STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

PERMIT ENGINEERING EVALUATION REPORT (PEER)

Developed by the Encroachment Permit Branch,
Caltrans Headquarters, Traffic Operations, May 2002

INTRODUCTION

This booklet is intended as an overview of the Permit Engineering Evaluation Report (PEER).

It is intended to give you information in regards to often-asked questions and to the guidelines for the PEER process.

The information contained herein and copies of the forms supplied have been taken from the 1999 edition of the PROJECT DEVELOPMENT PROCEDURES MANUAL (PDPM) and the 2002 edition of the ENCROACHMENT PERMITS MANUAL (EPM).

This booklet contains the following:

- Frequently asked questions about the PEER, WHO, WHY, & WHEN
- Chapter 9, Article 13 PEER for Encroachment Permit Projects (PDPM)
- Chapter 9, Article 12 (PDPM)
- Chapter 9, Appendix I (PDPM)
- Chapter 2, Requirements for PEER (EPM)
- APPENDIX BB - Fact Sheet Exceptions to Mandatory Design Standards (PDPM)
- Form TR-0112 PERMIT ENGINEERING EVALUATION REPORT (EPM)
- Form TR-0110 ENCROACHMENT PERMIT APPLICATION REVIEW (EPM)

Should any additional information be needed, the following is a list of contacts;

Headquarters Office of Encroachment Permits (916) 654-6232 / 8 464-6232
Headquarters Project Development Procedures (916) 653-5876 / 8 453-5876

PERMIT ENGINEERING EVALUATION REPORT

(PEER)

QUESTIONS & ANSWERS

WHAT IS A PEER?

The primary purpose of the PEER is to document the engineering rationale for Caltrans' decision in a permit action.

The purpose of the PEER is to document the engineering analysis of permit actions that affect operation, maintenance, or tort liability of the State highway. While the PEER serves as the State's project initiation document, its approval also provides project approval.

The PEER combines engineering review of permit proposals into the normal encroachment permit application review to eliminate any separate processing of a PR.

WHERE IS A PEER NEEDED?

As a general rule, a PEER should be prepared when the traffic or other actions generated by the permittee adversely affect operation and/or maintenance of the highway or there is potential to expose Caltrans to tort liability suits.

Where new signalization, channelization, widening, etc., are involved, it is sometimes necessary for the permittee to dedicate additional right of way to Caltrans.

A PEER includes review of the proposed improvements to determine drainage, maintenance, operation, and environmental impacts on the State highway system.

All proposed improvements must conform to Caltrans' current standards and practices or be justified by an approved exception.

All exceptions to mandatory and advisory design standards must be documented by the required Fact Sheets, and attached to the PEER. ***The District Director is responsible for approving the PEER.***

WHO INITIATES THE PROCEDURE?

Upon receiving the permit application, the **District Permit Engineer** will determine if the project is likely to require a PEER. If so, or if the Permit Engineer otherwise determines a need, the Permit Engineer will use the Encroachment Permit Application Review Form (TR-0110) to designate a responsible unit (Design, Traffic Operations, etc.) for possible PEER preparation. The Permit Engineer will request that unit and other involved district units to review the application.

WHAT TYPES OF PROJECTS REQUIRE A PEER?

A PEER is required for every action that has or would have a permanent traffic impact, and for work

that affects the operating capability of a State highway facility.

A PEER should always be prepared when **new operating improvements** are constructed by the permittee that become part of the State highway. These include signalization, channelization, left turn pockets, widening, realignment, public road connections, and bike paths and lanes. Commercial road approaches would not usually require a PEER when grades are flat and there are no sight distance restrictions; otherwise one should be prepared. Widening by adding lanes should be covered 4' by a PEER unless part of a precise plan for the highway adopted by the local agency and previously concurred in by Caltrans.

Drainage work by a permittee should have a PEER if there is potential for tort liability due to changes in upstream or downstream conditions as a result of the construction. Landscape with grading that affects sight distance or clear zones should have a PEER. Daylighting of cuts or other major grading within the right of way would not usually require a PEER unless sight distance or safety factors were less in the after condition.

PEER preparation is considered part of the permit review process, with costs to be charged to the Expenditure Authorization (EA) assigned by the District Permit Engineer.

WHO IS RESPONSIBLE FOR A PEER?

The responsible unit for PEER preparation will usually be **Design or Traffic Operations**, depending upon type of work. Other district units involved, such as Environmental, Right of Way, Utilities, Maintenance, etc., will review the permit application as appropriate. There will be no involvement by them in the PEER unless requested by the responsible unit.

The responsible district unit will review and determine whether or not a PEER is required. The responsible unit will evaluate the impacts of the permit proposal upon the State highway, determine its geometric and functional adequacy, and summarize the findings in a PEER, which should contain the information needed to justify (or reject) the proposed work. If the unit determines that there will be no adverse impact on highway operations, maintenance, and tort liability, it must indicate so in the appropriate box shown on the Encroachment Permit Application Review Form with the signature by at least a senior level person.

WHAT IS PERMITS ROLE?

The permit office must verify that responsible reviewing units have considered the need for the appropriate report.

WHERE ARE USES OF THE PEER?

Usually, the permit work is contained within the existing State highway right of way. These cases most often occur on conventional highways and pose no unusual problems.

Where access control is involved on freeways and expressways, dedications and changes in access control pose special procedural problems. These situations most often occur at freeway ramp terminals where widening or signalization is proposed or new development is planned.

ARTICLE 13 - PEER for Encroachment Permit Projects

Choosing the Correct Report

A Project Study Report (PSR) is not required if a State highway improvement to be funded by others has an escalated construction cost of $1,000,000 or less for projects where the local entity or a developer undertakes preliminary and construction engineering via the encroachment permit process. Instead, a Permit Engineering Evaluation Report (PEER), or occasionally a Combined PSR/PR or Project Report (PR), should be prepared. The following paragraphs describe the PEER and provide criteria for determining when a PEER would be applicable for encroachment permit projects.

