

**COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION
CONSTRUCTION DIRECTIVE
MEMORANDUM**

GENERAL SUBJECT:	<u>Scheduling Specifications for Category M, I, & II Projects</u>	NUMBER:	<u>CD-2008-14</u>
		DATE:	<u>July 18, 2008</u>
SPECIFIC SUBJECT:	<u>Special Provisions for Schedule of Operations for Category M Projects and for Progress Schedule for Category I & II Projects</u>	SUPERSEDES:	<u>CD-2007-8</u>
DATE EFFECTIVE	<u>Upon Receipt</u>	SUNSET/ EXPIRES:	<u>July 18, 2013</u>

Original with signature on file in the office
of the Scheduling and Contract Division

**W. BYRON COBURN, JR., P.E.
STATE CONSTRUCTION ENGINEER**

Original with signature on file in the office
of the Scheduling and Contract Division

**JAMES S. UTTERBACK, PMP
DIRECTOR, PMO**

DIRECTED TO - DISTRICT ADMINISTRATORS

I. PURPOSE

The purpose of this memorandum is to acknowledge the release of the Special Provision for Schedule of Operations for Category M Projects (dated 5-1-08), the Special Provision for Progress Schedule for Category I Projects (dated 4-28-08), and the Special Provision for Progress Schedule for Category II Projects (dated 4-29-08); as well as VDOT Form C-13C (Contractor's Progress Earnings Schedule) Microsoft Excel template (dated 5-1-08), and to provide criteria and examples to assist Project Managers in determining which to use on construction and maintenance projects scheduled for advertisement.

II. DIRECTIVE

Effective immediately, all contracts that are submitted for advertisement through the Scheduling and Contract Division; for projects that meet the criteria for Category M, Category I or Category II will include the appropriate Scheduling Special Provision as defined herein. Henceforth, the Project Manager is responsible for ensuring that the appropriate scheduling Special Provision is included in the project specifications prior to the Pre-advertisement Conference (PAC) date for all projects scheduled for advertisement. However, the Project Manager will consult with the Area Construction Engineer (ACE) in determining the Project Category. For projects that do not require PAC, the appropriate scheduling Special Provision will be included in the bid documents prior to submission to Central Office for Advertisement. During the Bid Proposal Bidability Review, the ACE will verify that the appropriate scheduling Special Provision is included in the bid documents.

Furthermore, the ACE will ensure that the Contractor complies with the submittal requirements as specified in the scheduling Special Provision. The Engineer will review the Contractor's schedule submittal for acceptance to ensure that the Contractor has complied with the requirements of the provision and that the progress schedule reflects a plan to accomplish the work in accordance with the requirements of the Contract. Acceptance of the progress schedule will be based only on completeness and conformance in accordance with the provision and the contract requirements. Any issues concerning the reasonableness of the schedule will be documented and addressed with the Contractor; however, acceptance will not be based on the Engineer's interpretation of reasonableness. The accepted progress schedule will become the project Schedule of Record (SOR), with which to establish and maintain schedule control, assess progress, and to resolve any time-related issues on the project. The SOR will also be used as a framework with which to plan for and manage the Department's resources and expenditures. For guidance on developing and reviewing the progress schedule, see the VDOT Post-award Scheduling Guide. <http://www.virginiadot.org/business/resources/const/PostAwardSchedGui.pdf>

III. PROJECT CATEGORIES

In recognition that projects undertaken by VDOT vary in size, complexity, and schedule risks, a project ranking system has been defined to group projects by category based primarily on level of complexity and schedule risks. The categorization of projects allows for the state-wide consistent assignment of the appropriate scheduling provision to ensure that the appropriate level of scheduling efforts needed to establish and maintain schedule control on the project is applied.

