MATERIALS MANAGEMENT SYSTEM (MMS) USER'S GUIDE

Version 1.1

STATE HIGHWAY ADMINISTRATION
STATE OF MARYLAND

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1 Overview

1.1 Material Management System (MMS) Goals

The implementation of a single electronic MMS has the following mission critical goals:

- Manage the materials quality process throughout the construction project life cycle; this should include support for materials quality activities in traditional design-bid-build construction contracts, as well as design-build and other innovative contracting methods;
- Allow information sharing and knowledge transfer among key SHA stakeholders;
- Allow one-stop data entry and status reporting on progress against material quality goals;
- Provide construction project managers with a notification of potential materials discrepancies as part of the preparation of construction contractor progress estimates;
- Provide documentation of materials clearance compliance for FHWA certification;
- Allow lab managers to track the status and costs of testing within a given Technical Material Division;
- Automate the allocation of testing costs to the various projects;
- Identify sources and materials used on projects through a referencing system to allow for easier access to materials information during construction and ongoing maintenance of the asset; and
- Support capture of data from testing performed by construction contractors, and facilitate the comparison of this test data with SHA quality assurance test results.

1.2 MMS Benefits

The benefits that MMS create for SHA are:

- The central storage and retrieval of common data elements, reduction of data entry errors caused by re-entry of data fields;
- Assurance of real-time data updates, elimination of the need for smaller systems and associated integrations;
- The provision of more robust reporting tools;
- Allowance for easily accessible data and the provision of more robust tools to aid in the management of this complex information set;
- Automation by reducing the amount of paperwork involved and the amount of time taken to transmit information between materials sections as well as between OMT and construction project sites;
- Standardization by contributing to a workforce which is both more interchangeable between projects or districts or between materials sections and a workforce which is more accountable;
- Integration of MMS with existing software applications across SHA;
- Accurate and efficient materials management process;
- Accountability by keeping an audit trail of all changes to the test results, as well as maintaining a record of the entering of test results;
- Support implementation of a knowledge-based system;
- Prevent system obsolescence; and
- Reduction of overhead created by multiple systems and lower training and maintenance costs for large numbers of smaller disparate systems.

2 Login to Material Management System

2.1 Internal User Login

The internal login procedure is applicable only if the user has a valid username and password within the SHA network, and occurs within the SHA intranet as opposed to the internet. For such users, authentication is executed automatically in the background and does not require entry of a user name and password. To access the system internally, type the following URL on a web browser: http://shahanweb2/mms/MMSBrowser_BC.aspx

After a successful login, users can simply create a shortcut of the application to avoid having to type in the intranet address every time. The MMS Welcome screen is displayed after a successful login (see **Figure 1**).

Figure 1. MMS Welcome Screen

2.2 External User Login

External user login into the MMS requires use of a user name (the user's full email address) and a password. This happens when users access the system via the internet.

To login to the Material Management System externally (via the internet), perform the following steps:

1. Go to **http://mms.sha.md.gov** on a web browser. Users will be required to enter their user name and password on the login screen. It is recommended that users write down and keep their password in a safe, readily accessible location.
2. Type in your user name. Your user name is your email address.
3. Enter your password and click  .

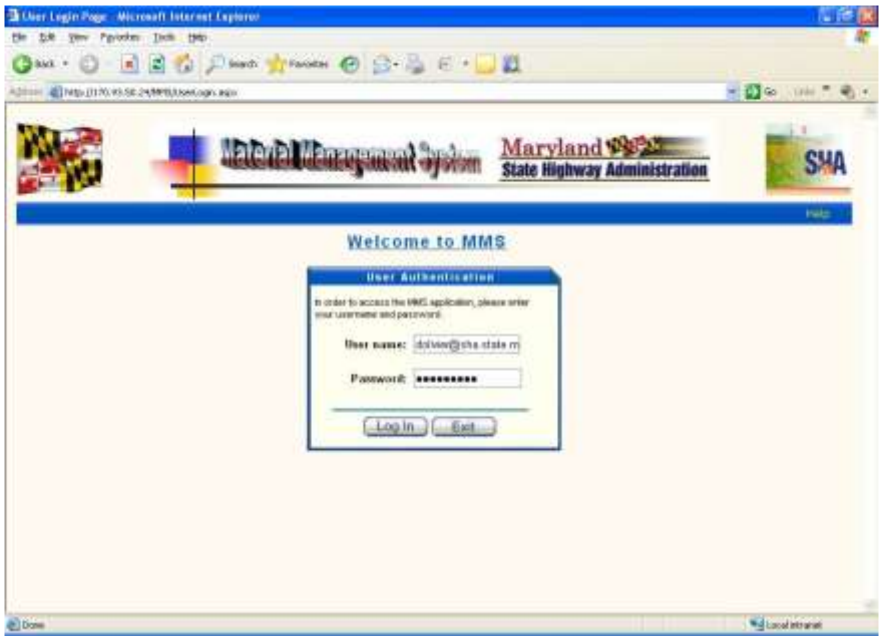


Figure 2. MMS Login Screen

4. If you enter an incorrect user name or password, the following screen is displayed:

Figure 3. Username/Password Do Not Match Screen

5. Contact your MMS administrator if you forgot your password and need to change it.

External User Login (cont'd)

6. After initial login, users are prompted to change their passwords. The following prompt screen is displayed:

Figure 4. Password Administration Change Password Prompt Screen

7. To change your password, you must include the following password criteria:
   a. Minimum of eight (8) characters long;
   b. At least one capital letter;
   c. At least one number;
   d. At least one special character (#,@,!, ~, etc.).

3 Working with Projects

The Project Data application enables the user to create new projects and search for all active and completed projects.

Figure 5. Project Data Link

Number	Description
1	**Project Data Link:** From the MMS Welcome screen, click on the Project Data link to open the Project Data screen (see **Figure 6**).

3.1 Search for a Project

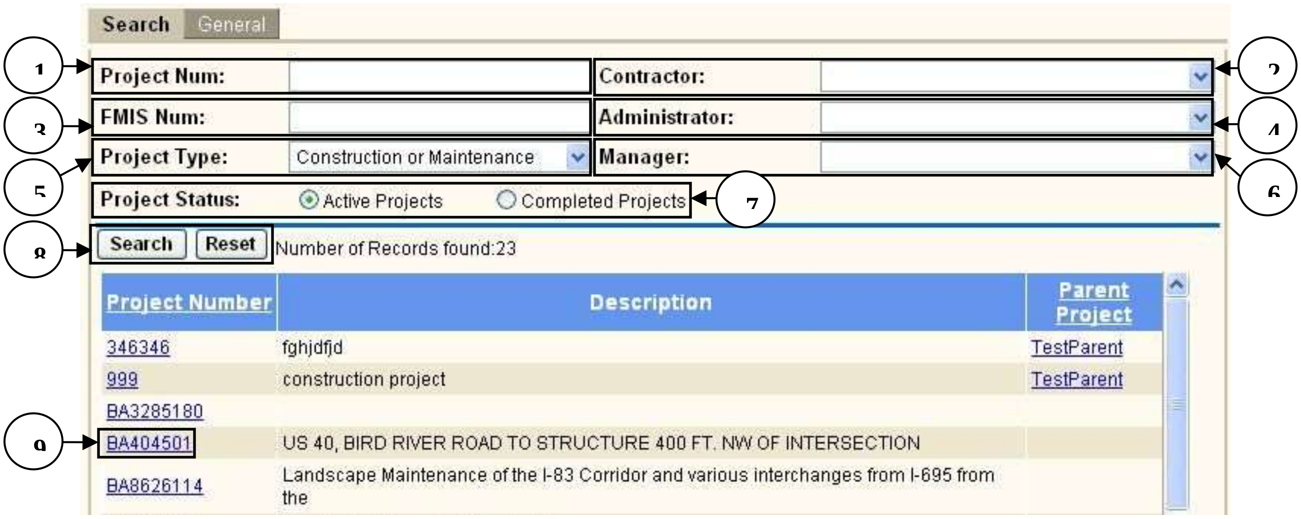


Figure 6. Project "Search" Tab Screen

Perform the following steps to search projects from the Project "Search" screen:

1. Enter a unique project number in the "Project Num" field.
2. Select a contractor from the "Contractor" drop-down box.
3. Enter the project's FMIS number in the "FMIS Num" field.
4. Select an administrator from the "Administrator" drop-down box.
5. Select a project type from the "Project Type" drop-down box.
6. Select a manager from the "Manager" drop-down box.
7. Click on the "Active Projects" or "Completed Projects" radio button in the "Project Status" field.
8. Click **Search** to perform the search or **Reset** to reset the screen.
9. To view an existing project, click on the project number link located in the "Project Number" column. The Project "General" tab screen will be displayed (see **Figure 7**).

TIP: The quickest way to search for all material products is by clicking on the **Search** button after the default search screen is displayed.

3.2 View / Change Project Data for an Existing Project

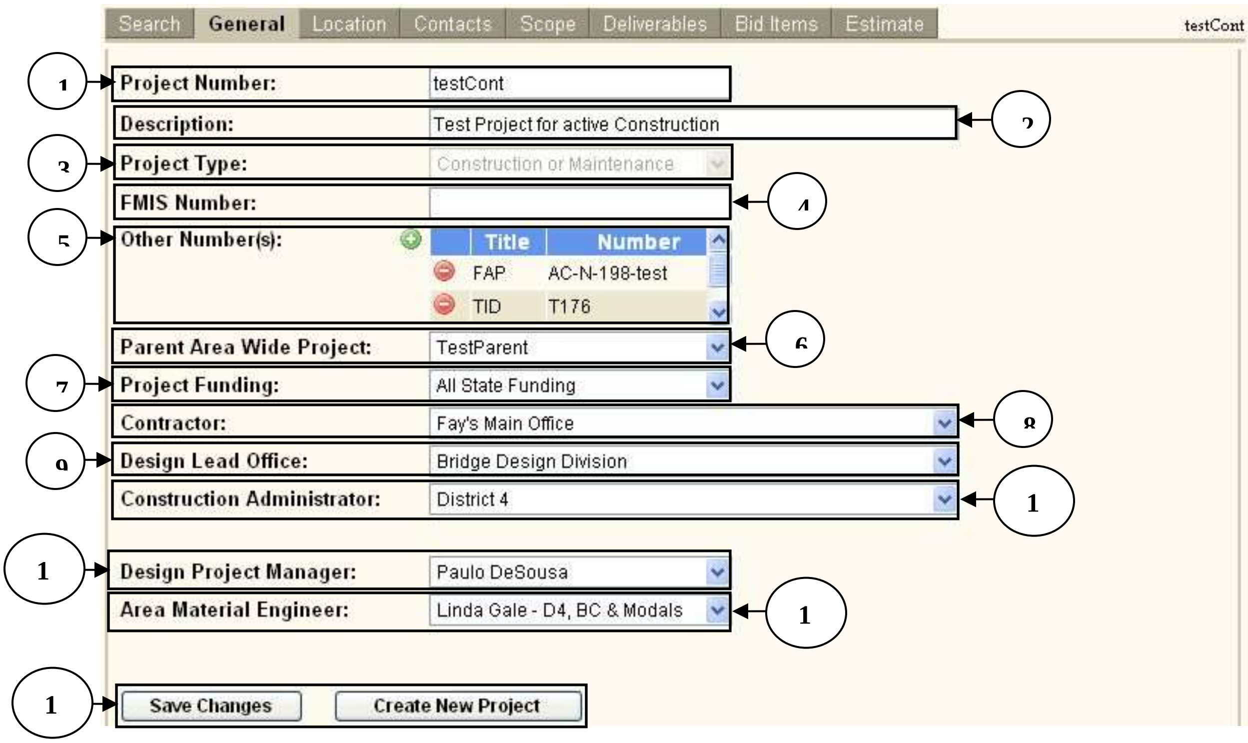


Figure 7. View / Change Project Data for an Existing Project

Perform the following steps to view or (if necessary) change project information from the Project "General" tab screen:

1. View or change the project number in the "Project Number" field.
2. View or change a brief description of the project in the "Description" field.
3. Select a project type from the "Project Type" drop-down box.
4. Enter the project's FMIS number in the "FMIS Number" field.
5. Add number by clicking the Add Contract Other Numbers icon ( ). The "Add Contract Other Numbers" pop-up box is displayed (see **Figure 8**).

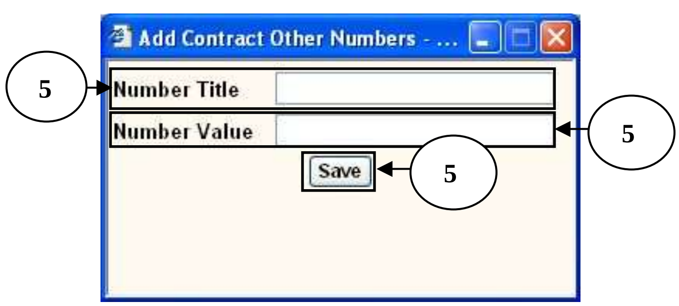


Figure 8. Add Contract Other Numbers

View / Change Project Data for an Existing Project (cont'd)

5a. Click the "Standard Milestones" drop-down box and select a milestone.

5b. Click the calendar icon ( ) and select a date.

5c. Click Save to save data and exit the "Add Contracts Other Numbers" pop-up box.

6. Select the parent area-wide project in the "Parent Area Wide Project" drop-down box.
7. Select the source of project funding from the "Project Funding" drop-down box.
8. Select the contractor from the "Contractor" drop-down box.
9. Select the design lead office from the "Design Lead Office" drop-down box.
10. Select the construction administrator from the "Construction Administrator" drop-down box.
11. Select the design project manager from the "Design Project Manager" drop-down box.
12. Select the area material engineer from the "Area Material Engineer" drop-down box.
13. Click Save Changes to save project data or Create New Project to create a new project (refer to **3.3 Add a New Project**)

3.3 Add a New Project

You can create a new project by clicking the "General" tab from the default "Search" screen. You can also create a new project by performing a search of an existing project in the default "Search" screen.

Perform the following steps to create a new project from the Project "General" tab screen:

1. From the Project Data General tab, click on the Create New Project button (refer to **Figure 7**). The following blank Project screen is displayed:

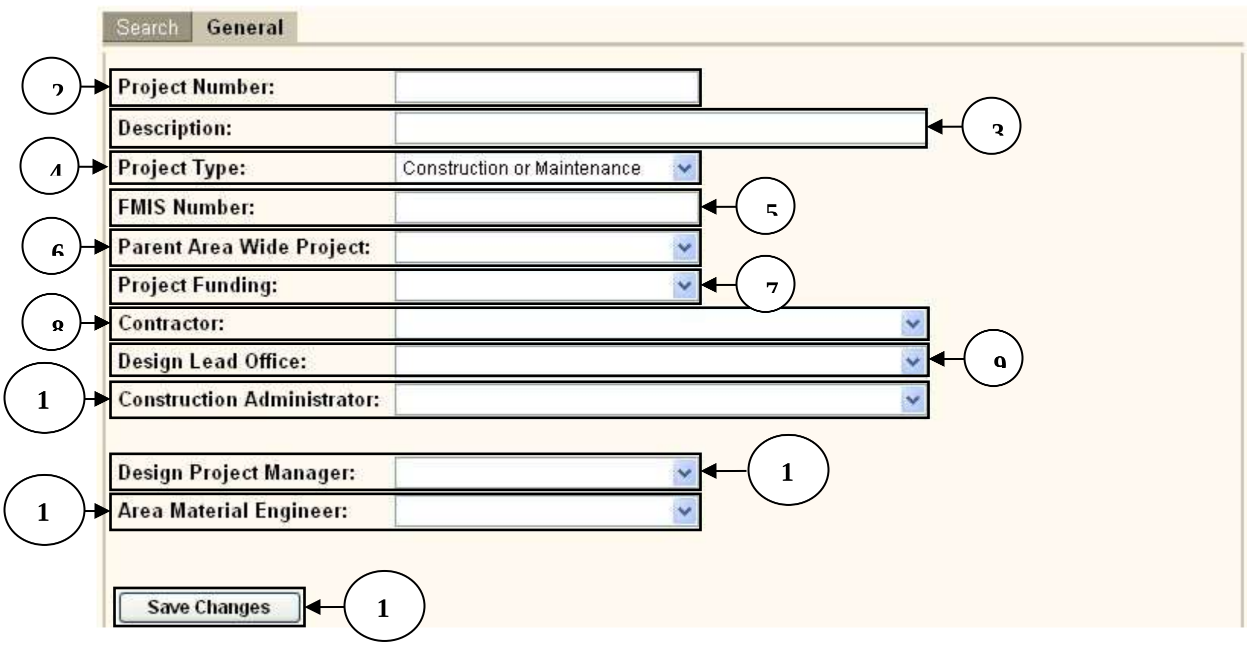


Figure 9. Blank Project Screen

2. Enter a unique project number in the "Project Number" field.
3. Enter a brief description of the project in the "Description" field.
4. Select a project type from the "Project Type" drop-down box.
5. Enter the project's FMIS number in the "FMIS Number" field.
6. Select the parent area-wide project in the "Parent Area Wide Project" drop-down box.
7. Select the source of project funding from the "Project Funding" drop-down box.
8. Select the contractor from the "Contractor" drop-down box.
9. Select the design lead office from the "Design Lead Office" drop-down box.
10. Select the construction administrator from the "Construction Administrator" drop-down box.
11. Select the design project manager from the "Design Project Manager" drop-down box.
12. Select the area material engineer from the "Area Material Engineer" drop-down box.
13. Click Save Changes to save project data.

