

May 1, 1997

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RE: State Job No. 97160-3306 & 6313
W.P.I. No.: 1157806
Contract No. 19456
Polk County Parkway - Section 1
Disputes Review Board

Subject: Disputes Review Board - Issue # 1
Finding of Fact Pertaining to Schedule Interpretation Issue.

On April 10, 1997, at the request of the Contractor, Cone Constructors, Inc. (Cone), and the Florida Department of Transportation (FDOT), the Disputes Review Board (DRB) held a hearing to consider the dispute over Schedule Interpretation Issues.

Written documentation was furnished to the Board by each of the parties. This documentation included:

FDOT's letter of March 19, 1997, requesting that the hearing be held on April 10, 1997. FDOT's "Statement of Position" letter dated March 27, 1997, outlining and supporting the Department's position. Cone's April 10, 1997, submittal of "Interpretation of the Contract Requirements Regarding the Schedule - Briefing for Schedule Specification". Oral presentations were made to the DRB by both parties at the hearing.

On April 23, 1997, Cone wrote the DRB communicating Cone's interpretation of how the FDOT had analyzed the total time impact to the project during the CR 542 pile redesign delay and the US 92 utility delay.

On April 28, 1997, FDOT wrote the DRB communicating that the Department did not consider the schedule specification issue resolved as suggested by Cone and requesting that the Board render its decision.

Issues requiring interpretation:

- A. Is the Contractor required to submit an updated schedule that reflects actual start and finish dates, added activities, changes in sequences and days remaining, on a monthly basis?
- B. If so, what would be the current baseline schedule?
- C. What schedule would be used to determine extensions of time to the contract completion date?

Project Special Provision 20. SUBMISSION OF WORKING SCHEDULE states in part:

"Within 30 calendar days after the contract has been executed or at the preconstruction conference, whichever is earliest, the successful bidder shall submit to the Engineer a Critical Path Method (CPM) schedule for the project.

*The schedule shall show the various activities of work in sufficient detail to demonstrate that the Contractor has a **reasonable and workable plan to complete the project within the contract time.***

*...
The schedule submitted shall include a **report of projected percent completion, measured in dollars, by each day of the contract. This schedule shall be the basis for the measurement of delinquency.**¹*

*...
Approval of the Critical Path Method schedule will be dependent upon satisfactory identifying work items, dates and durations in conformance with the terms of the Contract and the contract time the Department has established.*

...The approved schedule shall be the schedule used by the Contractor for planning, organizing, directing, and reporting progress.

*The Engineer will designate the location for a regular Monthly Progress Meeting at which all principal parties are expected to attend. **The monthly meetings will be held in the week prior to the Estimate cut-off date so that job progress will coincide with the monthly estimate. The Contractor shall provide a current baseline schedule, updated to reflect actual start dates, actual finish dates, added activities, changes in sequences and days remaining at this meeting.** Current schedule, job progress, delays, and projections will be among the priority items addressed in detail.*

*If the contract duration has been substantially changed as a result of time extensions or supplemental agreements, the **Engineer may request a revised report.** The report shall indicate percent completed, measured in dollars and based upon the most recent update of the schedule. **If satisfactory, the revised report will be the basis for measurement of progress.***

The Contractor shall prosecute the work in accordance with the latest approved Working Schedule. In the event that progress of critical items are delayed, due to no fault of the Department, the Contractor shall provide a written plan itemizing the methods the Contractor will implement to complete the project within the time allowed. All additional costs associated therefrom will be borne solely by the Contractor without additional cost to the Department. The Contractor shall submit for approval such supplementary schedules as may be required by the Engineer to demonstrate the manner in which the progress will be regained.

*Float is not for the exclusive use of or benefit of either the Department or the Contractor. **Extensions of time for damages or delays will be granted only to the extent that time adjustments to the affected activities exceed the total float time along the affected path of the base schedule current at the time of delay.**"*

Conclusion:

The Board, therefore, finds:

Although there may be some ambiguity as to the meaning of current baseline schedule, current schedule, working schedule, base schedule or report, the DRB concludes that a prudent scheduler would reasonably interpret:

That once the proposed working schedule submitted by the contractor was approved by the Engineer, the schedule would then become the **Approved Working Schedule.**²

¹ Referring to Standard Specification 9.2.2 Regulations Governing Suspension for Delinquency, ... approved by the Engineer, the schedule would then become the **Approved**

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That this Approved Working Schedule would be **updated monthly** to cumulatively reflect actual start dates, actual finish dates, added activities, changes in sequences and days remaining. There is no contractual requirement that this updated schedule be approved. It is therefore, the **Unapproved Current Working Schedule**.

That as long as this Unapproved Current Working Schedule conformed to the contract requirements and contract duration remained within contract time as adjusted by time extensions or supplemental agreements, either party could request this schedule become the approved **Working Schedule**. Upon approval by the Engineer this Working Schedule would then become the basis for measurement of delinquency. This for all practical purposes becomes the **Approved Current Baseline Schedule**.

There is a requirement that if the project is delayed through no fault of the Department that:

"...The Contractor shall submit for approval such supplementary schedules as may be required by the Engineer to demonstrate the manner in which the progress will be regained."

This schedule when approved would become the Working Schedule. This for all practical purposes would then become the **Approved Current Baseline Schedule**.

That the Special Provisions state:

"The Contractor shall prosecute the work in accordance with the latest approved Working Schedule."

Since project circumstances necessitate schedule changes due to weather, crew availability, subcontractor availability or other factors almost on a daily basis, it is **incumbent upon the Contractor to timely update the Working Schedule and request approval of same**.

