

VIRGINIA DEPARTMENT OF TRANSPORTATION

LOCATION AND DESIGN DIVISION

INSTRUCTIONAL AND INFORMATIONAL MEMORANDUM

GENERAL SUBJECT: CONSTRUCTION SURVEYING	NUMBER: IIM-LD 152.6
SPECIFIC SUBJECT: CONSTRUCTION SURVEYING BY CONTRACTOR AND SLOPE STAKE CROSS SECTIONS	DATE: AUGUST 8, 2001
	SUPERSEDES: LD-92 (D) 152.5
DIVISION ADMINISTRATOR APPROVAL: <i>Mohammad Mirshahi, PE</i>	

CURRENT REVISION

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- All previous revisions and errata have been incorporated into this memorandum.
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EFFECTIVE DATE

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- The Special Provision is effective on all applicable projects on the August 2001 advertisement and all subsequent advertisements.
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CONSTRUCTION PROJECTS

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- The construction stakeout for all construction projects shall be performed by the contractor. Any exceptions to the policy established herein must be in the form of a written request to the State Location and Design Engineer from the respective District Administrator on a project by project basis.
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“MINIMUM PLAN PROJECTS” AND “NO PLAN PROJECT”

- “Minimum Plan Projects” with bridges, box culverts, or culverts with design grades shall have Construction Surveying set up as a pay item.
- “Minimum Plan Projects” that do not have bridges, box culverts or culverts with design grades and any “No Plan Projects” on which Construction Surveying and Staking is deemed necessary by the Contractor for the construction of projects will have Construction Surveying and Staking performed by the contractor. No pay item will be set up in the contract for Construction Surveying and the cost must be included in the price bid for other items in the contract.
- A Special Provision Copied Note will be included in proposals for projects designed under the “No Plan” or “Minimum Plan” concept. Any exception (except as noted above) to the policy established herein must be by written request to the State Location and Design Engineer on a project by project basis. In the event the District deems it necessary to require that certain specific construction surveying or staking be done and that a pay item be established for same, the request must include details of what will be expected of the Contractor. Further, the surveying or staking requirements must be compatible with the Department’s existing survey procedures.

PAY ITEM

- The following pay item is to be set up in the plans when required:

<u>Pay Item</u>	<u>Pay Unit</u>	<u>Comp. Est. Item Code</u>
Construction Surveying	Lump Sum	00101

SLOPE STAKE CROSS SECTIONS

- A study has determined that there is little or no justification for taking digital terrain or cross sections on plan quantity projects at the time of construction stakeout.
- There may be rare occasions when digital terrain and/or cross sections taken at the time of construction stakeout would be helpful. However, we do not foresee problems that cannot be evaluated and resolved without cross sections.
- Therefore on all future projects we will be governed as follows:
 - Excavation can and should be paid for on the basis of plan quantity for the majority of highway projects. In cases of unstable ground or other unique conditions indicating a reasonable degree of uncertainty about actual excavation quantities, non-plan quantity “Regular Excavation” procedures should be used. However, this should definitely be the exception rather than the rule.

“Regular Excavation” – (Plan Quantity)

- Cross Sections or digital terrain model information will not be taken during construction stakeout unless original location sections or terrain differ from existing conditions.
- The Surveyor will monitor the ground line to be certain that original location sections or terrain are accurate. This is generally a matter of determining if the slope line intersection with the ground line conforms to the plans.
- Cross Sections or digital terrain will be taken to cover areas that show changes from the original location sections or digital terrain model and final sections or terrain will be taken to coincide with these.

“Regular Excavation” – (non-plan quantity)

- Cross sections or digital terrain will be taken throughout the project during construction stakeout and final sections or terrain will be taken to coincide with these.
- A baseline profile at “Final” stage on plan quantity projects is not required. Spot checks will be made to assure that the vertical alignment is within required specifications. In some cases a complete profile may be needed to provide proper assurance; but in most cases, this can be done by use of reference stakes and bench marks along the project.

SPECIAL PROVISION

- A Specification is available for applicable projects as follows:
 - <http://virginiadot.org/business/const/spec-default.asp>