

Compiling Design Standards for Development Review

BY BRET STEWART AND NAZIR LALANI

Metropolitan area transportation plans and planning processes have been in existence in most areas for well over 20 years. Circulation plans have been used to define areawide street systems.

Local government agencies, such as public works departments, planning departments, and planning commissions, are usually charged with overseeing development conformance with the transportation plan.

Many local government agencies charged with street and road planning responsibilities do not have a comprehensive set of design standards for development review. By not having a set of design standards, one or more of the following problems may occur.

The development review staff may find it difficult to be consistent in the design of roads in terms of the long-range functional requirements of these facilities, to ensure consistency between conditions set for adjacent developments, to properly coordinate road improvements, and to make sure that developers are treated equally.

Coordination may be lacking in the activities of various agency departments involved in development review, some of which may have overlapping responsibilities.

Consultants working for developers may have difficulty doing a consistently professional job and meeting the local agency requirements. Consultants are

often frustrated by local agency staff using differing standards on similar projects or by not being able to pin down answers to critical questions without having to repeatedly contact local agency staff members. The number of revisions to submittals is also much higher, a major source of frustration to the consulting profession.

Without a good set of standards local agency staff may find it difficult to process development applications in a quick and timely manner and are thus often accused of playing a "delay game."

A lack of consistent standards may lead consultants to believe that local agency staff are making up the rules as they go along, again leading to high frustration levels for parties.

Design Standards Manual Preparation Process

To develop a comprehensive manual of design standards, it is recommended that the following procedures be followed:

1. Review and update all existing standards.
2. Review and include or reference ordinances and codes pertaining to development.
3. Review and include state standards where appropriate or relevant.
4. Review and include standards developed and adopted by other local

agencies where appropriate.

5. Review nationally recognized publications from the American Association of State Highway and Transportation Officials, the Institute of Transportation Engineers, the Federal Highway Administration, and others. Proposed standards should conform with nationally accepted standards. Where local standards exceed national standards, local standards may take precedence.

For a listing of the contents of a typical design standards manual, see the Appendix.

Finalization and Adoption of Standards

To finalize and adopt a set of design standards, the following procedures are recommended.

All in-house staff members that might use the standards should review the first draft. A specific review time should be set (e.g., one month) for all comments to be submitted.

Incorporate all appropriate comments and suggestions into a second draft where possible and send out for another review by in-house staff, as well as all potential outside users, such as consulting engineers, architects, developers, and utility companies. Review by public bodies such as the planning commission might also be helpful. A specific review

time should be set (e.g., two months) for all comments to be submitted. Comments submitted past this deadline should be held over for future updates.

Prepare a final version of the standards, incorporating as many of the comments that the local agency staff find acceptable. Send letters to those who have made comments that cannot be incorporated into the standards indicating why their comments were not included.

Publish the standards and develop a mailing list of all people who need to be notified of the existence of the standards. Send a letter announcing the adoption of the standards to all the people on the mailing list. Include a compliance date in the notification letter.

A great deal of variation exists in how the standards are adopted by local agencies. Some simply adopt them as department policies; other agencies adopt them by resolution or ordinance. Any of these methods may work satisfactorily.

Future Updates

It is recommended that a careful record be kept of all recipients of the design

standards manual. Updates should be provided to all recipients on a regular

basis. Comments will be received as the standards are used and an update will

Appendix Design Manual Contents

To enable a local agency to address all the issues that arise during the development review process, a design standards manual should typically include the following:

Table of Contents.

Glossary of Terms and Definitions.

Introduction: Comments on the intended scope and application of the design manual. For liability purposes, include a disclaimer that excludes existing conditions from the intent of application of the standards except in redevelopment cases.

Road Functional Classification: Definitions of the important characteristics of the different roadway classifications, such as arterials, major and collector roadways, industrial roadways, and local roads included in the local agency's circulation plan; refer to the appropriate standard cross section details.