Format & Purpose for PEER

The format for a PEER is included in the *Encroachment Permits Manual* and in Appendix I of this manual.

The purpose of the PEER is to document the engineering analysis of permit actions that affect operation, maintenance, or tort liability of the State highway. Such work should conform to current policies and standards, and exceptions should be justified. While the PEER serves as the State's project initiation document, its approval also provides project approval.

The PEER melds engineering review of permit proposals into the normal encroachment permit application review to eliminate any separate processing of a PR. The responsible unit for PEER preparation will usually be Design or Traffic Operations, depending upon type of work. Other district units involved, such as Environmental, Right of Way, Utilities, Maintenance, etc., will review the permit application as appropriate. There will be no involvement by them in the PEER unless requested by the responsible unit.

Applicability

For Projects Less Than $1,000,000

The procedures for PEER preparation apply to projects involving work on State highways by others, costing $1,000,000 or less, except as indicated in the following paragraphs, or where a Combined PSR/PR or a Project Report may be more appropriate as noted in Article 12. Projects costing over $1,000,000 are considered "State highway improvements funded by others". As such, they must be covered by a Project Study Report, or if they meet the criteria, by a Combined PSR/PR. (Refer to Article 12.) The dollar limit referred to above represents the estimated value of permit work improvements within the existing State highway right of way and any right of way dedication to be made by the permittee (dollar limit does not include value of any dedicated right of way).

Not for Routine Utility or Drainage Work

The PEER process does not apply to routine utility and drainage work which is generally installed laterally and sometimes longitudinally within the right of way. Routine utility and drainage work can be handled by the normal encroachment permit process even if the work costs more than $1,000,000.

Not used for New Public Road Connections

The PEER process cannot be used for a project that requires new public road connections to a freeway or expressway or other FHWA or CTC approval. Usually both FHWA and CTC approvals are required, and a separate PR (or New Connection Report for expressways) should be prepared.

Right of Way and Access Control

Conventional Highway Right of Way

Usually, the permit work is contained within the existing State highway right of way. Where new signalization, channelization, widening, etc., are involved, it is sometimes necessary for the permittee to dedicate additional right of way to Caltrans. These cases most often occur on conventional highways and pose no unusual problems.

Freeway Right of Way

Where access control is involved on freeways and expressways, dedications and changes in access control pose special procedural problems. These situations most often occur at freeway ramp terminals where widening or signalization is proposed or new development is planned.

Access Control Change Procedures

If the permit proposal involves a reduction in access control or transfer of Caltrans right of way to the permittee, a request must first be made to the District Director for authorization to decertify and dispose (sell) the property rights involved. See Chapter 26, "Disposal of Rights of Way", for processing instructions. This work is normally done during preliminary negotiations with the permit applicant before the applicant formally submits the permit to the State. For proposals on the Interstate System, the district must obtain any necessary FHWA approvals. After approval is received, the right of way transaction is consummated and the encroachment permit is processed. The permit work would be covered by a PEER as applicable.

Right of Way Dedication Procedures

If the permit work involves dedication of additional rights of way along the access control line without any reduction in access restrictions, separate District Director concurrence is not needed. The involvement of PD Coordinators and Geometric Reviewers should be sought when substantial modifications to access control position are proposed. In all cases, it is important that the dedication specifically provide for

access control and that right of way record maps be updated. A map or paper shifting of the access control line is not legally binding — the restriction must be contained in the deed or quit claim.

Step-by-Step PEER Procedures

District Permit Engineer Initiates Procedure

Upon receiving the permit application, the District Permit Engineer will determine if the project is likely to require a PEER. If so, or if the Permit Engineer otherwise determines a need, the Permit Engineer will use the Encroachment Permit Application Review Form (TR0110) to designate a responsible unit (Design, Traffic Operations, etc.) for possible PEER preparation. The Permit Engineer will request that unit and other involved district units to review the application. See Article 11 for possible processing as a Combined PSR/PR if the cost is over $300,000; however any charges will still be accounted for utilizing the encroachment permit EA if the project cost does not exceed $1 million.

Determining if a PEER Is Required

The responsible district unit will review and determine whether or not a PEER is required. If the unit determines that there will be no adverse impact on highway operations, maintenance, and tort liability, it must indicate so in the appropriate box shown on the Encroachment Permit Application Review Form with the signature by at least a senior level person. The unit will then do its usual permit review, fill out the rest of the form, and return it to the Permit Engineer. If there will be impacts, a PEER is required and the unit will be responsible for the preparation, review, and approval of the PEER. (See Appendix I.)

Evaluate Impacts on State Highway

The responsible unit will evaluate the impacts of the permit proposal upon the State highway, determine its geometric and functional adequacy, and summarize the findings in a PEER, which should contain the information needed to justify (or reject) the proposed work.

As a general rule, a PEER should be prepared when the traffic or other actions generated by the permittee adversely affect operation and/or maintenance of the highway or there is potential to expose Caltrans to tort liability suits. The primary purpose of the PEER is to document the engineering rationale for Caltrans' decision in a permit action.

A PEER should always be prepared when new operating improvements are constructed by the permittee that become part of the State highway. These include signalization, channelization, left-turn pockets, widening, realignment, public road connections, and bike paths and lanes. Commercial road approaches would not usually require a PEER when grades are flat and there are no sight distance restrictions; otherwise one should be prepared. Widening by adding lanes should be covered by a PEER unless part of a precise plan for the highway adopted by the local agency and previously concurred in by Caltrans.

Drainage work by a permittee should have a PEER if there is potential for tort liability due to changes in upstream or downstream conditions as a result of the construction. Landscape with grading that affects sight distance or clear zones should have a PEER. Daylighting of cuts or other major grading within the right of way would not usually require a PEER unless sight distance or safety factors were less in the after condition.

Preparation Timing

The time needed to evaluate and finalize the PEER will depend on the scope and complexity of the work. When it can be done within the review deadline (normally back to the Permit Engineer within 10 working days of submittal), the PEER should be attached to the Encroachment Permit Application Review form and returned to the Permit Engineer. When more time is needed, the Encroachment Permit Application Review form should be returned immediately to the Permit Engineer, with notification of the estimated date that the PEER will be completed and whether or not additional information is needed.

