STIP Project Tracking & Financial Record Management System
STIP-RMS

Executive Summary

The *STIP-RMS* project is a collaboration of effort among the DOT, DOIT, and FHWA to improve the current STIP Database, improve the current billing process, update business logic to meet new requirements, provide enhanced functionality, and update the processing, sharing, and integration of information. This project will transform the current STIP database and existing business logic to leverage available technology, expediting data capture, data exchange, data storage, and reporting processes. The *STIP-RMS* application will use the existing DOT technology and data infrastructure for obtaining, updating, and sharing information from existing DOT applications, while complying with DOIT software development methodologies and standards.

Project Overview

The *STIP-RMS project* will replace the existing DOT STIP and Ten Year Plan record management and reporting system. This system is a menu driven Microsoft Access data entry application developed in the early 1990's, and it is considered a legacy system. This project will also include amendments to DOT's Finance & Contracts current billing process. Currently, DOT receives project requests from Regional Planning Commissions, Metropolitan Planning Commissions, Municipalities, Federal legislation, and from DOT staff to manage and maintain its transportation infrastructure. All requests are paper-based from external customers, with a combination of verbal, paper, and email correspondence within the DOT. These requests are manually entered into a Microsoft Access database system maintained by DOT staff. Project data, financial data, and timeframe data is stored, tracked, and reported to DOT decision makers, FHWA, the NH General Court, the Governor, and the public. DOT uploads the data from the Microsoft Access database to multiple Agency sub-systems to perform financial analysis, process Federal-Aid reimbursement, and for FHWA authorizations. Weekly, monthly, quarterly, and ad hoc reports are extracted from a Data Warehouse to facilitate DOT in its project development process.

Issues with current Project Tracking & STIP Database System

A number of issues posing high risk to the STIP Database and reporting process are as follows:
- Reports are deficient in information required by Federal agencies.
- Existing application technology (MS Access) is stressed to meet current business demands.
- Legacy system with single user knowledge base (There is no fail-over system or user cross training).
- Process is manual and time-consuming.
- Duplicate data entry into the STIP databases, Ten Year Plan Database, and the Project Database.
- Multiple databases are used to store duplicate information, requiring additional data entry and maintenance.
- Reports are not all real-time and often depend on linking current dynamic data with snapshot static data.
- Analytical queries and reports require time/effort of a single user with application knowledge.

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Project Approach

An executive steering committee and working stakeholder committee will be established. The stakeholder committee will establish be co-chaired by representatives from DOT, DOIT, and FHWA. Three sub-working groups, each with specific tasks, will be create from the working stakeholder committee:

1. Business Requirements
2. Technical infrastructure Design
3. Data capture, sharing, and reporting

The Business Requirement-working group

- Identify new STIP, Federal Aid Billing, and Department business requirements
- Process data flow

Technical infrastructure Design

- Hardware and Software requirements (see proposed technical solution below) Security
- System Integrations (Finance & Contracts Current Billing, Ten Year Plan, ERP, GIS, and FMIS)

Data capture, sharing and reporting

- User interface functionality (drop down menus, data validations, and screen layout)
- Identify Data Reporting and Sharing needs
- Recreate current daily, weekly, monthly, semi-annual, and annual reports to work

The sub-working groups will report to the working stakeholder committee that will report to the executive steering committee. Upon completion of the working groups tasks the DOT development team will begin working on system development.   DOIT's Systems Development Life Cycle (SDLC) guidelines will be used on this project: Functional Design, System Design, Construction and Unit Testing, Integrated Testing, System Testing, User Acceptance Testing, Deployment, Project Wrap-Up. The development team will report to the working stakeholder committee for each step.

Use of Vendors

- ❑ DOT and DoIT staff who directly support and operate these existing systems be directly involved in the re-design and enhancements of the new STIP-RMS.

- ❑ Staffed with existing DOT resources and funded through overtime and part-time operating budgets. NHDOT staff will work under DoIT guidance and DoIT requirements.

- ❑ Retired IT Manager to help lead this project (part-time employment)

- ❑ Through this approach, there will be significant cost savings to the project. Using in-house development would cost approximately 40% of what consultant costs.

Proposed Technical Solution

The technical solution will be defined during a Functional Design phase of the SDM.

