



## Baseline Document Change Announcement

Standard Specifications, related to Progress Schedule and Prosecution of Work.

BDC01S-12

February 27, 2002

**Subject:** Revisions to the Metric and English 2001 Standard Specifications, Subsection 101.03, 105.15, 108.03, 108.04, 108.05 and 108.11

**Reference:** Refer to BDC01T-5 dated February 26, 2002 and BDC01PR-3 dated February 28, 2002 for related information

The above referenced subsections of the Standard Specifications related progress schedule and prosecution of work have been revised to be consistent with the requirements of the Department's new publication *Capital Program Management Construction Scheduling Standard Coding and Procedures For Designers and Contractors Manual* issued by BDC01T-5, dated 2/26/02. The specification has no reference to dimensions. Therefore, the same specification shall be used for both English and metric unit projects.

The following revisions are incorporated in the both English unit Standard Input, SI2001E1 and metric unit Standard Input SI2001M1:

**101.03 Terms.**

THE TERM "EXTREME WEATHER CONDITIONS" IS CHANGED TO:

EXTREME WEATHER CONDITIONS. When, solely as a result of adverse weather, the Contractor is not able to work, the Contractor is entitled to claim that progress of the Work has been affected by extreme weather conditions and may seek an extension of Contract Time consistent with the provisions of Subsection 108.11.

**105.15 Field Office.**

**1. Construction Field Offices.**

**a. Type A.**  
(17)

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**COMPLETE AND INCLUDE THE FOLLOWING ONLY WHEN PRIMAVERA PROGRESS PLANNER IS SPECIFIED FOR THE PROJECT BY THE BUREAU OF CONSTRUCTION ENGINEERING.**

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**SELECT ONE OF THE FOLLOWING:**

- (e) \_\_\_ Primavera SureTrak or equivalent software, latest version.  
\*\*\*\*\*OR\*\*\*\*\*
- (e) \_\_\_ Primavera Project Planner (P3) or equivalent software, latest version.  
\*\*\*\*\*OR\*\*\*\*\*
- (e) \_\_\_ Primavera Project Planner for the Enterprise (P3e) or equivalent software, latest version.

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To be approved as a Substitute or "Or Equal", the software must be completely compatible with the Department database that contains the Capital Program Management's design process schedule and budget, as well as the construction scheduling from design through construction. The software shall be compatible with the hierarchy of the coding and able to import and export data within the Department's Capital Program Management's database without distortion of any coding or relationships contained in the database.

The Contractor shall only utilize equivalent or compatible software for a project, which has received written approval from the Department in accordance with the most current NJDOT Capital Program Management Construction Scheduling Standard Coding and Procedures for Designers and Contractors Manual. The approved equivalent/compatible software utilized shall not vary throughout the construction phase.

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### 108.03 Commencement of Work.

THE THIRD SENTENCE OF THE FIRST PARAGRAPH IS CHANGED TO:

Construction operations shall not begin until the Contractor has supplied, and the Engineer has accepted, the preliminary schedule and other certifications, forms, schedules, and any other information required by the Contract Documents, and until the Contractor has established a field office as required by Subsection 105.15.

### 108.04 Progress Schedule and Prosecution of the Work.

THIS SUBSECTION IS CHANGED TO:

In scheduling and executing the Work, the following shall be complied with:

1. **Progress Schedules.** The progress schedule shall conform to and incorporate the following requirements:

a. **General.**

- (1) The work shall be monitored by a detailed CPM schedule. The CPM schedule shall be developed utilizing the most current NJDOT Capital Program Management Construction Scheduling Standard Coding and Procedures for Designers and Contractors Manual and the NJDOT Primavera template project containing the latest standard coding. The manual and template are available from the Bureau of Quality Management Services.

The CPM schedule shall consist of diagrams and accompanying mathematical analyses. The scheduling of submittals, procurement, construction, and all else necessary to complete the Work as described in the Contract Documents, is the responsibility of the Contractor. The requirement for the CPM schedule is included to ensure adequate planning and execution of the Work and to assist the Department in appraising the reasonableness of the proposed schedule, as well as its compliance with Contract requirements.

The CPM schedule is the Contractor's committed plan to complete all work within the allotted time. The Contractor assumes full responsibility for the prosecution of the Work as shown. The CPM schedule shall be based on and derived from detailed schedules used to complete all Contract activities.