3.3.1 Add Project Location

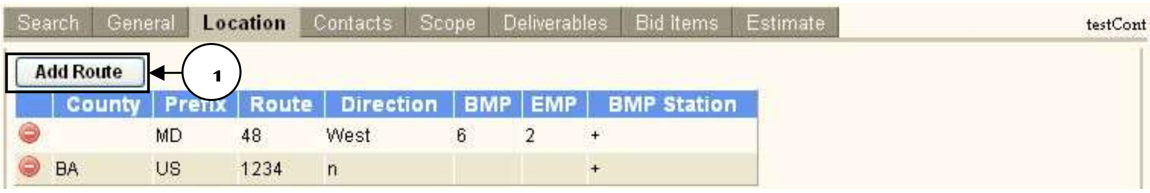


Figure 10. Add Project Location

Construction and Maintenance Projects (and to a lesser degree Area-wide Projects) will have locations associated with them. These locations are the roadway sections where work is being performed. Users are not required to enter this information; however, entering in the location data will provide benefits in reporting. Perform the following steps to enter a location from the Project "Location" tab screen:

1. Click on the **Add Route** button.
2. The "Route Information Entry Form" pop-up box is displayed (see **Figure 11**).

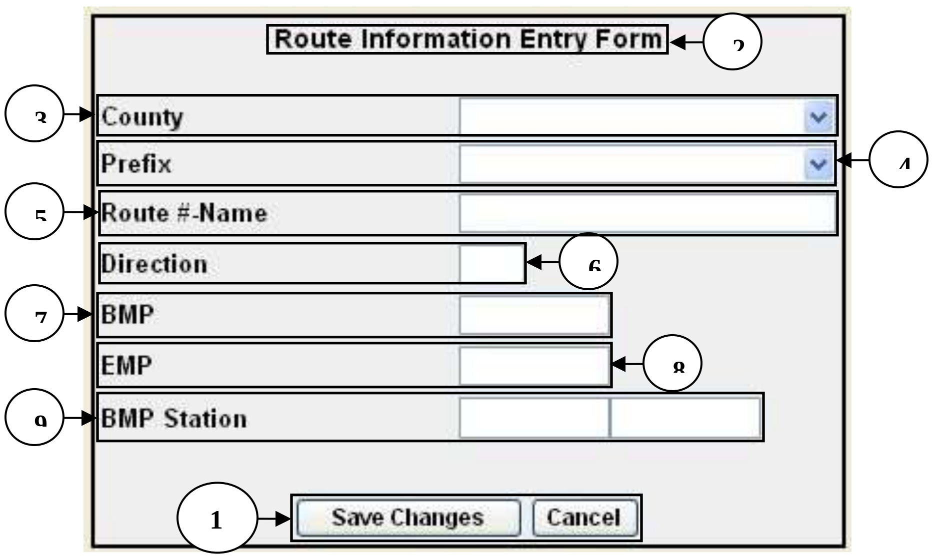


Figure 11. Add Route Information

3. Select the county where the project is located from the "County" drop-down box.
4. Select the route prefix from the "Prefix" drop-down box.
5. Enter the route number and name in the "Route #-Name" field.
6. Enter the direction in the "Direction" field.
7. Enter the Beginning Mile Point in the "BMP" field.
8. Enter the Ending Mile Point in the "EMP" field.
9. Enter the Beginning Mile Point Station in the "BMP Station" field.
10. Click **Save Changes** to save your changes or **Cancel** to cancel the operation.

3.3.2 Add Project Contacts

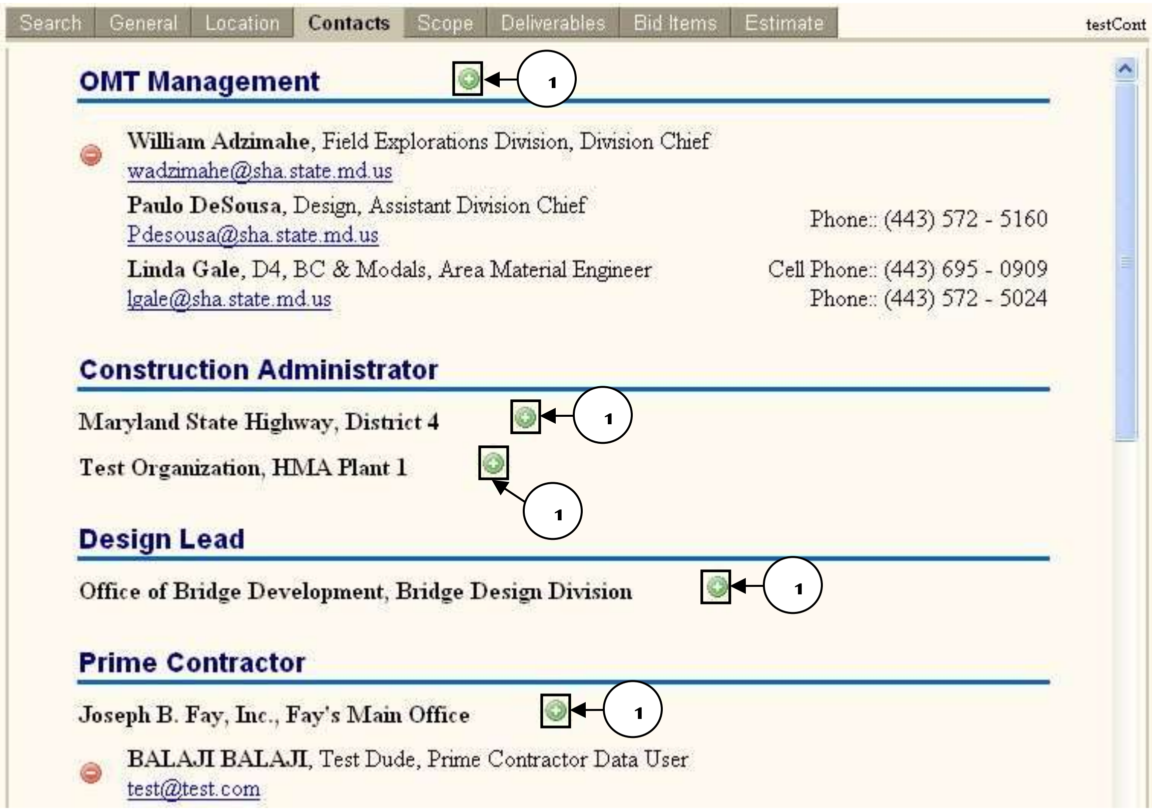


Figure 12. Add Project Contact Data

The Project "Contacts" screen lists contact information on each project. Perform the following steps to add contacts to the Project "Contacts" tab screen:

1. Click on the Add Contact icon ().
2. The "Contact" pop-up box is displayed (see **Figure 13**). Click the "Contact" drop-down box and select a contact.

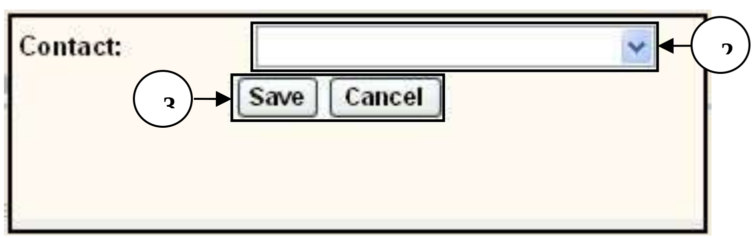
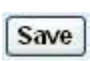
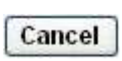


Figure 13. Add Contact

3. Click  to save changes or  to cancel changes.

3.3.3 Add Project Scope

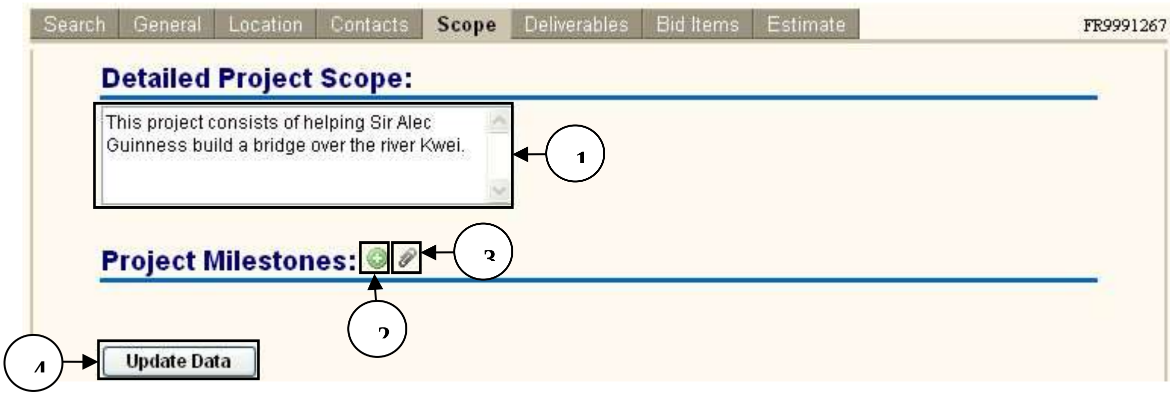


Figure 14. Add Project Scope

The Project "Scope" tab screen enables the user to enter detailed project scope information as well as project milestones. Perform the following steps to add information to the Project "Scope" tab screen:

1. Enter information in the Detailed Project "Scope" field.
2. In the "Project Milestones" area, click the Add Milestone icon ( ) to add a milestone. The "Add Milestone" pop-up box is displayed (see **Figure 15**).

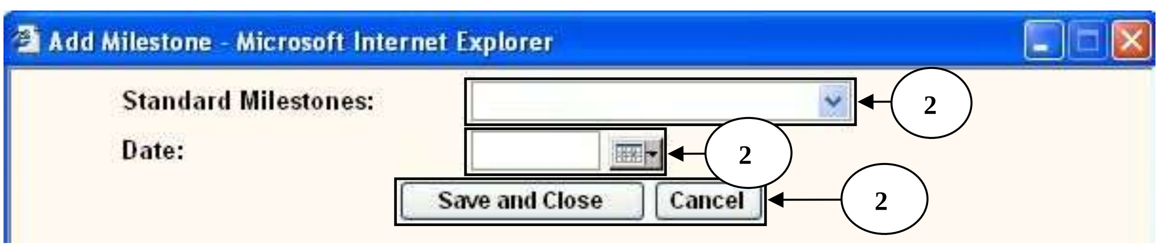


Figure 15. Add Milestone

2a. Click the "Standard Milestones" drop-down box and select a milestone.

2b. Click the calendar icon ( ) and select a date.

2c. Click Save and Close to save changes or Cancel to cancel changes.

3. Click the add document icon ( ) to add a document. The "Add Document Page" pop-up box is displayed (see **Figure 16**).

Add Project Scope (cont'd)

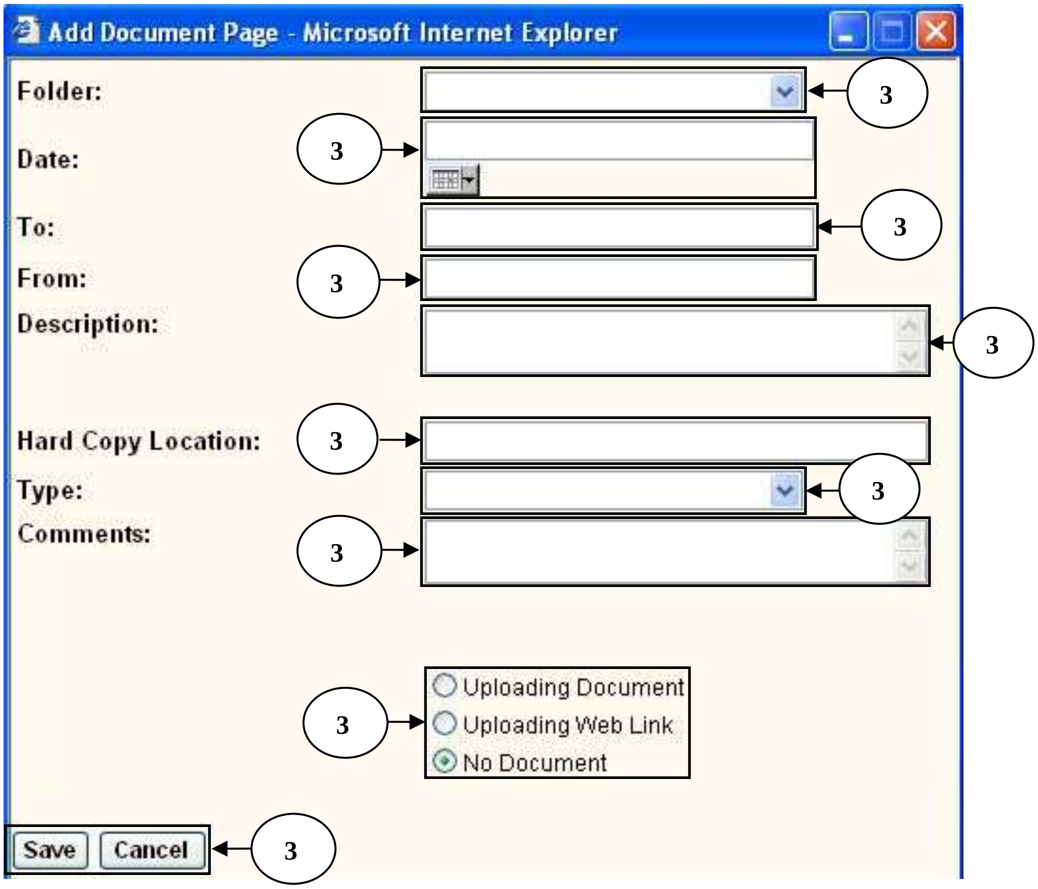


Figure 16. Add Document Page

3a. Click the "Folder" drop-down box and select a folder.

3b. Click the calendar icon ( ) and select a date in the "Date" field.

3c. Enter the name of the person to whom you will send the document in the "To" field.

3d. Enter the name of the person from which the document was sent in the "From" field.

3e. Enter a description of the document in the "Description" field.

3f. Enter the location of the document in the "Hard Copy Location" field.

3g. Click the document type in the "Type" drop-down box.

3h. Enter comments in the "Comments" field.

3i. Select the action you wish to take by selecting the appropriate radio button.

3j. Click **Save** to save changes or **Cancel** to cancel changes.

4. Click **Update Data** to update all changes in the Project "Scope" tab screen.

3.3.4 Add Project Deliverables

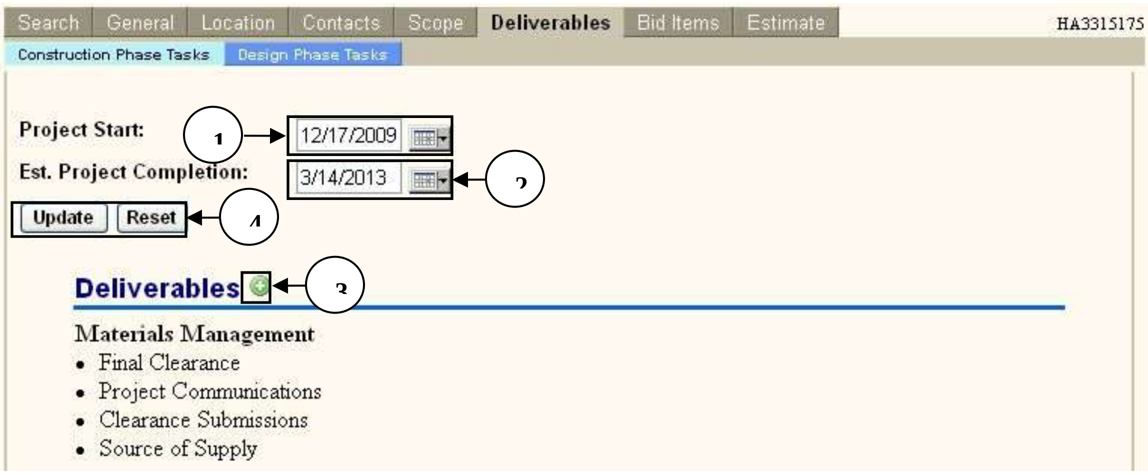


Figure 17. Add Project Deliverables

The Project "Deliverables" tab screen enables the user to enter standard deliverables and enter a start and estimated completion date for the project. Perform the following steps to add information to the Project "Deliverables" tab screen:

1. Click the calendar icon ( ) and select a date in the "Project Start" field.
2. Click the calendar icon ( ) and select a date in the "Est. Project Completion" field.
3. Click on the Add Tasks to Project icon ( ). The "Add Tasks to Project" pop-up box is displayed (see **Figure 18**).

Figure 18. Add Tasks to Project

3a. Click on the deliverable in the "Standard Deliverables" drop-down box.

3b. Click Save and Close to save changes or Cancel to cancel changes.

4. Click Update to update data or Reset to cancel changes.

3.3.5 Add Project Proposal Bid Items

Figure 19. Add Project Proposal Bid Items

The Project “Proposal Bid Items” tab screen enables the user to add proposal bid items. Perform the following steps to add proposal bid items to the Project “Proposal Bid Items” tab screen:

1. Click on the Add Proposal Bid Item icon ( ) to import proposal bid items from Trns*port for the selected project. The import option is used to auto-import all bid items of a project from Trns*port. This option only applies to projects that are within Trns*port.

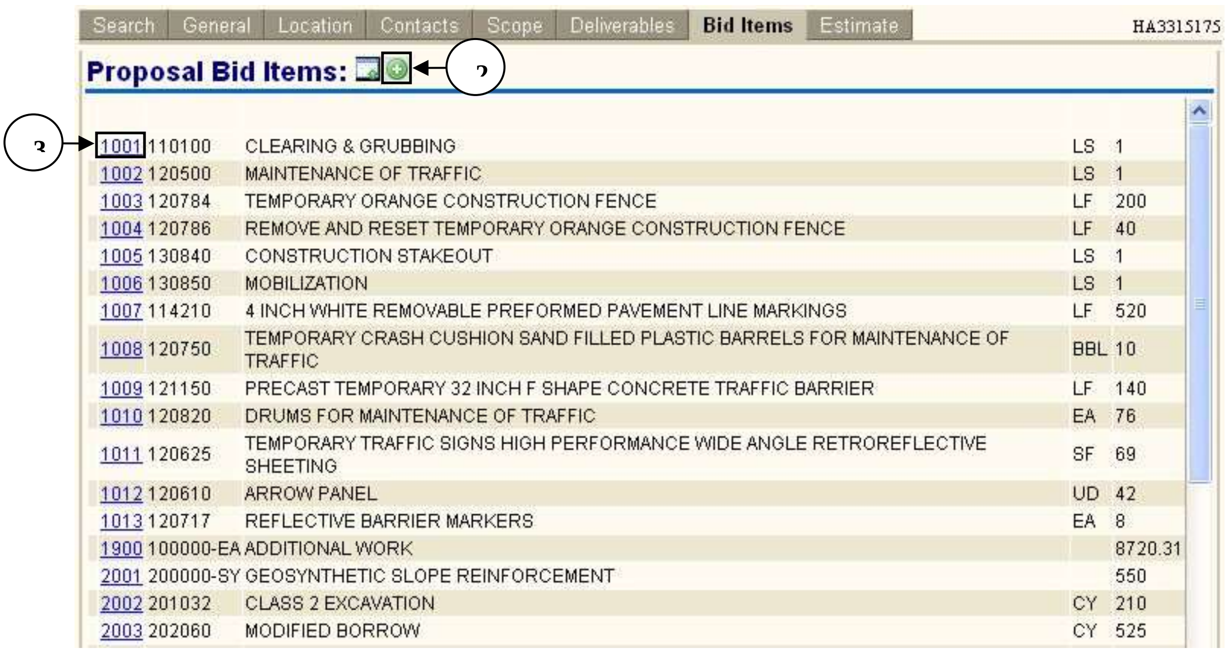


Figure 20. Add Proposal Bid Items

2. Click on the Add Proposal Bid Item icon ( ) to add a proposal bid item. This option is applicable when a project is not included in Trns*port. After clicking on the add icon, the pop-up window is used to enter the proposal bid items (see **Figure 21**).
3. Click on the item number link to view or edit details on the bid item of the project selected (see **Figure 21**).