The Project Categories for scheduling Special Provisions consist of six categories representing varying levels of complexity and schedule risks ranging from very low to very high. Category M represents typical maintenance projects and schedule work. Categories I through V represent typical construction projects ranging from simple to complex. Characteristics of each project category are as follows:

1. **CATEGORY M** – Category M represents typical maintenance contracts and seasonal schedule type work with very low complexity and schedule risk, where specific times for accomplishing the work is not generally a major constraint i.e., where a “window” of time is advantageous. Such projects, therefore, do not require the level of scheduling efforts needed for typical construction projects.
 - A. **Criteria for Category M Projects** – Category M projects generally meet the following criteria:
 - Typical maintenance and schedule type work; or
 - Seasonal Contracts with contract duration of one construction season or less (Time is not a major constraint); or
 - Simple repairs or straight-forward maintenance work with minimal or no traffic impact; and
 - No involvement with other major construction or improvement projects.
 - B. **Examples of Category M Projects** – The following is a list of typical Category M projects:
 - Pavement schedules (Asphalt overlay, surface treatments & slurry seals);
 - Bridge joint repairs;

- ❑ Bridge painting (minimum traffic impact);
- ❑ Guardrail improvements;
- ❑ Curb and gutter repair/replacement;
- ❑ Raised pavement marker installation, lens replacement;
- ❑ Pavement marking schedules;
- ❑ Minor Bridge maintenance (District wide, minor miscellaneous);
- ❑ Rumble strip installation;
- ❑ Slope slide repair, scour repair (Minor repairs);
- ❑ Ground mounted sign maintenance/replacement;
- ❑ Incidental concrete repair; i.e. sidewalks
- ❑ Pipe culvert rehabilitation;
- ❑ Bridge cleaning;
- ❑ Signal maintenance & repair (District wide);
- ❑ Retaining wall/Sound wall repair.

C. Category M Progress Schedule – The Category M Schedule of Operations consists of

- i) A written Narrative to describe the overall sequence of work;
- ii) A Tabular Schedule to indicate when each segment of the work will be completed;
- iii) A Two-week Look-ahead Schedule.

2. CATEGORY I – Category I represents the lowest level of the project ranking system for typical construction contracts involving small and simple projects. Category I projects are typically short duration construction projects with low complexity and risk. Such projects include typical No Plan or simple Minimum Plan construction projects with limited and straight-forward operations. Also, Category I projects may include certain maintenance or schedule type work with significant traffic impact or other time-related constraints. Such projects may include federally funded concrete pavement repairs or overlay work on major corridors. It may also include certain relatively complex time sensitive maintenance projects that may be involved with other major construction or improvement projects.

A. Criteria for Category I Projects – Category I projects generally meet the following criteria:

- ❑ Estimated contract value of \$1 million or less; or
- ❑ Contract duration of one construction season or less (typically short durations); and
- ❑ Limited items of work; and
- ❑ Simple or straight-forward operations with favorable conditions such as

- ❑ Low traffic impact; or
- ❑ Minimal or no limitations to the work; or
- ❑ No utility adjustments or relocations; and
- ❑ Contract does not contain any Special Provisions for special time-related conditions, such as multiple Interim Contract Milestones with accompanying Incentives/Disincentives, A+B Bidding, , or Lane Rental; and
- ❑ Project has no major items material delivery restrictions, environmental impacts, delayed right-of-way acquisitions or access restrictions, or other similar constraints and restrictions.

B. Examples of Category I Projects – The following is a list of typical Category I projects:

- ❑ Rural grade, drain, & pave of unpaved roads (may include minor horizontal & vertical alignment changes and rural rustic projects with drainage work);
- ❑ Minor bridge deck repair & concrete overlay (may include multiple bridges);
- ❑ Break, seat & overlay concrete pavement;
- ❑ Spot improvements (multiple locations any of: incidental concrete, minor widening, enhanced pavement marking, & sign installation);
- ❑ Building demolition in advance of construction projects;
- ❑ Retaining wall installation or extensive repair;
- ❑ Bridge substructure repair (with minimum traffic impact);
- ❑ Bridge painting (multiple locations or with traffic impact);
- ❑ Minor urban reconstruction & improvement (could include curb & gutter and sidewalks; new or extended turn lanes);
- ❑ Surface reclamation, sub-grade stabilization & overlays;
- ❑ Bridge steel repair (with traffic impact);
- ❑ Signal installation – Site specific (w/o intersection improvements, no regional on-call installations);
- ❑ Overhead sign installation & Lighting installations (multiple locations & or significant amount of lighting).

