

**PROJECT DELIVERY ACCELERATION
TOOL BOX**

*Improvements to the
Department of Transportation's
Project Delivery Process*

Version 05-04

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Project Delivery

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I. Introduction

This “Tool Box” is a comprehensive report listing all the California Department of Transportation’s (the Department) efforts in the recent past to acceleration the delivery of transportation projects. This report also identifies proposed changes to be implemented at the Department over the next few years. This report will be modified often to reflect the most current continuing improvement efforts of the Department. The purpose of this document is to provide the Department’s employees, as well as our external partners, some valuable tools that can be used to accelerate project delivery. Additional information can be found on the Department’s Acceleration website located at <http://www.dot.ca.gov/accel>.

II. Summary

This “Tool Box” is a comprehensive report listing all the Department’s acceleration efforts in the recent past and proposed techniques over the next few years. Independent efforts from the Department’s staff, legislative changes and many other sources have helped to contribute to the acceleration techniques contained in this “Tool Box.”

Tool Box Content

This “Tool Box” is a comprehensive report listing all the Department’s acceleration efforts in the recent past and proposed techniques over the next few years. As discussed above, this “Tool Box” is a compilation of acceleration techniques that are a result of various efforts both internal and external to the Department and is modified often to reflect the most current continuing improvement efforts of the Department. The contents are organized by functional area (i.e., Budgets, Planning, Programming, etc.) with both implemented and planned acceleration techniques addressed.

III. Budgets

A. Implemented Improvements

1) Streamlining the Federal Authorization Process

Since the passage of the Intermodal Surface Transportation Efficiency Act (ISTEA) in 1991, the Department has in cooperation with FHWA been making incremental changes to streamline the federal authorization process. The single biggest change has been the stewardship agreements signed in 1992 delegating to the Department the authority to authorize many projects for federal funding. This alone has eliminated approximately 2 weeks of federal review time. Shortly after the stewardship agreements were signed, the Department implemented an electronic transmittal of information to FHWA allowing a 2 to 3 day savings in mail time. Most recently the authorization documents and the federal aid project agreement have been combined allowing federal reimbursements to begin earlier. Federal law requires each project receiving federal funds to be included in the Federal State Transportation Improvement Program (FSTIP). FHWA however allows entries into the FSTIP by category of work thereby creating a lump sum entry in the Federal Transportation Improvement Program (FTIP). With the recent expansion of lump sums in the FSTIP, over 98% of the federal eligible project in the SHOPP fall under the lump sum entries. The use of lump sums does not extend to the STIP. Projects

covered under the lump sum in some cases can be federally authorized 1 to 2 months earlier than they would have been if an amendment to the FTIP had been required.

B. Proposed Improvements

1) Soft Match Pilot Program

The California Department of Transportation (Department) has been using soft match credits and tapered funding on a project-by-project basis.

The soft match credit is allowing the capital cost for early acquisition of right-of-way (R/W) prior to the completion of environmental clearance and Federal authorization to be credited to the non-Federal matching funding for project cost after Federal authorization is received. This allows R/W purchases earlier without jeopardizing later Federal funding.

Tapered funding allows the full Federal share of a project to be spent before the matching funds must be spent. Normally the Federal share and matching funds are spent proportionally throughout the project life. With multiple funding sources for projects, tapered funding is allowing projects to begin prior to all funds being fully available. Projects with local entity funding are beginning with full Federal funding and the local funding paying the final costs of a project. By the completion of the project, both Federal funds and matching funds have been spent in the correct ratio required for Federal funding.

For additional information, contact Fardad Falakfarsa at (916) 654-3043.

IV. Transportation Planning

A. Implemented Improvements

1) Establishment of the Project Study Report – Project Development Support

The Department and the CTC have established and adopted new guidelines for an expedited Project Study Report (PSR) entitled the Project Study Report – Project Development Support (PSR-PDS). The PSR-PDS meets the needs of SB 45 by allowing projects to be programmed by component and by expediting the PSR process. The traditional PSR required that the scope, cost and schedule of the entire project be determined and set within the document. This lent itself to cost and schedule delays and scope changes. The new PSR-PDS recognizes that until the environmental studies have been completed, the preferred project alignment and specific project features cannot accurately be determined. The PSR-PDS programs support cost only through Project Approval and Environmental Document phase (PA&ED) with a ballpark figure given for the total project cost. The PSR-PDS in conjunction with Project Change Control (see Sections VI. Project Management and VII. Design) encourages that all information and studies that are required to make a good project selection are known up front, prior to programming the project through construction.

2) Early Environmental Efforts/Geographic Information Systems

Early environmental scan efforts also assist in speeding project delivery by early identification at the system planning and Regional Transportation Plan (RTP) level of

"fatal flaw" alternatives or locations for environmental purposes or community resistance. (See also Section VIII. Environmental.)

The Department has several new Geographic Information System (GIS) environmental scan efforts for early identification of protected species and other environmental factors. In both system and regional planning, alternatives with major environmental implications are identified early on and evaluated for proceeding/not proceeding with an alternative or alignment.

The Department has also developed a GIS tool to display planned and programmed projects. The California Transportation Investment System GIS tool provides a comprehensive inventory of projects (highway, local, rail, airport, bicycle, pedestrian, and transit) planned by State and regional agencies over the next 20 years. This sketch level GIS tool is intended to inform and improve decision making by assisting the Department and regional planning agencies in identifying planned improvements on the transportation system and opportunities for improved timing and coordination of projects.

It is also recognized that these efforts will need to be done in concert with the much-needed GIS efforts of the resource agencies and transit operators.

For additional information, contact Helen Rainwater at (916) 653-1965.

V. Transportation Programming

A. Implemented Improvements

1) Delegated Authority

The Division of Transportation Programming is actively pursuing enhancing/expanding its delegated authority by the CTC to take actions that will accelerate project delivery. The Department (Transportation Programming) has delegated authority for project allocations over the Safety and Rehabilitation categories of the State Highway Operations and Protection Program (SHOPP). This delegated authority as of October 2002 accelerated 291 projects for a total savings of 8,761 days. This delegation expired on March 31, 2001, but was renewed for two years at the March 2001 CTC meeting and will now expire on March 31, 2003. The Department will report on the continued success of the delegation and will request a further extension and additional expansion of the delegation at or prior to the February 26/27 CTC meeting.

2) Improved Scoping and Scheduling

The Division of Transportation Programming in coordination with FHWA and Federal Transit Administration (FTA) developed guidelines and criteria for the use of Administrative Amendments and Line Items in the Federal Statewide Transportation Improvement Program (FSTIP). The Division of Transportation Programming also trains

Local Agency staff in the appropriate use of these two strategies to help streamline/accelerate project delivery. (For further information, also see Section III. Budgets.)

3) New Developments in Information Technology

The Division of Transportation Programming improved its existing programming database to serve as a multi-agency joint use project database system. This revised system is the California Transportation Improvement Program System (CTIPS), and contains project listings for the State Transportation Improvement Program (STIP), SHOPP and the FSTIP. The use of this tool and the advancements in Information Technology greatly improves the ability for the Department, FHWA, FTA and local agencies to plan, program and monitor their projects. This system and its proposed future improvements will increase efficiency and assist in streamlining the entire programming process resulting in enhanced program/project delivery.

4) Increased Delegation

With the proven success of the delegated authority for the SHOPP, the CTC at their December 2001 meeting, delegated authority to the Department to allocate STIP funds for the Governor's Traffic Congestion Relief Program (TCRP) projects that are identified in the Bi-annual TCRP status report. This delegation applies to those projects whose scope and funding are consistent with the application previously approved by the CTC. This delegation will save 30 to 60 days in the allocation process.

B. Proposed Improvements

1) Enhanced Information Technology

The Division of Transportation Programming will continue to improve its web site to insure the availability of real-time programming information. The site includes the adopted STIP; approved SHOPP; CTC Agendas, Meeting Book Items, and Action Taken Reports; and status of FSTIP amendments and links to websites containing project delivery resources. Improving the website will enhance its operation, and insure that it is user friendly and an efficient programming information tool, which enhances program/project delivery.

For additional information, contact Gene Murtey at (916) 654-6722.

VI. Project Management

A. Implemented Improvements

1) Project Charter Policy

A charter documents the agreement between project sponsor and the project manager over the key elements of a project. It helps the project manager guide the project team efficiently through the project development process. It is the first project management document in the suite of project management plans used to identify and control a project's scope, schedule and budget. It is also used to identify and control customer satisfaction requirements. The charter process is intended to help manage project scope and is intended to reduce rework by eliminating unnecessary scope changes. Included with the charter policy is a tool called the Innovative Checklist. Checklist is intended as a resource for project managers and teams to identify innovative practices that they can apply to their project. The charter policy was adopted on February 5, 2001 and is available at:

http://pm.dot.ca.gov/ProjectOffice/ProcessGuidance_Directives/PM_MemosDirectives/PMD007_Rev.pdf.

2) Capital Project Skill Development Plan

The Capital Project Skill Development (CPSD) plan will provide the Department capital project staff with the knowledge and skills needed to produce their deliverables. The CPSD plan was developed and is managed by a team that includes representatives from the Divisions of:

- Construction
- Design
- Engineering Services
- Environmental
- Project Management
- Right of Way
- Traffic Operations

These divisions are responsible to develop and provide technical training to the nearly 11,000 capital project staff statewide. In addition, CPSD provides discretionary training funds to the districts for securing courses in software, soft skills, and management. Districts throughout the state have been provided the resources and are responsible to ensure student participation in this training. The annual goal is to provide over 600,000 hours of student time. Additional information and on-line course catalog for CPSD is available at: http://10.160.180.1/cpsd/cpsd_home.htm.