Add Project Proposal Bid Items (cont'd)

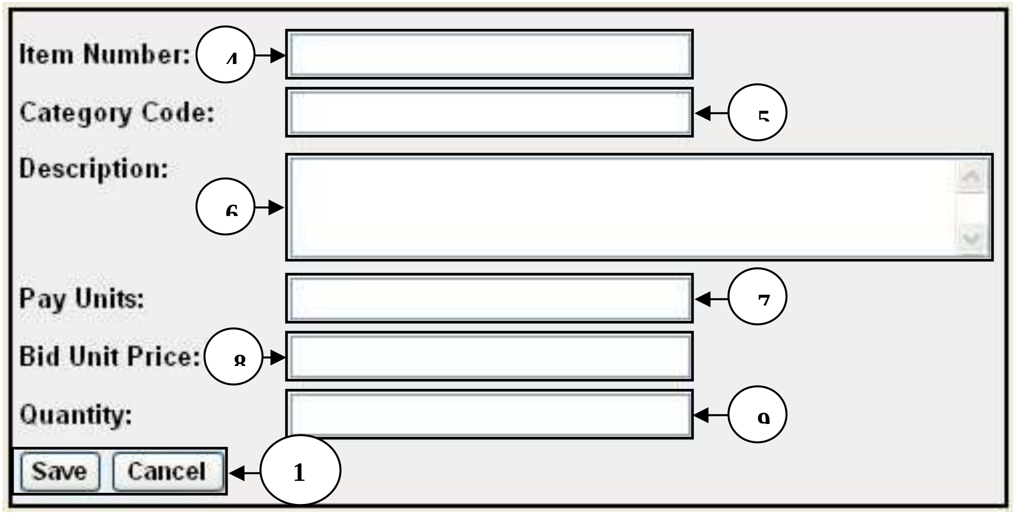


Figure 21. Add Project Proposal Bid Item Information

4. Enter a contract bid item number of the project selected in the "Item Number" field.
5. Enter the category code to which the contract bid item belongs in the "Category Code" field.
6. Enter a description of the contract (Project) bid item in the "Description" field.
7. Enter the pay units upon which payment calculations on the contract item will be based in the "Pay Units" field.
8. Enter the bid unit price in the "Bid Unit Price" field. The bid unit price is the price of each pay unit bid item.
9. Enter the quantity in the "Quantity" field to document how many estimated quantities are included for the contract bid item.
10. Click Save to save changes or Cancel to cancel changes.

3.3.6 Add Project Estimate

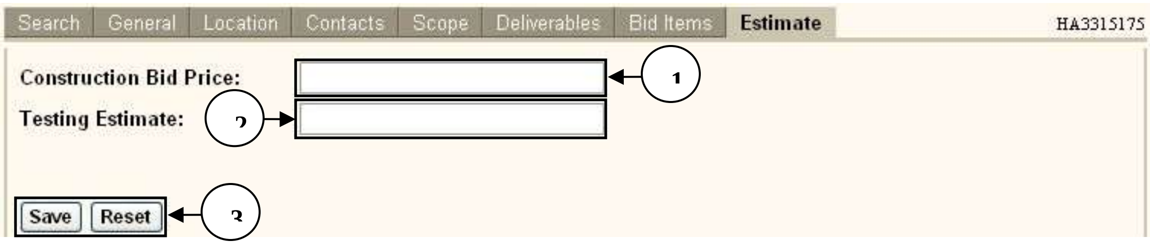


Figure 22. Add Construction Bid Price

The Project “Estimate” tab screen enables the user to input construction bid price and testing estimate information. Perform the following steps to add information to the Project “Estimate” tab screen:

1. Enter the construction bid price in the “Construction Bid Price” field.
2. Enter the testing estimate price in the “Testing Estimate” field.
3. Click **Save** to save changes or **Reset** to reset the screen.

4 Material Data Application

The Material Data application categorizes the materials with which OMT works, defines who has responsibility over the material, and provides information on how the material is accepted on projects. Only OMT users will have access to this application, and those rights will be limited based on page and material-specific rights.

Figure 23. Click on Material Data Link

Number	Description
1	**Material Data Link:** From the MMS Welcome screen, click on the Material Data link to open the Search for Material Data screen (see **Figure 24**).

4.1 Search for Material Data

The Material "Search" page allows users to select a material from a hierarchy that organizes the material by likeness. The broadest material likeness is based on which OMT testing division has the primary responsibility for the material. To view a material list, the user will select a testing division (lab area) within OMT from the "Responsible Division" dropdown list. Based on the selection made the page will show the material breakdown structure of all materials under this division's responsibility as hyperlinks that would go to the "General" tab.

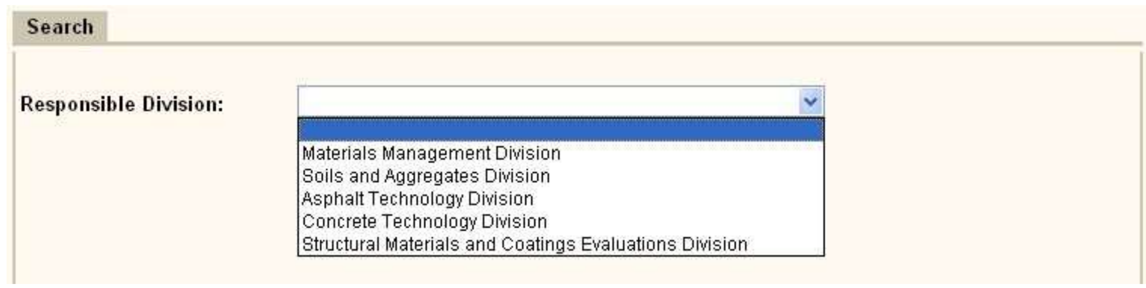


Figure 24. Search for Material Data

4.2 View Material Data

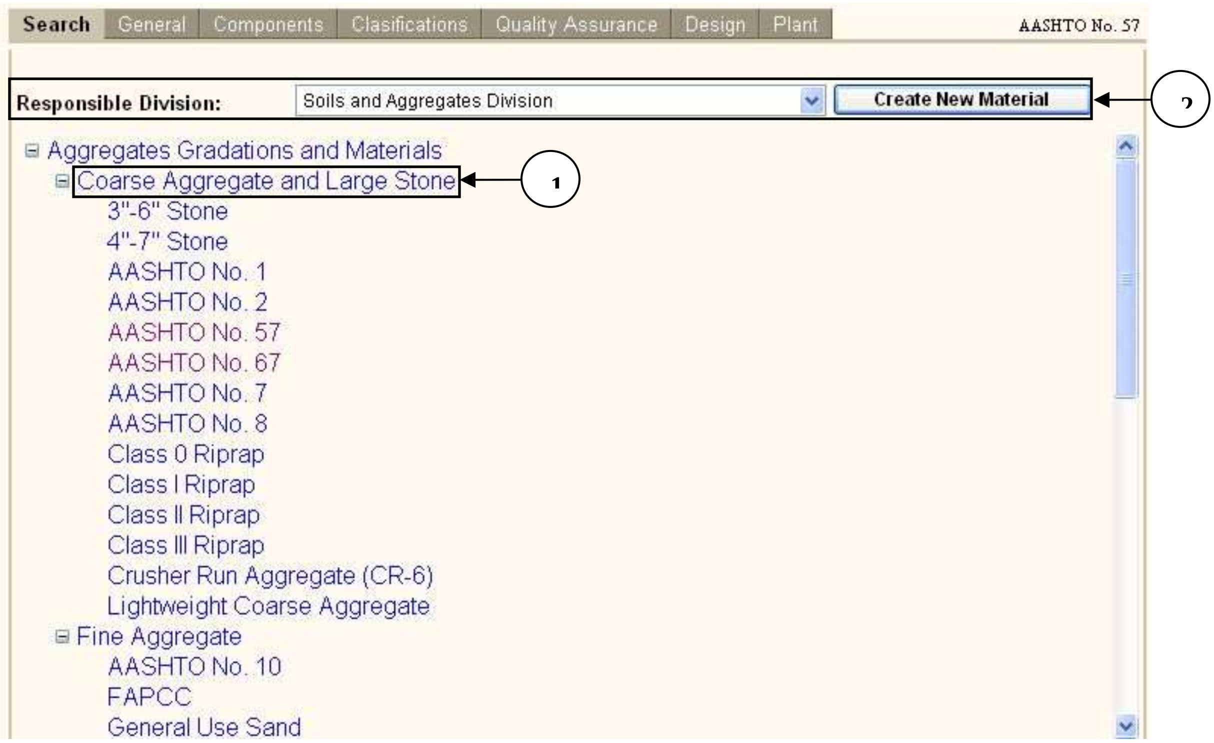


Figure 25. View Material Data

The Material General page provides a method to name the material and define what material category in which it belongs. This tool also provides methodologies on material categories. This screen consists of three different levels, depending on what type of material category is selected (Design Level, Allow Sub-group or Sourced Level).

- Design Format Level – This level stores high level information and possible property options that are passed down to specific sourced level materials.
- Allow Sub-group – This is a means to group families of materials together; e.g., all dense graded HMA and gap graded HMA.
- Sourced Level – This is the lowest level on the hierarchy and shows what specific material property options are allowed for it.

To view material data or to create new material from the List of Materials screen, perform the following steps:

1. To update material data, click on a material link. The Material Data “General” tab screen for the selected material will be displayed (see **Figure 28**).

2. To create a new material, click the **Create New Material** button. A blank Material Data "General" tab screen is displayed.

4.3 Create New Material

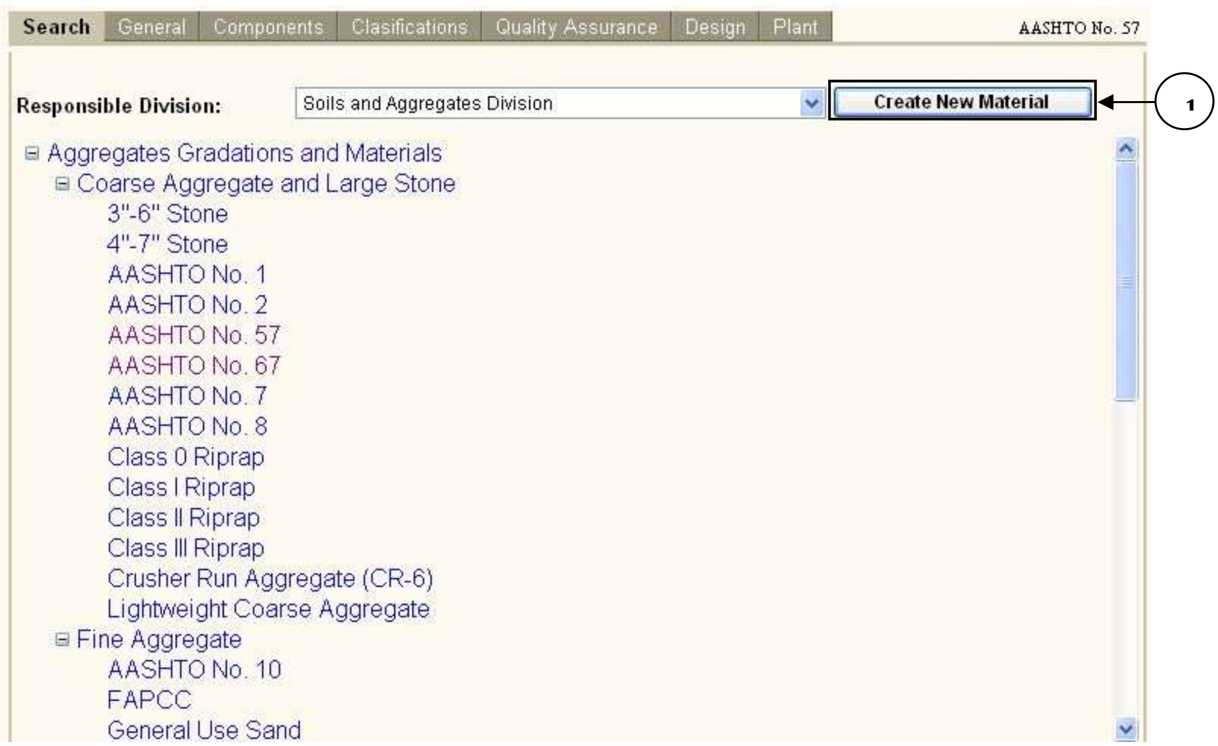


Figure 26. Create New Material

Number	Description
1	**Create New Material:** Click on the **Create New Material** button to bring up a blank screen (see **Figure 27**).

4.4 Add Material Data

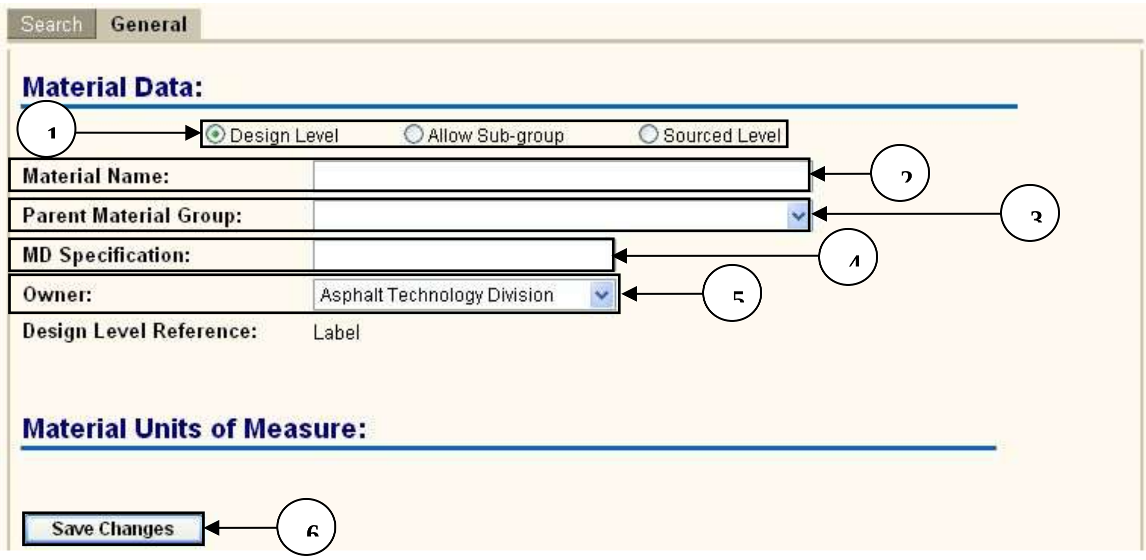


Figure 27. Add Material Data

Perform the following steps to update material data from the Material Data “General” “Design Level” screen:

1. Click on the radio button of the appropriate design level.
2. Enter unique material name in the “Material Name” field.
3. Select the Parent Material Group from the “Parent Material Group” drop-down box.
4. Enter the MD specification in the “MD Specification” field.
5. Select the design level reference from the “Design Level Reference” drop-down box.
6. Click 

.

4.5 Update Material Data

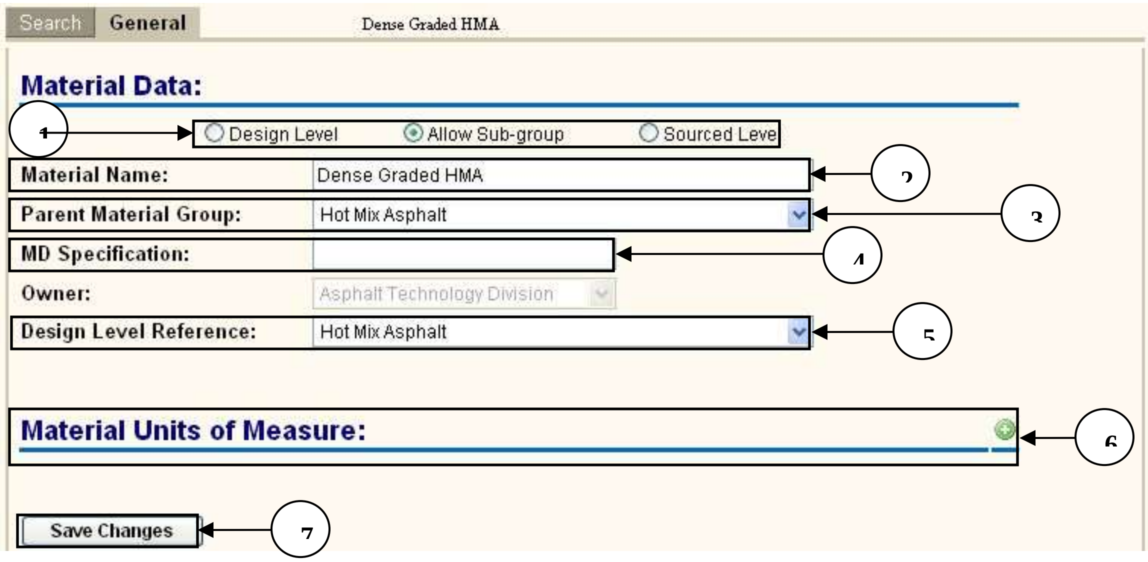


Figure 28. Update Material Data

Perform the following steps to update material data from the Material Data “Allow Sub-group” screen:

1. Click on the “Allow Sub-group” radio button.
2. Enter unique material name in the “Material Name” field.
3. Select the Parent Material Group from the “Parent Material Group” drop-down box.
4. Enter the MD specification in the “MD Specification” field.
5. Select the design level reference from the “Design Level Reference” drop-down box.
6. To add a unit of measure, click on the add icon ( ) at the top right side of the “Material Units of Measure” area of the Material Data screen. The Unit of Measure pop-up box is displayed (see **Figure 29**).
7. Click Save Changes.