C. Category I Progress Schedule – The Category I Schedule of Operations consists of

- i) A written Narrative to describe the Contractor's overall work plan;
- ii) A Tabular Schedule to indicate the sequence and timing of the time-based tasks;
- iii) A Progress Earnings Schedule (VDOT Form C-13C) to assess progress of the work.

3. **CATEGORY II** – Category II represents the second level of the project ranking system for typical construction contracts. Category II projects include single season or less duration construction projects of low to medium complexity and schedule risk. Such projects typically are small to medium size contracts with limited operations and low to medium traffic impact or known constraints; such as turn-lane projects in an urban setting. Category II projects may also include multi-season construction projects of relative complexity and risk. Such projects may involve limited linear, long duration straightforward or repetitive operations with limited traffic impact or known schedule constraints.

Category II projects may also include certain relatively complex maintenance projects that involve multiple components of work, known schedule constraints, and significant traffic impact such as concrete pavement repairs or overlay work on major corridors or work that is involved with other major construction or improvement projects.

A. Criteria for Category II Projects – Category II projects generally meet the following criteria:

- Estimated contract value, generally \$3 million or less; or
- Contract duration of one construction season or less (may be two construction seasons, but simple repetitive or linear operations); and
- Limited number of concurrent operations; and
- Low to medium complexity; and
- Low to medium traffic impact; and
- Typical conditions and limitations associated with the type of work; and
- Limited number of utility adjustments; and
- Contract may contain Special Provisions for special time-related but clearly defined conditions, such as Interim Contract Milestones, A+B Bidding, Incentives/Disincentives, or Lane Rental; and
- Project has no major items material delivery restrictions, environmental impacts, right-of-way acquisitions, or other similar constraints and restrictions;

B. Examples of Category II Projects – The following is a list of typical Category II projects:

- Urban grade, drain, & pave projects of low to medium complexity;
- Rural new construction or reconstruction involving grade separation roadway and bridge projects;
- Complex reconstruction and improvements, including widening and multiple turn lanes with utility adjustments;
- Major bridge deck repair & concrete overlay (multi-span or over railroads);
- Bridge deck replacements, such as multi-span or over railroads;
- Intersection improvements with lighting and/or signal installation;

- ❑ Bridge & drainage structure replacements (single span with limited approach work);
- ❑ Major drainage improvements;
- ❑ Multiple locations corridor concrete pavement repair and/or asphalt overlay, with significant traffic impact;
- ❑ Multi-season bridge painting, with low to medium traffic impact.

C. Category II Progress Schedule – The Category II Schedule of Operations consists of

- i) A written Narrative to describe the Contractor’s overall work plan;
- ii) A Bar-chart Schedule to depict the sequence and timing of the time-based tasks;
- iii) A Progress Earnings Schedule (VDOT Form C-13C) to assess progress of the work.

