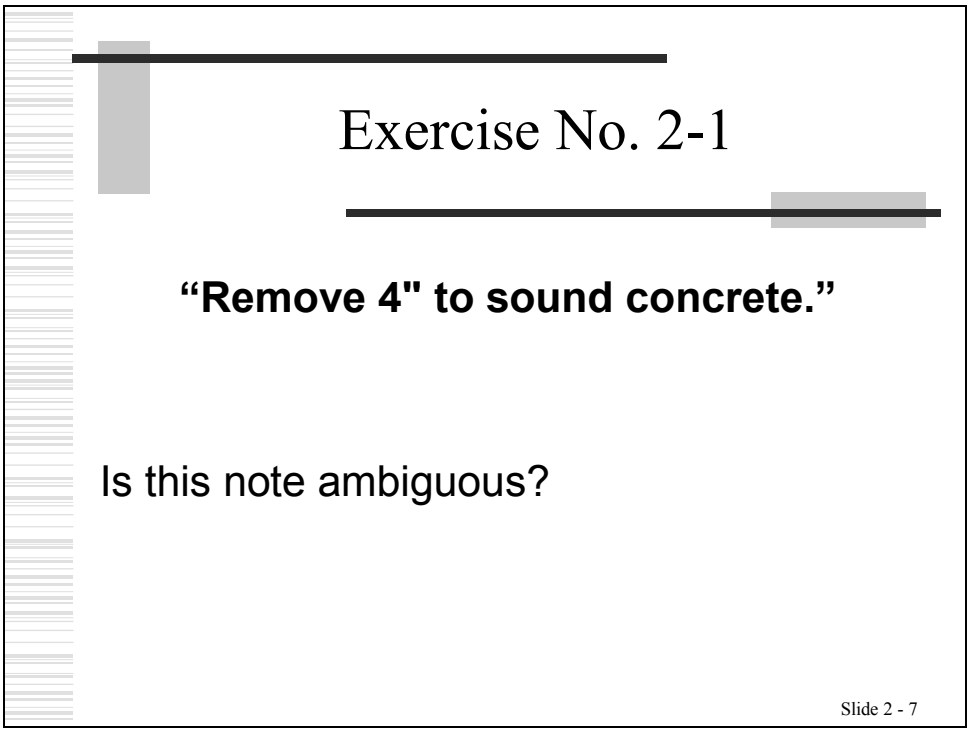
Objective

Participants are to evaluate the following plan note and determine whether or not it is ambiguous. Be prepared to discuss your answer with the class.

Background

The following note appeared on the plans for a bridge deck rehabilitation project. The note relates to the depth of concrete that must be removed to rehabilitate the deck.

"Remove 4" to sound concrete."


Exercise No. 2-1
“Remove 4" to sound concrete.”
Is this note ambiguous?
Slide 2 - 7

Exercise No. 2-2: Eliminated Work Case Study

Objective
Determine if the contractor is entitled to an adjustment given the facts of this case.

Background
An agency solicited bids for a highway and bridge rehabilitation contract. The contractor received a painting subcontractor's estimate of $826,473.50 and calculated individual pay items based on this estimate. Just prior to bid submission, the contractor received a lower estimate of $450,414.00. The contractor concluded that it did not have adequate time to revise all prices for the 44 bridge structure items without risking an error, so it did not amend the original $826,473.50 value of these items. Instead, it lowered the price of several common items (mobilization, construction layout, etc.). The contractor was awarded the contract for $17,906,324; however, the agency was unaware of the unbalanced bid.

The Change
After award, and before the commencement of the bridge painting work, OSHA reduced the allowable exposure limit of construction workers to lead. This revision required additional monitoring, training, and protection of workers, which affected the cost of bridge painting work. The contractor asked the agency to increase the contract price for costs associated with the new regulations; however, the contractor and the agency could not agree on a cost increase. Consequently, the agency elected to delete the bridge painting from the contract and issued a deductive change order for $826,473.

Contractor's Position
The contractor filed suit alleging breach of contract and unjust enrichment. It alleged that the agency changed the essential character of the work; and that removal of the painting scope of work was a modification entitling the contractor to compensation. According to the contractor, the agency was only entitled to a deduction for actual costs, not a deduction based on original contract unit prices.

Agency's Position
The revised regulations created extra work; therefore, the "Extra Work" clause was applied to the change. The removal of the scope of work did not constitute a significant change in the character of the work. Also, the contract forbids claims for additional compensation based on unbalanced bids. The state's common law defines an unbalanced bid as a bid "in which one or more of the pay items fails to carry its share of the cost of the work and the contractor's profit."

Excerpt from the Agency's Standard Specification Section 104.06 Eliminated Items

Should any Pay item contained in the Proposal be found unnecessary for the proper completion of the Work, the Engineer may, upon written order to the Contractor, eliminate such item from the Contract. In such case compensation, if any is appropriate, will be made as provided in this Subsection.

If acceptable material is ordered by the Contractor for the eliminated item prior to the date of notification of such elimination and if orders for such material cannot be canceled, it will be paid for at the actual cost to the Contractor…

Claims Avoidance Tip - When an agency receives an adverse decision on a case stemming from existing contract language, it may be good practice to modify the language in question.

Exercise No. 2-2: Eliminated Work Case Study (Continued)

Excerpt From the Agency's Standard Specification Section 104.08 Extra Work

The Department reserves the right to require Extra Work as needed for the satisfactory completion of the Project. Such work will be designated as Extra Work when it is determined by the Engineer that such work is not covered by any of the various items for which there is a bid price or by combinations of such items. In the event portions of such work are determined to be covered by some of the various items for which there is a bid price or combinations of such items, the remaining portion of such work will be designated as Extra Work.

If the Contractor and the Engineer cannot agree on a Supplemental Agreement … the commissioner may elect to have such work completed by others, and the Contractor shall not interfere there with nor have any claim for additional compensation as the result of such election.

Excerpt From the Agency's Standard Specification Section 102.08 - Balanced Bids

The bidder shall prepare his bid so that it reflects under each Pay Item the actual cost which the bidder anticipates the performance of that particular item entails, together with a proportional share of the bidder's anticipated profit, overhead and costs to perform work for which no Pay Item is provided. The Department will not consider any claim for ***additional compensation*** *arising from the bid on an item, or group of items, inaccurately reflecting the cost of such work or containing a disproportionate share of the bidder's anticipated profit, overhead and other costs. The Contractor expressly waives the right to pursue such claims…*

Excerpt From the Agency's Standard Specification Section 104 - Scope of Work

When the compensation for an item of work is subject to adjustment under the provisions of Subsections 104.04 through 104.09 the Contractor shall, upon request, furnish the Engineer with adequate detailed cost data for such item of work. If the Contractor requests an adjustment in compensation for an item of work as provided in Subsection 104.05, such cost data shall be submitted with the request.

Exercise 2-3: Differing Site Conditions Case Study

Objective:

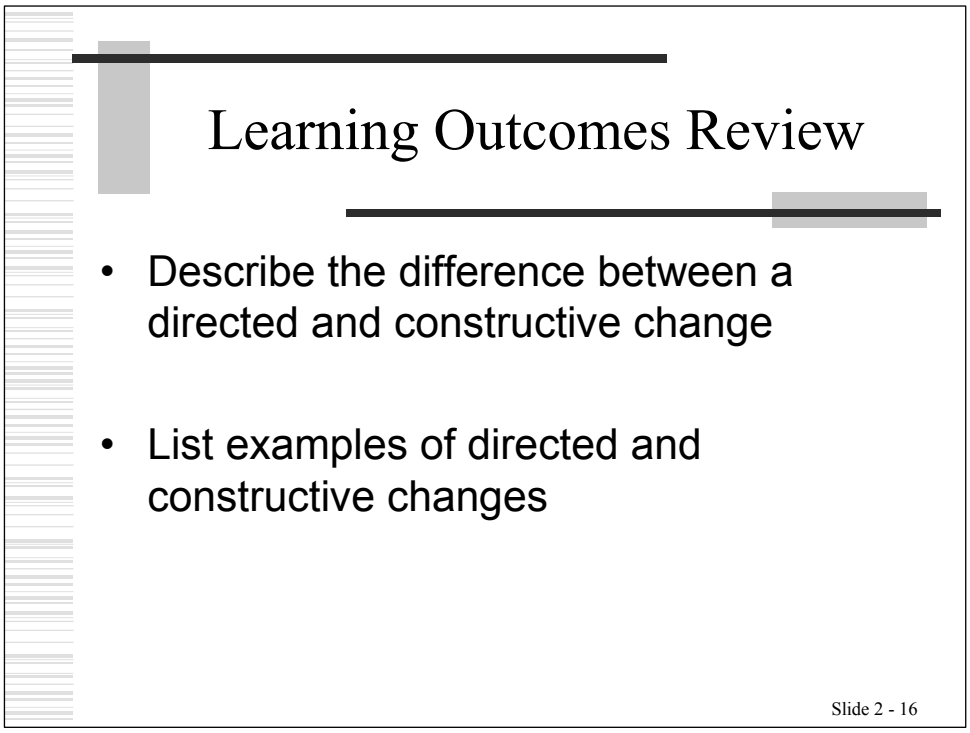
Read the redacted arbitrators' decision provided in Appendix D. Discuss in your groups and answer these questions:

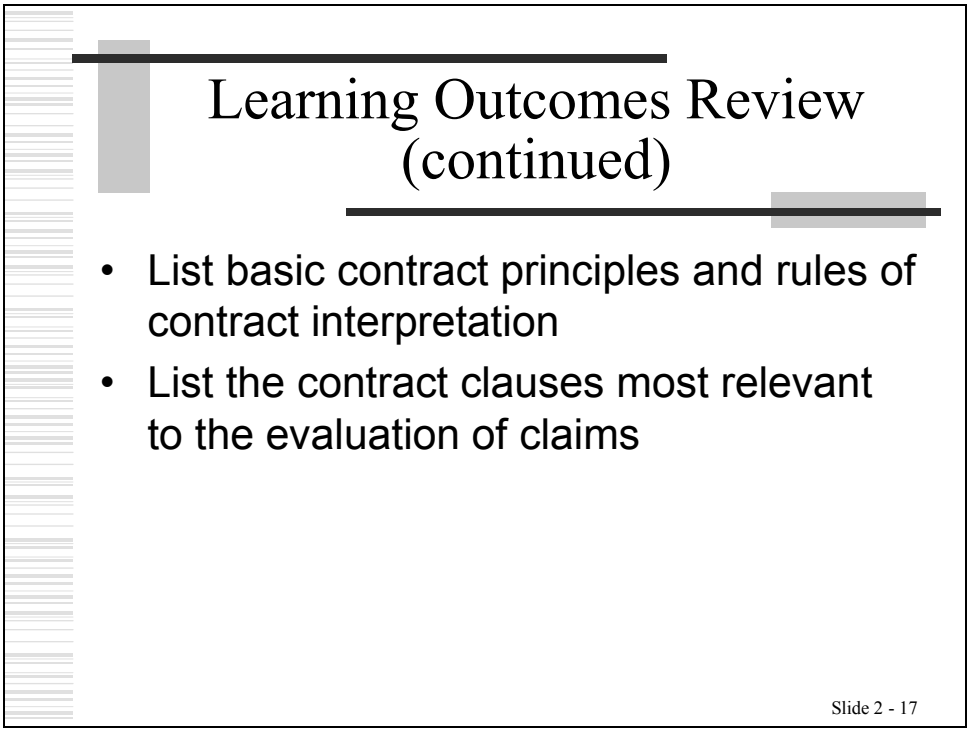
(Please limit review to the bridge demolition. Do not review issues related to Tropical Storm Andrea or the alleged need for a larger tug.)

1. Was there a differing site condition?

2. If so, was it a Type 1 or Type 2 Differing Site Condition?

3. Would your answer change if there were no as-built drawings showing the actual quay wall design?

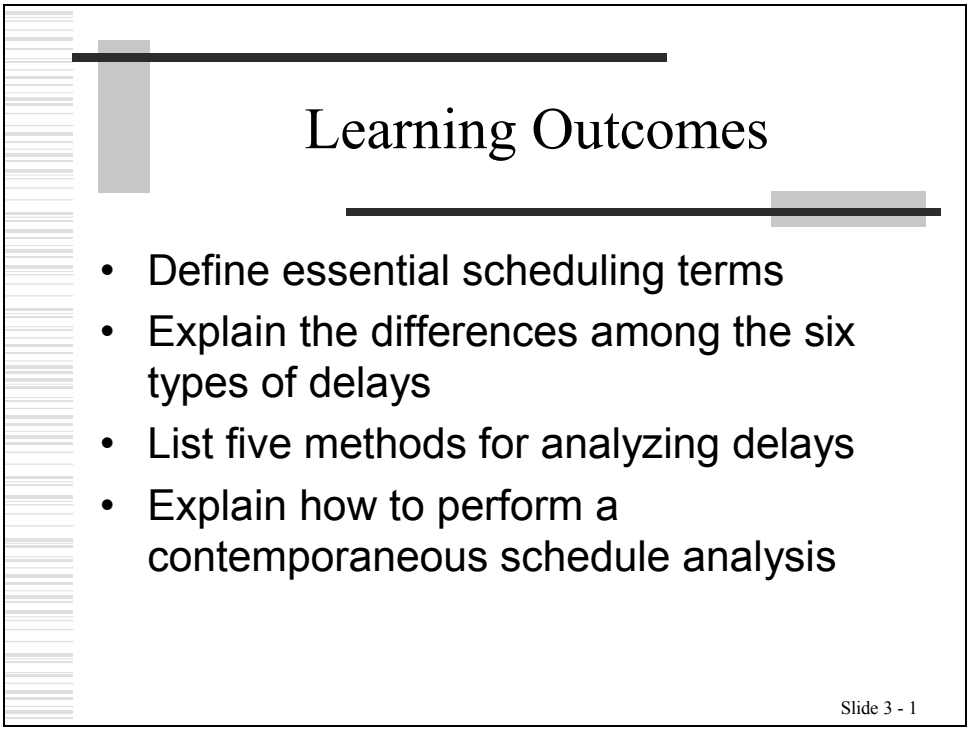

Learning Outcomes Review
• Describe the difference between a directed and constructive change
• List examples of directed and constructive changes
Slide 2 - 16

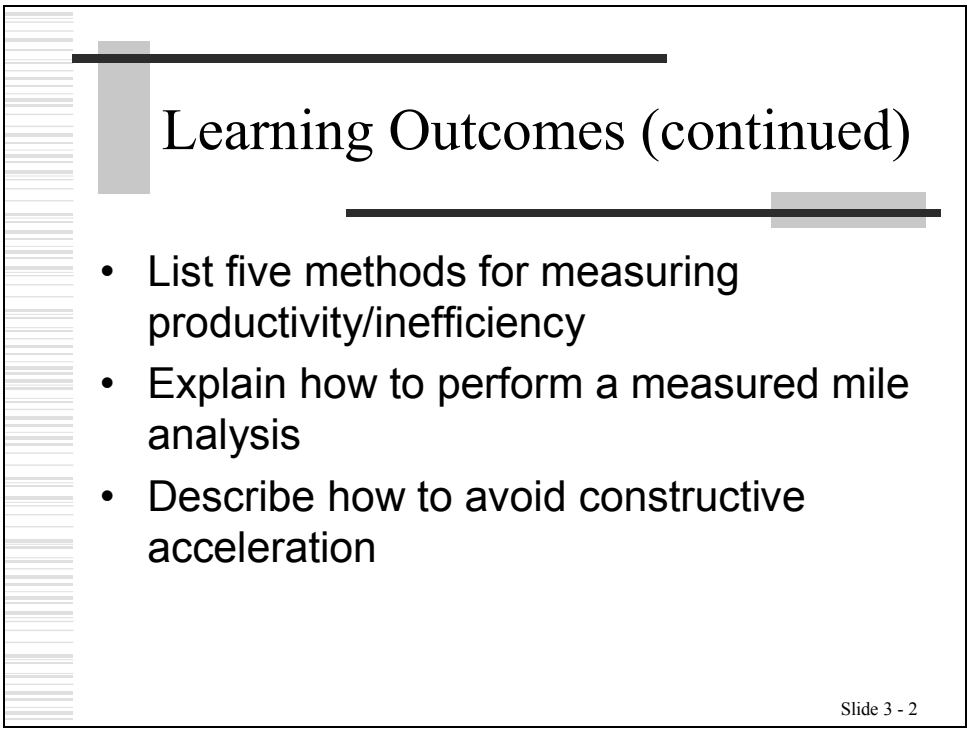

Learning Outcomes Review (continued)
• List basic contract principles and rules of contract interpretation
• List the contract clauses most relevant to the evaluation of claims
Slide 2 - 17

MODULE 3: IMPACTS

References

- DelDOT Standard Specification — 2016


Learning Outcomes
• Define essential scheduling terms
• Explain the differences among the six types of delays
• List five methods for analyzing delays
• Explain how to perform a contemporaneous schedule analysis
Slide 3 - 1


Learning Outcomes (continued)
• List five methods for measuring productivity/inefficiency
• Explain how to perform a measured mile analysis
• Describe how to avoid constructive acceleration
Slide 3 - 2

SCHEDULING

Schedules and Claims Avoidance

1. The issues of delay and acceleration are directly related to time. Because the schedule is the tool used to address time on a project, it is the tool that will be used to analyze delays and acceleration.

2. The more complete and accurate the project schedule, the easier it is to use the schedule to perform an objective analysis of time-related issues.

3. A good schedule should help avoid disputes or aid in their rapid resolution.

Types of Schedules

1. Lists of milestones.

2. Barchart (Gantt chart).

3. Critical Path Method (CPM).

    a. Activity-on-arrow or arrow-diagram method (ADM).

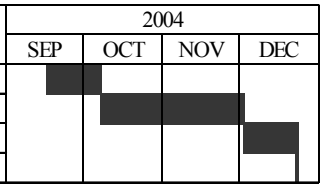
    b. Activity-on-node or precedence-diagram method (PDM).

Claims Avoidance Tip – A detailed review of the contractor's baseline schedule and a contemporaneous evaluation of the update schedules enables the project team to identify problems in real time. This allows the project team to identify the problem early, potentially limiting the ultimate delays and costs that would otherwise have been associated with the problem. This lessens the chance of a dispute and, thus, lessens the chance of a claim.

Scheduling

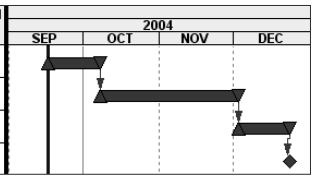
Bar Chart Schedule

Activity	Duration	Start	Finish
Utility Relocation	15	17-Sep-04	07-Oct-04
Civil Construction	40	08-Oct-04	02-Dec-04
Landscaping	15	03-Dec-04	23-Dec-04
Project Complete	0		23-Dec-04



CPM Schedule

Activity ID	Activity Description	Orig Dur	Early Start	Early Finish	Total Float
01000	Utility Relocation	15	17SEP04	07OCT04	0
02000	Civil Construction	40	08OCT04	02DEC04	0
03000	Landscaping	15	03DEC04	23DEC04	0
04000	Project Complete	0		23DEC04	0



Slide 3 - 3

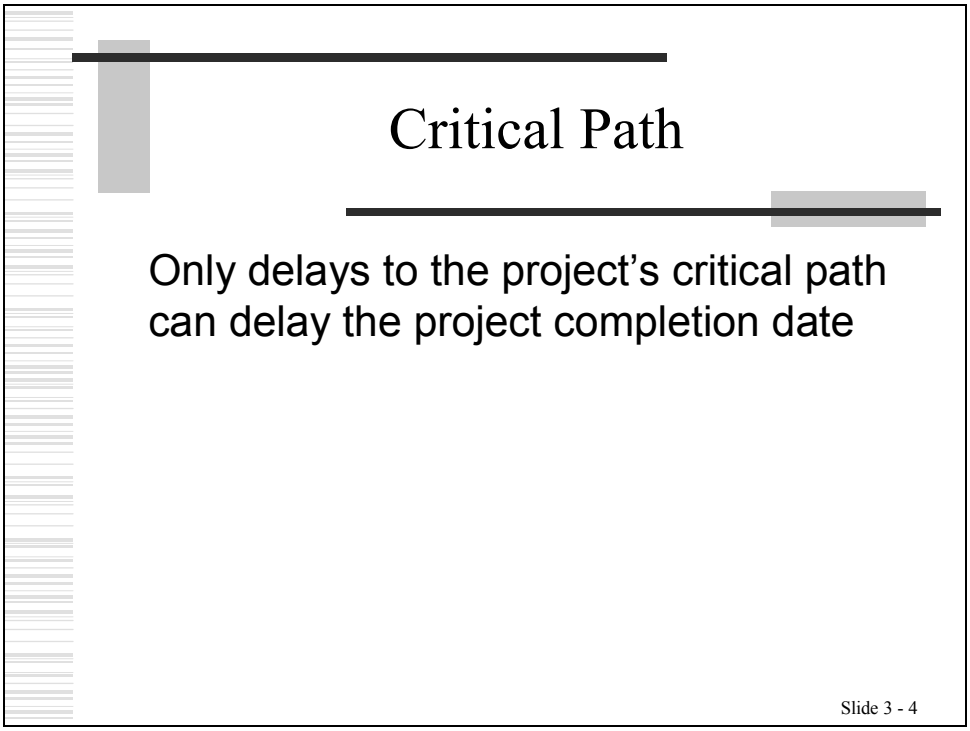
Critical Path of Work

1. The **critical path** is the continuous chain of activities within a project that require the longest time to complete.

2. A delay to any activity on the **critical path** will delay the completion of the project.

3. A **critical path** exists whether a project has no schedule, only a barchart schedule, or a CPM schedule.

(See Appendix E)


Critical Path
Only delays to the project's critical path can delay the project completion date
Slide 3 - 4

Float

1. **Float** is the amount of time, typically expressed in days, the start or finish of an activity can be delayed without causing a delay to the schedule. (Note: Float can be created, eliminated, or even manipulated by the use of constraints, calendars, and other features of scheduling software. This discussion focuses on the concept of float, not float as calculated by scheduling software.) Float can be:
   a. Positive – indicating the activity can be delayed without causing delay;
   b. Zero – indicating the activity cannot be delayed without causing delay;
   c. Negative – indicating the activity has been delayed or is causing delay.

2. **Total float** is the amount of time, typically expressed in days, the start or finish of an activity can be delayed without causing a delay to the project completion date.

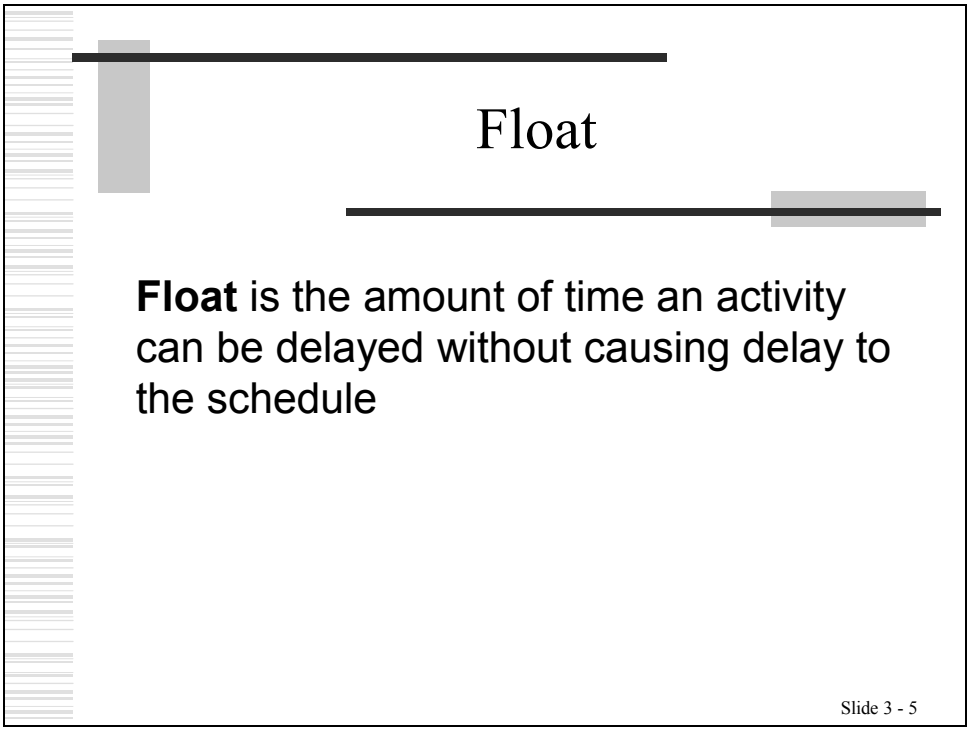
3. **Free float** is the amount of time, typically expressed in days, the start or finish of an activity can be delayed without causing a delay to a successor activity.

4. Activities not on the critical path have **float**.

5. Negative or positive float on the critical path occurs when the project completion date is fixed or restrained.

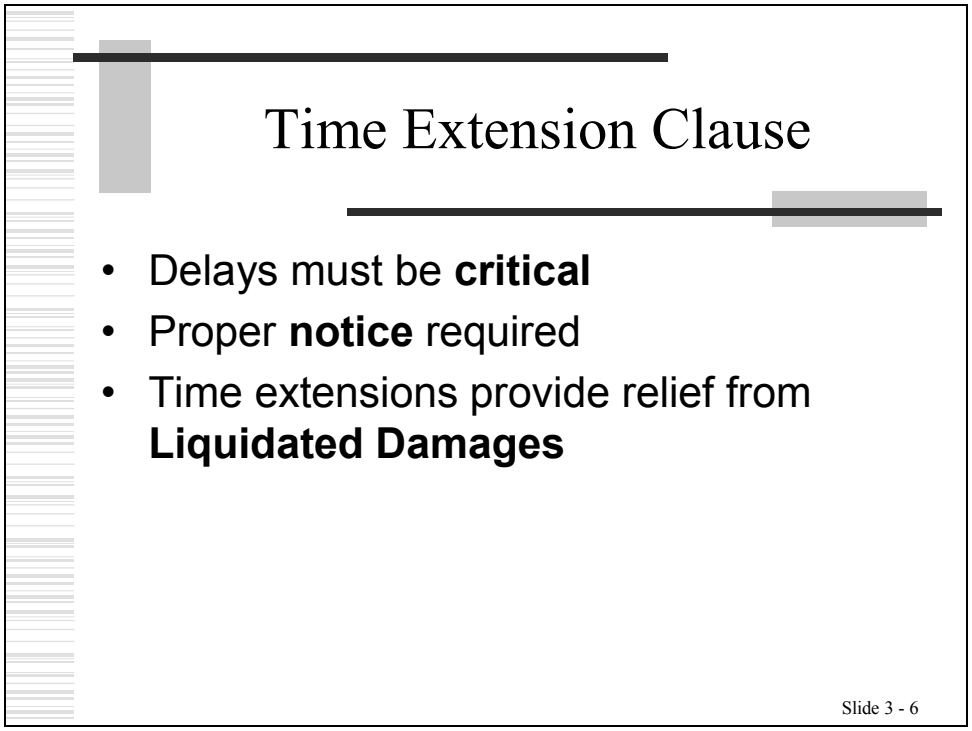
(See Appendix E)

Claims Avoidance Tip – Early in projects there is a greater likelihood that there is float available. Accordingly, should changes develop on a project, it is best to address these changes as early as possible in order to take advantage of any available float.


Float
Float is the amount of time an activity can be delayed without causing delay to the schedule
Slide 3 - 5

DelDOT Time Extension Clause

(See Appendices B and E)


Time Extension Clause
• Delays must be **critical**
• Proper **notice** required
• Time extensions provide relief from **Liquidated Damages**
Slide 3 - 6

Early Completion Schedule

1. One area of concern is an early completion schedule. An early completion schedule is a schedule that shows the project finishing earlier than the contract completion date.

2. Absent contract prohibitions, the contractor is entitled to finish early and to show early completion in its schedule.

3. An early completion schedule may not be accepted if it includes unsupported production rates, unrealistic staffing levels, or omits work.

4. When reviewing schedules, it is important to verify that the activity durations are reasonable. Activity durations are even more of a concern for reviewers of early completion schedules. A reviewer needs to verify that the durations represented are realistic. Examples of methods to verify activity durations include:

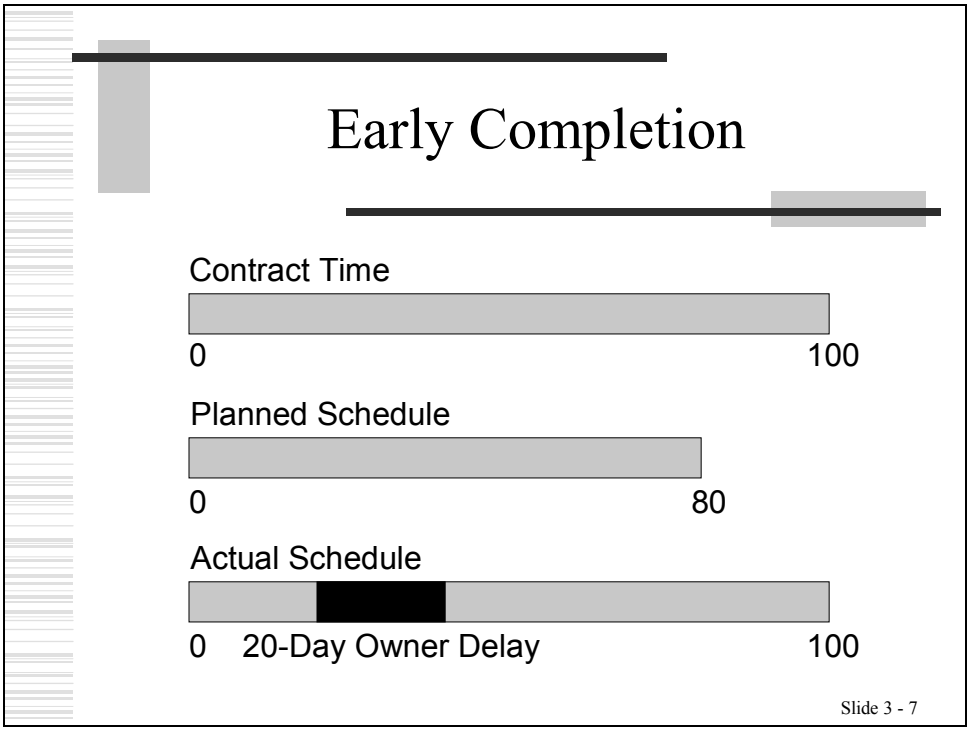
    a. Require resource-loaded schedules.

    b. Require resource loading on early completion schedules only.

    c. Require that the contractor provide resource loading when requested by the engineer.

    d. Meet with the contractor and require an explanation of resources and planned production rates to support the durations planned.

    e. Require a detailed explanation of resources and planned production rates with the submission of early completion schedules only.


Early Completion
Contract Time
0
100
Planned Schedule
0
80
Actual Schedule
0
20-Day Owner Delay
100
Slide 3 - 7

Delays (See Appendices B and E)

1. **Critical delays** are those that affect activities on the project critical path.

2. **Non-Critical delays** are those that affect non-critical work; typically, activities with float relative to the critical path.

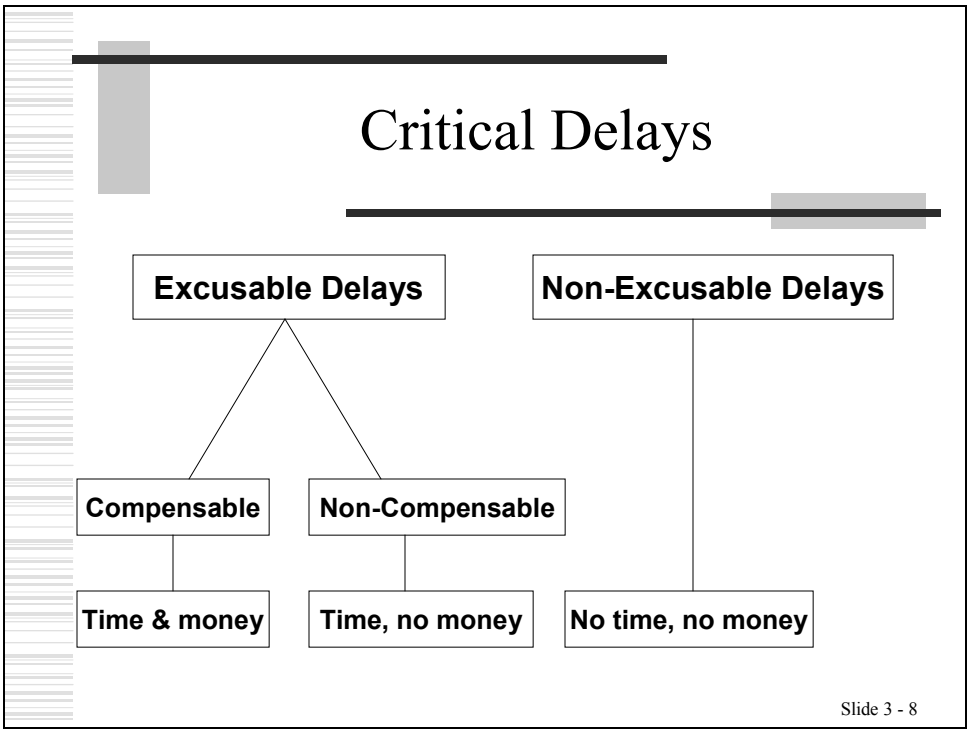
3. **Excusable delays** are delays for which the contractor is entitled to a time extension. The issues that cause **excusable delays** are typically unforeseeable and not the contractor's fault or responsibility. The contractor may be entitled to cost recovery if the delay is determined to be a compensable delay (defined below).

4. **Non-excusable delays** are usually foreseeable and avoidable. Typically, the contractor is at fault or responsible and, therefore, the contractor is not entitled to a time extension or cost recovery.

5. **Compensable delays** are excusable and the responsibility of the owner, potentially resulting in entitlement to cost recovery in addition to a time extension. Examples might include:
   a. Work additions;
   b. Suspension of work;
   c. Differing site conditions;
   d. Untimely response by owner (late approval of shop drawings or failure to make timely inspection).

6. **Non-compensable delays** are delays for which the contractor is not allowed to receive cost recovery. All non-excusable delays are non-compensable. Excusable delays that are not the fault or responsibility of the owner are also typically non-compensable. A *No Damage For Delay* clause may make all delays non-compensable. The terms of the governing contract will typically establish which excusable delays are non-compensable on a project. Typical examples include:
   a. Strikes;
   b. Floods and fires;
   c. Acts of God;
   d. Unusually severe weather.

Concurrent delays are multiple, critical delays that occur simultaneously. In the event that an owner-caused delay occurs concurrently with a contractor-caused delay, consider **primacy of delay** when evaluating.


Critical Delays
Excusable Delays
Non-Excusable Delays
Compensable
Non-Compensable
Time & money
Time, no money
No time, no money
Slide 3 - 8

Delay Analysis

Documents

1. Contemporaneous as-planned or baseline schedule. The as-planned schedule is typically the earliest complete and approved project schedule.

> *…in the absence of compelling evidence of actual errors in the CPMs we will let the parties "live or die" by the CPM applicable to the relevant time frames.*
>
> Sante Fe, Inc. VABCA No. 2168, 87-3 BCA ¶20677

2. Never use an as-planned schedule prepared after-the-fact. They can be very subjective and too easily biased towards the analyst's desired conclusions.

3. As-built information, including:
   a. Contemporaneous schedule updates (schedules submitted during the prosecution of the work).
   b. Daily reports, logs, and diaries.
   c. Meeting minutes.
   d. Correspondence and memoranda.
   e. Photographs.
   f. Other project documents (pay requisitions, concrete test reports, pile driving records, shop drawing and submittal logs, RFI logs, etc.).
   g. As-built schedules.

Techniques

The types of delay analysis techniques a reviewer of construction claims may encounter include:

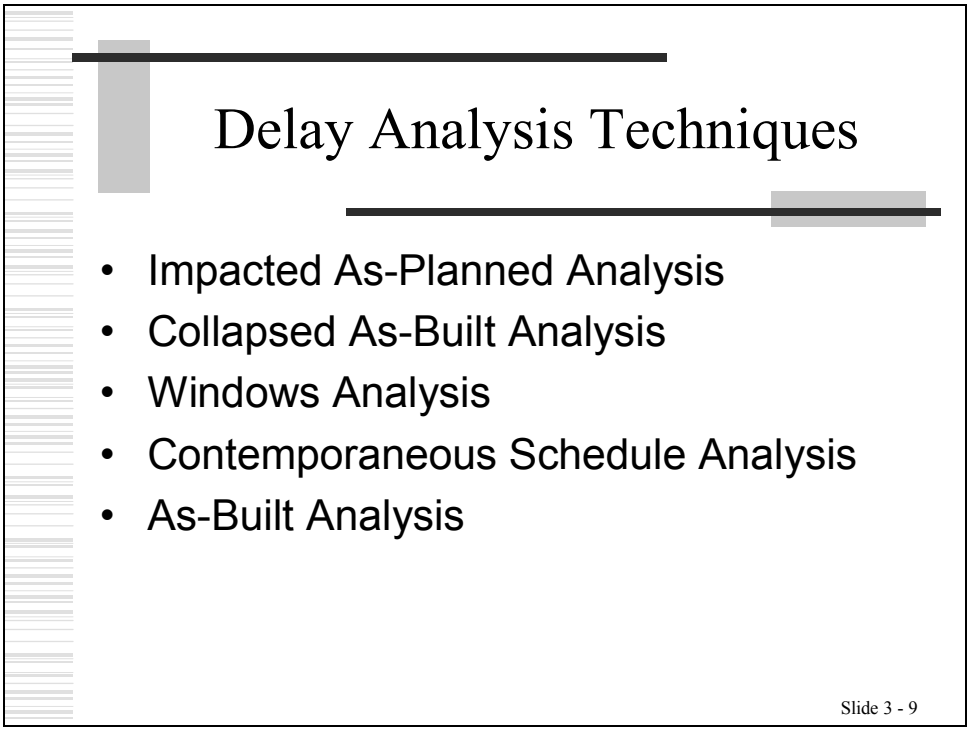
1. Impacted As-Planned Analysis

2. Collapsed As-Built Analysis

3. Windows Analysis

4. Contemporaneous Schedule Analysis

5. As-Built Analysis


Delay Analysis Techniques
• Impacted As-Planned Analysis
• Collapsed As-Built Analysis
• Windows Analysis
• Contemporaneous Schedule Analysis
• As-Built Analysis
Slide 3 - 9

Impacted As-Planned Analysis

1. This approach is usually performed by "impacting" or adding changes to the original (as-planned) project CPM schedule. These changes typically represent problems caused by the owner. The project delay that results from the addition of the changes supposedly represents the delay caused by these problems.

2. This delay analysis approach is often combined with an as-planned CPM schedule created after-the-fact for a project that originally had no schedule at all or only a barchart. The impacted as-planned approach has several weaknesses, including:

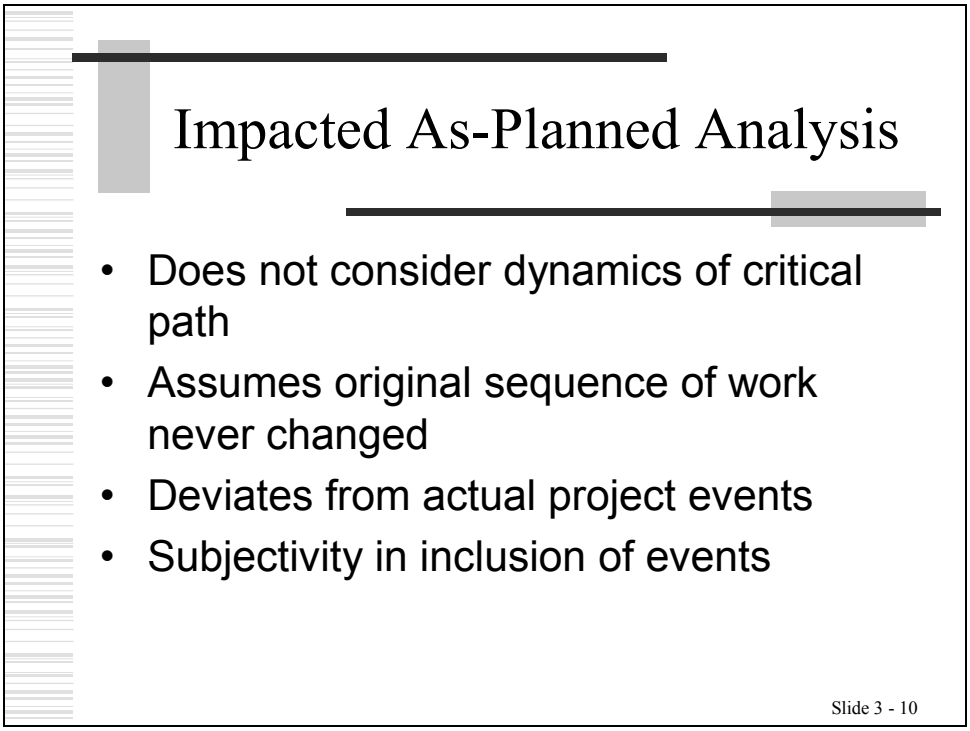
   a. Does not consider dynamics of critical path. Assumes a static critical path.

   b. Assumes project was completed using the sequence or approach originally planned. Does not account for changes in sequence or approach made during the prosecution of the work.

   c. "Impacted" schedule often has little or no resemblance to what actually occurred on the project.

   d. The analysis is subjective with regard to the events or delay that are incorporated into the schedule.

> *We have found that [the contractor's] analysis systematically excluded all delays and disruptions except those allegedly caused by the Government…We conclude that [his] analysis was inherently biased, and could lead to but one predictable outcome…To be credible, a contractor's CPM analysis ought to take into account, and give appropriate credit for all of the delays which were alleged to have occurred.*
>
> - Haney v. United States
> [30 CCF ¶70, 1891], 676 F.2d 584 (Ct. Cl. 1982)


Impacted As-Planned Analysis
• Does not consider dynamics of critical path
• Assumes original sequence of work never changed
• Deviates from actual project events
• Subjectivity in inclusion of events
Slide 3 - 10

Collapsed As-Built Analysis

The collapsed as-built analysis is another approach to the analysis of delays on projects with a CPM schedule. Procedurally, it is the opposite of the impacted as-planned approach. An as-built critical path schedule is developed for the project. Within this schedule, work is identified that allegedly represents changes or other excusable delays. This work is then removed from the as-built CPM schedule and the schedule recalculated. Any improvement in the project completion date equals the delay caused by the delays identified. This approach has several weaknesses.

1. Requires the creation of an as-built CPM schedule, which is extremely subjective. As a consequence, it is often biased to support the conclusions of the analyst. These biases are often found in the following places:
   a. Logic connections are often made that never existed in the project schedules and that were never recognized by the project participants.
   b. Mischaracterization of float as activity time.
   c. Misrepresentation of concurrent non-critical delays as being critical.

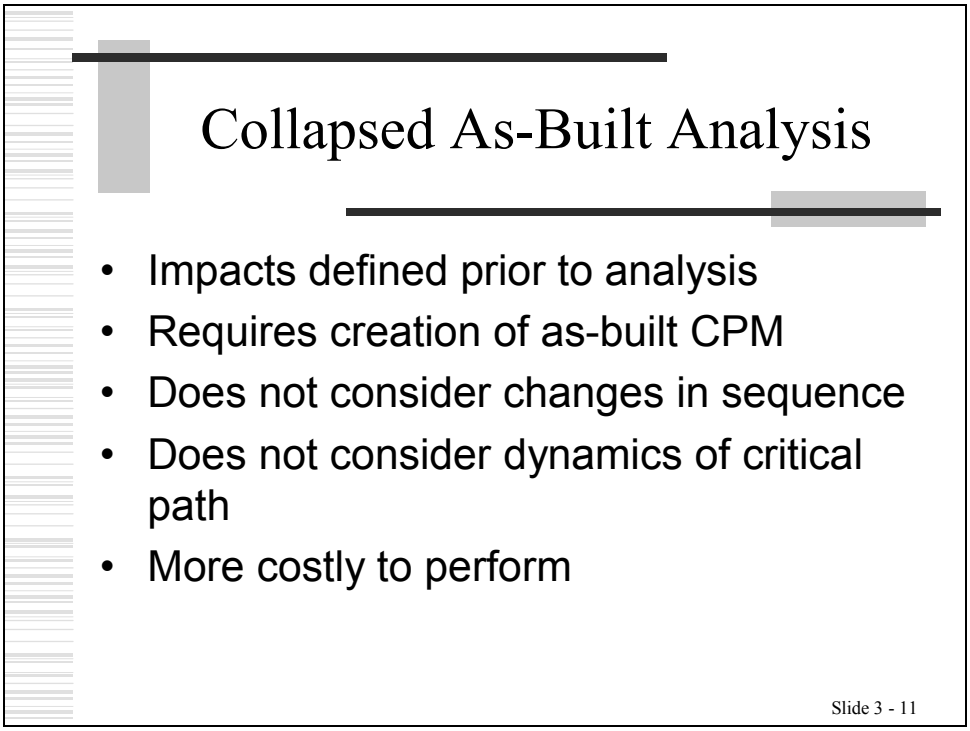
2. Does not consider how the parties would have viewed the changes in real time, and the decisions they may have made as a result of the changes.

3. Does not consider changes in sequence.

4. This method requires the analyst to determine specific “impacts” before performing any analysis. This analysis is very subjective. The analyst is first reaching conclusions about what caused a delay, and is only using the analysis to attempt to prove it. This is the proverbial tail wagging the dog.

5. This method ignores the fact that the schedule is dynamic. It does not allow for mitigation of delays and does not take into account the original plan of work.

6. In order to complete this method, the analyst must identify all delays, not just critical delays, and determine the as-built relationships among all activities. Accordingly, this method is often difficult and costly to perform and yields dubious results.


Collapsed As-Built Analysis
• Impacts defined prior to analysis
• Requires creation of as-built CPM
• Does not consider changes in sequence
• Does not consider dynamics of critical path
• More costly to perform
Slide 3 - 11

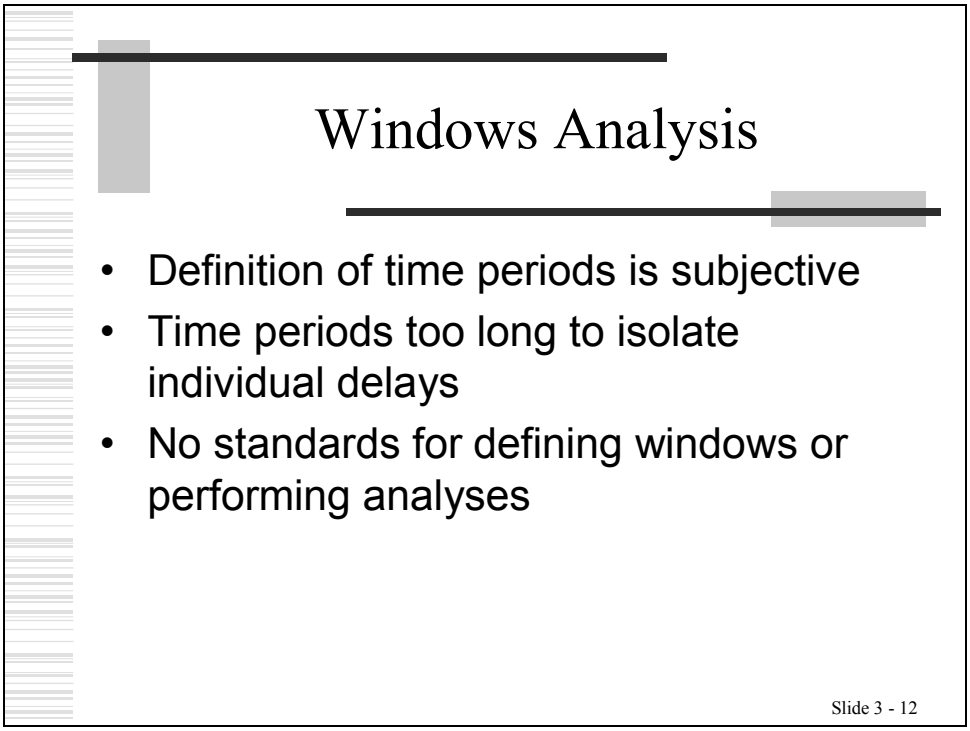
Windows Analysis

In this method, the delay period in question is divided into discrete time periods called “windows.” The endpoints for each period typically coincide with the onset and conclusion of an alleged delay issue. Once the time periods are established, the net schedule delays or gains are measured within each time period and assigned to specific causes.

1. Definition of the time periods is subjective.

2. Time periods are often too long to properly isolate individual delays, resulting in a commingling of delay events.

3. There are no industry standards governing the definition of a windows analysis.


Windows Analysis
• Definition of time periods is subjective
• Time periods too long to isolate individual delays
• No standards for defining windows or performing analyses
Slide 3 - 12

Contemporaneous Schedule Analysis

This analysis is performed by comparing the actual project schedules to the as-built information. This approach has several strengths and a weakness:

1. It is based on the contemporaneous project schedules, not on biased schedules created after-the-fact.

2. It takes into consideration shifts in the project critical path.

3. It accounts for changes in sequence or approach.

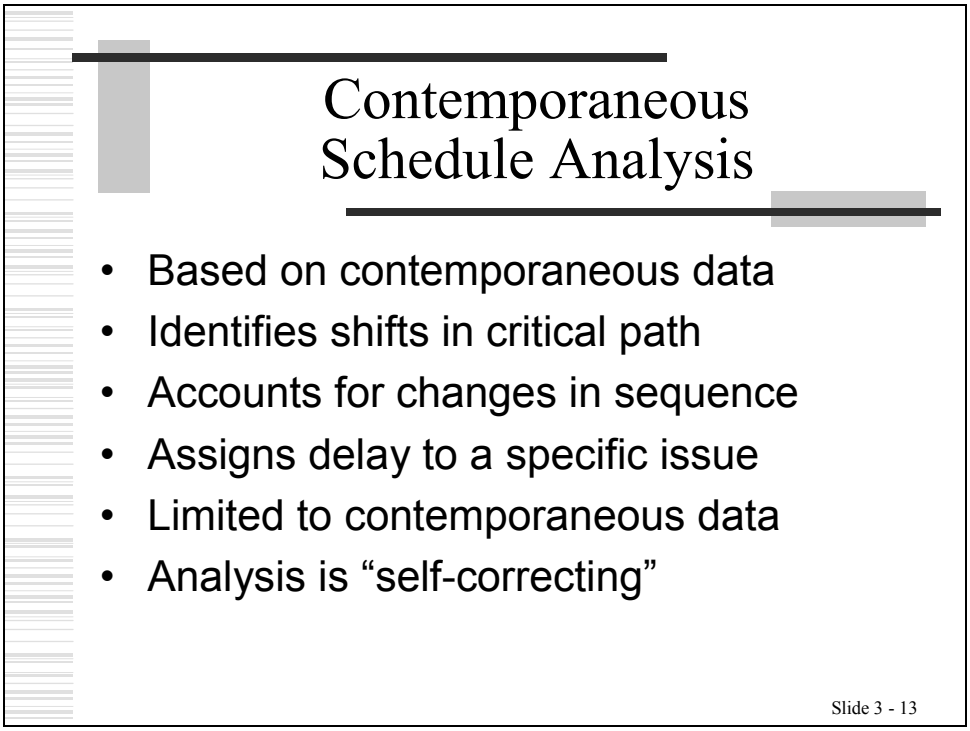
4. It most accurately represents the perception of the parties regarding the critical path of work when the delay was encountered.

5. It clearly identifies the delay attributable to a specific issue.

6. It can be performed on projects that have a barchart schedule or a CPM schedule.

7. Many schedule errors are not fatal, since the contemporaneous analysis approach is self-correcting. In other words, the errors in the schedule will become evident when comparing the schedules with the actual performance.

8. The major weakness of the contemporaneous approach is that it cannot be performed when there is no project schedule or when the contemporaneous project schedules contain gross and uncorrected errors. Limited adjustments in the contemporaneous schedules may be necessary to correct erroneous actual start and finish dates or progress, or logic errors recognized by the parties during the course of the project. More extensive adjustments are usually inappropriate. For projects using barchart schedules, the standards are similar. The analyst should rely on the contemporaneous schedules essentially as they were submitted.


Contemporaneous Schedule Analysis
• Based on contemporaneous data
• Identifies shifts in critical path
• Accounts for changes in sequence
• Assigns delay to a specific issue
• Limited to contemporaneous data
• Analysis is “self-correcting”
Slide 3 - 13

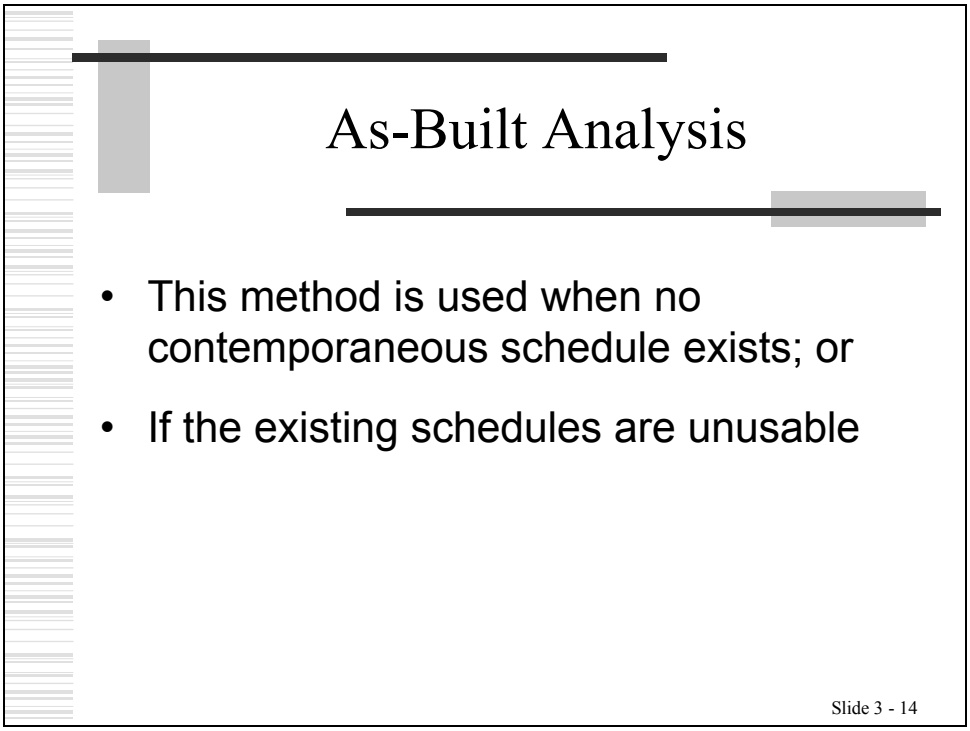
As-Built Analysis

1. This analysis is conducted by using contemporaneous project documents to identify critical delays to the actual schedule for the project.

2. The as-built schedule is not the same as the as-built CPM schedule developed for the collapsed as-built approach.

3. This type of an analysis is only used when there are no contemporaneous project schedules or the existing project schedules are unusable.

Claims Avoidance Tip – When a schedule is so poor that it is useless as a project management tool, it is even more critical for the agency's on-site personnel to document project events in great detail.


As-Built Analysis
• This method is used when no contemporaneous schedule exists; or
• If the existing schedules are unusable
Slide 3 - 14

Performance of a Delay Analysis

The exact approach used to analyze a delay using the contemporaneous schedules depends upon whether the delay is expected to occur as a result of an impending change or the delay has already occurred. The two cases are presented in the following sections.

Delay Analysis of Potential Changes

1. This approach is used when trying to evaluate the delay that will result from a contemplated change or other anticipated event. It can be used with either a CPM schedule or barchart schedule.

2. Steps in analysis:

   a. Update schedule to reflect current project status. When using a CPM schedule, the current project schedule update is often adequate.

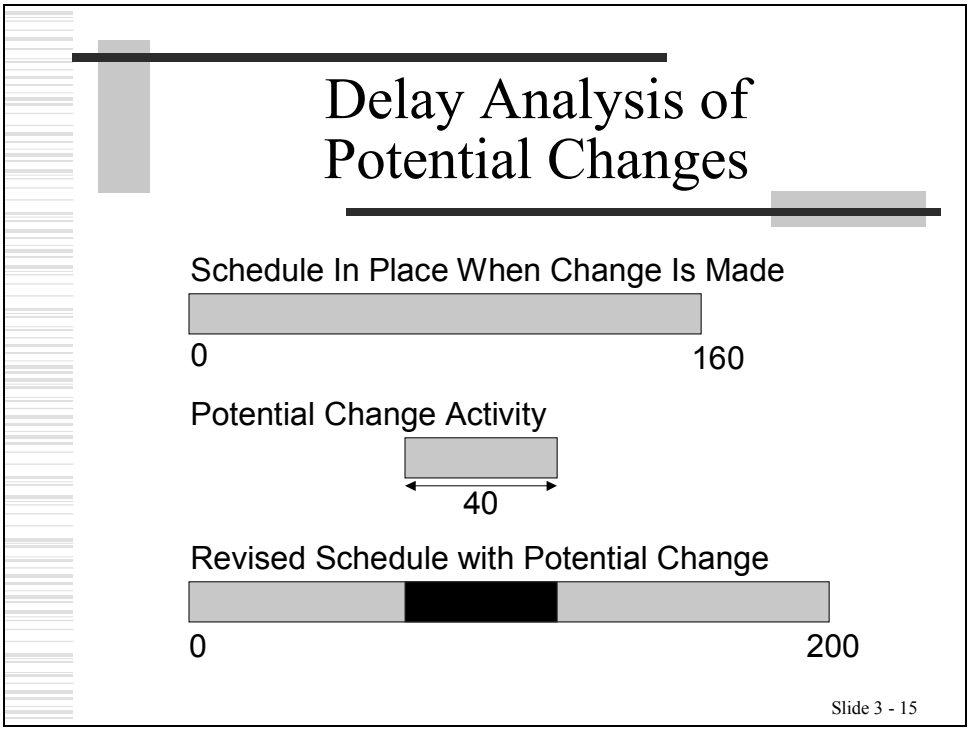
   b. Revise updated schedule to reflect anticipated change or event.

   c. Re-draft barchart schedule or recalculate CPM schedule after revisions are made.

   d. Time extension due is equal to the change to the project completion date.

(See Appendix F)

Claims Avoidance Tip – When possible, evaluate the impact a change will have on the project schedule when the change occurs and provide a time extension at that time.


Delay Analysis of Potential Changes
Schedule In Place When Change Is Made
0
160
Potential Change Activity
40
Revised Schedule with Potential Change
0
200
Slide 3 - 15

Analysis After Delay Has Occurred

1. Used in situations where delay event has already occurred.

2. Steps in analysis:

    a. Identify as-planned schedule.

    b. Identify critical path in as-planned schedule.

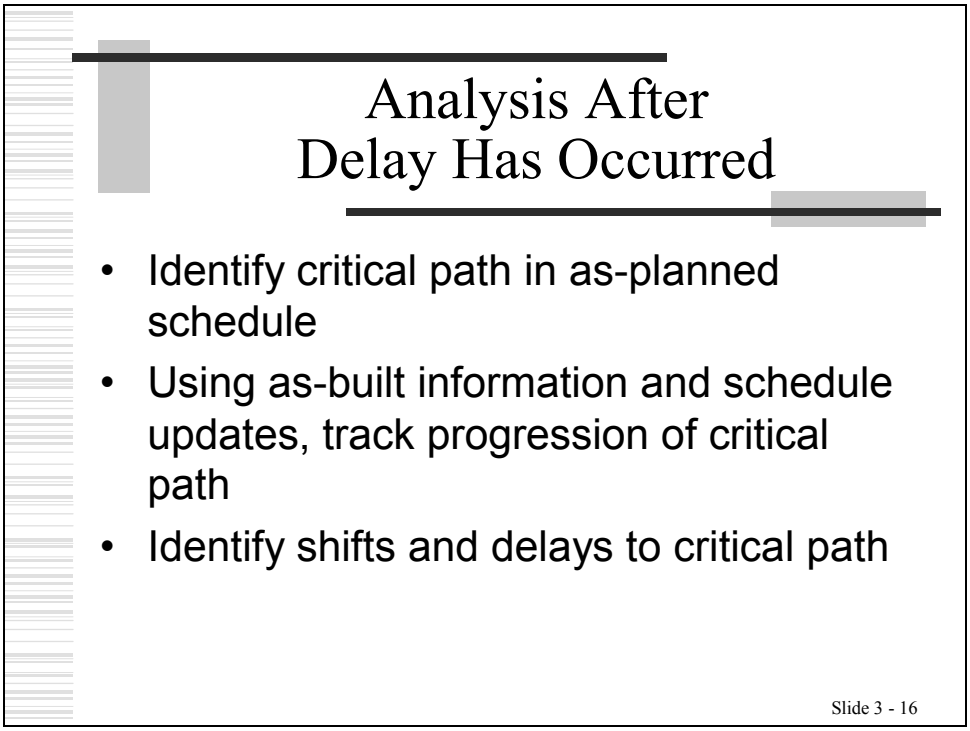
    c. Using as-built information and schedule updates, track critical path.

    d. Identify delays and shifts in the project critical path.

        i. Delays are the difference between the scheduled and actual progress of critical path activities.

        ii. A shift occurs when the float on a non-critical path is consumed and the path becomes the new critical path. A shift may result from slow progress on the non-critical path due to a delay or other source; accelerated progress on the critical path; or schedule revisions.

(See Appendix G)


Analysis After
Delay Has Occurred
• Identify critical path in as-planned schedule
• Using as-built information and schedule updates, track progression of critical path
• Identify shifts and delays to critical path
Slide 3 - 16

Inefficiency

Definitions

1. **Productivity** is the ratio of work performed to resources expended. For example, cubic yards of asphaltic concrete installed per labor hour. In construction, productivity is often expressed as the inverse. For example, labor hours per cubic yard installed.

2. **Inefficiency** results when more resources (labor hours, for example) are used to accomplish the same amount of work or less work is performed with no change in resources.

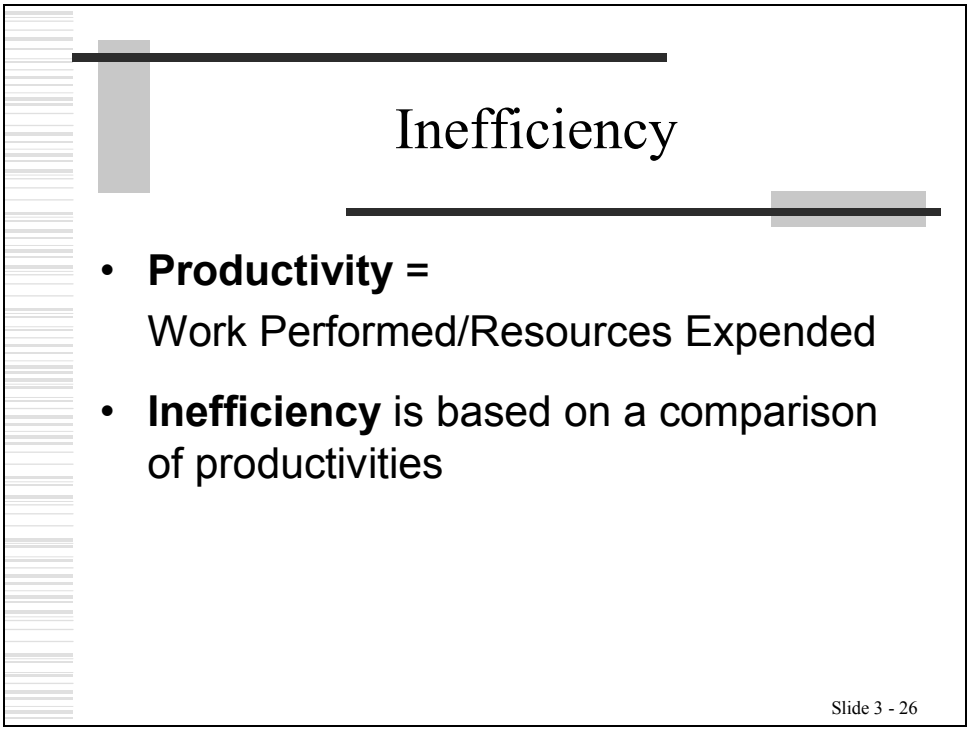
   Inefficiency Factor = (Unimpacted Prod. – Impacted Prod.) / Unimpacted Prod.

Measuring Productivity

1. Units of work and resources should be expressed in terms of a measurable quantity (cubic yards of concrete, labor hours, etc.).

2. Sometimes measured in terms of percent complete or cost per unit, though these measures are not preferred and are often erroneous. They can be very misleading as they are easily distorted by front-end loading, the cost of equipment and materials, and the mix of different types of work.

3. Maintenance of good records is essential to evaluating inefficiencies.


Inefficiency
• Productivity =
Work Performed/Resources Expended
• Inefficiency is based on a comparison of productivities
Slide 3 - 26

Methods of Measuring Inefficiency

1. **Measured Mile** – Comparison of productivity of unimpacted (efficient) and impacted (inefficient) work on the same project. This method eliminates from consideration problems for which the contractor is responsible such as errors in the bid, deficiencies in labor and management, equipment problems, etc. May not be possible to identify a measured mile or unimpacted period.

2. **Comparison with other projects** – Similar to measured mile approach, but unimpacted period is taken from other projects. Comparison may be distorted by differences in the scope, nature, character, magnitude, accessibility, contract requirements, management, staffing, equipment, and approach used by the contractor to complete the work on the two projects.

3. **Comparison with the contractor's bid, estimate, or plan** – Involves the comparison of what was bid or anticipated to actual performance. Primary weakness is the assumption that the estimate was accurate or reasonable.

4. **Use of Experts** – Measure of inefficiency based on opinion of expert familiar with the type of work that was inefficient. This is not an analytical approach and its accuracy depends upon the capabilities of the expert. The credibility of the expert is a factor in the outcome.

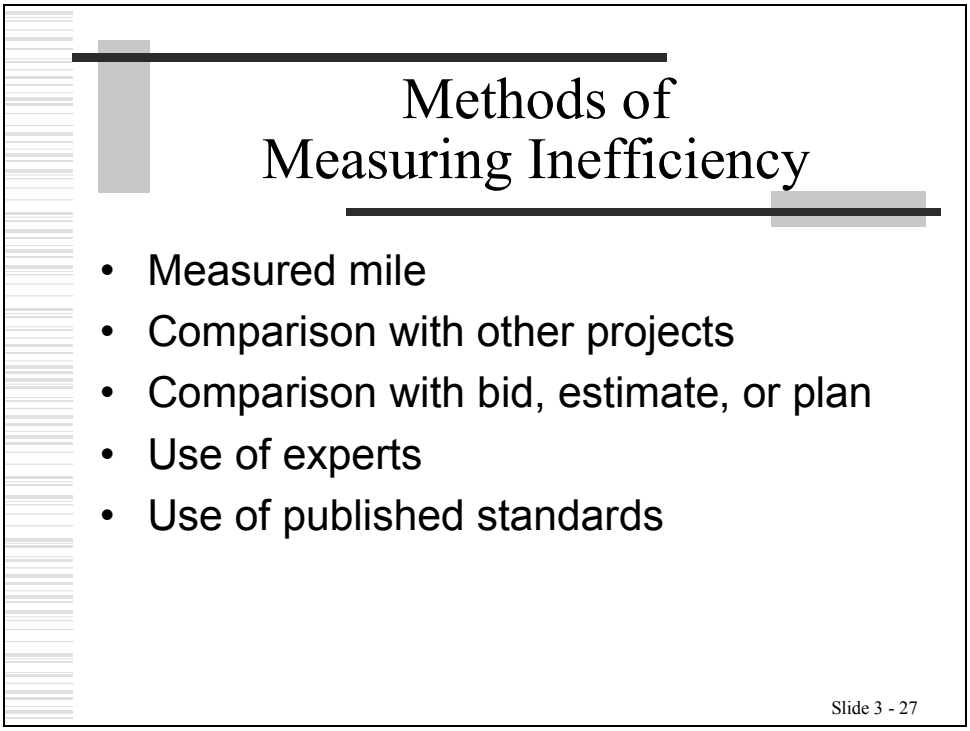
5. **Use of Published Standards** – This approach relies upon the use of factors or multipliers applied to labor and equipment usage to arrive at a measurement of inefficiency. Examples of shortcomings of published standards:

    a. Factors are often based on limited analysis.

    b. Factors are general and may not apply to a particular project.

    c. Factors apply only to the trade or industry that generated the factor.

    d. Because factors are often prepared by a particular industry or trade organization expressly for use in change order or claim situations, their objectivity may be questionable.


Methods of
Measuring Inefficiency
• Measured mile
• Comparison with other projects
• Comparison with bid, estimate, or plan
• Use of experts
• Use of published standards
Slide 3 - 27

Acceleration

Acceleration is an action or actions taken to improve upon the anticipated project completion date (or other milestone). Typically, acceleration entails a change in schedule, a change in sequence, or a change in resources.

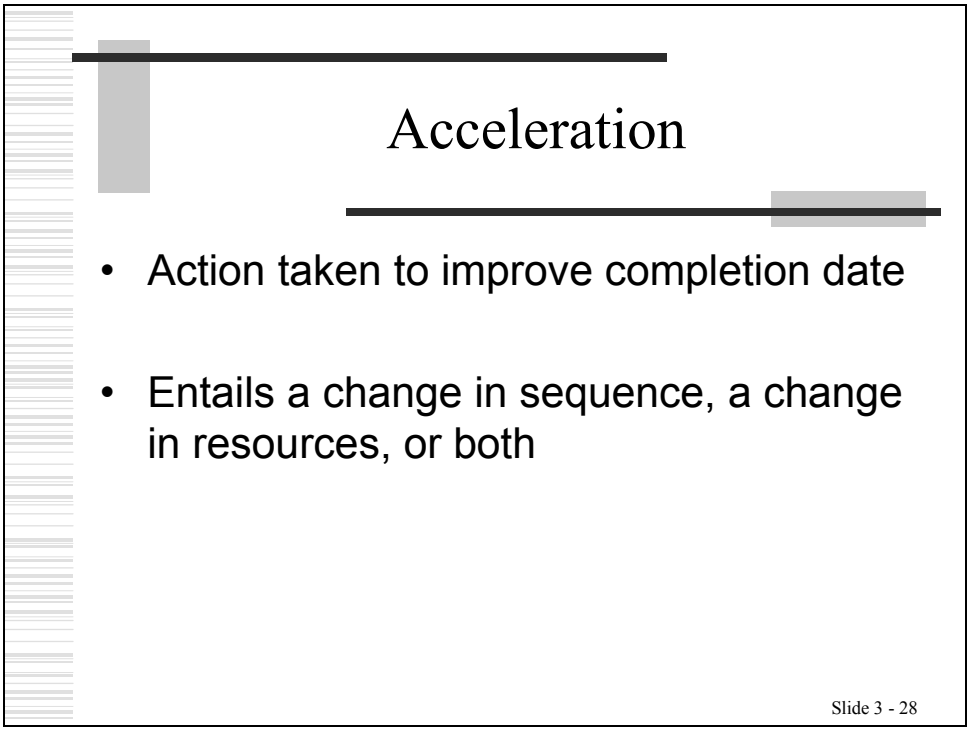
Reasons for Acceleration.

1. Directed by owner to meet a new, earlier project completion date.

2. Directed by owner to mitigate excusable delays.

3. Directed by owner to mitigate non-excusable delays.

4. Initiated by contractor to mitigate contractor-caused delays and other non-excusable delays.


Acceleration
• Action taken to improve completion date
• Entails a change in sequence, a change in resources, or both
Slide 3 - 28

Constructive Acceleration

A contractor must prove the following five criteria to recover for the constructive acceleration of its work.

1. There was an excusable delay.

2. The contractor gave notice of the excusable delay and requested a time extension.

3. The owner failed or refused to grant a time extension.

4. The contractor gave notice that compliance with the existing schedule would necessitate an acceleration of the work.

5. The contractor actually accelerated the work and incurred increased costs.

- Appeal of Commercial Contractors Equipment, Inc. ASBCA No. 52932 (September 17, 2003)

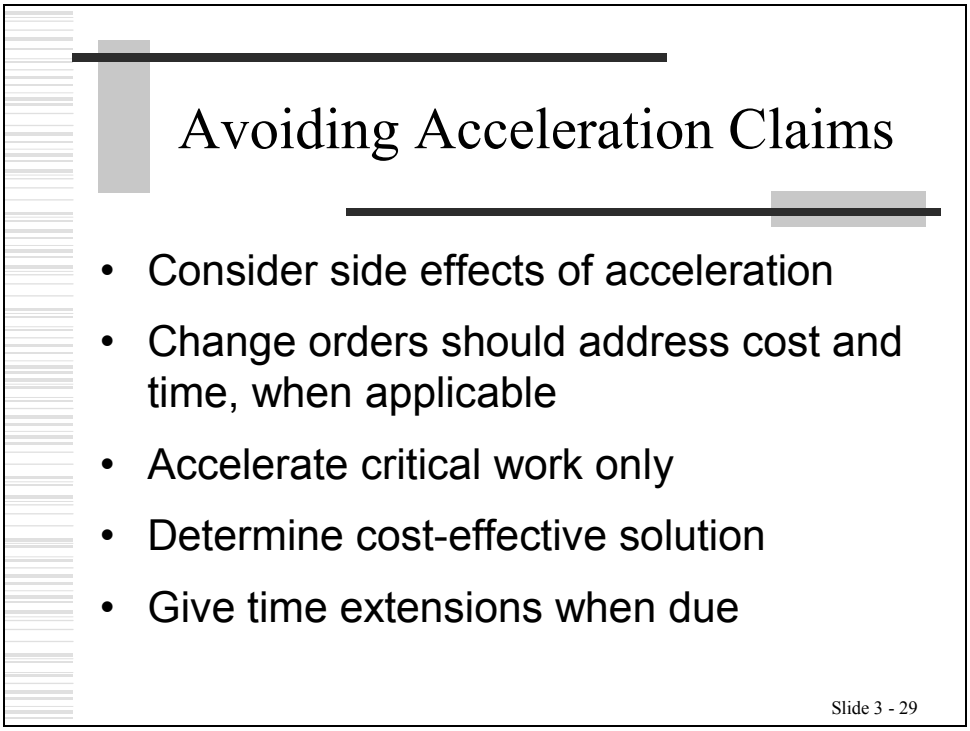
Claims Avoidance Tip – Avoiding Acceleration Claims

1. Consider possible side effects of acceleration actions such as impact on productivity.

2. Change orders executed that accelerate the project should address both costs and time. The contract completion date should be adjusted to reflect anticipated improvement. Give time extensions when they are due.

3. Accelerating “everything” is usually costly and unnecessary. Only critical work should be accelerated.

4. It may be more cost effective not to accelerate.


Avoiding Acceleration Claims
• Consider side effects of acceleration
• Change orders should address cost and time, when applicable
• Accelerate critical work only
• Determine cost-effective solution
• Give time extensions when due
Slide 3 - 29

MODULE 3: EXERCISES

Exercise No. 3.1: Analysis Using Contemporaneous Schedules After Delay Has Occurred

Objective

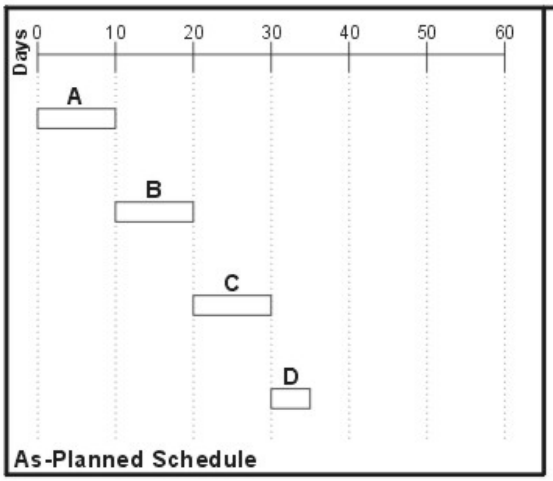
The participants will review the following background information and then follow along as the instructor leads the class through a delay analysis of the four activities.

Background

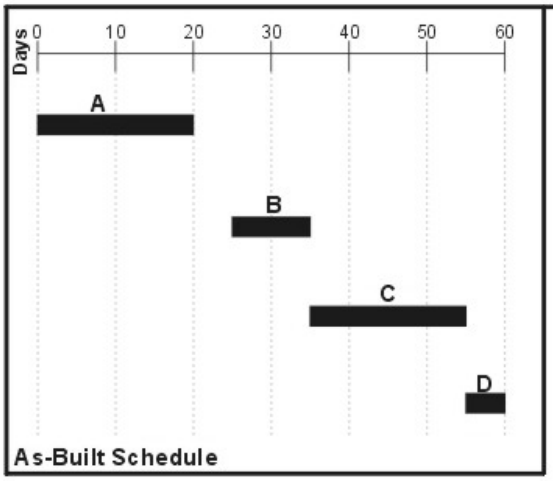
A contractor begins work on a project that is required to be completed in 35 calendar days. The contractor breaks the work into four main activities (A, B, C, and D) as shown in Figure 1, the As-Planned Schedule.

The contractor encounters problems during the prosecution of the work and finishes 25 calendar days late, resulting in a total project time of 60 calendar days, as shown in Figure 2, the As-Built Schedule.

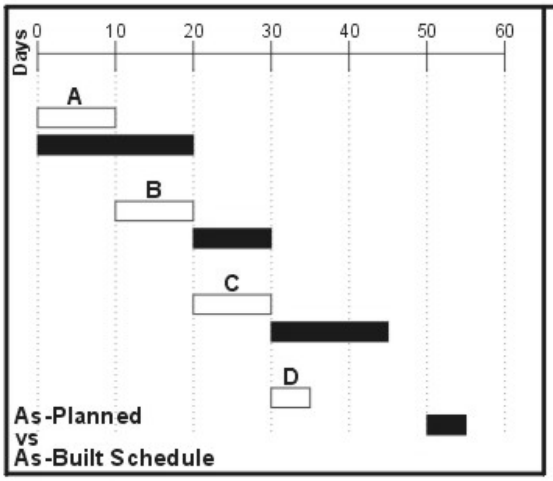
Based on these two schedules, determine which activities delayed project completion and by how much.



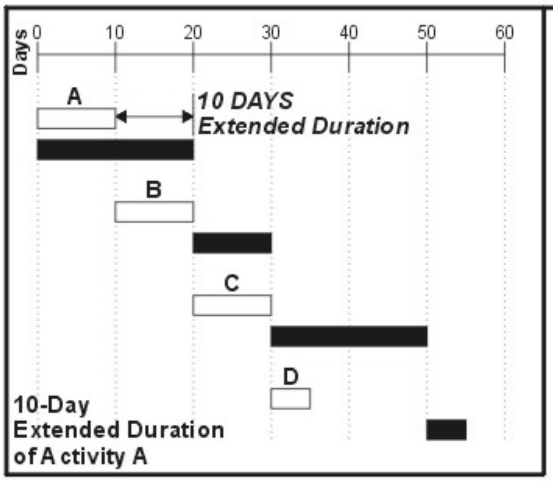
- Figure 1
  The As-Planned Schedule represents the contractor's plan for completing the project work. It is usually the first complete and approved project schedule.



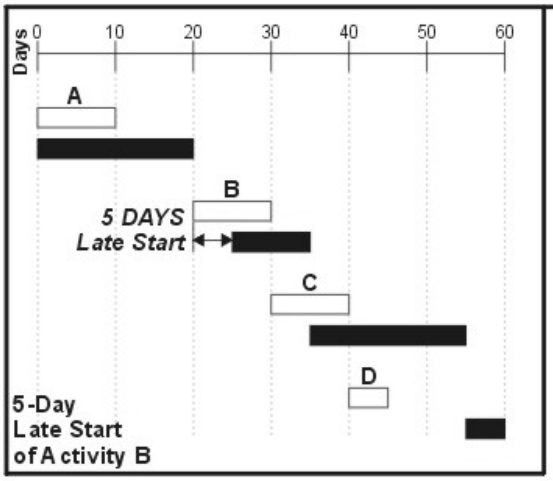
- Figure 2
  The As-Built Schedule depicts when the project work was actually performed. It is often plotted from the project daily reports and logs.



- Figure 3
  This figure is a plot of the As-Planned and As-Built Schedules together.

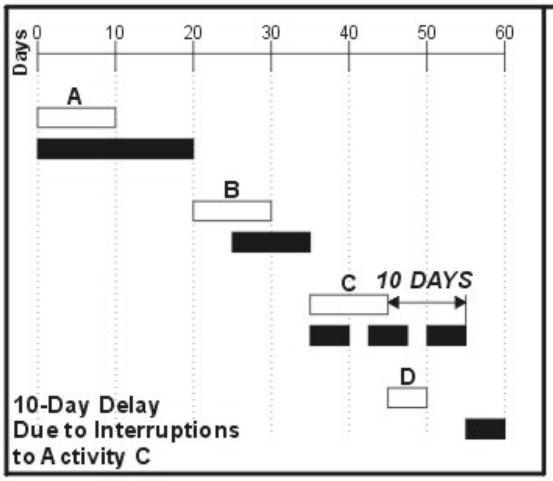


- Figure 4
  This figure shows that the 10 day extended duration of Activity A resulted in a 10 day project delay.



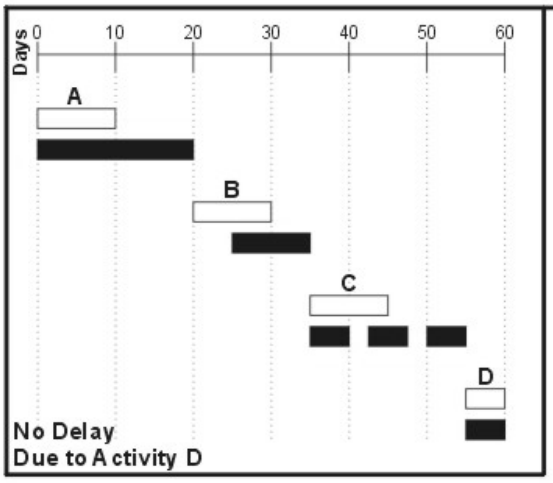
- Figure 5
  This figure shows five additional days of project delay due to the late start of Activity B.

  NOTE:
  The As-Planned critical path was adjusted for the initial delay.



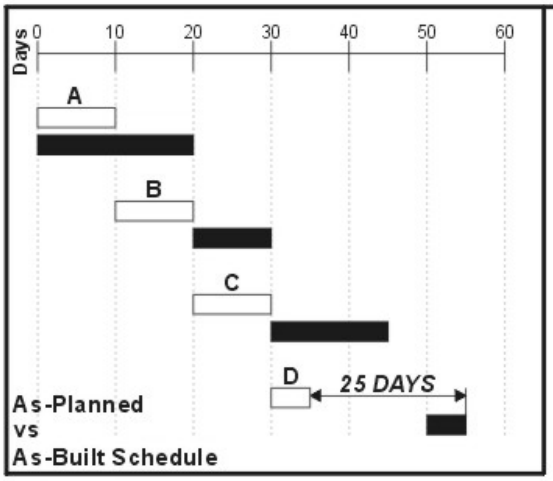
- Figure 6
  This figure shows 10 additional days of project delay attributable to the intermittent performance of Activity C.

  NOTE:
  The As-Planned critical path was adjusted for the previous delays.

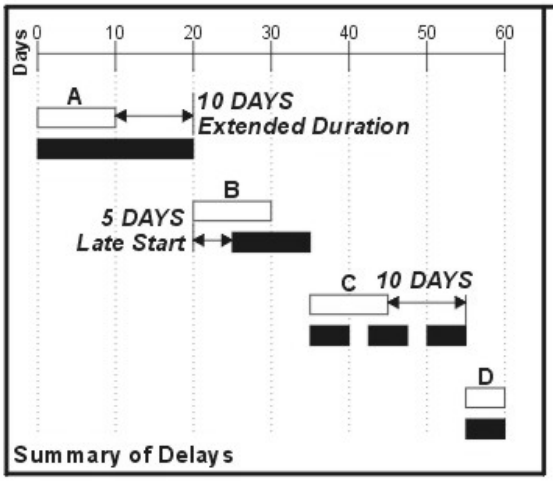


- Figure 7
  This figure shows no project delays attributable to Activity D.

  Note:
  The As-Planned critical path was adjusted for the previous delays.



- Figure 8
  This figure shows the total project delay of 25 days.



- Figure 9
  This figure shows the summary of delays.

SUMMARY OF DELAYS

ACTIVITY A	10 DAYS
ACTIVITY B	5 DAYS
ACTIVITY C	10 DAYS
ACTIVITY D	0 DAYS

Exercise No. 3.2: Measured Mile

Objective

Based on the background information provided below, perform a measured mile analysis to calculate the contractor's inefficiency factor. Refer to page 3-34 for the inefficiency factor equation.

Background

A project consists of the installation of a 5280-foot water line. The contractor has a crew of 5 workers that installed 2400 feet through week 8 of the project. Beginning week 9, it accelerates its operations to working six, 10-hour shifts per week as opposed to five, 8-hour shifts per week. The contractor alleges this caused inefficiency in its excavation operation.

Progress was tracked in daily logs and are summarized in the following table:

Week	Work Performed
1	Contractor mobilized.
2	Survey site.
3	Excavated 390' of trench for waterline.
4	Excavated 410' of trench for waterline.
5	Excavated 420' of trench for waterline.
6	Excavated 390' of trench for waterline.
7	Excavated 380' of trench for waterline.
8	Excavated 410' of trench for waterline.
9	Excavated 500' of trench for waterline.
10	Excavated 490' of trench for waterline.
11	Excavated 490' of trench for waterline.
12	Excavated 480' of trench for waterline.
13	Excavated 470' of trench for waterline.
14	Excavated 450' of trench for waterline.

Exercise No. 3-3: Constructive Acceleration

Objective

Determine if the contractor's claim presented below has merit. In other words, if the contractor could prove its acceleration costs, would the contractor be entitled to additional compensation for constructive acceleration? Refer to page 3-40 for the 5 criteria the contractor must prove.

Background

A contractor receives notice to proceed and starts work on March 1, 2003 for a contract to construct 10 miles of highway. The contract is not a working day contract; the completion date is October 31, 2003. The contract includes an early completion incentive in the amount of $10,000 per day that the contract is early, with a maximum incentive payment of $300,000.

The contractor submitted a schedule indicating it would complete the work 30 days early, thereby maximizing the incentive payment. The project was actually completed 25 days early, resulting in an incentive payment of $250,000.

The contractor has alleged that it was not able to access the site on ten working days during the month of April due to two separate blizzards. The contractor submitted its request for a time extension to the owner on September 14, 2003. The request was promptly denied by the Owner.

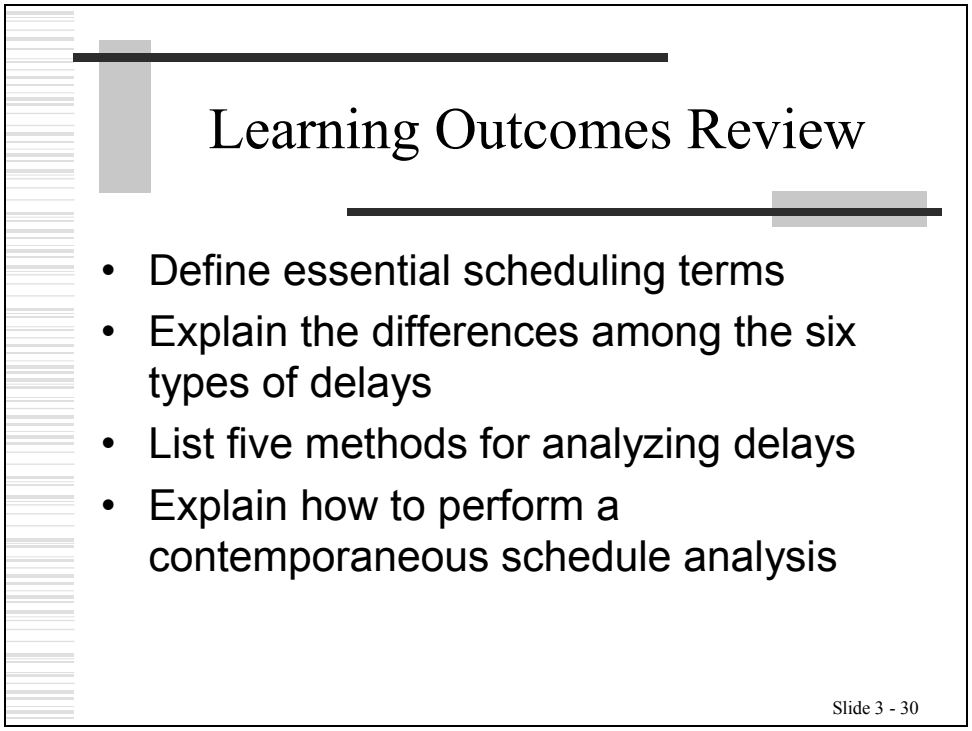
The contractor then submitted a claim stating that during the project it encountered 10 days of unusually severe weather, but that the owner refused to grant any time extension. As a result, the contractor alleges that it incurred increased costs as a result of the acceleration required to offset these delays. In order to accomplish the acceleration, the contractor worked every Saturday from May through August (eighteen in all) and extended the shifts from 8 hours to 10 hours during this same period. The contractor's claim consists of the following:

1. Premium time for work on Saturdays	$75,000
2. Premium time for 10-hour shifts (M – F)	$50,000
3. Inefficiency due to labor fatigue	$25,000

In all, the contractor is seeking to be paid an additional $50,000 in incentive payments and $150,000 in constructive acceleration costs.