4.5.1 Add Unit of Measure

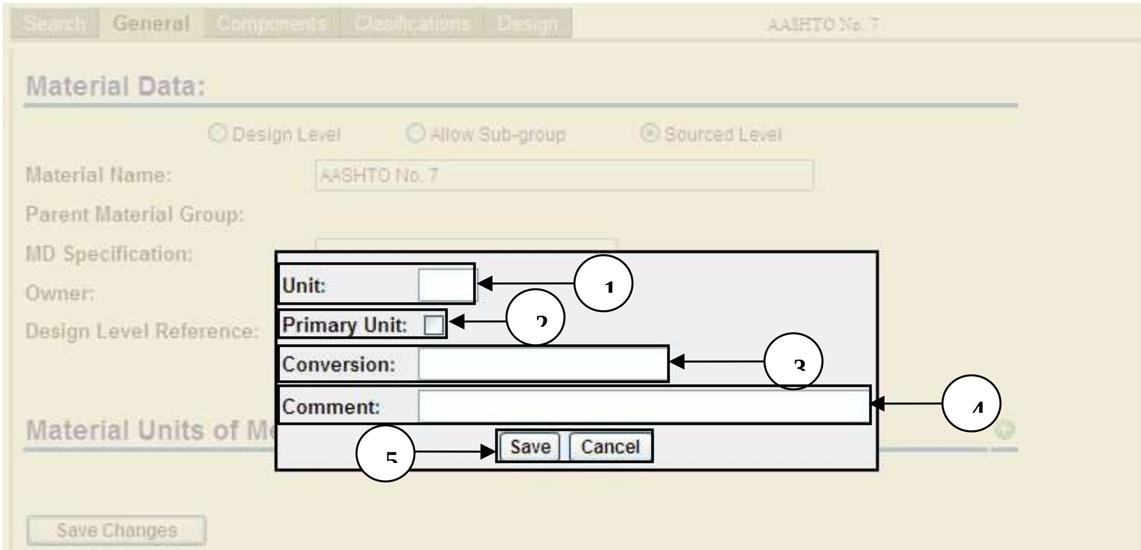


Figure 29. Add Unit of Measure

To add material units of measure, click on the add icon ( ) in the Material Units of Measure area of the Material Data "General" tab screen and perform the following steps:

1. Enter the unit in the "Unit" field (e.g., EA, FT, or CY). Please note that this is a required field, and that you can enter a maximum of five characters.
2. Click on the "Primary Unit" check box if the unit is a primary unit.
3. Enter a conversion value in the "Conversion" field. Please note that this is a required field and will be used to convert the unit being entered into the primary unit. If the unit being entered is Primary, enter "1."
4. Enter any appropriate comments in the "Comment" field.
5. Click Save to save the unit of measure or Cancel to cancel the operation.

4.5.2 Add Components – Design Level Materials

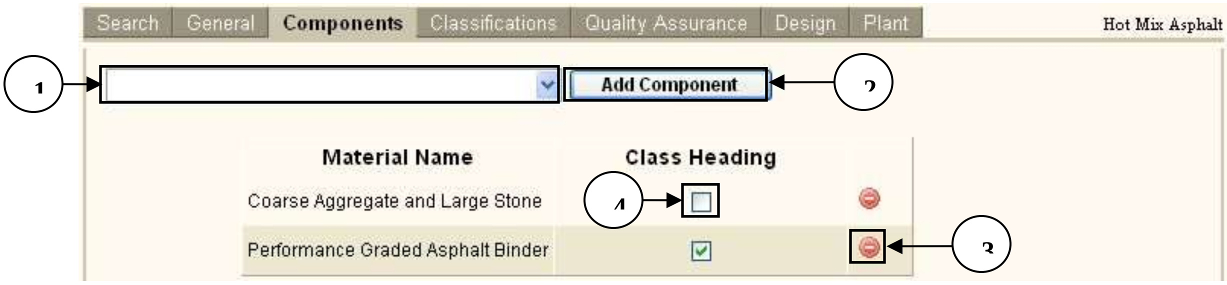


Figure 30. Add Material Components – Design Level Materials

To add a component from the “Components” tab screen, perform the following steps:

1. Click on the drop-down box located at the top of the screen and select the component you wish to add.
2. Click on the Add Component button.
3. To delete a component, click on the delete icon ().
4. Select the check box that corresponds to a material, if the material is a Class Heading.

4.5.3 Add Components – Sourced Level Materials

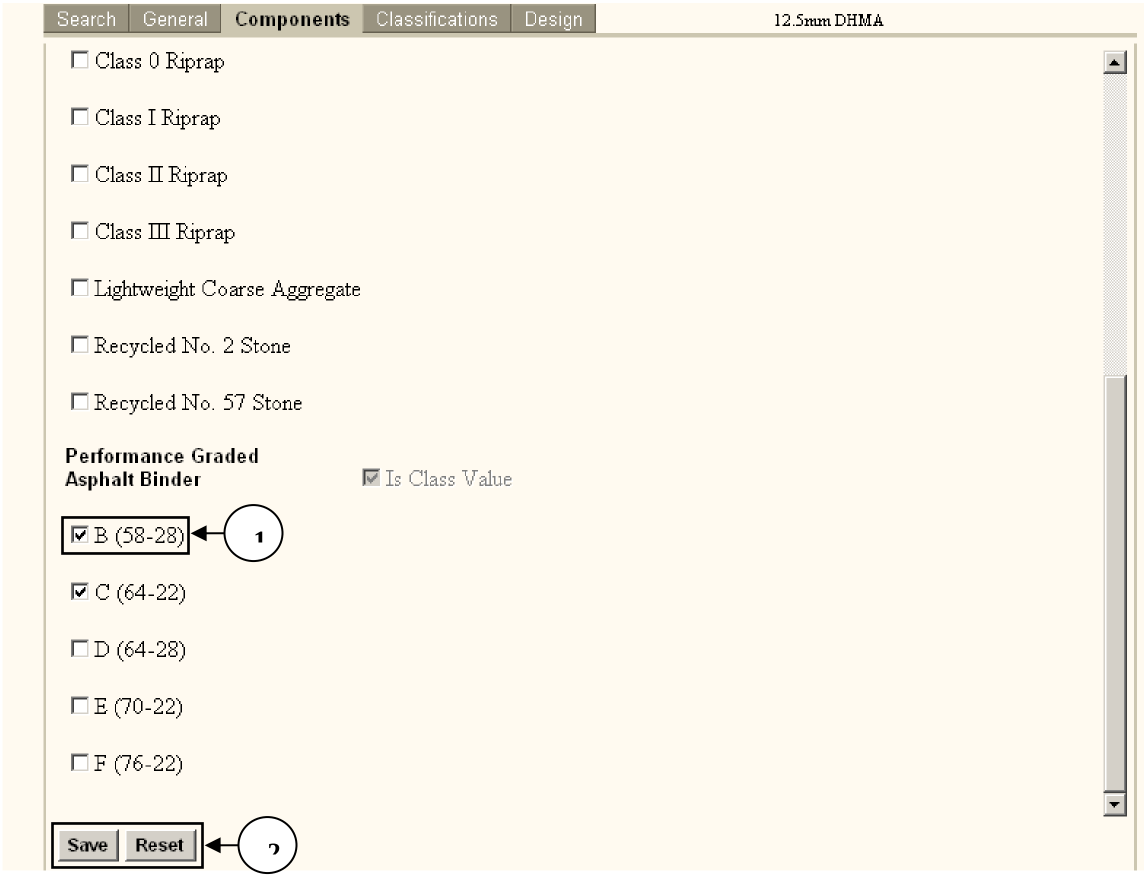


Figure 31. Add Components – Sourced Level Materials

To add a component from the Sourced Level “Classifications” tab screen, perform the following steps:

1. Check the component checkbox(es) for the sourced level material. If the Selected option is under a design level material that is a ***class value***, the component will be displayed in the Classifications screen of a sourced level material (see **Figure 33**).

2. Click **Save** to save data or **Reset** to reset the screen.

4.5.4 Add Classifications – Design Level Materials

Figure 32. Add Classifications – Design Level Materials

To add a classification from the “Classifications” tab screen, perform the following steps:

1. Click on the Add Heading button. The Heading pop-up box is displayed. Type in the Heading name and click Save.
2. To add an option to a heading, click on the Add Option icon ( ). The Option pop-up box is displayed. Type in the Option name and click Save.
3. To delete a heading, click on the delete icon ( ).
4. To delete an option, click on the delete icon ( ).

4.5.5 Add Classifications – Sourced Level Materials

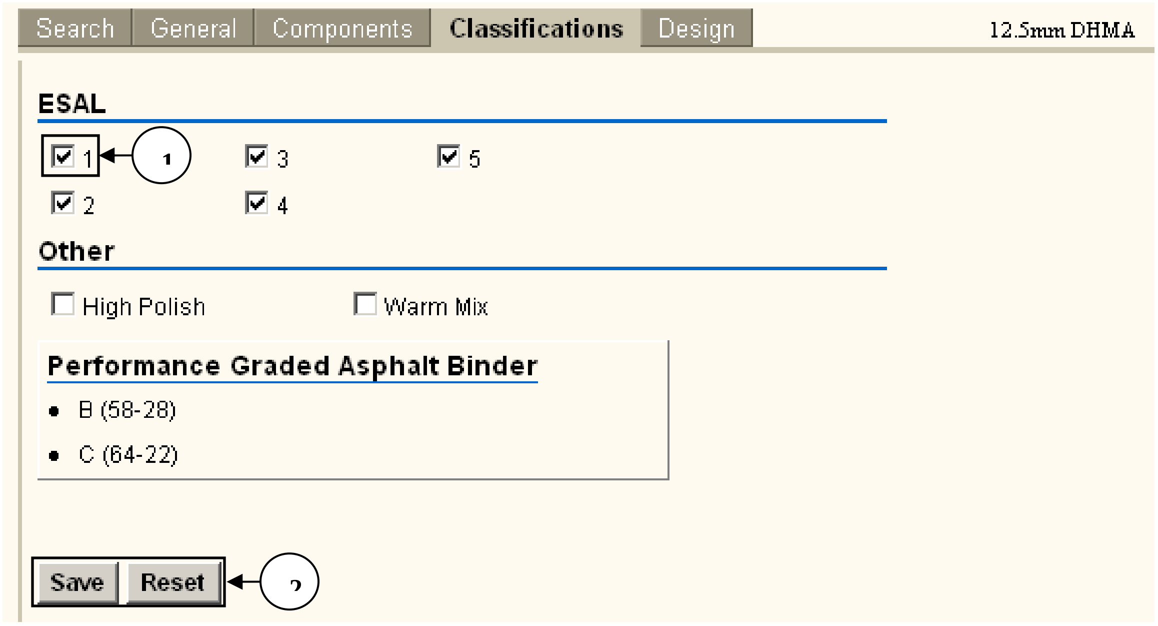


Figure 33. Add Classifications – Sourced Level Materials

To add a classification from the Sourced Level "Classifications" tab screen, perform the following steps:

1. Check the applicable checkbox(es) under each classification heading for the sourced level material.
2. Click Save to save data or Reset to reset the screen.

4.5.6 Add Quality Assurance Material Data

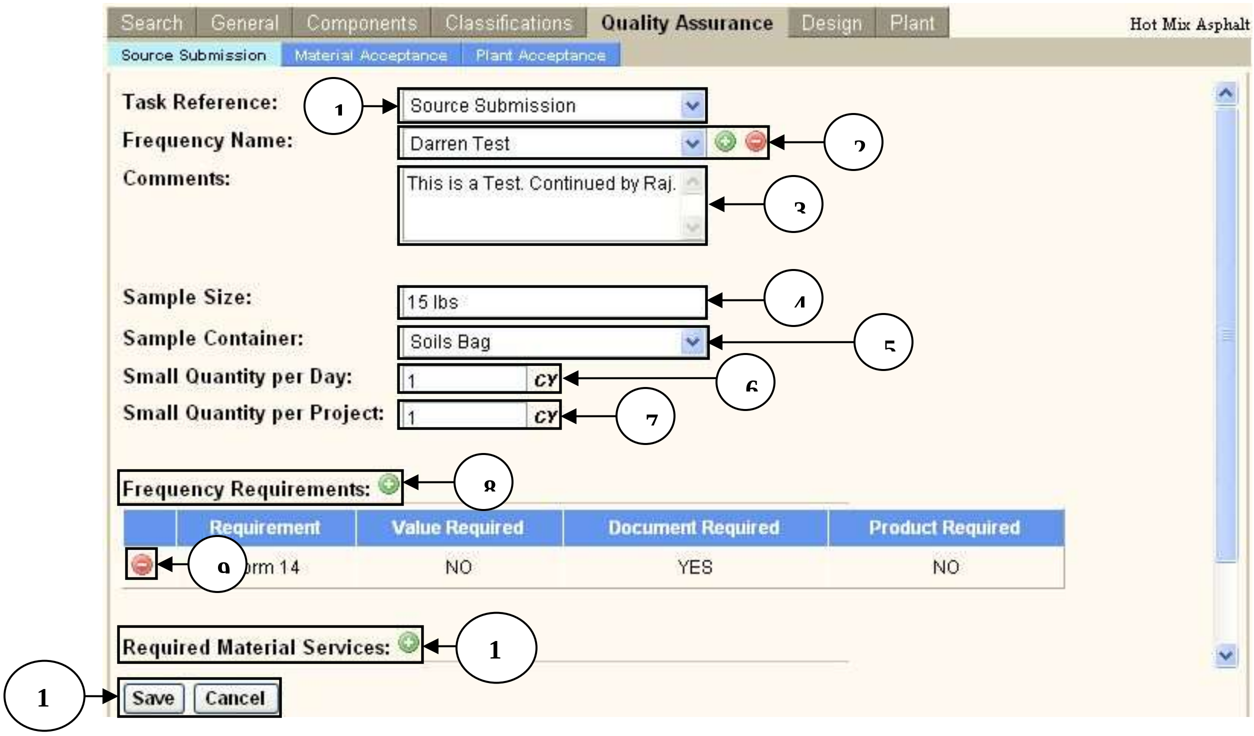


Figure 34. Add Quality Assurance Source Submission

To save data in the “Quality Assurance” “Source Submission” sub-tab screen, perform the following steps:

1. Click on the “Task Reference” drop-down box and select a task reference.
2. Click on the “Frequency Name” drop-down box and select a frequency name.
3. Enter appropriate comments in the “Comments” field.
4. Enter a sample size in the “Sample Size” field.
5. Click on the “Sample Container” drop-down box and select a sample container.
6. Enter a number in the “Small Quantity per Day” field.
7. Enter a number in the “Small Quantity per Project” field.
8. In the “Frequency Requirements” field, click on the add icon ( ) to add a frequency requirement.
9. To delete a frequency requirement, click on the delete icon ( ) located in the far left column in the “Frequency Requirements” area.
10. In the “Required Material Services” field, click on the add icon ( ) to add a required material service.
11. Click Save to save changes.

4.5.7 Add Material Design

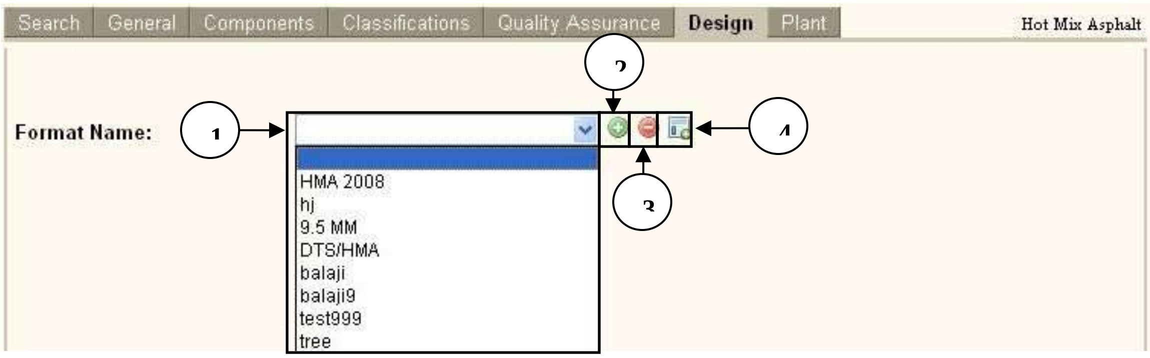


Figure 35. Add Material Design

To save data in the “Design” tab screen, perform the following steps:

1. Click on the “Format Name” drop-down box and select a format. A screen similar to the following is displayed.

Figure 36. Add Design Format Name

2. To add a format, click on the plus icon ( ) located at the top right portion of the “Format Name” drop-down box.
3. To delete a format, click on the delete icon ( ) located at the top right portion of the “Format Name” drop-down box. This will delete the format in selection.
4. To add a section to a format, click on the Section Name icon ( ). Enter the Section Name and click Save.

4.5.8 Add Plant Heading

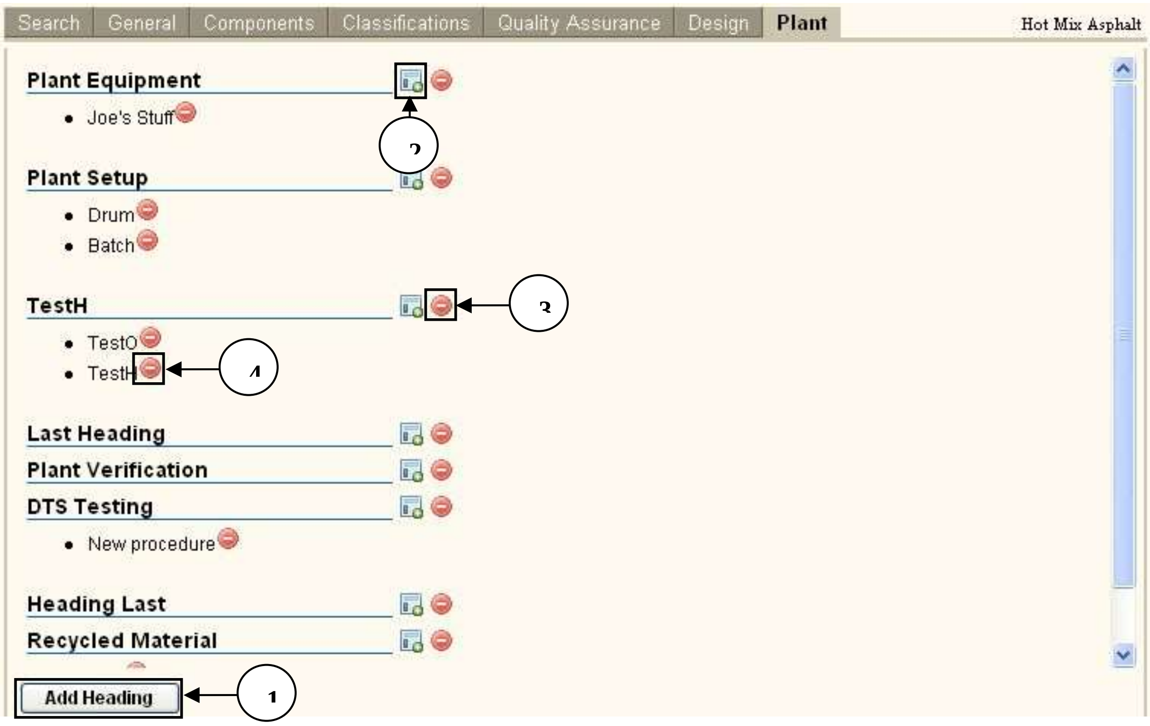


Figure 37. Add Plant Heading

The “Plant” tab screen allows the user to add or delete lists of plant headings. Perform the following steps to update data to the “Plant” tab screen:

1. To add a heading to the “Plant” tab, click Add Heading.
2. To add an option to the heading, click on the Add Option icon ( ), enter the option name in the Option pop-up box, and click Save.
3. To delete a heading, click on the delete icon ( ) located at the far right of the heading field.
4. To delete an option, click on the delete icon ( ) located at the far right of the option field.

5 Material Products Application

The Material Products application enables users to define specific material products that are used on state projects. This tool describes materials that are produced and sold to the state for use on highway projects. Specific OMT users can enter, update and validate product information and submit their specific product information.