3) Use of flexible resources to deliver projects

With the passage of Proposition 35 in November 2000, the Department has increased its effort to engage consultant resources in the delivery of Capital Projects. Consultant Services units are implemented in every district and region. The Department is using on-call contracts to alleviate delivery bottlenecks and project-specific contracts to augment project delivery efforts. Additional information about consultant services unit is available at:

http://pm.dot.ca.gov/ProjectOffice/ProcessGuidance_Directives/PM_MemosDirectives/PMD008.pdf.

4) Revised Milestone Standard

In order to better plan and monitor the progress of all STIP and SHOPP projects during the environmental phase, two new milestones were introduced to the Department's Work Breakdown Structure (WBS). These milestones are Notice of Preparation (NOP) for the Environmental Information Report (EIR) documents under the California Environmental Quality Act (CEQA) and Notice of Intent (NOI) for Environmental Information Statement (EIS) documents under the National Environmental Policy Act (NEPA). In addition to the reporting requirement to the CTC, the Division of Project Management will also be monitoring other internal milestones during PA&ED on a quarterly basis.

Additional guidance available at:

http://pm.dot.ca.gov/ProjectOffice/ProcessGuidance_Directives/PM_MemosDirectives/RevisedCapitalProjectMilestoneStandards.pdf.

5) Project Management Professional certification

The Project Management Professional (PMP) certification is an industry standard credential for project managers. Certification ensures that project managers understand the foundations, terminology and processes in project management. The Division of Project Management supports project managers in pursuit of certification by providing training and streamlining the application process.

6) Lessons Learned Database

The Lessons Learned Database is a tool to capture the lessons learned during the course of a project. Its purpose is to benefit Caltrans users from previous lessons, and to continuously improve and correct Caltrans documents (manuals, handbooks....etc) by channeling the lessons learned information to the appropriate person(s). All project team members are encouraged to record the problems they have encountered during project delivery, and to provide their suggestions and solutions for resolving those problems. The tool will allow users to search for information based on various parameters.

It can be accessed at:

http://pm/pmpi/ProjectManagementProgramDelivery_files/index.html

7) Project Close Out

The Project Close Out tool documents the various steps needed to close out each component (phase) of the project. Project Managers need to close out each component (phase) of the project in a formal and consistent manner. Proper Project Close-Out process should provide:

- Systematic documentation and archive of project records.
- The capture of Lessons Learned during project execution, so that these lessons can be used to improve future projects. A formal process would be used to amend guidance and manuals.
- Formal acceptance and delivery of the close-out products.

A documented Close Out task provides a brief description of the task, the procedure that needs to be followed, the roles of various individuals involved, a flowchart of the process, and links to further documents.

The Close Out tool can be accessed at:

<http://pm/pmpi/closeout/closeout.htm>

8) Communication Handbook

Published in February 2003, the Project Communication Handbook provides an overview of the basic concepts and processes that guide project communication in the Department. The purpose of the Project Communication Handbook is to assist the project team in identifying internal and external stakeholders, and to enhance communication among all parties involved in Project Delivery. The Project Communication Handbook includes the processes for completing project communication plans and conflict management strategies.

The Project Communication Handbook and templates for project communication planning can be downloaded from the Project Communication Planning website at http://www.dot.ca.gov/hq/projmgmt/guidance_pchb.htm

B. Proposed Improvements

1) Project Resource and Schedule Management

Project Resource and Schedule Management (PRSM) is an Enterprise Project Management Tool that will provide scheduling and timesheet capabilities for capital outlay support. The scheduler will be used to manage over 3,000 state highway projects and provide resource management for over 11,000 capital outlay support staff. PRSM will replace the eXpert Project Manager (XPM) system, which is currently the standard scheduling system used by the Department. The PRSM timesheet application will

replace TRS for capital employees and will provide timely access to project status data and will record project effort using an employees actual hours charged. The tool will accelerate project delivery by providing functional and project managers with a more effective management tool. It will improve the ability to access data for both program and project management. The tool will accelerate project delivery by providing functional and project managers with a more effective management tool. It will improve the ability to access data for both program and project management. Additional information is available at the PRSM intranet site:

<http://projdel/pm/pmip/148home.asp>.

2) Development and Use of Risk Management Plans for Capital Projects

Project risk management is the systematic process of identifying, analyzing, and responding to project risk. Rick management training is currently being delivered to project and functional managers across the state. The Statewide Risk Management Implementation Team has finalized an implementation plan for risk management, which builds upon the Caltrans Risk Management Handbook. On March 30, 2004, a memo titled “Implementation of Project Risk Management in Project Delivery” was sent to all District Directors from Mike Leonardo, Acting Chief Engineer. A second memo was sent to all District Division Chiefs in Program/Project Management from Carl Haack, Chief Division of Project Management. This memo provides guidance, tools, and support for implementing Risk Management. Project Management Coordinators are working in cooperation with the Single Focal Points and project managers to begin the

application of risk management planning in all of the Districts. The risk management performance measures are: Percent of projects with risk management plans at PID and percent of PCRs due to unidentified risks.

VII. Design

A. Implemented Improvements

1) Cycle Time Reduction Teams

Final plans, specifications and estimate (PS&E) packages have tended to grow in volume and complexity, resulting in even the simplest projects having complex PS&E's. Three design teams have been charged with identifying potential efficiencies in the Department's design process that have the potential to save significant staff time and support costs for dozens of projects statewide. Examples included:

- Reducing the number of plan sheets on simpler projects.
- Relying more heavily on specifications and quantity charts rather than plans.
- Minimizing or eliminating field surveys for certain simpler projects.

2) Reengineering the Project Development Process

Three pilot teams implemented a "reengineered" process, producing SHOPP Projects that focused on three key elements:

- Utilizing multifunctional work teams responsible for the project from inception through construction,

- Allocating funding on a program level, rather than project by project, based on a performance- based long term preservation plan, and
- Advertising and awarding construction contracts on a corridor or geographical basis, with individual projects being let on a task order basis.

The key benefits realized from the pilots included:

- The use of multifunctional teams significantly enhanced the project team dynamics, developed ownership of the projects by all team members, and increased project team communications resulting in instant feedback between functions. This resulted in less rework within projects, less delays between functional units, and overall accelerated delivery of projects. The use of multifunctional teams is currently being explored by Traffic Operations as an option to deliver safety projects.
- Providing funding on a program level rather than a project level provided the project owners (maintenance and operations) greater flexibility in the handling of funds to address the now needs. The project owners also maintained a greater level of control of the project scope, helping to ensure that the project delivered was the project that was originally envisioned. The 10-year SHOPP and the Department's delegated authority for voting of rehabilitation funds were loosely based on this concept.

3) Increase Accountability for Cooperative Agreements

A Cooperative Agreement is a formal, legally binding contract between the State of California and a city, county, or other public non-State entity (e.g., Authority, RTPA,

MPO, Federal Agency) whereby the parties to the agreement agree to either share or cooperate in a project. The Cooperative Agreement process should start as soon as the cooperative features of the project are identified. The Department initiates approximately 450 agreements per year and the Cooperative Agreements Branch reviews more than 1000 draft agreements. To improve the delivery of these agreements the Design Division Chief has established approximately 50 pre-approved forms to expedite approval of the agreement and reduce the number of drafts and is collecting information to monitor the progress of the agreements within the Department. The pre-approved forms as well as the Cooperative Agreement Manual are on the World Wide Web at <http://www.dot.ca.gov/hq/oppd/coop/cooptoc.html>. The District Cooperative Agreement Coordinator, and/or the State Cooperative Agreement Coordinator in HQ should be contacted for additional guidance. The pre-approved forms address common combinations of project type, responsibilities and funding among other issues and have been reviewed by the pertinent functional units so that if not changed, the Department's approval is immediate provided that commitment of State resources are in conformance with State policies and statutes. If pre-approved forms are not used, the approval time may stretch out to a few months. In addition, the Design Division Chief has established, as a performance measure that 80% of all cooperative agreements received in HQ will be returned to the districts within three working days.

The Design Division Chief sponsored the Cooperative Agreement Streamlining Team (CAST) in August of 2002, which consisted of Department personnel as well as local agency and private developers members. CAST identified the local partners and the

Department's satisfaction with the Cooperative Agreement process, local partners and the Department's understanding of own and other's roles and responsibilities in the Cooperative Agreement process and significant reduction in the average Cooperative Agreement processing time as its goal and mission. The team will make recommendations to change the Cooperative Agreement process to facilitate local partners and Department expectations. In addition, the Cooperative Agreements Branch is currently developing the statewide Cooperative Agreements Tracking System (CATS) to monitor the Cooperative Agreement process and provide performance measures.

4) Lump Sum Highway Planting Project

Districts 8 and 11 have produced three lump sum highway planting projects. These projects consist of one bid for planting and one bid for irrigation work thus creating timesavings in the production of the estimate. All three projects are under construction and will be evaluated.

2002 Update – One “lump sum” highway planting project was developed and implemented in District 8 on Route 60 and is currently in Plant Establishment phase. District construction reports that a reduction in claims resulted from fewer discrepancies in unit counts, but that contract administration effort is the same as for a traditional unit bid project. District Construction continues to evaluate this project.

