

7-5

**Density:**

# **Review Density Other Conventional**

## **Objectives**

Other Conventional Densities Overview

Familiarization with Data Entry and Display Windows

Enter an Other Conventional Density Test

Retrieve/Review an Existing Other Conventional Density Test

Edit an Existing Other Conventional Density Test

Delete an Existing Other Conventional Density Test

Queries for the Other Conventional Densities Module

## Other Conventional Densities

In the process of placing various surfacing material on a job site, RE on-site personnel perform conventional density tests to ensure that the material meets the state's standards. These tests are performed on the following materials:

- ◆ ABC
- ◆ Embankment
- ◆ CTBC
- ◆ Subgrade
- ◆ Etc.

The results of these tests are recorded on the M&T 504 form and provided to the RE's office for record keeping.

This portion of the densities module will provide the same functionality in HiCAMS. The RE office personnel will take the test results from the M&T 504 form and enter them into the window provided (see below for screen example and field descriptions).

### **Overview**

The Other Conventional Densities module of HiCAMS provides logging of conventional density test results in a centralized location.

### **Authorized Users**

The staff members who will have the ability to create, verify and update Other Conventional Density test results are:

- RE Office Personnel

The staff members who will have inquiry ability for Other Conventional Density test results are:

- All staff

## Window Descriptions

The following is an example of the window used for entering and reviewing other conventional density data:

Run date	Test	Test Type	Station From	Station Fraction	Location	% Comp.	Status	CDT Cert.	CDT Name
07/12/2001	9	Short	71	50	8' Rt -L-	97.3	Meets Specs	10974	Carter, Ben
07/03/2001	8	Short	71	50	8' Lt -L-	95.5	Meets Specs	2424	Strazisar, Richard
07/02/2001	7	Short	97	00	12' Rt -L-	98.5	Meets Specs	2424	Strazisar, Richard
08/13/2001	14	Short	91	10	10' Rt -L-	96.3	Meets Specs	2424	Strazisar, Richard
08/09/2001	13	Short	91	75	8' Rt -L-	97.1	Meets Specs	2424	Strazisar, Richard
07/24/2001	12	Short	81	10	15' Lt -L-	97.8	Meets Specs	2424	Strazisar, Richard
08/18/2001	11	Short	75	08	12' Lt -L-	97.0	Meets Specs	2424	Strazisar, Richard
07/16/2001	10A	Short	75	60	3' Rt -L-	96.3	Meets Specs	10974	Carter, Ben
07/13/2001	10	Short	75	60	3' Rt -L-	93.6	Does Not Meet Specs - Rejected	10974	Carter, Ben

## Review Other Conventional Density

**Fields** (underlined fields indicate user entered fields)

- **Contract**: The HiCAMS contract number. Entered by user or selected from the Contract Selection window when the selection icon is clicked. REQUIRED.
- **Contractor**: Displays contractor firm name based on the selected contract number. Provided by HiCAMS.
- **Work Order**: The primary work order number for the selected contract number. Provided by HiCAMS.
- **Status**: The status of the contract (ie “Activated”). Provided by HiCAMS.
- **Material**: The type of material on which the testing is being performed. REQUIRED. Valid choices include:
  - *Field Density - Aggregate Base Course*
  - *Field Density - Embankment*
  - *Field Density - Subgrade.*
- **Run Date**: The date that the tests were performed. REQUIRED.
- **Test**: The test number. REQUIRED.