Figure 38. Click on Material Products Link

Number	Description
1	**Material Products Link:** From the MMS Welcome screen, click on the Material Products link to open the Search for Material Products screen (see **Figure 39**).

5.1 Search for Material Products

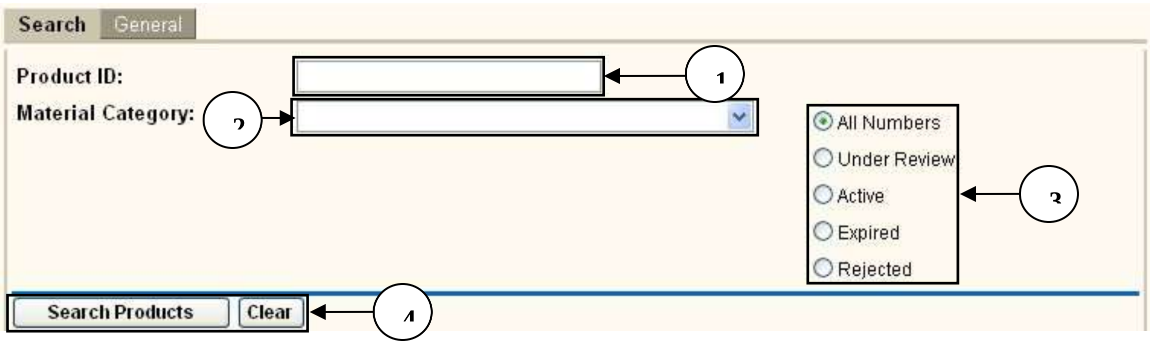


Figure 39. Search for Material Products

To search for material products, perform the following steps:

1. To search for a particular product, enter the Product ID in the “Product ID” field.
2. Click on the “Material Category” drop-down box and select a material category. The “Material Category” drop-down displays the type of material the product is satisfying. This list is populated with sourced level materials only.
3. To search for materials for a current project, check the Materials for Project checkbox and click the appropriate radio button selection. Choices are “All Numbers,” “Under Review,” “Active,” or “Expired.”
4. Click the Search Products button to perform a search of a material product or Clear to clear the screen. The results of the search are displayed (see **Figure 40**).

TIP: The quickest way to search for all material products is by clicking on the Search Products button after the default blank screen is displayed.

5.2 View Material Products Details

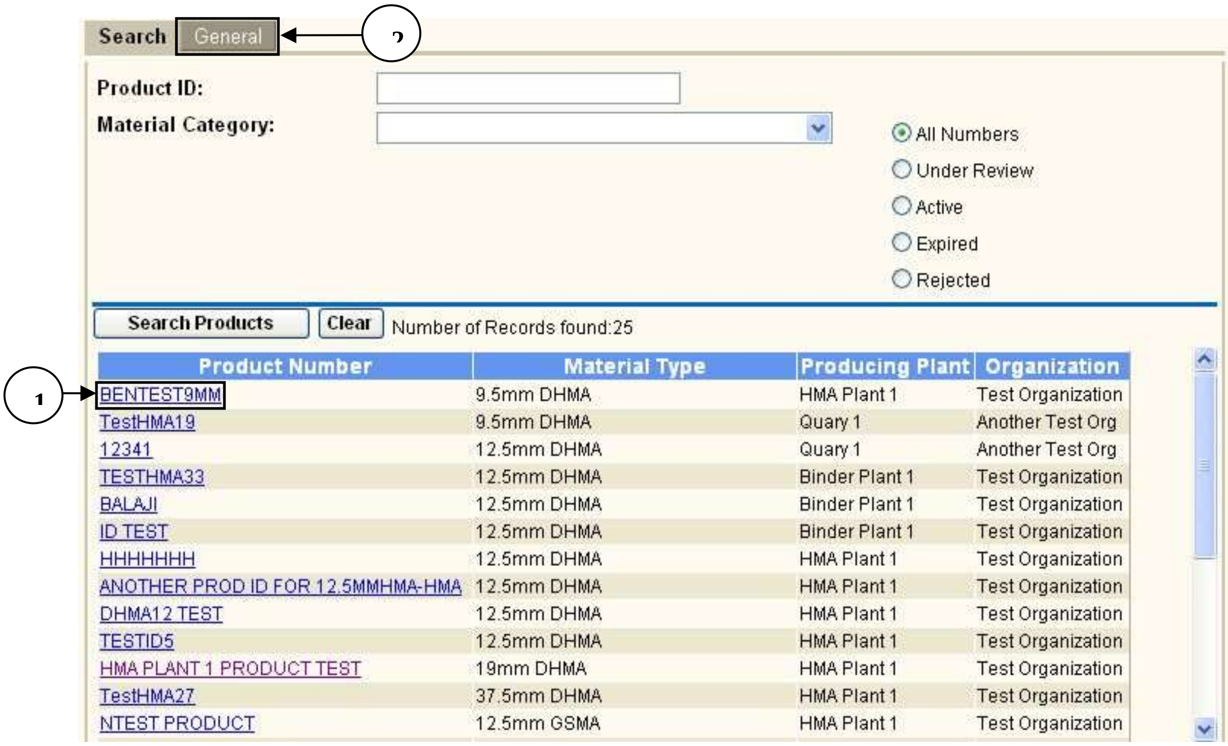


Figure 40. View Material Products Details

To search for a material product, perform the following steps:

1. Click on the Material Product link to view details of the product.
2. To enter a new material product, click on the "General" tab after clearing Search results via the Clear button. This will open up a blank form in the "General" tab (see **Figure 41**).

5.3 Add a New Material Product

The Material Products "General" tab screen provides a tool to enter high level information on the product. This is typically used to define what material type and usages to which the product conforms.

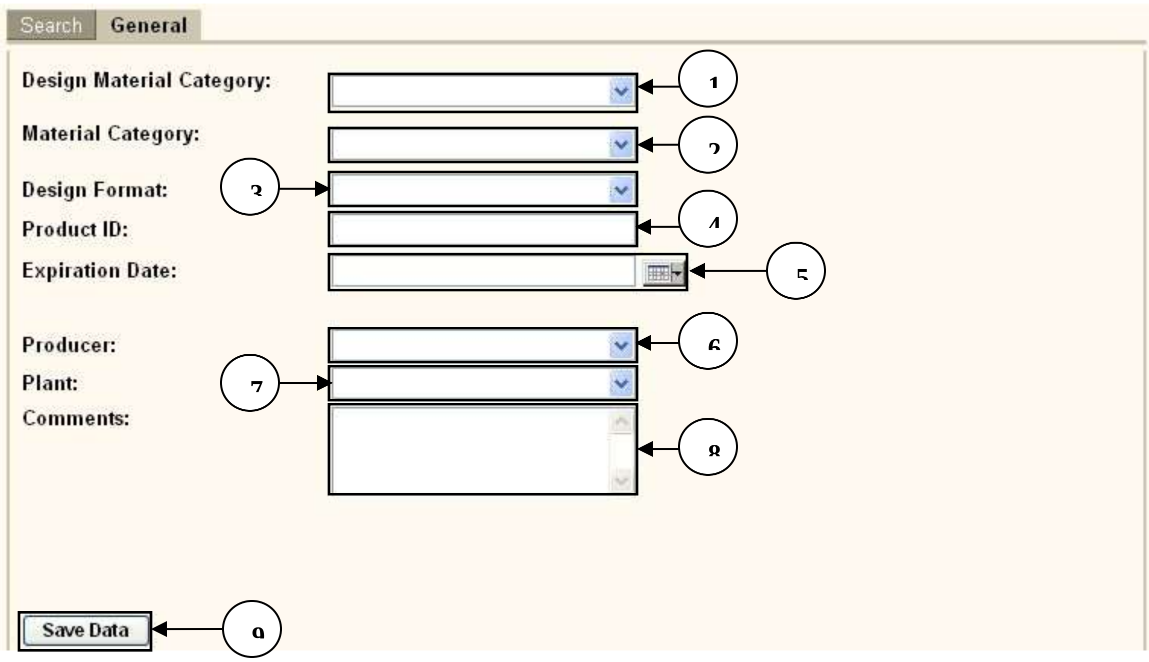


Figure 41. Add a New Material Product

To search for a material product, perform the following steps:

1. Click on the "Design Material Category" drop-down box and select a design material category.
2. Click on the "Material Category" drop-down box and select a material category. The "Material Category" drop-down box displays the type of material the product is satisfying. This list is populated with sourced level materials only.
3. Click on the "Design Format" drop-down box and select a design format. The "Design Format" drop-down box indicates the types of values that need to be stored in reference to the material product. Typically, there will only be one value in the list once it is populated. This control may only be populated when a material is selected in the "Material Category" drop-down box.
4. Enter the product ID in the "Product ID" field.
5. Click on the calendar icon and select an expiration date in the "Expiration Date" field.

Add a New Material Product (cont'd)

6. Click on the "Producer" drop-down box and select a producer. The "Producer" drop-down box is used to filter the list of potential production facilities. This list is populated with names of organizations that own plants that produce the material for which it is being asked. It can only be populated when a material is selected in the "Material Category" drop-down box.
7. Click on the "Plant" drop-down box and select a plant. The "Plant" drop-down box specifies the production facility that makes the product in question. The "Plant" drop-down box only displays production facilities that are owned by the selected producer and produce the selected material. This control may only be populated after the other fields have a value selected.
8. Enter appropriate comments in the "Comments" field.
9. Click Save Data to save data.

5.4 Add a Material Product Source

Figure 42. Add a Material Product Source

The Material Products "Sources" tab screen provides a method to enter the sources of supply for the ingredients that go into a material mixture that is sold a product to state projects. To enter a material product, perform the following steps:

1. Click on the Add Material icon ( ). The following pop-up box is displayed:

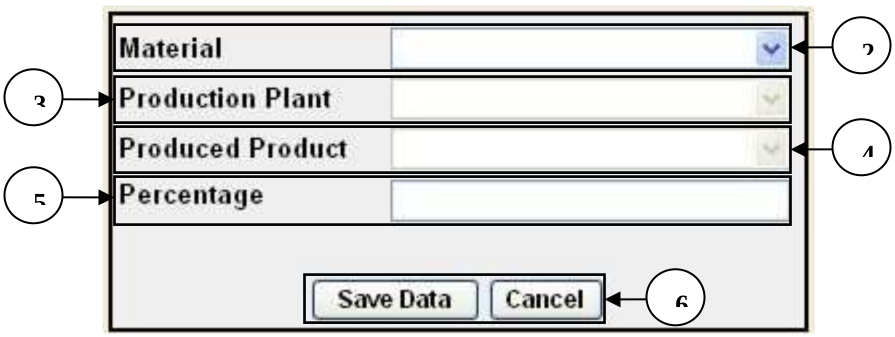


Figure 43. Add Material Products

2. Click on the "Material" drop-down box and select from a list of source level materials that fall under component design level material references.
3. Click on the "Production Plant" drop-down box and select a plant that is allowed to produce that material to supply for the mixture.
4. Once a production facility has been selected, the user can click the "Produced Product" drop-down box and select a produced product.
5. Enter a percentage of the ingredient material.
6. Click Save Data to save data or Cancel to cancel the operation.

5.5 Add Material Product Design Values

The Material Products “Design Values” tab screen enables the user to enter the target values against which samples of the material will be compared. These values may be taken from a certification or other documentation that is provided from the material producer.

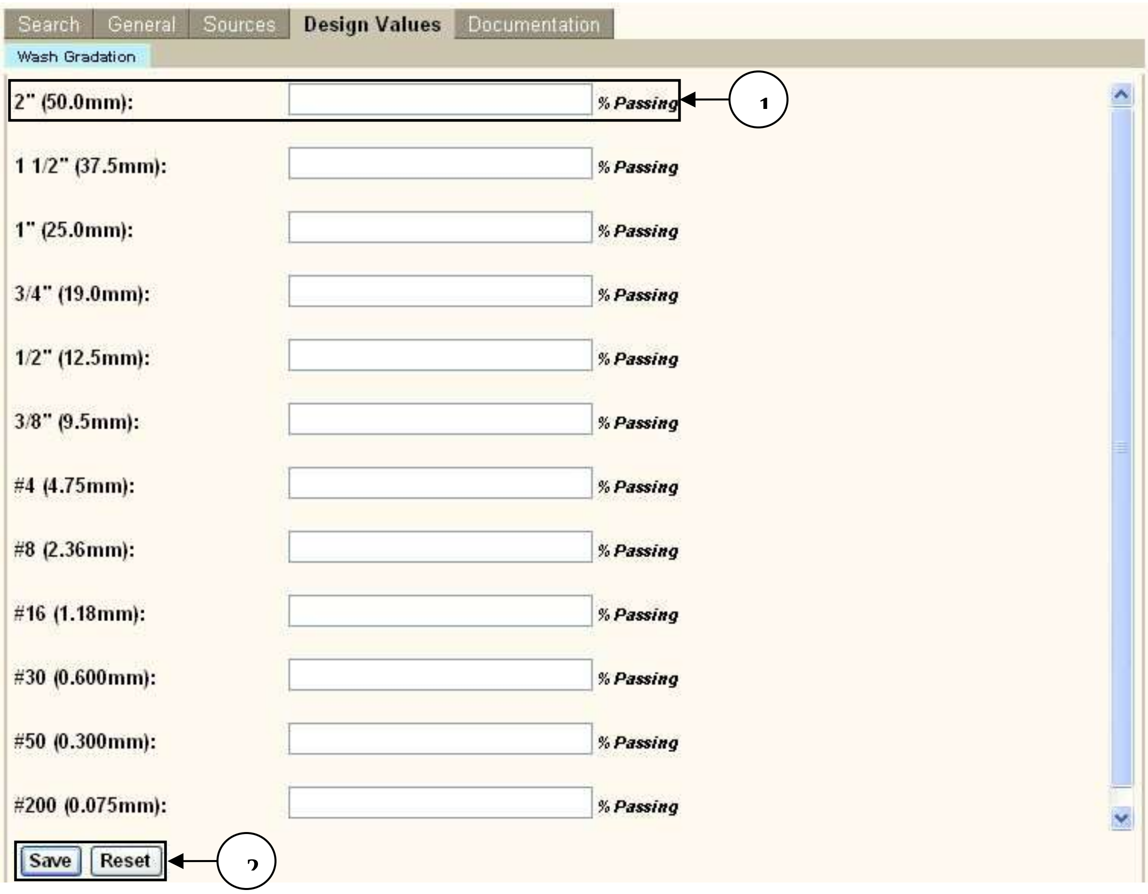


Figure 44. Add Material Products Design Values

To enter a design value, perform the following steps:

1. Enter a target value in the “% Passing” field.
2. Click Save to save data or Reset to reset the operation.

5.6 Add Material Products Documentation

The documentation screen displays all documents that are associated with the material product.

Figure 45. Add Material Products Documentation

Number	Description
1	**General Documents:** Click on the Add Document icon ( ) to bring up the “Add Document” pop-up box (see **Figure 16**).

6 Organizations, Offices and Contacts Application

The Organization, Offices and Contacts application is a tool that is used to store information regarding entities with which OMT does business, what parties own these businesses, and who works in those businesses. Additionally, if the business is a production facility, this application enables the user to store data regarding the types of materials it produces, such as specific products, production history and detailed plant information.

Figure 46. Click on Organizations, Offices and Contacts Link

Number	Description
1	**Organizations, Offices and Contacts Link:** From the MMS Welcome screen, click on the Organizations, Offices and Contacts link to open the Search for Organization/Office/Facility screen (see **Figure 47**).

6.1 Search for Organization/Office/Facility

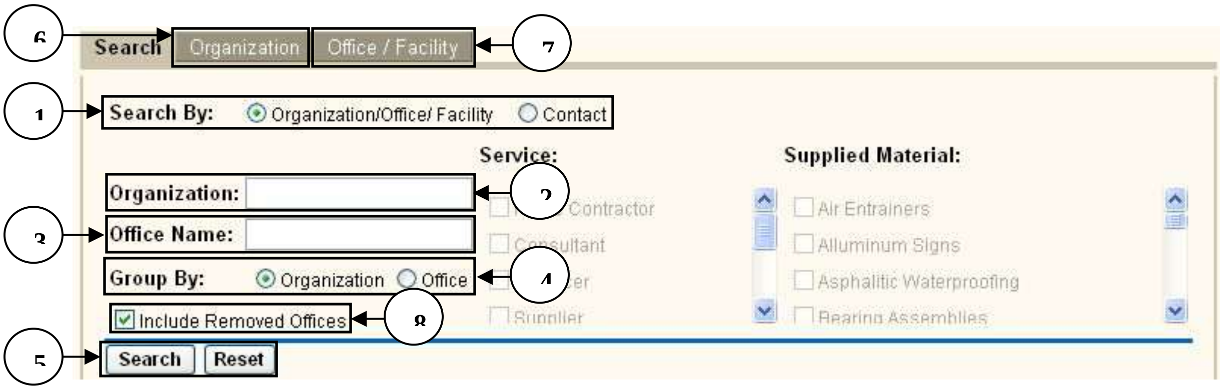


Figure 47. Search for Organization/Office/Facility

To search for an organization/office/facility from the “Search” tab screen, perform the following steps:

1. Click on the “Organization/Office/Facility” radio button.
2. Type in the first few letters of the organization.
3. Type in the first few letters of the office name.
4. In the “Group By” field, click on the “Organization” or “Office” radio button. “Organization” is the default choice. This will change the order that results are displayed (alphabetical by either organization name or office name).
5. Click Search to search for an Organization or Contact. The Search results are displayed below the Search and Reset buttons (see **Figure 48**). Click Reset to reset the Search form.
6. Clicking the “Organization” tab from the default “Search” screen enables the user to enter a new organization.
7. Clicking the “Office / Facility” tab enables the user to enter an office / facility.
8. Check the “Include Removed Offices” checkbox to include search results for offices that have been previously entered and later removed.

TIP: The quickest way to search for organizations is by clicking on the Search button after the default blank “Search” screen is displayed.

Search for Organization/Office/Facility (cont'd)

Figure 48. Search for Organization/Office/Facility

To search for an organization/office/facility from the "Search" results screen, perform the following steps:

1. Click on the Office link to go to the "Office / Facility" tab screen (see **Figure 52**).
2. Click on the Organization link to go to the "Organization" tab screen (see **Figure 49**).
3. Information listed in the "Services" column displays the type of service offered by the corresponding office.
4. Check the "Include Removed Offices" checkbox to include search results for offices that have been previously entered and later removed.

6.2 Search for Organization

The organization level is the highest level in the hierarchy. This tab contains basic information on the entities that own the businesses with which OMT works. This tool can also show if an organization is subsidiary to another organization.