Exercise No. 3-4: Analyzing Delays

(See Appendix I)


Learning Outcomes Review
• Define essential scheduling terms
• Explain the differences among the six types of delays
• List five methods for analyzing delays
• Explain how to perform a contemporaneous schedule analysis
Slide 3 - 30

Learning Outcomes Review (continued)

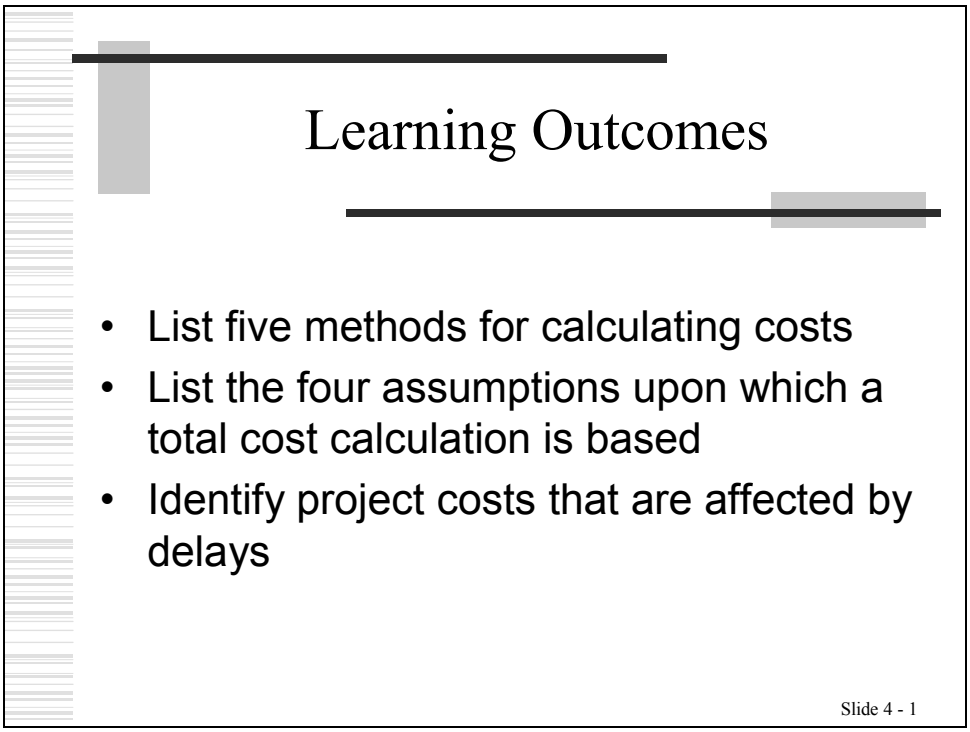
- List five methods for measuring productivity/inefficiency
- Explain how to perform a measured mile analysis
- Describe how to avoid constructive acceleration

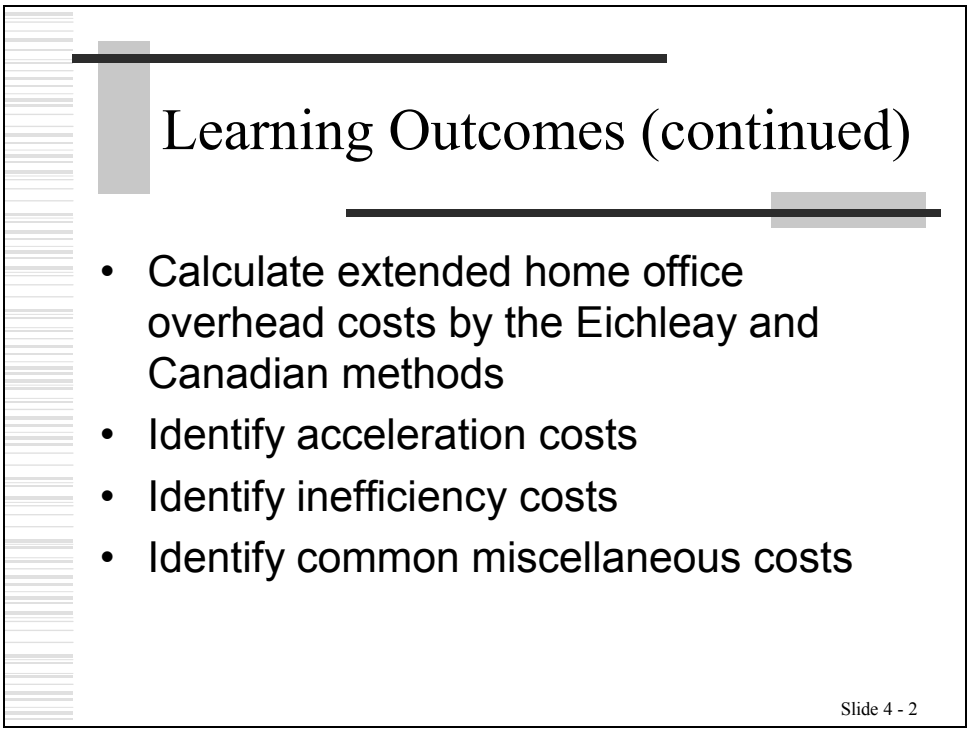
Slide 3 - 31

MODULE 4: COSTS

References

- Rental Rate Blue Book For Construction Equipment, Vol. 1, 2004, PRIMEDIA Business Magazines & Media, Inc.
- Armed Service Board of Contract Appeals in Eichleay Corporation, ASBCA No. 5183, 60-2 BCA 2688.
- Ohio Department of Transportation, Section 109.05, Extra and Force Account Work, Paragraph D.3.b
- National Cooperative Highway Research Program, Synthesis 315, Compensation for Contractors' Home Office Overhead, A Synthesis of Highway Practice, Transportation Research Board of the National Academies


Learning Outcomes
• List five methods for calculating costs
• List the four assumptions upon which a total cost calculation is based
• Identify project costs that are affected by delays
Slide 4 - 1

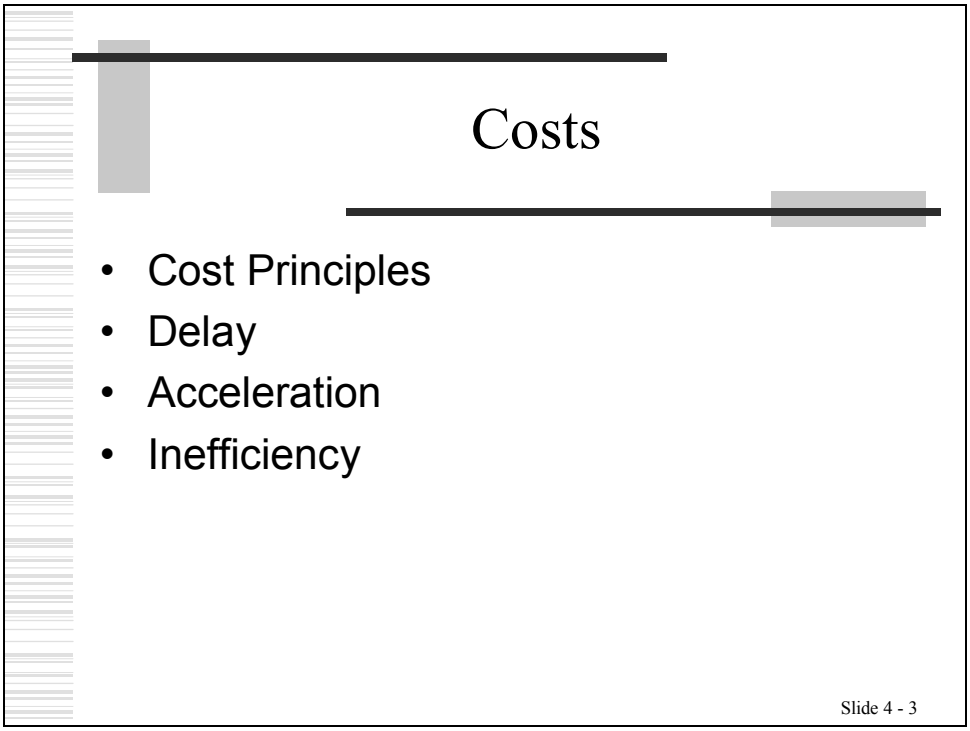

Learning Outcomes (continued)
• Calculate extended home office overhead costs by the Eichleay and Canadian methods
• Identify acceleration costs
• Identify inefficiency costs
• Identify common miscellaneous costs
Slide 4 - 2

Reviewing Claims

1. There is always a tendency to begin discussing the costs associated with claims first. Fight this tendency. Costs are the last consideration. Costs can only be calculated once the questions of entitlement and impact have been answered. For example, to determine costs incurred by an alleged delay, the analyst must identify the work that was delayed, the extent of the delay, and whether or not the delay was excusable and compensable before costs can be determined.

2. The costs associated with delay, acceleration, and inefficiency are different, but many of the cost principles that underlie the determination of these costs are similar. Thus, the first items in this section will address these underlying principles. Later items will address the cost components of delay, acceleration, and inefficiency separately.

Claims Avoidance Tip – Agree to the cost and the time impacts of a change before it is performed.


Costs
• Cost Principles
• Delay
• Acceleration
• Inefficiency
Slide 4 - 3

Five Methods of Calculating the Cost of a Change

1. **Contract** — Most transportation agency contracts dictate a methodology for calculating cost.

2. **Estimates** — It is generally preferred that issues related to delays, acceleration, and inefficiency be recognized and dealt with before they occur. For example, it is preferred that the delay that will be caused by a change be identified and the associated costs agreed to as part of the negotiations for the change order. In this situation, the costs of the delay, acceleration, and inefficiency will be agreed to before they are actually experienced.

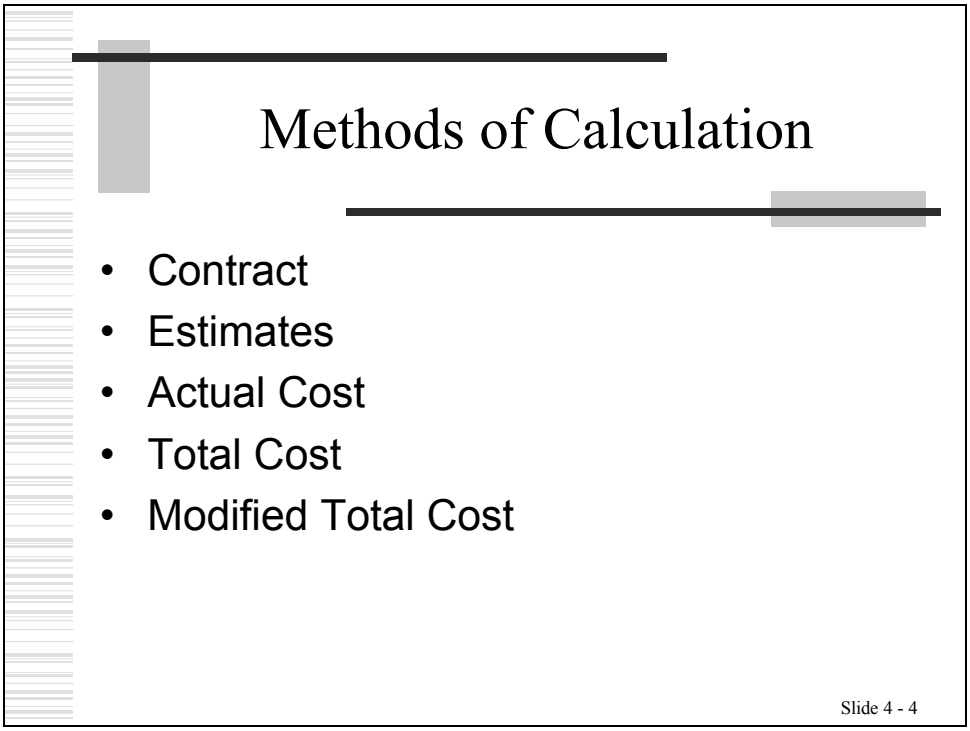
3. **Actual Cost** — If the delay, acceleration, or inefficiency has already been experienced, then estimating its cost is inappropriate. After an event takes place, it is preferred to measure the cost of the event based on the costs actually incurred to perform the work. Sometimes an audit may be necessary to establish the actual costs.

4. **Total Cost** — Difference between contractor's bid and actual costs. This method assumes that the contractor's bid was accurate. It also assumes that the contractor in no way contributed to the reduced efficiency and that all of the additional costs are solely attributable to the delays cited. In other words, for a total cost claim to be successful, the following criteria must be met:

    a. Nature of the impact was such that costs could not be tracked to specific impacts.
    b. Owner responsible for all added costs.
    c. Contractor's costs were reasonable.
    d. Contractor's bid was reasonable.

5. **Modified Total Cost** — Adjusted total cost to account for errors in the bid or added costs that were not the owner's responsibility.

(See Appendix B)


Methods of Calculation
• Contract
• Estimates
• Actual Cost
• Total Cost
• Modified Total Cost
Slide 4 - 4

Labor Costs Associated with Delays

Idle labor

1. Suspensions or work stoppages.

2. Disruptions.

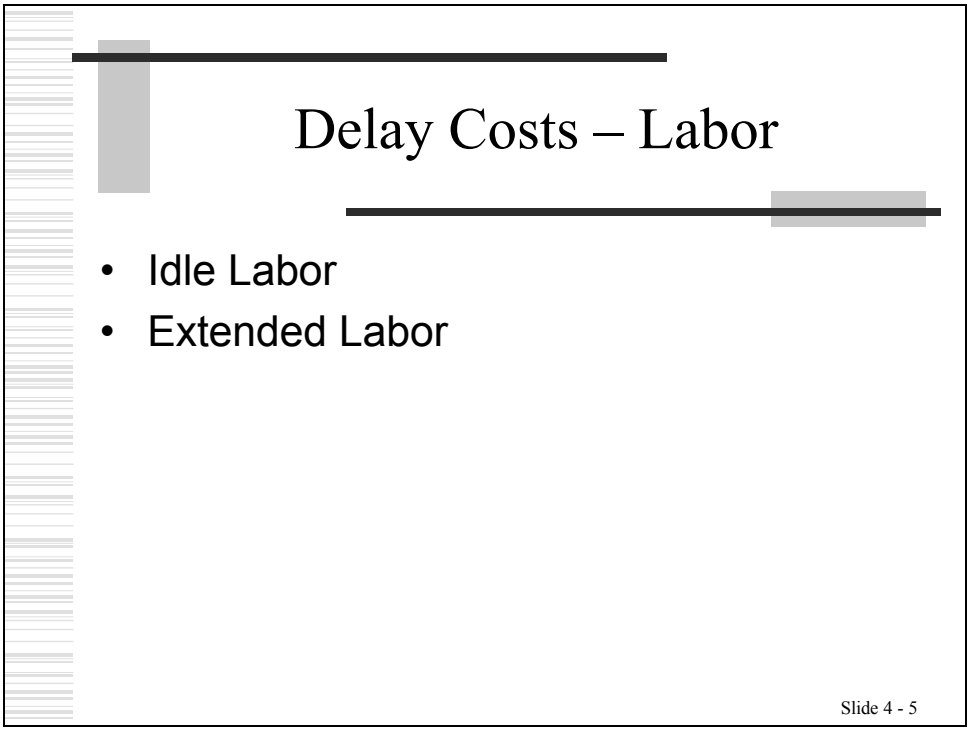
Extended labor

1. Added labor costs, inclusive of **burden,** that resulted from an increase in the project duration. **Burden** is the portion of a mark-up on labor costs that includes the cost of fringe benefits, taxes, and similar labor add-ons. In addition to burden, labor mark-ups might also include overhead and profit.

2. May include such things as extended use of flagmen, electricians to maintain temporary electrical system, etc.

3. Supervisory personnel requirements may also be time dependent, and therefore subject to recovery. Contract should address whether supervisory personnel are considered as field overhead or as a direct extended labor cost.

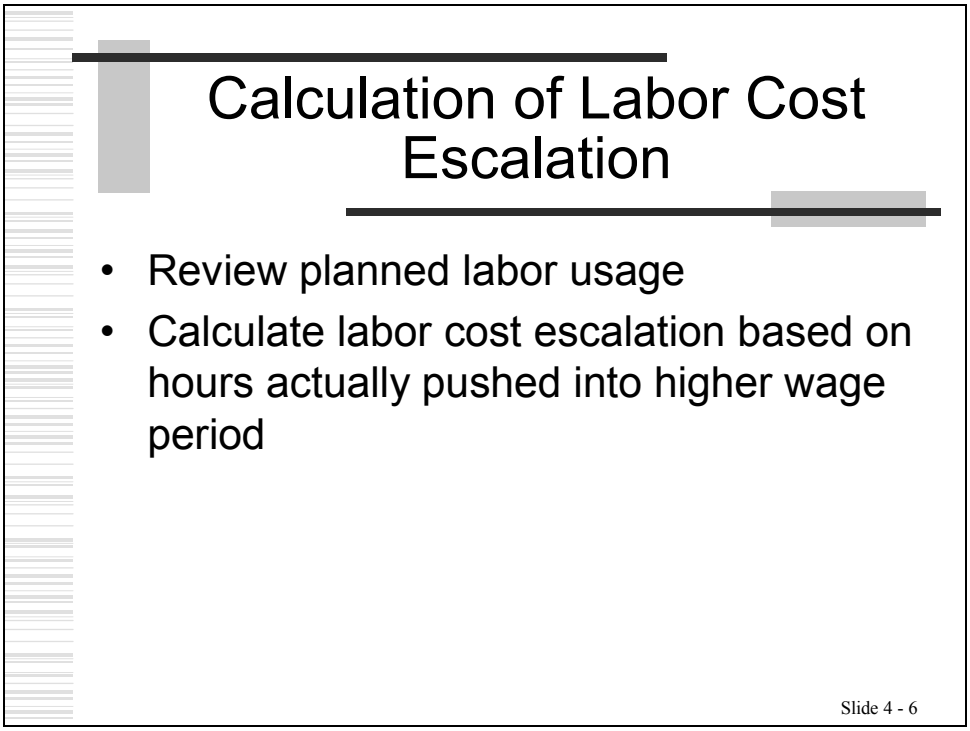
(See Appendix B)


Delay Costs – Labor
• Idle Labor
• Extended Labor
Slide 4 - 5

Labor Cost Escalation

Labor cost escalation occurs when delays push base contract work into higher wage rate periods.

(See Appendix B)


Calculation of Labor Cost Escalation
• Review planned labor usage
• Calculate labor cost escalation based on hours actually pushed into higher wage period
Slide 4 - 6

Equipment Costs Associated with Delay

1. Idle equipment costs are calculated in a manner similar to idle labor costs.

2. Extended equipment use may include items such as generators, dewatering pumps, scaffolding, etc.

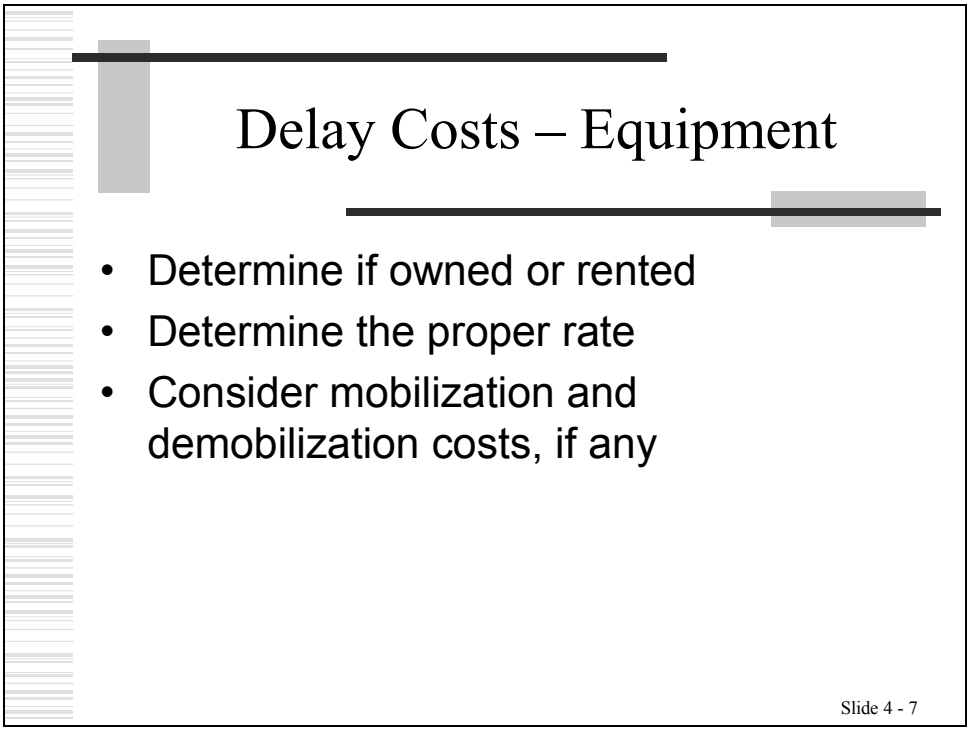
3. Consider mobilization and demobilization costs for added equipment or equipment removed from the site due to extended delay.

4. The primary difficulty in performing equipment cost calculations is determining the proper rate. The first step in calculating the proper rate is determining whether the equipment is rented or owned by the contractor. There are separate considerations for each category.

5. Equipment cost escalation may result from extended equipment use, but is rare.

6. Equipment costs are often estimated with the aid of industry guides, such as the Rental Rate Blue Book. The Blue Book lists estimated base rates for different equipment makes and models and provides adjustment factors based on equipment age and the project location. The Blue Book also identifies the portion of the equipment rate that comes from the following cost elements: depreciation; major overhaul; cost of facilities capital; and indirect costs.

(Refer to Appendix C for the Introduction to the Rental Rate Blue Book.)


Delay Costs – Equipment
• Determine if owned or rented
• Determine the proper rate
• Consider mobilization and demobilization costs, if any
Slide 4 - 7

Method for Calculating Rented Equipment Costs

1. Derive hourly rate by dividing period of rental by number of hours in rental period. For example, 8 hours/day, 40 hrs/week, or 176 hours/month.

2. Multiply hourly rate by number of hours of idleness or extension.

3. If operating, add operating costs expressed as an hourly rate.

4. Generally, operators are treated as a labor cost.

Options for Determining Owned Equipment Costs

1. Use actual audited equipment costs. May require auditing expertise.

2. Use equipment ownership cost guide specified in contract, if any.

3. Otherwise use published industry equipment ownership cost guides. For example, the Rental Rate Blue Book or Corps of Engineers Construction Equipment Ownership and Operating Expense Schedule.

4. Make appropriate cost adjustments to account for:

    a. Project region

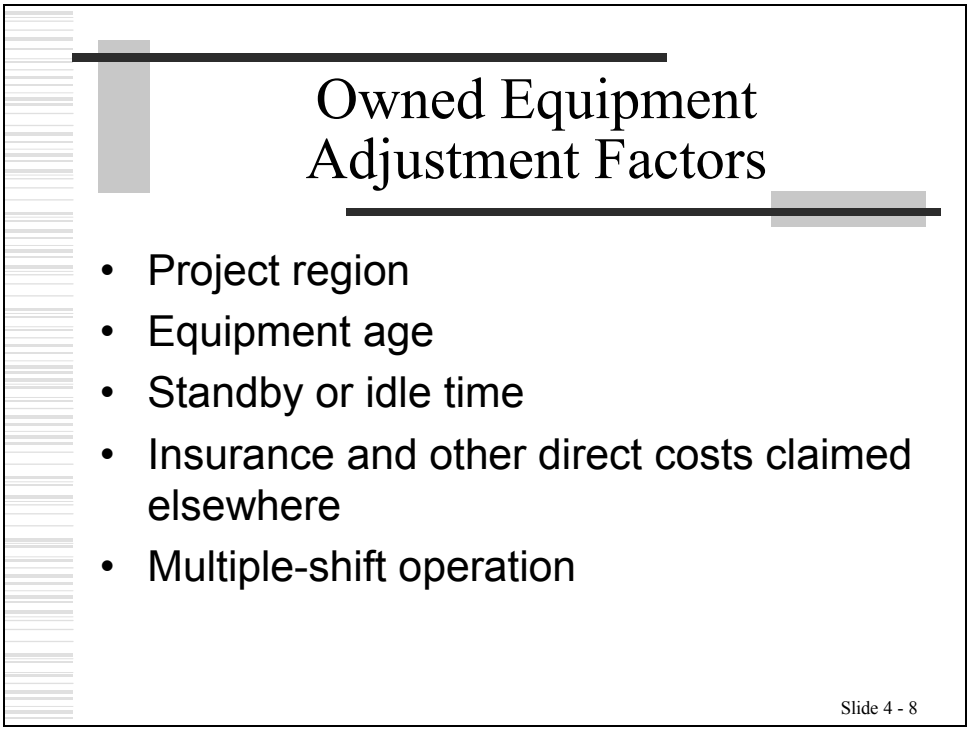
    b. Equipment age

    c. Standby or idle time

    d. Insurance and other direct costs claimed elsewhere

    e. Multiple-shift operation

(See Appendix B)


Owned Equipment
Adjustment Factors
• Project region
• Equipment age
• Standby or idle time
• Insurance and other direct costs claimed elsewhere
• Multiple-shift operation
Slide 4 - 8

Material Costs Associated with Delay

1. When delays occur, escalation in material cost is possible.

    a. Consider whether savings can be realized by purchasing material and storing it.

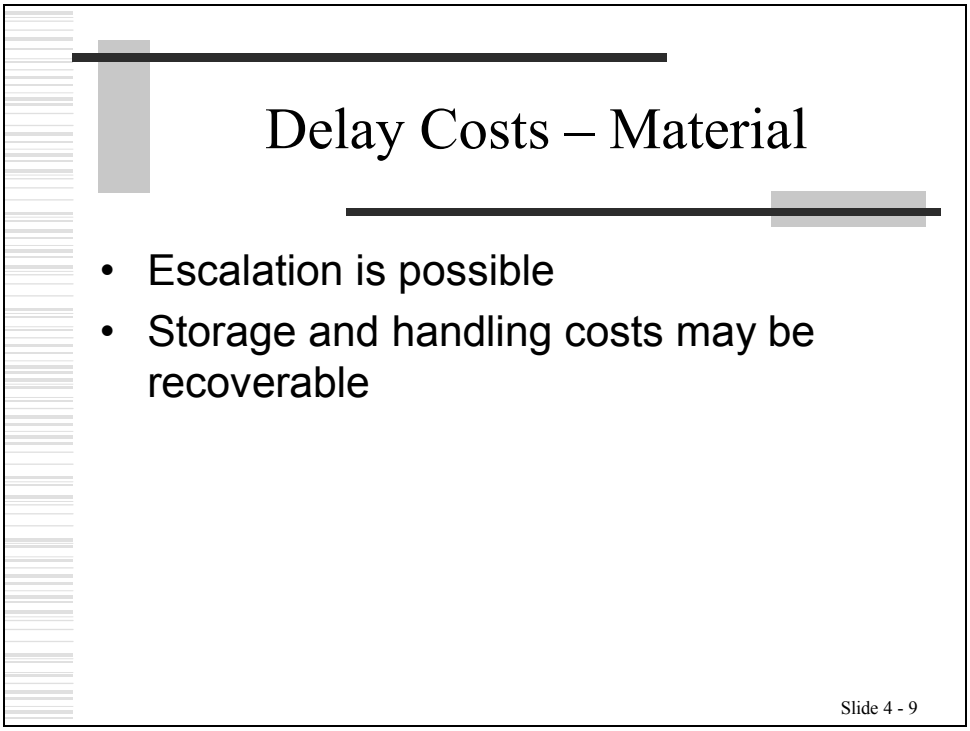
    b. Storage costs then become recoverable.

2. Storage and handling costs for equipment that is delivered and cannot be installed.

3. Careful analysis required of what materials were actually exposed to escalation.

4. FHWA cannot retroactively adjust unit prices for increased material costs absent a material price adjustment clause.

(See Appendix B)


Delay Costs – Material
• Escalation is possible
• Storage and handling costs may be recoverable
Slide 4 - 9

Field Overhead Costs

1. Field overhead costs are costs that can be identified to a particular project, but not a particular item of work.

    a. Calculation of field overhead costs is similar to the calculation of labor, equipment, and material costs.

    b. Often, a percentage mark-up is used to provide reimbursement for these costs, but they can usually be defined with a reasonable degree of certainty.

    c. Costs of field overhead items must be time-dependent.

2. Examples of field overhead include:

    a. Project office rent;

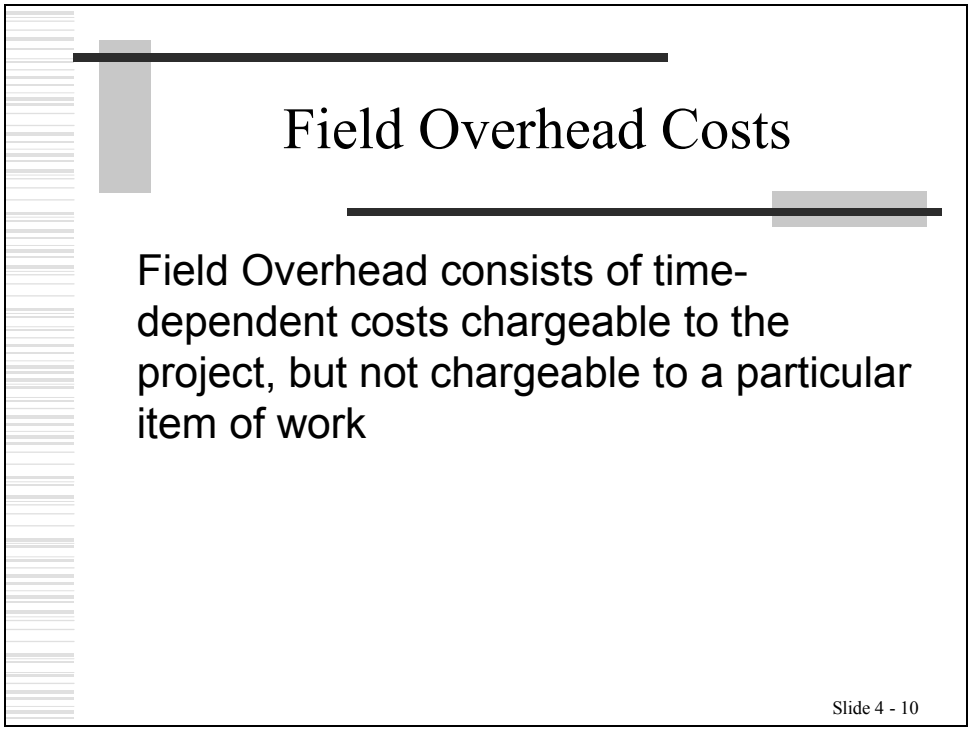
    b. Salaried project personnel;

    c. Project office equipment costs;

    d. Project office utilities.

3. Consider offsets for mark-ups on related change orders.

(See Appendix B)


Field Overhead Costs
Field Overhead consists of time-dependent costs chargeable to the project, but not chargeable to a particular item of work
Slide 4 - 10

Home Office Overhead Costs

1. Home office overhead includes costs that cannot be attributed to a particular project. The home office overhead costs are usually apportioned to a project as a percentage mark-up or as a function of the number and value of projects being administered by a contractor.

2. Examples of home office overhead include:

   a. Home office clerical staff,

   b. Home office executive staff,

   c. Home office rent,

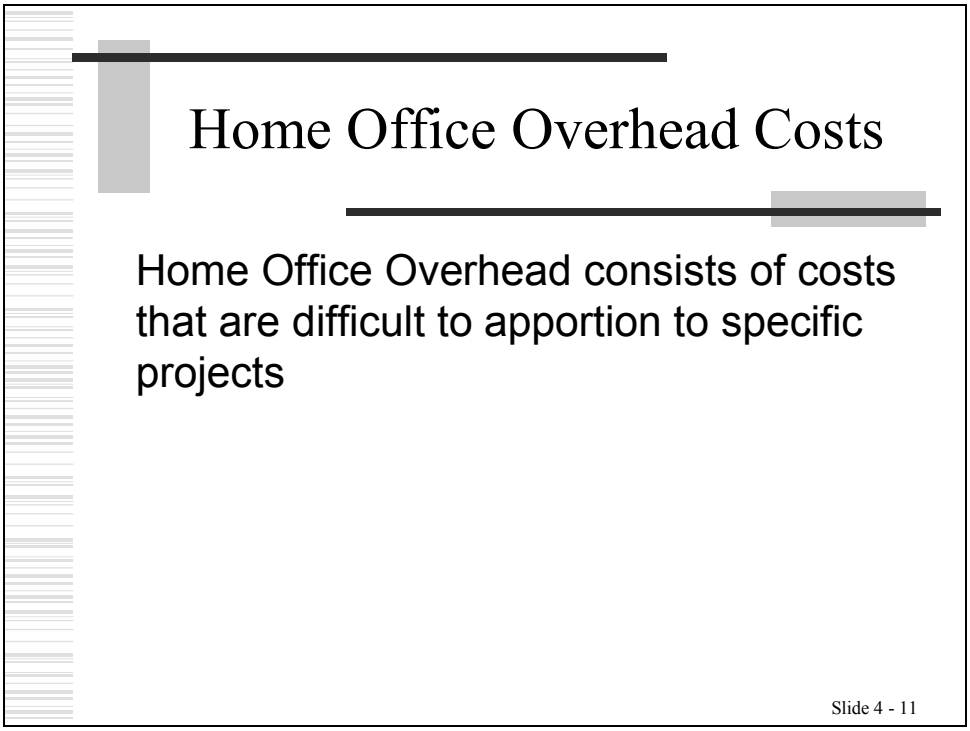
   d. Home office taxes,

   e. Home office supplies,

   f. Home office insurance,

   g. Home office utilities.

3. The contractor pays for its fixed home office overhead costs through the revenue generated from its projects. When a project is delayed, the revenue or a portion of the revenue associated with that project may not be available during the period of delay. When this occurs, the contractor's revenues may not *absorb* the costs or a portion of the costs of its fixed home office overhead. The costs that cannot be *absorbed* are referred to as unabsorbed home office overhead or underabsorbed home office overhead.


Home Office Overhead Costs
Home Office Overhead consists of costs that are difficult to apportion to specific projects
Slide 4 - 11

Eichleay Formula

1. First accepted by Federal boards and courts in the decision of the Armed Service Board of Contract Appeals in Eichleay Corporation, ASBCA No. 5183, 60-2 BCA 2688.

2. Provides a formula for distributing home office overhead costs across all of the projects for a given company. The Eichleay Formula does not establish entitlement; it is merely used to calculate unabsorbed home office overhead costs in instances where the contractor is entitled to recover these costs.

3. It may not be appropriate to use the Eichleay Formula if the work is not completely suspended or if the contractor was able to replace suspended work. The burden is on the owner to prove that the contractor was able to take on work to replace the suspended work.

4. Eichleay must be supported by audited financial information.

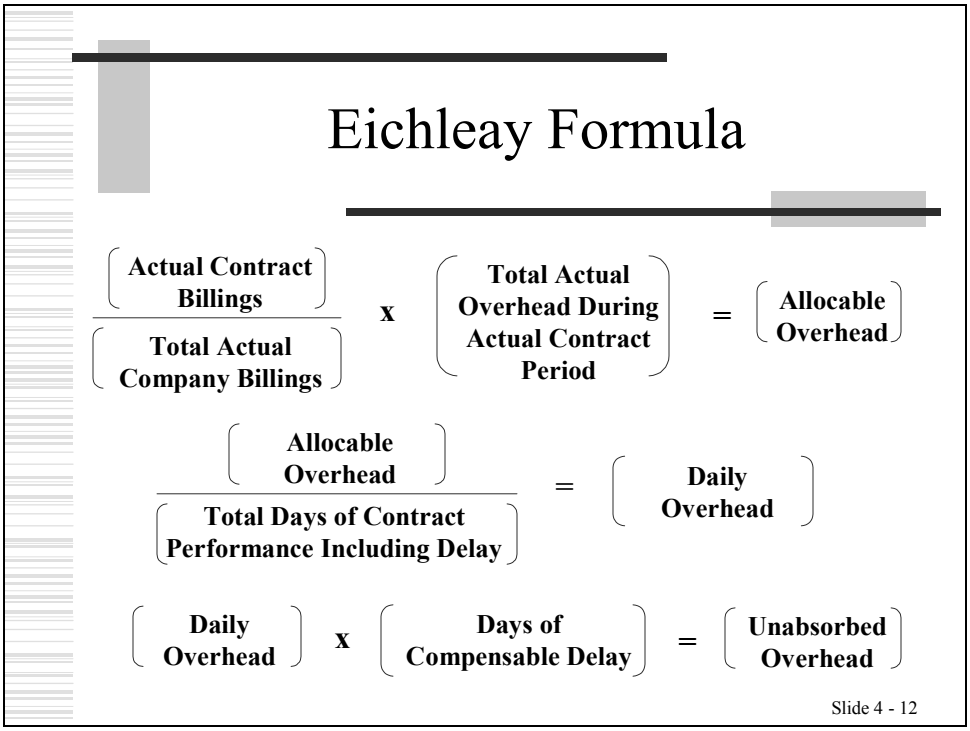
   Eichleay Formula:

$$\frac{\left(\text{Actual Contract Billings}\right)}{\left(\text{Total Actual Company Billings}\right)} \times \left(\text{Total Actual Overhead During Actual Contract Period}\right) = \left(\text{Allocable Overhead}\right)$$

$$\frac{\left(\text{Allocable Overhead}\right)}{\left(\text{Total Days of Contract Performance Including Delay}\right)} = \left(\text{Daily Overhead}\right)$$

$$\left(\text{Daily Overhead}\right) \times \left(\text{Days of Compensable Delay}\right) = \left(\text{Unabsorbed Overhead}\right)$$

Claims Avoidance Tip - The Eichleay formula or a prescriptive means for calculating unabsorbed home office overhead has been adopted by some agencies in their specifications as a claims avoidance technique.


Eichleay Formula
Actual Contract Billings
Total Actual Company Billings
x
Total Actual Overhead During Actual Contract Period
=
Allocable Overhead
Allocable Overhead
Total Days of Contract Performance Including Delay
=
Daily Overhead
Daily Overhead
x
Days of Compensable Delay
=
Unabsorbed Overhead
Slide 4 - 12

Canadian Method

The Canadian method is another approach to determining an appropriate number for unabsorbed home office overhead. The results of this method are usually higher than the Eichleay formula. It is used as follows:

1. Determine a percentage for home office overhead. This can be done by audit or based on bid documentation.

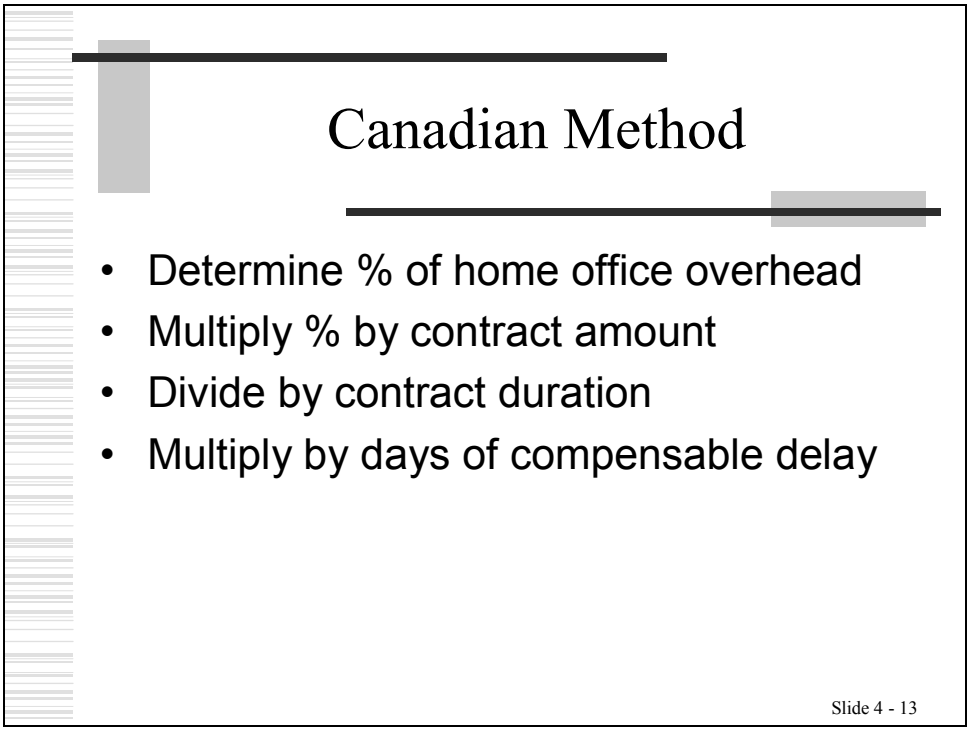
2. Multiply the home office overhead percentage by the original contract amount to determine originally anticipated home office overhead.

3. Divide the originally anticipated home office overhead by the original contract duration. This gives a daily rate for anticipated home office overhead.

4. Multiply the daily rate by the number of days of compensable delay to determine the cost of unabsorbed home office overhead.

Canadian Method Equation:

((Home Office Overhead % x Contract $)/Contract Duration) x # Days of Delay


Canadian Method
• Determine % of home office overhead
• Multiply % by contract amount
• Divide by contract duration
• Multiply by days of compensable delay
Slide 4 - 13

Fixed Percent Method for Calculating Home Office Overhead

A contract may prescribe a fixed percentage to be used to calculate home office overhead costs in the event a project is delayed.

Sample Home Office Overhead Clause

Ohio Department of Transportation, Section 109.05, Extra and Force Account Work, Paragraph D.3.b

b. Home Office Overhead. The Department will pay the Contractor for home office overhead, unabsorbed home office overhead, extended home office overhead, and all other overhead costs for which payment is not provided for in 109.05.D.3.a, including overhead costs that would otherwise be calculated using the Eichleay formula or some other apportionment formula, providing all of the following criteria are met:

1. *The Contractor has incurred an excusable, compensable delay that delays the Work at least 10 Calendar Days beyond the original Completion Date. These days are cumulative throughout the project.*
2. *The excusable, compensable delay for which payment of home office overhead is sought was not caused by Extra Work or by any other cause other than a suspension of work as defined in 104.02.C.*
3. *A significant subcontractor may submit a claim for reimbursement of home office overhead when a suspension of Work has impacted its operations.*

The Engineer will calculate the payment for home office overhead using the following formula:

$$HOOP = \frac{(D \times A \times C)}{B}$$

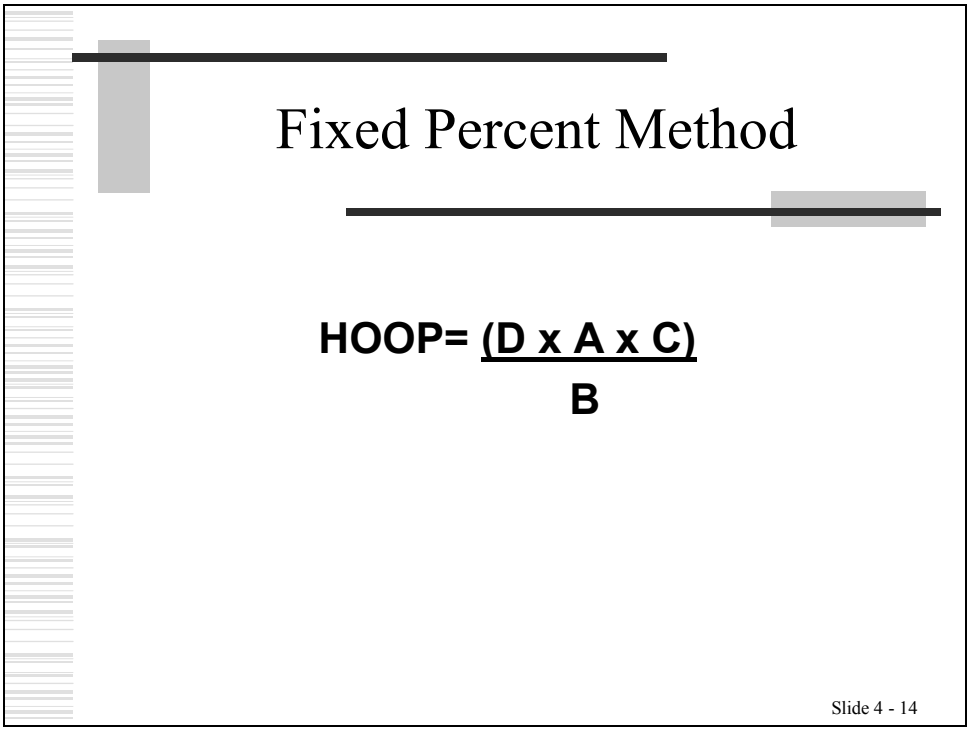
Where:

A = original contract amount
B = contract duration in Calendar Days
C = 5.5 percent
D = excusable, compensable delay in Calendar Days
HOOP = home office overhead payment

Contract duration term, B, is the number of Calendar Days from the execution of the Contract, unless otherwise specified by the Director, to the original Completion Date, except the period from December 1 through April 30, which is considered normal winter shutdown. However, if the accepted progress schedule shows Work during a portion of the winter, then that portion is included in the B term.

Exclude normal winter shutdown periods from the compensable delay term, D. The period from December 1 through April 30, is considered normal winter shutdown. However, if the Contractor normally performs work during a portion of the winter, then that portion is included in D.

When the Director allows a subcontractor home office overhead compensation, use the above formula to calculate the subcontractor's HOOP; however, in the subcontractor calculation, the A is equal to the subcontractor's portion of the original contract amount as determined by the sum of all approved C-92's issued for the subcontracted work.


Fixed Percent Method
HOOP= (D x A x C)
B
Slide 4 - 14

Acceleration Costs: Labor

1. **Labor Premium Time** — Typically paid when overtime is required or for evening, night, weekend, and holiday shifts. Expressed as a fraction of base pay rate (For example, time-and-a-half or double time).

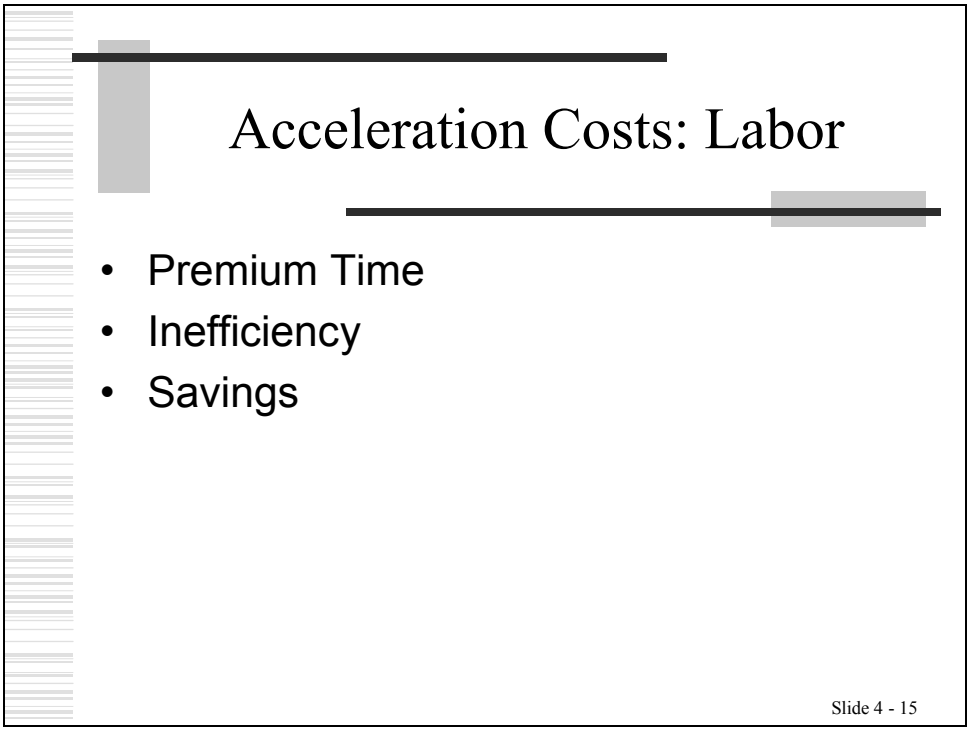
   a. Cost of acceleration includes only the premium cost, not the base labor rate. For example, if a worker earns $10/hr., and time-and-a-half is $15/hr., then the cost of the acceleration would be only the $5/hr. premium.

   b. The application of payroll burdens on the premium cost should be addressed in the contract. Absent contract provisions, the payroll burden rate should be substantially reduced or eliminated to reflect the fact that many payroll burdens are not charged on premium time.

2. **Labor Inefficiency** — Acceleration can sometimes result in labor inefficiencies. These costs will be addressed in the inefficiency section (page 4-38).

3. **Labor Savings** — Acceleration may result in the savings of some time-based costs such as supervisory or management costs and field office overhead costs. Any savings should be identified and accounted for in the overall evaluation of acceleration costs.

(See Appendix B)


Acceleration Costs: Labor
• Premium Time
• Inefficiency
• Savings
Slide 4 - 15

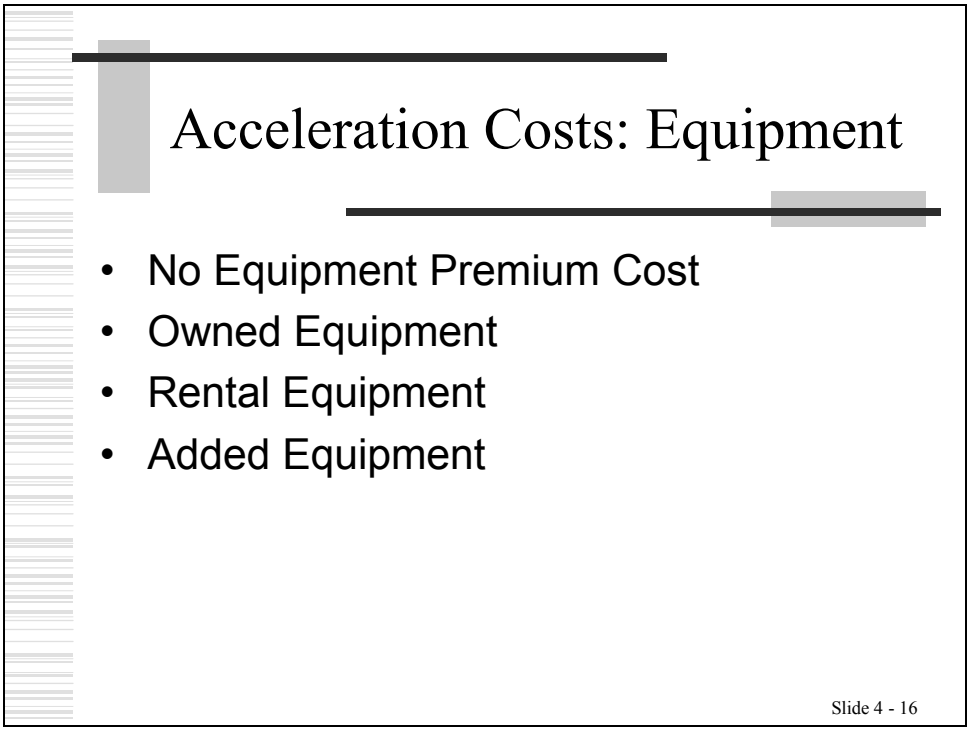
Acceleration Costs: Equipment

1. **No Equipment Premium Cost** — Unlike labor costs, typically there is no premium cost associated with equipment. In fact, the hourly cost of equipment may actually decrease as the number of operating hours increases.

2. **Owned Equipment** — Equipment cost guides typically include adjustments for extended workdays or multiple shifts. These adjustments tend to lower the hourly equipment cost. Hourly operating costs, however, should remain unaffected.

3. **Rental Equipment** — Unless the rental agency charges on the basis of operating hours or for multiple shifts, effective daily rental rates should not increase due to acceleration. Thus, working longer hours or multiple shifts may reduce the effective hourly rental rates. Consequently, acceleration in this manner may actually reduce equipment rental costs because the duration of the rental is reduced.

4. **Added Equipment** — Acceleration may require the addition of larger or more specialized equipment. To the extent that this added equipment increased the cost of completing each unit of work, it would represent an acceleration cost.


Acceleration Costs: Equipment
• No Equipment Premium Cost
• Owned Equipment
• Rental Equipment
• Added Equipment
Slide 4 - 16

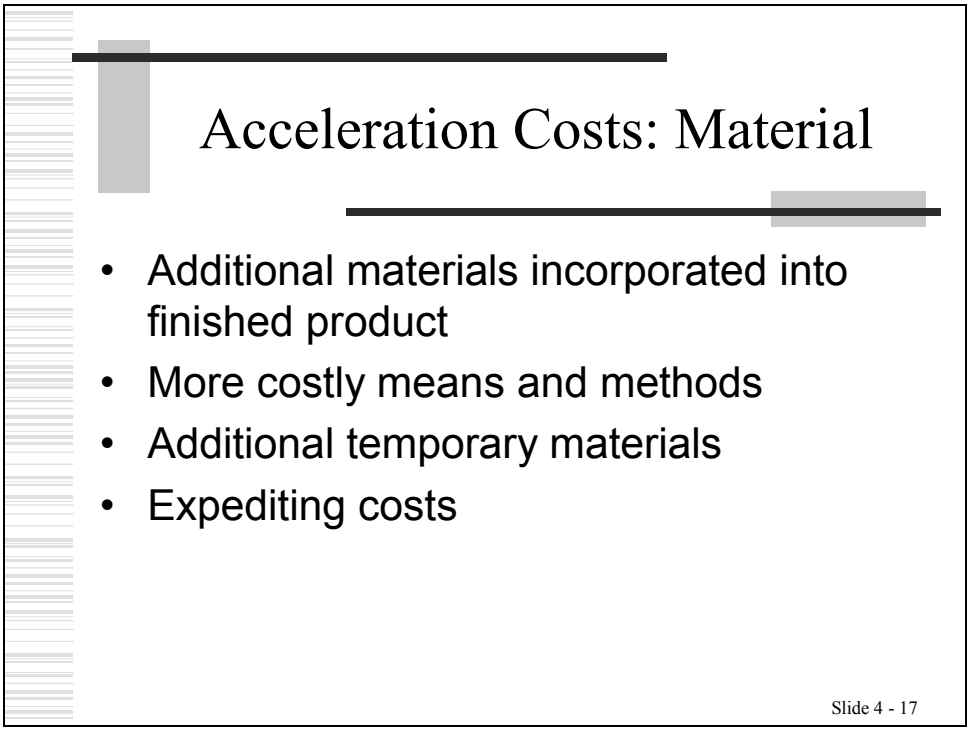
Acceleration Costs: Material

1. Additional materials may be incorporated into the finished product in order to achieve acceleration, such as additives used to speed-up concrete curing.

2. Revisions in the methods of completing work may involve changes in the material used. For example, the owner may approve the use of a faster, but more costly fastening system.

3. Additional temporary materials may be required in order to achieve acceleration, such as additional forms to allow multiple crews to work concurrently.

4. There may be additional costs to expedite fabrication and delivery of materials.


Acceleration Costs: Material
• Additional materials incorporated into finished product
• More costly means and methods
• Additional temporary materials
• Expediting costs
Slide 4 - 17

Acceleration Costs: Overhead Costs

1. The added overhead costs associated with acceleration will, most likely, arise from added supervision. For example, the staff added to support multiple shifts. These costs could be determined two ways:

   a. As a labor cost.

   b. As part of the overhead mark-up allowed on the direct costs of the acceleration.

2. The contract may address payment for added management and supervisory expenses, usually as a mark-up on direct costs.

3. Typically, reducing the duration of work through acceleration reduces field overhead costs as well.

Acceleration Costs: Overhead

- Additional supervision costs
- Contract may establish the basis for calculating compensation for additional supervision
- Shorter duration = Lower overhead (typically)

Slide 4 - 18

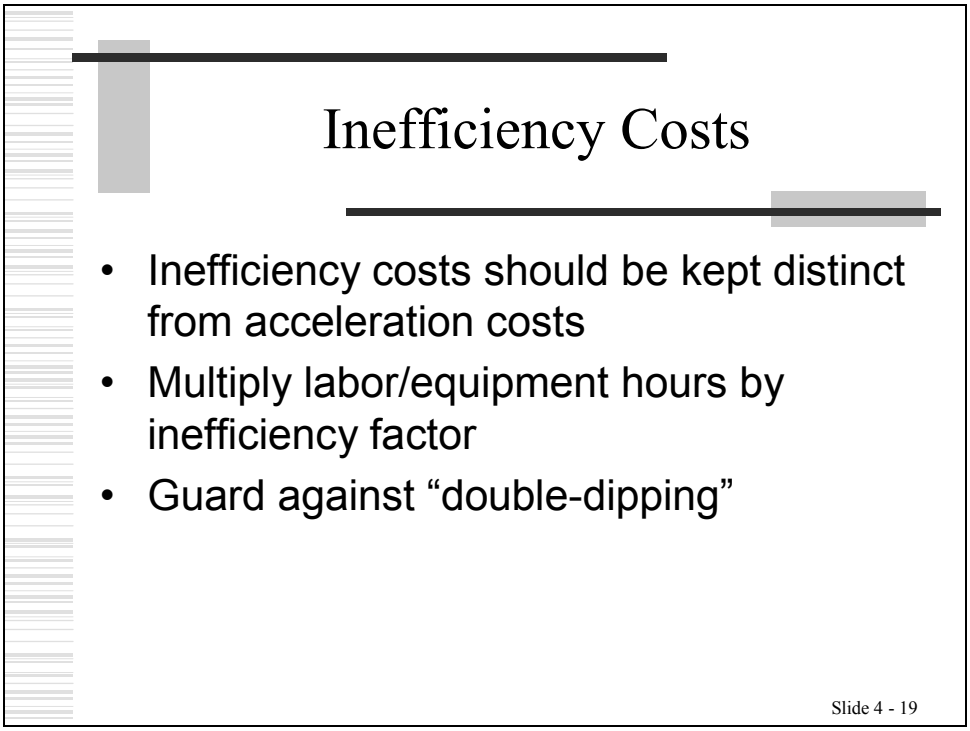
Inefficiency Costs

1. Inefficiency can be a result of acceleration, so it is important to keep the costs associated with each of these categories separate.

2. Labor costs associated with inefficiency are often calculated by multiplying the appropriate inefficiency factor (determined from an inefficiency analysis) by the expected labor hours (for forward pricing) or actual labor costs (calculations after-the-fact).

3. Decide whether to apply the inefficiency factor (equation on p. 3-34) to labor hours (preferred) or labor costs. Application to labor hours is preferred because it is the resource most closely related to productivity. If many different trades (carpenters, electricians, etc.) or levels (foreman, journeyman, etc.) are affected, however, it may be difficult to determine the proper labor rate to apply to the inefficient hours. In such cases, the application of the inefficiency factor to overall labor costs may be more expedient. Guard against “double-dipping” when doing this.

4. Equipment inefficiency cost calculations are performed in a similar fashion as labor inefficiency cost calculations.

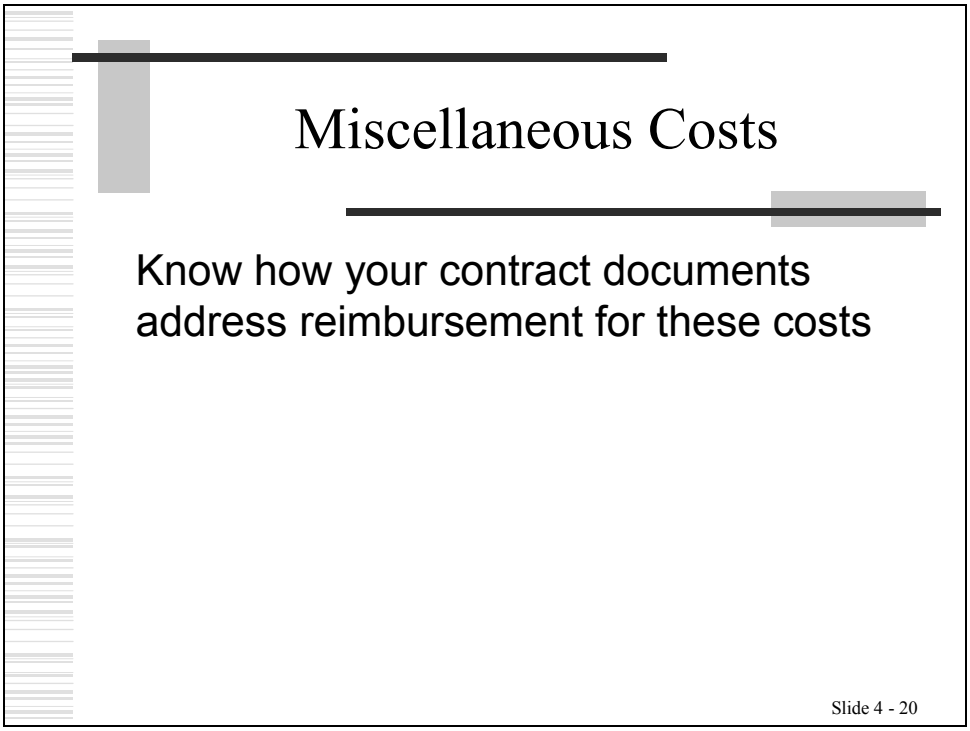

Inefficiency Costs
• Inefficiency costs should be kept distinct from acceleration costs
• Multiply labor/equipment hours by inefficiency factor
• Guard against “double-dipping”
Slide 4 - 19

Miscellaneous Costs

It is common for claims to include the following other cost categories. Mark the chart below as it applies to the agency's contract documents for future reference. Blank spaces provided to record additional examples of miscellaneous costs.

	Allowed	Not Allowed
Claim preparation costs		
Interest		
Insurance		
Bond		
Loss of Anticipated Profit		
Profit		
Legal Fees		

(See Appendix B)


Miscellaneous Costs
Know how your contract documents address reimbursement for these costs
Slide 4 - 20

Mitigation of Delays and Damages

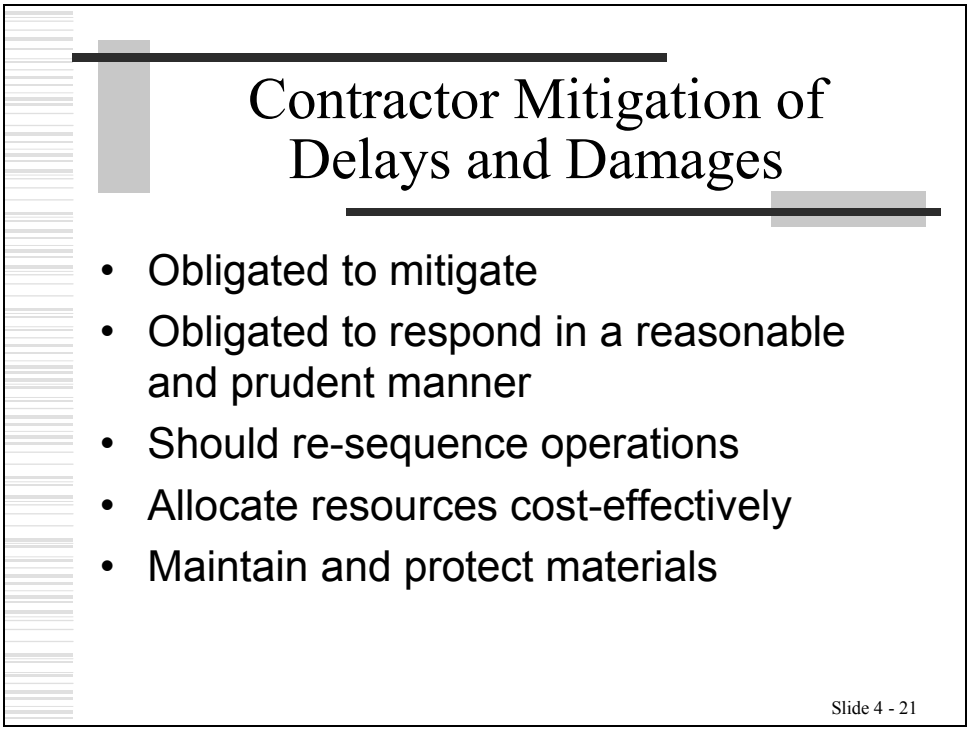
1. The contractor has an obligation to mitigate the costs associated with delay, acceleration, and inefficiency.

2. The contractor is obligated to proceed in a reasonable and prudent manner.

3. When possible, the contractor should resequence operations to mitigate delay.

4. Equipment and crews should be demobilized when cost effective.

5. Materials and equipment left onsite should be protected and maintained.


Contractor Mitigation of Delays and Damages
• Obligated to mitigate
• Obligated to respond in a reasonable and prudent manner
• Should re-sequence operations
• Allocate resources cost-effectively
• Maintain and protect materials
Slide 4 - 21

MODULE 4: EXERCISES

Exercise No. 4-1: Cost Escalation Clauses

Objective: Read the two labor cost escalation clauses and determine whether the provisions accurately address escalation of labor due to delays.

Sample Labor Cost Escalation Clauses

Section 109.05. Paragraph 2.b, Allowable Delay Costs

b. Escalated Labor. To receive payment for escalated labor costs, demonstrate that the Department-caused delay forced the Work to be performed during a period when labor costs were higher than planned at the time of Bid. Provide adequate support documentation for the costs, allowances, and benefits specified in 109.05.C.2.

Section 109.03. Paragraph C, Payment for Increased Contractor Costs

C. Increases in cost for labor, equipment, and materials will be calculated as follows:
1. Payment For Increases In Labor Costs. For unreasonable delays caused by conditions set forth in subsection 109.03.A, payments authorized for increases in labor costs will be based on the difference between old and new labor rates established by a State or Federal agency or an agreement between the employee's bargaining agency and the Contractor's and accepted by the Department. Payment will be based on certified payrolls. Payment will also include the increases in fringe benefit rates and increases in payroll taxes that the Contractor is required to pay.
a. The Contractor shall furnish certified payrolls showing the labor rates and hours worked by each employee during the week immediately preceding the delay.
b. The Contractor shall furnish certified payrolls showing the labor rates and the hours worked by each employee during the authorized extended contract time due to the delay or until the project is completed, which ever comes first.
c. In case of a decrease in labor cost, the decreased payment will be computed in the same manner.

Exercise No. 4-2: Field Office Overhead Costs

Objective: Evaluate the costs submitted by a contractor and determine whether or not each is a field office overhead cost recoverable in the event of a compensable delay.

Background On a bridge project a contractor submitted a claim to recover its field overhead costs for a 1-month delay on a 12-month project. The table below summarizes the costs.

Contractor Field Office Overhead Costs	
Item Description	**Amount**
Trailer Rental	$ 1,806
Project Sign	1,202
Telephone	4,797
Telephone Installation	50
Mobile Phone	1,402
Office Equipment Rental	1,296
Sanitary Facilities	1,092
Barricade Purchase	11,883
Guard Services	14,863
Formwork Purchase	4,235
Surveying	112,149
Testing	34,353
Per Diem Expenses	15,430
Miscellaneous Supplies	6,459
Federal Express	548
Petty Cash	30,818
Salaried Employees	138,269
TOTAL	**$ 380,652**

Based on the above costs, the contractor submitted its claim in the amount of $31,721 ($380,652/12).

Exercise No. 4-3: Home Office Overhead Costs

Objective: Consider whether or not a contractor would be entitled to additional compensation for unabsorbed home office overhead costs based on the following scenario. Be prepared to discuss your answer with the class.

Background A contractor with a bonding capacity of $1.6 million has 4 projects, each in the amount of $400,000 and scheduled to last 4 months. Each month, the contractor performs 25% of the work, or $100,000 on each contract. The contractor has a monthly home office overhead cost totaling $40,000, and has distributed this across the 4 projects.

In month 3, the owner on one of the projects issued a stop work order that lasted for the entire month. As a result, the contractor only performed $300,000 worth of work.

At the end of month 4, three of the projects were completed. In month 5, the contractor completed the fourth project and started 3 new projects, each of these in the same amount and with the same duration as the original 4 projects, and each were planned to be performed in a similar manner.

The chart below summarizes the contractor's billings on each project by month and illustrates the contractor's home office overhead costs.

	Month 1	Month 2	Month 3	Month 4	Month 5
Project 1	100,000	100,000	100,000	100,000	
Project 2	100,000	100,000		100,000	100,000
Project 3	100,000	100,000	100,000	100,000	
Project 4	100,000	100,000	100,000	100,000	
Project 5					100,000
Project 6					100,000
Project 7					100,000
Total Billings	400,000	400,000	300,000	400,000	400,000
10% of Billings for HOOH	40,000	40,000	30,000	40,000	40,000
Home Office OH Costs	40,000	40,000	40,000	40,000	40,000

Exercise No. 4-4: Calculation of Unabsorbed Home Office Overhead

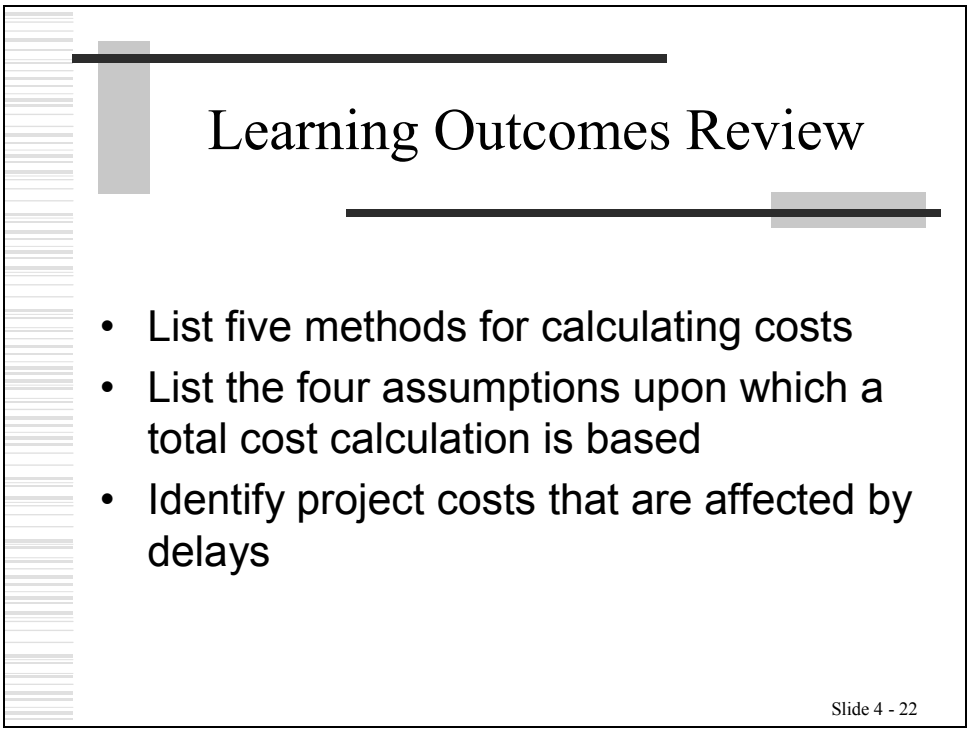
Objective: Based on the background information provided, calculate the unabsorbed home office overhead using the Eichleay method on page 4-24. Be prepared to discuss your answer with the class.

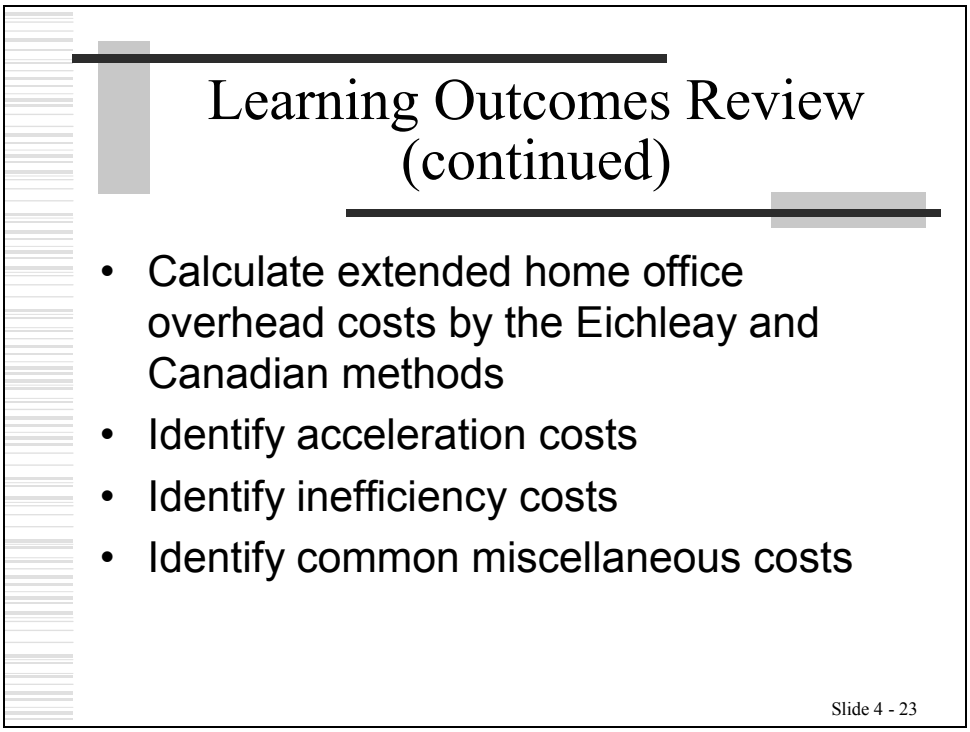
Background: An owner suspends operations for 100 days on a $3 million project. The final project duration was 500 days.

During the suspension period, the contractor has no other work that can accommodate the workers or equipment.

Audit of contractor's financial records show:
1. Total company billings during the contract period is $12 million.
2. Actual home office overhead costs during the same period is $400,000.

Exercise 4-5: See Appendix I

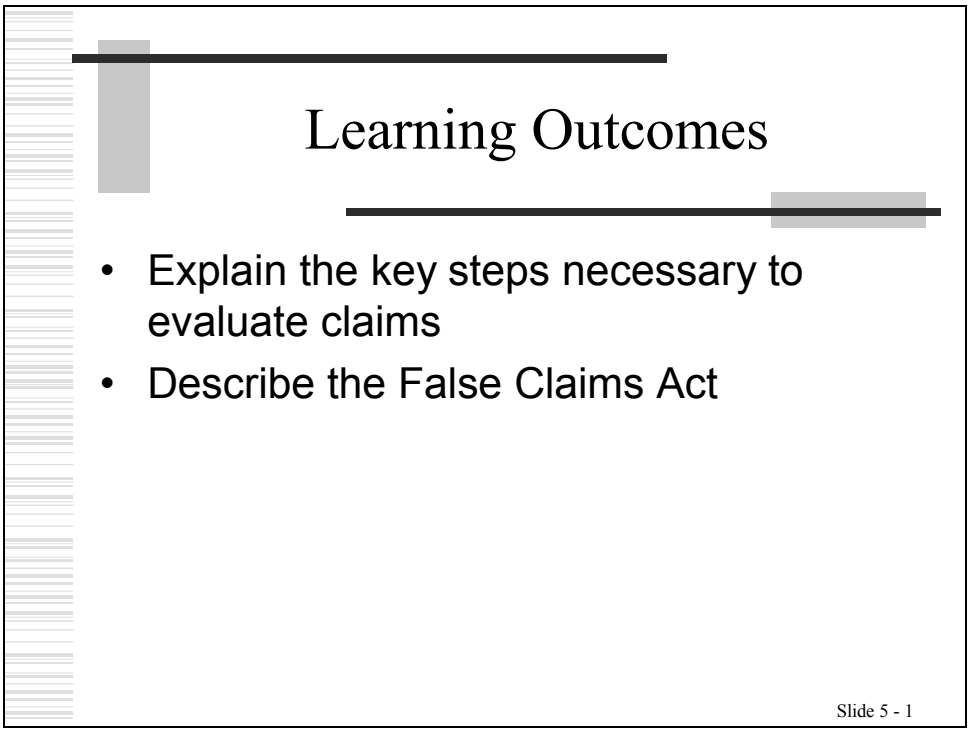

Learning Outcomes Review
• List five methods for calculating costs
• List the four assumptions upon which a total cost calculation is based
• Identify project costs that are affected by delays
Slide 4 - 22

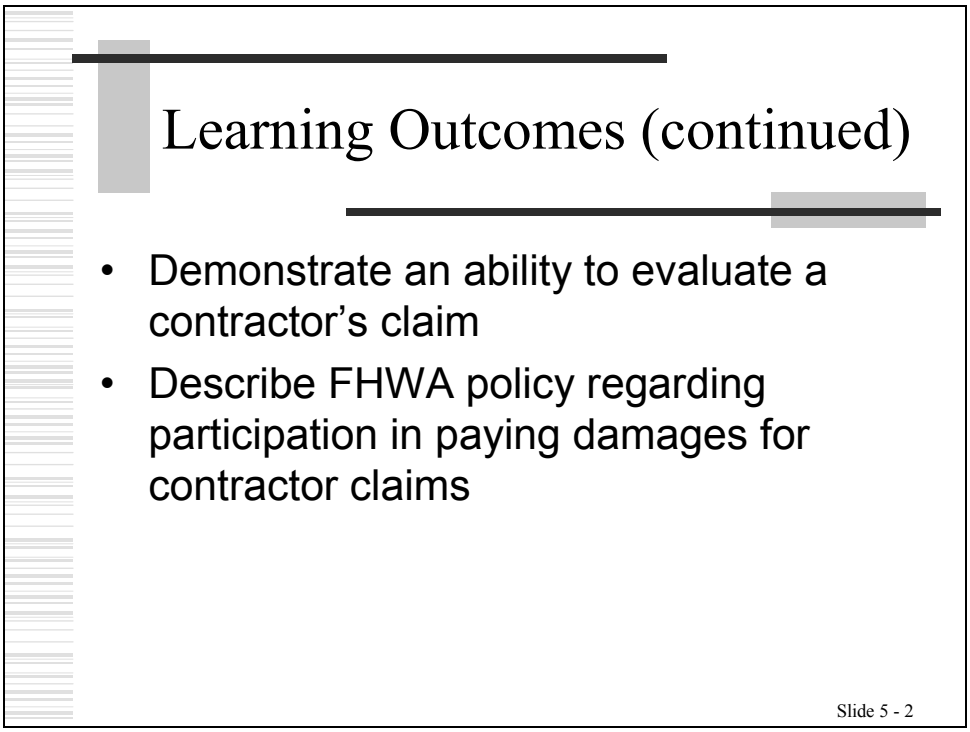

Learning Outcomes Review (continued)
• Calculate extended home office overhead costs by the Eichleay and Canadian methods
• Identify acceleration costs
• Identify inefficiency costs
• Identify common miscellaneous costs
Slide 4 - 23

MODULE 5: CLAIMS EVALUATION

References

- FHWA policy on claim participation
- False Claims Act


Learning Outcomes
• Explain the key steps necessary to evaluate claims
• Describe the False Claims Act
Slide 5 - 1


Learning Outcomes (continued)
• Demonstrate an ability to evaluate a contractor's claim
• Describe FHWA policy regarding participation in paying damages for contractor claims
Slide 5 - 2

Evaluation

1. The evaluation of a claim is a time consuming exercise that requires significant staff hours and potentially requires technical, accounting, and legal assistance.

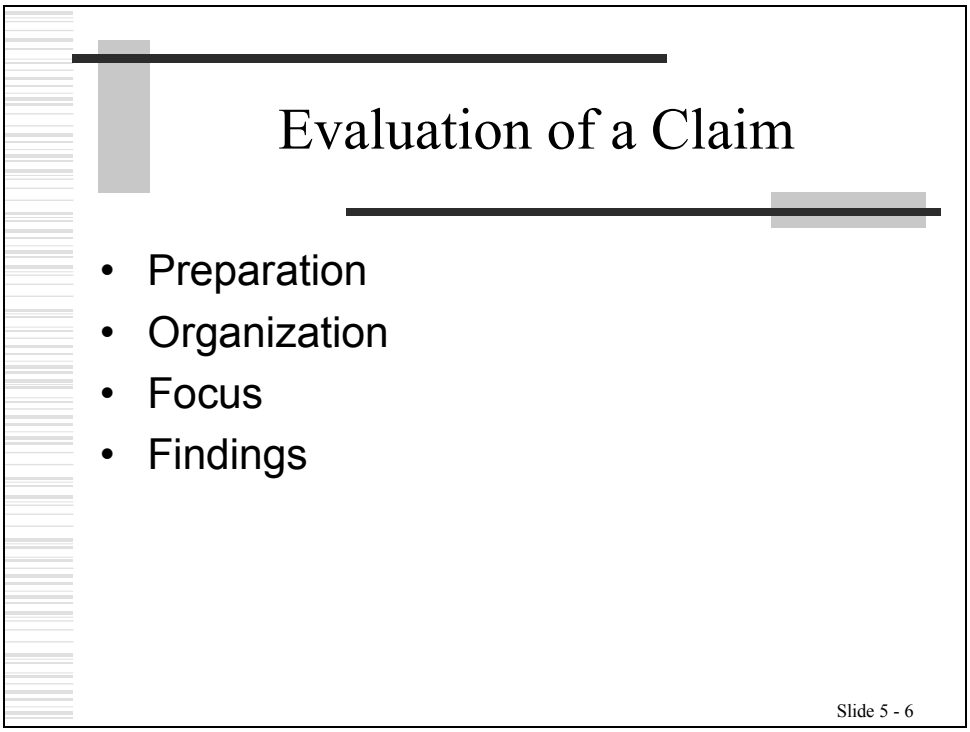
2. In order to efficiently evaluate a contractor's claim, a reviewer must address the following:

   a. Preparation;

   b. Organization;

   c. Focus;

   d. Findings.


Evaluation of a Claim
• Preparation
• Organization
• Focus
• Findings
Slide 5 - 6

Preparation

1. Insist on certification. Federal contractor claim certification reads as follows:

   > *I certify that the claim is made in good faith; that the supporting data are accurate and complete to the best of my knowledge and belief; that the amount requested accurately reflects the contract adjustment for which the Contractor believes the Government is liable; and that I am duly authorized to certify the claim on behalf of the contractor.*

   The Federal False Claims Act imposes civil liability on any person or entity that submits a false or fraudulent claim for payment to the United States Government. A person who violates the act must pay treble damages, plus pay a civil penalty. Many states have adopted provisions modeled after the Federal False Claims Act and many other states have adopted language of their own.

2. Upon receipt of a certified claim (if certification is required), acknowledge receipt in writing. Similarly, upon receipt of a claim that is not certified, reject in writing; include an explanation for the rejection.

3. Schedule an opportunity for contractor to provide oral presentation of claim.

4. Review claim immediately and critique any obvious deficiencies. In particular, note any lack of supporting analysis or documentation. Make contractor aware of any noted deficiencies so that contractor can take steps to supplement presentation. If possible, do this before contractor's oral presentation.

5. Collect all relevant documents in one file or location. Request any documents that might be needed from the contractor.

6. Conduct audit of the contractor's financial records, if necessary.

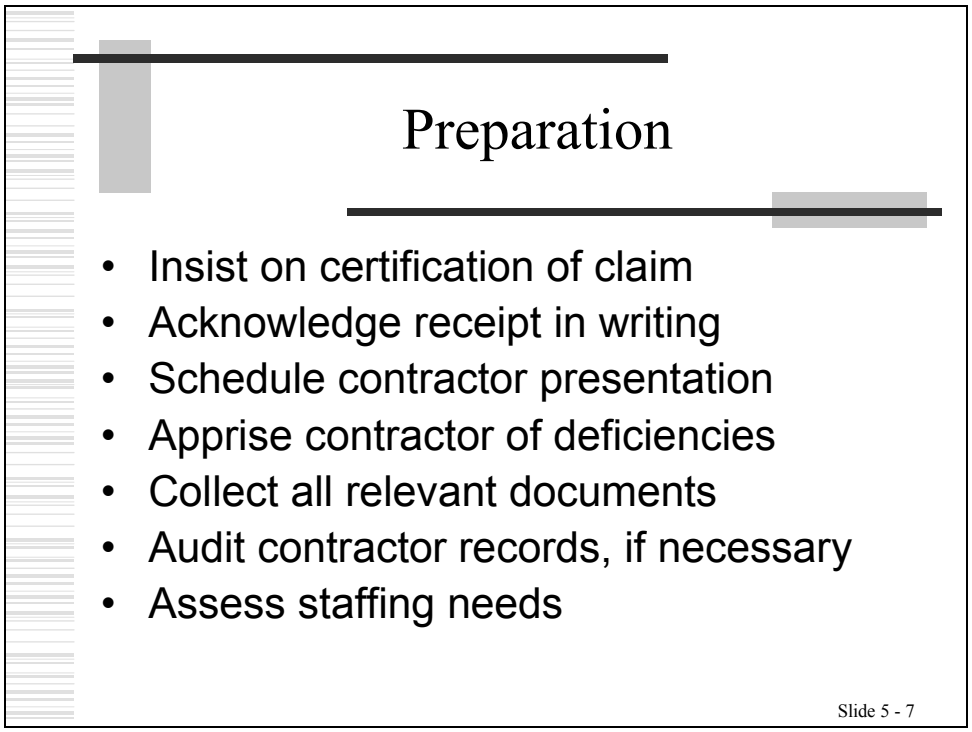
7. Realistically evaluate time, effort, manpower, skills, expertise, and other resources required to evaluate the contractor's claim. Consider the following:

   a. Will a delay analysis or other technical analysis be required?

   b. Are there engineering, geotechnical, legal, or other difficult issues requiring special expertise to evaluate?

   c. Is an audit required?

   d. Does the owner's staff have sufficient time, skills, and facilities to accomplish the required analysis?


Preparation
• Insist on certification of claim
• Acknowledge receipt in writing
• Schedule contractor presentation
• Apprise contractor of deficiencies
• Collect all relevant documents
• Audit contractor records, if necessary
• Assess staffing needs
Slide 5 - 7

Organization

1. Plan evaluation effort like any other project.

    a. Set goals and objectives.

    b. Identify staff.

    c. Establish budget and schedule.

    d. Monitor progress.

2. Assemble document files.

    a. Establish “master file” consisting of a chronological compilation of all letters, memoranda, requests for information, etc;

    b. Review master file and narrow down to “working file” of significant documents;

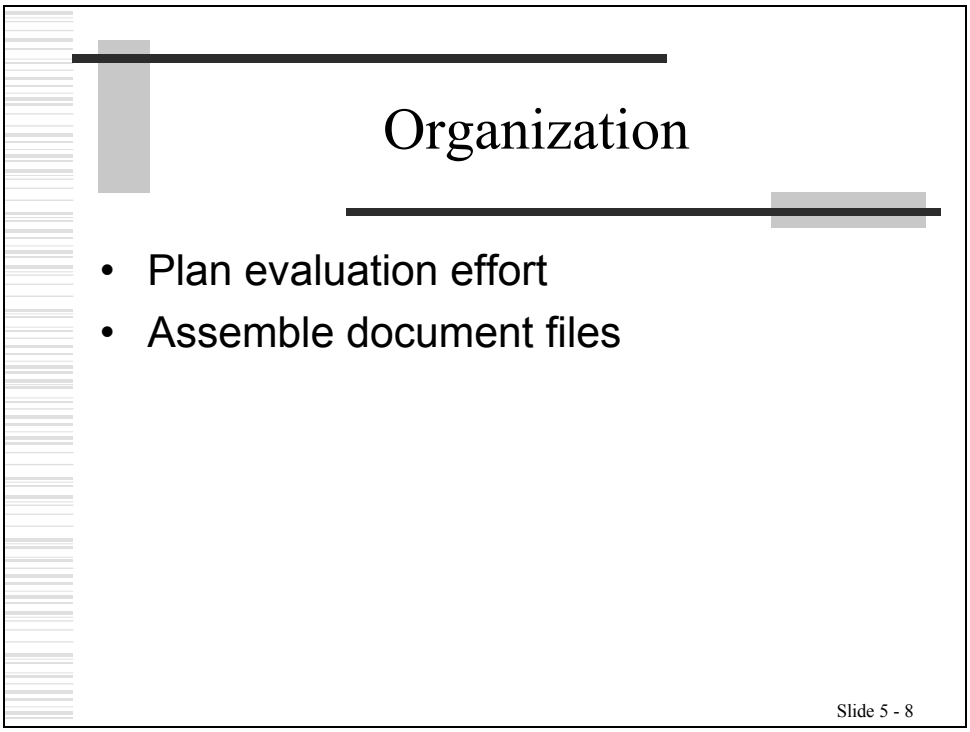
    c. Develop files for specific issues, if required;

    d. If the volume of documentation is extensive, consider the use of electronic document control systems;

    e. Organize daily logs, reports, and other daily records into separate chronological files. Some records, such as pile driving logs, may also need to be organized by bent or pier, or other appropriate unit;

    f. Organize extra work orders, supplemental agreements, and similar documents in sequential order;

    g. Collect a “conformed” set of all contract documents, including plans, revision sheets, specifications, addenda, etc.


Organization
• Plan evaluation effort
• Assemble document files
Slide 5 - 8

Focus

1. Do not be distracted by the volume or complexity of the contractor's claim.

2. Focus on the three primary components of every claim.

   a. **Entitlement**
   Any conclusion as to whether a change occurred and entitlement exists should be based on the answers to these questions.

      i. What is being claimed?

      ii. What does the contract say?

      iii. What are the facts?

   b. **Impact**

      i. What were the impacts, if any?

      ii. Were the impacts mitigated?

      iii. Impacts might include delay, inefficiencies, added effort, idle resources, etc.

      iv. Is there an appropriate and accurate measure of the impacts?

