



Cost Estimating & Management

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Early Actions !

A sponsor has Identified purpose and need for a project & provided a conceptual cost

Establish the scope of the project (VDOT has a Scoping Day Each Month)

Begin cost estimating process

Tools of the trade!

PCES (Project Cost Estimating System)

TRNS*PORT

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PCES What is it!

A spread sheet based tool developed by VDOT in 2003

PCES is to be utilized with a good scoping document

Is a featured based system which requires the user to know the following:

- Advertisement year of project
- Geometry of road or bridge project
- Design standard to be utilized
- Quantity of such items as raised median, curb & gutter, side walk etc.
- Special features such as box culverts, retaining walls, bike paths etc.

PCES is also able to estimate the following:

- PE (design cost)
- Right of Way including buildings, damages, demolition, relocation etc.
- Utilities will address "in plan" utilities as well as third party work
- CEI (Construction Engineering & Inspection)

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GOAL of PCES Cost Estimates

Establish an early conservative budget for project including an estimate of inflation.

PCES estimate is updated by the Project Manager every 90 days

Updated estimates are monitored two ways:

Updated estimates that change by 10% or \$50,000 automatically notifies the Programming Division.

VDOT's Dashboard measures changes from the scoping estimate and reports a project as having a green, yellow or red light (to view VDOT dashboard go to)

<http://dashboard.virginiadot.org/default.aspx>

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PCES Period of Use

PCES is generally used as the estimating tool through the following milestones:

Scoping

Preliminary Field Inspection

Public Hearing

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TRNS*PORT

VDOT utilizes the PES module of TRNS*PORT

Bid data is retained from the three lowest bidders on awarded projects

The data base is populated with the most recent 24 month of bids

When system process is used to generate bid based prices, Project Manager's will frequently manually update major items that have experienced rapid price increases in last 6 months

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TRNS*PORT Period of Use

TRNS*PORT estimates are utilized at the Field Inspection stage or earlier if quantities and unit prices are fully developed

The final design estimate is turned into the Scheduling & Contract Division for advertisement

When the project is turned in for advertisement, the responsibility for the estimate changes from the designer to the Scheduling & Contract Division

The Scheduling & Contract Division has an "estimating section" that prepares the final Engineer's Estimate. This estimate is compared to the bids received

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What's Next ?

Areas for continued improvement:

Better scoping of projects

Process to help control scope creep

Better feature based estimating tools (Like Tracer tied to DOT's database)

Raise awareness of quality cost estimates and their impact on program

Read more at:

<http://www.virginiadot.org/business/default.asp>

(Under Manuals, Training and forms, Project Management Methodology and specifically "Project Development Budgets/Estimates)