



U.S. Department of Transportation
Federal Highway Administration

Federal Highway Administration Contracting Alternatives Suitability Evaluator (CASE) Webtool **Guide for Users, Facilitators, and Administrators**

February 2021

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CASE Webtool Contents

Select link below to go to:

- *Case Webtool User Guide*
- *Facilitator Workbook User Guide*
- *Administrator User Guide*



U.S. Department of Transportation
Federal Highway Administration

Contracting Alternatives Suitability Evaluator (CASE) Webtool **User Guide**

February 2021

Change Record

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Background and Overview

The purpose of the **Federal Highway Administration Contracting Alternatives Suitability Evaluator (CASE) Webtool** is to assist public agencies in the evaluation of alternative contracting methods. The agency enters information for a planned project and the webtool provides an evaluation of the different project delivery methods to assist the agency in determining the most appropriate method for the project.

The webtool incorporates and expands on current tools and processes already developed by the Federal Highway Administration (FHWA) and State departments of transportation (DOTs). The webtool is primarily based on subject matter experts' input, the Colorado DOT's **Project Delivery Selection Matrix**, the California DOT's **Alternative Procurement Guide**, the Transportation Research Board's Transit Cooperative Research Program Report 131: **Guidebook for the Evaluation of Project Delivery Methods**, and FHWA's **P3-SCREEN**, **P3-EFFECTS**, and **P3-VALUE Analytical Tools**.

The data parameters and processes used in the webtool were developed to meet requirements gathered as part of an in-depth review of all 50 State agencies' processes, select case studies, subject matter workshops, and pilot workshops with seven State DOTs. During these efforts, researchers explored the types of ACMs in use, how the decision is made to use an ACM over a traditional method, which ACM to use, and how the ACM decision is evaluated after project completion.

This document provides instruction on how to access the webtool and includes detailed screen shots and explanations of all pages, fields, and processes. For a quick start to using the webtool, see the **Federal Highway Administration CASE Webtool Quick Start Guide**.

When to Use this Webtool

Research has shown that the project delivery method selection decision should be made as early as practical in the project development and delivery process. One key finding from a study of design-build (DB) projects was that making the decision to use DB late in the process often results in the DOT advancing the project's design to a point where the potential for innovative proposals from competing design-builders is minimized. The typical DOT project development process is predicated on the use of design-bid-build (DBB) project delivery and as a result, is often silent on when it is appropriate to consider ACMs. Therefore, agencies could benefit by including "gates" (i.e., decision points) to evaluate if an ACM is more appropriate.

The **Federal Highway Administration CASE Webtool** can be used to structure the dialog regarding evaluating an ACM at each gate. Ideally, the first gate would occur as the project's National Environmental Policy Act (NEPA) clearance and other State-level permits are completed to minimize the chances that the technical commitments made during the NEPA process would constrain potential benefits achieved through innovative solutions that could be proposed by industry in a number of ACMs.

In essence, a project with a high potential for beneficial ACM application must pass through the NEPA process with as much flexibility of final design configuration as possible. This constitutes a shift in the environmental permitting process away from the current mode of “be as specific as possible” to a less restrictive mode that provides the agency as much latitude as possible while remaining in full compliance with the laws of both the State and the Federal Government. The net result is that agency personnel must be jointly involved in the ACM selection decision at the earliest point--when the project scope is defined.

Table 1 is a generic DOT project development process and provides a list of considerations that should be included in the ACM assessment process at each phase of project development.

Table 1: Project Development Process ACM Considerations

Development Phase	Typical Activities	ACM Considerations
Planning	Determine purpose and need, determine whether it's an improvement or requirement study, goals and objectives, consider environmental factors, context, facilitate public involvement/participation, and consider interagency conditions	<ul style="list-style-type: none"> • Evaluate potential design alternatives for flexibility of staging and sequence of work. • Discuss implications with resource agencies, as well as internal design, construction, operations and maintenance offices. • Consider the possibility of choosing a long-term versus short-term ACM
Programming and Preliminary Design	Conduct environmental and contextual analysis, conduct schematic development, hold public hearings, finalize goals and objectives, determine right-of-way (utilities/railroads) impact, determine project economic feasibility, obtain funding authorization, develop right-of-way (utilities/railroads) needs, obtain environmental clearance, determine design criteria and parameters, survey utility locations and drainage, make preliminary plans such as alternative selections, initial geometrics, and create initial bridge layouts	<ul style="list-style-type: none"> • Evaluate potential impacts (social, environmental, economic) during the environmental review process to integrate potential means and methods ACMs are not unintentionally eliminated. • Keep the NEPA approved footprint/alignment as flexible as possible. • Consider the possibility of ACMs ability to manage risk related to utility relocations and/or railroad agreements. • Develop the risk management plan. • Assess the possibility of including private financing through P3 or DBF delivery.

Final Design	Acquire right-of-way, develop plans, specifications, and estimates (PS&E), finalize road, pavement and bridge design, traffic control plans, incorporate environmental commitments, utility drawings, hydraulics studies/drainage design, and cost estimates	<ul style="list-style-type: none">• Evaluate potential for innovative design alternatives customized for the preferred means and methods of ACM contractors.• Develop ACM scope limitations if required.• Discuss/develop ATC evaluation plan.• Update the risk management plan.• Determine stipend for project
* Note: The details of the procurement phase are specific to each ACM. Therefore, it is not shown in the table.		

FHWA CASE Webtool Workflow Components

The purpose of the **FHWA CASE Webtool Workflow** is to provide an overview of the framework for assisting public agencies in the evaluation and selection of alternative contracting methods (ACMs) in a workshop-oriented environment. The webtool provides a recommended project delivery method based key factors and on data collected from the ACM warehouse.

The major components of the workflow are described below:

ACM-DATA: This is the Information Source for Major Transportation Projects (ISfMTP) data warehouse.

ACM-PERFORM: This component, using data from ACM-DATA, will calculate performance measures for user defined ACMs and project types. This component will also provide comparable project case studies for user defined project size and types to inform user inputs into the other webtool components.

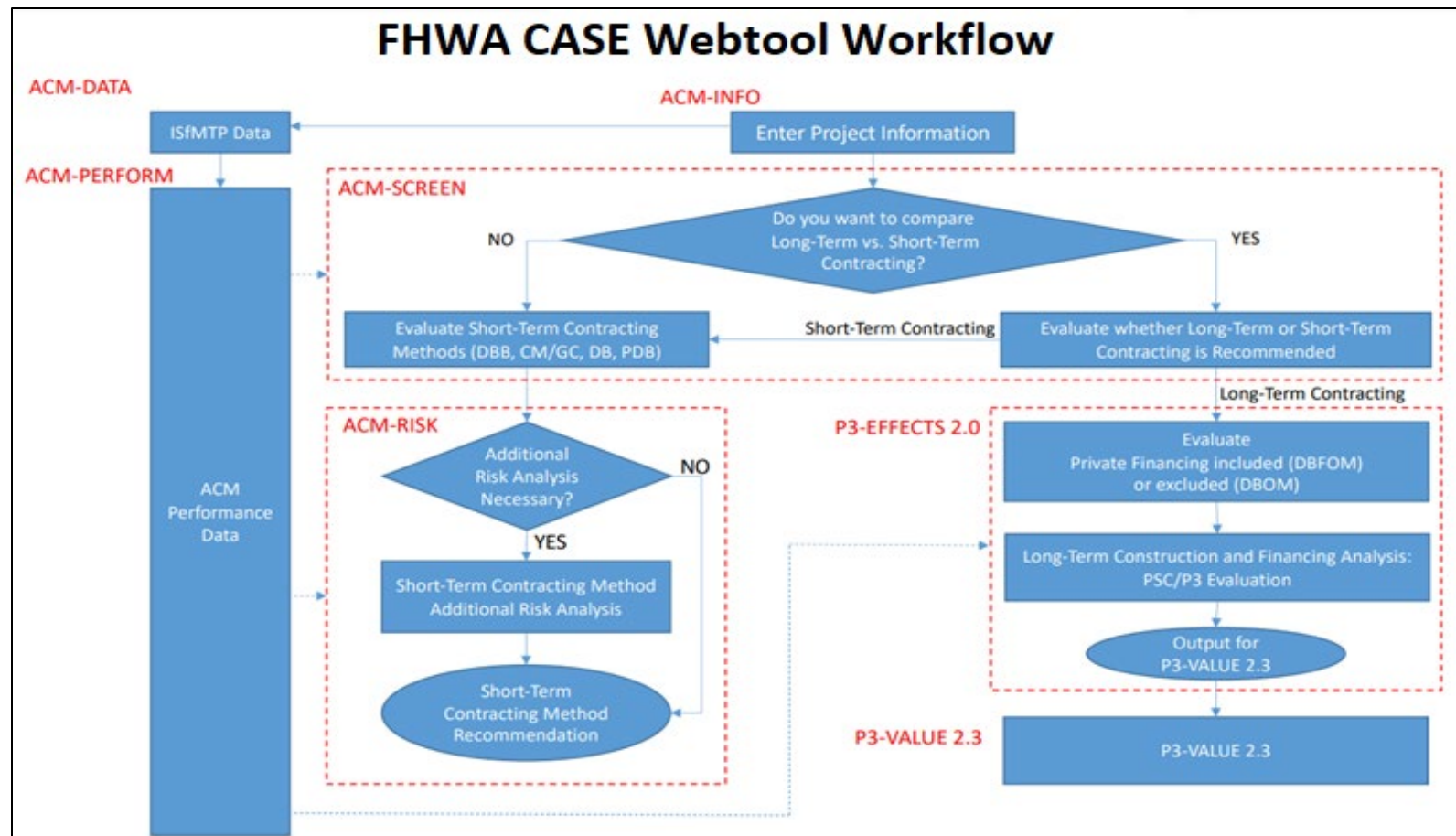
ACM-INFO: This is the component where the webtool users enters basic project information—project demographics, project description, project goals, goal ranking, and project delivery method selection committee/workshop details.

ACM-SCREEN: This component allows users an opportunity to evaluate whether long-term contracting or short-term contracting is recommended or go directly to short-term contracting methods (design-bid-build [DBB], construction manager/general contractor [CM/GC], design-build [DB], and progressive design-build [PDB]) evaluation. Results from this component will identify the most appropriate short-term project delivery method and, if desired, whether long-term contracting is recommended.

ACM-RISK: This component, if the user desires (e.g., where the recommended delivery method is not clear or a more detailed delivery risk analysis is warranted), provides a further evaluation of selected short-term project delivery methods based on additional project-specific risks. Results from this component will identify the most appropriate short-term project delivery method.

P3-EFFECTS 2.0: Evaluates, for projects where Long-Term contracting is recommended, whether private financing is viable (a design-build-finance-operate-maintain [DBFOM]) or public financing is preferred (a design-build-operate-maintain [DBOM]). This component then conducts a long-term contracting construction and financing analysis comparing a P3 to a public sector comparator (DBB or DB). This component provides a range of values for further analysis using P3-VALUE 2.3.

P3-VALUE 2.3: This is currently FHWA's stand-alone Microsoft Excel-based tool designed to assist practitioners in the planning and high-level screening evaluation of P3 procurements.



Register Account (First-Time Users Only)

The **Federal Highway Administration CASE Webtool** is internet-based. Access the webtool via this link: <https://case.fhwa.dot.gov>.

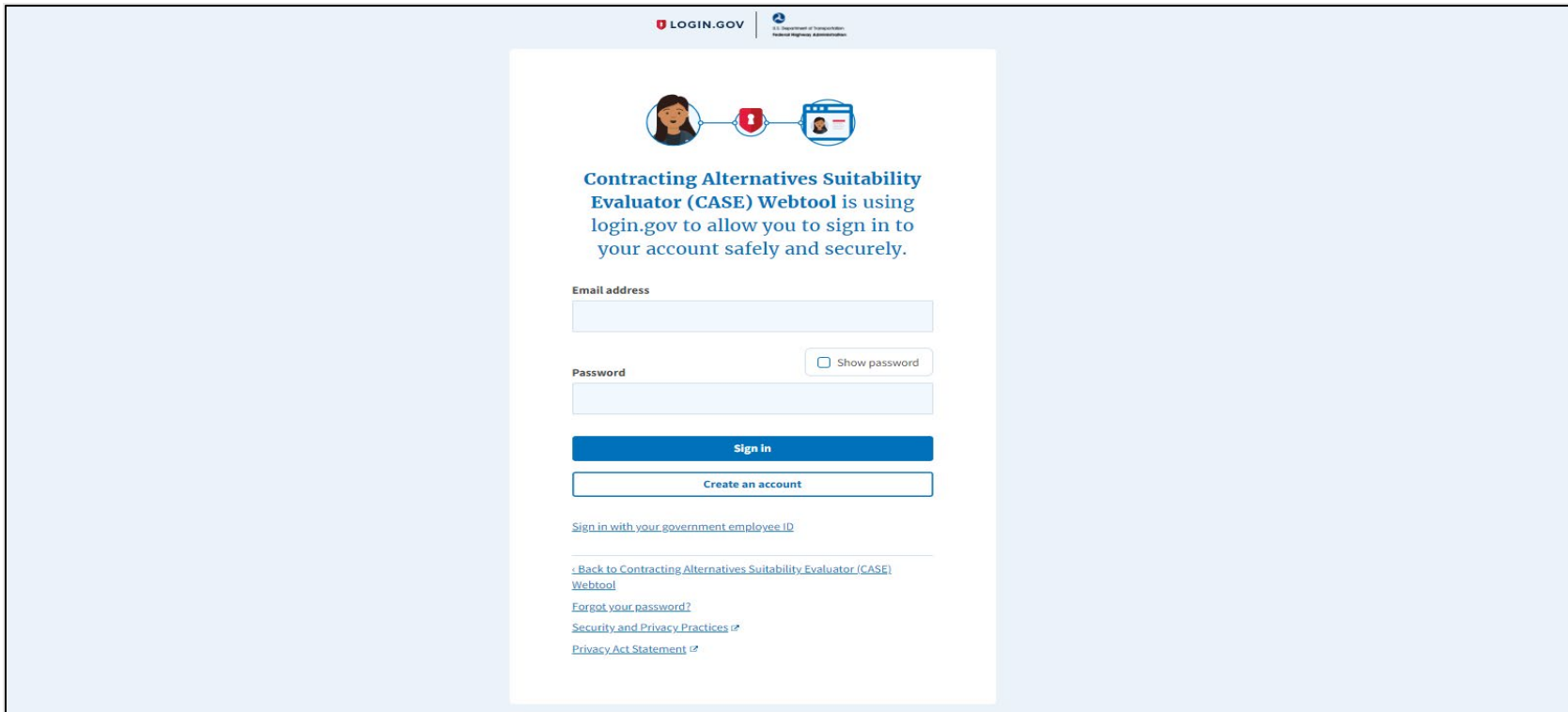


Select the “Sign In” button in the center of the page. Here you will be re-directed to the Login.gov sign in page. Here you will be able to access the CASE Webtool.

There are two ways to access the CASE Webtool: via PIV/CAC access or via creating a user account and password with Login.gov.




Users with a DOT PIV Card

Users wishing to access the CASE Webtool via PIV/CAC will have to follow a series of specific steps. Once re-directed to the Login.gov page, a user must first create a Login.gov account before setting up PIV/CAC authentication. Within the Login.gov page select the “Create an account” option.



The screenshot shows the Login.gov interface for the Contracting Alternatives Suitability Evaluator (CASE) Webtool. At the top, the LOGIN.GOV logo and the U.S. Department of Transportation Federal Highway Administration logo are displayed. Below the logos, a diagram shows a user icon connected to a PIV card icon, which is then connected to a computer icon. The text reads: "Contracting Alternatives Suitability Evaluator (CASE) Webtool is using login.gov to allow you to sign in to your account safely and securely." The form includes an "Email address" field, a "Password" field with a "Show password" checkbox, a blue "Sign in" button, and a "Create an account" button. At the bottom, there are links for "Sign in with your government employee ID", "Back to Contracting Alternatives Suitability Evaluator (CASE) Webtool", "Forgot your password?", "Security and Privacy Practices", and "Privacy Act Statement".

LOGIN.GOV | U.S. Department of Transportation
Federal Highway Administration

Contracting Alternatives Suitability Evaluator (CASE) Webtool is using login.gov to allow you to sign in to your account safely and securely.

Email address

Password ☐ Show password

Sign in

Create an account

[Sign in with your government employee ID](#)

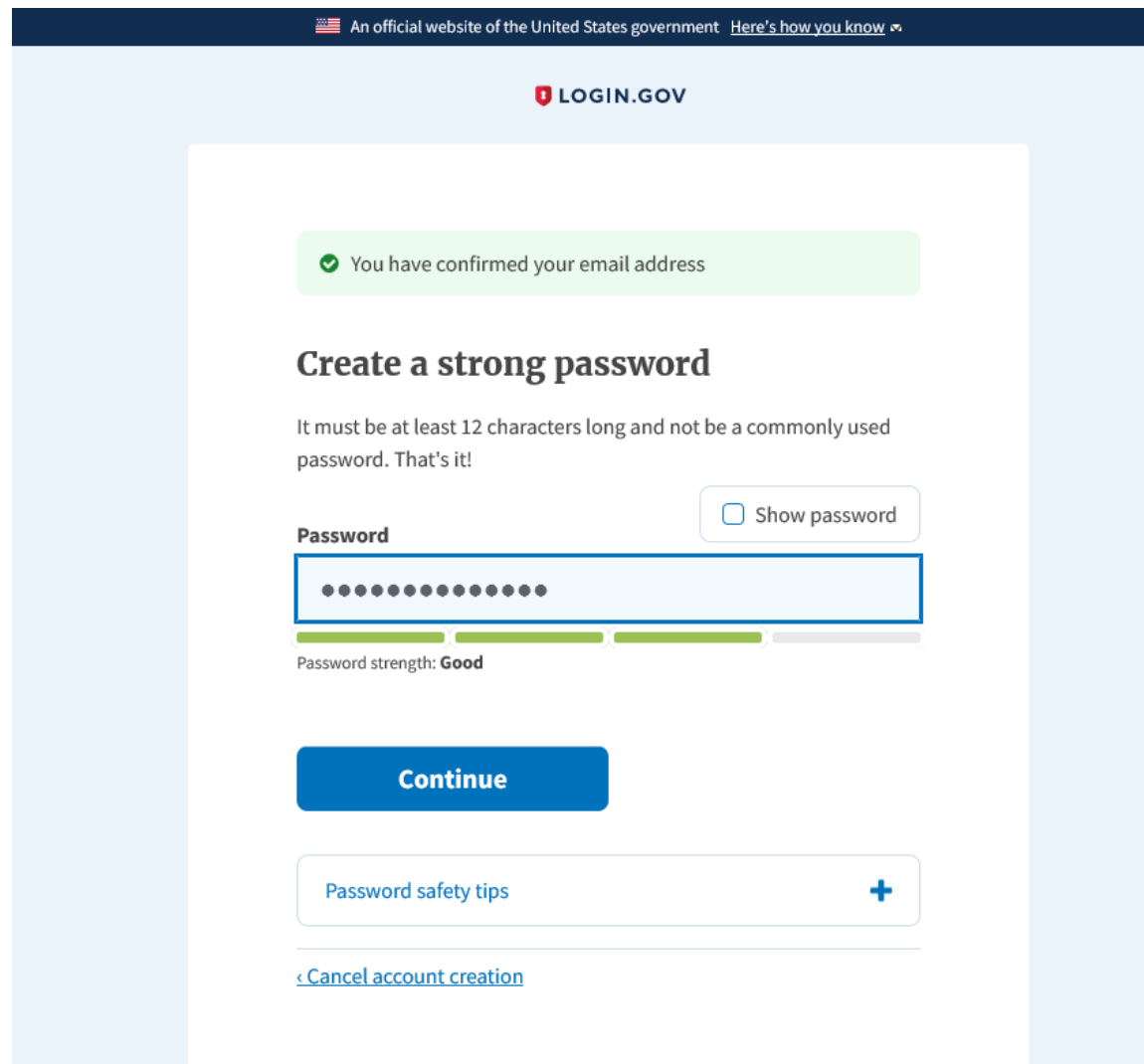
[Back to Contracting Alternatives Suitability Evaluator \(CASE\) Webtool](#)

[Forgot your password?](#)

[Security and Privacy Practices](#)

[Privacy Act Statement](#)

Along with defining an email address for the account, the user will then be prompted to set a strong password as shown below:



The screenshot shows the LOGIN.GOV password creation interface. At the top, a dark blue header contains the text "An official website of the United States government" and a link "Here's how you know". Below this, the LOGIN.GOV logo is centered. A green success message states "You have confirmed your email address". The main heading is "Create a strong password", followed by instructions: "It must be at least 12 characters long and not be a commonly used password. That's it!". The password input field is labeled "Password" and contains 12 dots. To the right of the field is a "Show password" toggle. Below the field is a strength indicator bar with three segments (two green, one grey) and the text "Password strength: Good". A blue "Continue" button is positioned below the strength indicator. At the bottom, there is a "Password safety tips" link with a plus icon, and a "Cancel account creation" link.

An official website of the United States government [Here's how you know](#)

LOGIN.GOV

✓ You have confirmed your email address

Create a strong password

It must be at least 12 characters long and not be a commonly used password. That's it!

Password ☐ Show password

●●●●●●●●●●●●

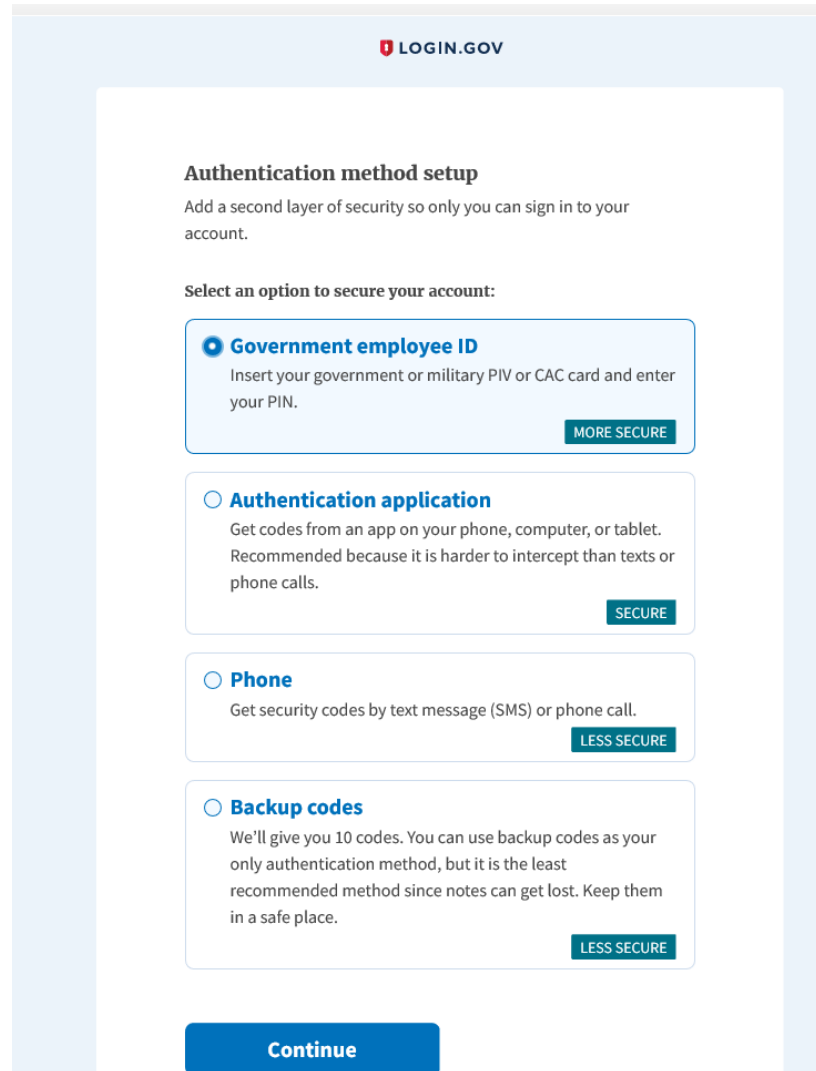
Password strength: **Good**

[Continue](#)

[Password safety tips](#) +

[Cancel account creation](#)

After choosing an email address and password, the user will be prompted to select an authentication method. Here the user must select “Government employee ID.” Once this option is chosen, select the blue “Continue” button on the bottom of the page.



The screenshot shows the 'Authentication method setup' page on the LOGIN.GOV website. The page has a light blue header with the 'LOGIN.GOV' logo. The main content area is white and contains the following elements:

- Authentication method setup**
Add a second layer of security so only you can sign in to your account.
- Select an option to secure your account:**
- Four authentication options, each in a rounded rectangle with a radio button, description, and security level button:
 - Government employee ID** (selected): Insert your government or military PIV or CAC card and enter your PIN. **MORE SECURE**
 - Authentication application**: Get codes from an app on your phone, computer, or tablet. Recommended because it is harder to intercept than texts or phone calls. **SECURE**
 - Phone**: Get security codes by text message (SMS) or phone call. **LESS SECURE**
 - Backup codes**: We'll give you 10 codes. You can use backup codes as your only authentication method, but it is the least recommended method since notes can get lost. Keep them in a safe place. **LESS SECURE**
- A large blue **Continue** button at the bottom.

The user from here will be re-directed to a page where they will define their PIV/CAC's nickname. This is an option in case the user has more than one.

Next, the user will insert their PIV/CAC into their card reader.

The screenshot shows the LOGIN.GOV website interface. At the top, there is a dark blue header with the text "An official website of the United States government" and a link "Here's how you know". Below this is the LOGIN.GOV logo. The main content area is titled "Add your PIV or CAC" and includes the instruction: "Set up your PIV or CAC as a two-factor authentication method so you can use it to sign in." The page is divided into three numbered steps: 1. "Give it a nickname" with a text input field; 2. "Insert your PIV/CAC into your card reader"; and 3. "Add your PIV/CAC" with instructions to choose a certificate and enter a PIN. A blue button labeled "Add PIV/CAC card" is positioned below the third step. At the bottom, there is a link "Choose another option".

An official website of the United States government [Here's how you know](#)

LOGIN.GOV

Add your PIV or CAC

Set up your PIV or CAC as a two-factor authentication method so you can use it to sign in.

- 1 Give it a nickname**

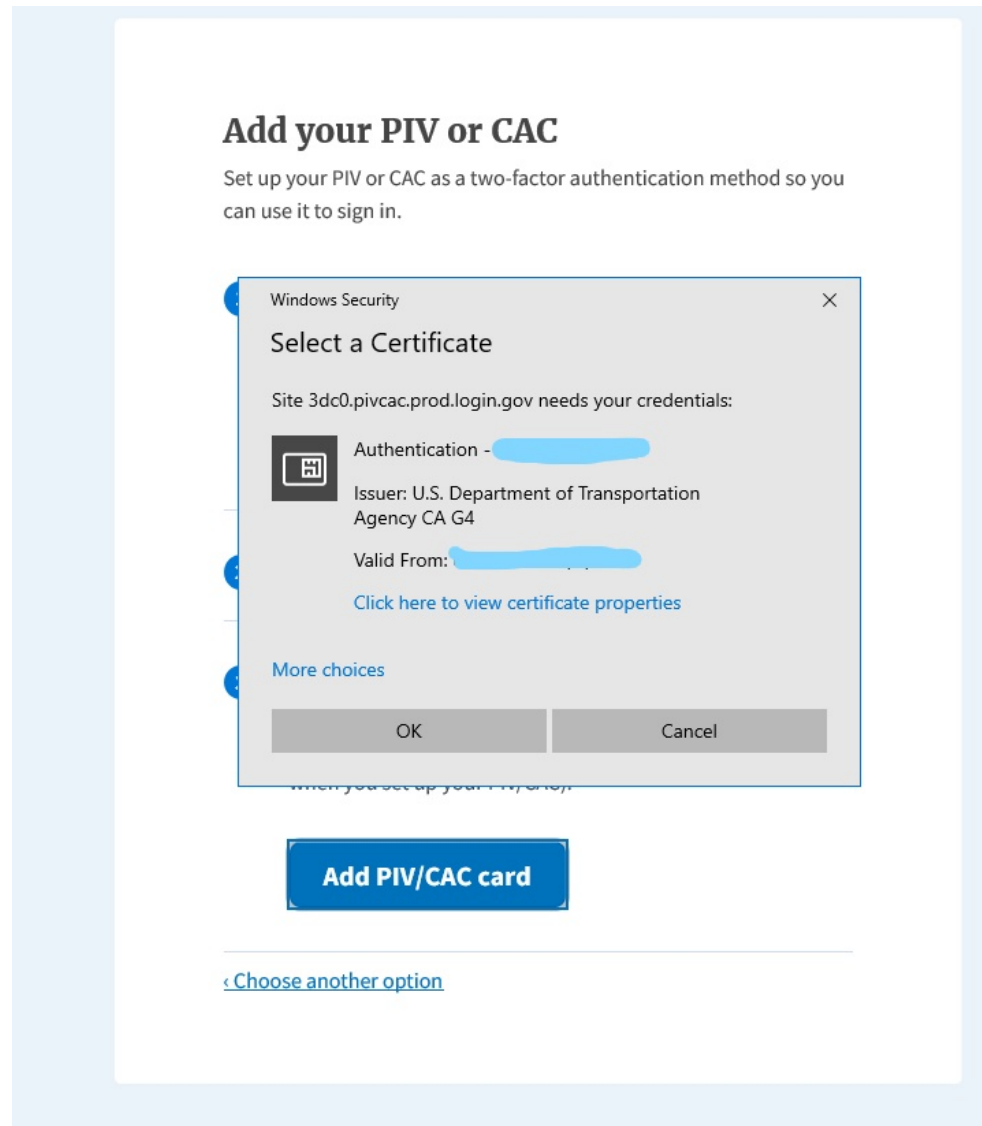
If you add more than one PIV/CAC, you'll know which one's which.
- 2 Insert your PIV/CAC into your card reader**
- 3 Add your PIV/CAC**

You'll need to **choose a certificate** (the right one likely has your name in it) and **enter your PIN** (your PIN was created when you set up your PIV/CAC).

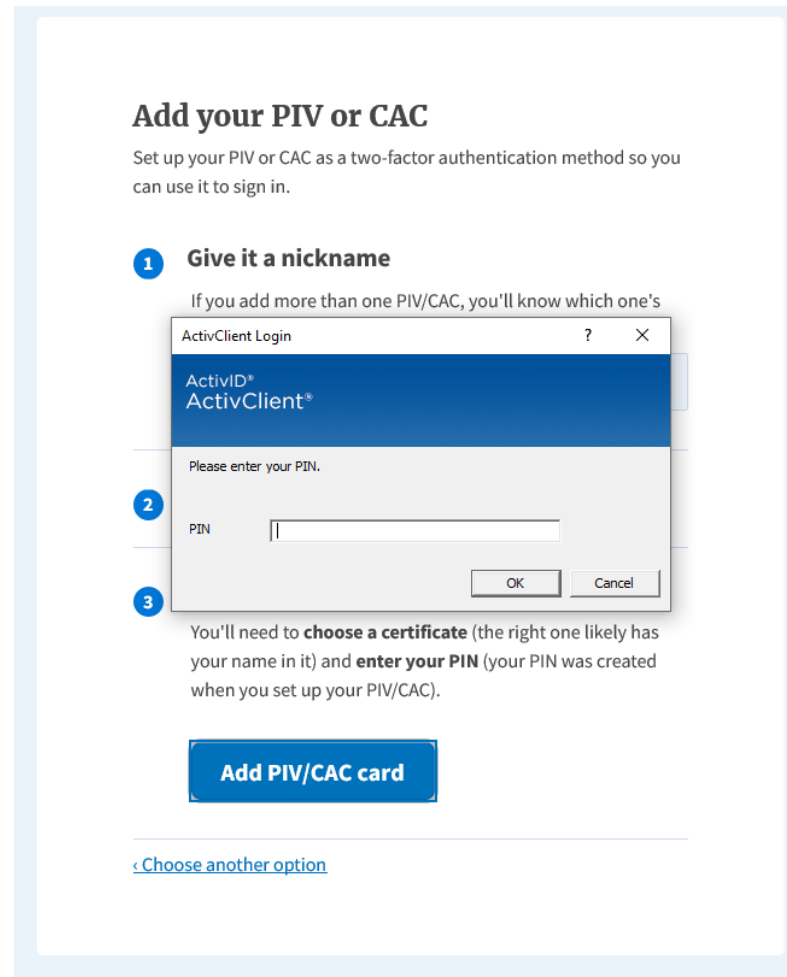
Add PIV/CAC card

[Choose another option](#)

Once the card has been inserted, the user will be prompted to choose a corresponding certificate as shown below:

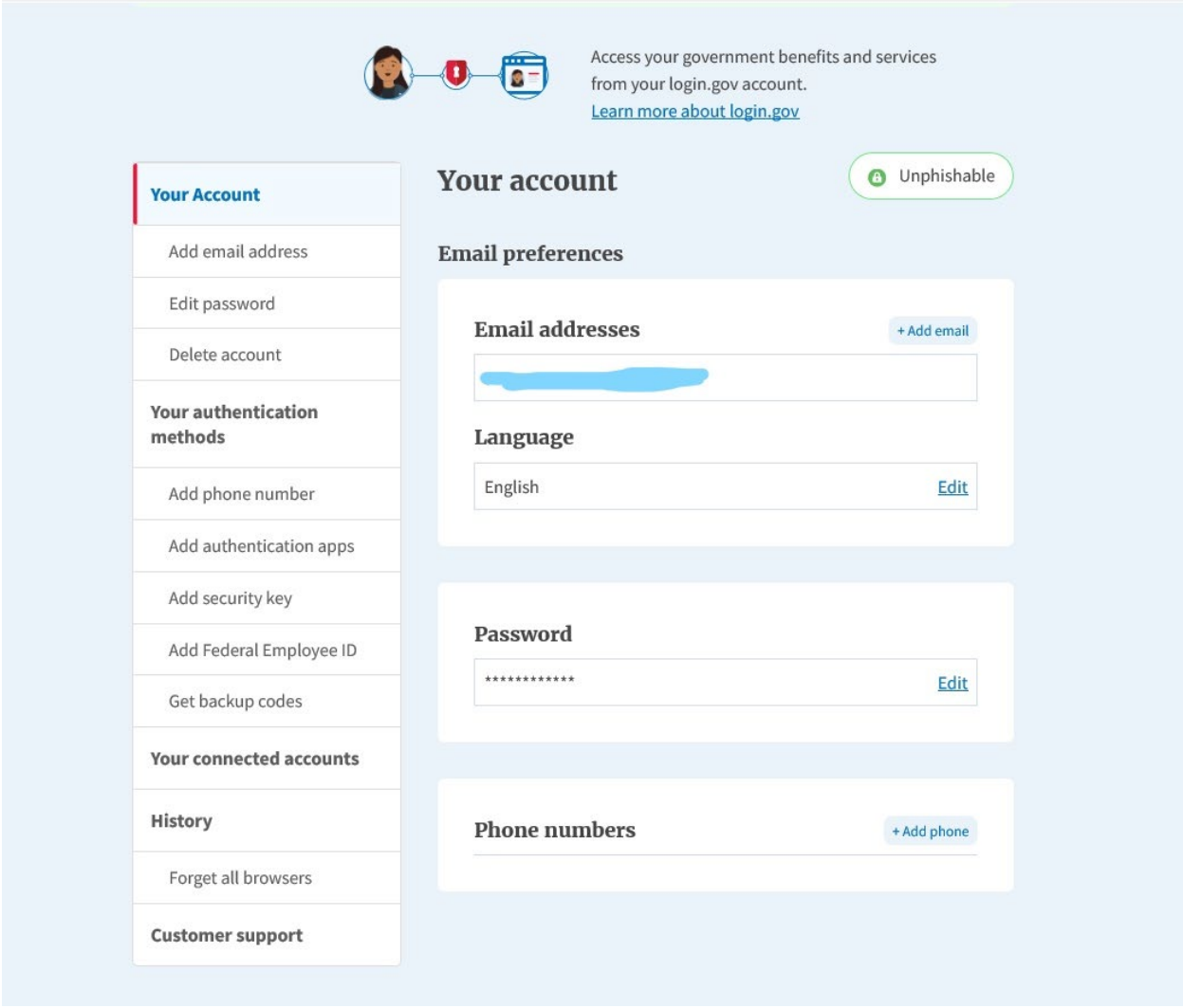


After selecting the certificate, the user will be prompted to enter their corresponding PIV/CAC PIN via the ActivClient Login window shown below:



After successful authentication, the user will now have access to the Case Webtool Welcome page. However, the user won't be re-directed automatically. Instead, to access the Case Webtool, the user must now navigate to the CASE Webtool landing page URL to access the site: <https://case.fhwa.dot.gov>

After completing the process, the user will be able to see Login.gov account details, as shown below. It is here that they will be able to add an additional email address, edit passwords, delete accounts, select authentication methods, and contact customer support, among other actions.



Access your government benefits and services from your login.gov account. [Learn more about login.gov](#)

Your Account

- Add email address
- Edit password
- Delete account

Your authentication methods

- Add phone number
- Add authentication apps
- Add security key
- Add Federal Employee ID
- Get backup codes

Your connected accounts

History

- Forget all browsers

Customer support

Your account Unphishable

Email preferences

Email addresses + Add email

Language

English Edit

Password

***** Edit

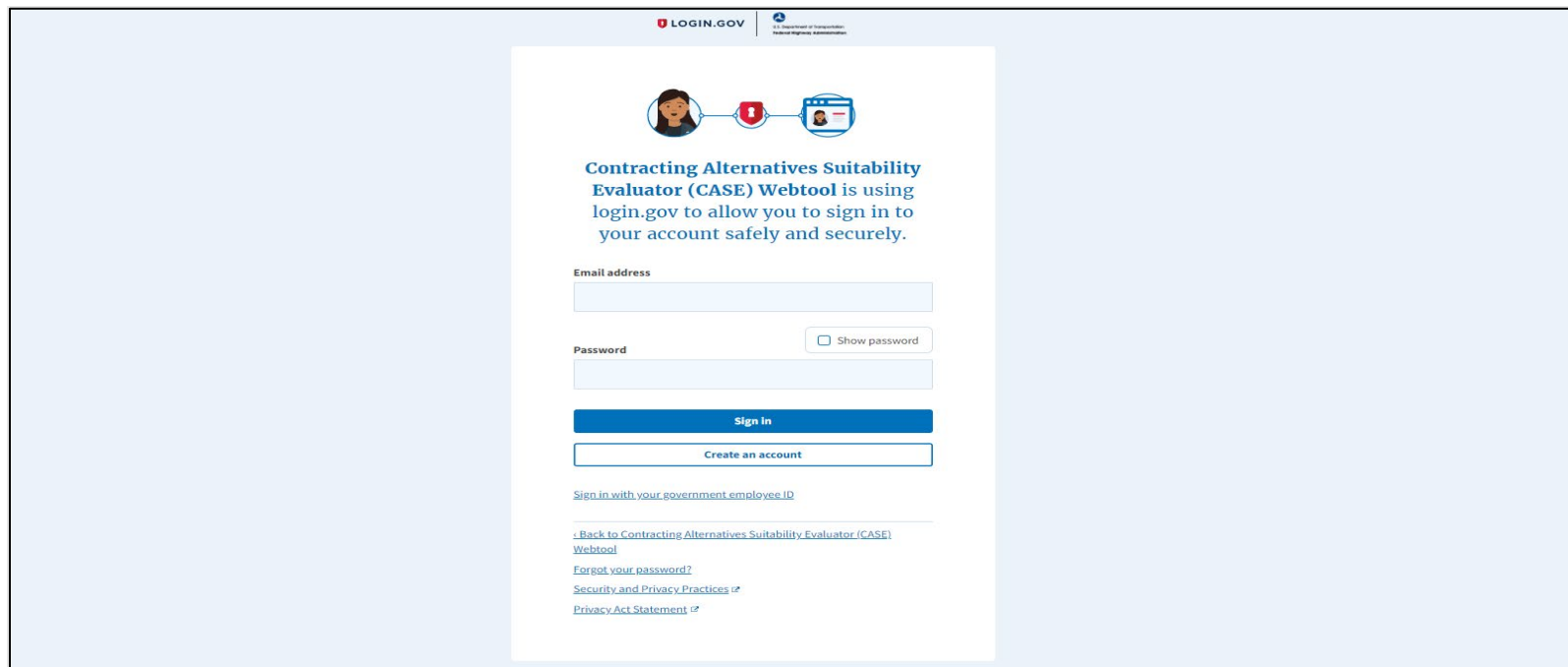
Phone numbers + Add phone

Users without a DOT PIV Card

If you do not have PIV/CAC access, you will need to create a new Login.gov account or log in with your existing one so that it can be linked with your SDC credentials. Linking a Login.gov account with your Case Webtool credentials provides extra security by adding the protection you can configure as two layers of authentication. Authentication methods will consist of phone text or call; an app on your phone, tablet, or computer; a security key; a government employee ID; and pre-generated backup codes.

Enter the email address you would like to use as your Login.gov account into the portal's Email Address sign in (Figure 2 above) and then select Sign In to be redirected to the Login.gov website, where you can create a new account. If you already have an existing Login.gov account, enter your credentials and then select Sign in.

If you do not have an existing Login.gov account, select "Create an account" on the page you are redirected to:



The screenshot shows the Login.gov sign-in interface. At the top, there are logos for LOGIN.GOV and the U.S. Department of Transportation Federal Highway Administration. Below these is a graphic showing a person's profile, a red shield with an exclamation mark, and a smartphone icon. The text reads: "Contracting Alternatives Suitability Evaluator (CASE) Webtool is using login.gov to allow you to sign in to your account safely and securely." There are two input fields: "Email address" and "Password". The password field has a "Show password" checkbox. Below the fields are two buttons: "Sign in" (blue) and "Create an account" (white with a blue border). At the bottom, there are links for "Sign in with your government employee ID", "Back to Contracting Alternatives Suitability Evaluator (CASE) Webtool", "Forgot your password?", "Security and Privacy Practices", and "Privacy Act Statement".

For further instructions on setting up your new Login.gov account and configuring its secure authentication methods, refer to <https://www.login.gov/help/creating-an-account/how-to-create-an-account/>.