Traffic Impact Studies: Traffic study format, trip generation, trip distribution, trip assignment, method of projecting future volumes, capacity analysis/levels of service, signals, accidents, recommendations and funding of mitigation measures and improvements, and technical requirements of the final report.

Access Control: Permitted number of access points based on road classification and land use; restriction of turning movements; shared access; abandoned accesses; criteria for providing speed change lanes; construction of accesses; and relocation of utilities, structures, etc.

Access Design: Access width and spacing, access alignment, driveway island design, driveway corner radii, maximum driveway grades, sight distance at driveways, and adequacy of vehicle storage at access points to public roads.

Street Standards: Phased road construction, approval process for road improvement plans, road improvement sureties and release of sureties, road connections between adjacent developments, widening of existing roads, conformance to local agency circulation plan, curb and gutter requirements, sidewalk requirements, road name signs, traffic signs, right-of-way width for various road classifications, alleys, bike routes, pavement structural section, mailbox location, cross gutters, requirement for wheelchair ramps, street trees in right of way, and road lighting.

Geometric Design: Lane widths on existing roads; horizontal and vertical curve radii; superelevation; intersection angles, spacings, offsets, corner radii; road width transition tapers; speed change lane design for left and right turns; stopping and passing sight distance; guard rail warrants; median design; and vertical clearance.

Standard Details: Utility and service trenching details, drainage facilities, curbs and driveways, sidewalk and wheelchair ramps, typical road sections, and traffic control.

Private Road Standards: Single-family residence; several single-family residences; multi-family and condominium developments; industrial and commercial developments; fire lanes; road name signs; building addresses; minimum bridge design criteria; vegetation clearance; design plan submittal requirements; covenants, conditions, and restrictions; and certification of private improvements.

Road Construction Plan Review Requirements: Local agency plan check procedures and approval process, drafting materials, sheet dimensions, sheet layout, title sheet information, detail sheet requirements, plan and profile sheet layout, traffic plans, surety agreement for public and private improvements, and inspection of public improvements.

Permits: Issuance procedures for excavation/encroachment permits, transportation permits for oversized vehicles, road closure permits, and haul route permits.

Grading Plan Review: Preparation of grading plans, sheet dimensions, detail sheet layout, title sheet layout, grading plan sheet layout, map recording, fees and sureties agreements, release of sureties, final map approval, retaining wall design, and inspection of grading.

Drainage and Flood Control: Definition of drainage terms, standard conditions for project approval, design requirements, overland escapes, storm water retardation basins, drainage easements, storm runoff in roads, culvert design criteria, storm drain criteria, curb inlet design criteria, hydrology calculations, rainfall intensity, runoff computations, inspection of improvements, and release of sureties.

Appendices: Examples of all forms, charts, graphs, sample agreements, and design details to be used during the development review process.



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probably be necessary within one year.

Experience with a Design Standards Manual

Santa Barbara County adopted a set of design standards in April 1987.

Experience since the adoption of these standards indicates the following:

- The development community and the county staff have greatly appreciated the development of such standards and they have become widely accepted.
- The development review staff has been able to standardize procedures for setting conditions on developments and to process them more quickly.
- The quality of plan checking has improved, as has the quality of the initial set of plans submitted by consulting engineers.
- Discussions over geometric design standards have been kept to a minimum.

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- It has been possible to better define the initial scope of traffic impact studies and to minimize revisions.
- It will take approximately 1 year to 18 months to complete and adopt a set of design standards.
- All the standards are constantly reviewed and updated as they are used. Prior to a formal manual being adopted, periodic updates occurred only every 5 to 10 years, resulting in many inefficient and inconsistent undocumented policies. A properly updated manual minimizes this policy deterioration.

Recommendation

It is strongly recommended that all local

agencies develop and adopt a set of design standards. The standards can be developed in house or prepared by a consultant.

If approached in systematic and me-

thodical manner, this task need not be herculean: A good project manager will do. Based on Santa Barbara County's experience, the effort will be well worthwhile.

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