



# Cost Estimating Procedures for DeIDOT DBE Certified Contractors

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# Overview

- DBE Subcontracting Opportunities
- Identifying bid opportunities and prospective primes
- Understanding the Project Scope
- Different Methods of Estimating
- Preparing the Cost Estimate
- Review & Submission

# Subcontracting Opportunities for DBEs

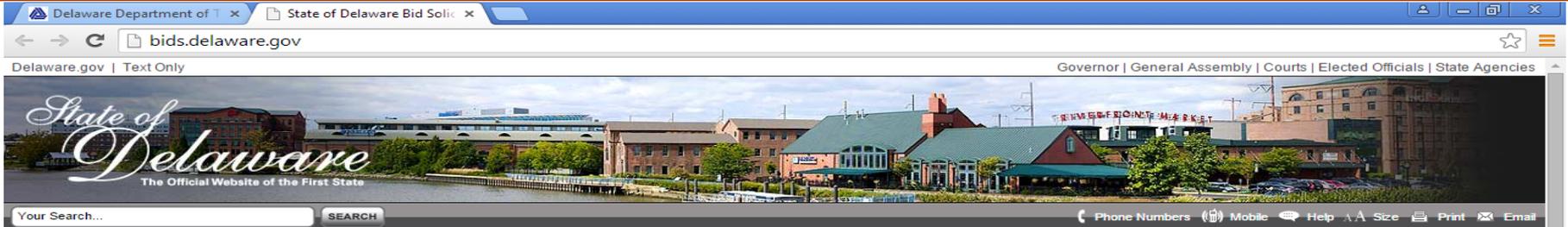
The major objectives of the DeIDOT DBE Program are:

- To ensure nondiscrimination in the award and administration of all DeIDOT contracts;
- To create a level playing field on which small businesses and DBE's can compete fairly for participation in federal-aid contracts;
- To ensure that the DBE Program is narrowly tailored in accordance with applicable federal and state law;
- To make certain that only firms that fully meet 49 CFR Part 26 eligibility standards are permitted to participate in our program;
- To help remove barriers to the participation of DBE's and small businesses in DOT-assisted contracts;
- To assist the development of firms that are able to compete successfully in the market place outside of the DBE Program;
- To achieve increased small business participation in federal-aid contracts through race- and gender-neutral means;

# Bid Opportunities

- Identify a project that is currently out for bid that provides a scope of work that you can perform.
- Obtain the bidders list from the Authority Project Manager or Construction Manager.
- Call **all** prospective prime bidders and speak with the chief estimator regarding your interest in the project.
- Assuming you and the Prime are both interested, obtain a copy of the drawings and project documents.

# Bid Opportunities



## Bid Solicitation Directory

### Bid Solicitation Directory

RSS

The Bid Solicitation Directory is the State's central repository across all three branches of state government that have an open Request for Information (RFI), Request for Quote (RFQ), Invitation to Bid (ITB), and/or a Request for Proposal (RFP). The goal of this directory is to provide a centralized location to find state RFIs, ITBs and RFPs without requiring knowledge of the specific structure of state government.

Please take a moment to register for any area of business you may wish to receive notification on here: <https://denotificationservices.bbcportal.com/>. Please see the [Step by Step Guide](#) on how to register.

For more information about working with the State on bids, please see the [Doing Business with the State Topic Page](#).

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Ad Date	Agency (Agency Acronyms)	UNSPSC (UNSPSC Information)	Contract Title/Description	Deadline Date
1/28/2015	GSS	4014	<a href="#">Plumbing Supplies</a>	2/17/2015
1/28/2015	DOI	8010	<a href="#">Delaware Premium Rate Reviews</a>	3/2/2015
1/26/2015	DOT	8110	<a href="#">Traffic Engineering Services</a>	2/17/2015
1/26/2015	DOT	7214	<a href="#">Pipe Installation, Open End, South, 2015</a>	2/24/2015
1/26/2015	DOT	7214	<a href="#">Pavement &amp; Rehabilitation, Sussex II, (Dagsboro) 2013</a>	2/24/2015
1/26/2015	DOT	7214	<a href="#">I-95 Crossover Relocation</a>	2/17/2015
1/26/2015	GSS	4213	<a href="#">Institutional Bed and Bath</a>	2/24/2015
1/26/2015	CYF	8512	<a href="#">Project LAUNCH Staffing</a>	2/19/2015
1/26/2015	GSS	4219	<a href="#">Institutional Bed and Bath</a>	2/24/2015

# Understanding the Scope

An accurate cost estimate is a byproduct of accurate plan reading and interpretation!!

- Read and Understand the Plans and Specification
- Having accurate quantities is crucial
- Know your material and labor costs
- Visit the project site and/or meet with Prime contractor for clarification
- Understand how you are getting paid for completion of your work

# Project Characteristics

- Duration – every project has a finite start and end. Understand how much time and labor you will need to complete your work.
- Deliverables – understand required tasks before the project begins.

# Key Elements of a Cost Estimate

## Direct Costs

- Materials
- Labor
- Equipment

## Indirect Costs

- Taxes
- Insurance
- Bonds
- Operating Costs

Overhead, profit, markups

Contingency

Time & Escalation

Phasing & mobilization costs

Geographic index

# Quantify

- Determine the number of units required for each work task that you identified. Use manual or electronic takeoff systems.
- Be sure to include an allowance for waste in materials or quantities.