After you have finished setting up all authentication methods or sign in with an existing Login.gov account, you will be redirected to a one-time sign-in form on the portal. Enter your Case Webtool credentials (provided in your welcome email) and then select Sign in.

If you are accessing the portal for the first time, you will be prompted to change your password after entering the credentials provided in the welcome email.

User Action: Request for an Account

After successfully registering your account with Login.gov, the user will be prompted to request access to an agency. Here the user will fill out the required information below:

Request for an account

* - Required

* Select Agency/Organization ⓘ
-- Select Agency/Organization --

* First Name ⓘ

* Last Name ⓘ

Address Line 1 ⓘ

Address Line 2 ⓘ

City ⓘ

State ⓘ
-- Select State --

Zip Code ⓘ

Phone Number ⓘ

* Email Address ⓘ

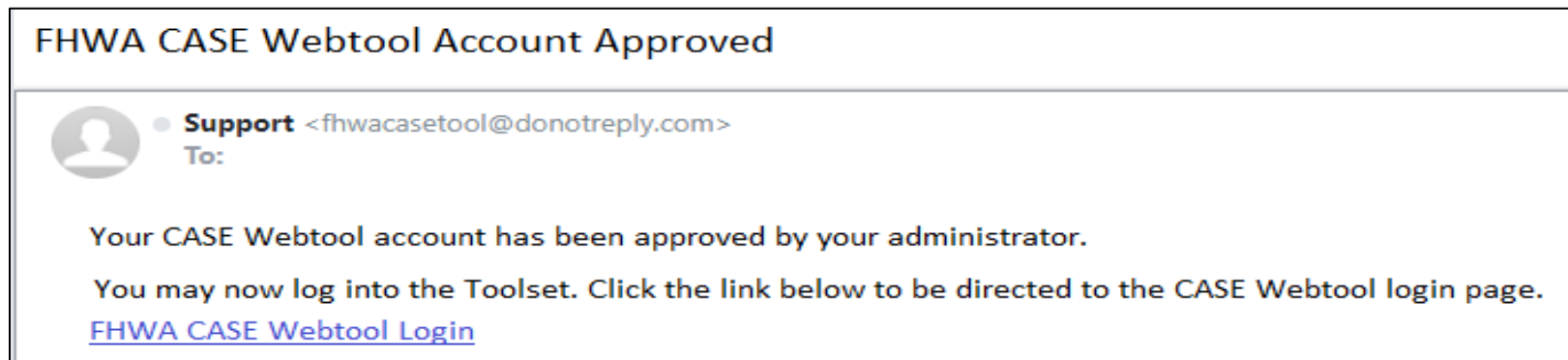
Submit

Cancel

Request for an Account: Field Descriptions and Help

- **Select Agency/Organization:** Select an existing agency. An Agency/Organization name is required.
- **First Name:** Corresponding first name of user. This field is required.
- **Last Name:** Corresponding last name of user. This field is required.
- **Address Line 1:** For a new agency, enter line 1 of the address. For an existing agency, you may edit the address here.
- **Address Line 2:** For a new agency, enter line 2 of the address. For an existing agency, you may edit the address here.
- **City:** For a new agency, enter the city name. For an existing agency, you may edit the city name here.
- **State:** For a new agency, select the State. For an existing agency, you may change the State selection here. State is required.
- **Zip Code:** For a new agency, enter the zip code. For an existing agency, you may edit the zip code here.
- **Phone Number:** For a new agency, enter the phone number. For an existing agency, you may edit the phone number here.
- **Email Address:** This field will be prepopulated and will be predetermined by the user. This is the user's corresponding email. This field is required.

Click “Submit” to request access to the tool via the corresponding agency. Users will receive an email when their request is finally approved.



Administrator Action: Approve Pending User Accounts



Approve Pending User Accounts

Users will register themselves in the webtool, and agency administrators will receive an email indicating a request has been initiated and needs approval. The email received will be similar to the following:

A new FHWA ToolSet account has been registered for your agency/organization.
Please log into the FHWA ToolSet and proceed to the Administration section.
Click the 'Account Approval' button to see a list of all accounts awaiting approval for your agency/organization.

This functionality allows you to approve a self-registered account request. A Super Admin may approve any request. An Agency Admin may only approve requests made by users assigned to his/her own agency/organization.

Click the “Approve Pending User Accounts” button to display the User Account Approval page.

Pending Accounts for Approval

* - Required

* Select Agency/Organization: ?

ICF

Registered Account

Test User abarrovs93@gmail.com

Registration Date

12/29/2020

Pending Accounts for Approval: Field Descriptions and Help

- **Select Agency/Organization:** The Agency/Organization to which the requested users will be assigned will be pre-populated in this field.
- **Registered Account/Registration Date:** One or more user account names and the date of the self-registration request will appear in the list. If you wish to approve the request, click the email address hyperlink within the Registered Account column.

After clicking the email address hyperlink, the admin will be redirected to the specific user's Approve Account page.

Here the admin will be able to select the User Role Type, confirm contact information, and approve/cancel any account request.

The screenshot shows a web form titled "Approve Account". A red asterisk indicates required fields. The form contains the following fields and controls:

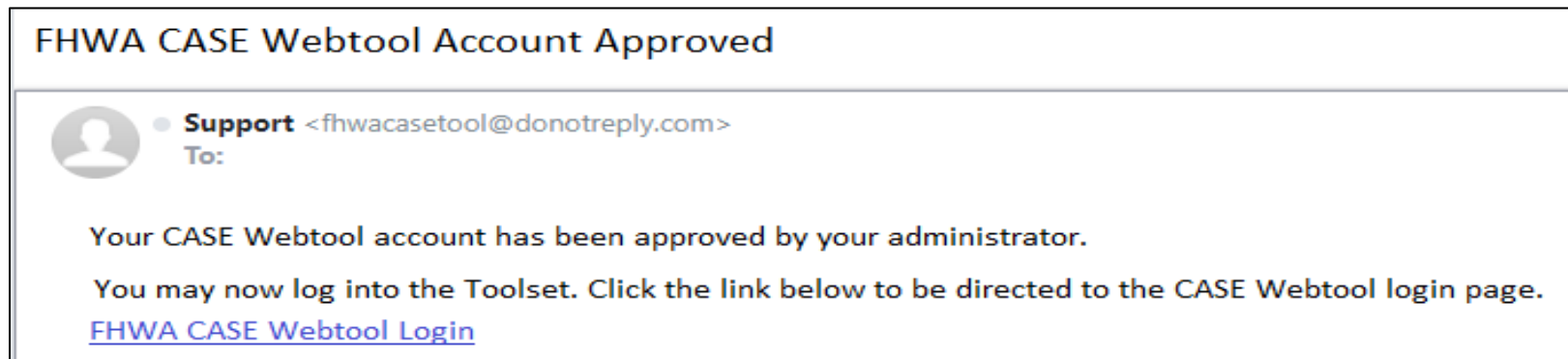
- * Email Address:** A text field containing "abarrows93@gmail.com".
- * User Role:** Radio buttons for "Admin" and "User" (selected).
- * First Name:** A text field containing "Test".
- * Last Name:** A text field containing "User".
- Address Line 1:** A text field containing "9300 Lee Hwy".
- Address Line 2:** An empty text field.
- City:** A text field containing "Fairfax".
- State:** A dropdown menu showing "Virginia".
- Zip Code:** A text field containing "22031".
- Title:** An empty text field.
- * Agency/Organization:** A dropdown menu showing "ICF".
- Phone Number:** A text field containing "(802) 315-5409".

At the bottom of the form are two buttons: "Approve" and "Cancel".

Approve Account: Field Descriptions and Help

- **Email Address:** This field will be prepopulated and will be predetermined by the user. This is the user's corresponding email. This field is required.
- **User Role:** Here, the admin will specify either Admin or User-level access. This field is required.
- **First Name:** Corresponding first name of user. This field is required.
- **Last Name:** Corresponding last name of user. This field is required.
- **Address Line 1:** For a new agency, enter line 1 of the address. For an existing agency, you may edit the address here.
- **Address Line 2:** For a new agency, enter line 2 of the address. For an existing agency, you may edit the address here.
- **City:** For a new agency, enter the city name. For an existing agency, you may edit the city name here.
- **State:** For a new agency, select the State. For an existing agency, you may change the State selection here. State is required.
- **Zip Code:** For a new agency, enter the zip code. For an existing agency, you may edit the zip code here.
- **Title:** Enter the corresponding user title.
- **Agency/Organization:** Select an existing agency. An Agency/Organization name is required.
- **Phone Number:** For a new agency, enter the phone number. For an existing agency, you may edit the phone number here.

Click "Approve" to approve the account request. Users will receive an email indicating their request was approved and their webtool user account is ready to be used.



Access and Log in to the Webtool

The **Federal Highway Administration CASE Webtool** is internet-based. Access the webtool via this link: <https://case.fhwa.dot.gov>

NOTE: For the best user experience, Google Chrome, Microsoft Edge Chromium, and Mozilla Firefox are the recommended Web browsers. Microsoft Internet Explorer (IE), Microsoft Edge, and Apple Safari browsers are not recommended, as they do not support some of the functionality in the webtool.

You are presented with the Main Access page:



Log in: Field Descriptions and Help


1. Enter a valid Email Address: Enter the email address used to register an account in the webtool.
2. Password: Enter the password you selected when you registered an account in the webtool. NOTE: You may change your password or reset a forgotten password by clicking [Forgot Password](#) at the bottom of the page. (See Appendix E: Password Resets.)

Click the Login button to log in to the webtool. You are presented with the Welcome page.


CASE Webtool

Logout

Administration Home FAQs Help ▾










Start a New Analysis



Archived Analyses

* - Required


Projects in Progress

ACM-INFO				ACM-SCREEN		ACM-RISK	P3-EFFECTS 2.0		P3-VALUE 2.3	
Action	Project Name	Project Identifier	Last Updated	Manage Documents	Long vs Short	Short-Term ACM	Short-Term Risk Mitigation	DBOM/ DBFOM	PSC/P3 Long-Term Analysis	P3-VALUE
 	Example Project for review -Unkefer	61EC1E44CD614BC79F74	2/8/2021		C	C	C	C	I	C
 	Express Lanes Project-Copied	2A2AB4DB23874958B7DF	12/18/2020		C	N	N	C	C	N

Page Header Information

The following appears at the top of all pages in the webtool:

- **U.S. Department of Transportation FHWA logo:** Click the logo to navigate to the FHWA website.
- **Logout:** Located in blue font at the upper right, under the Welcome message; click to log out of the webtool.
- **Administration:** This option appears ONLY if you have been assigned webtool administrator privileges. Click to access administrator functionality. (Refer to the Federal Highway Administration CASE Webtool Administrator User Guide.)
- **Home:** Click to return to the Welcome page from any page in the webtool.
- **FAQs:** Click to view a list of frequently asked questions and answers. (See Appendix D: Frequently Asked Questions.)
- **Help:** Click to display information about the webtool.

Welcome Page: Sections

- **View projects by Agency/Organization:** Select the agency/organization from the drop-down for which you wish to start or view a project. This field is required. NOTE: The list is pre-populated to display the agency/organization applicable to you, based on settings provided by your webtool administrator.
- **Start a New Analysis:** Click this button to enter a new project in the system and begin the analysis to determine the recommended method. See “Start a New Analysis” below.
- **Archived Analyses:** Click this button to view a library of archived project analyses. The button color changes to blue, indicating you are viewing archived analyses. Click the button again to return to the list of Projects in Progress.
- **Projects in Progress:**
 - Click the blue icon under “Manage Documents” to attach or delete supporting documentation for a project. (See Appendix F: Project Organization and Document Management.) NOTE: Only administrators may delete documents from the webtool.
 - Click the trash can icon to the left of the project name to delete the project analysis (See Appendix F: Project Organization and Document Management.)

- Click the “sheets of paper” icon to the left of the project name (if available) to make a copy of the project analysis. This may be useful when entering a project similar to one that already exists, eliminating the need to re-key all information from scratch. (See Appendix F: Project Organization and Document Management.)
- Click the file cabinet icon to the left of the project name (if available) to move the project analysis to the Archived Analyses section. (See Appendix F: Project Organization and Document Management.)
- The colored buttons at the end of a project row indicate the project’s current step in the workflow. No color indicates the workflow step is not started. Yellow indicates the workflow step is in progress. Green indicates the workflow step is complete.
- Workflow steps. The red font indicates the major components of the FHWA CASE Webtool as described as follows:

ACM-INFO:

- ◆ Enter Project Information: Click on the blue project name to see project demographic and other project setup information.

ACM-SCREEN:

- ◆ Long vs. Short: Comparing Long-Term vs. Short-Term Contracting.
- ◆ Short-Term ACM: Evaluating Short-Term Contracting Methods (DBB, CM/GC, DB, PDB).

ACM-RISK:

- ◆ Short-Term Risk Mitigation: Performing a short-term project delivery risk mitigation.

P3-EFFECTS 2.0:

- ◆ DBOM/DMFOM: Comparing the Publicly Funded (DBOM) method to the Privately Financed (DBFOM) method.
- ◆ PSC/P3 Long-Term Analysis: Performing a long-term construction and financing analysis (PSC/P3).

P3-VALUE 2.3:

- ◆ P3-VALUE: Accessing and downloading the P3-VALUE 2.3 spreadsheet tool.


Start a New Analysis

Click [Start a New Analysis](#) at the top of the page to enter a new project in the system and begin the analysis to determine the recommended contracting method.

Enter Project Information

The webtool presents a series of pages prompting for information to describe the project. NOTE: You may navigate to different pages within this section using the navigation pane on the right side of each page. Click the desired item to navigate to it. When an item is complete, its color changes from blue to green:



Enter information in the fields on the page, noting the required fields marked with a red asterisk. NOTE: Click the  icon for on-screen field level help, available throughout the webtool.

Sample report project

Project Goals (1 is most important, 5 is least important):
1 = Cost, 5 = Schedule, 4 = Technical, 2 = Context, 3 = Financing

Enter Project Information

Enter project information in the following panels.

* - Required

Project Demographics

* Project Title ⓘ
Sample report project

* Project Identification Number ⓘ
666A9E19F5344F7AB37D

Project Phase ⓘ
Initiation ▼

Project Location(s)

Address ⓘ
530 Galtner Rd

City Name ⓘ
Rockville

County ⓘ
Montgomery County ▼

Latitude ⓘ

Location Description ⓘ
Original location

State ⓘ
Maryland ▼

Region/District ⓘ

Longitude ⓘ

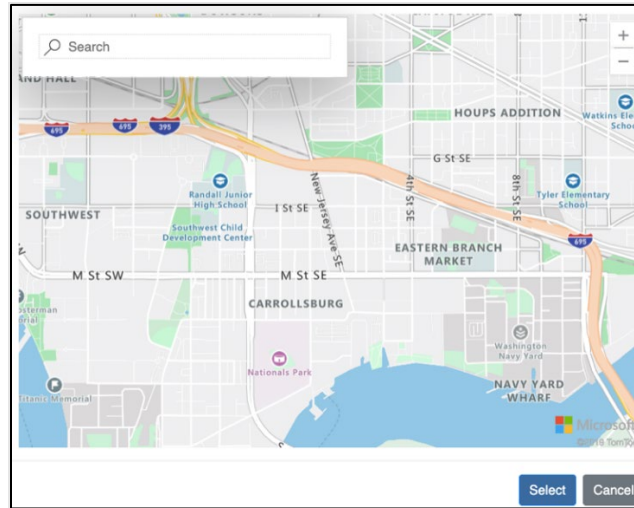
Project Demographics
Project Locations
Project Description
Project Goals
Relative Cost Value
Relative Schedule Value
Relative Technical Value
Relative Context Value
Relative Financing Value
Selection Committee/Workshops

Click to go back Click to continue

Project Demographics: Field Descriptions and Help

- **Project Title:** Enter the name/title of the project.
- **Project Identification Number:** Assign and enter a code or number to identify the project.
- **Project Phase:** Select the appropriate project phase.

- **Project Location(s):** You must enter information for at least one project location. The **Auto Populate** feature allows you to populate the project address by selecting a location on an online map. Click the “Auto Populate Location via Map” button to open the map.



Enter an address in the Search box to navigate directly to that location on the map and click the Select button to select it. The webtool will auto-populate address information in appropriate fields on the page. You may also drag and click to select map locations.

If you prefer to manually enter an address, complete the fields as follows:

- **Address:** Enter the address where the project is located.
- **City Name:** Enter the city where the project is located.
- **State:** Select the State where the project is located.
- **County:** Based on the State selected, the county dropdown list is pre-populated. Select the county where the project is located.
- **Region/District:** Enter the region or district where the project is located.
- **Latitude:** Enter the latitude measurement of the project location.
- **Longitude:** Enter the longitude measurement of the project location.

- **Location Description:** Enter text to describe in detail where the project construction will take place.
- If a project spans multiple locations, add locations by clicking the plus sign icon with the label “Add Location” at the bottom of the page. Click the red X to delete an additional location. (NOTE: You must enter at least one location.)

Click the “Click to continue” button at the bottom of the page. You are presented with the Project Description page:

Project Description

Project Type [?]

Highway Reconstruction / Rehabilitation

Project Type Description [?]

Project Corridor / Corridor Dimensions [?]

Urban Interstate

Major Features / Scope of Work [?]

New express toll lane system parallel to existing interstate approx. 30 centerline miles

Low Budget Estimate Amount [?]

\$ 840,000,000

High Budget Estimate Amount [?]

\$ 950,000,000

Target Project Cost Amount [?]

\$ 850,000,000

Budget/Cost Notes [?]

Midpoint of construction is 10 years from now.

Estimated Construction Start Date [?]

01/01/2023

Estimated Construction End Date [?]

01/01/2028

Construction Date Notes [?]

Allow 1.5 years for procurement
Construction data representative of market conditions in the urban area

Annual Average Daily Traffic [?]

265,000

Project Demographics

Project Locations

Project Description

Project Goals

Relative Cost Value

Relative Schedule Value

Relative Technical Value

Relative Context Value

Relative Financing Value

Selection Committee/Workshops

Major Project Stakeholders / Sponsors

Click to go back

Click to continue

Enter information in the fields on the page. NOTE: Throughout the webtool, the “Click to go back” button navigates back to the previous page.

Project Description: Field Descriptions and Help

- **Project Type:** Select the appropriate project type.
- **Project Type Description:** If ‘Other’ is selected for Project Type, this field becomes editable. Enter a description of the project type.
- **Project Corridor/Corridor Dimensions:** A transportation corridor is defined as “a combination of discrete, adjacent surface transportation networks (e.g., freeway, arterial, transit networks) that link the same major origins or destinations. Describe the corridor/highway segment included in the project.
- **Major Features/Scope of Work:** Describe in more detail the major features of the project or the scope of work required to complete the project.
- **Low Budget Estimate Amount:** A budget range will be used in later calculations. Enter the estimated low budget amount for the project in dollars.
- **High Budget Estimate Amount:** A budget range will be used in later calculations. Enter the estimated high budget amount for the project in dollars.
- **Target Project Cost Amount:** Enter the estimated total project cost in dollars.
- **Budget/Cost Notes:** Enter text to describe/explain the specific meaning of the budget and cost amounts, if desired.
- **Estimated Construction Start Date:** Select or enter the construction start date using the date selector up/down arrows or by entering it manually.
- **Estimated Construction End Date:** Select or enter the construction start date using the date selector up/down arrows or by entering it manually.
- **Construction Date Notes:** Enter text to describe/explain the specific meaning of the start and end dates, if desired.
- **Annual Average Daily Traffic:** Annual Average Daily Traffic (AADT) is an annual traffic count divided by the number of days in the year or a short-term traffic count annualized by factors to account for seasonality, etc. Enter the AADT for the project.
- **Major Project Stakeholders/Sponsors:** List the stakeholder or sponsor groups involved in the project. NOTE: These are groups or organizations, not individuals.

Click the “Click to continue” button at the bottom of the page. You are presented with the Project Goals page:

Project Goals: Ordinal Ranking View

Project Goals (Defining Project Goals, the 5 DPMs – More info)

* ☒ Ordinal Ranking (1-5) [?](#) ☐ Point Ranking (must total 100 Pts) [?](#)

Cost

* Rank the Relative Cost Value [?](#)

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☒ 5

Describe the Cost Goals [?](#)

Considering P3 concession due to lack of public funding in the "pay-as-you-go" category.

Schedule

* Rank the Relative Schedule Value [?](#)

☒ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

Describe the Schedule Goals [?](#)

Production schedule is comparable to other normal construction projects.

Technical

* Rank the Relative Technical Value [?](#)

☐ 1 ☒ 2 ☐ 3 ☐ 4 ☐ 5

Describe the Technical Goals [?](#)

Standard road and bridge construction in an interstate context.

Context

* Rank the Relative Context Value [?](#)

☐ 1 ☐ 2 ☐ 3 ☒ 4 ☐ 5

Describe the Context Goals [?](#)

Bringing private funding in creates increased political scrutiny.

Financing

* Rank the Relative Financing Value [?](#)

☐ 1 ☐ 2 ☒ 3 ☐ 4 ☐ 5

Project Demographics
Project Locations
Project Description
Project Goals
Relative Cost Value
Relative Schedule Value
Relative Technical Value
Relative Context Value
Relative Financing Value
Selection Committee/Workshops

Project Goals: Point Ranking View

Project Goals (Defining Project Goals, the 5 DPMs – More Info)

Ordinal Ranking (1-5)

Point Ranking (must total 100 Pts)

Cost

Rank the Relative Cost Value

20

Describe the Cost Goals

Schedule

Rank the Relative Schedule Value

20

Describe the Schedule Goals

Technical

Rank the Relative Technical Value

20

Describe the Technical Goals

Context

Rank the Relative Context Value

20

Describe the Context Goals

Project Demographics

Project Locations

Project Description

Project Goals

Relative Cost Value

Relative Schedule Value

Relative Technical Value

Relative Context Value

Relative Financing Value

Selection Committee/Workshops

Page 30

Project Goals: Field Descriptions and Help

Transportation projects traditionally have been managed by optimizing the tradeoff between cost, schedule, and quality. In recent years, increased attention has been given to the effects of context and financing on design, cost, and schedule, resulting in a 5-Dimensional Project Management (5DPM) matrix that represents a much more complicated optimization calculus.

The webtool prompts you to rank the importance of five project goals relative to one another, using either an ordinal or point ranking method (described below). The five goals to consider are Cost, Schedule, Technical, Context, and Financing.

Click the More info link on the page (circled in red on screenshot above) for details on 5DPM. You may also refer to Appendix A: 5DPM Background in this document.

- **Ordinal Ranking (1–5):** Ordinal ranking allows you to indicate the value of a goal relative to another goal by assigning a unique ranking to each goal. Select this option if you wish to rank goals using ordinal ranking. Each goal must be assigned a unique ranking from 1 to 5 where 1 indicates the most important goal and 5 indicates the least important goal as described in the following table:

Ordinal Ranking	Weighting (% of total)
1	33%
2	27%
3	20%
4	13%
5	7%
Total	100%

- **Point Ranking (100 pts):** Point Ranking allows you to indicate the value of a goal relative to another goal by assigning a number of points to each goal, where a higher assigned number indicates a higher value to the project. Select this radio button if you wish to rank goals using Point Ranking. A goal may be assigned the same point value as another goal, but the sum total of all rankings must equal 100 points.
- **Rank the Relative Cost Value:** If Ordinal Ranking was selected above, select the relative ranking. If Point Ranking was selected above, enter a point value.
- **Describe the Cost Goals:** Provide a text description of the goals of the project specific to cost.

- **Rank the Relative Schedule Value:** If Ordinal Ranking was selected above, select the relative ranking. If Point Ranking was selected above, enter a point value.
- **Describe the Schedule Goals:** Provide a text description of the goals of the project specific to the schedule/timeline.
- **Rank the Relative Technical Value:** If Ordinal Ranking was selected above, select the relative ranking. If Point Ranking was selected above, enter a point value.
- **Describe the Technical Goals:** Provide a text description of the technical goals of the project.
- **Rank the Relative Context Value:** If Ordinal Ranking was selected above, select the relative ranking. If Point Ranking was selected above, enter a point value.
- **Describe the Context Goals:** Provide a text description of the context goals of the project. Context related goals may include Public Relations, Agency Constraints, Third Party Agreements, and Environmental Permits.
- **Rank the Relative Financing Value:** If Ordinal Ranking was selected above, select the relative ranking. If Point Ranking was selected above, enter a point value.
- **Describe the Financing Goals:** Provide a text description of the financing goals of the project.

Goal ranking numbers for the project will be displayed on each page of subsequent sections in the webtool.

Click the “Click to continue” button at the bottom of the page. You are presented with the Project Selection Committee/Workshop Information page:

Enter Project Information

Enter project information in the following panels.

* - Required

Project Selection Committee/Workshop Information

Project Workshop(s)

☒ No Workshops for project

Submit Your Project

Click to go back

Project Demographics
 Project Locations
 Project Description
 Project Goals
 Relative Cost Value
 Relative Schedule Value
 Relative Technical Value
 Relative Context Value
 Relative Financing Value
 Selection Committee/Workshops

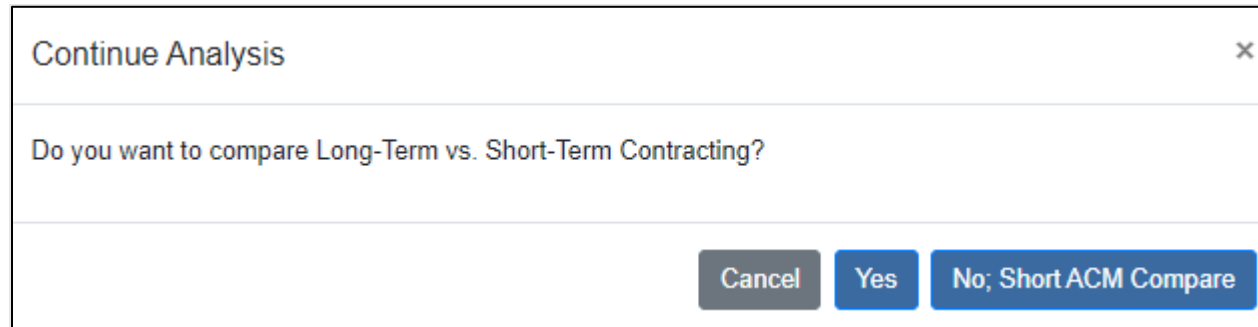
Enter information in the fields on the page. NOTE: Workshop information is optional. If there is no workshop information for the project, check the “No Workshops for project” checkbox on the top right of the section to close the Workshop Information panel. Then click the “Submit Your Project” button to save your responses and complete the entry of Project Demographics information.

[Project Selection Committee/Workshop Information: Field Descriptions and Help](#)

- Project Workshop(s). You may enter information for one or more project meetings/workshops:
 - **Workshop Location:** Enter the location of any workshop or planning meeting that occurred when analyzing the project.
 - **Workshop Description:** Describe the workshop in additional detail.
 - **Workshop Date:** Select or enter the workshop date using the date selector up/down arrows or by entering it manually.
 - **Workshop Time:** Select or enter the workshop time (hours, minutes, AM/PM) using the time selector up/down arrows or by entering it manually.
 - You may add project workshops, if desired, by clicking the blue plus sign “Add Workshop” icon.
- Project Workshop Stakeholder(s)/Facilitator(s)/Participant(s). You may enter information for one or more stakeholders:
 - **Workshop Role:** Select the appropriate role for the individual involved in the workshop.
 - **First Name:** Enter the individual’s first name.
 - **Last Name:** Enter the individual’s last name.
 - **Organization:** Enter the individual’s work reporting organization.
 - **Title:** Enter the individual’s title.
 - **Email Address:** Enter the individual’s email address.
 - **Phone Number:** Enter the individual’s phone number.
 - You may add participants, if desired, by clicking the blue plus sign “Add Workshop Participants” icon.

Click the “Submit Your Project” button at the bottom right of the page to save your responses and complete the entry of Project Demographics information.

You are presented with the following question:

A dialog box titled "Continue Analysis" with a close button (X) in the top right corner. The main text asks "Do you want to compare Long-Term vs. Short-Term Contracting?". At the bottom, there are three buttons: "Cancel" (grey), "Yes" (blue), and "No; Short ACM Compare" (blue).

Continue Analysis

Do you want to compare Long-Term vs. Short-Term Contracting?



Cancel Yes No; Short ACM Compare

- Click “Yes” to Evaluate whether Long-Term or Short-Term Contracting is Recommended for the project.
- Click “No; Short ACM Compare” to skip this step and go to Evaluate Short-Term Contracting Methods (DBB, CM/GC, DB, PDB).
- Click “Cancel” to return to the Welcome page.

Evaluate whether Long-Term or Short-Term Contracting is Recommended

The webtool presents questions on multiple pages to determine whether Long-Term or Short-Term contracting is recommended for the project. NOTE: You may navigate to different pages within this section using the navigation pane on the right side of each page. Click the desired item to navigate to it. When an item is complete, its color changes from blue to green:



Provide information in the fields on all pages in the section, noting all fields are required and marked with a red asterisk. NOTE: Click the  icon for on-screen field level help, available throughout the webtool. Click the  icon to open a comment block where you may optionally enter information to document your reason for making a selection.

NOTE: Project Goal rankings entered in the Project Information section are displayed at the top of every page going forward.

A heat map is displayed on every page in this section. The needle on the map moves as responses are collected, indicating the trend toward the webtool's recommendation of whether Long-Term or Short-Term contracting may be preferred for the project. If desired, a webtool Administrator may change default settings to hide the heat map.



Sample report project

Project Goals (1 is most important, 5 is least important):
1 = Cost, 5 = Schedule, 4 = Technical, 2 = Context, 3 = Financing

Evaluate whether Long-Term or Short-Term Contracting is Recommended

A heat map is displayed on every page in this section. The needle on the map moves as responses are collected, indicating the trend toward the toolset's recommendation of whether Long-Term or Short-Term contracting may be preferred for the project.

* - Required

Legislation and Access to Private Capital

Legislation for Long-Term Contracting

* Do State/Regional laws permit the use of a long-term contracting method for the project? ⓘ ⓘ

Yes ▼

Access to Private Capital

* Is access to private capital the only reason the agency is considering long-term contracting? ⓘ ⓘ

-- Select Choice -- ▼

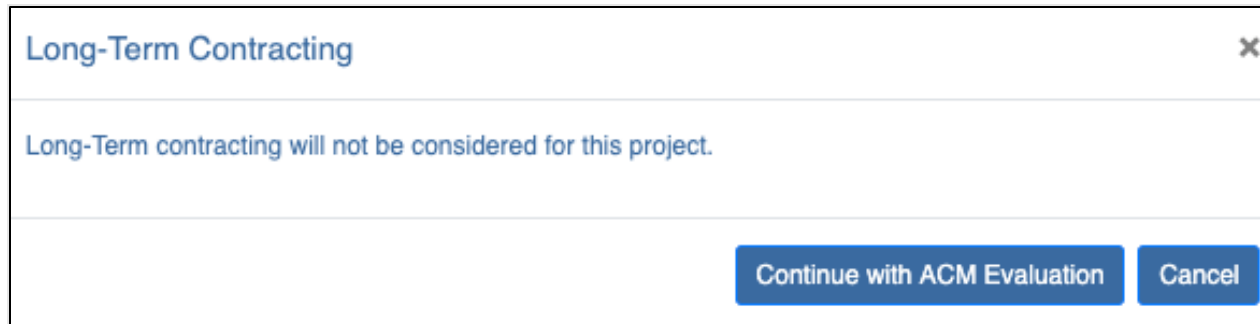
Click to go back

Click to continue

Legislation and Access to Private Capital: Field Descriptions and Help

- Legislation for Long-Term Contracting
 - **Do State/Regional laws permit the use of a long-term contracting method for the project?** Indicate whether long-term contracting is allowed by law. Long-term methods include [DBOM](#) and [DBFOM](#). If the selection is “Yes”, long-term methods will be analyzed further. If the selection is “No,” long-term methods are eliminated from further analysis. If the selection is “No,” but include for analysis', long-term methods are not eliminated, but any results should be used for analysis purposes only.

NOTE: Selecting “No” presents the following message:

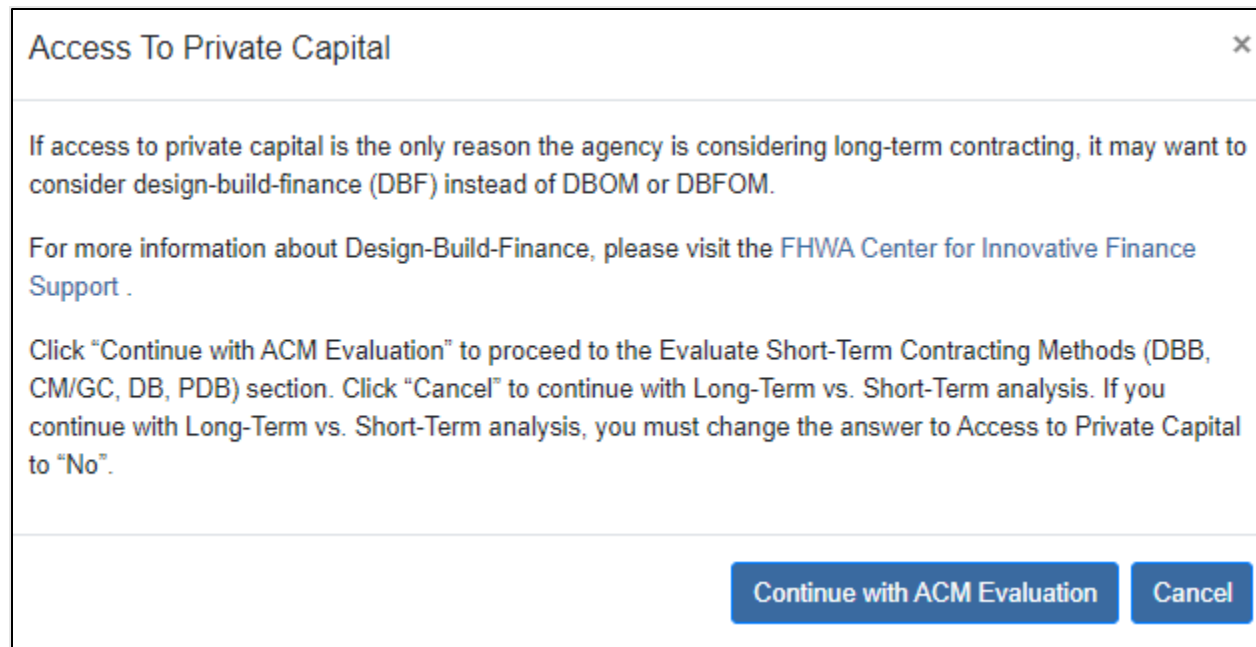


Click “Continue with ACM” to exit the Evaluate whether Long-Term or Short-Term is Recommended section and go to Evaluate Short-Term Contracting Methods (DBB, CM/GC, DB, PDB).

Click Cancel to close the message and return to Long-Term vs. Short-Term analysis. You may then either change your selection or click Home at the top of the page to be directed to the Welcome page.

- Access to Private Capital
 - **Is access to private capital the only reason the agency is considering Long-Term contracting?** If private financing were not available, the agency would need to decide whether to use (exclusively) existing reserves or whether to (also) issue public debt to help finance the project. Public financing can help accelerate project delivery, as existing public reserves may be insufficient to realize the project today.

NOTE: Selecting “Yes” presents the following message:



Click "Continue with ACM" to exit the Evaluate whether Long-Term or Short-Term is Recommended section and go to Evaluate Short-Term Contracting Methods (DBB, CM/GC, DB, PDB).

Click Cancel to close the message and continue with Long-Term vs. Short-Term analysis. If you continue with Long-Term vs. Short-Term analysis, you must change the answer to the Access to Private Capital question to "No."

If you answered "No" to the Access to Private Capital question, click the "Click to continue" button.

* - Required

Agency Capabilities

Experience and Guidelines

* Does the agency have guidelines for procurement, implementation and management of long-term contracting methods? ⓘ ⓘ

Yes ▼

* What level of experience does the agency have with long-term contracting methods? ⓘ ⓘ

Low ▼

* What level of experience does the agency have with defining and specifying project performance outcomes and service requirements? ⓘ ⓘ

High ▼

Monitoring

* What is the agency's level of experience in monitoring performance of O&M services provided by a private participant? ⓘ ⓘ

Medium ▼

Contracts

* Does the agency wish to avoid contractual relationships with multiple parties? ⓘ ⓘ

Yes ▼

[Click to go back](#)
[Click to continue](#)

Agency Capabilities: Field Descriptions and Help

- Experience and Guidelines
 - **Does the agency have guidelines for procurement, implementation, and management of long-term contracting methods?** To ensure a consistent, reliable, and efficient project delivery process, the agency should have established policies and guidelines governing the development, procurement, and management of long-term contracts. Consider whether guidelines are documented and accessible and select the appropriate response.

- **What level of experience does the agency have with long-term contracting methods?** A higher level of experience indicates the agency understands the challenges and opportunities associated with long-term contracting methods. Further, this may reduce the need for external support services since the agency will have internal capacity/competency for utilization. Evaluate the agency's level of experience and select the appropriate response.
- **What level of experience does the agency have with defining and specifying project performance outcomes and service requirements?** Long-term contracting methods typically specify [performance standards and outcomes](#) for a project, which give the private contractor the latitude to determine how to best meet the project's objectives. This is a departure from conventional practice, where agencies prescribe facility characteristics through prescriptive specifications. Consider the agency's experience with developing and implementing performance outcomes for projects and select the appropriate response.
- Monitoring
 - **What is the agency's level of experience in monitoring the performance of O&M services provided by a private participant?** Long-term contracting methods typically prescribe performance standards for a project, so an agency must [monitor such performance](#) to assess whether expectations are met. A higher level of experience indicates that an agency has in house capabilities and/or has worked with external consultants to [monitor and assess project outcomes](#). Consider the agency's experience and select the appropriate response.
- Contracts
 - **Does the agency wish to avoid contractual relationships with multiple parties?** Long-term contracting methods typically reduce the number of contractual relationships in a project—often to a single contract. While this can make coordination more efficient, it typically involves a more complex contract since it will cover multiple phases of a project's lifecycle. Consider whether this trade-off is advantageous to the agency and select the appropriate response.

Click the “Click to continue” button.

* - Required

Market Experience and Interest

Private Experience

* What level of experience do private participants in the market have in long-term contracting with this type of project? ⓘ ⓘ

Medium

Private Interest

* What is the private sector level of interest in pursuing this or similar projects through long-term contracting? ⓘ ⓘ

High

Click to go back

Click to continue

Market Interest and Experience: Field Descriptions and Help

- Private Experience
 - **What level of experience do private participants in the market have in long-term contracting with this type of project?** Higher levels of market experience with long-term contracting methods suggest the agency will experience fewer challenges in procurement and implementation. Alternatively, less market experience will likely introduce new issues for both parties to address. Consider the level of experience and select the appropriate response.
- Private Interest Level
 - **What is the private sector level of interest in pursuing this or similar projects through long-term contracting?** High levels of [market interest](#) in the project, or similar past projects, may result in a larger number of respondents in the procurement process, contributing to more competition. It may also be an indicator of the project's viability under current scale and scope expectations. Assess the private sector's level of interest and select the appropriate response.

Click the “Click to continue” button.

As responses are selected for the following questions, the webtool may display informational text in red font. This text is intended to serve as guidelines for the user.

Project Considerations

Design, Scope, Scale and Complexity

* To meet the agency's goals, how critical is prescribing the project's design details? ⓘ ⓘ

Somewhat Critical

* Does the project have sufficient scope and complexity so meaningful risks are present throughout its lifecycle? ⓘ ⓘ

Yes

* Can the project be bundled with comparable projects to increase scale/scope and to enhance market interest while still meeting agency goals? ⓘ ⓘ

Yes

Bundling can increase scale/scope and enhance market interest, but the agency should carefully consider the advantages and disadvantages of doing so. See the following bundling documentation: [FHWA EDC5 Project Bundling Initiative](#), [FHWA Bundled Facilities Guidance](#), [FHWA Bridge Bundling Guidebook](#)

* Will the project have complex stakeholder or third-party issues (i.e. coordination with railroads, property owners, etc.) over its lifecycle? ⓘ ⓘ

Possibly

* For conditions expected for this project, how significant are barriers to transferring O&M responsibilities to a private contractor? ⓘ ⓘ

Low

Project Considerations; Design, Scope, Scale and Complexity: Field Descriptions and Help

- **To meet the agency's goals, how critical is prescribing the project's design details?** If the agency desires to retain significant influence or control over the design process, Long-Term contracting methods may be less desirable since one of the benefits of long-term contracting is the latitude granted to private respondents to generate alternative design solutions. Consider the level of design influence desired and select the appropriate response.
- **Does the project have sufficient scope and complexity so meaningful risks are present throughout its lifecycle?** Long-term contracting methods are generally preferred when certain [lifecycle risks are transferred](#) to a private entity because the concessionaire will have greater incentive or capacity to manage them. If a project has limited complexity or scope, the benefits of risk transfer are likely less. Consider the types and nature of risks expected and select the appropriate response.
- **Can the project be bundled with comparable projects to increase scale/scope and to enhance market interest while still meeting agency goals?** Under [Project Bundling](#), a single contract is used to deliver multiple projects of a similar nature to increase the scope and scale of the contract. Bundling is often used in the rehabilitation or replacement of multiple comparable facilities. Consider whether the project can be bundled with others and select the appropriate response.

- **Will the project have complex stakeholder or third-party issues (coordination with railroads, property owners, etc.) over its lifecycle?** Long-term contracting methods may give the public agency the ability to tap into private sector expertise or experience to address challenging third-party issues, particularly during project implementation and operations and maintenance (O&M). Consider the potential for complex third-party issues and select the appropriate response.

Integration of Project Phases

* For conditions expected for this project, what is the likelihood that integrating design, construction and O&M services will increase innovation? ⓘ ⓘ

High

* For conditions expected for this project, what is the likelihood that integrating design, construction and O&M services will improve risk allocation and management? ⓘ ⓘ

High

* For conditions expected for this project, what is the likelihood that integrating design, construction and O&M services will reduce lifecycle cost? ⓘ ⓘ

Medium

* For conditions expected for this project, what is the likelihood that integrating design, construction and O&M services will improve stakeholder engagement and third-party issues over the project's lifecycle? ⓘ ⓘ

Low

* For conditions expected for this project, what is the likelihood that integrating design, construction and O&M services will improve the chances of meeting other agency/project goals such as schedule acceleration? ⓘ ⓘ



High

Demonstration project for implementation of express lanes in the region.