Conflicting expectations between Office Engineer and District Design for appropriate spec language resulted in the second proposed “lump sum” project being processed as a traditional unit bid project.

District 11 implemented a “lump sum” highway-planting project on Route 94 in Lemon Grove, which is currently in Plant Establishment phase. Preliminary evaluation indicates that there were no timesavings in project delivery for this project and that there were problems with contractors understanding the non-traditional bid process for this demonstration project. Contract administration by District Construction was made more difficult due to disputes with the contractor regarding items of work. The District is continuing to evaluate this contract.

5) Design Sequencing

Legislation authorized a Design Sequencing Pilot Program that allows the Department to award up to twelve design-sequenced projects to a contractor based on plans that are a minimum of 30 percent complete. This method, although dramatically different from the 100 percent complete project plans, estimate and specifications (PS&E) that are normally required before soliciting bids from potential contractors, may yield the ability for faster performance, cost savings and/or earlier delivery.

Developing a PS&E is a process that can take many years to complete for large or complex projects, where various functional units must complete a monumental amount of supporting work, in the proper order, to orchestrate a 100 percent PS&E package. With

design sequencing, flexibility is worked into a normally rigid process. It allows each construction sequence to commence when design for that sequence is complete, instead of requiring the design for the entire project to be completed before beginning construction.

6) Project Change Control

As discussed in Section VI, Project Management, the Department has implemented "change control" techniques. Change control is focused on keeping projects on schedule by reducing design changes after PA&ED has been achieved. These changes can result in significant delays especially if they impact right of way requirements or environmental approval. This is accomplished by (1) establishing change control teams to coordinate project lock-in process to manage scope changes after PA&ED, (2) determining what controlling "work packages" could cause significant scope changes and developing project schedules that complete these controlling work packages at the earliest opportunity, and (3) use of a PSR-PDS document, which is used as a basis for programming of the PA&ED support, on all projects requiring an environmental document (non-CE). Upon completion of the PA&ED support programmed with the PSR-PDS document, the remaining support components and right-of-way and construction capital can be programmed with a greater level of confidence and lower risk.

As discussed in Section VI, Project Management, the Department is in the process of implementing risk management techniques. Risk management is the systematic process

of identifying, analyzing, and responding to project risk. Risk management training is currently being delivered to project and functional managers across the state. The guideline will expand beyond the earlier Change Control policy. The goal is to have plans completed on at-risk project by the end of fiscal year 2003.

B. Proposed Improvements

1) CADD Software for Landscaping Projects

The CAICE software provider and the CADD Unit are working with Landscape Architecture to develop software that will calculate landscape quantities, calculate pipe sizes and assist in the irrigation design. Pilot product should be ready in early summer.

2002 Update - CAICE Landscape Architecture training was developed with Caltrans Landscape Architecture input and has been implemented in each District. The software continues to be developed by the provider to accommodate use on Landscape Architecture projects.

2) Landscape Architecture Standards Manual

A Standards Manual for landscape architecture projects is being developed to assist the Department's landscape architects in the preparation of design work. It includes guidance on all elements of project development from the planning to the final PS&E and through construction, including memos of instruction, procedures, standards and policies related to landscape architecture.

2002 Update - The Landscape Architecture Standards Manual was completed and distributed in July 2001, with continuous update.

For additional information, contact Scott McGowen at (916) 653-3348.

VIII. Environmental

A. Implemented Improvements

1) Improved Scoping and Scheduling

The Department has and is continuing to develop tools to inform the planning process of environmental concerns. Project delivery can be hampered when the environmental phase of the project is not properly scoped prior to programming, which often leads to an unrealistic schedule and unanticipated costs and delays. The Division of Environmental Analysis has developed and deployed a GIS-based computer application to provide preliminary information of mapped environmental resources to planners for the development of transportation plans and to support Project Initiation Documents. The system allows the user to define the limits of a transportation project and overlay views of previously mapped environmental resources that must be addressed during the environmental process. While by no means a substitute for detailed investigations, the tool provides an early warning of environmental constraints and issues, allowing the planners to avoid the resources, if possible, but also to better anticipate the scope, costs, and schedule for the eventual environmental studies, coordination with resource and permitting agencies, and mitigation of impacts.

Second, to augment the physiographic and resource data in the GIS tool, which primarily comes from other agencies' inventories, the Department is conducting its own inventories

to document cultural and biological resources within Caltrans rights-of-way. Using Transportation Enhancement Activities (TEA) funds, the Department has completed the roadside archaeological inventories in Districts 2, 5, and 9; is currently conducting the inventory for District 10; and anticipates commencement for the inventories for Districts 4 and 11 late this fiscal year or early next fiscal year. . The Department is also assembling a data base of biological resources in the right-of-way that is based on prior biological surveys. The more detailed data from these surveys will augment the broad-based GIS planning tool, and facilitate the scoping and scheduling of projects on existing routes.

2) Organizational Change

In January 2001, the Division of Environmental Analysis, formerly under the Deputy Director for Planning, was moved under the Deputy Director for Project Delivery. This organizational change will facilitate project delivery and environmental streamlining, because the key functions during the life cycle of a project are now aligned under one Deputy Director.

3) Tri-Agency Partnership Agreement

The Resources Agency, the California Environmental Protection Agency, and the Business, Transportation, and Housing Agency have entered into a partnering agreement whereby the agency secretaries have committed to work together to achieve a number of mutually beneficial goals. Among the goals are to streamline the provision of

transportation projects without compromising the environmental process; identify and share information on transportation and environmental resource priorities to develop projects which can meet both the objective of improving mobility while also improving the quality of the environment; ensure interagency collaboration as early as possible in project planning and development. These goals are being met through a number of commitments: the agency secretaries serve as a steering committee, which meets quarterly to chart the progress of an upper management working group and a number of teams addressing specific initiatives.

4) “Mare Island Agreement”

As a result of one of the Department/FHWA partnering initiatives, the Department, the FHWA and the Environmental Protection Agency (EPA) entered into a formal partnering agreement in July 2000, in which they committed to the following actions: quarterly meetings of senior management, shared training and outreach, rotational assignments among agencies, reconvene NEPA/404 integration group, provision of staff to resource agencies, proposed pilot study to integrate planning and project, and joint development of guidance. The Partnership Principals and middle managers are meeting quarterly to track and report on the status of the initiatives and to discuss emerging problems, issues, opportunities and agency priorities. This has resulted in improved interagency relationships as well as providing opportunities to gain a better understanding of each agency's mandates and challenges.

5) Resource Agency Partnering Agreements

Through a FY 2000 Finance Letter, the Department received an allocation to fund about 21 positions in federal and state resource agencies to handle priority work within the transportation program. Contracting delays and difficulties establishing and filling positions contributed to a slow start to this program, but 14 positions are now filled, and agencies are actively recruiting to fill the remaining positions. The Department has executed Memoranda of Understanding (MOUs) with these agencies that outline the coordination and review processes and performance measures for this new partnering program. In addition, we are providing each agency with a list of priority projects, to help them manage their workload and establish priorities for staff time. Quarterly coordination meetings with the agencies will provide a forum for the Department and the agency staff to improve consultation and review procedures. Over the next year, the Department will be monitoring agency performance and assessing the need for additional positions, based on current and anticipated workload as well as the ability of the agencies to fill additional positions, if available.

6) Agency Liaison Positions

In addition to providing funding for staff in resource agencies, the Department has created two in-house agency liaison positions, one for the ACOE in San Francisco, and another for the California Coastal Commission. These Department employees help to facilitate agency review of transportation projects, and also provide guidance to Department staff regarding the agencies' information needs. This approach has been quite successful, and the Department is considering establishing such liaison positions for other agencies.

7) Programmatic Agreements with Resource Agencies

Many environmental regulatory processes allow consultation or permitting on a programmatic basis. Depending on the process and resource type, programmatic approaches can be used for similar types of projects (e.g., the Programmatic CE described below); for similar projects/impacts on particular species (e.g., Programmatic Section 7 consultation under the Federal Endangered Species Act); or to substitute alternative procedures for those specified in regulation (e.g., Programmatic Agreement {PA} for Section 106 of the National Historic Preservation Act). In all cases, negotiation of Programmatic Agreements requires substantial initial effort by the Department, the FHWA, and the regulatory agency. However, this investment has the potential to substantially streamline future project-level consultations, as well as to improve the accuracy of project schedules and estimates because the agreements typically specify study protocols and/or mitigation methodologies.

The Department has received a Programmatic Biological Opinion (Section 7) for the Valley Elderberry Longhorn Beetle; final agreements for the coastal red-legged frog and the San Joaquin Kit Fox are imminent. Additional programmatic approaches are under consideration for the Sierra red-legged frog; various species on the north coast (e.g., marbled murrelet); and southern California species in the coastal sage scrub community. The Department has been working with FHWA to develop procedures for informal Section 7 consultation and to develop guidance on the inferred presence of endangered species. For historic and archaeological resources, Department staff is developing a Programmatic Agreement for Section 106, in consultation with FHWA and the State Office of Historic Preservation (SHPO). Execution of this PA (anticipated in 2003) will streamline the Section 106 process by reducing the number of individual consultations with the SHPO. The Department will continue to seek opportunities to use programmatic approaches, where the long-term benefits would outweigh the initial cost of developing the agreement.