# Historical Data/Costs

- Historical Data is desired for productivity and pricing resources for most tasks
- Required productivity and pricing data can be found in various commercially available estimating books (RS Means and Walker's are two examples).
- Steel and structural concrete are good examples of estimate items that use historical data. In the case of structural concrete work, production depends on the ability to erect formwork and the time allowance for achieving strength.
- Concrete and asphalt paving production are usually controlled by either plant capability or the intricacy of layout, which controls paver maneuvers.
- When using the data from commercial resources and agency-specific historical databases, the estimator's experience and ability to relate the data to a specific circumstance are important. To do this, the estimator must visualize the construction process.

# Estimating with RS Means

- For Highway Work – Use RS Means Heavy Construction Cost Data Manual
- For General Construction – Use Means Facilities Construction Cost Data Manual

# Material Costs

- Construction material costs consist of material cost, shipping charges and taxes, if applicable.
- It is important consider all of these variations while calculating construction material costs.
- It's always good idea to get several vendor quotes, if possible. This way you can compare to your estimated quantities and costs. Be sure to include as much detail so you know exactly what the vendor is providing.

# Labor Costs

- Direct labor cost requirements are broken into work tasks.
- A labor crew, including equipment, usually performs each work task; therefore, the crew and its cost must be defined, and a production rate must be established for the task.
  - Crews may vary in size and mix of skills. The number and size of each crew should be based on two factors: having sufficient workers to perform a task within the construction schedule time limits and the available workspace.
  - Once the crews are developed, the task labor costs can be determined based on the production rate of the crew and the labor wage rates.
  - Production rate is the relationship of work in-place and the time required to accomplish that work. It can be cubic yards per hour, tons per shift (also indicate the duration of the shift), or feet of trench per hour. Unit of work in-place denotes the unit of production accomplished. It can be the volume or weight of the material moved, volume of concrete placed, weight of steel hung, or any similar measurement of production.
  - Unit of time denotes an arbitrary time unit, such as an hour, a shift, or any other convenient duration in which the unit of work in-place is accomplished.

# Equipment Costs

- Two readily available publications, the Rental Rate Blue Book (2011) and the AED Green Book (2011) provide detailed equipment cost data. The Blue Book contains cost data reflecting ownership of a machine with the intent of long-term use—a machine owned by the contractor.
- The costs of small power and hand tools and miscellaneous non-capitalized equipment and supplies are usually estimated as a percentage of the labor cost

# Overhead & Profit

The actual construction work tasks cover the majority of the cost associated with a bid item, but the contractor has additional costs that are not included in the work task costs for an item.

**Indirect/overhead** costs are those costs that cannot be attributed to a single task of construction work. Costs that can be applied to a particular item of work should be considered a direct cost to that item and are not to be included in overhead costs. Job overhead also referred to as general conditions or field office overhead. General home office overhead commonly referred to as general and administrative (G&A) overhead. Examples of job overhead costs are:

- Job supervision and office personnel.
- Engineering and shop drawings/surveys.
- Site security.
- Temporary facilities and project office.
- Temporary material storage.
- Temporary utilities, such as electricity and water.
- Preparatory work and laboratory testing.
- Telephone and communications.
- Permits and licenses.
- Insurance (project coverage).
- Quality control.

# Assumptions, Variables, Risks

- Fluctuation of costs
- Traffic conditions
- Restrictive work hours
- Separate operations
- Accessibility
- Geographic location
- Material or labor shortages
- Environmental impacts, concerns, and requirements such as impact on existing wildlife and plant species, soil contamination and soil erosion control

# Traffic Control

- Traffic control involves directing vehicular and pedestrian traffic around a construction zone. If your scope of work requires traffic control, remember to include the following items in your bid:
  - Attenuators & Barriers
  - Channelization Devices
  - Illumination and signals
  - Temporary pavement markings
  - Construction signs
  - Labor

# Night Work/Multiple Shifts

- Night work reduces congestion and traffic delays
- Multiple shifts are often used to accelerate construction schedules
- Understand the increased costs that may be associated with night work labor



# Review Your Bid

- Feel comfortable with your prices BEFORE submitting any bid to a Prime.
- Only you can determine your price
- Don't let Primes drive your price below a comfortable level
- Don't submit a bid with pricing based off past bid tabulations
  - These are for reference and should not be a tool for pricing

# Submit Your Bid

Prepare the formal proposal. In this process, the following should be part of your bid:

- Formal bid on your letterhead, signed by an Officer or Owner
  - Lump sum amount or unit pricing as required
  - Your specific conditions, such as funding or joint check requirements
  - Specific exclusions or exceptions to your scope of work
  - Specific inclusions to your scope of work
- Submit your proposal several days early. Call the person to whom you made your bid submission and try and have a meeting to discuss details and requirements. At this point try and make an agreement that if they are successful that they will contract with your organization. The prime contractors have legal obligations to solicit and obtain the DBE, MBE and WBE organizations and should "work" with you to meet those goals.