That the specifications state:

1-14 Controlling Work Items. The activity or work item on the critical path having the least amount of total float. The Controlling item of work will also be referred to as a Critical Activity. (Special Provisions)

8-7.3.1 Increased Work: The Department may grant an extension of contract time when the contract amount is increased due to overruns in original contract items, adding new work items or unforeseeable work being required. Consideration for granting an extension of contract time shall be based on the extent that the time required to complete the additional designated work impacts the contract completion schedule. (Special Provisions)

8-7.3.2 Contract Time Extensions: The Department may grant an extension of contract time when a controlling item of work is delayed by factors not reasonably anticipated or foreseeable at the time of bid. Such extension of time may be allowed only for delays occurring during the contract time period or authorized extensions of contract time period. When failure by the Department to fulfill an obligation under the contract results in delays in the controlling construction operations, such delays will be considered as a basis for granting credit to the contract time. Extensions of contract time will not be granted for delays due to the fault or negligence of the Contractor.

considered as a basis for granting credit to the contract time.

⁴ This could also be called the **Original Baseline Schedule**.

Special provision 20. Float is not for the exclusive use of or benefit of either the Department or the Contractor. Extensions of time for damages or delays will be granted only to the extent that time adjustments to the affected activities exceed the total float time along the affected path of the base schedule current at the time of delay."

That the introduction into the specifications of the terminology "**base schedule current at the time of delay**" is the crux of the current schedule interpretation dispute between the Contractor and the Department.

The Contractor states:

"The Contractor shall prosecute the work in accordance with the latest approved working schedule....

The Original Baseline is the approved working schedule unless the Engineer requests revised reports as a result of substantial changes (i.e. Time Extensions or Supplemental Agreements) and that update is then deemed satisfactory or if Contractor Delays the project and a supplemental schedule is requested and approved by the Engineer....

The Contractor's Progress and Delinquency is measured against the Approved Base Schedule....

Consideration for granting an extension of time SHALL be based on the extent that the time required to complete the additional work impacts the Contract Completion Schedule....

The as-planned analysis may not be the most desirable (for both the contractor and the owner) but it is an acceptable method in the industry and is pursuant to this contract."

Base schedule is not defined in the specifications. The only inferred reference to base schedule found in the specifications is in regard to the schedule updated at the required monthly meeting:

The Engineer will designate the location for a regular Monthly Progress Meeting at which all principal parties are expected to attend. The monthly meetings will be held in the week prior to the Estimate cut-off date so that job progress will coincide with the monthly estimate. The Contractor shall provide a current baseline schedule, updated to reflect actual start dates, actual finish dates, added activities, changes in sequences and days remaining at this meeting. Current schedule, job progress, delays, and projections will be among the priority items addressed in detail.

This "current baseline" would be the last Approved Working Schedule. The "current baseline schedule updated" would be an Unapproved Working Schedule. Ambiguity exist in what is the meaning of base schedule current at the time of delay. If it means the last Approved Working schedule then Special Provision 20 would be in conflict with Section 8-7.3.1 which refers to impacting the contract completion schedule.³

If it means the last Approved Working Schedule brought current to the time of impact, then the Specifications would not be contradictory, since this would be the contract completion schedule.

There is an ambiguity in the specifications which should not be interpreted to the detriment or betterment of the Contractor.

³ Although undefined would be the contractor's schedule to complete the work just prior to the delay.

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Scheduling as applied to highway projects is at best an **indicator**. Even the best planned and executed schedule is an educated estimate of planned order and duration for performing the various activities in pursuit of planned project completion. Some duration's will require longer to complete than estimated, all activities required to complete the work may not be included in the schedule, while others may require less time or be eliminated altogether. Impacts that at a point in time mathematically are on the project critical path may later in the project turn out not to have been critical to project completion at all.

For early detection and resolution of project disputes, the Board, finds that the best method to estimate the impact of any added work, unforeseen work or delays to the project involves:

- Establish Approved Working schedule.
- Follow the schedule logic in constructing the project.
- Update⁴ the schedule as actual job changes require.⁵
- When possible additionally update this schedule to the date immediately prior to impact.
- Insert impact activity and tie logic to appropriate activities.
- Revise logic (where possible) to mitigate impact.
- Monitor schedule until impact is no longer critical to the contract completion.
- Establish impact duration.

This means that the schedule that should be used to determine extensions of time to the contract completion date is the schedule that the contractor is actually using to construct the project,⁶ updated to the time of impact, so long as this schedule does not violate scheduling logic dictated in the contract specifications.⁷ This may also be called the **Current Contract Completion Schedule**.

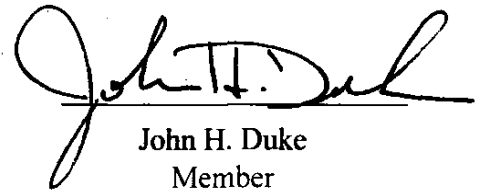
I certify that I participated in all of the meetings of the DRB regarding the Dispute indicated above and concur with the findings and recommendations.

Polk County Section 1 - Disputes Review Board



Dolph Hanson
Chairman

John C. Norton
Member



John H. Duke
Member

CC: Jim Moulton, Jr., P.E.

⁴ Updated for the purposes of this finding means: Updated to reflect actual start dates, actual finish dates, added activities, changes in sequences and days remaining. Calculate the project using retained logic, revise out of sequence progress activity logic and recalculate.

⁵ In this case the Specifications require updating at least monthly.

⁶ This should have been derived from the various updates to the Approved Working Schedule.

⁷ Changes to the contract specified logic that have been approved by the Engineer would not violate this requirement.

⁴ Updated for the purposes of this finding means: Updated to reflect actual start dates, actual finish dates, added activities, changes in sequences