Nonstandard Feature Approval

If Nonstandard Design features are involved, the procedure outlined in Chapter 21 of this manual should be followed. An exception to a mandatory standard will require preparation of a Fact Sheet by the unit responsible for PEER preparation and approval by the PD Coordinator.

CEQA / Traffic Mitigation

On more complex permit proposals involving CEQA and traffic mitigation approvals by a local agency, it is expected that the responsible unit would have been involved in preliminary negotiations prior to final PEER preparation. If this has not been done, the permittee should be called for an immediate meeting to resolve these issues. In addition, it may be appropriate to require a Combined PSR/PR or a full PR, but not if the cost is $300,000 or less.

All Permit Proposals Need Evaluation

The fact that a PEER is not prepared does not in any way diminish the responsibility of the District Responsible Unit to thoroughly evaluate the permit proposal and summarize conclusions in the "Remarks" area of the Encroachment Permit Application Review form (TR0110).

Approval

The District Director (or designee) is responsible for approval of the PEER. One copy of the approved PEER is to be sent to DLP, Attention: Project Report.

Permit Review Charges

PEER preparation is considered part of the permit review process, with costs to be charged to the Expenditure Authorization (EA) assigned by the District Permit Engineer. Charges should be reasonable. Excessive hours should be charged to the unit's overhead EA. Prior staff work not directly associated with actual permit processing or PEER preparation, even though later constructed by permit, should be charged to the unit's overhead EA, and not to the permit review EA.

ARTICLE 12 - Combined PSR/PR for Certain 100% Local-Funded Projects

Applicability

The purpose of the Combined Project Study Report/Project Report (PSR/PR) is to streamline the project development process by providing for the preparation of a single engineering report for noncomplex, noncontroversial State highway projects that are funded by others and that cost over $1,000,000 for construction. The Combined PSR/PR documents agreement on the scope and estimated cost. The Combined PSR/PR eliminates the separate processing of a PSR and should expedite project delivery. It constitutes project approval to proceed with design and as such serves as the Project Report. Although one report is prepared, it is expected that the report will address issues affecting operation, maintenance, and any potential tort liability on the State highway, and that the proposed work will conform to current Caltrans policies, practices, and standards.

A Permit Engineering Evaluation Report (PEER) is normally used for projects costing $1,000,000 or less (see Article 13). However, for permit proposals that are too complex to be adequately documented in a PEER, the District may utilize the Combined PSR/PR format as a Project Report instead of a PEER.

Neither a Combined PSR/PR nor a PEER is required for utility and drainage encroachment work within the right of way. This work is handled by the normal encroachment permit process.

Format for Combined PSR / PR Report

The format for a Combined PSR/PR is included in Appendix A of this manual.

Combined PSR / PR Usage Criteria

A Combined PSR/PR may be used for projects funded by others if the project complies with the following criteria:

- Project is not capacity increasing (will not add through-mixed-flow lanes, other than short gap closures).

- Project qualifies as a Categorical Exemption (if Caltrans will be the Lead Agency for the CEQA).

- There must be only one “build” alternative.

  (OR

  The local agency is the Lead Agency for Environmental Clearance and has filed a Notice of Determination (NOD).)

- Exceptions to mandatory and advisory design standards shall be approved prior to approval of the Combined PSR/PR. Any nonstandard features identified after approval of the Combined PSR/PR shall be approved prior to approval of the contract plans by the State, and prior to issuance of the encroachment permit.

- No right of way acquisition by Caltrans or Relocation Assistance Program (RAP) involvement.

- No California Transportation Commission (CTC) approval required for route adoption or new public road connections to access controlled highways.

- Exceptions to Caltrans encroachment policy shall be approved prior to approval of the Combined PSR/PR.

Typically, "noncomplex, noncontroversial projects" will not involve new, non-dedicated right of way, hazardous waste, significant environmental impacts, public hearings for consideration of State highway improvements, non-standard maintenance agreement features, or tort liability concerns.

A Combined PSR/PR may generally be used for the following types of noncomplex, noncontroversial projects: channelization and restriping, widening, curbs and gutters, auxiliary and turning lanes, signal installation or modification, ramp modifications, landscaping, minor vertical and horizontal realignments, retaining walls, most interchange modifications, and overcrossings or undercrossings that are not part of an interchange.

Right of Way and Access Control

If the proposed permit work involves dedication of additional right of way along the access control line – without any reduction in access restrictions – separate District Director concurrence is not needed. Involvement of the PD Coordinator or Geometric Reviewer should be sought when substantial modifications in the access control are proposed Where access control is involved, the dedication shall specifically provide for access control, and right of way record maps shall be updated. A map or paper shifting of the access control line is not legally binding. The restriction must be contained in the deed or quit claim between local agencies and Caltrans. For changes in access control and disposal of right of way, refer to the Chapter 26 of this manual, entitled "Disposal of Rights of Way."

Combined PSR / PR Procedure

Upon receiving the "Standard Encroachment Permit Application", the district's single point of contact (usually the District Permit Engineer) will verify that the project cost is more than $1,000,000 or that it is otherwise not appropriate for processing as a PEER. A critical review of proposed PEER projects costing less than $1,000,000 should be made to assure that PEER processing won't be nullified at a later date due to cost increases resulting from required scope changes, better estimates, or some other reason, or that PEER processing is not appropriate because the proposal is too complex.

Once verified, the district responsible unit assigned by the District Permit Engineer will be notified so that a Special Funded Project Coordinator (SFPC) can be assigned to coordinate the project approval. Communication between the SFPC, the District Permit Engineer, the applicant, and appropriate district functional units such as the environmental, structures and traffic units is essential to expedite this process.

A meeting of the applicant and all involved units should be held to determine the type of project approval and environmental documentation needed and to define roles and responsibilities.