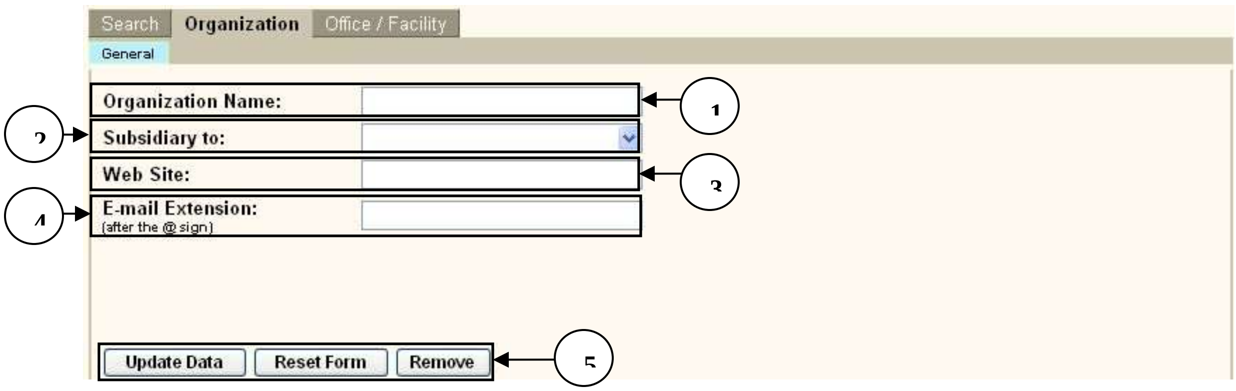


Figure 49. Search for Organization

To search for an organization/office/facility from the Search tab screen, perform the following steps:

1. Enter the name of the organization. This is a required field.
2. Click on the “Subsidiary to” drop-down box and select the appropriate subsidiary organization. This field is used when another organization owns the organization in question.
3. Enter the website of the organization. This field is used to store a web site URL that is specific to the organization as a whole.
4. Employees often have the same extension on their email addresses (e.g., @sha.state.md.us). This field is used to store this commonality so that it does not have to be modified for each person that works in the company. Enter the email extension after the @ sign.
5. Click Update Data to update the organization data. Click Reset Form to reset the form. Click Remove to remove the organization.

6.3 Create/Modify a Position

Figure 50. Create/Modify a Position

To create or modify a position from the “Organizational Structure” sub-tab screen, perform the following steps:

1. To modify or view an existing position, click on a listed position’s link.
2. To create a new position, click **Create Position**. This will modify the organizational structure by adding an additional position. A screen is displayed that enables the user to define details of the created position (see **Figure 51**).
3. Click on the plus sign next to the organization name to expand the “Organizational Structure” details or on the minus sign to condense the “Organizational Structure” details.

6.4 Create a New Position

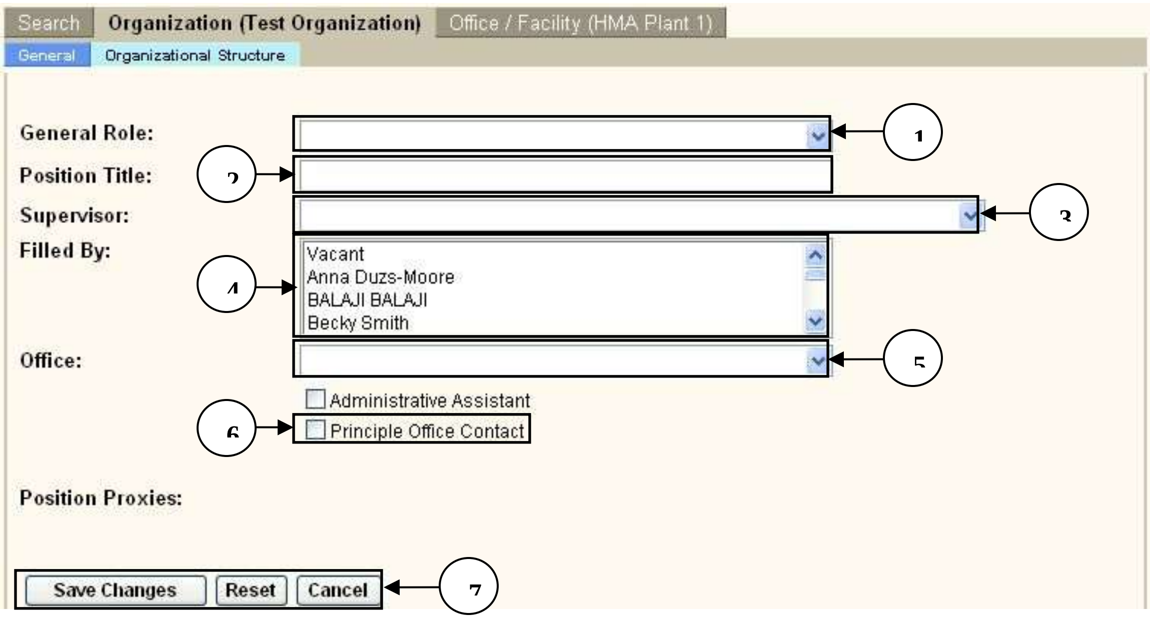


Figure 51. Create a New Position

To create a new position from the "Organizational Structure" sub-tab screen, perform the following steps:

1. Click on the "General Role" drop-down box. This indicates the general responsibilities of the position.
2. Enter the position title in the "Position Title" field. This is the title of the position requested. This is a required field.
3. Click on the "Supervisor" drop-down box. This field indicates the position within the organization that supervises the position in question.
4. In the "Filled By" box, click on the name of the individual person that is filling this position. Note that one person may fill multiple positions.
5. In the "Office" drop-down box, click the office out of which the position works. This is a required field.
6. Check this box if the position in question is the primary point of contact for the office to which it is assigned or is an administrative assistant position.
7. Click **Save Changes** to save changes to this screen. Click **Reset** to clear the screen. Click **Cancel** to cancel.

6.5 Update / Create an Office/Facility

The "Office / Facility" "General" Data screen is used to store a wide variety of information that is relevant to a specific office location. For example, the user can store the office name, address and what services the office performs for OMT. Offices may be production facilities (such as quarries or plants), mobile production facilities (e.g., concrete batch trucks), or a physical location for doing business. When modifying an office, this page can be accessed via a link on the Search results.

There are times that one office is supervised by a separate office. For example, several separate production facilities may be dispatched through a common centralized office. The "Office / Facility" "General" Data screen is able to store this relationship.

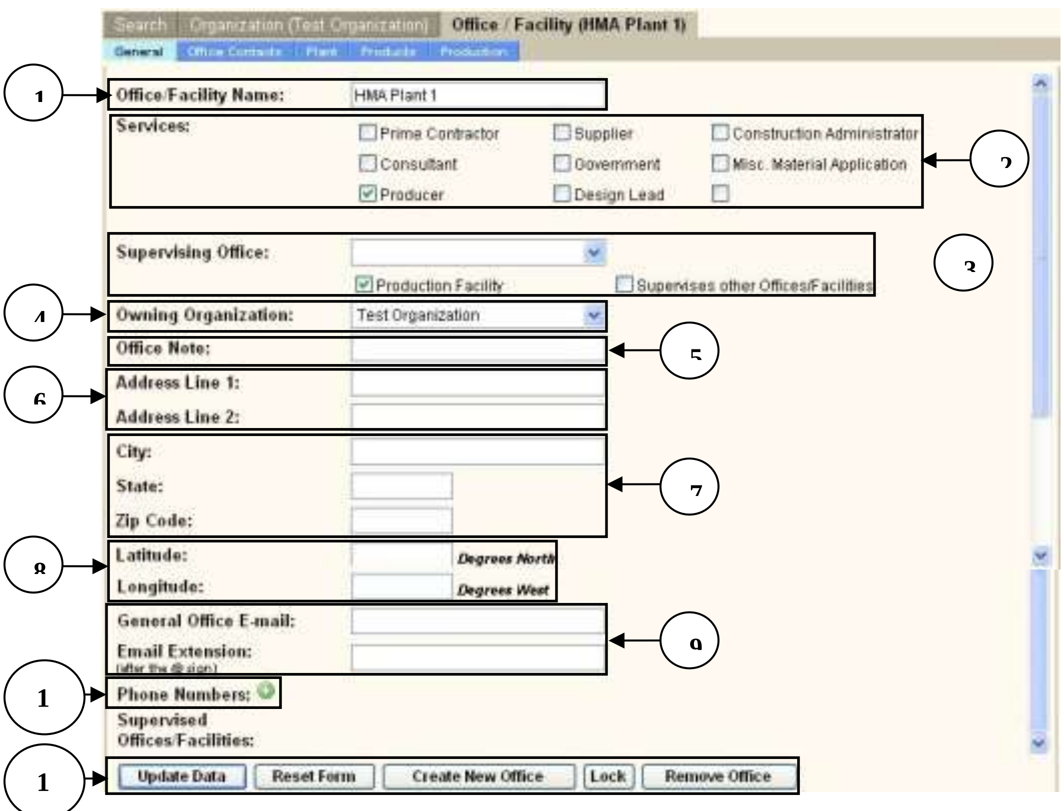


Figure 52. Update / Create an Office/Facility

MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

Update / Create an Office/Facility (cont'd)

To update data in the "Office / Facility" tab screen, perform the following steps:

1. Enter the office / facility name in the "Office/Facility Name" field. This is a required field.
2. In the "Services" field, check the appropriate service(s) the office/facility provides. This is a required field.
3. If the office is supervised by another office, select the supervising office in the "Supervising Office" field. Check the "Supervises other Offices/Facilities" box if the office oversees other offices, e.g., a dispatch office that oversees several concrete plants.
4. In the "Owning Organization" field, select the organization that owns the office. This is a required field.
5. In the "Office Note" field, enter an office-wide note that the responsible party deems needed in this field.
6. In the "Address Lines 1 and 2" fields, enter the street address of the office.
7. In the "City" / "State" / "Zip Code" fields, enter the city, state, and zip code of the organization.
8. In the "Latitude" / "Longitude" field, enter the latitude and longitude coordinates to locate the facility if a street address is not accessible.
9. In the "General Office E-mail" / "Email Extension" fields, enter the email address if an office has a single email address that is not specific to any of the employees.
10. To add a phone number, click on the Add Phone Number ( ) icon and enter a phone title and phone number in the pop-up box.
11. Click Update Data to update the organization data. Click Reset Form to reset the form. Click Create New Office to create a new office.

6.5.1 Click on an Office Contact

The “Office Contacts” tab screen provides a quick report of the positions that work in the selected office along with some contact information. This information was entered in through the “Organizational Structure” page.

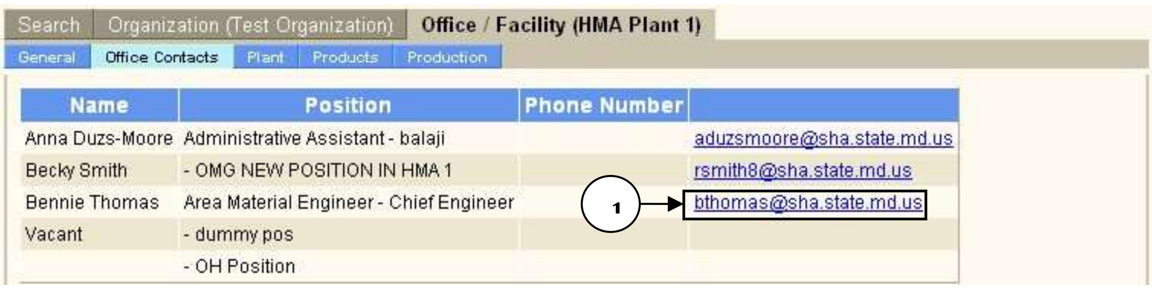


Figure 53. Click on an Office Contact

Number	Description
1	**Email Link:** Click on the email link to send the person an email.

6.5.2 Update Data in the Office/Facility Plant Screen

The “Plant” tab screen is used to define what specific values need to be stored for a production facility of the selected material type. For example, aggregate quarries may store the values of their stone in these fields.

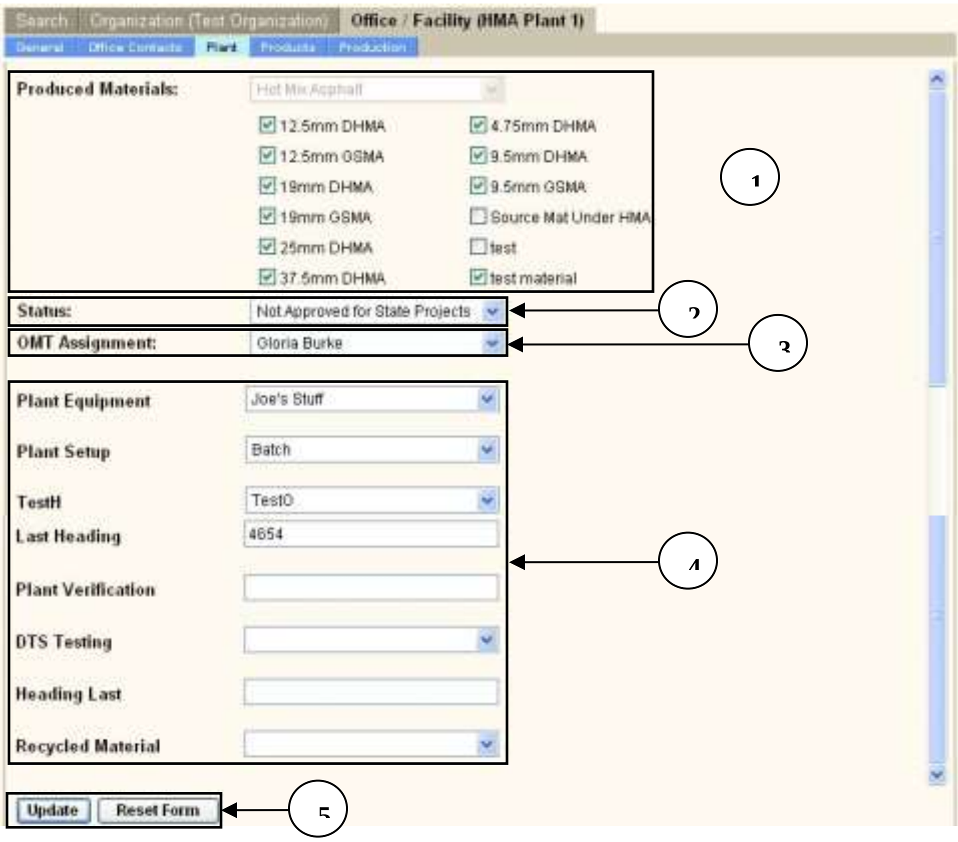


Figure 54. Update Data in the Office/Facility Plant Screen

To update data in the “Plant” tab screen, perform the following steps:

1. Click on the “Produced Materials” drop-down box to select a produced material. This field identifies what category of materials and what specific material types are produced at the facility. After the user picks a category, a checkbox list is displayed for the source level materials. This is a required field.
2. Click on the “Status” drop-down box to select the status of the material. Status indicates the present status of the plant, e.g., if the plant is presently approved for state use or unapproved. This is a required field.

Update Data in the Office/Facility Plant Screen (cont'd)

3. Click on the "OMT Assignment" drop-down box to select the OMT assignment. The "OMT Assignment" field enables the user to identify the position in OMT that is responsible for the routine inspection of the selected plant. This is a required field.
4. Note the area below the "OMT Assignment" field. This is a dynamic area form that is dependent on the material category that has been picked. Enter the appropriate choices in each field.
5. Click **Update Data** to update the form or **Reset Form** to reset the form.

6.5.3 "Products" Tab Screen

The "Products" tab is a report view of the products that are produced at the selected plant and their status of approval for state projects as a whole.

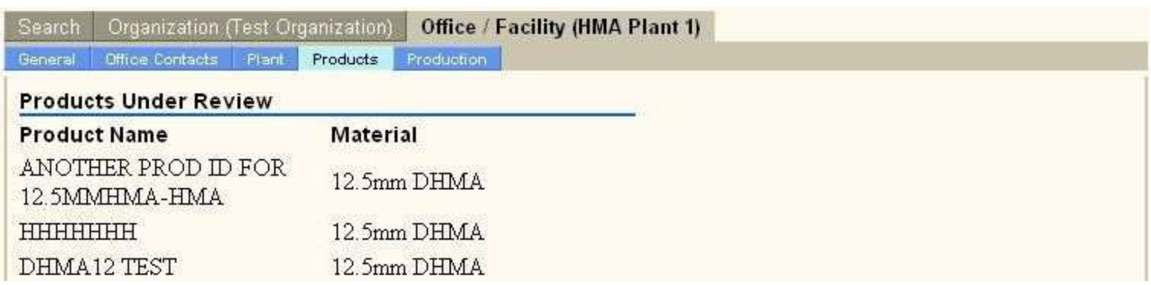


Figure 55. "Products" Tab Screen

6.5.4 "Production" Tab Screen

The "Production" tab is a report that details what material products where produced, what day and for what projects. The information that is reported out on this screen is generated through other applications.

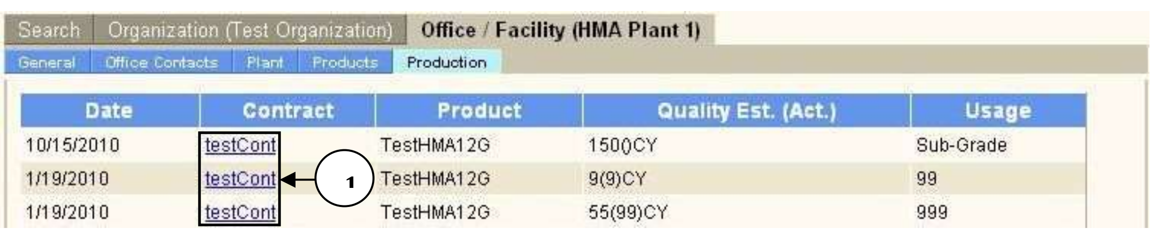


Figure 56. "Production" Tab Screen

Number	Description
1	**Contract Links:** These links can only be accessed by users with certain permission rights. These links open the General Project data tab.

6.5.5 Update a Contact

Individuals are entered through the “Contact” tab, and these people are referenced to the positions they fill through the “Organizational Structure” page. Any personal information (such as name, email address, phone numbers and notes) is entered through this screen.