- (2) No claim for extension of time due to extra work or any other type of delay will be considered unless the baseline schedule has been approved and monthly updates are current and submitted within the time limits stated.
- (3) No claim for additional compensation as specified in Subsection 109.04 will be considered unless the baseline schedule has been approved and monthly updates are current and submitted within the time limits stated.
- (4) The CPM preliminary, baseline, and updated schedules shall be submitted in electronic format on a floppy diskette or compact disk, in addition to the required number of copies specified in b. (1) and b. (2) below.
- (5) Once the CPM baseline schedule has been approved, the Contractor shall not deviate therefrom without first notifying the Engineer in writing and schedule is updated in accordance with 1.h. and 1.i. below.

b. **Submittals.** The CPM schedule shall consist of the following two distinct initial submittals:

- (1) **Preliminary Schedule.** No later than 10 State Business Days after execution of the Contract, the Contractor shall submit to the Engineer for review and approval or rejection and return a preliminary schedule. The contractor shall submit six copies of:

- (a) A CPM time-scaled diagram defining the Contractor’s planned activities during the first 90 Calendar Days. For projects with a construction cost over \$ 40 million, a CPM time-scaled diagram defining the Contractor’s planned activities during the first 120 Calendar Days.
- (b) A summary network for the remainder of the Contract time. The preliminary schedule shall indicate all milestone activities expected to be completed or partially completed before submission and approval of the CPM baseline schedule as specified in b. (2) below.
- (c) All multiple shifts per day and anticipated production rates shall be detailed in the Contractor’s narrative accompanying the preliminary schedule.
- (d) The Work shall not begin until the preliminary schedule has been approved. Five State Business Days will be required for review and approval or rejection and return of the preliminary schedule.
- (2) **Baseline CPM Schedule.** In accordance with the time frames listed below, the Contractor shall submit six copies of the Baseline CPM Schedule documents depicting the Contractor’s work plan for the entire Contract.

Project Construction Cost (\$ million)	Time Frame After Approval of Preliminary Schedule for Submission of the Baseline CPM Schedule (State Business Days)
< 5	10
5 - 15	15
15 - 40	20
> 40	30

The Contractor shall submit to the Engineer for review and approval or rejection and return:

- (a) Computer generated tabular schedule and logic reports in accordance with 1.e. below.
- (b) Time-scaled computer generated Layout Output in conformance with 1.f. below.
- (c) A written narrative explaining the schedule and the Contractor’s general approach for achieving Substantial Completion and the date of Completion as specified in Subsection 108.10 of these Special Provisions. Multiple shifts per day and anticipated production rates shall be detailed in the Contractor’s narrative accompanying the Baseline CPM Schedule.
- (d) Electronic version as specified in 1.a. (4) above.
- c. **CPM Schedule Requirements for the Baseline and Updates.**
  - (1) The CPM schedule and updates shall contain the following:
    - (a) The order in which the Contractor proposes to prosecute the Work; the starting dates of the various work stages, operations, and principal items of work including procurement of materials and plant, and the contemplated dates for completing the same.
    - (b) List dates for all required submissions.
    - (c) A clear outline of the intended maintenance of traffic.
    - (d) The locations and timeframes for the installation of temporary and permanent soil erosion and sediment control measures to be installed.
    - (e) All unusual requirements specific to the project included in the Contract Documents or as deemed appropriate for the project.
    - (f) Special consideration to sensitive areas such as wetlands, floodplains, waterways, and parklands to ensure that appropriate staging and seasonal constraints are considered in order to maximize the effectiveness of the soil erosion and sediment controls.
    - (g) The time frames when work is restricted in sensitive areas as reflected in present and future permits as anticipated or known.
    - (h) Updates to reflect permit conditions if changed.
    - (i) Include a detailed, step-by-step outline of any clean-up operations regarding contaminated material.
    - (j) The work of the Contractor, subcontractors, suppliers, the Department, permitting agencies, utility companies, and all others that affect progress shall be shown and identified on the schedule by responsibility codes.

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**THE DESIGNER SHALL INSERT THE NUMBER OF STATE BUSINESS DAYS (SBD) THAT THEY WILL REQUIRE TO REVIEW CERTIFY/APPROVE OR REJECT WORKING DRAWINGS. IT IS SUGGESTED THAT TWENTY SBDS BE USED FOR THE “CERTIFICATION” PROCESS AND THIRTY SBDS BE USED FOR THE “APPROVAL” PROCESS. BASED ON SPECIFIC PROJECT CHARACTERISTICS, THE SUGGESTED TIME**

**FRAMES MAY BE INCREASED OR DECREASED. HOWEVER, ANY INCREASE MUST BE JUSTIFIED BY THE DESIGNER AND APPROVED BY THE PROJECT MANAGER.**

- (k) Procurement activities shall be shown, including plans, permits, materials, individual working drawings, fabrication, and delivery of the material. \_\_\_\_\_ State Business Days will be required for review and certification or rejection and return of fabrication working drawings. \_\_\_\_\_ State Business Days will be required for review and approval or rejection and return of working drawings for items that were included as conceptual and the Contractor is required to complete final design plans. The time frames set forth in this paragraph are provided for scheduling purposes only. The Department reserves the right to enlarge such time periods for review by a reasonable amount of time where circumstances necessitate, within the sole discretion of the Engineer.