Project Considerations; Integration of Project Phases: Field Descriptions and Help

- **For conditions expected for this project, what is the likelihood that integrating design, construction, and O&M services will increase innovation?** Integrating design, construction and O&M may provide bidders the opportunity to propose innovative solutions for the project since they have incentives to optimize aspects of a project over its lifecycle to improve service or reduce cost. Consider how likely this may be for the given project and select the appropriate response.
- **For conditions expected for this project, what is the likelihood that integrating design, construction, and O&M services will improve risk allocation and management?** Integrating design, construction, and O&M may transfer some of the risks that the agency would otherwise not be able to optimally manage. Consider how likely this may be for the given project and select the appropriate response.
- **For conditions expected for this project, what is the likelihood that integrating design, construction, and O&M services will reduce lifecycle cost?** Integrating design, construction, and O&M provide bidders the opportunity to consider various strategies for incurring capital and O&M expenses over the contract's duration to reduce overall lifecycle costs. For instance, a higher capital investment may reduce recurring O&M costs, which may result in a lower overall lifecycle cost. Consider how likely this may be for the given project and select the appropriate response.
- **For conditions expected for this project, what is the likelihood that integrating design, construction, and O&M services will improve stakeholder engagement and third-party issues over the project's lifecycle?** Integrating design, construction, and O&M may give the contracted private entity the ability to consider stakeholder engagement and third-party issues as it develops its design and overall project management plan. Consider how likely this may be for the given project and select the appropriate response.
- **For conditions expected for this project, what is the likelihood that integrating design, construction, and O&M services will improve the chances of meeting other agency/project goals?** Integrating design, construction, and O&M may improve the potential to meet other agency goals (private sector participation, environmental innovation, etc.). Consider how likely this may be for the given project and select the appropriate response.
- **For conditions expected for this project, how significant are barriers to transferring O&M responsibilities to a private contractor?** Agencies utilize operations and maintenance [\(O&M\) agreements](#) to transfer responsibility for asset operation and management to the private sector. Such a transfer may meet resistance from existing public sector employees or face opposition from unions if it is not properly addressed. Consider any barriers to transferring O&M responsibilities and select the appropriate response.



Risk Assessment

* Has the agency identified the key risks throughout the lifecycle for the project?  

In Progress



* For each of the identified key risks, has the agency determined who is best positioned to manage these risks at the lowest cost? (If the agency has not identified key risks throughout the lifecycle of the project, please select "no".)  

In Progress

* Has the agency determined which key risks it would like to transfer to a private partner/participant? (If the agency has not identified any risks throughout the lifecycle of the project, please select "no".)  

In Progress

Financial risk of the toll and revenue intended to transfer to private partner for project to be successful.
A maximum of \$350M of public sector funding to be allocated.

* Has the agency determined which key risks it would like to retain or share with a private partner/participant? (If the agency has not identified any key risks throughout the lifecycle of the project, please select "no".)  

In Progress

Submit Your Responses

Click to go back

Save and Exit

Project Considerations; Risk Allocation: Field Descriptions and Help

- Has the agency identified the key risks throughout the lifecycle for the project?** The agency should identify the principal risks in the project's lifecycle; this is critical to assess their impacts and to determine the subsequent allocation. Please select the appropriate response.
- For each of the identified key risks, has the agency determined who is best positioned to manage these risks at the lowest cost?** (If the agency has not identified key risks throughout the lifecycle of the project, please select "no.") The party that has the better ability to manage or mitigate a risk is typically the one who should carry the risk. Consider whether the agency has completed such an assessment and select the appropriate response.

- **Has the agency determined which key risks it would like to transfer to a private partner/participant?** (If the agency has not identified key risks throughout the lifecycle of the project, please select “no.”) Risk transfer to the private sector is an important aspect of long-term contracting methods; risks transferred should be those where it is expected the private sector is better able to manage or mitigate these risks. Consider whether the agency has identified the risks to be transferred and select the appropriate response.
- **Has the agency determined which key risks it would like to retain or share with a private participant?** (If the agency has not identified key risks throughout the lifecycle of the project, please select “no.”) Some risks are better shared with the private sector or retained by the public agency. Consider whether the agency has identified the risks to share or maintain and select the appropriate response.

If you wish to save the responses on this page but are not ready to submit responses to the webtool to complete the analysis, click the blue “Save and Exit” button at the bottom of the page. Responses are saved and you will return to the Welcome page. You can come back to this section later to complete the analysis. When you return to the section, if you decide to change any saved responses or notes, the new response/note will be highlighted in yellow (see below example). This provides a quick visual of anything that is new since the last time you navigated the section.

Cost Constraints

Cost

* How difficult will it be to develop a reliable cost estimate for the project? ⓘ ⓘ

Very Difficult

* Does the project include construction materials with volatile pricing? ⓘ ⓘ

Yes

Click to go back Click to continue

Technical Constraints
Design and Technology
Schedule Constraints
Schedule Criticality
Schedule Completion
Construction
Utilities
Cost Constraints
Cost
Context
Public Relations
Agency Constraints
Third Party Agreements
Environmental Permits
Finance Constraints
Funding and Revenue

When you get to the last page in the section, if you made any changes since the last time responses were saved, you have an opportunity to change your responses back to those last saved, if desired. Click the blue “Reset” button at the bottom of the last page to revert to the previously saved responses/notes.

If you are satisfied with your responses and would like to complete this section and see the results of the analysis, click the gray “Submit Your Responses” button. Based on the answers provided, the webtool displays a heat map and provides advice on whether long-term or short-term contracting may be preferred for the project:

Long-Term vs. Short-Term Comparison Results

Short-Term

Long-Term

Based on answers to questions in this section, the position of the needle in this heat map represents the results of the toolset's evaluation of long-term vs. short-term contracting. The closer the needle is placed to either end of the map indicates the toolset's recommendation of whether Long-Term or Short-Term contracting may be preferred for the project.

Based on your responses, the toolset's recommendation is :

Long-Term Contracting is preferred.

Do you want to evaluate whether private financing should be included (DBFOM) or excluded (DBOM) in long-term contracting?

Cancel

Yes

No; Short ACM Compare

Select “Yes” to proceed with Evaluate whether Private Financing Included (DBFOM) or Excluded (DBOM).

Select “No; Short ACM Compare” to proceed with Evaluate Short-Term Contracting Methods (DBB, CM/GC, DB, PDB).

Select “Cancel” to return to the Welcome page.

Evaluate whether Private Financing Included (DBFOM) or Excluded (DBOM)

The webtool presents a series of evaluation questions related to financing for long-term contracts. Answers correspond to weightings used in formulas to ultimately recommend whether private financing should be included or excluded from recommended methods. See Appendix B: Scoring Key for details on how calculations are made throughout the webtool.

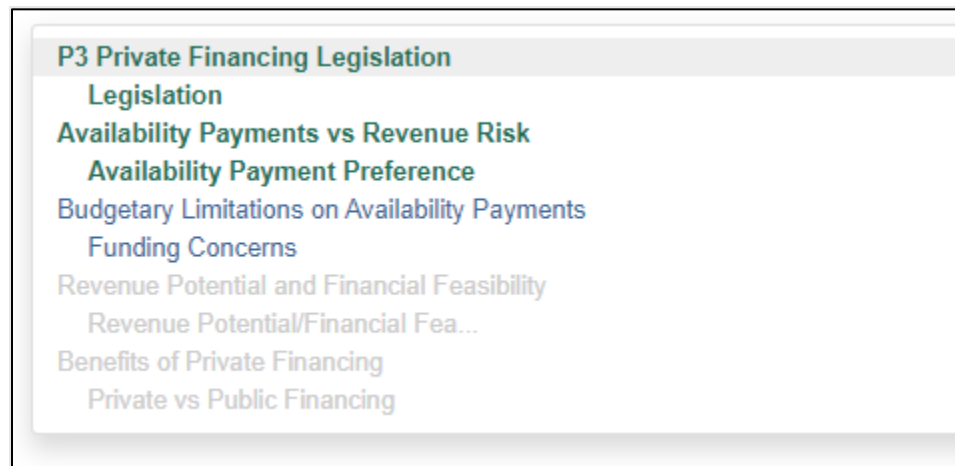
NOTE: At the top of each page in this section, you may click the blue “Click here for description of the activities in project periods by contracting method” link to view a document describing the activities in each phase of the project lifecycle for each contracting method:



Evaluate whether Private Financing Included (DBFOM) or Excluded (DBOM)

[Click here for description of the activities in project periods by contracting method](#)

NOTE: You may navigate to different pages within this section using the navigation pane on the right side of each page. Click the desired item to navigate to it. When an item is complete, its color changes from blue to green.

As you navigate through this section, the webtool may disable some pages if questions do not apply based on other questions and answers. You may notice some items “greyed out” like in the example below. This User Guide provides help for all questions that may be presented by the webtool. Depending on your responses, you may not see every question.



Provide information in the fields on all applicable pages in the section, noting required fields marked with a red asterisk. NOTE: Click the  icon for on-screen field level help, available throughout the webtool. Click the  icon to open a comment block where you may optionally enter information to document your reason for making a selection.



Evaluate whether Private Financing Included (DBFOM) or Excluded (DBOM)

[Click here for description of the activities in project periods by contracting method](#)

* - Required

P3 Private Financing Legislation

Legislation

* Is P3 with private financing allowed under existing legislation?  

Yes

Click to go back

Click to continue

P3 Private Financing: Field Descriptions and Help

- Legislation
 - **Is P3 with private financing allowed under existing legislation?** Indicate whether P3 with private financing is allowed by law (i.e., DBFOM). If the selection is “Yes” the analysis will continue. If the selection is “No” you are notified in a popup that DBOM is the recommended long-term contracting method. If the selection is “No” but include for analysis', long-term contracting with private financing is not eliminated, but any results should be used for analysis purposes only.

Click the “Click to continue” button.

NOTE: The webtool evaluates responses as they are recorded and, if appropriate, stops the workflow to notify the user that DBFOM is not a feasible method, and DBOM may be recommended. You will see a message similar to the following:

DBOM Recommended

×

DBOM is the recommended long-term contracting method for this project.

Would you like to perform a Long-Term Construction and Financing Analysis (PSC/P3 Evaluation)?



No; Cancel

Yes; Long-Term Analysis

Click “Yes; Long-Term Analysis” to proceed to the Long-Term Construction and Financing Analysis (PSC/P3 Evaluation) section.
Click “No; Cancel” to skip a Long-Term analysis and return to the Welcome page.

Availability Payments vs Revenue Risk

Availability Payment Preference

* Are availability payments allowed and preferred over a toll concession?  

-- Select Choice --

Click to go back

Click to continue

Availability Payments vs Revenue Risk: Field Descriptions and Help

- Availability Payment Preference
 - **Are availability payments allowed and preferred over a toll concession?** Using the [availability payments](#) approach, the agency makes periodic payments to the concessionaire on the condition that the facility meets defined performance specifications. As a result, revenues to the concessionaire are not dependent on traffic and/or tolls. If the project is a tolled facility, the public agency retains all toll revenues as well as the risk that toll revenue forecasts will not be realized; however, it also retains full control over toll pricing. The amount of the availability payment is typically determined through a competitive bidding process. Once financial close is reached, the public agency is obligated to make the agreed availability payments subject to the project's performance and contractual conditions. Consider whether an availability payments concession is allowed and preferred over a toll [revenue risk](#) concession and select the appropriate response.

Click the “Click to continue” button.

Funding Concerns

* Does the agency expect to have sufficient funding to make availability payments over the life of the concession? ⓘ

-- Select Choice --

* Does the agency have debt capacity limits that may impact its ability to pay availability payments over the life of the concession? ⓘ

-- Select Choice --

* Is the agency confident that availability payments will be appropriated and allocated as needed over time? ⓘ

-- Select Choice --

Click to go back

Click to continue

Availability Payments: Field Descriptions and Help

- Funding Concerns
 - **Does the agency expect to have sufficient funding to make availability payments over the life of the concession?**
In a DBFOM project with [availability payments](#), the public agency will need to ensure the budgetary resources necessary to make such availability payments over the duration of the contract will be available as required. If issues with the availability of funds over time are likely, DBFOM using availability payments may not be viable.
 - **Does the agency have debt capacity limits that may impact its ability to pay availability payments over the life of the concession?** Certain agencies consider [availability payments](#) to be the equivalent of debt. Consider whether the agency has debt capacity limits that may limit or prohibit it from making availability payments when they are due and select the appropriate response.
 - **Is the agency confident that availability payments will be appropriated and allocated as needed over time?**
[Availability payments](#) may be subject to appropriations risk since the ability to pay will depend on whether the funds needed are appropriated over the duration of the contract. The agency should consider how confident it is that appropriations risk will be limited or minimal over the life of the project.

Click the “Click to continue” button. If you selected “No” to the Availability Payment Preference question above (Are availability payments allowed and preferred over a toll concession?), you will see the following page:

Revenue Potential and Financial Feasibility

Revenue Potential/Financial Feasibility

* Does the project have material revenue generation potential? ⓘ ⓘ

-- Select Choice --

* Is the project revenue potential expected to meet or exceed costs (operational costs + cost of financing capital expenditure)? ⓘ ⓘ

-- Select Choice --

Click to go back

Click to continue

Revenue Risk: Field Descriptions and Help

- Revenue Potential/Financial Feasibility
 - **Does the project have material revenue generation potential?** Based on preliminary or indicative traffic and revenue studies, does the project have the ability to generate revenue primarily from tolls charged for the use of the facility? Other ancillary revenues may be available to supplement tolls.
 - **Is the project revenue potential expected to meet or exceed costs (operational costs + cost of financing capital expenditure)?** The viability of DBFOM with revenue risk depends largely on whether the expected revenues are sufficient to cover costs during the operating period and any monies invested (equity) or borrowed (bonds or loans) by the private sector to pay for capital expenses. Based on traffic and revenue studies to date or other preliminary estimates, will the project be able to rely solely or mostly on project revenues to pay for O&M services and debt service while providing a return to private equity investors?

If you answer “No” to this question, two additional questions will appear:

Revenue Potential and Financial Feasibility

Revenue Potential/Financial Feasibility

* Does the project have material revenue generation potential? ⓘ ↗

Yes

* Is the project revenue potential expected to meet or exceed costs (operational costs + cost of financing capital expenditure)? ⓘ ↗

No

* Does the agency have funding availability limitations that may impact its ability to make the budgetary contributions or other fiscal support required to make the project financially feasible? ⓘ ↗

-- Select Choice --

* If the agency expects budgetary contributions or other fiscal support is necessary to make the project financially feasible, is the agency confident these funds will be appropriated and allocated as needed over time? ⓘ ↗

-- Select Choice --

Click to go back

Click to continue

- **Does the agency have funding availability limitations that may impact its ability to make the budgetary contributions or other fiscal support required to make the project financially feasible?** If the project revenue potential appears to fall short of the levels needed to meet necessary O&M and debt service expenses while providing a sufficient private equity return, is the public agency able to make budgetary contributions and/or provide other forms of fiscal support to the project? If not, DBFOM with revenue risk is likely not a viable option for the project.
- **If the agency expects budgetary contributions or other fiscal support is necessary to make the project financially feasible, is the agency confident these funds will be appropriated and allocated as needed over time?** If the project revenue potential appears to fall short of the levels needed to meet necessary O&M and debt service expenses while providing a sufficient private equity return *and* the public agency is considering supporting the project with contributions or other forms of fiscal support, the contributions/fiscal support may be subject to appropriations risk. The agency should consider how confident it is that appropriations risk will be limited or minimal over the life of the project. If the level of confidence is low, DBFOM with revenue risk is likely not a viable option for the project.

Click the “Click to Continue” button.

Benefits of Private Financing

Private vs Public Financing

* Does the agency believe improved risk management by the private sector, the associated incentive to optimize lifecycle costs and deliver continued performance, and the reduced risk exposure for the agency outweigh the incremental cost of private financing compared to public financing?

Yes

Reset ? Submit Your Responses

Private Financing Recommendation: Field Descriptions and Help

- Private vs. Public Financing
 - **Does the agency believe improved risk management by the private sector, the associated incentive to optimize lifecycle costs and deliver continued performance, and the reduced risk exposure for the agency outweigh the incremental cost of private financing compared to public financing?** The final consideration is whether the agency expects the benefits, such as better risk management and lifecycle cost performance, of a DBFOM approach will outweigh the typical premium of private financing versus public financing. While this is not the only trade-off to consider, it is a critical one for using a DBFOM contracting method.

If you wish to save the responses on this page but are not ready to submit responses to the webtool to complete the analysis, click the blue “Save and Exit” button at the bottom of the page. Responses are saved and you will return to the Welcome page. You can come back to this section later to complete the analysis. When you return to the section, if you decide to change any saved responses or notes, the new response/note will be highlighted in yellow (see below example). This provides a quick visual to anything that is new since the last time you navigated the section.

Revenue Potential and Financial Feasibility

Revenue Potential/Financial Feasibility

* Does the project have material revenue generation potential? ⓘ ⓘ

Yes

* Is the project revenue potential expected to meet or exceed costs (operational costs + cost of financing capital expenditure)? ⓘ ⓘ

-- Select Choice --

Click to go back

Click to continue

When you get to the last page in the section, if you made any changes since the last time responses were saved, you have an opportunity to change your responses back to those last saved, if desired. Click the blue “Reset” button at the bottom of the last page to revert to the previously saved responses/notes.

If you are satisfied with your responses and would like to complete this section and see the results of the analysis, click the gray “Submit Your Responses” button. You are presented with the following message:

DBFOM Recommended

An availability payment DBFOM structure is the recommended long-term contracting method for this project.

Would you like to perform a Long-Term Construction and Financing Analysis (PSC/P3 Evaluation)?



No; Cancel

Yes; Long-Term Analysis

Click “Yes; Long-Term Analysis” to proceed to the Long-Term Construction and Financing Analysis (PSC/P3 Evaluation) section. Click “No; Cancel” to skip a Long-Term analysis and return to the Welcome page.

Perform Long-Term Construction and Financing Analysis (PSC/P3 Evaluation)

Provide information in the fields on all pages in the section, noting required fields are marked with a red asterisk.

NOTE: Click the  icon for on-screen field level help, available throughout the webtool. Click the  icon, where available, to open a comment block where you may optionally enter information to document your reason for making a selection.

At the beginning of the Long-Term Financing Analysis section, you are presented with text describing the Pre-Development Agreement (PDA) process.

Long-Term Construction and Financing Analysis (PSC/P3 Evaluation)

[Click here for description of the activities in project periods by contracting method](#)

* - Required

The Long-Term Construction and Financing Analysis produces min/max ranges for a number of key parameters related to project cost, schedule and financing. Where an agency may find itself within those min/max range for each parameter will depend on a number of parameter-specific considerations that are discussed throughout this module. However, the extent to which an agency can achieve maximum benefits from long-term contracting will also depend on the processes it employs to procure the project and develop and negotiate the long-term contract as discussed below.

Competition and interaction in procurement and project development

In general, competitive pricing pressure in the procurement process is seen as a critical driver to create value for money. This can be achieved through a two-step "hard bid" competitive procurement process (i.e. RFQ followed by RFP) that includes the pricing of design, construction, and other project implementation and long-term costs.

In some situations, agencies may prefer to select a developer through a Pre-Development Agreement (PDA) process, in which case project teams are asked to demonstrate their ability to design and implement the project even though the project may be in the early stages of development. As such, a PDA partner is typically selected through a competitive qualifications-based procurement without committed design, construction, etc. pricing. Both a competitive "hard bid" procurement process and a PDA process are intended to ultimately lead to a project agreement, which spells out the roles and responsibilities of the developer and agency. A two-step competitive hard bid procurement leading to committed bids obviously leads to more competitive pricing pressure than a PDA process.

A PDA process may be desired for projects with significant complexity and uncertainties that may benefit from the inclusion of a private partner early in the project development process. This inclusion can provide key benefits while environmental studies (i.e. NEPA) are still underway - before designs are too advanced - allowing for maximum innovation, as well as private sector views of lifecycle considerations, risk allocation, constructability, cost and financeability.

A checkbox is included at the end to indicate you have read and understood the content:

While not having the same early involvement advantages as a PDA, engagement with private partners during the procurement of more traditional long-term contracts can be achieved in alternative ways. For example, typical two-stage competitive hard bid procurement processes include a draft RFP process, (i.e. one-on-one meetings between bidders and agencies) to allow bidders to provide feedback on the procurement process and/or project in order to achieve the most efficient risk allocation, integrate innovation, and provide other project optimization advantages. The discussion paper on [Early Involvement of Private Developers in the Consideration of Long-Term Public Private Partnership Concession Options](#) presents more alternative approaches to early stage engagement with private partners.

Other procurement and contracting considerations

Besides the procurement process employed, the following considerations are also key value drivers:

- Performance-based specifications: The use of performance-based specifications provide opportunities for bidders to come up with innovative and cost-effective technical solutions by way of broad specifications that allow flexibility within certain boundaries.
- Best value evaluation criteria: By developing clear bid evaluation criteria that transparently lay out and value the procuring agency's goals, bidders are incentivized to propose solutions that meet the agency's objectives in a cost-effective manner.
- Risk allocation: By allocating risks to the party that is best positioned to manage those risks at the lowest cost, the agency can reduce the project's overall risk-adjusted cost, thus generating value for money.
- Performance-based payment mechanism: A well-designed payment mechanism should provide financial incentives to the developer aimed towards meeting the agency's policy objectives.

The above considerations directly impact whether an agency can achieve maximum benefit from long-term contracting and should therefore be considered in conjunction with the other parameter-specific considerations outlined in the remainder of this section of the tool.

☒ I understand that the extent to which an agency can achieve maximum benefit from long-term contracting also depends on whether the procurement process and project agreement are structured in such a way to maximize value for money.

[Click to go back](#)

[Click to continue](#)

Check the “I understand...” checkbox and the “Click to continue” button to proceed.

You may navigate to different pages within this section using the navigation pane on the right side of each page. Click the desired item to navigate to it. When an item is complete, its color changes from blue to green:

- PSC Contracting Method**
 - Contracting Method**
- PSC Public Funding and Financing Approach**
 - PSC Upfront Funding or Borrowing**
 - PSC Public Borrowing Approach**
- Project Timing**
 - Project Preparation**
 - Procurement Duration**
 - Project Implementation Duration**
 - Operations Duration**
 - Delayed PSC Project Preparation Start**
- Project Capital Costs**
 - Project Preparation Costs**
 - Procurement Costs**
 - Project Implementation Costs**
- Project Operational Costs**
 - Annual Routine Costs**
 - Major Maintenance Costs**
 - Major Maintenance Frequency**
- Financing Conditions**
 - Pre-Tax Cost of Equity**
 - Gearing**
 - DSCR Requirements**
 - Long-Term Debt Tenor**
 - Long-Term Debt Interest Rate**
 - Debt Issuance and Arrangement Fees**
 - Construction Loan Interest Rate**
 - Interest Rate Earned on Reserves**

NOTE: At the top of each page in this section, you may click the blue “Click here for description of the activities in project periods by contracting method” link to view a document describing the activities in each phase of the project lifecycle for each contracting method:

Long-Term Construction and Financing Analysis (PSC/P3 Evaluation)

[Click here for description of the activities in project periods by contracting method](#)

At the completion of the “Evaluate whether Private Financing Included (DBFOM) or Excluded (DBOM)” section, the webtool recommended the preferred long-term contracting method. This method (DBFOM or DBOM) is displayed on the right side of the pages in this section. You may have also selected the desired repayment method (Availability Payments/Toll Revenues) while completing questions in the DBFOM/DBOM section. If so, the selection is also displayed.


Long-Term Construction and Financing Analysis (PSC/P3 Evaluation)

[Click here for description of the activities in project periods by contracting method](#)

* - Required

PSC Contracting Method

Contracting Method

* Do you want to perform this analysis assuming a DB or DBB procurement for the PSC?  

DB

[Click to go back](#)

[Click to continue](#)

PSC Contracting Method; Contracting Method: Field Descriptions and Help

- **Do you want to perform this analysis assuming a DB or DBB procurement for the PSC?** Based on your selection, a PSC/P3 analysis will be performed for either the Design-Build (DB) or Design-Bid-Build (DBB) method. Select the desired method here.

Click the “Click to continue” button.

PSC Public Funding and Financing Approach

PSC Upfront Funding or Borrowing

* If private financing is either not going to be used or is unavailable, does the agency intend to issue debt? ⓘ ⓘ

No

PSC Public Borrowing Approach

If the agency were to issue debt to finance the project, would it issue toll revenue bonds or general obligation bonds to finance the project? ⓘ ⓘ

-- Select Choice --

Click to go back

Click to continue

PSC Public Funding and Financing Approach: Field Descriptions and Help



- PSC Upfront Funding or Borrowing
 - **If private financing is either not going to be used or is unavailable, does the agency intend to issue debt?** If private financing were not available, the agency would need to decide whether to use (exclusively) existing reserves or whether to (also) issue public debt to help finance the project. Public financing can help accelerate project delivery, as existing public reserves may be insufficient to realize the project today.
- PSC Public Borrowing Approach
 - **If the agency were to issue debt to finance the project, would it issue toll revenue bonds or general obligation bonds to finance the project?** Depending on the revenues pledged to repay the public debt, the agency can issue either revenue bonds (backed by toll revenues) or general obligation bonds (backed by all agency revenues, typically including tax revenues).

Click the “Click to continue” button.

For the following questions, based on the preferred long-term contracting option (DBFOM or DBOM), the webtool displays the minimum and maximum values, if P3, for each item. This information is intended to be educational and serves as guidelines for the user. The values displayed in this section may be used as input to P3-VALUE 2.3.

Project Timing



Project Preparation

* In what year will project preparation start?  

2018

Context:

The project development start year is the year in which project development activities begin. This year will be used to determine the overall project timeline from the start of initial project development activities through construction completion. The tool assumes that project development activities will start at the same time under the PSC and P3 options, unless the PSC option is delayed due to lack of full funding.

* What is the estimated duration of the project preparation phase (in months) for the PSC?  

24

Context:

The project preparation period runs from initiation of the project to start of procurement for the project. This period involves activities necessary to assess the project's feasibility and structure it ahead of procurement. Activities that are likely common among the contracting methods include feasibility studies, traffic and revenue studies, EIS, ROW acquisition, etc. It excludes drafting of procurement documents, which is included in the procurement period. In DBB, this period will also include preliminary design and detailed design activities necessary to prepare a complete set of contract documents for bids. In DB, DBOM, or DBFOM this period will include preliminary design necessary to solicit proposals during procurement but excludes detailed design.

Output Ranges:

Contract Method: DB

Minimum Value under P3: 24 month(s)

Maximum Value under P3: 30 month(s)

Project preparation duration could potentially be longer under DBB when compared to DB, DBOM, or DBFOM as detailed design is included in the former. Project preparation duration under DB is typically comparable to DBOM or DBFOM.

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Project Timing; Project Preparation: Field Descriptions and Help

- **In what year will project preparation start?** Enter start year of project preparation.
- **What is the estimated duration of the project preparation phase?** Enter estimated project preparation duration in months.

Click the “Click to continue” button.

Project Timing

Procurement Duration

* What is the estimated duration of procurement for the PSC (in months)?  

Context:

The procurement period runs from the start of procurement to contract award or financial close (if applicable, whichever is later). In DBB, this period includes activities such as drafting procurement documents, advertisement for bids, pre-bid meetings, bid opening, contract execution and finalizing financial arrangements (financial close), if applicable. In DB and DBOM, this period includes activities such as preparation of procurement documentation, the RFQ process, short-listing, the RFP process which may include submission and evaluation of alternative technical concepts (ATCs), proposal evaluation, any negotiations, selection of a preferred bidder, contract execution and finalizing financial arrangements (financial close), if applicable. In DBFOM, the activities in this period are similar to DB and DBOM, but it also includes activities necessary for securing private financing and reaching both commercial and financial close. If a TIFIA loan is expected to be part of the financing package, then the time to secure its commitment may increase this duration, potentially up to 12 months.

Output Ranges:

Contract Method: DB

Minimum Value under P3: 24 month(s)

Maximum Value under P3: 48 month(s)

Relative to DBB, P3 procurement time can be considerably longer due to the range of activities involved during this phase to vet potential technical solutions as well as to secure preliminary and final financial commitments, including TIFIA commitment if applicable. Relative to DB, many procurement activities may be similar, but the additional time needed to make financial arrangements will likely increase the procurement time, including TIFIA commitment if applicable.

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Project Timing; Procurement Duration: Field Descriptions and Help

- **What is the estimated duration of procurement for the PSC (in months)?** Enter the expected procurement duration in months for the selected PSC.

Click the “Click to continue” button.

Project Timing

Project Implementation Duration

* What is the estimated duration of implementation for the PSC (in months)?  

Context:

The implementation period runs from contract award or financial close (if applicable, whichever is later) to substantial completion. In DBB, this period involves the construction activities by the successful bidder to build the project. In DB, DBOM, and DBFOM, this period involves the necessary design and construction activities by the successful bidder/consortium to complete design and construction of the project.

Output Ranges:

Contract Method: DB

Minimum Value under P3: 54 month(s)

Maximum Value under P3: 66 month(s)

The implementation period under P3 is expected to be relatively comparable to DB since design and construction will occur concurrently in both methods. However, some decrease in schedule may occur since the P3 contractor often is incentivized to complete the project early since it may either start receiving toll revenues or it may receive a significant milestone payment and/or start the availability payment period. Relative to DBB, P3 may be longer since some design work still needs to be completed under P3 after contract award; however, it may be shorter since the integrated design-build approach will likely result in more efficient packaging, sequencing and completion of work, which can reduce the overall implementation period.

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Project Timing; Project Implementation Duration: Field Descriptions and Help

- **What is the estimated duration of implementation for the PSC (in months)?** Enter the estimated implementation duration in months for the PSC.

Click the “Click to continue” button.

Project Timing

Operations Duration

* What is the estimated duration of the operations phase for the PSC (in years)?  

35

Context:

For the purpose of comparison, the PSC and/or P3 operations durations should be adjusted such that the overall evaluation period used for the analysis is the same. Generally, the proposed P3 concession term is used for this purpose.

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Project Timing; Operations Duration: Field Descriptions and Help

- **What is the estimated duration of the operations phase for the PSC (in months)?** Enter the estimated operations period duration in years for the PSC. The operations period should be long enough, so the facility undergoes a major maintenance cycle or two.

Click the “Click to continue” button.

Project Timing

Delayed PSC Project Preparation Start

In what year will the project preparation start if budget constraints delay the PSC? ⓘ ⓘ

2025 ▼

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Project Timing: Delayed PSC Preparation Start: Field Descriptions and Help

- **In what year will the project development start if budget constraints delay the PSC?** If budgetary constraints are likely to delay the project if not implemented as a P3, enter the year in which project preparation activities are expected to start for such a delayed PSC. The PSC start date may be delayed where full funding of a PSC option would not be available until later; hence, a later start date.

Click the “Click to continue” button.

Project Capital Costs

Project Preparation Costs

* What are the estimated (risk and uncertainty adjusted) project preparation costs for the PSC?  

\$ 75,000,000

Context:

The difference in project preparation cost is mainly driven by the difference in activities to be conducted during this project phase. In particular, under DBB, both preliminary and detailed design cost would be included whereas under DB, DBOM, and DBFOM, only preliminary design cost would have to be accounted for as detailed design will be performed throughout and after the procurement process.

Output Ranges:

Contract Method:	DB		
Minimum Value under P3:	\$75,000,000	Maximum Value under P3:	\$93,750,000
If the project is expected to leverage private finance, additional focus on traffic and revenues may increase costs relative to projects that rely on public funding or financing.			

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Project Capital Costs; Project Preparation: Field Descriptions and Help

- **What are the estimated (risk and uncertainty adjusted) project preparation costs for the PSC?** Enter the estimated preparation costs, adjusted for risk and uncertainty, including any contingencies the agency may typically include to account for risk and uncertainty.

Click the “Click to continue” button.

Project Capital Costs

Procurement Costs

* What are the (risk and uncertainty adjusted) public procurement costs for the PSC? ⓘ ↗

\$ 10,000,000

Excluding environmental costs.

Context:

Public agency procurement/management costs could include the development of procurement documents, market soundings, stipends to shortlisted firms, and administration of the procurement and ATC process. If PSC is DBB, procurement costs to the agency are typically lower since some activities such as financial analysis, market soundings and administration of ATC processes are not typically done. Further, the administration of procurement is less complex. If PSC is DB, procurement costs would be higher than DBB since more activities are involved and procurement administration is more complex.

Output Ranges:

Contract Method:	DB		
Minimum Value under P3:	\$11,500,000	Maximum Value under P3:	\$20,000,000

Procurement time and costs for P3s are considerably higher than DBB or DB. Evidence from VM studies and published reports suggests that relative to DBB these costs can be 2-4 times higher and relative to DB they can be up to 1-2 times higher.

* What are the (risk and uncertainty adjusted) private procurement costs for the PSC? ⓘ ↗

\$ 15,000,000

Expect to short list 3 bidders with estimated pursuit cost at \$5M each.

Context:

Bidders incur varying levels of cost during preparation of bids/proposals. More sophisticated and involved procurement processes such as two-stage (RFQ followed by RFP) best value procurements that include an ATC process will increase the costs of the bidder. Successful completion of procurement, i.e. contract award/financial close, is presumed.

Output Ranges:

Contract Method:	DB		
Minimum Value under P3:	\$22,500,000	Maximum Value under P3:	\$45,000,000

Bidders expend significant funds in pursuit of P3s. Evidence from VM studies and published reports suggest that these values can be percentage points of total capital costs where a sizeable portion of this cost is related to design, lifecycle cost optimization and making the necessary financial arrangements. Relative to DBB, the incremental cost of P3 is likely less compared to DB since bidders pursuing DBs engage in somewhat similar activities (except detailed O&M analysis and financial arrangements).

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Project Capital Costs; Procurement: Field Descriptions and Help

- **What are the (risk and uncertainty adjusted) public procurement costs for the PSC?** Enter the estimated (risk and uncertainty adjusted) public procurement costs for the PSC. Public agency procurement costs could include the development of procurement documents, market soundings, stipends to shortlisted firms, and administration of the procurement and ATC process.
- **What are the (risk and uncertainty adjusted) private procurement costs for the PSC?** Enter the estimated (risk and uncertainty adjusted) costs to the winning bidder for the PSC.

Click the “Click to continue” button.

Project Capital Costs

Project Implementation Costs

* What are the (risk and uncertainty adjusted) implementation costs for the PSC? ⓘ ⓘ

\$ 750,000,000

Context:

If PSC is DBB, then it is likely that general constructability reviews have occurred, so the design is not tailored for any particular construction contractor, meaning that an integrated P3 approach has more potential for cost savings. Alternatively, if the PSC is DB, then the construction contractor is involved during the iterative design that occurs during procurement, so it likely provides specific constructability recommendations for each design solution considered, resulting in lower construction costs compared to DBB. Further, the DB team can continue to explore ways to modify the design and/or means and methods during the construction process.

Output Ranges:

Contract Method:	DB		
Minimum Value under P3:	\$712,500,000	Maximum Value under P3:	\$750,000,000

Output or performance-based specifications and ATC processes provide P3 bidders the opportunity to optimize technical solutions and innovate (including long-term, life cycle considerations). This may reduce or possibly increase capital costs related to construction. Such opportunities are likely greater when comparing P3s to DBB than DB.

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Click to continue



Project Capital Costs; Project Implementation Costs: Field Descriptions and Help

- **What are the (risk and uncertainty adjusted) implementation costs for the PSC?** Enter the estimated risk-adjusted implementation (design and construction) costs for the PSC.

Click the “Click to continue” button.

Project Operational Costs

Annual Routine Operations and Maintenance Costs

* What are the estimated (risk and uncertainty adjusted) annual routine operations and maintenance costs for the PSC?  

\$
15,000,000

Context:

If PSC is DBB, O&M is typically performed by the agency and potentially subject to budgetary constraints. If PSC is DB, the inclusion of warranties or some level of incentives in contractual arrangements may improve up-front capital investment and/or quality of means and methods; this might reduce O&M cost.

Output Ranges:

Contract Method:	DB		
Minimum Value under P3:	\$12,000,000	Maximum Value under P3:	\$14,250,000

In P3s, contractors are incentivized to optimize lifecycle costs through an integrated asset development and asset management strategy. This will entail greater initial investment resulting in innovation in design and construction to reduce lifecycle cost. Often, P3 contractor will increase routine and preventative maintenance to reduce major maintenance costs and the associated disruptions. P3s also provide a high level of O&M price certainty to the public agency.

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Project Operational Costs; Annual Routine Operations and Maintenance: Field Descriptions and Help

- **What are the estimated (risk and uncertainty adjusted) annual routine operations and maintenance costs for the PSC?**
Enter the estimated (risk and uncertainty adjusted) annual routine O&M costs in nominal dollars for the base year for the PSC.

Click the “Click to continue” button.

Project Operational Costs

Major Maintenance Costs

* What are the estimated (risk and uncertainty adjusted) major maintenance costs per major maintenance cycle for the PSC?  

\$ 20,000,000

\$20M expenditure every 10 years over life of asset.

Context:

If PSC is DBB or DB, major maintenance is performed by agency and may be impacted by budgetary constraints. To allow for an apples-to-apples comparison within the context of a VFM analysis, it is typically assumed that the agency carries out major maintenance as originally scheduled.

Output Ranges:

Contract Method:	DB		
Minimum Value under P3:	\$17,000,000	Maximum Value under P3:	\$20,000,000

In P3s, the incentive to optimize lifecycle costs will drive contractor to find ways to minimize major maintenance activities over the O&M period. Further, operational performance requirements and hand-back standards incentivize routine and preventive maintenance, which will reduce major maintenance actions.

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Project Operational Costs; Major Maintenance: Field Descriptions and Help

- **What are the estimated (risk and uncertainty adjusted) major maintenance costs per major maintenance cycle for the PSC?** Enter the estimated (risk and uncertainty adjusted) major maintenance cost per cycle in nominal dollars for the PSC base year.

Click the “Click to continue” button.

Project Operational Costs

Major Maintenance Frequency

* What is the anticipated frequency of major maintenance for the PSC (in years)?  

10

Context:

Major maintenance cycle duration refers to the length of the major maintenance cycle, expressed in years (i.e. every how many years does major maintenance get carried out?). If PSC is DBB or DB, major maintenance is performed by agency and may be impacted by budgetary constraints and deferred. To allow for an apples-to-apples comparison within the context of a VFM analysis, it is typically assumed that the agency carries out major maintenance as originally scheduled.

Output Ranges:

Contract Method:	DB		
Minimum Value under P3:	10 year(s)	Maximum Value under P3:	12 year(s)

In P3s, the incentive to optimize lifecycle costs will drive contractor to find ways to minimize major maintenance activities over the O&M period. Further, operational performance requirements and hand-back standards incentivize routine and preventive maintenance. This may reduce the frequency of major maintenance (i.e. increase the major maintenance cycle duration).

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Project Operational Costs; Major Maintenance Frequency: Field Descriptions and Help

- **What is the anticipated frequency of major maintenance for the PSC (in years)?** Enter the expected frequency of major maintenance actions (i.e., action occurs every 10 years) for the PSC.

Click the “Click to continue” button.

The following pages display Financing Information and Considerations.

Based on the preferred long-term contracting option (DBFOM or DBOM) and the repayment method (availability payments, toll revenues, or tax revenues), if financing is considered, the webtool displays the minimum and maximum values or ranges for each item. This information is intended to be educational and serves as guidelines for the user. The values displayed in this section may be used as input to P3-VALUE 2.3.

Financing Conditions

Pre-Tax Cost of Equity

Context:

The pre-tax cost of equity is the required return that equity investors expect from investing in a P3.

Output Ranges:

Financing Method:	DBFOM		
PSC Minimum Value:	N/A	PSC Maximum Value:	N/A
P3 Minimum Value:	9%	P3 Maximum Value:	12%

Considerations:

- Although there is no equity financing in publicly financed transaction, there is effectively a cost to issuing GO debt for revenue generating projects, particularly if such debt is issued for assets that could otherwise be financed on a standalone basis. GO debt is a valuable resource with limited capacity, thus the use of that capacity can adversely impact the ability to issue debt for competing projects, the issuers credit rating, etc.
- Target equity returns consider risks that equity investors are exposed to and that cannot be (fully) mitigated through back-to-back contracting with subcontractors (i.e. interface risks, demand risk, agency credit risk, inflation, etc.). All other things being equal, more risk for the equity investor will result in a higher target equity return.
- All other things being equal, target equity returns are lower for availability payment P3 due to lower financial risk compared to a revenue risk P3 (i.e. no demand risk under availability payment P3, with most other risks being similar).
- No equity financing in DBF (which typically has shorter-term private debt only without any private equity).
- No equity financing in DBF (which typically has shorter-term private debt only).

Financing Information/Considerations; Pre-Tax Cost of Equity

The pre-tax cost of equity is the return that equity investors expect to earn from investing in a P3. In P3-VALUE 2.2, the pre-tax cost of equity is used in combination with a cost, schedule, and financing inputs to calculate the required annual availability payment (for an availability payment transaction) or upfront subsidy/concession fee (for a revenue risk concession) if the project were to be implemented as a P3.

The provided ranges give the user an idea of reasonable equity return expectations for an availability payment transaction or a revenue risk concession. As described in the considerations, all else being equal, more risk exposure for P3 investors will mean their target equity return will be higher, resulting in higher availability payments (for availability payment transactions), higher upfront subsidy, or a lower concession fee (for revenue risk concessions).

Gearing

Context:

Gearing is the ratio of long-term debt financing to overall long-term financing, calculated as the amount of long-term debt financing divided by the sum of long-term debt financing and equity at substantial completion.