8) Mitigation Banking and Process Improvements

Mitigation banking, which involves the purchase of bank "credits" from the bank creator, can help to streamline project delivery by enabling more accurate estimates of mitigation costs, by reducing the time needed for resource agency consultation about appropriate mitigation sites, and by moving the mitigation parcel acquisition process off the critical path for a proposed project. A Mitigation Process Improvement Team has identified changes in Department policies and procedures that would simplify the Department

participation in mitigation banks, and made recommendations to facilitate long-range mitigation planning and development of mitigation cost estimates. The Team's report has been approved, and implementation of adopted recommendations is anticipated over the next fiscal year.

In addition to the mitigation banking effort, Budget Change Proposal #10 for fiscal year 2001 provided resources for three years to determine the effectiveness of the Department's biological mitigation process. The project will produce a statewide catalogue of current projects, including monitoring commitments and lessons learned. The information developed in this study will aid project delivery by providing feedback to staff about the costs, successes and failures of mitigation efforts, which will help to inform future mitigation strategies and will aid the development of mitigation cost estimates.

9) EIS Review Process Improvement

In an effort to improve the quality of NEPA documents and to facilitate the delegation of EIS approval from FHWA Region 9 to the FHWA California Division, in 1998 the Department and FHWA developed a process of concurrent review of EISs. (This process pre-dated the reorganization of FHWA in which regional offices were eliminated and four nationwide resource centers were created, and the approval authority previously held by the regional offices was delegated to division offices.) The process also served as a means for the Department to review and comment on the quality of district environmental documents, a step that had been eliminated in 1988 when the authority to approve

environmental documents was delegated to the districts. The process was reexamined to identify additional improvements and modified in November 2001.

10) Ombudsman for Environmental Streamlining

In March 2001, the Governor created a new position to act as an ombudsman for environmental streamlining opportunities, particularly with state and federal permitting agencies. The ombudsman has identified opportunities to improve internal processes to facilitate communications among parties in the environmental review and to monitor environmental compliance as part of project delivery.

11) Coast Highway Management Plan, Big Sur Coast

Under an interagency agreement, initiated in April 1999, the Department and the California Coastal Commission have agreed to jointly develop a management plan for the Big Sur Coast which includes the following goals: provide a coordinated approach to maintaining the Route 1 corridor along the Big Sur Coast; streamline interagency coordination and regulatory approvals for transportation projects associated with Route 1; serve as a means of coordination with public agencies that manage natural and recreational resources, such as State Parks, Los Padres National Forest, and Monterey Bay National Marine Sanctuary that adjoin Route 1. The Department has funded a position with the Coastal Commission to prepare or assist in preparing portions of the management plan addressing coastal shoreline access, visual resources, land uses, and other pertinent issues.

12) Consistent Approach to Well-Defined Project Need and Purpose

The pitfalls in a poorly conceived project Need and Purpose (N&P) become evident and cause problems during the environmental phase. A good N&P can be an important means of avoiding ill-conceived projects. It is highly desirable to have a consistent N&P concept throughout, keeping in mind that the level of detail increases as the project concept is developed. Ultimately, the N&P needs to include and also exclude certain things in order to get concurrence from partners. A good N&P helps to prioritize projects for programming at the PID stage. It is critical for defining a project's scope, determining which alternatives to study, and evaluating alternatives. It is critical for achieving environmental streamlining. It can also help in identifying potential context-sensitive solutions.

In early 2002, the Department established an inter-department, inter-division team to examine the process by which a project's need and purpose are established and recommend measures to ensure that projects' need and purpose statements are well-reasoned and consistent from the earliest planning stages through the environmental analysis and project approval stage. The team's recommendations are expected in the fall of 2002.

13) Quality Control Plans

The Department is in the process of developing Environmental Document Quality Control Plans for each District or Region to verify that each environmental document has

received the appropriate level of internal review prior to its submittal to FHWA. The plans have been submitted to the Division of Environmental Analysis for review and approval; the Department expects to implement the plans by the end of calendar year 2002.

14) Preliminary Environmental Assessment Report

In December 2001, the Department began to require the preparation of a Preliminary Environmental Assessment Report (PEAR) to support the Project Study Report – Project Development Support (PSR-PDS) for all projects on the State Highway System requiring an environmental document (EIS/EIR and ND/FONSI). The PEAR defines the scope of the subsequent environmental document by identifying the known environmental issues and constraints (using site visits and the improved scoping tools described in Item 1) and informs the development of the workplan (cost and schedule) for the environmental component of the project. The cost estimates for the preparation of the environmental studies and NEPA/CEQA document and proposed schedule thus allow the project development support element to be programmed more accurately. The Department expects that projects for which the environmental support component has a realistic schedule, is appropriately funded, and has been well-scoped will be better projects and will be approved faster.

15) On-Call Contracts

In 2001, the Division of Environmental Analysis established a number of on-call contracts for environmental studies including biological studies, cultural studies, and

“general” environmental work, which could include other necessary studies or document preparation for transportation projects. The contracts are available to the districts/regions to write task orders for work on a specific project using programmed project funds. These on-call contracts allow the districts/regions to quickly obtain consultant services when needed to prepare specialized studies for specific projects.

16) Multi-Agency Working Group to Address Assessment of Cumulative Impacts

Cumulative impact is defined as the impact on the environment, which results from the incremental impact of the project when added to other past, present, and reasonably foreseeable future actions, regardless of what agency or person undertakes them. Cumulative analysis is a requirement of NEPA, CEQA, and the Endangered Species Act; definitions do not match from one set of regulations to the next. In California, with steadily increasing population leading to fragmented and shrinking habitat, this analysis has become both increasingly important and increasingly contentious over the last few years. There is neither agreement among agencies on what constitutes reasonable analysis nor is there mutual understanding of agency mission, jurisdiction, and requirements. Transportation projects proposed to be implemented in areas that are also experiencing growth are now frequently the subject of interagency dispute on the appropriate depth and extent of analysis, and responsibility of the transportation improvement for the impacts and mitigation costs of growth, habitat destruction, and endangered species loss. Project delivery delay is a common result.

The Department is currently embarking on an interagency pilot project to increase mutual understanding of agency mission, jurisdiction, definitions and requirements as they relate to cumulative impact analysis. Key players include the Department, EPA, FWS, NMFS, and the local land use and transportation agencies. Consensus will also be sought on the appropriate level of analysis, and impact and mitigation responsibilities of land use development projects and transportation projects. A long-term goal is to develop a routine, mutually acceptable approach to cumulative impact analysis. Together, these measures are designed to increase predictability of resource agency response to the analysis, improve delivery planning, and streamline project delivery.

17) Standard Formats for Environmental Documents

Department staff from Headquarters, Central Region, and North Region formed a team to develop standardized formats for environmental documents. This effort has served a number of purposes: to facilitate electronic publication of environmental documents on the internet to maximize public dissemination; to provide the State Clearinghouse with electronic versions of the documents; to facilitate reviews by state and federal resource and regulatory agencies by providing a consistent format; to promote statewide consistency within the Department in preparing the documents, and to provide statewide consistency in direction to consultants preparing environmental documents. As part of this effort, a style guide for environmental documents has been prepared in addition to Word templates for the various report formats.

The Department also formed a team of staff biologists to develop standardized formats for the biological technical reports which support the environmental document and the Section 7 consultation as well as a team of environmental planners to develop a standardized format for Section 4(f) Evaluations and to improve and maintain the Word templates for the standardized report formats.

The Department believes that standardized documents will expedite project review and approval since the review agencies will become familiar with the format and know where to expect certain types of information. In addition, a standardized format will improve the organization of environmental documents, allowing context, impacts, and mitigation of each issue to be addressed in one section, and decreasing the amount of internal contradictions resulting from issues being discussed in a number of sections.

18) Disposal Site Quality Team

The Disposal Site Quality Team was formed in July 2000 to address the Department and FHWA policies on disposal sites. There has been controversy regarding responsibility for compliance with CEQA, NEPA, and other state and federal regulations that may apply to these areas during the project development process and throughout construction. Some resource agencies are requiring identification and environmental “clearance” of disposal sites prior to issuance of permits or other agreements, such as biological opinions for sensitive species impacts, causing interagency conflicts, project delays, and unnecessary expenditures of time and money. The team developed recommendations for

changes in policy to clarify responsibility for compliance with environmental requirements pertaining to disposal sites.

19) Standard Environmental Reference

The Department is developing a Standard Environmental Reference (SER) for federal and state requirements for use by the Department, and for federal-aid projects, by local agencies. The project is the result of a recommendation of a process improvement team examining means to improve local agency transportation project delivery; however, it shall be used by Department staff as the guidance for preparing and processing its own environmental documentation. An interagency team represented by the FHWA, the Department, local agencies, and environmental consultants has developed the SER. Publication of the SER began in spring 2002 and continues as chapters are completed. The anticipated date for completion is December 2002. It provides guidance on the preparation of environmental documents to comply with NEPA, CEQA and other environmental laws, regulations, and Executive Orders, and links the user, via the Internet, to sites containing more detailed guidance as well as the text of code sections. The reference also links users to detailed guidance on the preparation of the technical reports, which support the environmental documents. The intent of the SER is to ensure that State and local agency projects comply with the federal requirements in a consistent manner and to serve as an education tool, especially to assist local agencies what to request in consultant scopes of work.