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- (l) Traffic staging, delivery of Department - furnished labor/equipment, project phasing, right-of-way availability dates, and any other requirements specified in Divisions 200 through 900 shall be shown.
- (m) The CPM schedule shall contain sufficient activities to adequately depict the Work, and will be subject to the review and approval of the Engineer.
- (n) The logic and activity time durations established by the Contractor shall be consistent with the Contract Documents and be reflective of proper coordination between trades.
- (2) The CPM schedule shall operate as follows:
  - (a) The CPM schedule shall be of the precedence type.
  - (b) One activity for each discrete component part of each Pay Item scheduled in the Proposal. The Engineer may allow grouping of similar Pay Items into one activity. No work activity shall have a duration greater than 30 Calendar Days, except as approved by the Engineer. The activities shall be consistent with the Work Breakdown Structure (WBS), and shall also include discrete component parts of the Contractor's submittal preparation, Department approval, procurement, and construction work activities with sufficient detail such that all the relationships with all direct and non-direct parties to the Work are shown.
  - (c) The system shall be based upon network diagrams and accompanying mathematical tabulations as described hereinafter. Diagrams shall show the order and interdependence of activities and the sequence and quantities in which work is to be accomplished. The basic concept of network scheduling shall be followed to show how the start of a given activity is dependent on the completion of preceding activities and how its completion may affect the start of subsequent activities. The critical path shall be distinguished from other paths on the network.
  - (d) The completion date of the CPM schedule shall be the date of Completion specified in Subsection 108.10 of these Special Provisions, except as specified in Subsection 108.04 subpart 5, which shall be input as a Finish Milestone with a Late Finish Constraint. All Intermediate Milestones required in the Contract shall be shown in proper logical sequence and input as a "Start-no-Earlier-Than" constraint for entrance into an area or start activity or a "Finish-no-Later-Than" constraint date for completions.
  - (e) Activities shall be described such that the Work is readily identifiable for assessment of start and completion, as well as intermediate status. Descriptions shall utilize activity codes for physical locations at each stage such as distance-markers, structures, and elevations where possible to define the Work. Activity descriptions of "Start," "Continue," "Completion," "X percent," "Y percent," "Z percent" or similar nonspecific descriptions will not be allowed.
  - (f) The CPM schedule shall be calculated in Working Days. The Working Day to calendar date correlation shall be based upon the Contractors proposed work week with adequate allowance for weekends, legal holidays and any special requirements of the Contract. Activities shall indicate the calendar being used. Durations for activities shall not be less than one workday. Multiple shifts per day and anticipated production rates shall be detailed in the Contractor's narrative accompanying the baseline schedule and subsequent updates.
  - (g) Constraint dates are permitted only on milestone activities, unless otherwise approved by the Engineer.
  - (h) All activities with the exception of the Project Start Milestone and Project Completion Milestone shall have predecessors and successors. The start of an activity shall have a Start-to-Start or Finish-to-Start relationship with preceding activities. The completion of an activity shall have a Finish-to-Start or Finish-to-Finish relationship with a succeeding activity. Start-to-Finish relationships are not acceptable.
  - (i) CPM schedules, which have been resource leveled, are permissible, provided the effects of leveling are incorporated in the schedule using "Start-no-Earlier-Than" date constraints.