The SFPC will provide a copy of the Combined PSR/PR outline to the applicant. The appropriate type of pre-approved cooperative or highway improvement agreement should be identified and given to the applicant for completion, execution, and submittal with the combined PSR/PR. The SFPC should document this meeting with a letter to the applicant. Once the applicant completes and submits the Combined PSR/PR, the SFPC should distribute the document for review by all involved Caltrans units.

The time needed to review and approve the Combined PSR/PR will depend on the completeness, scope, and complexity of the work. If a Combined PSR/PR is appropriate, the application is not considered complete until the approval of the PSR/PR. The responsible SFPC will notify the applicant of the expected completion date and whether additional information is needed.

The District Director (or designee) is responsible for the approval of the Combined PSR/PR. After approval, two copies of the final document should be forwarded to DLP, Attention: Project Report.

The approved Combined PSR/PR is the authorization to enter into a preapproved cooperative or highway improvement agreement for the design and construction of the State highway. Refer to the Cooperative Agreement Manual for the appropriate preapproved document.

APPENDIX I - Preparation Guidelines for Permit Engineering Evaluation Report

ARTICLE 1 - Overview

The Encroachment Permit Application Review Form

Refer to Chapter 9, Article 13, for the Permit Engineering Evaluation Report (PEER) process. The Encroachment Permit Application Review form is used by the district permits unit for transmitting encroachment permit proposals that cost up to $1,000,000 within state right of way to other Caltrans units for review. The reviewing units must fully detail their comments about the proposal and their number of review hours. The responsible unit as determined by the District Permits Engineer is designated on this form. The responsible unit must determine whether a PEER is required, and if so, attach it or indicate the estimated completion date. If the unit determines that there will be no adverse impact on highway operations, maintenance, and tort liability, it will indicate so in the appropriate box shown on the Encroachment Permit Application Review form with the signature by at least a senior level person. The unit will then do its usual permit review, fill out the rest of the form, and return it to the District Permit Engineer. If there will be impacts, a PEER is required and the unit will be responsible for the preparation and review and securing the approval of the PEER. Some projects costing over $300,000 may be required to utilize the Combined PSR/PR format as a project report if they are too complex to utilize the PEER format.

The Permit Engineering Evaluation Report

A Project Report (PR) or a PEER is required for every action that has a permanent traffic impact and for work that affects the operating capability of a state highway facility. These reports, and their preparation, are the responsibility of either Project Development or Traffic Operations. However, the District Permit Unit must verify that responsible and reviewing units have considered the need for the appropriate report and have correctly completed the Encroachment Permit Application Review form.

Special Funded Project if Cost is Over $1,000,000

The District Permit Engineer determines the magnitude of the work. An encroachment or public transit project that costs more than $1,000,000 and is located within state right of way is considered a special funded project and will require a Combined PSR/PR if it qualifies, or a PSR and a PR if it does not. The Combined PSR/PR process is described in Chapter 9, Article 12, and in Appendix A.

Projects Not Requiring a PEER

Projects not requiring a PEER usually are for commercial filming, miscellaneous activities, special events, surveys, and utilities.

Purpose of a PEER

A PEER is prepared to document the engineering analysis of proposed work. The analysis includes review of the proposed improvements to determine drainage, maintenance, operation, and environmental impact on the state highway system. Proposed improvements must conform to Caltrans' current design standards and practices or be justified by an approved design exception. Additional information may be requested from the applicant if it is needed to perform the reviews. A permit may be denied based upon conclusions of the reviews.

Report Format

The PEER should be prepared and submitted using the form shown in the following pages (form number TR-0112). The following article provides guidelines for specific items on the form.

ARTICLE 2 - Guidelines for Completing the PEER Form

Hours for Preparing

Give the total hours used in investigating and preparing the PEER by all parties. PEER preparation is considered part of the permit review process. The time needed to evaluate and finalize the PEER will depend on the scope and complexity of the work. When it can be done within the review deadline, the PEER should be attached to the review form and returned to the Permit Engineer,. When more time is needed, the review form should be returned immediately to the Permit Engineer, notifying of the estimated date of PEER completion and whether nor not additional information is needed.

Permit Number

Permit number assigned to permit application by District Permit Office (if appropriate)

Date

Date of completion of the PEER

District / County / Route/ Kilometer Post (Post Mile) [Dist-Co-Rte-KP(PM)]

The Kilometer Post should be given to the nearest 0.1 kilometer; if the project is 0.2 kilometers or more in length, give both the beginning and ending Kilometer Post. Post Mile should follow Kilometer Post if needed for continuity of file references or other reasons.

EA Used

The Expenditure Authorization (EA) used to charge costs for the permit review process as spelled out in Chapter 2 of the *Encroachment Permits Manual.*

Applicant

Name of individual, agency or organization submitting permit proposal.

1. Describe Permit Proposal, What It Serves, Approximate Cost

   Provide a brief narrative containing statements that are concise but include the information needed to describe the proposed work.

2. Describe Existing Highway - Brief Analysis of Impact on Highway Operation and Maintenance

   Evaluate the impacts of the permit proposal upon the State highway.

3. Analysis of Permit Proposal for Geometric and Functional Adequacy

   Summarize the findings of the determination of the geometric and functional adequacy of the permit proposal. All statements should be concise and contain the information needed to justify (or reject) the proposed work.

3a. Non-Standard Design Features

   Check "Yes" or "No" indicating whether nonstandard design features are involved and if they are provide the rationale for approval of an exception. If yes, give name and date of approval of the PD Coordinator who approved the Fact Sheet for Exception to Mandatory Design Standards. If FHWA concurrence in the Fact Sheet is needed, obtain this on a separate sheet and attach it.

4. Revision in Access Control or Transfer of R/W to Permittee Involved

   Check Yes or No.

4a. If Yes, Date of District Director Approval

   If the permit proposal involves a reduction in access control or the transfer of Caltrans right of way to the permittee, a request must first be made to the District Director (DD) for authorization to decertify and dispose of the property rights involved. See Chapter 26 "Disposal of Rights of Way" for processing instructions. Indicate the date the DD approved the revision.