B. Proposed Improvements

1) Improved Scoping and Scheduling

The Department is developing a “proof-of-concept” for a desktop GIS tool that will retrieve environmental data specifically for the PSR. This project expands on the GIS scoping tool mentioned above to simplify user interface, deploy the system on the web, reach consensus among resource agencies as to which data sets shall be employed, and provide a greater level of detail than the current scoping tool. The system will allow efficient, accurate identification of known environmental resource locations at the time of project programming. It will also increase environmental resource and regulatory agency confidence in the Department as demonstrated by consistent identification of resources of concern early in the process. Access to good quality environmental data at the PSR stage is crucial to accurate development of project cost, scope and schedule. Poor quality information in the PSR can result in inadequate or inaccurate understanding of environmental resources of concern in the project area at a critical time in project development. Later in the project development process, opportunities for project redesign for avoidance become fewer. Conflict with environmental resource and regulatory agencies can also increase as a result.

The goal of this study is to design a desktop tool to retrieve environmental data in a logical format that can be used by a variety of individuals in the planning, programming and development of a transportation project. It can also help the environmental specialist

access data for the environmental document and assist local agencies in scoping their transportation projects using a regional frame of reference. Data sets to be used will be identified in coordination with State and Federal environmental resource and regulatory agencies. If the “proof-of-concept” of this tool is approved the project will proceed to the application development stage for eventual rollout to staff statewide.

2) Renegotiation of NEPA/404 Integration Process MOU

In 1994, the Department, the FHWA, the FTA, the U.S. Army Corps of Engineers (ACOE), the U.S. Environmental Protection Agency (EPA), the U.S. Fish and Wildlife Service (USFWS), and the National Marine Fisheries Service (NMFS) executed a Memorandum of Understanding regarding integration of NEPA and procedures for implementation of Section 404 of the Clean Water Act. Due to changes in the ACOE's Nationwide Permit Program (NWP), which went into effect last year, as well as organizational changes within FHWA, the signatory agencies agreed in August 2000 to revise the MOU. The primary purpose of the integration process is to enable the ACOE to fulfill its NEPA responsibilities for its Section 404 permit action concurrently with the FHWA/Department NEPA process, through early consultation on project need and purpose, alternatives, and the least environmentally damaging practicable alternative. A working group comprising of representatives of all agencies has met regularly to update and revise the MOU, and a final agreement is anticipated this fiscal year.

(NOTE: USDOT has withdrawn the proposed regulatory revisions and technical advisory.)

3) Programmatic Categorical Exclusion

FHWA regulations to implement NEPA (23 CFR 771) include a list of project types determined normally to have no significant environmental impact, but require FHWA verification that the particular project meets the exclusion criteria. Since 1990, the Department and FHWA have had an agreement defining a set of conditions for programmatic processing of certain NEPA categorical exclusions. The agreement allows programmatic processing when the project does not involve a number of issues, which require compliance with separate federal laws, such as Section 106 of the National Historic Preservation Act, Section 7 of the Endangered Species Act, Section 404 of the Clean Water Act, or Section 4(f) of the Department of Transportation Act. “Programmatic CEs” require the same documentation as a regular categorical exclusion but do not require review and approval by FHWA staff. Several years ago, the Department and FHWA were unsuccessful in renegotiating a new agreement to include a broader range of projects, but now are entering into a new set of negotiations to update and expand the programmatic approach.

For additional information, contact Denise O'Connor at (916) 653-5157.

IX. Right of Way

A. Implemented Improvements

1) One-Call Acquisition

Right of Way implemented a One-Call Acquisition Process, which allows a Right of Way Agent to issue a Draft Purchase Order (DPO) (check) on the first call for low value parcels (\$2,500 or less) and conclude the acquisition transaction on the spot with immediate payment. This process was developed in conjunction with Accounting, Audits, Right of Way, Department of Finance, and Board of Control. This allowed immediate payment to the property owner where the normal payment process could take at least one month. This not only improved customer service, but also reduced the number of field trips by the Right of Way Agent.

2) Single Agent Appraise/Acquire Process

Implemented a Single Agent Appraise/Acquire Process which permits a single Right of Way Agent to appraise, acquire and relocate personal property on parcels that are valued at \$10,000 or less. Prior to receiving a policy exception from FHWA, the property owner had to work with three different agents who were each responsible for a single function.

This process was originally developed as a pilot program with specific approval from FHWA to deviate from regulations. FHWA mandated that the owner's rights to a fair

appraisal would not be jeopardized. After the pilot program was evaluated and approved for statewide application, policies and procedures in the Right of Way Manual were changed to provide staff with guidance on the Single Agent Process.

The Single Agent Process for non-complex parcels valued below \$10,000 has been in place for several years. In the recent Quality Enhancement Joint Review conducted by Headquarters Right of Way, several of these types of parcels were reviewed. The review indicated the process appears to be functioning rather well, specifically in the northern part of the state. The process reduces Right of Way processing time in that the parcel is not handed off to the various functions as it works its way through the system. This process eliminates multiple trips to the property, saves both the agent and the owner's time in providing information about the property and establishing rapport at each meeting.

3) Reduced Process for Parcels < \$10,000

In lieu of a regular, full appraisal, Right of Way obtained a waiver from FHWA for less documentation for parcels having an estimated value of \$10,000 or less. Such parcels account for more than 50% of all parcels acquired by the Department.

Three valuation formats, as alternatives to the full narrative appraisal, have been established in an effort to reduce the time required to value lower valued parcels. In each of these three formats, substance and brevity should be the norm. The amount of analysis

and degree of documentation should be in proportion to the appraisal problem and valuation involved.

Non-complex parcel valuations of \$10,000 or less may be appraised utilizing either the memorandum appraisal format, or a very succinct narrative appraisal.

Additionally, Code of Federal Regulations (49 CFR 23, 102.2) provides that an appraisal is not required for parcels estimated at \$2,500 or less, and FHWA has recently raised the limit to \$10,000 or less. The valuation problem must be uncomplicated, and is documented in a “Determination of Just Compensation.” Because a Determination of Just Compensation is not an appraisal, it cannot be used to obtain Resolutions of Necessity, or establish the amount for deposit in a condemnation proceeding.

Determination of Just Compensation valuations of \$2,500 or less can be documented with a diary entry. The diary entry should state the basis of the value conclusion and include a photograph of the subject.

4) Resolution of Necessities by Locals

The Department is the responsible agency for obtaining Resolutions of Necessity for all projects on the state highway system, irrespective of whom is the lead agency or who does the right of way work. The CTC is the State’s governing body for adopting Resolutions of Necessity. However, statute provides for specific authorization on a project by project basis to allow a County Board of Supervisors, in lieu of the CTC, to hear Resolutions of Necessities, upon written approval by the Department. The

guidelines for this exception and approval process are outlined in Department Memorandum dated December 10, 2001.

5) Right of Way Acquisition prior to Environmental Approval

Right of Way appraisals may be completed during the Preliminary Right of Way Phase of the project (see Planning & Management Functional File Memo #94-1 and Right of Way Appraisal Manual Section 7.01.06.00). One overriding criteria is that the preferred alternative must have been made public. Federal Funds must be pre-authorized (see Right of Manual 3.05.00.00).

Acquisitions can be completed using State only funding under specific guidelines (see Acquisition Reference File 00-1). Federal regulations permit early acquisitions without federal participation; however; they do allow the value of a parcel acquired or donated lands to be used as a soft match for the non-federal portion of a federal aid project.

Right of Way may acquire the property prior to environmental approval if the project is non-controversial and the project has been programmed. All laws, regulations, and policies including Uniform Relocation Assistance and Real Properties Acquisition Policies Act, must be followed throughout the acquisition process. A Letter of Qualification (LOQ) shall be approved by the Right of Way Division Chief documenting how the project meets the criteria set forth in the guidelines. Documentation will be maintained in the project file. The LOQ shall contain signatures of the Region/District

Division Chiefs for Project Development, Environmental Planning, and Right of Way, indicating their concurrence.

6) Streamlined Positive Location (Potholing) Process

Recent approval of the streamlined utility positive location process where the State pays 100 percent of cost will allow the State to take full control of the process to locate underground utilities, to support both Project Development and Construction Programs. This will be accomplished utilizing a State-funded service contract. This process is expected to enhance timely project delivery, improve utility relocations and minimize delays due to unidentified utilities during construction.

7) Implemented Right of Way Project Delivery Team

Use of Right of Way Project Delivery Team to deliver Right of Way products/services on non-complex small projects has proven to be an effective tool to accelerate and enhance project delivery. The Project Delivery Team concept utilizes full-service Right of Way project delivery teams rather than a functional organization. These teams are responsible for delivering all Right of Way products and services necessary to advertise and award projects. The team concept results in timesaving because there are fewer "handoffs" from one functional organization to another. The team owns a project from the earliest estimate to final closeout. Team members gain a broader perspective of project delivery and tend to "own" projects rather than having a single functional perspective. Team

members become exposed to many Right of Way skill areas without having to formally rotate. However, the team approach may preclude development of specialized expertise required for more complex projects.

8) Quality Enhancement Joint Review Process

Implemented the use of Quality Enhancement Joint Review process to identify functional readiness gaps and to identify Best Business Practices. This process was intended to improve the processes established to provide quality products or services. Every fiscal year a plan is established as to what functions to review for the following fiscal year. Critical monitoring areas are developed prior to the review and shared with the Region/District Managers. This review is conducted using a team approach comprised of a HQ functional senior as the team leader, a visiting Region/District agent and the hosting Region/District functional senior. In addition, an FHWA representative may participate, as may the Quality Enhancement Joint Review Project Manager. The teams are charged with looking at the functional strengths, areas for development, projected workloads and staffing needs, training needs to deliver the work products, and Best Business Practices. This process has worked extremely well, has opened up communication channels and has been a good forum to share knowledge/expertise statewide. This process included functional reviews of the statewide delegations and 23 and 49 Code of Federal Regulation Compliance Reviews.