- d. Computer Program Requirements.** The computer program requirements shall be the same as that specified in Subsection 105.15 subpart 1.e. of these Special Provisions.
- e. Tabular Reports.**
- (1) CPM schedule reports shall be provided for the following sort orders:
    - (a) Total float, then early start for activities with float less than 20 days.
    - (b) Grouped by responsibility, then by early start.
    - (c) Grouped by WBS, area, then sorted by early start.
  - (2) The minimum activity information required for each of the above reports in (1), shall include the following:
    - (a) A unique activity ID for each activity.
    - (b) A description of the Work represented by the activity.
    - (c) Location code identification.
    - (d) Work responsibility code identification.
    - (e) Original activity duration and remaining activity duration in Working Days.
    - (f) Early and late, start and finish dates calculated according to CPM principles.
    - (g) Total float.
    - (h) Historical (actual) dates for activities completed or underway shall replace the appropriate calculated dates.
    - (i) Stages.
    - (j) Calendar used for each activity.
- f. CPM Time-Scaled Layout Output.**
- (1) The network displayed on the schedule diagram shall depict the exact detail of the CPM schedule reports.
  - (2) The network diagram shall be of the precedence type and drawn by using early dates.
  - (3) The layout output shall be time-scaled. The length of the activity representation shall be proportional to the activity duration.
  - (4) The activity display shall include the:
    - (a) Activity description.
    - (b) Activity identification.
    - (c) Activity original duration and remaining duration.
    - (d) Activities coded by area, responsibility, and WBS.
    - (e) Activity total float.
    - (f) Activities early start dates.
    - (g) Activities finish dates.
  - (5) The activities, which are displayed on the network diagram, shall be grouped by WBS and sorted by area. The title of these components shall appear on the left-hand side of the plot.
  - (6) The critical path shall be identified on the plot.
  - (7) Vertical lines indicating the start and the end of each month shall be shown.
  - (8) The data date shall be indicated on the plot in the activity display and in the title at the top or bottom of the plot.
  - (9) Completed activities shall be indicated on the plot.
  - (10) The Contract title shall be displayed on the plot.
  - (11) A legend shall be provided which indicates the various symbols used and their meanings.
  - (12) Milestone Activity shall be indicated by a prominent symbol.
  - (13) Different line types shall indicate the critical path and completed Milestone and activities.
- g. Review and Approval.** The Engineer will review a submitted preliminary schedule for approval or rejection within five State Business Days of receipt and will thereafter return same to the party having submitted it. There will, in turn, be allotted ten State Business Days for review and approval or rejection by the Engineer of the submitted baseline schedule, which will thereafter be returned to the party having submitted it. The Engineer will review revised preliminary or revised baseline submittals within five State Business Days of receipt. The time periods set forth in this paragraph are provided for scheduling purposes only. The Department reserves the right to enlarge such time periods for review by a reasonable amount of time where circumstances necessitate, within the sole discretion of the Engineer.
- h. Updating and Revisions.**
- (1) Within ten State Business Days after review by the Engineer, all preliminary and baseline schedules that are not approved shall be revised and resubmitted by the Contractor until the Engineer's approval is received.

- (2) The Contractor shall update the CPM schedule monthly whether or not the Engineer has accepted the schedule, to reflect actual activity progress. The update shall include the historical record of actual start and actual finish dates for activities in progress, or completed, and the remaining duration based on the amount of workdays required to complete the activity.
- (3) Monthly progress meetings shall be held. The updated CPM schedule shall be the basis for the monthly progress review meetings. Activity progress shall be prepared in advance of the meeting. At this meeting, attended by the Engineer, all progress during the calendar month shall be presented and reviewed for incorporation into the schedule by the Contractor. Within a period of ten State Business Days from the date of this progress meeting, the Contractor shall submit the schedule update to the Engineer with the agreed upon changes.
- (4) The monthly schedule update submission shall consist of three copies of electronic format on floppy diskettes or compact disks and three copies of the following:
  - (a) Updated CPM schedule reports (see Item e. above).
  - (b) Layout output. (See item f. above)
  - (c) CPM progress narrative.

The CPM progress narrative report submitted as part of the update analysis shall include, but not be limited to, the:

1. Description of schedule status.
2. Discussion of current and anticipated delaying problem areas and their estimated impact.
3. Schedule slippage, pay revisions, and/or progress along the critical path in terms of days ahead or behind the allowable dates, and if the Work is behind schedule, progress along other paths with negative float. This shall be in addition to and not a substitute for requirements in Subsection 108.11.
4. Logic changes and an explanation of the revisions. Revisions to activities not worked on during the period, including changes in duration, or revisions to activity relationships are to be considered logic revisions. Out-of-sequence activities are not acceptable and shall be corrected in logic revisions prior to submission to the Department.
- (5) When, in the Engineer's opinion, the CPM schedule fails to reflect the Contractor's actual plan and method of operation, or the Contractor's completion date as indicated by the CPM is more than one month behind the Contract completion date, the Engineer may require the Contractor to submit for review within ten State Business Days, a recovery plan for completion of the remaining work within the Contract completion date. A recovery plan shall include, but not be limited to, a revised CPM schedule and additional manpower and equipment that shall be utilized to complete the project by the date of Completion.
- (6) When the Contractor adds activities that are not Extra Work Items to the CPM schedule, they shall be added in a method that completion dates of any succeeding baseline activities are not affected. All revisions shall be submitted to the Engineer for approval before incorporation into the CPM schedule.
- (7) The Engineer shall have the right, within its sole discretion, to prepare its own update(s) or revision(s) to the baseline schedule in the event of a dispute between the parties regarding the appropriateness of the submitted revision(s) or updates to the baseline schedule or by reason of a failure on the part of the contractor to prepare same, which update(s) or revision(s) may reflect what the Engineer has determined to be the actual status of the project progress, actual sequencing of the Work and appropriate scheduling logic required under this Subsection. The Engineer may thereupon rely on its own revision(s) or update(s) of the baseline schedule in the administration of the project, review of claims and/or the imposition of liquidated damages.