4b. If Interstate, Date of FHWA Approval

If FHWA concurrence is needed for a change in access on the Interstate system, give the date of approval.

5. Signalization Involved

Check YES or NO. If the answer is "yes", answer the next four questions by checking YES, NO or NOT APPLICABLE.

If the answer to any of the four questions is "no", provide an explanation and any comments on an attached sheet.

Permit Proposal Recommended

Check either "Yes, as submitted", "Yes, with conditions described above", or "No, as described above". List conditions in Item 3. Indicate reasons for "No, as described above" in Item 3.

Prepared by Title

- Name of individual who prepared this report and who should be contacted regarding the proposal.
- Title of individual preparing the PEER.

Registered Engineer Stamp

The PEER must be prepared by a Caltrans registered civil engineer. The stamp or seal and signature and date must be placed on the report, in the space provided for the engineer in responsible charge of the evaluation.

Unit

The unit source code of the registered engineer in responsible charge of the evaluation of the proposal.

Approved by Title Date Approved

- Signature of the District Director or the District Division Chief to whom approval authority has been delegated.
- Title of individual approving the PEER.
- Date approved.

CALIFORNIA STATE DEPARTMENT OF TRANSPORTATION

ENCROACHMENT PERMITS MANUAL
(EPM)

CHAPTER 2
REQUIREMENTS FOR PEER

202.2 Project Report or PEER Document

A project report or Permit Engineering Evaluation Report (PEER) is required for every action that has a permanent traffic impact and for work that affects the operating capability of a State highway facility. These reports, and their preparation, are discussed fully in the Project Development Procedures Manual. Their preparation is either the responsibility of Project Development or Traffic Operations. However, the permit office must verify that responsible reviewing units have considered the need for the appropriate report and have correctly completed the Encroachment Permit Application Review form.

202.2A Projects Requiring a Permit Engineering Evaluation Report (PEER)

A Permit Engineering Evaluation Report (PEER) is prepared to document an engineering analysis of proposed work. The analysis includes review of the proposed improvements to determine drainage, maintenance, operation, and environmental impacts on the State highway system. Proposed improvements must conform to Caltrans' current standards and practices or be justified by an approved exception.

On proposals that are too complex to be adequately described in a PEER, the district may require that a combined PSR/PR format or a PR format be utilized in lieu of the PEER format.

Exceptions to mandatory and advisory design standards must be documented by the required Fact Sheets, and attached to the PEER. The District Director or the delegated representative is responsible for approving the PEER.

Proposals that require a PEER generally involve extensive work. Projects that cost $1,000,000 or less and are not financed with local sales taxes normally require a PEER.

Projects that cost $1,000,000 or less and are financed with local sales taxes also normally require a PEER or a combined PSR/PR must also serve as the IPR (Initial Project Report) required by Government Code Section 14529.11. If there is a Master Cooperative Agreement with a Sales Tax Measure Authority, an additional Cooperative Agreement may not be required.

For special funded projects that cost more than $1,000,000 within the State's right of way, refer to Section 202.3.

Permit applications for projects requiring a PEER involve the steps listed in Table 2.4.

Table 2.4
Permit Procedures for Projects Requiring a PEER

These permit procedures are followed for projects that require a Permit Engineering Evaluation Report (PEER):

1. The appropriate fee is determined and the application is accepted.
2. Engineering and technical reviews are performed; additional information is requested from the applicant if it is needed to perform the reviews. A permit may be denied based upon conclusions of the reviews.
3. A Permit Engineering Evaluation Report (PEER) is prepared.
4. Bonding requirements are determined.
5. Additional fees, if required, are collected.
6. An encroachment permit is issued to the applicant and distributed to other Caltrans units.
7. The applicant begins work authorized by the permit. Project work is inspected by Caltrans for compliance with the permit.
8. As-built plans are received, a Progress Billing/Completion Notice is issued, and bonds are released.
9. Records are microfilmed and the project is closed out.

202.2B Projects Not Requiring a PEER

Projects not requiring a PEER are usually for commercial filming, miscellaneous activities, special events, surveys, and utilities. Permit applications involve the same steps as outlined in Table 2.4 with the omission of Step 3.

202.3 Special Funded Projects

Projects constructed on the State highway system costing over $1,000,000 and financed with revenues from sources other than the State Highway Fund, e.g., a city, county, local transportation authority, local transit agency, or private entity, are called Special Funded Projects. These local and private entities finance improvements on the State highway system using funds obtained from local sales tax measures, local non-sales tax revenues or development mitigation fees, and private sources. Caltrans' Procedures Manual for Special Funded State Highway

Projects and the Structures Office of Special Funded Projects (OSFP) Information and Procedures Guide give detailed guidance for developing special funded projects constructed on the State highway system.

202.3A Pre-Approved Agreements

Caltrans is required to enter into Cooperative Agreements with local entities for all projects on the State highway system that cost more than $1,000,000 for work within the existing or proposed State highway right of way regardless of the source of funding. By contrast, projects

$1,000,000 or less usually do not require a Cooperative Agreement. These agreements contain a provision requiring the issuance of an encroachment permit.

Caltrans has pre-approved Cooperative Agreements to be used for special funded projects sponsored by a local entity. These include:

- ***Cooperative-Agreement J-1*** is used when the local entity advertises, awards, and administers a State highway improvement project that is funded by others and no federal funds are used.
- ***Cooperative-Agreement J-2*** is used when the local entity advertises, awards, and administers the project and federal funds are used.
- ***Cooperative-Agreement J-3*** is a Joint Powers Agreement that is used when the State advertises, awards, and administers the project and the local agency reimburses the State.

Caltrans and private developers are required to execute a Highway Improvement Agreement for any State highway project funded by private entities that costs more than $1,000,000 for improvements located within the existing or proposed State highway right of way.