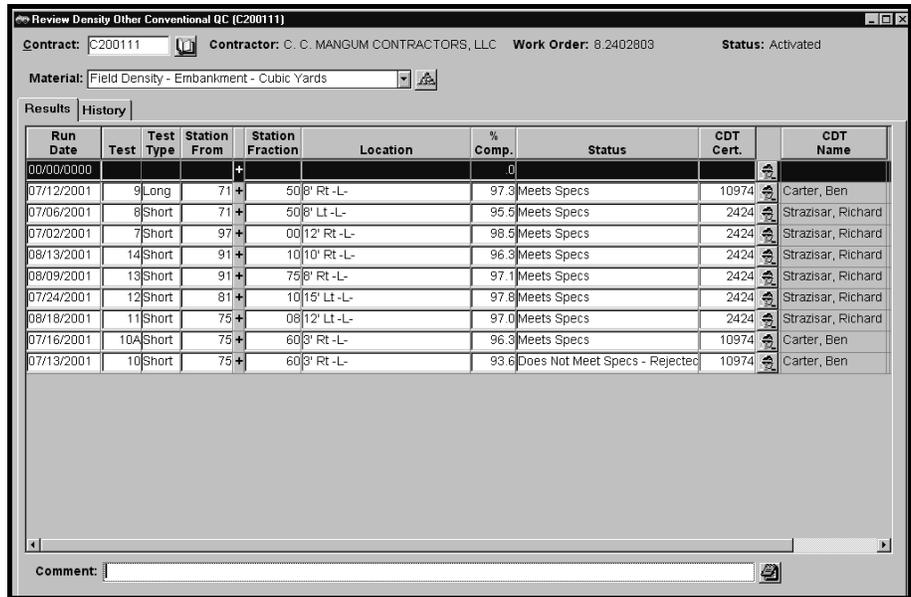
- **Test Type:** The type of test performed. REQUIRED. These are the available choices:
  - Long
  - Short
- **Station From/Station Fraction:** The station where the test was performed. (Please note that this is a 2part field with the “+” in the middle.) REQUIRED.
- **Location:** Any additional information associated with the station to more precisely describe the location.
- **% Comp:** The compaction percentage test result. This figure should be between 85% and 105% and it cannot be outside the range of 50%-150%. REQUIRED.

**Note:** *Test results falling outside the parameters (< 50% or > 150%) are considered invalid and cannot be entered.*

*Test results falling between 50% - 85% and 105% - 150% will display a warning message.*

- **Status:** The status of the test. The user chooses from one of the following statuses:
  - *Meets Specs*
  - *Does Not Meet Specs – Accepted*
  - *Does Not Meet Specs – Rejected*
  - *Does Not Meet Specs – Pay Adjustment Recommendation*
- **CDT Cert.:** The conventional density technician’s certification number. If this number is not known, the user can click on the staff icon and select a Technician by name through the Technician Selection Window. REQUIRED.
- **CDT Name:** Pre-filled when CDT number entered in previous field or selected from search window.
- **Comment:** This is a freeform text field for general comments. It is accessed through the notepad icon next to the comment field at the bottom of the test results tab. The comment is associated with the test where the cursor is currently located. If the cursor is not on a test, then this field will be empty. The user can add to the existing comment, but not delete or alter it in any way.

**Note:** *To enter a comment for all tests, select the Notepad icon or simply enter a comment in the area at the bottom of the window:*



To view the history of updates/corrections to a specific or all tests on this material, click the History tab:

