



IMPROVED
CONSTRUCTION
AND
MAINTENANCE
TECHNOLOGIES

new strategies to enhance the quality
performance of highway systems

Construction Management Systems: Automated Contract Tracking

Highway construction projects generate enormous amounts of information that must be captured, organized, and reviewed to keep construction on track and meet governmental reporting requirements. Construction management systems can dramatically speed and simplify the management of this information flow by streamlining data collection and organization, reducing duplicative record-keeping, and generating up-to-the-minute management reports and required documentation.

Automated systems improve efficiency for everyone involved. Agency staff spend less time on paperwork and more time monitoring progress and quality at the project site. Contractors experience faster turnaround on payments and speedier resolution of contract change orders. Suppliers receive faster certification that their materials meet specifications. Recordkeeping is easier and more accurate, and agencies save in reduced hands-on time. Michigan, for example, reported annual State-wide savings of more than \$16.8 million following implementation of its system.

Two contract management systems designed specifically for highway construction projects—SiteManager and FieldManager—are helping many highway agencies manage and track their projects more efficiently. To assist States, the Federal Highway Administration has made both systems eligible for Federal-aid construction funds for their acquisition and implementation. Both are components of the AASHTOWare Trns·port suite sponsored by the American Association of Highway and Transportation Officials. Both are designed to manage construction contracts, but each fulfills a different set of needs. Choosing the best fit requires a careful assessment of an agency's existing software applications and its unique business requirements.

SITEMANAGER

SiteManager is best suited to the State highway agency that needs a single, robust system. It is a Windows-based, client/server application that will work with existing databases. SiteManager is compatible with other programs in the Trns·port software family, and it can exchange data with an agency's financial management system as well as with mainstream business software word processing and spreadsheet applications.



Capturing and tracking construction data

Improved productivity translates into cost savings for States using construction management systems. SiteManager is now licensed for use or evaluation by 21 States; FieldManager for use or evaluation by eight States plus hundreds of local governments, consultants, and contractors.

Visit www.cloverleaf.com for more information on SiteManager and FieldManager.

SiteManager’s contract management features are located in six integrated modules that provide online forms for viewing and entering all contract data:

- Contract Administration
- Change Orders
- Daily Work Reports
- Civil Rights
- Contractor Payments
- Materials Management

Project data are stored in a central database, allowing users to call up the most up-to-date information available and automatically supplying the data to all forms and reports that use the same information. This integration eliminates costly duplicate data entry. For example, information from contractor payroll forms can be used to generate Equal Employment Opportunity reports; information from daily work reports can be compiled to authorize periodic progress payments to contractors. The program also automates authorization reviews and routing. A lightweight, easy-to-use field data collection device, SitePad, is under development.

FIELDMANAGER

Highway agencies may find FieldManager to be a better fit if they already have individual applications for activities such as materials management, contractor payments, and civil rights reporting, or if their construction budgets do not justify investing in SiteManager.

FieldManager is a scalable, field-level construction management system. Designed to meet the needs of State agencies, city and county governments, engineering consultants, and large contractors, it is fast, easy-to-use, and PC-based. FieldManager contains data on all aspects of a contract: award information, tasks that must be accomplished, progress, contractor and subcontractors, benchmarks, supplies and materials, field inspectors’ findings, and payment history. The project database is built through paperless, field-based data updates:

- Work item progress
- Contractor payments
- Inspector’s daily reports
- Contract changes
- Project engineer’s daily diaries
- Reports and inquiries
- Stockpile management

FieldManager uses this field-gathered data to track construction, document progress, initiate contractor payments, and communicate with an agency’s central contract administration system. Complete day-to-day details make it easier to identify issues resulting in incentive and disincentive payments, track contract modifications, monitor contractor performance, and identify onsite personnel and equipment. Companion products provide portability for field collection of data and interface and communications capabilities.

Plans for the long term are to interface FieldManager with SiteManager, allowing local governments and consultants to exchange data with State agencies that use SiteManager and to migrate to SiteManager if their needs change.

For more information, contact your local FHWA division office or:

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