**i. Changes and Delays.** To ensure that the CPM schedule continues to accurately reflect the Contractor's plan for the Work and that it incorporates the impact of all changes and delays as soon as the Work scope can be defined, the Contractor shall use the following procedure to incorporate changes and delays.

When Extra Work or a change is proposed or claimed, the Contractor shall submit a Time Impact Evaluation form. Each Time Impact Evaluation must identify in a CPM fragnet sketch, additional work required as a result of the proposal and its interrelationship to the CPM schedule. Each change or delay shall be represented by adding a new activity or activities. These activities shall be clearly identified. This sketch shall show all activities, logic revisions, duration changes, and new activities with all the predecessors and successors. The Time Impact Evaluation form shall also include any associated cost changes for performing the Work in question. Upon the Engineer's approval of the Time Impact Evaluation, the Contractor shall incorporate the fragnet's illustrating the influence of changes and delays into the baseline schedule and the working schedule in the next schedule update. An extension of time may only be considered when the Time Impacted scheduled completion date exceeds the date of Completion. For cases where the Contractor is behind schedule, an extension will be granted for only the amount of time

that the Department is responsible as supported by a Time Impact Evaluation. In the event of a dispute, the Engineer may prepare an update, which is believed to be the true impact on the project. No additional compensation will be paid to the Contractor for preparing these revisions. Any request for extension of time shall be verified by CPM analysis and shall be in accordance with Subsection 108.11. Compensation for additional expense to the Contractor and allowance of additional time for completion of the Work shall be as set forth in a Construction Order in accordance with Subsections 108.11 and 109.03.

2. **Staging.** The Contractor shall schedule the Work using such procedures and staging as may be specified in the Contract Documents. Work designated as part of separate stages may be performed simultaneously where provided by the Contract Documents or where approved.

When the Contract Documents provide for staging or specific procedures, the Contractor may present, for written approval of the Engineer, a detailed, written alternate staging plan or procedure which incorporates the requirements of the Department. If the Contractor proposes an alternate-staging plan, two CPM schedules shall be submitted. One based on the original staging and one based on the Contractor's alternate staging. As a condition of the Engineer's reviewing of the alternate staging plan or procedure, the Contractor agrees that it is not entitled to additional Contract Time or compensation arising from possible delays to construction due to the time spent in reviewing the Contractor's staging plan or procedure, regardless of whether the Department accepts or rejects it. The Engineer will review and approve or reject and or return, with comments, the staging plan within ten State Business Days. If such staging plan or alternate procedure is approved in writing, the Contractor shall then finalize the progress schedule consistent with the alternate approved staging.

3. **Prosecution of the Work.**

- a. At or prior to the preconstruction conference, the Contractor shall furnish the name and location of the solid waste facilities to be utilized as well as the fee structure of each of the facilities. Failure to provide such information shall make the Contractor ineligible for adjusted compensation as provided for in Subsection 104.07.
- b. The Contractor shall provide sufficient materials, equipment, and labor to guarantee the Completion of the Project in accordance with the Contract Documents and within the time set forth under Subsection 108.10.
- c. The Contractor shall supply the Engineer with a weekly work schedule indicating the Contractor's planned work, the subcontractor's planned work, the dates when materials and submissions are to be delivered, and a forecast of lane closings.
- d. The Contractor shall notify the Engineer, in writing, prior to discontinuing work for any reason and at least 24 hours in advance of resuming operations.
- e. The Contractor shall arrange and prosecute the Work so that each successive construction operation at each location shall follow the preceding operation as closely as the requirements of the various types of construction permit.
- f. Underground structures for traffic signals, except for pressure detector installations shall be constructed prior to completion of the intersecting road.
- g. Work, which closes or alters the use of existing roadways shall not be undertaken until adequate provisions, conforming to the requirements of Section 617, have been made by the Contractor and approved.
- h. The Engineer may revise stage construction and maintenance of traffic, if deemed necessary, by the Engineer due to unforeseen circumstances that may arise during construction.
- i. When possible, the construction of subsurface structures adjacent to traffic shall be performed while traffic is being diverted from such areas. If traffic must be maintained in such areas, the Work shall be done expeditiously in stages, as approved, and with minimum interference with traffic.
- j. Subsurface structure excavation adjacent to traffic shall not remain open overnight unless adequately protected by approved safety devices.
- k. The Contractor shall proceed with the Work of demolition of the various buildings that are identified with a demolition number as and when they become available for demolition. If any of the buildings to be demolished is not available for demolition at the time the Contractor begins work on the Project, the Contractor shall temporarily defer its work in the vicinity of the building and complete the Work when the building is made available for demolition.
- l. Operations adjacent to traffic shall be confined to only one side of the traffic at any one time unless otherwise specified in the Contract Documents.
- m. Concrete curbs constructed adjacent to flexible base and surface courses shall be completed, cured, and backfilled before the flexible base and surface courses are constructed.
- n. Bituminous paving operations shall be staged to progress up to the bottom of the surface course. The top layer of the bituminous concrete surface course for the full width of the traveled way, shoulder, and auxiliary lanes shall be paved as a single stage of construction and as the final paving operation.