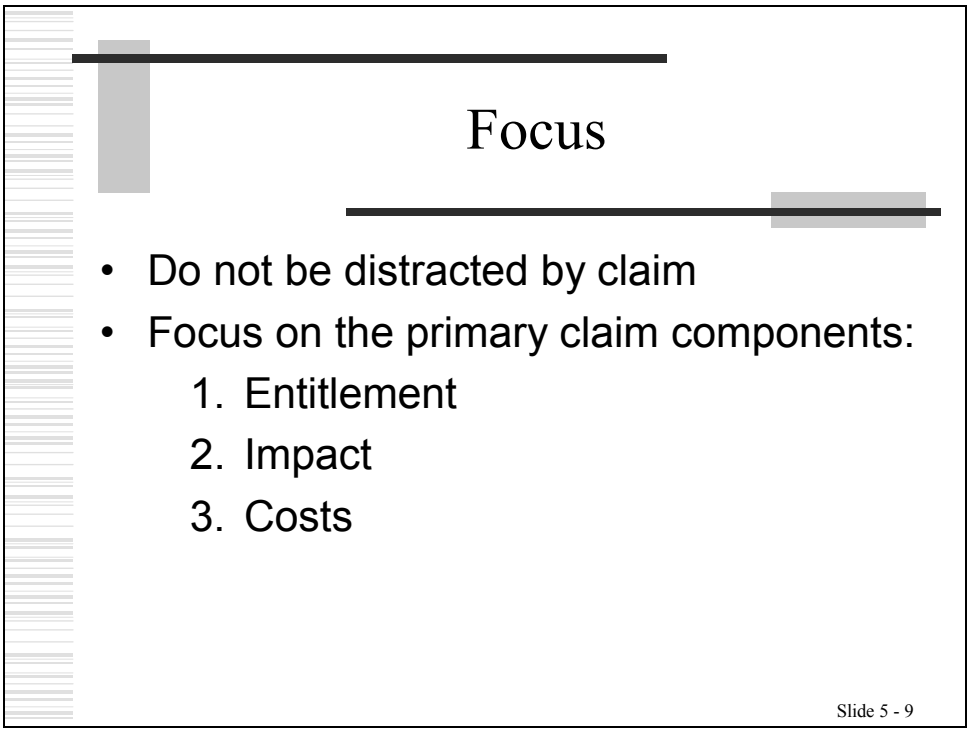
   c. **Costs**

      i. After entitlement is established and impacts defined, costs can be identified and calculated.

      ii. Were the costs mitigated?

      iii. Consider the need for audit assistance to verify labor burdens, overhead costs, etc.

      iv. Keep a complete record of all calculations, assumptions, estimates, etc.


Focus
• Do not be distracted by claim
• Focus on the primary claim components:
1. Entitlement
2. Impact
3. Costs
Slide 5 - 9

Findings

1. Results of the claim evaluation should be expressed in writing. A report is often the best format, though for small claims, a letter may be sufficient.

2. The source of all data used in the evaluation should be referenced; source documents should be included as exhibits.

3. Reports should be organized logically. For example:

    a. Introduction

    b. Project History

    c. Entitlement Analysis

    d. Impact Analysis

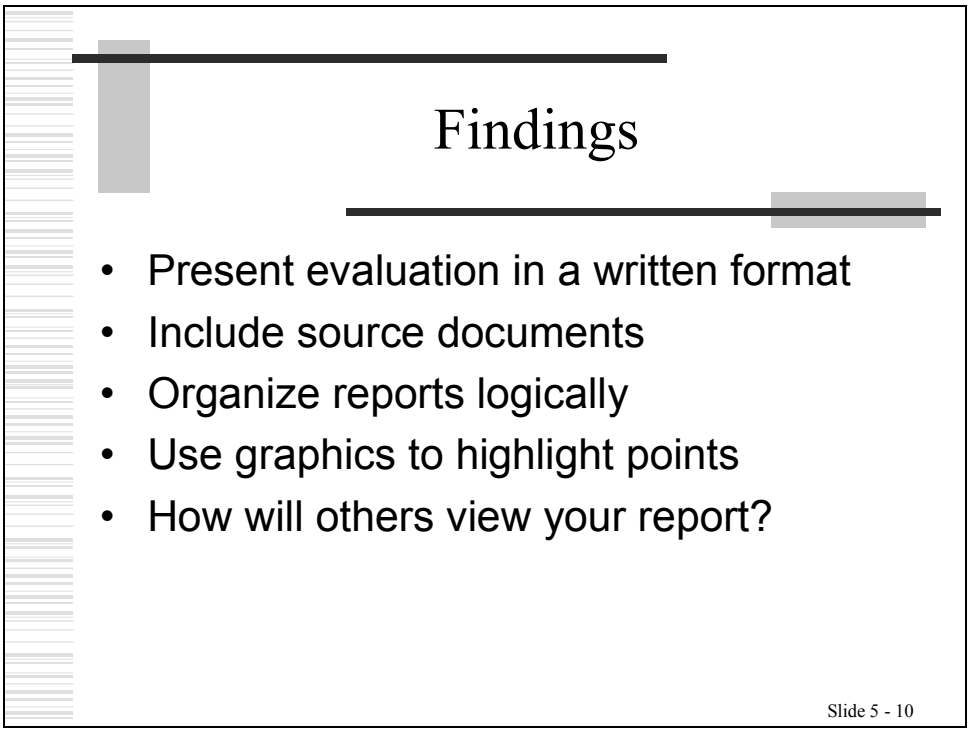
    e. Cost Analysis

    f. Summary

    g. Conclusions

4. Make liberal use of graphs, charts, etc., to illustrate analysis results and important points.

5. Consider how your report will be received by others; will they be persuaded by the analysis and presentation of your conclusions? Consider having a peer review of your findings.


Findings
• Present evaluation in a written format
• Include source documents
• Organize reports logically
• Use graphics to highlight points
• How will others view your report?
Slide 5 - 10

FHWA Policy on Reimbursing States for Claims

1. The FHWA promotes early coordination and involvement in claim issues in order to make fair and objective decisions; and to avoid "second guessing" of those who are more intimately involved in the claim award. The specific details of coordination and involvement are left to each FHWA Division Office and state to finalize, allowing them the flexibility to work out an arrangement that accommodates the state's program.

2. A good generalization of FHWA's policy is the following statement:

   > *"If the States are diligent and pursue resolution of a claim through the courts or arbitration boards (including appeals), consulting with and keeping FHWA fully informed throughout the process, FHWA will share in the results."*

3. The FHWA determines reimbursement on a case-by-case basis to the extent that the claim can be supported by the facts and has a basis in the contract and under applicable state law. In instances where state law is inconsistent with Federal law, the FHWA may limit or deny reimbursement.

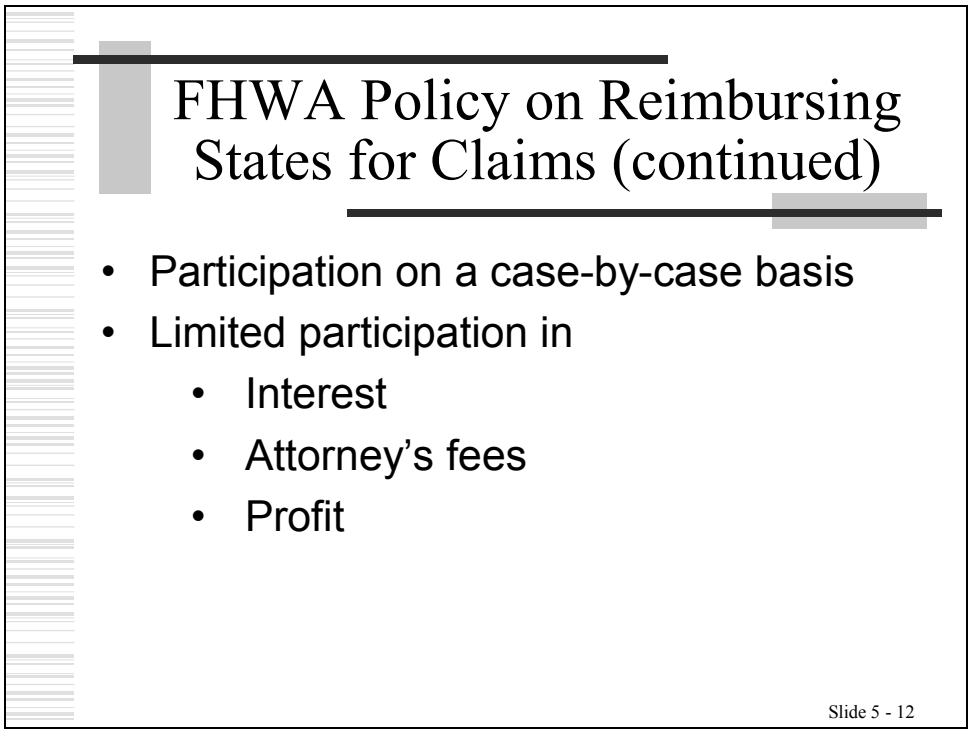
4. Since the FHWA believes the state is in the best position to compile and provide relevant information and documentation to support a decision for FHWA participation in claims, the burden of proof to document the reasonableness of a claim remains the responsibility of the state.

5. The FHWA will not participate in claim awards that arise from gross negligence, intentional acts or omissions, fraud, or other actions by a state employee that are not consistent with the usual state practices.

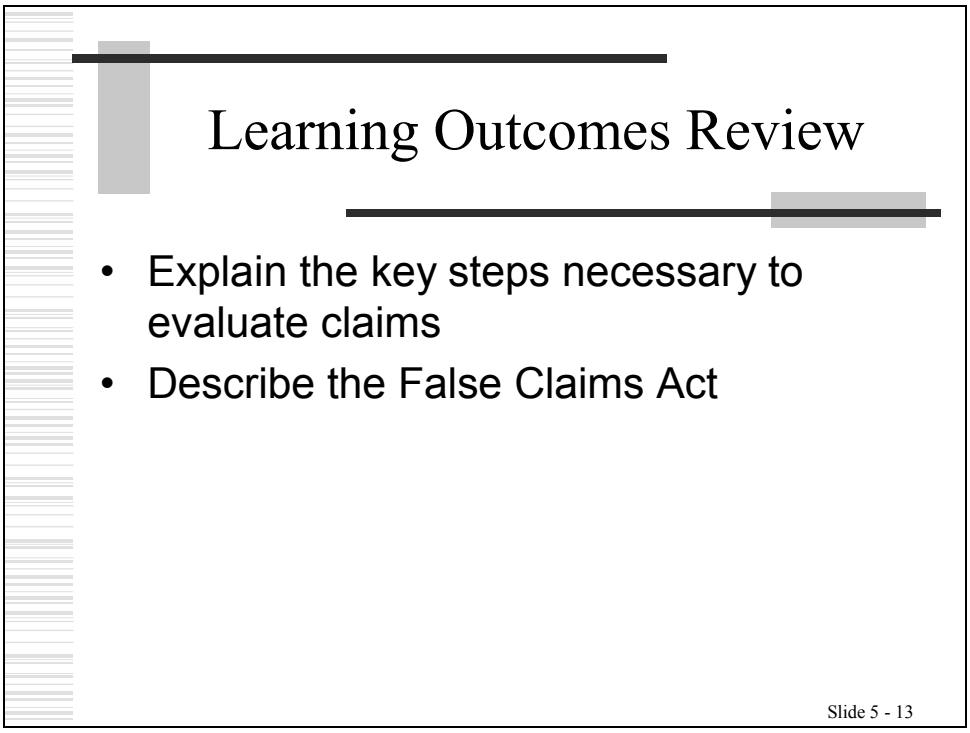
FHWA Policy on Reimbursing States for Claims

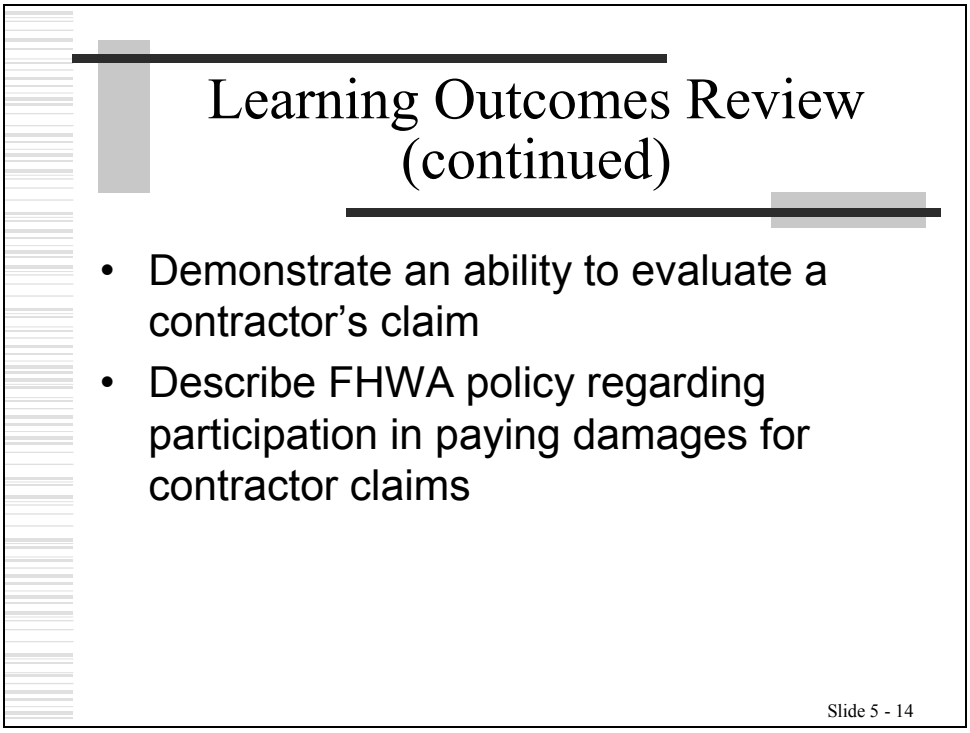
- Applies to NHS projects
- Non-NHS follow state procedure and OMB A-87
- Early FHWA involvement is key

Slide 5 - 11


FHWA Policy on Reimbursing States for Claims (continued)
• Participation on a case-by-case basis
• Limited participation in
• Interest
• Attorney's fees
• Profit
Slide 5 - 12

Exercise No. 5.1: See Appendix J

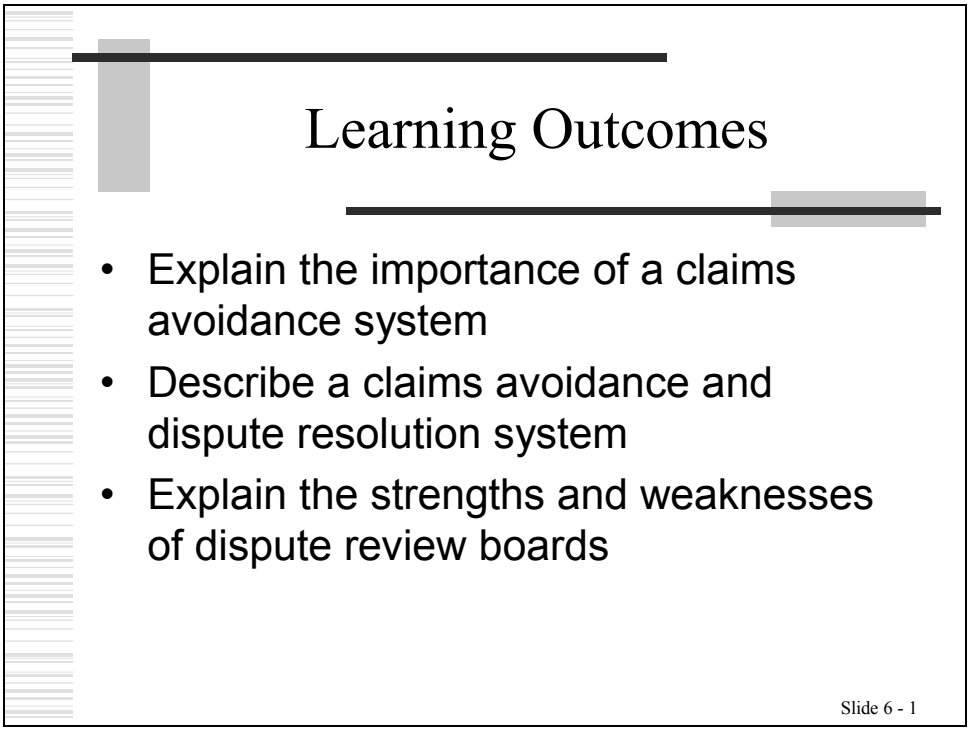

Learning Outcomes Review
• Explain the key steps necessary to evaluate claims
• Describe the False Claims Act
Slide 5 - 13


Learning Outcomes Review (continued)
• Demonstrate an ability to evaluate a contractor's claim
• Describe FHWA policy regarding participation in paying damages for contractor claims
Slide 5 - 14

MODULE 6: CLAIMS AVOIDANCE

References

- Moelmann, L.R. (2001), Implied Terms in Contract Formation and Interpretation: Getting the Most Out of What Is Not There; American Bar Association Forum on the Construction Industry/TIPS Fidelity and Surety Law Committee


Learning Outcomes
• Explain the importance of a claims avoidance system
• Describe a claims avoidance and dispute resolution system
• Explain the strengths and weaknesses of dispute review boards
Slide 6 - 1

Claims Avoidance

1. A claims avoidance system should be thought of as a system or collection of actions working independently and in concert to reduce the number of claims filed on a project and enhance the chances of quick resolution of claims that are filed.

2. Successful claims avoidance systems foster a culture of issue resolution. The roots of these systems are anchored in the design, the contract, and the project procedures. The conduct of the project participants is paramount to the success or failure of this system.

3. Components of a claims avoidance system:

    a. Open, frequent, and continued communications between project participants;

    b. Partnering;

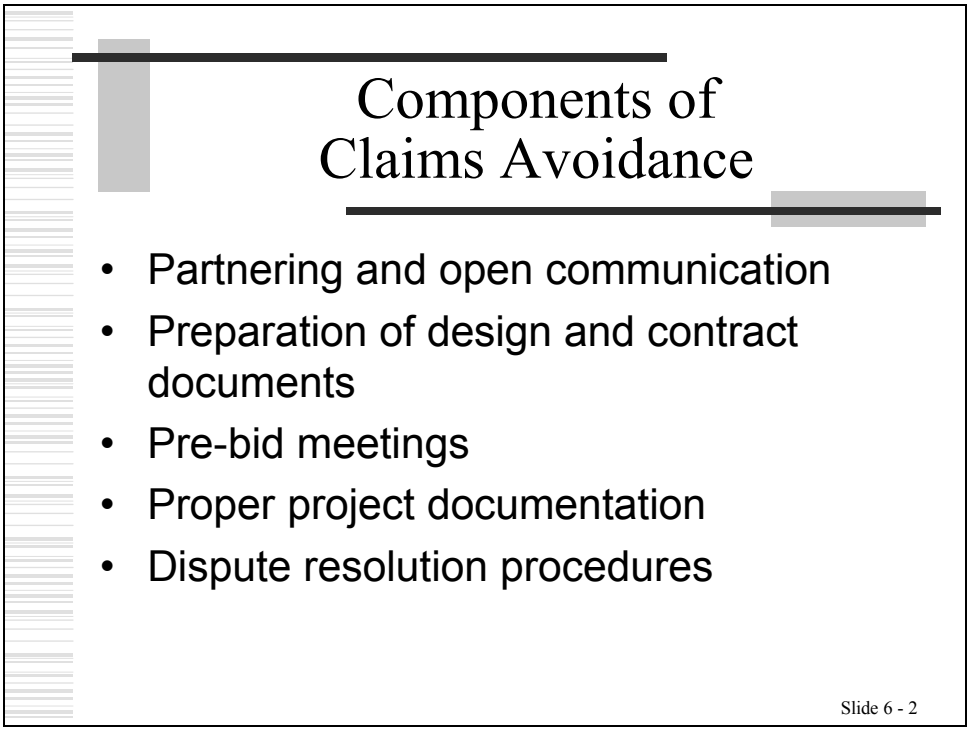
    c. Careful preparation of design documents;

    d. Careful preparation of contract documents;

    e. Pre-bid meetings;

    f. Maintenance of proper project documentation;

    g. Workable dispute resolution procedures.


Components of
Claims Avoidance
• Partnering and open communication
• Preparation of design and contract documents
• Pre-bid meetings
• Proper project documentation
• Dispute resolution procedures
Slide 6 - 2

Partnering

1. Partnering is a system founded on the cooperation of the parties to a contract in which participants work to improve professional relationships, achieve mutually beneficial successes, and minimize disputes.

2. Partnering is:

   a. Team building in order to achieve success,

   b. A management tool to identify and solve problems,

   c. A structured process of decision-making and team building,

   d. A relationship based on trust, honesty, and open communications,

   e. A process of developing working teams to achieve quality and continuous improvement through self-evaluation,

   f. A commitment to success,

   g. A vehicle to avoid problems, avoid adversarial relationships, and resolve issues expeditiously,

   h. A process in which the participants recognize that no one benefits from the exploitation of another and all must seek a win/win solution.

Partnering
Participants work to:
• Improve professional relationships
• Achieve mutually beneficial successes
• Minimize disputes
Slide 6 - 3

Preparation of Design

1. Establish consultant selection procedures; this should include consideration of past claims history.

2. Perform an adequate evaluation of existing conditions.

3. Manage the administration and scheduling of the design consultant contract. Consider including partnering provisions in the design contract.

4. Commission a design review by qualified third parties.

5. Commission a constructability review by qualified third parties. Alternately, make sure construction field personnel are involved in review of design for constructability issues.

6. Consultants should be required to provide professional liability insurance.

Preparation of Contract Documents

1. Do not ignore the contract or defer its preparation to the last minute. The contract spells out the rules of the game and is your most important tool in claims mitigation.

2. Read the contract documents in their entirety, including General Conditions, Standard Specifications, Supplemental Provisions, Special Provisions, plans, referenced documents, etc. and address the following:
   a. Conflicts;
   b. Omissions;
   c. Ambiguities.

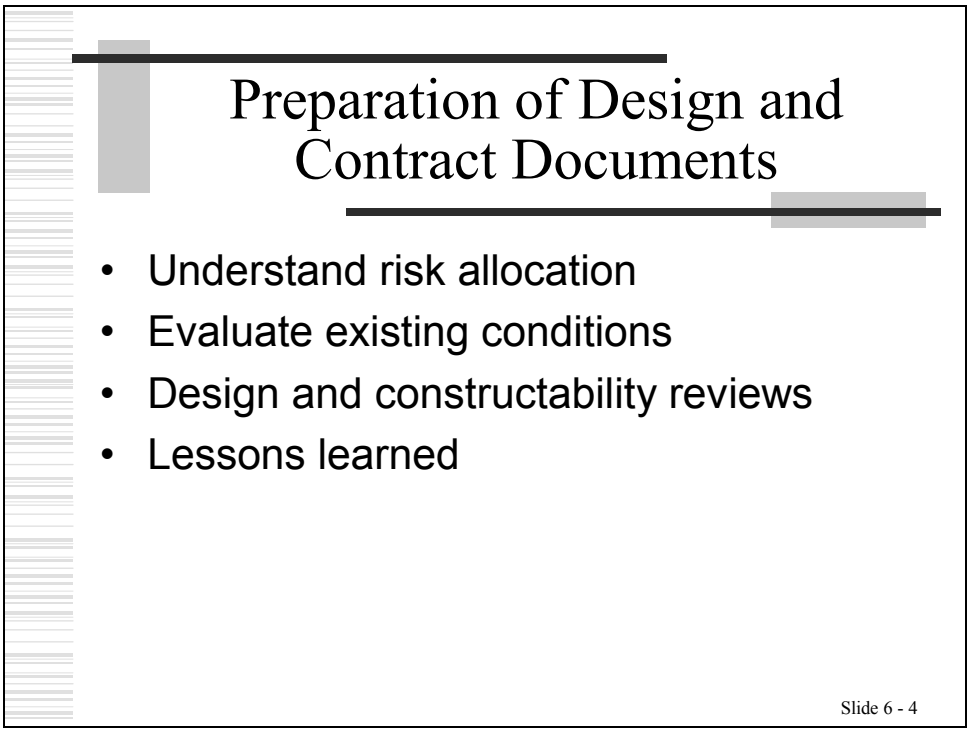
3. Understand how the contract allocates risk among the stakeholders.

4. Read the contract as if everything has gone wrong and you are in the middle of litigation, then answer the following question:

   *"**Does this contract provide adequate protection from risk?"***

   Make the necessary revisions until your answer to this question is ***"Yes."***

Claims Avoidance Tip – Lessons learned should be incorporated into the contract documents of future projects.


Preparation of Design and Contract Documents
• Understand risk allocation
• Evaluate existing conditions
• Design and constructability reviews
• Lessons learned
Slide 6 - 4

Pre-Bid Meetings

1. Schedule meetings so that contractors have time to prepare; but well before bid date to allow for time to answer questions.

2. Prepare and issue minutes of meeting as addendum to contract.

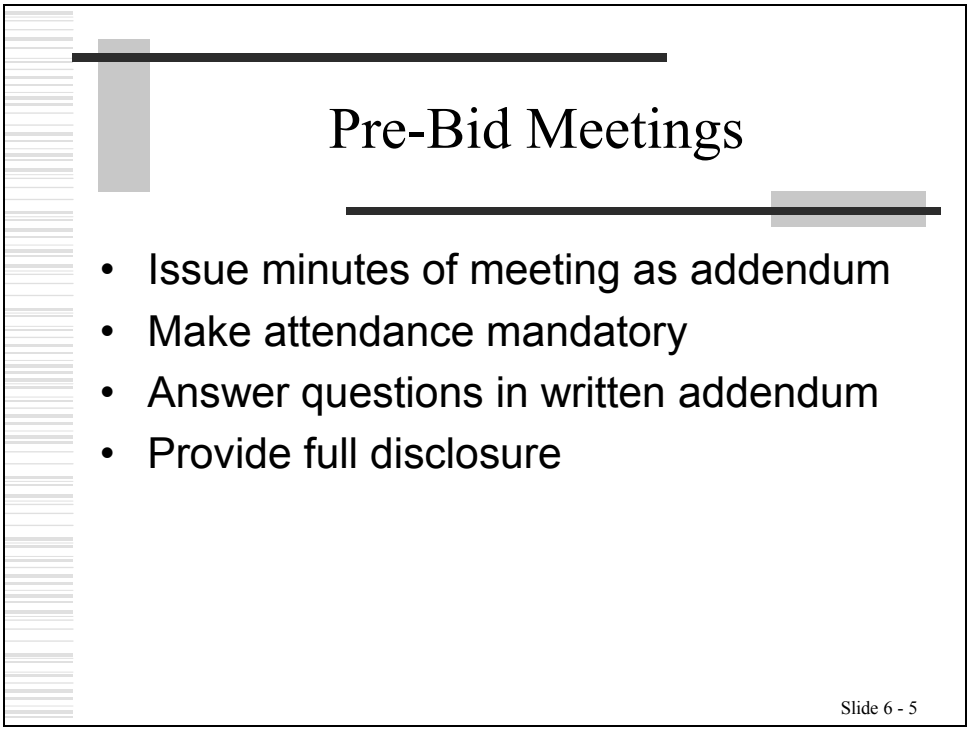
3. Consider making attendance mandatory and coordinating meeting with site visit or "showing."

4. Answer pre-bid questions promptly and in writing. Issue answers as addenda.

5. Provide full disclosure to bidders. This includes borings and other subsurface investigation results, as-built drawings, etc.

6. Be aware of the doctrine of **superior knowledge** and the consequences of failing to disclose material information.

> *Requirements for invoking the duty of disclosure must include the following:*
>
> 1. *The contractor undertakes to perform without vital knowledge of a fact that affects the performance costs or direction;*
> 2. *The government was aware the contractor had no knowledge of or had no reason to obtain such information;*
> 3. *Any contract specifications supplied misled the contractor, or did not put it on notice to inquire; and*
> 4. *The government failed to provide relevant information.*
>
> -Moelmann, L.R. (2001), Implied Terms in Contract Formation and Interpretation: Getting the Most Out of What Is Not There; American Bar Association Forum on the Construction Industry/TIPS Fidelity and Surety Law Committee


Pre-Bid Meetings
• Issue minutes of meeting as addendum
• Make attendance mandatory
• Answer questions in written addendum
• Provide full disclosure
Slide 6 - 5

Project Documentation

1. Maintaining proper project documents plays an important role in every claims avoidance system. A lack of proper documentation weakens an owner's ability to defend itself from contractor requests for additional compensation, and ultimately from contractor claims. *Remember, if it wasn't written down, it didn't happen.*

2. Maintain a copy of all bid documents for future reference. This includes the contractor's estimate, assumptions, schedules, take-offs, and calculations. Consider the escrow of bid documents.

3. Take jobsite photographs and videotapes and record the dates taken. Written descriptions should accompany the photographs and videotapes as well. These should be carefully archived to prevent damage. Consult with the agency's legal department regarding the admissibility of photographs and videotapes in court proceedings.

4. Obtain cost and payroll records. Get electronic copies of these records if possible.

5. Pay requisitions and supporting information.

6. Submittals, test results, and other miscellaneous QA/QC reports.

7. Change orders, including all back-up information.

8. Requests for Information.

9. Weather data.

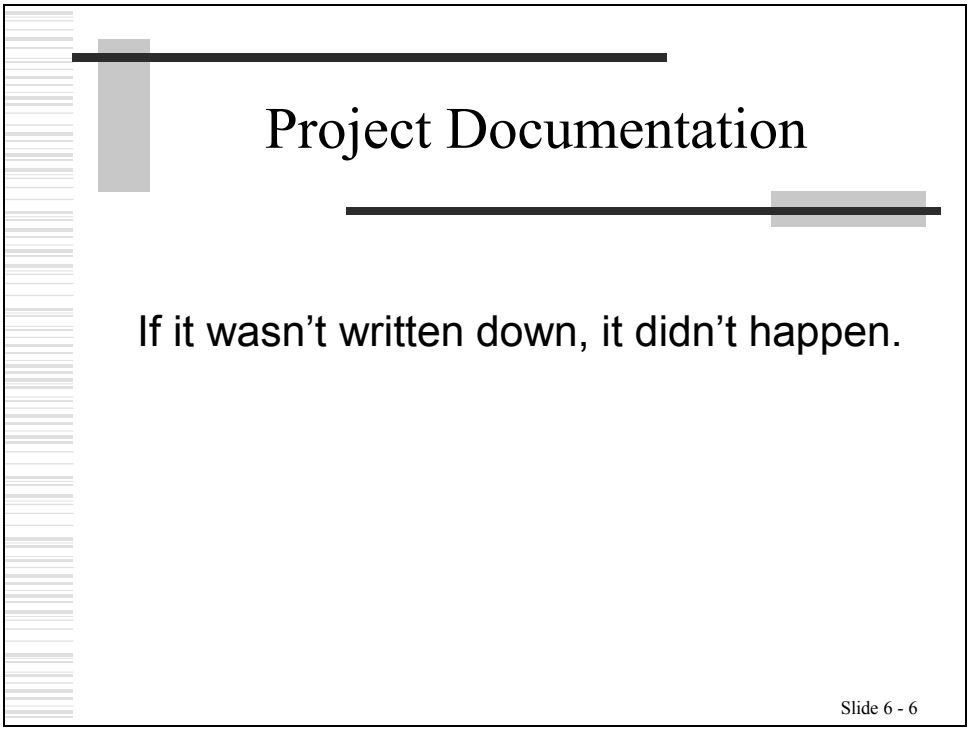
10. Daily reports and job diaries.

11. Correspondence.

12. Secure duplicates of all project correspondence away from the project site.

Claims Avoidance Tips – Escrow of Bid Documents

If the agency elects to escrow the bid documents on a project, the specifications should prescribe what to include as part of the bid documents. The agency should consider providing a form with the bid packages for the contractor to record its bid information on. Prior to award of the contract, an inspection of the bid documents should be scheduled by the agency. If information is missing, the contractor should be required to provide the missing information prior to the contract being awarded.


Project Documentation
If it wasn't written down, it didn't happen.
Slide 6 - 6

Daily Reports

1. Establish guidelines for daily reports that standardize both format and content.
   a. Uniform report format helps organize data among multiple projects.
   b. Ensures that all categories of information are included or considered.

2. Reports should include key operational data, namely:
   a. Headcount by trade and level;
   b. Areas of work and crew size, including subcontractor work;
   c. Quantities of work performed;
   d. Hours expended;
   e. Supervisory personnel;
   f. Material deliveries;
   g. Equipment mobilized or demobilized to site, note owned or rented, operating or idle, and record serial numbers (to prevent contractor's from charging for the same piece of equipment on more than one job);
   h. Work area access restraints;
   i. Lack or loss of power or utilities;
   j. Weather.

3. Reports should include all events that may have significance to the progress or execution of the project.

4. Reports should be dated and signed.

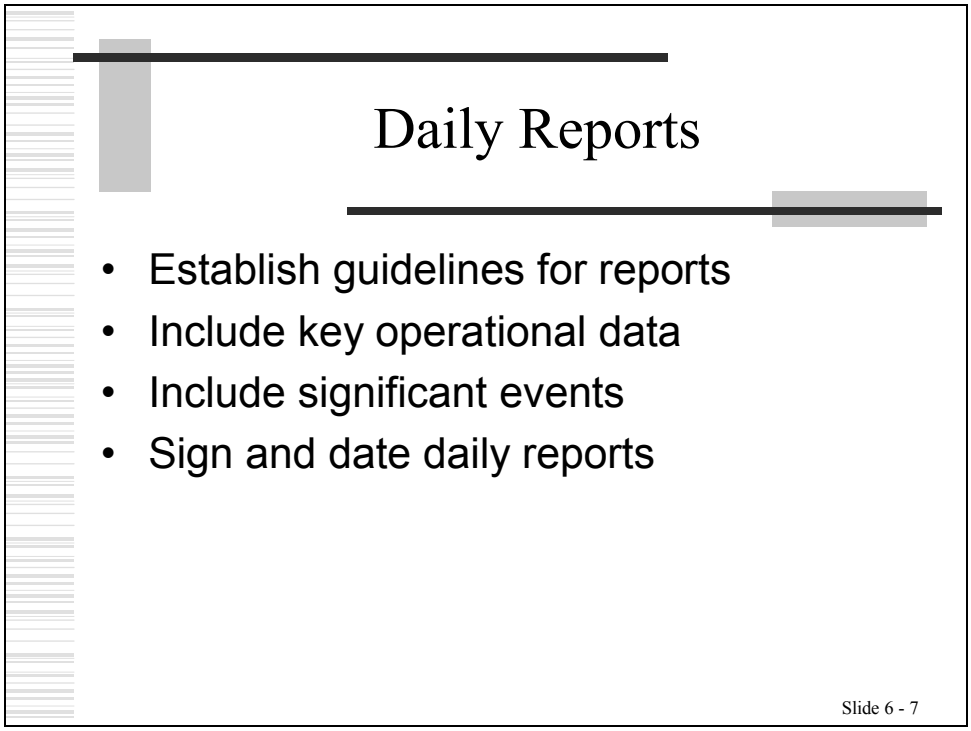
Diaries

1. Maintained by Resident Engineer or Project Manager;
2. Record significant events of the day;
3. Record progress of the work;
4. Record problems;
5. Record key telephone conversations and oral directions;
6. Avoid editorial comments; diaries are "discoverable."

Visitors Log

1. Record visitors to the site;
2. Record time in and out

Claims Avoidance Tip - Daily reports are the key to claims avoidance and mitigating damages. The daily report must contain the information needed to support the evaluation of the contractor's performance. They must be neatly and legibly filled out. If an element of the contractor's work is a potential change, or the source of a potential dispute, special attention should be paid to documenting in detail the work affected by the change or dispute. The agency should have the contractor submit daily reports. Require that the agency's representatives and the contractor agree to the work performed on a daily basis if there is a dispute.


Daily Reports
• Establish guidelines for reports
• Include key operational data
• Include significant events
• Sign and date daily reports
Slide 6 - 7

Project Schedules

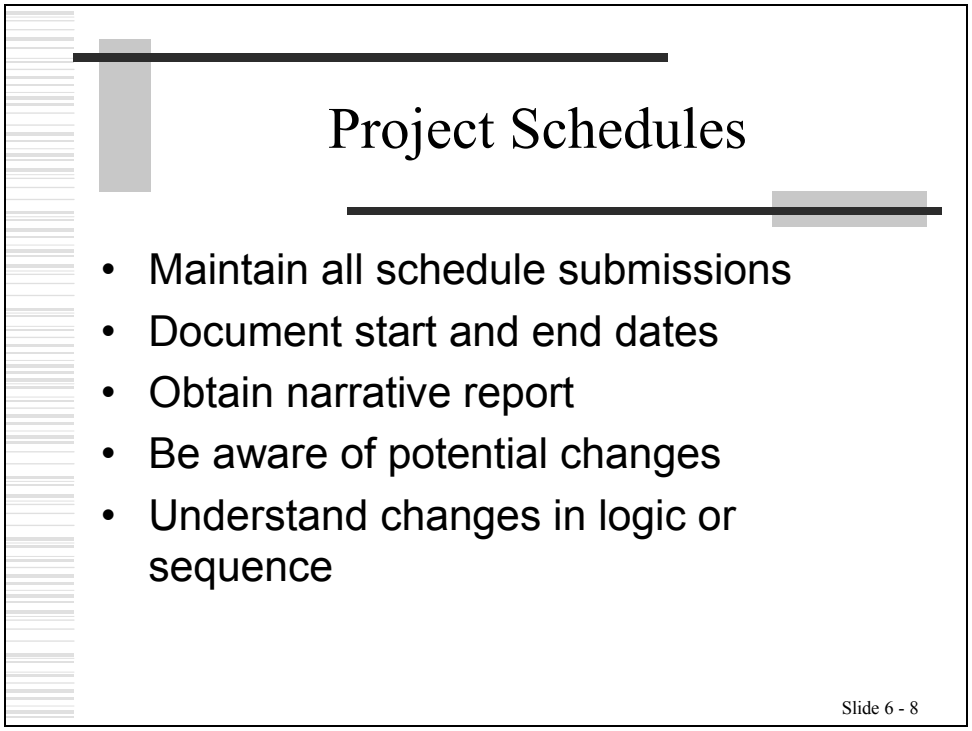
1. Maintain all pre-bid and project schedule submissions and updates, including computer files.

2. Document when specific schedule items of work begin and when they are completed.

3. The schedule should include a narrative report describing what occurred during the update period.

4. Note any situations that have occurred that might be construed as a change.

5. Make sure any changes in logic or sequence, and the reasons for these revisions, are fully explained and understood.

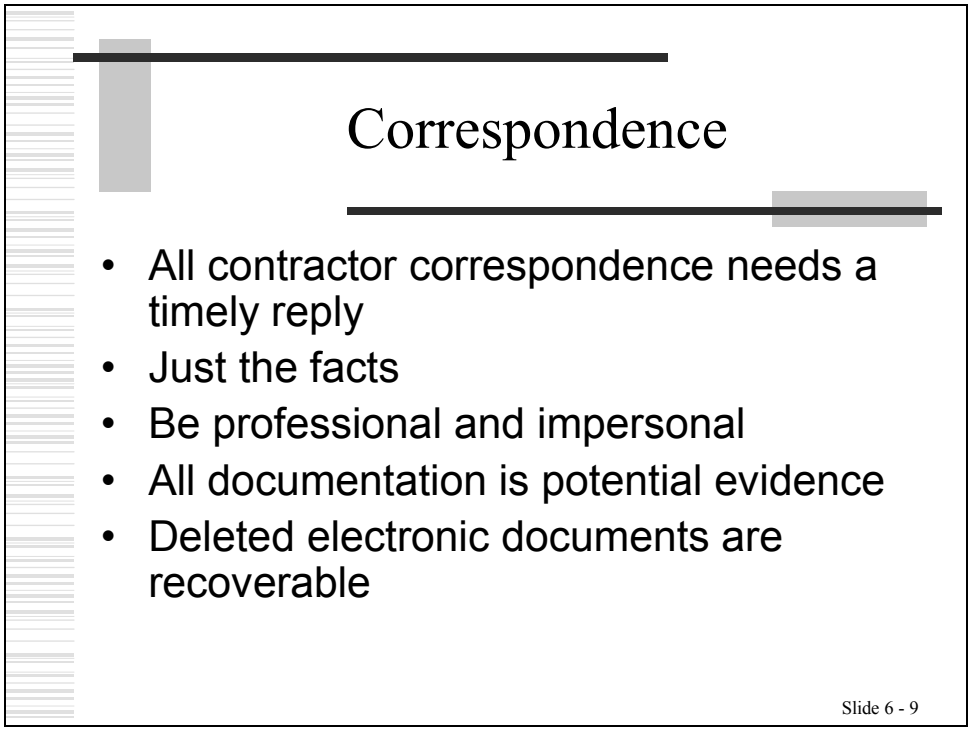

Project Schedules
• Maintain all schedule submissions
• Document start and end dates
• Obtain narrative report
• Be aware of potential changes
• Understand changes in logic or sequence
Slide 6 - 8

Project Correspondence

Good correspondence is essential to effective claims avoidance and damages mitigation.

1. Correspondence and memoranda
   a. Every contractor letter or e-mail needs a prompt and complete reply.
   b. Avoid letter-writing wars by referencing earlier correspondence, when appropriate.
   c. Address each issue raised by the contractor directly.
   d. Use references when responding.
   e. Let the facts and the contract speak for themselves.
   f. Be professional; remember you wear the “white hat.”
   g. Keep everyone informed and give notice of events.
   h. A letter or memorandum should follow all oral direction.
   i. Insist on timely notice; and insist on timely action.
   j. Keep correspondence impersonal.

2. All project documentation is potential evidence (discoverable) should a dispute become the subject of a lawsuit.
   a. Carefully draft all project documentation with discovery in mind.
   b. Preserve original documents.
   c. Some documents, usually only those you write to your attorney, are privileged, which means that the document does not have to be turned over as part of the discovery process. Keep these documents separate.
   d. Remember that deleted electronic documents are recoverable from computer hard drives.


Correspondence
• All contractor correspondence needs a timely reply
• Just the facts
• Be professional and impersonal
• All documentation is potential evidence
• Deleted electronic documents are recoverable
Slide 6 - 9

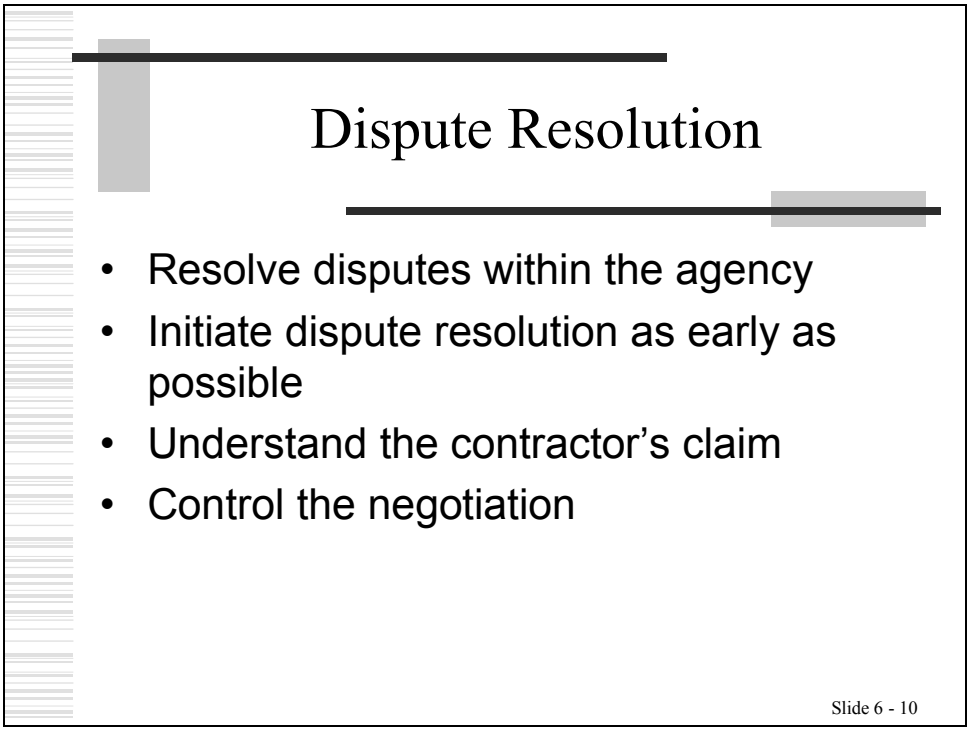
Dispute Resolution

1. Administrative Process.
   a. Majority of claims are settled by negotiation on site, or at the District, Regional, or Central Office levels. Basically, within the agency.
   b. Rules established in the contract.
   c. Usually the least expensive and quickest method of resolution.
   d. Best when initiated as early as possible.
   e. Dispute escalation procedures established.

2. Considerations, Guidelines, and Techniques.
   a. Be thoroughly prepared.
   b. Understand the contractor's claim.
   c. Anticipate possible positions the other side might take.
   d. Know what the contractor's claim is worth.
   e. Understand the maximum and minimum settlement values that you can support.
   f. Know exactly what items you can trade off; do not trade off strong points.
   g. Any time you give up something, you should get something of equal or greater value (not necessarily measured in dollars) in return.
   h. Control the negotiation sessions, including what will be discussed and the sequence of discussion.
   i. Never trust that the information presented is valid until you can verify it.
   j. Practice presentation with peers.

Dispute Resolution Procedures

(See Appendix B)


Dispute Resolution
• Resolve disputes within the agency
• Initiate dispute resolution as early as possible
• Understand the contractor's claim
• Control the negotiation
Slide 6 - 10

MODULE 6: EXERCISES

Exercise No. 6-1: Preparation of Project Correspondence.

Objective: Read both the contractor's notice of claim, and the owner's response. Critique the owner's response to make it more effective.

Contractor's Notice of Claim:

ACME Construction. Inc.

SINCE 1984

May 22, 1997

Subject: Notice of Potential Claim - Welding Requirements

Gentlemen:

Per Special Provisions Section 9-1.04 Notice of Potential Claim, ACME protests the welding inspection requirements for splicing steel pipe pile as interpreted by the Agency. The Agency notified ACME on May 8,1997 that inspection is required on all field welding performed. Special Provisions Section 10-1.22 Piling states that piling shall conform to the provisions in Section 49, "Piling", of the Standard Specifications, and the Special Provisions. Special Provisions Section 10-1.22 reads that unfilled pipe piles shall be full penetration welded. Partial welds may be restored to full penetration welds in the field in conformance with AWS D1.1. Also, Standard Specification Section 49-5.02 Splicing states that splices for steel piles shall be made by full penetration butt welding the entire cross section in conformance with the requirements in AWS D1.1. The welding procedure required is D1.1, but no inspection is required per 49-5.02 of the Standard Specifications.

Exercise No. 6-1 (continued): Preparation of Project Correspondence.

In the past, previous projects interpretations of this specification has not required welding inspection per Section 6 of AWS D1.1 to be performed by the Contractor. Contracts following our current project have revised this specification section to require that the Contractor performs welding inspection. ACME is supplying a CWI certified inspector per Section 6 of AWS D1.1 for this project and requests additional compensation for all expenses incurred for this inspection.

ACME has attached partial Agency specification sections from other projects for your information regarding welding procedures. Attachment 1, Agency Contract #11-050024 was bid prior to our current project which reflects our current specifications. Attachment 2, Agency Contract #05-453404 was bid after our current project which includes additional field welding quality control requirements.

ACME has also attached per Special Provisions Form CEM-6201 Notice of Potential Claim. ACME is currently analyzing the additional costs involved. Per specifications, the Contractor shall, within 15 days of submitting said notice, furnish an estimate of the cost of the affected work and impacts, if any, on project completion. ACME will be unable to furnish a full cost analysis to the Agency within this period of time, but believes the following costs will be incurred: 1) additional cost for CWI certified inspector; 2) schedule delays; 3) resource delays; 4) additional resources; and 5) additional supervision.

Please contact ACME at 555-555-5555 if you have any questions.

Very truly yours,

ACME Construction, Inc.

Exercise No. 6-1 (continued): Preparation of Project Correspondence.

Agency's Response:

May 27, 1997

Re: Notice of potential claim, welding

Gentlemen:

The Agency acknowledges the receipt of the contractor's notice of potential claim regarding the welding specification. The Agency takes exception to the implication that the contractor was not informed as to what welding specification was applicable. The contract clearly defines which elements of the welding specifications were important to our application. The contractor's failure to provide the specified welding submittal prior to welding work for the project is the sole cause for any delays or loss of efficiencies the contractor might be experiencing.

The contractor's request for additional compensation for "scheduling delays" and "resource delays" has no factual basis. The Agency takes exception that this request for additional compensation was made in the name of a contractual non-persona "Joe Welder". Mr. Welder's statement that he prepared the notice of potential claim without review of the correspondence file and with little or no personal involvement in this issue is disturbing.

Review of the alien contract documents submitted by the contractor reveals only that they are welding specifications applicable to other projects. Mr. Welder's observation that the cast-in-steel shell concrete pile specification on another project "reflects our current specifications" is baffling.

The applicable provision for splicing of the "open ended pipe piles" on the Big River Bridge is found in the Standard Specifications, Section 49-5.02 "Splicing.", "Splices for steel piles shall be made by full penetration butt welding the entire cross section in conformance with the requirements in AWS D1.1."

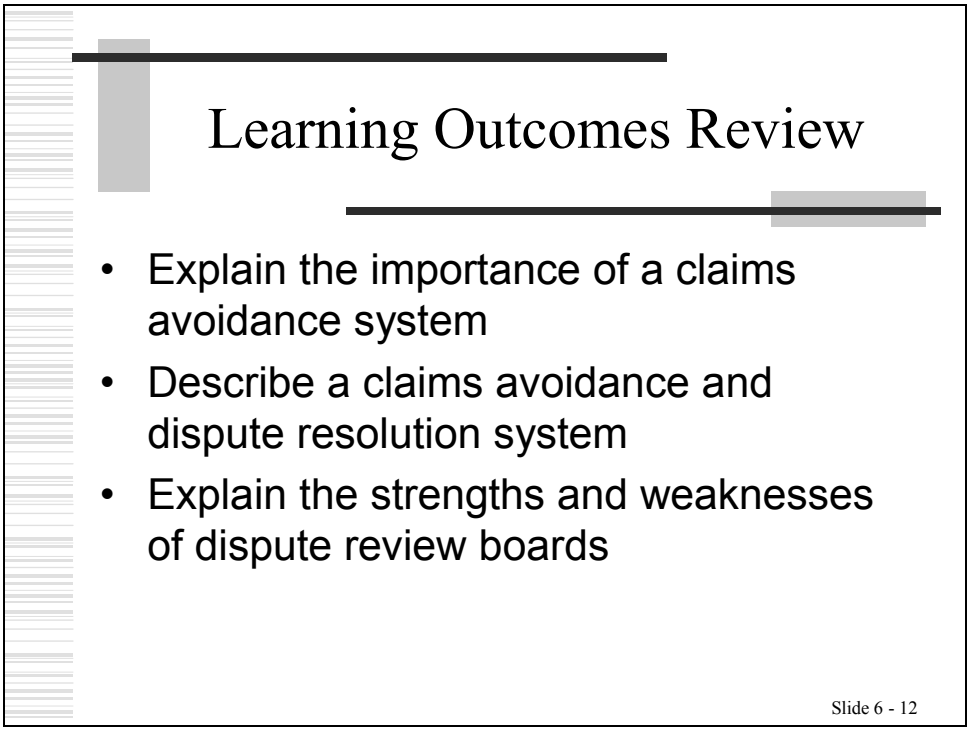
Exercise No. 6-1 (continued): Preparation of Project Correspondence.

Quoting from the AWS D1.1. Section 1.1 "Scope", "This code contains the requirements of fabricating welded steel structures. When conformance to the Code is stipulated in the contract documents, all provisions of the code shall be complied with, except for those provisions that the Engineer or contract documents specifically exempt." In the contract 03-362404 no provisions have been exempted.

The contractor's request for additional compensation for complying with the applicable welding specifications is without merit.

Sincerely,

The Agency


Learning Outcomes Review
• Explain the importance of a claims avoidance system
• Describe a claims avoidance and dispute resolution system
• Explain the strengths and weaknesses of dispute review boards
Slide 6 - 12

APPENDIX A: GLOSSARY

ACCELERATION. Ordered or voluntary expedited performance.

ACCEPTANCE. An agreement, either by express act or by implication from conduct, to the terms of an offer so that a binding contract is formed.

ACCORD and SATISFACTION. An agreement to substitute for an existing debt some alternative form of discharging debt. The new agreement is the accord; the discharge of the debt is the satisfaction.

ACT OF GOD. An event or happening resulting from natural causes without interference or aid from man.

ADMINISTRATIVE REMEDY. Non-judicial remedy provided by an agency, board, commission, or the like.

AGENT. One who is authorized to act for or in place of another.

ALLOCABLE COST. A cost that is assignable or chargeable to one or more cost objectives in accordance with the relative benefits received or other equitable relationship.

ALLOWABLE COST. Any cost that can be included in prices, cost reimbursements, or settlements under the contract to which it is allocable.

ARBITRATION. Reference of a dispute to impartial, third person(s) chosen by the parties to the dispute who agree in advance to abide by the arbitrator's decision after a hearing at which both parties have an opportunity to be heard.

AUDIT. The examination of records and documents and the securing of other evidence by confirmation, physical inspection, or otherwise, for one or more of the following purposes: determining the propriety or legality of transactions; ascertaining whether all transactions have been recorded and are reflected accurately in accounts; determining the existence of recorded assets and inclusiveness of recorded liability; determining the accuracy of financial statements or reports and the fairness of the facts they present; determining the degree of compliance with established policies and procedures relative to financial transactions and business management; or appraising an accounting system and making recommendations concerning it.

BID BOND. A surety bond that indemnifies the Agency against a winning bidder's failure to execute the contract documents and proceed with performance.

BILATERAL CONTRACT. A contract in which both contracting parties are bound to fulfill obligations reciprocally towards each other.

BRAND NAME OR EQUAL. Type of purchase description identifying one or more commercial products by brand name that sets forth those physical, functional, or other characteristics of the named product that are essential to the agency's needs.

BREACH OF CONTRACT. Failure, without legal cause, to perform any promise under a contract.

BURDEN. Fringe benefits paid to workers.

CARDINAL CHANGE. Contract change having the effect of making the work as performed not essentially the same work as the parties bargained for when the contract was awarded, and thus constituting a breach of contract by the agency.

CHANGE. A revision to the contractor's original contract requirements.

CHANGE ORDER. A written order signed by the owner, directing the contractor to make changes that the Changes clause of the contract authorizes the owner to make without the consent of the contractor.

CLAIM. A written demand or written assertion by one of the contracting parties, seeking (as a matter of right) the payment of money, the adjustment of interpretation of contract terms, or other relief.

COMPENSABLE DELAY. Delays that are excusable are the responsibility of the owner, and are compensable under the contract.

COMPENSATORY DAMAGES. Damages sufficient in amount to indemnify the injured party for the loss suffered.

CONCURRENT DELAYS. Multiple, critical delays that occur simultaneously.

CONDITION PRECEDENT. Condition that must occur or be performed before a contract becomes effective.

CONSEQUENTIAL DAMAGES. Losses that do not flow directly and immediately from an injurious act, but result indirectly from the act.

CONSIDERATION. The cause, motive, price, or impelling influence that induces a party to enter into a contract.

CONSTRUCTIVE ACCELERATION. A requirement based on the reasonable interpretation of the words, acts, or inaction of authorized agency employees, that the contractor complete the work at a date earlier than one that would reflect the time extensions to which the contractor is entitled because of excusable delays.

CONSTRUCTIVE CHANGE. A change to a contract resulting from conduct by the agency (e.g. defective specifications) or its authorized employees, that has the effect of requiring the contractor to perform additional work or otherwise modifies the contract.

CONTRACT. A term used to describe a variety of agreements or orders for the procurement of supplies or services. An agreement, enforceable by law, between two or more competent parties to do or refrain from doing something not prohibited by law for a legal consideration.

CONTRIBUTION. Sharing of a loss or payment among several defendants.

COORDINATION CLAUSE. Clause that defines the hierarchy of the contract documents (Order of Precedence Clause).

CRITICAL DELAY. Delay to the activities on the critical path.

CRITICAL PATH. The continuous chain of activities within a project that require the longest time to complete.

CROSS CLAIM. Claims litigated by parties on the same side of the main litigation, i.e. defendant files claim against other defendant.

COUNTERCLAIM. Claim presented by a defendant against a plaintiff.

DEBARMENT. A formal sanction by an agency prohibiting a contractor from receiving contracts as a result of certain proscribed actions, including crimes, fraud, etc.

DEDUCTIVE CHANGE. A change resulting in a reduction in the contract price because of a net reduction in the contractor's work.

DEFAULT. The omission or failure to perform a contractual duty.

DELAY. Postponement of the contract completion date, intermediate milestones, or start date of individual items of work, or the extended duration of an individual item of work.

DESIGN SPECIFICATION. Category of specification that sets out in detail the materials used for contract work and the mode and manner in which the contract work is to be performed.

DIFFERING SITE CONDITIONS. Unanticipated physical conditions at the site that differ materially from those set forth in the contract or ordinarily encountered.

DIRECTED CHANGE. An order to the contractor adding or deleting work to the contract, or modifying the manner or method of work performance.

DISCOVERY. Pretrial or pre-hearing procedure designed to promote full disclosure of all relevant facts related to a contract dispute.

DUTY. Legal obligation to perform under a contract.

EQUITABLE ADJUSTMENT. The doctrine that in settling a federal contract dispute, the contracting officer should make a fair adjustment or modification of the contract price.

ESTOPPEL. One who has by his or her conduct induced another to act in a particular manner is precluded (estopped) from thereafter adopting an inconsistent position and thus causing injury to such other person.

EXCULPATORY CLAUSES. A contractual provision relieving a party from any liability resulting from a negligent or wrongful act.

EXCUSABLE DELAY. Type of delay in contract performance that, in the absence of contractor control, fault, or negligence, will excuse delay and prevent a termination for default.

EXPRESS CONTRACT. Actual agreement of the parties, the terms of which are declared at the time of making, being stated in distinct and explicit language.

FLOAT. The amount of time, typically expressed in days, the start or finish of an activity can be delayed without causing a delay to the project schedule.

FREE FLOAT. The amount of time, typically expressed in days, the start or finish of an activity can be delayed without causing a delay to a successor activity.

IMPLIED CONTRACT. Contract not created by explicit agreement between the parties, but inferred by law from their acts or conduct.

IMPLIED WARRANTY. Promise arising by operation of law that something sold shall be merchantable and fit for the purpose for which a seller has reason to know it is required.

INCIDENTAL DAMAGES. Damages that include any commercially reasonable damages incurred in transportation, inspection, receipt, care, etc.

INDEMNIFICATION CLAUSE. A contractual provision in which one party agrees to answer for any liability or harm the other might incur.

INEFFICIENCY. Results when more resources are used to accomplish the same amount of work, or less work is performed with no change in resources.

INJUNCTION. A writ issued by a court of equity ordering a person to refrain from a given course of action.

INTEREST EXPENSE. The cost of borrowing funds.

INVITATION FOR BIDS. A package containing all of the information required by a bidder to submit a responsive bid when the sealed bidding method of procurement is used.

JURISDICTION. The authority of a board of contract appeals, federal court, arbitrator, or other judicial body to hold a hearing, grant relief, and make determinations that are binding on the parties.

LATENT. Hidden.

LIQUIDATED DAMAGES. A specific sum of money that has been expressly stipulated by the parties to a contract as the amount of damages to be recovered by either party in the event of a breach.

LITIGATION. A lawsuit.

MANDAMUS. A court writ issued to compel the performance of a public or official duty owned by the person to whom the order is directed.

MATERIAL. Significant.

MECHANICS LIEN. A claim created by law for the purposes of securing payment for work performed or materials furnished.

MEETING OF THE MINDS. A mutual agreement and assent by parties to the substance and terms of a contract.

MITIGATION OF DAMAGES. Duty of an injured party to minimize damages after injury.

MUTUAL AGREEMENT. Meeting of the minds with respect to the substance of an agreement.

MUTUAL MISTAKE OF FACT. Agreement in written form that does not really express what was intended by the parties.

NON-COMPENSABLE DELAY. Delay for which the contractor is not allowed to receive cost recovery.

NON-CRITICAL DELAY. Delay that affects non-critical work; typically activities with float.

NON-EXCUSABLE DELAY. Delay for which the contractor is entitled to a time extension.

NOTICE. Written warning, presented formally, intended to appraise a person of some proceeding in which his or her interests are involved.

NOTICE TO PROCEED. A written order by the agency to the contractor to proceed with the contract work.

OFFER. Manifestation of willingness to enter into a contract.

ORDER OF PRECEDENCE CLAUSE. Clause that defines the hierarchy of the contract documents (Coordination Clause).

PAROL EVIDENCE. Oral evidence; for example, under the parol evidence rule, for parties who put their agreements in writing, all previous and contemporaneous oral agreements are said to "merge" into the contract and generally are not admissible as evidence to alter terms of a contract.

PATENT. Obvious.

PAYMENT BOND. A bond required of contractors that secures their obligation to pay their laborers and suppliers.

PERFORMANCE. Fulfillment or accomplishment of a promise, contract, or other obligation according to its terms.

PERFORMANCE BOND. A bond required primarily of contractors that secures their obligation to properly complete their work.

PERFORMANCE SPECIFICATION. Category of specification that sets forth an end result; leaving manner, method of performance, and materials to the contractor's choice.

PRIMACY OF DELAY. The delay determined to be the primary or controlling delay when evaluating whether an adjustment to contract time is appropriate as a result of concurrent delays.

PRIVILEGE. That which releases one from the performance of a duty or obligation, or exempts one from liability, that he or she would otherwise be required to perform.

PRIVITY OF CONTRACT. Requirement that party seeking to enforce contractual rights against a party must have a direct contractual relationship with that party.

PRODUCTIVITY. The ratio of work performed to resources expended.

PROPOSAL. Any offer or other submission used as a basis for pricing a contract, contract modification, or termination settlement, or for securing payments thereunder.

PROTEST. A complaint that a certain procurement action violates the applicable rule.

PROXIMATE CAUSE. Act or omission immediately causing or failing to prevent injury.

PROMISSORY ESTOPPEL. Promise that promisor should reasonably expect to induce action or forbearance on the part of the promisee.

REASONABLE COST. Generally, cost that in nature and amount does not exceed what would be incurred by an ordinarily prudent person in the conduct of competitive business.

REFORMATION. The correction of defects so as to conform to the actual intent of the parties, which intent had been, through inadvertence or otherwise, improperly expressed in the agreement as originally drawn.

REMEDY. The rights given to a party by law or by contract that the party may exercise upon default by the other contracting party.

REQUEST FOR PROPOSALS (RFP). Packet of information used in the competitive negotiation method of procurement to communicate agency requirements and solicit proposals.

RESCISSION. The unmaking of a contract; it may be effected by mutual agreement of parties or by one of the parties declaring rescission of contract without consent of other if a legally sufficient ground exists.

RESPONSIBILITY. The ability of a bidder to properly perform contract work.

RESPONSIVENESS. The compliance of a bid in all material respects with the invitation for bids.

SEALED BIDDING. One of the two basic methods of procurement, this method involves the solicitation of bids and the award of a contract to the responsible bidder submitting the lowest bid.

SETTLEMENT. An agreement ending a dispute or lawsuit.

SOVEREIGN IMMUNITY. Prevents litigants from asserting a course of action against a state or the federal government unless the government body consents.

SPEARIN DOCTRINE. Owner's legal obligation regarding the completeness of the plans and specifications as well as the implied warranty that the project is constructible as designed.

SPECIAL DAMAGES. Actual damages, but not necessarily the result of the injury, by reason of special circumstances or conditions.

SPECIFICATIONS. A particular or detailed account or listing of the various elements, materials, and dimensions in a construction contract.

STATUTE OF LIMITATIONS. Time limit within which one may bring a lawsuit.

SUBSTANTIAL PERFORMANCE. Doctrine that prohibits termination of a contract for default if a contractor's performance deviates only in minor respects from the contract's requirements.

SUPERIOR KNOWLEDGE. Knowledge greater than that had by another person, especially so as to adversely affect that person.

SUPPLEMENTAL AGREEMENT. A change to an existing contact that is accomplished by the mutual action of the parties.

SUSPENSION OF WORK. An action by the agency in which the contractor is ordered to stop work until it receives an order to continue.

TERMINATION FOR CONVENIENCE. Right of the agency, under standard Termination for Convenience of the Government clause, to bring an end to contracts that are made obsolete by technological and other developments, or that are otherwise no longer advantageous to it.

TERMINATION FOR DEFAULT. Sanction that the agency may impose, under the standard default clause, for a contractor's unexcused failure to perform.

TOTAL FLOAT. The amount of time, typically expressed in days, an activity can be delayed without causing a delay to the project completion date.

TWO-STEP SEALED BIDDING. Hybrid procurement method whereby under "step one" contractors submit technical proposals (without prices) in response to a performance specification and, then, under "step two," each contractor whose technical proposal was acceptable submits a sealed bid in accordance with normal bidding procedures.

UNILATERAL CHANGE ORDER. A written order signed by the owner, directing the contractor to make changes that the changes clause of the contract authorizes the owner to make without the consent of the contractor.

WAIVER. The voluntary relinquishment or abandonment — express or implied— of a legal right or advantage.

Reference:
Black's Law Dictionary, Second Pocket Edition, Bryan A. Garner, Editor in Chief, West Group, A Thomson Company, St. Paul, Minnesota, 2001

APPENDIX B: DelDOT Standard Specifications for Road and Bridge Construction — 2016

Standard Specifications

for

Road and Bridge Construction

AUGUST 2016

Prepared by

The State of Delaware

DEPARTMENT OF TRANSPORTATION

Excellence in Transportation - Every Trip • Every Mode • Every Dollar • Everyone

Jennifer Cohan, Secretary
Robert McCleary, Chief Engineer

DIVISION 100 - GENERAL PROVISIONS

SECTION 101 – GENERAL INFORMATION, DEFINITIONS, AND TERMS

101.01 General

101.02 Abbreviations

101.03 Definitions

101.04 Units of Measure

101.01 General. The titles and headings of the Sections and subparts of Sections are intended for reference and are not to be used to interpret the Specifications. When the Contract references a publication, the reference applies to the most recent date of issue as of the date bids are advertised, including interim publications, unless the reference includes a specified date or year.

Portions of these Specifications are written in the imperative mood. In sentences using imperative mood, the subject "the Contractor" is implied. Also implied in the language are "shall" or "shall be" or similar words and phrases. In all instances where "the Contractor" and "shall" or "shall be" are implied, the actions specified are solely the responsibility of the Contractor. In the referenced Material Sections, the subject may also be a vendor, fabricator, manufacturer, or combination thereof, who may be supplying the Material, products, or Equipment for the Project. Prior to the Execution of the Contract, the implied subject of a sentence using the imperative mood is either "the Bidder" or "the prospective Bidder". The word "will" generally applies to decisions or actions of the Department or Engineer.

In the Contract, the following words: contemplated, required, determined, directed, specified, authorized, ordered, given, designated, indicated, considered necessary, deemed necessary, permitted, reserved, suspended, established, approval, approved, disapproved, acceptable, unacceptable, suitable, satisfactory, unsatisfactory, sufficient, insufficient, rejected, condemned, or words with similar intent; mean by or to the Department.

In the Contract, the words "or equal", referring to a product, Material, or process, mean "equal as determined by the Engineer".

The Specifications may present numerical values in both U.S. customary units (English) and metric units. The Plans will only use one of the two systems. Work entirely within the system set forth in the Plans and do not convert between the two systems. The relationship between the U.S. customary values and the metric values within these Specifications is neither an exact (hard) conversion nor a completely rationalized (soft) conversion.

101.02 Abbreviations. Wherever the following abbreviations, terms or pronouns are used in the Contract, interpret the intent and meaning as follows:

AA	Aluminum Association
AAN	American Association of Nurserymen
AAR	Association of American Railroads
AASHTO	American Association of State Highway and Transportation Officials
ACI	American Concrete Institute
AED	Associated Equipment Distributors
AGC	Associated General Contractors of America
AIA	American Institute of Architects
AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute
ALSC	American Lumber Standard Committee
ANSI	American National Standards Institute

APWA	American Public Works Association
ARA	American Railway Association
AREMA	American Railway Engineering and Maintenance of Way Association
ARTBA	American Road and Transportation Builders Association
ASCE	American Society of Civil Engineers
ASLA	American Society of Landscape Architects
ASME	American Society of Mechanical Engineers
ASTM	American Society of Testing and Materials
AWPA	American Wood Preservers Association
AWS	American Welding Society
AWWA	American Water Works Association
CFR	Code of Federal Regulations
FHWA	Federal Highway Administration
FSS	Federal Specifications and Standards
IEE	Institute of Electrical and Electronic Engineers
IES	Illuminating Engineering Society
IMSA	International Municipal Signal Association
ISO	International Organization for Standardization
ITE	Institute of Transportation Engineers
MASH	Manual for Assessing Safety Hardware
MIL	Military Specifications
MUTCD	Delaware (DE) Manual on Uniform Traffic Control Devices For Streets and Highways
NASSCO	National Association of Sewer Service Companies
NCHRP	National Cooperative Highway Research Program
NEC	National Electrical Code
NEMA	National Electrical Manufacturer's Association
NFPA	National Fire Protection Association
NIST	National Institute of Standards and Technology
OSHA	Occupational Safety and Health Administration
PCA	Portland Cement Association
PCI	Prestressed Concrete Institute
PTI	Post Tensioning Institute
SAE	Society of Automotive Engineers
SSPC	Steel Structures Painting Council
Temporary Traffic Control (TTC)	Delaware Manual on Uniform Traffic Control, Part 6, Temporary Traffic Control
UL	Underwriters Laboratory, Incorporated

101.03 Definitions. The following definitions apply to the Contract Documents.

Addendum. An Addendum is a Bid Proposal revision issued after Advertisement and before the bid opening.

Additional Work or Extra Work. Additional Work or Extra Work is Work that was not included in the Contract, but is necessary in order to satisfactorily perform the Work required by the Contract or Work that is not included in the Contract, but is desired by the Engineer in order to satisfactorily complete the Work.

Adjustment (or Equitable Adjustment). An Adjustment, Contract Adjustment or Equitable Adjustment is a revision to the Project cost or Project time provided in accordance with Section 109.04 for Project cost and/or 108.07 for Project time.

Advertisement. An Advertisement is a public announcement inviting Proposals for Work to be performed or Material to be furnished.

Award. An Award is the Department's acceptance of a Proposal prior to the execution of a formal, written Contract.

Bidder. A Bidder is any individual or legal entity submitting a Proposal.

Bid Documentation. Bid Documentation includes all writings, working papers, computer printouts, charts, and data compilations that contain or reflect information, data, or calculations used by the Bidder to prepare the Bid Proposal submitted to the Department, including, but not limited to, material relating to the determination and application of:

A. Equipment rates
B. Overhead rates and related time schedules
C. Labor Rates
D. Efficiency or productivity factors
E. Arithmetic extensions of Unit Prices
F. Subcontractor and Material supplier quotations

Any standard manuals used by the Bidder in determining the contents of the Proposal are also considered Bid Documentation. These manuals may be included by reference in the Bid Documentation. In such cases, show the name and date of the publication and the publisher.

The term "Bid Documentation" does not include documents provided by the Department for the Bidder's use in the preparation of the Proposal.

Bid Proposal; Bid Proposal Form. A Bid Proposal is the Department's specific Invitation to Bid and consists of the following documents and any referenced documents: the General Description; General Notices; Supplemental Specifications; Special Provisions including Utility, Right of Way, Environmental and Railroad Statements; Plans, Addendums and any Appendices or Attachments; and the Bid Proposal Form. A Bid Proposal Form is the approved form on which the Department requires formal bids to be prepared and submitted for the Work. The Department may allow or require Bid Proposal Forms to be in an electronic format.

Bond. See Contract Payment and Performance Bond.

Bridge. A Bridge is a Structure, including supports, erected over a depression or an obstruction, such as water, highway, or railway; having a track or passageway for carrying traffic or other moving loads; having an opening of 20 square feet or greater; and a minimum vertical opening of 4 feet.

Calendar Day. A Calendar Day consists of each and every day shown on the calendar, beginning and ending at midnight.

Change Order. A Change Order is a written order issued by the Engineer to the Contractor setting forth any change, reduction of Work, and/or addition of Extra Work required to be undertaken by the Contractor. A Change Order may be issued with or without the consent of the Contractor. The signature line for the Contractor on a Change Order form is for the sole purpose of acknowledging receipt of the Change Order; do not write anything on the form other than a signature and do not modify the form on which the Engineer issues the Change Order. Failure to sign the Change Order does not invalidate the Change Order. A Change Order does not invalidate any other portion of the Contract.

Claim. Refer to Section 105.15 for definition of Claim.

Completion. Completion of the Project occurs when the Work has been satisfactorily concluded under the Contract and the Contractor has satisfactorily executed and delivered to the Engineer all documents, certificates, and proofs of compliance required by the Contract.

Contract; Contract Documents. The Contract is the written agreement between the Department and the Contractor setting forth the obligation of the parties for the performance of the Work. The written agreement constitutes the entire Contract between the parties.

The Contract may include, but is not limited to, the Advertisement; the Contract form; the Contractor's Proposal, the Department's Bid Proposal, Performance, Payment, and other bonds or guaranties; the Specifications; Working Drawings; general and detailed Plans; all required notices with respect to any of the foregoing; Change Orders; Supplemental Agreements; all documents incorporated into the Contract by reference; and the Engineer's written directives. Do not modify, alter, or otherwise change the Contract by any oral promise, statement, or representation made either by the Department or Contractor, unless such modification, alteration, or change is reduced to writing in accordance with the Contract.

Contract Item (Pay Item or Item). A Contract Item, Pay Item, or Item is a specifically described item of Work for which a price is provided in the Contract.

Contract Payment and Performance Bond. A Contract Payment and Performance Bond is the security furnished by the Contractor and the Contractor's Surety or Sureties to guarantee payment and performance of all obligations incurred by the Contractor on or because of the Contract.

Contract Time. The Contract Time is the number of Working Days or number of Calendar Days allowed for the Substantial Completion of the Contract. Achieve Substantial Completion on Calendar Day Contracts on or before the last chargeable Calendar Day even when that date is a Saturday, Sunday, or Holiday.

Contractor. The Contractor is the individual or legal entity contracting with the Department for performance of the Work.

Culvert. A Culvert is either a Structure that is not classified as a Bridge and provides an opening that allows water to flow under a roadway, railway, Embankment or trail or is a Bridge classified as a Culvert in DelDOT's Bridge Inventory.

Days. Days means Calendar Days.

Department (DelDOT). Department means Delaware Department of Transportation (DelDOT).

Differing Site Conditions. Differing Site Conditions are subsurface or latent physical conditions encountered at the site that, 1) differ materially from those indicated in the Contract, or are 2) unknown physical conditions of an unusual nature, differing materially from those conditions ordinarily encountered and generally recognized as inherent in the Work provided for in the Contract. If the Contract contains a definition of Differing Site Conditions in the General Notices, the definition in this Section does not apply and is replaced by the definition found in the General Notices.

District. A District is the subdivision of the Department that is administering the Contract.

District Engineer. The District Engineer is the Department head of the District administering the Contract. The chain of command on a Project will be expressly identified at the preconstruction meeting for the Project.

Embankment. An Embankment is a Structure constructed of Material meeting the requirements of Section 209, as described in Section 202.

Engineer. The Engineer is the Chief Engineer of the Department, acting directly or through an assistant or other authorized representative. The Engineer is responsible for engineering and administrative supervision of the Contract.

Equipment. Equipment is all machinery, tools, and apparatus, and the fuels, lubricants, batteries and other supplies and parts needed to use, operate, and maintain these items for use in constructing and completing the Work.

Extra Work. See Additional Work for the definition of Extra Work.

Falsework. Falsework is any temporary construction Work used to support the weight of a permanent structural element until such element becomes self-supporting. Falsework includes, but is not limited to, steel or timber beams, girders, columns, piles and foundations, and any proprietary Equipment including modular shoring frames, post shores, and adjustable horizontal shoring.

Final Acceptance. Refer to Section 105.16 for definition of Final Acceptance.

Final Inspection. A Final Inspection is the inspection conducted by the Engineer to determine if the Project, or any substantial portion thereof, has been satisfactorily completed in accordance with Contract requirements.

Force Account. Force Account is a method of payment for Work performed by the Contractor at the Engineer's direction, calculated as specified in Section 109.04.

Formwork. Formwork is a temporary Structure or mold used to retain plastic or fluid Material in a designated shape until the Material hardens. Formwork must have enough strength to resist the fluid pressure exerted by the plastic Material during placement and any additional pressure generated by vibration of the Material.

General Description. The General Description is the information that appears in the Bid Proposal before the General Notices that consists of specific Project related information that may include, but is not limited to; Location, Description, Completion Time, Prospective Bidders Notes, anticipated Notices to Proceed, Special Notices, Bidding Criteria, Construction Sequence Notes, Road User Costs, modifications to Liquidated Damages, Addenda issued, Questions and Answers published, Prebid Meeting Transcripts, Construction Items Units of Measure and Table of Contents.

General Notices. General Notices are federal and State regulations contained in the Bid Proposal that govern the Contract. The General Notices do not list every State or federal regulation that may affect the Contract.

Holidays. The following Days are Holidays in the State of Delaware.

A. New Year's Day
B. Martin Luther King's Birthday
C. Good Friday
D. Memorial Day
E. Independence Day
F. Labor Day
G. General Election Day (biennial)
H. Return Day (Sussex County only after 12:00 Noon)
I. Veteran's Day
J. Thanksgiving Day
K. Friday after Thanksgiving
L. Christmas Day

If any Holiday falls on Sunday, the Monday following shall be the Holiday. If any Holiday falls on Saturday, the Friday preceding shall be the Holiday. If any additional Days are designated as legal Holidays for State employees by Executive Order of the Governor, and the Contractor chooses to honor the Days by not working, the State will extend the Contract Time accordingly.

Contractors must receive approval from the Engineer in order to perform Work on a Holiday. The Contractor is not entitled to an extension of Contract Time if the Engineer prohibits Work on a Holiday. Holidays count as Calendar Days on Calendar Day Contracts whether or not the Contractor receives approval to perform Work on those Days.

Inspector. An Inspector is an authorized representative of the Engineer whose duties and authority is defined in Section 105.02.

Invitation for Bids. The Invitation for Bids is the Advertisement of Bid Proposals for Work and/or Materials on which Proposals are requested. The Advertisement will indicate with reasonable accuracy the quantity and location of the Work to be performed and the time and place of the opening of Proposals.

Limits of Construction (LOC). The Limits of Construction (LOC) are boundaries that define the area where the Contractor may perform Work. The Contractor may not bring labor, Equipment or Materials outside of the LOC within the Project limits without written permission from the Engineer. When not specifically identified on the

Plans or in any other part of the Contract, the Limits of Construction shall be the outer boundary of the State's Rights-of-Way and easements within the Project's limits.

Liquidated Damages. Liquidated Damages are an amount due and payable to the Department by the Contractor for additional costs incurred by the Department resulting from (a) Withdrawal of a Bid per Section 103.06 or (b) the Contractor's failure to complete the Work within the Contract Time as set forth in Section 108.08.

Major and Minor Contract Items. A Major Item is any Contract Item whose total bid value equals or exceeds 10 percent of the total price bid for the Contract. All other Items are Minor Items.

Materials. Materials are any substances, other than Equipment, used in the construction of the Project.

Notice of Award. A notice of award is the written notice to the selected Bidder stating that the Bidder's Proposal has been accepted by the Department and that the selected Bidder is required to execute the Contract Agreement and furnish Performance and Payment Bonds that are satisfactory to the Department.

Notice to Proceed (NTP). A Notice to Proceed is a written notice to the Contractor to begin the Contract Work and includes the date on which Contract Time will begin to accrue.

Pavement Structure. A Pavement Structure is the combination of sub-base, base course, and/or surface course placed on a sub-grade to support a traffic load.

A. Sub-grade. A sub-grade is the top surface of the roadbed upon which the Pavement Structure is constructed.
B. Sub-grade Treatment. A sub-grade treatment is the modification of roadbed Material by stabilization.
C. Sub-base. The sub-base is one or more layers of specified material thickness placed on a sub-grade to support a base course (or in the case of rigid pavement, the Portland cement concrete slab).
D. Base Course. The base course is the layer or layers of specified or selected Material of designated thickness placed on a sub-base or a sub-grade to support a surface course.
E. Surface Course. A surface course is the layer(s) of a Pavement Structure designed to accommodate the traffic load, the top layer of which resists skidding, traffic abrasion, and the disintegrating effects of climate. The top layer is sometimes called the "Wearing Course".

Plans. Plans are the Contract drawings, typical sections, and supplemental drawings, or exact reproductions thereof, which show the location, character, dimension, and details of the Work to be done, and which are considered to be a part of the Contract.

Profile Grade. A Profile Grade is the elevation of the trace of a vertical plane intersecting the top surface of the finished grade, usually along the longitudinal centerline of the Surface Course.

Project. A Project refers to a specific section of highway or other public improvement together with all appurtenances and construction to be performed thereon under the Contract. The Project may include work performed by others under other contracts.

Proposal. A Proposal is a written offer by a Bidder on Bid Proposal Forms furnished by the Department to perform the Work. The Proposal includes the Bid Proposal Form and all documents submitted by the Bidder, and incorporates by reference all of the documents in the Bid Proposal.

Proposal Guaranty. A Proposal Guaranty is the security furnished with a Proposal to ensure that the Bidder will enter into the Contract if the Contract is Awarded.

Responsive Bid. A Responsive Bid is a Proposal that complies with all requirements of the Invitation to Bid.

Responsible Bidder. A Responsible Bidder is a Bidder determined by the Department to possess the potential to perform the Work.

Right-Of-Way. Right-Of-Way is a general term denoting land, property, or an interest therein possessed by the Department or other entity that was acquired for or devoted to transportation purposes. Rights-of-Way identified in the Contract Documents are presumed to belong to the Department unless the Contract Documents identify such Rights-of-Way as belonging to another entity.

Schedule of Items. The Schedule of Items is the list of Contract Items of Work contained in the Bid Proposal on which Bidders submit their bid prices.

Schedule of Work (Schedule). The Schedule of Work refers to the approved progress Schedule submitted by the Contractor containing dates of commencement and Completion of the various items of Work within the Contract Time.

Secretary. The Secretary is the Secretary of the Department of Transportation of the State of Delaware.

Section. When referring to the Specifications, a numbered article or group of related articles forming a part of the Specifications is considered a Section.

Specifications. Specifications are those parts of the Contract that are the compilation of provisions and requirements for the performance of the prescribed Work.

A. Standard Specifications are the Department's posted and/or referenced *Specifications for Road and Bridge Construction* current as of the date of Advertisement of a Bid Proposal and contain the Department's requirements and specifications for general application and repetitive use. Standard Specifications include Supplemental Specifications.
B. Supplemental Specifications are the Department's posted and/or referenced additions and revisions to the Standard Specifications, current as of the date of advertisement of a Bid Proposal and are part of the Standard Specifications.
C. Special Provisions are special directions, provisions, or requirements particular to the Project not otherwise detailed in the Standard or Supplemental Specifications.

Standard Construction Details. Standard Construction Details are drawings of standard details of construction that have been adopted by the Department for miscellaneous items of Work and are a part of the Bid Proposal.

State. State refers to The State of Delaware.

Structures. Structures are Bridges, Culverts, Embankments, storm sewer appurtenances, slope and retaining walls, sign support structures, buildings and other similar items.

Subcontractor. A Subcontractor is an individual or legal entity contracting with the Contractor or another Subcontractor to perform any part of an Item of Work of the Contractor's Contract with the Department. Subcontractors are subject to the requirements of Section 108.01.

Exceptions to this definition are suppliers limited to delivering and depositing, but not incorporating, Material; suppliers of services that transport Material; and Work performed which does not physically advance the Completion of the Contract and is not considered as an Item of Work.

Substantial Completion. Substantial Completion is the point at which all Contract Items are complete as deemed by the Department excluding any warranties or vegetation growth.

Substructure, Bridge. The Substructure of a Bridge is all of the structure below the bearings of simple and continuous spans, skewbacks of arches, and tops of footings of rigid frames, including backwalls and wingwalls.

Superintendent. A Superintendent is the Contractor's authorized representative in responsible charge of the Work.

Superstructure, Bridge. The Superstructure of a Bridge includes the approach slabs and the entire Structure except the Substructure.

Supplemental Agreement. A Supplemental Agreement is a written agreement signed by the Department and the Contractor for the performance of Work which is beyond the scope of the original Contract, but which the Department elects to perform in conjunction with the existing Contract.

Surety. A Surety is the legal entity other than the Contractor, in good standing and currently licensed to write surety bonds in the State of Delaware Department of Insurance executing a Surety Bond furnished by the Contractor.

Unbalanced Bid, Materially. A Materially Unbalanced Bid is a Proposal that generates a reasonable doubt that Award to the Bidder submitting a Mathematically Unbalanced Bid will result in the lowest ultimate cost to the Department.

Unbalanced Bid, Mathematically. A Mathematically Unbalanced Bid is a Proposal containing Contract Items that do not reflect the Bidder's reasonable actual costs plus a reasonable proportionate share of the Bidder's anticipated profit, overhead costs, and other indirect costs.

Unit Bid Price (Unit Price). A Unit Bid Price is the price provided by the Contractor in the Proposal for a Contract Item.

Work. Work is the furnishing of all labor, Materials, Equipment, and other incidentals necessary to complete the Contract.

Working Day. A Working Day is any Calendar Day, except: 1) Saturdays, Sundays, and Holidays; 2) Calendar Days where conditions identified in the Contract require the Contractor to suspend construction operations; 3) Calendar Days with inclement weather that prevent prosecution of the scheduled Work; and 4) Calendar Days from December 16 to March 15 inclusive. On inclement weather Days that result in partial prosecution of the Work, partial Working Days will be charged as determined by the Engineer. Partial Working Days will be charged in one-quarter day increments. If the Contractor receives permission from the Engineer to perform Work on any Saturday, Sunday or Holiday, full Working Days will be charged, weather permitting. Should the Contractor prepare to begin Work on any Day on which inclement weather prevents the Work from beginning at the usual starting time and the crew is dismissed as a result, the Contractor will not be charged for a Working Day whether or not conditions change during the day and the rest of the day becomes suitable for construction operations.

Working Drawings. Working Drawings include stress sheets, shop drawings, erection plans, Falsework plans, framework plans, cofferdam plans, bending diagrams for reinforcing steel, or any other supplementary plans or similar data which the Contractor is required to submit to the Engineer for approval.

101.04 Units of Measure.

Abbreviation	Description
ACRE	Acre
BAG	Bag
BF	Board Foot
CF	Cubic Foot
cSt	Centistokes
CY	Cubic Yard
EA-DY	Each Day
EA-MO	Each Month
EA-NT	Each Night
EACH	Each
F	Fahrenheit
GAL	Gallon
KIP	Thousand Pounds
LF	Linear Foot
LS	Lump Sum
LB	Pound
MFBM	Thousand Feet of Board Measure
MGAL	Thousand Gallons

PCF	Pounds per Cubic Foot
PSI	Pounds per Square Inch
SF	Square Foot
SY	Square Yard
SY-IN	Square Yard – Inch
TON	Ton

SECTION 102 – BIDDING REQUIREMENTS AND CONDITIONS

102.01	Registration of Bidders	102.09	Delivery of the Proposal
102.02	Contents of the Bid Proposal	102.10	Withdrawal or Revision of Proposals
102.03	Issuance of the Bid Proposal	102.11	Public Opening of Proposals
102.04	Interpretation of Quantities in the Bid Proposal Form	102.12	Disqualification of Bidders
102.05	Examination of Plans, Specifications, Bid Proposal, and Site of Work	102.13	Rejection of Proposal
102.06	Preparation of the Proposal	102.14	Materials Guaranty
102.07	Irregular Proposals	102.15	Non-Collusive Bidding Certification
102.08	Proposal Guaranty		

102.01 Registration of Bidders. Obtain registration status prior to submitting a Proposal. In order to obtain registration status, provide the Department with the information requested on the registration form provided by the Department.

Upon receipt of this information, the prospective Bidder will be listed on the Department's registry. Provide the Department on a continuous basis any changes to the information contained in the registry. Failure to provide current information may result in the loss of bidding privileges.

102.02 Contents of the Bid Proposal. The Bid Proposal will state the location and description of the contemplated Work, show the estimate of the various Pay Item quantities, and show the kinds of Work to be performed and/or Materials to be furnished. A Schedule of Items for which Unit Prices are invited will be included along with the specified Contract Time in which the Work must be completed, amount of the Proposal Guaranty, and the date, time, and place of the opening of Bid Proposals. If the basis of Bid Proposal comparisons by the Department is to be other than total cost, the comparison basis to be used will be defined. The Bid Proposal will also include or designate any Addenda, Special Provisions, and any other specifications or requirements that vary from or are not contained in the Standard Specifications.

All papers bound with or attached to the Bid Proposal are part of the Proposal. The Plans, Specifications, and other documents incorporated by reference in the Bid Proposal are part of the Proposal whether attached or not.

102.03 Issuance of the Bid Proposal. Potential Bidders must contact the Department in order to receive the Bid Proposal in electronic format. The Department does not provide printed Bid Proposals; bidders are able to print from the electronic format. The Bid Proposal is also available on the internet at the state's Bid Solicitation Directory; however, the Website Bid Proposal is not valid for submitting bids and the Website documents are marked as such. The Department does provide a printed set of plans and specifications for viewing in the Bidder's Room at the DelDOT Administration Building in Dover. The Department will furnish a Bid Proposal to each prospective bidder. The Department reserves the right to refuse to issue a Bid Proposal to a Bidder for any of the reasons stated in Section 102.12.

All Addenda are posted on the internet at the State's Bid Solicitation Directory and are included by reference in the Bid Proposal. The Bidder is responsible to check the website as needed to ensure that the Bidder is aware of Addenda that are included in the Bid Proposal. If Addenda are issued, the final Addendum will be posted no later than the end of the day two working days prior to the bid date. Each Addendum number and date must be entered on the submitted Certification Form.

102.04 Interpretation of Quantities in the Bid Proposal Form. The quantities appearing in the Bid Proposal Form are estimates used for the bid comparison. Payment to the Contractor will be made for the actual quantities of Work performed and accepted, or for Materials furnished in accordance with the Contract. The estimated quantities of Work to be performed and Materials to be furnished may be increased, decreased, or eliminated in their entirety.

102.05 Examination of Plans, Specifications, Bid Proposal, and Site of Work. Examine the site of the proposed Work, the Bid Proposal, and all Items designated in the Bid Proposal before submitting a Proposal. The Bidder

assumes responsibility for all site conditions that should have been discovered had a reasonable site investigation been performed, whether or not the Bidder actually performed the investigation. The submission of a Proposal will be considered conclusive evidence that the Bidder is aware of and accepts the conditions to be encountered in performing the Work and the requirements of the proposed Contract.