Output Ranges:

Financing Method:	DBFOM		
PSC Minimum Value:	N/A	PSC Maximum Value:	N/A
P3 Minimum Value:	80%	P3 Maximum Value:	92%

Considerations:

- Note that there is no equity financing in publicly financed transactions. As such, gearing is not applicable in the PSC.
- Gearing represents the share of long-term debt financing in the project's overall long-term financing structure (long-term debt + equity at substantial completion, excluding any short-term debt or grant funding).
- Debt financiers allow for higher gearing (i.e. more debt) if revenues are more predictable. All other things being equal, availability payment P3s are more highly leveraged than revenue risk P3s.

Financing Information/Considerations; Gearing

Gearing (often referred to as leverage or debt-to-equity ratio) is the ratio of long-term debt financing to overall long-term financing, calculated as the amount of long-term debt financing divided by the sum of long-term debt financing and equity at substantial completion. By calculating the gearing at substantial completion, any short-term construction debt and/or grant funding is excluded. The gearing input in P3-VALUE 2.3 determines the split between equity and long-term debt, thus impacting the overall cost of capital. As debt is typically cheaper than equity, more gearing helps lower the average cost of capital. As such, it impacts the required annual availability payment (for an availability payment transaction) or upfront subsidy/concession fee (for a revenue risk concession) in much the same way as the cost of equity does. However, minimum Debt Service Coverage Ratio (DSCR) requirements (see below) may put a cap on how much gearing is possible.

All else being equal, debt financiers will allow for a higher level of gearing if revenues are relatively predictable. The provided ranges give the user an idea of what is a reasonable gearing for an availability payment transaction or a revenue risk concession.

DSCR Requirements

Context:

The debt service coverage ratio (DSCR) is the ratio between cash flows available for debt service and the debt service due in a given period. A higher DSCR means that there is a bigger "buffer" between the cash flows available and the debt service required, which provides more protection to debt financiers. Banks typically have rate covenants that specify the minimum DSCR requirements that the project must meet to ensure borrowers can repay the debt even under downside scenarios.

Output Ranges:

Financing Method:	DBFOM		
PSC Minimum Value:	N/A	PSC Maximum Value:	N/A
P3 Minimum Value:	1.15x	P3 Maximum Value:	1.25x

Considerations:

- Debt financiers will require a higher minimum DSCR if revenues are uncertain, although the DSCR requirement is also impacted by the presence of other liquidity mechanisms, including backstops, reserve accounts, etc.
- All other things being equal, toll revenue-backed borrowing will have a higher minimum DSCR requirement than general obligations or availability payment-backed borrowing.
- All other things being equal, highly rated public borrowers have a lower minimum DSCR requirement than private borrowers or poorly rated public borrowers.
- All other things being equal, borrowing backed by a diversified portfolio of toll revenue projects will have a lower minimum DSCR requirement than borrowing backed by a single toll revenue project.
- Forecasted minimum (and average) DSCRs will generally exceed rate covenants for revenue risk transactions and will also vary in accordance with the selected base case (sponsor, lender or equity).

Financing Information/Considerations; DSCR Requirements

The Debt Service Coverage Ratio (DSCR) is the ratio between cash flows available for debt service and the debt service due in a given period. A higher DSCR means there is a bigger buffer between the cash flows available and the debt service required, which provides more protection to debt financiers. Banks typically have minimum DSCR requirements to ensure borrowers can repay the debt even under downside scenarios. Much like gearing, lenders will require a lower minimum DSCR if the project is believed to be less risky. As such, availability payment transactions typically have lower minimum DSCR requirements.

In P3-VALUE 2.3, the overall financing structure (i.e., the mix of equity and debt as well as the repayment profile of the debt) is optimized such that the long-term debt is fully repaid at maturity, the calculated DSCR never falls below the minimum DSCR requirement, and the calculated equity return is equal to or exceeds the cost of equity. The provided ranges give users information as to what is typical in the capital marketplace for infrastructure finance.

Long-Term Debt Tenor

Context:			
The long-term debt tenor is the time period from first draw to the final repayment of the loan.			
Output Ranges:			
Financing Method:	DBFOM		
PSC Minimum Value:	N/A	PSC Maximum Value:	N/A
P3 Minimum Value:	Concession period minus required debt tail (0-2 years)	P3 Maximum Value:	40 years
Considerations:			
<ul style="list-style-type: none"> • Lenders will want to see a debt service-free “tail” at the end of the concession term that can act as a buffer in case the concessionaire is unable to repay the loan in full before the maturity date. As such, the tenure will always be less than the P3 concession term. For public borrowing, similar constraints will apply if the financing agency is given the right to operate the toll road for a specific term, e.g. 50 years. • For availability payment P3s, the tail can be as short as 3-6 months. For revenue risk P3s, the tail will be longer (1-5 years) given the higher level of uncertainty with regards to the loan repayment. For sales tax-backed bonds, the tenure may be constrained by the expiration of a specific sales tax (e.g. Measure I in California). • Private bond financing (including Private Activity Bonds) typically have a tenure of 40 years or less. • Public financing can have long tenure of 40 years or possibly even more. • TIFIA loans must be repaid within 35 years from substantial completion, meaning that the TIFIA loan's tenure can be over 35 years when including the construction period. • Private placement debt (i.e. from insurance companies / other institutional investors) tenure can extend to 20-25 years, sometimes longer. • Commercial bank debt tenure (post-2008) are most often ~7 years maximum, presenting a re-financing risk to the structure. Commercial bank debt is most often used for construction period financing to be repaid through milestone payments. 			

Financing Information/Considerations; Long-Term Debt Tenor

The Long-Term Debt Tenor is the time from the first draw to the final repayment of the loan. The longer the tenor for a given interest rate, the lower the average cost of capital. P3-VALUE 2.3 uses the long-term debt tenor to structure the repayment of the loan, either using an annuity-style repayment (with level debt service payments in each period) or by sculpting the repayment profile to the available revenues for debt service. The latter results in a level Debt Service Coverage Ratio (DSCR) in all periods, which means the ratio between available cash flows and debt service is constant over time. A constant ratio is indicative of a more efficient financing structure in that it helps reduce the overall cost of capital.

As specified in the considerations, the maximum debt tenor available for a project depends on the debt provider, and the concession length and the need for a debt service-free “tail” at the end of the concession. The tool provides guidelines on what are reasonable maximum tenures for a variety of debt financing products.

Long-Term Debt Interest Rate

Context:

The long-term debt interest rate is the interest rate charged on long-term debt by lenders.

Output Ranges:

Financing Method:	DBFOM		
PSC Minimum Value:	N/A	PSC Maximum Value:	N/A
P3 Minimum Value:	Risk free rate (tenure adjusted) + 1.00%	P3 Maximum Value:	Risk free rate (tenure adjusted) + 1.50%

Considerations:

- The long-term interest rate is a reflection of 1) the risk-free interest rate for the respective tenure and 2) a risk premium that compensates debt financiers for project-specific risks that they are exposed to (including whether they are senior or subordinate lenders).
- U.S. Treasury rates are considered a good proxy for the risk-free interest rate for many debt instruments. However, some project finance markets use other base rates, such as LIBOR for the bank loan market and Municipal Market Data (MMD) benchmark for the Private Activity Bonds (PABs) municipal market.
- Like the risk-free interest rate, the risk premium may vary over time as market conditions change.
- The risk premium for revenue risk transactions will typically be higher than for projects without revenue risk.
- In the PABs market, credit ratings are required and an important pricing driver. All other things being equal, a higher credit rating should be indicative of a lower risk premium.
- As availability payments are paid by the agency to the concessionaire, the creditworthiness of the agency may impact the risk premium in an availability payment P3.

Financing Information/Considerations; Long-Term Debt Interest Rate

The Long-Term Debt Interest Rate is the interest rate charged on long-term debt by lenders. The interest rate depends on the risk-free interest rate for the desired tenure and a risk premium that reflects the project's overall risk profile. The latter depends on a large number of considerations, including the project's overall technical complexity, the repayment source (revenue risk or availability payments), the P3 contract as well as the creditworthiness of the P3 concessionaire and the agency (if payments are expected to be made by the agency). Although interest rates can be quite volatile, the tool provides ranges of the credit margin (the interest rate above the risk-free rate) for both availability payment and revenue risk P3 concessions and for publicly financed projects.

Debt Issuance and Arrangement Fees

Context:

Debt issuance / arrangement fees refers to the upfront fees that lender and advisors charge for issuing debt. Note that P3-VALUE 2.2 does not consider commitment fees (i.e. fees to compensate debt financiers for committed but undrawn debt balances).

Output Ranges:

Financing Method: DBFOM

PSC Minimum Value: N/A

PSC Maximum Value: N/A

P3 Minimum Value: 0.00%

P3 Maximum Value: 1.00%

Considerations:

- Given the complexity of P3s, the fees associated with securing project finance debt tend to be higher than for public or investment-grade corporate issuers. However, upfront fees depend on the financial instrument and are negotiable in conjunction with credit margins and other terms. For example, low (or even zero) upfront fees may be compensated through higher credit margins and/or other terms.
- All other things being equal, fees will represent a lower share of a larger transaction amount.

Financing Information/Considerations; Debt Issuance and Arrangement Fees

Debt issuance/arrangement fees refer to the upfront fees that lenders and advisors charge for issuing debt. P3-VALUE 2.3 uses these percentages to calculate the overall financing fees, which will be incurred by the concessionaire (or agency if the project is publicly financed). Please note that P3-VALUE 2.3 does not consider commitment fees (i.e., fees to compensate debt financiers for committed but undrawn debt balances).

As explained in the considerations, upfront fees depend on the financial instrument and are negotiated in conjunction with credit margins and other terms. In other words, debt financiers tend to negotiate a package, which may include interest rates, fees, drawdown flexibility (i.e., delayed drawdown), and debt tail. It may be challenging to predict with accuracy what the exact fees will be without considering the other financing terms.

Construction Loan Interest Rate

Context:

Construction loan interest rate refers to the interest rate charged by lenders on short-term debt, which may be secured by milestone payments paid by the agency to the concessionaire upon substantial completion.

Output Ranges:

Financing Method:	DBFOM		
PSC Minimum Value:	N/A	PSC Maximum Value:	N/A
P3 Minimum Value:	Risk free rate (tenure adjusted) + 0.50%	P3 Maximum Value:	Risk free rate (tenure adjusted) + 1.00%

Considerations:

- P3-VALUE 2.3 uses construction debt only to the extent that it is secured by milestone payments from the agency to the concessionaire. As such, no short-term construction financing is assumed for publicly financed transactions. The tenure of private construction debt is directly derived from the construction period within the model, as any milestone payments are assumed to be paid at the end of construction.
- The construction debt interest rate is a reflection of 1) the risk-free interest rate for the respective tenure and 2) a risk premium that compensates short-term debt financiers for project-specific risks that they are exposed to, which include construction risks, the creditworthiness of the consortium, and the creditworthiness of the agency making the payment.

Financing Information/Considerations; Construction Loan Interest Rate

Construction Loan Interest Rate refers to the interest rate charged by lenders on short-term debt, which may be secured by milestone payments paid by the agency to the concessionaire upon substantial completion. P3-VALUE 2.3 uses short-term construction debt only to the extent that it is secured by milestone payments from the agency to the concessionaire. The tenure is directly derived from the construction period within the model, as any milestone payments are assumed to be paid at the end of construction. P3-VALUE 2.3 does not anticipate any short-term debt under the PSC. Similar to the interest rate for long-term debt, the construction debt interest rate reflects the risk-free interest rate for the respective tenure and a risk premium that compensates short-term debt financiers for project-specific risks to which they are exposed. Although interest rates can be quite volatile, the tool provides ranges of the credit margin (the interest rate above the risk-free rate). As the short-term loan is secured by milestone payments, there is no distinction between availability payment and revenue risk P3 concessions.

Interest Rate Earned on Reserves

Context:

The interest rate earned on reserves refers to the interest rate that applies to cash balances that the agency or concessionaire may hold (e.g. debt service reserve account, major maintenance reserve account).

Output Ranges:

Financing Method:	DBFOM		
PSC Minimum Value:	0.00%	PSC Maximum Value:	2.00%
P3 Minimum Value:	0.00%	P3 Maximum Value:	2.00%

Considerations:

- Short-term interest rates can fluctuate considerably and should be estimated based on recent market data.
- Commercial bank rates for demand deposits and guaranteed investment contracts should be consulted for the (short-term) interest rate that can be earned on reserves, such as the Debt Service Reserve Account.

[Back to the top](#)

[Click to go back](#)
[Save and Exit](#)
[Submit Your Responses](#)

Financing Information/Considerations; Interest Rate Earned on Reserves

The Interest Rate Earned on Reserves refers to the interest rate that applies to cash balances the agency or concessionaire may hold (e.g., debt service reserve account or major maintenance reserve account). By accounting for interest income on these reserves, P3-VALUE 2.3 aims to limit the negative effects in terms of overall project costs of such reserves. Whereas the tool provides ranges for short-term interest rates, short-term interest rates can fluctuate considerably. As such, users should use market data such as commercial bank rates for demand deposits and guaranteed investment contracts to estimate the appropriate short-term interest rate that can be earned on reserves.

If you wish to save the responses on this page but are not ready to submit responses to the webtool to complete the analysis, click the blue “Save and Exit” button at the bottom of the page. Responses are saved, and you will return to the Welcome page. You can come back to this section later to complete the analysis. When you return to the section, if you decide to change any saved responses or notes, the new response/note will be highlighted in yellow (see below example). This provides a quick visual of anything new since the last time you navigated the section.

Cost Constraints

Cost

* How difficult will it be to develop a reliable cost estimate for the project? ⓘ ↗

Very Difficult ▼

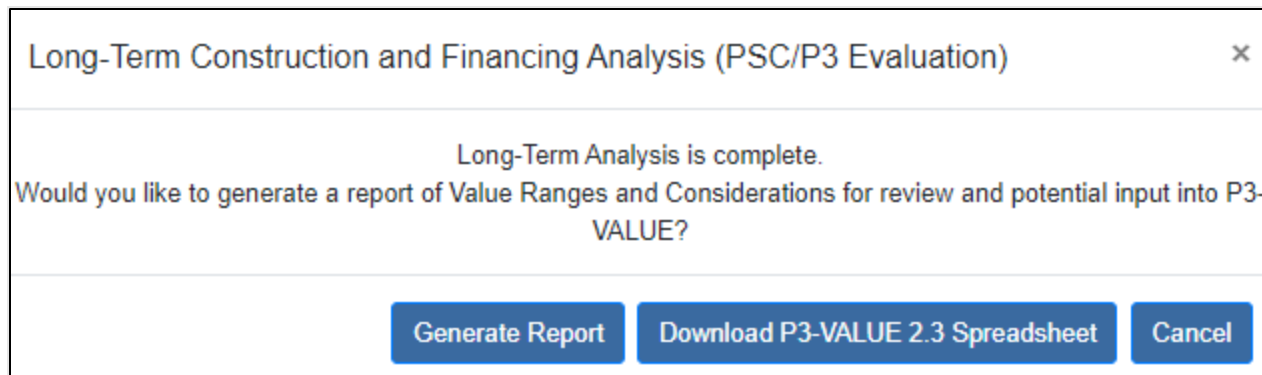
* Does the project include construction materials with volatile pricing? ⓘ ↗

Yes ▼

[Click to go back](#) [Click to continue](#)

When you get to the last page in the section, if you made any changes since the last time responses were saved, you have an opportunity to change your responses back to those last saved, if desired. Click the blue “Reset” button at the bottom of the last page to revert to the previously saved responses/notes.

If you are satisfied with your responses and would like to complete this section and see the results of the analysis, click the gray “Submit Your Responses” button. You are presented with the following message:



Click “Generate Report” to view and optionally print a report of information from this section. See Appendix C: Reports for details on how to generate reports.

Click “Download P3-VALUE 2.3 Spreadsheet” to download the P3-VALUE 2.3 Microsoft Excel spreadsheet tool.

Click “Cancel” to return to the Welcome page.

Perform a Value for Money Analysis (P3-VALUE 2.3)

P3-VALUE 2.3 is an Excel-based analysis tool that supports a rigorous quantitative comparison of P3 vs. public procurement. The public procurement, termed “Conventional Delivery” or Public Sector Comparator (PSC), involves public funding or borrowing. The tool covers both cash flow-based Value for Money (VfM) analysis and economic efficiency-based Project Delivery Benefit-Cost Analysis (PDBCA). You may select either one or both to compare P3 and PSC for ACM decision making.

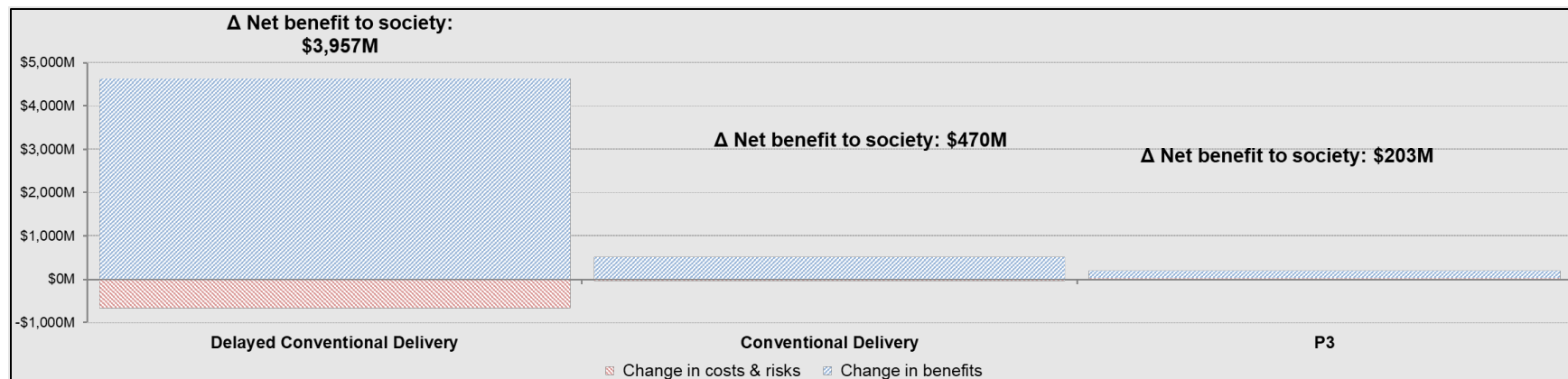
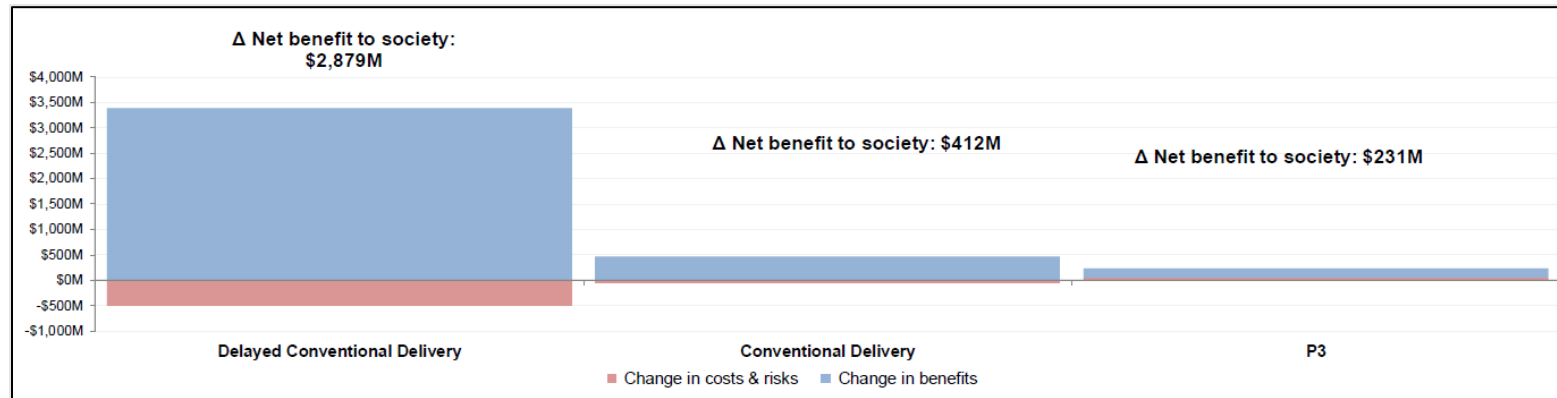
After downloading the tool and opening it, you must enable macros to use the tool. Select Navigator and click the Inputs button to open the Project Inputs worksheet. The Project Inputs sheet contains three input sections, namely 1) timing, cost, delivery, and financing inputs, 2) traffic, toll, and competitive neutrality inputs, and 3) benefit-cost analysis (BCA), taxation, inflation, discounting, and risk inputs. You are advised to refer to the outputs from the PSC/P3 Long-Term Analysis for most of the timing, cost, delivery, and financing inputs. You can access the detailed user guide of the P3-VALUE 2.3 via this link:

https://www.fhwa.dot.gov/ipd/p3/toolkit/analytical_tools/p3_value/.

Click Navigator and VfM Outputs to open the VfM Output Summary sheet. The summary sheet contains a summary of the NPV of all relevant cash flows to either the public agency or the P3 concessionaire under PSC and P3. You can compare PSC and P3 across each cost and revenue item and then decide which is a better ACM based on which ACM offers a higher total net value to the Agency (after considering revenues to the Agency, if applicable).

Click Navigator and PDBCA Outputs to open the PDBCA Output Summary sheet. The PDBCA Output Summary sheet contains a summary of the NPV of all relevant costs and benefits under Delayed PSC, PSC, and P3. You can compare Delayed PSC, PSC, and P3 in measures of economic efficiency such as travel time, safety, emissions, energy, vehicle operation cost, and induced travel. The P3 delivery is better than PSC if it leads to positive net benefits to society, as reflected by a higher NPV of social net benefits (benefits minus costs).

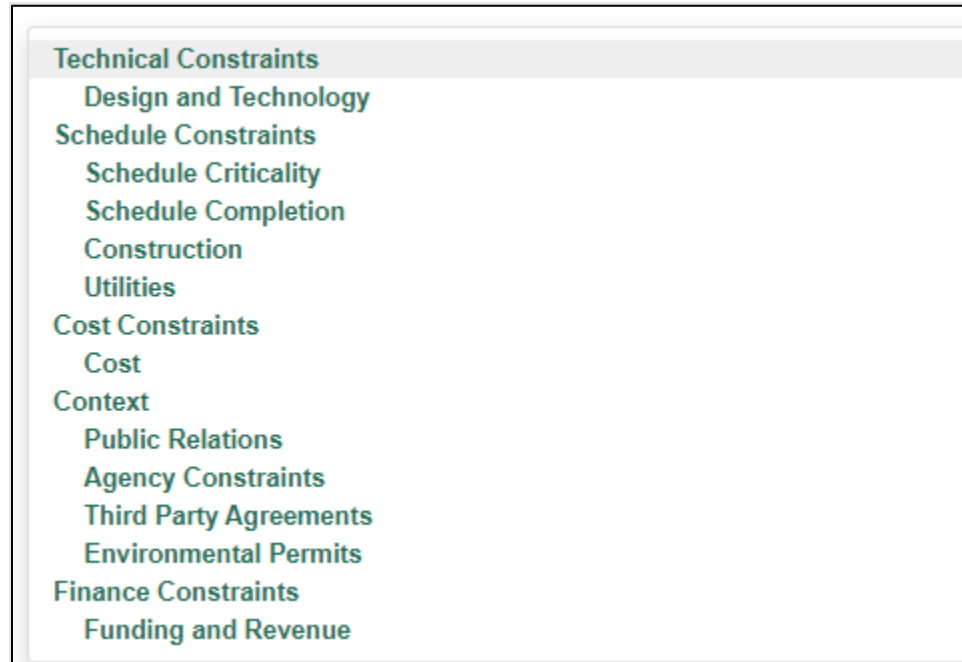
Click Navigator and PDBCA Outputs to open the PDBCA Incremental Comparison sheet to access the following visual comparison of Delayed PSC, PSC, and P3. Note that the terms “PSC” and “Conventional Delivery” are interchangeable and have the same meaning.





Evaluate Short-Term Contracting Methods (DBB, CM/GC, DB, PDB)

The Goal rankings provided in the Project Information section and answers to questions in this section are used in formulas to ultimately recommend the best Short-Term ACM for the project.

NOTE: You may navigate to different pages within this section using the navigation pane on the right side of each page. Click the desired item to navigate to it. When an item is complete, its color changes from blue to green:

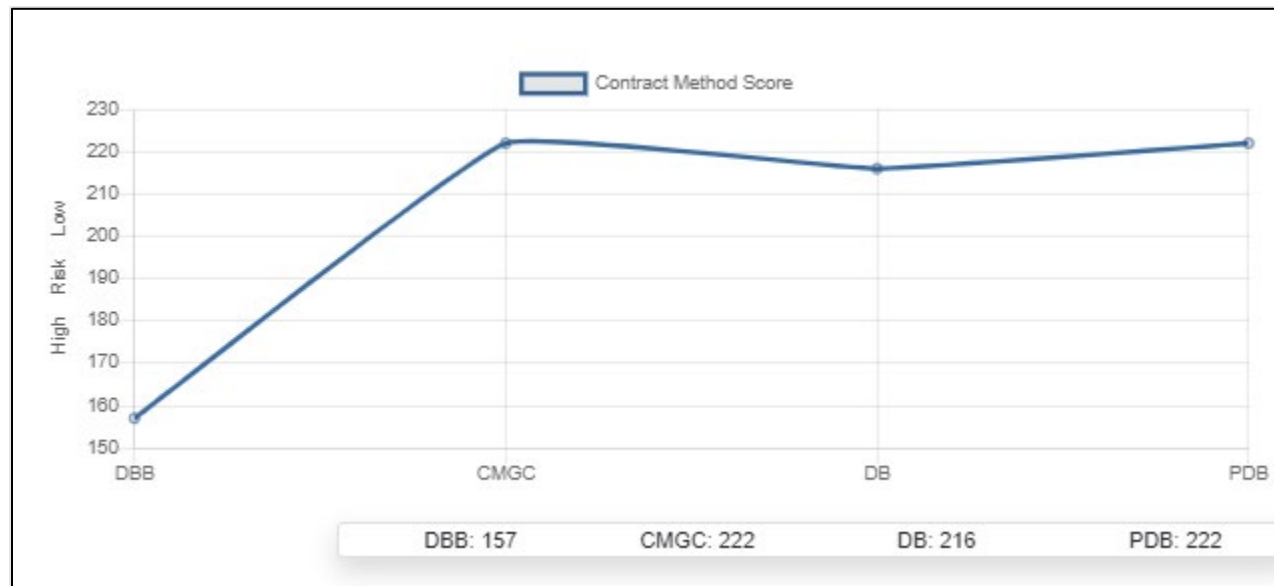


Provide information in the fields on all pages in the section, noting the fields that are required and marked with a red asterisk. NOTE:

Click the  icon for on-screen field level help, available throughout the webtool. Click the  icon, where available, to open a comment block where you may optionally enter information to document your reason for making a selection.

Scores specific to the short-term contracting methods being evaluated (DBB, CM/GC, DB, PDB) are displayed on the right side of each page in this section, along with a graph indicating each method's level of risk. NOTE: The higher the numeric score for a method, the LOWER the level of risk. If desired, the scoring display may be hidden by a webtool administrator.

As each question is answered, the scores and graph are dynamically recalculated and displayed:



See Appendix B: Scoring Keys for details on how calculations are performed in this section.

Technical Constraints

Design and Technology

* Has the project's design advanced beyond preliminary engineering (i.e. ~10-30% design)? ⓘ ⓘ

Yes

* Could the project involve the implementation of new technology? ⓘ ⓘ

Yes

* Will the project require design exceptions from FHWA? ⓘ ⓘ

No

Click to go back
Click to continue

Technical Constraints: Field Descriptions and Help

- Design and Technology
 - **Has the project's design advanced beyond preliminary engineering (i.e., ~10–30% design)?** Select the appropriate response.
 - **Could the project involve the implementation of new technology?** New technology may introduce risk. Consider whether the project will include new technology and select the appropriate response.
 - **Will the project require design exceptions from FHWA?** FHWA design exceptions require approval by FHWA and may extend the preconstruction period. Requiring a design exception for a design solution might introduce risk into an ACM contractor's schedule. If the project team has identified potential design exceptions that may be needed, select 'Yes'. Otherwise, select 'No' or 'N/A'.

Click the “Click to continue” button.

Schedule Constraints

Schedule Criticality

* Is the schedule critical (i.e. achieving substantial completion faster) to meet project or agency objectives? [?](#) [/](#)

Not Critical

Schedule Completion

* Is schedule certainty critical to meet project or agency objectives? [?](#) [/](#)

Yes

Construction

* Can construction begin before design is complete? [?](#) [/](#)

Yes

Utilities

* Would the agency consider assigning utility coordination responsibilities to the private sector? [?](#) [/](#)

Yes

[Click to go back](#) [Click to continue](#)

Schedule Constraints: Field Descriptions and Help

- Schedule Criticality
 - **Is the schedule critical (i.e., achieving substantial completion faster) to meet project or agency objectives?**
Ensuring a project remains on schedule throughout its lifecycle is sometimes a critical success factor to an agency. Indicate the level of criticality the schedule/timelines may meet objectives and select the appropriate response.

- Schedule Completion
 - **Is schedule certainty critical to meet project or agency objectives?** Indicate whether the project end date cannot be changed (i.e., the project end date must remain *fixed* regardless of other changes to the project)
- Construction
 - **Can construction begin before the design is complete?** When construction and design phases run concurrently, there is a risk to the project due to the potential for rework if the design changes. Indicate whether project construction may begin before design is complete.
- Utilities
 - **Would the agency consider assigning utility coordination responsibilities to the private sector?** Consider whether the project presents utility or third-party issues that would benefit from the construction manager or design-builder's assistance. Are utility issues identified and understood? Select the appropriate response.

Click the “Click to continue” button.

Cost Constraints

Cost

* How difficult will it be to develop a reliable cost estimate for the project? ⓘ ⓘ

Very Difficult

* Does the project include construction materials with volatile pricing? ⓘ ⓘ

Yes

Click to go back

Click to continue



Cost Constraints: Field Descriptions and Help

- Cost
 - **How difficult will it be to develop a reliable cost estimate for the project?** Consider the level of difficulty involved in coming up with a realistic, workable, and accurate project cost estimate. Select the appropriate response.
 - **Does the project include construction materials with volatile pricing?** Construction material volatility is a function of the underlying commodity. Petroleum-based products have large historic volatility, whereas materials procured regionally are less volatile. The agency holds the material cost risk until it awards a contract to procure those materials. Therefore, ACMs that permit early contractor design involvement provide a contractual mechanism to increase cost certainty by locking in material prices before the final engineering design is complete. Additionally, ACMs that permit the agency to evaluate priced technical alternatives for features of work with different levels of material volatility also promote cost certainty through making a risk-based design decision. Alternate pavement bidding is an example of this approach. If construction materials with volatile pricing (fuel, asphalt, steel) are anticipated to be a problem, and the agency can handle them with a price adjustment mechanism for volatile materials, answer ‘No.’ Select the appropriate response.

Click the “Click to continue” button.

Context

Public Relations



* Does the agency seek to involve a private sector design and/or construction team to support addressing public opposition?  

Yes



* Is there an impact on landowners within/abutting project limits?  

Yes



Agency Constraints

* How mature is the agency's ACM program?  

Growing

* Does the agency have experience in defining and specifying project performance outcomes and service requirements?  

Yes

* What is the likelihood of owner directed design changes after the construction contract price is established?  

Somewhat Likely

* How open is the agency to design solutions it has never used?  

Willing to Consider

Third Party Agreements

* Is the complexity of third party involvement (i.e. railroads, utilities, environmental, etc.) higher than normal? ⓘ ⓘ

No ▼

* Will any third parties require a complete set of construction documents to execute an agreement? ⓘ ⓘ

Yes ▼

Environmental Permits

* Will the status of NEPA impact bidders' ability to offer alternative technical solutions? ⓘ ⓘ

Moderate Impact ▼

* What is the level of effort to obtain necessary permits? ⓘ ⓘ

Usual ▼

[Click to go back](#)
[Click to continue](#)

Context Constraints: Field Descriptions and Help

- **Public Relations**
 - **Does the agency seek to involve a private sector design and/or construction team to support addressing public opposition?** Consider the level to which the general public and the press have supported or opposed the project. If there will be opposition, select Yes, otherwise select No or N/A.
 - **Is there an impact on landowners within/abutting project limits?** Consider the level of impact project construction may have on any landowners, highway users, and businesses within or near the construction area and select the appropriate response. Can a procurement method help minimize and/or eliminate any potential right-of-way impacts by way of encouraging innovative solutions or otherwise incentivizing impact minimization?

- Agency Constraints
 - **How mature is the agency's ACM program?** Select the level of maturity of the agency's current program for evaluating alternative contract methods.
 - **Does the agency have experience in defining and specifying project performance outcomes and service requirements?** [Performance Measures](#) are valuable tools for building consistency, transparency, and accountability in transportation decision making. Performance Measures can be used as evaluation criteria within a process. After the completion of a plan or project, performance measures also provide a way to monitor the effectiveness of implemented solutions. Consider the level of agency experience in monitoring performance outcomes and select the appropriate response. If the organization has previously awarded projects with similar requirements, select "Yes."
 - **What is the likelihood of owner directed design changes after the construction contract price is established?** Indicate the likelihood that the design will change after construction begins.
 - **How open is the agency to design solutions it has never used?** Consider the agency's level of openness to using new design solutions and select the appropriate response.
- Third-Party Agreements
 - **Is the complexity of third-party involvement (railroads, utilities, environmental, etc.) higher than normal?** Each delivery method can facilitate agreements with third parties, such as political entities, utilities, railroads, etc., in a different manner. The extent to which designers or constructors can facilitate third party agreements is the basis for the advantage and disadvantage of each method. Consider the number of third parties involved in the project and assess whether the number is higher than the norm.
 - **Will any third parties require a complete set of construction documents to execute an agreement?** Select the appropriate response.
- Environmental Permits
 - **Will the status of NEPA impact bidders' ability to offer alternative technical solutions?** The National Environmental Policy Act of 1969 ([NEPA](#)) establishes a policy and provides a framework for environmental planning and decision making by Federal agencies. NEPA directs Federal agencies, when planning projects or issuing permits, to conduct environmental reviews to consider the potential impacts on the environment by their proposed actions.
 - **What is the level of effort to obtain necessary permits?** Select the appropriate response. See [FHWA Environmental Review Toolkit](#) for additional information about permits.

Click the “Click to continue” button.

Finance Constraints

Funding and Revenue

* Could the project use innovative financing? ⓘ ⓘ

Yes

* Have sufficient funding sources for construction been identified? ⓘ ⓘ

Yes

Submit Your Responses

Click to go back

Save and Exit

Finance Constraints: Field Descriptions and Help

- **Funding and Revenue**
 - **Could the project use innovative financing?** Innovative financing includes Transportation Innovation Finance and Innovation Act ([TIFIA](#)), Grant Anticipation Revenue Vehicles ([GARVEE](#)), and other types.
 - **Have sufficient funding sources been identified?** If Federal, State, and/or Innovative funding will be used, consider whether the source(s) have already been identified and select the appropriate response.

If you wish to save the responses on this page but are not ready to submit responses to the webtool to complete the analysis, click the blue “Save and Exit” button at the bottom of the page. Responses are saved, and you will return to the Welcome page. You can come back to this section later to complete the analysis. When you return to the section, if you decide to change any saved responses or notes, the new response/note will be highlighted in yellow (see below example). This provides a quick visual of anything that is new since the last time you navigated the section.

Cost Constraints

Cost

* How difficult will it be to develop a reliable cost estimate for the project? ⓘ ↗

Very Difficult

* Does the project include construction materials with volatile pricing? ⓘ ↗

Yes

Click to go back

Click to continue

When you get to the last page in the section, if you made any changes since the last time responses were saved, you have an opportunity to change your responses back to those last saved, if desired. Click the blue “Reset” button at the bottom of the last page to revert to the previously saved responses/notes.

If you are satisfied with your responses and would like to complete this section and see the results of the analysis, click the gray “Submit Your Responses” button. Responses to questions are saved, and the webtool displays and saves the results of its analysis of Short-Term ACMs. The highest score indicates the recommended method, but the webtool allows you to optionally select any method to perform further analysis if desired.

Short-Term Contracting Methods – Evaluation Results

Below are your scores for each of the methods based on your answers.

☐ DBB (157) ☐ CM/GC (222) ☐ DB (216) ☐ PDB (222)

To select and save your preferred Short-Term method and complete the analysis, select the method and click [Complete](#)

To perform a more detailed Short-Term Risk Mitigation, select the method(s) you wish to review and click [Short-Term Risk](#)

To complete your Short-Term analysis and perform a Long-Term Construction and Financing Analysis for DBB or DB only, select the short-term method you wish to save and click [Long-Term Analysis](#)

To return to the Home page, click [Cancel](#)

Choose one of the following:

- If you wish to select and store your preferred Short-Term ACM and complete the analysis, select the appropriate radio button for that score and click Complete.
- If you are still unsure which Short-Term ACM is appropriate for your project and would like to perform a Short-Term risk allocation to compare methods, select the radio button(s) corresponding to the method(s) you would like to compare and click Short-Term Risk. You will be directed to the Short-Term Risk Allocation section.
- If you wish to select and store your preferred Short-Term ACM and continue with a long-term analysis for DBB or DB, select the appropriate radio button for your selected ACM and click Long-Term Analysis. You will be directed to the Long-Term Construction and Financing Analysis (PSC/P3 Evaluation) section.
- If you would like to return to the Home page without selecting a Short-Term ACM, click Cancel.

Perform Short-Term Risk Mitigation

This section allows you to describe risks specific to the project, identify the probability of their occurrence, indicate the severity of impact to the project should they occur, and rate the ability to mitigate each risk for selected Short-Term ACMs. The webtool calculates and ultimately provides a final Risk Mitigation Rating for each ACM.

Risk Assessment Matrix

[\(Click to see General Risk Categories/High Level Risks\)](#)

Hide Probability x Severity Matrix

		Severity of Impact			
		Negligible Schedule or Cost Impact	Minor Delay and/or Cost Increase	Major Delay and/or Cost Increase	Catastrophic Delay and/or Cost Increase
Probability	60% <= P	4	8	9	16
	20% <= P < 60%	3	6	9	16
	5% <= P < 20%	2	4	6	8
	P <= 5%	1	2	3	4

Risk Description

Scope definition is poor or incomplete

Delay in review of environmental documentation

Environmental regulation changes

Unforeseen delays due to utility owner and third-party

Lack of coordination/ communication

+ Add Risk

Risk Mitigation Decision Matrix

Notes/Comments

note 1

Probability of Occurrence

P <= 5%

5% <= P < 20%

5% <= P < 20%

20% <= P < 60%

P >= 60%

Qualitative Risk Assessment

Severity of Impact

Negligible Schedule or Cost Impact

Minor Delay and/or Cost Increase

Minor Delay and/or Cost Increase

Major Delay and/or Cost Increase

Catastrophic Delay and/or Cost Increase

Risk Rating

1

4

4

9

16

Risk Assessment Matrix: Field Descriptions and Help

- Risk Description:** Enter text to describe a project risk. A risk description should generally be written as “If <RISK EVENT> happens, then <CONSEQUENCE> will <IMPACT> the <PROJECT OBJECTIVE>.” However, if the project information is not yet available to sufficiently describe the risks in this fashion, general risk categories or high-level risk descriptions can be used. (Click the link above for more information.) These risks are provided as a starting point. Please use only those risks that apply. Please edit the risks for your project using the suggested risk statement format.

×

General Risk Categories and High Level Risk Descriptions

General Risk Categories to Consider

- [Environmental Risks](#)
- [Third-Party Risks](#)
- [Right-of-Way/Real Estate Risks](#)
- [Organizational Risks](#)
- [External Risks](#)
- [Geotechnical and Hazmat Risks](#)
- [Design Risks](#)
- [Construction Risks](#)

High-Level Risk Checklist

1. Environmental Risks

- ☒ Delay in review of environmental documentation
- ☐ Challenge in appropriate environmental documentation
- ☐ Defined and non-defined hazardous waste
- ☒ Environmental regulation changes
- ☐ Environmental impact statement (EIS) required
- ☐ NEPA/ 404 Merger Process required
- ☐ Environmental analysis on new alignments required

2. Third-Party Risks

- ☒ Unforeseen delays due to utility owner and third-party
- ☐ Encounter unexpected utilities during construction
- ☐ Cost sharing with utilities not as planned
- ☐ Utility integration with project not as planned
- ☐ Third-party delays during construction
- ☐ Coordination with other projects
- ☐ Coordination with other government agencies

Select the checkbox(es) corresponding to the risks you would like to include in the analysis. The selected risks will populate on the Risk Assessment Matrix in the order in which they appear on the list. You may manually re-order the risks in the matrix, if desired, by clicking the = symbol in the upper left corner of the risk and dragging it to the preferred location in the matrix. If you wish to delete a risk, uncheck the corresponding checkbox in the General Risk Categories/High Level Risks popup.

Click the blue plus sign “Add Risk” icon, if desired, to add up to 40 risks for the project.