4. **Acceleration and Default.** If, in the opinion of the Engineer, the Contractor falls behind its baseline schedule, and cannot complete the Work within the time prescribed under Subsection 108.10, as modified pursuant to Subsection 108.11, the Contractor shall take such steps as may be necessary to improve its progress. The Engineer may require the Contractor to increase the number of shifts, begin overtime operations, work extra days including weekends and holidays, or supplement its construction plant and to submit for approval such supplementary schedule or schedules, as may be deemed necessary to demonstrate the manner in which the agreed rate of progress shall be regained, all at no cost to the State.

Failure of the Contractor to comply with the requirements of the Engineer under this Subheading is grounds for the determination that the Contractor is not prosecuting the Work with such diligence as to ensure Completion within the time specified. Upon such determination, the Engineer may terminate the Contractor's right to proceed with the Work or any separate part thereof in accordance with Subsection 108.17.

5. **Intent, Responsibility, and Time.** Scheduling of construction shall be the responsibility of the Contractor. The Contractor's shall determine the most feasible order of work commensurate with the Contractor's abilities and the Contract Documents. The CPM schedule will be used for determining extensions or reductions of Contract Time pursuant to Subsection 108.11.

It is not intended that the Engineer, by approving the CPM schedule, agrees that it is reasonable in any or all respects or that following the CPM schedule can result in timely completion of the Project. The progress schedule is not a part of the Contract.

If, in the preparation of the CPM schedule, the Contractor reflects a completion date different than that specified under Subsection 108.10, this in no way voids the date set therein. The date as specified in that Subsection governs. Where the CPM schedule reflects a completion date earlier than that specified as the Contract Time, the Engineer may approve such schedule with the Contractor specifically understanding that no claim for additional Contract Time or compensation shall be brought against the State as the result of failure to complete the Work by the earlier date shown on the CPM schedule.

6. **Payment.** Payment for the accepted progress schedule will be made on a lump sum basis for the costs for schedule preparation, maintenance, updating, facilities, personnel, computer hardware and software requirements, schedule submittals and reproduction as specified. Twenty-five percent of the lump sum bid will be paid upon approval of the baseline submission, and the balance paid on approval of updates at a prorated sum based upon the number of anticipated updates to be submitted during the Contract Time.

Payment will be made under:

<i>Pay Item</i>	<i>Pay Unit</i>
PROGRESS SCHEDULE	LUMP SUM

**108.05 Mobilization.**

THIS SUBSECTION IS CHANGED TO:

Mobilization shall consist of the preparatory work and operations necessary for the movement of personnel, equipment, supplies, and incidentals to the Project site, and other work performed or costs incurred prior to beginning Work.

Payment for mobilization will be made on a lump sum basis regardless of the fact that the Contractor may have, for any reason, shut down its work on the Project or moved equipment away from the Project and back again.

Payment will be made in accordance with the following schedule:

- When five percent of the Work is completed and the Baseline Progress Schedule is approved by the Engineer, 25 percent of the lump sum bid for mobilization or 2.5 percent of the Total Contract Price, whichever is less, will be paid.
- When ten percent of the Work is completed and all required CPM Progress Schedule Updates are approved by the Engineer, 50 percent of the lump sum bid for mobilization or five percent of the Total Contract Price, whichever is less, will be paid.
- When 15 percent of the Work is completed and all required CPM Progress Schedule Updates are approved by the Engineer, 75 percent of the lump sum bid for mobilization or 7.5 percent of the Total Contract Price, whichever is less, will be paid.
- When 20 percent of the Work is completed and all required CPM Progress Schedule Updates are approved by the Engineer, 100 percent of the lump sum bid for mobilization or ten percent of the Total Contract Price, whichever is less, will be paid.
- When all Work on the Project is complete, payment for the lump sum bid for mobilization in excess of ten percent of the Total Contract Price will be made.
- The percentage of Work completed shall be the total of payments earned compared to the Total Contract Price. The total of payments earned excludes the amount paid for this item and the amount paid for materials furnished



but not incorporated into the Work in accordance with Subsection 109.06, as shown on the monthly estimates of the approximate quantities of Work performed, prepared in accordance with Subsection 109.05.