Boring logs and other records of subsurface investigations, when such investigations have been performed, are available for inspection by Bidders. It is understood that such information was obtained and used for Department design and estimating purposes only. The information is made available to Bidders so that all Bidders have access to subsurface information identical to that available to the Department and to other Bidders, and such information is not intended as a substitute for the personal investigation, interpretations, and judgment of the Bidders.

The Department will not be bound by any statements or representations concerning site conditions or descriptions of the Work unless they are included or designated in the Bid Proposal. Oral explanations or instructions given before the bid of the Contract by Department employees or agents will not be binding.

Submit any request for explanation of the meaning or interpretation of the Bid Proposal or Items designated in the Bid Proposal in writing to the Department's e-mail address listed in the Bid Proposal no less than six business Days prior to the Proposal opening date. Interpretations or explanations made by the Department in response to questions asked by prospective Bidders will be dated and posted periodically on Delaware's Bid Solicitation Directory Website. The final questions and answers document will be posted on the Website no later than the end of the day two business Days prior to the bid date. The final posted date must be entered on the submitted Certification Form. All questions and answers posted by the Department on the Website are included in the Contract by reference and become part of the Bid Proposal. The Bidder to whom the Contract is Awarded will receive a hard copy of the final posted questions and answers.

102.06 Preparation of the Proposal. Submit the Proposal either upon the Bid Proposal Forms, or upon approved electronic media as directed by the Contract Documents. When using approved electronic media to submit bids, provide both the electronic copy and a hard copy of the bid unless otherwise directed by the Proposal. Detach the Bid Proposal Forms from the Bid Proposal. Specify a Unit Price in figures for each Contract Item for which a quantity is given and show the product of the respective Unit Price and quantities typewritten or electronically printed in figures in the column provided. The total amount of the Proposal is to be obtained by adding the amounts of the several Contract Items. Type or print the figures onto the form. In case of a discrepancy between the typewritten Unit Prices and the typewritten or electronically printed bid amount, the Department will use the typewritten or electronically printed Unit Prices. In case of a discrepancy between the Unit Prices contained on the approved electronic media and the Unit Prices on the hard copy generated by the electronic medium, the Department will use the hard copy Unit Prices.

Execute last minute handwritten substitutions of the typewritten or electronically printed Unit Prices on the typewritten Bid Proposal Forms or hard copy generated by the approved electronic media by striking a single line through the figure being substituted and legibly writing the new Unit Price in ink. Initial each last minute substitution. Legibility of the substitution will be solely determined by the Department.

Acknowledge all Department Addenda to the Bid Proposal, including questions and answers, in the certification form provided by the Department and submit the form with the modified Bid Proposal Forms. The Proposal submitted must be signed in ink by a representative of the Bidder authorized to execute Proposals. Provide the name and address of the individual signing the Proposal as well as the following names and addresses as applicable:

Type of Bidder	*Names and Office Addresses Required*
Individual	Individual
Partnership	Each member of the partnership
Joint Venture	Each member or officer of firms represented in the joint venture
Corporation	Corporation officer, corporate name, and corporate address

Bid Proposals, Bid Proposal Forms and approved electronic media are serially numbered and are not transferable. Unless otherwise provided in the Proposal, joint ventures may submit a Proposal for a joint venture of Bidders qualified for that Project on a Bid Proposal issued to the joint venture or on a Bid Proposal issued to any one of the joint participants. The Proposal must be signed by each covenant followed by the title "Joint Venturer".

102.07 Irregular Proposals. Proposals will be considered irregular and will be rejected as non-Responsive for any of the following reasons:

A. The Proposal is on a form (or in a format if computer generated) other than that approved by the Department, or if the form is altered or any part detached or incomplete.
B. There are unauthorized additions, interlineations, conditional bids, or irregularities of any kind that may tend to make the Proposal incomplete, indefinite, or ambiguous.
C. The Bidder adds provisions reserving the right to accept or reject an Award, or to enter into a Contract pursuant to an Award.
D. If the Bidder specifies a Unit Price of zero or fails to provide a Unit Price for every Pay Item indicated.
E. The Proposal does not include the Bid Documentation in a sealed container and the affidavit of Bid Documentation if required by the Contract.
F. The Proposal is Materially Unbalanced.
G. If any last minute hand written substitution of any Unit Price is illegible, as determined by the Department, or is not initialed by the Bidder authorizing the substitution.
H. The Bidder fails to provide a Proposal Guaranty.
I. The Bidder fails to sign the non-collusive bidding certification.
J. The Proposal fails to comply with any other material requirements of the Invitation for Bids.
K. A bid will be held to be non-Responsive and not considered if specific DBE information is not provided at the time of bid: failure to present written and notarized assurance that the goals on the Contract will be met or failure to include Good Faith Effort Documentation in place of assurance; or, failure to present written copies of all DBE subcontracts within the prescribed number of Calendar Days after the bid opening.

102.08 Proposal Guaranty. All bids shall be accompanied by a deposit of either a good and sufficient Bond to the State for the benefit of the agency involved, with a corporate Surety authorized to do business in this State, or a security of the Bidder assigned to the Department. The form of the Bond and the Surety to be used must be approved by the Department. The Department will provide a Bond form that complies with the requirements of 29 Del.Code Sec. 6962(d)(8)(a). The sum of the Proposal Guaranty must be equal to at least 10 percent of the bid. The Bid Bond need not be for a specific sum, but may be stated to be for a sum equal to 10 percent of the bid to which it relates and not to exceed a certain stated sum, if said sum is equal to at least 10 percent of the bid. "Securities" include certified checks, cashier's checks, treasurer's check, and other negotiable or transferable instruments evidencing an unconditional debt to the State or Department.

102.09 Delivery of the Proposal. Place the Proposal in a sealed envelope and plainly mark the envelope to indicate its contents, including the Contract designation and the name and address of the Bidder. Deliver Proposals prior to the time and to the place specified in the Advertisement. The Bidder bears the risk of delays in delivery. Proposals received after the specified time will be returned to the Bidder unopened. Proposals must be delivered to:

Contract Administration
DelDOT Administration Building
800 Bay Road
Dover, DE 19901

102.10 Withdrawal or Revision of Proposals. A Bidder may withdraw or revise a Proposal after it has been delivered to the Department, provided the request for withdrawal or revision is received by the Department in writing or in person with proper identifications before the time set for receipt of Proposals. When the Proposals have been read, any low Bidder may withdraw any other unopened Proposal which it may have submitted for another Contract.

Any Bidder exercising the privilege of so withdrawing its Bid or Bids waives all Claims that may arise should it be found that its opened Proposal is irregular or, for any reason, is unacceptable to the Department.

102.11 Public Opening of Proposals. Proposals will be opened and read publicly at the place and time set for the opening of the Proposal by the Department.

102.12 Disqualification of Bidders. The Department may disqualify a Bidder and reject future submissions of Proposals from that Bidder until the Bidder is reinstated as a registered Bidder for the following reasons:

A. The Bidder has defaulted on previous Contract(s).
B. Unsatisfactory past performance evaluations(s) as determined and documented by the Department.
C. Failure to submit required Contract release documents, such as Certification of Payment (CN-91), Release of Contractor (CN-102), Release of Subcontractors (CN-103), or failure to sign a Contract final Change Order for a completed Contract.

The Department requires all releases within 90 Calendar Days after the date of the final Change Order or date of the acceptance of the Contract, or within 30 Calendar Days following the resolution of any Contract Claims, whichever is later.

102.13 Rejection of Proposal. The Department may reject a Proposal for any of the following reasons:

A. The bidder has submitted more than one Proposal for the same Work from an individual, firm, or corporation under the same or different name.
B. Participants have colluded with other Bidders.
C. Work by the Bidder remains uncompleted which, in the judgment of the Department, might hinder or prevent the timely Completion of further Work if Awarded.
D. Failure of a Bidder to pay or satisfactorily settle all bills due for labor and Materials on Contracts current at the time of bidding.

102.14 Materials Guaranty. The successful Bidder may be required to furnish a complete statement of the origin, composition, and manufacture of Materials used in the construction of the Work, together with a sample to be tested for conformance with the Contract provisions.

102.15 Non-Collusive Bidding Certification. Every Proposal submitted to the Department shall contain a Non-Collusive Bidding Certification subscribed to and affirmed by the Bidder as true under the penalties of Law. Sign the certification, and submit with the Bid Documents.

A Bid Proposal will not be considered for Award nor will any Award be made without a valid certification as provided above.

If the Bidder cannot make the foregoing certification, furnish with the Proposal a signed statement which sets forth in detail the reasons why the certification cannot be made. Where the Bidder has not complied with the provisions of the certification, the Department will neither consider the Proposal for Award nor Award the Proposal unless the Department determines that such disclosure was not made for the purpose of restricting competition.

The fact that a Bidder has 1) published price lists, rates, or tariffs covering items being procured, 2) informed prospective customers of proposed or pending publication of new or revised price lists for such items, or 3) sold the same items to other customers at the same prices being bid does not constitute a disclosure within the meaning of the certification above.

SECTION 103 – AWARD AND EXECUTION OF THE CONTRACT; ESCROW BID DOCUMENTATION

103.01	Consideration of Bids	**103.06**	Withdrawal of a Bid
103.02	Award of the Contract	**103.07**	Execution and Approval of the Contract, Proof of Insurance
103.03	Cancellation of an Award	**103.08**	Failure to Execute the Contract
103.04	Return of the Proposal Security	**103.09**	Escrow of Bid Documentation
103.05	Performance and Payment Bonds		

103.01 Consideration of Bids. After the Proposals are opened and read, the Department will compare the Proposals on the basis of the summation of the products of the quantities and the Unit Prices unless otherwise defined in the Bid Proposal. The results of the comparison will be available to the public upon Award of the Contract. In the event of a discrepancy between Unit Prices and extensions, the Unit Prices govern. The Department reserves the right to reject Proposals, waive technicalities, proceed to perform the Work otherwise, or advertise for new Proposals. Unit Bid Prices may also be affected by maximum price provisions noted elsewhere in the Contract Documents. In such cases, upon discovery of a discrepancy, the Department will adjust the Unit Bid Price to conform to the maximum permissible Bid Price.

103.02 Award of the Contract. The Award of the Contract will be made within 30 Days after the opening of the Proposals to the Responsible Bidder who submits the lowest Responsive Proposal. The successful Bidder will be notified by letter or electronic means of the acceptance of the Proposal and the Award of the Contract. By mutual consent, the Department and the lowest Responsible Bidder can agree to extend the time within which the Department may make an Award.

103.03 Cancellation of an Award. The Department reserves the right to cancel the Award of any Contract before execution without liability.

103.04 Return of the Proposal Security. Proposal securities, except that of the lowest Bidder, will be returned upon Award of the Contract, but in no event, later than 30 Days after opening of the Bid Proposals. The retained Proposal Guaranty of the lowest Bidder will be returned after the satisfactory Contract Performance and Payment Bond has been furnished and the Contract has been executed. A Contractor will not be released from the obligations to provide a satisfactory Performance Bond and execute the Contract because of an alleged error in the preparation of the Proposal unless the Department retains the Proposal Guaranty.

103.05 Performance and Payment Bonds. Simultaneous with the execution of the Contract, furnish a Surety Bond or Bonds in a sum equal to 100 percent of the Contract price to the State. The Bond shall be for the benefit of the Department, as well as for the use and benefit of the Division of Revenue of the State in the case of Claims under this Bond for any and all taxes due to the State. Have the Bond issued by a corporate Surety authorized to do business in this State.

On a form provided by the Department, obtain a release from the Division of Revenue indicating that all tax obligations for the Division of Revenue have been satisfied. Present this form to the Department as a condition for the release of Bond.

The Bond shall be conditioned upon the faithful compliance and performance by the successful Bidder of each and every term and condition of the Contract, at the time and in the manner prescribed by the Contract, including the payment in full to every person furnishing Material or performing labor or services in the performance of the Contract, and of all sums of money due the furnish or for such labor, services, or Material. The Bond shall also contain the successful Bidder's guarantee to indemnify and save harmless the State, the Department and the Department's employees from all costs, damages, and expenses growing out of or by reason of the successful Bidder's failure to comply with applicable laws and regulations and failure to perform the Work and complete the Contract in accordance with the terms and conditions of the Contract.

The Bond shall provide that every person furnishing Materials or performing labor for the successful Bidder under the Contract may maintain an action on the Bond for its own use in the name of the State in any court of competent jurisdiction, for recovery of such sum or sums of money as may be due the person from the successful Bidder.

The form of such Bond will be provided by the Department. The Surety must also be acceptable to the Department.

103.06 Withdrawal of a Bid. If, at any time after the acceptance of bids by the Department and before full execution of the Contract, the low Bidder determines a need to withdraw its bid, put the request in writing to the Department's representative stating its reason(s) for such withdrawal. The Department reserves the right to accept/reject the Bidder's request to withdraw upon review of the merits. The Department reserves the right to retain the Bid Bond or certified check in full or in part as Liquidated Damages. The Department may then proceed to the next lowest Responsive Bidder, or reject all Proposals and re-advertise for new Proposals.

103.07 Execution and Approval of the Contract; Proof of Insurance. Return the signed Contract and Contract Bond to the Department within 20 Days after the notice that the Contract has been Awarded. If the Contract is not executed by the Department within 15 Days following receipt of the signed Contracts and Bonds, the Bidder has the right to withdraw the bid without penalty or liability. The Contract will not be considered effective until it has been fully executed by all parties to the Contract.

If the successful Bidder is a non-resident corporation, provide proof of compliance with the requirements of Subchapter XVI of Title 8 of the Delaware Code, and as further amended at the time of bid.

Maintain insurance in compliance with the requirements of Sections 2502 and 2503, Title 18 of the Delaware Code. Provide a certificate of insurance to the Department prior to the Execution of the Contract. If the Contract requires the Contractor to provide coverage for additional insureds, provide proof of additional insureds. The Department will not execute the Contract until an acceptable proof of insurance is provided.

103.08 Failure to Execute a Contract. Failure by the successful Bidder to execute the Contract and file an acceptable Bond within 20 Days after the Notice of Award will be considered a revocation of the Notice of Award and a forfeiture of the Proposal Guaranty to the Department. Contract Award may then be made to the next lowest Responsible and Responsive Bidder or the Work may be re-Advertised.

103.09 Escrow of Bid Documentation. If required by the General Notices, Special Provisions, or other language in the Bid Proposal that is specific to a particular Contract, submit to the Department legible copies of the Bid Documentation as set forth in this Section.

A. *Scope and Purpose.* The purpose of escrowing Bid Documents is to preserve all of the Contractor's Bid Documents for joint use by the Contractor and the Engineer in the resolution of any disputes, Claims, arbitration proceeding, litigation or negotiation arising from this Contract.

B. *Submittal, Escrow and Return of Bid Documentation.* Prior to the execution of the Contract, submit the Bid Documentation in a sealed container to the Department. Clearly mark the container "Bid Documentation" and show on the face of the container the Contractor's name, address, date of submittal, the Contract number and the Project designation. The Department and the Contractor will jointly deliver the sealed container and an affidavit per Section C. below to a banking institution or other bonded document storage facility selected by the Department for placement in a safety deposit box, vault or other secure accommodation. The escrowed Bid Documents will remain in escrow subject to the terms of this Section until all of the following have occurred:

   1. One hundred eighty Days have elapsed from Final Acceptance;
   2. All disputes between the Department and the Contractor arising from or related to this Contract have been settled or resolved; and
   3. Final payment is made by the Department and accepted by the Contractor.

C. *Affidavit.* Submit an affidavit on a form provided by the Department, signed under oath by a representative of the Contractor authorized to execute bidding Proposals, listing each bid document submitted by author, date, nature and subject matter. Attest that (1) the affiant has personally examined the Bid Documentation, (2) the affidavit lists all of the documents relied upon by the Contractor in preparing the Proposal for the Project, and (3) all such Bid Documentation is included in the sealed container submitted to the

Department. Include the signed affidavit with the sealed container submitted to the Department per Section B.

D. *Representation of Accuracy by the Contractor.* The Contractor represents and warrants that the escrowed Bid Documents provided with the Proposal constitute all of the information used in the preparation of its Proposal and agrees that no other Proposal preparation information will be considered in resolving disputes or Claims. The Contractor also agrees that the escrowed Bid Documents are not part of the Contract and that nothing in the escrowed Bid Documents shall change or modify the Contract.

E. *Contents and Form of the Escrowed Documents.* Clearly itemize in the escrowed Bid Documents the estimated costs of performing each aspect of the Work required by the Contract Documents. Separate all Work into sub-items as required to present a complete and detailed estimate of all costs. Detail all crews, Equipment, quantities and rates of production. Further divide estimates of costs into the Contractor's usual cost categories such as direct labor, repair labor, Equipment ownership and operation, expendable Material, permanent Material, and subcontract costs. Clearly identify allocations of plant and Equipment, indirect costs, contingencies, markup, and other items to each direct cost item. Include all assumptions, quantity takeoffs, rates of production and progress calculations, quotes from Subcontractors and suppliers, memoranda, narratives and all other information used by the Contractor to arrive at the Bid Price for the Contract.

Submit the escrowed Bid Documents in the format actually used by the Contractor in preparing the Proposal. The Department does not intend for the Contractor to perform any extraordinary Work in the preparation of these documents prior to the Proposal due date. However, the Contractor represents and warrants that the escrowed Bid Documents related to the Proposal have been personally examined prior to delivery to escrow by an authorized officer of the Contractor and that such documents meet the requirements of this Section.

F. *Changes to the Contract.* The Department may require all documentary information used in preparation of the quotation of prices for Additional or Extra Work performed on the Contract. If required, the Engineer will request the documents in writing and the Contractor and Engineer will place the additional documents in the sealed container held in escrow. Documents supporting new prices will be subject to all of the requirements of this Specification.

G. *Availability for Review.* The escrowed Bid Documents shall be available for joint review by the Department and the Contractor for the resolution of disputes and the negotiations of changes to the Contract. The Department will be entitled to review all or any part of the escrowed Bid Documents in order to determine the applicability of the individual documents to the matter at issue. The Department will be entitled to make and retain copies of such documents as it deems appropriate in connection with any such matters, provided that the Department has executed and delivered to the Contractor a confidentiality agreement specifying that all proprietary information contained in such documents will be kept confidential; that copies of such documents will not be distributed to any third parties other than the Department's agents, attorneys, auditors, and experts who are aiding the Department in resolving the issue at hand; and that all documents and copies of documents will be returned to the depository upon resolution of the issue. The Contractor agrees to waive the right to use any Bid Documentation other than that placed in escrow to resolve all disputes arising out of the Contract. The foregoing shall in no way be deemed a limitation on the Department's discovery rights with respect to such documents.

H. *Confidentiality of Bid Documentation.* The escrowed Bid documents are and shall always remain the property of the Contractor subject to the Department's right to review them as provided herein. The Department acknowledges that the Contractor may consider that the escrowed Bid Documents constitute trade secrets or proprietary information. The Department further acknowledges that the Contractor expended money in developing the information included in the escrowed Bid Documents and that it would be difficult for a competitor to replicate the information contained therein. The Department acknowledges that the escrowed Bid Documents and the information contained therein are being provided to the Department only because it is an express prerequisite to execute this Contract. Thus, the escrowed Bid Documents will at all times be treated as proprietary and confidential information and will be used only for the purposes described herein. At the Contractor's request, confidentiality agreements will be executed and delivered to the Contractor by the Department's employees or agents who review or have access to the escrowed Bid Documents.

I. *Refusal or Failure to Provide Bid Documentation and Review by the Department.* Failure to provide Bid Documentation will render the Proposal non-Responsive and the Contractor shall forfeit the Proposal Guaranty in accordance with Section 103.08. The Department may, at any time, conduct a review of the escrowed Bid Documents to determine whether they are complete. In the event the Department determines that any data is missing, provide such data within three Working Days of the request and at that time it will be date stamped, labeled to identify it as supplementary material, and added to the escrowed Bid Documents. The Contractor shall have no right to add documents to the escrowed Bid Documents except upon the Department's request.

J. *Cost and Escrow Instructions.* The costs for complying with this Section are incidental to the Contract. The cost of the storage of Bid Documents will be borne by the Department. The Department will provide escrow instructions to the document depository consistent with this Section.

SECTION 104 – THE CONTRACTOR'S RESPONSIBILITY FOR THE WORK; CHANGES TO THE CONTRACT; SUSPENSION OF WORK; THE USE OF BRIDGES DURING CONSTRUCTION

104.01	Intent of the Contract	**104.09**	Notification Requirements for Differing Site Conditions, Changes in the Character of the Work and Extra Work
104.02	Existing Signs	**104.10**	Maintaining Traffic
104.03	Bus Stops	**104.11**	Rights In and Use of Materials Found on the Work
104.04	Material Testing Notification	**104.12**	Additional Utility Relocations Required by the Department; Restoration of Surfaces Opened by Permit
104.05	Accident Notification	**104.13**	Value Engineering Proposals (VEP) by the Contractor
104.06	Contract Revisions, Changes in the Character of Work, and Major and Minor Items	**104.14**	Final Cleaning of Project Site; Maintenance and Cleanup of Staging areas
104.07	Differing Site Conditions	**104.15**	Contractor's Responsibility for the Work
104.08	Suspension of Work	**104.16**	Required Notifications for Disturbing Property and Using Bridges

104.01 Intent of the Contract. Cooperate with the Engineer to complete the Work described in a manner that is safe and poses the least practicable impact to the flow of vehicular and pedestrian traffic. Furnish all labor, Materials, Equipment, tools, transportation, and supplies required to complete the Work in accordance with the Contract. Perform all alterations to the Contract or requests for Extra Work from the Engineer in accordance with the terms of the Contract.

104.02 Existing Signs. Inventory all existing signs (i.e., Traffic, Bus Stops, Street Names, etc.) within the limits of the Contract with the Engineer prior to commencing the Work. Maintain necessary traffic signs as directed by the Engineer during construction, and properly store all other signs. Return all stored signs to the Engineer at the end of the Project. The Contractor is responsible for any loss of, or damage to, stored signs throughout the duration of the Project.

104.03 Bus Stops. Maintain bus stops as prescribed in Section 801.

104.04 Material Testing Notification. For Portland Cement Concrete and Bituminous Concrete material testing, the Contractor must notify the Materials & Research Section of the quantity and time of the scheduled release by 3:00 P.M. the business day prior.

No Portland Cement Concrete or Bituminous Concrete materials shall be shipped to the job without first being released by the DelDOT Inspector. When DelDOT releases materials for shipment, DelDOT does not guaranty that the materials meet the specifications or are suitable for use. The Contractor is solely responsible for the suitability of the materials shipped. DelDOT may waive the release requirements on a case by case basis. Waivers of releases by DelDOT do not waive the release requirements for future shipments.

104.05 Accident Notification. Immediately notify DelDOT's Transportation Management Center (TMC) at 302-659-4600 and the Engineer's site representative of any incidents resulting in damage to property or personal injury occurring within the limits of the Project.

104.06 Contract Revisions, Changes in the Character of the Work and Major and Minor Items. The Department reserves the right at any time prior to the Completion of the Contract to issue plan revisions, make adjustments in Contract Item quantities, or make such other alterations considered necessary to satisfactorily complete the Contract. Perform the revised Work immediately upon receiving direction from the Engineer to do so. The Engineer will pay for the revised Work at the Contract Unit Prices unless the revision results in a change to the character of the Work as defined below. In the case of a change to the character of the Work, the Engineer may

revise the Contract as specified in Section 109.04. If the determination that the character of the Work has changed is based solely upon Section 104.06.A.2, the change to the Unit Price applies only to that portion in excess of 125 percent of the original Contract Quantity, or in the case of a decrease below 75 percent, to the actual amount of Work performed under the Item.

Payment for Contract revisions or changes in the character of the Work will exclude any amount for loss of anticipated profits alleged to result from the change. Changes to the Contract do not invalidate the Contract or release the Contract Surety. If, as a result of such changes, the Contractor requires additional time to complete the Work, request an extension of Contract Time. The Engineer will evaluate such a request and will grant an extension of Contract Time if the request is justifiable in accordance with Section 108.07. All Contract revisions will be issued in writing by the Engineer.

A. If the Engineer alters Contract quantities, the Work, or both as necessary to satisfactorily complete the Project, such an alteration changes the character of the Work if:

   1. The alteration requires the Contractor's means and methods in performing the Work to differ materially in kind or nature from that involved or included in the original Contract; or

   2. The alteration causes the quantity of a Major Item, as defined in Section 101.03, to increase in excess of 125 percent or decrease below 75 percent of the original Contract Quantity.

104.07 Differing Site Conditions. If Differing Site Conditions, as defined by Section 101.03, are encountered at the Project site, promptly notify the Engineer as specified in Section 104.09. Stop Work in the affected area and preserve the evidence of the alleged Differing Site Conditions so that the Engineer can investigate whether the conditions differ materially from those that the Contractor reasonably should have expected as defined in Section 101.03. Do not proceed with the Work in the affected area until the Engineer provides written notification to continue.

If the Engineer determines that the conditions differ materially from those that the Contractor should have reasonably expected as defined by Section 101.03, and such Differing Site Conditions caused an increase or decrease in the cost or time required for the Contractor to perform the Work, a written Adjustment will be made to the Contract by the Engineer. Adjustments in the Contract price for Differing Site Conditions will be made under Section 109.04, and Adjustments in Contract Time for Differing Site Conditions will be made under Section 108.07. No Adjustments in Contract Price will include loss of anticipated profits. The Engineer will notify the Contractor whether or not an Adjustment of the Contract is warranted.

No Contract Adjustment resulting in a benefit to the Contractor will be allowed unless the Contractor has provided the required written notice as specified in Section 104.09 and has afforded the Engineer an opportunity to investigate the alleged Differing Site Conditions before further disturbing the affected area.

104.08 Suspension of Work. The Engineer may suspend the Work in whole or in part by written order to the Contractor for any reason or condition that would be in the best interest of the Department. Immediately comply with the written order of the Engineer to suspend the Work.

If the delay resulting from the written suspension order is unreasonable, submit a written request for a Contract Adjustment to the Engineer within seven Calendar Days of the Engineer's order to resume Work providing the reasons and justification for the Adjustment. If:

A. An increase in the Contract performance cost or time results from an unreasonable delay caused by the suspension; and

B. The suspension was caused by conditions beyond the control and not the fault of the Contractor or those parties for whom the Contractor is responsible, then:

Adjustments in the Contract price, excluding profit, will be made according to Section 109.04 and Adjustments to Contract Time will be made according to Section 108.07. The Engineer will not adjust the Contract Time or price if the Work performance would have been suspended or delayed by any other cause under any other terms or

conditions of the Contract or if the Contractor fails to submit a request for an Adjustment to the Contract within the allowable time prescribed above.

The Engineer may suspend the Work when the Contractor fails to perform any provisions of the Contract. In such a case, the Engineer will neither adjust the Contract Time nor price nor will the Engineer pay for traffic control devices or maintenance of traffic during the suspension period. The Engineer will order the Work to resume when conditions are favorable as determined by the Engineer.

104.09 Notification Requirements for Differing Site Conditions, Changes in the Character of the Work and Extra Work. Immediately notify the Engineer of alleged changes to the Contract due to Differing Site Conditions; Extra Work; altered Work beyond the scope of the Contract; any delay that is compensable under the terms and conditions of the Contract; and/or action(s) or lack of action(s) taken by the Department that have allegedly changed the Contract terms and conditions.

A. No further Work is to be performed or Contract costs incurred on the change after the date the change occurs unless directed otherwise by the Engineer.

B. Within seven Days of the initial notification, provide the following information to the Engineer in writing:

1. The date of occurrence and the nature and circumstances of the occurrence that constituted the alleged change.

2. The name, title, and activity of each Department representative knowledgeable of the alleged change.

3. Copies or descriptions of any documents and the substance of any oral communications involved in the alleged change and the basis for an allegation of accelerated Schedule performance, if applicable.

4. The basis for an allegation that the Work is not required by the Contract, if applicable.

5. The particular elements of Contract performance for which additional compensation may be sought under this Section including:

a. Contract Item(s) that have been or may be affected by the alleged change.

b. Materials that were/will be added, deleted, or wasted by the alleged change and a list of Equipment that was/will be idled or required by the alleged change.

c. Labor that was/will be forced to remain idle on the jobsite as a result of the alleged change.

d. Delay and disruption to the manner and sequence of performance that has been or will be caused by the alleged change.

e. Estimated Adjustments to Contract price(s), delivery schedule(s), staging, and Contract Time necessary due to the alleged change.

f. Estimate of the time within which the Department must respond to the notice to minimize cost, delay, or disruption of performance.

The failure of the Contractor to provide required notice in accordance with this Section shall constitute a waiver of any and all entitlement to Adjustments in the Contract price or Time as a result of the alleged change.

C. Within ten Days after the receipt of notice, the Engineer will respond in writing to the Contractor to:

1. Confirm that a change occurred and, when necessary, direct the method and manner of further performance; or

2. Deny that a change occurred and, when necessary, direct the method and manner of further performance; or

8. A VEP proposing to change the type or thickness of the Pavement Structure will not be considered.

9. Additional information needed to evaluate VEP will be provided in a timely manner. Untimely submittal of additional information will result in rejection of the VEP. Where design changes are proposed, the additional information could include results of field investigations and surveys, design computations, and field change sheets.

D. **Payment.** If the VEP is accepted, the changes and payment will be authorized by a Change Order. Reimbursement will be made as follows:

1. The changes will be incorporated into the Contract by changes in quantities of Unit Bid Items, and/or new agreed price Items, as appropriate, under the Contract.

2. The cost of the Value Engineering Work as determined from the changes will be paid directly. In addition, the Department will pay the Contractor 50 percent of the savings to the Department as reflected by the difference between the cost of the revised Work and the cost of the related construction required by the original Contract computed at Contract Unit Bid Prices. If the VEP provides only a savings in time to the Department, there will be no sharing of savings between the Department and the Contractor.

3. The Contractor's costs for development, design, and implementation of the VEP are not eligible for reimbursement.

4. The Contractor may submit a VEP for an approved Subcontractor. Subcontractors may not submit a VEP except through the Contractor.

104.14 Final Cleaning of Project Site; Maintenance and Cleanup of Staging Areas. Before the Final Inspection of the Project, clean all rubbish, excess Materials, temporary Structures and Equipment from the Project, any publicly owned borrow source used to complete the Work, and all areas affected by the Contractor in connection with the Work within the Right-Of-Way. Trim all surfaces and slopes, whether old or new, to the cross-section. Cut all grass and weeds that are taller than 6 inches, and leave all parts of the Work in an acceptable condition. The cost of the final cleanup is incidental to the Contract and no separate payment will be made.

Install erosion and sediment control measures that comply with stormwater regulations for all staging areas to the satisfaction of the Engineer. Restore all areas used for staging operations upon Completion of the Work. Restore paved staging areas to their original condition. Restore unpaved staging areas by re-grading and placing topsoil, seed and mulch to the satisfaction of the Engineer. Perform all restoration Work in accordance with Sections 202 and 908 of these Standard Specifications. All costs associated with restoration of staging areas and establishing an acceptable stand of grass are incidental to the Contract.

104.15 Contractor's Responsibility for the Work. Retain sole and absolute responsibility for the Work and provide for the protection and safety of all agents and employees of state and federal agencies, Contractors, Subcontractors, suppliers, and members of the general public until Substantial Completion is achieved as defined in Section 101.03. In no case, including but not limited to, supervisory acts or administration of the Contract by the Engineer, will the Contractor be relieved of the responsibility to indemnify the Department pursuant to the provisions of the Contract.

Rebuild, repair, restore, and make good all losses, injuries, or damage to any portion of the Work under the control of the Contractor and/or due to his/her fault or inactivity, at no cost to the Department. Rebuild, repair, restore, and make good all losses, injuries, or damage to any portion of the Work, not under the control of the Contractor, under agreed Unit Prices or as Extra Work under Section 109.04. "Items not under the control of the Contractor" shall be defined for purposes of this Section as Acts of God such as earthquakes, tidal waves, tornadoes, or hurricanes; catastrophic conditions such as hazardous waste materials spills, explosions, etc., or acts of the public enemy or of governmental authorities.

In case of the suspension of Work, maintain responsibility for the Project and take such precautions as may be necessary to prevent damage to the Project, provide for normal drainage and normal traffic operations, and erect any necessary temporary Bridges, signs, or other facilities. During such period of suspension of Work, properly and continuously maintain in an acceptable growing condition all living Material in newly established plantings,

seedings, and soddings furnished under the Contract, and take adequate precautions to protect new tree growth and other vegetative growth against injury.

104.16 Required Notifications for Disturbing Property and using Bridges. Give two weeks' notice to property owners when any fixture, shrub, or other object must be removed from a Right-Of-Way or easement area. If the owner does not attempt to salvage this property within the two week period, remove it without further obligation.

Before starting any Work that will change the loadings on an existing or proposed Bridge, inform the Engineer of the proposed loadings (axle spacing, axial loads, stockpiling and Equipment locations) including quantity of and type of construction Equipment and vehicles proposed for use. The loading that the Contractor's Equipment will apply to the Bridge will be subject to the approval of the Engineer. The Engineer's approval does not relieve the Contractor of its responsibility for the safe performance of the Work or from carrying out the Work in full accordance with the Plans and the requirements of the Specifications. If at any time the Contractor's upcoming operations would result in a change to the loading and / or the location of the loading on a Bridge, submit the proposed loadings for approval by the Engineer prior to changing the loading. Perform no Work that will change the loadings on any Bridge within the Contract limits until the Engineer's approval has been obtained. Review time will be in accordance with Section 105.04.

SECTION 105 – RESPONSIBILITIES OF THE DEPARTMENT; INTERPRETATION OF THE CONTRACT DOCUMENTS; MAINTENANCE DURING CONSTRUCTION; CLAIMS; PROJECT ACCEPTANCE

105.01	Authority of the Engineer	**105.09**	Utilities within the Project Limits; Miss Utility One-Calls
105.02	Authority and Duties of Inspectors	**105.10**	Construction Stakes, Lines & Grades Provided by the Engineer
105.03	Inspection of the Work	**105.11**	Removal of Defective and Unauthorized Work
105.04	Plans and Working Drawings	**105.12**	Load Restrictions
105.05	Conformity with the Plans and Specifications	**105.13**	Maintenance During Construction
105.06	Coordination of the Contract Documents; Duty to Report Errors to the Engineer; Use of Dimensions over Scaled Measurements	**105.14**	Opening Sections of the Project to Traffic
105.07	Copies of the Plans; Contractor's Supervision	**105.15**	Claims for Adjustments and Resolution of Disputes
105.08	Cooperation Between Contractors	**105.16**	Project Acceptance; Partial Acceptance

105.01 Authority of the Engineer. The Engineer is the administrator of the Contract and not a supervisor of the Work. Perform all Work to the satisfaction of the Engineer, but maintain complete responsibility for the Work. The Engineer will decide all questions which may arise as to the quality and acceptability of Materials furnished and Work performed and as to the manner of performance and rate of progress of the Work; all questions which may arise as to the interpretation of the Plans and Specifications; all questions as to the acceptable fulfillment of the Contract on the part of the Contractor; all disputes and mutual rights between contractors; and all questions as to compensation. At the preconstruction meeting, the Engineer will determine and communicate to the Contractor the chain of command and the extent of authority Department personnel will have to make changes to the Contract during the life of the Contract.

The Engineer has the authority to suspend the Work, wholly or in part, due to the failure of the Contractor to correct conditions unsafe for the general public; for failure to carry out provisions of the Contract; for failure to carry out orders; for such periods as may be deemed necessary due to conditions the Engineer considered unsuitable for the prosecution of the Work; or for any other condition or reason deemed to be in the public interest.

The Engineer's authority to impose any Contract sanction, including suspension of the Work, withholding payments, or the like, will not relieve the Contractor of sole and absolute responsibility for the Project, performance of the Work, and the safety of workers and the general public. The Contractor saves the Department harmless pursuant to Section 107.10 for any violation, breach, or omission of the above Contract provision.

105.02 Authority and Duties of Inspectors. Inspectors acting under the authority of the Engineer are administrators of the Contract and not supervisors of the Work. Inspectors employed by or designated by the Department are authorized to inspect all Work performed and all Material furnished by the Contractor. Such inspection may extend to all or any part of the Work and to the preparation, fabrication, or manufacture of the Materials to be used. The Inspector is not authorized to revoke, alter, or waive any requirements of the Plans or Specifications. The Inspector may call the attention of the Contractor to any failure of the Work or Materials to conform to the requirements of the Contract and will have the authority to reject Materials or suspend the Work until any questions at issue can be referred to and decided by the Engineer. Such inspection will not relieve the Contractor from the obligation to perform the Work in accordance with the requirements of the Contract.

The Inspector will in no case act as foreman or perform other duties for the Contractor, nor interfere with the management of the Work by the Contractor. Any advice which the Inspector may give the Contractor shall in no way be construed as binding the Engineer in any way or releasing the Contractor from fulfilling all of the terms of the Contract.

The Engineer may issue a written order to the Contractor to stop Work giving the reason for shutting down the Work. After placing the order in the hands of the Contractor's representative in charge at the Project Site or sending an electronic copy of such an order to a responsible party in the Contractor's organization, the Inspector will immediately leave the job, and in such cases Work performed by the Contractor during the absence of the Inspector will not be paid for and may not be accepted. The Engineer will identify the person(s) within the Department who have the authority to issue a Stop Work order at the preconstruction meeting for the Contract.

105.03 Inspection of the Work. Allow the Engineer access to all parts of the Work at all times for inspection. Furnish information and assist the Engineer as required to make complete and detailed inspections. Inspection may include mill, plant, or shop inspection; and/or any Material furnished under these Specifications. If the Engineer fails to reject defective Work or Materials, whether from lack of discovery of such defect or for any other reason, such initial failure to reject in no way prevents the later rejection of the Materials or Work when such defect is discovered, or obligates the Engineer to Final Acceptance. The Engineer is not responsible for losses suffered by the Contractor due to removals or repairs of such defects.

Remove or uncover portions of the finished Work as directed at any time before acceptance of the Work. After examination, restore those portions of the Work to the standard required by the Contract. If the exposed Work proves to be acceptable, the uncovering or removal and restoration will be paid as Extra Work. If the exposed Work proves to be unacceptable, the uncovering or removal and restoration shall be at the Contractor's expense.

Any Work performed or Materials used without supervision or inspection by the Department representative may be ordered removed and replaced at the Contractor's expense.

When any unit of government or political subdivision, utility company, or any railroad corporation pays a portion of the cost of the Work performed on this Contract, its respective representatives have the right to inspect the Work. Such inspection shall not make any unit of government or political subdivision, utility company, or any railroad corporation a party to this Contract, and shall in no way interfere with the rights of either party hereunder.

105.04 Plans and Working Drawings. The Department will furnish, with the Bid Proposal, Plans of sufficient detail to convey a comprehensive understanding of the Work specified. Furnish Working Drawings as required by the Engineer. Do not incorporate any changes from the requirements of the Contract in the Working Drawings unless the changes are specifically denoted, together with justification, and approved in writing by the Engineer. Any change from the requirements of the Contract shall be signed and sealed by a Professional Engineer registered in Delaware. Identify Working Drawings and submittals by the Contract number. Identify Items or component Materials by the specific Contract Item Number and Specification reference in the Contract.

Any staging and stockpile area(s) outside the Project's LOC that individually or cumulatively are larger than 10,000 square feet must be approved by DelDOT's Archaeologist. Submit all staging and stockpile areas outside the Project's LOC for approval. Within 30 Days, DelDOT will:

A. Approve the use of the proposed staging and stockpile area(s),
B. Reject the request, or
C. Perform an archaeological survey to determine whether to approve or reject the request, which my take up to 3 months.

If an archaeological survey is necessary, DelDOT or a consultant on its behalf will undertake the survey.

The Contractor is responsible for the preparation of all Working Drawings. However, drawings submitted directly by the supplier or the Contractor's representative will be accepted by the Department, if the letter of submittal indicates that the Contractor has been notified of the submission.

Working Drawings for metal Structures shall consist of shop detail, erection, and other Working Drawings showing details, dimensions, sizes of units, and other information necessary for the fabrication and erection of metal work.

Provide such details on Working Drawings as are required for successful prosecution of the Work. Include plans for Items such as Falsework, bracing, sheeting, shoring, cofferdams, Formwork, masonry layout diagrams, and bending diagrams for reinforcing steel.

Submit copies of the manufacturer's catalog cuts, drawings, wiring diagrams, etc. with Working Drawings for electrical and mechanical Equipment. After all Items of a particular system have been reviewed, prepare an

"Instruction Book" especially for the system. Include in the "Instruction Book" an Equipment list, a complete description of the Equipment, the sequence of operation including inter-locking and protective features, the use of by-pass switches, and a detailed description of all wiring circuits. Also include in the book a recommended spare parts list, renewal parts bulletins, and instruction bulletins for the Equipment furnished. Use diagrams and drawings of reduced size suitable for binding. Include a proper index listing all Items. Properly fasten and bind in a suitable leather or heavy plastic cover book with a title clearly shown.

Prior to Final Inspection, supply five copies of the book to the Engineer. The books must be available during the period when electrical and mechanical systems are being connected and energized, and the final bound copies must reflect any changes or Adjustments made during this period.

Submit electronic copies of Working Drawings to the Engineer following the procedure set forth in Figure below, unless otherwise defined at the preconstruction meeting. Should any questions arise as to the proper procedure for submitting Working Drawings, contact the Engineer for clarification. Returned drawings will be stamped as follows:

A. **"Returned for Resubmission".** In this case, revisions or corrections must be made, and the drawings resubmitted for review.

B. **"Reviewed for General Conformity with Plans and Specifications".** In this case, if the Contractor agrees with the comments, incorporate the comments and do not resubmit the drawings. If the Contractor does not agree with the comments, state the reason for disagreeing with the comments in writing and submit the reasons to the Department within ten Working Days after receipt of the Department's comments.

The Department does not review every detail of every Working Drawing or other submittal made by the Contractor. Consequently, responsibility for the completeness, accuracy, and conformance to Contract requirements of all submittals rests with the Contractor. The Department accepts no responsibility for the completeness and accuracy of approved submittals or the failure of approved submittals to conform to the requirements of the Contract.

Reviewed Working Drawings, submittals, or resubmittals will be transmitted to the Contractor within forty-five (45) Days from the date of receipt by the Department. If a railroad, the U.S. Coast Guard, municipality, or other entity as specified in the Contract is required to review the Working Drawings, the reviewed Working Drawings will be returned within sixty (60) Days from the date of receipt by the Department. If the Working Drawings are not returned by the time specified, no additional compensation will be allowed except that an extension of time in accordance with Section 108.07 will be considered.

The Department generally follows the submittal flowchart provided on the following page in reviewing and approving Working Drawings.

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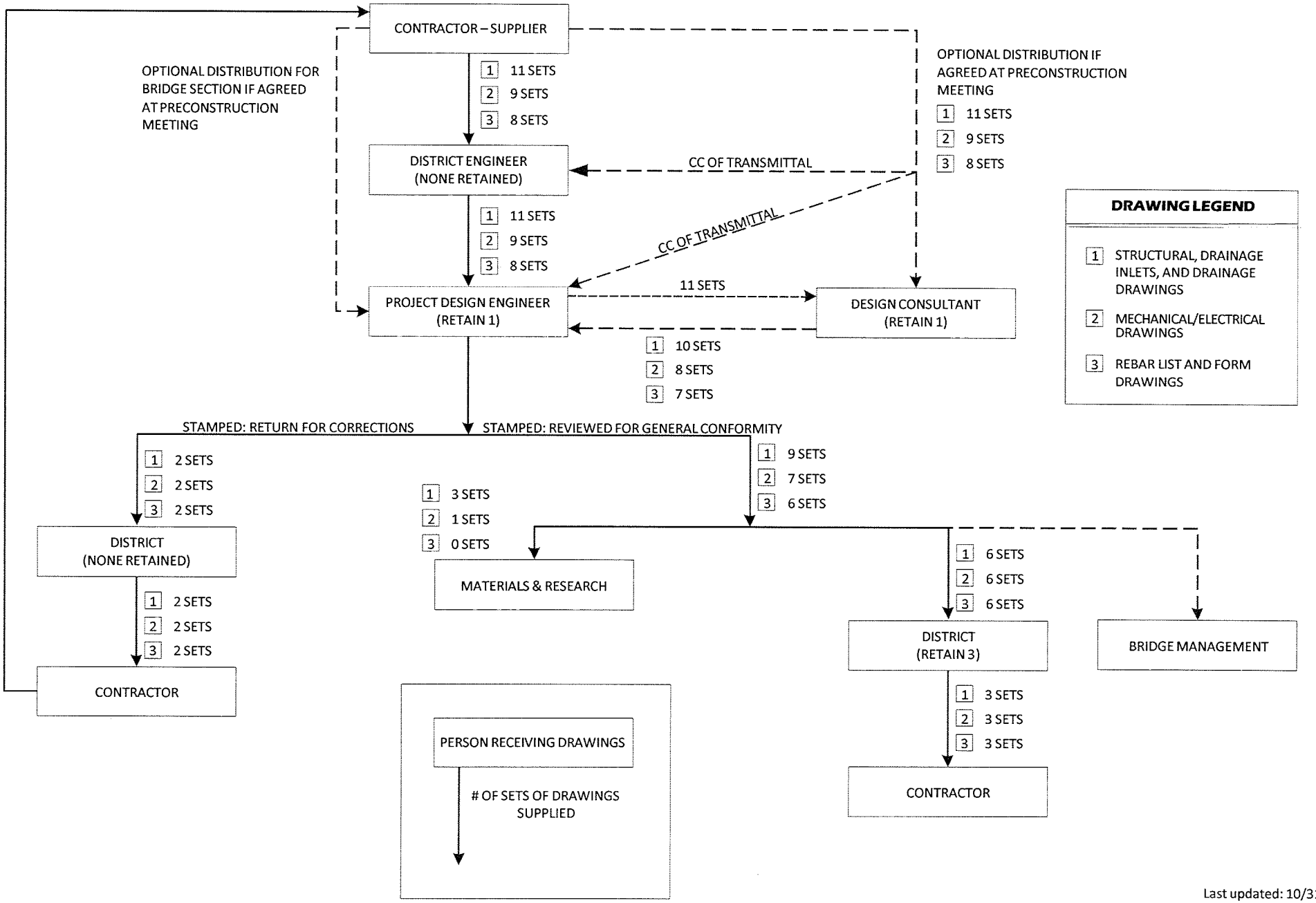
WORKING DRAWING SUBMITTAL PROCESS



Last updated: 10/31/2014

105.05 Conformity with the Plans and Specifications. Perform all Work and furnish all Materials in reasonably close conformity with the lines, grades, cross-section, dimensions, and Material requirements, including tolerances, shown on the Plans or indicated in the Specifications.

If the Engineer finds that the Materials or the finished product in which the Materials used are not within reasonably close conformity with the Plans and Specifications, but that reasonably acceptable Work has been produced, the Engineer will then make a determination if the Work will be accepted and remain in place. In this event, the Engineer will document the basis of acceptance which will provide for an appropriate Adjustment in the Contract price for such Work or Materials if deemed necessary by the Engineer.

In the event the Engineer finds the Materials or the finished product in which the Materials are used or the Work performed are not in reasonably close conformity with the Plans and Specifications, and the result is an inferior or unsatisfactory product, remove and replace or otherwise correct the Work or Materials at the expense of the Contractor. If provisions are included in the Contract for the acceptance of Materials or Work that are not in full compliance with the minimum requirements stated, adjust the pay per those provisions.

105.06 Coordination of the Contract Documents; Duty to Report Errors to the Engineer; Use of Dimensions over Scaled Measurements. Each individual Contract Document is an essential part of the Contract and a requirement occurring in one is binding as though occurring in all. All of the Contract Documents are intended to be complementary and to describe and provide for a complete Contract. In the case of a discrepancy between the Contract Documents the governing ranking will be:

A. General Description

B. General Notices

C. Plans

D. Special Provisions

E. Standard Construction Details

F. Standard Specifications

Do not take advantage of any apparent error or omission in the Contract. If the Contractor discovers an error or omission, promptly notify the Engineer. The Engineer will make corrections and interpretations as necessary to fulfill the intent of the Contract. Do not use scaled measurements when the dimensions on the Plans are given or can be computed from the information given.

The Contractor is responsible to verify during construction that the conditions actually encountered are consistent with the design and related Contract Documents during the course of construction. Issue a written Request For Information (RFI) to the Engineer for clarification and response, if any questions arise, experience interference / conflict caused by design, or feel errors and omissions may exist in the Contract Documents. The Engineer will respond to each RFI in writing clearly indicating all applicable design revisions. Provide a copy of all RFIs and responses to the Department as they are issued.

If a deviation from the specified sampling or testing procedures and/or Contract Documents is identified by the Contractor, Inspector or any representative thereof, then submit for approval a written Non-Conformance Report (NCR), including its associated corrective actions forward, covering such deviation. Include in the NCR, description of construction activity and location by Specification.

Make every attempt to identify issues and deviations from the Contract Documents in advance of the Work in order to allow the Department three (3) Working Days from receipt of the written notice to review and respond accordingly to any RFI and NCR. The Department will work with the Contractor with response to any RFI or NCR that requires immediate attention.

105.07 Copies of the Plans; Contractor's Supervision. The Contractor will be supplied with two copies of the Plans and the Bid Proposal. Keep one copy at the Project site at all times. Give the Work the constant attention necessary to facilitate progress and cooperate with the Engineer in every way possible.

Furnish (a) a competent Superintendent or supervisor who is employed by the firm, has full authority to direct performance of the Work in accordance with the Contract requirements, and is in charge of all construction operations, regardless of who performs the Work and (b) such other organizational resources, including supervision, management and engineering services, as the Engineer determines is necessary to assure the performance of the Contract. The Superintendent or supervisor must be present on site while Work is being performed and must be competent, capable of reading and understanding the Contract and experienced in the type of Work being performed. The Superintendent or supervisor is the point of contact for the Engineer, authorized to act for the Contractor, and has full authority to execute orders or the directions of the Engineer without delay.

105.08 Cooperation between Contractors. The Department reserves the right to contract for and perform other or Additional Work on or near the Limits of Construction covered by the Contract.

Contractors performing work on the same Project shall coordinate their Work and cooperate with each other. In case of a dispute, the Engineer will be the referee, and the Engineer's decision will be final and binding on all. When separate Contracts are let within the limits of any one Project, conduct the Work without interfering or hindering the progress or Completion of the Work by other Contractors.

Each Contractor involved assumes all liability, financial or otherwise, in connection with its respective Contract. Protect and save harmless the Department from any and all damages or Claims that may arise because of inconvenience, delays, or loss experienced because of the presence and operations of other Contractors working within the Limits of Construction of the same Project.

Coordinate and sequence the Work with other contractors. Arrange, place, and dispose of Materials without interfering with the operations of other contractors on the same Project.

105.09 Utilities within the Project Limits; Miss Utility One-Calls. Bidders are hereby notified that within the limits of the Work under this Contract, several utility facilities and/or appurtenances may be encountered. The locations of all utilities shown on the Plans or mentioned in the Contract Documents are approximate locations only.

Prior to Advertisement, the Department will notify all utility companies, pipeline owners, railroads, or other parties known to be affected by the Work, and endeavor to have all necessary relocations of the public or private utility fixtures, pipelines, and other facilities and appurtenances within or adjacent to the Limits of Construction made as soon as practicable. Notwithstanding any other provision of this Contract, do not proceed with the Work before conferring with the Engineer, the utility companies, and the municipal or county authorities in an effort to secure the most accurate and most recent information as to utility locations. As required by Chapter 8, Title 26 of the Delaware Code, do not begin any construction around or adjacent to utilities without notifying the Utilities Service Protection (Miss Utility) of Delmarva, Inc. at least two Working Days, but not more than ten Working Days in advance of starting the Work. Miss Utility is a report center system that enables the public, contractors, utilities, and other excavators to notify participating member utilities of planned digging activities by making one call.

Water lines, gas lines, wire lines, services connections, water and gas meter boxes, water and gas valve boxes, light standards, cable ways, signals, and all other utility facilities and appurtenances within the limits of the proposed construction that require moving, including the Work involved in relocating or otherwise altering such utilities, are to be moved by others at no expense to the Contractor, except as otherwise provided in the Contract. Allow utility contractors performing Work within the limits of the Contract to use the Contractor's maintenance of traffic (MOT) devices that are already in place as a result of the Work, such as "Road Work Ahead" signs and MOT related to the Project's construction phasing. The respective utility contractor is responsible for their own Equipment, Work and personnel safety while working within the limits of another Contractor. Utility contractors performing Work within the work zone shall use their own MOT devices at their own expense for daily construction activities such as lane and shoulder closures. Utility contractors shall provide their own flaggers. The Engineer reserves the right to order the Contractor to provide MOT for utility companies working within the work zone. When the Engineer issues such an order, the Engineer will pay for the work under the Unit Prices in the Contract. If Unit Prices for MOT ordered by the Engineer do not exist on the Contract, the Contractor and the Engineer shall negotiate a new price for the work or follow the Force Account procedure for reimbursement. If the Contractor provides MOT at the request of a

utility company, the Engineer will not make payments under the Contract. The utility company will pay the Contractor.

The Engineer will not pay for any relocation or rearrangement of utility facilities or appurtenances made for the Contractor's sole convenience.

Consider in the bid all the permanent and temporary utility appurtenances in their present or relocated positions as shown on the Plans or as readily discernible. No additional compensation will be allowed for any delays, inconvenience, or damage due to any interference from such utility facilities and appurtenances or the operation of moving them, except that the Contractor may be granted an extension of Contract Time.

The relocation of existing utilities that will interfere with the proposed construction, the construction of new utility facilities, and/or the reconstruction of existing utility facilities may also be in operation simultaneously with the Work to be performed under this Contract.

Any damage to utility services caused by the Contractor must be repaired at the Contractor's expense. Repair such damage immediately.

Prior to performing any Work on the Project, contact all utility companies, pipeline owners, railroads, or other known parties affected and "Miss Utility" of DELMARVA in order to ensure that all such utilities have received notice and in order that all utility adjustments may be made.

The following Utilities are members of Utilities Service Protection Center of DELMARVA (USPCD):

24/7 Mid-Atlantic Network, LLC
AboveNet Communications
Aero Energy
AIRCO
Angola Crest, LLC
Artesian Water Company
AT&T of Delaware
Atlantic Broadband
Bethel Township Sewer Dept
Camden-Wyoming Sewer & Water
Cavalier Telephone
Chesapeake Utilities
Choptank Electric
City of Delaware City
City of Dover
City of Harrington
City of Lewes Public Works
City of Milford
City of Newark
City of New Castle
City of Pocomke
City of Rehoboth Beach
City of Seaford
City of Wilmington
Colonial Pipeline Co.
Columbia Gas Transmission
Comcast Cable Communications
Connexion Technologies
County Propane of Delaware
Dept.of Transportation
Delaware Electric Cooperative
Delaware Pipeline Company
Delaware State Highway
Delaware Storage and Pipeline Com
MCI
Mediacom of Lower MD/DE
Moore Grant Sanitation
Municipal Utility Commission
Neon Optica, Inc
New Castle County Special
ServicesNUI Elkton Gas
Paradee Gas Co.
Pep-Up, Inc.
Peninsula Oil and Propane
P.F. Net Network Corporation
Poores Propane
Qwest Communications
Savannah's Landing HOA
Schagrin Gas Company
Sharp Energy
Steeplechase Waterworks
Sunoco Pipeline, LP
Sussex County Engineering Dept.
Sussex Shores Water Co.
Texas Eastern Transmission, LP
Tidewater Utilities
Town of Bethany beach
Town of Blades
Town of Bridgeville
Town of Chesapeake City
Town of Clayton
Town of Dagsboro
Town of Felton
Town of Georgetown
Town of Laurel
Town of Middletown
Town of Millsboro
Town of Milton

Delmarva Power
Direct Propane
Eastern Shore Gas
Eastern Shore Natural Gas
Eastern Utilities Commission
G4S Technology, LLC
Gull Point Condominium Association
Kent County Public works (Engineering)
Kent County Sanitary District
Kitts Hummock Improvement Association
Level 3 Communications
Long Neck Water Co.
Magellan Midstream Partners, L.P.
Magellan Terminals Holding, LP
Town of Selbyville
Town of Smyrna
Tunnel Companies, Inc.
United Water
University of Delaware
Verizon Communications
Wastewater Utilities, Inc.
Williams Gas Transmission
W.L. Gore & Associates, Inc.
XO Communications
YMG Corporation

The report center is essentially a message center, to which all participating parties are connected by a private line teletype network. The work location report is called in over two primary numbers, toll free, 1-800-441-8355 and 1-800-282-8555 in Delaware only. The area covered is the entire DELMARVA Peninsula.

A minimum of two but not more than ten (10) Working Days advance notice of starting time is required. The Day of the call is not counted as one of these Days. This assures the person calling of having the underground facility located prior to excavation.

The party reporting a digging operation is asked a standard format of questions to provide the utilities with the necessary information required to ensure an adequate location of the activity. The caller is given a ticket number for reference purposes. The center specifically locates reported areas of activity on a master map and determines the spot by grid coordinates. This information is then transmitted to the participating parties via high speed teletype network. The ticket life is for ten (10) Working Days after the call.

Messages received are sent out immediately during normal work hours (7:00 AM to 5:00 PM, Monday through Friday). Messages received after normal working hours, Saturdays, Sundays, or Holidays are taken, logged, and transmitted within one hour the next normal Work Day.

The Work location report is received by the participating utility which immediately locates the Work area by the information transmitted from the message center. The utility must then respond to the person originating the call by 1) stating it has no underground facilities at the designated location or 2) stating there are facilities in the area and dispatching a locating crew to the site and marking their underground facility with stakes, flags, and/or paint horizontally over the ground.

APWA recommended safety color codes will be used: white for proposed excavation, pink for temporary survey marking, orange for communications, red for electric, blue for potable water, green for sewer and drain lines, yellow for gas and petroleum products, purple for reclaimed water. This will enable the reporting party to visually see if the utility has responded.

Overhead High-Voltage Line Safety requires notification to and mutually agreeable measures from the utility from any person intending to carry on any function, activity, Work or operation within 20 feet of any high voltage overhead line.

105.10 Construction Stakes, Lines, and Grades Provided by the Engineer. The Engineer will furnish and set control points and construction stakes unless otherwise specified in the Contract Documents.

The Engineer will establish Right-Of-Way lines, Limits of Construction, and easements if needed, and will provide and set construction stakes establishing Right-Of-Way lines, easement lines, slopes, Profile Grades, centerline or off-set lines, and benchmarks. The Department may furnish the Contractor with information relating the lines, slopes, and grades. The Engineer will establish Structure working points, elevations, and all the necessary points and off-sets to complete the Structure. Use these stakes and marks as the field control to establish other necessary controls and perform the Work. Before beginning the Work, determine the meaning of all stakes, indicated measurements, and marks provided by the Department.

The Engineer will also perform preliminary and final cross-sections of borrow pit sites and cross-sections for bedrock and undercut excavation.

Protect and preserve of all stakes and marks. The labor cost of the survey crew replacing disturbed stakes and marks will be deducted from the payment due for the Work.

The Department is responsible for the accuracy of lines, slopes, grades, and other engineering work set forth under this Section. The Department will not be responsible for staking delays unless the Contractor provides the Engineer ten (10) Calendar Days' notice prior to beginning Work for which layout is needed and thereafter gives at least two (2) business days' notice that stakes are needed.

105.11 Removal of Defective and Unauthorized Work. All Work that fails to meet the Contract requirements will be deemed unacceptable by the Engineer. Remove and dispose of all unacceptable Work at the Contractor's expense immediately upon rejection by the Engineer. Work performed without adequate layout, Work performed beyond the lines and grades shown on the Plans, or any Extra Work performed without written direction by the Engineer will be considered unauthorized Work and will not be measured or paid by the Department. The Engineer may direct the Contractor to remove and replace unauthorized Work at the Contractor's expense.

Failure of the Contractor to remove and properly dispose of rejected Work immediately after receiving written notice to do so from the Engineer shall be sufficient cause for the termination of the Contract. Furthermore, the Engineer will have the authority to cause unacceptable Work to be remedied or removed and replaced, and unauthorized Work to be removed. The costs incurred by the Engineer for correcting unacceptable or unauthorized Work will be deducted from the amount due or to become due the Contractor.

105.12 Load Restrictions. Comply with all legal and Contractual load restrictions in the hauling of Materials or Equipment on public roads. A hauling permit or other special permit will not relieve the Contractor of liability for damage to public or private property that may result from the movement of such loads or Equipment.

Vehicles transporting construction Materials to Department Projects shall not exceed the gross vehicle weight (GVW) or licensed weight, if less, as specified in the Delaware Code. Materials inspection weigh tickets will not be issued by Department personnel for GVWs in excess of the allowable maximum. The allowable GVW for the delivery truck must be shown on each material ticket submitted to the Engineer.

Payment for Materials delivered to the Project will not exceed the allowable GVW minus the truck tare weight. An average tare weight may be established on a basis approved by the Engineer so that empty weighing is not necessary before every load. No payment will be made for any excess Material weight.

Notify Subcontractors, vendors, and suppliers of this requirement.

The maximum GVW for different vehicle axle configurations is as follows; provided that in the case of three-axle vehicles the extra weight fee has been paid and is so noted on the registration card:

Customary Values

Single Unit Values	***GVW, Maximum***
2-axle vehicle (e.g., 2-axle dump truck)	40,000 lb.
3-axle vehicle (e.g., 3-axle dump truck)	65,000 lb. *70,000 lb.
4-axle vehicle (e.g., 4-axle dump truck)	73,280 lb.
Tractor-Semi-Trailer Combinations	
3-axle combination unit	60,000 lb.
4-axle combination unit	70,000 lb.
5-axle combination unit	80,000 lb.

* When extra weight fee has been paid and is so noted on registration card.

Assume responsibility for all damage caused by hauling Equipment, whether the damage occurs within or outside of the Project limits.

105.13 Maintenance during Construction. Maintain the Work during construction and until the Project is accepted. Perform this maintenance every Day in a continuous and effective manner with adequate Equipment and forces to keep the roadway and Structures in a satisfactory condition. All snow removal will be performed by DelDOT Maintenance, unless the Contract Documents specifically assign these responsibilities to the Contractor. All mowing of grass outside of the LOC will be performed by DelDOT Maintenance.

The Engineer will notify the Contractor if there is a failure to comply with these provisions. If the Contractor fails to remedy unsatisfactory maintenance within twenty-four (24) hours after receipt of the notice, the Engineer may proceed to maintain the Project. The entire cost of this maintenance will be deducted from monies due or to become due the Contractor. Failure to adequately and safely maintain the Project will be sufficient cause to terminate the Contract for default.

If the Contract involves the placement of Material on or the use of a previously constructed subgrade, base course, pavement or Structure, maintain the previously constructed Work during construction operations.

The cost of maintenance Work during construction and before the completion of the Final Inspection punchlist is incidental to the Contract. The cost of maintenance Work occurring after the Final Inspection punch list is complete will be paid by the Engineer, except that the cost of maintenance Work required for landscaping and vegetative growth shall be borne by the Contractor until Final Acceptance.

In the event that the Contractor's Work is ordered shut down for failure to comply with the provisions of the Contract, maintain traffic, protect and maintain the roadway and Structures, and provide ingress and egress for local residents as may be necessary during the period of suspended Work or until the Contract has been declared in default.

Mow all grass and weeds within the Limits of Construction, as directed by the Engineer, to a height in compliance with Section 107.01. If the Engineer directs the Contractor to mow grass more than 4 times in a calendar year, the Engineer will pay for all mowing beyond the fourth mowing operation.

105.14 Opening Sections of the Project to Traffic. The Engineer may order certain sections of the Work to be opened to traffic or other use prior to Completion or acceptance of the Work. Opening these sections will not constitute acceptance of the Work or waiver of any Contract provisions. For sections of the Work that are open to traffic, the cost of repairing damage to the Work caused by vehicular traffic will be paid by the Engineer unless such section of roadway is open due to the fault or inactivity of the Contractor or the Contractor caused the damage. All other maintenance costs including, but not limited to, mowing grass, general cleanup and/or the repair of Work damaged by vandalism are borne by the Contractor until the Final Inspection punch list is complete, except that maintenance costs for Work involving landscaping and vegetative growth that are borne by the Contractor until Final Acceptance. Prior to opening a section of the Work to traffic, confer with the Engineer to ensure that all traffic control devices are in place and functioning. Do not open any section of roadway to traffic without the approval of the Engineer.

105.15 Claims for Adjustments and Resolution of Disputes. All disputes between the Contractor and the Engineer arising under or related to this Contract that are not resolved by mutual agreement shall be resolved by following the Claim procedure established in this Section. "Claim" means a written demand or assertion by the Contractor or the Department seeking, as a legal or equitable right: payment of money, Adjustment or interpretation of Contract terms, or other relief.

A. ***Contractor Notification of Claims.***

Notify the Engineer orally or in writing of the intention to make a Claim for relief before beginning the affected Work. Within five Working Days of declaring the intention to make a Claim, provide written notification of the Claim to the Engineer that includes the following:

1. The date of the occurrence and the nature and circumstances of the occurrence that constitute a change to the Contract or the need for an interpretation of the Contract's terms;

2. The name and title of Department representatives knowledgeable of the conditions on which the Claim is based; and

3. The particular elements of Contract performance for which relief is sought under this Section.

When a Claim is based solely upon the need for a Contract interpretation, provide written notice of the intent to Claim as prescribed above within five (5) Working Days of the discovery by the Contractor of the alleged misinterpretation of the Contract by the Engineer.

If the Contractor's written notification is not given to the Engineer within five (5) Working Days as prescribed above or the Engineer is not afforded proper facilities by the Contractor for keeping strict account of the actual costs incurred by the Contractor as a result of the alleged change or alleged misinterpretation of the Contract, then the Contractor waives the Claim. Such notice by the Contractor, and the fact that the Engineer has kept account of the cost as aforesaid, shall not in any way be construed as proving the validity of the Claim. Nothing contained in this Section shall be construed as establishing any Claim contrary to the terms of Section 104.06 or any other provision of the Contract Documents.

B. ***Engineer's Response to the Contractor's Notice.***

Within ten (10) Calendar Days after receipt of the Contractor's written notice of a Claim, the Engineer will respond in writing to the Contractor to:

1. Confirm that a change has occurred and that relief is due as provided herein; or

2. Confirm that the Engineer agrees with the Contractor's interpretation of the Contract and that relief is due as provided herein; or

3. Deny that relief is due and direct the Contractor to follow the formal Claim submittal procedure as described below; or

4. Advise the Contractor that adequate information has not been submitted to decide whether B.1., B.2. or B.3. above applies, and indicate the need for more information for further review. The Department will respond to such additional information within ten (10) Calendar Days of receipt from the Contractor; or

5. Advise the Contractor that the Engineer will review the Claim after obtaining the formal Claim submittal as described below.

Any Adjustments made to the Contract will not include increased costs or time extensions for delay resulting from the Contractor's failure to provide requested additional information in accordance with this Section.

C. ***Claim Submittal.***

Submit a formal Claim in writing within sixty (60) Calendar Days after Work on the Item Claimed has been completed. The Contractor can only recover, and the formal Claim shall only consist of, those items allowed under Section 105.15.H. The formal Claim submittal must contain:

1. A description of the precise nature and basis for the Claim;

2. Each fact upon which the Contractor relies to support the claim;

3. The precise reason the Contractor believes that relief should be granted;

4. The language in the Contract upon which the Contractor relies in support of the Claim;

5. The amount of money or nature and extent of relief to which the Contractor believes it is entitled; and

6. Any other factors which the Contractor believes support the Claim.

When requesting a time extension or relief due to a constructive acceleration, include an as-built Project Schedule that conforms to the requirements of the Contract. Failure to submit such a Schedule constitutes a waiver of the Contractor's right to receive a time extension or other relief due to a delay or a constructive acceleration.

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In complying with the Claim submittal requirements listed above, the Contractor must certify the Claim using the following form:

The undersigned is duly authorized to certify this claim on behalf of (the Contractor).

(The Contractor) certifies that this claim is made in good faith, that the supporting data are accurate and complete to the best of the Contractor's knowledge and belief, and that the amount requested accurately reflects the Contract Adjustment for which (the Contractor) believes that the Department is liable.

(THE CONTRACTOR)

By: _____

(Name)

(Title)

Date of Execution: _____

The Contractor agrees to follow the procedure described in this Section for all Claims. The Contractor further agrees that any claimed dollar amount and/or relief sought that is not made pursuant to this Section and within the time limits prescribed by this Section shall be forever waived and not raised at any subsequent meeting or hearing dealing with the Claim. The Department will establish a claims procedure to be followed that is consistent with these Specifications and provides the means and methods by which the Contractor and the Department shall process the Contractor's formal Claim.

D. ***District Review.***

Formal Claims submitted in accordance with this Section will be reviewed fully at the District level. Within thirty (30) Calendar Days after receiving the formal Claim submittal, the District Engineer will respond, in writing, with the District's decision. If additional time is required by the District to review the Claim, the District Engineer will notify the Contractor. Upon mutual agreement, the parties may engage in non-binding alternate dispute resolution proceedings in order to try and induce a settlement of the dispute prior to the District's decision. These proceedings may include, but are not limited to, non-binding arbitration or mediation.

E. ***Contractor's Appeal to the Claims Committee.***

The Contractor may appeal the District's decision to DelDOT's Claims Committee for review. Give notice of the appeal to the District in writing within ten (10) Calendar Days of the District's Decision. Failure to provide timely notice of an appeal constitutes a waiver of the Contractor's right to appeal.

The Claims Committee will conduct a Claim review meeting attended by representatives of the Contractor and the District. The Claims Committee will conduct the Claim Review Meeting within sixty (60) Calendar Days after the District receives the Contractor's notice of appeal. The proceedings of the Claim

Review Meeting will be recorded by a Court Reporter. The cost associated with the Court Reporter will be shared equally by the Department and the Contractor. A copy of the record of the Claim Review Meeting will be made available to the Contractor. Within fifteen (15) Calendar Days of the Claim Review Meeting, the Committee's Chairperson will notify the Contractor, in writing, of the Committee's decision.

F. ***Decision of the Secretary.***

Either party may appeal the Claims Committee's decision to the Secretary requesting to proceed with the arbitration process as outlined in Section 105.15.G. The appellant shall give notice of the appeal to the Claims Committee's Chairperson, in writing, within ten (10) Calendar Days after receiving the Claims Committee's decision. Failure by either party to provide timely notice of an appeal constitutes a waiver of that party's right to appeal. After receiving the written notification, the Secretary or the Secretary's designee (usually the Chief Engineer) will notify the parties, in writing, within thirty (30) Calendar Days of the receipt of the notice regarding the Claim. The Secretary or the Secretary's designee will review the record and may schedule a meeting or hearing with the parties to discuss the Claim. The Secretary or the Secretary's designee will then issue a written decision that will serve as the final decision of the Department concerning the Claim.

G. ***Arbitration.***

Any Claim, properly presented and processed through the Claim procedure outlined above, and finally decided by the Secretary or the Secretary's designee pursuant to Section 105.15.F, in the absence of agreement by the Contractor and the Department as to the resolution thereof, and upon the demand of either party delivered in writing to the other within thirty (30) Calendar Days from the date of the written decision by the Secretary or the Secretary's designee, as provided in Section 105.15.F; shall be decided by arbitration in accordance with the Construction Industry Arbitration Rules of the American Arbitration Association then in effect; except as otherwise modified by these Specifications. Failure by either party to provide a timely notice of appeal to the other constitutes a waiver of that party's right to appeal.

The arbitration proceeding may involve presentation of facts or such portions thereof as have previously been presented at prior administrative hearings held pursuant to Section 105.15 herein or may be based entirely upon the record, as established therein. The record established at prior administrative hearings pursuant to Section 105.15 shall be specifically admissible at such arbitration proceedings and such facts as have been established shall be specifically binding upon the parties; with the exclusion of opinions and conclusions thereon. Such arbitration shall be specifically based upon the Claim presented at prior administrative hearings and no material, information, fact, and/or Claim not presented at such hearings held pursuant to said Section 105.15 shall be admissible at any arbitration conducted pursuant to this Section, with the exception of the Contract Documents as defined in Section 101.03 Definitions - Contract. The arbitrators are to furnish a written decision to both parties that includes the findings of the panel and an explanation of the basis for the findings. This agreement to arbitrate will be strictly enforceable as provided under Chapter 57, Title 10 of the Delaware Code, as amended. The Contractor and DelDOT will each pay half of the arbitration fee and the cost of the court reporter.

H. ***Recoverable Costs.***

The Contractor is not entitled to recover any costs in a Claim other than those allowed by this Section. As described below, 1. through 5. identify all recoverable direct and indirect costs and 6. identifies all non-recoverable costs.

1. Labor. In accordance with Section 109.04 D.1.

2. Bond, Insurance, and Tax. In accordance with Section 109.04 D.2.

3. Materials. In accordance with Section 109.04 D.3.

4. Equipment. In accordance with Section 109.04 D.4.

5. Percentage Markups. In accordance with Section 109.04 D.6. and 109.04 D.7.

6. Non-recoverable Damages or Expenses. The expenses listed above as 1. through 5. shall constitute the sole cost(s) and expense(s) to which the Contractor is entitled on any Claim submitted for additional compensation or settlement of any Claim made under these Specifications, except as further provided in Section 105.15.J. The parties agree that the Department will have no liability for the following items of damage or expense:

   a. Profit in excess of that provided herein;

   b. Loss of profit;

   c. The costs of lost productivity for labor and Equipment either on this Contract or any other;

   d. Home office overhead in excess of that provided herein;

   e. Consequential damages, including but not limited to loss of Bonding capacity, loss of bidding opportunities and insolvency;

   f. Indirect costs or expenses of any nature;

   g. Attorney's fees, Claim preparation expenses or costs of litigation; and

   h. Interest on any claimed amounts.

Submit any Claim on behalf of a Subcontractor according to Section 105.15. Recoverable damages for Claims submitted on behalf of Subcontractors shall be solely limited to the list of all direct or indirect costs permitted by 1. through 4. above. For Work approved by the Department, the Subcontractor will be allowed a percentage markup as permitted by Section 109.04 D.6. and 109.04 D.7. The Contractor will be allowed an additional percentage markup as permitted by Section 109.04 D.8. to be computed on the final sum total of such Subcontractor cost Claimed under 1. through 4. above for portions of Subcontractor Work approved by the Department.

I. ***Liquidated Damages.***

A Claim, not for additional costs, but for a waiver by the Department of an assessment of Liquidated Damages, in whole or in part, may also be made by the Contractor as part of this Section. Any Claim submitted shall not affect in any manner the imposition or waiver of Liquidated Damages, except that any Liquidated Damages shall be waived for any delay for which a time extension is granted in accordance with Section 108.07.

J. ***Claims for Delays.***

In order to receive an extension of Contract Time or to receive monetary compensation for delays to the Contract Schedule, the Contractor must request an extension of Contract Time in accordance with Section 108.07. Base all requests for extensions of Contract Time on the Contract's progress Schedule. Failure to properly update and maintain the progress Schedule in accordance with the terms of the Contract shall constitute a waiver of the Contractor's rights to claim for a time extension and/or monetary damages due to a delay.

The Department may grant time extensions in the performance of Work for delays caused by Acts of God as defined in Section 104.15. For such delays that are also beyond the control and not the fault of the Department, the Contractor shall be entitled to a time extension, but is not entitled to recover any other damages resulting from such delays.

In the event that a delay is not caused by the Contractor's fault or negligence but is caused wholly by actions of the Department, or determined by an arbitrator to be the Department's sole responsibility, an extension of time will be granted in an amount equivalent to the actual critical delay caused by the Department, and the Contractor is not entitled to any additional compensation except as allowed herein. In the event that a delay that is the Department's sole responsibility is concurrent with a delay that was not the

sole responsibility of the Department, the Contractor is entitled to a time extension, but shall not be entitled to recover any other damages resulting from the concurrent delay.

All recoverable direct and indirect costs for compensable delays are identified in 1. below, and all non-recoverable costs for compensable delays are identified in 2. below. Compensation provided by 1. below shall not be duplicative of compensation already provided as part of Section 105.15.H or 109.04.

1. **Allowable Direct and Indirect Expenses.** Only the additional costs associated with the following items will be recoverable by the Contractor for delay compensation:

   a. Extended Field Overhead. Field overhead costs necessary for the prosecution of the Work during the delay period, as follows:

      i. General Field Supervision. Such costs include but are not limited to general field supervision, assistants, watchman, clerical and other field support staff that are physically located on the jobsite. Compute these labor costs in accordance with Section 109.04.D.1. For salaried personnel, calculate the rate of wage (or scale) actually paid by dividing the weekly salary by seven Days per week.

      ii. Field Office Facilities and Supplies. Such costs include but are not limited to field office trailers, tool trailers, office equipment rental, temporary toilets, and other incidental facilities and supplies that are physically located on the jobsite. Compute these costs on the basis of the actual added costs incurred by the Contractor to provide these services as a result of the delay.

      iii. Maintenance of Field Operations. Such costs include but are not limited to expenses for telephone, electric, water, and other similar services that are provided at the jobsite. Compute these costs on the basis of the actual added costs incurred to maintain these services as a result of the delay. These extended field overhead costs are not duplicative of those compensated in Section 109.04.D.7.

   b. Labor. For all necessary, non-salaried, idle labor that must remain on the Project during such periods of delay due to collective bargaining contracts or other reasons approved by the Engineer. Compute the labor costs in accordance with Section 109.04.D.1.

   c. Bond, Insurance, and Tax. In accordance with Section 109.04.D.2.

   d. Equipment. For any idle Equipment other than small tools that must remain on the Project site during delays, the Contractor is to receive compensation at the rate calculated in Section 109.04.D.4. Should it not be necessary for machinery or Equipment to remain on the Project during delays, the Contractor is to receive transportation costs to remove the machinery or Equipment and return it to the Project at the end of the delay period. No compensation is recoverable for idle Equipment unless the Equipment has been held on the Project site on a standby basis at the request of the Engineer and, but for this request, would have left the Project site.

   e. Materials. Costs for material escalation due to the delay or the cost of storage of Materials due to the delay are recoverable. Obtain the Engineer's approval prior to storing any Material due to a delay.

   f. Percentage Markups. An additional 10 percent markup of the total of a., b., c., and d. above will provide full compensation for home office overhead and any other costs attributed to the delay for which no specific allowance is herein provided. This is the sole markup that is recoverable for a compensable delay. Markups from Sections 105.15.H.5., 109.04.D.6. and 109.04 D.7. shall not apply.

   g. Records. Payment will not be made for delays until the Contractor has furnished the Engineer with duplicate itemized statements of the cost as herein above specified and detailed as follows:

i. Name, classification, date, daily hours, total hours, rate, and extension for each worker and foreman.

ii. Designation, dates, daily hours, total hours, rental rate, and extension for each unit of machinery and Equipment.

iii. Transportation costs.

iv. Cost of Bonds, property damage, liability, and workers compensation insurance premiums; unemployment insurance contributions; and social security taxes.

The Engineer will compare the Department's records with those furnished by the Contractor and make any necessary Adjustments. When these records are agreed upon and signed by both parties, the records become the basis of payment for the expenses incurred, but do not preclude subsequent Adjustment based on later audits or inspections of the Contractor's records by the Department.

The Contractor's cost records pertaining to expenses under this Section shall be open to inspection or audit by representatives of the Department as provided in Section 105.15.K.

2. **Non-Allowable Damages or Expenses.** The expenses listed in 1. above shall constitute the sole cost(s) and expense(s) to which the Contractor shall be entitled on any delay Claim submitted for additional compensation or settlement of any Claim made under these Specifications. The parties agree that the Department will have no liability for the items listed in Section 105.15.H.6.

K. ***Review of Contractor's Records by the Engineer.***

The Contractor agrees to make its accounting records and cost information available at the time of submission of the Claim and such other records as the Department may require in order to determine the validity and amount of each item Claimed. Ensure that such records are open to inspection or audit by representatives of the Department during the life of the Contract and for a period of not less than three years after the Contractor's acceptance of Final Payment as set forth in Section 109.10. Retain such records for that period.

Where payment for Materials, Equipment, or labor is based on the cost of forces other than the Contractor's, make every reasonable effort to ensure that the cost records of such other forces are open to inspection and audit by representatives of the Department on the same terms and conditions as the cost records of the Contractor. Payment for the cost of such forces may be deleted if the records of such third parties are not made available to the Department's representatives.

If an audit or inspection is to be commenced, the Engineer will provide the Contractor with a reasonable notice of the time when such an audit or inspection is to begin. In cases where all or a part of such records are not made available, the Contractor understands and agrees that any items not supported by records because the records are not made available will not be recoverable. If payment has already been made in such a case, refund to the Department the amount so recovered.

L. ***Contractor and Subcontractor/Supplier Disputes.***

Resolve any dispute arising between the Contractor and its Subcontractor/supplier concerning payments held in trust, as required by Chapter 8, Title 17 of the Delaware Code by arbitration. The Department shall not serve as the arbiter of such disputes, but shall, in the absence of agreement between the parties, designate the American Arbitration Association to resolve the matter.

105.16 Project Acceptance; Partial Acceptance. Final Acceptance will not occur until Completion of the Project as defined in Section 101.03. The Contract Time will be stopped at Substantial Completion as defined in Section 101.03.

When the Contract Time is stopped, expeditiously provide the exempted documents, certificates, or proofs of compliance. Final Acceptance and final payment will not be made until all documents, certificates, or proofs of compliance have been executed and delivered to the Engineer.

Upon receiving notice from the Contractor of Substantial Completion, the District will conduct a semi-final inspection. During this inspection, the District will note by stations and in detail all Work or conditions requiring correction. Immediately prosecute the corrective Work. When the noted corrections are completed to the satisfaction of the District, the Department will conduct a Final Inspection to certify that the Project can be used, occupied, or operated for its intended use and that the Work has been satisfactorily completed in accordance with the Contract Documents. The Engineer will note any further corrective measures as deemed necessary. Prosecute corrective measures immediately. When the corrective Work is satisfactorily completed, together with receipt of proper documentation as noted herein, the Engineer will immediately accept the Project and notify the Contractor in writing of the date of acceptance of the Project. If the Contractor fails to complete the corrective Work identified by the Engineer within a reasonable period of time, usually two weeks, after the semi-final and Final Inspections, or the Contractor fails to submit proper documentation including final invoice, time charges will resume until such is completed. For each and every Calendar Day or Working Day, dependent on the type of Contract, charged beyond Substantial Completion that exceeds the allowable Contract time, the Contractor will be assessed Liquidated Damages in the amount of 10 percent of the value shown in Section 108.09.

When a unit or portion of the Project, such as a Structure, interchange, or section of road or pavement is Substantially Completed, the Contractor may request a Final Inspection of that unit or portion of the Work. If the unit or portion of the Work has been completed in accordance with the Contract, the Engineer may accept it as completed. The decision to make a partial acceptance of a unit of Work is solely at the discretion of the Engineer. Partial acceptance will not void or alter any of the terms of the Contract.

SECTION 107 – LEGAL RELATIONS AND RESPONSIBILITY TO THE PUBLIC

107.01	Laws to be Observed	**107.08**	Use of Explosives
107.02	Permits, Licenses and Taxes	**107.09**	Protection and Restoration of Property
107.03	Patented Devices, Materials, and Processes	**107.10**	Responsibility for Damage Claims
107.04	Contractor's Responsibility to Protect Utility Property and Services	**107.11**	Furnishing Right-Of-Way
107.05	Federal Aid Participation	**107.12**	Personal Liability of Public Officials
107.06	Construction Safety, Health, and Sanitary Standards	**107.13**	Contractor's Responsibility for the Work after Final Acceptance; No Waiver of Legal Rights
107.07	Public Convenience and Safety	**107.14**	Hazardous Materials Discovered Within the Project Limits

107.01 Laws to be Observed. Investigate and strictly comply with all Federal, State, or County laws and regulations, and City or Town ordinances and regulations. Indemnify and save harmless the State of Delaware, the Department of Transportation, its Secretary and all officers, agents, and servants against any Claim or liability arising from or based upon the violation of any such laws, ordinances, regulations, orders, or decrees whether by the Contractor as an entity or by the Contractor's employees.

If the Contractor should discover any provisions in the Contract that are contrary to or inconsistent with any law, ordinance, regulation, order, or decree, immediately report it to the Engineer in writing.

107.02 Permits, Licenses and Taxes. Procure all permits and licenses, pay all charges, fees, and taxes, and give all notices necessary and incidental to the due and lawful prosecution of the Work.

107.03 Patented Devices, Materials, and Processes. The Contractor and the Surety shall hold and save harmless the State, the Department, their officers or agents, in accordance with the terms of these Specifications, from any and all Claims because of the use of any patented design, device, material, or process in connection with the Work agreed to be performed under this Contract. Furnish any patent agreement between patentee and the Contractor to the Department.

107.04 Contractor's Responsibility to Protect Utility Property and Services. At points where the Contractor's operations are adjacent to properties of railway, communications companies, power companies, or other utilities, or are adjacent to other properties, facilities, or appurtenances, and damage to which might result in considerable expense, loss, or inconvenience, do not commence Work until all arrangements necessary for the protection thereof have been made.

In the event of interruption to water or utility services as a result of accidental breakage, or as a result of being exposed or unsupported, promptly notify the proper authority. Cooperate with the proper authority in the restoration of service as promptly as possible. Do not Work around or near fire hydrants until appropriate plans for continued service have been approved by the local fire authority.

Keep fire hydrants on or adjacent to the highway accessible to fire apparatus at all times and do not place any Material or obstruction within 15 feet of any such hydrant. Ensure that fire hydrants are entirely accessible at all points to fire apparatus at all times. Whenever any Work is performed in the area of a fire hydrant or whenever a fire hydrant is relocated or installed, the center of the hose outlet shall be a minimum of 18 inches above the final grade directly beneath the hose outlet. Set the breakaway flange at the bottom of a hydrant at 0 inches to 4 inches above the ground.

107.05 Federal Aid Participation. When the United States Government pays all or any portion of the cost of a Project, observe the federal laws authorizing such participation and the rules and regulations made pursuant to such laws; and the Work shall be subject to the inspection of the appropriate Federal agency.

SECTION 108 – SUBCONTRACTING; NTP; PROGRESS SCHEDULES; TIME EXTENSIONS; LIQUIDATED DAMAGES; TERMINATION

108.01	Subletting of the Contract	**108.07**	Extensions of Contract Time; Weather Delays
108.02	Preconstruction Meeting; Submitting a Schedule; Notice to Proceed	**108.08**	Failure to Complete on Time
108.03	Performance and Progress	**108.09**	Schedule of Liquidated Damages
108.04	Contractor's Resources; Progress Schedules	**108.10**	Default of the Contract
108.05	Traffic Requirements and Contractor's Operations; Completing Work	**108.11**	Termination of the Contract for Convenience
108.06	Preference for Delaware Labor; Character of Workers and Equipment; Specified Construction Methods	**108.12**	Termination of the Contractor's Responsibility

108.01 Subletting of the Contract. Perform Work with the Contractor's own organization amounting to not less than **50 percent** of total original Contract Price, excluding any specialty Items designated by the Contract. Specialty Items may be performed by subcontract and the amount of any such specialty Items performed may be deducted from the total original Contract Price before computing the amount of Work required to be performed by the Contractor's own organization. The Contract upon which the requirements are computed includes the cost of Material and manufactured products that are to be purchased or produced by the Contractor under the Contract provisions. Adjustments in quantities or additional Items of Work shall not require an Adjustment of the percentage computed as described above.

The term "perform Work with its own organization" refers to workers employed or leased by the prime Contractor, and Equipment owned or rented by the prime Contractor, with or without operators. Such term does not include employees or Equipment of a Subcontractor or lower tier Subcontractor, agents of the prime Contractor or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime Contractor meets all of the following conditions:

A. The prime Contractor maintains control over the supervision of the day-to-day activities of the leased employees;

B. The prime Contractor remains responsible for the quality of the Work of the leased employees;

C. The prime Contractor retains all power to accept or exclude individual employees from Work on the Project; and

D. The prime Contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other federal regulatory requirements.

"Specialty Items" are limited to Work that requires highly specialized knowledge, abilities, or Equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the Contract as a whole and in general are intended to be limited to minor components of the overall Contract. All Specialty Items will be expressly identified in the Contract.

Do not sublet, sell, transfer, assign or otherwise dispose of any portion of the Contract except with the written consent of the Engineer. Such consent, when given, does not relieve the Contractor of any responsibility for the fulfillment of the Contract. Do not purchase Work or Materials from an organization other than its own, or otherwise dispose of the Contract or Contracts or any portion thereof, or of its right, title or interest therein, without written consent from the Engineer. Written consent will only be given after the Engineer has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime Contract.

If the Contractor proposes to subcontract any part of Work, outline the scope and value of the Work to be performed by the Subcontractor. Outline the cost of Materials to be used by the Subcontractor. Include the cost of Materials to be used by the Subcontractor in the value of the subcontracted Work. A Subcontractor shall not subcontract further a portion of the Work without the express written permission of the Engineer. In granting such permission, the Engineer will ensure that the Subcontractor seeking to subcontract the Work to be performed by another shall nonetheless perform with its own organization Work amounting to not less than 50 percent of the total subcontracted bid price.

Perform all the traffic control Work and related Items either (1) entirely with labor, Equipment and Materials from the Contractor's own organization; or (2) entirely with labor, Equipment and Materials from a single Subcontractor. Maintenance of the Equipment will not be subject to this requirement.

When the Contractor has sublet a portion of the Contract or a Bid Item to a Subcontractor, the actual payment to the Subcontractor will be applied to fulfill Disadvantaged Business Enterprise (DBE) requirements of the Contract, where applicable. The cost of the portion of the Contract or Bid Item performed by a DBE will be included in the total amount of Work subcontracted by the Contractor in determining whether the Contractor is performing at least 50 percent of the total Contract Bid Price, as required by this Section.