Risk Assessment Matrix

(Click to see General Risk Categories/High Level Risks)

Hide Probability x Severity Matrix

		Severity of Impact			
		Negligible Schedule or Cost Impact	Minor Delay and/or Cost Increase	Major Delay and/or Cost Increase	Catastrophic Delay and/or Cost Increase
Probability	60% <= P	4	8	9	16
	20% <= P < 60%	3	6	9	16
	5% <= P < 20%	2	4	6	9
	P <= 5%	1	2	3	4

Risk Description

☐ Scope definition is poor or incomplete
☐ Delay in review of environmental documentation
☐ Environmental regulation changes
☐ Unforeseen delays due to utility owner and third-party
☐ Lack of coordination/ communication

+ Add Risk

Risk Mitigation Decision Matrix

Notes/Comments

note 1

Probability of Occurrence

P <= 5%

5% <= P < 20%

5% <= P < 20%

20% <= P < 60%

P >= 60%

Qualitative Risk Assessment

Severity of Impact

Negligible Schedule or Cost Impact

Minor Delay and/or Cost Increase

Minor Delay and/or Cost Increase

Major Delay and/or Cost Increase

Catastrophic Delay and/or Cost Increase

Risk Rating

1

4

4

9

16

- Qualitative Risk Assessment

- Probability of Occurrence:** Select the range of probability (P) that the associated risk may occur during the lifecycle of the project. Selections include 0–5%, 5%–20%, 20%–60%, and greater than 60% probability. Selection is required for each listed risk.
- Severity of Impact:** Select the severity of the impact to the project schedule and cost should the risk occur. Selection is required for each listed risk.
- Risk Rating:** This number and field color is displayed by the webtool based on selected Probability of Occurrence and Severity of Impact values as they correspond to the following Severity of Impact Matrix:

		Severity of Impact			
		<i>Negligible Schedule or Cost Impact</i>	<i>Minor Delay and/or Cost Increase</i>	<i>Major Delay and/or Cost Increase</i>	<i>Catastrophic Delay and/or Cost Increase</i>
Probability	$60\% \leq P$	4	8	12	16
	$20\% \leq P < 60\%$	3	6	9	12
	$5\% \leq P < 20\%$	2	4	6	8
	$P \leq 5\%$	1	2	3	4

Note: You can hide or display this matrix on the screen by clicking the “Display Probability x Severity Matrix” and “Hide Probability x Severity Matrix” toggle link at the top of the page:

Risk Assessment Matrix

(Click to see General Risk Categories/High Level Risks)

Display Probability x Severity Matrix

- **Notes/Comments:** Provide comments to support your selections, if desired.

Click the blue “Risk Mitigation Decision Matrix” button. You are presented with the Risk Mitigation Decision Matrix:

Risk Mitigation Decision Matrix

☒ DBB
 ☒ CMGC
 ☒ DB
 ☒ PDB

Risk Description

Scope definition is poor or incomplete

Delay in review of environmental documentation

Environmental regulation changes

Unforeseen delays due to utility owner and third-party

Lack of coordination/ communication

Risk Rating

1

4

4

9

16

Ability to Mitigate through Delivery Method

DBB

CMGC

DB

PDB

Potentially a Fatal Flaw

Costly to Manage

Advantageous to Manage

Costly to Manage

N/A

N/A

Costly to Manage

Advantageous to Manage

Reasonable to Manage

Potentially a Fatal Flaw

Potentially a Fatal Flaw

N/A

Potentially a Fatal Flaw

Advantageous to Manage

Potentially a Fatal Flaw

Potentially a Fatal Flaw

Costly to Manage

Costly to Manage

Advantageous to Manage

N/A

Assessment Matrix

Risk Mitigation Rating(Higher Score = Better Risk Mitigation)

43

67

57

53

Notes/Comments

note 2

Submit Your Responses

Page 100

Risk Mitigation Decision Matrix: Field Descriptions and Help

- **Select the ACM methods for Risk Mitigation:** The selections you made at the end of the Short-Term ACM section are pre-checked for you. If desired, you may change your selections here. You must check at least one box.
- **Risk Rating:** The values displayed on the Risk Assessment Matrix (previous step) are carried over and displayed here. Ratings cannot be changed on this page.
- **Ability to Mitigate through Delivery Method:** Select the level of ability to mitigate the risk from the dropdown list. You must make a selection for each risk for each delivery method you wish to analyze. Possible selections include “Potentially a fatal flaw,” “Costly to Manage,” “Reasonable to Manage,” and “Advantageous to Manage.”
- **Risk Mitigation Rating (Higher Score = Better Risk Mitigation):** This value is calculated and displayed by the webtool as the SUM TOTAL of the Risk Rating times the score associated with the selected Ability to Mitigate through Delivery Method per the following table, for all risks identified:

• Ability to Mitigate through Delivery Method	• Score
• Potentially a Fatal Flaw	• 1
• Costly to Manage	• 2
• Reasonable to Manage	• 3
• Advantageous to Manage	• 4

NOTE: The higher the number, the better the project delivery risk mitigation.

Click the blue “Assessment Matrix” button if you wish to return to the Risk Assessment Matrix page to change Probability or Severity of Impact selections.

- **Notes/Comments:** Provide comments to support your selections, if desired.

Click “Submit Your Responses” to submit and save your selections. The webtool displays the results of the risk mitigation along with the results from the Evaluate Short-Term Contracting Methods (DBB, CM/GC, DB, PDB) section:

Short-Term Risk Mitigation – Evaluation Results

The scores from the Short Term Risk Allocation section and the Evaluate Short Term Contract Methods sections are based on distinct scoring methods and should be evaluated separately. The purpose of the risk mitigation is to augment the evaluation scores or help decide when two scores are close. Do not sum these numbers in order to determine an ACM.

Below are the results of the Short-Term Risk Mitigation based on your responses. The higher the number, the better the project delivery risk allocation.

DBB: 43 CM/GC: 67 DB: 57 PDB: 53

Below are the scores from the "Evaluate Short-Term Contracting Methods" section:

☐ DBB: 157 ☐ CM/GC: 222 ☐ DB: 216 ☐ PDB: 222

To select and save your preferred Short-Term method and complete the analysis, select the method and click **Complete**

To complete the Short-Term Risk Mitigation and perform a DBOM/DBFOM - Long-Term analysis for DBB or DB only, select the short-term method you wish to save and click **Long-Term Analysis**

To return to the Home page, click **Cancel**

Choose one of the following:

- If you wish to select and store your preferred Short-Term ACM and complete the analysis, select the appropriate radio button for that score and click the blue “Complete” button.
- If you wish to select and store your preferred Short-Term ACM and continue with a long-term analysis for DBB or DB, select the appropriate radio button for your selected ACM and click the blue “Long-Term Analysis” button. You will be directed to the Long-Term Construction and Financing Analysis (PSC/P3 Evaluation) section.
- If you would like to return to the Home page without selecting a Short-Term ACM, click the blue “Cancel” button.

Use Project Performance Data to Support ACM Evaluation (ACM-DATA)

You can review performance data of similar projects using the Information Source for Major Project (ISMP). The ISMP is the ACM-DATA module in the CASE Webtool workflow. It is an open data platform for public agencies to exchange project information, including performance data and project documents, for projects delivered under alternative contracting methods. Please note that the ISMP is outside of the CASE Webtool and requires a user account to access the system.

You can complete the user registration and login process via this link: <https://www.transportationproject.org>


After logging in, you are presented with the main access page: Select Data on the top menu bar (callout box A) and click Projects. You will be directed to the Project List page. You can shortlist the projects by selecting filters on the left side, including State/Territory, Procurement Model, Project Type, Project Status, Capital Cost, Award Year, and Completion Year.

To identify similar projects from the ISMP, select project type and project status of completion. Click the Search button to generate a project shortlist. You can narrow down the shortlist by selecting a range of capital costs and project award or completion years.

Select up to three projects on the shortlist and click Compare. You will be redirected to a new page with a unique URL, which you can revisit at any time, or use to share the comparison results. This comparison page displays each project's basic information, funding sources, key milestones, and performance indicators to facilitate informed decision-making. Clicking project name (callout box B) will lead to the Project Detail page, where you can review detailed project information, including cost and funding, project timeline, stakeholders, Disadvantaged Business Enterprise program performance, operation and maintenance, and documents and news.

You may want to select projects with various alternative contracting methods so that a comparison of their time and cost performance provides examples of the performance of projects that are similar to your new project but delivered under different contracting methods (see callout boxes C and D). Time growth indicates the variation of actual project duration to final (or substantial) completion against forecasted project duration as a baseline. Cost growth shows how the actual project cost changed over time relative to the contract value. Award growth is the difference between contract value and engineer's estimate.


You can find average project performance data under various alternative contracting methods by clicking Dashboard (callout box A). You can also find information on public agencies, private organizations, and contracting-related State legislation at the ISMP. A user's manual is available by clicking resources and then the user's manual.


U.S. Major Transportation Projects


[Home](#)
[Dashboard](#)
[Data](#)
[Resources](#)
[Contact](#)
[Logout](#)

B


I-39/90 Expansion Project, Wisconsin



Wekiva Parkway - FDOT Sections, Florida



I-4 Ultimate Improvements with Express Lanes, Florida



Project Type	Highway Reconstruction / Rehabilitation	Beltway	Highway Widening
Delivery Method	DBB (Design-Bid-Build)	DB (Design-Build)	DBFOM (Design-Build-Finance-Operate-Maintain)
Estimated Cost (\$M)	1454.6	1604.8	4307
Final Cost (\$M)	1201.7	1199.7	4853.6
Funding Sources (\$M)	Federal Funds: 429 State Funds: 198 Local Funds: 7.7 Other Public Financing: 566.8	Federal Funds: 340.5 State Funds: 859.2	Federal Funds: 1604.8 State Funds: 1685.1 Other Financing: 2592.9 Local Funds: 280.6
Contract Award Date	08/14/2012	10/15/2012	04/29/2014
Estimated Substantial Completion	N/A	N/A	12/31/2020
Estimated Final Completion	12/15/2021	06/15/2022	03/31/2021
Award Growth	-6.4%	-25.9%	12.2%
Cost Growth	-11.8%	0.9%	0.5%

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Appendix A: 5DPM Background

Transportation projects traditionally have been managed by optimizing the tradeoff between cost, schedule, and quality. In recent years, increased attention has been given to the effects of context and financing on design, cost, and schedule, resulting in a 5DPM matrix that represents a much more complicated optimization calculus. This section explains 5DPM development.

Routine three-dimensional project management theory is based on three common project management knowledge areas—cost, schedule, and technical/quality—as shown in Figure 1.

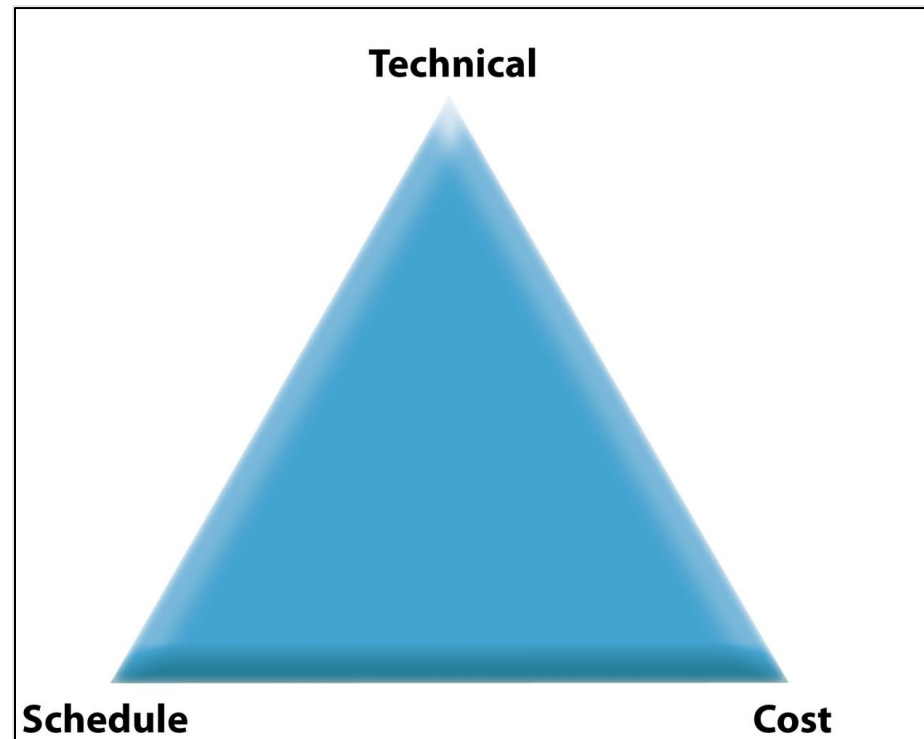


Figure 1. Three-dimensional project management

5DPM expands on three-dimensional project management and adds two additional factors, which are often present in complex projects. Those factors are project context and project financing. The tools discovered in the research were organized around the five

critical dimensions of project management. Complex projects are differentiated by the requirement to manage in more than three dimensions. A routine project can be technically complicated but not complex if the issues of context and finance have no appreciable impact on the final technical solution or do not drive the project delivery schedule. The five-dimensional model is shown in Figure 2.

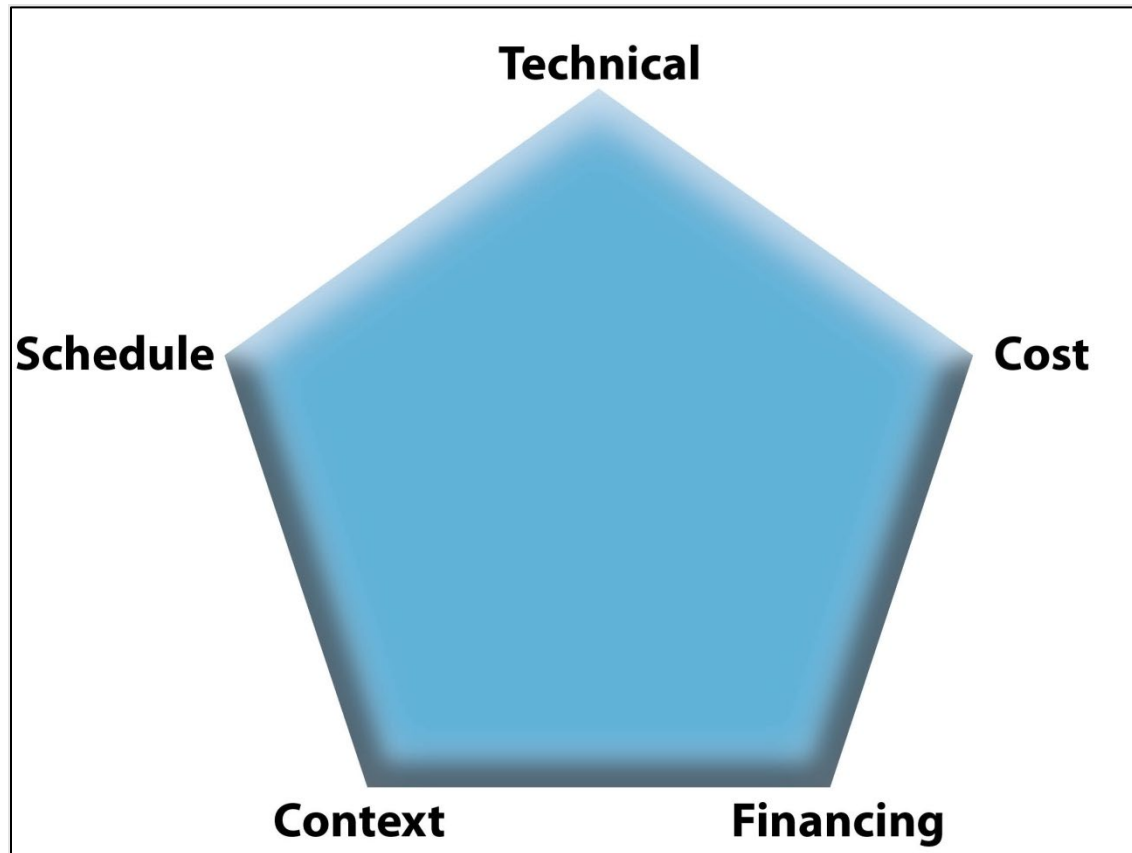


Figure 2. Five-dimensional project management

5DPM's basic premise is that each dimension provides the complex project manager with a basic set of requirements to be satisfied and that optimizing the resources in a manner that permits the project to be delivered in the required period within the available financing and furnishing the requisite level of capacity, is the end goal of the process.

Therefore, 5DPM starts by literally inventorying the project's requirements and constraints and associating each with a given dimension. The idea is that, by recognizing the constraints imposed on the project at a very early stage, the project manager can then gain input, support, and resources from the impacted stakeholders in a manner that permits the final project to be satisfactory to all parties. The inventory is conducted using the structure furnished in the next section.

Explanation of Each Dimension

Several factors make up 5DPM. The following is a list of common factors found in each dimension in the case study project reviewed by the research team. (The list of factors is not all-inclusive.)

Dimension #1: Cost—The Cost Dimension generally includes factors involved with quantifying the scope of work in dollar terms:

- Project estimates.
- Uncertainty.
- Contingency.
- Project-related costs (i.e., road user costs, right-of-way).
- Project cost drivers and constraints.

Typical project goals that are found under the Cost Dimension for a complex project are:

- Maximize cost certainty.
- Retire cost risks as scheduled.
- Release contingency as cost risks are retired.
- Quantify project costs as early as practical.
- Minimize the number of times the project budget has to be adjusted.

Dimension #2: Schedule—The Schedule Dimension includes factors involved with the calendar-driven aspects of the project:

- Time.
- Schedule risk.
- Prescribed milestones.
- Availability of resources.

Typical project goals that are found under the Schedule Dimension for a complex project are:

- Maximize schedule certainty.
- Retire schedule risks as early as practical.
- Establish intermediate milestones that support the control of schedule risk.
- Quantify availability of required resources as early as practical.

Dimension #3: Technical—The Technical Dimension includes factors relating to typical engineering requirements:

- Scope of work.
- Internal structure.
- Contract.
- Design.
- Construction.
- Technology.
- Nature of constraints.

Typical project goals that are found under the Technical Dimension for a complex project are:

- Maximize scope certainty
- Make key design decisions as early as practical
- Select a project delivery method that is responsive to project scope and schedule constraints.
- Obtain needed design deviations as early as practical
- Validate the availability of qualified contractors in the market
- Validate the availability of construction materials within project schedule constraints

Dimension #4: Context—The Context Dimension includes factors describing the external influences that may have an impact on project progress:

- Stakeholders
- Project-specific issues
- Local issues
- Environmental
- Legal/legislative
- Global/national
- Unexpected occurrences

Typical project goals that are found under the Context Dimension for a complex project are:

- Obtain needed statutory waivers or exceptions as early as practical
- Retire permitting risks as early as practical
- Initiate public information plan as early as practical
- Initiate communications plan with elected officials at the State and local level as early as practical
- Establish a system to identify and resolve unexpected issues as they arise

Dimension #5: Financing—The Financing Dimension includes factors involved with understanding the sources of funds that will be used to pay for the project's cost:

- Public financing
- Financing a future revenue stream
- Exploiting asset value
- Finance-driven project delivery methods
- Financial techniques to mitigate risk
- Differential inflation rates
- Commodity-based estimating

Typical project goals that are found under the Financing Dimension for a complex project are:

- Maximize financing certainty
- Validate sufficiency of cash flow requirements
- Complete financial and commercial closure of projects with private finding as soon as practical
- Minimize debt amortization period
- Evaluate options to reduce exposure commodity volatility and implement as soon as practical.

Appendix B: Scoring Keys

Calculations are performed in the “Evaluate whether Long-Term or Short-Term is Recommended” and “Evaluate Short-Term Contracting Methods (DBB, CM/GC, DB, PDB)” sections of the webtool. Calculations are made based on responses to questions, using internally assigned scores and ratings.

Scoring Key: Evaluate whether Long-Term or Short-Term is Recommended

A heat map indicating Long-Term vs. Short-Term is displayed in the Long or Short-Term recommendation section, using responses received by the webtool. Below is a table displaying the rating assigned to each question based on the response. As responses are received, the webtool redisplay the heat map on each screen and at the end of the section. NOTE: a rating of “null” for a question indicates a calculation is not performed for that question.

Question	Answer / Rating
Does the agency have guidelines for procurement, implementation, and management of Long-Term contracting methods?	Yes = 1 Under development = 0 No = -1 Unknown = 0 Exclude from this analysis = null
What level of experience does the agency have with Long-Term contracting methods?	High = 1 Medium = 0 Low = -1 Able to augment sufficiently = 1 Unknown = 0 Exclude from this analysis = null
What level of experience does the agency have with defining and specifying project performance outcomes and service requirements?	High = 1 Medium = 0 Low = -1 Able to augment sufficiently = 1 Unknown = 0 Exclude from this analysis = null

Question	Answer / Rating
What is the agency's level of experience in monitoring the performance of O&M services provided by a private participant?	High = 1 Medium = 0 Low = -1 Able to augment sufficiently = 1 Unknown = 0 Exclude from this analysis = null
Does the agency wish to avoid contractual relationships with multiple parties?	A: Yes = 1 B: Worth considering = 0 C: No = -1 D: Unknown = 0 E: Exclude from this analysis = null
What level of experience do private participants in the market have in Long-Term contracting with this type of project?	High = 1 Medium = 0 Low = -1 Unknown = 0 Exclude from this analysis = null
What is the private sector level of interest in pursuing this or similar projects through Long-Term contracting?	High = 1 Medium = 0 Low = -1 Unknown = 0 Exclude from this analysis = null
To meet the agency's goals, how critical is prescribing the project's design details?	Very critical = 1 Somewhat critical = 0 Not critical = -1 Unknown = 0 Exclude from this analysis = null
Does the project have sufficient scope and complexity so meaningful risks are present throughout its lifecycle?	Yes = 1 Possibly = 0 No = -1 Unknown = 0 Exclude from this analysis = null

Question	Answer / Rating
Can the project be bundled with comparable projects to increase scale/scope and to enhance market interest while still meeting agency goals?	Yes = 1 Possibly = 0 No = -1 Unknown = 0 Project scope is sufficient/exclude from this analysis = null
Will the project have complex stakeholder or third-party issues (coordination with railroads, property owners, etc.) over its lifecycle?	Yes = 1 Possibly = 0 No = -1 Unknown = 0 Exclude from this analysis = null
What is the likelihood that integrating design, construction, and O&M services will improve stakeholder engagement and third-party issues over the project's lifecycle?	High = 1 Medium = 0 Low = -1 Unknown = 0 Exclude from analysis = null
What is the likelihood that integrating design, construction, and O&M services will increase innovation?	High = 1 Medium = 0 Low = -1 Unknown = 0 Exclude from this analysis = null
What is the likelihood that integrating design, construction, and O&M services will improve risk allocation and management?	High = 1 Medium = 0 Low = -1 Unknown = 0 Exclude this question from the short vs. Long-Term analysis = null

Question	Answer / Rating
What is the likelihood that integrating design, construction, and O&M services will reduce lifecycle cost?	High = 1 Medium = 0 Low = -1 Unknown = 0 Exclude from analysis = null
What is the likelihood that integrating design, construction, and O&M services will improve the chances of meeting other agency/project goals?	High = 1 Medium = 0 Low = -1 Unknown = 0 Exclude from analysis = null
How significant are barriers to transferring O&M responsibilities to a private contractor?	High = -1 Medium = 0 Low = 1 Unknown = 0 Exclude from analysis = null
Can identified risks be efficiently allocated to and better managed by a private partner/participant?	Yes = 1 Possibly = 0 No = -1 Unknown = 0 Exclude from analysis = null

Scoring Key: Evaluate Short-Term Contracting Methods (DBB, CM/GC, DB, PDB)

Calculations are performed, and results are accumulated in the Evaluate Short-Term Contracting Methods section, based on responses received by the webtool.

Every question in this section is associated in the webtool with one of five goals: Cost, Schedule, Technical, Context, or Financing. Each of the goals is ranked in relative importance by the user, who selects whether to use Ordinal Ranking or Point Ranking. If Ordinal Ranking is selected, the user assigns a unique value of 1 through 5 to each goal, where 1 is least important to the project, and 5 is most important. If Point Ranking is selected, the user assigns a value of 1 to 100 to each goal, where the higher the number indicates a higher value to the project. Point values do not need to be unique, but the sum total of all points assigned cannot exceed 100.

Every response to a question has an internal **rating** and **weighting factor** assigned by subject matter experts or each short-term delivery method.

As responses are received, the webtool calculates a numeric result per question for each of the short-term delivery methods based on the following formula:

Result = Relative goal ranking (1 through 5 or 1 through 100) * rating * weighting factor

Results are accumulated by question, by method, and dynamically updated and redisplayed on the page as the user provides or changes responses. Total scores by method are also displayed at the end of the section in a summarized popup window. The method with the highest score is recommended for the project.

Below is a table displaying, by question and answer, the associated **rating** and **weighting factor** per method. These numbers are defaults set in the application based on input from subject matter experts. Weighting factors may be modified by an Administrator. (See the **Federal Highway Administration CASE Webtool Administrator User Guide**.)

Goal Ranking (1-5 if ordinal or 1-100 if point)	Question	Answer	Rating	DBB Weight	CM/GC Weight	DB Weight	PDB Weight
Technical	Has the project's design advanced beyond preliminary engineering (i.e., ~10%–30% design)?	Yes	2	3	1	1	1
Technical	Has the project's design advanced beyond preliminary engineering (i.e., ~10%–30% design)?	No	1	3	3	3	3
Technical	Has the project's design advanced beyond preliminary engineering (i.e., ~10%–30% design)?	N/A	null	1	1	1	1
Technical	Could the project involve the implementation of new technology?	Yes	2	1	2	3	2
Technical	Could the project involve the implementation of new technology?	No	1	2	1	1	1
Technical	Could the project involve the implementation of new technology?	N/A	null	1	1	1	1
Technical	Will the project require design exceptions from FHWA?	Yes	2	3	2	1	2

Goal Ranking (1-5 if ordinal or 1-100 if point)	Question	Answer	Rating	DBB Weight	CM/GC Weight	DB Weight	PDB Weight
Technical	Will the project require design exceptions from FHWA?	No	1	1	2	2	2
Technical	Will the project require design exceptions from FHWA?	N/A	null	1	1	1	1
Schedule	Is the schedule critical (i.e., achieving substantial completion faster) to meet project or agency objectives?	Very Critical	3	1	3	2	2
Schedule	Is the schedule critical (i.e., achieving substantial completion faster) to meet project or agency objectives?	Somewhat Critical	2	1	2	2	2
Schedule	Is the schedule critical (i.e., achieving substantial completion faster) to meet project or agency objectives?	Not Critical	1	2	1	1	1
Schedule	Is the schedule critical (i.e., achieving substantial completion faster) to meet project or agency objectives?	N/A	null	1	1	1	1
Schedule	Is schedule certainty critical to meet project or agency objectives?	Yes	2	1	2	2	2

Goal Ranking (1-5 if ordinal or 1-100 if point)	Question	Answer	Rating	DBB Weight	CM/GC Weight	DB Weight	PDB Weight
Schedule	Is schedule certainty critical to meet project or agency objectives?	No	1	3	1	1	1
Schedule	Is schedule certainty critical to meet project or agency objectives?	N/A	null	1	1	1	1
Schedule	Can construction begin before design is complete?	Yes	2	1	3	2	3
Schedule	Can construction begin before design is complete?	No	1	3	2	1	2
Schedule	Can construction begin before design is complete?	N/A	null	1	1	1	1
Schedule	Would the agency consider assigning utility coordination responsibilities to the private sector?	Yes	2	1	3	3	3
Schedule	Would the agency consider assigning utility coordination responsibilities to the private sector?	No	1	3	1	1	1

Goal Ranking (1-5 if ordinal or 1-100 if point)	Question	Answer	Rating	DBB Weight	CM/GC Weight	DB Weight	PDB Weight
Schedule	Would the agency consider assigning utility coordination responsibilities to the private sector?	N/A	null	1	1	1	1
Cost	How difficult will it be to develop a reliable cost estimate for the project?	Very Difficult	1	1	3	1	3
Cost	How difficult will it be to develop a reliable cost estimate for the project?	Moderately Difficult	2	2	3	2	3
Cost	How difficult will it be to develop a reliable cost estimate for the project?	Not Difficult	3	3	2	3	2
Cost	How difficult will it be to develop a reliable cost estimate for the project?	N/A	null	1	1	1	1

Goal Ranking (1-5 if ordinal or 1-100 if point)	Question	Answer	Rating	DBB Weight	CM/GC Weight	DB Weight	PDB Weight
Cost	Does the project include construction materials with volatile pricing?	Yes	2	1	3	1	3
Cost	Does the project include construction materials with volatile pricing?	No	1	2	1	2	1
Cost	Does the project include construction materials with volatile pricing?	N/A	null	1	1	1	1
Context	Does the agency seek to involve a private sector design and/or construction team to support addressing public opposition?	Yes	2	1	2	2	2
Context	Does the agency seek to involve a private sector design and/or construction team to support addressing public opposition?	No	1	2	1	1	1
Context	Does the agency seek to involve a private sector design and/or construction team to support addressing public opposition?	N/A	null	1	1	1	1

Goal Ranking (1-5 if ordinal or 1-100 if point)	Question	Answer	Rating	DBB Weight	CM/GC Weight	DB Weight	PDB Weight
Context	Is there an impact on landowners within/abutting project limits?	Yes	3	1	3	2	3
Context	Is there an impact on landowners within/abutting project limits?	No	1	2	1	1	1
Context	Is there an impact on landowners within/abutting project limits?	N/A	null	1	1	1	1
Context	How mature is the agency's ACM program?	New	1	1	1	1	1
Context	How mature is the agency's ACM program?	Growing	2	2	2	2	2
Context	How mature is the agency's ACM program?	Fully Mature	3	3	3	3	3
Context	How mature is the agency's ACM program?	N/A	null	1	1	1	1
Context	Does the agency have experience in defining and specifying project performance outcomes and service requirements?	Yes	3	1	2	3	2
Context	Does the agency have experience in defining and specifying project	No	1	3	1	1	1

Goal Ranking (1-5 if ordinal or 1-100 if point)	Question	Answer	Rating	DBB Weight	CM/GC Weight	DB Weight	PDB Weight
	performance outcomes and service requirements?						
Context	Does the agency have experience in defining and specifying project performance outcomes and service requirements?	N/A	null	1	1	1	1
Context	What is the likelihood of design changes after the construction contract price is established?	Very Likely	3	1	3	1	2
Context	What is the likelihood of design changes after the construction contract price is established?	Somewhat Likely	2	1	2	2	2
Context	What is the likelihood of design changes after the construction contract price is established?	Not Likely	1	3	1	2	1
Context	What is the likelihood of design changes after the construction contract price is established?	N/A	null	1	1	1	1
Context	How open is the agency to design solutions it has never used?	Reluctant	1	3	2	1	1

Goal Ranking (1-5 if ordinal or 1-100 if point)	Question	Answer	Rating	DBB Weight	CM/GC Weight	DB Weight	PDB Weight
Context	How open is the agency to design solutions it has never used?	Willing to Consider	2	2	2	2	2
Context	How open is the agency to design solutions it has never used?	Completely Open	3	1	2	3	2
Context	How open is the agency to design solutions it has never used?	N/A	null	1	1	1	1
Context	Is the number of involved third parties (railroads, utilities, environmental, etc.) higher than normal?	Yes	2	1	3	2	3
Context	Is the number of involved third parties (railroads, utilities, environmental, etc.) higher than normal?	No	1	1	1	1	1
Context	Is the number of involved third parties (railroads, utilities, environmental, etc.) higher than normal?	N/A	null	1	1	1	1
Context	Will any third parties require a complete set of construction documents to execute an agreement?	Yes	2	3	2	1	2
Context	Will any third parties require a complete set of construction documents to execute an agreement?	No	1	1	2	2	2

Goal Ranking (1-5 if ordinal or 1-100 if point)	Question	Answer	Rating	DBB Weight	CM/GC Weight	DB Weight	PDB Weight
Context	Will any third parties require a complete set of construction documents to execute an agreement?	N/A	null	1	1	1	1
Context	Will the status of NEPA impact bidders' ability to offer alternative technical solutions and/or start construction before the design is finalized?	No Impact	1	1	3	3	3
Context	Will the status of NEPA impact bidders' ability to offer alternative technical solutions and/or start construction before the design is finalized?	Moderate Impact	2	2	2	2	2
Context	Will the status of NEPA impact bidders' ability to offer alternative technical solutions and/or start construction before the design is finalized?	High Impact	3	3	2	1	2
Context	Will the status of NEPA impact bidders' ability to offer alternative technical solutions and/or start construction before the design is finalized?	N/A	null	1	1	1	1
Context	What is the level of effort to obtain necessary permits?	Lower than Usual	1	3	2	2	3

Goal Ranking (1-5 if ordinal or 1-100 if point)	Question	Answer	Rating	DBB Weight	CM/GC Weight	DB Weight	PDB Weight
Context	What is the level of effort to obtain necessary permits?	Usual	2	3	2	2	2
Context	What is the level of effort to obtain necessary permits?	More than Usual	3	1	3	2	3
Context	What is the level of effort to obtain necessary permits?	N/A	null	1	1	1	1
Finance	Could the project use innovative financing?	Yes	2	1	1	2	1
Finance	Could the project use innovative financing?	No	1	2	2	1	1
Finance	Could the project use innovative financing?	N/A	null	1	1	1	1
Finance	Have sufficient funding sources for construction been identified?	Yes	2	1	2	2	2
Finance	Have sufficient funding sources for construction been identified?	No	1	2	1	1	1
Finance	Have sufficient funding sources for construction been identified?	N/A	null	1	1	1	1

Appendix C: Printing Reports

Print Current Project

Select the section(s) you wish to print.

*NOTE: Submit any responses that have changed prior to printing or they will not be included on the report.

☐ All Sections

☐ Include Response Notes

☐ Include FOIA

☐ Project Executive Summary

☐ Project Demographics

☐ Long-Term vs Short-Term

☐ Short-Term Contracting Methods

☐ Short-Term Risk Mitigation

☐ Private Financing Included (DBFOM) or Excluded (DBOM)

☐ Long-Term Construction and Financing Analysis (PSC/P3 Evaluation)

☐ Include Context/Considerations

Cancel

Print

Check the workflow sections you wish to print. (NOTE: a section must be complete, and responses must be submitted in order for information to be included on the report.)

You may print specific sections or all sections. If you would like to see all detailed response notes on the report, check the “Include Response Notes” checkbox.

If you would like to see context and/or range output values on the Long-Term Construction and Financing Analysis (PSC/P3 Evaluation) report, check the “Include Context” and/or “Include Range Output” checkboxes.

Click the Print button. Your report will appear in HTML format in another tab. From here, the user can save the HTML text as a PDF. The following is a sample page from a sample project report:

CASE Webtool

Sample report project

Executive Summary

Long-Term vs Short Term Analysis

Based on answers to questions in this section, the toolset evaluates whether Long-Term or Short-Term contracting is preferred for the project.

Based on your responses, the toolset's recommendation is : Long -Term Contracting is preferred.

Short-Term Contracting Methods – Evaluation Results

Below are your scores for each of the methods based on your answers. (→ denotes selected method.)

DBB : 157
CMGC : 222
DB : 216
→ PDB : 222

Risk Mitigation Decision Matrix Summary

Risk Mitigation Rating (Higher Score = Better Risk Mitigation)

DBB: 64
CMGC: 100
DB: 85
PDB: 79

Private Financing (DBFOM) or Public Financing (DBOM) Evaluation

An availability payment DBFOM structure is the recommended long-term contracting method for this project.

Long-Term Construction and Financing Analysis

Please see the Long Term Financing Analysis Detail Report for information regarding this section of the project.

Project Demographics

Project Identifiers

Project Title	Sample report project
Project Identification Number	666A9E19F5344F7AB37D

Appendix D: Frequently Asked Questions

Q: What is ACM?

A: ACM is an abbreviation for the Alternative Contracting Method.

Q: What is P3?

A: P3 is an abbreviation for Public-Private Partnership. Public-private partnerships are contractual agreements between a public agency and a private entity that allow for greater private participation in delivering projects. In transportation projects, this participation typically involves the private sector taking on additional project risks such as design, construction, finance, long-term operation, and traffic revenue. Click [here](#) to learn more about P3.

Q: What is DBB?

A: DBB (Design-Bid-Build) is the traditional Short-Term project delivery method used in conventional highway construction. Three sequential phases must be completed: design creation, opening a bidding process, and selecting a contractor (usually the lowest bidder). Click [here](#) to learn more about DBB.

Q: What is DBF?

A: With the design-build-finance (DBF) procurement model, a single contract is awarded for the design, construction, and full or partial financing of a facility. Responsibility for the long-term maintenance and operation of the facility remains with the project sponsor but could be included in a separate agreement. This approach takes advantage of the efficiencies of the design-build (DB) approach and also allows the project sponsor to defer financing either completely or partially during the construction period. Click [here](#) to learn more about DBF.

Q: What is CM/GC?

A: Construction Manager / General Contractor (CM/GC) is a Short-Term project delivery method. CM/GC allows an owner to engage a construction manager during the design process to provide constructability input. Click [here](#) to learn more about CM/GC.

Q: What is DB?

A: DB (Design-Build) is a Short-Term project delivery method. In the DB process, a State DOT identifies what it wants constructed, accepts proposals, and selects a DB team to assume the risk and responsibility for the design and construction phases. Click [here](#) to learn more about DB.

Q: What is DBOM?

A: DBOM (Design-Build-Operate-Maintain) is a delivery method for long-term projects. The DBOM model is an integrated procurement model that combines the design and construction responsibilities of design-build procurements with operations and maintenance. These project components are procured from the private sector in a single contract with financing independently secured by the public sector project sponsor. With DBOM contracts, a private entity is responsible for design and construction as well as long-

term operation and/or maintenance services. The public sector secures the project's financing independently and retains the operating revenue risk. Click [here](#) to learn more about DBOM.

Q: What is IDIQ?

A: IDIQ (Indefinite Delivery/Indefinite Quantity) is typically used to deliver multiple projects similar in scope, size, and type. The “projects” are normally called “job orders” or “task orders.” The traditional method is based on DBB with fixed unit pricing for the expected pay items in the scope of work. However, it must be emphasized that IDIQ has been used to deliver multiple DB and, in some cases CM/GC projects. An example from the Minnesota DOT is a DB IDIQ for delivering traffic signalization and ramp metering work on a corridor basis.

Q: What is PDB?

A: The below explanation is extracted from the following paper:

Gransberg, D.D. and Molenaar, K.R., “Critical Comparison of Progressive Design-Build and Construction Manager/General Contractor Project Delivery Methods,” *Transportation Research Record, Journal of the Transportation Research Board*, No. 2673, National Academies, doi.org/10.1177/ 0361198118822315, 2019, pp. 261-268.

Progressive Design-Build Mechanics

The distinguishing feature of Progressive-Design-Build (PDB) is the process used to set the initial target budget and then negotiated the construction price as the design is advanced from the time of design-builder selection to the point where the guaranteed maximum price (GMP) is established. At this writing, there is no standard procedure for doing this in the highway construction sector. The airport, transit, and water/wastewater sectors have used PDB for at least two decades. The Water Design-Build Council has been actively involved in promoting PDB in its sector and produced a 5-volume set of PDB procurement documents.

Figure 2 is a conceptual diagram of the PDB process promoted by the Water Design-Build Council. The point where the CM/GC would be selected if the owner chose that method over PDB is shown for reference purposes. Figure 2 shows three important concepts that apply to PDB but not to traditional DB.

The design-builder is selected and participates in the establishment of the target budget. The owner benefits from several aspects of this approach. First, it can ask the design-builder to generate and price potential technical alternatives before having to commit to one preferred alternative as in the typical DB process. Second, the agency has access to the construction contractor's real-time pricing data, which provides higher cost certainty than estimates using bid tabulations based on historic rather than current pricing.

The GMP negotiations are based on open book pricing. The design-builder's design/preconstruction services fee is established once the scope is solidified. It is also possible to negotiate the contractor's construction management fee (usually includes profit and overheads/general conditions) as a lump sum. Thus, subsequent GMP negotiations consist of direct costs, quantities, and other cost items that are auditable if the owner should lose confidence in the design-builder.

The PDB process includes an “off-ramp” if a GMP cannot be mutually agreed upon. However, the design process includes periodic progressive estimates as the design increases in detail and not only assists in early identification and control of scope creep, but also makes the potential of not reaching an agreement on the GMP low as design decisions can be continuously informed by the in-progress estimates.

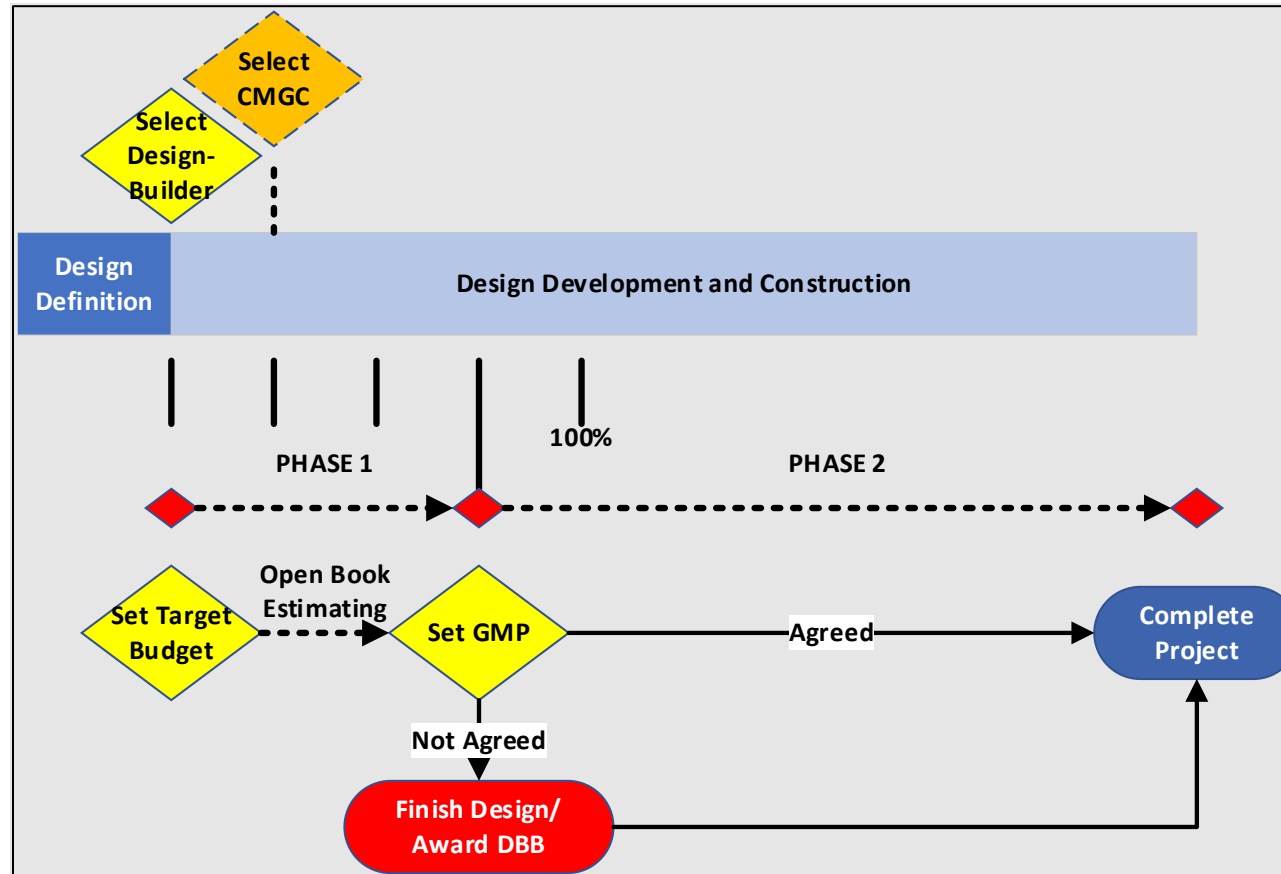


Figure 1: Progressive Design-Build conceptual process with CM/GC shown for comparison.