7. No payment will be made for mobilization until a Baseline Schedule is approved, except when all Work on the Project is complete, then 50 percent of the lump sum bid for mobilization will be paid and no further payment(s) will be made for the lump sum bid for mobilization.

Payment will be made under:

<i>Pay Item</i>	<i>Pay Unit</i>
MOBILIZATION	LUMP SUM

When mobilization is not a Pay Item, all costs for the Work shall be included in the prices bid for various Pay Items scheduled in the Proposal.

#### **108.11 Extensions and Reductions of Contract Time.**

THIS SUBSECTION IS CHANGED TO:

- A. Basis for Extension.** Where appropriate under the provisions of this Subsection, extensions or reductions to the Contract Time may be provided by Construction Order, however, such extensions or reductions will be allowed only to the extent that the increase or decrease in the Work or delays of the types indicated below affect current controlling operations and the overall Completion. Increases or decreases in Work or such delays, which do not affect the overall Completion, are not to be the basis for reduction or extension of Contract Time. Extensions of Contract Time will not be granted under this Subsection where it is determined that the Contractor could have avoided the circumstances which caused the request for extension.

If the Contractor is delayed in completion of the Work by reason of changes made under Subsection 104.02, or by failure of the Department to acquire right-of-way, or by any act of other contractors consistent with Subsection 105.10, or due to the discovery of archeological finds consistent with Subsection 108.13, or the discovery of hazardous substances, or by any act of the Engineer or of the Department not contemplated by the Contract, an extension of Contract Time commensurate with the delay in overall completion of the Contract thus caused will be granted, and the Contractor is relieved from any claim for liquidated damages or engineering and inspection charges.

Additionally, the Contractor may be granted an extension of Contract Time and not be assessed liquidated damages or the costs of engineering and inspection for any portion of the delay in overall completion of the Work beyond the time provided in Subsection 108.10 caused by the following reasons:

1. acts of civil or military authorities, war, or riot;
  2. fire;
  3. floods, tidal waves, earthquakes, cyclones, tornadoes, hurricanes, or other cataclysmic natural phenomenon (except on working day contracts);
  4. extreme weather conditions (see Item 1 of the fourth paragraph) (except on working day contracts);
  5. epidemics or quarantine restrictions;
  6. strikes or labor disputes beyond the control of the Contractor which prevent work on the construction operations which are critical to the completion of the Project;
  7. shortages of materials (see Item 2 of the fourth paragraph) or freight embargoes;
  8. acts of the State in its sovereign capacity;
  9. failure of the Engineer to furnish interpretations of the Contract Documents (see Item 3 of the fourth paragraph).
- B. Criteria for Evaluation.** Extension of Contract Time for the reasons set forth in this Subsection will not be granted unless the Contractor has notified the Engineer in writing of the causes of delay within 15 State Business Days from the beginning of any such delay on forms provided by the Department. The Engineer will evaluate the facts and the extent of the delay, and the Engineer's findings will be final and conclusive and will be based on the following:
1. Extensions of Contract Time for extreme weather conditions will be granted in accordance with the following:

Number of Days the Contractor's Work is Limited to in One Month as the Result of Extreme Weather Conditions (April through November inclusive)	Extension of Contract Time Allowable
16 - 31	0
15	1
14	2
13	3
12	4
11	5
10	6
9	7
8	8
7	9
6	10
5	11
4	12
3	13
2	14
1	15
0	16

Extensions of Contract Time for extreme weather conditions will be granted in accordance with the following for the months of December through March inclusive:

\*\*\*\*\*  
**THE DESIGNER SHALL INSERT THE AVERAGE NUMBER OF WORKING DAYS THAT ARE ANTICIPATED DURING THE WINTER SEASON FOR ROAD AND BRIDGE WORK. THIS SHOULD BE BASED ON ITEMS OF WORK ON THE CRITICAL PATH FOR THE MONTHS OF DECEMBER THROUGH MARCH INCLUSIVE.**

It is anticipated that the average number of total Working Days during this four month winter period is \_\_\_ for road work (Exclusive of temperature sensitive work, for example but not limited to, paving operations, earthwork, aggregates, curb and sidewalk, etc.) and \_\_\_ for bridge work (Exclusive of temperature sensitive work, for example but not limited to, concrete decks, parapets, bridge repairs, bridge painting, etc.)