As a prerequisite to payment for any Work performed by a Subcontractor or on a Subcontractor's behalf and prior to any Work being performed on the Project by any Subcontractor, submit a certified copy of the Contractor-Subcontractor agreement and a copy of the Subcontractor's Delaware business license. Also include all other contracts with suppliers or any other person, firm, or organization for review and approval by the Engineer. Each subcontract shall be in writing and shall contain and state that all pertinent provisions and requirements of the prime Contract are incorporated into the subcontract. The Contractor is solely responsible to determine that all such provisions are included and such provisions will be implied where not specifically included.

The Contractor may also be required to submit additional information concerning the prospective Subcontractor or supplier, including any additional information required by the terms of this Contract, by the Department or by the FHWA, or other governmental agency, where necessary. Such information may include but may not necessarily be limited to:

A. Evidence that the organization which performs the Work is particularly experienced and equipped for such Work.

B. Assurance by the Contractor that the labor standards provisions set forth in this Contract shall apply to labor performed on all Work encompassed by the Contract.

C. Assurance that all Civil Rights provisions and DBE requirements have been satisfied.

Include provisions in all subcontracts that indemnify and save harmless the Department from the action of the Subcontractor or supplier; provisions that provide for the binding arbitration of all disputes between the parties to the subcontract agreement; and provisions that save harmless and indemnify the Department for omissions in the subcontract agreement.

Any review performed or permission or approval granted under these Specifications will not operate, nor be interpreted as approval of the Work to be performed by the Subcontractor or Material supplied by a supplier, nor operate to relieve the Contractor of the sole responsibility for satisfactory Completion of the Contract. No contracts, subcontracts, supplier agreements, sales, transfers, leases, assignments, or any other agreements applicable to this Contract will in any case release the Contractor of its sole responsibility and liability under the Contract and Bonds.

The Department, at its discretion, may refuse to pay for or accept all or part of the Work or Materials supplied by an unapproved Subcontractor or Materials supplier and may refuse to consider such Work performed or Materials supplied as part of the subcontracted Work.

108.02 Preconstruction Meeting; Submitting a Schedule; Notice to Proceed. Following the execution of the Contract, the Engineer may schedule a preconstruction meeting. Prior to the preconstruction meeting, submit the progress Schedule per Section 108.04. After the preconstruction meeting, the Engineer will issue to the Contractor a Notice to Proceed which will stipulate the date on or before which the Contractor must begin Work. The date specified in the notice will be at least ten (10) Calendar Days subsequent to the date of issuance of the Notice to

Proceed. No Work is to be started before receipt of the Notice to Proceed. The specified Contract Time will begin on the Day the Work actually starts or on the date stipulated in the Notice to Proceed, whichever is earlier.

108.03 Commencement of Work; Counting Contract Time. Begin Work no later than the date stipulated in the Notice to Proceed. Contract Time will be counted using either Calendar Days or Working Days, whichever is indicated in the Bid Proposal.

A. Calendar Day Contracts. Contract Time will begin as specified in Section 108.02 and continue each and every Day shown on the calendar until the Substantial Completion of the Work as determined by the Engineer. No Work will be permitted on Sundays or Holidays unless the Engineer determines that such Work is in the best interest of the Department. If the Contractor wants to perform Work on Sundays and/or Holidays, submit a written request to the Engineer at least three Working Days prior to the Sunday or holiday for approval to perform Work on such Sunday or Holiday. Provide notice to the Engineer no later than 12 PM Friday if any Work is to be performed that week on Saturday so that adequate inspection can be provided by the Department.

B. Working Day Contracts. Contract Time will begin as specified in Section 108.02 and continue as defined in Section 101.03 until Substantial Completion of the Work as determined by the Engineer. No Work will be permitted on Sundays or Holidays unless the Engineer determines that such Work is in the best interest of the Department. Submit a written request to the Engineer at least three Working Days prior to the Sunday or holiday for approval to Work on such Sunday or Holiday. Provide notice to the Engineer no later than 12 PM Friday if any Work is to be performed that week on Saturday so that adequate inspection can be provided by the Department.

108.04 Contractor's Resources; Progress Schedules. Provide sufficient Materials, Equipment, and labor to complete the Project within the Contract Time. Lack of resources is not a sufficient reason for an extension of Contract Time.

Submit a Progress Schedule to the Engineer for review. Do not start Work until the Progress Schedule is approved and methods of construction operations for each phase of construction are acceptable to the Engineer and are in conformance with all applicable erosion and sediment control requirements. The progress Schedule will be used to establish the critical construction operations and to monitor the progress of the Work. Submit the progress Schedule chart in the form specified below, unless the Contract requires a Critical Path Method (CPM) Schedule. When the Contract requires a CPM Schedule, the specifications for preparing and maintaining the Schedule will be set forth in the Special Provisions. The cost of preparing and maintaining a progress Schedule is incidental to the Contract unless otherwise specified in the Contract Documents.

If the Contractor elects to use a CPM Schedule when it is not required in the Contract, comply with the requirements of this Section and no additional payment will be made for the CPM Schedule.

A. **Progress Schedule Chart.** Prepare a Progress Schedule Chart ("PSC") that shows in detail the time (Working Days or Calendar Days as specified) involved in performing construction activities for the duration of the Project. Schedule the Project in such manner and sequence as to minimize the time and surface area of erodible earth material. Use the PSC for the coordination of Work under the Contract including the activities of Subcontractors, vendors, and suppliers. The Department will use the PSC to monitor the progress of the Work. Show the impact of utility activities, permits and interdependent Work between separate Project locations, if applicable.

   Fully use, but do not exceed, the specified Contract duration in the PSC. Time charges will begin no later than the time stipulated in the Notice to Proceed. Review and approval of the PSC will not bind the Department nor constitute acceptance of any individual time period for scheduled activities.

B. **Biweekly and As-Required Look-Ahead Schedules.** Submit to the Engineer a two-week activity Schedule on each Friday for each two-week period of Work activity. This activity Schedule shall provide specific details related to actual construction activities the Contractor plans to have in progress during the two-week period.

   When requesting an extension of Contract Time as specified in Section 108.07 and if required by the Engineer, submit a revised detailed progress Schedule showing the remaining Work to be completed and

any delay periods that affected the Schedule. The Engineer also reserves the right to require the Contractor to submit a revised Schedule when the Contractor performs a significant amount of the Work out of sequence from the approved Schedule.

Monthly Payment Chart. Unless otherwise noted on the Plans submit to the Engineer, as part of the PSC or CPM Schedule submittal, an estimate of the monthly payments expected to be received on the Contract. This estimate will be referenced as the "Monthly Payment Chart". The Monthly Payment Chart can be generated by hand, or by a word processor or spreadsheet. Include, as a minimum, columns showing estimated monthly payments for the duration of the Contract Time. The total of all estimated monthly payments must equal the Awarded Contract total Bid Price. The Engineer may request an updated "Monthly Payment Chart" depending on the accuracy of the initial estimates and according to the overall needs of the Department. The Monthly Payment Chart is not binding on either the Department or the Contractor. The purpose of the chart is to help the Department plan its budget so that Contractors can be paid each month as quickly as is practicable.

Costs to prepare and/or update the "Monthly Payment Chart" are addressed as follows:

A. On Contracts requiring CPM Schedules and Updates, these will be addressed with Special Provisions.

B. On Contracts not requiring CPM Schedules, the cost to prepare and update the "Monthly Payment Chart" is included in Item 763000, Initial Expense.

108.05 Traffic Requirements and Contractor's Operations; Completing Work. Schedule and conduct Work in such a manner and in such sequence as will ensure the least interference with traffic. Do not open up Work to the prejudice or determent of Work already started; and the Engineer may require the Contractor to finish a section on which the Work is in progress before Work is started on any additional sections.

108.06 Preference for Delaware Labor; Character of Workers and Equipment; Specified Construction Methods. In the construction of all public works for the State or any political subdivision thereof, or by persons contracting with the State or any political subdivision thereof, give preference in employment of laborers, workers, or mechanics to bona fide legal citizens of the State who have established citizenship by residence of at least 90 Days. Each public works Contract for the construction of public works for the State or any political subdivision thereof will contain a stipulation that any person, company, or corporation who violates the provisions of this Section shall pay penalty to the State Treasurer equal to the amount of compensation paid to any person in violation. The requirement to give preference to Delaware laborers, workers or mechanics shall not apply to federally funded Contracts.

Employ only competent and efficient persons. Whenever, in the opinion of the Engineer, any employee is careless or incompetent, obstructs the progress of the Work, acts contrary to instructions of the superintendent or foreman, or conducts himself/herself improperly, discharge the employee, upon the request of the Engineer, from the Work and do not again employ that person on the Contract or any other Contract for the Department, except with the written consent of the Engineer.

Use only machinery and Equipment that is of sufficient size and capacity to obtain satisfactory quality in the performance of the Work. Do not use Equipment that injures the Work, adjacent property or public roads. When the Contract specifies that the Work be performed by the use of certain methods and/or Equipment, use such methods and/or Equipment unless alternatives are authorized by the Engineer. Submit requests for the use of alternative Equipment or methods in writing for approval. If approval is given, the Contractor will be fully responsible for producing Work in conformity with Contract requirements. If, after trial use of the substituted methods and/or Equipment, the Engineer determines that the Work produced does not meet the Contract requirements, discontinue the use of the substitute method and/or Equipment and complete the remaining construction with the specified methods and/or Equipment.

If substituted methods or Equipment produce deficient Work, remove the deficient Work and replace it with Work of specified quality, or take such other corrective action as the Engineer may direct. No additional compensation or increases in Contract Time will be allowed as the result of authorizing a change in methods and/or Equipment under these provisions unless it is as a credit to the Department or a VEP.

108.07 Extensions of Contract Time; Weather Delays. If the Contractor cannot complete the Work within the time allowed by the Contract due to a delay or delays that meet the criteria of Section 105.15.J, submit a written

request to the Engineer for an extension of time for Completion of the Contract. Submit the reasons justifying the delay. All time analysis will be performed based on the approved Contract Schedule. Failure to submit an acceptable Schedule or failure to properly maintain the Schedule forfeits the Contractor's right to a time extension. If requested by the Engineer, submit a revised detailed progress Schedule showing the remaining Work to be completed on the Project. If the Engineer finds that the request for an extension of time is justified, the Engineer will grant an extension of time in such amount as the Contractor proves to be reasonable and proper. Upon written notice being sent by the Engineer, the new Completion time will become part of the Contract and shall be binding upon the Contractor and Surety. The Contractor shall not be entitled to any additional time as a result of any delay to the Schedule without articulating a valid reason that is permitted by these Specifications.

The Contractor is presumed to have included in its Contract price allowance for any reasonably anticipated delays in procurement of Materials and procurement is the Contractor's sole responsibility. Unless some unusual market condition such as an industry-wide strike, natural disaster, or area-wide shortage arises after bids are taken and prevents procurement of Materials within the allowable time limitations, delays in delivery of such Materials are not sufficient reasons for extending the Contract Time.

For Contracts that do not provide an allowance for Weather Days in the Contract Documents, follow the requirements of Section 105.15.J to determine if weather warrants and extension of Contract Time.

For Contracts that provide an allowance for Weather Days, the term "Weather Day" means any Calendar Day, including weekends, Holidays and non-Work periods, on which weather conditions would prevent a Contractor from performing Work, whether or not the Contractor was scheduled to Work that Day. For each Weather Day that occurs on a jobsite, submit a request to the Engineer for that Day to be counted as a Weather Day. When the total number of Weather Days that are submitted and approved exceeds the number of allowable Weather Days provided in the Contract, Contract Time will be extended one Calendar Day for each Calendar Day that Work cannot progress due to the impact of weather. Such extensions will only begin accruing once the allowable Weather Days are exceeded and Contract Time will only be adjusted for Weather Days that occur after the number of allowable Weather Days has been exceeded. For Contracts without CPM Schedules, Calendar Days lost to weather do not need to occur on a critical path in order to be considered for an extension of Contract Time.

108.08 Failure to Complete on Time. For each Calendar Day or Working Day that Work remains uncompleted after the Contract Time has expired, the sum specified in Section 108.09 will be deducted from any money due the Contractor. This sum is not a penalty, but is a Liquidated Damage assessed to recover the cost of inconvenience to the public, added cost of engineering and supervision, and other extra expenditures of public funds due to the Contractor's failure to complete the Work on time. Any Adjustment of the Contract Time for Completion of the Work granted under Section 108.07 will be considered in the assessment of Liquidated Damages.

The column indicated in the chart as "Calendar Day" will also be used in the assessment of Liquidated Damages for contracts with a predetermined Completion date.

Computations for the assessment of Liquidated Damages will be made in accordance with the daily computations described in the definition of Working Day, when the Contract is a Working Day Contract. On all other Contracts each and every consecutive Calendar Day, including Saturdays, Sundays, and Holidays, will be included in the computations for the assessment of Liquidated Damages.

Assume liability for Liquidated Damages for delays commencing from the date on which the Contract Time, as adjusted by Section 108.07, expires. The Department will not pay the Contractor for maintenance of traffic (MOT) devices or measures used during periods when Liquidated Damages are assessed. This includes, but is not limited to, MOT devices, flaggers, traffic officers and any lump sum MOT Items that may be included in the Contract. Additionally, the Department will not pay the Contractor for field office items or CPM updates used during periods when Liquidated Damages are assessed.

Permission for the Contractor or Surety to continue and finish Work after the Contract Time and approved extensions have elapsed will not waive the Department's rights under the Contract. The Department may waive such portions of the Liquidated Damages as may accrue after the Work is substantially complete and is in a condition for safe and convenient use by the traveling public. Payment of Liquidated Damages will be deducted from payments otherwise due the Contractor or be made by direct payment by the Contractor in the event that the total Liquidated Damages due exceeds the deductions.

108.09 Schedule of Liquidated Damages. The specific rates for Liquidated Damages are as follows:

Awarded Contract		Value Daily Charge	
For More Than	**To and Including**	**Work Day**	**Calendar Day**
$ 0	$ 25,000	$410.00	$ 290.00
25,000	50,000	420.00	300.00
50,000	100,000	570.00	400.00
100,000	500,000	880.00	630.00
500,000	1,000,000	1,140.00	820.00
1,000,000	2,000,000	1,410.00	1,000.00
2,000,000	5,000,000	1,480.00	1,060.00
5,000,000	10,000,000	1,650.00	1,180.00
10,000,000	15,000,000	2,620.00	1,870.00
15,000,000	20,000,000	4,380.00	3,130.00
20,000,000	25,000,000	6,110.00	4,360.00
25,000,000	30,000,000	7,850.00	5,610.00
30,000,000	35,000,000	9,610.00	6,860.00
35,000,000	over	11,340.00	8,100.00

108.10 Default of the Contract. The Engineer may give notice to the Contractor and the Surety, in writing, declaring the Contract to be in default under the following conditions:

A. If the Contractor fails to begin the Work within the time specified in the Notice to Proceed.

B. If the Contractor fails to perform the Work with sufficient labor, Equipment, and Material resources to ensure the prompt Completion of the Work in accordance with the approved Schedule.

C. If the Contractor's Work is unacceptable, or if the Contractor refuses to remove Materials or perform any such Work as shall be determined by the Engineer to be defective or otherwise unacceptable Work.

D. If the Contractor discontinues the prosecution of the Work or fails to resume the Work which has been discontinued.

E. If the Contractor becomes insolvent, declares bankruptcy, commits any acts of bankruptcy or insolvency, or allows any final judgment to stand unsatisfied for a period of ten (10) Days.

F. If the Contractor makes an assignment for the benefit of creditors without authorization by the Department.

G. If the Contractor, for any other cause whatsoever, fails to carry on the Work in a manner acceptable to the Department.

If the Contractor or Surety, within a period of ten (10) Days after receiving a written notice of default from the Engineer, fails to remedy the situation to the satisfaction of the Engineer, the Engineer will declare the Contractor to be in default on the Contract, terminate the Contractor's right to proceed with the Work, and have full power and authority, without violating the Contract, to take over the prosecution of the Work from the Contractor. The Department may appropriate or use the Contractor's Materials at the site as may be suitable for use in the Project and may enter into an agreement with another Contractor for the Completion of the Contract according to the terms and provisions thereof, or use other methods as in the opinion of the Engineer will be required for the Completion of the Contract.

All costs and changes incurred by the Department as a result of the default, including the cost of completing the Work under Contract or remedying defective or otherwise unacceptable Work, and any applicable Liquidated Damages or disincentives will be deducted from monies due the Contractor for completed Work. If such cost

exceeds the sum which would have been payable under the Contract, then the Contractor and the Surety shall be liable and shall pay to the Department the balance of such costs in excess of the Contract Price.

If it is determined, after termination of the Contractor's right to proceed, that the Contractor was not in default, the rights and obligations of the parties will be the same as if the termination had been issued for the convenience of the Department in accordance with Section 108.11. Thus, damages to which a Contractor may be entitled as a result of an improper default termination will be limited to amounts as provided for in Section 108.11.

108.11 Termination of the Contract for Convenience. The Department may, by written order to the Contractor, terminate the Contract or any portion of the Contract when such termination would be in the best interest of the Department. In the event such termination occurs without fault and for reasons beyond the control of the Contractor, all completed Items as of the date of termination will be paid for at the Contract price. Payment for partially completed and eliminated Work will be paid as provided in Section 109.06.

Acceptable Materials obtained by the Contractor for the Work, but which have not been incorporated therein, may, at the option of the Department, be purchased from the Contractor at actual cost delivered to a prescribed location, or otherwise disposed of as mutually agreed.

After receipt of notice of termination from the Department, submit, within sixty (60) Days of the effective termination date, its' Claim for additional damages or costs not covered above or elsewhere in these Specifications. Such Claim may include such cost items as reasonable idle Equipment time, mobilization efforts, uncompensated bidding and Project investigation costs, overhead expenses attributable to the Project terminated, legal and accounting charges involved in Claim preparation, Subcontractor costs not otherwise paid, actual idle labor costs if Work is stopped in advance of the termination date, guaranteed payments for private land usage as part of original Contract, and any other direct cost or direct damage for which the Contractor feels reimbursement should be made. The intent of negotiating this Claim would be that an adjusted figure be reached with the Contractor. In no event, however, will loss of anticipated profits be considered as part of any settlement.

The Contractor agrees to make its cost records available to the extent necessary to determine the validity and amount of each Item claimed.

Termination of the Contract or portion thereof shall not relieve the Contractor of its contractual responsibilities for the Work completed, nor shall it relieve the Surety of its obligation for and concerning any just Claim arising out of the Work performed.

108.12 Termination of the Contractor's Responsibility. The termination of the Contractor's responsibility for the Work occurs upon Final Acceptance in accordance to Section 105.16, except to the extent provided in Section 107.13.

Volumes will be measured at 60 degrees Fahrenheit or will be corrected to the volume at 60 degrees Fahrenheit using ASTM D4311 for asphalt or ASTM D633 for tars.

When bituminous Materials are shipped by truck or transport, net certified weights or volume subject to correction for loss or foaming may be used for computing quantities.

Cement will be measured by the pound.

Timber will be measured by the actual thousand feet board measure, MFBM, incorporated into the Structure.

When a complete Structure or structural unit (in effect, "lump sum" Work) is specified as the unit of measurement, the unit will be construed to include all necessary fittings and accessories.

When standard manufactured items are specified such as fence, wire, plates, rolled shapes, pipe conduit, etc., and these items are identified by unit weight, section dimensions, etc., such identification will be considered to be nominal weights or dimensions. Unless more stringently controlled by tolerances specified elsewhere in the Contract, manufacturing tolerances established by the industries involved will be accepted.

109.02 Scope of Payment for Unit Prices; Payment of Subcontractors. Receive and accept compensation provided in the Contract as full payment for furnishing all Materials and for performing Work under the Contract in a complete and acceptable manner and for all risk, loss, damage, and expense of every kind arising out of the nature of the Work or the performance thereof, subject to the provisions of Section 107.13.

If the "Basis of Payment" clause for an Item relating to a Unit Price in the Contract requires that the Unit Price cover and be considered compensation for certain Work or Materials used to complete the Work for that Item, this same Work or Material will not be measured or paid under any other Pay Item appearing in the Contract.

When requirements, responsibilities and/or furnishing of Materials (collectively called "Requirements" in this Section) are outlined in the details, notes on the Plans and/or in the paragraphs preceding the "Basis of Payment" paragraph in these Specifications or Special Provisions, such Requirements are included in the payment for the Item. No separate payment will be made for the above mentioned Requirements even if those requirements are not expressly reiterated in the "Basis of Payment" Section of the specification.

Within 30 Days of receipt of any payment from the Department, file a statement to the Department on a form furnished by the Department that all Subcontractors furnishing labor or Material have been paid the full sum due them at that stage of the Contract, except any funds withheld under the terms of the Contract as required by Chapter 8, Title 17 of the Delaware Code, Annotated Revised 1974, and as amended.

109.03 Compensation for Altered Quantities. When the accepted quantities of Work vary from the quantities in the Contract Schedule, accept payment at the original Contract Unit Prices for the accepted quantities of Work performed. No allowance will be made for any increased cost, except as provided in Sections 104.06, 104.07, 104.08, and 108.11 and/or in any escalation clauses provided in the Contract Documents.

109.04 Payment for Differing Site Conditions, Major Changes, Extra Work, and Force Account. When the Contract requires the Department to compensate the Contractor for Differing Site Conditions, changes to the Contract, and/or Extra Work, (collectively called "Changed Work" in this Section) the Department and the Contractor shall jointly choose one of the following methods to calculate the compensation owed to the Contractor:

A. Perform the Changed Work at Contract Unit Prices;

B. Renegotiate the Unit Prices for the Changed Work;

C. Negotiate a lump sum payment for the Changed Work;

Should negotiated new prices or renegotiated existing price(s) involve Work to be performed by a Subcontractor, the Contractor's total allowable mark-up on the subcontracted portion of the Work shall not exceed 10 percent of the Subcontractor's proposed price. Upon request by the Department, submit documentation substantiating the price of the Subcontractor's proposed Work.

Should the Engineer and the Contractor fail to agree on a method of compensation for Changed Work, the Engineer may direct the Contractor to perform the Changed Work, provided that the Changed Work is within the scope of the Contract. When the Contractor performs Changed Work at the direction of the Engineer, the Work is called "Force Account Work" and the Contractor will be compensated following the procedure set forth below.

D. Perform the Changed Work on a time and material basis using the rules for "Force Accounts" described below to determine payment.

Prior to starting Force Account Work, the Engineer and the Contractor must meet to determine the labor, Equipment and Materials that are necessary to perform the Work. The Engineer will make the final determination concerning what labor, Equipment and Materials are necessary. The Contractor must follow the direction of the Engineer when performing the Force Account Work. Force Account Work is to be compensated in the following manner except as further provided in Section 105.15:

1. ***Labor.*** Receive as compensation the rate of wage (or scale) actually paid as shown on its certified payrolls for each and every hour that necessary labor and foremen are actually engaged in the Force Account Work. Superintendents, general foreman, or other general supervisors of the Force Account Work are compensated by the overhead markup in Section (7.) below and are not paid as labor.

   Receive as compensation the actual costs paid to, or on behalf of, workers by reason of health and welfare benefits or other benefits, when such amounts are required by collective bargaining agreements or other employment contracts generally applicable to the classes of labor employed on the Work.

2. ***Bond, Insurance, and Tax.*** For Bond premiums, property damage, liability, and workers compensation insurance premiums, unemployment insurance contributions, and social security taxes on the Force Account Work, receive the actual incremental cost thereof, necessarily and directly resulting from the Force Account Work. Furnish satisfactory evidence of the rate or rates paid for such Bond, insurance, and tax.

3. ***Materials.*** The Department reserves the right to furnish such Materials as it deems advisable. Make no Claims for costs and markup on such Materials.

   Only Materials furnished by the Contractor and necessarily used in the performance of the Force Account Work will be paid under this Section. The cost of Contractor furnished Materials shall be the cost to the purchaser, whether Contractor, Subcontractor, or other forces from the supplier thereof, together with transportation charges actually paid by the purchaser, except as the following are applicable:

   a. If a cash or trade discount by the actual supplier is offered or available to the purchaser, credit that amount to the State notwithstanding the fact that such discount may not have been taken.

b. If Materials are procured by the purchaser by any method which is not a direct purchase from a direct billing by the actual supplier to such purchaser, the cost of such Materials is the price paid to the actual supplier as determined by the Engineer plus the actual costs, if any, incurred in the handling of such Materials.

c. If the Materials are obtained from a supply or source owned wholly or in part by the purchaser, the cost of such Materials shall not exceed the price paid by the purchaser for similar Materials furnished from said source on items or the current wholesale price for such Materials delivered to the job site, whichever price is lower.

d. If the cost of such Materials is, in the opinion of the Engineer, excessive, then the cost of such Material is deemed to be the lowest current wholesale price at which such Materials are available in the quantities concerned delivered to the Project site, less any discounts as provided in a. above.

e. If the Contractor does not furnish satisfactory evidence of the cost of such Materials from the actual supplier thereof, the cost will be determined in accordance with d. above.

4. ***Equipment and Plant.***

Use only Equipment that is, in the opinion of the Engineer, in good operating condition. Specifically describe the Equipment used when documenting such Equipment for payment. Use Equipment of suitable size and suitable capacity required for the Work to be performed. In the event the Contractor elects to use Equipment of a higher rental or payment value than that suitable for the Work, payment will be made at the rate applicable to the suitable Equipment. The Engineer will determine the suitability of the Equipment. If there is a differential in the rate of pay of the operator of oversize or higher rate Equipment, the rate paid for the operator is to be that for the suitable Equipment.

a. *Contractor-Owned Equipment and Plant.* The hourly rates for Contractor-owned Equipment and plant will be determined from the applicable volume of the Rental Rate Blue Book (referred to hereafter as the "Blue Book"), published by Machinery Information Division of K-III Directory Corporation, 1735 Technology Drive, Suite 410, San Jose, CA 95110. These provisions apply to the Equipment and plant owned directly by the Contractor or by entities which are divisions, affiliates, subsidiaries, or in any other way related to the Contractor or its parent company. The Blue Book will be used in the following manner:

i. The hourly rate will be determined by dividing the monthly rate by 176. The weekly, hourly, and daily rates will not be used.

ii. The number of hours to be paid will be the number of hours that the Equipment or plant is actually used on a specific Force Account activity, not to exceed 176 hours per calendar month.

iii. The current revisions to the Blue Book will be used in establishing rates. The current revision applicable to specific Force Account Work is as of the first Day of Work performed on that Force Account Work and that rate applies throughout the period the Force Account Work is being performed.

iv. An area adjustment will be made. Equipment life adjustment will be made in accordance with the rate adjustment tables in the Blue Book. Charge overtime at the same rate indicated in i. above.

v. The estimated operating costs per hour will be used for each hour that the Equipment or plant is in operation on the Force Account Work. Such costs do not apply to idle time regardless of the cause of the idleness.

vi. Idle time for Equipment or plant will not be paid, except where the Equipment has been held on the Project site on a standby basis at the written request of the Engineer and, but for this request, would have left the Project site. Such payment will be made at one-half the rate

established in i. and iv. above. Such payment will not exceed 8 hours in a Day and will not exceed 40 hours in a week.

vii. The rates established above include the cost of fuel, oil, lubrication, supplies, attachments, repairs, overhaul and maintenance of any kind, depreciation, storage, overhead, profits, insurance, and all incidentals.

viii. Operator costs are not included in this hourly rate for this Equipment or plant.

In the event that a rate is not established in the Blue Book for a particular piece of Equipment or plant, the Engineer will establish a rate for that piece of Equipment or plant that is consistent with its cost and use in the industry.

b. *Rented Equipment and Plant.* In the event that the Contractor does not own a specific type of Equipment and must obtain it by rental, inform the Engineer of the need to rent the Equipment and of the rental rate for that Equipment prior to using it on the Work. The Contractor will be paid the actual rental rate for the Equipment for the time that the Equipment is actually used to accomplish the Work, provided that rate is reasonable, plus the cost of moving the Equipment on to and away from the job if such moves are solely necessitated by the Force Account Work. For idle rental Equipment that must remain on the site because of a written directive from the Engineer and would have left the site but for that directive, the rented Equipment will be paid at the rental rate established above, not to exceed 8 hours per Day and not to exceed 40 hours per week. In no case will the Department pay the Contractor for equipment costs in excess of the actual cost paid by the Contractor for the rental. Provide a copy of the paid receipt or canceled check for the rental expense incurred.

5. ***Miscellaneous.*** No allowance will be made for: general superintendence; the use of tools whose Blue Book value is less than $1,500.00; or other costs for which no specific allowance is herein provided.

6. ***Profit.*** Profit shall be computed at 5 percent of the following:

   a. Total Material cost (bare cost not including FOB).

   b. Total direct labor cost (actual hours worked multiplied by regular hourly rate and benefits) as provided by Section 109.04.D.1.

7. ***Overhead.*** Overhead is defined to include the following:

   a. All salaries and expenses of executive officers, supervising officers, or supervising employees and all home office expenses;

   b. All clerical or stenographic employees;

   c. All charges for minor Equipment, such as tools whose Blue Book value is less than $1,500.00, including, but not limited to, shovels, picks, axes, saws, bars, sledges, lanterns, jacks, cables, pails, wrenches, and other miscellaneous supplies and services; and

   d. All drafting room accessories such as paper, tracing cloth, and blueprinting.

   Overhead costs for Force Account Work will be computed at 10 percent of the following:

   a. Total Material cost (bare cost not including FOB).

   b. Total direct labor cost (actual hours Worked multiplied by the regular hourly rate) and benefits as provided by Section 109.04.D.1.

   c. Total Equipment and plant cost.

d. Specific extraordinary overhead expenses, such as hiring of additional supervisory personnel or the use of a special type of minor Equipment (as defined above), which the Contractor has to purchase specifically for the Force Account, may be allowed. In such instances, the Contractor will be paid only the reasonable costs of such extraordinary overhead expenses provided the Engineer has agreed to such costs prior to their being incurred.

8. ***Subcontracting***. For administration costs in connection with approved subcontract Work, receive an amount equal to 10 percent for Work up to $100,000.00 and 5 percent for Work exceeding $100,000 of the total of such Work completed as set forth in 1. through 4. above.

9. ***Records***. Maintain Force Account Records in such a manner as to provide a clear distinction between the direct costs of Work paid for on a Force Account basis and the costs of other operations.

   From the above records, furnish the Engineer completed daily Force Account Work reports for each Day's Work to be paid for on a Force Account basis. Sign and submit such reports daily. Detail the daily Force Account Work reports as follows:

   a. Name, classification, date, daily hours, total hours, rate, and extension for each laborer and foreman.

   b. Designation, dates, daily hours, total hours, rental rate (including a copy of the Blue Book pages used), and extension for each unit of machinery and Equipment.

   c. Quantities of Materials, prices, and extensions.

   d. Costs for transportation of Materials.

   e. Cost of property damage, liability, and workers compensation insurance premiums; unemployment insurance contributions; Bonds; and social security tax.

Substantiate Material charges with valid copies of vendor's invoices. Submit such invoices with the daily Force Account Work reports, or, if not available that Day, submit them with subsequent daily Force Account Work reports. Should the vendor's invoices not be submitted within sixty (60) Days after the date of delivery of the Material, or within fifteen (15) Days after the Completion of the Work, whichever occurs first, the Engineer reserves the right to establish the cost of such Materials at the lowest current wholesale prices at which said Materials are available, in the quantities concerned delivered to the location of Work less any discounts provided in Section 109.04.D.3.a.

The Engineer will compare its records with the completed daily Force Account Work reports furnished by the Contractor and make any necessary adjustments. When these daily Force Account Work reports are agreed upon and signed by both parties, the reports become the basis of payment for the Work performed, but do not preclude subsequent Adjustment based on a later audit by the Department.

Allow cost records pertaining to Work paid on a Force Account basis to be open to inspection or audit by representatives of the Department as provided in Section 105.15.K.

109.05 Basis of Payment for Fixed Quantity Items. When indicated on the Plans, Bid Proposal and/or the Specifications, certain Items will be paid on an estimated fixed quantity Item basis. Where this occurs, the method of measurement and basis of payment indicated in these Specifications is modified for such Items as identified in this Section.

When estimated fixed quantities are indicated, the only quantities for which payment will be made are the estimated quantities as shown in the Proposal at the Unit Bid Prices, except in certain situations described below in (A), (B) and (C) of this Section.

When bidding, check the estimates provided in the Contract Documents and appraise the actual amount of labor, Equipment, or Material required to complete the Work in accordance with the Plans and Specifications. No allowance will be made or Claims considered for any quantities used in completing the Work in excess of those given in the Proposal unless:

A. The Contractor encounters a Differing Site Condition that causes the estimated fixed quantity to change;

B. The Engineer adds or deletes Work to the Contract that increases or decreases a fixed quantity Item; or

C. The Contractor contests the fixed quantity and can show that the actual quantity of the Work performed is more than 25 percent of the estimated fixed quantity.

When Differing Site Conditions cause an estimated fixed quantity to change, the Engineer will adjust the payment in accordance with Section 104.07 of these Specifications. When the Engineer adds or deletes Work, the actual quantity of Work that is added or deleted will be added to or deleted from the estimated fixed quantity. If estimated fixed quantity Items are deleted completely, no payment will be made.

In cases where a fixed quantity is contested by the Contractor, provide necessary measurements and computations to support a change in the quantity. If the change is verified and approved by the Engineer and the error in the estimated fixed quantity exceeds 25 percent, the Contractor will be compensated at the Unit Bid Price for the actual quantity of Work performed under the Item.

109.06 Eliminated Items. Should any Items contained in the Contract be found unnecessary for the Completion of the Work, the Engineer may, upon written order to the Contractor, eliminate the Items from the Contract. The elimination of these Items will not invalidate the Contract. When the Contractor is notified of the elimination of Items, the Contractor will be reimbursed for the actual Work performed and all direct expenses incurred in preparation for the eliminated Item as calculated by the Force Account procedure outlined in these Specifications. Reimbursement of Materials actually purchased prior to notification of the elimination of Items will be paid at the actual cost of the Materials plus 15 percent (overhead and profit). Such Materials will become the property of the Department. In no event will reimbursement for an eliminated Item exceed the Bid Price of the Contract Item. Also, in no case will the Contractor be reimbursed for the loss of anticipated profit.

109.07 Estimates; Retainage. The Engineer will once in each month make an estimate, in writing, of the total amount of Work performed on the Contract and the value of the completed Work to the date of the estimate. Five percent of the value of the Work performed as indicated by the estimate may be retained as security for fulfillment of the Contract until a total of 5 percent of the total bid price has been retained. Securities may be substituted for this retainage in accordance with Section 6962, Chapter 69, Title 29 of the Delaware Code and as amended. Payment of estimates, except final estimates, will not exceed those shown on the Proposal except those authorized by Change Order. No such estimates or payments will be made when, in the judgment of the Engineer, the Work is not proceeding in accordance with the provisions of the Contract or when, in the Engineer's judgment, the total value to the Work performed since the last estimate amounts to less than $3,000.00. The Engineer, if it deems it expedient to do so, may cause estimates to be made more frequently than one in each month and payments thereon to be made more frequently to the Contractor.

109.08 Payment for Stored Material. When approved by the Engineer, estimates may include an allowance for the value of tested and acceptable Materials of a non-perishable or non-contaminative nature which have been produced or furnished in a condition ready for incorporation as a permanent part of Work yet to be completed, provided the following terms and conditions are met:

A. Request. The request for payment allowance for properly stored Materials must be in writing, accompanied by an itemized inventory statement, written consent of the Surety, and an invoice or purchase order on the supplier's letterhead documenting the cost of the Materials. No payment allowance will be permitted for amounts less than $25,000.00 for each Material of a qualifying Contract Item.

B. Materials. An allowance of 100 percent of the cost to the Contractor for Materials, not to exceed 90 percent of the Contract Item price, may be made when such Material is delivered and stockpiled or stored in accordance with the requirements specified in the Contract Documents.

   Prior to such allowance, all such Material shall have been tested and found acceptable to the Engineer.

   Payment will not be allowed in excess of the Unit Bid Price of the quantity required for the Contract. Base the required quantity on the Contract bid quantities and approved revisions.

C. Excluded Materials. No allowance will be made for fuels, form lumber, Falsework, temporary Structures, or for other Materials of any kind which will not become an integral part of the finished construction.

   No allowance will be made for cement, aggregate, sand, seed, plants, fertilizer, or other perishable or contaminative items, nor for Materials which, in the opinion of the Engineer, have an unacceptable shelf life or an environmental, or safety restriction.

D. Storage. Store all Materials in an approved manner and in areas where damage is not likely to occur. Dedicate the stored Material to the Project.

   When Materials cannot be practically stored within the limits of the Project, the Engineer may approve the storage of Materials on private property or, for structural members, in the manufacturer's or fabricator's yard. Requests for payment for such Material stored outside the limits of the Project shall be accompanied by a release from the owner and/or tenant of such property or yard agreeing to permit the removal of the Materials from the property without cost to the State.

E. Materials Inventory. Materials shall be available for inspection and inventory at the storage site by the Engineer or the Engineer's authorized representative at all times.

F. Materials Measurement and Payment. The method of measurement for Materials shall be in units which are easily inventoried and acceptable to the Engineer. Payment allowance for Materials will be included in the progress estimate as a new and separate Item and will be subject to retainage provisions. Submit proof of payment to the Engineer prior to processing the next progress estimate in the form of a paid invoice from the Material supplier. Failure to submit proof of payment prior to the processing of the progress payment will result in the deduction of the applicable Material payment in its entirety from progress payments until such time as the proof of payment is received by the Engineer. As the Materials are incorporated into the Project and the Work is paid under the applicable Unit Price(s), an equal percentage of the Material allowance will be deducted from progress estimates until 100 percent of the allowance has been deducted. At the conclusion of the Work for which the Materials are required, the cost of Materials remaining in storage for which payment allowance has been made will be deducted from the progress estimate.

109.09 Withholding of Money Due on an Estimate to Offset a Contractor's Liability. Whenever Liquidated Damages are assessable, such damages will be deducted from the monthly and final estimate. The payment of any current or final estimate or of any retained percentage shall in no way affect the obligation of the Contractor to repair or renew any defective parts of the construction and to be responsible for all damage due to such defects.

If at any time there is evidence of any lien or Claim for which, if established, the Department might become liable, and which is chargeable to the Contractor, the Department will have the right to retain out of any payment then due or to become due an amount sufficient to completely indemnify the Department against such lien or Claim. If there should prove to be any such Claim after all payments are made, refund to the Department all monies that the Department may be compelled to pay in discharging any lien made obligatory in consequence of the Contractor's neglect or default.

Upon Substantial Completion of the Work under the Contract, the Engineer may release 60 percent of the amount then retained. The balance of the amount retained will be held until all reports required of the Contractor are received and final payment is authorized by the Department. The Department may, at its option, retain temporarily or permanently a smaller amount and may cause the Contractor to be paid temporarily or permanently, from time to time, such portion of the amount retained as it deems equitable.

No provision contained in these Specifications shall be construed as creating any debt, liability or obligation on the part of the State or Department to any Subcontractor, supplier, or materialman.

109.10 Final Payment; Time Limit to Challenge Quantities. The Engineer will, as soon as practicable after the Completion of the Contract, make a final estimate of the Work performed and the value of such Work, and the Department will pay the entire sum found to be due after deducting from all previous payments all amounts to be kept and all amounts to be retained under the provisions of the Contract. All prior partial estimates and payments will be subject to correction in the final estimate payment. Give notice to the Engineer of any alleged errors in the payment of Contract quantities. Such notice must be given to the Engineer within 120 Calendar Days of the date when the Engineer gives the Contractor notice that the Contract's quantities have been finalized. Failure to notify the Engineer within this time frame constitutes a waiver of the Contractor's right to contest the quantities. Nothing in this Section serves to preclude the Engineer from performing audits of its own records or the Contractor's records and to adjust payment based on such audits in accordance with other provisions in the Specifications.

The acceptance by the Contractor of the final estimate operates as and is a release to the State, the Department, the Secretary, and its agents from all Claims of liability under the Contract, or for anything done or furnished or relating to the Work under the Contract, or for any act or neglect of the State, the Department, the Secretary, or its agents relating to or connected with the Contract.

109.11 Source of Supply and Carrier Rates on Construction Materials. Bidders must fully inform themselves as to the source of supply of acceptable Materials needed for the Work and in regard to the carrier rates and transportation facilities for these Materials before submitting Proposals.

Inability to secure satisfactory Materials from the source upon which the bid was based, or changes in carrier, or the alteration of transportation facilities for these Materials during the life of the Contract, shall not constitute cause for a Claim for extra compensation.

109.12 Transportation Tax Exemption. Base all Unit Prices on exemption from any transportation tax for which the State is, by law, exempt on Materials entering into and forming a part of the Project.

In order for the Contractors to take advantage of the exemption from payment of the tax on transportation and to have the construction Materials consigned to the State, in care of itself, furnish the supplier with a statement certifying that the Contractor has been authorized to Claim the exemption, identifying the Contract in which the authorization was given and instructing the supplier to make the shipment involved free of tax.

APPENDIX C: BLUE BOOK INTRODUCTION*

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RENTAL RATE BLUE BOOK

FOR

CONSTRUCTION EQUIPMENT

VOLUME 1

The Standard Reference
for
Rental Rates on All Classes
of Construction Equipment

Researched and Published to
meet the needs of the
construction industry in
RENTAL AGREEMENTS - CONSTRUCTION CONTRACTS
FORCE ACCOUNTS - CLAIM WORK - LITIGATION
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COST GUIDES
Rental Rate Blue Book, Volume 2
Rental Rate Blue Book, Volume 3
Blue Book for Railroad Equipment
Contractors' Equipment Cost Guide
Cost Reference Guide

VALUE GUIDES
Green Guide, Volume 1
Green Guide, Volume 2
Green Guide for Older Equipment
Green Guide for Off-Highway Trucks & Trailers
Green Guide for Lift Trucks (Gas & Diesel)
Green Guide for Electric Lift Trucks

AUCTION GUIDES
The Last Bid - Construction Equipment
The Last Bid - Truck & Trailer Monthly

SERIAL NUMBER GUIDES
Serial Number Guide for Used Construction Equipment
Lift Truck Serial Number Guide

SPECIFICATION BOOKS
Wheel & Crawler Tractors
Wheel & Crawler Loaders
Motor Graders
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Hydraulic Cranes
Truck Cranes (Mechanical)
Crawler Cranes, Volumes 1 & 2 (thru 90 Tons)
Crawler Cranes, Volume 3 (over 90 Tons)
Off-Highway Haul Units
Compaction Equipment
Paving Equipment
Trenching Equipment
Forestry Equipment
Lift Trucks, Volume 1 (Gas & Diesel, under 10,000 lbs.)
Lift Trucks, Volume 2 (Gas & Diesel, over 10,000 lbs.)
Electric Lift Trucks
Personnel & Maintenance Elevating Lifts
Specification Reference Book
Pocket Specs for Lift Trucks, Volume 1 (IC-Cushion Tire)
Pocket Specs for Lift Trucks, Volume 2 (IC-Pneumatic Tire)
Pocket Specs for Lift Trucks, Volume 3 (Electric-Counterbalanced)
Pocket Specs for Lift Trucks, Volume 4 (Narrow Aisle)

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RENTAL RATE BLUE BOOK

FOR

CONSTRUCTION EQUIPMENT

VOLUME 1

§1 INTRODUCTION

2004

INTRODUCTION

The Rental Rate Blue Book Volume 1 is a comprehensive, current guide to cost recovery for equipment currently manufactured or discontinued from manufacture within the past five years. The rates in this manual are intended as guidelines paralleling amounts an equipment owner should charge during rental or contractual periods to recover equipment-related costs on a single shift (8-hour) basis.

These rates are derived from cost formulas and factors developed from our own research and from analytic methods used in the construction industry. Generally, these methods consider purchase price, depreciation, maintenance and overhaul costs, indirect equipment costs, and average annual use hours. Specific market conditions, such as local supply and demand, are not considered in these calculations. **These rates are not a tabulation of rates being charged nationally.** They do not reflect rates charged by rental companies, except by coincidence.

The publication of these rates is not intended to influence the construction equipment rental market as a whole. To enter into agreement, combination, understanding, or action with any person or party with intent to establish rental rates at specific levels in this or any other publication may constitute a violation of Fair Trade Practices and be subject to prosecution.

This publication is designed to provide accurate and authoritative information in regard to the subject matter covered. It is sold with the understanding that the publisher is not engaged in rendering legal or accounting services. While all efforts have been made to assure total accuracy, the variable nature of the information and informational sources precludes any warranties of specific accuracy in any specific instance.

RENTAL RATE STRUCTURE: Definitions and Methodology

Rental rates in this guide are based on ownership and operating costs for contractor-owned equipment. The term "rental" does not refer to third-party contracts for the use of equipment. Profit, project overhead, and general company overhead costs such as office facilities and supplies are **not** included in the rates shown is this guide.

OWNERSHIP COSTS

a. *Depreciation Costs.* Depreciation in this guide is a straight line, even accrual of funds over an established economic life to offset the original purchase price of a machine. As applied in this context, it is not to be confused with other methods of determining depreciation for taxation or other accounting purposes.

   Depreciation costs are based on the purchased price plus sales tax and original freight costs, minus the cost of a set of new tires if tire mounted, and minus an allowance for salvage value at the end of a machine's economic life. The purchase price used in this guide is the last or most recent manufacturer's suggested list price available to EquipmentWatch analysts at the time of research and publication of the data being revised. These prices have been reduced to allow for an average discount off list price as determined by EquipmentWatch analysts.

   Under certain circumstances, for example in projects governed by federal cost principles, the depreciation portion of the rates in this guide may need to be adjusted to reflect the original purchase price of a machine rather than the last list price. See the explanation of the "Rate Adjustment Tables" on page 1-4 of this introduction, for instructions on this procedure.

b. *Indirect Equipment Costs.* Allowances are made for indirect costs that result directly from equipment ownership. These costs include normal risk insurance, property taxes, mechanics' supervision, storage, licenses, and record keeping costs.

These indirect costs are sometimes recovered in project or general company overhead. If any of these costs need to be eliminated from the basic rates in this volume of Blue Book, refer to the Rate Element Tables at the front of each section. See the explanation of the "Rate Element Tables" on page 1-6 of this Introduction for instructions on this procedure.

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c. *Cost of Facilities Capital.* Cost of facilities capital (CFC), which is not the same as interest charges, is an allowance for the cost of money invested in machinery, whether the machinery is purchased in cash or financed over time. CFC is calculated by the following formula:

$$\frac{[(N-1) \times (1+S) + 2] \times CMR \times P}{2 \times N} = CFC$$

Where:
- N = Economic life of machine in years
- S = Salvage value percentage
- CMR = Cost of money rate (as set by the Treasury Department each January 1 and July 1)
- P = Purchase price of the machine
- CFC = Annual cost of facilities capital

d. *Major Overhaul.* The ownership rates in this guide include an allowance for major overhaul costs necessary to keep a machine functional throughout its economic life. This allowance covers the periodic rebuilding of engines, transmissions, undercarriages, and other major equipment components. Equipment that is operated in normal job applications well beyond normal economic life cycles, may require complete overhauls, or remanufacturing to keep the equipment productive. In such cases, overhaul or remanufacturing costs commonly average between 60% and 70% of a new replacement machine. These costs are typically considered capital expenditures, and such costs are then depreciated over a newly established economic life. Remanufactured equipment is usually given a new serial number identification, and is considered "good-as-new." In some instances, the year of manufacture is changed. The rates in this guide do not include allowances for overhaul or remanufacturing beyond average economic life cycles. Special economic considerations should be given to such cases.

The life-cycle ownership costs–depreciation, indirect costs, cost of facilities capital, and major overhaul–are annualized and then adjusted to reflect the average annual working season to obtain a monthly rental rate. Weekly, daily and hourly rates are then derived from the monthly rate. Rates for shorter use periods are increased to account for lost availability and productivity during shorter use periods.

The weekly Blue Book rate is approximately 28% of the monthly rate. This percentage presumes the loss of roughly 32 hours during a month when machinery usage is on a weekly basis.

The daily Blue Book rate is approximately 25% of the weekly rate, based on the loss of roughly 60 hours during a month when machinery is used on a day to day basis.

The hourly Blue Book rate is approximately 15% of the daily rate, based on the loss of roughly 80 hours during a month when machinery is used on an hourly basis.

OPERATING COSTS

The Estimated Operating Cost Per Hour presented in this manual assumes that the equipment is in good operating condition. No allowances are made for equipment operating in severe conditions or beyond periodic maintenance services.

The Estimated Operating Cost Per Hour includes the following expenses:

a. The cost of labor and parts needed for routine, daily servicing of the equipment. This includes repairing and/or replacing small components such as pumps, carburetors, injectors, filters, belts, gaskets, and worn lines.

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b. The cost of operating expendables. These include fuel, computed in accordance with horsepower, average load factors, and the price of fuel; lubrications, including filters, oil, and grease, as well as the labor and the lube truck involved in lubrication; tires; and ground engaging components, including pads, blades, bucket teeth, etc. Tire costs are calculated by average tire life factors and take into consideration typical discounts from list prices. Electricity costs (where applicable) are calculated according to generally accepted duty cycles for the total motor load.

c. The cost of extraordinary operating expendables. The "Estimated Operating Cost/Hr." in Blue Book may not include all operating expenses. Certain ground engaging components, such as hammer and drill bits, drill steel, augers, saw blades, and tooth-bits, are normally excluded from the "Estimated Operating Cost/Hr." because of their highly variable wear patterns. It is recommended that these costs be recovered separately.

Operator's wages are not included in the Estimated Operating Cost/Hour. Whenever operating costs are shown as "N/A," not enough information has been received to justify an estimate.

HOW TO USE YOUR RENTAL RATE BLUE BOOK

1. *Read the entire Introduction.* It contains information you need to use this book effectively.

2. Turn to the *Index* to find the section which has the type of equipment in which you are interested.

3. Use the *Table of Contents* at the beginning of each section to locate the pages which cover the specific kind of equipment for which you are looking.

4. Within a section, equipment is identified in one of two ways.

   a. By manufacturer (in alphabetical order) and model number:

SKID-STEER LOADERS

Model (Yr. Disc)	*Operating Capacity*	*HP*
Diesel Powered		
BOBCAT		
453 (2001)	700 lbs.	15.70
553	950 lbs.	22.50
751 (2000)	1,250 lbs.	38.00
CASE		
75XT	2,200 lbs.	69.00
85XT	2,400 lbs.	69.00
90XT	2,450 lbs.	74.00

   b. By size and type of equipment:

MULTI-SHANK RIPPERS

Eng HP	*No. Shanks*	*Ripper Type*
Hydraulic Powered		
To 84	3	Radial
85-129	3	Parallelogram
85-129	3	Radial
130-189	3	Parallelogram

There are separate listings for gasoline, diesel, electric, hydraulic, and/or PTO powered units for some equipment. Other specifications, such as transmission or bucket size, are given in order to facilitate equipment identification."ROPS = "Roll over protection system." "EROPS" = "Enclosed roll over protection system."

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5. When horsepower is shown, it is the horsepower used for calculation of estimated operating costs per hour, or for identification of variations in like models of the same manufacturer. Whenever possible, flywheel horsepower is used based upon manufacturer ratings. For motors, it is 1.341 times the kilowatt rating or as listed by the manufacturer for a given RPM.

6. As cubic yard capacities of equipment vary with material and swell factors, comparisons will be kept consistent by using struck capacity at an average weight of 2,400 pounds per cubic yard.

7. Rental rates are given by the month, week, day, and hour for each piece of equipment. Hourly operating costs are listed separately.

Monthly	*Weekly*	*Daily*	*Hourly*	*Estimated Operating Cost/Hr.*
$2,870.00	$805.00	$200.00	$30.00	$6.70
10,645.00	2,980.00	745.00	110.00	25.75
5,480.00	1,535.00	385.00	58.00	12.40

8. When applicable, the rental rates should be modified by the Rate Adjustment Table Factors to reflect a depreciation allowance indexed to the year a machine was originally manufactured and sold.

9. Rental rates should be increased or decreased to account for regional differences in annual use hours, cost of labor, freight, taxes, etc. The amount by which basic rates should be increased or decreased is shown on the adjustment maps at the beginning of each section.

10. To figure the *total cost* for owning and operating a piece of equipment, add the following items:
    - Hourly Rental Rate for Equipment (modified by Regional Adjustment Maps and Rate Adjustment Tables when applicable)
    - Rate for attachments (where applicable)
    - Estimated Operating Cost
    - Operator's Wage (including fringe benefits)
    - Additional costs for operating or maintenance personnel required

The total cost suggested here is a guideline. It is not meant to define the actual rate a lessor may charge. The actual rate may be increased or decreased by factors not taken into account in this book, such as severe job conditions, etc.

ADJUSTING RATES IN RENTAL RATE BLUE BOOK

1. Rate Adjustment Tables. Adjusting for machine age differences.

Blue Book allowances for depreciation costs are based on current or latest price levels for the machinery. To compensate for different purchase price levels for older machines, the Rate Adjustment Tables in this guide are designed to index depreciation costs to the year a machine was originally manufactured. These adjustments are necessary for the rates in this guide to comply with federal cost principles concerning depreciation cost allowances.

Depreciation allowances, being one of four ownership costs in these rates, represent a percentage of the total Blue Book rate. This percentage is adjusted to reflect the differences between current price levels and historical price levels for specific equipment types. EquipmentWatch analysts have used the Producer Price Index, published by the U.S. Department of Labor, Bureau of Labor Statistics, and manufacturer's price literature to determine historical and current price levels.

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INTRODUCTION

The Rate Adjustment Table factors, which are listed by equipment type in the front of each section, apply only to the basic ownership rates; they do not apply to the "Estimated Operating Cost per Hour." Rate Adjustment Tables copyrighted 1999 can only be applied to rates copyright in 1999. Likewise, Rate Adjustment Tables copyrighted in 1996 can only be used with rates copyrighted 1996.

INSTRUCTIONS FOR USING RATE ADJUSTMENT TABLES

a. Adjustments to current models:

i. Determine the year your machine was manufactured. (You may need to refer to an equipment serial number guide.)

Example: AMERICAN HC80 Crawler Mounted Lattice Boom Crane manufactured in 1994.

ii. Find the rate adjustment factor for the type of machine you have and the year it was manufactured.

There are two tables: Table 1 is for years 2003-1994 and Table 2 is for years 1993-1984.

Example: Lattice Boom Cranes; Table 1 = .942 (Factor for 1994)

iii. Multiply the rate found in Blue Book by the adjustment factor for the year your machine was built.

Example:	$12,015	=	Monthly Published rate for AMERICAN HC80
	X .942	=	Adjustment factor for 1994
	$11,318	=	Adjusted monthly rate for 1994 AMERICAN HC80

b. Adjustment to discontinued models:

i. Determine the year your machine was manufactured, (you may need to refer to an equipment serial number guide).

Example: Case 9050B Crawler Mounted Hydraulic Excavator manufactured in 1997

ii. Determine the year in which this model was discontinued, (the year of discontinuation appears in parenthesis next to the model number).

Example: Case 9050B was discontinued in 2001

Note: If the year of your machine is identical to the year discontinued, then no adjustment to the published rate is necessary. Adjustment Factor = 1.

iii. If the year your machine was manufactured is different from the year that model was discontinued, perform the following calculation using the Rate Adjustment Tables listed in the beginning of each section (There are two tables: Table 1 is for years 2003-1994 and Table 2 is for years 1993-1984:

A/B = Rate adjustment factor for discontinued model

Where:

A = Adjustment factor for the year of your machine
B = Adjustment factor for year that model was discontinued

Example: Case 9050B Crawler Mounted Hydraulic Excavator manufactured in 1997

A = .967 (1997 Adjustment factor for Hydraulic Excavators)
B = .993 (2001 Adjustment factor for Hydraulic Excavators)

.967/.993 = .974

.974 = Rate adjustment factor for 1997 Case 9050B Crawler Mounted Hydraulic Excavator

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iv. Note that the calculated adjustment factor for a discontinued model is a higher number than the one shown in the Rate Adjustment Table for a machine of the same age. For example, the factor for a 1997 Excavator from Table 1 is .967, whereas the factor for a 1997 model discontinued in 2001 would be .974. This is because the rate adjustment factors are all indexed to the current year and discontinued models must be indexed to the year discontinued.

v. Multiply the rate found in Blue Book by the adjustment factor derived from the above formula.

Example:
$9,015 = Monthly Published rate for Case 9050B (2001)
X .974 = Adjustment Factor for 1997
$8,780 = Adjusted monthly rate for 1997 Case 9050B

2. *Rate Element Tables: Adjusting for standby, job severity, and duplication of costs.*

The Rate Element Tables in this guide are designed to allow for greater accuracy when adjusting Blue Book rates for standby, job severity, and duplication of costs. As defined earlier in this introduction, the basic Blue Book rate contains allowances for depreciation, major overhaul repairs, cost of facilities capital (CFC), and indirect equipment costs. These tables show the percentage of the total Blue Book rate that each cost allowance comprises. For example, with Skid Steer Loaders, the tables list these data:

Equipment Type:	*Depr.*	*Major Overhaul*	*CFC*	*Indirect Costs*
Skid Steer Loaders	.26	.60	.08	.06

For current models, the data in the Rate Element Tables are within +/- 3%; for the discontinued models the accuracy is between +/- 5% and +/- 10%. This diminished accuracy for discontinued models is due to the high variations in resale values for older machines. A basic rule of thumb is that the overhaul portion of the rates for older machines increases with age.

The data in these tables do not apply to the Estimated Operating Cost per Hour. The application of the data in these tables need not be limited to the situations described below.

a. *Standby Rates.* Standby refers to the situation where equipment is on the job and available for work, but is not put into operation until needed. Under certain circumstances, for example during forced or legal standby, contractors may be entitled to payments for their equipment on standby. These payments are meant to reimburse the contractor for fixed costs such as depreciation, cost of facilities capital, and indirect equipment costs.

No industry standard exists regarding the computation of standby rates. However, data in the Rate Element Tables can help users identify an appropriate standby rate. For example, using the tables for Skid Steer Loaders, standby may be calculated by adding the factors for depreciation, cost of facilities capital, and indirect costs to obtain a total percentage of the Blue Book rate applicable for a standby allowance.

.26 (for depreciation)
.08 (for CFC)
+ .06 (for indirect costs)
.40 (or 40% of Blue Book rate = Standby rate)

The above example is not meant to establish a correct way of determining standby rates. Determining the specific amounts and cost allowances used in the calculation of standby rates is the responsibility of the contracting parties.

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b. *Job Severity.* Blue Book rates are based on the assumption that machines are working mostly under normal job conditions, with occasional light and severe applications. In some cases, machinery may work consistently in severe conditions, and these conditions may increase actual repair costs. The Rate Element Tables may be used to isolate the Blue Book allowance for major overhaul and adjust it for severity. For example, if severe job conditions are expected to increase major overhaul by 10%, then the Blue Book rate can be increased by adding 10% to the overhaul portion of the Blue Book rate. In the Skid Steer Loaders table, overhaul is .60, or 60%, of the Blue Book rate. Multiplying this by 10% gives you 6.0%, which is the amount to increase the **total** Blue Book rate to allow for the adjustment necessitated by the above example.

   The above example does not constitute the only procedure for adjusting Blue Book rates to account for severity. For example, prolonged applications in severe job conditions may affect other cost allowances by decreasing a machine's economic life.

c. *Duplication of Costs.* If costs that are included in the Blue Book rates are handled through other procedures, these costs should be deducted from the Blue Book rate. For example, if indirect costs are included in project overhead, then deduct that portion of the Blue Book rate. Using the tables for Skid Steer Loaders, this means that one would deduct 6% from the total Blue Book rate to avoid duplicating the allowance for indirect costs.

3. *Regional Adjustment Maps: Adjusting for climate and regional costs*

The adjustment maps at the beginning of each section are designed to show regional variations of average equipment ownership costs. The amount by which the rental rates should be increased or decreased is based on several factors that influence ownership costs. These factors include local mechanics' labor, sales tax, freight, and climate. The most significant factor in regional variation is climate and its effect on the average annual use hours (the working "season"). A shorter working season means rates will be higher in order to recover fixed costs.

No attempt is made to identify specific locations, such as mountainous areas or municipalities, within any region. Extreme climatic variations should be considered separately.

Information concerning climate regions and regional adjustments is obtained from direct surveys of contractors and equipment users, government indices, industry periodicals, and climatological maps. Every effort has been made to process and review this data for statistical certainty, but the research staff of EquipmentWatch does not present these area adjustments as exact factors. Users of these maps should refer to their own judgment and experience when modifying suggested adjustments to reflect specific conditions.

Regional adjustment factors are meant to apply only to rental rates. They are not intended to be adjustments to the "Estimated Operating Cost/Hour." Instructions on the application of regional adjustment factors can be found at the beginning of each section containing maps.

4. *Multiple Shifts*

No industry standard exists regarding the computation of overtime rates. It is the responsibility of the contracting parties to agree on the appropriate method of allowing for equipment costs in the instances where overtime hours are worked. Two commonly used methods are outlined below as examples of how overtime rates may be established.

a. At the rate of 1/8th of the daily rate for each hour in excess of eight hours, 1/40th of the weekly rate for each hour in excess of forty hours, and 1/176th of the monthly rate for each hour in excess of 176 hours within a thirty-day period.

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b. At 50% of the agreed upon monthly, weekly, daily, or hourly rate for each overtime hour worked.

Example:

Single Shift (8 hours)	=	$100 per day
Double Shift (16 hours)	=	$150 per day ($100 for the first 8 hours, $50 for the second 8 hours)
Triple Shift (24 hours)	=	$200 per day ($100 for the first 8 hours, and $50 each for the second 8 hours and third 8 hours)

c. Operating Costs should be charged at the full rate during all shifts.

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APPENDIX D: George & Lynch, Inc. vs. DelDOT

AMERICAN ARBITRATION ASSOCIATION
Construction Industry Arbitration Tribunal

George & Lynch, Inc.	
and	
Cherry Creek Recycling, LLC	No. 01-14-0001-4290
and	
Delaware Department of Transportation	

Award on Phase 1

WE, THE UNDERSIGNED ARBITRATORS, Travis L. Kreiser, Esq., Rocco Cavallo, and Peter F. Marvin, Esq., Chair, having been designated in accordance with the applicable provisions of the Specifications for Road and Bridge Construction dated August, 2001 promulgated by the Delaware Department of Transportation as incorporated into Contract T200907301.01, FAP BROS-S050(19) dated February 2, 2011 between George & Lynch, Inc. and Delaware Department of Transportation and the Construction Industry Rules of the American Arbitration Association, and having been duly sworn, and having duly heard the proofs and allegations of the Parties, with Daniel Wolcott, Jr., Esq. and James M. Kron, Esq., appearing on behalf of Claimant George & Lynch, Inc., Jesse Howard Witt, Esq., appearing on behalf of Claimant Cherry Creek Recycling, LLC, and John F. Morkan, III, Esq. and Aleine Porterfield, Esq., appearing on behalf of Respondent Delaware Department of Transportation, hereby FIND as follows:

Major prehearing submissions were made by the parties in the autumn of 2015. Hearings were held on this matter in Wilmington, DE on November 16-19, 2015 before the Panel. The initial phase of hearings on this bifurcated matter were closed as of February 5, 2016.

I. Introduction

At the core of Phase 1 of this bifurcated arbitration are three claims that George & Lynch, Inc. ("G+L"), the contractor, has advanced on behalf of Cherry Creek Recycling, LLC ("CCR"), its subcontractor, against the Delaware Department of Transportation (the "Department"), the owner.[1]

[1] This bifurcation is reflected in Scheduling Order Number Two issued by the Panel on August 5, 2015. Before the hearings, CCR advised the Panel that its claims for costs associated with a delay in pedestrian access, its removal of sand from the north access and the relocation of stockpiled material are not being asserted against the Department but may be asserted by CCR against G+L in Phase 2 of this arbitration.

After competitive bidding conducted on December 7, 2010, the Department, on February 2, 2011, awarded a contract to G+L for a project known as the Indian River Inlet Roadway and Approaches, Phase II, (the "Project") Contract T200907301.01, FAP BROS-S050(19) (the "Contract").

A portion of the scope of work required of G+L on the Project was the demolition of an existing, no longer used, highway bridge over the Indian River Inlet (the "Existing Bridge"). CCR, on March 8, 2012, signed a subcontract with G+L (the "Subcontract") under which CCR agreed to demolish the Existing Bridge.

Encountering what it has alleged were major cost over-runs on the work it was required to perform under the Subcontract, CCR has asserted a claim seeking additional compensation from G+L [redacted] cost events experienced during performance of its scope of work under the Subcontract and G+L has, in turn, asserted such claims against the Department.[2]

The Specifications for Road and Bridge Construction dated August, 2001 promulgated by the Delaware Department of Transportation (the "DelDOT Specs") established extensive requirements and guidelines controlling both the Project itself and the process for addressing claims arising from the Project including the claims asserted by CCR and G+L. Section 105.17 of the DelDOT Specs ("§105.17") provides numerous directives and limitations that bear directly on the proceedings under which these claims are to be decided.

§105.17 provides, *inter alia*:

- Any claim, properly presented pursuant to Subsection 105.15, processed through the claims procedure [submission to a Claims Committee], and finally decided by the Chief Engineer pursuant to Subsection 105.16 . . . upon the demand of either party . . . shall be decided by arbitration in accordance with the Construction Industry Arbitration Rules of the American Arbitration Association then in effect; *except as otherwise modified by these Specifications.* (emphasis added)

- The arbitration proceeding may involve presentation of facts or such portions thereof as have previously been presented at prior administrative hearings held pursuant to Subsection 105.15 herein or may be based entirely upon the record, as established therein.

- The record established at prior administrative hearings pursuant to Subsection 105.15 shall be specifically admissible at such arbitration proceedings and *such facts as have been established shall be specifically binding upon the parties; with the exclusion of opinions and conclusions thereon.* (emphasis added)

[2] G+L has presented claims against the Department on its own behalf as well as on behalf of CCR. G+L's claims are factually dependent on the [redacted] claim asserted by CCR.

- *[N]o material, information, fact, and/or claim not presented at such hearings held pursuant to said Subsection 105.15 shall be admissible at any arbitration conducted pursuant to this Section.* (emphasis added)

- The arbitrators, in their final ruling on the claim shall include a summary of the evidence, findings of fact based upon the evidence, conclusions of law, and a concise statement of the relief awarded.

The parties elected to present facts to the Panel through both written and live testimony. The record of the proceedings before the Claims Committee was before the Panel as was the decision of the Department's Chief Engineer. The Panel strove to ensure that no material, information, fact, and/or claim not presented at the Claims Committee hearings was admitted at the November hearings.

Bound by the facts that were established before the Claims Committee but not their opinions and conclusions, in accordance with §105.17, the Panel now makes the following summary of the evidence, findings of fact based upon the evidence, conclusions of law, and a concise statement of the relief awarded.

II. Summary of the Evidence[3]

On December 7, 2010, the Department opened the bids that had been submitted for the Project. With a bid of $11,625,940.29, G+L was the apparent low bidder; its bid included $1,751,200.00 as a lump sum price for the demolition of the Existing Bridge. In January, 2011, the Department conducted a Pre-Award meeting and on February 2, 2011 it awarded the contract for the Project to G+L.

An entity named PCI Bridge had provided Pre-Award pricing to G+L on the Existing Bridge demolition portion of the Project. PCI Bridge had planned to demolish the structural steel elements of the Existing Bridge ("Steel Demolition") using a water-borne crane, that is, a crane on a barge moored in the Inlet. Encountering at least informal opposition to its demolition plans, PCI Bridge withdrew from the Project.

Summit Engineering Group, Inc. ("Summit"), based in Littleton, CO, had served as the engineer for PCI Bridge on its bid to G+L. Summit also had an existing relationship with CCR, also a Colorado based entity. In January, 2012, upon hearing that PCI Bridge had withdrawn, CCR began exploring the possibility of submitting its own proposal for demolishing the Existing Bridge.

On February 7, 2012, CCR came to the Project site, visually inspected the site and met with representatives of G+L. CCR was accompanied by a representative of a potential crane supplier. On February 9, 2012, CCR submitted a proposal to G+L for the demolition of the Existing Bridge. On March 8, 2012, CCR and G+L signed the

[3] The Panel here presents only a brief summary of the evidence. A more detailed statement of the facts, supported by citation to the record, follows in the Panel's Findings of Fact.

Subcontract. The Subcontract, as ultimately agreed upon and with a small deduction, was for $1,945,500.00.

CCR's proposal was premised on its belief that the Steel Demolition could be accomplished using a large land-based crane. To that end, on March 12, 2012, CCR forwarded demolition plans labeled "not for construction" that Summit had prepared for review by the governing authorities (the "Review Plans").

The Department, on March 27, 2012, provided preliminary comments in response to the Review Plans.

A meeting was held on April 3, 2012 attended by representatives of the Department, CCR, G+L and Summit. William A. Geschrei, PE, of Whitman, Requardt & Assoc., LLP, a design professional acting on behalf of the Department, participated by telephone. During the course of the meeting, Mr. Geschrei stated that there would be or there was a possibility of a catastrophic failure of a quay wall if the land based crane was used to remove steel from the Existing Bridge.[4]

Following the April 3, 2012 meeting, CCR began to explore alternative methods for removing the steel from the Existing Bridge. CCR developed and then submitted a plan to remove the steel from the Existing Bridge using a "reverse launch" method. The first reverse launch plans were submitted to the Department in May, 2012 with submissions continuing through the summer. After the submission of all plans requested or required by the Department, including all required revisions, the plans reflecting the "reverse launch" method were approved by the Department in the autumn of 2012.

Starting in November, 2012, CCR removed the structural steel from the Existing Bridge using the reverse launch method.

CCR seeks recovery of the additional costs that it claims it incurred because it had to switch its method for Steel Demolition from the land based crane method to the reverse launch method.

With the Steel Demolition completed, it remained for CCR to demolish the piers of the Existing Bridge down to an agreed level. CCR completed that work from barges anchored in the Inlet. While that process was underway, two events occurred; these events form the bases for CCR's remaining claims: (1) Tropical Storm Andrea passed through the area; and (2) a larger tug was brought to the Project to tend to the barges. CCR seeks additional costs that it claims to have incurred because of these two events.

Beyond what it presents as a pass-through for CCR, G+L seeks: (1) reversal of liquidated damages for delay assessed against it by the Department; (2) a time extension and additional compensation for the added project time consumed by the demolition of

[4] Whether Mr. Geschrei said that there "would" or "could" be a catastrophic failure will be discussed, to the extent that it bears on our decision, in the Findings of Fact section.

the Existing Bridge; and (3) the mark-up allowed to a general contractor under the DelDot Specs if a subcontractor incurs compensable additional costs.

III. Findings of Fact Based upon the Evidence

A. *Claim for Increased Costs Due to* [redacted]

1. The Project is the Indian River Inlet Roadway and Approaches, Phase II, (the "Project") Contract T200907301.01, FAP BROS-S050(19). CLCM at 1.[5]

2. On December 7, 2010, the Department opened the bids that had been submitted for the Project. With a bid of $11,625,940.29, G+L was the apparent low bidder. CLCM at 2.

3. A portion of the scope of work required of G+L on the Project was the demolition of the Existing Bridge. G+L's bid included $1,751,200.00 as a lump sum price for the demolition of the Existing Bridge. CLCM at 2.

4. The U.S. Army Corps of Engineers and the U.S. Coast Guard became involved with the Project. CLCM at 2.

5. At a non-mandatory pre-bid meeting held in late 2010 attended by G+L, the Department made a presentation about scour holes in the inlet. Tr. 605; 643-45.

6. At a Pre-Award meeting conducted by the Department on January 18, 2011, G+L was reminded that there were potential issues with scour holes in the inlet. Ex. 146.[6]

7. G+L, at the Pre-Award meeting, asked the Department: "Is there a secret that we don't know about." The Department did not respond. Ex. 146.

8. At the Pre-Award meeting, PCI Bridge outlined for the Department the demolition method it intended to use to remove the structural steel from the Existing Bridge; PCI Bridge explained that it planned to use a 300 ton crane placed on a barge anchored in the inlet. Ex. 146.

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[5] Citations are to:
"CLCM" – The July 10, 2014 decision of the Department's Claims Committee. Ex. 2;
"Tr." – The transcript of the hearings held before the Panel on Nov. 16-19, 2015.
"Stmnt. ____" – The witness statements submitted by the parties prior to the November Hearings;
"Ex." – Exhibits used both at the Claims Committee proceedings and the Hearings.

[6] The Claims Committee found that as of February 7, 2012, G+L knew that the inlet bottom had deep scour holes. CLCM at 2.

9. On February 2, 2011 the Department awarded the contract for the Project to G+L. CLCM at 2.

10. On April 6, 2011, the Department furnished G+L with a November, 2007 bathymetric survey. This is the first date on which G+L had the bathymetric survey showing in detail the subsurface topography as of the survey's date including the location of the major scour holes. Tr. 579-80; 936-37; Ex. 56.

11. By January 9, 2012, with the U.S. Army Corps of Engineers not having approved PCI Bridge's water-borne crane method for demolishing the structural steel, PCI Bridge had apparently withdrawn from the Project. CLCM at 2; Tr. 543, 599.

12. Between the Pre-Award meeting and the first meeting between G+L and CCR on February 7, 2012, PCI Bridge's "plan to use water-based barges with cranes on them for bridge demolition had met resistance." CLCM at 2.

13. Between the Pre-Award meeting and the February 7, 2012 meeting at the site attended by G+L and CCR, *inter alia*, it was apparent that "an alternative method [of bridge demolition] was desired." CLCM at 2.

14. In the spring of 2011, G+L submitted plans to the Department for the storage of certain heavy material on the Inlet bank. Those plans showed that G+L intended to place the material close to the quay wall. In response, on June 21, 2011 the Department sent a letter to G+L notifying G+L that the Department had concerns about the structural stability of the quay wall due to added lateral forces the proposed stock pile would generate. Ex. 115; Saborio Stmnt ¶24.3.

15. With that letter, the Department forwarded as-built drawings of the existing quay wall (the "June, 2011-supplied Drawings") to G+L. Ex. 40; Ex. 116; Saborio Stmnt ¶24.3.

16. The June, 2011-supplied Drawings differed from drawings that had been made available to G+L (and other bidders) pre-bid. The June 21, 2011-supplied Drawings appeared to show that the sheet pile jetty wall (the quay wall) did not have tie-backs. This was in direct conflict with other drawings available pre-bid that did show that the quay walls had tie-backs. CLCM at 3.

17. The Department had not previously furnished the June, 2011-supplied Drawings to G+L. Ex. 115.

18. Summit had served as the engineer for PCI Bridge on its bid to G+L. Summit also had an existing relationship with CCR, another Colorado based entity. Tr. 15-18.

19. In January, 2012, upon hearing that PCI Bridge had withdrawn, CCR began exploring submitting a proposal to G+L under which CCR would be the subcontractor to G+L demolishing the Existing Bridge. Tr. 16-17.

20. CCR was told that its bid to G+L had to be under $2,000,000.00. CLCM at 2.

21. On February 7, 2012, CCR came to the Project site, conducted a visual inspection and met with representatives of G+L. A representative of Amquip, a crane rental organization in the area, accompanied CCR on that visit to the Project site. Tr. 31, 34-35.

22. A substantial crane, although not as large as the 600 ton crane being contemplated for the steel removal, was observed working on the embankment proximate to the Existing Bridge. Tr. 24-25; 688-89.

23. On February 9, 2012, CCR submitted a proposal to G+L for the demolition of the Existing Bridge. Tr. 148-51.

24. On March 8, 2012, CCR and G+L signed the Subcontract. The Subcontract, as ultimately agreed upon and with a small deduction, was for $1,945,500.00. Ex. 106.

25. CCR's proposal, bid and Subcontract price were premised on its belief that the Steel Demolition could be accomplished using a 600 ton land-based crane. CLCM at 3.

26. On March 12, 2012, CCR forwarded, for review, a set of "not for construction" demolition plans and method statement that Summit, CCR's design engineer, had prepared. CLCM at 3; Ex. 34.

27. On March 27, 2012, G+L forwarded to CCR the preliminary comments that the Department had provided in response to CCR's March 12th submission. CLCM at 3.

28. A meeting was held on April 3, 2012. Representatives of the Department, CCR, G+L and Summit attended. William A. Geschrei, PE, of Whitman, Requardt & Assoc., LLP, a design professional acting on behalf of the Department, participated by telephone. Ex. 38; Tr. 41, 549, 918.

29. Mr. Geschrei, during the course of the meeting, stated that if a large crane were used as planned by CCR to accomplish the Steel Removal, there would be a catastrophic failure of a quay wall or that there was a possibility that there would be such a catastrophic failure. Tr. 41 (Blair); Tr. 549 (Delp)("would be") Tr. 918 (Saborio) ("was a possibility").[7]

[7] Mr. Geschrei was an employee of consulting engineers retained by the Department; he was not called by the Department at the Claims Committee hearing and, therefore, not at these hearings. On that basis, we

30. The Claims Committee found, and we accept, as we must, that at the April 3, 2012 meeting, [Geschrei] "raised a serious concern of a potential catastrophic failure of the quay wall by placing the 600-ton crane within 20 feet of the quay wall." CLCM at 3.

31. Regardless of the degree of certainty implicated in whatever Mr. Geschrei said at the April 3, 2012 meeting, his statement [redacted] changed the approach that CCR could and did take; his statement stopped any thought of using a large land-based crane to accomplish the Steel Removal. "It was a 'holy crap' moment." Tr. 42 (Blair) "That catastrophic-failure comment in [the April 3rd meeting] had opened a Pandora's box." Tr. 203 (Blair); Geschrei's comment "took the air out of the room. Everybody just sat there and looked at each other." Tr. 550 (Delp) "[W]e were caught off guard and that pretty much ended the conversation as far as what we were prepared to talk about at that time." Tr. 614 (Delp) "[The Department] was not going to allow the crane to be used on that bank." Tr. 626 (Delp).

32. ". . . it seemed obvious that [the Department] would not approve . . . a plan [using a land based crane] Delp Stmnt. ¶7.

33. Shortly after the April 3, 2012 meeting, the Department reported that the U.S. Army Corps of Engineers had stated that the Corps was not prepared to establish loading criteria for the area near the quay "without a detailed analysis." Ex. 38.

34. Given [redacted] Geschrei's statement, the likelihood that CCR, Summit and G+L could provide sufficient information to allow the Department to approve any plan CCR might submit that used a large land based crane to remove the structural steel from the Existing Bridge appeared extremely remote. Tr. 626.

35. Following the April 3, 2012 meeting, CCR began to explore alternative methods for removing the steel from the Existing Bridge. Tr. 61-66.

36. "As a result of comments from [Geschrei] about a potential catastrophic quay wall failure, [CCR] chose to redesign their demolition method switching from the land based method with a 600-ton crane to a reverse launch method." CLCM at 5.

37. CCR developed and then submitted a plan to remove the steel from the Existing Bridge using a "reverse launch" method, a complex, sophisticated approach for a demolition of the magnitude of the demolition required at the Existing Bridge. Tr. 65-66.

38. The first plans for the reverse launch method were first submitted to the Department on May 11, 2012. Additional materials for the reverse launch method were submitted throughout the spring and early summer with the last package submitted on July 26, 2012. CLCM at 3. Delp Stmnt. ¶15.

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could draw a negative inference from his failure to testify. Given the approach we take, we need not do that, however.

39. The Department approved the reverse launch on November 14, 2012. Delp Stmnt. ¶15.

40. Starting in November, 2012, CCR accomplished the Steel Demolition using the reverse launch method. Tr. 66.

41. The requirement that CCR abandon its plan to use a land based crane and turn to the reverse launch method delayed CCR substantially. Tr. 66.

42. The requirement that CCR abandon its plan to use a land based crane and turn to the reverse launch method increased CCR's costs for removing the structural steel from the Existing Bridge substantially. *See* Findings 53-54.

[redacted]

46. The extent and depth of the scour holes precluding the use of the water based crane was not known to G+L when it submitted its bid with its lump sum price for the demolition of the Existing Bridge of $1,751,200.00. Tr. 579-80; 936-37; Ex. 56.

47. The extent and depth of the scour holes was not known to G+L until the Department delivered the bathymetric survey to G+L in April, 2011. Tr. 936-37.

[redacted]

49. The existence and fragility of the quay walls and their risk of a catastrophic collapse was not known to G+L when it submitted its bid with its lump sum price for the demolition of the Existing Bridge of $1,751,200.00. Tr. 927-29.

[redacted]

51. CCR has presented its claim for the additional costs it incurred because of the need to adopt the reverse launch method as a modified total cost claim.

52. As presented by CCR, the matrix it chooses to employ for calculating the additional costs it incurred is as follows:

Total costs incurred[8]	$3,577,284.00
Contract Price	$1,945,500.00
CCR claim on this Claim	$1,631,784.00

[redacted]

B. *Claim for Suspension of Work Due to Tropical Storm Andrea*

55. After removal of the structural steel from the Existing Bridge, CCR was required to demolish the piers of the Bridge down to an agreed upon level. This work was performed in the spring and summer of 2013.

[redacted]

56. Tropical Storm Andrea struck the Delaware region on June 7, 2013 "bringing heavy rain, storm surge flooding, and high winds." CLCM at 7.

57. "Due to the storm, activities ceased due to unsafe conditions." CLCM at 7.

58. CCR is seeking compensation for the delay associated with an Act of God from June 7, 2013 to June 22, 2013. CLCM at 8.

59. The Claims Committee found that "subsequent weather on the following days were [sic] not such that activities could not take place." CLCM at 9.

[redacted]

C. ***Claim for Increased Costs Due to Additional Tug Requirements***

61. While the Claims Committee found that there was: "no documented directive from the USCG to [CCR] mandating the use of a larger vessel or tugboat in order to continue demolition," CLCM at 9, the absence of such written directive does not preclude the finding that such directive was in fact communicated to CCR. [redacted]

62. None of the parties submitted any evidence to show that the larger tugboat was required by any applicable law or Coast Guard regulation, nor was there any evidence that CCR was cited by the Coast Guard or any other governmental authority for any alleged failure to staff the Project with any equipment required by law or regulation.

[redacted]

D. *G+L's Claim*

64. G+L's claim has three components. It seeks:

a. a reversal of the assessment made against it for 43 days of delay;
b. costs it alleges it incurred due to the extended duration of the job;
c. a 5% mark-up on whatever is awarded to CCR as provided in DelDOT Specs §109.04.D.8.

[redacted]

65. We find that the Project was delayed in excess of 43 days due to the differing site conditions. *See* Finding 41.

[redacted]

IV. Conclusions of Law

A. *Claim for Increased Costs Due to Differing Site Conditions*

1. CCR seeks the additional costs that it incurred because it could not proceed using the land based crane and had to use the reverse launch method to accomplish the Steel Demolition.

2. CCR asserts that it is entitled to these costs because it encountered differing site conditions.

3. Section 101.26 of the DelDOT Specs defines differing site conditions as: "Subsurface or latent conditions encountered at the site that, 1) differ materially from those indicated in the Contract, or are 2) unknown physical conditions of an unusual nature differing materially from those conditions ordinarily encountered and generally recognized as inherent in the work provided for in the Contract."

4. Thus, to recover on a claim based on an alleged differing site condition, G+L and CCR must show either that the conditions on the Project differed materially from those indicated in the Contract or that there were unknown physical conditions of an unusual nature differing materially from those conditions ordinarily encountered and generally recognized as inherent in the work provided for in the Contract.

[redacted]

APPENDIX E: DelDOT CPM Scheduling Specification

763508 - PROJECT CONTROL SYSTEM DEVELOPMENT PLAN
763509 - CPM SCHEDULE UPDATES AND/OR REVISED UPDATES

Description:

The Contractor Shall plan, schedule and construct the Project by using a Critical Path Method Project Schedule (CPM) meeting the requirements of these specifications. Use the CPM for coordinating and monitoring the Work specified in the Contract Documents including all activities of Subcontractors, vendors, suppliers, utilities, railroads, the Department, and all other parties associated with the construction of the Contract. Include all Work in the CPM; including but not limited to submittals, major procurement, delivery, and construction activities. Include all activities, including bid items, quantified in the Contract Documents. Base the CPM upon the entirety of the Contract Documents. Utilize CPM software that generates files compatible with Primavera P6 Project Management Release: 7.0.0.

Scheduling Representative:

Designate a scheduling representative prior to submission of the Original Critical Path Method Project Schedule (OCPM). The scheduling representative is the person primarily responsible for development and maintenance of the CPM schedule; the Contractor's representative in all matters regarding the schedule; and the Contractor's designated attendee for all schedule related meetings. The scheduling representative shall also be knowledgeable of the status of all parts of the Work throughout the duration of the Project. Replacement of the scheduling representative will require written approval from the Engineer.

Submit the qualifications of the scheduling representative to the Engineer for approval. This approval is required before the OCPM will be accepted. The scheduling representative shall have at least three years of verifiable experience for preparing and maintaining CPM project schedules on Contracts of similar size and complexity.

Critical Path, Project Completion Date, and Float:

The critical path is defined as the series of activities in a CPM that has the longest path in time. The submitted activity sequence and durations must generate a CPM with only one critical path. Divide Project wide activities such as Maintenance of Traffic, Construction Engineering, or Temporary Erosion Control that, by their nature, generate long durations and complement other activities into "establish" and "conclude" activities to prevent this type of Work from occupying a significant portion of the critical path.

The project start date, or initial data date, of the original CPM shall be the first chargeable day of Work. Nonproductive Work and administrative activities may begin and/or end prior to the project start date. The Original CPM must use all of the Contract Time and contain a critical path containing exactly zero float. Early completion schedules are not permitted. The schedule ending date of the Original CPM that uses all of the Project Time is the contract completion date.

Total Float is the difference between the schedule's finish date and the contract completion date. Free float is the difference in time between an activity's early finish and late finish. Free float is a shared commodity for the use of the Department and the Contractor and is not for the exclusive use or benefit of either party. Both parties have the full use of free float until depleted.

Submittal of the OCPM; the Start of Work and the Schedule of Record:

Complete and submit the proposed original CPM schedule (OCPM) database and the written narrative (WN) within 30 calendar days after Contract is Awarded. The WN is a description of any elements of the Schedule that deviate from the proposed construction sequence shown in the Contract Documents. Submit the OCPM in CPM format fully compatible with Primavera P6 Project Management Release: 7.0.0 by email or CD ROM as a single compressed database in CPM format.

The Engineer will complete the review of the OCPM within 30 calendar days after submittal. If required, a Joint Review Conference will be convened at which time the Engineer and Contractor may make corrections and adjustments to the proposed OCPM. If a revision is necessary due to the Engineer's review or the Joint Review Conference, submit the proposed revision within seven calendar days after receiving the Engineer's review comments or within seven calendar days after the date of the Joint Review Conference, whichever is the latest. Make revisions in accordance with the requirements for the OCPM. The Engineer will respond to the revised OCPM within seven calendar days after receipt. Clearly identify each submittal and resubmittal for clarity by labeling "2nd Draft", "3rd Draft", etc.

Do not start any Work until the OCPM is accepted. If the Engineer is ready to issue a Notice to Proceed but the OCPM is not yet accepted, the Engineer may issue the NTP and start Contract Time, but forbid Work to begin until the OCPM is accepted. The Engineer may partially accept a OCPM and allow Work to begin if the required corrections to the OCPM are minor, but the Engineer will not accept submittals that do not show the complete schedule. The Engineer will not pay any estimates until the OCPM is partially accepted. Once the OCPM is partially accepted, the Engineer will pay the first estimate. If the Contractor fails to make a good faith effort to address the Engineer's comments before the second estimate is due for payment, the Engineer will not pay the second estimate until a good faith effort is made by the Contractor to comply. The Engineer may not withhold an estimate payment if, within the estimate period in question, the Engineer has failed to provide timely review comments in response to the Contractor's submittal. The Engineer may, however, withhold the payment of subsequent estimates if the Contractor fails to make a good faith effort to address the Engineer's comments. Upon issuance of the Notice to Proceed, the start date utilized in the OCPM will be adjusted to comply with the first chargeable day of Work. Any delay in starting Work caused by the acceptance of the OCPM by the Engineer will not be considered as a basis for any adjustment in the Contract amount or time. For Contracts that have fast-tracked starts, the Engineer and the Contractor may agree to alter the response times and approval dates listed above.
Upon notification that the OCPM has been accepted, the corrected copy will become the CPM of record. The CPM of record shall be the Contractor's work plan for completing the entire Contract as specified in the Contract Documents.

Requirements for the OCPM:

The format of the OCPM database shall be the precedence diagram method with days as the planning unit and shall be based on Calendar Days. Use the Department's partially predetermined coding structure (CS) that is furnished by the Engineer.

Activity Sequencing. Activity sequence must be logical and representative of the Contractor's order of the Work. Successors and predecessors determine the schedule logic or activity sequence. A given activity cannot start until all of the given activity's predecessors have been completed. Use only finish to start dependency relationships (links); do not use lag times without approval from the Engineer. The Engineer may request that the Contractor resequence the activities to reflect realistic job logic. When scheduling using multiple resources, each resource unit shall have a corresponding activity. Durations of activities include all the time necessary to complete the activity including, but not limited to, Contractor's non-work periods (other than those shown on the calendars), reasonably foreseeable inclement weather, weekends and holidays. Base schedule calculations on retained logic, contiguous durations, and total float as finish float.

Activity Resources. Sequence activities to reflect resource apportionment. Logically connect and code each activity to reflect the crew (resource) performing the operation. Submit a summary list of crews, their crew codes, and their operation(s) with each schedule submission, unless unchanged. Identify responsibility for each activity. Identify Subcontractors, DBE's, utilities and Work performed by others that affects the Schedule.

Breakdown and Durations of Activities. An individual activity is required for each construction element or each activity not under the control of the Contractor that affects the sequence or progress of the Work. The Engineer reserves the right to require additional breakdown of the Work activities at any time. Each activity must be identified by a name, symbol and coding, and shall have a duration, sequence, responsibility and resource(s). Choose activity names that are descriptive and identify single construction elements. Activity symbols, or ID's, shall be unique and systematic.

Activity types must be either "task", "start milestone", or "finish milestone". Do not use "hammock" type activities. Date constraints, float and duration constraints, and/or flags for activities are not permitted.