The flow chart in Figure 2 increases the level of detail found in Figure 3. It also illustrates the need to approach PDB as series of design and related construction packages in much the same manner as is done in CM/GC. The primary benefit to packaging the project is found during price negotiations, where the focus becomes tied to the value of a particular design package and the quantities of work contained in it. This simplifies the preparation of the progressive estimates by reducing the scale of each negotiation. It also permits the owner to approve completed design packages for release for construction if desired and establish incremental GMPs for groups of related design packages. This process is called using a progressive GMP. While the owner can still choose to establish a single GMP, by following the design and construction package approach, it leaves the door open to commence construction as early as practical. The system also provides an early warning if the project's estimated cost is in danger of exceeding the established budget, allowing the design-builder and owner to initiate value engineering at a point where substantive changes can be made to recover the budget.

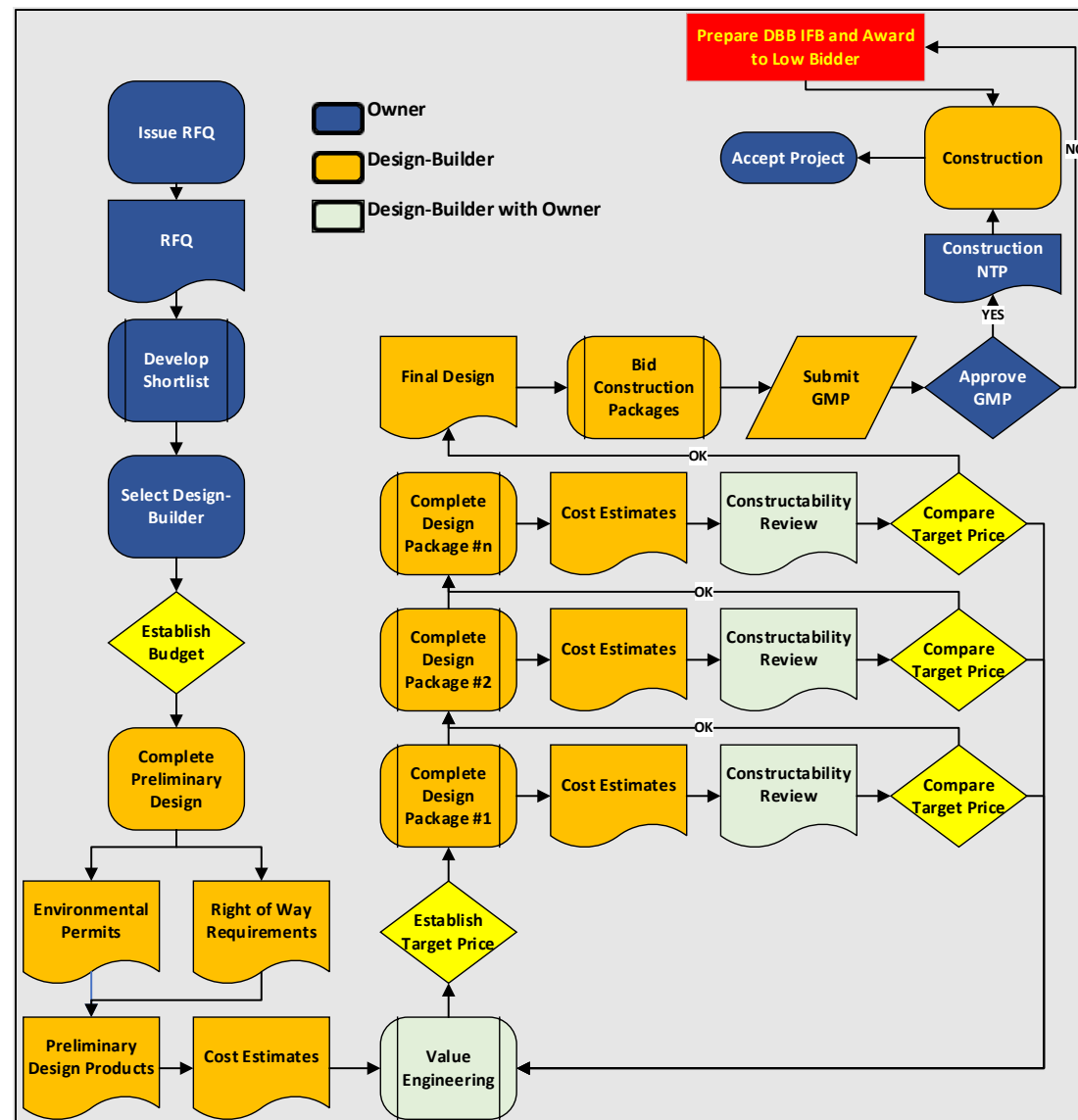


Figure 2. Progressive Design-Build Flow Chart

One of the rarely used mechanisms for aligning scope and budget is making changes to the initial project risk profile. The highway industry comes from a long history of risk-shedding regardless of project delivery method. This mainly due to the fact that in DBB and traditional DB, the project price is fixed upon contract award. The downside is that construction contractors and design-builders must include contingencies to account for the risk transfer from the owner. If those risks are not realized, e.g., no differing site conditions are encountered during construction, the owner still pays for the unrealized risks because the contingencies are buried in the unit prices and lump sum contract amounts.

When the contractor or design-builder is selected using a QBS process, the price is still unknown at the time of the initial contract award. Thus, when the initial budget is established, it can not only include the value of the technical scope of work, but also the value of the risk as mutually agreed. Research has proven that risk sharing is less costly than risk shedding. Hence, PDB and CM/GC provide the means to jointly discuss the risk profile and even furnish the owner with the estimated costs of risk-sharing and/or shedding alternatives. Thus, the risk assignment decisions are made in an environment of actual information rather than by professional judgment and assumption.

Q: What do the scores at the end of the “Evaluate Short-Term Contracting Methods” section indicate?

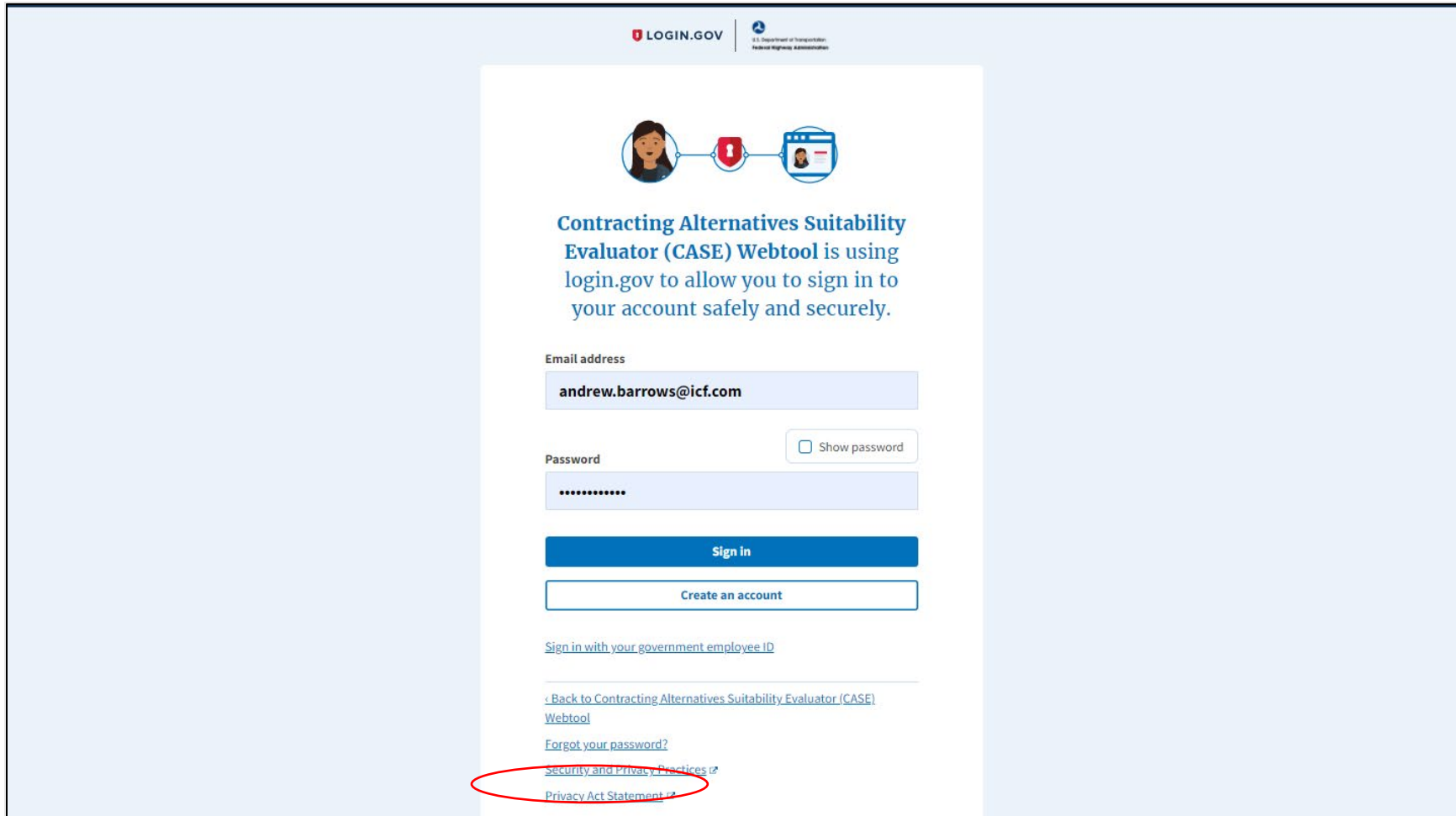
A: The tool calculates scores for Short-Term delivery methods based on responses to questions and the relative goal rankings assigned in the Project Information section. A score is calculated for DBB, CM/GC, DB, and PDB methods. The highest of the four scores indicates the recommended Short-Term delivery method for the project. You may use the tool’s recommendation or select a different ACM for further analysis.

Q: What is PSC?


A: PSC is Public Sector Comparator. In this webtool, the PSC is either the Short-Term contracting method (ACM) recommended at the end of the “Evaluate Short-Term Contracting Methods” section or the method you select. The PSC is compared with the recommended long-term method as part of the webtool’s Long-Term Construction and Financing Analysis (PSC/P3 Evaluation).

Appendix E: Password Resets

To reset your password, click “Forgot Password” found at the bottom of the Login.gov screen seen below:



LOGIN.GOV | U.S. Department of Transportation
Federal Highway Administration



Contracting Alternatives Suitability Evaluator (CASE) Webtool is using login.gov to allow you to sign in to your account safely and securely.

Email address

Password
 ☐ Show password

Sign in

Create an account

[Sign in with your government employee ID](#)

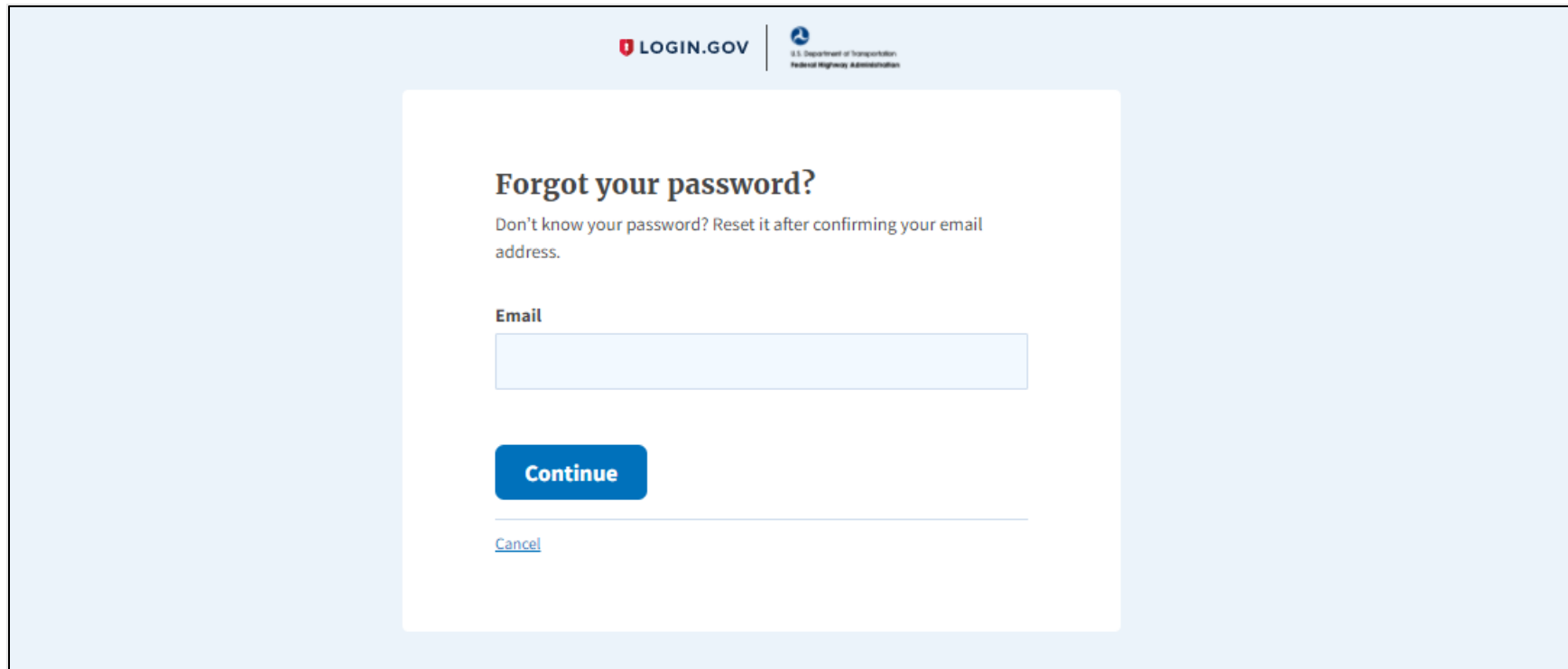
[Back to Contracting Alternatives Suitability Evaluator \(CASE\) Webtool](#)

[Forgot your password?](#)

[Security and Privacy Practices](#)

[Privacy Act Statement](#)

You are presented with a page requesting you to enter an email address to which a link will be sent that you will use to reset your password:

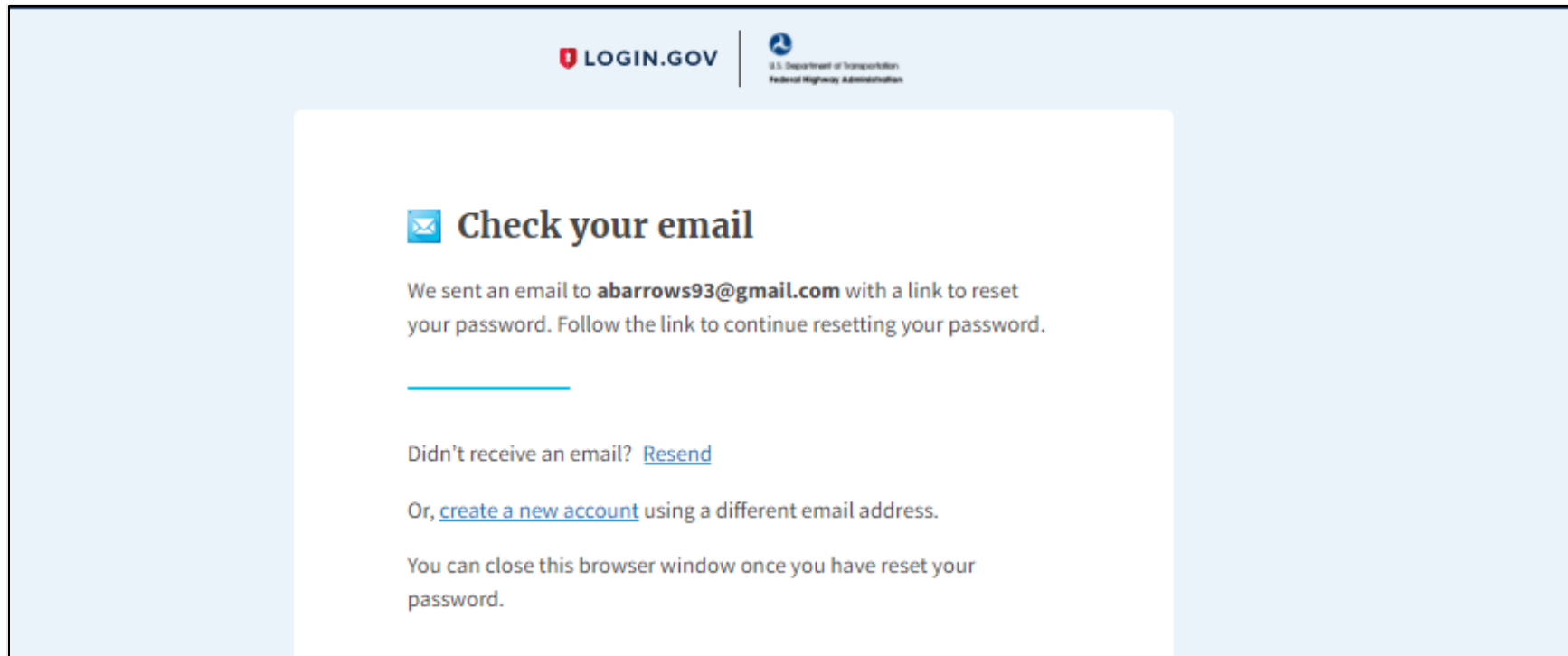


The screenshot shows a web page with a light blue background. At the top, there are two logos: 'LOGIN.GOV' on the left and the 'U.S. Department of Transportation Federal Highway Administration' logo on the right. In the center, there is a white rectangular box containing the following text and elements:

- Forgot your password?** (in bold)
- Don't know your password? Reset it after confirming your email address.
- Email** (label for the input field)
- A text input field for the email address.
- A blue button labeled **Continue**.
- A horizontal line below the button.
- A [Cancel](#) link below the line.

Enter the email address in the Email Address field and click the “Submit” button.

You are presented with the following message:



You can close this browser window once you have reset your password.

Locate and open the email from fhwaACMTool@donotreply.com. The email contains text similar to the following:




Reset your password

To finish resetting your password, please click the link below or copy and paste the entire link into your browser.

Reset your password


Click the blue hyperlink text in the body of the email. You are presented with the following:

 LOGIN.GOV


Change your password

New password

Change password

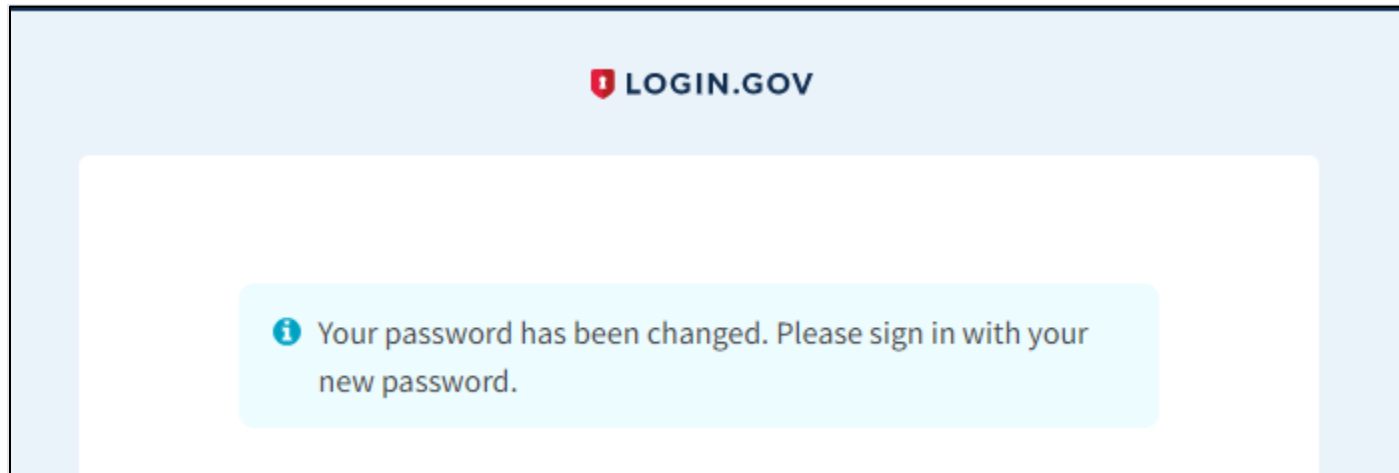
Password safety tips 

The longer and more unusual the password, the harder it is to guess. So avoid using common phrases. Also avoid repeating passwords from other online accounts such as banks, email and social media.

 Close

Enter your *new* password in the Password field.


Re-enter your **new** password in the Confirm Password field and click “Change password.” You are presented with the following message:




You are now able to use your new password when prompted on Login.gov. Please return to the login page and use your new password to log in to the webtool.

Appendix F: Project Organization and Document Management

Project Organization and Document Management capabilities and functionality are located for each project on the Welcome page of the webtool:




Start a New Analysis



Archived Analyses













* - Required



Projects in Progress













* View projects by Agency/Organization


ICF

ACM-INFO					ACM-SCREEN	ACM-RISK	P3-EFFECTS 2.0		P3-VALUE 2.3	
Action	Project Name	Project Identifier	Last Updated	Manage Documents	Long vs Short	Short-Term ACM	Short-Term Risk Mitigation	DBOM/ DBFOM	PSC/P3 Long-Term Analysis	P3-VALUE
  	Sample report project	666A9E19F5344F7AB37D	12/28/2020		C	C	C	C	C	C
  	Express Lanes Project-Copied	F3BE7CAA6F6446FCB717	4/6/2020		C	N	N	C	C	N
  	Express Lanes Project-Copied	AAE6717BA96B4298AB24	4/6/2020		C	N	N	C	C	N


Manage Documents

Manage Documents allows you to upload and download supporting documentation for your project. Documentation is saved in the cloud account for the project. NOTE: Only an administrator may delete a document once it is uploaded.

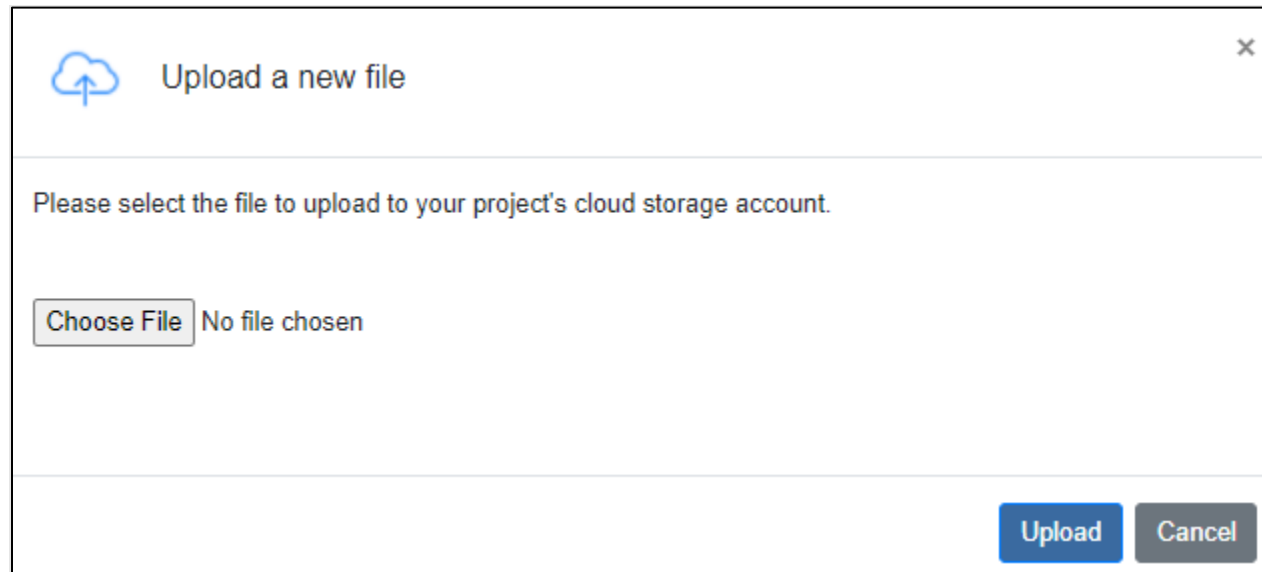
ACM-INFO				
Action	Project Name	Project Identifier	Last Updated	Manage Documents
  	Sample report project	666A9E19F5344F7AB37D	12/28/2020	
  	Express Lanes Project-Copied	F3BE7CAAEF6446FCB717	4/6/2020	
  	Express Lanes Project-Copied	AAE6717BA96B4298AB24	4/6/2020	

Click the “sheets of paper” icon  in the Manage Documents column for your project. You are presented with the Upload page:

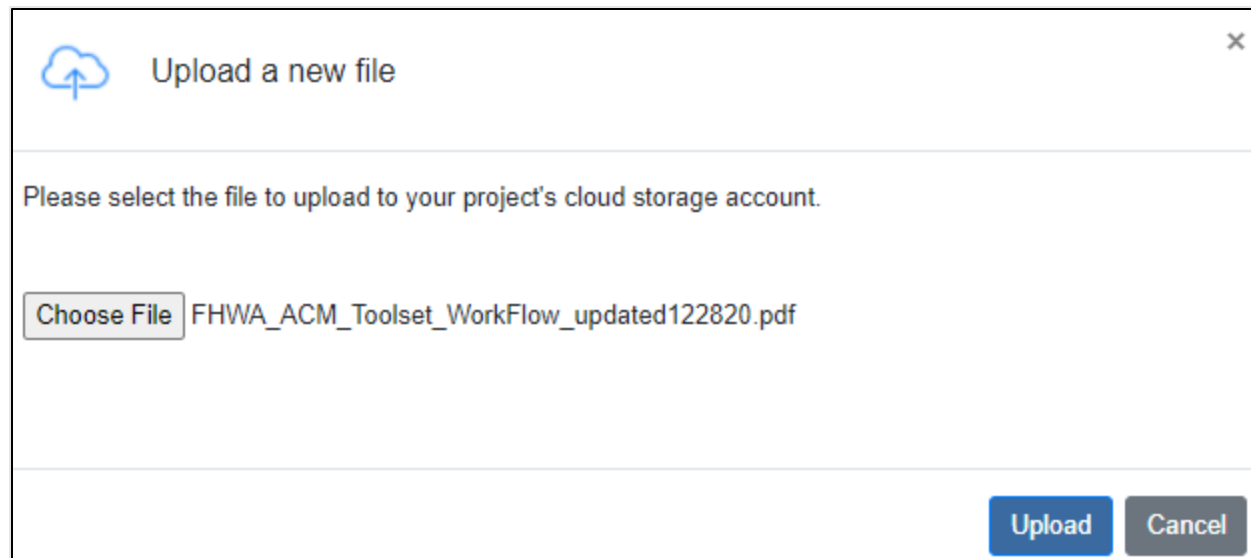
Sample report project
Project Documents
666A9E19F5344F7AB37D

Document Name	Upload Date	Download	Delete
<div>  Upload a New File </div>			

Click “Upload a New File” to upload a piece of supporting documentation for your project. You are presented with the following message:

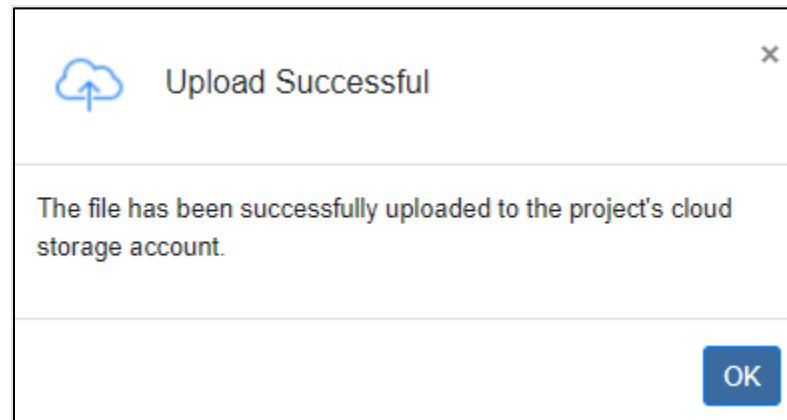


Click “Choose File.” Navigate to the stored file on your computer you wish to upload and select it. The name of the file is displayed in the message:



Click the blue “Upload” button to upload a copy of the file from your computer to the cloud storage account for your project. (NOTE: You must choose a file to upload *before* clicking the Upload button.)

You are presented with the following message:






Click “OK” to return to the Upload page. The file now appears in the list of files uploaded for your project:


Sample report project


Project Documents

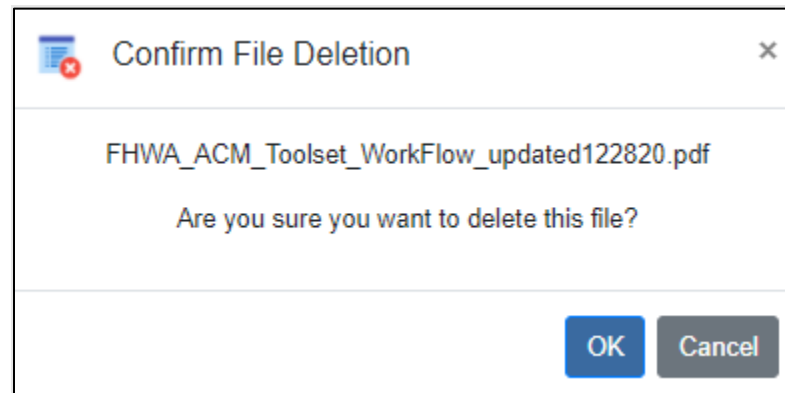
666A9E19F5344F7AB37D

Document Name	Upload Date	Download	Delete
FHWA_ACM_Toolset_WorkFlow_updated122820.pdf	2020-12-28 11:42:11 PM		


Upload a New File

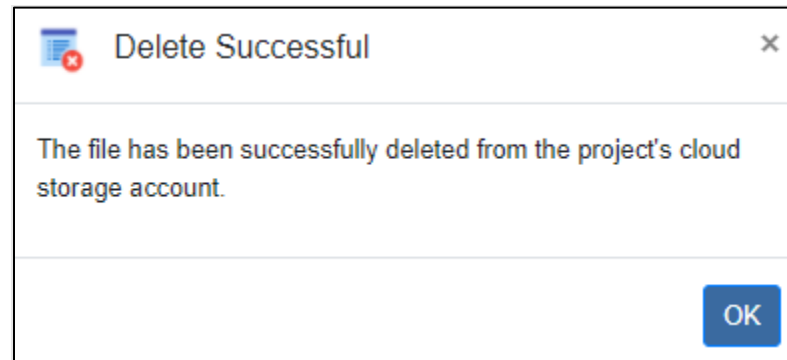
Click the blue cloud  icon in the Download column to download a copy of the file to your computer. The file will be downloaded to a destination on your computer based on your computer’s settings.

Administrators **only**: Click the  icon in the Delete column to delete the downloaded file from the cloud storage account for the project. You are presented with the following message:



If you wish to cancel file deletion, click “Cancel” to return to the Upload page.

To confirm the deletion, Click “OK.” You are presented with the following message:



Click “OK” to clear the message and return to the Upload page.

[Delete Project](#)


The [Delete Project](#) functionality allows you to permanently delete a project and its supporting documentation from the webtool.

ACM-INFO				
Action	Project Name	Project Identifier	Last Updated	Manage Documents
  	Sample report project	666A9E19F5344F7AB37D	12/28/2020	
  	Express Lanes Project-Copied	F3BE7CAAEF6446FCB717	4/6/2020	
  	Express Lanes Project-Copied	AAE6717BA96B4298AB24	4/6/2020	
  	Express Lanes Project-Copied	B03BF394C28649B68320	4/6/2020	
  	Express Lanes Project-Copied	32CB7F6F293D492AB187	4/6/2020	
  	Express Lanes Project-Copied	00D252D3097D4875BB6F	6/9/2020	

Click the “trash can”



icon to the left of the project name to access the functionality. You are presented with the following message:

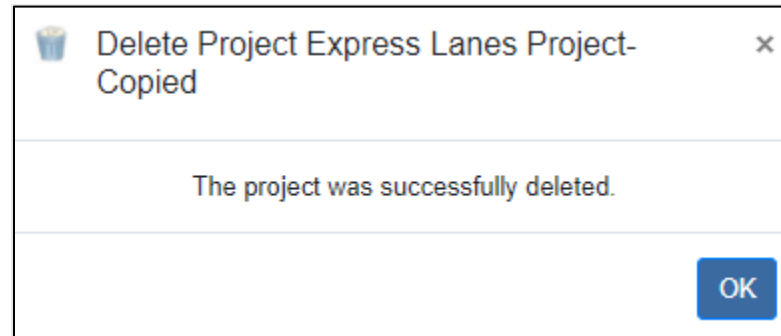
 Delete Project Express Lanes Project-Copied ×

Are you sure you want to delete this project?

OK Cancel

Click “Cancel” to skip deletion and return to the Welcome page.

Click “OK” to confirm the deletion. The project and its supporting documentation are deleted from the cloud account. You are presented with the following message:




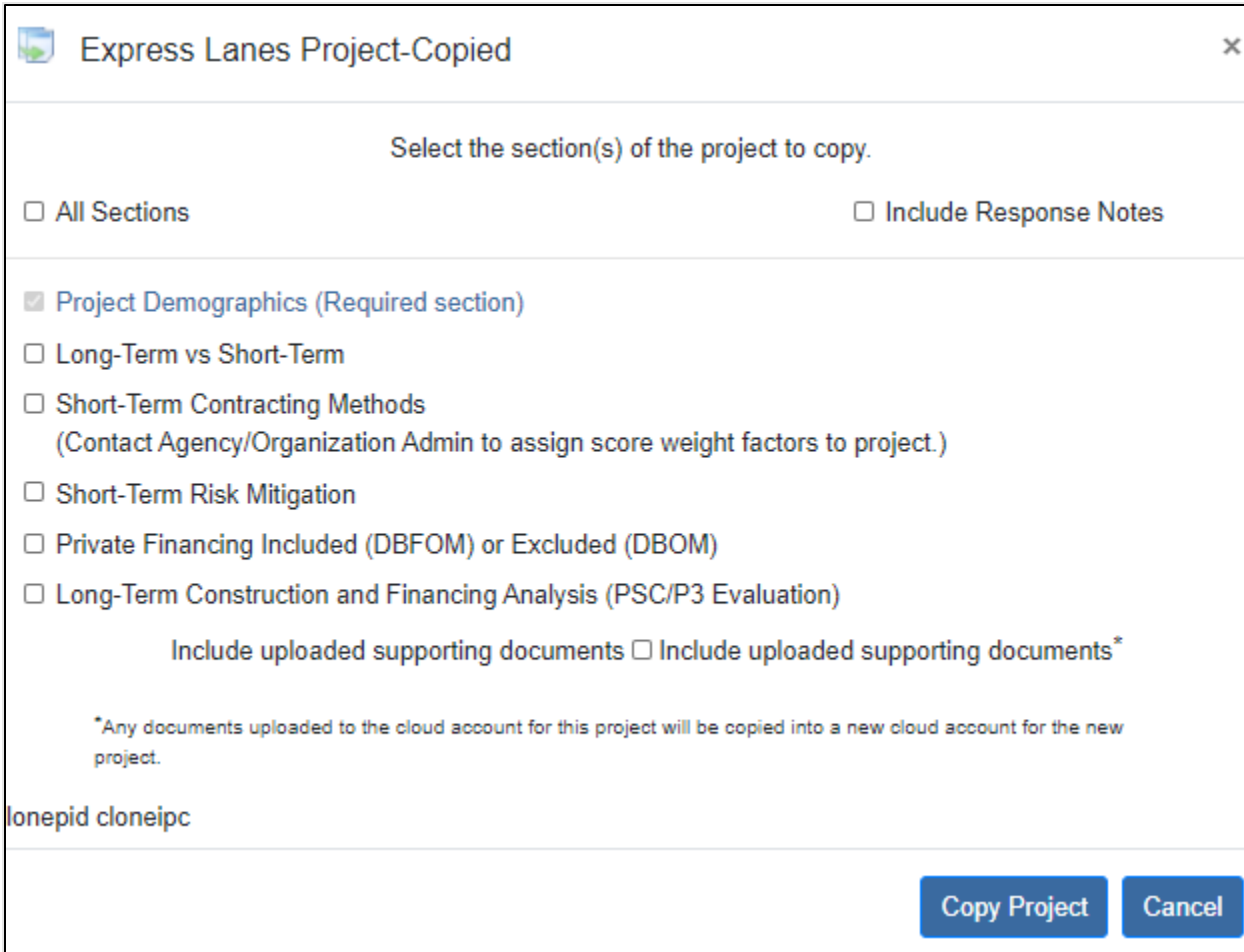
Click “OK” to return to the Welcome page.

Copy Project

The [Copy Project](#) functionality allows you to copy an existing project. This may be useful when entering a project similar to one that already exists, eliminating the need to re-key all information from scratch.

ACM-INFO				
Action	Project Name	Project Identifier	Last Updated	Manage Documents
  	Sample report project	666A9E19F5344F7AB37D	12/28/2020	
  	Express Lanes Project-Copied	F3BE7CAAEF6446FCB717	4/6/2020	
  	Express Lanes Project-Copied	AAE6717BA96B4298AB24	4/6/2020	
  	Express Lanes Project-Copied	B03BF394C28649B68320	4/6/2020	
  	Express Lanes Project-Copied	32CB7F6F293D492AB187	4/6/2020	
  	Express Lanes Project-Copied	00D252D3097D4875BB6F	6/9/2020	

Click the sheets of paper  icon to the left of the project name to access the functionality. You are presented with the following message:



The dialog box is titled "Express Lanes Project-Copied" and contains a close button (X) in the top right corner. The main instruction is "Select the section(s) of the project to copy." Below this, there are two checkboxes: "All Sections" and "Include Response Notes". A list of project sections follows, with "Project Demographics (Required section)" checked. Other sections include "Long-Term vs Short-Term", "Short-Term Contracting Methods" (with a note to contact agency admin), "Short-Term Risk Mitigation", "Private Financing Included (DBFOM) or Excluded (DBOM)", and "Long-Term Construction and Financing Analysis (PSC/P3 Evaluation)". There is a section for "Include uploaded supporting documents" with a checkbox and an asterisked note. At the bottom, there are "Copy Project" and "Cancel" buttons.

Express Lanes Project-Copied

Select the section(s) of the project to copy.

☐ All Sections ☐ Include Response Notes

☒ Project Demographics (Required section)

☐ Long-Term vs Short-Term

☐ Short-Term Contracting Methods
(Contact Agency/Organization Admin to assign score weight factors to project.)

☐ Short-Term Risk Mitigation

☐ Private Financing Included (DBFOM) or Excluded (DBOM)

☐ Long-Term Construction and Financing Analysis (PSC/P3 Evaluation)

Include uploaded supporting documents ☐ Include uploaded supporting documents*

*Any documents uploaded to the cloud account for this project will be copied into a new cloud account for the new project.

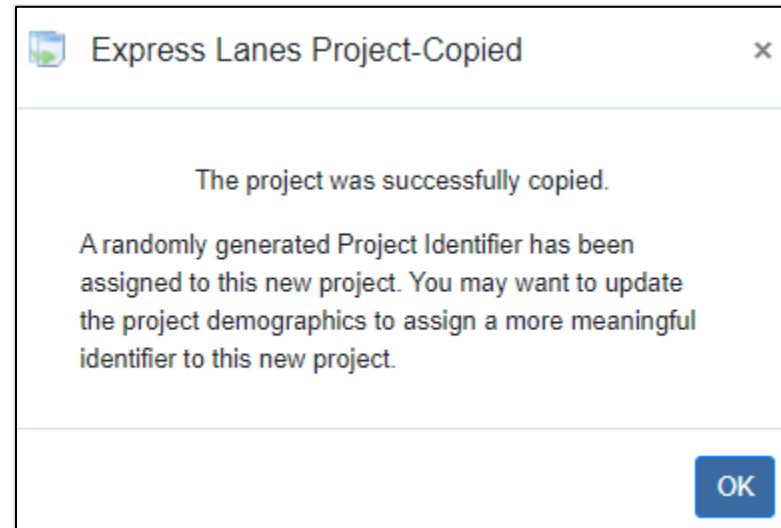
lonapid cloneipc

Copy Project Cancel









































Click “Cancel” to cancel the project copy and return to the Welcome page.

If you want to copy the project and include all existing documentation, check the “All Sections” checkbox.

Click “Copy Project” to make a copy of the project. You are presented with the following message:












































Click “OK” to return to the Welcome page. The new project appears on the list of projects. If you wish, you may change the project name and project identifier to something more meaningful in the Project Information section of the webtool. Click the project name to access the Project Demographics panel to make your changes.

