

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

GENERAL SUBJECT:	<u>Partial Payments</u>	NUMBER:	<u>CD-2005-2</u>
		DATE:	<u>March 8, 2005</u>
SPECIFIC SUBJECT:	<u>Guidelines for Use on System Integration Projects</u>	SUPERSEDES:	<u>N/A</u>
		SUNSET/ EXPIRES:	<u>March 8, 2010</u>

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

W. BYRON COBURN, JR., P.E.
SCHEDULING & CONTRACT ENGINEER

PURPOSE: The purpose of this CD is to provide guidelines to develop a payment schedule based on the meeting of milestones for specialty equipment associated with system integration projects and to provide sample partial payment special provision copied notes for designers to use in the preparation of system integration projects.

DIRECTED TO - DISTRICT ADMINISTRATORS

Through experience on previous TMS\ITS and other system integration projects the need for structured payments of certain specialty equipment associated with these types of projects has become evident. There are a number of issues that warrant specialized job specific provisions to cover the furnishing, documentation and testing, and most importantly, system integration of such equipment and software to protect the interests of the Department and the Contractor. While standard specification language would be the most desirable means of addressing these issues the special or custom nature of the equipment and associated software on such projects makes this very difficult to capture. This memorandum, therefore, seeks to provide some guidance and examples of specification language that a designer may wish to use in tailoring such language to his or her specific project.

Due to the upfront cost associated with designing and fabricating certain equipment items and software contractors have requested the Department consider partial payments on these items. At the same time the Department has to safeguard against completely paying for expensive equipment once it is delivered to the jobsite (Material on Hand – Section 109.08) without the benefit of evaluating the performance of such equipment and in many cases its associated software once it is integrated into the finished existing or proposed system. When selecting TMS\IT specialty system integration items for partial payments a designer should separate specialty TMS\IT items from standard low cost TMS\IT or lower cost stock items included in the project. Typically, specialty TMS\IT items require more lead time to design, fabricate, factory test and document test results.

The unit price generated in the designer's estimate may prove helpful in determining if an item is of significant value to merit inclusion as a partial payment item. Updated awarded unit prices for various items are available from the estimating section of the Scheduling and Contract Division.

In order to assist a designer or Project Manager in selecting the appropriate items and the percentages he or she wishes to use it is advantageous for the designer or Project Manager to consider the following:

Types of Testing

- Factory demonstration/ acceptance test – Generally conducted for VDOT at the manufacturer's or supplier's facility for specialized equipment.
- Quality control test – Conducted for VDOT and documented by the manufacturer or supplier to meet design specifications.
- Stand-alone test – Conducted for VDOT and documented by the Contractor once the piece of equipment is installed but not connected or integrated into the finished system(s) it is to become a part of.
- Fully operational system test – Conducted for VDOT by the Contractor for a specified period designated in the design specifications to show all equipment (and software if necessary) is properly installed and operating as designed in the finished system.

General guidelines for determining the partial payment percentages are as follows:

- The Contractor should receive 40 to 50% for supplying materials and documentation of successful completion of required factory demonstration/acceptance testing to VDOT.
- Once the materials are installed or placed and required testing (stand alone) is accepted by VDOT the Contractor should receive an additional 20 to 30%.
- The remaining payment percentages (minimum 25%) will not be paid until all items and /or item categories listed are fully integrated (operational) into the systems they are a part of and required testing (operational) is accepted by VDOT. The remaining payment is to ensure the Contractor strives to complete and have operating all the integral parts of the systems in a timely manner before receiving final and full payment.
- Also, a documentation percentage may be included with the final payment depending on the type, necessity and amount of documentation to be submitted.

Things to keep in mind when developing list of appropriate TMS\IT specialty items:

- Use "System Support Equipment" instead of "Spare Equipment". Be very selective relative to which equipment to include and be prepared to document need. System Support Equipment needs to be operationally tested with such tests documented and accepted by VDOT prior to receiving payment.
- TMS items with a Pay Unit "HOUR" should not to be included for partial payments.

Once a determination of the appropriate items to include for partial payment has been made by the designer or Project Manager, a Special Provision Copied Note similar to the attached samples may be included in with project provisions for advertisement. The Specifications Section of the Scheduling and Contract Division can assist in finalizing special provision language.

The design of such items in the pre-bid stage relays to the Contractor the Department expectations and allows the Contractor to factor into his bid whatever risks or associated factors these requirements will impose upon his schedule of operations and bid prices for these items.

SAMPLE

SECTION 109.07 - PARTIAL PAYMENTS of the Specifications is amended to include the following:

Individual Items and Item description categories to include all items contained therein will not be paid as indicated in Section 109.08 Payment for Materials on Hand but shall be paid as follows:

Item Code	ITEM DESCRIPTION (CATEGORIES*)	Pay Unit
59050	COMMUNICATION EQUIPMENT DESKTOP COMPUTER	EA.
59060	COMMUNICATION EQUIPMENT SYSTEM SUPPORT EQUIPMENT	LS
59060	VARIABLE MESSAGE SIGN CENTRAL SOFTWARE	LS
50902	TRAFFIC SIGN Variable Message Sign Type A	EA.
59050	COMMUNICATION EQUIPMENT Variable Message Sign Type A	EA.
59050	COMMUNICATION EQUIPMENT Variable Message Sign Type B	EA.
59050	COMMUNICATION EQUIPMENT Automatic Gate Config. 1	EA.

- o Item categories to include ALL items within the same item coding.

Forty-five (45) percent of the unit price bid for items listed will be paid upon delivery of the item providing the items also comply with conditions listed in Section 109.08 Payment for Material on Hand of the Specifications. Further, there shall be documentation of a successful factory test provided to and accepted by the Engineer, if applicable.

Twenty-five (25) percent of the unit price bid for items listed will be paid upon successful installation or placement of the item at each job site. If applicable, successful installation shall include a stand-alone test that shall be provided to and accepted by the Engineer,

Thirty (30) percent of the unit price bid for items listed will be paid upon successful completion of all testing and integration as required by the contract. The item and all system associated items must be fully operational as determined by the Department. Also, all documentation for these items must have been submitted to include: shop drawings, manuals, wiring diagrams, associated software if required for full integration and operation, block diagrams, flow charts, MIB's and other material necessary to document the operation of the system, if applicable.

SAMPLE 2

TMS PAYMENTS - Payment for the following items will be made in the following manner:

Seventy percent (70%) of the contract unit bid price will be paid upon delivery to the job site and installation at the appropriate locations. The remaining thirty percent (30%) of the contract unit bid price will be paid after each of the items have passed all applicable operational tests and observation periods.

- CCTV Camera Assembly
- CCTV Pole w/ Lowering Device
- Microwave vehicle detector
- Piezoelectric Vehicle Sensor
- Coaxial Cable, RG-58/U
- Piezoelectric Sensor Electronics Unit

For the purposes stated herein, Section 109.08 will not apply where this partial payment schedule is used.

6-12-03(SPCN)

DL: wskjr

CC: Mr. Philip A. Shucet
Mr. Donald R. Askew, P.E.
Commissioners Staff
Division Administrators
District Construction Engineers
District Maintenance Engineers
District Civil Rights Managers
District Contract Managers
Residency Administrators
Assistant Resident Engineers
Construction Managers
Project Inspectors
Federal Highway Administration
American Concrete Pavement Association
Virginia Ready-Mixed Concrete Association
Precast Concrete Association of Virginia
Virginia Department of Minority Business Enterprise
Virginia Transportation Construction Alliance
Old Dominion Highway Contractors Association
Virginia Asphalt Association