Assign a reasonable duration to each activity representative of its scope. Durations may not exceed 14 calendar days unless approved by the Engineer. Determine the duration of each activity by using productivity rates based on Calendar Days.

Include the preparation and approval of Working Drawings as activities. Include phasing (staging) milestones as activities. Correlate phasing milestones with the sequence of construction provided in the Contract Documents. Use a separate start and finish milestone activity to delineate each phase (stage).

*Utility Work***.** Include all Work performed by utilities on the Project as activities in the OCPM. Include each utility item of Work shown in the Contract's Utility Statement as an activity. Durations for utility activities shall be the same as the durations shown in the Utility statement for each activity unless otherwise approved by the Engineer.

*Calendars***.** Assign a calendar to each activity in the schedule. Use a minimum of 6 calendars, when applicable: (1) Full Schedule; (2) Permit Requirements; (3) Winter Condition; (4) Concrete Work; (5) Asphalt Paving Work; and (6) Nighttime Asphalt Paving Work. Use additional calendars if needed. Calendar non-work periods shall reflect the average Delaware weather history for the jobsite and the restrictions identified in the Contract Documents. The Contractor may choose perform Work during an activity's calendar non-work period at no additional cost to the Department if weather conditions are favorable for such Work and the Work does not violate a set forth in the Contract Documents. The maximum allowable non-work period for each calendar is set forth below. The Contractor may choose to shorten non-work periods at his/her discretion.

CALENDAR	MAXIMUM NON-WORK PERIOD
Full Schedule	None
Winter Condition	December 1 through March 15
Concrete Work	December 1 through March 15
Asphalt Paving	November 15 through March 15
Nighttime Asphalt Paving	October 15 through April 30

Written Narrative (WN). Provide a written narrative (WN) as part of the OCPM explaining the following:

(a) Relationships between activities not obviously identified
(b) Equipment usage and limitations.
(c) Manpower usage and limitations.
(d) Use of additional shifts and overtime.
(e) Activity codes, abbreviations, and activity identification system.
(f) All calendars utilized in the CPM and the basis of determining each non-work period
(g) All abbreviations.
(h) Use of calendars.
(i) Any other conditions that affect the schedule and are not readily discernible in the database.

CPM Updates:

Provide monthly updates to the CPM of record. Meet with the Engineer once a month prior to submitting the update to review the status of the schedule's activities. Prepare an updated list of activities showing all of the actual start and actual finish for each of the schedule's activities so that both parties can agree on the dates. Use the dates that were agreed upon in the meeting to status the CPM of record and submit the updated schedule to the Engineer for approval. Assign a unique file name to each update (Number/version). The data date of the update shall be the next day after the end of the update period. As part of the monthly update, submit a written description that identifies any delays or disruptions to the schedule experienced during the period of an update, any change in manpower or equipment, and any potential delays to the completion date of the schedule.

Do not include any revisions to the CPM without prior approval. Failure to submit complete updates in a timely manner may result in the withholding of estimates by the Engineer. The Engineer agrees to refrain from withholding estimates unless the Contractor is habitually late in providing updates, is more than four weeks late in submitting an update or has failed to submit an update that is part of a resolution to a serious problem that must be addressed immediately.

Revisions to the Schedule of Record:

Revisions are defined as any changes to the database other than status updates, log entries and moving the data date. Discuss any proposed revisions to the CPM verbally with the Engineer. If the revision is minor in nature, the Engineer may allow the revision to be included on the next Update of the CPM. If the Engineer determines that the revision is not minor in nature, submit the proposed revision for review and approval prior to deviating from the approved CPM. When a revision to the CPM is required due to changes in the Contract initiated by the Engineer, immediately contact the Engineer to discuss the changes. The Engineer may allow a deviation from the approved CPM for specific mitigating activities.

The Engineer may direct the Contractor to revise the schedule of record at the Contractor's expense if: the critical path has less than minus ten (-10) Calendar Days of total float due to the Contractor's failure to perform the Work in accordance with the schedule; the Contractor requests to re-sequence the Work; and/or the Contractor has performed a significant amount of Work out of sequence. The Engineer may direct the Contractor to revise the schedule for any other reason; and such a revision will be paid at the unit cost for a CPM Revision.

The Engineer will review and respond to the proposed revision within 7 Calendar Days after receipt. Resubmit, if required, within seven calendar days after receipt of the Engineer's review comments. The Engineer reserves the right to reject any proposed revision that adversely impacts the Department, utilities, or other concerned parties.

Extensions of Contract Time and/or Incentive/Disincentive Dates.

Make requests for extension of Contract time in writing and subject to the notice and timeliness of submission provisions as provided for elsewhere in the Contract. Requests for an extension of Contract time or change in an incentive/disincentive date will be evaluated by the Engineer's analysis of the CPM of record and any proposed revision submitted. Include in the request a written narrative of the events that impacted the schedule and a detailed explanation of why the Contractor cannot meet the requirements of the schedule of record. Only delays to activities that affect the Contract completion date or will be considered for an extension of Contract time. Only delays to activities that affect the completion duration of an incentive/disincentive period will be considered for an extension of an incentive/disincentive completion date. The extension of the specified Contract completion date or incentive/disincentive date will be based upon the number of Calendar Days the Contract completion date or incentive/disincentive date is impacted as determined by the Engineer's analysis. The Engineer and Contractor may agree to defer the analysis of a potential impact to the schedule until the completion of the activities that are affected. Such a deferment does not relieve the Contractor of his/her duty to identify potential impacts to the schedule in the applicable schedule updates.

All requests for extensions of Contract Time must be supported by the most recent CPM Update. If, within a reasonable period of time, the Contractor fails to make a good faith effort to produce an acceptable CPM update and uses an unacceptable CPM update to support a request for a time extension, the Contractor loses the right to receive that time extension; and/or the right to receive compensation for that delay caused in whole or in part by the Engineer.

Final As Built Schedule.

Submit a final CPM Schedule database within 14 Calendar Days of Substantial Completion. Failure to submit a final CPM Schedule may result in the withholding of estimates by the Engineer.

Method of Measurement:

The Project Control System will be measured in two items. The item, "Project Control System Development Plan" will be lump sum. The item "CPM Schedule Updates and/or Revised Updates" will be measured one each per update that is submitted and accepted.

Basis of Payment:

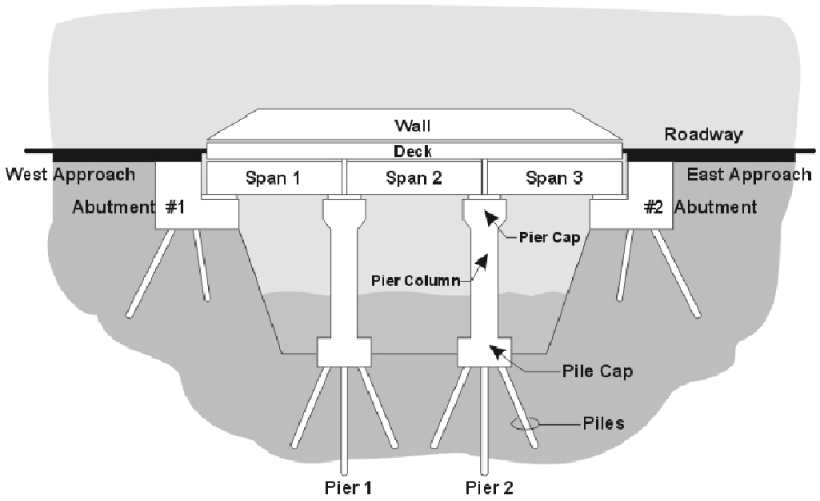
The item, "763508 – Project Control System Development Plan" will be paid at the Contract's lump sum bid price on the next monthly estimate after completion of the requirements of the Project Control System Development Plan, which includes the approval of the Original CPM Schedule. Price and payment will constitute full compensation for preparing the CPM database, acquiring the necessary software, attending all scheduling meetings with the Department, submitting and resubmitting all documents and for all labor, tools, equipment and incidentals necessary to complete the Work.

The item, "763509 – CPM Schedule Updates and/or Revised Updates" will be paid at the Contract unit price per each approved CPM schedule update as described above. Price and payment will constitute full compensation for preparing, submitting and resubmitting all CPM updates, for attendance at all scheduling meetings with the Department, for preparing and reviewing a list of actual start and actual finish dates with the Engineer, and for all labor, tools, Equipment and incidentals necessary to complete the Work.

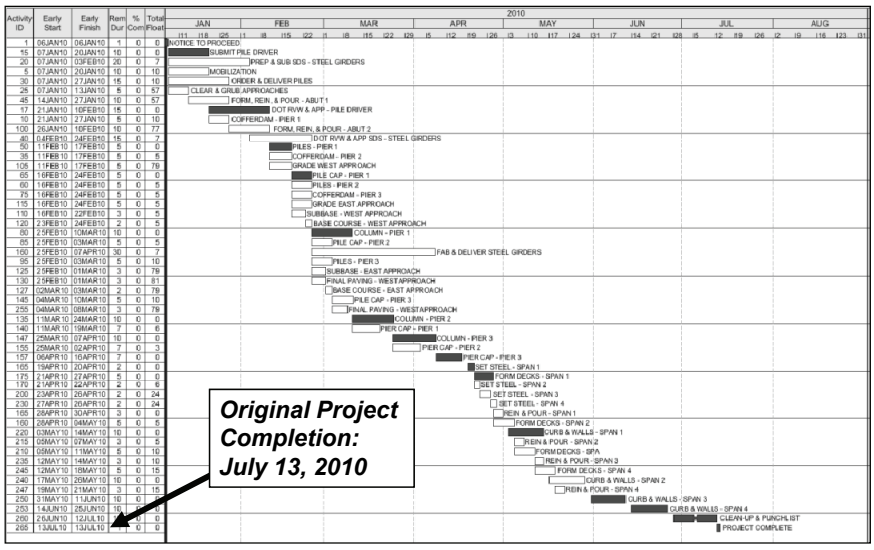
2/11/2015

APPENDIX F: Time Impact Analysis

The Project (TIA)

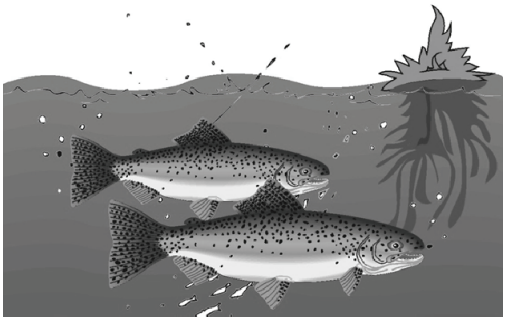


Baseline Schedule

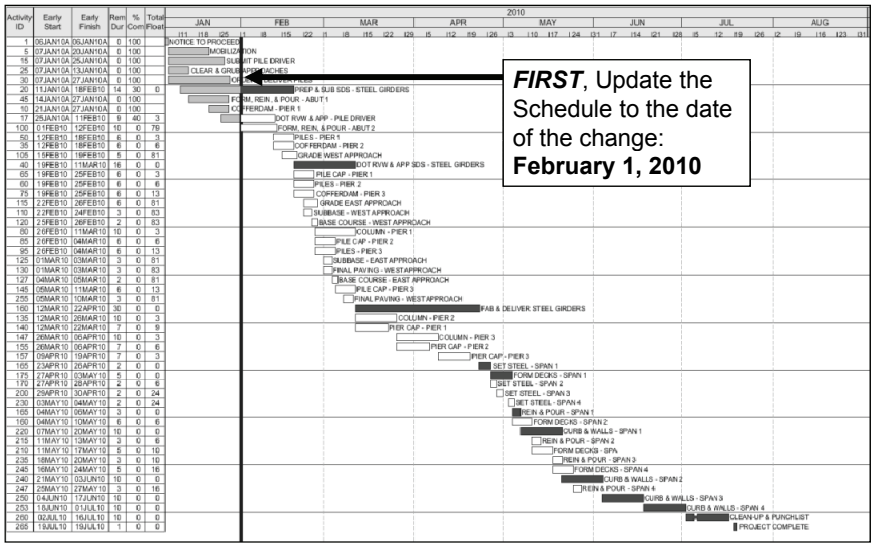


The Change

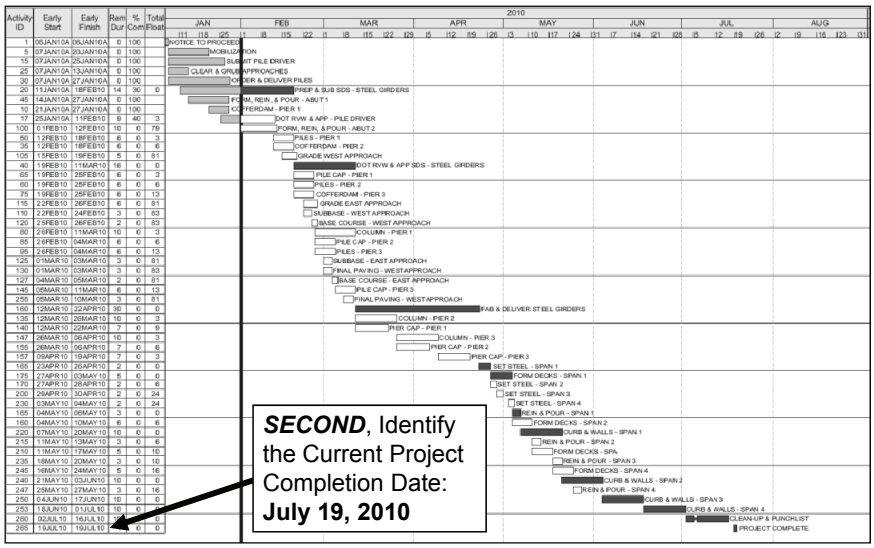
On February 1, the owner informed the contractor that to accommodate the spawning season this year, the project's environmental permit had been modified. The second cofferdam, located in a flowing portion of the river, could not be installed until March.



Update for Change

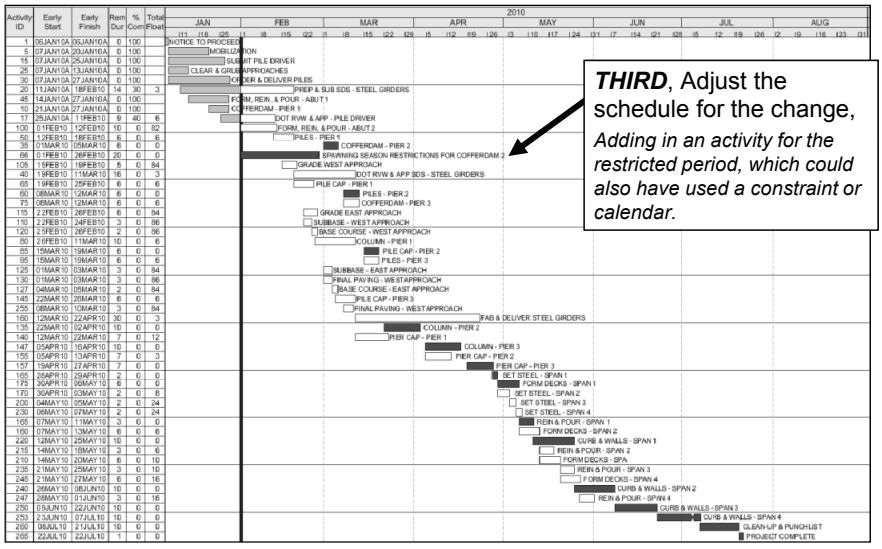


Update for Change



SECOND, Identify the Current Project Completion Date: **July 19, 2010**

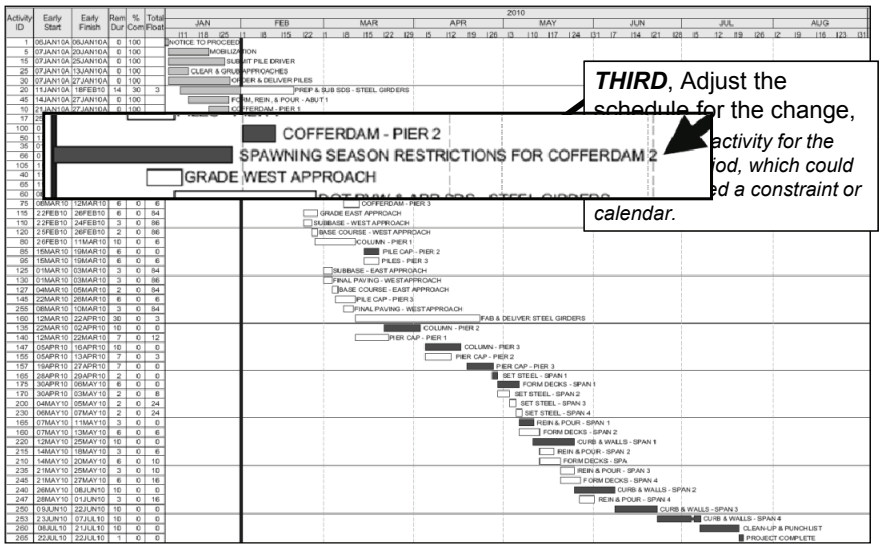
Adjust for Change



THIRD, Adjust the schedule for the change,

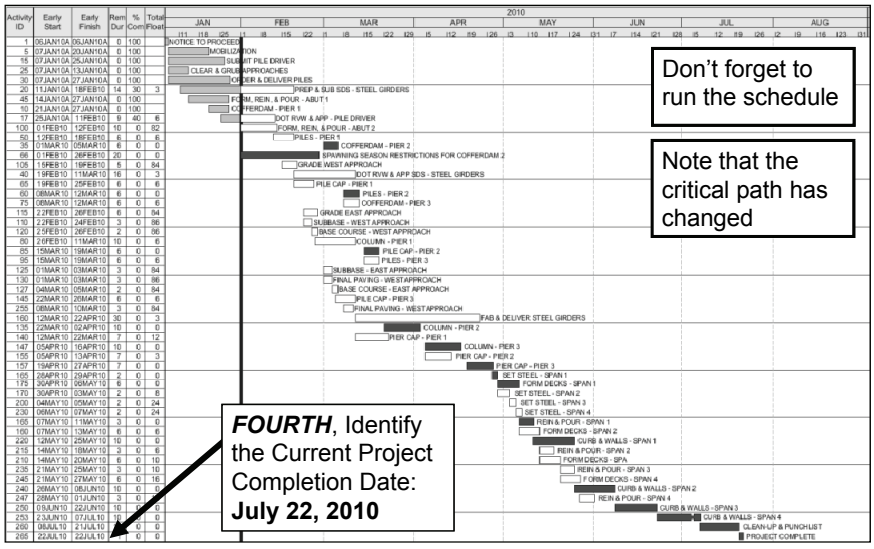
Adding in an activity for the restricted period, which could also have used a constraint or calendar.

Adjust for Change



THIRD, Adjust the schedule for the change, *activity for the od, which could d a constraint or calendar.*

Adjust for Change



Don't forget to run the schedule

Note that the critical path has changed

FOURTH, Identify the Current Project Completion Date: **July 22, 2010**

Evaluate the Results (TIA)

- What was the completion date?
  - Before the change: July 19
  - After the change: July 22
- The change order issued for the permit revision should include a 3-day time extension.
- Alternately, the work could be accelerated to mitigate the delay and achieve timely completion.

APPENDIX G: Contemporaneous Analysis Methodology

Contemporaneous Analysis Methodology

Trauner Consulting Services — PRIMAVERA PROJECT PLANNER — Course - Use of CPM

REPORT DATE 25JUN09 RUN NO. 29 — AS-PLANNED — START DATE 5JAN08 FIN DATE 10JUL08
14:09

Schedule Report - Sorted by Total Float — DATA DATE 5JAN08 PAGE NO. 1

ACTIVITY ID	ORIG DUR	REM DUR	%	CODE	ACTIVITY DESCRIPTION	EARLY START	EARLY FINISH	LATE START	LATE FINISH	TOTAL FLOAT
1	1	1	0		NOTICE TO PROCEED	5JAN08	5JAN08	5JAN08	5JAN08	0
15	10	10	0		SUBMIT PILE DRIVER	6JAN08	19JAN08	6JAN08	19JAN08	0
17	15	15	0		SHA REVIEW & APPROVE PILE DRIVER	20JAN08	9FEB08	20JAN08	9FEB08	0
50	5	5	0		DRIVE PILE - PIER 1	10FEB08	16FEB08	10FEB08	16FEB08	0
65	5	5	0		CONSTRUCT PILE CAP - PIER 1	17FEB08	23FEB08	17FEB08	23FEB08	0
80	10	10	0		F/R/P COLUMN - PIER 1	24FEB08	9MAR08	24FEB08	9MAR08	0
135	10	10	0		F/R/P COLUMN 2 - PIER 2	10MAR08	23MAR08	10MAR08	23MAR08	0
147	10	10	0		F/R/P COLUMN PIER 3	24MAR08	6APR08	24MAR08	6APR08	0
157	7	7	0		F/R/P PIER CAP - PIER 3	7APR08	15APR08	7APR08	15APR08	0
165	2	2	0		SET STEEL - SPAN 1	16APR08	17APR08	16APR08	17APR08	0
175	5	5	0		FORM DECKS - SPAN 1	20APR08	24APR08	20APR08	24APR08	0
185	3	3	0		REBAR, POUR SPAN 1	27APR08	29APR08	27APR08	29APR08	0
220	10	10	0		CURBS/WALL - SPAN 1	30APR08	13MAY08	30APR08	13MAY08	0
240	10	10	0		CURBS/WALL SPAN 2	14MAY08	27MAY08	14MAY08	27MAY08	0
250	10	10	0		CURBS/WALL SPAN 3	28MAY08	10JUN08	28MAY08	10JUN08	0
253	10	10	0		CURBS/WALL SPAN 4	11JUN08	24JUN08	11JUN08	24JUN08	0
260	10	10	0		CLEAN-UP & PUNCHLIST	25JUN08	9JUL08	25JUN08	9JUL08	0
265	1	1	0		PROJECT COMPLETE	10JUL08	10JUL08	10JUL08	10JUL08	0
155	7	7	0		F/R/P PIER CAP - PIER 2	24MAR08	1APR08	27MAR08	6APR08	3
25	5	5	0		CLEAR & GRUB APPROACHES	6JAN08	12JAN08	13JAN08	19JAN08	5
35	5	5	0		CONSTRUCT COFFERDAM - PIER 2	10FEB08	16FEB08	17FEB08	23FEB08	5
45	10	10	0		FORM, REINFORCE, POUR (F/R/P)- ABUTMENT 1	13JAN08	26JAN08	20JAN08	2FEB08	5
60	5	5	0		DRIVE PILES - PIER 2	17FEB08	23FEB08	24FEB08	2MAR08	5
85	5	5	0		CONSTRUCT PILE CAP - PIER 2	24FEB08	2MAR08	3MAR08	9MAR08	5
100	10	10	0		F/R/P ABUTMENT 2	27JAN08	9FEB08	3FEB08	16FEB08	5
180	5	5	0		FORM DECKS - SPAN 2	27APR08	1MAY08	4MAY08	8MAY08	5
215	3	3	0		REBAR, POUR SPAN 2	4MAY08	6MAY08	11MAY08	13MAY08	5
140	7	7	0		F/R/P PIER CAP - PIER 1	10MAR08	18MAR08	18MAR08	26MAR08	6
20	20	20	0		PREP & SUBMIT SHOP DWGS - STEEL GIRDERS	6JAN08	2FEB08	15JAN08	11FEB08	7
40	15	15	0		AGENCY REVIEW & APPROVE STEEL GIRDERS	3FEB08	23FEB08	12FEB08	4MAR08	7
160	30	30	0		FAB & DELIVER STEEL GIRDERS	24FEB08	6APR08	5MAR08	15APR08	7
170	2	2	0		SET STEEL - SPAN 2	20APR08	21APR08	30APR08	1MAY08	8

Contemporaneous Analysis Methodology

Trauner Consulting Services — PRIMAVERA PROJECT PLANNER — Course - Use of CPM

REPORT DATE 25JUN09 RUN NO. 29 — AS-PLANNED — START DATE 5JAN08 FIN DATE 10JUL08
14:09

Schedule Report - Sorted by Total Float — DATA DATE 5JAN08 PAGE NO. 1

ACTIVITY ID	ORIG DUR	REM DUR	%	CODE	ACTIVITY DESCRIPTION	EARLY START	EARLY FINISH	LATE START	LATE FINISH	TOTAL FLOAT
1	1	1	0		NOTICE TO PROCEED	5JAN08	5JAN08	5JAN08	5JAN08	0
15	10	10	0		SUBMIT PILE DRIVER	6JAN08	19JAN08	6JAN08	19JAN08	0
17	15	15	0		SHA REVIEW & APPROVE PILE DRIVER	20JAN08	9FEB08	20JAN08	9FEB08	0
50	5	5	0		DRIVE PILE - PIER 1	10FEB08	16FEB08	10FEB08	16FEB08	0
65	5	5	0		CONSTRUCT PILE CAP - PIER 1	17FEB08	23FEB08	17FEB08	23FEB08	0
80	10	10	0		F/R/P COLUMN - PIER 1	24FEB08	9MAR08	24FEB08	9MAR08	0
135	10	10	0		F/R/P COLUMN 2 - PIER 2	10MAR08	23MAR08	10MAR08	23MAR08	0
147	10	10	0		F/R/P COLUMN PIER 3	24MAR08	6APR08	24MAR08	6APR08	0
157	7	7	0		F/R/P PIER CAP - PIER 3	7APR08	15APR08	7APR08	15APR08	0
165	2	2	0		SET STEEL - SPAN 1	16APR08	17APR08	16APR08	17APR08	0
175	5	5	0		FORM DECKS - SPAN 1	20APR08	24APR08	20APR08	24APR08	0
185	3	3	0		REBAR, POUR SPAN 1	27APR08	29APR08	27APR08	29APR08	0
220	10	10	0		CURBS/WALL - SPAN 1	30APR08	13MAY08	30APR08	13MAY08	0
240	10	10	0		CURBS/WALL SPAN 2	14MAY08	27MAY08	14MAY08	27MAY08	0
250	10	10	0		CURBS/WALL SPAN 3	28MAY08	10JUN08	28MAY08	10JUN08	0
253	10	10	0		CURBS/WALL SPAN 4	11JUN08	24JUN08	11JUN08	24JUN08	0
260	10	10	0		CLEAN-UP & PUNCHLIST	25JUN08	9JUL08	25JUN08	9JUL08	0
265	1	1	0		PROJECT COMPLETE	10JUL08	10JUL08	10JUL08	10JUL08	0
155	7	7	0		F/R/P PIER CAP - PIER 2	24MAR08	1APR08	27MAR08	6APR08	3
25	5	5	0		CLEAR & GRUB APPROACHES	6JAN08	12JAN08	13JAN08	19JAN08	5
35	5	5	0		CONSTRUCT COFFERDAM - PIER 2	10FEB08	16FEB08	17FEB08	23FEB08	5
45	10	10	0		FORM, REINFORCE, POUR (F/R/P)- ABUTMENT 1	13JAN08	26JAN08	20JAN08	2FEB08	5
60	5	5	0		DRIVE PILES - PIER 2	17FEB08	23FEB08	24FEB08	2MAR08	5
85	5	5	0		CONSTRUCT PILE CAP - PIER 2	24FEB08	2MAR08	3MAR08	9MAR08	5
100	10	10	0		F/R/P ABUTMENT 2	27JAN08	9FEB08	3FEB08	16FEB08	5
180	5	5	0		FORM DECKS - SPAN 2	27APR08	1MAY08	4MAY08	8MAY08	5
215	3	3	0		REBAR, POUR SPAN 2	4MAY08	6MAY08	11MAY08	13MAY08	5
140	7	7	0		F/R/P PIER CAP - PIER 1	10MAR08	18MAR08	18MAR08	26MAR08	6
20	20	20	0		PREP & SUBMIT SHOP DWGS - STEEL GIRDERS	6JAN08	2FEB08	15JAN08	11FEB08	7
40	15	15	0		AGENCY REVIEW & APPROVE STEEL GIRDERS	3FEB08	23FEB08	12FEB08	4MAR08	7
160	30	30	0		FAB & DELIVER STEEL GIRDERS	24FEB08	6APR08	5MAR08	15APR08	7
170	2	2	0		SET STEEL - SPAN 2	20APR08	21APR08	30APR08	1MAY08	8

Contemporaneous Analysis Methodology

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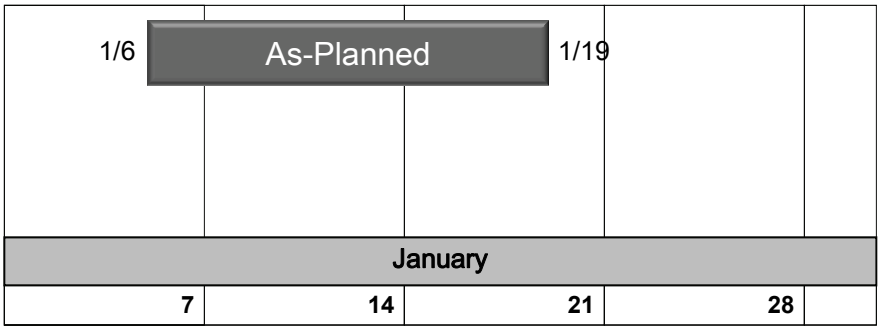

Contemporaneous Analysis Methodology

Trauner Consulting Services — PRIMAVERA PROJECT PLANNER — Course - Use of CPM

REPORT DATE 25JUN09 RUN NO. 25 — UPDATE NO. 1 — START DATE 5JAN08 FIN DATE 23JUL08
14:31
Schedule Report - Sorted by Total Float — DATA DATE 2FEB08 PAGE NO. 1

ACTIVITY ID	ORIG DUR	REM DUR	%	CODE	ACTIVITY DESCRIPTION	EARLY START	EARLY FINISH	LATE START	LATE FINISH	TOTAL FLOAT
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5	10	0	100		MOBILIZATION	6JAN08A	19JAN08A			
15	10	0	100		SUBMIT PILE DRIVER	6JAN08A	22JAN08A			

Contemporaneous Analysis Methodology

As-Planned Schedule

15	10	10	0	SUBMIT PILE DRIVER	6JAN08	19JAN08	6JAN08	19JAN08	0

Schedule Update, 2FEB98

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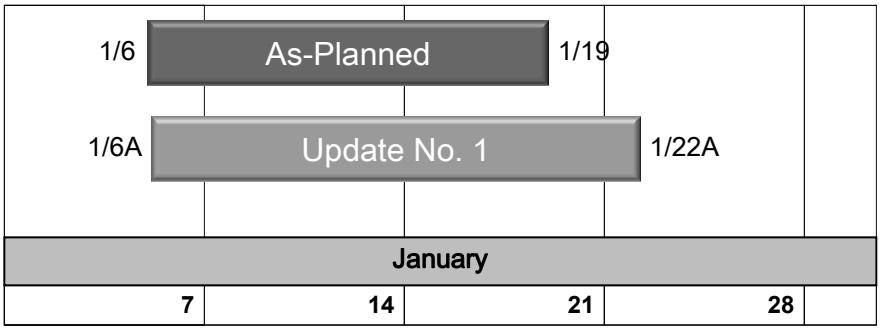


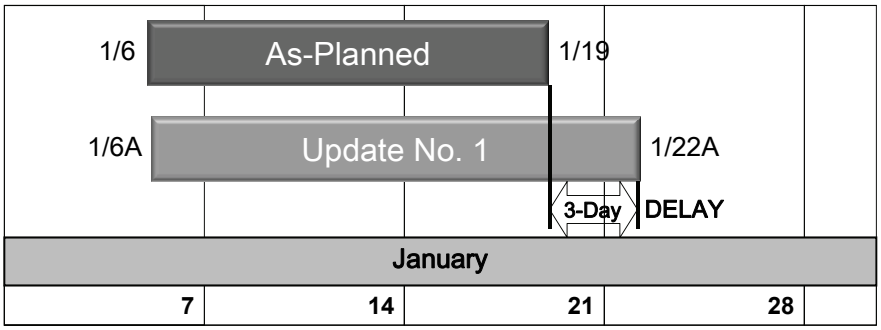
Contemporaneous Analysis Methodology

As-Planned Schedule

15	10	10	0	SUBMIT PILE DRIVER	6JAN08	19JAN08	6JAN08	19JAN08	0

Schedule Update, 2FEB98

15	10	0	100	SUBMIT PILE DRIVER	6JAN08A	22JAN08A



APPENDIX H: Exercise Answer Key

Exercise No. 2-1: Ambiguities

Answer: There is ambiguity as it relates to the question of whether or not 4 inches is a minimum or maximum depth of concrete removal.

Exercise No. 2-2: Eliminated Work Case Study

Answer: The Trial Court ruled that the agency properly deleted the bridge painting scope of work from the contract; however, the contractor was entitled to an equitable adjustment of $325,000. The agency appealed the decision.

The Appellate Court ruled that the agency properly deleted the bridge painting scope of work from the contract but reversed the equitable adjustment award because the specifications stated that individual pay items had to reflect estimated costs and the specifications bar additional compensation for unbalanced bid items. The contractor appealed.

The state Supreme Court ruled that the agency properly deleted the painting and that the contractor was entitled to an equitable adjustment of $325,000 to cover the cost of other items included in the pay item for the deleted painting work. The state Supreme Court took the following into account in reaching its decision:

1. No relevant state law relating to equitable adjustments.
2. Public contracts awarded by the federal government typically have equitable adjustment clauses.
3. The specification related to balanced bids was ambiguous as “claim for additional compensation” is subject to more than one interpretation.
4. Ambiguities construed against drafter of document.

Exercise No. 3.2: Measured Mile

Answer: The contractor excavated the trench at a rate of 10 feet per crew hour for the first 6 workdays. During the period that the contractor worked overtime, it excavated the trench at a rate of 8 feet per crew hour.

Unimpacted: 5 days x 8 hours x 6 weeks = 240 crew hours
2400 feet ÷ 240 crew hours = 10 ft./crew hour

Impacted: 6 days x 10 hours x 6 weeks = 360 crew hours
2880 feet ÷ 360 crew hours = 8 ft./crew hour

(10-8)/10 = 20%

Based on its progress, the contractor experienced an inefficiency factor of 20%.

Exercise No. 3-3: Constructive Acceleration

Answer: The following criteria should be presented and the groups should discuss whether or not the contractor satisfied each element:

a. There was an excusable delay.
b. The contractor gave notice of the excusable delay and requested a time extension.
c. The owner failed or refused to grant a time extension.
d. The contractor gave notice that compliance with the existing schedule would necessitate an acceleration of the work.
e. The contractor actually accelerated the work and incurred increased costs.

In this case, there may have been an excusable delay since two blizzards in April could be considered unusually severe weather. Also, the contractor did accelerate, resulting in additional costs; however, the contractor did not submit a request for time extension until after the acceleration was performed. Accordingly, the contractor is not entitled to recover its acceleration costs.

The instructor will ask the groups to share their comments on whether or not the contractor fulfilled its obligation to mitigate the owner's costs. The groups should take into account that the acceleration cost of $150,000, included working 18 additional Saturdays, included 4 months of 10-hour shifts, resulted in inefficiencies, and achieved only 5 days of actual acceleration.

Exercise No. 4-1: Cost Escalation Clauses

Answer: The second clause does not require the contractor to demonstrate that the delay moved the work into a period when labor costs exceeded those anticipated in its bid.

Exercise No. 4-2: Field Overhead Costs

Answer: The following items are not considered to be time-dependent field overhead costs, and therefore should not be included in the calculation:

1. Project Sign,
2. Telephone Installation,
3. Barricade Purchase,
4. Formwork Purchase,
5. Surveying,
6. Testing.

After deducting these items, the revised total is $216,780, resulting in a total claim amount of $18,065. Note that petty cash may or may not be recoverable. Petty cash is excluded from recovery, unless there is an accounting of the project costs paid by petty cash. If the items paid by petty cash can be accounted for, and are time-dependent, they are likely recoverable.

Exercise No. 4-3: Home Office Overhead Costs

Answer: $10,000 is unabsorbed during month 3. The instructor should ask the participants to consider how the contractor pays for the $10,000 in home office costs that its revenues could not absorb during month 3.

Exercise No. 4-4: Calculation of Unabsorbed Home Office Overhead

Answer:

Eichleay Method	Amount
Actual contract billings	3,000,000
Total company billings	12,000,000
Total overhead	400,000
Allocable overhead	100,000
Actual Days Contract Performed	500
Daily overhead	200
Days of Delay	100
Unabsorbed overhead	**$ 20,000**

($3,000,000) / ($12,000,000) x ($400,000) = $100,000

($100,000) / (500 days) = $200 / day

($200 / day) x (100 days) = $20,000

Exercise No. 5.1: Evaluation of Contractor Claim

Answers: The analysis and its results are presented below.

Question 1 The contractor states in its claim that it was "forced to constructively re-accelerate." The answer to Question 1 is "Yes."

Question 2 In order to determine if the contractor was constructively accelerated, all of the following 5 criteria must be met:

1. There was an excusable delay.
   NOT MET: weather is not an excusable delay under this contract.

2. The contractor gave notice of the excusable delay and requested a time extension.
   NOT MET: the contractor did not file a notice in accordance with the contract notice provisions. The contract requires notice of requests for time extensions "not later than 7 days following the termination of the delay." The contractor did not submit its request for a time extension until October 16, 1992, 96 days after the "termination of the delay" (July 12, 1992, the last rain day).

3. The owner failed or refused to grant a time extension.
   NOT MET: The owner did not receive (or refuse) the time extension request until after the work was complete.

4. The contractor gave notice that compliance with the existing schedule would necessitate an acceleration of the work.
   NOT MET: The contractor did not comply with the contract notice provisions and did not advise the owner that compliance with the existing schedule would necessitate acceleration until after the project was complete.

5. The contractor actually accelerated the work and incurred increased costs.
   MET: The contractor did satisfy this criterion.

   Since the contractor only satisfied 1 criterion out of 5, it was not constructively accelerated.

Question 3 The contractor has not established that it experienced an excusable delay. The answer to bidder's question #17 states that no extensions of time will be granted for "any weather conditions."

Question 4 The contractor has not complied with the contract time extension provision; therefore, it is not eligible for a time extension. The contractor's failure to provide timely notice may have compromised the owner's ability to mitigate costs and delays associated with the alleged change.

Question 5 There were a total of 16 rain days from May 5, 1992 through July 31, 1992. Of these days, 3 occurred on a Sunday, a scheduled non-work day; therefore, there were 13 days of critical delay due to rain.

Question 6 In May, June, and July, the contractor worked a total of 19,200 hours and installed 13,824 linear feet of roadway, for a production rate of 0.72 linear feet per hour (13,824/19,200).

In August and September, the contractor worked a total of 37,100 hours and installed 20,034 linear feet of roadway, for a production rate of 0.54 linear feet per hour (20,034/37,100).

The actual inefficiency is 25% (0.72-0.54)/0.72. Published guides are of limited value since they are estimates and not project specific. These should not be used when actual performance data are available.

Question 7 If the question of entitlement is ignored, the instructor should refer to the host agency's specifications to determine how it pays for overhead and profit.

No costs are recoverable, however, based upon the presentation the contractor has made. The contractor has not established entitlement to delays associated with weather events; and the contractor has not demonstrated that the project events met the 5 criteria necessary to create a constructive acceleration condition. Furthermore, the contractor's claim is an inefficiency/acceleration claim; thus, delay damages such as extended field office overhead and unabsorbed home office overhead costs are not compensable.

Question 8 Possible actions that could be taken to avoid this claim include:

1. Enforce timely submission of project schedules (baseline and all updates), and review each submission to ensure compliance with contract terms; identify and address any reported delays in a timely manner.

2. Discuss schedule issues (particularly delay problems) with the contractor on a regular basis. Listing "Schedule Issues" as a standing item on the weekly progress meeting agendas is an effective way to raise and resolve problems before they become problematic.

3. Once the contractor re-accelerated its work on August 1, 1992, the agency could have questioned the contractor as to its reasons for doing so. This would have given the contractor an opportunity to raise issues it was concerned about, so that the project stakeholders could collectively arrive at a solution.

Did the contractor mitigate the owner's costs?

The contractor expended $2,102,720 in order to receive a $600,000 bonus. The agency's project administration costs were reduced by completing the project 30 days early and the agency received the benefit of having the road open a month early. The agency valued these savings at $600,000; therefore, it was unreasonable for the contractor to expend in excess of $2 million to save $600,000.

Exercise No. 6-1: Preparation of Project Correspondence

Answer:

Dear ACME:

The agency acknowledges receipt of ACME's Notice of Potential Claim, dated May 22, 1997, regarding the enforcement of specified welding requirements. We have reviewed the letter of May 22 forwarding the Notice and its attachments. We disagree with the conclusion that our direction to ACME to inspect all field welds is a change to the contract requirements based on the following:

1. Standard Specification Section 49-5.02 governs the splicing of the "open-ended pipe piles" on this project, as ACME acknowledged in its letter.

2. Section 49-5.02 requires that, "Splices for steel piles shall be made by full penetration butt welding the entire cross section in conformance with the requirements in AWS D1.1." ACME acknowledged the applicability of AWS D1.1 in its letter.

3. Section 1.1 of AWS D1.1, “Scope,” states that, "This code contains the requirements of fabricating welded steel structures. When conformance to the code is stipulated in the contract documents, all provisions of the code shall be complied with, except for those provisions that the Engineer or contract documents specifically exempt."

4. AWS D1.1 requires inspection of all field welds. Neither the Engineer, nor the contract documents relaxed this requirement. ACME is still required to provide for inspection of all field welds.

5. The fact that the contract language related to the inspection of field welds was modified in subsequent Agency contracts, does not change the requirements of ACME’s contract.

For these reasons, ACME is required to provide inspection of all field welds. The cost of field inspection is incidental to the unit price paid to furnish and install the steel pipe piles. ACME is not entitled to reimbursement for inspection costs beyond the reimbursement already provided by the unit price for pipe pile.

With regard to the delays that ACME attributes to this issue, the contract documents require it to submit its welding procedure for steel pipe piles for approval prior to the start of welding. ACME’s plan for field inspection should have been part of this procedure. Because the procedure was not submitted prior to the start of welding, ACME did not discover that the Agency would enforce the specified field inspection requirements until the Agency pointed them out to ACME in the field. Thus, any delay that resulted from ACME’s failure to provide the required submittals in a timely fashion is its responsibility. Therefore, no time extension is due.

Even if the Agency had modified the specified inspection requirements, ACME would not be due a time extension or reimbursement beyond the unit price because: 1) ACME's letter does not include an analysis demonstrating that such a change delayed the critical work on the project; and 2) ACME has failed to provide a detailed description and calculation of the alleged added costs.

Sincerely,

The Agency

Important points to make:

- Stick to the facts. The deficiencies in Mr. Welder's preparation are irrelevant if he's right.
- Answer the contractor's claim. The claim concerned inspection of all field welds. The letter does not specifically address this allegation.
- Your emotional state is irrelevant. It does not matter that you are disturbed or baffled if the contractor is correct.
- There is probably a better way to describe a contract document than "alien."
- Keep the text of the response impersonal.

Consider drafting instructions at the end of the letter reminding the contractor of the notice and contractual procedures it must comply with should it disagree with the Agency's findings.

APPENDIX I: American Infrastructure, Inc. v. DelDOT

AMERICAN ARBITRATION ASSOCIATION
Arbitration Tribunal

In the Matter of:

American Infrastructure, Inc.

v. **AAA Case No. 14 441 Y 00433 13/14 20 1300 0433**

State of Delaware, Department of Transportation

FINAL AWARD

I, the UNDERSIGNED ARBITRATOR, having been designated in accordance with the arbitration provision contained in the Standard Specifications incorporated into the Contract, entered into between the above-named parties and having been duly sworn, and having duly heard the proofs and allegations of the parties, do hereby AWARD, as follows:

I. FINDINGS OF FACT

Based on the evidence presented at the five days of arbitration hearings, the Arbitrator finds as follows:

A. The Parties and the Contract

1. Petitioner is American Infrastructure, Inc. ("AI") which served as the general contractor for the construction of SR 1, North Frederica Intersection (the "Project"), Contract No. 24-122-03.01, AI Job Number: 223809 (the "Contract").

2. Respondent is the State of Delaware, Department of Transportation ("DelDOT"), which entered into the Contract and arranged for performance of the work on the Contract by AI on behalf of the State of Delaware.

3. AI's Bid Proposal for the Contract was subject to the Standard Specifications prepared by DelDOT (August 2001), including Section 105.17 ("Arbitration"):

"Any claim, properly presented pursuant to Subsection 105.15, processed through the claims procedure, and finally decided by the Chief Engineer pursuant to Subsection 105.16, in the absence of agreement by the Contractor and the Department as to the resolution thereof, and upon the demand of either party delivered in writing to the other within 30 calendar days from the date of the written decision by the Chief Engineer, as provided in the aforesaid Subsection 105.16; shall be decided by arbitration in accordance with the Construction Industry Arbitration Rules of the American Arbitration Association then in effect; except as otherwise modified by these Specifications. The arbitration proceeding may involve presentation of facts or such portions thereof as have previously been presented at prior administrative hearings held pursuant to Subsection 105.15 herein or may be based entirely upon the record, as established therein. The record established at prior administrative hearings pursuant to Subsection 105.15 shall be specifically admissible at such arbitration proceedings and such facts as have been established shall be specifically binding upon the parties; with the exclusion of opinions and conclusions thereon. Such arbitration shall be specifically based upon the claim presented at prior administrative hearings and no material, information, fact, and/or claim not presented at such hearings held pursuant to said Subsection 105.15 shall be admissible at any arbitration concluded pursuant to this section. The arbitrators, in their final ruling on the claim shall include a summary of the evidence, findings of fact based upon the evidence, conclusions of law, and a concise statement of the relief awarded."

4. DelDOT is an administrative agency of the State of Delaware.

5. The Contract, project-specific specifications and plans were all drafted/prepared by DelDOT (or on its behalf by its design professional, Century Engineering).

6. The Contract incorporated the Standard DelDOT Specifications ("Standard Specifications") as amended or superseded by the Contract-Specific Special Provisions.

7. DelDOT also prepared all bid documents for the Project; the bid documents, and Contract, described the Project as following a mandatory, phased construction that allowed for a total of 390 calendar days (with an allowance of 63 weather days) to complete the work.

8. None of DelDOT's bid or Project documents (i.e. the Contract or Standard Specifications) disclosed the existence of any unresolved or pending design issues that would affect the mandatory phased construction or the Contract duration of 390 days.

B. AI's Bid and the Award of the Contract

9. AI was the lowest, responsive, responsible bidder.

10. AI and DelDOT met at a Pre-Award meeting on August 31, 2009 at which DelDOT reviewed its bid with AI.

11. At no time during the Project or at the Pre-Award meeting was AI informed that there were any pending, unresolved issues respecting the design of the Sanitary Sewer Force Main work that would affect the Project sequence and duration.

12. AI was never told of *any* issues that would adversely affect AI's access to the work, or that the required phasing would change or that major changes to the plans were contemplated by DelDOT.

13. AI was thereafter awarded the Contract.

C. Initial Project Meeting

14. The Project Preconstruction Meeting was held on Tuesday, November 3, 2009. DelDOT did not inform AI that there were omissions/errors in the Project plans, or a contemplated change in the Project plans, or that a Project plan review had not been completed by Kent County, the owner of the sewer line that was to be relocated.

15. Although neither the bid nor Contract documents disclosed to AI that the Project plans had to be revised, Kent County had raised the design issues with DelDOT and Century prior to the Project Preconstruction Meeting.

16. The Project records confirm that there was no disclosure to AI that there were any defects or design issues in the Contract plans upon which AI based its bid.

D. Notice to Proceed and Initial Submissions

17. By way of an e-mail dated November 24, 2009, DelDOT advised AI that DelDOT "... time charges will start on Monday, November 30; however, work may not begin until the CPM schedule is submitted and approved." (DelDOT Exhibit Tab 5).

18. The Notice to Proceed was issued by DelDOT ("NTP", or "First Chargeable Day") to AI on November 30, 2009.

19. On December 4, 2009, five days after receiving the NTP, AI requested a coordination meeting among DelDOT, the design professionals and Kent County because AI had questions and concerns respecting the Project design.

20. AI's request was deferred until February 2, 2010. AI was not provided a specific reason for the deferral of the request.

21. AI's baseline schedule was approved on January 27, 2010. (DelDOT Exhibit Tab 8).

22. Although the exact date when DelDOT first knew of the deficiencies in the Project plans is not specifically clear from the Project records, based on the statements made at the February 2, 2010, meeting among AI, DelDOT, Century Engineering and Kent County, it is believed that DelDOT and/or its design professional, Century Engineering, knew of the defects in the Project Plans prior to the February 2, 2010 meeting.

23. At no time prior to the February 2, 2010 meeting did DelDOT advise AI of the defects in the Project plans, that Project plan revisions were being made, or any information provided about the scope and nature of the impacts as a result of the defects and corresponding

necessity for Project plan revision. DelDOT also did not disclose that the defects in the Project plans would foreclose AI's ability to perform the work in accordance with the approved baseline schedule or the mandatory sequences, pending the Project plan revision, or that there would be an extension to the duration of the work and changed/denied access to the entire site of work and increased costs to complete the work.

24. Specifically, as of the February 2, 2010 meeting, AI was prohibited from working in the areas of the sewer tie-ins, or the sanitary sewer lines due to the concern that the existing sewer lines could be affected, i.e. break.

25. As of February 2, 2010, DelDOT, Century Engineering and Kent County all knew that defects existed in the Project plans and those revisions to the Project plans were necessary to move ahead with the Project, but the duration of time for the revision to the Project plans by DelDOT, Century Engineering and Kent County was unknown.

26. As of February 2, 2010, DelDOT was specifically aware that despite issuing AI the NTP, the Project *could not* proceed and the physical start of the Project in accordance with the mandatory sequence and AI's approved baseline schedule was prevented by DelDOT. AI could not proceed in accordance with the Project plans and approved schedule, unless and until the Project plan modifications were completed by DelDOT (or its agents, Century Engineering), were reviewed and approved by Kent County, and issued to AI by way of a "Change Order" directing a change to the Project.

27. Defects in DelDOT's plans interfered with the progress of the Project as the Project could not proceed until the foregoing impediments were addressed to the satisfaction of Kent County.

28. Although DelDOT had the contractual right to suspend work on the Project pending the correction of the defects in the Project plans -- which would have entitled AI to both additional time to complete the Project and compensation resulting from the suspension and standby costs -- DelDOT chose to continue with the Project, without abating the "Contract time" from continuing to run and while "holding" the Project completion date of December 24, 2010.

29. DelDOT continued to credit each calendar day after the February 2, 2010 meeting against the allowed Contract duration of 390 days, even though DelDOT specifically knew that the impact of the defects, and corresponding necessity for Project plan revision, prohibited AI's following the mandatory Project sequence and progressing with the Project and that the duration of the Project, access to the site of work and costs to complete the work were all adversely affected and that AI was entitled to a time extension.

30. AI did not have under the Contract the right to unilaterally suspend its work.

[redacted]

E. Project Control Special Provisions

32. DelDOT drafted and incorporated into the Contract Special Provisions, the specification for a "Project Control System." (DelDOT Exhibit Tab 53).

33. DelDOT's Project Control System special provisions regarding the development and maintenance of the project schedule provided: "The Project Control System ***will be set up and maintained by the Department of Transportation*** to monitor and record work in progress and to coordinate and synchronize the construction management functions. The Department will

use CPM scheduling to approve the Contractor's work schedule, review work progress, evaluate time extensions, identify problem areas and recommend solutions to maintain the established work schedule. The Department will designate a Critical Path Method Administrator (CPMA) to oversee the Project Control System." (DelDOT Exhibit Tab 53, p. 211).

34. As it relates to the timing of the issuance of the Notice to Proceed, the Project Control System special provisions provided that the "Issuance of the Notice to Proceed is contingent upon receipt and acceptance of this schedule in accordance with Standard Specifications 108.02 and 108.03."

35. DelDOT disregarded this condition in the Project Control special provisions when it issued the Notice to Proceed on November 30, 2009. This action violated the express provisions of the Project Control special provisions.

36. Adherence to the Project Control special provisions dictated that the *earliest* date when DelDOT *should* have issued a Notice to Proceed was January 27, 2010, when the Baseline Project Schedule was approved by DelDOT. (See, DelDOT Exhibit Tab 8 -- DelDOT letter dated January 27, 2010, approving AI's baseline schedule).

37. Applying the Project Control special provisions to DelDOT's conduct, DelDOT improperly counted 58 calendar days toward the completion date -- measured from November 30, 2009 through and including January 27, 2010 -- when the Notice to Proceed was permitted to be issued. Therefore there was a constructive acceleration (*i.e.* DelDOT holding the end date of December 24, 2010 as the completion date) throughout the Project.

38. Because the as-bid Project plans were defective and the revised Project plans were not issued until June 21, 2010, AI could not develop a firm "intent" to construct a Project because there were no plans following the mandatory sequence. DelDOT and AI agreed that AI

could utilize "look ahead" schedules due to the uncertainty caused by the revisions to the Project plans.

39. By the time the revised Project plans were issued, the mandatory sequence was abandoned and no revised sequence was provided in the revised Project plans. (DelDOT Exhibit Tab 53, p. 217).

40. Contrary to its view that AI had the obligation to create updates to the project CPM schedules, the language of DelDOT's Project Control special provisions expressly assigned that responsibility to generate schedule updates to the "CPMA", *i.e.* DelDOT's scheduling representative. (DelDOT Exhibit Tab 53, p. 218).

41. The Project Control special provisions stated, *inter alia*: "The Project Control System *will be set up and maintained by the Department of Transportation* to monitor and record work in progress and to coordinate and synchronize the construction management functions. *The Department will use CPM scheduling to approve the Contractor's work schedule, review work progress, evaluate time extensions, identify problem areas and recommend solutions to maintain the established work schedule. The Department will designate a Critical Path Method Administrator (CPMA) to oversee the Project Control System*." (DelDOT Exhibit Tab 53, p. 211) (Emphasis furnished).

42. Pursuant to these Special Provisions (drafted by DelDOT), DelDOT's CPMA had specific assigned duties: "*The CPMA [DelDOT]* will receive the Contractor's CPM schedule databases for input *to generate the CPM schedules*." (DelDOT Exhibit Tab 53, p. 211) (Emphasis furnished)

43. DelDOT's CPMA further had the responsibility to evaluate the schedule impact as the special provisions state: "Discrepancies and/or changes initiated by the Department in

proposed quantities or plans that cause an extension to the critical path *will be considered by the CPMA*." (DelDOT Exhibit Tab 53, p. 211) (Emphasis furnished).

44. Although the testimony of DelDOT witnesses indicated their belief that AI was responsible for generating CPM schedule updates, the Project Control special provisions drafted by DelDOT and incorporated into the Contract by DelDOT actually assigned that duty and responsibility to DelDOT itself: ***"The CPMA [DelDOT] will generate a CPM schedule update reflecting the Contractor's update information."*** (DelDOT Exhibit Tab 53, p. 218) (Emphasis furnished).

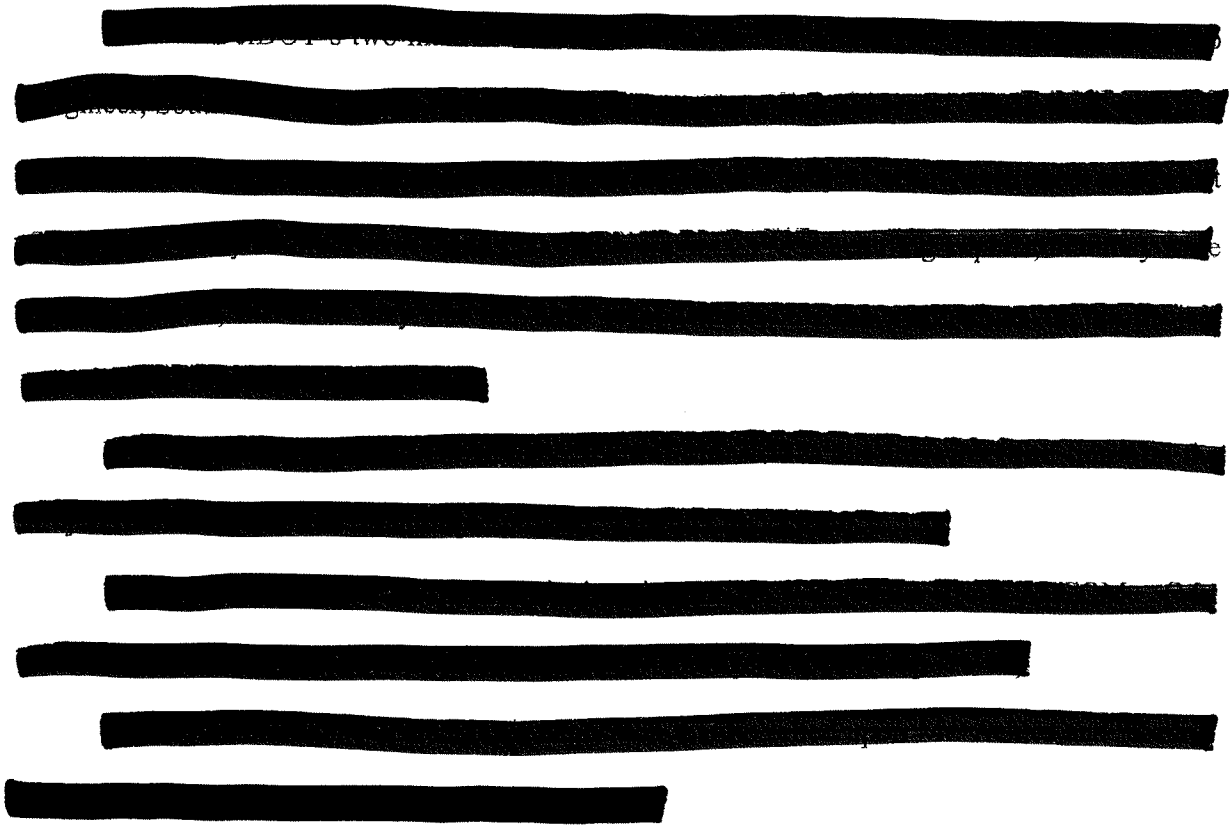
45. As it relates to schedule updates, the only requirement imposed on AI was the completion of a "status form provided by the Department..." (DelDOT Exhibit Tab 53, p. 218)

46. The testimony at the arbitration hearings was that AI furnished schedule information to DelDOT in advance of the project meetings and "look ahead" schedule information. There was no testimony that AI *ever* failed to complete the status forms provided by DelDOT, and the Project Meeting minutes do not record a single event when AI failed to provide the schedule information to DelDOT.

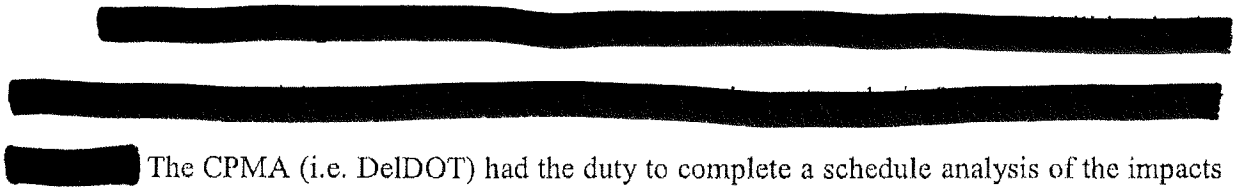
47. Schedule updates were the sole responsibility of DelDOT. (DelDOT Exhibit Tab 53, p. 218). "*The CPMA [DelDOT] will generate a CPM schedule update* reflecting the Contractor's update information," but DelDOT never performed this Contract obligation. (Emphasis furnished).

48. DelDOT's fundamental misunderstanding that AI, itself, had the assigned responsibility for the evaluation of schedule impacts resulting from DelDOT plan changes resulted in DelDOT's failure to analyze schedule impacts, and issue timely extensions to the Contract duration, all of which resulted in AI's acceleration to complete the work by the original

Contract completion date of December 24, 2010, since timely and proper time extensions were not granted.



53. When DelDOT issued the Project plan revisions on June 21, 2010, there was no evaluation of the schedule impact provided by DelDOT's CPMA to AI, even though the Project Control special provisions provided "Discrepancies and/or changes initiated by the Department in proposed quantities or plans that cause an extension to the critical path *will be considered by the CPMA*." (DelDOT Exhibit Tab 53, p. 211).



The CPMA (i.e. DelDOT) had the duty to complete a schedule analysis of the impacts of the changes to the Project plans. (Ledger deposition p. 54).

55. The Project Control Specifications clearly and unambiguously assigned the duty to generate schedule impact analyses for Project plan changes and all schedule updates to DelDOT's CPMA (DelDOT Exhibit Tab 53), and the testimony from DelDOT and AI demonstrated that the CPMA never performed any of these duties or responsibilities.

56. As a direct result of DelDOT's failure to perform as required by the Project Control special provisions, DelDOT incorrectly imposed the rescheduling responsibilities on AI.

57. DelDOT rejected each of AI's time impact analyses, but *never* properly evaluated the time impacts on the Project through any schedule evaluation.

58. Under the Project Control Specifications, DelDOT materially breached its obligations throughout the Project, starting with the improper Notice to Proceed, continuing with the failure to issue time extensions for the Project plan changes it directed, and finally resulting in its failure to properly evaluate the total impacts of the design errors and need to revise and reissue the Project plans.

59. As a direct result of these breaches, DelDOT: (a) failed to issue time extensions to AI in a timely fashion (resulting in actual and "constructive acceleration"); (b) failed to evaluate the time impact analyses (including the "but-for" analysis presented by AI which justified a time extension through the completion of the Project); (c) imposed on AI the duty (and resultant costs associated with hiring and utilizing K2) to perform DelDOT's contractual duties; (d) failed to compensate AI for all time related costs; and, (e) improperly assessed liquidated damages and withheld payment for delay and constructive acceleration.

[redacted]

F. **Project Plan Changes**

61. Between February 2, 2010, and May 10, 2010, AI requested information as to when the revised Project drawings would be issued. DelDOT issued several sets of draft "interim drawings." These drawings were specifically not the "Project Drawings" and were not reliable or complete.

62. Virtually all of AI's claims resulted from the delays and impacts due to the directed changes to Project drawings by DelDOT and DelDOT's breach of the Project Control special provisions.

63. Because DelDOT never completed any schedule analyses, and did not properly evaluate the scope and impacts of the revisions to the Project plans, it never properly and fairly evaluated AI's claims.

64. DelDOT's Standard Specifications, Section 101.14 define a "Change Order" as: "A written order issued by the Engineer to the Contractor for a change to the Contract. Changes to the Contract are extra work, increases or decreases in Contract item quantities, or alterations to the Contract, and are within the scope of the Contract. A change order also establishes the basis and amount of payment for the change to the Contract and provides for any time extension necessitated by the change to the Contract."

65. The "Project Control System" special provisions respecting "Change Orders" provided for the time impact analysis of the Change Orders issued *by DelDOT,* but DelDOT did not issue any time impact analysis respecting the Project plan changes. (DelDOT Exhibit Tab 53, p. 219-220, *see, also, supra*).

66. When DelDOT initiated a Change Order, it had the obligation to address all time impacts to the work, and to compensate AI for the impacts of the changes as a part of the Change Order process. (DelDOT's Standard Specifications, "Change Orders", Section 101.14).

67. When DelDOT issued revised plans on June 21, 2010, this was a "Change Order" insofar as it was "issued by the Engineer for a change to the Contract."

68. Pursuant to Section 109.04 ("**Payment for Differing Site Conditions, Major Changes, Extra Work, and Force Account**") of DelDOT's Standard Specifications: "Differing site conditions, changes, and extra work performed under Section 104 will be paid for using the following methods as appropriate: A. Contract unit prices. B. Unit prices agreed upon in the change order authorizing the work. C. A lump sum amount agreed upon in the change order authorizing the work or D. If directed by the Department, work performed on a force account basis..."

69. Although DelDOT directed a change to the Project plans, it failed to follow its Standard Specifications by failing to provide pricing for the costs associated with the changes. This should have included direct costs for change work, payment for the impacts to the Project due to the Contract plan changes and a contemporaneous time extension consistent with the requirements of the Standard Specifications and Project Control special provisions.

70. These various changes resulted in the denial of access to the site of work as and when originally planned by AI -- as depicted in the baseline schedule approved by DelDOT -- and consequential unavailability of power outages from the utility company DelMarva, shifting of weather sensitive work into the winter and other disruptions to AI's work caused by mistakes even in the revised plans.

71. As a result of these various changes, the Project duration was extended. DelDOT's Standard Specifications respecting "Change Orders" required payment for all of the effects of the directed changes, including but not limited to items of work that were time related such as the continued maintenance of its field operations, Project office, Project superintendence, maintenance of traffic, furnishing traffic control devices such as barriers and traffic signage, and multiple mobilizations to areas within the Project due to the disruption of planned sequence of work reflected in AI's approved baseline schedule.

72. In addition, because of DelDOT's failure to follow the Standard Specifications respecting "Change Orders," and its errors in understanding the duties on the CPMA, there was a lack of timely and proper time extensions, despite DelDOT's knowledge that the Project would be -- and eventually was -- affected by winter weather conditions in 2010 - 2011.

73. DelDOT's "initial time extension" of 65 days pushed the completion of weather sensitive work into winter months, when DelDOT should have recognized that the time extension had no substantive benefit to, or effect on AI's work.

74. Had DelDOT's CPMA performed his duties in June, 2010 and throughout the Project, DelDOT would have recognized the necessity for time extensions because of: (a) the improper (early) NTP, and (b) change in sequence (which was known as of February 2, 2010, and contemporaneous with the issuance of the new plans on June 21, 2010). Had DelDOT's CPMA performed his duties, DelDOT would have also known that the "time extension" granted in October, 2010 had failed to take into account the weather sensitive nature of the work and therefore did not relieve AI of the need to accelerate to overcome the delay caused by the defective plans. And finally, had the CPMA performed his duties, DelDOT would have

recognized that all time extensions were compensable because they were all directly related to changes directed by DelDOT to correct errors in its plans.

G. **AI Notices of Claims**

75. The first notices of claim by AI came *prior* to the issuance of the revised Project drawings. (AI Exhibit Binder Tabs 15, 17).

76. AI's formal notice of claim, with specific reference to Section 105.15, was on May 12, 2010, one day after DelDOT furnished the advanced redesign plans. DelDOT acknowledged receipt of the claim on May 13, 2010. (AI Exhibit Binder Tabs 46, 47).

77. DelDOT has taken the position that "There was no prior notice of the claimed "Extra General Condition" costs totaling $338,194.37 as required in Subsection 105.15 and the project was substantially completed for over 60 days at the time the claim was received." However, the facts are that AI provided timely notice of its time impact claims and the amounts being sought are for costs that continued to accrue through August, 2011. Therefore, AI's claim was presented within the required time for the cost impacts being sought.

78. The Standard Specifications provide, in part, an "outside" due date for the submission of claims: "C. *Claim Submittal.* The Contractor must submit a formal claim in writing within 60 calendar days ***after the item claimed has been completed.***"

79. In accordance with DelDOT's specifications, an item is not "completed" until it is deemed completed by DelDOT's acceptance of the work which occurs only after final inspection.

80. It is standard in the industry that an item is not deemed completed until it is "accepted" by the owner as having been measured and determined to meet all contract specifications.

81. Final inspection of the work did not occur until August, 2011. Therefore, AI's formal claim submission was timely.

82. Further, DelDOT was on notice from at least May 2010 and thereafter in September, 2010, that AI was seeking a compensable time extension.

83. Therefore, despite its claim of lack of notice of time related costs, DelDOT had specific notice (as confirmed in DelDOT's letters dated October 12, 2010 and March 22, 2011) of AI's request for increased time and that, in AI's view, the time impact costs were compensable throughout the Project.

84. DelDOT claimed that AI was substantially complete with the exception of two items on June 9, 2011. However, DelDOT also acknowledged that AI's work continued on the Project *after* June 9, 2011, and in point of fact, assessed liquidated damages for work completed by AI *after* June 9, 2011.

85. AI provided timely notice of claims as prescribed by DelDOT's specification.

H. Prejudice Due to Alleged "Lack of Notice"

86. DelDOT *argued* that there was "prejudice" due to the lack of notice of claims, but there was no evidence to support this argument.

87. Rather, the evidence showed that DelDOT maintained daily records of all activities at the Project and that DelDOT was fully aware of AI's work and work forces, and was especially aware that the disruption to the Project was a direct result of DelDOT's plan defects.

88. Further, despite DelDOT's claim of "prejudice" due to the alleged lack of notice, DelDOT testified at the Claims Committee hearing that it maintained records of the impacts in terms of manpower, equipment and materials due to the Project plan revisions. (See Claim

Committee transcript p. 101: "We went ahead and tracked manpower, equipment, and materials in relation to the revision.")

I. Impacts of Plan Changes on AI's Work

89. DelDOT took the position that the "preliminary plans set" emailed to AI on May 11, 2010, was the date from which all time impacts, entitlements to time extensions, cost impacts and schedule updates should be measured even though it concedes that it performed no such analysis.

90. Section 104.05 of the Standard Specifications ("Changes in the Character of Work") provides: "The Department reserves the right to, at any time prior to the completion of the Contract, issue[d] plan revisions, make adjustments in Contract item quantities, or make such other alterations considered necessary to satisfactorily complete the Contract. 1. A. Such changes will be issued *in writing by the Engineer*." (Emphasis added).

91. On June 21, 2010, DelDOT furnished AI with the final set of revised drawings.

92. As a matter of Contract, when DelDOT changed the sequence and plans for the Project, *DelDOT* was correspondingly required to change the Contract duration and compensate AI for all consequences. Further, Section 104.05 of the Specification states that "3. C. If as a result of such changes the Contractor requires additional time to complete the Contract, adjustments in the Contract time will be made under Subsection 108.07" and "D. Payment for changes will be made as provided in Subsection 109.03 or 109.04." Both the imperatives for time and payment were ignored by DelDOT.

93. On May 12, 2010, one day after receiving the advance emailed copy of the plans, AI gave notice to DelDOT of a claim.

94. On May 13, 2010, DelDOT acknowledged that the May 11, 2010 email contained an ***incomplete set of drawings***: "***It is our intention [as of May 13, 2010] to provide a full plan revision as soon as possible in order for AI to be able to submit pricing for any new items of work involved.*** Any time impacts to your schedule need to be full detailed in your CPM update/narrative per the CPM Specifications." (Claimant Exhibit Tab 47) (Emphasis furnished).

95. DelDOT's May 13, 2010 letter admits that "a full plan revision" was not yet issued.

96. The duration between the Notice to Proceed of November 30, 2009 and June 21, 2010 -- the date when AI was first provided with "complete plans", *was 203 calendar days.* DelDOT never granted AI a 203 day time extension.

97. Both AI and DelDOT agreed that one result of the revision to the Project plans was to shift AI's work into different weather seasons, *i.e.* from summer months, into the winter, which resulted in time and cost impacts.

98. Specifically, both AI and DelDOT agreed that one of the impacts of the revised Project plans was that the AI work which would be affected by power outages by DelMarva was shifted into the "hotter months" when power outages typically would be less available.

99. As between AI and DelDOT, the party responsible for the impacts arising from the unavailability of DelMarva power outages (and lack of predictability of when power outages would be available) is DelDOT.

100. DelDOT acknowledged the impacts of the DelMarva power outages by granting a time extension; however, the time impacts were never evaluated by DelDOT's CPMA and DelDOT dismissed, without any CPM analysis, AI's time impact analysis ("TIA's"). Until the

Claims Committee stage, DelDOT refused to recognize that the impact was a compensable delay.

101. The belated time extension arising from the DelMarva outages did not eliminate the necessity for AI to accelerate because the time extension DelDOT granted only pushed the end date from the original project completion date of December 24, 2010, into the winter months when the Project work was "specification precluded", i.e. paving, concrete work and earth work with landscaping could not be completed in accordance with the specification due to temperature restrictions.

102. DelDOT's "time extension" was belated and insufficient, unsupported by a CPMA schedule analysis and had no substantive effect on the work. It resulted in a "constructive acceleration" which meant that AI (although entitled to more time and compensation than DelDOT provided) was forced to accelerate to try to meet the original project completion date of December 24, 2010. Even when provided a "time extension", the time extension provided no relief from the original completion date since elements of Project work could not be completed in the wintertime.

103. Thus, DelDOT is responsible for both delay and acceleration costs.

J. AI's Cost Calculations for All Claim Items Conformed to the Specifications. None of the Claim Items Were Calculated Utilizing a "Total Cost Approach." AI Has Established Entitlement to be Paid for all Claim Items.

104. When DelDOT issued the revised Project plans to address the design errors, and directed AI to complete the work in accordance with the new plans, DelDOT had the obligation under the "Change Order" Standard Specifications to fully address all the costs associated with the directed changes and all impact costs of the delays and interferences with the as-bid Project.

105. Although DelDOT paid for some direct costs associated with the directed changes, it failed to pay for all of the direct and any of the delay damages resulting from the directed changes, including all time related costs, costs associated with the extended duration of the Project, shifting of work into different seasons, and failed to grant timely extensions to the Project time.

106. AI proved that its as-planned work (reflected in the approved Baseline Schedule that followed the mandatory sequences) was delayed by DelDOT's revising of the Project plans due to the defects disclosed to AI at the February 2, 2010 meeting.

107. AI's proof included the TIAs submitted to DelDOT. (Claimant Exhibit Binder Tabs 5, 70). DelDOT completed no schedule or time impact analysis during the Project or in connection with any of AI's claims analysis, and admitted that they did not know if there were any schedule impacts that had resulted from what it asserted were "work errors."

108. DelDOT also argued that AI's method of calculating its increased costs for some Claim Items was a purportedly improper "total cost approach."

109. DelDOT's Standard Specifications **Section 105.21 ("Claims for Delay Damages")** begins: "The Department may grant time extensions in the performance of work for delays caused by acts of God, acts of the public enemy, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, unusually severe weather, or other causes, only when these delays are not the fault or responsibility of the Contractor, are beyond the Contractor's control, and could not have been anticipated by the Contractor. For such delays that are also beyond the control and not the fault of the Department, the Contractor shall be entitled to a time extension, but shall not be entitled to recover any damages resulting from such delays. In the event a delay is not caused by the Contractor's fault or negligence but is caused wholly by

actions of the Department, or determined by an arbitrator and/or judicial proceeding to be the Department's sole responsibility, an extension of time shall be granted in an amount equivalent to the actual critical delay caused by the Department, and the Contractor shall not be entitled to any additional compensation ***except as allowed herein***." (emphasis added).

110. AI's individual claims that follow are specifically allowed by the Standard Specifications pursuant to either the "Claim", "Delay Claim" and "Change Order" Standard Specifications.

111. DelDOT's Specifications **Section 105.19 ("Claims")**, for the recovery of damages for a ***claim*** provides, *inter alia*: "All claims shall be submitted according to the procedure established in Subsection 105.15. ... *the Contractor shall submit to the Department an itemized list of labor, equipment, and materials used and such other costs as specifically allowed pursuant to this Subsection. The Contractor shall not be entitled to recover any costs other than those contained and allowed herein. As described below, A. through G. shall cover all direct and indirect costs allowed and H. identifies all non-allowable costs.*"

112. The following are specifically permitted elements of damages to be paid to the Contractor for claims:

> "A. *Labor.* In accordance with Subsection 109.04 D.1.
>
> B. *Bond, Insurance, and Tax.* In accordance with Subsection 109.04 D.2.
>
> C. *Materials.* In accordance with Subsection 109.04 D.3.
>
> D. *Equipment.* In accordance with Subsection 109.04 D.4.
>
> E. *Percentage Markups.* In accordance with Subsections 109.04 D.6. and 109.04 D.7.

F. *Subcontractor Claims.* Any claim submitted by the Contractor on behalf of a subcontractor shall be submitted according to Subsection 105.15 and shall be solely limited to the list of all direct or indirect costs permitted by A. through D. above. For work approved by the Department, the subcontractor will be allowed a percentage markup as permitted by Subsections 109.04 D.6. and 109.04 D.7. The Contractor will be allowed an additional percentage markup as permitted by Subsection 109.04 D.8. to be computed on the final sum total of such subcontractor cost claimed under A. through D. above for portions of subcontractor work approved by the Department.

G. *Waiver of Liquidated Damages.* A claim, not for additional costs, but for a waiver by the Department of an assessment of liquidated damages, in whole or in part, may also be made by the Contractor as part of this Subsection."

113. In accordance with **Section 105.21 ("Claims for Delay Damages")**, the following are *expressly* recoverable damages: "All direct and indirect costs allowed are covered in A. below, and B. below identifies all non-allowable costs. Compensation provided by A. below shall not be duplicative of compensation already provided as part of Subsection 105.19 or 109.04:

A. *Allowable Direct and Indirect Expenses.* Only the additional costs associated with the following items will be recoverable by the Contractor for delay compensation:

1. Extended Field Overhead. Field overhead costs necessary for the prosecution of the work during the delay period, as follows:

a. General Field Supervision. Such costs include but are not limited to general field supervision, assistants, watchman, clerical and other field

support staff. Compute these labor costs in accordance with Subsection 109.04 D.1. For salaried personnel, calculate the rate of wage (or scale) actually paid by dividing the weekly salary by seven days per week.

b. *Field Office Facilities and Supplies.* Such costs include but are not limited to field office trailers, tool trailers, office equipment rental, temporary toilets, and other incidental facilities and supplies. Compute these costs on the basis of the actual added costs incurred by the Contractor to provide these services as a result of the delay.

c. *Maintenance of Field Operations.* Such costs include but are not limited to telephone, electric, water, and other similar expenses. Compute these costs on the basis of the actual added costs incurred to maintain these services as a result of the delay. These extended field overhead costs are not duplicative of those compensated in Subsection 109.04 D.7.

2. *Labor.* For all necessary, non-salaried, idle labor that must remain on the Project during such periods of delay due to collective bargaining contracts or other reasons approved by the Engineer, compute the labor costs in accordance with Subsection 109.04 D.1.

3. *Bond, Insurance, and Tax.* In accordance with Subsection 109.04 D.2.

4. *Equipment.* For any idle equipment other than small tools that must remain on the Project site during delays, the Contractor is to receive compensation at the rate calculated in Subsection 109.04 D.4. Should it not be necessary for machinery or equipment to remain on the Project during delays, the Contractor is

to receive transportation costs to remove the machinery or equipment and return it to the Project at the end of the delay period.

5. *Materials.* Costs for material escalation due to the delay or the cost of storage of materials due to the delay are recoverable. Obtain the Engineer's approval prior to storing any material due to a delay.

6. *Percentage Markups.* An additional 10% markup of the total of 1., 2., 3., and 4. above will provide full compensation for home office overhead and any other costs attributed to the delay for which no specific allowance is herein provided. Payment under this Subsection constitutes full compensation for all items of expense related to such delay. No profit is allowed under this Subsection. The markup is not duplicative of those provided in Subsections 105.19 E., 109.04 D.6., and 109.04 D.7."

114. DelDOT's Specifications make it plain that the delay damages under Sections 105.19 and 105.21 are to be read together, and so long as there is no duplication in the claims, the nature and amounts for the claims and the consequences of the claim are all recoverable costs. These sections apply to AI's entitlements to claim costs and delay damages.

115. DelDOT's Standard Specifications **Section 101.14 ("Change Order')** also prescribe payment for all costs for Change Orders, "A written order issued by the Engineer to the Contractor for a change to the Contract. Changes to the Contract are extra work, increases or decreases in Contract item quantities, or alterations to the Contract, and are within the scope of the Contract. *A change order also establishes the basis and amount of payment for the change to the Contract* ***and provides for any time extension necessitated by the change to the Contract.***"

123. At the February 2, 2010 coordination meeting among DelDOT, Kent County, DelDOT's engineers, Century Engineering and AI, Kent County's representative notified, *inter alia*, AI that there were defects in the Project plans.

124. Kent County's representative stated at the February 2, 2010 meeting that the plan defects were known to Century Engineering prior to the February 2, 2010 meeting, that the Project plans had to be revised, and that the Project could not proceed in accordance with the mandatory sequence at that time.

125. As of February 2, 2010, the Project plan revisions became a "restraint" (as that term is defined in the Project Control Specification) on AI's proceeding with the Contact, as bid, that followed the mandatory sequences in the Contract. (DelDOT Exhibit Tab 53; p. 214)

126. As of the February 2, 2010 meeting, AI and DelDOT knew that:

a. AI could not proceed with the project as designed and advertised and which formed the basis of AI's bid; and,

b. The as-bid Contract plans would have to be changed by DelDOT's direction pursuant to Standard Specification 104; and,

c. The physical start of the project as planned by AI and as reflected in the baseline schedule would be held in abeyance until the Project plan revisions were completed by DelDOT and/or Century, as well as reviewed and approved by Kent County; and,

d. There would be delays and costs associated with the revised Project plans and the directed changes that would be issued by DelDOT, but until the duration of the Project plan revision and scope of the changes were known, neither the time impacts nor the costs could be estimated; and,

e. If mitigation efforts were undertaken by AI, the mandatory sequences would be abandoned, the schedule and construction logic ties (i.e. AI's approach to the project as bid) would be changed and broken, so that the as-planned work by AI would materially change; and,

f. Access to the site of work, especially in the area of the sewer tie-ins, would change, especially with regard to when access would be provided, how the changes would interface with existing utilities and how the Project plan revisions would affect dependent work.

127. However, neither DelDOT nor AI knew how long the Project plan revisions would take.

[redacted]

129. As documented in the March 4, 2010 Progress Meeting Minutes, AI requested a time extension of 63 calendar days, specifically referencing Section 105.21 of the Standard Specifications respecting delays. (AI's letter dated March 4, 2010 Claimant Exhibit Tab 14, references 105.21 of the Standard Specifications).

130. As of March 4, 2010, DelDOT was specifically on notice of AI's claim of delays and time impacts. (March 4, 2010, Progress Meeting p. 2).

131. The Progress Meeting Minutes for the March 4, 2010 meeting record that AI provided notice of the critical path delay, the necessity to mitigate the time impacts and notice of time and cost impacts that would be quantified in the future. (*Id.* p. 2). AI is recorded as stating "in closing, please be advised that American Infrastructure is firmly committed to maintaining our construction schedule. We will work closely with the Department to ensure these

forthcoming changes are processed as expeditiously as possible. Once the design revisions are received by American Infrastructure we will advise the department of any time and cost impacts to the project." (*Id.* p. 2). Based upon the notices reflected in the March 4, 2010, Progress Meeting Minutes, DelDOT was aware of claims by AI for costs. DelDOT's argument that it had "no notice" is not supported by the project records.

132. As documented in the Project Meeting Minutes for April and May, 2010, in an effort to mitigate the time and cost impacts to the Project due to the defective plans, AI proposed to work "out of sequence" with work not directly affected by the design error identified by Kent County at February 2, 2010 meeting.

133. AI was legally obligated to mitigate its damages. AI's mitigation proposals were all unconditionally approved by DelDOT.

134. DelDOT's issuance of a new set of plans on June 21, 2010, constituted a "Change Order" as defined in the specifications. See Section **101.14 ("Change Order"),** "A written order issued by the Engineer to the Contractor for a change to the Contract. Changes to the Contract are extra work, increases or decreases in Contract item quantities, or alterations to the Contract, and are within the scope of the Contract. *A change order also establishes the basis and amount of payment for the change to the Contract* ***and provides for any time extension necessitated by the change to the Contract.***"

135. However, DelDOT *did not* provide for the time extension necessitated by the change to the Contract as was its Contractual responsibility.

136. Because of the impact to the Project caused by the defective plans, which in turn affected other items of work, AI submitted TIA's and schedule analyses which documented AI's entitlement to a compensable time extension through August, 2011.

137. AI's TIAs and schedule analyses were rejected by DelDOT. (See DelDOT's December 13, 2010, email, State Exhibit, Tab 48). Specifically, DelDOT rejected every schedule submission due to Mr. Ledger's disagreement over whether May 11, 2010 or June 21, 2010, was the correct plan issue date. (See, also, DelDOT claim response: "September 2, 2010, Mr. Ledger responded to AI rejecting their submitted CPM update for April/May which was to detail impacts related to the Force Main Revision.").

[redacted]

139. DelDOT has completed no TIAs and offered no schedule analysis at the hearing before the Claims Committee, the Chief Engineer, or at the arbitration (nor offered any scheduling expert testimony, including the Project CPMA) to refute the claims by AI that the project duration was extended exclusively due to the omissions and errors and directed changes by DelDOT.

140. Despite its Contractual obligation (see, Project Control Special Provisions, *supra*, (DelDOT Exhibit Tab 53)) and its purported ability to do so (i.e. DelDOT testified that it had a specific individual assigned as the scheduling representative during the project, i.e. the CPMA (who was later "replaced" by a scheduling representative from AECOM)), DelDOT provided no scheduling analysis in its written claim responses, and offered no testimony of a scheduling expert or DelDOT's Project scheduler. DelDOT chose instead to rely upon the testimony of Mr. Ledger, who admitted in his deposition that he is not a scheduling expert and was not DelDOT's scheduler on the Project.

141. When DelDOT issued the new plans in June, 2010, and directed AI to perform work in accordance these new plans, DelDOT *did not* provide any new sequences or address the time impacts for the changes.

142. DelDOT offered no schedule analysis that documented or demonstrated that AI caused the extended duration of the Project.

143. The nature and types of damages for which AI has requested compensation are those specifically permitted by DelDOT specifications for "Changed Conditions" and damages for "Delay."

144. The method utilized by AI to calculate its damages conformed to the prescribed methodology for the calculation of costs for Delays and Changed Conditions in the Standard Specifications.

145. Based on the weight of the evidence submitted by AI and DelDOT on entitlement and damages issues as to Claim Item No. 1, AI established it is entitled to an Award of $338,194.37 for Claim Item No. 1.

CLAIM ITEM No. 2: Traffic Barrier

146. DelDOT specifications Section **104.09 ("Maintaining Traffic")** provides: "The Contractor shall keep all roads open to all traffic during the construction. Where provided in the Contract or approved by the Engineer, traffic may be bypassed over an approved detour route. The Contractor shall keep the section of the Project being used by public traffic in a condition that safely and adequately accommodates traffic. *The Contractor shall furnish, erect, and maintain barricades, drums, warning signs, delineators, striping, and flaggers, in accordance the Traffic Control Manual.*" AI was therefore contractually required to maintain all traffic

control devices, including traffic barriers as prescribed by the plans and specifications throughout the project.

147. The evidence was that DelDOT knew as of the project meeting on February 2, 2010, that the project would not be completed by the anticipated completion date of December 24, 2010, and therefore knew that AI would have to continuously maintain barriers as well as the prescribed traffic controls for as long as the Project was not completed.

148. DelDOT's distinction between "owned" and "rented" barrier is not based on the specifications and, if applied, would provide DelDOT with services without the obligation to pay for them.

149. The Change Order Specification, Section 109.05 provides, *inter alia*: "No allowance will be made or claims considered for any quantities used in completing the work in excess of those given in the proposal *unless changes due to conditions encountered during construction become necessary* and are authorized in writing by the Engineer. In such cases additions or deductions will be made to or from the proposal quantities for the actual volume or amounts charged, with payment adjusted in accordance with the bid price of the item."

150. DelDOT argued that there was a lack of advanced notice which "interfered with the Department's ability to mitigate the costs now being claimed" However, this was not supported by testimony or documentation.

151. As a matter of Contract and the Standard Specifications, DelDOT knew AI was responsible for the continuous maintenance of traffic, which included the maintenance of the barriers throughout the project limits.

152. DelDOT argued: "While there were several options that could have been pursued or considered, these options were not able to be considered due to the failure of the Contractor to provide adequate notice." (DelDOT Claim Committee binder).

153. However, DelDOT never identified *any* of the purported alternative "options that could have been pursued or considered" at the Claims Committee before the Chief Engineer, or in testimony at the arbitration.

154. Because of the Project delays, the barrier wall remained on the project longer than the original Contract time.

155. AI's bid anticipated the barrier would be onsite through October 2010.

156. AI incurred extra cost for the traffic barrier remaining on site until May 2011.

157. AI provided the barrier for an addition six months (*i.e.*, November 1, 2010 through April 30, 2011).

158. The fact that AI may have owned the traffic barrier does not mean that DelDOT was entitled to use it on the Project without charge.

159. Evidence was presented that the fair market value (an appropriate measure of damages) for barrier rental was $7.75/Lineal foot for a period of three months. (The Blue Book does not carry Jersey Barriers, so finding the Blue Book value was not an option.).

160. The evidence showed the cost for the extended period of six months is $7.75/ Lineal Foot for three months, or $15.50 for six months. Multiplying this rate by 4541 Lineal Feet would amount to $70,385.50.

161. Based on the weight of the evidence submitted by AI and DelDOT on entitlement and damages issues as to Claim Item No. 2, AI established it is entitled to the Award of

$70,294.00 it is requesting, plus the 10% allowable mark up of $7,029.40 for a total of $77,323.40.

CLAIM ITEM No. 3: Extended Maintenance of Traffic Controls

162. The rate for the extended traffic controls was agreed upon by AI and DelDOT to be at the rate of $247.44 per day. The only disputed issue was over the number of compensable days.

163. The Claims Committee and Chief Engineer found 68 days were compensable. This included a compensable utility delay of 22 days related to DelMarva's refusal to provide outages.

164. DelDOT issued a Change Order for extended Maintenance of Traffic ("MOT") for 46 days (68 days approved time extension minus the 22 day time extension associated with utilities = 46 days).

165. AI claims the additional MOT from the original project completion date of December 24, 2010, until the bridge opening on June 29, for a total extended period of time of 188 calendar days.

166. AI and DelDOT have agreed with the pro-rated daily payment amount based on the project Bid Item 763500 divided by the total original Contract time of 390 calendar days as follows: Bid Item 763500 MOT = $96,500 / 390 days = $247.44 per days.

167. Based on the weight of the evidence, the Arbitrator finds with request to Claim Item No. 3. AI is entitled to 188 calendar days x $247.44 per day = $46,518.72, minus $11,382.24 (for DelDOT payments). Therefore, AI is entitled to an Award of $35,036.48 for Claim Item No. 3.