9) Right of Way Intranet Site

The Right of Way Intranet site is being used to disseminate Best Business Practices and other useful information. Right of Way utilizes its Region/District Quality Enhancement Joint Review (QEJR) process to examine processes and procedures to ensure compliance with applicable statutes, regulations and policies. A major by-product of these reviews is the compilation of "Best Business Practices." A web page that allows others to view these Best Business Practices is sorted by function, subject, and Region/District. This site also allows users to submit Best Business Practices and to query others regarding unique Right of Way situations. This site is new but should provide a useful method for communicating throughout the Right of Way Division.

10) Utility Design Activities Prior to Environmental Approval

A utility company may commence utility design activities, prior to the approval of the Environmental document with prior Headquarters approval. A district/region's request for approval to order utility design activities, prior to approval of the environmental document may be submitted only upon completion of the environmental studies and the selection of the preferred alternative for the project. The guidelines for this exception and approval process are outlined in Utility Reference File No. 02-01.

B. Proposed Improvements

1) Revise Utility Relocation Master Agreements

Revise Utility Relocation Master Agreements to help expedite Right of Way project delivery. The Department currently has master contracts with nine (9) utility companies. These contracts date back to the early years of the freeway system and apply to freeway relocations only. Each of these contracts was negotiated separately and the terms vary widely. The contracts are complex and each contract must be evaluated as relocations occur. Right of Way is formulating a universal 50/50 Master Agreement for all utility companies to equally share the cost of utility relocations for freeway projects. A 50/50 Agreement will eliminate the time and staff expense presently needed to evaluate liability, provide an equitable and uniform single standard of cost apportionment, simplify the process, eliminate interpretation problems and eliminate conflict and litigation. Implementation of this Non-Master Agreement is expected to save time and money for project delivery.

2) FHWA Delegation

The Right of Way Division will be requesting FHWA to approve an expansion of utility relocation activities that can be accomplished during the preliminary Right of Way phase without jeopardizing federal aid participation. Right of Way will request for approval as allowable to proceed with all Utility activities (conflict, identification, relocation plans, ordering long lead time materials, and preparing utility relocation agreements) but not

including, the issuance of a utility relocation notice activities prior to regular Right of Way. This will be a substantial expansion of currently allowed utility activities prior to PAED.

3) Analyze Draft Purchase Order Limit

Right of Way will request an audit on Right of Way's existing uses of \$2,500 Draft Purchase Orders (DPO) and determine if an increase in the amount is warranted. Department of Finance, Board of Control has approved the DPO amount to \$10,000 for "Right of Way Acquisitions Only". The existing use of the \$2,500 will have been in existence for 1 year as of July 1, 2001. Right of Way will request an internal audit be performed on the existing process to determine if the Draft Purchase Orders are being appropriately utilized and then determine if the need for an increase is warranted. Since 50% of Right of Way's parcels are estimated to be under \$10,000, this will be a very effective and efficient tool to assist in accelerating project delivery and improving customer satisfaction.

4) Increase Awareness of Right of Way Activities

Increase the awareness of Right of Way Activities with Project Delivery partners by conducting various Right of Way training courses to non-Right of Way. Start having joint Right of Way Management Board meetings with other programs within Project Delivery, and jointly review projects in the field.

5) U.S. Forest Service Agreement

Together with the U.S. Forest Service and FHWA, the Department will assist in developing a three party MOU, for implementation in all National Forest Management Regions within California. The MOU will clarify future project lead agency environmental responsibilities and processing, facilitate Right of Way acquisitions on those projects, and provide a vehicle to clear up previous title issues along existing highways. In an effort to improve interagency processes and expedite project delivery, the Department will take the lead agency role for completing the environmental process. The process requires a centerline and standard corridor measurement be established on all existing and new highways so that Right of Way can easily acquire consistent rights through the forest lands, and even across district lines. Policies and procedures in the Right of Way Manual will provide guidance for Department staff.

6) Increase Expert Witness Pool

The Right of Way Division will be expanding the size and improving the quality of its expert witness consultant pool through development of an informational Internet web site that identifies specific contracting categories, sets forth qualification requirements, and provides for processing resulting applications. Categories will include Goodwill, Machinery and Equipment, and Real Property. A Department Headquarters Right of Way review team will review applications of the Goodwill and Machinery and Equipment Appraisals. District review teams will review applications for Real Property

Appraisers. Qualified applicants will be placed on a statewide list. The contractors will establish preferences for locations for which they prefer to be considered. The districts will be able to draw from a pool of qualified contractors with short notice.

7) Analyze Agent Appraisal/Acquire Limit

The Right of Way Division has requested FHWA approval to increase the successful “Single Agent Appraise/Acquire Process” from \$10,000 to \$25,000. The original request for a pilot project in the Southern Right of Way Region for several soundwall projects where required, was for temporary construction easements for those soundwall projects are expected to exceed the \$10,000 limit but most should be under \$25,000. The request has been modified to include at least one pilot project in each district where the property value estimates exceed \$10,000 but the acquisition and relocation is considered non-complex.

Current requirements for preparation of an appraisal over \$10,000 are still in place, but a similar agent can prepare the report, based on the inspection of the property and discussion with the owner, and complete the acquisition and relocation activities.

8) Letter/Notice to Property Owners For Environmental Study Entry

In selected situations where entry onto private property for environmental study purposes does not interfere with the property owner's use, and is clearly non-invasive in nature, such as walk-on visual inspections, taking photographs, etc., in lieu of obtaining written consent, Right of Way Managers may elect to send an informational letter to the property

owner. The letter informs the owner of the purpose and impact of such entry or has specific instructions they wish to have observed during such entry (personal contact before entering, closing livestock gates, instructions concerning dogs, etc.). Where appropriate< this tool can streamline the process and safe project delivery cost and time.

For additional information, contact Bimla Rhinehart at (916) 654-2450.

X. Division of Engineering Services, Office Engineer

The Division of Engineering Services Office Engineer (DES-OE) receives Plans, Specifications and Estimate for Capital Outlay projects from department district offices. DES-OE prepares the contract documents, advertises the projects, opens bids and awards the construction contracts. In 2001-2002 Fiscal Year, DES-OE awarded approximately 600 contracts worth a total of approximately \$3 billion.

A. Implemented Improvements:

1) Reduced Advertising Period

The “Advertising Period” is the duration from when contract documents are available to contractors for bidding to the time bids are opened. Projects costing over \$1 million had advertising periods reduced by a week or more. In addition, DES-OE reduced the advertising period for Safety Projects, under \$2.5 million with 50 or less contract items, from 4 to 3 weeks. Maintenance projects with less than 20 contract items or plan sheets, had their advertising periods reduced to 3 weeks. All these reductions were made without requiring a change to State statutory or Federal requirements.

2) Reduced Listing Period

The “Listing Period” is the time used for final plan sheet preparation, disadvantaged business goal setting, final development of bid books, proofing, and reproduction of bid

packages. DES-OE reduced the 6-week listing period to 4 weeks. Contract preparation activities during the listing process were compressed by taking advantage of efficiencies in office automation and reproduction of contract documents.

3) Redesigned Website

The DES-OE Internet website was developed to provide up-to-date information to the construction contracting community as well as to automate the distribution of contract advertising announcements, bid result information and plans and specifications. DES-OE redesigned the DES-OE Internet website to improve its performance to our customers; the “look and feel,” content and frequency of data refresh were improved.

4) Streamlined Plans, Specifications and Estimate (PS&E) Submittal Process

Plans, Specifications and Estimate (PS&E) submittal process is the process where PS&E is submitted from the districts to DES-OE for contract preparation. DES-OE reduced the submittal time from 3 days to 0 days. This efficiency was achieved by DES-OE’s development of a fully electronic PS&E submittal package.

5) Developed Specifications and Guidelines for Design Sequencing

DES-OE developed specifications and guidelines for advertisement of “Design Sequencing” in selected pilot projects. This project delivery method, allowed by legislative pilot, allowed projects to be advertised for which the completed plans and specifications would be provided to the contractor during the construction phase.

6) Training by DES-OE to Enhance Project Delivery

The following DES-OE training efforts were implemented and will be given on a continuous basis:

- Training Project Engineers and District Specification Engineers on the "Project Preparation and Review" class. The target audience for this class is engineers with less than 5 years of experience or new engineers to the Department. The objectives of the class are threefold: 1) participants will be able to prepare a plans, specifications and estimate (PS&E) package that is consistent (i.e., work shown on the plans is consistent with what is in the estimate and the specification); 2) participants will be able to prepare a PS&E package where work shown on the plans is fully covered in the Specifications and Estimate; and 3) participants will be able to prepare a PS&E package that is complete, biddable and buildable (i.e., can be bid upon cost effectively and built within the estimated working days with a minimum of avoidable contract change orders.)
- Training District Specification Engineers (DSE) (Electrical, Landscape and Civil) as DES-OE Specification Engineers. This training is performed in DES-OE where the DSE performs the work of the DES-OE Specification Engineer. The objective of this training is to familiarize the DSEs with the DES-OE processing timeline and milestones and to produce more PS&Es in qualified form. The other purpose is to expose the DSEs to different projects and issues so that DES-OE has additional

trained staff to assist during the DES-OE peak periods and to ensure the department's program stays on schedule.