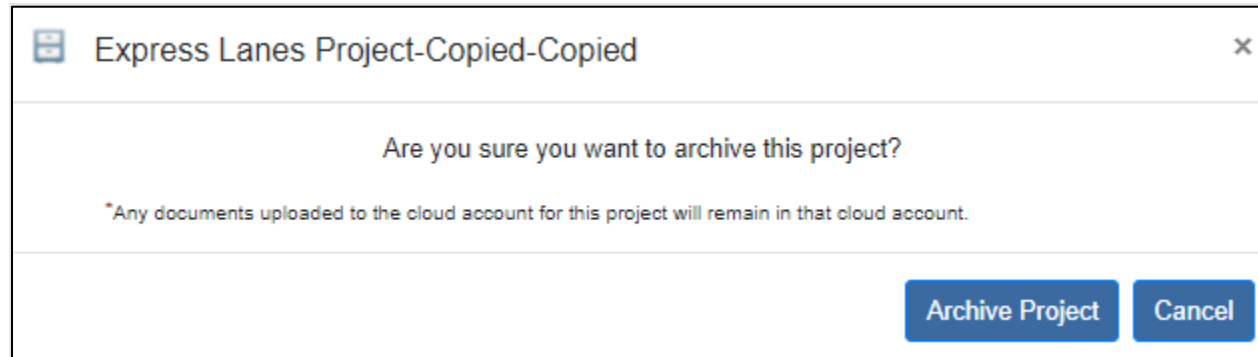
ACM-INFO				
Action	Project Name	Project Identifier	Last Updated	Manage Document
  	Sample report project	666A9E19F5344F7AB37D	12/28/2020	
  	Express Lanes Project-Copied	F3BE7CAAEF6446FCB717	4/6/2020	
  	Express Lanes Project-Copied	AAE6717BA96B4298AB24	4/6/2020	
  	Express Lanes Project-Copied	B03BF394C28649B68320	4/6/2020	
  	Express Lanes Project-Copied	32CB7F6F293D492AB187	4/6/2020	
  	Express Lanes Project-Copied	00D252D3097D4875BB6F	6/9/2020	
  	Express Lanes Project-Copied	5E76F6BF3126488A965F	9/3/2020	
  	Nick 1	1	12/12/2020	
  	Express Lanes Project-Copied	33C7D4B9BDB04C628049	12/18/2020	
  	Express Lanes Project-Copied-Copied	2C79AF2CD26342A8A63F	12/28/2020	

Archive Project

The [Archive Project](#) functionality allows you to move a project from the Projects in Progress section on the Welcome page to an archived project library. This is useful when you want to clean up the existing list of projects without deleting projects.

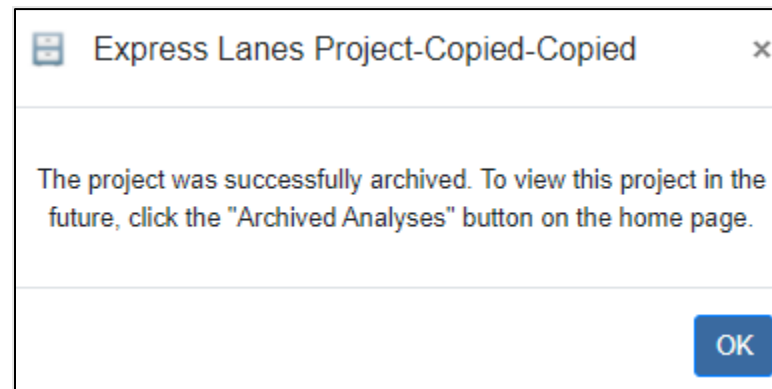
Action	Project Name	Project Identifier	Last Updated	Manage Document
  	Sample report project	666A9E19F5344F7AB37D	12/28/2020	
  	Express Lanes Project-Copied	F3BE7CAAEF6446FCB717	4/6/2020	
  	Express Lanes Project-Copied	AAE6717BA96B4298AB24	4/6/2020	
  	Express Lanes Project-Copied	B03BF394C28649B68320	4/6/2020	
  	Express Lanes Project-Copied	32CB7F6F293D492AB187	4/6/2020	
  	Express Lanes Project-Copied	00D252D3097D4875BB6F	6/9/2020	
  	Express Lanes Project-Copied	5E76F6BF3126488A965F	9/3/2020	
  	Nick 1	1	12/12/2020	
  	Express Lanes Project-Copied	33C7D4B9BDB04C628049	12/18/2020	
  	Express Lanes Project-Copied-Copied	2C79AF2CD26342A8A63F	12/28/2020	

Click the “file cabinet”  icon to the left of the project name to access the functionality. You are presented with the following message:



Click “Cancel” to cancel the archive.


Click “Archive Project” to move the project and its supporting documentation to the archive library. You are presented with the following message:




Click “OK” to close the message and return to the home page.

To view projects in the Archive library, click the “Archived Analyses” button at the top right of the Welcome page. You are presented with the list of all archived projects.

CASE Webtool Welcome, Andrew Barrows
Logout
Administration Home FAQs About ▾




Start a New Analysis



Archived Analyses



* - Required



Archived Projects

* View projects by Agency/Organization

ICF ▾

		ACM-INFO			ACM-SCREEN	ACM-RISK	P3-EFFECTS 2.0	P3-VALUE 2.3		
Action	Project Name	Project Identifier	Last Updated	Manage Documents	Long vs Short	Short-Term ACM	Short-Term Risk Mitigation	DBOM/ DBFOM	PSC/P3 Long-Term Analysis	P3-VALUE
	Express Lanes Project-Copied-Copied	2C79AF2CD26342A8A63F	12/28/2020		C	N	N	C	C	N

C Complete
 I In Progress
 N Not Started

The “Archived Analyses” button turns blue, and the “Archived Projects” file cabinet icon appears above the list of projects indicating you are viewing archived projects. To return to the list of Projects in Progress, click the blue “Archived Analyses” button again.

Appendix G: ACM Glossary

Alliance Contracting: A commercial/legal framework between an owner-participant and one or more private-sector parties as a service provider or non-owner participants for delivering one or more capital works projects. Also known as Alliancing.

Alternative Contracting Methods (ACMs): Contracting methods—including design-build, construction manager/general contractor, and alternative technical concepts—to accelerate project delivery, encourage the deployment of innovation, and minimize unforeseen delays and cost overruns.

Alternative Delivery Method (ADM): A wide array of methods used by public agencies to deliver transportation project improvements. These methods include construction manager/general contractor, design-build, design-build-operate-maintain, design-build-finance, design-build-finance-operate-maintain, fee services, long-term lease concessions, and operations and maintenance. Also known as alternative project delivery.

Alternative Project Delivery (APD): A wide array of methods used by public agencies to deliver transportation project improvements. These methods include construction manager/general contractor, design-build, design-build-operate-maintain, design-build-finance, design-build-finance-operate-maintain, fee services, long-term lease concessions, and operations and maintenance. Also known as alternative delivery method.

Best Value: May be defined based on either the value of the product to be received (a 10-year warranty compared with a 3- or 5-year warranty) or the bidder's past performance based on some objective criteria. In general, the project award is based on a composite of price data and non-price factors.

Bridge Bundling: A defined set (or bundle) of bridges that are planned for preservation/preventive maintenance, rehabilitation, or replacement in a timely and efficient manner through a series of bridge bundling contracts with the support of various funding options and/or partnerships that may include a program completion time frame.

Contract: A mutually binding legal relationship obligating the seller to furnish supplies or services and the buyer to pay for them.

Contracting: Purchasing, renting, leasing, or otherwise obtaining supplies or services from non-Federal sources. Contracting includes a description of supplies and services required, selection and solicitation of sources, preparation and award of contracts, and all phases of contract administration.

Construction Manager/General Contractor (CM/GC): The agency procures professional services on qualifications or best-value basis from a construction manager during the design phase to offer suggestions on innovations, cost and schedule savings, and

constructability issues. Upon completion of the design or individual design packages, the contractor and agency negotiate a price for the construction contract (often verified by an independent cost estimator), and then the construction manager acts as a general contractor to complete construction. The contract can employ a guaranteed maximum price administered on a cost-reimbursable basis, unit price, or lump-sum contract.

Cost-Plus-Time Bidding (also referred to as A+B Bidding): Reduces construction time by making time a factor, in addition to cost, when awarding a contract. Under this method, each submitted bid consists of two components: the “A” component is the traditional bid for the contract items based on unit bid prices and quantities, while the “B” component is the bidder’s estimate of the time required to complete critical construction as defined in the contract. Calendar days are typically used to reduce the potential for disputes. For the purposes of determining the apparent low bidder, the B component is converted to a dollar value by multiplying the number of days by the daily road user cost identified in the contract.

Corridor (also referred to as Transportation Corridor): A combination of discrete, adjacent surface transportation networks (e.g., freeway, arterial, transit networks) that link the same major origins and destinations.

Design-Build (DB): A project delivery method that combines two, usually separate, services into a single contract. With DB procurements, agencies execute a single, fixed-fee contract (lump sum) for both architectural/engineering services and construction. The DB entity—also known as a constructor—may be a single firm, a consortium, a joint venture, or other organization assembled for a project. DB has been implemented using various procurement approaches, including qualified low bid and best value.

Design-Bid-Build (DBB): The traditional delivery method where the agency contracts separately for design and construction services, the bid is based on complete (100 percent) plans and specifications, and design and construction occur sequentially. DBB is typically a unit-priced contract, but it can also include lump-sum items.

Design-Build-Finance (DBF): A project delivery method where procurement is a single contract awarded for the design, construction, and full or partial financing of a facility. Responsibility for the long-term maintenance and operation of the facility remains with the project sponsor but could be included in a separate agreement. This approach takes advantage of the efficiencies of the design-build approach and allows the project sponsor to defer financing either completely or partially during the construction period.

Design-Build-Finance-Operate (DBFO): Concessions whereby a single private consortium develops, builds, finances, and operates the road for a set number of years. See Design-Build-Finance-Operate-Maintain (DBFOM).

Design-Build-Finance-Operate-Maintain (DBFOM): A concessions approach where the responsibilities for designing, building, financing, operating, and maintaining are bundled together and transferred to private sector partners.

Design-Build-Operate (DBO): In a DBO project, a single contract is awarded for the design, construction, and operation of a capital improvement. The title to the facility remains with the public sector unless the project is a design-build-operate-transfer or design-build own-operate project. On a public project, the operations phase is normally handled by the public sector or awarded to the private sector under a separate operations and maintenance agreement. Combining all three phases into a DBO approach maintains the continuity of private sector involvement and can facilitate private-sector financing of public projects supported by user fees generated during the operations phase. See Design-Build-Finance-Operate-Maintain.

Design-Build-Operate-Maintain (DBOM): An integrated procurement model that combines the design and construction responsibilities of design-build procurements with operations and maintenance. These project components are procured from the private sector in a single contract with financing independently secured by the public sector project sponsor. This project delivery approach is also known by a number of different names, including turnkey procurement and build-operate-transfer.

Indefinite Delivery/Indefinite Quantity (IDIQ): A type of contract that provides for an indefinite quantity of supplies or services during a fixed period of time.

Job Ordering Contracting (JOC): A non-determinate location/non-determinate quantity-type contract. The heart of a JOC contract is a construction task catalog (CTC) consisting of hundreds of pre-priced work activities. The prices in the CTC are based on the estimated labor, equipment, and material costs to perform the work. All costs are based on local pricing (local prevailing wage rates, equipment costs, and local materials costs). Contractors bid a single adjustment factor that includes their overhead and profit and their risk assessment as to the prices in the CTC. The bidder submitting the lowest adjustment factor is declared the winner.

Public-Private Partnership (P3): A contractual agreement between a public agency and a private entity that allows for greater private participation in the delivery of a transportation project. P3s include any contractual arrangement in which the private sector takes on more risk. P3 goals may vary from raising funds from a lease of an existing facility (brownfield) to constructing a brand-new facility (greenfield). P3s do not necessarily involve toll facilities. P3s traditionally include variations of design-build with one or more operate, maintain, and/or finance components (e.g., design-build-operate, design-build-finance-operate, design-build-finance-operate-maintain (DBFOM), availability-payment concession, and DBFOM concession) and could include other delivery methods such as construction manager/general contractor and alliancing.

Procurement Method: The means used to select a vendor (contractor, designer, or other service). These include low bid, best value, and qualifications-based selection. Other less common methods include adjusted low bid, sole source, and emergency selection.

Project Delivery Method (PDM): The comprehensive process used by an agency to deliver a project includes planning, programming, design, construction, and consideration of required operations and maintenance. These methods include design-bid-build, indefinite delivery/indefinite quantity, design-build (DB), and public-private partnerships (P3s). P3s include DB with operate, maintain, and/or financing components, e.g., design-build-operate, design-build-finance-operate, design-build-operate-maintain, and design-build-finance-operate-maintain.

Progressive Design-Build: A variation of design-build that facilitates involvement of the design build team during the earliest stages of the agency's project development, ensuring they are part of the project team developing design solutions (Design-Build Institute of America).

Quality Assurance (QA): All those planned and systematic actions necessary to provide confidence that a product or facility will perform satisfactorily in service; or, ensuring the quality of a product is what it should be. QA addresses the overall process of obtaining the quality of a service, product, or facility in the most efficient, economical, and satisfactory manner possible. Within this broad context, QA includes the elements of quality control, independent assurance, acceptance, dispute resolution, etc. The use of the term QA/QC or QC/QA is discouraged; the term QA should be used. QA involves continued evaluation of the activities of planning, design, development of plans and specifications, advertising and awarding of contracts, construction and maintenance, and the interactions of these activities (TRB Circular E-C173, 2013).

Quality Control (QC): Also called “process control.” The system is used by a contractor to monitor, assess, and adjust production or placement processes to ensure the final product will meet the specified level of quality. QC includes sampling, testing, inspection, and corrective action (where required) to maintain continuous control of a production or placement process (TRB Circular E-C173, 2013).

Transportation Corridor (also referred to as Corridor): A combination of discrete, adjacent surface transportation networks (e.g., freeway, arterial, transit networks) that link the same major origins and destinations.

Appendix H: Taxonomy of Project Delivery Methods

Project Delivery Methods	Contract goal	Contracting Methods	Procurement methods	P3 (DBFOM) payment models
Conventional Delivery	Project implementation	Design-Bid-Build (DBB)	Best value (BV) or low bid (LB)	Not applicable
Alternative Contracting Methods (ACMs)	Project implementation	DB or DBF	Qualifications-based (QB), best value (BV), or low bid (LB)	Not applicable
		CM/GC or CMR	QB	Not applicable
		IDIQ	QB, BV, or LB	Not applicable
	Project implementation plus long-term (lifecycle) services	Project implementation contracts as above plus separate O&M either contracted or done by Agency (public sector comparator for P3 value for money)	O&M could be QB, BV or LB	Not applicable
		DBOM, DBM, or DBO	QB, BV, or LB	Not applicable
		DBFOM, DBFM, DBFO with equity financing (defined as P3 by FHWA's OIPD)	QB, BV, or LB	Availability payment (AP)
				Toll concession
				Hybrid AP/toll payment

Topics related to Project Delivery Methods		
Topic	Categories	Applicability to DBB and ACMs
Other variations that may be applied to contracting methods above	Contractor Proposed Value Engineering (VE) in DBB, Alternative Technical Concepts (ATCs), IDIQ and warranties	Applicable to all
Financing Methods	Agency budget	Applicable to all
	Agency revenue bonds or GO bonds	Applicable to all
	Private financing	Applicable to DBF and P3 only
Funding Methods	General taxes	Applicable to all
	Dedicated taxes (e.g., sales tax %)	Applicable to all
	Project revenues (i.e., value capture from beneficiaries and tolls)	Applicable to all ACMs, but essential for toll concessions
Payment Methods	Lump sum	Applicable to DB
	Unit price	Applicable to all
	Reimbursable with Guaranteed Maximum Payment (GMP)	Applicable to CM/GC
	Milestone payments, progress payments, completion payments, etc.	Applicable to all

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U.S. Department of Transportation
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Federal Highway Administration Contracting Alternatives Suitability Evaluator (CASE) Webtool **Facilitator Workbook User Guide**

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Background and Overview

The objective of the **Federal Highway Administration Contracting Alternatives Suitability Evaluator (CASE) Webtool** is to furnish a comparative analysis that informs the project delivery method selection decision made by the alternative contracting methods (ACM) project team. The webtool is NOT intended to make the decision for the project team. It is not statistically predictive. The webtool is intended to structure the dialog that must be undertaken by the project team to make an informed business decision as to which project delivery approach is best suited for the given project within the context of the environment in which the project must be delivered. As a result, the project delivery method selection workshop becomes the mechanism in which the dialog takes place and the consensus input is entered into the software. The output then furnishes a second set of information meant to stimulate further dialog regarding the most appropriate approach to deliver the project. This **Federal Highway Administration CASE Webtool Facilitator Workbook User Guide** is intended to act as a resource to assist the ACM project team in gaining the full value of both the information produced by the webtool and the dialog associated with populating the software.

The webtool incorporates and expands on current tools and processes already developed by the Federal Highway Administration (FHWA) and State departments of transportation (DOTs). Much of this workbook is based on the Colorado DOT (CDOT) **Project Delivery Selection Matrix** documentation and processes (see the Next-Generation Transportation Construction Management Pooled Fund website at www.colorado.edu/tcm).

This workbook contains brief descriptions of the overall webtool. However, much of the instructions on how to use the software can be found in the **Federal Highway Administration CASE Webtool Quick Start Guide** and the **Federal Highway Administration CASE Webtool User Guide**. This workbook is intended to describe how a workshop-based approach might work for your organization.

When to use the Federal Highway Administration CASE Webtool

Research has shown that the project delivery method selection decision should be made as early as practical in the project development and delivery process. (See Alternative Contracting Method Performance in U.S. Highway Construction <https://www.fhwa.dot.gov/publications/research/infrastructure/17100/17100.pdf>.) One key finding from a study of design-build (DB) was that making the decision to use DB late in the process often results in the DOT advancing the project's design to a point where the potential for innovative proposals from competing design-builders is minimized. The typical DOT project development process was predicated on the use of design-bid-build (DBB), and as a result, it is silent on when to use ACMs. Therefore, the project development process needs to be modified to include “gates” (decision points) where the DOT project team has sufficient time to evaluate whether ACM delivery is more attractive, whether ACM delivery provides greater value/return on investment (ROI), and which ACMs seem to be most appropriate.

The **Federal Highway Administration CASE Webtool** can be used to structure the dialog regarding potential ACM selection at each gate. Ideally, the first gate would occur as the project's National Environmental Policy Act (NEPA) clearance and other State-level permits are completed to minimize the chances that the technical commitments made during the NEPA process would constrain potential benefits achieved through innovative solutions that could be proposed by industry in a number of ACMs.

A project with a high potential for beneficial ACM application must pass through the NEPA process with as much flexibility of final design configuration as possible. This constitutes a shift in the environmental permitting process away from the current model of “be as specific as possible” to a less restrictive mode that provides the agency as much latitude as possible while remaining in full compliance with the laws of both the State and the Federal Government. The net result is that agency personnel must be jointly involved in the ACM selection decision at the earliest point — when the project scope is defined.

Table 1 is a generic DOT project development process and provides a list of considerations that should be included in the ACM assessment process at each phase of project development.

Table 1: Project Development Process ACM Considerations

Development Phase	Typical Activities	ACM Considerations
Planning	Determine purpose and need, determine whether it's an improvement or requirement study, goals and objectives, consider environmental factors, context, facilitate public involvement/participation, and consider interagency conditions	<ul style="list-style-type: none"> • Evaluate potential design alternatives for flexibility of staging and sequence of work. • Discuss implications with resource agencies, as well as internal design, construction, operations, and maintenance offices. • Consider the possibility of choosing a long-term versus short-term ACM.
Programming and Preliminary Design	Conduct environmental and contextual analysis, conduct schematic development, hold public hearings, finalize goals and objectives, determine right-of-way (utilities/railroads) impact, determine project economic feasibility, obtain funding authorization, develop right-of-way (utilities/railroads) needs, obtain environmental clearance, determine design criteria and parameters, survey utility locations and drainage, make preliminary plans such as alternative selections, initial geometrics, and create initial bridge layouts	<ul style="list-style-type: none"> • Evaluate potential impacts (social, environmental, economic) during the environmental review process to integrate potential means and methods ACMs are not unintentionally eliminated. • Keep the NEPA approved footprint/alignment as flexible as possible.

Development Phase	Typical Activities	ACM Considerations
		<ul style="list-style-type: none"> Consider the possibility of ACM's ability to manage risk related to utility relocations and/or railroad agreements. Develop the risk management plan. Assess the possibility of including private financing through P3 or design-build-finance (DBF) delivery.
Final Design	Acquire right-of-way, develop plans, specifications, and estimates (PS&E), finalize road, pavement, and bridge design, traffic control plans, incorporate environmental commitments, utility drawings, hydraulics studies/drainage design, and cost estimates	<ul style="list-style-type: none"> Evaluate the potential for innovative design alternatives customized for the preferred means and methods of ACM contractors. Develop ACM scope limitations if required. Discuss/develop alternative technical concepts (ATC) evaluation plan. Update the risk management plan. Determine stipend for the project.
* Note: The details of the procurement phase are specific to each ACM. Therefore, it is not shown in the table.		

FHWA CASE Webtool Workflow Components

The purpose of the **FHWA CASE Webtool Workflow** is to provide an overview of the framework for assisting public agencies in the evaluation and selection of ACMs in a workshop-oriented environment. The webtool provides a recommended project delivery method based on key factors and on data collected from the ACM warehouse.

The major components of the workflow are described below:

ACM-DATA: This is the Information Source for Major Transportation Projects (ISfMTP) data warehouse.

ACM-PERFORM: This component using data from ACM-DATA will calculate performance measures for user-defined ACMs and project types. This component will also provide comparable project case studies for user-defined project size and types to inform user inputs into the other webtool components.

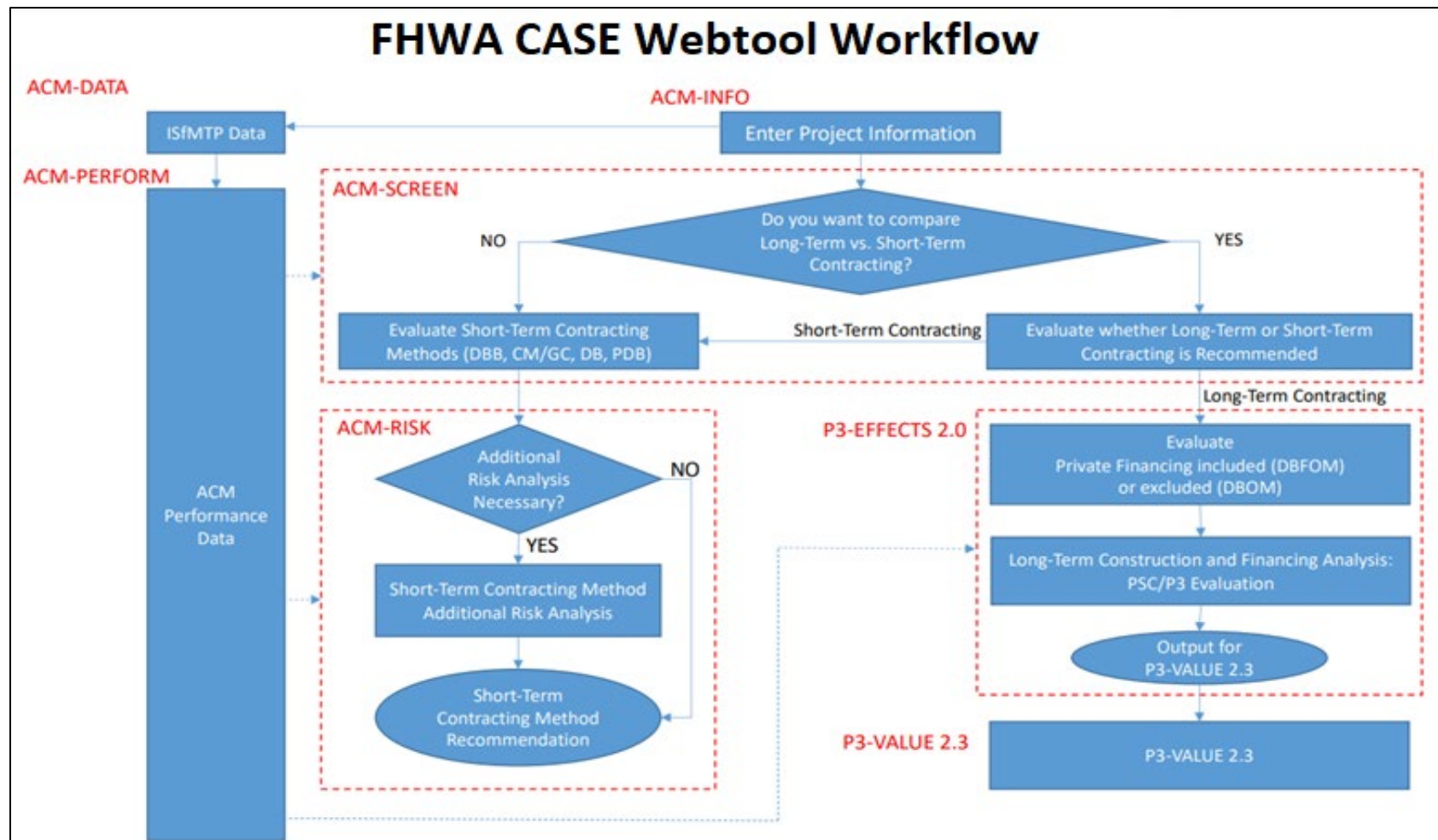
ACM-INFO: This is the component where the webtool users enter basic project information — project demographics, project description, project goals, goal ranking, and project delivery method selection committee/workshop details.

ACM-SCREEN: Allows users an opportunity to evaluate whether long-term contracting or short-term contracting is recommended or go directly to short-term contracting methods (DBB), construction manager/general contractor (CM/GC), DB, and progressive design-build (PDB)) evaluation. Results from this component will identify the most appropriate short-term project delivery method and, if desired, whether long-term contracting is recommended.

ACM-RISK: This component, if the user desires (e.g., where the recommended delivery method is not clear or a more detailed delivery risk analysis is warranted), provides a further evaluation of selected short-term project delivery methods based on additional project-specific risks. Results from this component will identify the most appropriate short-term project delivery method.

P3-EFFECTS 2.0: Evaluates, for projects where long-term contracting is recommended, whether private financing is viable (a design-build-finance-operate-maintain [DBFOM]) or public financing is preferred (a design-build-operate-maintain [DBOM]). This component then conducts a long-term contracting construction and financing analysis comparing a public-private partnership (P3) to a public sector comparator (DBB or DB). This component provides a range of values for further analysis using P3-VALUE 2.3.

P3-VALUE 2.3: This is currently FHWA's stand-alone Microsoft Excel-based tool designed to assist practitioners in the planning and high-level screening evaluation of P3 procurements.



Facilitated Workshop Guidelines

Below are guidelines for facilitating a workshop, following the workflow presented in the webtool. Depending on an organization's internal processes, much of the webtool data may be pre-configured. This workbook will walk through the processes at a high level, regardless of whether the webtool is prefilled.

ACM-INFO: [Enter Project Information](#)

It will be helpful to have basic project information completed prior to the workshop. (See the “Enter Project Information” section in the **Federal Highway Administration CASE Webtool User Guide**.) Project workshop participants, locations, etc., as well as general information about the project can be pre-populated to save time during the workshop. The facilitator may also pre-upload as many documents and types as might be useful for going through the ACM selection process. (See the “Welcome Page: Projects in Progress” section in the **Federal Highway Administration CASE Webtool User Guide**.)

- Additionally, copies of all of the questions, answers, and default numeric ratings that can be addressed in the webtool are available in the **Federal Highway Administration CASE Webtool User Guide**, Appendix C: Scoring Keys. These can be distributed to participants in preparation for the meeting. It should be noted that answers *do not* have to be given to questions the workshop participants deem irrelevant to the project they are examining.
- Another more complex alternative is to have workshop participants fill out project selection data prior to the workshop and have their responses compiled and analyzed prior to the workshop. Output reports can calculate the Mean, Median, and Mode for analysis and additionally allow a ‘raw data dump’ for manipulation by analysts. However, these results should be discussed in the workshop, or the project team will lose the benefits of discussing the questions as a group.
- In some cases, the facilitator may want to prefill more sections of the webtool in order based on their or others’ expertise on a given project. This technique could trigger dialogue immediately and shorten the process with regard to people ‘questioning the questions.’ This is not necessarily counterproductive, but the questions have been thoroughly vetted by industry experts. Feedback for the webtool development team is always welcome and can be accomplished by selecting “Send Feedback” on the webtool’s main page.
- A critical component of the webtool is the ranking of the importance of the Project Goals. According to the CDOT Project Goals worksheet description, *“A careful determination of the project goals is an instrumental first step of the process that will guide both the selection of the appropriate method of delivery as well as the specific delivery procurement process and implementation of the project.”*

It may also be helpful to ask workshop participants to come prepared, using guidelines described in the CDOT **Project Delivery Selection Matrix** documentation. Some of the worksheets that can be made available to participants include:

- Project Description Checklist
- Project Goals Worksheet—including example project goals
- Project Constraints Worksheet (Go / No-Go Decisions)
- Workshop Blank Form
- Evaluation Factor Project Delivery Method Opportunity/Obstacle Summary
- Opportunity/Obstacles Checklists
- Initial Risk Assessment Guidance

ACM-SCREEN: Long-Term vs. Short-Term Contracting and Evaluate Short-Term Contracting Methods

Evaluate whether Long-Term or Short-Term Contracting is Recommended

This section of the webtool is intended to have the project team give thorough consideration to the characteristics of a project that would deem it “Short-Term” or “Long-Term.” For purposes of the webtool, short-term projects (even though potentially long in duration), fall into the category of DBB, CM/GC, DB, and PDB. Long-term projects, for the purposes of the webtool, include elements of post-construction operations and/or maintenance and will be referred to in this document as P3 projects.

At the end of this section, the webtool will *suggest* that either a Short-Term or Long-Term contracting path is recommended. **Be clear that the project team will make the final determination of the direction the project research should go.**

Evaluate Short-Term Contracting Methods (DBB, CM/GC, DB, PDB)

This section can be accessed in two ways; directly after the “Enter Project Information” section or after the “Evaluate whether Long-Term or Short-Term Contracting is Recommended” section. Components of the CDOT **Project Delivery Selection Matrix** documentation can help the team prepare for this discussion and effort.

Some teams like to have the graphics and scoring displayed on the screen during the session, and others do not. This can be managed through the Administration portion of the webtool, and your administrator can toggle these on and off based on your preferences.

At the end of this exercise, the webtool will present a pop-up message that displays the values for each contract method (DBB, CM/GC, DB, PDB). If the team is satisfied with the way the scoring is presented, the work can be saved. If the team believes no clear method was presented, any or all of the four methods can be selected for another level of analysis, the “Short-Term Additional Risk Analysis” section.

ACM RISK: Short-Term Additional Risk Analysis

The webtool allows for standard risks to be selected from a prescribed list. Risks may also be entered manually. Corresponding short-term methods, selected from the previous section, are pre-populated on the page, and can be changed again once in the section. The facilitation role allows for detailed and in-depth discussion about how the risks noted may impact the methods selected. Final scoring is displayed at the bottom of the table.

At the end of this process, the team can determine whether the recommended method is appropriate for the project.

P3-EFFECTS 2.0: Evaluate Private Financing and Long-Term Construction and Financing Analysis

Evaluate whether Private Financing is included or excluded

The webtool provides a series of DBOM/DBFOM financing evaluation questions. Answers correspond to weightings used in formulas to ultimately recommend whether private financing should be included or excluded from recommended methods.

Topics that will be addressed in this section are listed here:



It is important to have the appropriate people in the room with knowledge about the project and the topics to gain the most from the collaborative approach.

The facilitator should understand the concepts of DBOM and DBFOM in order to guide the process to a productive end. If necessary, the team may need to bring in external experts to assist.

Background for DBOM/DBFOM can be found at these links:

https://www.fhwa.dot.gov/ipd/alternative_project_delivery/defined/new_build_facilities/dbom.aspx

https://www.fhwa.dot.gov/ipd/alternative_project_delivery/defined/new_build_facilities/dbfom.aspx

http://www.pwfinance.net/document/research_reports/4%20Prieto%20DBB.pdf

Perform Long-Term Construction and Financing Analysis (PSC/P3 Evaluation)

This section of the webtool is intended to analyze inputs to the questions posed for items in the snapshot below and then provide ranges of numbers appropriate to those questions for consideration in the Value for Money analysis (P3-VALUE 3.3):

PSC Contracting Method
Contracting Method
PSC Public Funding and Financing Approach
PSC Upfront Funding or Borrowing
PSC Public Borrowing Approach
Project Timing
Project Preparation
Procurement Duration
Project Implementation Duration
Operations Duration
Delayed PSC Project Preparation Start
Project Capital Costs
Project Preparation Costs
Procurement Costs
Project Implementation Costs
Project Operational Costs
Annual Routine Costs
Major Maintenance Costs
Major Maintenance Frequency
Financing Conditions
Pre-Tax Cost of Equity
Gearing
DSCR Requirements
Long-Term Debt Tenor
Long-Term Debt Interest Rate
Debt Issuance and Arrangement Fees
Construction Loan Interest Rate
Interest Rate Earned on Reserves

The facilitator should understand the concepts of Long-Term Construction and Financing to guide the process to a productive end. If necessary, the team may need to bring in external experts to assist. The FHWA Center for Innovative Finance Support has vast troves of documentation to assist in understanding the concepts covered in this section of the webtool.

Guidance and research on these topics can be found in the following areas of the Center's website (<https://www.fhwa.dot.gov/ipd/>):

<https://www.fhwa.dot.gov/ipd/p3/>

https://www.fhwa.dot.gov/ipd/site_directory/resources.aspx

<https://www.fhwa.dot.gov/ipd/finance/>

https://www.fhwa.dot.gov/ipd/tolling_and_pricing/

https://www.fhwa.dot.gov/ipd/value_capture/

ACM Glossary

Alliance Contracting: A commercial/legal framework between an owner-participant and one or more private-sector parties as service provider or non-owner participants for delivering one or more capital works projects. Also known as Alliancing.

Alternative Contracting Methods (ACMs): Contracting methods—including design-build, construction manager/general contractor, and alternative technical concepts—to accelerate project delivery, encourage the deployment of innovation, and minimize unforeseen delays and cost overruns.

Alternative Delivery Method (ADM): A wide array of methods used by public agencies to deliver transportation project improvements. These methods include construction manager/general contractor, design-build, design-build-operate-maintain, design-build-finance, design-build-finance-operate-maintain, fee services, long-term lease concessions, and operations and maintenance. Also known as alternative project delivery.

Alternative Project Delivery (APD): A wide array of methods used by public agencies to deliver transportation project improvements. These methods include construction manager/general contractor, design-build, design-build-operate-maintain, design-build-finance, design-build-finance-operate-maintain, fee services, long-term lease concessions, and operations and maintenance. Also known as alternative delivery method.

Best Value: May be defined based on either the value of the product to be received (a 10-year warranty compared with a 3- or 5-year warranty) or the bidder's past performance based on some objective criteria. In general, the project award is based on a composite of price data and non-price factors.

Bridge Bundling: A defined set (or bundle) of bridges that are planned for preservation/preventive maintenance, rehabilitation, or replacement in a timely and efficient manner through a series of bridge bundling contracts with the support of various funding options and/or partnerships that may include a program completion time frame.

Contract: A mutually binding legal relationship obligating the seller to furnish supplies or services and the buyer to pay for them.

Contracting: Purchasing, renting, leasing, or otherwise obtaining supplies or services from non-Federal sources. Contracting includes a description of supplies and services required, selection and solicitation of sources, preparation and award of contracts, and all phases of contract administration.

Construction Manager/General Contractor (CM/GC): The agency procures professional services on a qualifications or best-value basis from a construction manager during the design phase to offer suggestions on innovations, cost and schedule savings, and

constructability issues. Upon completion of the design or individual design packages, the contractor and agency negotiate a price for the construction contract (often verified by an independent cost estimator), and then the construction manager acts as a general contractor to complete construction. The contract can employ a guaranteed maximum price administered on a cost-reimbursable basis, unit price, or lump-sum contract.

Cost-Plus-Time Bidding (also referred to as A+B Bidding): Reduces construction time by making time a factor, in addition to cost, when awarding a contract. Under this method, each submitted bid consists of two components: the “A” component is the traditional bid for the contract items based on unit bid prices and quantities, while the “B” component is the bidder’s estimate of the time required to complete critical construction as defined in the contract. Calendar days are typically used to reduce the potential for disputes. For the purposes of determining the apparent low bidder, the B component is converted to a dollar value by multiplying the number of days by the daily road user cost identified in the contract.

Design-Build (DB): A project delivery method that combines two, usually separate services into a single contract. With DB procurements, agencies execute a single, fixed-fee contract (lump sum) for both architectural/engineering services and construction. The DB entity—also known as a constructor—may be a single firm, a consortium, a joint venture, or other organization assembled for a project. DB has been implemented using various procurement approaches, including qualified low bid and best value.

Design-Bid-Build (DBB): The traditional delivery method where the agency contracts separately for design and construction services, the bid is based on complete (100 percent) plans and specifications, and design and construction occur sequentially. DBB is typically a unit-priced contract, but it can also include lump-sum items.

Design-Build-Finance (DBF): A project delivery method where procurement is a single contract awarded for the design, construction, and full or partial financing of a facility. Responsibility for the long-term maintenance and operation of the facility remains with the project sponsor but could be included in a separate agreement. This approach takes advantage of the efficiencies of the design-build approach and allows the project sponsor to defer financing either completely or partially during the construction period.

Design-Build-Finance-Operate (DBFO): Concessions whereby a single private consortium develops, builds, finances, and operates the road for a set number of years. See Design-Build-Finance-Operate-Maintain (DBFOM).

Design-Build-Finance-Operate-Maintain (DBFOM): A concessions approach where the responsibilities for designing, building, financing, operating, and maintaining are bundled together and transferred to private sector partners.

Design-Build-Operate (DBO): In a DBO project, a single contract is awarded for the design, construction, and operation of a capital improvement. The title to the facility remains with the public sector unless the project is a design-build-operate-transfer or design-build own-operate project. On a public project, the operations phase is normally handled by the public sector or awarded to the private sector under a separate operations and maintenance agreement. Combining all three phases into a DBO approach maintains the continuity of private sector involvement and can facilitate private-sector financing of public projects supported by user fees generated during the operations phase. See Design-Build-Finance-Operate-Maintain.

Design-Build-Operate-Maintain (DBOM): An integrated procurement model that combines the design and construction responsibilities of design-build procurements with operations and maintenance. These project components are procured from the private sector in a single contract with financing independently secured by the public sector project sponsor. This project delivery approach is also known by several different names, including turnkey procurement and build-operate-transfer.

Indefinite Delivery/Indefinite Quantity (IDIQ): A type of contract that provides for an indefinite quantity of supplies or services during a fixed period.

Job Ordering Contracting (JOC): A non-determinate location/non-determinate quantity-type contract. The heart of a JOC contract is a construction task catalog (CTC) consisting of hundreds of pre-priced work activities. The prices in the CTC are based on the estimated labor, equipment, and material costs to perform the work. All costs are based on local pricing (local prevailing wage rates, equipment costs, and local materials costs). Contractors bid a single adjustment factor that includes their overhead and profit and their risk assessment as to the prices in the CTC. The bidder submitting the lowest adjustment factor is declared the winner.

Public-Private Partnership (P3): A contractual agreement between a public agency and a private entity that allows for greater private participation in the delivery of a transportation project. P3s include any contractual arrangement in which the private sector takes on more risk. P3 goals may vary from raising funds from the lease of an existing facility (brownfield) to constructing a brand-new facility (greenfield). P3s do not necessarily involve toll facilities. P3s traditionally include variations of design-build with one or more operate, maintain, and/or finance components (e.g., design-build-operate, design-build-finance-operate, design-build-finance-operate-maintain (DBFOM), availability-payment concession, and DBFOM concession) and could include other delivery methods such as construction manager/general contractor and alliancing.

Procurement Method: The means used to select a vendor (contractor, designer, or other service). These include low bid, best value, and qualifications-based selection. Other less common methods include adjusted low bid, sole source, and emergency selection.

Project Delivery Method (PDM): The comprehensive process used by an agency to deliver a project, which includes planning, programming, design, construction, and consideration of required operations and maintenance. These methods include design-bid-

build, indefinite delivery/indefinite quantity, design-build (DB), and public-private partnerships (P3s). P3s include DB with operate, maintain, and/or financing components, e.g., design-build-operate, design-build-finance-operate, design-build-operate-maintain, and design-build-finance-operate-maintain.

Progressive Design-Build: A variation of design-build that facilitates involvement of the design build team during the earliest stages of the agency’s project development, ensuring they are part of the project team developing design solutions (Design-Build Institute of America).

Quality Assurance (QA): All those planned and systematic actions necessary to provide confidence that a product or facility will perform satisfactorily in service or, ensuring the quality of a product is what it should be. QA addresses the overall process of obtaining the quality of a service, product, or facility in the most efficient, economical, and satisfactory manner possible. Within this broad context, QA includes the elements of quality control, independent assurance, acceptance, dispute resolution, etc. The use of the term QA/QC or QC/QA is discouraged; the term QA should be used. QA involves continued evaluation of the activities of planning, design, development of plans and specifications, advertising and awarding of contracts, construction and maintenance, and the interactions of these activities (TRB Circular E-C173, 2013).

Quality Control (QC): Also called “process control.” The system used by a contractor to monitor, assess, and adjust production or placement processes to ensure the final product will meet the specified level of quality. QC includes sampling, testing, inspection, and corrective action (where required) to maintain continuous control of a production or placement process (TRB Circular E-C173, 2013).



U.S. Department of Transportation
Federal Highway Administration

Federal Highway Administration Contracting Alternatives Suitability Evaluator (CASE) Webtool **Administrator User Guide**

February 2021

Change Record

Version	Date	Description
1.0	February 2021	Initial version.

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Background and Overview

The **Federal Highway Administration Contracting Alternatives Suitability Evaluator (CASE) Webtool** is a Web-based tool designed to assist State departments of transportation (DOTs) and other public agencies in the ACM selection process. Agencies can enter information into the webtool for a planned project, and it will provide an evaluation of several different project delivery methods to assist in determining the most appropriate to use.

The webtool incorporates and expands on current tools and processes already developed by the Federal Highway Administration (FHWA) and State DOTs. It is primarily based on subject matter experts' input, the Colorado DOT's **Project Delivery Selection Matrix**, the California DOT's **Alternative Procurement Guide**, the Transportation Research Board's Transit Cooperative Research Program Report 131: **Guidebook for the Evaluation of Project Delivery Methods**, and FHWA's **P3-SCREEN, P3-EFFECTS, and P3-VALUE Analytical Tools**.