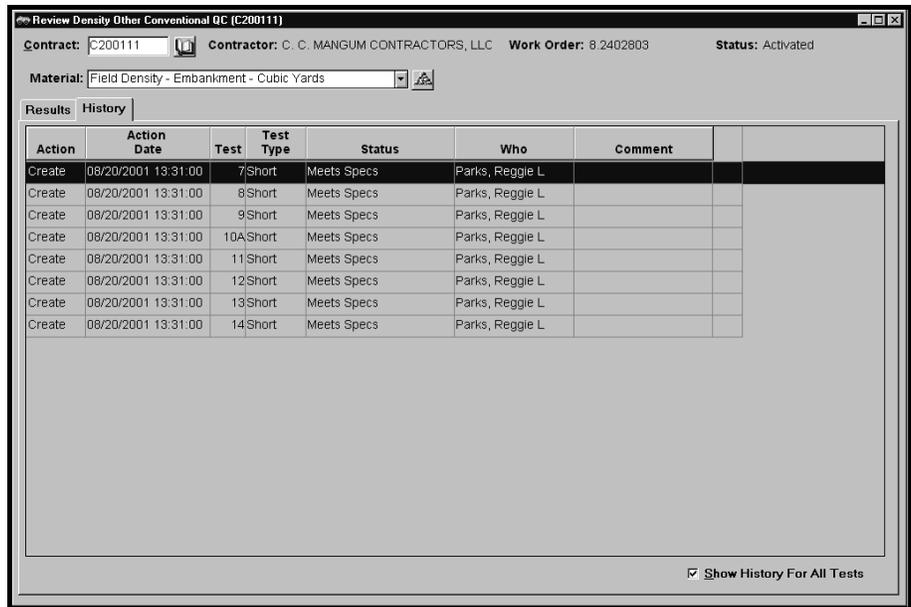


Figure 1 - Review Density Other Conventional (History Tab Navigation)

**Fields**

- **Action:** Indicates the action taken that caused the entry into the history:
  - *Comment* – A comment was added to an existing test.
  - *Create*– A new sample was entered

- *Modify* – Data for an existing sample was modified
- *Delete* - A sample was deleted
- **Action Date:** This is the date the action was performed in HiCAMS.
- **Test Date:** Displays the original test number if one or more of the following are changed: test number, test type, station, or compaction %.
- **Test Type:** Displays the original test type if one or more of the following are changed: test number, test type, station, or compaction %.
- **Status:** Current test status
- **Who:** The username of the person entering the test.
- **Comment:** The comment associated to the selected history record.

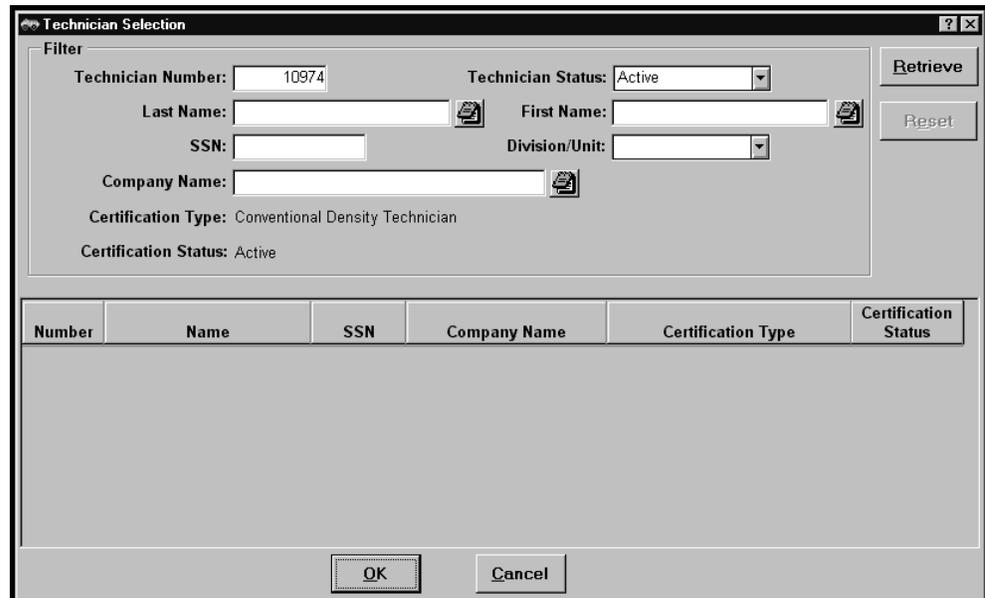
## Enter Other Conventional Density Tests

- Step 1:** From the menu bar, select **Functions® Density® Review Density Other Conventional**
- Step 2:** The **Review Density Other Conventional** entry window displays.
- Step 3:** Enter the Contract. If the contract you entered is not found in HiCAMS, the **Contract Selection** Window will be displayed and you can select a Contract from this window. If the Contract number is unknown, click on the book button next to the Contract entry field. 
- Step 4:** This displays the **Contract Selection** Window:

Contract	Work Order	TIP Number	Description (nickname)	Contractor
C102994	8.1500605	U-2003AA	GRADING, DRAINAGE, PAVING, PAVMT MARKINGS	ENGLISH CONSTRUCTION
C103030	6.499004T	I-303G	GRADING, DRAINAGE, PAVING, SIGNING, PAVEM	APAC-CAROLINA, INC., CH
C103144	8.T470402	I-304C	WIDENING, GRADING, DRAINAGE, PAVING, SIGNI	S. T. WOOTEN CORPORA
C103339	8.T491804	I-303E	WIDENING, GRADING, DRAINAGE, PAVING, SIGNI	BLYTHE CONSTRUCTION
C103340	8.1501201	U-2504	COMPUTERIZED TRAFFIC SIGNALS. VARIOUS L	(WATSON ELECTRICAL CC

- Step 5:** Select the material type from the Material dropdown list.
- Step 6:** This will populate the fields with the contract and material information and if there are existing results, they will be displayed.
- Step 7:** Click on the insert button  to record a new test entry.
- Step 8:** Enter the **Test** number.
- Step 9:** Enter the **Run Date** (indicating the date the material was installed on the project).
- Step 10:** Select the **Test Type** from the dropdown list.
- Step 11:** Enter **Station From** of the first test taken in the test section in the Station column for the test section.
- Step 12:** Enter any other information such as other station numbers, offset, etc. in the **Location** column for the test section
- Step 13:** Enter the test results in the **% Comp.** column.
- Note:** *If the compaction % is not within acceptable levels, the user will be notified with a pop-up see "Compaction Warning" in the Auxiliary messages section*
- Step 14:** Enter the technician certification number in the **CDT Cert.** column. If this number is unknown, you can click on the

staff icon  to display the “Technician Selection Window” and select the technician from there:



Number	Name	SSN	Company Name	Certification Type	Certification Status

**Note:** Once you select or enter a Technician Certification, HiCAMS will retrieve the technician’s name and populate the CDT field

**Step 15:** Enter any **Comment** that you may have about the lot. Do this by clicking on the comment icon  or the “Comment” button and entering your comment in the window provided.

Repeat **Steps 6-14** to enter any additional test sections for this lot.

**Step 16:** Save the data you entered by clicking on the Save icon. 

## Retrieve/review existing Other Conventional Density Tests

Follow **Steps 1-5** in the section above “Enter an Other Conventional Density Test”

**Step 6:** All existing tests for the selected Contract and Density Type will be displayed in the list on the lower portion of the window.

## Edit an existing Other Conventional Density Test

Follow **Steps 1-5** in the section above **Enter an Other Conventional Density Test**

**Step 6:** Scroll up or down to find the test you wish to modify.

**Step 7:** Place your cursor in the field you wish to modify and make the change.

**Step 8:** Repeat this for any field on the window.

**Step 9:** Save the data you entered by clicking on the save icon. 

## Delete an existing Other Conventional Density Test

Follow **Steps 1-5** in the section above **Enter an Other Conventional Density Test**

**Step 6:** Scroll up or down to find the test you wish to delete.

**Step 7:** Place your cursor anywhere on the line for the test.

**Step 8:** Click on the “Delete” icon. 

**Step 9:** Click Save to record the deletion.

**Note:** *All deleted items will be displayed in the History tab window.*

**Step 10:** Delete other tests as desired.

**Step 11:** **Save** the data you entered by clicking on the save icon. 

## Auxiliary Windows/Messages

**Information Messages** – Pop-ups with information that either provide basic information or may suggest action, but not require such action:

- Compaction % not between 85.00 and 105.00.

**Warning Messages** – Pop-ups with an OK button that require action:

- Compaction % out of range popup
- Status's not in sensible order popup
- Invalid Technician Popup

## Queries

The following queries are recommended in conjunction with this module:

### **Status Query:**

- Criteria (any or all of the following):
  - Status = Meets Specs
  - Status = Does Not Meet Specs
  - Contract = #
  - RE=Name

### **Displayed Fields (any or all of the following):**

- Density Type
- Date
- Test
- Station From
- Compaction %
- CD Technician
- Comment
- Status