168. DelDOT claimed by way of defense that "Maintenance of Traffic was not provided during the winter suspension period as no work was ongoing". However, based on the evidence presented, the Arbitrator finds the maintenance of traffic controls continued throughout the winter period.

CLAIM ITEM No. 4 Winter Shutdown

169. In communications between DelDOT and AI, it was agreed that there was to be a winter shut down, that AI had equipment on site (specifically, equipment remained on the bridge) which would be idled and that DelDOT would keep daily records of the manpower and equipment on site during the shutdown period.

170. DelDOT granted AI a non-compensable time extension.

171. Mr. Ledger admitted in an email to AI: "Joe [an AI representative] - As discussed by phone today, *we are in agreement with a winter suspension following work on Dec 16, 2010 due to the impending winter weather conditions and the temperature sensitive nature of the remaining work.*" (Ledger email December 13, 2010, DelDOT Exhibit No. 48).

172. In Mr. Ledger's email, DelDOT agreed to pay *some* costs: "While we agree to pay for the direct costs of the each/day and monthly items as necessary based on items in use on the project, it is the Department's position that any AI overhead is the Contractor's responsibility much the same as DelDOT's overhead and consultant costs (for both winter 2009¬2010, and winter 2010-2011) would be our responsibility." (Ledger email December 13, 2010, DelDOT Exhibit No. 48).

173. Mr. Ledger's email (Ledger email December 13, 2010, DelDOT Exhibit No. 48, State Ex 48) included the statement that: "Once a comprehensive time extension has been established, AI will be required to submit a new schedule outlining completion of the remaining

items of work within the remaining contract time (including extensions). All outstanding pay estimates will be released once this schedule is submitted." This never occurred because DelDOT rejected each of AI's TIA and schedule analyses without providing any corresponding analysis by DelDOT or identifying any errors in AI's TIAs.

174. DelDOT also claimed that AI failed to object to Mr. Ledger's email with respect to AI's right to compensation for the winter shutdown and therefore these claims were waived since ostensibly the condition was "accepted."

175. However, there is nothing in the Contract, Standard Specifications or the Special Provisions that provided that AI was obligated to "object" to any unilateral condition sought to be imposed by DelDOT.

176. In order for there to have been modifications to the Contract Specifications, a Section 101.14 Change Order was required; *but none was issued by DelDOT.*

177. AI working under winter conditions was a direct result of delays to the project resulting from the Project plan revisions. The winter shutdown damages thus fall squarely within the delay damage portions of the Standard Specifications.

178. AI supplemented its claim submission with cost records which proved entitlement to winter shutdown damages in the amount of $93,502.01 for the extra project costs due to the winter shutdown. The evidence showed these were the direct costs of the shutdown, not overhead, as alleged by DelDOT. Accordingly, $93,502.01 is awarded to AI for Claim Item No. 4.

CLAIM ITEM No. 5: Abatement of Liquidated Damages

179. On Pay Estimate #17, DelDOT assessed 14 days of liquidated damages totaling $18,080.00.

180. DelDOT agrees that this amount has not been paid to AI.

181. DelDOT's Standard Specifications respecting the right of DelDOT to assess and keep liquidated damages is specifically limited by the specifications related to delay damages which provides: ("...*an extension of time **shall** be granted in an amount equivalent to the actual critical delay caused by the Department") (citation?).*

182. AI produced several Time Impact Analyses that documented that "but for" the revisions to the Project plans due to the defects which were in no way caused by AI, and the time impacts and consequences of the needed changes to address the Project plan errors, AI would have completed the Project by December 24, 2010, as reflected in AI's approved Baseline Schedule.

183. DelDOT did not conduct and did not offer into evidence any scheduling or delay analyses or Time Impact Analysis, and never refuted AI's scheduling or Time Impact Analyses.

184. Based on the weight of the evidence submitted by AI and DelDOT on entitlement and damages issues as to Claim Item No. 5, AI is entitled to the full abatement of liquidated damages in the amount of $18,080.00.

CLAIM ITEM No. 6: Costs for K2 Scheduling Consultants

185. Pursuant to the Contract specifications, DelDOT's CPMA was responsible for all schedule updates. DelDOT's CPMA, however, did not testify before the Claims Committee or at the arbitration.

186. DelDOT's witnesses at the Claims Committee hearing and in the arbitration erroneously believed that AI was responsible for schedule updates.

187. During the arbitration, when DelDOT's witness read the Project Control Special Provisions and acknowledged that as written, DelDOT had schedule update responsibilities and

the obligation to assess time impacts of DelDOT directed changes, his only reply was that there was a "typo" in the Project Control Special Provisions. When read in context, the Project Control special provisions unmistakably assigns to the CPMA the duty to generate schedule updates and impact analyses of directed changes. However, DelDOT *did not* complete any schedule updates and did not provide for any time impact analyses, or make any analysis respecting AI's entitlement to time extensions when the revised Project plans were issued.

188. As of December 13, 2010, DelDOT imposed the additional Contract requirement on AI that a comprehensive time extension request must be furnished *as a condition precedent to the release of payment estimates,* writing: "Once a comprehensive time extension has been established, AI will be required to submit a new schedule outlining completion of the remaining items of work within the remaining contract time (including extensions). *All outstanding pay estimates will be released once this schedule is submitted.*" (DelDOT Exhibit Tab 48).

189. Although DelDOT had the Contract responsibility to provide schedule updates, it imposed the foregoing conditions on AI's right to be paid (and right to have pay estimates released).

190. K2 was the scheduling consultant hired by AI to satisfy the directions issued by DelDOT regarding scheduling information, time impact analyses and completion schedules.

191. K2 *was not* retained for claim preparation and presentation, but rather as directed by DelDOT.

192. As K2 performed the scheduling work that DelDOT was contractually obligated to perform this work, constituted "extra work" as defined in the Standard Specifications. AI's damages included proof of the amounts paid to K2 to comply with DelDOT directions.

193. Based on the weight of the evidence submitted by AI and DelDOT on entitlement and damages issues as to Claim Item No. 6, the sustainable and recoverable amounts for Claim Issue No. 6 are $53,902.00. Therefore, AI is entitled to an Award of $53,902.00 on Claim Item No. 6 (amount paid to K2), plus the 10% allowable markup of $5,390.20 for a total of $59,292.20.

199. AI submitted Project documentation proving additional surveying costs of $42,655.42; to this amount the permitted 10% mark-up is to be added, for a total of $46,920.96.

200. Based on the weight of the evidence submitted by AI and DelDOT on entitlement and damages issues as to Claim Item No. 7, AI is entitled to $46,920.96 for Claim Item No. 7.

CLAIM ITEM No. 8: Bridge Substructure Construction Costs

201. AI established through its evidence that Phase 2, Stage 2 of the as-bid Project plans, specified performance of work on the bridge pier and both abutments in a continuous and unrestrained manner following the installation of the new sewer and abandonment of the existing facilities.

202. Due to the delays caused by the Project plan revisions and resultant changes in phasing, AI was unable to construct the bridge in one continuous effort.

203. Rather, the work was completed with three mobilizations of equipment and manpower as opposed to one mobilization reflected in AI's bid and the continuous operations reflected in the approved baseline schedule.

204. The Standard Specifications Section 109.04 for differing site conditions and major changes, as well as the delay damage provisions, prescribe methods of payment where there are documented unforeseen and changed conditions and where delays result from DelDOT's actions.

205. AI produced evidence that it incurred additional costs due to these two extra mobilizations and loss of production due to the fragmentation of its operations. Basically, there was a loss of production due to starts and stops -- ramping up and ramping down.

206. AI's evidence was that its operations suffered a 12% loss of production due to the additional mobilizations and lost production directly related to the change of phasing resulting

from the Project plan revisions and resultant delay. AI's documentation in accordance with the Standards Specifications confirms: Two additional mobilizations at $5,000 each, equaling a total of $10,000.00; and, loss of production of $9,642.00.

207. Based on the weight of the evidence submitted by AI and DelDOT on entitlement and damages issues as to Claim Issue No. 8, the total for Claim Item No. 8 is $19,642.00 plus the 10% allowable markup of $1,964.20 for a total award for this item of $21,606.20.

CLAIM ITEM No. 9: TDW Subcontractor Claim

208. This claim was withdrawn since it has not been pursued against AI by TDW.

CLAIM ITEM No. 10: Excavation and Embankment

209. The quantity of the excavation and embankment work at issue in Claim Item No. 10 is not disputed by AI or DelDOT. The dispute is over the unit price or rate that applies to those quantities.

210. More specifically, the parties dispute whether or not the cost of the agreed-upon quantities was affected by out of sequence work, i.e. the delays caused by the Project plan revisions and "Differing Site Conditions."

211. Standard Specification Section 109.04 ("Payment for Differing Site Conditions, Major Changes, Extra Work, and Force Account"), prescribes the methodology for the payment of items of work affected by, *inter alia*, "Differing Site Conditions, Major Changes, Extra Work, and Force Account."

212. AI's claim that the excavation cut and fill operations were impacted due to the revisions to the Project plans was supported by its witnesses and corroborated by the testimony of DelDOT witnesses.

224. AI's bid unit of $5.80 was comparable to the next three bidders and was specifically accepted by DelDOT after the Pre-Award meeting.

225. Utilizing the as-bid unit price and the agreed-upon final quantity of 49,683 cubic yards, the payment by DelDOT was $288,161.40.

226. However, as documented by AI, as a result of the impacts of the Project plan defects, changes in sequence and production changes, AI was required to perform a scope that was quite different from as-bid. As reflected in AI's cost submissions the price for this revised Excavation & Embankment item of work (represented by its actual costs plus the 10% allowable markup) totaled $496,783.58. After crediting the amount already paid by DelDOT, AI's claim for this item is $208,622.18.

227. The evidence showed the changed work was due to the impacts of the Project plan defects, the changes in sequence of work and production changes, and not as a result of anything attributable to AI.

228. Based on the weight of the evidence submitted by AI and DelDOT on entitlement and damages issues as to Claim Item No. 10, AI is entitled to reimbursement for these additional costs for Claim Item No. 10 in the amount of $208,622.18.

CLAIM ITEM No. 11 Type F Borrow

229. The quantity of the excavation and embankment work at issue in Claim Item No. 10 is not disputed by AI or DelDOT. The dispute is over the unit price. The parties agree on quantities. AI is seeking to be paid the additional differential of $4.20/Cubic Yard for those quantities, as if it were being paid under the bid unit price of $10/Cubic Yard for Type F Borrow.

230. DelDOT specifications Section 104.10 ("Rights In and Use of Materials Found on the Work") provides: "The Engineer may authorize the Contractor's use of materials found in the

excavation. ***Payment will be made both for the excavation of such materials at the corresponding Contract unit price and for the Contract item for which the excavated materials are used.*** *" Section 104.10 (Emphasis added).*

231. The testimony of the witnesses for AI and DelDOT at the arbitration was consistent with respect to the fact that the materials mined on site, with the permission of DelDOT, met all specifications for Type F Borrow.

232. Based on the language of the Standard Specifications, payment was owed to AI. See Section 104.10, "***Payment will be made both for the excavation of such materials at the corresponding Contract unit price and for the Contract item for which the excavated materials are used.***" (Emphasis furnished).

233. The Contract unit price for Type F Borrow was $10.00/ Cubic Yard.

234. The Contact unit price for excavation was $5.80 /Cubic Yard.

235. Based on the Standard Specifications, AI could have claimed entitlement to the aggregate, $15.80 per cubic yard.

236. The testimony of the witnesses for AI, which was not disputed by DelDOT's witnesses, was that there were a greater number of activities related to the Type F Borrow (i.e. cutting and stockpiling of topsoil, mining of the borrow materials, and the restoration of the borrow) than only the "excavation and embankment" item DelDOT argued should be the basis of payment.

237. The Standard Specifications do not provide DelDOT with the unilateral right to modify the terms of the Contract and the Standard Specifications, but required DelDOT to pay for both the excavation *and* the materials.

238. DelDOT admitted that the work performed by AI on this borrow item met the Standard Specifications and the Type F specifications.

239. DelDOT's objection was that it purportedly "conditioned" the approval of the on-site location for the Type F materials on AI's "acceptance" of the price limitation imposed by DelDOT which is directly contrary to DelDOT's own Standard Specifications.

240. DelDOT did not identify the contractual basis for this asserted authority.

241. AI did not waive its rights under the Contract to be paid in accordance with the Standard Specifications and it received no additional consideration for the approval of the location of the borrow pit.

242. The Standard Specifications, Section 104.10 ("Rights In and Use of Materials Found on the Work"), permit the Engineer [DelDOT] to evaluate and authorize "the Contractor's use of materials found in the excavation", but do not permit DelDOT to condition the authorization on the waiver of Contract rights to payment.

243. The parties agree the quantity of material at issue is 19,410 cubic yards.

244. Although AI would be otherwise entitled to payment in the amount of $5.80 per cubic yard, plus $10/ cubic yard, AI has limited its claim to 19,410 Cubic Yards x $4.20/Cubic Yard = $81,522.00. The $4.20/Cubic Yard unit price is the differential between DelDOT's contention that the unit price should be $5.80/Cubic Yard versus AI's contention it should be $10/Cubic Yard.

245. Based on the weight of the evidence submitted by AI and DelDOT on entitlement and damages issues as to Claim Item No. 11, AI is entitled to be paid $81,522.00 for Claim Item No. 11.

CLAIM ITEM No. 12: Undercut Refill Materials

246. For Claim Item No. 12, this issue is whether AI should have been paid for the agreed quantities of Undercut Refill at the Contract rate of $36.70 (as AI contends) or instead at the $0.05 rate (as DelDOT contends) for A Borrow on site when, for reasons stated below, A Borrow was no longer available on site at the relevant time.

247. The evidence showed the areas of undercut and backfill in question were directly affected by the extended duration of the Project into 2011 which the TIAs and schedule analyses provided by AI proved were caused by the Project plan revisions and were DelDOT's responsibility.

248. The testimony of the witnesses for AI and DelDOT was also consistent: the available sources of the necessary backfill material had been exhausted *prior* to 2011 and that the materials utilized by AI to complete this work in 2011 met the specifications for suitable backfill.

249. DelDOT's refusal to pay AI for the materials actually used, consistent with the Contract specifications and classification of the materials actually used for the backfill is not justified where (a) the necessity for the backfill was related to the delay to the Project which made this work (excavation and backfill) weather sensitive; and (b) the Project specifications clearly provide that payment will be made for the item of work furnished at the contract unit price for the work.

250. Section 109.03 ("Compensation for Altered Quantities") expressly provides that "When the accepted quantities of work vary from the quantities in the Contract schedule, the Contractor shall accept payment *at the original Contract unit prices for the accepted quantities of work done.*"

251. DelDOT approved the use of GABC refill material in lieu of Type A Borrow since there was no Type A Borrow available on site in 2011.

252. DelDOT only paid $0.05 for the refill materials and initially refused to pay for the geotextile separation fabric used in conjunction with the undercut operation despite its direction to AI to use this material.

253. DelDOT currently concedes that it is obligated to pay AI for the geotextile separation fabric in the amount of $5,913.60.

254. DelDOT and AI agree that 1540 cubic yards of GABC refill material was used.

255. DelDOT and AI agree that the Contract price for GABC refill material was $36.70.

256. DelDOT's Standard Specifications **§ 101.26 ("Differing Site Conditions")** defines differing site conditions as "Subsurface or latent physical conditions encountered at the site that, 1) differ materially from those indicated in the Contract, *or* are 2) unknown physical conditions of an unusual nature, differing materially from those conditions ordinarily encountered and generally recognized as inherent in the work provided for in the Contract."

257. The area where the refill material wwas needed was not an indicated area for undercut and undercut would not have been needed but for the delay caused by the Project plan revisions, pushing work into the wet season when subsurface conditions were unstable.

258. AI is entitled to be paid at the Contract unit price for the type of materials actually furnished.

259. Based on the weight of the evidence submitted by AI and DelDOT on entitlement and damages issues as to Claim Item No. 12, AI is entitled to be paid for Claim Item No. 12 for

piping being full of water as much as possible). The direct result of this effort caused by such differing and unforeseen conditions was that AI incurred corresponding additional costs.

291. At the arbitration hearing, AI established entitlement to reimbursement of the additional extra detailed in its claim submission.

292. Based on the weight of the evidence submitted by AI and DelDOT on entitlement and damages issues as to Claim Item No. 15, AI is entitled to be paid $16,491.23 as result of these design errors.

CLAIM ITEM No. 16: DelMarva Power Outage Delay

293. The facts respecting Claim Item No. 16 are largely not disputed between AI and DelDOT.

294. On July 6, 2010, Delmarva cancelled the required overhead power outages at the North Sewer Tie-In location.

295. These outages were required per the Contract documents to allow for the installation of SOE sheeting and the sewer tie-in work.

296. AI submitted delay costs to DelDOT which was rejected based on Section 105.09 ("Utilities from the Standard Specification") which states ... "no additional compensation will be allowed for any delays, inconvenience, or damage due to any interference from the utility facilities and appurtenances or the operation of moving them."

297. AI disagreed with DelDOT's denial of these costs and the basis for DelDOT's rejection because the root cause for the power outage delays was the shifting of the work into the affected summer season.

298. The delay was caused exclusively by the defective Project plans and the resultant Project delays, which pushed this work activity into the "hot" summer season when Delmarva was unable to provide the outage.

299. Based on the weight of the evidence submitted by AI and DelDOT on entitlement and damages issues as to Claim Item No. 16, AI proved that it sustained the following additional costs (calculated in accordance with the Delay Claim Specifications): Costs $17,541.90 plus a contract mark-up at 10% equal to $1,754.19, for a total Award to AI on Claim Item No. 16 of $19,296.09.

II. CONCLUSIONS OF LAW

300. Well established Delaware law holds that a "contractor is not liable for any damage occasioned by a defect in plans and specifications furnished by the owner if the contractor performs work without neglect and in a workmanlike manner." *Millsboro Fire Co. v. Constr. Mgmt. Svc., Inc.*, 2006 WL 1867705, *4 (Del. Super. Ct. June 7, 2006). Even where the contractor is "obligated under the contract to produce a structure free from any defects, the owner's instructions to the contractor excuse the contractor from any further liability." *Id.* (*citing Ridley Inv. Co. v. Croll*, 192 A. 2d 925, 927 (Del. 1963)).

301. Under Delaware law, to prevail on a breach of contract claim, plaintiff must demonstrate: "First, the existence of the contract, whether express or implied; second, the breach of an obligation imposed by that contract; and third, the resultant damage to the plaintiff." *VLIW Technology, LLC v. Hewlett-Packard Co.*, 840 A.2d 606, 612 (Del. 2003).

302. To determine the materiality of the party's breach of the contract, the fact finder must "weigh [] the consequences in the light of the actual custom of men in the performance of contracts similar to the one that is involved in the specific case." *Eastern Elec. and Heating, Inc.*

v. Pike Creek Professional Center, 1987 WL 9610, *4-5 (Del. Super. Ct. Apr. 7, 1987) (quoting 4 Corbin on Contracts § 946, at 809 (1967)). The following factors are significant in determining materiality:

a. the extent to which the injured party will be deprived of the benefit which he reasonably expected;

b. the extent to which the injured party can be adequately compensated for the part of that benefit of which he will be deprived;

c. the extent to which the party failing to perform or to offer to perform will suffer forfeiture;

d. the likelihood that the party failing to perform or to offer to perform will cure his failure, taking account of all the circumstances including any reasonable assurances;

e. The extent to which the behavior of the party failing to perform or to offer to perform comports with standards of good faith and fair dealing. *Id.* (quoting Restatement (Second) of Contracts § 241).

303. As it relates to issues of "notice", in the construction context, "[t]imely notice of claims is a matter of fundamental fairness." 1 Bruner & O'Connor on Construction Law § 4:35. Where the owner knows of the operative facts giving rise to construction delays and the contractor's claims for accelerated work and extra costs, the notice provisions of a contract are satisfied. *See James Corp.*, 938 A.2d at 486 (citing *Hoel-Steffen Constr. Co. v. United States*, 456 F.2d 760, 767-68 (Ct. Cl. 1972)). Further, where the owner fails to demonstrate any prejudice resulting from any failure by the contractor to submit a written claim for damages, the contractor is nevertheless allowed to recover its damages. (*Id.* at 486-87).

304. DelDOT conceded that some of its Standard Specifications, specifically the section respecting Change Orders (*i.e.* Section "101.14 Change Order") as it related to "written direction" were, at best, ambiguous.

305. Under Delaware law, ambiguities are construed against the drafter.

306. AI's claims were the result of DelDOT directions during the Project and Change Orders initiated by DelDOT for which the Contract technically does not require notice.

307. In addition, as a matter of law, if a party has received actual notice of the circumstances giving rise to a claim, the notice provisions of the contract are satisfied, even if the contractor does not provide express written notice within the time specified in the contract. *James Corp. v. North Allegheny Sch. Dist.*, 938 A.2d 474, 485-486 (Pa. Cmwlth. Ct. 2007); see also, *Hoel-Steffen Construction Company v. United States*, 456 F.2d 760, 767-768 (Ct. Cl. 1972); *Chaney & James Construction Company v. United States,* 421 F.2d 728 (Ct. Cl. 1970); *Bruner & O'Connor on Construction Law,* Section 15:99 (2005); *Transpower Constructors, a Division of Harrison International Corporation v. Grand River Dam Authority,* 905 F.2d 1413 (10th Cir. 1990) (contractual notice provision was deemed waived even in the face of an "anti-waiver" clause).

308. DelDOT knew the facts and circumstances giving rise to each claim item submitted by AI, so in addition to AI's specific satisfaction of the Contract Standard Specifications, DelDOT was on actual notice of the claims.

309. DelDOT has no right to unilaterally modify the Standard Specifications without granting a contract extension and extra payment to AI.

310. DelDOT asserted that AI "waived" its right to additional compensation when AI ostensibly did not "object" to the unilateral conditions imposed by DelDOT.

311. There is no right in the Contract retained by DelDOT to condition required Project changes and the payments prescribed therefore on AI's "waiver" of its contract rights.

312. DelDOT presented no evidence to support a claim of waiver. Under Delaware law, it is well settled that "[a] waiver is the intentional relinquishment of a known right. To constitute waiver, there must be [1] an existing right, benefit or advantage, [2] a knowledge of its existence, and [3] an intention to relinquish it." (Citation?). Although waiver can be express or implied, silence, however, ***does not*** constitute waiver "unless there is some duty or obligation to speak." *Shadewell Grove IP, LLC v. Mrs. Fields Franchising, LLC*, 2006 Del. Ch. LEXIS 85, 35-36 (Del. Ch. May 8, 2006).

313. In regard to the design defects in the Project plans and the ensuing revisions to the Project plans, DelDOT failed to perform as required by the Project Control Special Provisions.

314. Specifically, DelDOT failed to prepare scheduled updates, analyze the impact of changes on the Project schedule and issue appropriate and prompt time extensions as required by the specifications.

315. DelDOT's admitted failure to comply with the requirements of the Project Control Special Provisions was a material breach of the Contract and the direct cause of DelDOT's untimely and incorrect extensions of time and DelDOT's failure to pay for all claim items related to the design defect in the Project plans and revisions to the Project plans.

316. Delaware law seeks to place the non-breaching party in the same position it would have been in had the contract been properly performed. *See Orsini Top Soil, et al. v. Carter*, 2004 Del. C.P. LEXIS 10 (2004).

317. To that end, "the traditional measure of damages is that which is utilized in connection with an award of compensatory damages, whose purpose is to compensate a plaintiff

for its proven, actual loss caused by defendants' wrongful conduct, and those compensatory damages are measured by the plaintiffs' 'out-of-pocket' actual loss." *Orsini,* 2004 Del. C.P. LEXIS 10, *4 (internal citations omitted).

318. Delaware decisional law has embraced and followed the long-standing measure of damages for a breach of contract set forth in the Restatement (Second) of Contracts, Section 347. See e.g. *Orsini, supra.*

319. Section 347 provides: "Subject to the limitations stated in §§350-53, the injured party has a right to damages based on his expectation interest as measured by (a) the loss in the value to him of the other party's performance caused by its failure or deficiency, plus (b) any other loss, including incidental or consequential loss, caused by the breach, less (c) any cost or other loss that he has avoided by not having to perform." Restatement (Second) of Contracts §347.

320. The Comments to Section 347 provide that "[s]ubject to the limitations stated in §§ 350-53, the injured party is entitled to recover for all loss actually suffered. ... The terms used to describe the type of loss are not, however, controlling, and the general principle is that all losses, however described, are recoverable." Restatement (Second) of Contracts § 347, Comment (c). The damages awarded and sought by AI for the breach of Contract were exactly the types of damages consistent with Delaware law and Section 347.

321. Delaware law requires that a party establish its loss with "reasonable certainty," not mathematical precision, in order to recover damages. *RM Williams Co., Inc. v. Frabizzio,* 1993 WL 54423, at *13 (Del. Super. Feb. 8, 1993); *Cura Financial Services v. Electronic Payment Exchange, Inc.*, [2001 WL 1334188 (Del.Ch.)].

322. AI produced evidence to sustain each of its claims with reasonable certainty and calculated the damages in accordance with the Contract Standard Specifications for, *inter alia,* "Claims" and "Delays."

323. AI proved entitlement and quantified its damages with reasonable certainty.

324. Pursuant to the Standard Specifications, Section 105.17 "Arbitration", this arbitration is governed by the Construction Industry Arbitration Rules of the American Arbitration Association.

III. AWARD

325. Respondent, Delaware Department of Transportation ("DelDOT") shall pay to Claimant, American Infrastructure, Inc. ("AI") the total sum of $1,119,870.72 USD on its claims. For the reasons stated above in the Findings of Fact and Conclusions of Law, the following is the Summary of the Items Claimed and Amount Awarded for each specific claim:

ITEM NO.	ITEM DESCRIPTION	CLAIM AMOUNT (USD)
1	Extra General Condition Costs	$ 338,194.37
2	Extra Traffic Barrier Costs	$ 77,323.40
3	Maintenance of Traffic	$ 35,036.48
4	Extra Project Costs due to Winter Shutdown	$ 93,502.01
5	Abatement of Liquidated Damages	$ 18,080.00
6	K2 Consultant	$ 59,292.20
7	Survey	$ 46,920.96
8	Bridge Substructure Construction	$ 21,606.20
9	TDW Sewer Line Stopping	Withdrawn
10	Excavation & Embankment	$ 208,622.18
11	Borrow Pit Type F Material	$ 81,522.00

12	Undercut Refill Material	$	62,431.60
13	Additional Traffic Barrier and Sand Barrel	$	16,454.00
14	Bridge & Parapet Sealing	$	25,098.00
15	Storm Sewer Unforeseen Condition	$	16,491.23
16	Delmarva Power Outage Impacts	$	19,296.09
	TOTAL	$	1,119,870.72

326. AI and DelDOT have both complied in all respects with the arbitration provision of the Contract, contained in §105.17 of the Standard Specifications. There were no claims presented in the arbitration which were not previously presented to the Claim Committee and the Chief Engineer. The record established at the prior administration hearings was offered and admitted into evidence at the arbitration proceeding. See DelDOT Ex. 51 (Claims Committee Decision) and Ex. 52 (Chief Engineer's Decision regarding Claim Appeal). All facts established at the prior administration hearings were offered into evidence and accepted as binding, with the exclusion of opinions and conclusions relating to the various claims and defenses.

327. AI is entitled to an Award of $1,119,870.72. There is no entitlement to interest, the costs of the arbitration or counsel fees because the specifications at § 105.19(H) of the Contract provide they are non-allowable.

328. The administrative fees and expenses of the American Arbitration Association (AAA) totaling US$12,450.00 shall be borne as incurred, and the compensation and expenses of the arbitrator totaling US$ 45,554.00 shall be borne as incurred, with each party responsible for half of the total.

APPENDIX J: Madcorp., Conrail Road

madcorp
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Mathew E. Mitten
President

Mr. James T. Pappas, P.E.
Chairman of the Claims Committee
Delaware Department of Transportation
800 Bay Road
Dover, Delaware 19901

RE: DE DOT Contract #T201107304.01: F.A.P. #EBROS-S546 (04), BR 3-224 on S546 Conrail Road over Bucks Branch, Sussex County ("Contract")

Introduction

Mid-Atlantic Dismantlement Corporation ("Madcorp") submits the following claim for additional compensation under 105.15 *Claims for Adjustment and Disputes,* Standard Specifications for Road and Bridge Construction August 2001 ("Specifications"). Madcorp sustained damages attributable to delays on the project. The delays forced Madcorp to perform its work during the wintertime, not originally contemplated by Madcorp at the time of bid. DELDOT issued the Notice to Proceed more than six months after Madcorp was originally scheduled to begin work. The delays of more than six (6) months were due to Item 763502 Maintenance of Railroad Traffic ("Item 763502") being omitted from the original bid documents. Madcorp had no responsibility with respect to Item 763502 and should not be penalized for the delays.

Based on the construction schedule at the time of bid, Madcorp's work was to be completed during the summer of 2014. Due to the delays, however, Madcorp, in good faith, worked through two major winter holidays, as well as many Saturdays. Madcorp worked through significantly bad weather, including rain, sleet, and snow. During this period, there were over 25 days of rain, sleet, snow and temperatures below freezing. (Attached hereto as **Exhibit A** are the December 2014, January and February 2015 calendars (2 different sets); (Attached hereto as **Exhibit B** are the June and July 2014 weather calendars (2 different sets) for comparison); (Attached as **Exhibit C** is Madcorp's onsite weather observations.) Madcorp would not have been subjected to these adverse weather conditions had the project proceeded in accordance with the construction schedule at the time of bid.

Delays Resulting From The Omission Of Item 763502

After being postponed several times, DelDOT designated February 18, 2014 as the date it would accept bids for Contract #T201107304. Prior to accepting bids, DELDOT informed the bidders that the Notice to Proceed Date had been revised to June 2, 2014. (See **Exhibit D**, Addendum #4, including the cover sheet bid proposal) With this understanding, Madcorp submitted its bid and was awarded the Contract by DelDOT. Based on the Notice to Proceed Date, Madcorp anticipated that its contract work would be performed in June and July. Due to the delays, however, Madcorp did not perform its work until

December and January. It is much more difficult and costly to perform the contract work in the wintertime.

Madcorp understands that a Notice to Proceed Date is not cast in stone, but a delay of more than six months, which occurred here, is not reasonable. Furthermore, a delay of more than six months to issue a Notice To Proceed is far outside acceptable industry standards. Contractors need to be generally aware of time of year in which the contract work will be performed, especially if the work is to be performed during winter. Contract work performed in the wintertime is much more difficult as, among other things, products used in the work generally do not set properly, the ground is typically frozen resulting in grading issues, machines and equipment do not work properly, and the cold weather negatively impacts the workforce. Further, a contractor needs to know a reliable start date to reserve manpower and equipment in light of needs on other projects. A six month delay is simply unreasonable and unfair.

The Contract involved 33 calendar (work) days in which Madcorp would be working with water (stream diversion), hot mix asphalt and concrete products. The products Madcorp was using required different ambient temperatures to properly set pursuant to the product manufacturer specifications. In addition, the frozen ground, during the winter, provided an unstable base to grade and complete the road work prior to placing hot mix by Madcorp's subcontractor. Despite the challenges presented of performing the contract work in the winter, DelDOT directed that Madcorp commence work two weeks before Christmas Holiday, resulting in the contract work being performed and completed in the middle of the winter. Madcorp encountered 19 work days in which temperatures were below freezing. (*See* **Exhibit A & C**) (See **Exhibits 25 & 28** – pictures). The five bad weather days allotted for the summertime work are insufficient for wintertime work due to the frequency of bad weather encountered during the winter.

Both DelDOT and Madcorp agree that Item 763502 was omitted from the original bid documents. The discovery of this omission during the May 22, 2014 Preconstruction Meeting, started a chain of events that led to a six-month delay and an early winter Notice to Proceed. After Item 763502 was submitted and approved, DelDOT issued a Notice to Proceed letter, dated October 3, 2014, with a start date of October 13, 2014 (Attached hereto as **Exhibit E** is the Notice to Proceed Letter dated October 3, 2014). After the message boards alerting the public that the road would be closed October 13, 2014 were placed by our subcontractor, on October 3, 2014, the Notice to Proceed was rescinded mid-morning October 3, 2014.

Our subcontractor had to remove the message boards from the job site. (Attached hereto as **Exhibit F** are relevant emails.) A second Preconstruction Meeting was scheduled because the railroad was not invited to the first Preconstruction Meeting back in May, 2014. (Attached as **Exhibit G** are the relevant emails related to the scheduling of the second preconstruction meeting) The second Preconstruction Meeting was held on October 20, 2014. In Bradford Saborio's letter of June 23, 2015, (**Exhibit: CC**) Mr. Saborio indicated that all paperwork was approved by October 22, 2014, two days after the second preconstruction meeting. Because the paperwork had been approved it was not reasonable for DelDOT to wait more than an additional month to issue the Notice to Proceed. Ostensibly, this additional delay was because URS, a subcontractor of DelDOT, needed to submit information to the Railroad for their approval. (Attached here as **Exhibits H & I** are the relevant emails)

DelDOT's final notice to proceed was issued for December 8, 2014. At this time, Madcorp pleaded with DelDOT to begin work sooner, explaining the problems associated with performing the work in the wintertime. DelDOT denied the request. (Attached hereto as **Exhibit J** is an email by R. Campbell of DelDOT stating that an additional week would not make a difference.) On November 28, 2014, the day after Thanksgiving, the message boards alerting the public that the road would be closed December 8, 2014 were put in place. The URS erosion control meeting was held on December 2, 2014 and the Miss Utility tickets were called in on December 3, 2014. Madcorp mobilized equipment, materials, and manpower and began the project on a December day filled with snow, sleet and light misty rain. **(Exhibits A & C)** This was a completely unreasonable requirement by DelDOT.

Extra Work Performed By Madcorp As A Result
Of Being Forced To Perform Contract Work In Winter

Week One: Madcorp took delivery of the 58"X91" Reinforced Concrete Pipe (RCP). Madcorp also setup the pumps and sediment tank for the stream diversion and dewatering system as required by the Contract. The plans called for the use of Item #27000 Portable Sediment Tank, Standard Construction Detail #E-24 (2005). The portable sediment tank used by Madcorp was built to DelDOT's Standard Construction Detail #E-24 (2005) for Item #27000. Although built to DelDOT's specifications, the sediment tank was unable to filter the heavy sediments and debris contained in the water at the excavation site. This was due to the soils containing voluminous amounts of organic matter, which consisted of dead roots, grass material, and other organic matter. Through e-mails DELDOT acknowledged that there was an issue with the portable sediment tank being adequate (because of the heavy sediments, etc.) and issued a change to both add the filter bag system and move the silt fence out to accommodate the equipment. **(Exhibit K** – e-mails with sketches**).**

These underlying soils caused significant problems with dewatering and sediment removal. (Attached hereto as **Exhibits 1 & 2** are pictures of the work area) By e-mails dated 12/11/14 (*See* **Exhibit: K** e-mails), Madcorp started using 15' X 30' filter bags in the dewatering process as a new Item on the project. (*See* **Exhibits 15 & 16** – pictures) These filter bags greatly added to the filtration of the water pumped from the excavation. Madcorp used five of these 15' X 30' filter bags at a cost of $653.12 each to Madcorp. (***See* Appendix C**) (*See Specs.* 105.19(C.) &109.04) Because of the above-mentioned dewatering conditions, Item 263001 Sump Pit Type II furnished to DelDOT's specifications (Standard Construction Detail #E-16 (2005) needed to have constant attention so that the water could get to the suction hose of the pump. (***See* Exhibits 1 & 2** - pictures) Madcorp had to completely remove and rebuild the sump pit several times, requiring additional labor and time. Accordingly, Madcorp seeks payment for two additional Type II Sump Pits in the amount of $1,600 each pursuant to the Bid Proposal and Contract unit price of $1,600.00 for Item #263001 Sump Pit Type II. (*See* Spec. 109.04(A)). (*See* also **Appendix A**: Original Bid Proposal/Contract).

Week Two: Madcorp continued setting up the stream diversion and dewatering system, including setting up the sump pit, placing riprap for discharge pipe, and establishing the sediment bag. (*See* **Exhibits 15 & 16** – pictures) Madcorp began excavation of existing structures, reset the sump pit, and began placing the stone base for the 58"X91" Reinforced Concrete Pipe's (RCP).

Week Three: Madcorp continued excavation, hauling away sediment, stone placement, demolished and removed the concrete head wall, drilled and placed dowels for concrete work, and fine-tuned the sump

pit in preparation for incoming rain storm. After light rain Tuesday and heavy rain Wednesday, on Christmas Eve and Christmas Day, the upstream (RR Bridge side) dike blew out. It was repaired under Force Account (10 hours) on 12/26/2014 **(Damages Calculated under 109.04(D. –Force Account))**. (Force Account has not been settled and paid yet.) Throughout the time that the stream diversion was in place, Madcorp fought with water boiling up under sandbags. On 12/27/2014 Madcorp reset the sandbag diversion wall and worked trying to stop water from boiling up under the sandbags. (***See* Exhibits 2, 3, & 4** – pictures)

Week Four: On 12/29/2014, Madcorp lined the channel under the railroad bridge with poly to try and stop water infiltration and again reset the sandbag diversion wall. (*See* **Exhibits 5 through 12** – pictures) The poly helped slow the water infiltration, but water continued to seep under the sandbags. Madcorp was able to manage the flow of water with its dewatering pump. (***See* Exhibit 13 & 14 - pictures)** The stream diversion, including the sandbag dikes, was built to DelDOT's specifications as per Contract #T201107304 Plan Sheets #11 & #12 and Standard Construction Detail Sheet #E-20 (2005). The downstream sandbag dike worked somewhat adequately as the one ton sandbags lodged into the stream bottom mud and provided a partial water seal. When building the upstream sandbag dike next to the railroad bridge, the railroad inspector did not want Madcorp to use two rows of sandbags or get them close to the railroad bridge. At the railroad bridge (the SW side being much worse that the NW side), the sandbags rested on existing sand, gravel, riprap, old railroad ties, etc. With a head of water on the dike, the water continued to boil up under the sandbags and undermine the dike. (*See* **Exhibit 13, 14, & 27 - pictures)** This added greatly to the time the stream diversion was in place and the cost of running the dewatering pumps, which were running 24 hours per day.

Also during Week Four, Madcorp continued to haul out sediment and finished drilling and installing the dowel bars for the concrete work. On December 31, 2014, Madcorp set in place six of the 58"X91" reinforced concrete pipes on Delaware #57 stone, Item 608000 Coarse Aggregate for Foundation Stabilization and Sub-foundation Backfill, per Contract #T201107304 Bridge Plan Section and Elevation sheet #8. (*See* **Exhibits 17 & 18** – pictures) Placing the mastic (tar) strips between the pipes in sub-freezing weather is not workable (***See* Exhibits 23 & 24 - pictures**). Even, when heated with a torch, the mastic (tar) strips become solid as soon as the heat is removed when placing the strips in the pipes joints. Madcorp submitted a request to use non-shrink grout for the 58"X91" RCP joints, because the mastic (tar) strips were not working. DelDOT decided that the weather was too cold to use grout. (*See* **Exhibit L & M** - e-mails) On Friday and Saturday, January 2 & 3, 2015 respectively, Madcorp set forms for the concrete work. (*See* **Exhibits 23 through 28** – pictures)

Week Five: Madcorp completed the concrete form work and poured the new headwall, set 16 each 58"X91" reinforced concrete pipes in place, and started the backfill operation, set in place the south side 18" RCP and backfilled pipes. (*See* **Exhibits 19 through 22** – pictures)

Week Six: Madcorp set in place the final two 58"X91" RCP, continued the backfill operation for RCP, filled below water-line RCP joints with "water plug," patched RC pipe joints, removed balance of existing structure, removed concrete forms and completed structure backfill, turned off pumps, shut down dewatering system. (*See* **Exhibits 26-31 & 34** – pictures)

Week Seven: Madcorp removed sandbags, sediment bags, and pumps; continued jobsite cleanup; installed and backfilled 18" RC pipes on the north side of bridge; continued concrete demolition on tops

of concrete wing walls; removed rental pumps, fuel cell, and lines from jobsite; formed and poured concrete caps; removed asphalt roadway and sub-base. (*See* **Exhibits 32 & 33** – pictures)

Madcorp sent e-mails outlining concerns about winter paving from our subcontractor and received a negative response from DelDOT. DelDOT instructed that the job must get paved immediately. (***See* Exhibits N & O**) DelDOT's Standard Specification #401.08 sites that "No bituminous concrete shall be placed on any frozen surface" and calls for a minimum air temperature of 40 degrees F for asphalt paving. DelDOT instructed Madcorp to complete paving no matter what the weather was, despite temperatures being both outside and barely within acceptable ranges. (*See* **Exhibit P** - letter) Madcorp is claiming increased costs from the hot mix subcontractor due to winter paving (*See* **Appendix F**). The additional costs from our Subcontractor stem from: the only hot mix plant willing to open in Sussex County this time of the year was further away meaning the Subcontractor had higher trucking costs, physically placing hot mix takes longer in cold weather, plus the Subcontractor was doing their off season equipment repairs and had to reassemble equipment to do this hot mix asphalt paving.

Week Eight: Madcorp finished hauling away old roadway, placed and graded asphalt sub-base, continued demobilizing, worked on top-soiling (frozen ground causing difficulties) finishing east side. Thursday January 29, 2015, Del-Mar-Va Paving placed Type "B" hot mix asphalt. Friday, January 30, 2015, Del-Mar-Va Paving placed Type "C" hot mix asphalt. Both days the ambient air temperature barely met the minimum of 40 degrees F and the roadway sub-grade was still frozen. (*See* **Exhibit 35 & 36 & 37 – pictures)**

The reference to "all work had been inspected by a DelDOT inspector," in the next to last paragraph set forth in Mr. Saborio's letter of June 23, 2015 (**Exhibit: CC**) was a misinterpretation of Madcorp's May 19, 2015 letter. (***See* Exhibit Z.**) Madcorp did not state that the inspector was responsible for Madcorp's work. Madcorp merely stated that the job site inspector did verify the various milestone events, including the appropriate grading, and found that the work performed by Madcorp was within acceptable standards at the time. The job site inspector verified that Madcorp had the correct sub-grade elevation, placed and compacted the correct amount of graded aggregate base course (8") and had the correct HMA (hot mix asphalt) sub-grade elevation at the time of paving. Since completion of the backfilling operation and roadwork, there has been no settlement of the 58"X91" reinforced concrete pipes. (*See* **Exhibit 38 – picture**)

Week Nine: Madcorp completed the following items: topsoil and seeding (working with frozen ground), set and toed –in retention blanket, finished concrete patching, striped the roadway, and opened road to traffic on February 5, 2015. (*See* **Exhibit 37 & 38 - Pictures)** Madcorp seeding subcontractor has returned to the jobsite and reseeded the project four times. This is because grass will not grow in cold temperatures and in frozen earth.

Madcorp submitted letter requesting Semi-Final Inspection. DelDOT returned a letter scheduling Semi-Final Inspection for February 26, 2015. (*See* **Exhibit R**) On February 26, 2015, Madcorp received a second letter rescheduling the Semi-Final Inspection to March 25, 2015. (*See* Exhibit U) Semi-Final Inspections are typically held within a month of substantial completion. The Semi-Final Inspection was performed on March 25, 2015. A Punch list letter was e-mailed to Madcorp on April 28, 2015. (***See* Exhibit V**) The punch list work is directly related to the Contract Work being performed during the wintertime at DelDOT's direction. The grading changed as temperatures warmed, the ground thawed,

and the mastic failed as it did not properly adhere in the cold temperatures. Madcorp has been working with DelDOT to offer satisfactory Means and Method for Del DOT Punch List Items. (*See* **Exhibits W, X, Y, Z, AA, BB, DD, EE, FF)**

Extra Work Resulting From DelDOT's Punch List Items

The subfreezing temperatures resulted in the Road Base not settling properly until the onset of warmer weather. The grading became outside of the specifications when the ground warmed as a result of warmer air temperatures. The delay in the Road Base settlement as a result of the frozen ground while the contract work was being performed is not the fault of Madcorp. The failure of the mastic tar strips in the joint openings of the Reinforced Concrete Elliptical Pipes is a direct result of it being applied in freezing temperatures and again not the fault of madcorp.

None of these deficiencies comprising the punch list are attributable to Madcorp. Madcorp performed its contract work in accordance to the contract specifications, which was inspected by DelDOT at the time the work was completed. The delay in the settlement of the Road Base which resulted in improper grading, the RCP joints not properly sealed, and other deficiencies identified in the punch list are not the fault of Madcorp.

Accordingly, Madcorp is seeking extra compensation to perform the punch list work requested by DelDOT.

Additional Compensation Sought By Madcorp

Stream Diversion - 17 additional days: Madcorp bid a lump sum of $35,000.00 for Item #265500 Stream Diversion. (*See* **Appendix A** - Original Bid Proposal/Contract) The normal duration for stream diversion for this project, during spring, summer, or fall construction would be 20 days. Because of winter operations and differing site conditions (soils, sediment, railroad ties buried in stream bed, etc.), this stream diversion took an additional 17 days. Bid Item 265500, Lump Sum $35,000.00 divided by 20 days (normal time) = $1,750 per day times 17 days.

Claim Amount: $29,750.00

Item 263001, Sump Pit, Madcorp bid $1,600.00 each (*See* **Appendix A)**
2 additional sump-pits @ same bid price of $1,600 each Claim Amount: $ 3,200.00

New Item Filter Bags, Furnished and placed
5 filter bags @ 653.12 each (*See* **Appendix C**) Claim Amount: $ 3,265.60

Cold weather concrete work: additional working time
plus ten concrete blankets, etc. (*See* **Appendix D**) Claim Amount: $ 2,319.27

58" X 91" RCP – increase in time dealing with frozen tar strips
(*See* Appendix E) Claim Amount: $ 3,546.46

Bid Item 763643 Maintenance of Traffic Lump Sum $2,200.00
Lump Sum $2,200 divided by 33 calendar days equals $66.67/Calendar Day
Additional Costs 25 additional Calendar days X $66.67 (*See* **Appendix A)** Claim Amount: $ 1,666.66

Liquidated damages inappropriately back-charged by DelDOT

20 calendar days @ $730.00/day — Claim Amount: $14,600.00

6 calendar days @ $730.00/day — Claim Amount: $ 4,380.00

Delaware DOT agreed to extend the Contract by 6 days but has yet to reimburse Madcorp those 6 days (*See* **Exhibit GG** – letter)

Costs from Del-Mar-Va Paving represent winter paving costs

Extra trucking, using equipment during down time (*See* **Appendix F**) — Claim Amount: $12,846.33

58"X91" RCP joint repair (Punch List) (*See* **Appendix G**) — Claim Amount: $23,018.33

WMA, Super-pave – hot mix paving repair – (Punch List) Roto-milling, Placing hot mix Type "C" & Temp striping (*See* **Appendix H**) — Claim Amount: $42,599.35

Additional Topsoil due to Punch List - Madcorp bid $31.00/ton

56 tons @ $31.00/ton (*See* **Appendix A**) — Claim Amount: $ 1,736.00

Delay Damages: Keeping a foreman and operator on the payroll for two months waiting to begin Construction on Del DOT Contract #201107304

Foreman – two months' salary and Operator – two months' wage + taxes and insurances (*See* **Appendix I**) — Claim Amount: $28,481.22

Remaining and working on Contract #201107304 an additional 25 days beyond the 33 calendar day time table (*See* **Appendix J**) — Claim Amount: $73,290.46

TOTAL CLAIM AMOUNT: $244,699.68

Section 105.15 Certification

Mid-Atlantic Dismantlement Corporation certifies that this claim is made in good faith, that the supporting data are accurate and complete to the best of the Contractor's knowledge and belief, and the amount requested accurately reflects the Contract adjustment for which Madcorp believes that the Department is liable.

Regards;

Mathew E. Mitten
President

Mid-Atlantic Dismantlement Corporation
P. O. Box 1192, Dover, Delaware 19903
302-678-9300

DE DOT Contract #T201107304
BR 3-224 on S546 Conrail Road over Bucks Branch
Sussex County

EXHIBITS DESCRIPTION

A	December 2014 weather calendar
A	January 2015 weather calendar
A	February 2015 weather calendar
B	June 2014 weather calendar
B	July 2014 weather calendar
C	Madcorp Jobsite Weather Observations
D	Adendum #4 Del DOT Contract #T201107304
D	Del DOT Contract #T201107304 Bid Proposal Cover sheet
E	Notice to Proceed Letter dated October 3, 2014
F	e-mails about rescinding Notice to Proceed
G	e-mails about setting up second preconstruction Meeting
H	e-mails about - URS needing railroad insurance
I	e-mails about - URS finally gets their railroad insurance approved
J	e-mail requesting to start the job a week earlier than December 8, 2014
K	December 11 - e-mail requesting to use the dewatering filterbags
L	January 5 - e-mail requesting to use a non-shrink grout in place of the mastic joint seal (tar strips)
M	Letter from Del DOT Materials & Research stating DuraGrout not approved
N	E-mails with Del-Mar-Va Paving about winter paving and this job specifically
O	e-mailed concerns to Bob Campbell & Brad Saborio from hot mix Sub - Del-Mar-Va Paving
P	Letter from Del DOT instructing Madcorp to hot mix now
Q	e-mails between Madcorp and Del-Mar-Va Paving coordinating hot mix paving of jobsite
R	Letter from Del DOT scheduling Semi-Final Inspection for February 26, 2015
S	Letter from Madcorp submitting a request for 25 additional calendar days/ weather observation
T	Letter from Del DOT adding 6 calendar days
U	Letter dated February 26 from Del DOT rescheduling Semi-Final Inspection for March 25, 2015
V	Punch list letter dated April 28, 2015
W	Madcorp letter dated May 14 requesting a meeting to review means and methods for Punch list Items
X	e-mail from Del DOT rejecting meeting
Y	Madcorp letter dated May 19 outlining Madcorp Means and Methods for Punch list Items
Z	Madcorp letter dated May 19 outlining Madcorp's intent to claim for additional compensation
AA	Letter from Del DOT June 4 response to Madcorp Means & Methods for Punch List letter
BB	Madcorp's June 22, 2015 response to Del DOT June 4 letter
CC	Letter dated June 23, 2015 from Brad Saborio, Del DOT with Madcorps previous letters attached
DD	Madcorp's June 26, 2015 letter
EE	Del DOT - 2 email responses to Madcorp letter of June 26
FF	Del DOT's 2 follow-up letters to e-mails
GG	Del DOT's letter extending the contract time 6 days

Mid-Atlantic Dismantlement Corporation
P. O. Box 1192, Dover, Delaware 19903
302-678-9300

DE DOT Contract #T201107304
BR 3-224 on S546 Conrail Road over Bucks Branch
Sussex County

EXHIBIT C

Mid-Atlantic Dismantlement Corporation
P. O. Box 1192, Dover, Delaware 19903
302-678-9300

DE DOT Contract #T201107304
BR 3-224 on S546 Conrail Road over Bucks Branch
Sussex County

WEATHER

			Low Temps / Snow / RAIN
12/8/2014		Temps 35-36 degrees - light snow, sleet, light mist	X ✓
12/9/2014		Temps 41-42 degrees - light rain all day	X ✓
12/10/2014		Temps 41-46 degrees slow clearing	
12/11/2014		Temps 34-39 degrees cloudy	
12/12/2014		Temps 33-42 degrees - cloudy	
12/13/2014	Saturday	Temps 34-42 degrees - cloudy	
12/14/2014	Sunday	Temps 42-48 degrees - cloudy	
12/15/2014	Monday	Temps 42-48 degrees - cloudy	
12/16/2014		Temps 33-52 degrees - cloudy - heavy rain in afternoon - rained out	X ✓
12/17/2014		Temps 42-53 degrees - clearing	
12/18/2014		Temps 33-40 degrees - cloudy	
12/19/2014		Temps 33-34 degrees - cloudy	
12/20/2014	Saturday	Temps 25-38 degrees - cloudy - checked pumps	
12/21/2014	Sunday	Temps 32-42 degrees - cloudy - checked pumps	
12/22/2014	Monday	Temps 32-39 degrees - rain on & off all day	X ✓
12/23/2014		Temps 49- 55 degrees - rain on & off all day	X ✓
12/24/2014		Temps 51-70 degrees - rain all day	X ✓
12/25/2014	Christmas	Temp 51 degrees - rain - checked pumps -	
		Placed sand bags on washed out dike	
12/26/2014		Temps 32- 50 degrees and clear	
12/27/2014	Saturday	Temps 32- 50 degrees and clear	
12/28/2014	Sunday	Temps 35-56 degrees checked on pumps	
12/29/2014	Monday	Temps 34-36 degrees - rain/sleet	X ✓
12/30/2014		Temps 35-37 degrees - Light snow - cloudy	X
12/31/2014		Temps 22-36 degrees - clear	
1/1/2015	New Years	Temp 22 degrees - clear - checked pumps	
1/2/2015		Temps 32-42 degrees - cloudy	
1/3/2015	Saturday	Temp 33 degrees - rained out at 1:35 P.M.	X ✓
1/4/2015	Sunday	Temp 50 degrees - rain - checked pumps	
1/5/2015	Monday	Temps 42-36 degrees - cloudy, very windy -	
		poured headwall - insulated it with blankets	
1/6/2015		Temps 24-28 degrees - light snow 1/2 day partly cloudy	X
1/7/2015		Temps 24-27 degrees - very windy - wind chill 10 degrees	X
1/8/2015		Temps 10-21 degrees - wind chill -15 degrees AM	X
1/9/2015		Temps 23-37 degrees - light snow	X
1/10/2015	Saturday	Temps 13-25 degrees - pump frozed & froze -	X
		worked on unfreezing pump and getting it working again	
1/11/2015	Sunday	Temps 13-41 - checked on pumps	
1/12/2015		Temps 35-38 degrees - rain all day - rained out at 9:30 A.M.	X ✓
1/13/2015		Temps 34-34 degrees - cloudy all day - Dike washed out again - 5 hours F.A.	
1/14/2015		Temps 28-33 degrees - freezing rain, sleet & snow most of day	X ✓

1/15/2015		Temps 29-37 degrees - cloudy	
1/16/2015	Friday	Temps 28-45 degrees - cloudy	
1/17/2015	Saturday	Temps 21-34 degrees - open up stream flow - shut down pumps	
1/18/2015	Sunday	Temp 47 degrees - heavy rain until 3 P.M.	
1/19/2015		Temps 33-44 degrees - cloudy	
1/20/2015		Temps 24-52 degrees - cloudy all day	
1/21/2015		Temps 31-31 degrees - cloudy, snow - heavy 2" at noon	X ✓
1/22/2015		Temps 30-42 degrees - cloudy all day	
1/23/2015		Temps 25-40 degrees - afternoon rain - start hot mix removal	X
1/24/2015	Saturday	Temps 35-39 degrees - heavy rain in morning- rain off & on	X ✓
		no work on site	
1/25/2015	Sunday	Temps 34-46 degrees - cloudy very wet	
1/26/2015	Monday	Temps 36-35 degrees - rain in A.M. heavy rain in P.M.- Light snow late	X
		finished Hot mix asphalt removal - grade very wet - very wet shoulder	
1/27/2015		Temps 30-35 degrees - light snow in morning, cloudy	X
		did roadwork - subgrade very wet	
1/28/2015		Temps 20-33 degrees - did roadwork	
1/29/2015	Thursday	Temps 16-38 degrees - Del-Mar-Va Paving layed base hotmix asphalt	X
1/30/2015	Friday	Temps 38-42 degrees - light rain, clearing, snow flurries -	
		Del-Mar-Va Paving layed HMA "C"	
1/31/2015	Saturday	Temps 17-30 degrees - worked on frozen topsoil	X
2/2/2015	Monday	Temps 56-40 degrees - light rain, heavy rain - 9 AM to 3 P.M. - rained out	X ✓
2/3/2015		Temps 21-31 degrees - clear - guardrail installed	X
2/4/2015		Temps 24-50 degrees - clear - Temporary striping installed	
		OPENED ROAD 3:00 P.M.	

Sundays are there to show continuity. Sundays are not in our request.

- 5
35
- 13
22

Mid-Atlantic Dismantlement Corporation
P. O. Box 1192, Dover, Delaware 19903
302-678-9300

DE DOT Contract #T201107304
BR 3-224 on S546 Conrail Road over Bucks Branch
Sussex County

EXHIBIT E

STATE OF DELAWARE
DEPARTMENT OF TRANSPORTATION
800 BAY ROAD
P.O. BOX 778
DOVER, DELAWARE 19903

SHAILEN P. BHATT
SECRETARY

October 3, 2014

Mr. Rick Mazol
Mid-Atlantic Dismantlement Corp.
PO Box 1192
Dover, DE 19903

Dear Mr. Mazol,

In reference to DelDOT Contract No. T201107304.01, Bridge 3-224 on S546 Conrail Road over Bucks Branch, Sussex County, please consider this your Notice to Proceed under the terms of this contract. Work must begin on or before October 13, 2014; time charges begin on this date.

Your work schedule has been approved with the start date of October 13, 2014 with the understanding that your prosecution of work and approved work schedule be in full compliance with Section 108.03 of the Standard Specification, August 2001.

The MOT will be as per the specifications. The MOT plans and NCHRP 350 Report submitted for review and approval will be sent under separate cover.

If there are any questions, please contact this office at (302) 853-1330.

Sincerely,

Robert Campbell
Area Engineer
South II Construction

BC:ab
cc: Robert McCleary, Chief Engineer
Hugh Curran, Director Finance
Drew Boyce, Director, Planning
Mark Alexander, Director of Maintenance of Operations
Javier Torrijos, Assistant Director of Construction
Jeff Reed, District Engineer, South District
Brad Saborio, Group Engineer, South II Construction
Mark Luszcz, Traffic Engineer

DelDOT

Mid-Atlantic Dismantlement Corporation
P. O. Box 1192, Dover, Delaware 19903
302-678-9300

DE DOT Contract #T201107304
BR 3-224 on S546 Conrail Road over Bucks Branch
Sussex County

EXHIBIT G

Bob,

I called and spoke to Norfolk Southern's Public Projects Engineer concerning our official approval from the RR to begin construction. We have not received this yet. He asked if we held the Precon yet. We have a requirement to hold the Precon with someone present from NS representing their Division. These meeting minutes do not address someone from the RR present. Please advise when we can hold this meeting with NS. I would also like to attend.

I will then send a copy of those meeting minutes to NS so we can receive their formal approval. Please check the RR requirements.

Bob

From: Brown, Amanda (DelDOT)
Sent: Friday, September 26, 2014 11:15 AM
To: Campbell, Robert (DelDOT); Miller, Amy D. (DelDOT); Walter, Mark (DelDOT); McCluskey, Jason (DelDOT); Phillips, Tim (DelDOT); 'Rick Mazol'; McCleary, Robert (DelDOT); Curran, Hugh (DelDOT); Boyce, Drew (DelDOT); Alexander, Mark (DelDOT); Torrijos, Javier (DelDOT); Reed, Jeff (DelDOT); Saborio, Bradford (DelDOT); Luszcz, Mark (DelDOT); Cimo, Eric (DelDOT); Steward, Jeff (DelDOT); Simmons, Michael (DelDOT); Cunningham, Robert (DelDOT); Pappas, James (DelDOT); Spadafino, George (DelDOT); Nagase, George (DelDOT); Richardson, Rosemary (DelDOT); Probert, Alastair (DelDOT); Lallier, Evan (DelDOT); Pinkerton, Jennifer (DelDOT); McDougall, Sarah (DelDOT); Farkas, Paul (DelDOT); Bedwell, Clayton (DelDOT); Ceballos, Ramon (DelDOT); Davis, Vince (DelDOT); Thompson, Dan (DelDOT); Nagyiski Jr., Gerald (DelDOT); Holt, Louise A. (DelDOT); Layton, Gregory (DelDOT); Hehman, Denny (DelDOT); Clarke, David S. (DelDOT); Roberts, Marvin (DelDOT); Strauss, Al (DelDOT); Dodd, David H (DelDOT); Peters, Melody (DelDOT); Webb, Richard (DelDOT); Bunting, James (DelDOT); Hamilton, Mary (DelDOT); Gottfried, Scott (DelDOT); Hutson, Bob (DelDOT); Lewis, Rhonda (DelDOT); Perrine, Robert (DelDOT); Walter, Mark (DelDOT); Donovan, Sheila (DelDOT); Dutton, Jeremy (DelDOT); Lord, Pam (DelDOT); Wright, Dawn (DelDOT); DeLuca, Anthony J (DOL); Chudzik, Francis (DOL); Chantry, Steve (DelDOT); 'matmitten@madcorpde.com'
Subject: T201107304.01 Precon Meeting Minutes

Please see the attached Preconstruction Meeting Minutes for Contract T201107304.01.

Amanda Brown
Administrative Specialist
Delaware Dept. of Transportation
Transportation Solutions/South II
Phone: 302-853-1330
Fax: 302-856-5926

From : madcorp@comcast.net Fri, Oct 03, 2014 09:18 AM

Subject : Fwd: T201107304.01 Precon Meeting Minutes

To : bonniedougherty@tssi.cc

Bonnie:

We have been notified by the Delaware DOT Inspector, Mark Walter, that the message boards need to be removed from the jobsite until further notice. We thought we might be able to turn them sideways, but Del. DOT said to remove them. Apparently Del. DOT did not invite railroad personel to the project preconstruction meeting that was held May 22, 2014. Now the Railroad wants another preconstruction meeting before the project can begin.

The costs associated with removing and bringing back the signs need to carefully documented and will be submitted to Delaware DOT.

We will alert you as soon as we have a better idea what the new schedule will be.

Yvonne
Mid-Atlantic Dismantlement Corporation
P. O. Box 1192
Dover, Delaware 19903
302-678-9300

XFINITY Connect madcorp@comcast.net

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Fwd: T201107304.01 Job schedule

From : madcorp@comcast.net Fri, Oct 03, 2014 09:42 AM

Subject : Fwd: T201107304.01 Job schedule

To : Vincent Erdlen <verdlen@jfcson.com>, jhetherington@smicompanies.net

We have been notified by Delaware DOT that the job will not begin as currently scheduled Apparently Del. DOT did not invite railroad personel to the project preconstruction meeting that was held May 22, 2014. Now the Railroad wants another preconstruction meeting before the project can begin.

We will alert you as soon as we have a better idea what the new schedule will be.

Yvonne
Mid-Atlantic Dismantlement Corporation
P. O. Box 1192
Dover, Delaware 19903
302-678-9300

From: "Mazol, Rick" <rickmazol@madcorpde.com>
To: madcorp@comcast.net, "Mitten, Mat" <matmitten@madcorpde.com>
Sent: Friday, October 3, 2014 8:33:56 AM
Subject: Fwd: T201107304.01 Precon Meeting Minutes

Rick Mazol
Division Manager
Mid Atlantic Dismantlement
Bridge/Civil Division
302-678-9300 office
302-678-9304 fax

---------- Forwarded message ----------
From: **Campbell, Robert (DelDOT)** <Robert.Campbell@state.de.us>
Date: Fri, Oct 3, 2014 at 6:45 AM
Subject: RE: T201107304.01 Precon Meeting Minutes
To: "Perrine, Robert (DelDOT)" <Robert.Perrine@state.de.us>
Cc: "Saborio, Bradford (DelDOT)" <Bradford.Saborio@state.de.us>, "Hastings, Jason (DelDOT)" <Jason.Hastings@state.de.us>, "Brown, Amanda (DelDOT)" <Amanda.Brown@state.de.us>, Rick Mazol <rickmazol@madcorpde.com>, "Walter, Mark (DelDOT)" <Mark.Walter@state.de.us>, TMC1 <tmc1@state.de.us>, "Thompson, Dan (DelDOT)" <Dan.Thompson@state.de.us>, "Nagyiski Jr., Gerald (DelDOT)" <Gerald.Nagyiski@state.de.us>, "Lafferty, David" <david.lafferty@urs.com>, "Hamilton, Mary (DelDOT)" <Mary.Hamilton@state.de.us>, "Sullivan, Carol (DelDOT)" <Carol.Sullivan@state.de.us>, "Lindell, Kevin (DelDOT)" <Kevin.Lindell@state.de.us>, "Richter, Stephen (DelDOT)" <Stephen.Richter@state.de.us>

Bob...I'LL get Amanda to send out a letter to hold another Pre-Construction Meeting, but first, find out the name of the person(s) who will be attending, his/her e-mail address and the day(s) and time(s) available. Once we have this info, I'll reserve the conf room and Amanda will send out the letter. Rick Mazol...no construction is to begin until we hold another Pre-Construction Meeting with a NSRR representative present. This office will notify MAD Corp. when the meeting will take place. To whom it may concern at TMC1: disregard the Road Closure Form that was sent to you, another one will be issued at a later date. Dave Lafferty, do not schedule any E & S meetings.

-----Original Message-----
From: Perrine, Robert (DelDOT)
Sent: Thursday, October 02, 2014 10:38 PM
To: Campbell, Robert (DelDOT)
Cc: Saborio, Bradford (DelDOT); Hastings, Jason (DelDOT)
Subject: FW: T201107304.01 Precon Meeting Minutes

Sent: Thursday, October 09, 2014 9:29 AM
To: Campbell, Robert (DelDOT); madcorp@comcast.net; mat mitten; Walter, Mark (DelDOT)
Subject: Conrail Rd BR 3-224

Good morning Robert,

Any news from the RR on a pre-con date ?

Thanks,
Rick Mazol
Division Manager
Mid Atlantic Dismantlement
Bridge/Civil Division
302-678-9300 office
302-678-9304 fax

From : Robert Campbell (DelDOT) <Robert.Campbell@state.de.us> Thu, Oct 09, 2014 11:16 AM
Subject : RE: Conrail Rd BR 3-224
To : 'Rick Mazol' <rickmazol@madcorpde.com>, madcorp@comcast.net, mat mitten <matmitten@madcorpde.com>
Cc : Bradford Saborio (DelDOT) <Bradford.Saborio@state.de.us>, Mark Walter (DelDOT) <Mark.Walter@state.de.us>, Kevin Lindell (DelDOT) <Kevin.Lindell@state.de.us>, Robert Perrine (DelDOT) <Robert.Perrine@state.de.us>

No.

From: Rick Mazol [mailto:rickmazol@madcorpde.com]
Sent: Thursday, October 09, 2014 11:14 AM
To: Campbell, Robert (DelDOT); madcorp@comcast.net; mat mitten; Walter, Mark (DelDOT)
Subject: Re: Conrail Rd BR 3-224

Robert, The RR ROW only comes to the west edge of Conrail RD. Can URS just stand in the DEL DOT road (Conrail RD) and look at silt fence ?

Rick Mazol
Division Manager
Mid Atlantic Dismantlement
Bridge/Civil Division
302-678-9300 office
302-678-9304 fax

On Thu, Oct 9, 2014 at 10:56 AM, Campbell, Robert (DelDOT) <Robert.Campbell@state.de.us> wrote:
Waiting on name(s) and e-mail address of those NSRR representatives who might attend. As soon as this office receives the name(s), we will schedule a second Pre-Con. In addition, we have been told, our S & S Consultant (URS Corp.) must also obtain railroad insurance to enter their ROW too.

From: Rick Mazol [mailto:rickmazol@madcorpde.com]
Sent: Thursday, October 09, 2014 9:29 AM
To: Campbell, Robert (DelDOT); madcorp@comcast.net; mat mitten; Walter, Mark (DelDOT)

XFINITY Connect **madcorp@comcast.net**

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RE: Conrail Rd BR 3-224

From : Robert Campbell (DelDOT) <Robert.Campbell@state.de.us> Thu, Oct 09, 2014 11:25 AM

Subject : RE: Conrail Rd BR 3-224

To : Robert Perrine (DelDOT) <Robert.Perrine@state.de.us>, Amanda Brown (DelDOT) <Amanda.Brown@state.de.us>

Cc : Bradford Saborio (DelDOT) <Bradford.Saborio@state.de.us>, Mark Walter (DelDOT) <Mark.Walter@state.de.us>, Kevin Lindell (DelDOT) <Kevin.Lindell@state.de.us>, 'Rick Mazol' <rickmazol@madcorpde.com>, madcorp@comcast.net, mat mitten <matmitten@madcorpde.com>, Mark Walter (DelDOT) <Mark.Walter@state.de.us>

Amanda, reserve lg. conf room and do letter for Pre-Con any day during the week of 10/20 from 10 am to 12 pm. The e-mail address for Steven Guenther is: steven.quenther@nscorp.com and for mark: mark.serfass@nscorp.com. Also, include Bob Perrine. Steve and Mark are available any day that week, thx's.

From: Perrine, Robert (DelDOT)
Sent: Thursday, October 09, 2014 11:02 AM
To: Campbell, Robert (DelDOT)
Cc: Saborio, Bradford (DelDOT); Walter, Mark (DelDOT); Lindell, Kevin (DelDOT); 'Rick Mazol'; madcorp@comcast.net; mat mitten; Walter, Mark (DelDOT)
Subject: RE: Conrail Rd BR 3-224

Bob,

Your timing is good. Here are the contacts:

Steven Guenther,	Track Supervisor	(717) 712-4712 cell
Mark Serfass,	Structures Supervisor	(610) 442-2291

Yes, the E&S consultant will require RR insurance if they will be entering RR ROW.

Let me know if I can assist further.

Bob

From: Campbell, Robert (DelDOT)
Sent: Thursday, October 09, 2014 10:56 AM
To: 'Rick Mazol'; madcorp@comcast.net; mat mitten; Walter, Mark (DelDOT)
Cc: Saborio, Bradford (DelDOT); Walter, Mark (DelDOT); Lindell, Kevin (DelDOT); Perrine, Robert (DelDOT)
Subject: RE: Conrail Rd BR 3-224

Waiting on name(s) and e-mail address of those NSRR representatives who might attend. As soon as this office receives the name(s), we will schedule a second Pre-Con. In addition, we have been told, our E & S Consultant (URS Corp.) must also obtain railroad insurance to enter their ROW too.

From: Rick Mazol [mailto:rickmazol@madcorpde.com]

Mid-Atlantic Dismantlement Corporation
P. O. Box 1192, Dover, Delaware 19903
302-678-9300

DE DOT Contract #T201107304
BR 3-224 on S546 Conrail Road over Bucks Branch
Sussex County

EXHIBIT H

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RE: Conrail Rd BR 3-224

From : Robert Campbell (DelDOT) <Robert.Campbell@state.de.us> Thu, Oct 09, 2014 11:25 AM

Subject : RE: Conrail Rd BR 3-224

To : Robert Perrine (DelDOT) <Robert.Perrine@state.de.us>, Amanda Brown (DelDOT) <Amanda.Brown@state.de.us>

Cc : Bradford Saborio (DelDOT) <Bradford.Saborio@state.de.us>, Mark Walter (DelDOT) <Mark.Walter@state.de.us>, Kevin Lindell (DelDOT) <Kevin.Lindell@state.de.us>, 'Rick Mazol' <rickmazol@madcorpde.com>, madcorp@comcast.net, mat mitten <matmitten@madcorpde.com>, Mark Walter (DelDOT) <Mark.Walter@state.de.us>

Amanda, reserve lg. conf room and do letter for Pre-Con any day during the week of 10/20 from 10 am to 12 pm. The e-mail address for Steven Guenther is: steven.quenther@nscorp.com and for mark: mark.serfass@nscorp.com. Also, include Bob Perrine. Steve and Mark are available any day that week, thx's.

From: Perrine, Robert (DelDOT)
Sent: Thursday, October 09, 2014 11:02 AM
To: Campbell, Robert (DelDOT)
Cc: Saborio, Bradford (DelDOT); Walter, Mark (DelDOT); Lindell, Kevin (DelDOT); 'Rick Mazol'; madcorp@comcast.net; mat mitten; Walter, Mark (DelDOT)
Subject: RE: Conrail Rd BR 3-224

Bob,

Your timing is good. Here are the contacts:

Steven Guenther,	Track Supervisor	(717) 712-4712 cell
Mark Serfass,	Structures Supervisor	(610) 442-2291

Yes, the E&S consultant will require RR insurance if they will be entering RR ROW.

Let me know if I can assist further.

Bob

From: Campbell, Robert (DelDOT)
Sent: Thursday, October 09, 2014 10:56 AM
To: 'Rick Mazol'; madcorp@comcast.net; mat mitten; Walter, Mark (DelDOT)
Cc: Saborio, Bradford (DelDOT); Walter, Mark (DelDOT); Lindell, Kevin (DelDOT); Perrine, Robert (DelDOT)
Subject: RE: Conrail Rd BR 3-224

Waiting on name(s) and e-mail address of those non-railroad representatives who might attend. As soon as this office receives the name(s), we will schedule a second Pre-Con. In addition, we have been told, our E & S Consultant (URS Corp.) must also obtain railroad insurance to enter their ROW too.

From: Rick Mazol [mailto:rickmazol@madcorpde.com]

Mid-Atlantic Dismantlement Corporation
P. O. Box 1192, Dover, Delaware 19903
302-678-9300

DE DOT Contract #T201107304
BR 3-224 on S546 Conrail Road over Bucks Branch
Sussex County

EXHIBIT J

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Fwd: Contract T201107304, Br3-224 on S546 Conrail Road over Bucks Branch---NTP

From : Rick Mazol <rickmazol@madcorpde.com> Wed, Nov 19, 2014 03:45 PM
Subject : Fwd: Contract T201107304, Br3-224 on S546 Conrail Road over Bucks Branch---NTP
To : madcorp@comcast.net, mat mitten <matmitten@madcorpde.com>

Rick Mazol
Division Manager
Mid Atlantic Dismantlement
Bridge/Civil Division
302-678-9300 office
302-678-9304 fax

---------- Forwarded message ----------
From: **Campbell, Robert (DelDOT)** <Robert.Campbell@state.de.us>
Date: Wed, Nov 19, 2014 at 3:39 PM
Subject: RE: Contract T201107304, Br3-224 on S546 Conrail Road over Bucks Branch---NTP
To: Rick Mazol <rickmazol@madcorpde.com>
Cc: "Walter, Mark (DelDOT)" <Mark.Walter@state.de.us>

I don't think a week is going to make a difference, Rick. We have to have a E & S Pre-Con prior to start of construction and starting work on the 1st of December only allows 3 days next week (State Holiday on Thursday and Friday) to have this meeting...too short of notice for attendees. If we need to temporarily stop time charges for legitimate reason(s), we will do it.

From: Rick Mazol <rickmazol@madcorpde.com>
Sent: Wednesday, November 19, 2014 1:54 PM
To: Campbell, Robert (DelDOT); madcorp@comcast.net; mat mitten; Walter, Mark (DelDOT)
Subject: Re: Contract T201107304, Br3-224 on S546 Conrail Road over Bucks Branch---NTP

Robert, Is there anyway we can put the message boards out this Friday (11-21-14) ? This would put the start date at Monday December 1st. This would be a BIG help as far as weather, winter shut down of asphalt plants and X-Mas holiday`s go.

Thanks, Rick

Rick Mazol
Division Manager
Mid Atlantic Dismantlement
Bridge/Civil Division
302-678-9300 office
302-678-9304 fax

On Wed, Nov 19, 2014 at 1:41 PM, Campbell, Robert (DelDOT) <Robert.Campbell@state.de.us> wrote:

Rick,

Finally, the NSRR has approved URS Corp's Insurance Certificate and we are good to go. This office will be sending out the Notice to Proceed Letter shortly with a start date of December 8th (time charges will begin that day). You will be hearing shortly from a URS Representative about scheduling an E & S Pre-Con meeting. We need to get the message boards in place, Friday, November 28th. Please have someone call Mark Walter (222-7269) regarding placement of the boards. Thank you.

Mid-Atlantic Dismantlement Corporation
P. O. Box 1192, Dover, Delaware 19903
302-678-9300

DE DOT Contract #T201107304
BR 3-224 on S546 Conrail Road over Bucks Branch
Sussex County

EXHIBIT L

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RCP joints

From : Rick Mazol <rickmazol@madcorpde.com> Mon, Jan 05, 2015 10:56 AM

Subject : RCP joints

To : Robert Campbell (DelDOT) <robert.campbell@state.de.us>

Cc : Mark Walter (DelDOT) <mark.walter@state.de.us>, madcorp@comcast.net

Robert,

Due to the cold weather, the mastic joint seal for the large diameter RCP is way to stiff to use. MAD Corp proposes to use premixed bag non-srink grout. The cost for labor and material to furnish and install the grout would be $3.45 per pound.

Thanks for your help with this matter,
Rick

On Jan 5, 2015 11:30 AM, "Campbell, Robert (DelDOT)" <Robert.Campbell@state.de.us> wrote:

I will do some checking. What is the cost difference between the mastic and non-shrink ? Secondly, are there any restriction to warming up the mastic to use?

From: Rick Mazol [mailto:rickmazol@madcorpde.com]
Sent: Monday, January 05, 2015 11:25 AM
To: Campbell, Robert (DelDOT)
Subject: Re: FW: RCP joints

For large dia. Elliptical RCP mastic is used. This is also per the manufacturer, Rinker Pipe.

On Jan 5, 2015 11:17 AM, "Campbell, Robert (DelDOT)" <Robert.Campbell@state.de.us> wrote:

Why isn't a rubber gasket being used as called for in subsection 612.03 ?

From: Rick Mazol [mailto:rickmazol@madcorpde.com]
Sent: Monday, January 05, 2015 10:57 AM
To: Campbell, Robert (DelDOT)
Cc: Walter, Mark (DelDOT); madcorp@comcast.net
Subject: RCP joints

Robert,

Due to the cold weather, the mastic joint seal for the large diameter RCP is way to stiff to use. MAD Corp proposes to use premixed bag non-srink grout. The cost for labor and material to furnish and install the grout would be $3.45 per pound.

Thanks for your help with this matter,
Rick

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Fwd: RE: FW: RCP joints

From : Rick Mazol <rickmazol@madcorpde.com> Mon, Jan 05, 2015 12:56 PM
Subject : Fwd: RE: FW: RCP joints
To : madcorp@comcast.net

---------- Forwarded message ----------
From: "Campbell, Robert (DelDOT)" <Robert.Campbell@state.de.us>
Date: Jan 5, 2015 12:25 PM
Subject: RE: FW: RCP joints
To: "Rick Mazol" <rickmazol@madcorpde.com>
Cc: "Lindell, Kevin (DelDOT)" <Kevin.Lindell@state.de.us>, "Walter, Mark (DelDOT)" <Mark.Walter@state.de.us>

Rick,

I have a call into Kevin to discuss. In the meantime, I need to know the approximate quantity of grout being used. The State should be getting a Credit for the mystic strips not being used too. You need to submit the name of the grout being used to John Thomas, M & R, for approval. Or call him get a verbal approval and have him send me an e-mail to confirm. I did call Rinker and the strips are $ 72.00 for 8 rolls, 14.5 ' long and they do not make a gasket for that size pipe.

From: Campbell, Robert (DelDOT)
Sent: Monday, January 05, 2015 11:47 AM
To: 'Rick Mazol'
Subject: RE: FW: RCP joints

Wouldn't a similar effect be for the non-shrink grout too? Did you call the supplier to see if they have a rubber gasket?

From: Rick Mazol [mailto:rickmazol@madcorpde.com]
Sent: Monday, January 05, 2015 11:41 AM
To: Campbell, Robert (DelDOT)
Subject: RE: FW: RCP joints

The mastic comes with the pipe. Heating the mastic will make it softer, but when exposed to below freezing temps on placed on below freezing pipe it would be to stiff to use again.

Mid-Atlantic Dismantlement Corporation
P. O. Box 1192, Dover, Delaware 19903
302-678-9300

DE DOT Contract #T201107304
BR 3-224 on S546 Conrail Road over Bucks Branch
Sussex County

EXHIBIT M

STATE OF DELAWARE
DEPARTMENT OF TRANSPORTATION
800 BAY ROAD
P.O. BOX 778
DOVER, DELAWARE 19903

SHAILEN P. BHATT
SECRETARY

January 7, 2015

Mid-Atlantic Dismantlement Corporation
P.O. Box 1192
Dover, DE 19903

Gentlemen:

The following material sources have been reviewed by this office for **State Contract No. T201107304, F.A. P. No. EBROS-S546(04) – BR3-224 on S546 Conrail Road over Bucks Branch, Sussex County** as to their acceptability for use on this project. Please note that all materials must conform to the Standard Specifications, and Special Provisions, and/or Plans governing this project. The following action must be taken in order that we may expedite the inspection and approval of the material.

If you have any questions, please call me at 302-760-2381.

SECTION: #612233 – RCP Elliptical 58"x91" Class III

SOURCE: L&M Construction Chemicals - DuraGrout

ACTION: Not approved.

Duragrout placement must have a temperature of 40° F minimum for a 24 hour period for proper curing.

The mastic allows movement. The grout does not.

Sincerely,

"Signature on File"

John W. Thomas
Materials Technician

JT:tss
cc: Brad Saborio, Group Engineer, Group 3 Construction
Wayne Massey, Area Supervisor, Group 3 Construction
Sarah Criswell, Area Engineer, Group 3 Construction

TEAM DelDOT
Transparent Efficient Accountable Measured

Mid-Atlantic Dismantlement Corporation
P. O. Box 1192, Dover, Delaware 19903
302-678-9300

DE DOT Contract #T201107304
BR 3-224 on S546 Conrail Road over Bucks Branch
Sussex County

EXHIBIT N

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Fwd: Re: BR 3-224, Conrail RD, Seaford

From : Rick Mazol <rickmazol@madcorpde.com> Mon, Jan 12, 2015 05:27 PM

Subject : Fwd: Re: BR 3-224, Conrail RD, Seaford

To : madcorp@comcast.net, mat mitten <matmitten@madcorpde.com>

---------- Forwarded message ----------
From: "Rick Mazol" <rickmazol@madcorpde.com>
Date: Jan 12, 2015 5:26 PM
Subject: Re: BR 3-224, Conrail RD, Seaford
To: "Mac Nossick" <macdmvpaving@gmail.com>
Cc:

Mac, yes we have to complete the project and open the road. Please state your concerns and any additional costs associated with winter HMA operations. This may be by the ton or on lump sum basics. After I receive your reply MAD Corp will forward it to Del Dot for approval.

Thanks, Rick

On Jan 12, 2015 4:25 PM, "Mac Nossick" <macdmvpaving@gmail.com> wrote:
Just received your email. Is DelDOT insisting that the project be completed, at the referenced date? Will DelDOT compensate MadCorp and DMV Paving for the additional time, associated with winter start-up and waiting time (waiting at the site until the temperature is approved for paving, etc.)? Will DelDOT compensate MadCorp and DMV Paving for the additional winter plant and minimum start-up costs, as issued from the hot mix plants? As you know, there are a whole new set of rules for paving now. We need to know (in writting) how difficult Del DOT will be.

On Mon, Jan 12, 2015 at 3:42 PM, Rick Mazol <rickmazol@madcorpde.com> wrote:
> Mac,
>
> As per our ph-con of last week you stated the DMV Paving was shut down until
> March 17th. However MAD Corp will be ready for HMA paving on Conrail Rd
> January 22nd weather permitting.. Please reply with any concerns that you
> may have.
>
> Thanks,
> Rick Mazol
> Division Manager
> Mid Atlantic Dismantlement
> Bridge/Civil Division
> 302-678-9300 office
> 302-678-9304 fax

From : Rick Mazol <rickmazol@madcorpde.com> Mon, Jan 12, 2015 03:42 PM

Subject : BR 3-224, Conrail RD, Seaford

To : Mac Nossick <macdmvpaving@gmail.com>, madcorp@comcast.net

Mac,

As per our ph-con of last week you stated the DMV Paving was shut down until March 17th. However MAD Corp will be ready for HMA paving on Conrail Rd January 22nd weather permitting.. Please reply with any concerns that you may have.

Mid-Atlantic Dismantlement Corporation
P. O. Box 1192, Dover, Delaware 19903
302-678-9300

DE DOT Contract #T201107304
BR 3-224 on S546 Conrail Road over Bucks Branch
Sussex County

EXHIBIT O

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RE: Del DOT Contract #T201107304

From : Bradford Saborio (DelDOT) <Bradford.Saborio@state.de.us> Tue, Jan 20, 2015 12:36 PM
Subject : RE: Del DOT Contract #T201107304
To : 'madcorp@comcast.net' <madcorp@comcast.net>
Cc : Rick Mazol <rickmazol@madcorpde.com>, Mat Mitten <matmitten@madcorpde.com>, Robert Campbell (DelDOT) <Robert.Campbell@state.de.us>, Mark Walter (DelDOT) <Mark.Walter@state.de.us>

Yvonne,
I will need to discuss this matter with Mr. Campbell before we can approve the additional cost. He is expected to return to work tomorrow. In the meantime in order for us to fully evaluate your request we will need additional supporting documentation to justify the amounts.
Thanks
Brad

From: madcorp@comcast.net [mailto:madcorp@comcast.net]
Sent: Tuesday, January 20, 2015 10:33 AM
To: Saborio, Bradford (DelDOT)
Cc: Mazol, Rick; Mitten, Mat; Campbell, Robert (DelDOT); Walter, Mark (DelDOT)
Subject: Fwd: Del DOT Contract #T201107304

Mr. Saborio:

Attached find a letter addressed to Delaware DOT about the hot mix on Delaware DOT Contract #T201107304, that we need a response on, to go forward with this project. This is a time sensitive issue and it has been brought to my attention that Mr. Campbell is still not available.

Thank you for your attention to this matter.

Yvonne, Administrative Assistant
Mid-Atlantic Dismantlement Corporation
P. O. Box 1192
Dover, Delaware 19903
302-678-9300

From: madcorp@comcast.net
To: "robert campbell" <robert.campbell@state.de.us>
Cc: "mark walter" <mark.walter@state.de.us>, "Mat Mitten" <matmitten@madcorpde.com>
Sent: Thursday, January 15, 2015 5:02:17 PM
Subject: Del DOT Contract #T201107304

Attached find a letter about paving on the above referenced Contract.

madcorp
Mid-Atlantic Dismantlement Corporation
P.O. Box 1192, Dover, Delaware 19903
Phone (302)678-9300 FAX (302)678-9304

Mathew E. Mitten
President
January 15, 2015

Robert Campbell, Area Engineer
South II Construction District
Delaware Department of Transportation
23697 DuPont Boulevard
Georgetown, Delaware 19947

RE: DE DOT Contract #T201107304.01: F.A.P. #EBROS-S546 (04), BR 3-224 on S546 Conrail Road over Bucks Branch, Sussex County

Dear Mr. Campbell:

We have been advised by our subcontractor, Del-Mar-Va Paving Co,, Inc, that there will be additional costs to complete the asphalt paving, on the above referenced contract, now that Del-Mar-Va Paving is shut down for the winter until March 17, 2015 and the plant is running a winter schedule. Our additional costs are as follows:

Material and Haul Rate Increases (add)	
Item #401800, Type C hot mix material increase	$3.99/ton
Item #401809, Type B hot mix material increase	1.44/ton
Haul Rate increase	4.14/ton
Minimum tonnage start-up charge for orders under 200 tons (winter schedule), per day	$2,070.00/day
Truck waiting time charges, at the plant	$ 97.75/ hour
Additional time (costs) for hot mix application, Due to winter paving for both Type B and Type C	$ 40.25/ton

Additional cost for Item #401800, Type C would be: $48.38/ton
+ $93.00 (bid Price) = $141.38/Ton (Total to Pave)
Additional cost for Item #401809, Type B would be $45.83/ton
+ $82.00 (bid price) = $127.83/Ton (Total to Pave)

If you need additional information, please call me at 302-678-9300.

Sincerely;
Rick Mazol
Division Manager
Mid-Atlantic Dismantlement Corporation
Bridge/Civil Division

Mid-Atlantic Dismantlement Corporation
P. O. Box 1192, Dover, Delaware 19903
302-678-9300

DE DOT Contract #T201107304
BR 3-224 on S546 Conrail Road over Bucks Branch
Sussex County

EXHIBIT P

January 22, 2014

Mid-Atlantic Dismantlement Corp.
PO Box 1192
Dover, DE 19903

Ladies and Gentlemen:

This letter is in reference to DelDOT Contract No. T201107304, F.A.P. No. EBROS-S546(04), Br 3-224 on S546, Conrail Road over Buck's Branch, Sussex County. This office acknowledges receipt of MAD Corp's letter dated January 15, 2015 regarding the additional costs to complete the asphalt paving. At this time, there are no monies in the Project to bear these additional costs as outlined in the letter.

As you know, the Project is in Liquidated Damages and the completion date was January 9th. We cannot continue to keep Conrail Road closed until a hot-mix plant is re-opened on March 17, 2015. There is one hot-mix plant in Dagsboro (Del-Mar Plant) that is open all winter and will produce Type B Hot-Mix. With this plant being open, this office sees no reason why MAD Corp cannot complete the typical roadway section on sheet 4, less Type C Hot-Mix, for Conrail Road and open it to traffic and then complete it when Type C Hot-Mix becomes available without any additional costs to the Department.

If there are any questions, please contact this office at (302) 853-1330.

Sincerely,

Robert Campbell
Area Engineer
Group 3 Construction

Mid-Atlantic Dismantlement Corporation
P. O. Box 1192, Dover, Delaware 19903
302-678-9300

DE DOT Contract #T201107304
BR 3-224 on S546 Conrail Road over Bucks Branch
Sussex County

EXHIBIT Q

XFINITY Connect madcorp@comcast.net

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Fwd: Re: Conrail

From : Rick Mazol <rickmazol@madcorpde.com> Tue, Jan 27, 2015 10:50 AM

Subject : Fwd: Re: Conrail

To : madcorp@comcast.net, mat mitten <matmitten@madcorpde.com>

---------- Forwarded message ----------
From: "Mac Nossick" <macdmvpaving@gmail.com>
Date: Jan 27, 2015 10:45 AM
Subject: Re: Conrail
To: "Rick Mazol" <rickmazol@madcorpde.com>
Cc:

Okay, we will see what we can do about the plant and a crew. Are we just placing the base course now? What about the extra charges I emailed you? Who will be responsible for them? We cannot wait for an extended period of time for payment or wait to see if DelDOT will pay them. Oh, did anyone submit mix designs?