Caltrans also has a pre-approved Highway Improvement Agreement (A-1) and Escrow Agreement (A-2) that are used with private developers on State highway improvement projects funded by private entities (see Appendix B).

Double permits with appropriate fees are required for contractors performing work under agreement unless specifically waived in an agreement. Double permits and fees are required if the agreement is silent.

202.3B Issuing Encroachment Permits for Special Funded Projects

Cooperative Agreements and Highway Improvement Agreements establish the respective responsibilities of Caltrans and the local entity or private developer for all project development work, including environmental studies, documentation, and clearance. Consequently, encroachment permits shall not be issued for special funded projects without the district permits office receiving a copy of the required, fully executed agreement. The agreement will specify whether or not there will be a charge to the local agency its contractor for the encroachment permits.

The permit usually can be processed and issued shortly after the permit engineer receives an application with approved plans and an executed agreement for construction.

202.3C Public Transit Projects

Public transit projects financed by others (other than by the State) and located within State highway right of way and having a construction cost of more than $1,000,000 shall be considered a special funded project. Responsibilities and costs for project development work, right of way, construction, utilities, liability, ownership, operation, and maintenance must be established in a Cooperative Agreement with Caltrans.

A copy of the fully executed agreement and approved plans shall be delivered to the district permits office before an encroachment permit is issued to the transit agency and its contractor for construction work within State right of way.

202.3D Project Development Procedures

Caltrans is exposed to tort liability, operational and possible maintenance responsibilities by any expansion or improvement of State highways using local resources. Therefore, such projects that are more than routine must comply with the Project Development Procedures Manual (PDPM) and the Environmental Handbook (EH). The permit applicant is required to use the project development procedures that Caltrans uses to do the same work. These include the project development teams, project reports, and project development categories described in the PDPM.

Caltrans' policy is that all State highway improvement projects funded totally by others and having a construction cost of more than $1,000,000 must be approved in concept by a Project Study Report and approved in a Project Report following environmental compliance and public input. Caltrans is normally responsible for the PSR if it can be done on a schedule Caltrans is able to meet, and the local agency or private developer is responsible for preparing the Project Report (except for Sales Tax Measure Projects). This requirement can create special timing problems for applicants and should be pointed out during initial discussions. An abbreviated process utilizing a Combined PSR/PR format is

available for projects meeting certain criteria which enables a local agency or developer to prepare a combined document on their own schedule and at their own expense in lieu of the PSR and the PR. Applicants should be given a copy of the “Procedures Guide for Special Funded Projects” and "Guidelines for the Preparations of Combined Project Studies Report/Project Report for State Highway Projects Funded by Others" during initial discussion.

202.4 Traffic Controller Assemblies

Caltrans provides Model 170 Traffic Signal Controller Assemblies for installation on all State highway projects involving signal systems. The Department is reimbursed for the controller assembly acquisition, quality assurance testing, and delivery. The method of reimbursement to Caltrans depends upon the type of recipient and contractual relationship. Controller allocation criterion is described as follows:

JOINTLY FUNDED COOPERATIVE AGREEMENT PROJECTS:

The Department provides the Model 170 Controller Assembly as a contribution to its share of the project cost.

LOCALLY FUNDED AND SALES TAX MEASURE COOPERATIVE AGREEMENT PROJECTS

The funding local agency pays the full cost of the controller assembly. If the State is administering the construction contract, the controllers will be provided as State-Furnished material paid for by the local agency as part of the project costs.

PRIVATELY FUNDED HIGHWAY IMPROVEMENT AGREEMENT PROJECTS

The Department provides the controller assembly as State furnished materials paid for by the permittee as part of the project cost.

ENCROACHMENT PERMIT WITHOUT AN AGREEMENT

When an agreement for the project does not exists and construction is authorized only under an encroachment permit, the private party permittee or permitted local agency contractor shall pay the costs for the controller assembly including the related field work and inspection. These costs are collected from the permittee or contractor as a fee and added to the deposit collected for other estimated inspection field work costs.

Additional information on State furnished traffic controller assemblies is shown in Appendix E and K.

202.5 Registered Engineer's Seal and Signature

Caltrans must comply with provisions of the Business and Professions Code. Those provisions require that all final engineering reports and plans bear the signature, registration seal, license number, and registration certificate expiration date of the registered engineer responsible for preparation of the final report or plans. The engineer must be registered in California.

A Registered Engineer shall sign engineering reports or plans for the design and construction of a proposed project.

Environmental documents are not professional engineering documents and therefore do not require preparation by a registered engineer. The environmental document serves as a public disclosure document explaining the effects of the proposed project on the environment.

State of California **Business, Transportation and Housing Agency**

M e m o r a n d u m

To: ALL DISTRICT DIRECTORS
ALL PROJECT DEVELOPMENT
COORDINATORS AND DESIGN REVIEWERS

Date : September 25, 2000

File:

From: **DEPARTMENT OF TRANSPORTATION**
DESIGN AND LOCAL PROGRAMS
MAIL STATION 28

Subject: Fact Sheet for Exceptions to Mandatory Design Standards

Attached is the new format to be used when preparing Fact Sheets for Exceptions to Mandatory Design Exceptions. The format has been revised to facilitate review for those projects with more than one design exception. This supersedes all other previously issued formats. Please distribute to all pertinent planning, design, and construction staff. The new format can be accessed from the Design Program Home Page at http://www.dot.ca.gov/hq/oppd/design/index.htm.

The format presented in this memorandum will be incorporated into future updates of the Project Development Procedures Manual as appropriate.

If you have any questions, please contact your Project Development Coordinator.

Original signed by:
ROBERT L. BUCKLEY
Program Manager
Design and Local Programs

Attachment

Return to Design Memos Home Page

Fact Sheet Exceptions to Mandatory Design Standards

Prepared by:

_____
Registered Civil Engineer

Submitted by _____ _____ _____
(Name), Design Engineer Date Telephone

Recommended
for Approval _____ _____ _____
(Name), Project Manager Date Telephone

Concurrence by _____ _____ _____
* (Name), Branch Chief or DDC, Design Date Telephone

Approved by _____ _____
Project Development Coordinator for DLP Date

* Required if the Project Manager is not a Supervising T.E. or above.

