

CITY OF TUCSON, ARIZONA  
DEPARTMENT OF TRANSPORTATION

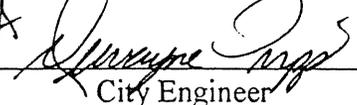
ENGINEERING DIVISION  
ACTIVE PRACTICES GUIDELINES

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EFFECTIVE: 02/01/00

APPROVED BY: *MNA*   
City Engineer

DATE: 2/2/2000

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**SUBJECT: GUIDELINES FOR REVIEW OF ENGINEERING CAPITAL IMPROVEMENT PLANS**

**A. PURPOSE:**

To establish a guideline for review of Engineering Capital Improvement Plans, including the outline of a formal internal review process.

**B. BACKGROUND:**

An Active Practice Guideline was established in 1993, with revisions made in 1996, which set forth a checklist to be used during the design phases of projects. This APG further identified the need for office and field plan reviews (PS&E), and provided recommendations for when these reviews should occur. This was necessary due to the number of project managers within the Engineering Division, and the fact that the methods and occasions on which these plan reviews occurred varied with each project manager.

Several problems have been identified with the Engineering Division's current review process, as noted below:

- Inconsistent use of the in-house (peer) review process
- Lack of effective review comments from certain sections
- Inconsistent/lack of expectations provided to design consultants
- Poor quality control resulting in less than desirable approved plans
- Lack of consistency in plan presentation of construction drawings

C. POLICY:

In order to establish a consistent process, by which engineering plans are reviewed, the guidelines set forth in this document shall be utilized for all Capital Improvement Projects.

D. PLAN REVIEW DISTRIBUTION:

As stated in the 1993 APG checklist, the Consultant shall make submittals to the City at the 30%, 75%, 90%, and 100% stages. At each of these stages, the project manager shall distribute the plans for review by various Sections, Divisions, and Departments. The work area and assignee to which the plan distributions are to be made shall be as follows:

- 30% Submittal: Roadway Design Section (for peer review)  
Engineering Landscape Architect (if applicable)  
Streets Division – Electric Shop (if applicable)  
Streets Division – Landscape Maintenance (if applicable)  
Survey Unit  
Technical Planning and Resources Division  
Traffic Engineering Division  
Transportation Planning Division (if paving)
- 75% Submittal: Roadway Design Section (for peer review)  
Development Services Center – Engineering (information only)  
Engineering Landscape Architect (if applicable)  
Field Engineering Section  
Planning Department (information only)  
Real Estate Division (for acquisitions or construction licenses)  
Streets Division – Electric Shop (if applicable)  
Streets Division – Landscape Maintenance (if applicable)  
Survey Unit  
Technical Planning and Resources Division  
Traffic Engineering Division
- 90% Submittal: Roadway Design Section (for peer review)  
Engineering Landscape Architect (if applicable)  
Field Engineering Section  
Streets Division – Electric Shop (if applicable)  
Streets Division – Landscape Maintenance (if applicable)  
Survey Unit  
Technical Planning and Resources Division  
Traffic Engineering Division

100% Submittal: Development Services Center (for information only) – Jim Vogelsberg  
Any applicable areas that need/wish to see another submittal

It is understood that projects vary greatly in terms of scope and staff involvement, and as such the project manager is allowed the discretion to determine which assignees may be omitted from the distribution list. However, the above-stated lists should be followed as closely as possible for all Capital Improvement Projects. It is important that all projects be distributed to as many in-house reviewers as possible, as this will increase the quality control of plans submitted for construction bids, ultimately decreasing the potential of design-related change orders during the construction process.

The plans are to be distributed with a cover memo, including the project title, job number, percent review stage, and project manager. The purpose of the distribution memo is twofold: to provide the reviewer with the necessary information regarding the project, including all participating reviewers, and to provide a document that stands out from other documents and alerts the reviewer to its importance.

#### E. COMPILATION OF REVIEW COMMENTS:

The project manager shall allow at least two weeks for reviews to be made. Upon receipt of written comments, the project manager shall compile all comments for the benefit of the design consultant. This can be in the form of letter compilation or redlined comments combined onto one set of plans. It is recommended, however, that a letter be used to convey the comments to the design consultant, as this will serve as a record of the issues brought to the consultant's attention.

Should comments not be received from all reviewers within the allotted time frame, the project manager shall compile all comments and deliver them to the design consultant. It is important that no time be lost waiting for review comments to be provided, as the design consultant's contract time typically assumes a three week review and comment period. It is also important that all pertinent reviews be made within the review period, as different reviewers may make conflicting comments and the project manager may be required to resolve design issues.

If comments are received after the deadline and after the project manager has forwarded comments to the consultant, the party submitting the late comments should be notified. If the project manager feels that these comments will not negatively affect the project scope or schedule, they may be forwarded to the consultant. If review comments are not received by a party which the project manager feels should be reviewing the plans, a memo or email should be written to the party in question, requesting that a formal review be performed. This is necessary not only to ensure the quality control of the plans, but also to provide documentation of the party's failure to review the plans in a timely fashion.