On Tue, Jan 27, 2015 at 10:35 AM, Rick Mazol <rickmazol@madcorpde.com> wrote:
> Mac, we plan on having the road ready to pave this Thursday, 1-29-15. The
> forecast is to be 39°.
>
> Thanks, Rick

From : Rick Mazol <rickmazol@madcorpde.com> Tue, Jan 27, 2015 10:35 AM

Subject : Conrail

To : Mac Nossick <macdmvpaving@gmail.com>, madcorp@comcast.net, mat mitten <matmitten@madcorpde.com>

Mac, we plan on having the road ready to pave this Thursday, 1-29-15. The forecast is to be 39°.

Thanks, Rick

XFINITY Connect **madcorp@comcast.net**

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Fwd: Re: Contract T201107304, Br 3-224 on S546, Conrail Road over Buck's Branch, Sussex County---Response to MAD Corp's letter dated January 15,2015

From : Rick Mazol <rickmazol@madcorpde.com> Wed, Jan 28, 2015 07:17 AM

Subject : Fwd: Re: Contract T201107304, Br 3-224 on S546, Conrail Road over Buck's Branch, Sussex County---Response to MAD Corp's letter dated January 15,2015

To : madcorp@comcast.net, mat mitten <matmitten@madcorpde.com>

---------- Forwarded message ----------
From: "Mac Nossick" <macdmvpaving@gmail.com>
Date: Jan 28, 2015 7:11 AM
Subject: Re: Contract T201107304, Br 3-224 on S546, Conrail Road over Buck's Branch, Sussex County---Response to MAD Corp's letter dated January 15,2015
To: "Rick Mazol" <rickmazol@madcorpde.com>
Cc:

Good morning Rick. I have gotten the plant to open tomorrow, so that hurdle has been accomplished. We are working on acquiring the trucking and hopefully will know that this morning. I still have not received any word (signed/acknowledged paperwork) from you or Matt, in reference to the additional costs, for this winter adventure. I will need this, before we can move forward with the paving. I realize that MADCorp is still trying to resolve these issues with DelDOT, but Del-Mar-Va Paving Co., Inc. needs to be positively assured that we will be paid our additional charges, no matter the circumstances you encounter with DelDOT. The only way for this to happen is your company's signing of our paperwork. I look forward to receiving our paperwork soon, so we can press on tomorrow.

On Tue, Jan 27, 2015 at 9:24 AM, Mac Nossick <macdmvpaving@gmail.com> wrote:
> Good morning Rick. I just wanted to let you know about the hot mix
> plant schedule. I talked to the plant yesterday and they do not have
> any orders and do not have any plans on starting the plant, this week.
> There intention is still to shut down this friday or possibly sooner.
> I know we did not receive any appreciable snow last night, but there
> was substantial rain and ice. Currently it is snowing (flurries) in
> Seaford. I just wanted to give you this update. Please keep me posted
> on your progress and schedule for the project.
>
> On Mon, Jan 26, 2015 at 10:47 AM, Mac Nossick <macdmvpaving@gmail.com> wrote:
>> Good morning Rick. I am just following up on all the emails and phone
>> calls, from last week. I was wondering if you had heard anything from
>> DelDOT? Just curious.
>>
>> On Thu, Jan 22, 2015 at 11:51 AM, Mac Nossick <macdmvpaving@gmail.com> wrote:
>>> Good morning Rick. Per our phone conversation earlier this morning, I
>>> contacted the plant/supplier and Matt Mitten. After numerous calls to
>>> the plant/supplier, I really cannot give you a definate answer, on the
>>> plant closure or schedule. As we have stated for a couple weeks, River
>>> Asphalt Plant #1, is scheduled to close on January 30, 2015 (River
>>> Asphalt #2 is closed for the winter), but they are also going to
>>> remain open or be available after that date, for work that George &
>>> Lynch or other companies, who need to complete any projects. This open
>>> ended schedule is also subject to change and cancelation due to
>>> weather, plant breakdown, plant repair or any other reason, which
>>> could occur during this time of year. I passed this on to Matt and he
>>> understood the situation and was going to talk to DelDOT. I also
>>> expressed to him our desire to support any decision that was made and
>>> will remain available to help your company as much as possible. I
>>> figure that it will probably take about 3/4 of a day to place the base

>>> course, which is what DelDOT wants to achieve, at this time. Of
>>> course, this is subject to weather and site conditions, plant
>>> availability and DelDOT inspection. Hopefully, Matt can help resolve
>>> this matter and we can move forward. Please keep me informed. Thank
>>> you.
>>>
>>> On Thu, Jan 22, 2015 at 7:04 AM, Rick Mazol <rickmazol@madcorpde.com> wrote:
>>>> Mac, DelDOT response....
>>>>
>>>> ---------- Forwarded message ----------
>>>> From: "Campbell, Robert (DelDOT)" <Robert.Campbell@state.de.us>
>>>> Date: Jan 22, 2015 5:50 AM
>>>> Subject: Contract T201107304, Br 3-224 on S546, Conrail Road over Buck's
>>>> Branch, Sussex County---Response to MAD Corp's letter dated January 15,2015
>>>> To: "Rick Mazol" <rickmazol@madcorpde.com>
>>>> Cc: "Saborio, Bradford (DelDOT)" <Bradford.Saborio@state.de.us>, "Lindell,
>>>> Kevin (DelDOT)" <Kevin.Lindell@state.de.us>, "Nagyiski Jr., Gerald (DelDOT)"
>>>> <Gerald.Nagyiski@state.de.us>, "Thompson, Dan (DelDOT)"
>>>> <Dan.Thompson@state.de.us>, "Walter, Mark (DelDOT)"
>>>> <Mark.Walter@state.de.us>, "Holt, Louise A. (DelDOT)"
>>>> <Louise.Holt@state.de.us>
>>>>
>>>> Good morning Rick,
>>>>
>>>> Attached above is our response to MAD Corp's letter dated January 15, 2015.
>>>> Should you have any questions, please feel free to call or e-mail us,
>>>> thanks.
>>>>
>>>>
>>>>
>>>> From: Dept. Trans [mailto:dotcanonscans@state.de.us]
>>>> Sent: Thursday, January 22, 2015 6:41 AM
>>>> To: Campbell, Robert (DelDOT)
>>>> Subject: Attached Image
>>>>
>>>>
>>>>
>>>>

From : Rick Mazol <rickmazol@madcorpde.com> Tue, Jan 27, 2015 10:32 AM

Subject : Fwd: Re: Contract T201107304, Br 3-224 on S546, Conrail Road over Buck's Branch, Sussex County---Response to MAD Corp's letter dated January 15,2015

To : madcorp@comcast.net, mat mitten <matmitten@madcorpde.com>

---------- Forwarded message ----------
From: "Mac Nossick" <macdmvpaving@gmail.com>
Date: Jan 27, 2015 9:24 AM
Subject: Re: Contract T201107304, Br 3-224 on S546, Conrail Road over Buck's Branch, Sussex County---Response to MAD Corp's letter dated January 15,2015
To: "Rick Mazol" <rickmazol@madcorpde.com>
Cc:

Good morning Rick. I just wanted to let you know about the hot mix plant schedule. I talked to the plant yesterday and they do not have any orders and do not have any plans on starting the plant, this week. There intention is still to shut down this friday or possibly sooner. I know we did not receive any appreciable snow last night, but there was substantial rain and ice. Currently it is snowing (flurries) in Seaford. I just wanted to give you this update. Please keep me posted on your progress and schedule for the project.

On Mon, Jan 26, 2015 at 10:47 AM, Mac Nossick <macdmvpaving@gmail.com> wrote:
> Good morning Rick. I am just following up on all the emails and phone
> calls, from last week. I was wondering if you had heard anything from

XFINITY Connect madcorp@comcast.net

+ Font Size -

Fwd: Re: Conrail

From : Rick Mazol <rickmazol@madcorpde.com> Wed, Jan 28, 2015 12:28 PM

Subject : Fwd: Re: Conrail

To : madcorp@comcast.net, mat mitten <matmitten@madcorpde.com>, Mark Walter (DelDOT) <mark.walter@state.de.us>

---------- Forwarded message ----------
From: "Mac Nossick" <macdmvpaving@gmail.com>
Date: Jan 28, 2015 12:09 PM
Subject: Re: Conrail
To: "Rick Mazol" <rickmazol@madcorpde.com>
Cc:

Received your email. I just checked with the plant and they have no other orders, for this friday. This means that MADCorp will have to pay the start-up charge to get the mix. I have tried to get Matt on his cell phone, but I got his voice mail. He had mentioned earlier that he did not want to pay the start-up charge. I left word for him to call me. Also, with all this push by the state, MADCorp will have to explain to Del DOT, that if they want paving, during this time of year, that we cannot wait until the temperatures look right, for they may only last for a short time. We have to work quickly and complete each lift of paving. The inspector at the jobsite and the plant need to know that this paving is being done under duress and we do not have time to worry about existing temperatures. Also, due to winter time temperatures and condtions, we cannot be held accountable or responsible for posssible cosmetic deficiencies. I know you understand these comments, but you have to make them understand them. I am waiting for Matt to call me back, so we can talk.

On Wed, Jan 28, 2015 at 11:32 AM, Rick Mazol <rickmazol@madcorpde.com> wrote:
> Mac, the type C hot mix needs to go down this Friday. The temps look OK for
> a am start.
>
> Thanks, Rick

From : Rick Mazol <rickmazol@madcorpde.com> Wed, Jan 28, 2015 11:32 AM

Subject : Conrail

To : Mac Nossick <macdmvpaving@gmail.com>, madcorp@comcast.net, mat mitten <matmitten@madcorpde.com>

Mac, the type C hot mix needs to go down this Friday. The temps look OK for a am start.

Thanks, Rick

Mid-Atlantic Dismantlement Corporation
P. O. Box 1192, Dover, Delaware 19903
302-678-9300

DE DOT Contract #T201107304
BR 3-224 on S546 Conrail Road over Bucks Branch
Sussex County

EXHIBIT S

madcorp
Mid-Atlantic Dismantlement Corporation
P.O. Box 1192, Dover, Delaware 19903
Phone (302)678-9300 FAX (302)678-9304

Mathew E. Mitten
President

February 20, 2015

Robert Campbell, Area Engineer
South II Construction District
Delaware Department of Transportation
23697 DuPont Boulevard
Georgetown, Delaware 19947

RE: DE DOT Contract #T201107304.01: F.A.P. #EBROS-S546 (04), BR 3-224 on S546 Conrail Road over Bucks Branch, Sussex County

Dear Mr. Campbell:

Mid-Atlantic Dismantlement Corporation respectfully requests to have twenty-five (25) calendar days added to the above referenced contract; two days for force account work, the balance of the days for the weather issues that led to the dike wash-outs causing the force account and the additional time construction took because of the dismal working conditions. When Contract #T201107304 was bid February 18, 2014, Delaware DOT anticipated issuing the Notice to Proceed for June 2, 2014; that became October 13, 2014; then the actual Notice Proceed was issued for December 8, 2014. The job was bid to be constructed and finished during the summer months. Weather working conditions in December and January are far different than weather working conditions in June and July. I have attached a sheet high-lighting the egregious weather days.

If you need additional information, please call me at 302-678-9300.

Sincerely;

Rick Mazol
Division Manager
Mid-Atlantic Dismantlement Corporation
Bridge/Civil Division

Mid-Atlantic Dismantlement Corporation
P. O. Box 1192, Dover, Delaware 19903
302-678-9300

DE DOT Contract #T201107304
BR 3-224 on S546 Conrail Road over Bucks Branch
Sussex County

WEATHER

12/8/2014		Temps 35-36 degrees - light snow, sleet, light mist
12/9/2014		Temps 41-42 degrees - light rain all day
12/10/2014		Temps 41-46 degrees slow clearing
12/11/2014		Temps 34-39 degrees cloudy
12/12/2014		Temps 33-42 degrees - cloudy
12/13/2014	Saturday	Temps 34-42 degrees - cloudy
12/14/2014	Sunday	Temps 42-48 degrees - cloudy
12/15/2014	Monday	Temps 42-48 degrees - cloudy
12/16/2014		Temps 33-52 degrees - cloudy - heavy rain in afternoon - rained out
12/17/2014		Temps 42-53 degrees - clearing
12/18/2014		Temps 33-40 degrees - cloudy
12/19/2014		Temps 33-34 degrees - cloudy
12/20/2014	Saturday	Temps 25-38 degrees - cloudy - checked pumps
12/21/2014	Sunday	Temps 32-42 degrees - cloudy - checked pumps
12/22/2014	Monday	Temps 32-39 degrees - rain on & off all day
12/23/2014		Temps 49- 55 degrees - rain on & off all day
12/24/2014		Temps 51-70 degrees - rain all day
12/25/2014	Christmas	Temp 51 degrees - rain - checked pumps - placed sand bags on washed out dike
12/26/2014		Temps 32- 50 degrees and clear
12/27/2014	Saturday	Temps 32- 50 degrees and clear
12/28/2014	Sunday	Temps 35-56 degrees checked on pumps
12/29/2014	Monday	Temps 34-36 degrees - rain/sleet
12/30/2014		Temps 35-37 degrees - Light snow - cloudy
12/31/2014		Temps 22-36 degrees - clear
1/1/2015	New Years	Temp 22 degrees - clear - checked pumps
1/2/2015		Temps 32-42 degrees - cloudy
1/3/2015	Saturday	Temp 33 degrees - rained out at 1:35 P.M.
1/4/2015	Sunday	Temp 50 degrees - rain - checked pumps
1/5/2015	Monday	Temps 42-36 degrees - cloudy, very windy - poured headwall insulated with blankets
1/6/2015		Temps 24-28 degrees - light snow 1/2 day partle cloudy
1/7/2015		Temps 24-27 degrees - very windy - wind chill 10 degrees
1/8/2015		Temps 10-21 degrees - wind chill -15 degrees AM
1/9/2015		Temps 23-37 degrees - light snow
1/10/2015	Saturday	Temps 15-25 degrees - pump stopped & froze - worked on un freezing pump
1/11/2015	Sunday	Temps 13-41 - checked on pumps
1/12/2015		Temps 35-38 degrees - rain all day - rained out at 9:30 A.M.
1/13/2015		Temps 34-34 degrees - cloudy all day - Dike washed out again - 5 hours F.A.
1/14/2015		Temps 28-33 degrees - freezing rain, sleet & snow most of day
1/15/2015		Temps 29-37 degrees - cloudy
1/16/2015	Friday	Temps 28-45 degrees - cloudy
1/17/2015	Saturday	Temps 21-34 degrees - open up stream flow - shut down pumps

1/18/2015	Sunday	Temp 47 degrees - heavy rain until 3 P.M.
1/19/2015		Temps 33-44 - cloudy
1/20/2015		Temps 24-52 degrees - cloudy all day
1/21/2015		Temps 31-31 degrees - cloudy, snow - heavy 2" at noon
1/22/2015		Temps 30-42 degrees - cloudy all day
1/23/2015		Temps 25-40 degrees - afternoon rain - start hot mix removal
1/24/2015	Saturday	Temps 35-39 degrees - heavy rain in morning- rain off & on - no work on site
1/25/2015	Sunday	Temps 34-46 degrees - cloudy very wet
1/26/2015	Monday	Temps 36-35 degrees - rain in A.M. heavy rain in P.M.- Light snow late
		finished Hot mix asphalt removal - grade very wet - very wet shoulder
1/27/2015		Temps 30-35degrees - light snow in morning, cloudy - did roadwork - subgrade very wet
1/28/2015		Temps 20-33 degrees - did roadwork
1/29/2015	Thursday	Temps 16-38 degrees - Del-Mar-Va Paving layed base hotmix asphalt
1/30/2015	Friday	Temps 38-42 degrees - light rain, clearing, snow flurries - Del-Mar-Va Pav layed HMA "C"
1/31/2015	Saturday	Temps 17-30 degrees - worked on frozen topsoil
2/2/2015	Monday	Temps 56-40 degrees - light rain, heavy rain - 9 AM to 3 P.M. - rained out
2/3/2015		Temps 21-31 degrees - clear - guardrail installed
2/4/2015		Temps 24-50 degrees - clear - Temporary striping installed - opened road 3:00 P.M.

Mid-Atlantic Dismantlement Corporation
P. O. Box 1192, Dover, Delaware 19903
302-678-9300

DE DOT Contract #T201107304
BR 3-224 on S546 Conrail Road over Bucks Branch
Sussex County

EXHIBIT T

STATE OF DELAWARE
DEPARTMENT OF TRANSPORTATION
800 BAY ROAD
P.O. BOX 778
DOVER, DELAWARE 19903

JENNIFER COHAN
SECRETARY

February 23, 2015

Mid-Atlantic Dismantlement Corp.
PO Box 1192
Dover, DE 19903

Ladies and Gentlemen:

This letter is in reference to DelDOT Contract No. T201107304, F.A.P. No. EBROS-S546(04), Br 3-224 on S546, Conrail Road over Buck's Branch, Sussex County. In reference to MAD Corp's letter dated February 20, 2015 (copy enclosed) requesting that 25 calendar days be added to this Project, this office has reviewed the Weather Days listed attached to this letter and our records and we offer the following response:

1. Force Account Work: This office will add 2 Calendar Days to the Contract Time for this work that was performed on 12/26/14 and 1/13/15,

2. Weather Days: The original Contract Time of 33 Calendar Days includes an allowance for 5 Weather Days. According to our records and the Weather Days listed attached to letter dated February 20, 2015, this office has determined a total of 8.5 Calendar Days as legitimate less the 5 allowable which leaves 3.5 Calendar Days to be added to the Contract Time. The 8.5 Calendar Days are follows: 12/24/14 (½ day), 12/25/14 (1 day), 1/3/15 (½ day), 1/4/15 (1 day), 1/10/15 (1/2 day), 1/12/15 (1 day), 1/18/15 (1 day), 1/24/15 (1 day), 1/25/15 (1 day), and 2/2/15 (1 day).

In summary, this office will extend the Contract Time 6 Calendar Days instead of 5.5 Calendar Days as noted in 1 and 2 above. Referencing our letter dated February 5, 2015, this project has been in Liquidated Damages (LD's) from January 10, 2015 to February 4, 2015, in other words, 26 Calendar Days. This office will apply the 6 Calendar Days to the 26 Calendar Days making the total LD's now 20 Calendar Days.

If there are any questions, please contact this office at (302) 853-1330.

TEAM DelDOT
Transparent Efficient Accountable Measured

Mid-Atlantic Dismantlement Corporation
P. O. Box 1192, Dover, Delaware 19903
302-678-9300

DE DOT Contract #T201107304
BR 3-224 on S546 Conrail Road over Bucks Branch
Sussex County

EXHIBIT V

State of Delaware

Department of Transportation

23697 DuPont Boulevard

Georgetown, DE 19947

April 28, 2015

Jennifer Cohan
Secretary

MAD Corp.
P.O. Box 1192
Dover, Delaware 19903

Ladies and Gentleman:

This letter is in reference to DelDOT Contract T 201107304, F.A.P. No. EBROS-S546(4), Bridge 3-224 on Conrail Road over Bucks Branch, Sussex County, DE. The Semi-Final Inspection was held on March 25, 2015 and attended by the following persons:

Bob Campbell	Area Engineer, Group 3 Construction, DelDOT
Mark Walter	Inspector, Group 3 Construction, DelDOT
Jeff Laurel	Construction Inspector, South District Admin., DelDOT
Kevin Lindell	Project Manager, Bridge Design, DelDOT
Jason McCluskey	Asst. Maintenance Engineer, South Dist. M & O, DelDOT
Dave Lafferty	Senior Field Tech., AECOM
Travis Warnock	Senior Field Tech., AECOM

Punch List

The Final Field Inspection for this project will be scheduled upon completion of the below items of work. All work noted in the Punch List must be completed on or before June 30, 2015.

1. Conrail Road from station 1 + 50 to station 5 + 70 is unacceptable. Based on field surveys obtained by DelDOT on March 31, 2015, the as-built centerline elevations noted below do not meet the Design Profile Grade Elevations.

STATION	PROFILE GRADE ELEV.	AS-BUILT	DIFF.
2 + 00	31.12	30.89	-0.23
2 + 50	30.89	30.76	-0.13
3 + 00	30.75	30.54	-0.21
3 + 50	30.69	30.78	+0.09

DelDOT

4 + 00	30.72	30.67	-0.05
4 + 50	30.84	30.52	-0.32
5 + 00	31.06	30.71	-0.35

Regarding the as-built roadway cross slopes, field surveys reveal that the slopes vary from 1% to 2.6% and do not meet the 2% cross slope as shown on the Typical Roadway Section on Plan Sheet 4. In addition, this office is requesting field verification that the typical roadway section meets the depths as shown in the "Typical Section Legend" on Plan Sheet 4.

This office is requesting in writing for review and approval, the "Methods and Means" MAD Corp. anticipates using to achieve the above Profile Grade Elevations and cross slopes as indicted on Plan Sheet 7 (Profiles) and the Typical Roadway Section shown on Plan Sheet 4. This work is to be performed at no cost to the Department.

2. Regarding the 3- spans of 58" X 91" Reinforced Concrete Elliptical Pipes; the installation is unacceptable. On April 17, 2015, our Bridge Management Section performed an on-site inspection focusing their attention on joint widths and conditions and found numerous deficiencies as listed below:

- The joint openings in all 3 spans varied from ¼" to 2 ½". (Note: measurements in the joints were taken at the 3 o'clock, 12 o'clock and 9 o'clock positions facing upstream for each span). The pipes do not meet Subsections 612.07- Joints and 612.08- Laying Pipe
- In many of the pipe joints, the preformed butyl rubber strips were missing, visible and not compressed. At some of the joints, the butyl rubber strips could be removed.
- Many of the joints in all 3 spans where trowel grade type mastic was used was falling out of the joint, missing and/or was sagging.
- Some joints leaked when a bucket of water was poured on them.
- There were joints in all 3 spans that were vertically misaligned from ½" to 1 ¼"..
- One joint where cementicious material was used exhibited visual signs of failure.

This office is requesting in writing for review and approval, the "Methods and Means" MAD Corp. anticipates using to correct the above deficiencies at no cost to the Department.

3. As pointed out in the ES2M Reports and the Semi-Final Inspection, there are many areas within the project limits that have eroded and require attention. This project cannot be accepted until there is an acceptable stand of grass.

4. The W Beam guardrail spanning the 3 elliptical pipes appear to be very flexible and further investigation is required and will be addressed on or before the Final Inspection is held. This office will advise MAD Corp. if any changes are required.

Mid-Atlantic Dismantlement Corporation
P. O. Box 1192, Dover, Delaware 19903
302-678-9300

DE DOT Contract #T201107304
BR 3-224 on S546 Conrail Road over Bucks Branch
Sussex County

EXHIBIT Z

madcorp
Mid-Atlantic Dismantlement Corporation,
P.O. Box 1192, Dover, DE 19903 (302)678-9300 fax (302)678-9304

May 19, 2015

Robert Campbell
Area Engineer, Group 3 Construction
Delaware Department of Transportation
23697 DuPont Boulevard
Georgetown, Delaware 19947

Dear Robert:
Mid-Atlantic Dismantlement Corporation ("Madcorp") hereby provides notice of its intention to make certain claims for additional compensation to the Delaware Department of Transportation ("DELDOT") pursuant to Section 105.15, entitled *Claims for Adjustment and Disputes*, of the Supplemental Specifications[1].

The punch list items set forth in your letter dated August 28, 2015 constitute extra work, entitling Madcorp to additional compensation from DELDOT. (A true and correct copy of your letter is attached hereto as **Exhibit A.**). The punch list items are a direct and proximate result of Madcorp being forced to complete its contract work during the winter months.

Madcorp did not originally contemplate performing its contract work during the winter at the time of bid. Madcorp was originally scheduled to perform its contract work within a thirty-three (33) day period during the summer months of June and July of 2014. Addendums Nos. 3 and 4 of the bid proposal provided that notice to proceed would be issued by DELDOT on June 2, 2014.

Due to the omission of Item No. 763502, *Maintenance of Rail Road Traffic*, of the original bid specifications, however, the project was delayed while this specification was being prepared. It is our understanding that DELDOT was waiting for a subcontractor to submit information so that the specification could be prepared during this prolonged period of delay.

Due to the resulting delays, which were not the fault of Madcorp, notice to proceed was not issued by DELDOT until December 8, 2014. The delays forced Madcorp to perform its contract work in the winter months of December and January. During this time period, Madcorp was subject to subfreezing temperatures as low as ten (10) degrees Fahrenheit.

The subfreezing temperatures resulted in the soil not settling properly until the onset of warmer weather. The delay in the soil settlement as a result of the frozen ground while the contract work was being performed is not the fault of Madcorp. The delay in the

[1] The project specifications at page 35 adopt the *Standard Specifications for Road and Bridge Construction*, August 2001 ("Supplemental Specifications.").

madcorp
Mid-Atlantic Dismantlement Corporation.
P.O. Box 1192, Dover, DE 19903 (302)678-9300 fax (302)678-9304

settlement of the soil is also the reason why the joint openings of the Reinforced Concrete Elliptical Pipes are now outside the requirements of the contract specifications.

None of these deficiencies comprising of the punch list are attributable to Madcorp. Madcorp performed its contract work in accordance to the contract specifications, which was inspected by DELDOT at the time the work was completed. The delay in the settlement of the soil which resulted in improper grading and joint widths outside the contract specifications and other deficiencies identified in the punch list are not the fault of Madcorp.

Accordingly, Madcorp intends to submit "Methods and Means" for the completion of the punch list items for approval by DELDOT and intends to complete the punch list items, with the understanding that it will seek additional compensation from DELDOT.

Madcorp reserves all rights with respect to seeking additional compensation for performance of the punch list items, to include, but not limited to, pursing claims under the contract documents and making a demand for arbitration against DELDOT with the American Arbitration Association.

Sincerely,

Mathew E. Mitten

Mathew E. Mitten, President
Mid-Atlantic Dismantlement Corporation

Mid-Atlantic Dismantlement Corporation
P. O. Box 1192, Dover, Delaware 19903
302-678-9300

DE DOT Contract #T201107304
BR 3-224 on S546 Conrail Road over Bucks Branch
Sussex County

EXHIBIT CC

STATE OF DELAWARE
DEPARTMENT OF TRANSPORTATION
800 BAY ROAD
P.O. BOX 778
DOVER, DELAWARE 19903

JENNIFER COHAN
SECRETARY

June 23, 2015

Mr. Mathew E. Mitten, President
Mid-Atlantic Dismantlement Corp.
PO Box 1192
Dover, DE 19903

Mr. Mitten:

This letter is in reference to DelDOT Contract No. T201107304, F.A.P. No. EBROS-S546(04), Br 3-224 on S546, Conrail Road over Buck's Branch, Sussex County and in response to your letter dated May 19, 2015 (copy enclosed) and dated June 16, 2015 (copy enclosed).

It is the Department's understanding that Mid-Atlantic Dismantlement Corporation (Madcorp) believes that they are due additional compensation to correct the deficiencies listed in the Department's letter dated April 28, 2015 as a result of performing the contract work during the winter months. As with each DelDOT contract there is an anticipated notice to proceed date included in the General Description as you have referenced in your letter. This anticipated date is when the Department intends to issue the Notice to Proceed on or about this date but may be subject to potential delays.

As you mentioned in your letter the original bid proposal for Contract T201107304 did not contain the special provision for Item 763502 Maintenance of Railroad Traffic. Upon discovery of the omission the Department delivered the special provision to MadCorp on June 4, 2014. Subsequently, MadCorp submitted a new price proposal for Item 763502 on June 10, 2014. A condition of this contract provision is that the contractor provide evidence of insurance to work within the Railroad's right-of-way. It was not until September 14, 2014 that the Railroad's Risk Management Department was able to authorize work within the right-of-way after receiving adequate evidence of insurance from MadCorp. Furthermore Norfolk Southern was unable to grant permission to work within the railroad right of way until October 22, 2014 when they received the Construction Right of Entry executed by Mid-Atlantic Dismantlement Corporation. The Department was unable to issue the Notice to Proceed until the conditions of the contract to provide all required information to Norfolk Southern were met.

The Department also understands from your letter that you believe the deficiencies listed in the Department's April 28, 2015 letter are a result of a delay in the settlement of the soil due to frozen ground at the time of the placement of the reinforced concrete pipe that caused the pipe joint

separation. The Department's position is that the reinforced concrete pipes were placed on an unstable subgrade that caused the pipe joint separation. In accordance with the Delaware Department of Transportation Standard Specification Section 612 – *Reinforced Concrete Pipe*, all pipe shall be placed on a dry, firm and unyielding subgrade and receive a Class C bedding in accordance with Delaware Department of Transportation Standard Detail D-8. It was documented by the project inspector that the stream diversion implemented by MadCorp never fully diverted the stream flow and allowed for dry site conditions that provided a firm and unyielding subgrade. Contract Special Provision 265500 – Stream Diversion states that diversion of the stream flow is intended to minimize erosion and sediment transport and permit construction under dry site conditions. The deficiencies listed in the April 28, 2014 letter are a result of MadCorp's inability to place the reinforced concrete pipe in accordance with the contract requirements and not a result of performing the work within the winter months. There are no ambient temperature restrictions within the contract documents for the placement of reinforced concrete pipe.

Lastly, you mention in your letter that all work had been inspected by a DelDOT inspector It is important to note that Section 104.14 *Contractor's Responsibility for Work* of the Delaware Department of Transportation Standard Specifications states that until the Contractor has achieved substantial completion, the Contractor shall have the sole and absolute responsibility for the work. In no case, including but not limited to, supervisory acts or administration of the Contract by the Engineer, will the Contractor be relieved of the responsibility to indemnify the Department pursuant to the provisions of the Contract. Section 105.02 *Authority and Duties of Inspectors* states that Inspectors employed by or designated by the Department are authorized to inspect all work done and all material furnished. Such inspection will not relieve the Contractor from the obligation to perform the work in accordance with the requirements of the Contract.

Your request for additional compensation to perform corrective work for deficiencies resulting from performing the contract work during the winter months is denied. If you wish to pursue this matter further you may appeal to the Claims Committee for review in accordance with Section 105.15 of the DelDOT Standard Specifications. Should you have any questions, please contact me at (302) 853-1330.

Sincerely,

Bradford L. Saborio, P. E.
Group Engineer
Group 3 Construction

BS:bs

cc: Javier Torrijos, Assistant Director, Transportation Solutions - Construction
Robert Campbell, Area Engineer, Group III Construction
Jason Hastings, Bridge Design Engineer, Bridge Design Section
Kevin Lindell, Project Manager, Bridge Section
Mark Walter, Inspector, Group 3 Construction
File: General Correspondence

madcorp
Mid-Atlantic Dismantlement Corporation,
P.O. Box 1192, Dover, DE 19903 (302)678-9300 fax (302)678-9304

June 16, 2015

VIA EMAIL AND CERTIFIED MAIL
Bradford Saborio, PE
Group Engineer, Group 3 Construction
Delaware Department of Transportation
23697 DuPont Boulevard
Georgetown, Delaware 19947

Dear Bradford:

On May 19, 2015, Mid-Atlantic Dismantlement Corporation ("Madcorp") provided the area Engineer, Robert Campbell, written notification of its claim for extra compensation pursuant to Section 105.15 of the *Standard Specifications for Road and Bridge Construction August 2001* ("Supplemental Specifications"). (Attached hereto as **Exhibit 1** is the written notification of claim for extra compensation submitted by Madcorp.). To date, Madcorp has not received a response to its notice of claim for extra compensation.

Pursuant to Section 105.15(B) of the Supplemental Specifications, upon receiving notice of claim for extra compensation, the Project Engineer is required to respond in ten (10) days to the contractor in the following manner:

1. confirm that a change occurred, and it shall be allowed and paid as extra pursuant to the specifications; or,

2. deny that a change occurred, and direct the contractor to follow the claim submittal procedure; or,

3. advise the contractor that adequate information has not been submitted, and indicate the need for additional information for review; or,

4. advise the contractor that the District will review the claim after obtaining the claims submittal.

Because Madcorp has not received an appropriate response to its notice of claim for extra compensation within the prescribed time period, Madcorp will proceed with submitting a formal claim to the District under Section 105.15 (C) of the Supplemental Specifications.

Accordingly, Madcorp will perform the additional work under protest, reserving all rights with respect to seeking extra compensation under the claims procedures, including demanding arbitration pursuant to Section 105.17 of the Supplemental Provisions.

madcorp
Mid-Atlantic Dismantlement Corporation,
P.O. Box 1192, Dover, DE 19903 (302)678-9300 fax (302)678-9304

Madcorp would be happy to meet with you and the District for the purpose of resolving the dispute; if an agreement cannot be reached, Madcorp intends on proceeding with the disputed claims submittal process.

Sincerely,

Mathew E. Mitten

Mathew E. Mitten, President
Mid-Atlantic Dismantlement Corporation

Mid-Atlantic Dismantlement Corporation
P. O. Box 1192, Dover, Delaware 19903
302-678-9300

DE DOT Contract #T201107304
BR 3-224 on S546 Conrail Road over Bucks Branch
Sussex County

EXHIBIT GG

STATE OF DELAWARE
DEPARTMENT OF TRANSPORTATION
800 BAY ROAD
P.O. BOX 778
DOVER, DELAWARE 19903

JENNIFER COHAN
SECRETARY

February 23, 2015

Mid-Atlantic Dismantlement Corp.
PO Box 1192
Dover, DE 19903

Ladies and Gentlemen:

This letter is in reference to DelDOT Contract No. T201107304, F.A.P. No. EBROS-S546(04), Br 3-224 on S546, Conrail Road over Buck's Branch, Sussex County. In reference to MAD Corp's letter dated February 20, 2015 (copy enclosed) requesting that 25 calendar days be added to this Project, this office has reviewed the Weather Days listed attached to this letter and our records and we offer the following response:

1. Force Account Work: This office will add 2 Calendar Days to the Contract Time for this work that was performed on 12/26/14 and 1/13/15,

2. Weather Days: The original Contract Time of 33 Calendar Days includes an allowance for 5 Weather Days. According to our records and the Weather Days listed attached to letter dated February 20, 2015, this office has determined a total of 8.5 Calendar Days as legitimate less the 5 allowable which leaves 3.5 Calendar Days to be added to the Contract Time. The 8.5 Calendar Days are follows: 12/24/14 (½ day), 12/25/14 (1 day), 1/3/15 (½ day), 1/4/15 (1 day), 1/10/15 (1/2 day), 1/12/15 (1 day), 1/18/15 (1 day), 1/24/15 (1 day), 1/25/15 (1 day), and 2/2/15 (1 day).

In summary, this office will extend the Contract Time 6 Calendar Days instead of 5.5 Calendar Days as noted in 1 and 2 above. Referencing our letter dated February 5, 2015, this project has been in Liquidated Damages (LD's) from January 10, 2015 to February 4, 2015, in other words, 26 Calendar Days. This office will apply the 6 Calendar Days to the 26 Calendar Days making the total LD's now 20 Calendar Days.

If there are any questions, please contact this office at (302) 853-1330.

TEAM DelDOT
Transparent Efficient Accountable Measured

Mid-Atlantic Dismantlement Corporation
P. O. Box 1192, Dover, Delaware 19903
302-678-9300

DE DOT Contract #T201107304
BR 3-224 on S546 Conrail Road over Bucks Branch
Sussex County

	APPENDICIES DESCRIPTION
A	Madcorp bid Proposal/Contract for Del DOT
	Contract #T201107304 showing unit pricing
B	Contract #T201107304 - Wage Scale
C	Filter Bags
D	Cold weather concrete work
E	58" X 91" RCP - increased time working with
	frozen mastic (tar strips)
F	Winter paving costs from Del-Mar-Va Paving
G	58" X 91" RCP joint repair
H	WMA Super-pave - hot mix asphalt pavement repair
I	Foreman & Operator for two months waiting for job to start
J	Equipment & Crew - 25 extra days on Contract #201107304

Mid-Atlantic Dismantlement Corporation
P. O. Box 1192, Dover, Delaware 19903
302-678-9300

DE DOT Contract #T201107304
BR 3-224 on S546 Conrail Road over Bucks Branch
Sussex County

APPENDIX B

APPENDIX B

STATE OF DELAWARE
DEPARTMENT OF LABOR
DIVISION OF INDUSTRIAL AFFAIRS
OFFICE OF LABOR LAW ENFORCEMENT
PHONE: (302) 451-3423

Mailing Address:
225 CORPORATE BOULEVARD
SUITE 104
NEWARK, DE 19702

Located at:
225 CORPORATE BOULEVARD
SUITE 104
NEWARK, DE 19702

PREVAILING WAGES FOR **HIGHWAY CONSTRUCTION** EFFECTIVE MARCH 15, 2013

CLASSIFICATION	NEW CASTLE	KENT	SUSSEX
BRICKLAYERS	46.83	46.83	14.51
CARPENTERS	42.64	50.06	39.82
CEMENT FINISHERS	28.79	26.13	23.29
ELECTRICAL LINE WORKERS	22.50	43.42	21.25
ELECTRICIANS	60.60	60.60	60.60
IRON WORKERS	42.20	23.87	25.35
LABORERS	28.95	26.97	26.82
MILLWRIGHTS	16.11	15.63	13.49
PAINTERS	58.07	58.07	58.07
PILEDRIVERS	66.42	23.75	26.95
POWER EQUIPMENT OPERATORS	37.00	29.47	27.16
SHEET METAL WORKERS	22.75	20.31	18.40
TRUCK DRIVERS	29.08	21.42	19.13

CERTIFIED: 9/4/13

BY: _____
ADMINISTRATOR, OFFICE OF LABOR LAW ENFORCEMENT

NOTE: THESE RATES ARE PROMULGATED AND ENFORCED PURSUANT TO THE PREVAILING WAGE REGULATIONS ADOPTED BY THE DEPARTMENT OF LABOR ON APRIL 3, 1992.

CLASSIFICATIONS OF WORKERS ARE DETERMINED BY THE DEPARTMENT OF LABOR. FOR ASSISTANCE IN CLASSIFYING WORKERS, OR FOR A COPY OF THE REGULATIONS OR CLASSIFICATIONS, PHONE (302) 451-3423.

NON-REGISTERED APPRENTICES MUST BE PAID THE MECHANIC'S RATE.

PROJECT: T201107304-01 BR 3-244 on S546 Conrail Road over Bucks Branch, Sussex County

Mid-Atlantic Dismantlement Corporation
P. O. Box 1192, Dover, Delaware 19903
302-678-9300

DE DOT Contract #T201107304
BR 3-224 on S546 Conrail Road over Bucks Branch
Sussex County

APPENDIX C

Mid-Atlantic Dismantlement Corporation
P. O. Box 1192, Dover, Delaware 19903
302-678-9300

DE DOT Contract #T201107304
BR 3-224 on S546 Conrail Road over Bucks Branch
Sussex County

APPENDIX C

	FILTER BAGS	Unit	Unit Price	Subtotals	Subtotals	TOTAL
Materials						
	Filter Bags	1	$ 240.00	$ 240.00		
	SubTotal				$ 240.00	
Labor	Install - Filter bag					
1	Foreman - 1hour	1	$ 33.75	$ 33.75		
2	Labor - 2 labors X 1 hr = 2	2	$ 26.82	$ 53.64		
	Remove - Filter bag					
1	Foreman - 1/2 hour	0.5	$ 33.75	$ 16.88		
2	Labor - 2 labors X 1/2 hr = 1	1	$ 26.82	$ 26.82		
	SubTotal			$ 131.09		
	Add Insurances & Taxes - 19.75%			$ 25.89		
	Health Insur, Life & Dis, Holiday, etc.					
	$8.22 per hour	4.5	$ 8.22	$ 36.99		
	SubTotal				$ 193.97	
Equipment						
1	10 Wheel Dump Truck	0.5	$ 80.00	$ 40.00		
	SubTotal				$ 40.00	
	SUBTOTAL				$ 473.97	
	Add 15% - Overhead				$ 76.50	
	SUBTOTAL				$ 590.47	
	Add 10% - Profit				$ 62.65	
	TOTAL per Filter Bag					$ 653.12

TRI
SUPPLY & EQUIPMENT
110 COLUMBIA ROAD
SALISBURY, MD 21801
410-546-2900

Remit To:
1685 RIVER ROAD
NEW CASTLE, DE 19720
302-838-6333

SALES INVOICE

Job Site:
MID-ATLANTIC DISMANTLEMENT
P.O.BOX 1192
DOVER, DE 19903

C#: 302-678-9300 J#: 302-678-9300

Customer: 61109
MID-ATLANTIC DISMANTLEMENT
P.O.BOX 1192
DOVER, DE 19903

Invoice #... 423181-0001
System date. 12/30/14

Invoice date 12/30/14 8:25 AM
Job Loc..... CONRAIL RD BRIDGE
Job No..... SEAFORD, DE
P.O. #..... VERBAL
Ordered By.. RICK
Terms..... Net 30 Days

Written by.. TS001NM

Qty	Item number	Unit	Price	Amount
2	15'X 30' FILTER BAG FB1530	EA	240.000	480.00
	DELIVERY CHARGE			

Sub-total: 480.00
Total: 480.00

Posted 1/13/15

Visit Our Website at www.trisupplyandequipment.com

1. I, The undersigned renter, specifically acknowledge that I have received and understand the instructions regarding the use and operation of the rented equipment.
2. Renter further acknowledges that he has read and fully understands the within equipment rental contract and agrees to be bound by all of the terms, conditions and provisions hereof. THIS IS YOUR CONTRACT, READ BOTH SIDES BEFORE SIGNING.
3. Renter acknowledges that he has received a true and correct copy of this agreement at the time of execution hereof.

x DELIVERED BY NICK

CUSTOMER SIGNATURE | DATE | NAME PRINTED | DELIVERED BY | DATE

Terms: Payment Due Net 30 - Delinquency charges, at the maximum monthly rate allowed by law, will apply 30 days from the date of invoice.

Mid-Atlantic Dismantlement Corporation
P. O. Box 1192, Dover, Delaware 19903
302-678-9300

DE DOT Contract #T201107304
BR 3-224 on S546 Conrail Road over Bucks Branch
Sussex County

APPENDIX D

Mid-Atlantic Dismantlement Corporation
P. O. Box 1192, Dover, Delaware 19903
302-678-9300

DE DOT Contract #T201107304
BR 3-224 on S546 Conrail Road over Bucks Branch
Sussex County

APPENDIX D

	COLD WEATHER CONCRETE WORK	Unit	Unit Price	Subtotals	Subtotals	TOTAL
Materials						
	Insulating Blankets	10	$ 35.63	$ 356.25		
				$ -		
	Subtotal				$ 356.25	
Labor	1 day					
1	Foreman	8	$ 33.75	$ 270.00		
3	Labor - 3 labors X 8 hrs.= 24	24	$ 26.82	$ 643.68		
	SubTotal			$ 913.68		
	Add Insurances & Taxes - 19.75%			$ 180.45		
	Health Insur, Life & Dis, Holiday, etc.					
	$8.22 per hour	32	$ 8.22	$ 263.04		
	SubTotal				$ 1,357.17	
Equipment						
	Pickup Truck - 8 hours	8	$ 15.00	$ 120.00		
	SubTotal				$ 120.00	
	SUBTOTAL				$ 1,833.42	
	Add 15% - Overhead				275.01	
	SUBTOTAL				$ 2,108.43	
	Add 10% - Profit				210.84	
	TOTAL					$ 2,319.27

TRI SUPPLY & EQUIPMENT
110 COLUMBIA ROAD
SALISBURY, MD 21801
410-546-2900

Remit To:
1685 RIVER ROAD
NEW CASTLE, DE 19720

302-838-6333

SALES INVOICE

Job Site:
MID-ATLANTIC DISMANTLEMENT
P.O.BOX 1192
DOVER, DE 19903

C#: 302-678-9300 J#: 302-678-9300

Customer: 61109
MID-ATLANTIC DISMANTLEMENT
P.O.BOX 1192
DOVER, DE 19903

Invoice #... 423471-0001
System date. 1/05/15

Invoice date 1/05/15 2:34 PM
Job Loc..... CONRAIL RD BRIDGE
Job No..... SEAFORD, DE
P.O. #..... VERBAL
Ordered By.. RICK MAZOL
Terms..... Net 30 Days

Written by.. TS001NM

Qty	Item number	Unit	Price	Amount
10	CURING BLANKET 6'X25' 625IB	EA	35.625	356.25
	DELIVERY CHARGE			
			Sub-total:	356.25
			Total:	356.25

P/V conc. VIB.
#12572

Visit Our Website at www.trisupplyandequipment.com

1. I, The undersigned renter, specifically acknowledge that I have received and understand the instructions regarding the use and operation of the rented equipment.
2. Renter further acknowledges that he has read and fully understands the within equipment rental contract and agrees to be bound by all of the terms, conditions and provisions hereof. THIS IS YOUR CONTRACT, READ BOTH SIDES BEFORE SIGNING.
3. Renter acknowledges that he has received a true and correct copy of this agreement at the time of execution hereof.

x _____ 1/5/15

CUSTOMER SIGNATURE | DATE | NAME PRINTED | DELIVERED BY | DATE

Terms: Payment Due Net 30 - Delinquency charges, at the maximum monthly rate allowed by law, will apply 30 days from the date of invoice.

Mid-Atlantic Dismantlement Corporation
P. O. Box 1192, Dover, Delaware 19903
302-678-9300

DE DOT Contract #T201107304
BR 3-224 on S546 Conrail Road over Bucks Branch
Sussex County

APPENDIX E

Mid-Atlantic Dismantlement Corporation
P. O. Box 1192, Dover, Delaware 19903
302-678-9300

DE DOT Contract #T201107304
BR 3-224 on S546 Conrail Road over Bucks Branch
Sussex County

APPENDIX E

RCP JOINT MASTIC (TAR) STRIPS

	Extreme Cold Weather	Unit	Unit Price	SUBTOTALS	SUBTOTALS	TOTAL
Materials						
	Subtotal					
Labor	1 nine hour day					
1	Foreman - 9 hours	9	$ 33.75	$ 303.75		
	Operator - 9 hours	9	$ 27.16	$ 244.44		
3	Labor - 9 Hours x 3 laborers =	27	$ 26.82	$ 724.14		
	SubTotal			$ 1,272.33		
	Add Insurances & Taxes - 19.75%			$ 251.29		
	Health Insur, Life & Dis, Holiday, etc.					
	$8.22 per hour	45	$ 8.22	$ 369.90		
	Subtotal				$ 1,893.52	
Equipment						
	Pickup Truck - 9 hours	9	$ 15.00	$ 135.00		
	Hitachi 350 - 9 hours	9	$ 75.00	$ 675.00		
	Kubota Skidsteer - 2 hours	2	$ 50.00	$ 100.00		
	SubTotal				$ 910.00	
	SUBTOTAL				$ 2,803.52	
	Add 15% - Overhead				420.53	
	SUBTOTAL				$ 3,224.05	
	Add 10% - Profit				322.41	
	TOTAL					$ 3,546.46

Mid-Atlantic Dismantlement Corporation
P. O. Box 1192, Dover, Delaware 19903
302-678-9300

DE DOT Contract #T201107304
BR 3-224 on S546 Conrail Road over Bucks Branch
Sussex County

APPENDIX F

Mid-Atlantic Dismantlement Corporation
P. O. Box 1192, Dover, Delaware 19903
302-678-9300

DE DOT Contract #T201107304
BR 3-224 on S546 Conrail Road over Bucks Branch
Sussex County

APPENDIX F

	WINTER PAVING COSTS FROM	Unit	Unit Price		Subtotals	TOTAL
	DEL-MAR-VA PAVING					
	Subcontrct Increase					
Type B	**Winter Hot Mix Rate Increases**	213.57	$ 1.25	$ 266.96		
Type C	**Winter Hot Mix Rate Increases**	211.95	$ 3.45	$ 731.23		
	Haul Rate Increase	425.52	$ 3.60	$ 1,531.87		
	Truck wait time	2.5	$ 85.00	$ 212.50		
	Additional time	213.57	$ 21.00	$ 4,484.97		
	to place various	181.3	$ 21.00	$ 3,807.30		
	stages of hot mix	30.65	$ 21.00	$ 643.65		
	SUBTOTAL				$ 11,678.48	
	Add 10% - Overhead				$ 1,167.85	
	TOTAL					$ 12,846.33

Mid-Atlantic Dismantlement Corporation
P. O. Box 1192, Dover, Delaware 19903
302-678-9300

DE DOT Contract #T201107304
BR 3-224 on S546 Conrail Road
over Bucks Branch Sussex County

BACKUP TO APPENDIX F

Del-Mar-Va Paving Co., Inc.
P. O. Box 366, Seaford, Delaware

	Original Tonage	Unit Price			Actual Tonage	Unit Price	
Type C	184	$ 85.00	$ 15,640.00		211.95	$ 85.00	$ 18,015.75
Type B	206	$ 75.00	$ 15,450.00		213.57	$ 75.00	$ 16,017.75
SubTotal			**$ 31,090.00**				**$ 34,033.50**
Add-ons							
	Winter Hot Mix				213.57	$ 1.25	$ 266.96
	Rate Increases				211.95	$ 3.45	$ 731.23
	Haul Rate Increase				425.52	$ 3.60	$ 1,531.87
	Truck wait time				2.5	$ 85.00	$ 212.50
	Additional time				213.57	$ 21.00	$ 4,484.97
	to place various				181.3	$ 21.00	$ 3,807.30
	stages of hot mix				30.65	$ 21.00	$ 643.65
Subtotal		or TOTAL		of Add-Ons			$ 11,678.48
TOTALS			$ 31,090.00				$ 45,711.98

To: Mid-Atlantic Dismantlement Corporation
P.O. Box 1192
Dover, Delaware 19903

Date: February 2, 2015

Project: Bridge 3-224 on S546 Conrail Road
Sussex County, Delaware
Contract # T201107304.01; Federal Aid Project
EBROS-S546(4)

Misc. Amount: 1. Application of the following tonnage amounts, per our proposal dated February 18, 2014:

a. 213.57 tons of 19mm hot mix @ $ 75.00/ton.

Amount: $ 16,017.75

b. 211.95 tons of 9.5mm hot mix @ $ 85.00/ton.

Amount: $ 18,015.75

2. Additional costs per our sheet dated January 14, 2015:

a. 213.57 tons of 19mm hot mix @ $ 1.25/ton

Amount: $ 266.96

b. 211.95 tons of 9.5mm hot mix @ $ 3.45/ton

Amount: $ 731.23

c. 425.52 tons @ $ 3.60/ton.

Amount: $ 1,531.87

3. Truck waiting time at the plant: (2 trucks @ 1.25 hrs = 2.50 hrs @ $ 85.00/hr.)

Amount: $ 212.50

4. Additional time for application of the base (19mm), surface (9.5mm) and the wedge & level course (9.5mm):

a. 213.57 tons (19mm) @ $ 21.00/ton.

Amount: $ 4,484.97

b. 181.30 tons (9.5mm) @ $ 21.00/ton.

Amount: $ 3,807.30

c. 30.65 tons (9.5mm wedge-level) @ $ 21.00/ton.

Amount: $ 643.65

Total: $ 45,711.98

Del-Mar-Va Paving Co.
~ INC. ~

DATE: Jan. 14, 2015

PLEASE DELIVER THE FOLLOWING PAGE (S) TO:

NAME : MidAtlantic Dismantlement Corporation
Re: Contract #T201107304.01
Bridge 3-224 on S546 Conrail Road
Attn: Rick Mazol

FROM : Mac Nossick

Rick,

Here are the numbers we discussed, for paving this time of year.

1. Material and Haul Rate Increases (ADD)

a. 19mm hot mix material increase:	$ 1.25/ton
b. 9.5mm hot mix material increase:	$ 3.45/ton
c. Haul Rate Increase:	$ 3.60/ton

2. Minimum tonnage start-up charge, for orders under 200 tons (winter schedule), per day. $ 1,800.00

3. Truck waiting time charges, at the plant. $ 85.00/hour

4. Additional time (costs) for hot mix application, due to winter paving (19mm & 9.5mm). $ 35.00/ton

P.O. Box 368 • SEAFORD, DE 19973
302-629-7995 FAX 302-629-7964

Mid-Atlantic Dismantlement Corporation
P. O. Box 1192, Dover, Delaware 19903
302-678-9300

DE DOT Contract #T201107304
BR 3-224 on S546 Conrail Road over Bucks Branch
Sussex County

APPENDIX G

Mid-Atlantic Dismantlement Corporation
P. O. Box 1192, Dover, Delaware 19903
302-678-9300

DE DOT Contract #T201107304
BR 3-224 on S546 Conrail Road over Bucks Branch
Sussex County

APPENDIX G

	RCP JOINT REPAIR	Unit	Unit Price	Subtotals	Subtotals	TOTALS
Materials						
	L & M Duraplug - 5 gallon pails	15	$ 42.00	$ 630.00		
	SikaQuick VOH - bag	94	$ 22.65	$ 2,129.10		
	SealBoss Can-Seal-Foam - kits	4	$ 225.00	$ 900.00		
	Miscellaneous tubing	1	$ 100.00	$ 100.00		
	Miscellaneous materials	1	$ 250.00	$ 250.00		
	Sandbags	250	$ 1.00	$ 250.00		
	Sand - 5 ton	5	$ 30.00	$ 150.00		
	Poly - 2 rolls	2	$ 50.00	$ 100.00		
	Plywood dams	4	$ 50.00	$ 200.00		
	Rubber Seal	1	$ 50.00	$ 50.00		
	Subtotal				$ 4,759.10	
Labor	Six Days					
1	Foreman - 6 days x 8 hours/day	48	$ 33.75	$ 1,620.00		
4	Labor - 6 days X 8 Hours =48 X 4=	192	$ 26.82	$ 5,149.44		
	SubTotal			$ 6,769.44		
	Add Insurances & Taxes - 19.75%			$ 1,336.96		
	Health Insur, Life & Dis, Holiday, etc.					
	$8.22 per hour	240	$ 8.22	$ 1,972.80		
	Subtotal				$ 10,079.20	
Equipment						
	Pickup Truck - 6 days for 9 hrs/day	54	$ 15.00	$ 810.00		
	Tag Trailer - 6 days for 9 hours/day	54	$ 12.00	$ 648.00		
2	Pumps + hose - $100/day each	12	$ 100.00	$ 1,200.00		
	Generator - $50/day	6	$ 50.00	$ 300.00		
	Miscellaneous Small Tools	1	$ 400.00	$ 400.00		
	Subtotal				$ 3,358.00	
	SUBTOTAL				$ 18,196.30	
	Add 15% - Overhead				$ 2,729.45	
	SUBTOTAL				$ 20,925.75	
	ADD 10% Profit				$ 2,092.58	
	TOTAL					$ 23,018.33

Mid-Atlantic Dismantlement Corporation
P. O. Box 1192, Dover, Delaware 19903
302-678-9300

DE DOT Contract #T201107304
BR 3-224 on S546 Conrail Road over Bucks Branch
Sussex County

APPENDIX H

Mid-Atlantic Dismantlement Corporation
P. O. Box 1192, Dover, Delaware 19903
302-678-9300

DE DOT Contract #T201107304
BR 3-224 on S546 Conrail Road over Bucks Branch
Sussex County

APPENDIX H

	WMA Hot Mix Repair	Unit	Unit Price	Subtotal	Subtotal	TOTAL
Materials	8 each for 2 days					
8	Maintenance of Traffic - signs	16	$ 25.00	$ 400.00		
	Subtotal				$ 400.00	
Labor	2 - 10 hour days					
1	Foreman - 2 days X 10 hours each	20	$ 33.75	$ 675.00		
1	Labor - 2 day X 10 hours each	20	$ 26.82	$ 536.40		
	SubTotal			$ 1,211.40		
	Add Insurances & Taxes - 19.75%			$ 239.25		
	Health Insur, Life & Dis, Holiday, etc.					
	$8.22 per hour	40	$ 8.22	$ 328.80		
	Subtotal				$ 1,779.45	
Flaggers						
2	Flaggers - 2 X 20 hours	40	$ 46.94	$ 1,877.60		
	Subtotal				$ 1,877.60	
Equipment						
	Pick up Truck	20	$ 15.00	$ 300.00		
	Tag-axle trailer	20	$ 12.00	$ 240.00		
	Subtotal				$ 540.00	
	SUBTOTAL				$ 4,597.05	
	ADD 15% - Overhead				$ 689.63	
	SUBTOTAL				$ 5,286.68	
Subcontractor					$ 33,440.00	
	SUBTOTAL				$ 38,726.68	
	ADD 10% -Profit/Overhead				$ 3,872.67	
	TOTAL					$ 42,599.35

PENINSULA Paving

~ DELMARVA'S PAVEMENT CONTRACTOR ~

Attention : Rick Mazol – Mid Atlantic Dismantlement
Location: Conrail Rd. Culvert Xing – Seaford, DE
Date: 5/22/15

A representative of Peninsula Paving has reviewed the location and/or drawings for your job site, and we are pleased to be able to offer you the below listed estimate for asphalt improvements.

Detailed Scope of Services:

2,222 SY of pavement limits @ culvert xing

- Roto-mill 30ft transition joints for smoothness
- Apply liquid tackifier to 2,222 SY of paving limits for adhesion (145gal.)
- Apply approx. 297 ton type C superpave @ variation depths 1.5-2.5" for drainage
- Compaction performed w/ three smooth drum rollers (3ton / 5ton/ 9ton)
- Temporary latex line striping

Proposal Total:	$33,440

Terms: **A service charge of 1.5% per month with an annual percentage rate of 18% will be applied to any past due balance of 45 days. Any actual and reasonable collection charges and legal fees will be added to all other sums due if delinquent. This proposal is valid for 30 days. All payments submitted to: PENINSULA PAVING – 20873 Old Landing Rd. Rehoboth Beach, DE 19971**

ONE YEAR WARRANTY

We hereby warranty all paving, seal coating, and parking lot striping applications against defects in material, workmanship and normal wear and tear for a period of one year from the date of application. We will honor all written claims made within 30 days of application under the following conditions and guidelines. Peninsula Pave and Seal LLC cannot be held responsible for damage of asphalt paving, seal coating, line striping, or crack repairs caused by foot or vehicle traffic allowed on asphalt before the appropriate cure time of 24 hours, or lawn or home chemicals, sprinklers, acts of god, domestic or wild animals. Peninsula Pave and Seal LLC will NOT honor ANY written claims regarding workmanship, appearance, drainage, or asphalt integrity for applications performed in sub-40 degree temperatures or within 48 hours of a rain event. Insufficient aggregate, compromised, unsuitable, or saturated sub-grade conditions and/or paving surfaces will be documented by Peninsula Pave and Seal personnel on-site prior to application, and will hereby void warranty and any and all written claims will NOT be honored. Warranty is null and void for invoices not paid in full within 30 days of project completion.

Acceptance of Proposal

The above prices, specifications, terms and conditions are satisfactory and hereby accepted. You are authorized to do the work as specified and/or discussed. Payment will be made as indicated above.

Acceptance of Proposal_____ Date:_____

Phone: 302-226-PAVE | Fax: 302-260-9352
EMAIL US @: info@peninsulpavingco.com
VISIT US ON THE WEB @: www.peninsulapavingco.com

Mid-Atlantic Dismantlement Corporation
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Sussex County

APPENDIX I

Mid-Atlantic Dismantlement Corporation
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DE DOT Contract #T201107304
BR 3-224 on S546 Conrail Road over Bucks Branch
Sussex County

APPENDIX I

	FOREMAN & OPERATOR	Unit	Unit Price	Subtotals	TOTAL
	Waiting to start				
	Del DOT Contract #201107304				
Labor	2 MONTHS				
1	Foreman - 8 weeks	8	$ 1,350.00	$ 10,800.00	
1	Operator - 40 hours X 8 weeks	320	$ 26.82	$ 8,582.40	
	SubTotal			$ 19,382.40	
	Add Insurances & Taxes - 19.75%			$ 3,838.02	
	Health Insur, Life & Dis, Holiday, etc.				
	$8.22 per hour	640	$ 8.22	$ 5,260.80	
	TOTAL				**$ 28,481.22**

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Sussex County

APPENDIX J

Mid-Atlantic Dismantlement Corporation
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DE DOT Contract #T201107304
BR 3-224 on S546 Conrail Road over Bucks Branch
Sussex County

APPENDIX J

25 EXTRA CALENDAR DAYS

	ON JOBSITE	Unit	Unit Price	SUBTOTALS	SUBTOTALS	TOTAL
	20 Workable Days - Monday - Saturday					
Labor	20 Days - Monday - Saturday					
1	Superintendent	160	$ 33.75	$ 5,400.00		
1	Foreman - 8 hours X 20 days	160	$ 33.75	$ 5,400.00		
1	Operator - 8 hours X 20 days	160	$ 27.16	$ 4,345.60		
3	Labor - 8 Hours X 20 days X 3 lab.	480	$ 26.82	$ 12,873.60		
	SubTotal			$ 22,619.20		
	Add Insurances & Taxes - 19.75%			$ 4,467.29		
	Health Insur, Life & Dis, Holiday, etc.					
	$8.22 per hour	960	$ 8.22	$ 7,891.20		
	Subtotal				$ 34,977.69	
Equipment						
	Pickup Truck - 8 hours X 20 days	160	$ 15.00	$ 2,400.00		
	Hitachi 350 - 8 hours X 20 days	160	$ 75.00	$ 12,000.00		
	Kubota 75 Skidsteer - 8 hrs. X20 D	160	$ 50.00	$ 8,000.00		
	Kawasaki Wheel Loader-8hrsX20D	160	$ 50.00	$ 8,000.00		
	8.5X24 Job Trailer - $50/day	25	$ 50.00	$ 1,250.00		
	SubTotal				$ 31,650.00	
	SUBTOTAL				$ 66,627.69	
	Add 10% - Overhead				6662.77	
	TOTAL					$ 73,290.46

madcorp
Mid-Atlantic Dismantlement Corporation,
P.O. Box 1192, Dover, DE 19903 (302)678-9300 fax (302)678-9304

November 3, 2015

Mr. Robert McCleary, Chief Engineer
Delaware Department of Transportation
800 Bay Road
Dover, DE 19903

RE: Notice of Appeal

Ref.: DelDOT Contract No. T201107304, F.A.P. No. EBROS-S546(04), Br 3-224 on S546, Conrail Road over Buck's Branch, Sussex County

Dear Mr. McCleary,

This letter shall serve as Mid-Atlantic Dismantlement Corp ("Madcorp's) notice of appeal pursuant to Section 105.15 Claims for Adjustments and Disputes of the *Standard Specifications – Specifications for Road and Bridge Construction* ("Supplemental Specifications").

On October 26, 2015, the Claims Committee issued their decision on Madcorp's claim for additional compensation and time added to the above contract. It has been established that the delay of the notice to proceed was not the fault of the contractor. The original notice to proceed was June 2, 2014, but the actual start date was December 8, 2014. This forced Madcorp to perform the contract work during the winter months and through a major holiday period. The project was a 33-calendar-day job, and the bid was based on performing the work during the summer months or early fall. As detailed in our original claim documents (attached), this was an unusually cold and wet winter.

The following are the portions of the committee's decisions that Madcorp is appealing to the Chief Engineer:

1. **Stream Diversion**- Madcorp requested to be compensated for 17 additional days of the stream diversion beyond the anticipated construction schedule. This delay was due, in part, to adverse weather; but Madcorp also encountered differing site conditions, *i.e.*, excessive sediments and debris in the stream and an unusually high water level as shown by the photographs submitted with the claim. The sand bags worked for the out-fall side of the diversion as the bottom of the stream was free of debris. The bags sat on the mud bottom creating a good seal. Conversely, because of debris at the base of the railroad bridge (i.e.; railroad ties, parts of logs and other buried debris, and gravelly sand bottom), we could not get a seal under the sand bags. Water was continually bubbling up from under the diversion damn. Further excavation was not an option because with the railroad bridge being old we were concerned about undermining and weakening the structure. The railroad inspector also expressed similar concerns. There was only about eight feet

between the railroad bridge and work area of the bridge being replaced, so we could not move farther away and sheet piling would cause too much disturbance being so close. Our only available option was to make the original stream diversion work. This caused more labor, materials, fuel, and rental costs due to the prolonged period in which the stream diversion was in place. The stream diversion runs continuously while it is installed and because it was cold, it cost more to operate. We are requesting to be compensated for the added time the stream diversion was in place and maintained. We feel the 17 days we originally requested is fair and reasonable. **Claim amount $ 29,750.00**

9. **RCEP Joint Repair** – We requested to be compensated for this item because we notified the State at the time of originally installing the RCEP that the mastic tar strips supplied by the pipe manufacturer and approve by DelDOT were not working properly due to the cold temperatures. We submitted an alternate method but Bridge Section would not approve it. Bridge Section was of the opinion that it was too cold to use non-shrinking grout. However, it was also too cold for proper application of the mastic. The cold weather was the reason the mastic strips were very difficult to work with and would not properly adhere to the piping. Madcorp would not have had these problems if the work was performed in fall or summer temperatures.

In Item 5 of the decision, the Committee states that due to poor workmanship, the joint segments were not tight enough. There is no specification for the allowable tolerance of the joint spacing. In addition, Madcorp, as part of the punch list work, which was approved by Bridge Section, had used non-shrink grout to seal the joints that did not seal properly using the tar strips. Madcorp was not required to correct the spacing of the joints as part of the punch list work. Also, as shown on Madcorp's picture # 25, all the joints that were backfilled were sealed with geotextile fabric in conjunction with the tar strips. Therefore, it is clear that spacing was not the issue and that the leaks were attributable to the mastic failing to set properly as a result of the cold weather, not the joint spacing.

In fact, the only joint that was not sealed with geotextile fabric after the original installation was the out-fall end joint. During the hearing, the District showed a video showing water being poured over the out-fall end joint which permeated through the joint. The District failed to present any evidence with respect to the other joints failing. The remaining joints had proper seals without any modification to the joint spacing. If the joints successfully sealed without modifying the spacing, then it is apparent that the spacing was not the issue. Therefore, it is clear that the mastic failed to adhere properly as a result of the cold weather, which was not Madcorp's fault. Accordingly. Madcorp is requesting that it be compensated for repairing the joints. **Claim Amount: $ 23,018.33.**

10. **Warm Mix Asphalt Repair** – When we originally paved the road in January, we were concerned that the quality of the paving would not be attainable and requested that the paving wait until spring, but we were directed by Robert Campbell to get the road finished no matter the conditions. (*See* email attached.) The temperature was below freezing at night as well as during most of the days throughout that time period.

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The particular day Madcorp paved, the temperature reached to approximately 40 degrees. The ground was still frozen, however, as the State inspector indicated in his daily report. The inspector noted that the road base was solid as dump trucks were driving on the base with no movement. The inspector further noted, however, that when the paving started, the heat of the hot mix started thawing the ground causing instability in the base. The State inspection report reads as follows:

> [The crushed concrete] was indeed very tight & solid and seemed to be excellent base for B mix. It turned out that the ground under the stone had frozen and had begun to thaw out. Thus allowing equipment to start moving base around.

When Madcorp started at about 6:00 a.m. in morning, the temperature was approximately 16 degrees. Under these conditions it was clear that the ground was frozen. The ground never had time to thaw. Despite the conditions, the inspector still released the B-mix and Madcorp was directed to commence with paving.

Despite the challenges, the finished paving was good. There were no dips or settling; the ride was good. See photographs 35, 36, and 37. The road was opened on February 5, 2015. The semi-final inspection was not held until March 25, 2015, after the weather had warmed up. Madcorp believes the District waited until the spring to complete final inspect to allow the ground to thaw. At final inspection, you could visibly see were the pavement had settled, which was not evident in the photographs taken just after the paving was completed. Thus, it is clear the ground had settled after it thawed out in the spring which caused the roadway to be outside of acceptable grading tolerances.

Because we were directed to pave during unsuitable conditions by Robert Campbell, we should be compensated for the repaving. During the claim hearing, the Committee was wrongfully informed by the District that the repaving was not accepted as it was still outside acceptable tolerances. The District, unfairly, took the position that because the road remained defective after the repaving, then the defects must not have been the result of settling earth due to thawing ground but that of poor workmanship. Not only is this logic flawed, as there could have been a different reason why the road remained outside acceptable grading after the repaving, but is factually false.

The improper grading as a result of the settlement due to the frozen ground was repaired by Madcorp. The District accepted the road after the Claims Hearing without any additional repairs. After the repaving, the roadway was repaired, except for a small dip where they had to wedge the asphalt. Aside from the small dip, there were no other issues with the repaving work performed by Madcorp. In fact, **Brad Saborio, after the hearing, personally inspected the road paving and found it was within acceptable tolerances without any additional work performed by Madcorp** (see email). Thus, because the Committee's findings were based upon an erroneous representation made by the District, the finding should be overturned or submitted to the Claim Committee for reconsideration. **The claim amount is $42,599.35.**

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13. Additional Days – Madcorp requested to be compensated for labor and equipment used for the additional 20 work days it took to complete the project due to the differing site conditions experienced by having to perform the contract work during the winter. Doing work in cold and wet conditions restricts the performance of the workers. The workers become fatigued. Equipment is hard to operate. Materials are harder or impossible to work with like the mastic. This particular type of work should always be avoided in the wintertime. Thus, when estimating the amount time and cost for a particular project, the time of year the work will be performed is always taken into consideration.

Had the planners known this work would be performed during the winter, they would have taken the potential weather into consideration and allotted for much more time. Madcorp's bid price would have been undoubtedly higher. The District's approach of cherry picking the historical weather calendar, differentiating between extremely cold days and tolerable days, is not correct. This approach does not take into account that the cold weather takes its toll on the workforce as well as equipment, even though some tolerable days are mixed in the period.

The completion date was to be January 09, 2015, and our substantial completion was February 05, 2015, a total of 25 days. Of those 25 days, we worked on site 20 of them. Winter work is not the same as performing work during the summer or the fall. Madcorp should be compensated for this extra time. **The claim amount is $ 73,290.00**

Mid-Atlantic Dismantlement Corporation has submitted back-up for our claims in our claim submitted to James Pappas, Chairman of the Claims Committee, and a copy included with this appeal.

Sincerely,
Mathew E. Mitten

Mathew E. Mitten, President
Mid-Atlantic Dismantlement Corporation

THINK SAFETY

madcorp
Mid-Atlantic Dismantlement Corporation,
P.O. Box 1192, Dover, DE 19903 (302)678-9300 fax (302)678-9304

June 29, 2015

Mr. James T. Pappas, P.E.
Chairman of the Claims Committee
Delaware Department of Transportation
800 Bay Road
Dover, DE 19903

RE: Notice of Appeal

Ref.: DelDOT Contract No. T201107304, F.A.P. No. EBROS-S546(04), Br 3-224 on S546, Conrail Road over Buck's Branch, Sussex County

Mr. Pappas,:
This letter shall serve as Mid-Atlantic Dismantlement Corp ("Madcorp's) notice of appeal pursuant to Section 105.15(C) of the *Standard Specifications – Specifications for Road and Bridge* Construction ("Supplemental Specifications").

On May 19, 2015, Madcorp provided written notification of its claim for extra compensation as a result of the delays on the project attributable to the omission of Item Maintenance of Railroad Traffic from the original contract documents. This delay caused extra expenses to Madcorp as a result of it being forced to work during the winter months. In your capacity as the Project Engineer, by letter dated June 23, 2015, you denied Madcorp's claim, prior to Madcorp being able to submit a formal claim pursuant to the specifications.

Accordingly, Madcorp appeals this decision to the Claims Committee and hereby requests a hearing within forty-five (45) days of this notice, *i.e.*, on or before **Thursday, August 13, 2015**, as required by the Supplemental Specifications. In addition, Madcorp will proceed in submitting a formal claim pursuant to Section 105.15(C) of the Supplemental Specifications for review of the Claims Committee.

The failure of DELDOT to promptly schedule a hearing before the Claims Committee within forty-five (45) days of this notice shall constitute waiver of the dispute resolution provisions; accordingly, on such event, Madcorp reserves the right to directly pursue its claim with the American Arbitration Association pursuant to Section 105.17 of the Supplemental Specifications.

Sincerely,
Mathew E. Mitten

Mathew E. Mitten, President
Mid-Atlantic Dismantlement Corporation

BEFORE THE CLAIMS COMMITTEE

DEPARTMENT OF TRANSPORTATION

STATE OF DELAWARE

IN RE:
DE DOT CONTRACT #T201107304.1
F.A.P. #EBROS-S546(04)
BR 3-224 on S546 Conrail Road over
Buck's Branch, Sussex County

Delaware Department of Transportation
800 Bay Road
Dover, Delaware

Wednesday, October 14, 2015
8:30 a.m.

CHAIRMAN: JIM PAPPAS, P.E., ASSISTANT DIRECTOR

BEFORE CLAIMS COMMITTEE:

VERNON LAWTON, Area Engineer,
Group 2 Construction

MARK LUSZCZ, Chief Traffic Engineer

THOMAS M. BANEZ, Project Manager

EDWIN TENNEFOSS,
Statewide Support Engineer

MATTHEW SCHLITTER,
Civil Engineer IV

WILCOX & FETZER
Registered Professional Reporters
1330 King Street - Wilmington, Delaware 19801
(302) 655-0477
www.wilfet.com

APPEARANCES:

EDWARD K. BLACK, ESQ.
DEPUTY ATTORNEY GENERAL
DEPARTMENT OF JUSTICE
820 North French Street
Wilmington, Delaware 19801
on behalf of DelDOT

ANNE C. CORDO, ESQ.
DEPUTY ATTORNEY GENERAL
DEPARTMENT OF JUSTICE
820 North French Street
Wilmington, Delaware 19801
on behalf of the Claims Committee

EDWARD SEGLIAS, ESQ.
SCOTT THOMAS EARLE, ESQ.
COHEN SEGLIAS PALLAS
GREENHALL & FURMAN, PC
Nemours Building - Suite 1130
1007 North Orange Street
Wilmington, Delaware 19801
on behalf of Mid-Atlantic
Dismantling Corp.

ALSO PRESENT:
MATTHEW E. MITTEN,
President Madcorp

RICK MAZOL, Construction Manager

BRAD SABORIO, Group Engineer
Group 3 Construction

MARK WALTER, Inspector
Group 3 Construction

ROBERT CAMPBELL, Area Engineer
Group 3 Construction

PAMELA MAY, Claims Committee Observer

- - - - - - - -

MR. PAPPAS: Good morning everyone. My name is Jim Pappas, and I am the Claims Committee Chairman for this claim. This is a claim for Contract No. T201107304, Bridge 3-224 on S546, Conrail Road over Buck's Branch in Sussex County.

The contractor for this project, Mid-Atlantic Dismantling Corp., has submitted a claim for this contract. Madcorp has appealed DelDOT South District's denial of their claim to this Claims Committee.

The Claim issues concern additional compensation requested by Madcorp for the total of $244,699.68.

Is that still the true and accurate number?

MR. MITTEN: Yes.

MR. PAPPAS: I just wanted to make sure.

We have five members here who make up the Claims Committee. These five individuals will be the voting members of the committee. I am not a voting member. I am here to keep everything going smoothly and also

to document the outcome.

At this time I would like the Claims Committee members to introduce themselves, starting with Vern.

MR. LAWTON: I'm Vern Lawton from North Construction with DelDOT.

MR. LUSZCZ: Mark Luszcz, Chief Traffic Engineer.

MR. BANEZ: Tom Banez, Program Manager and Project Development South.

MR. TENNEFOSS: Edwin Tennefoss, Statewide Services Engineer.

MR. SCHLITTER: Matthew Schlitter, Central District Engineer.

MR. PAPPAS: And we have name tags coming for all those as well, so it is on the way.

So representing the contractor, if you could please introduce yourself for the record.

MR. MITTEN: My name is Mat Mitten with Mid-Atlantic Dismantlement. I'm the president of the company.

MR. SEGLIAS: Edward Seglias,

counsel for Mid-Atlantic.

MR. EARLE: Scott Earle, co-counsel for Mid-Atlantic.

MR. MAZOL: Rick Mazol, construction manager.

MR. PAPPAS: And representing South District?

MR. SABORIO: Brad Saborio. I'm the Group Engineer for Group 3 Construction.

MR. BLACK: Edward Black, Department of Justice, Deputy Attorney General.

MR. CAMPBELL: Edward Campbell, Area Engineer, Group 3 Construction.

MR. WALTER: Mark Walter, Inspector, South 2 District Construction.

MR. PAPPAS: Also in the room we have?

MS. CORDO: Annie Cordo, with the Department of Justice, representing the Claims Committee.

MR. PAPPAS: And Pam May, down there with the purple mug. She will be running claims committees in the future so she is here just basically as a listener and see

procedurally. She is in a new position, and so I'm going to hand it to her eventually, but I figure this would be a good opportunity. So just kind of the person that's going to be watching everything. So thank you.

So the way we will progress through this is I will ask the contractor to present their petition to the Committee for the Claim. If the Committee has any questions they will ask the contractor.

Then, I will ask South District to present their petition to the Committee for the Claim. If the Committee has any questions they will ask the District.

Once the District has finished their presentation, I will ask the contractor if they would like to offer a rebuttal, then I will ask the District the same, and I will go back and forth until both parties have nothing further to offer and the Committee has all their questions answered.

Throughout this hearing I do not want any cross conversation between the contractor and the District.

We will consider everything associated with the contract, the plans, standard specifications, special provisions, supplemental specifications, cross sections, bid tabs, pay estimates, and correspondence as part of the support material for this hearing.

At this time does anybody have any questions?

With that, if there are no questions, I will ask the contractor to begin.

MR. SEGLIAS: Thank you, Mr. Pappas. Brief opening, and then we will proceed with the presentation.

So just to set the table for everybody, as has been mentioned, this is a project at Conrail Road. Essentially, the project was to remove existing pipe, replace it, and then repair approximately 450 feet of roadway that ran over where the piping was to be constructed, which, of course, is part of the drainage of that area, and that's the purpose really for this contract, is to reconstruct that area.

This project originally was to

start on June the 2nd, in 2014, and the duration of the project would be 33 days.

And my client, Mid-Atlantic Dismantlement, was prepared to proceed forward with the project at the original notice to proceed date of June 2nd. That didn't happen, though, because it was determined, not because of anything Mid-Atlantic did, but it was determined that Norfolk Southern had not been properly introduced, nor had there really been any interface with Norfolk Southern regarding the project, which was required because there is a right-of-way that they have in that area that had to be respected.

And that came to the attention of the department. And a couple things had to happen. One is that Mid-Atlantic was required to procure insurance and provide notification of that insurance to Norfolk Southern railroad, which they did, and there had to be approval of that, which eventually occurred in September.

Also, what was to happen, but did not happen, was Norfolk Southern was to participate in a pre-construction meeting prior

to the time that the work would actually commence.

It was determined at a later point in time, not until about October, that they had not been invited, and so that was necessary to arrange.

So at about the end of the summer, beginning of the fall, there was an expectation that the work could get started, but then it was determined that URS, who was to be a project inspector or engineer for DelDOT, also didn't have the necessary insurance certificates and that they had to be approved by Norfolk Southern as well, and that eventually occurred, but that pushed the project really into a difficult time period, and that's pretty much why we are here.

The actual notice to proceed, and when work did finally get started, was on December 8, 2014. And here is the big difference, and all of you know this because of the type of work that you do, it is a lot easier, typically, to do work, this type of work, in the summer for a variety of reasons,

and you will hear from both Mat and Rick about the reasons why.

Conversely, it is a lot more difficult to do this type of work, particularly where you are involving streambeds, in the winter, which is when this work occurred. And we did have a difficult winter, as most of you know, last year.

So what was to be a relatively routine project, done at the height of the summer, in June and July, turned out to be a much more difficult project once it actually got started.

You will hear from Rick Mazol primarily on the issue of the construction of this project. But essentially what occurred was, although the work got started when it was supposed to, it lasted a lot longer than it should have, and there are a variety of reasons for that which you will hear about, but in large part it is the weather and the difficult conditions that they had to work under at that point in time.

And not only is there I guess

injury to some extent because of the difficulty working under those conditions, which as a result increased the costs of performance, but there is some insult here too because, notwithstanding these difficult conditions, DelDOT has asserted a liquidated damages claim.

They provided a six-day extension of work, but that's not nearly sufficient to account for the difficulties and the bad weather and the holidays that interrupted this work. So we are here to tell you about that story. We are here to tell you about the costs.

There were some issues with some of the workmanship, but we are here to explain that too. But I think at the bottom of all this, and what always needs to be kept in mind is when you are doing roadwork in this part of the country, the end of December, beginning of January, you are going to have difficulties, particularly with the asphalt paving and the other facets of this project which involve that streambed.

And to disregard that, as has

been the case up to this point, I think ignores the reality of a project that you originally intended to have done in the summer, which was then ultimately performed in the winter.

So I'm going to introduce Mat Mitten to you now, who is president of the company, and he is going to talk about really the upfront, the period of time from when Mid-Atlantic bid the project until when they actually got started.

Once we get to the start of the project I'm going to turn it over to Rick, who was on the project every day, and who will explain the various difficulties that were encountered, and which some of you know about in some more detail, but for those of you who don't, we are going to pretty much run through the project on a week-by-week basis.

And then I'm going to turn it back over to Mat, who is going to explain really the punch list and the correspondence between DelDOT and Mid-Atlantic, and then also the damages that were incurred as a result of being forced to do this work in the winter as

opposed to the summer.

(MATTHEW E. MITTEN, called as a witness, was examined and testified as follows:)

BY MR. SEGLIAS:

Q. So, Mat, please introduce yourself.

A. Again, Mat Mitten, president Mid-Atlantic Dismantlement Corporation. Good morning.

Q. I'm going to jump right into it. Mat, tell us a little bit about how Mid-Atlantic got involved in this project.

A. Early on in the year, 2014, came out to bid as a DelDOT project, regularly advertised, and Rick and I decided that we wanted to bid on the job, and subsequently went through the bidding process, put together a bid for DelDOT, and on the designated bid date, which we understand was delayed a couple times because they were trying to, as it states on the letter, that it was delayed because they actually talked about a permit working inside the railroad's right-of-way.

Q. What did you understand the work to be

at the time you bid it?

A. The work to be is we are going to go in and remove the existing structures, which consisted of three corrugated metal pipes crossing the roadway, opening it up, and replacing it, and at the headwall of that there was a concrete structure, replacing that, and then replacing the steel corrugated pipe with elliptical concrete pipe, approximately eight foot in diameter, elliptical, across the roadway.

Actually, it was going to extend out a little longer. So we rip all that out. We go back in, put a new bid in and pour bid, we mucked out underneath where the old bridge was.

So it was fairly relative, basic, take it out, put it back in. The 33 days was not a problem. And basically everything about it was pretty cut and dry as far as small bridge work goes.

Q. Okay. And you eventually submitted a bid. What was the price of that bid, approximately?

A. Approximately, with change order, so it was, I think it was just under $300,000.

Q. Okay. And at the time that you submitted your bid, what did you assume in the way of work site conditions, in other words, weather, conditions of the stream, and your ability to execute the work in an efficient manner in order to be competitive with your bid?

A. Well, we assumed, obviously, it was going to be decent weather. We assumed that being in the summertime, production would be good. The days would be long, so, you know, we felt very comfortable with 33 days, and given that out of those 33 days, five of them were set aside for bad weather days.

And knowing that it was a calendar day job, we start, we -- I can remember in discussions in the office, you know, starting in June, we would have one holiday to contend with, which was 4th of July, and we didn't have a problem with that. We discussed beings that it is warm, it wouldn't be that bad working in the water, dealing with

that, the equipment would be functioning well. We just didn't foresee any problems or challenges at that time.

Q. Okay. Scott, why don't we put up Exhibit D.

Take a look at that and we will introduce Exhibit D.

By the way, we have previously submitted a Claims notebook. The exhibits that we are going to run through correspond with what is in the Claims notebook. So for those who have the Claims notebook, you can see the exhibits there. We have handed out a couple, but we didn't bring ten or 12. But the exhibits will all be up here on the screen, so you can follow along there.

What are we looking at here, Mat?

A. The exhibit dated January 9th just postpones the bid date out from there until February 18th, 2014.

Q. And if we look at item number 3, what do we see there?

A. Location description page was revised to be substituted as part of the proposal which

would say that it would behoove us, and I think, Jim, you stated it has to be audited anyway, that through that, that would all come out and it would be all be separated and fixed. So yes. Does that answer your question?

MR. TENNEFOSS: Yes, yes.

MR. PAPPAS: From the Claims Committee, we are not necessarily the ones to determine monetary values. It is just whether you are due it or not. So if it is needed, that we will need to get to that level of detail, we will work with the District and they will work directly with you to clarify that.

MR. MITTEN: Yes.

MR. PAPPAS: Okay. So at this point the contractor has given their presentation. Their questions have been answered.

Now, Brad is going to I think speak on behalf of the District. So we will do the same thing. Brad will give the District's side. The Claims Committee will have the opportunity to question them. And then at that point we will turn it back to Madcorp for

rebuttal. Brad.

MR. SABORIO: I prepared a quick PowerPoint presentation just to bring out some of the key points in our position from the District level.

The first couple slides are probably a repeat of some of the information you have already heard. A lot of it is stuff we don't dispute.

Just to run through real quick, the bids were received on February 18th, 2014. Contract was awarded March 25th, 2014. Contract was executed April 16th, 2014. And the pre-construction meeting was held at May 22nd, 2014. And the date noted in the original bid package for anticipated notice to proceed was June 2nd, 2014.

Just to address some of the discussions earlier regarding the delays in the actual bid, the reason, as I understood it, is that they were trying to obtain a right-of-way statement, that there was some delays. The [illegible] determine the availability of the right-of-way.

And there were some delays in working with Norfolk Southern to determine that.

And the contract was actually issued with a stipulated right-of-way because that was never determined at the time of bid.

As I mentioned, the pre-construction meeting was held May 22nd, 2014. And as we discussed, it was determined at that meeting that the maintenance and railroad traffic specifications, 763502, was omitted from the original bid package.

BY MR. BLACK:

Q. Slow down just a little bit, Brad.

A. Sorry.

Q. It makes it easier on the court reporter. Thank you.

A. Once that was determined at the pre-construction meeting, that specification was delivered to Madcorp on June 4th, 2014. And subsequent to that, then Madcorp prepared a new price proposal and submitted to the Department, which was approved on June 10th, 2014.

So as we discussed, that price

was approved that compensated Madcorp for the additional work to obtain their insurance, prepare all necessary documentation to meet that specification.

So after June 10th, 2014, Madcorp began working with Norfolk Southern to submit the required information.

Our railroad coordinator, Bob Perrone, was also involved in that, making sure the requirements were submitted in that as far as the specification. And it was approved on September 14th, 2014, regarding having adequate evidence of insurance, and then subsequently on October 22nd was when they were actually granted permission to work within the right-of-way, when they received the construction right of entry.

During that same time when we were trying to obtain that information and work with the railroad it was determined that it was a requirement of Norfolk Southern that a representative be present at the [illegible] when we rescheduled a second meeting to be held

October 20th, 2014.

And, again, during that time we found out from Norfolk Southern it was also a requirement that the consultant, E & S inspector who performs the weekly CCR inspections, which is a requirement of the permit for the contract, also obtain insurance so that they can work within the right-of-way.

So those were the reasons for the delay to December 8th, 2014, notice to proceed.

With a lot of contracts it is typical you face delays. The anticipated notice to proceed is not set in stone. It is something that frequently does change. In this case it was a little longer than usual, but it is something that is common.

And just to note also, there was a lot of discussion about performing the work during wintertime. It is very common for the Department to issue bridge contracts during this time of year. A lot of times it is the traffic impacts are too great on the roads to support the detail and the road closures during the summer months, so we actually issue it

purposely to do it during the winter.

We have them going on now. We have open-end contracts where we continue this work through the winter. So it is not uncommon. And nowhere in our specification does there specify any temperature requirement for placement of pipe other than placing it on frozen subgrade.

So with regards to the work, we feel that a lot of the basis of the claim centers around four major items: 265500, which is stream diversion; the 608000, which is coarse aggregate for foundation stabilization; and the two associated concrete pipe specifications.

To discuss each one of those individually, I'll start with the stream diversion. To quote from the specification, the diversion of the stream flow is intended to minimize erosion and sediment transport and permit construction under dry site conditions.

So if a stream diversion is [illegible] the intent is that you have no standing water

or no flowing water through the site so that you can maintain dry site conditions and place everything per specification.

I just want to note real quick, in Exhibit B that was submitted, there was a lot of discussion of construction of the work during summer months versus winter months. And if you note at the top of each one of the reports, it notes the actual and the average rainfall. Those rainfall totals actually for June, July and August are higher than what is shown for December, January and February.

So whether we performed it during the summer months or during the winter months, we would have encountered the same, and, in actuality, the actual amounts in the summer were more than what we encountered during the winter.

And furthermore, as far as the water level, it is shown on the contract plans on sheet 8, the elevation of the water, so when they were preparing their bid, understanding they may have done a site visit and seen much less water, the plans did indicate a much

higher elevation that should have accounted for or anticipated whether they did this during the summer months or winter months.

Just bringing up the standard detail that we have for sandbag diversions, this is a detail we used on several projects. It is the requirement to properly divert the water.

And I just want, I know it is awfully small, but I just want to focus on the right detail, that it shows the sandbags completely encapsulated in polyethylene sheathing, and that's to prevent any seepage between the bags, and that's what gives you the watertight seal.

We saw in several of the pictures shown this morning that there were a lot of the sandbags that were placed where it was not fully encapsulated. They should have placed the poly underneath the sandbags, but it was not encapsulated.

I also want to note that during [illegible] diversion, obviously, they claim that they

encountered some difficult conditions. At no time did they submit a formal request to the Department as far as additional compensation or a change of conditions, which are provisions of our standard specification.

Specifically, section 104.05 is changes in the character or work. 104.06 is differing site conditions. 104.08 is notification of differing site conditions and extra work. And lastly, 105.15 is claims for adjustments and disputes.

It is pretty straightforward, formal process. If you encounter changes in the character of the work or differing site conditions, notice should be made to the Department so that we can address it, compensate them, if necessary, or make plan revisions, if necessary, and we did not receive that notification from the contractor.

So as we said earlier, we saw several photos of the stream diversion, but here is another view of the stream diversion in place, and you can see that in this case there is some poly in some areas, but, again, it