1. PROPOSED PROJECT

A. Project Description:

Briefly describe the project; what is the proposal? Note the type of project and/or major elements of work to be done, such as safety or operational improvement, roadway widening, rehabilitation, reconstruction, etc. Provide the geographic project limits and length; i.e. "... On Route 12 in Sonoma County between Napa St. (KP 60.7, PM 37.7) and Napa Rd. (KP 62.3, PM 38.7)".

B. Existing Highway:

Describe the general highway characteristics including the setting (i.e. number of lanes, rural, suburban, or urban; flat, rolling hills, or mountainous), and focusing on those features relevant to the proposed design exception, such as the widths of lanes, shoulders, median, roadbed, and structures; horizontal and vertical alignment and clearances; design speed, sight distance, grades, cross slope, superelevation, etc. Is the existing highway a part of the FHWA 42 000 km (26,000 mile) Priority Network?

If relevant, note structure clear width and the lane and shoulder widths across the structure; does the structure clear width match or exceed the approach roadbed width?

Note bridge-rail type; does it meet current standards for structural adequacy? Request this information from the Engineering Service Center Project Functional Manager assigned to your District.

Provide a similar, but brief, description of adjacent highway segments, highlighting existing nonstandard features when relevant to the proposed exception.

C. Safety Improvements:

Describe proposed improvements that would qualify as safety enhancements, such as: median barrier, guardrail upgrade, flattening slopes, correcting superelevation, eliminating roadside obstructions, etc.

D. Total Project Cost:

Include a good summary estimate of project cost segregated by major elements, including: roadway, structures, right of way, utility relocation, environmental mitigation, etc., as needed.

2. FEATURES REQUIRING AN EXCEPTION

A. Design Exception Feature #1

Nonstandard Features:
Describe the proposed nonstandard feature or the existing nonstandard feature which is proposed to be maintained; if newly proposed, is the nonstandard feature an improvement over the existing condition?

Standard for Which Exception Is Requested:
State the specific standards and refer to the applicable Chapter, Topic, or Index numbers of the *Highway Design Manual*.

Reason For Requesting Exception
Be thorough, but brief; justification must be as complete and convincing as possible. Reasons exceptions have been granted in the past include a

combination of excessive cost, right of way impacts and/or environmental impacts. Supportive factors have included low accident frequency, local opposition, and consistency with adjacent highway segments.

A commitment to correct a nonstandard feature with a future project should not be made in the Fact Sheet unless absolutely necessary. If a commitment must be made, the follow-up project is to be programmed and Caltrans must have the authority to define the project's scope. Additionally, the follow-up project's status must be monitored in accordance with the procedures established by each district pursuant to the January 26, 1994, memo titled "FHWA/Caltrans Joint Review of Design Exceptions and Commitments". Provide a detailed account of the follow-up project in Section 7 (see below).

Added Cost to Make Standard
Summarize an estimate of the added cost above the proposed project cost which would be required to meet the design standard for which the exception is requested. The estimate does not have to be highly developed, but must be realistic.

Also, when the Fact Sheet covers multiple nonstandard features, provide separate cost summaries for the "standardization" of individual design features.

B. Design Exception Feature #2
For projects with more than one design exception, add additional subsections B, C, D etc, with the same information used in subsection A.

3. TRAFFIC DATA

Include both AADT's and design (peak period) hourly volumes. For 3R (i.e., rehabilitation) projects, use current year traffic. For all others, use design year traffic, usually 20 years after construction is complete. For interim projects that are to be superseded by programmed future construction, provide traffic data for both the ultimate programmed construction year and the ultimate project's design year.

4. ACCIDENT ANALYSIS

Traffic safety is of primary importance to both Design and Local Programs (DLP) and FHWA when considering approval or rejection of design exceptions. To strengthen the justification for design exceptions, the Fact Sheet must include an analysis of accident data to identify prevalent accident types and causes, plus an evaluation of the effect of the requested design exceptions on accident types and frequencies.

Summarize an analysis of how the proposed project, particularly the design exception feature(s) will help alleviate identified safety problems; or as a minimum, how it will not contribute to any increase. This analysis must be based on evaluation of TASAS Table B statistical data regarding both the number and severity of accidents as well as actual versus statewide average accident rates. For design exceptions related to spot locations (i.e., nonstandard vertical curve) on existing highways, analyze only the accident data within the vicinity of the feature. The analysis should also examine Table C data for high accident frequency spot locations, if any are within the proposed project limits.

TASAS data analysis should be supplemented by a review of district accident diagrams covering the project area in order to enhance the understanding of prevalent accident types and how they relate to existing and proposed highway design features. Provide the TASAS Table B summary of "actual" versus "expected" accidents; however, merely stating the "actual" versus "expected" numbers is insufficient.

In determining accident causes, keep in mind that although terms like "excessive speed", "inattention", "failure to yield right of way", "under the influence", etc., are perfectly valid for the CHP, they have meaning for the highway engineer only as they relate to the underlying highway characteristics. Hence, the engineer must instead look for other reasons, such as: tight radius curves with inadequate superelevation, high-volume turning movements without separate turn lanes, a concentration of rear-end/side-swipe accidents in a particular lane, etc. In general, the accident concentrations detected in this manner are too small for a Table C printout, but collectively they are the key to understanding the vehicle-highway interactions that are the basic causes of accidents.

5. INCREMENTAL IMPROVEMENTS

Discuss other practical alternatives that are intermediate in scope and cost between the proposed project (requiring this design exception) and the full, standard solution. For example, to justify retaining an existing horizontal curve with R=100 m (300') when the standard minimum radius is 260 m (850'), the costs and impacts of an alternative which proposes a 175 m (550') radius curve (and possibly others) would need to be analyzed and discussed in this section.

Provide enough information on costs versus benefits, right of way and environmental impacts, etc., to explain why none of the incremental alternatives are recommended. These alternatives should normally be investigated prior to requesting an exception.