- Sending DES-OE staff to districts to be trained to do the work of the DSE and become more familiar with district issues. This training is performed in the districts where the DES-OE SE goes to the district to process a PS&E for submittal to DES-OE.
- Project Manager Training: Train district project management and support staff on how to use DES-OE project management tools to manage delivery of their projects through DES-OE.
- OE Academy: Train District Specification Engineers to give them the knowledge and tools they need to deliver high quality PS&E's to DES-OE. Most of the issues that delay advertisement or bid opening and award of contracts can be avoided if the Enginjkhuo9eers who prepare projects in the district were aware of them. Therefore, the emphasis is on training District Specification Engineers to identify and correct issues before sending the projects to DES-OE.

7) Compressed Processing for “Qualified” Projects

DES-OE qualified individual District Specification Engineers to provide projects in a more complete fashion (“qualified projects”). DES-OE implemented compressed PS&E processing for qualified projects less than \$5 million.

8) Workload Sharing between DES-OE and Districts

Peak workload occurs at different times in the districts and DES-OE. DES-OE solicited District Specification Engineers to perform DES-OE work during our peak period in order to deliver the Minor A and Maintenance programs. Award of these projects is required by June 30 of each year. DES-OE sends specifications engineers to the districts to assist them during their peak period. Implementation of workload sharing could reduce overtime usage in both the district and DES-OE.

9) Electronic Bidding Pilot

The first step towards getting to electronic bid submittals was completed recently with a pilot effort by DES-OE. The goals of this effort were to demonstrate proof of concept, facilitate greater small business participation, and test contractor acceptance in using Internet based bidding. The concept for a pilot effort was submitted to the Department of General Services (DGS) for consideration in the Governor's then newly formed California One-Stop eBusiness Center. DGS accepted the concept and Caltrans staff worked with DGS consultants to develop a basic pilot system. The pilot effort consisted of five Department construction projects ranging in size from \$120,000 to \$3,900,000 and was operated from January 2002 to April 2002. With the exception of one minor technical incidence, bids for all five projects were received, opened, and awarded entirely on-line.

10) Implemented Authority to Advertise District Delegation Process

Administered policy, trained staff and processed projects in which districts provided complete and fully funded projects ready to advertise. These projects were immediately listed for Advertisement and sent to reproduction with no engineering review by DES-OE. Approximately 120 out of a possible 350 Minor A, Maintenance and CTC SHOPP delegated projects were processed using AADD in the 01-02 FY.

11) Implemented Risk Advertising and Schedule Recovery Processes

Administered policy, training staff and processed projects where critical projects, if approved, were able to be accelerated through DES-OE and allowed to proceed through Advertisement without being complete and/or without full funding.

12) Soundwall Specification

The Division of Design and the Division of Engineering Services worked together to develop a new alternative soundwall Standard Special Provision (SSP) to facilitate the inclusion of alternative soundwalls in PS&E packages.

Designers will find that the new SSP will allow them to consider a variety of Pre-approved alternative soundwall types during the design process. This is largely in response to the requests from communities and local and regional partners who are

seeking innovative alternatives to masonry block wall and pre-cast concrete noise barrier structures that have dominated the soundwall market to date.

The new SSP and descriptive information on its utilization can be found by obtaining the September 03, 2004 Memorandum from Structure Design Services & Earthquake Engineering titled “Alternative Soundwall Specifications.”

B. Proposed Improvements:

1) Standard Specifications and Standard Plans in Dual Units

Many local agencies use the Department’s Standard Specifications and Standard Plans for their construction contracts. When the Department adopted the metric system, we discontinued updates to the English versions of these documents. To accelerate delivery of local projects, local agencies have requested English unit updates. Upon authorization from management, DES-OE has facilitated the development and publication of the Department's Standard Specifications, Standard Plans and Standard Special Provisions in dual units (metric and English) to expedite delivery by local agencies of projects not on the State highway system.

2) New Training Classes Provided by DES-OE

DES-OE will encourage the districts to develop better quality PS&Es and to better manage their project delivery. The result will be project acceleration, a reduction in the amount of effort and time needed by DES-OE to develop final contract documents, better bids and reduced contract administration problems in construction. In addition to the training we are already providing described in section A6 above, the following training classes will be developed and implemented:

- Qualified Process Training: Enhance training to certify additional Qualified District Specification Engineers to produce PS&Es in final form.
- Basic Engineers Estimate System (BEES) Training
- Quality Control/Quality Assurance/Independent Assurance Training for bringing project to a Ready to Advertise state prior to submittal to DES-OE.

3) Electronic Submittal and Review of Plans, Specifications and Estimate to the FHWA

Implement pilot project to provide FHWA with electronic plans, specifications and estimate for review of non-exempt projects. Implement electronic process to communicate project reviews and approvals.

4) Enhanced Internet Access to Project Plans and Specifications

Implement “I-Doc” project to publish electronic plans and specifications on the Internet in a fully indexed and easy to use format.

5) Provide Electronic Access to Project Documentation

Implement electronic access to project documentation by other functions in the department and FHWA to facilitate information sharing and project delivery. Included in this project is automatic e-mail notification to other programs when DES-OE receives a PS&E submittal from the district.

6) Internet Bidding

DES-OE sees the potential for getting lower project costs through increased competition and also for shortening processing times via internet bidding. Work has already begun on the next phase, which is to get Department of Finance approval and funding for procuring and implementing a full production system. Approval is targeted for fiscal year 2005. Contractors are looking forward to that day when they no longer have to turn in their paper bids.

7) Purchase of Bid Packages Via the Internet

Implement system to allow purchasing of construction contract bid packages via the Internet by contractors and subcontractors.

For additional information, contact Brian Lee at (916) 227-6270.

XI. Construction

Speed of construction is contingent on the quality of the plans and specifications, the quality of the contract administration, and the means/methods selected by the contractor. The Department has control over the first two items and influence over contractor means/methods.

A. Implemented Improvements

1) Constructability Reviews

Prior to formalizing constructability reviews in 1997, project engineers were only required to have the final draft project plans and specifications reviewed by construction staff. On complex projects and value-engineered projects project engineers might include construction staff during the project study and/or design phase. In 1997, the Division of Design issued a policy guideline institutionalizing constructability reviews at appropriate milestones.

2) Cost-plus-Time (A + B) Bidding

In A + B the successful bidder has the lowest combination of “A” contract amount (item and/or lump sum) and “B” total number of days bid by contractor to complete the work multiplied by the road user costs (as predetermined by the agency). Payment to the contractor is the “A” amount and the contract duration is the “B” amount. Contractors on

A + B bid contracts have generally bid fewer working days than calculated by the Department (average is 14% fewer working days). A + B bidding was piloted in 1993. In 1995, FHWA determined that A + B bidding was no longer experimental and agencies were allowed to implement on projects without FHWA prior approval. New specifications and guidelines for employing A + B Bidding on projects were issued in September 2002. As a goal for 2003-04, the Department would like to increase (compared to previous years) the number of projects advertised that use A + B bidding, in the over \$5 million range.

3) Incentives/Disincentives (I/Ds)

I/Ds encourage a contractor to meet the contract's specified schedule. The incentive and disincentive may be based on liquidated damages and/or road user costs. Rarely used previously without A + B bidding on emergency contracts, guidelines for employing A + B bidding and/or I/Ds on projects were issued in June of 2000.

4) A + B with I/Ds

These two items can be used together to encourage timely delivery and meeting specified project milestones.

5) Joint contractor/state Value Analysis Study immediately after contract approval

A special provision “Value Analysis (VA) Study Workshop,” is being included in all contracts estimated to cost more than \$5 million. This specification provides an opportunity for Caltrans and contractor staff to meet for the purpose of generating and developing ideas for reducing the contracts cost and time.

6) Construction Contract Time

A new policy implemented in February 2001 requires project engineers to employ standard industry production rates and critical path method (CPM) schedules on all major projects (costing \$750,000 or more) to determine construction contract time. Previously, project engineers would review projects of similar cost and scope to estimate project time or use in-house production rates to determine contract time. The Department is also utilizing new technologies to decrease construction contract time. One of these technologies is Fast Setting Hydraulic Cement Concrete. As the name suggests, this concrete sets fast but has high cost and limited use.

7) Review of Differing Site Conditions (DSC) Disputes by a Management Review Committee

Differing Site Conditions (DSC) disputes can be particularly complex, difficult to analyze, and require the consideration of various sources of information. In addition, DSC disputes often occur during the subsurface work performed early in a project, and therefore can be protracted disputes that are costly to the Department when not resolved

early. For these and other reasons, DSC disputes are a relatively common dispute during both the claim administration and arbitration phases of dispute resolution.

A new process implemented in February 2002 to resolve Differing Site Conditions (DSC) disputes earlier and to clarify the Department's position on the dispute. This process takes place after the Contractor files a notice of potential claim regarding a DSC and involves a management review committee early in the potential claim process. The management review committee consists of the deputy district director, construction (chairperson), the structure construction area manager, and the construction coordinator. This process also provides an opportunity for the Department to maintain statewide consistency in dealing with DSC disputes.