- \*\*\*\*\*
- In using the above, the Engineer will:
- a. Consider days for which an extension is granted under the above category "floods, tidal waves, earthquakes, cyclones, tornadoes, hurricanes, or other cataclysmic natural phenomenon" as days on which the Contractor's work is limited as the result of these extreme weather conditions;
  - b. Consider days for which an extension is granted under the above categories for causes other than "floods, tidal waves, earthquakes, cyclones, tornadoes, hurricanes, or other cataclysmic natural phenomenon" as days on which the Contractor worked and was unaffected by extreme weather conditions; and
  - c. Make the above calculation based on the full number of days in the calendar month as being days on which the Contractor could have worked without regard to Saturdays, Sundays, and holidays.
  - d. Extension of time for extreme weather conditions will only be granted when the Critical Path of the Progress Schedule is affected and documented by the contractor in accordance with Subsection 108.04. No extension of time will be granted unless the Contractor submits daily documentation of such extreme weather.
2. Extensions of Contract Time will not be granted for a delay caused by a shortage of materials unless the Contractor furnishes:
    - a. Documentary proof that it has diligently made every effort to obtain such materials from all known sources within reasonable distance from the Work, and
    - b. Further proof in the form of a progress schedule, as required in Subsection 108.04, showing that the inability to obtain such materials when originally planned, did, in fact, delayed the date of Completion which could not be compensated for by revising the sequence of the Contractor's

operations. The term "shortage of materials" applies only to raw and fabricated materials, articles, parts, or equipment which are standard items and does not apply to materials, parts, articles, or equipment which are processed, made, constructed, fabricated, or manufactured to meet the specific requirements of the Contract. Only the physical shortage of materials and not the cost of materials will be considered.

3. Extensions of Contract Time will not be granted for failure of the Engineer to furnish interpretations of the Contract Documents until 20 State Business Days after receipt of such demand in writing as required by Subsections 105.01 and 105.07, and not then unless such request for an interpretation of the Contract Documents is reasonable and made in good faith, and the failure to respond was unwarranted.
4. It is understood and agreed that the Contractor has considered in its bid all of the permanent and temporary utility facilities in their present or relocated positions as may be shown on Plans, as described in Specifications and as revealed by its site investigation; is aware that utility company service demands, adverse field conditions and emergencies may affect the owner's ability to comply with the proposed schedules for utility work; and is cognizant of the limited ability of the State to control the actions of the utility companies, including the actions of railroads, and has made allowances in its bid. Extensions of Contract Time will be granted for extreme weather and exigent circumstances only, as specifically set forth above and which are outside the control of the respective utility company(ies) or the Contractor as determined by the Engineer utilizing the Extreme Weather provisions specified in 1. above. Extension of time for utility work will only be granted when the Critical Path of the Progress Schedule is affected and documented by the Contractor in accordance with Subsection 108.04.

Except where specifically provided in the Contract Documents, the Contractor shall not make any claim for damages or additional compensation for any delay in or hindrance to the performance of the Contract occasioned by any act or omission to act by the State or any of its representatives, or for any of the reasons enumerated in this Subsection and agrees that any such claim shall be fully compensated for by an extension of Contract Time to complete performance of the Work.

Extensions of Contract Time will not be granted due to delays caused by, or in any way related to, the financial condition of the Contractor, subcontractors, sub-subcontractors, material, men, fabricators, or suppliers. The Contractor and its surety assume full responsibility for ensuring that the financial condition of any of the above does not delay completion of the Contract.

If, as a result of modifications made under Subsection 104.02, 104.05, 104.06, or 108.09, the Work required is reduced or altered so that the time required for Completion is reduced, the Engineer may reduce the Contract Time provided under Subsection 108.10. The Engineer will evaluate the facts and the extent of the reduction. The Engineer's findings thereon will be final and conclusive.

It is the intention of the above provisions that the Contractor or surety is not relieved of liability for liquidated damages or engineering and inspection charges for any period of delay in Completion in excess of that expressly provided for in this Subsection.

### **Instructions to Designers:**

This BDC is one of three BDCs for developing and processing of construction schedules. The other two BDCs, BDC01T-5 (dated 2/26/02) and BDC01PR-3 (dated 2/28/02), are for the revised Department Procedures manual and the construction schedule manual, respectively.

The requirements of these three BDCs shall be followed by designers and contractors to develop construction schedules for projects that are designed using either the Department's 2001 metric or English units Standard Specifications for Road and Bridge Construction.

The above specification revision has been incorporated into the English unit Standard Input, SI2001E1 and metric unit Standard Input SI2001M1.

### **Distribution and Announcement Access Information:**

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<http://www.state.nj.us/transportation/cpm/BaselineDocuments/bdcdownloads.htm>.

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