6. FUTURE CONSTRUCTION

Describe any planned future projects in the vicinity of the proposed design exception, but do not make a commitment to correct the nonstandard design features unless absolutely necessary (see Section 2). If a commitment must be made, describe the follow-up project's funding source (STIP, SHOPP) and schedule as listed in the appropriate programming document.

7. PROJECT REVIEWS, CONCURRENCE

Note relevant project reviews by the HQ DLP Project Development Coordinator and/or Design Reviewer, HQ Traffic Operations Liaison Engineer, and/or FHWA Transportation Engineer (if appropriate), etc. Provide the date of meeting or discussion, and state the individual's concurrence with the proposed design exception.

8. ATTACHMENTS

a. Provide location and/or vicinity map for the project. When the Fact Sheet covers multiple exceptions at various locations, a project strip map may be provided to indicate the general location of the various design exceptions.

b. Provide cross sections and/or special details to clearly illustrate the proposed condition for each location that does not meet the mandatory standard for horizontal/vertical clearance and lane/shoulder/bridge clear width. For example, an exception for nonstandard verticle and horizontal alignment features must include a layout with existing and proposed horizontal curve data, existing and proposed profile with vertical alignment data, and existing and proposed superelevation diagram It may not be necessary for these drawings to be developed on CADD. These details can often times be clearly illustrated with hand drawings.

c. Letters, resolutions, traffic study summaries, etc., which further develop or clarify the reasons discussed under Section 2 may be attached.

Do not attach superfluous materials, such as complete project plan sets or engineering reports unless specifically requested by the PD Coordinator or Geometric Reviewer.

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

PERMIT ENGINEERING EVALUATION REPORT

TR-0112 (REV. 6/2001)

PREPARATION HOURS	PERMIT NO.
DATE	DIST/CO/RTE/PM
EA USED	APPLICANT

1. DESCRIBE PERMIT PROPOSAL, WHAT IT SERVES, APPROXIMATE COST.

2. DESCRIBE EXISTING HIGHWAY - BRIEF ANALYSIS OF IMPACT ON HIGHWAY OPERATION AND MAINTENANCE.

3. ANALYZE PERMIT PROPOSAL FOR GEOMETRIC AND FUNCTIONAL ADEQUACY.

4. NON-STANDARD DESIGN FEATURES ☐ YES ☐ NO

REVISION IN ACCESS CONTROL INVOLVED ☐ YES ☐ NO

If YES above, provide rationale and name & date of headquarters, reviewer's concurrence. (and on Federal Aid Projects, FHWA concurrence on separate sheet)

IF YES, DATE OF HQ APPROVAL

5. SIGNALIZATION INVOLVED ☐ YES ☐ NO

If yes, signal warrants met	☐ YES	☐ NO*	☐ NOT APPLICABLE
Capacity Analysis OK	☐ YES	☐ NO*	☐ NOT APPLICABLE
Safety Analysis OK	☐ YES	☐ NO*	☐ NOT APPLICABLE
Ownership/Maintenance Provisions OK	☐ YES	☐ NO*	☐ NOT APPLICABLE

* Comments, Supporting documents on attached sheet(s)

PERMIT PROPOSAL RECOMMENDED

☐ Yes, as submitted ☐ Yes, with conditions described above ☐ No, as described above

PREPARED BY	TITLE	UNIT	DATE

APPROVED BY (Caltrans Engineer)	TITLE	UNIT	DATE

PREPARING REGISTERED ENGINEER'S STAMP

I attest to the technical information contained herein and have judged the qualifications of all technical specialists providing engineering data upon which recommendations, conclusions, and decisions were based.

SIGNATURE

,REGISTERED CIVIL ENGINEER

DATE

REMARKS: SEND ONE COPY OF COMPLETED REPORT TO HEADQUARTERS DESIGN AND LOCAL PROGRAMS.

FM 91 1404 M

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

ENCROACHMENT PERMIT APPLICATION REVIEW

TR-0110 (REV. 7/2001)

APPLICANT	PERMIT NO.
DATE	DIST / CO / RTE / PM
Your comments and recommendations are requested regarding an encroachment permit application.	TYPE OF WORK
REVIEW NEEDED BY	REVIEWING UNITS

CHARGE ALL CUSTOMER SERVICE & TRAVEL TIME TO THE E.A. BELOW

DIST. CHARGE	EA-SUB JOB	SPECIAL DESIGNATION	ACT
	937700-3EPCS		2002 Supv 2003 Non-Sup

CHARGE ALL REVIEW TIME TO THE E.A. BELOW

DIST. CHARGE	EA-SUB JOB	SPECIAL DESIGNATION	ACT
	937700-3EPPR		2037

THERE IS ADDITIONAL INFORMATION AVAILABLE IN PERMIT FILE. ☐ YES ☐ NO

BESIDES THOSE LISTED, WHO ELSE SHOULD REVIEW THIS APPLICATION?

LAST _____, Permit Office

THIS APPLICATION IS BEING REVIEWED SEPARATELY BY EACH UNIT.

TIME CHARGED*

EA/SUB JOB 937700-3EPPR _____ HOURS

EA/SUB JOB 937700-3EPCS _____ HOURS

*** MUST MATCH TRS ENTRY**

PERMIT RECOMMENDED:

☐ YES

☐ NO

☐ Need more information *(explain)*

RESPONSIBLE UNIT

PERMIT ENGINEERING EVALUATION REPORT REQUIRED

☐ NO (*No adverse impact on highway operations or maintenance.*)

DATE

BY _____, SR. TRANSP. ENGR.

☐ YES ☐ ATTACHED EST. COMPLETION DATE OF PEER. DATE ___/___/___

REMARKS: *(Include necessary changes, required conditions, etc.)*

REVIEWED BY	UNIT CODE	BUSINESS PHONE	DATE
CONCURRED BY	UNIT CODE	BUSINESS PHONE	DATE

FM 91 1402 M