The data parameters and processes used in the webtool were developed to meet requirements gathered as part of an in-depth review of processes at DOTs in all 50 States, select case studies, subject matter workshops, and pilot workshops with seven State DOTs. During these efforts, researchers explored what types of ACMs are in use, how the decision is made to use an ACM over a traditional method, how the decision is made on which ACM to use, and how the ACM decision is evaluated after project completion.

This document is a guide for webtool administrators. It describes the process to register and remove users and administrators, register and assign agencies/organizations, remove agencies/organizations, modify contract method scoring and long-term range values, override an agency's Freedom of Information Act (FOIA) statement, and adjust graphical display preferences.

Access and Log in to the Webtool

The **FHWA CASE Webtool** can be accessed via this link: <https://case.fhwa.dot.gov>.

NOTE: For the best user experience, Google Chrome, Microsoft Edge Chromium, and Mozilla Firefox are the recommended Web browsers.

You are presented with the Main Access page:



Select the “Sign In” button in the center of the page. Here you will be re-directed to the Login.gov sign in page. Here you will be able to access the CASE Webtool.

Log in: Field Descriptions and Help

1. Enter a valid Email Address: Enter the email address used to register an account in the webtool.
2. Password: Enter the password you selected when you registered an account in the webtool. NOTE: You may reset a forgotten password by clicking [Forgot Password](#) at the bottom of the screen. (See the Password Resets appendix in the FHWA CASE Webtool User Guide or Quick Start Guide.)
3. Click the “Login” button to log in to the webtool. You are presented with the Welcome page:



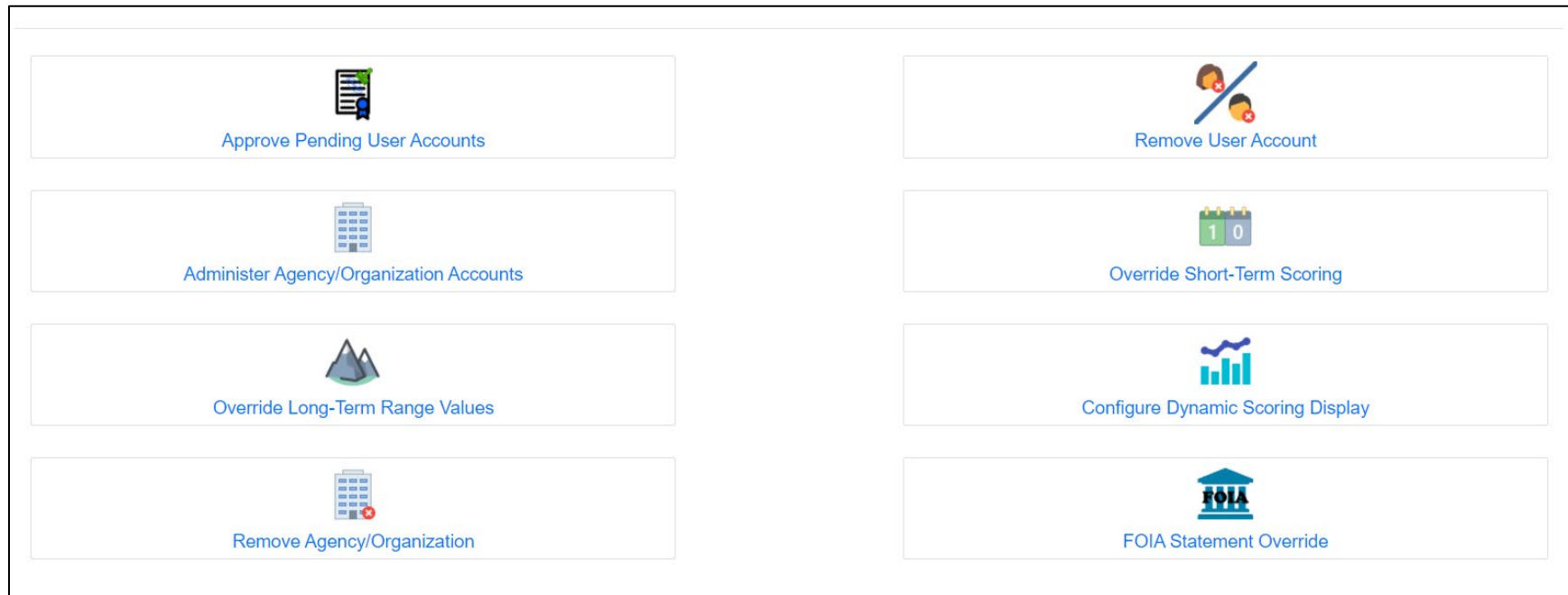
There are two levels of administrators in the FHWA CASE Webtool:

Super Administrator (Super Admin): A Super Admin may edit, update, and perform any action on any administrator, user, agency/organization, and/or project in the webtool.

Agency Administrator (Admin): An Admin is restricted to actions on users and projects within his/her own agency/organization.

Click [Administration](#) at the top of the page to access webtool administrator functionality. Based on your administrator level, you are presented with one of the following pages:

Super Administrator (Super Admin) page:



Agency Administrator (Admin) page:



Approve Pending User Accounts



Approve Pending User Accounts

Users will register themselves in the webtool, and agency administrators will receive an email indicating a request has been initiated and needs approval. The email received will be similar to the following:

A new FHWA ToolSet account has been registered for your agency/organization.
Please log into the FHWA ToolSet and proceed to the Administration section.
Click the 'Account Approval' button to see a list of all accounts awaiting approval for your agency/organization.

This functionality allows you to approve a self-registered account request. A Super Admin may approve any request. An Agency Admin may only approve requests made by users assigned to his/her own agency/organization.

Click the “Approve Pending User Accounts” button to display the User Account Approval page.

Pending Accounts for Approval

* - Required

* Select Agency/Organization: ?

ICF

Registered Account

Test User abarrovs93@gmail.com

Registration Date

12/29/2020

Pending Accounts for Approval: Field Descriptions and Help

- **Select Agency/Organization:** The Agency/Organization to which the requested users will be assigned will be pre-populated in this field.
- **Registered Account/Registration Date:** One or more user account names and the date of the self-registration request will appear in the list. If you wish to approve the request, click the email address hyperlink within the Registered Account column.

After clicking the email address hyperlink, the admin will be redirected to the specific user's Approve Account page.

Here the admin will be able to select the User Role Type, confirm contact information, and approve/cancel any account request.

The screenshot shows a web form titled "Approve Account" with a red asterisk indicating required fields. The form contains the following fields and controls:

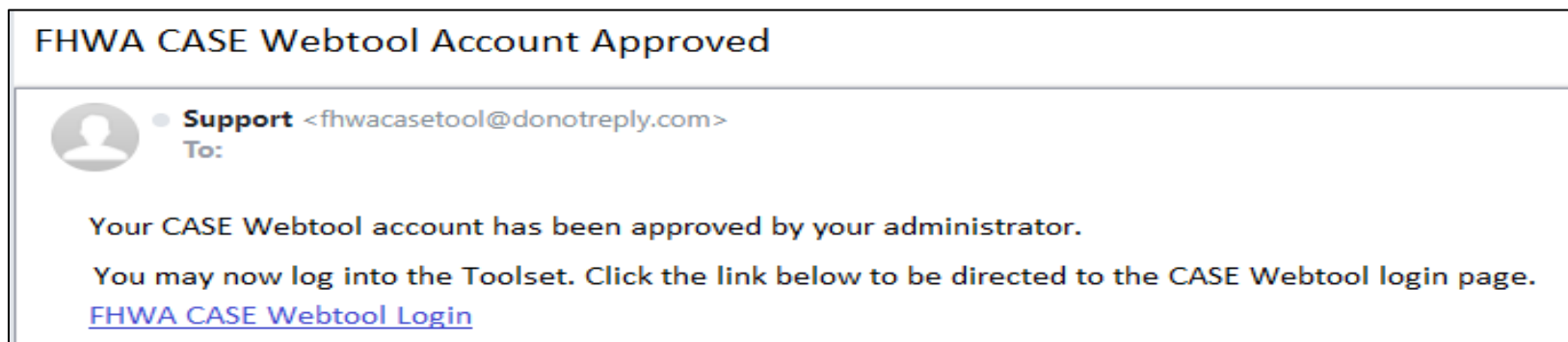
- * Email Address:** A text input field containing "abarrows93@gmail.com".
- * User Role:** Radio buttons for "Admin" and "User", with "User" selected.
- * First Name:** A text input field containing "Test".
- * Last Name:** A text input field containing "User".
- Address Line 1:** A text input field containing "9300 Lee Hwy".
- Address Line 2:** An empty text input field.
- City:** A text input field containing "Fairfax".
- State:** A dropdown menu showing "Virginia".
- Zip Code:** A text input field containing "22031".
- Title:** An empty text input field.
- * Agency/Organization:** A dropdown menu showing "ICF".
- Phone Number:** A text input field containing "(802) 318-5409".

At the bottom of the form are two blue buttons: "Approve" and "Cancel".

Approve Account: Field Descriptions and Help

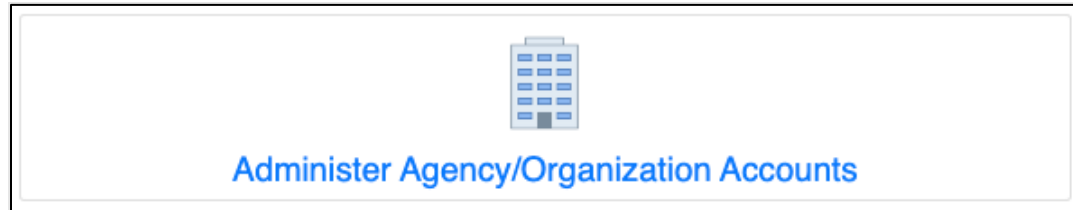
- **Email Address:** This field will be prepopulated and will be predetermined by the user. This is the user's corresponding email. This field is required.
- **User Role:** Here the admin will specific either Admin or User-level access. This field is required.
- **First Name:** Corresponding first name of user. This field is required.
- **Last Name:** Corresponding last name of user. This field is required.
- **Address Line 1:** For a new agency, enter line 1 of the address. For an existing agency, you may edit the address here.
- **Address Line 2:** For a new agency, enter line 2 of the address. For an existing agency, you may edit the address here.
- **City:** For a new agency, enter the city name. For an existing agency, you may edit the city name here.
- **State:** For a new agency, select the State. For an existing agency, you may change the State selection here. State is required.
- **Zip Code:** For a new agency, enter the zip code. For an existing agency, you may edit the zip code here.
- **Title:** Enter the corresponding user title.
- **Agency/Organization:** Select an existing agency. An Agency/Organization name is required.
- **Phone Number:** For a new agency, enter the phone number. For an existing agency, you may edit the phone number here.

Click “Approve” to approve the account request. Users will receive an email indicating their request was approved and their webtool user account is ready to be used.



Administer Agency/Organization Accounts (Super Admin ONLY)

NOTE: This functionality is available to **Super Administrators** only.





This functionality allows a Super Admin to register new agency/organization accounts and maintain account information in the webtool.


Click the “Administer Agency/Organization Accounts” button to display the Agency/Organization Registration and Maintenance page.


Agency/Organization Registration and Maintenance




* - Required


* Select Agency/Organization: 
ICF

* Agency/Organization Name: 
ICF

 Address Line 1
9300 Lee Highway

Address Line 2: 

City:  Fairfax * State:  Virginia Zip Code:  22031

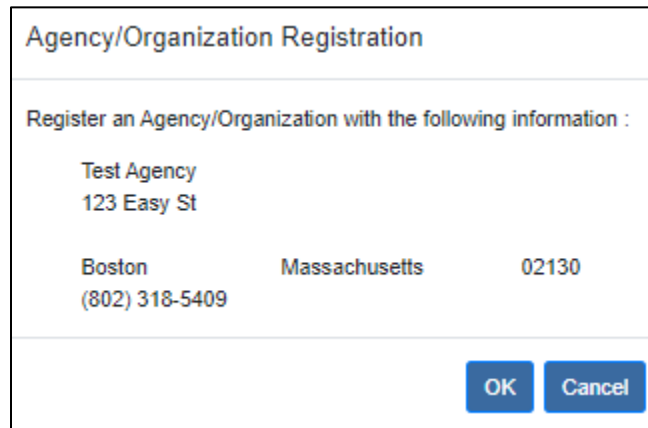
Phone Number: 

Agency/Organization Registration and Maintenance: Field Descriptions and Help

- **Select Agency/Organization:** Select the Agency/Organization information you wish to edit. If you wish to add a new Agency/Organization, select “Add a New Agency/Organization” at the top of the list. Selection is required.
- **Agency/Organization Name:** For a new agency, enter the Agency/Organization Name. For an existing agency, you may edit the name here. An Agency/Organization name is required.
- **Address Line 1:** For a new agency, enter line 1 of the address. For an existing agency, you may edit the address here.
- **Address Line 2:** For a new agency, enter line 2 of the address. For an existing agency, you may edit the address here.
- **City:** For a new agency, enter the city name. For an existing agency, you may edit the city name here.
- **State:** For a new agency, select the State. For an existing agency, you may change the State selection here. State is required.
- **Zip Code:** For a new agency, enter the zip code. For an existing agency, you may edit the zip code here.
- **Phone Number:** For a new agency, enter the phone number. For an existing agency, you may edit the phone number here.

Provide information in the fields on the page then, click the “Submit” button.

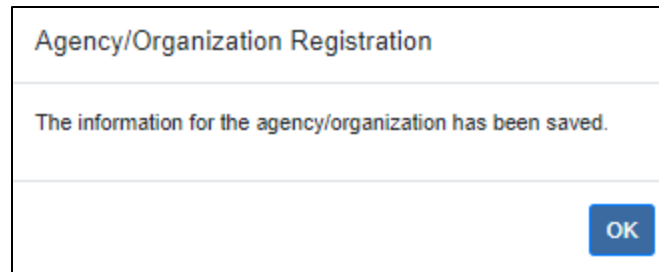
If you are registering a new agency, you will receive a message asking you to confirm the registration:



A confirmation dialog box titled "Agency/Organization Registration". The text inside reads: "Register an Agency/Organization with the following information :". Below this, the details for the registration are listed: "Test Agency", "123 Easy St", "Boston", "Massachusetts", "02130", and "(802) 318-5409". At the bottom right, there are two buttons: "OK" and "Cancel".

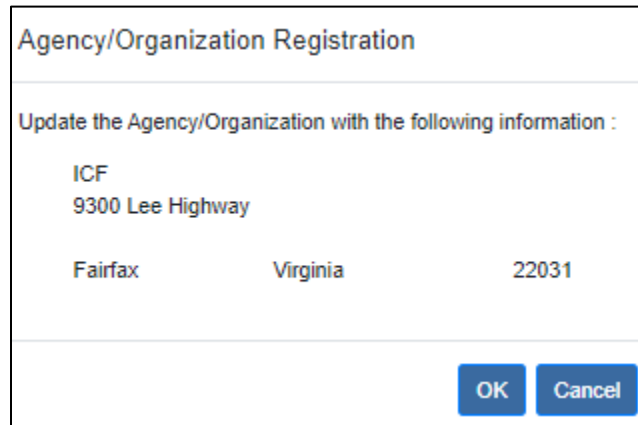
Agency/Organization Registration		
Register an Agency/Organization with the following information :		
Test Agency		
123 Easy St		
Boston	Massachusetts	02130
(802) 318-5409		
		<input type="button" value="OK"/> <input type="button" value="Cancel"/>

Click the “OK” button to register the agency in the webtool. You will receive a confirmation message similar to the following:

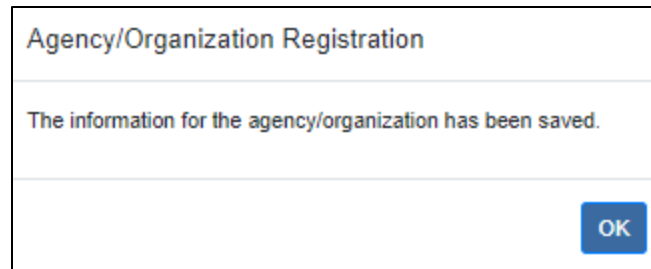


Click the “OK” button to close the message and return to the main administration page.

If you are updating information for an existing agency, you will receive a message asking you to confirm the update:

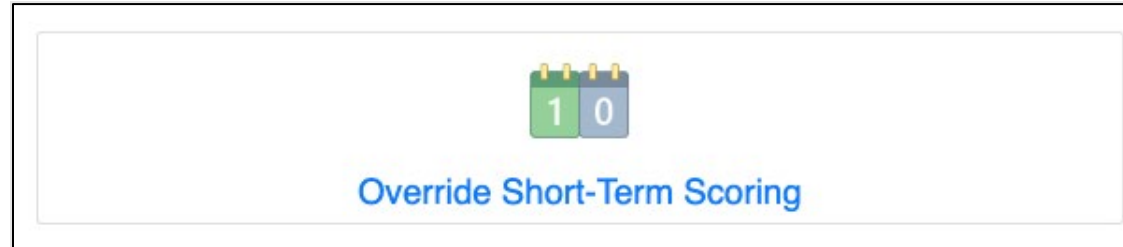


Click the “OK” button to confirm the updates. You will receive a confirmation message similar to the following:



Click the “OK” button to close the message and return to the main administration page.

Override Short-Term Scoring



This functionality allows you to override the default short-term ACM scores set in the webtool by subject matter experts. These scores are used in calculations in the Evaluate Short-Term Contracting Methods (DBB, CM/GC, DB, PDB) section of the webtool.

A Super Admin may override scores globally (across the entire webtool) or for a specific agency/organization and/or project. An Admin may override scores only for his/her agency/organization and its projects.

Click the “Override Short-Term Scoring” button to display the Short-Term ACM Scoring Override page:

Short-Term ACM Scoring Override

* - Required

*Applied Weight Level: [?](#) ☐ Global ☐ Agency/Organization ☐ Project

*Select Agency/Organization: [?](#)

*Select Project: [?](#)

*Select Scoring Version: [?](#)

Enter Scoring Version Name: [?](#)

☐ Set version as default for the Agency/Organization: [?](#)

[Reset Form to Global Weight Factor Values](#)

Question	Choice	*DBB	*CMGC	*DB	*PDB
Has the project's design advanced beyond preliminary engineering (i.e. ~10-30% design)? ?	Yes	<input type="text" value="3"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>
	No	<input type="text" value="3"/>	<input type="text" value="3"/>	<input type="text" value="3"/>	<input type="text" value="3"/>
	N/A	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>
Could the project involve the implementation of new technology? ?	Yes	<input type="text" value="1"/>	<input type="text" value="2"/>	<input type="text" value="3"/>	<input type="text" value="2"/>
	No	<input type="text" value="2"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>
	N/A	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>
Will the project require design exceptions from FHWA? ?	Yes	<input type="text" value="3"/>	<input type="text" value="2"/>	<input type="text" value="1"/>	<input type="text" value="2"/>
	No	<input type="text" value="1"/>	<input type="text" value="2"/>	<input type="text" value="2"/>	<input type="text" value="2"/>
	N/A	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>

Short-Term ACM Scoring Override: Field Descriptions and Help

- **Applied Weight Level:** “Global” indicates the weight level will impact all active projects not assigned to Agency/Organization level or project level weight factor values. You will only see this option if you are a Super Admin. “Agency/Organization” indicates the weight level will apply to all projects within a selected Agency/Organization. “Project” indicates the weight level will apply to a specific project only. Select the weight level to apply here. Selection is required.
- **Select Agency/Organization:** If your Applied Weight Level selection is “Agency/Organization” or “Project,” select the Agency/Organization here. Selection is required.
- **Select Project:** If your Applied Weight Level selection is “Agency/Organization” or “Project,” select the Agency/Organization here. Selection is required.
- **Select Scoring Version:** If your Applied Weight Level selection is “Project,” select the version to assign to the project. Once the version is selected for a project, it cannot be changed on this page. If you need to change the version for the project, you must copy/clone the project and the agency administrator can assign a new version to the copied project.

- **Enter Scoring Version Name:** If you selected “Add New Scoring Override Values” in the Select Scoring Version dropdown, enter the name of this new scoring version here.
- **Set version as default for the Agency/Organization:** Check this box if you would like to set this version as the default scoring version for the Agency/Organization.

The list that appears next contains the questions displayed in the Evaluate Short-Term Contracting Methods section of the webtool. Every answer (choice) to every question has a corresponding score for each short-term method evaluated in the section (DBB, CM/GC, DB, PDB). Refer to the FHWA CASE Webtool User Guide, Appendix B: Scoring Keys, for a detailed explanation of these scores and calculations.

You may override the scores set in the webtool by changing the values in the boxes in the DBB, CM/GC, DB, and PDB columns on this page. NOTE: Each box must be populated and must contain a whole number from 0 to 3.

Short-Term ACM Scoring Override

* - Required

*Applied Weight Level: ☒ Global ☐ Agency/Organization ☐ Project

Select Agency/Organization:

Select Project:

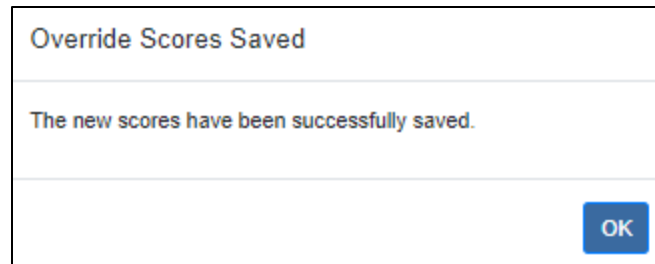
Note: Saving new Global weight factor values will impact all open, active projects that have not been assigned to Agency/Organization level or project level weight factor values.

[Reset Form to Global Weight Factor Values](#)

Question	Choice	*DBB	*CMGC	*DB	*PDB
Has the project's design advanced beyond preliminary engineering (i.e. ~10-30% design)?	Yes	<input type="text" value="3"/>	<input type="text" value="2"/>	<input type="text" value="2"/>	<input type="text" value="1"/>
	No	<input type="text" value="3"/>	<input type="text" value="2"/>	<input type="text" value="2"/>	<input type="text" value="3"/>
	N/A	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>
Could the project involve the implementation of new technology?	Yes	<input type="text" value="1"/>	<input type="text" value="2"/>	<input type="text" value="3"/>	<input type="text" value="2"/>
	No	<input type="text" value="2"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>
	N/A	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>
Will the project require design exceptions from FHWA?	Yes	<input type="text" value="3"/>	<input type="text" value="2"/>	<input type="text" value="1"/>	<input type="text" value="2"/>
	No	<input type="text" value="1"/>	<input type="text" value="2"/>	<input type="text" value="2"/>	<input type="text" value="2"/>
	N/A	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>

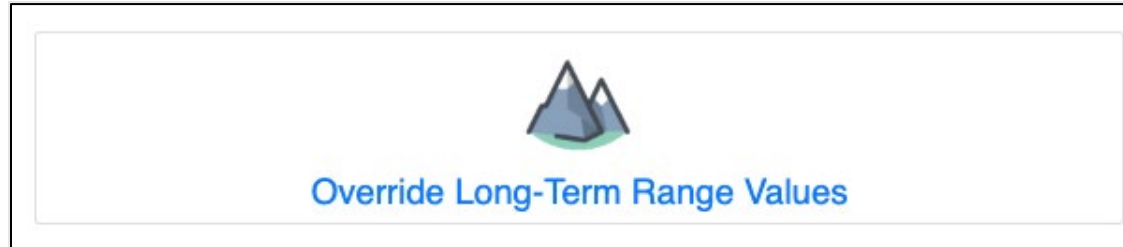
NOTE: Click the blue “Reset Form to Global Weight Factor Values” button to reset the values to the initial global weight factor values.

Ensure each box contains a number from 0 to 3 then click the “Submit” button. You are presented with the following message:



Click the “OK” button to close the message.

Override Long-Term Range Values



This functionality allows you to override the long-term analysis range values established by subject matter experts and set by default in the webtool. These values are used in the Long-Term Construction and Financing Analysis (PSC/P3 Evaluation) section of the webtool.

A Super Admin may override values globally (across the entire webtool) or for a specific agency/organization and/or project. An Admin may override values only for his/her agency/organization and its projects.

Click the “Override Long-Term Range Values” button to display the Long-Term Analysis Range Override page:

Long-Term Analysis Range Override

* - Required

Note: Saving new range values will impact all open, active projects. The level of impact will be based on the "Applied Range Level" selection.

*Applied Range Level: ☐ Global ☐ Agency/Organization ☐ Project

*Select Agency/Organization:

*Select Project:

*Select Range Version:

Enter Range Version Name:

☐ Set version as default for the Agency/Organization

Question	*DB Min	*DB Max	*DBB Min	*DBB Max
What is the estimated duration of the project preparation phase (in months) for the PSC?	<input type="text" value="0"/>	<input type="text" value="6"/>	<input type="text" value="-24"/>	<input type="text" value="6"/>
What is the estimated duration of procurement for the PSC (in months)?	<input type="text" value="0"/>	<input type="text" value="24"/>	<input type="text" value="0"/>	<input type="text" value="36"/>
What is the estimated duration of implementation for the PSC (in months)?	<input type="text" value="-10"/>	<input type="text" value="10"/>	<input type="text" value="-20"/>	<input type="text" value="10"/>
What are the estimated (risk and uncertainty adjusted) project preparation costs for the PSC (in %)?	<input type="text" value="0"/>	<input type="text" value="25"/>	<input type="text" value="-25"/>	<input type="text" value="25"/>
What are the (risk and uncertainty adjusted) public procurement costs for the PSC (in %)?	<input type="text" value="15"/>	<input type="text" value="100"/>	<input type="text" value="50"/>	<input type="text" value="300"/>
What are the (risk and uncertainty adjusted) private procurement costs for the PSC (in %)?	<input type="text" value="50"/>	<input type="text" value="200"/>	<input type="text" value="200"/>	<input type="text" value="400"/>
What are the (risk and uncertainty adjusted) implementation costs for the PSC (in %)?	<input type="text" value="-5"/>	<input type="text" value="0"/>	<input type="text" value="-20"/>	<input type="text" value="0"/>

Long-Term Analysis Range Override: Field Descriptions and Help

- **Applied Range Level:** “Global” indicates the range values will impact all active projects not assigned to Agency/Organization level or project level weight factor values. You will only see this option if you are a Super Admin. “Agency/Organization” indicates the range values will apply to all projects within a selected Agency/Organization. “Project” indicates the range values will apply to a specific project only. Select the range level to apply here. Selection is required.
- **Select Agency/Organization:** If your Applied Range Level selection is “Agency/Organization” or “Project,” select the Agency/Organization here. Selection is required.
- **Select Project:** If your Applied Range Level selection is “Agency/Organization” or “Project,” select the Agency/Organization here. Selection is required.
- **Select Range Version:** Select the version to assign to the project. Once the version is selected for a project, it cannot be changed on this page. If you need to change the version for the project, you must copy/clone the project and the agency administrator can assign a new version to the copied project.

- **Enter Range Version Name:** If you selected “Add New Range Override Values” in the Select Range Version dropdown menu, enter the name of this new range version here.
- **Set version as default for the Agency/Organization:** Check this box if you would like to set this version as the default range version for the agency/organization.

The list that appears next contains the questions displayed in the Long-Term Construction and Financing Analysis (PSC/P3 Evaluation) section of the webtool. Every question has a corresponding minimum and maximum range value for DB and DBB methods (DB Min, DB Max, DBB Min, DBB Max).

You may override the minimum and maximum range values set in the webtool by changing the values in the boxes in the DB Min, DB Max, DBB Min, and DBB Max columns for each question on this page. NOTE: Each box must be populated with a numerical value.

Long-Term Analysis Range Override

* - Required

Note: Saving new range values will impact all open, active projects. The level of impact will be based on the “Applied Range Level” selection.

*Applied Range Level: ☒ Global ☐ Agency/Organization ☐ Project

Select Agency/Organization:

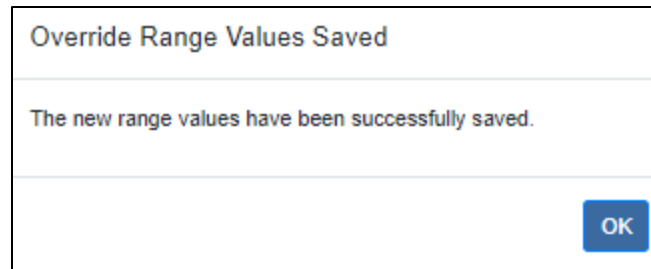
Select Project:

[Reset Form to Global Range Values](#)

Question	*DB Min	*DB Max	*DBB Min	*DBB Max
What is the estimated duration of the project preparation phase (in months) for the PSC? ?	<input type="text" value="0"/>	<input type="text" value="6"/>	<input type="text" value="-24"/>	<input type="text" value="6"/>
What is the estimated duration of procurement for the PSC (in months)? ?	<input type="text" value="10"/>	<input type="text" value="24"/>	<input type="text" value="0"/>	<input type="text" value="36"/>
What is the estimated duration of implementation for the PSC (in months)? ?	<input type="text" value="-10"/>	<input type="text" value="10"/>	<input type="text" value="-20"/>	<input type="text" value="10"/>
What are the estimated (risk and uncertainty adjusted) project preparation costs for the PSC (in %)? ?	<input type="text" value="0"/>	<input type="text" value="25"/>	<input type="text" value="-25"/>	<input type="text" value="25"/>
What are the (risk and uncertainty adjusted) public procurement costs for the PSC (in %)? ?	<input type="text" value="15"/>	<input type="text" value="100"/>	<input type="text" value="50"/>	<input type="text" value="300"/>
What are the (risk and uncertainty adjusted) private procurement costs for the PSC (in %)? ?	<input type="text" value="50"/>	<input type="text" value="200"/>	<input type="text" value="200"/>	<input type="text" value="400"/>

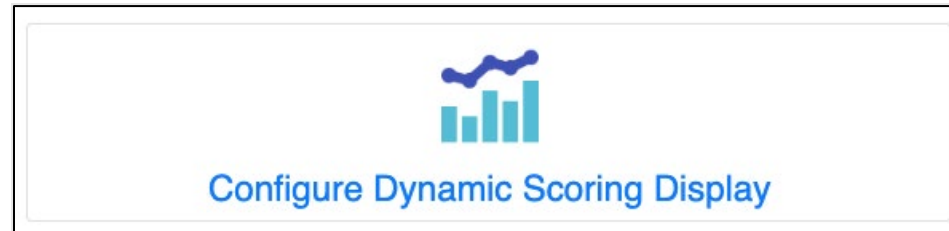
NOTE: Click the blue “Reset Form to Global Range Values” button to reset the values to the initial global range values.

Ensure each box contains a number, then click the “Submit” button. You are presented with the following message:



Click the “OK” button to close the message.

Configure Dynamic Scoring Display



This functionality allows you to select whether to display or hide the dynamic scoring in the “Evaluate Short-Term Contracting Methods (DB, CM/GC, DBB, PDB)” section and/or the heat map in the “Evaluate whether Long-Term or Short-Term Contracting is Recommended” section of the webtool. The choice to display or hide the scoring and/or heat map is made at the agency/organization level.

Click the “Configure Dynamic Scoring Display” button to show the Dynamic Scoring Display page:

Dynamic Scoring Display

* - Required

* Select Agency/Organization: ICF

Evaluate Short-Term Contracting Methods (DBB, CM/GC, DB, PDB)

Dynamic Scoring Chart

Organization/Agency Level ?

On

Project Level ?

On

Chart

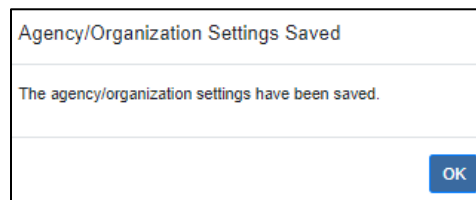
Project Name

<div>On</div>	Sample report project
<div>On</div>	Express Lanes Project-Copied
<div></div>	Express Lanes Project-Copied
<div></div>	Express Lanes Project-Copied
<div>On</div>	Express Lanes Project-Copied
<div></div>	Express Lanes Project-Copied
<div></div>	Express Lanes Project-Copied
<div>On</div>	Nick 1
<div></div>	Express Lanes Project-Copied
<div></div>	Express Lanes Project-Copied
<div></div>	Express Lanes Project-Copied

Dynamic Scoring Display: Field Descriptions and Help

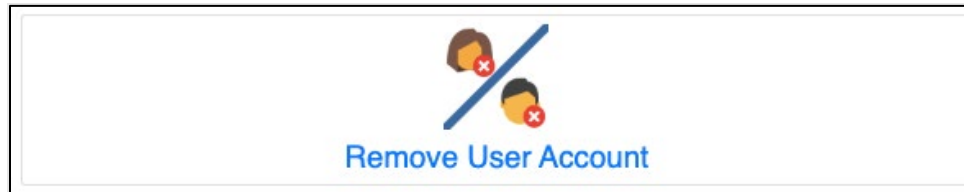
- **Select Agency/Organization:** Select the agency/organization for which you would like to configure the scoring that displays on pages in the webtool. The projects assigned to the agency/organization will be displayed in the Dynamic Scoring Chart and Long-Term vs. Short-Term HeatMap sections.
- Evaluate Short-Term Contracting Methods (DBB, CM/GC, DB, PDB); Dynamic Scoring Chart:
 - **Organization/Agency Level:** Slide the toggle switch 'On' to display the dynamic scoring chart for all projects at the organization/agency level. Slide the toggle switch 'Off' to hide the dynamic scoring chart at the organization/agency level. Not setting the toggle switch will remove any specific setting for the organization/agency, and the chart will be displayed. This setting may be overridden on a per project basis.
 - **Project Level:** Slide the toggle switch 'On' to display the dynamic scoring chart for the project. Slide the toggle switch 'Off' to hide the dynamic scoring chart for the project. Not setting the toggle switch will remove any specific setting for the project. The Organization/Agency level setting will be applied if set, otherwise the default is to display the chart.
- Evaluate whether Long-Term or Short-Term Contracting is Recommended; Long-Term vs. Short-Term HeatMap:
 - **Organization/Agency Level:** Slide the toggle switch 'On' to display the dynamic heatmap for all projects at the organization/agency level. Slide the toggle switch 'Off' to hide the dynamic heatmap at the organization/agency level. Not setting the toggle switch will remove any specific setting for the organization/agency, and the heatmap will be displayed. This setting may be overridden on a per project basis.
 - **Project Level:** Slide the toggle switch 'On' to display the dynamic heatmap for the project. Slide the toggle switch 'Off' to hide the dynamic heatmap for the project. Not setting the toggle switch will remove any specific setting for the project. The Organization/Agency level setting will be applied if set, otherwise the default is to display the heatmap.

Click the “Submit” button. The following message will be displayed:



Click the “OK” button to close the message.

Remove User Account



This functionality allows you to remove a user account from the webtool. A Super Admin may remove any user account. An Admin may only remove a user account assigned to his/her agency.

Click the “Remove User Account” button to display the Remove User Account page:

Remove User Account

* - Required

* Select Agency/Organization: ?

ICF

User Account Selections

* Select a user account to delete: ?

-- Select User Account --

* Select a user account to assign projects: ?

-- Select User Account --

Projects Owned by User Account to be removed ?

Submit

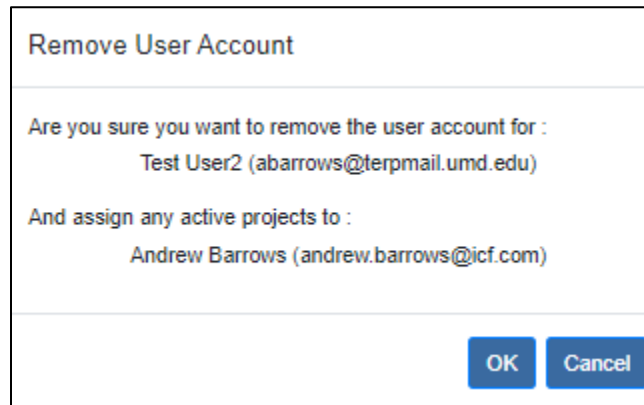
Cancel

Page 23

Remove User Account: Field Descriptions and Help

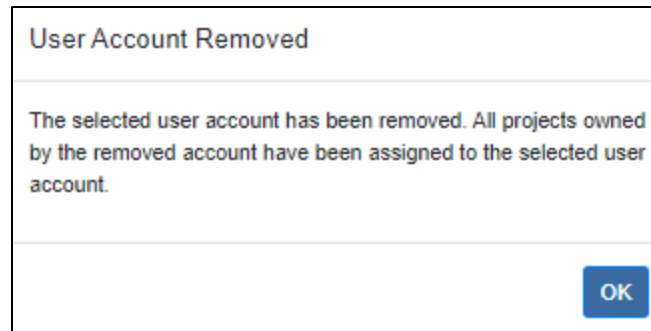
- **Select Agency/Organization:** Select the agency/organization to which the user account is assigned.
- User Account Selections
 - **Select a user account to delete:** Select the user account to remove.
 - **Select a user account to assign projects:** Select a user account to assign to the projects owned by the removed user account. If an admin account is selected, only an admin may edit the projects; all non-admin users will only be able to view the projects.
 - **Projects Owned by User Account to be removed:** Projects owned by the user account to be removed are listed here.

Click the “Submit” button. A message similar to the following will display:



A screenshot of a web-based dialog box titled "Remove User Account". The dialog box has a light gray border and a white background. At the top, the title "Remove User Account" is displayed in a blue font. Below the title, there is a line of text: "Are you sure you want to remove the user account for :". Underneath this, the name and email of the user to be removed are shown: "Test User2 (abarrows@terpmail.umd.edu)". Below that, another line of text reads: "And assign any active projects to :". Underneath this, the name and email of the user to whom projects will be assigned are shown: "Andrew Barrows (andrew.barrows@icf.com)". At the bottom right of the dialog box, there are two blue buttons with white text: "OK" and "Cancel".

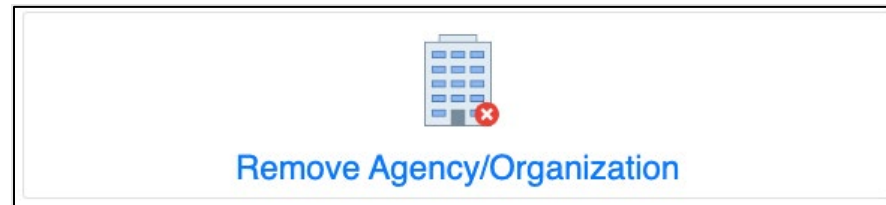
If you are sure you want to remove the user, click the “OK” button. The following message will display:



Click the “OK” button to close the message.

Remove Agency/Organization (Super Admin ONLY)

NOTE: This functionality is available to **Super Administrators** only.





This functionality allows a Super Admin to remove an agency/organization from the webtool. NOTE: When you remove an agency, all active projects for the selected agency will be assigned to FHWA, and all active user accounts assigned to the selected agency will be deactivated.

Click the “Remove Agency/Organization” button to display the Remove Agency/Organization page:

Remove Agency/Organization


* - Required

* Select Agency/Organization: 



Test Agency 

Address Line 1
123 Easy St

Address Line 2

City: Boston * State: Massachusetts  Zip Code: 2130

Phone Number
(802) 318-5409

Remove Agency/Organization: Field Descriptions and Help

- **Select Agency/Organization:** Select the agency/organization you wish to remove. All active projects for the selected agency/organization will be assigned to FHWA, and all active user accounts assigned to the selected agency/organization will be deactivated.

Click the “Submit” button. A message like the following will appear:

Remove Agency/Organization Account

Are you sure you want to remove the agency/organization account for :

Test Agency

All active projects for this agency/organization will be assigned to the Federal Highway Administration.
All active user accounts assigned to this agency/organization will be deactivated.

OKCancel

If you are sure you want to remove the agency/organization, click the “OK” button. The following message will appear:

Agency/Organization Account Removed

The selected agency/organization account has been removed. All active users for the organization/agency have been inactivated.
All active projects owned by the removed account have been assigned to the Federal Highway Administration.

OK

Click the “OK” button to close the message.

FOIA Statement Override



This functionality allows you to modify the default language in the Freedom of Information (FOIA) statement that is displayed on all reports produced by the webtool. A Super Admin may edit FOIA language for any agency/organization. An Admin may edit the language only for his/her assigned agency/organization.

Click the “FOIA Statement Override” button to display the FOIA Statement Override page:

FOIA Statement Override

* - Required

* Select Agency/Organization ?

-- Agency/Organization --

* FOIA Statement: ?

[Start with default FOIA statement](#)Default FOIA Statement

Sensitive Information – Consult with Legal prior to disclosing under FOIL or FOIA requests or to third parties.

** The information contained in this electronic message and any attachments to this message are intended for the exclusive use of the addressee(s) and may contain information that is confidential, privileged, and/or otherwise exempt from disclosure under applicable law. If this electronic message is from an attorney or someone in the Legal Department, it may also contain confidential attorney-client communications which may be privileged and protected from disclosure. If you are not the intended recipient, be advised that you have received this message in error and that any use, dissemination, forwarding, printing, or copying is strictly prohibited.

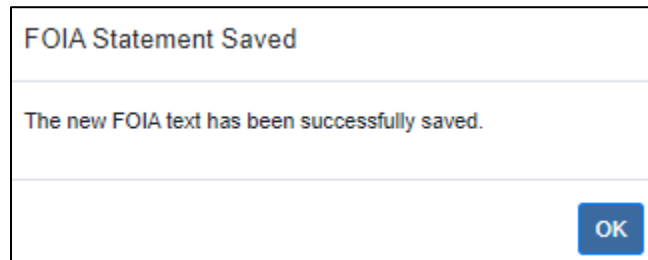
Submit

Cancel

FOIA Statement Override: Field Descriptions and Help

- **Select Agency/Organization:** Select the agency/organization whose FOIA Statement you wish to edit. If you are an Admin, your agency is pre-populated.
- **FOIA Statement:** Enter the text you would like to use as the Freedom of Information Act statement for the selected agency/organization. Text is required. NOTE: You may click the blue “Start with default FOIA statement” button to populate the field with default FOIA text to use as a starting point before making edits.

Click the “Submit” button. You will receive the following message:



Click the “OK” button to close the message.

Click “Cancel” to return to the main administration page.