

# Section 4 Research Project and Task Management

## 4.1 Management of Research

### 4.1.1 Project Manager

#### Responsibilities

The purpose of project management) in DRISI is to achieve the objectives of a research project on schedule and within budget. This project management process starts before any resources are committed and continues until all work is finished and the project is closed.

The PM is a Caltrans employee with full authority and responsibility to manage all aspects of an approved project. The PM is responsible for delivering the product on schedule, within budget, and to the satisfaction of the project's sponsors, customers, and end users.

#### Changing a Research Project

The need for a change in a research project can happen at any time after the project's initiation.

A research project may need to be changed due to new information being discovered, modifications in funding possibilities, or modifications in research priorities.

The steps to change a research project include:

- A recommendation from the Project Panel
- Approval from the related PSC
- Updating the Project Plan

Resource approval may also be necessary if additional time or funding is needed.

#### Canceling a Research Project

A project's circumstances can be significant enough to cancel a project. Cancellation can happen at any time during a project's life.

Canceling a research project goes through the same three steps as changing a research project. If a project task has been initiated, additional task termination work will be needed.

### 4.1.2 Task Management

#### Responsibilities

The Task Manager (TM) is responsible for overseeing the research task from task execution to close-out.

#### Task Execution

There are four mechanisms used to conduct research tasks within a DRISI research project. The four methods are:

- Contract Research
- In-House Research
- Transportation Pooled Fund Research
- National Cooperative Research Programs

Each method has its own execution criteria. See Sections 4.2, 4.3, 4.4, and 2.7, respectively, for additional information.

#### Task Reporting and Distribution

Quarterly reports for all active tasks are required throughout the life of the task. This report is done by each TM in the Research Project Management Database (RPMD). The RPMD is a database used to store, manage and report on the research program and projects.

A final report is created at the conclusion of each research task. The final report outline is at: [DRISI Final Report Instructions and Outline](#).

The reports are distributed to the State, Federal, and National Depository Libraries and at: [DRISI Research Final Reports](#).

#### Changing a Research Task

Requests for changes to a research task can come from a variety of sources. The change request is managed by the PM and TM working with the Project Panel and PSC.

#### Terminating a Research Task

When a decision has been made to terminate a research task, the TM will follow the instructions and outline defined at: [DRISI Termination Report Format](#).

## Task Close-out

When a task is completed, the TM will close the task in accordance with the research task close-out process and procedures. The close-out process and procedures can be found at: [DRISI Research Closing Process and Procedures](#).

## 4.2 Management of Contracted Research

### 4.2.1 Introduction to Research Contracts

The research contract allows Caltrans to utilize the expertise of universities and other transportation consultants.

The research contract is also the mechanism to encumber multi-year funding. This allows DRISI to provide better fiscal management of the research program.

The TM is typically responsible for all of the Contract Management duties for the contracts within their task. The various types of research contracts are:

- Standard Agreements
- Interagency Agreements
- Master Interagency Agreements
  - Research Technical Agreements
  - Task Orders
- Leverage Procurement Agreements
  - California Multiple Award Schedules, or CMAS
  - Cooperative Agreements
  - Master Service Agreements
  - Statewide Contracts\*
  - State Price Schedule\*

*\*Used primarily for purchase orders*

### 4.2.2 Executing Research Contracts

DRISI awards research contracts in accordance with approved Caltrans contracting procedures. The TM prepares all the documents necessary to execute each type of research contract.

### 4.2.3 Managing Contracted Research

Research contract management responsibilities extend from contract development to contract completion.

All Caltrans TM receive formal contract management training and must comply with the requirements in Caltrans “Contract Manager’s Handbook.”

## 4.3 Management of In-house Research

### 4.3.1 Introduction to In-house Research

In-house research differs from contracted research in that the researcher is an employee of Caltrans. The in-house researcher often also serves as the PM or TM.

In-house research enables Caltrans to:

- Give transportation administrators and managers accurate and substantive advice quickly, during emergencies or where problems being researched have safety implications
- Assess emerging research results and determine appropriate solutions to benefit California transportation programs
- Evaluate field-implemented transportation innovations for cost saving implications
- Provide a professional knowledge base to solicit, award, monitor, and evaluate the quality and cost-effectiveness of research

### 4.3.2 Requirements for In-house Research

Approval by DRISI management is required prior to starting in-house research.

In house researchers should possess the following:

- Expertise in the subject area of the research and the techniques to be used in the proposed research project
- Ability to dedicate the required amount of time to the research during the life of the project
- Ability to serve as liaison with the committees and panels identified in this research manual
- Approval by DRISI management

### **4.3.3 Execution and Management of In-house Research**

The in-house researcher utilizes the NCHRP Report 20-45 “Scientific Approaches to Transportation Research”, NCHRP Report 727 “Effective Experiment Design and Data Analysis in Transportation Research”, and DRISI In-house Research Criteria at: [DRISI In-house Research Criteria](#).

## **4.4 Management of Transportation Pooled Fund Research**

### **4.4.1 Introduction to TPF Research**

The TPF Program allows federal, state and local agencies, and other organizations to combine resources to support transportation research studies.

The TPF Program is a popular means for State DOT, commercial entities, and FHWA program offices to combine resources and achieve common research goals.

Pooling resources reduces costs and provides efficient use of taxpayer dollars. It also provides greater benefits to participating interests as compared to individual entities conducting or contracting research on their own.

### **4.4.2 Involvement in Transportation Pooled Fund Research**

When significant or widespread interest is shown in solving transportation-related problems, research, planning, and technology transfer activities may be jointly funded by federal, state, regional, and/or local transportation agencies, academic institutions, foundations, or private firms as a pooled fund study.

A federal or state transportation agency may initiate pooled fund studies. Regional and local transportation agencies, private companies, foundations, and colleges/universities may participate in pooled fund projects. TPF studies must be sponsored by either a state DOT or the FHWA.

General information on Pooled Fund Projects is on the TPF website at: <http://www.pooledfund.org>.