8) Overview of Time Related Overhead Specifications

Caltrans has developed and implemented use of a Time Related Overhead (TRO) specification to provide timely compensation to its construction contractors for owner-related delays. Caltrans initiated a pilot program in August 2000 to include the TRO bid item and specifications in construction contracts greater than \$5 million. Preliminary results from a formal evaluation of the pilot program are favorable. Some of the benefits of using TRO specifications include:

- Allows a bid item for compensation of TRO based upon competitive bidding that is driven by market forces and contractor efficiencies.
- Permits administration of overhead compensation at the resident engineer's level.

- Provides “real time” project management, allowing the project manager and resident engineer to quickly quantify delay cost impacts as the proposed changes or disputes occur.
- Reduces contentious, non-partnering atmosphere. Eliminates polarized positions on overhead disputes during contract administration.
- Resolves delay issues before the completion of the work.
- Eliminates time-consuming, complex, and expensive audits in most cases.

Caltrans management plans to continue the use of TRO specifications in State Highway projects over \$5 million and potentially increase the scope of projects that use it after further evaluation.

9) Increased construction cost savings to the contractor for reducing traffic congestion

A legislative proposal was initiated by the Department to encourage contractors to submit more cost reduction proposals that would reduce or avoid traffic congestion during construction of a project. As a result, AB 1530 was approved last year and became effective on January 1, 2002. This bill increases the compensation to the contractor from 50% to 60% if cost reduction changes significantly to reduce or avoid traffic congestion during construction. A special provision “Cost Reduction Incentive” is revised and being included in all contracts to implement this bill

B. Proposed Improvements

1) Policy to Pay for Acceleration Costs During Construction When Cost Effective

A Department/industry team chartered to focus on contractor enhanced Transportation Management Plans is including this item as an output. Cost effective is being defined as avoiding motorists' delays. The team is considering a “Cost Reduction Incentive Proposal” (CRIP) type of specification that would compensate contractors for avoiding/minimizing actual motorists' delays.

2) Contractors Involvement on Pre-Bid Design Phase

The above Department/industry team chartered to focus on contractor enhanced Transportation Management Plans is including this item as an output. The intent is for contractors to be involved at some point in constructability reviews without comprising the fair bid process.

3) Information Technology Systems

Improve and add functionality to existing information systems and develop new systems that reduce manual processes, allowing improved contract time monitoring and reduction in delays. A significantly larger proportion of the field construction staff's time will be available for ensuring timely prosecution of the work and earlier resolution of delay disputes.

4. Automated Workzone Information System

In an effort to improve safety and traffic operations in work zones, the Department made the decision to deploy for evaluation different Automated Workzone Information Systems (AWIS) at different construction work zones around the state. Up to six systems are planned for this evaluation. The AWIS systems can provide real-time traffic delay, speed, alternate route or special events information to the motoring public.

5. Lane Closure Software

Construction, Traffic Operations and Maintenance have been working on an interim lane closure request/processing/tracking system to reduce the amount of time to request/accept closures.

6. Notched Wedge

Current Department guidelines allow for a 46 mm vertical lane-to-lane drop off at longitudinal construction joints for asphalt concrete (AC) paving operations. A number of states across the country are allowing Contractors to utilize a tapered wedge at the longitudinal joint in lieu of a vertical joint. The tapered wedge is typically constructed by means of a strike off plate attached to the outside of the screed. The Department is proposing to allow Contractors the opportunity to utilize this device on contracts with AC paving where lift thickness are between 60-75 mm.

For additional information, contact Scott Jarvis at (916) 651-6284.

XII. Local Assistance

A Implemented Improvements

The Division of Local Assistance (DLA) has implemented the following changes and added a number of services to improve delivery of local agency projects.

1) Increased Training

The existing training program is constantly being updated and revised to help local agencies with project delivery. Disadvantaged Business Enterprise (DBE) training classes were updated to educate local agencies on DBE goal setting and Construction Contract Administration requirements. A STIP course was added to teach local agencies STIP programming and implementation procedures. A Consultant Selection course was revised to help local agencies with various consultant selection procedures and consultant contract management.

A training advisory team continues to meet for the purpose of reviewing the existing training curriculum and recommending changes or new classes. The Team has representatives from the DLA, RTPAs, and local agencies, and meets several times each year. Training continues to be made available through the Cooperative Training Assistance Program (CTAP) and Local Technical Assistance Program (LTAP).

A Local Assistance Academy continues to train new Local Assistance employees. Work continues with various HQ divisions to include local agencies in Capital Program Skills Development (CPSD) courses and academies, such as Right of Way Academy, Bridge Design Academy, Environmental courses, New Technology and Research-Intelligent Transportation Systems (ITS) courses, and Design courses.

2) Increased Technical Assistance

The DLA has added staff in headquarters and the districts to accelerate project review and approval, for local agencies seeking reimbursement through various federal or state funding programs. Department staff is now available to provide technical and advisory support to local agencies in the following seven areas: 1) Environmental, 2) Design, 3) Construction Management with District Construction Contract Monitoring, 4) Project Management Support, 5) Preliminary Engineering, 6) Hydraulics, and 7) Right of Way. The Department will consider reimbursable work requests from local agencies on a case-by-case basis.

3) Simplified Agreement Process

A simplified agreement process has been implemented for local agency projects to receive federal funds. In the past, separate Program Supplement Agreements (PSA) were required for each phase of the project, namely Preliminary Engineering, Right of Way, and Construction. Under the new process, a PSA is needed only for the first phase of the

project involving federal funds. The future phases of the project could be included into the agreement simply by the approval of a finance letter.

The DLA has also provided a “Sample Blanket Resolution to the local agencies. By adopting this blanket resolution, the local agency need not get a specific resolution from its Council or Board for the execution of each PSA. This has eliminated the need to wait for the Council or Board to meet every time a PSA needs to be executed.

4) Delegated Allocation Authority

The Commission has delegated to the Department the authority to make allocations for certain categories of local agency projects programmed in the STIP. The DLA continues to take full advantage of this delegated authority.

5) Reduced Number of Pre-Award Audits Requirements

The DLA has issued a Local Programs Procedure (LPP 00-05) that eliminates the pre-award audit limit for consultant contracts under \$250,000 for all federal and state-only funded Local Assistance projects. It also increased the current service contract threshold from \$25,000 to \$100,000.

6) Use It or Lose It

Implementation of the “use it or lose it” provisions provided a significant incentive for on-time delivery of locally designated, federally funded RSTP/CMAQ projects. This legislation was enacted to provide a disciplined, structured and accountable environment for the delivery of local RSTP and CMAQ projects. Specifically, the legislation states that RSTP and CMAQ funds not obligated within the first three years of federal eligibility are subject to redirection by the CTC in the fourth year. For the first cycle, regions were notified that they needed to obligate about \$330 M in these funds to keep from losing them. At the end of the one-year period (January 2001), no funds were lost. For cycle 2, noticed on December 5, 2000 at \$277 M (including regional TEA), the balance is down to \$34 M as of February 28, 2001. A six-month extension for cycle 2 was granted by the CTC. The regions with outstanding cycle 2 balances have until June 5, 2002 to obligate these funds.

7) Manuals and Guidelines on CD ROM

The Publications for Local Assistance is available on CD from the Department Publications Unit. This CD acts as a one-stop shop for information and promotes better access to helpful information for local project delivery. Especially useful as a starter kit for new staff, the CD provides local agencies and their consultants with fast and powerful access to essential information. Local project sponsors will find the CD full of manuals, handbooks, and other publications that address procedures, practices, policies, and standards. The *Local Assistance Procedures Manual*, *Local Assistance Guidelines*, *Local*

Assistance Guidebooks, the Department's Standard Plans and Specifications and all previously released Local Program Procedures (LPPs) are some of the publications included on the CD. Most of these publications are posted at the Department's Website, but the CD enables PC users to find information without requiring Internet access or performing an on-line search. The CD is part of an ongoing effort to provide more "user-friendly" manuals for local assistance project delivery.

8) Improved Program Management Direction and Communications

The Local Assistance Management Board (Division Chiefs & Program Manager) & Council (DLAEs and DLA Office Chiefs) were established; 1) to identify issues, 2) to recommend corrective actions to help local agencies achieve efficient, effective, and timely delivery of transportation projects, and 3) to strengthen the state/local partnership. The Local Assistance Program Strategic Plan was developed via the Local Assistance Management Board. The plan includes Mission, Vision, Goals, Objectives, Strategies and Performance Measure areas, which target specifics in delivery and supporting areas.

9) Electronic Forms (Forms Plus)

Currently, there are a large number of forms that local agencies must complete when submitting a request to receive funding. Electronic versions of these forms have been developed using a File Maker Pro application. The intended results are to reduce the time and effort needed by customers to complete necessary forms, and elimination of redundant data entries.

B. Proposed Improvements

1) Improved Training

The DLA will continue to refine and expand the training program and improve training to local agencies by more strategically leveraging training resources, providing just-in-time training mechanisms where applicable, and working with headquarter Divisions to increase the number of local agencies attending Department CPSD training.

2) Expedite Reimbursements

The Department is working with the State Controllers Office on developing an Electronic Fund Transfer (EFT) system to expedite reimbursement to Local Agencies. The anticipated implementation date is summer 2002.

3) Standard Environmental Reference

The DLA is working with the Division of Environmental Analysis (DEA) on the completion of the Standard Environmental Reference (SER). The SER will provide a single, standard reference on compliance with NEPA and related federal laws, regulations, and policies for statewide use f\by local agencies, Caltrans, and FHWA. The SER will have links to applicable legislation and other relevant supporting data.

For questions, contact Terry Abbott at (916) 653-1776.