IV. REFERENCES/RESOURCES/TRAINING

1. VDOT Post-Award Scheduling Guide (Release 2)
(<http://www.virginiadot.org/business/resources/const/PostAwardSchedGui.pdf>)
2. VDOT Form C-13C (Contractor’s Progress Earnings Schedule)
(<http://www.virginiadot.org/business/resources/const/c13c.xls>)
3. VDOT Microsoft Excel Bar-chart Template (Version 1.0) (*under construction*)
4. Category I Progress Schedule Review Checklist
(<http://www.virginiadot.org/business/resources/const/Cat1ProgSchRevwChklst.pdf>)
5. Category II Progress Schedule Review Checklist
(<http://www.virginiadot.org/business/resources/const/Cat2ProgSchRevwChklst.pdf>)
6. FHWA National Highway Institute, Course No. 134049 - "Critical Path Method for Estimating, Scheduling, and Timely Completion"
7. VDOT MBTP Scheduling Training Course – Developing a Construction Plan (VDOT University - Trainer: Wayne Nolde, PE, Staunton District)
8. VDOT MBTP Construction Scheduling Training Course – Using Sequence Templates for Schedule Development (VDOT University - Trainer: Dianna C. Sheesley, PE, Culpeper District)
9. VDOT MBTP On-line Scheduling Course – Establishing Schedule Control on Category I & II Projects (VDOT University - Trainer: Zachary P. Weddle, PE, Lynchburg District)
10. VDOT MBTP Scheduling Training Course – Establishing Schedule Control on Category I & II Projects (VDOT University - Trainer: Zachary P. Weddle, PE, Lynchburg District)
11. VDOT MBTP Scheduling Training Course – Maintaining the Schedule During Construction (VDOT University - Trainer: Waheed Uz Zaman, Fredericksburg District)
12. VDOT MBTP Scheduling Training Course – Schedule Impact Analysis (VDOT University - Trainer: Brian Henschel, PE, Lynchburg District)

Attachment

fg\CC: Commissioner
Deputy Commissioner
Commissioner's Staff
Division Administrators
District Construction Engineers
District Maintenance Engineers
District Materials Engineers
District Preliminary Engineering Managers
District Location and Design Engineers
District Civil Rights Managers
District Contract Administrators
Regional Operations Directors
Residency Administrators
Area Construction Engineers
Construction Managers
Project Inspectors
CQIP Regional Engineers
Federal Highway Administration
Office of the Attorney General
Virginia Department of Minority Business Enterprise
Virginia Transportation Construction Alliance
Old Dominion Highway Contractors Association
Virginia Asphalt Association
American Concrete Pavement Association
Virginia Ready-Mixed Concrete Association
Precast Concrete Association of Virginia
Division Library

ATTACHMENTS

- A. **Special Provision for Schedule of Operations for Category M (dated 5-1-08)**
(<http://www.virginiadot.org/business/resources/const/SpProv4SchOpCatM.pdf>)
- B. **Special Provision for Progress Schedule for Category I (dated 4-28-08)**
(<http://www.virginiadot.org/business/resources/const/SpProv4ProgSchCat1.pdf>)
- C. **Special Provision for Progress Schedule for Category II (dated 4-29-08)**
(<http://www.virginiadot.org/business/resources/const/SpProv4ProgSchCat2.pdf>)
- D. **VDOT Post-award Scheduling Guide**
(<http://www.virginiadot.org/business/resources/const/PostAwardSchedGui.pdf>)
- E. **Sample Schedule of Operations for Category M**
(<http://www.virginiadot.org/business/resources/const/SampSchOpCatM.pdf>)
- F. **Sample Progress Schedule Narrative for Category I & II**
(http://www.virginiadot.org/business/resources/const/SampProgSchNarCat1_2.pdf)
- G. **Sample Tabular Progress Schedule for Category I & II**
(http://www.virginiadot.org/business/resources/const/SampTabProgSchCat1_2.pdf)
- H. **Sample Bar-chart Progress Schedule for Category II**
(<http://www.virginiadot.org/business/resources/const/SampBarChrtProgSchCat2.pdf>)
- I. **Sample Contractor's Progress Earnings Schedule (Form C-13C) for Cat I & II**
(http://www.virginiadot.org/business/resources/const/SampContrProgErnSchCat1_2.pdf)
- J. **Category I Progress Schedule Review Checklist**
(<http://www.virginiadot.org/business/resources/const/Cat1ProgSchRevwChklst.pdf>)
- K. **Category II Progress Schedule Review Checklist**
(<http://www.virginiadot.org/business/resources/const/Cat2ProgSchRevwChklst.pdf>)