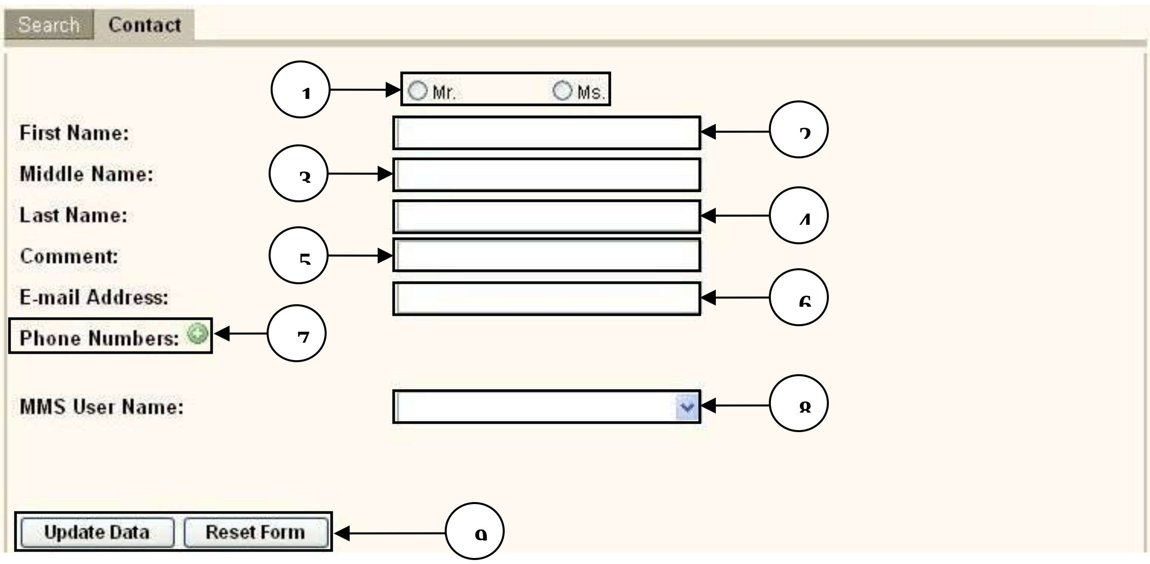


Figure 57. Update a Contact

To update data in the “Contact” tab screen, perform the following steps:

1. Click on the appropriate salutation radio button.
2. Enter the contact’s first name in the “First Name” field.
3. Enter the contact’s middle name in the “Middle Name” field.
4. Enter the contact’s last name in the “Last Name” field.
5. Enter appropriate comments (if any) in the “Comment” field.
6. Enter the contact’s e-mail address in the “E-mail Address” field.
7. Enter a list of phone numbers that pertain to the contact by clicking on the add icon ( ).
8. Click on the MMS User Name in the “MMS User Name” drop-down box. Please note that only administrators can perform this function.
9. Click Update Data to update the contact data. Click Reset Form to reset the form.

7 Scheduled Production Application

The Scheduled Production application is a tool that enables all MMS users to see what materials are being shipped to what projects. Production-specific users can utilize this tool to enter their estimated production as well as report the actual quantities that they produced. Contract-specific users will be able to verify that the materials that they expect are on their way.

7.1 Update a Scheduled Production Report

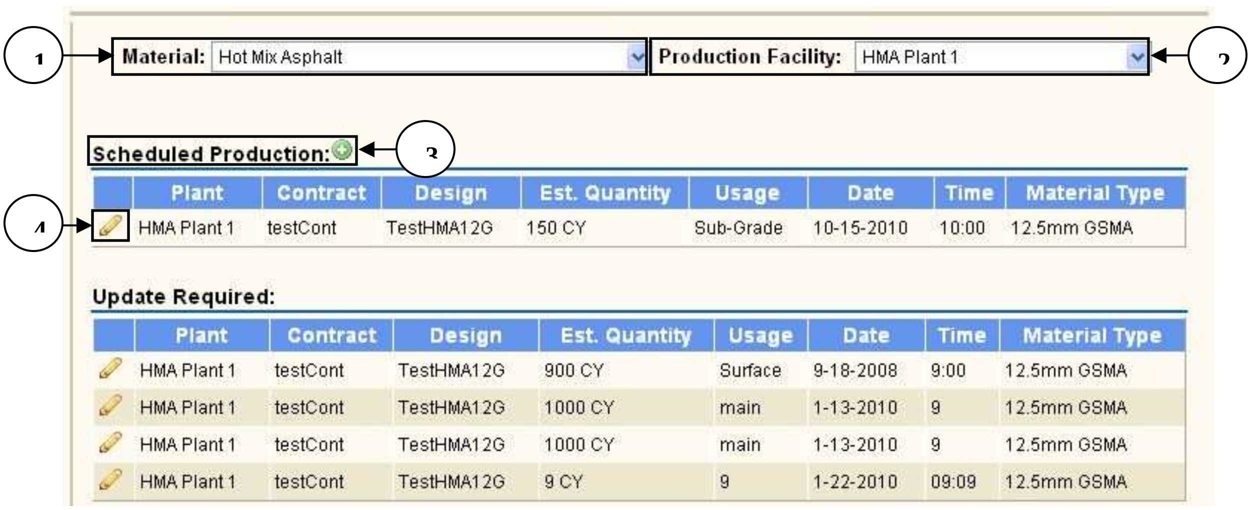


Figure 58. Update a Scheduled Production Report

The “Scheduled Production” screen displays all records for production that are planned to occur on the given day or in the future. This report will be shown to all users of the MMS application. Depending on the user’s permission rights, users might not be able to view data on this page. To update data in the “Scheduled Production” screen, perform the following steps:

1. Click on the appropriate material in the “Material” drop-down box to limit results to a specific material.
2. Click on the appropriate production facility in the “Production Facility” drop-down box.
3. To schedule a material production, click on the add icon ( ). A blank Material pop-up box is displayed (see **Figure 59)**.
4. To update an existing record, click on the edit icon ( ). The Material pop-up box for the existing material is displayed. Edit all appropriate fields and click Save. If you wish to remove the record, click Remove Record.

7.1.1 Enter Data in the Material Production Pop-up Box

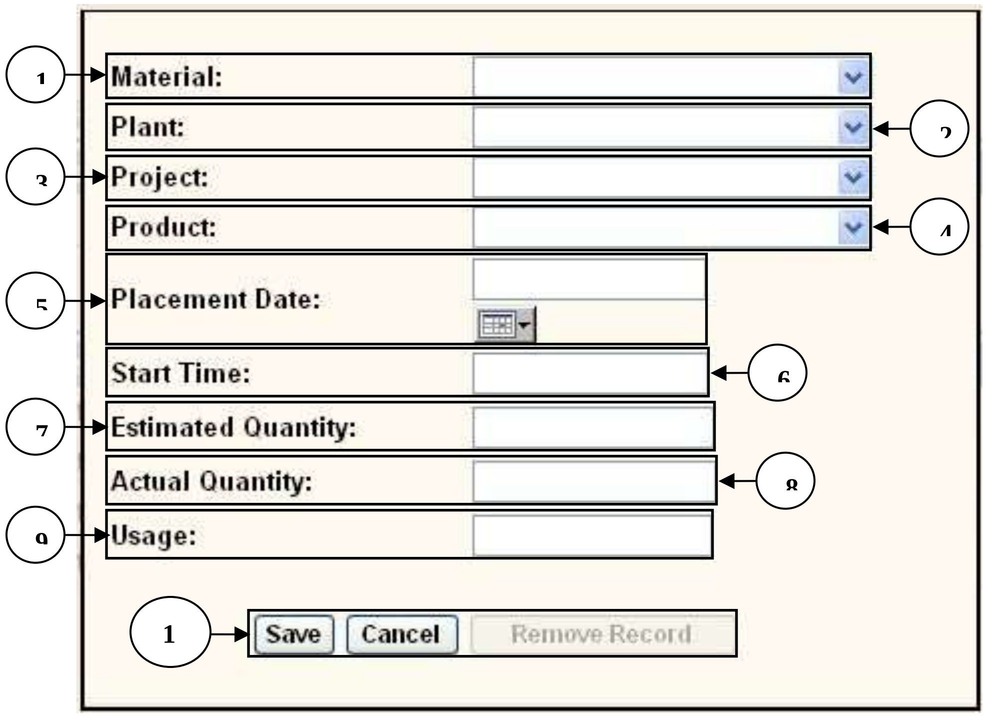


Figure 59. Enter Data in the Material Production Pop-up Box

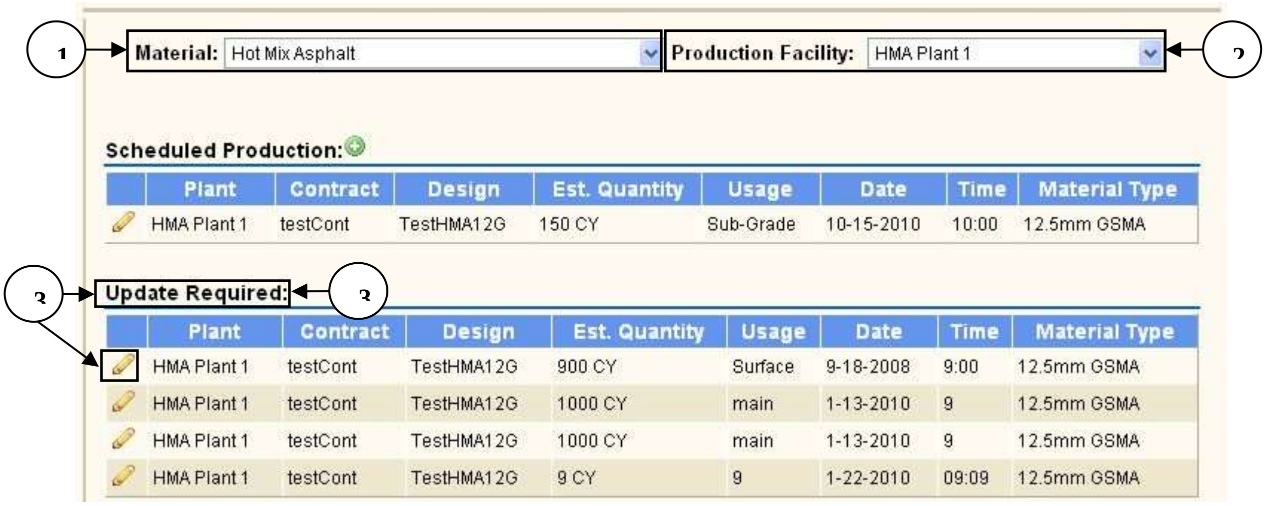
To add or update data to the Material Production pop-up box, perform the following steps:

1. Click on the appropriate material in the “Material” drop-down box.
2. Click on the appropriate production facility in the “Plant” drop-down box.
3. Click on the appropriate project in the “Project” drop-down box.
4. Click on the appropriate product in the “Product” drop-down box.
5. Click on the calendar icon ( ) and select a date in the “Placement Date” field.
6. Enter a start time in the “Start Time” field.
7. Enter an estimated quantity in the “Estimated Quantity” field.
8. Enter an actual quantity in the “Actual Quantity” field.
9. Enter how the material will be used (e.g., Main, Sub-grade, or Surface) on that shipment in the “Usage” field.

10. Click [Save] to save data, [Cancel] to cancel the operation, or [Remove Record] to remove an existing record. Please note that the [Remove Record] button will not function when you add new material in the Material Production pop-up box.

7.2 Update Data in an “Update Required” Report

The “Update Required” Report is a listing of production records that was to occur in the past but the actual quantities were not reported. The “Update Required” fields list productions with past placement dates, but the fields null or blank actual quantity (see the blank “Actual Quantity” field in **Figure 61**). This report only needs to be viewed by OMT and Production Specific Users.



	Plant	Contract	Design	Est. Quantity	Usage	Date	Time	Material Type
	HMA Plant 1	testCont	TestHMA12G	150 CY	Sub-Grade	10-15-2010	10:00	12.5mm GSMA

	Plant	Contract	Design	Est. Quantity	Usage	Date	Time	Material Type
	HMA Plant 1	testCont	TestHMA12G	900 CY	Surface	9-18-2008	9:00	12.5mm GSMA
	HMA Plant 1	testCont	TestHMA12G	1000 CY	main	1-13-2010	9	12.5mm GSMA
	HMA Plant 1	testCont	TestHMA12G	1000 CY	main	1-13-2010	9	12.5mm GSMA
	HMA Plant 1	testCont	TestHMA12G	9 CY	9	1-22-2010	09:09	12.5mm GSMA

Figure 60. Update Data in an “Update Required” Report

To update data in the “Update Required” screen, perform the following steps:

1. Click on the appropriate material in the “Material” drop-down box to limit results to a specific material.
2. Click on the appropriate production facility in the “Production Facility” drop-down box.
3. Click on the edit icon ( ). The Material pop-up box for the existing material is displayed (see **Figure 61**). Edit all appropriate fields and click [Save]. If you wish to remove the record, click [Remove Record].

Update Data in an “Update Required” Report (cont’d)

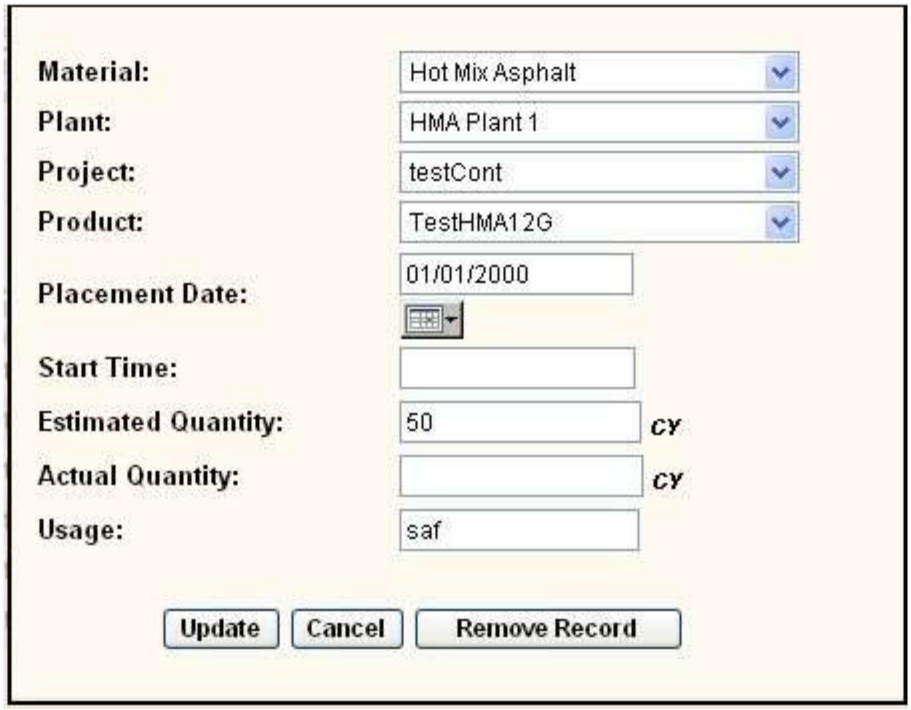


Figure 61. Material Production (Update Required) Pop-up Box

8 Source of Supply

One of the main goals of the Materials Management System is to submit sources of supply for materials that are being used on highway projects. All materials are associated with a Project Bid Item. The bid items are entered through another application that is part of Project Data, but this application may be used to add additional project-specific materials. The entire Source of Supply application requires a selection of a Contract Number.

8.1 Update Material Sources

The Material Sources tab screen allows users to associate additional materials with project bid items. This screen is also a reporting tool that enables users to review the status of a source submission.

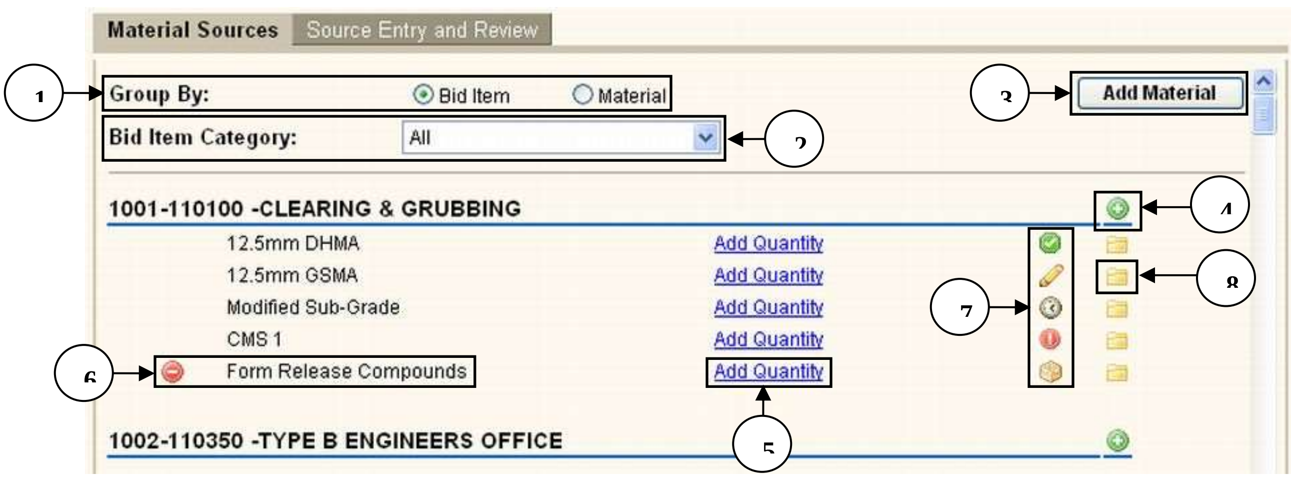


Figure 62. Update Material Sources

To update data in the “Material Sources” screen, perform the following steps:

1. Click on Bid item or Materials to display results either by Bid Items or by Sourced Materials.
2. When the “Bid Item” “Group By” radio button is selected, the “Bid Item Category” drop-down box will be displayed. Its purpose is to filter the list of bid items presented. If the Grouping is shown by “Materials,” this drop-down list filters or limits page-displayed results to materials of bid items per selected project (contract).
3. When the user clicks on the “Add Material” button, a popup window will appear and will prompt the user to select a bid item and its sourced material. (See **Figure 63**.)

Update Material Sources (cont'd)

Figure 63. Update Bid Item

To link a material with a bid item perform the following steps.

3a. Select a bid item for the project in selection.

3b. Select a design level material for the project in selection.

3c. Select a sourced level material.

3d. Click the Save button to save or Cancel to exit.

4. Clicking on the "Add Material" icon (on a specific bid item) opens the same popup window as above, but with the bid item number already preselected. The user is prompted to select a sourced level material for the bid item.

5. Click on the link to input quantity on the material you associated with the bid item (see **Figure 64**).

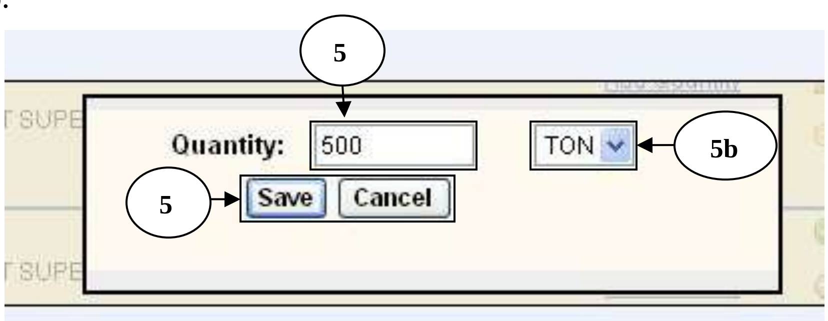


Figure 64. Enter Bid Quantity

To enter a quantity, perform the following steps.