The top diagram below contains a visual overview of the Statewide Transportation Improvement Plan-Database System (STIP-RMS) in its current state, and the bottom diagram depicts a possible solution implementation.
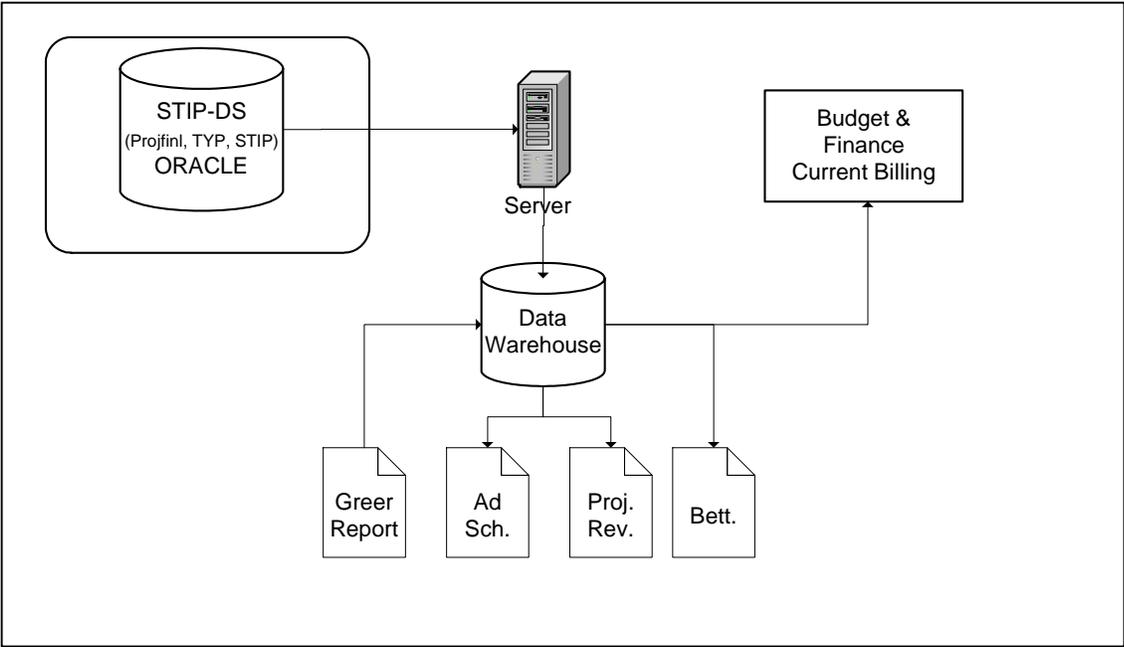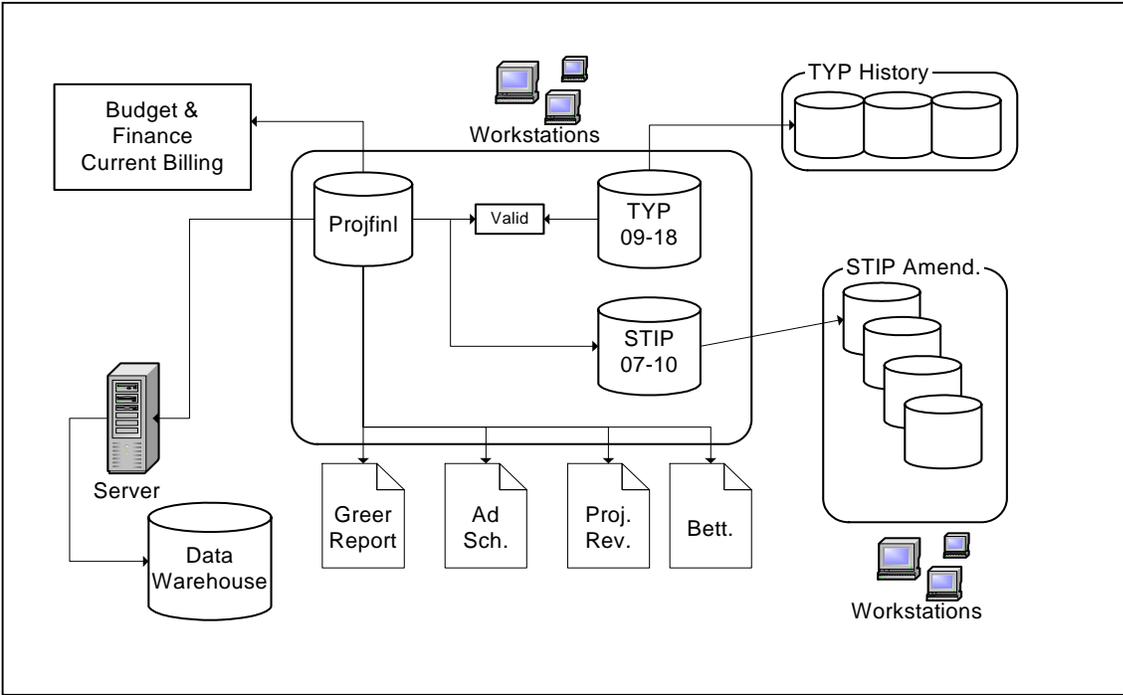
Projected Scheduled

The following table for the scheduled effort to be expended during the project by month shall be updated at the end of the Analysis Phase.

ID	ℹ	Task Name	2008				2009				2010		
			Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3
2		Requirements Gathering			�								
3		Logical Design					▮						
4		Physical Design						▮					
5		Development							▮				
6		Testing										▮	
7		Implementation											▮
8		Training											▮

Project Organization

The diagram below illustrates the Project Organization as determined in the Planning and Initiation Phase:

Statewide Transportation Improvement Program - Record Management System (STIP-RMS)

Executive Stakeholder Committee
Jeff Brillhart, NHDOT
Chris Clement, NHDOT
Bill Cass, NHDOT
John Cater, FHWA
Peter Hastings, DoIT
Cynthia Copeland, MPO

Project Team

Agency Leader
Bill Watson, NHDOT
Tom Martin, NHDOT
Gail Hambleton, DoIT
Leigh Levine, FHWA

Project Managers
Dane Prescott, DoIT
Steve DuBois, NHDOT
Glenn Davison, NHDOT
Nick Alexander, NHDOT

Lead Stakeholders

DOT Exec. Office
Chris Clement
Bill Cass

DOT Planning - Analysis
Nick Alexander
Tom Balint

DOT Planning - GIS
Jim Irwin
Jeff Harpring
James Downs

DOT Finance & Contracts
Paul Anctil
AJ Nolin

DOT Proj Programming
Bill Jennison
Karla Kemp
Linda Wescott

DOT Proj. Development
Craig Green
Chris Waszczuk

MPO/RPC
Executive Directors
Staff

FHWA
Leigh Levine
Terri Marcelli

FTA
Bill Gordon

DES
Beck Ohler
Chris Skoglund

EPA
Don Cooke

DoIT
Gail Hambleton
Dane Prescott

Construction
Ted Kitsis
Staff

Community Asst.
Nancy Mayville
Jim Marshall