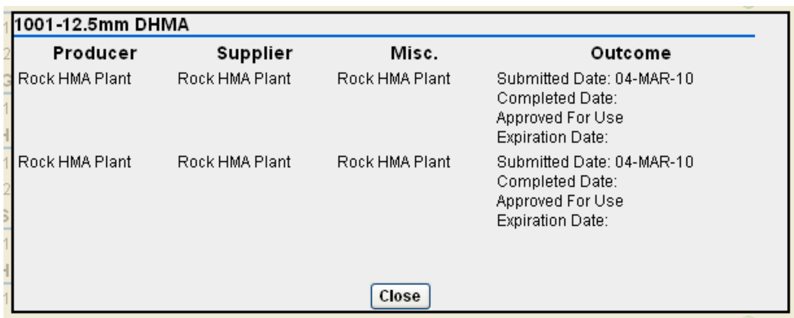
5a. Enter the quantity of the Sourced Material being sourced in the "Quantity" field.

5b. Select the unit of measure of the Sourced material in the unit of measure drop-down box.

5c. Click Save to save or Cancel to exit the pop-up box.

Update Material Sources (cont'd)

6. Deletes the displayed source material from its displayed bid item.
7. Click on any of the following icons to navigate to Source Entry and Review tab screen. Each Icon implies a different submission status as given below.
   - ( ) No Material has been submitted and submission is not created.
   - ( ) A Source Supply submission is created but not submitted.
   - ( ) There is presently a source submission review underway.
   - ( ) There is an approved source of supply.
   - ( ) The Source of Supply was rejected.
8. Clicking on the "Source of Supply History" icon will open a pop-out window to show all of the source submission history and review outcomes for the given bid item and material relation. (See **Figure 65**.)


1001-12.5mm DHMA

Producer	Supplier	Misc.	Outcome
Rock HMA Plant	Rock HMA Plant	Rock HMA Plant	Submitted Date: 04-MAR-10 Completed Date: Approved For Use Expiration Date:
Rock HMA Plant	Rock HMA Plant	Rock HMA Plant	Submitted Date: 04-MAR-10 Completed Date: Approved For Use Expiration Date:

Close

Figure 65. Source of Supply Submission History Pop-up Box

8.2 Update Submission Tasks

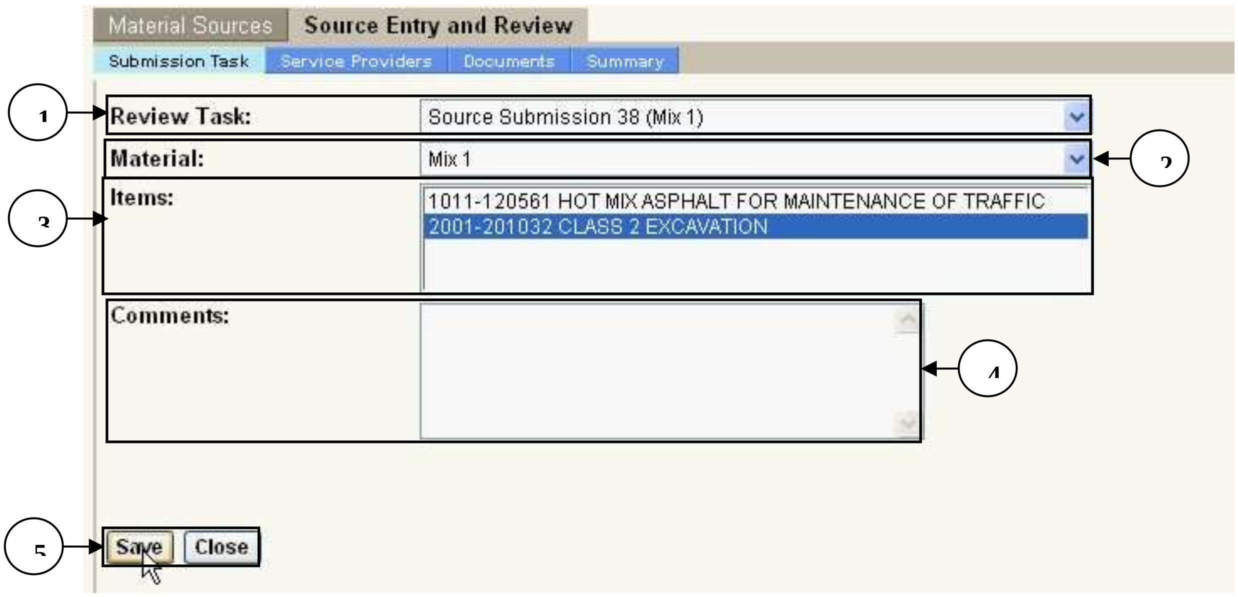


Figure 66. Update Submission Tasks

To update data in the “Source Entry and Review” “Create New Submission” screen, perform the following steps:

1. Click on the “Review Task” drop-down box. The “Review Task” drop-down box enables the user to select a source submission or to create a new submission.
2. Select the “Material” drop-down box to show which material is associated with the project being sourced.
3. Select one or multiple bid items. The “Items” list box enables the user to select the bid item to which the source of submission refers.
4. Add comments regarding the submission underway in the “Comments” field.
5. Click Save to update data or Close to close the screen.

8.3 Update Service Providers

The Service Providers screen enables the user to define which contractors are supplying and/or manufacturing materials for a given source of supply submission.

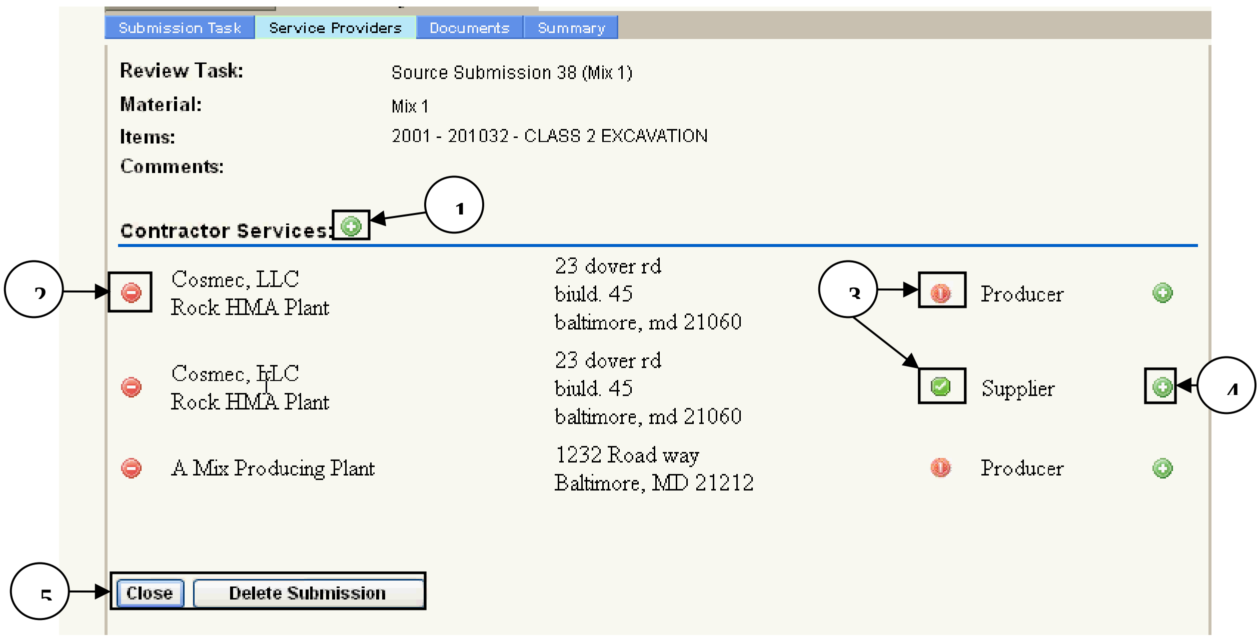


Figure 67. Update Service Providers

To update data in the "Source Entry and Review" "Service Providers" screen, perform the following steps:

1. Click on the add Contractor Services icon ( ) to initiate a pop-up box in which service providers are entered for the specific source submission underway.
2. Click on the delete icon to delete the Service Provider shown.
3. Click on these icons to open the "Facility Review Required" pop-up box on facilities that have not been approved for state use (see **Figure 68**).

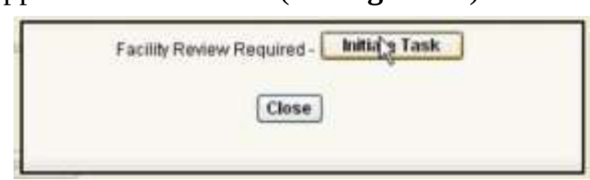


Figure 68. Initiate Review Task

4. Click on this icon to open the pop-up window that will prompt the user to select a product that is approved and produced by the corresponding service provider (only applicable if a product [mix] is required for source approval).

5. Click Close to close the “Service Providers” screen or Delete Submission to delete the submission.

8.3.1 Update Source Providers – Manual Input

The “Source Provider” pop-up screen allows users to select a service provider that has been already processed in the past or to manually input a service provider. The following screen allows users to manually input a service provider.

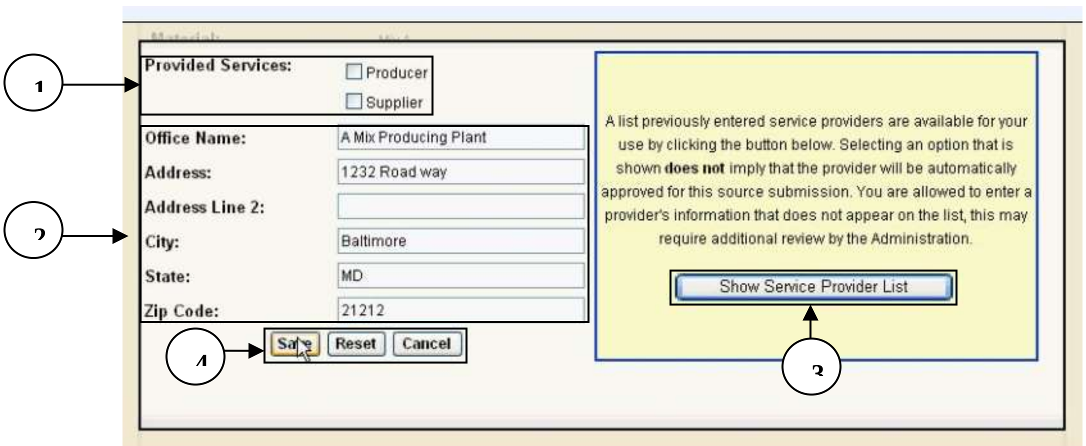


Figure 69. Update Service Providers – Manual Entry

To update data in the “Source Entry and Review” “Service Providers” pop-up screen, perform the following steps:

1. Select all applicable “Provided Services” of the facility being entered/selected.
2. Enter basic information on a facility you would like to enter manually.
3. Select to view a list of previously entered service providers that are available for your use (please read disclaimer shown).
4. Click Save to save the facility information in the text fields you entered, Reset to reset values, or Cancel to cancel the screen display.

8.3.2 Update Source Providers – Filtered Input

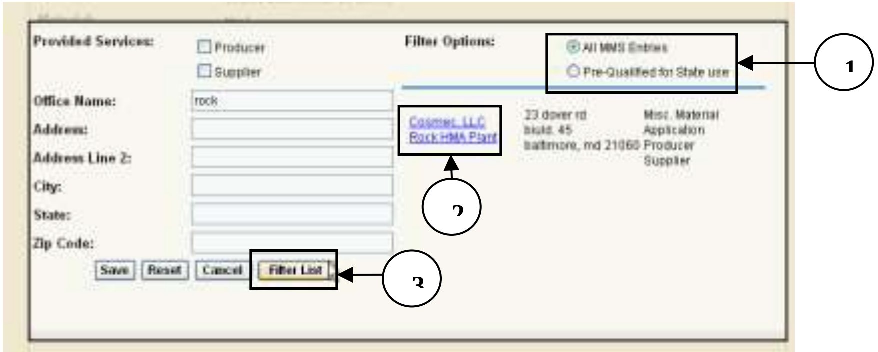


Figure 70. Update Service Providers – Filtered Input

To update data in the “Source Provider Manual Entry” pop-up box, perform the following steps:

1. Select a check box to choose whether you would like to filter the list of service providers that are “Pre-qualified” for state use or all MMS entries.
2. Click to filter the previously entered service providers list. (The user must first enter a filtering criteria/text in any of the text fields shown on the left.)
3. Select a filtered service provider; the facility information will be auto filled in the text fields shown on the left.

8.4 Add Source Entry and Review Documents

Refer to **Figure 16** to see the Add Document screen.

8.5 Submit Entry for Review

The “Source Entry and Review” “Summary” screen summarizes information on the source submission process that is yet to be completed. The screen will only be editable to users with certain permission rights.

Figure 71. Submit Entry for Review

To update data in the “Source Entry and Review” “Summary” screen, perform the following:

1. Click on the **Close** button to close the screen, **Submit for Review** to submit for review, or **Delete Submission** to delete the submission.

8.6 Update Acceptance Requirements

The "Source Entry and Review" "Acceptance Requirements" screen will only be available for source submissions that have already been carried out and are under review. This screen will only be accessed by users with certain permissions.

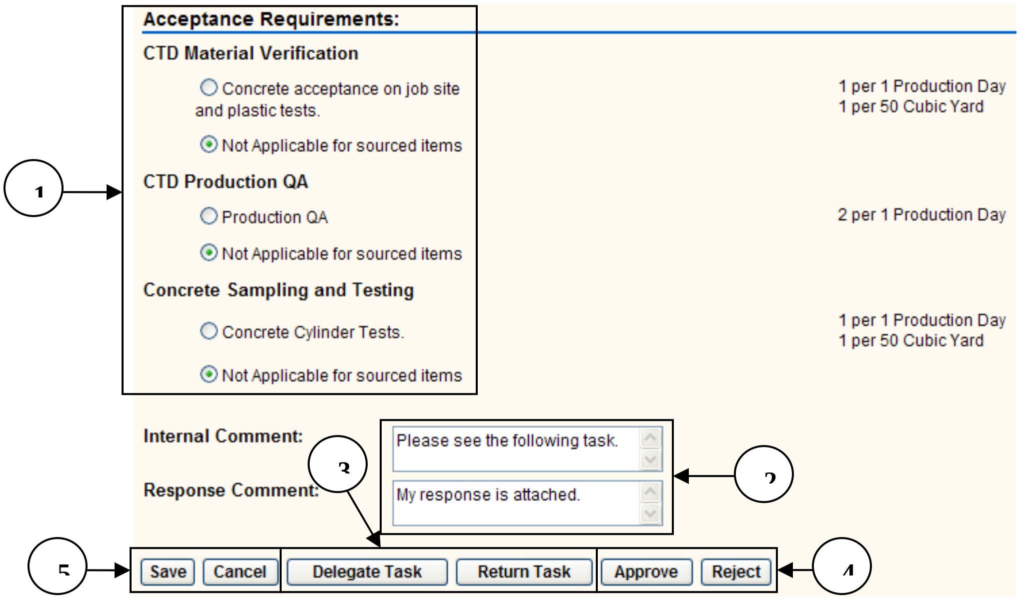


Figure 72. Update Acceptance Requirements

To update data in the "Acceptance Requirements" screen, perform the following steps:

1. Click on the appropriate source "Acceptance Requirements" radio buttons. Selections are dependent on the Material being sourced. Only users with certain privileges will have access to this part of the application.
2. Enter initial comments regarding the source submission.
3. Click Delegate Task to delegate the task of reviewing/inputting information on the source submission or click Return Task to return the delegated task back (see **Figure 73**).

Update Acceptance Requirements (cont'd)

Figure 73. Select a Task Designate

3a. Select the Source Review Task Designee from the "Task Designate" drop-down box.

3b. Click Save to save or Cancel to close the "Task Designate" pop-up box.

4. Click Approve to approve or Reject to reject the source submission.

5. Click Save to save the data changes or Cancel to cancel changes and exit the "Acceptance Requirements" screen.

9 Project Tasks and Documents

The Project Tasks and Documents module is a means to report various tasks and documents of a specific Project. A project number must be selected before the application is run.

9.1 View User Tasks

The "User Tasks" screen is a tool to show any user what tasks he has assigned to him and what other tasks are available for him to work on.

Figure 74. View User Tasks

9.2 View Project Tasks

The "Project Tasks" screen is a tool to provide a hierarchical view of all tasks that are being worked on for a given project. The user must select contract number for this application to function properly.

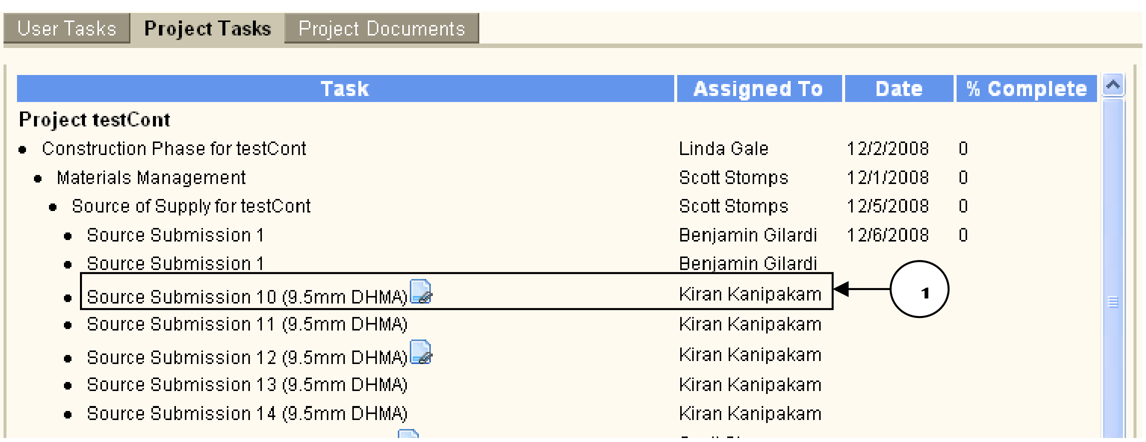


Figure 75. View Projects Tasks

Number	Description
1	**Source Submission Number:** Shows source submissions that have attached documents on file.

9.3 View Project Documents

The "Project Documents" screen lists all documents that are associated with a given project. It is a list of documents grouped by document type and ordered by date. The user must select a contract number in order for this application to function properly.

Figure 76. View Project Documents

10 System Administration Screen

The System Administration screen enables Administrators to set general information for the applications that the MMS employs. Only MMS administrators can access this screen, as it is used to edit the applications and their module groupings that exist inside of the MMS.

Figure 77. System Administration Screen

The System Administration screen enables Administrators to:

- Switch systems components on and off;
- Add modules;
- Add applications;
- Add application views;
- Set user access permissions;
- Edit System Settings;
- Set Material specific permissions; and
- Manage system accessibility.