EL DORADO COUNTY LAND DEVELOPMENT MANUAL

ADOPTED MONTH, DAY, YEAR

ATTACHMENT 3

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10-1101.3G.1

EL DORADO COUNTY LAND DEVELOPMENT MANUAL

Future Amendments:

Date	Resolution Number	Section Amended

EL DORADO COUNTY LAND DEVELOPMENT MANUAL

ADOPTED BY THE BOARD OF SUPERVISORS
MONTH, DAY, YEAR
RESOLUTION NUMBER XXX-2010

JOHN L. KNIGHT, DISTRICT I
RAY NUTTING, DISTRICT II
JAMES R. SWEENEY, DISTRICT III
RONALD BRIGGS, DISTRICT IV
NORMA SANTIAGO, DISTRICT V

PLANNING COMMISSION

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ALAN TOLHURST, DISTRICT V

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PREPARED BY THE FOLLOWING COUNTY AGENCIES:

DEVELOPMENT SERVICES DEPARTMENT
DEPARTMENT OF TRANSPORTATION
SURVEYOR'S OFFICE
ENVIRONMENTAL MANAGEMENT DEPARTMENT

WITH ASSISTANCE FROM THE FOLLOWING:

EL DORADO COUNTY AGRICULTURE, WEIGHTS, AND MEASURES
EL DORADO COUNTY COUNSEL
SURVEYORS, ARCHITECTS, GEOLOGISTS, ENGINEERS (SAGE)
EL DORADO COUNTY FIRE PROTECTION DISTRICTS
CALIFORNIA DEPARTMENT OF FORESTRY AND FIRE PROTECTION (CAL FIRE)

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CHAPTER 1 – INTRODUCTION (draft rev. 10/01/10)

Sections:

1.1 Purpose

This manual includes design standards for proposed discretionary development, including Planned Developments, Use Permits, Design Reviews and all divisions of land.

ALL discretionary land development projects *shall* conform to the standards of design and improvements as specified in the Design Manuals and applicable El Dorado County (County) Ordinances.

Exceptions and exemptions are described in this manual where they exist. If neither an exception nor an exemption can be applied, a design waiver may be requested, subject to required Findings (refer to Section 1.6.2 of this Chapter) and approval by the approving authority.

This manual also provides an introduction to land use planning and development for those unfamiliar with the processes in the County. For building in the South Lake Tahoe basin, also refer to the Tahoe Regional Planning Agency (TRPA) Code of Regulations.

The land development process will require additional information and documents not contained in this manual. The County maintains information on its website about the land use and development process. (See Chapter 7, Section 7.1 of this manual for contact and website information.) Some of the information available on the website includes:

- El Dorado County's General Plan,
- Zoning Ordinance,
- Design Manuals,
- Application forms,
- The fee schedule for application filing fees, and
- Applicable fire, water, school districts; land use designation; zoning; flood zone; snow load; etc.

More information on References and abbreviations used in the manual (e.g., contact information, website addresses) can be found in Chapter 7 of this manual.

1.2 El Dorado County General Plan

The *General Plan* is the County's official policy statement concerning its future character, land use patterns, and types of development. The *General Plan* describes the amount and type of development needed to achieve the County's social, economic, and environmental goals. It addresses a wide variety of development issues, including land uses, traffic, natural resources, and public safety.

The *General Plan* functions as a valuable decision making tool by providing the policy framework for all land use and capital expenditure decisions made by the County. County staff, the Planning Commission (Commission), and the Board of Supervisors (Board) use it to evaluate every discretionary development project that is submitted for approval.

The County's current *General Plan* was adopted in 2004 and may be amended from time to time. The Cities of Placerville and South Lake Tahoe have their own General Plans.

The Land Use Diagram is a map that provides a geographic reference and spatial context to the *General Plan's* major strategies, goals, and policies. It shows designated land uses, such as commercial, industrial, residential, agricultural, and open space.

1.3 Zoning

1.3.1 Overview and Legal Basis

The *General Plan* sets the broad parameters for growth and establishes future land use patterns. Zoning is the manner in which the County implements the *General Plan* and establishes the use and development standards for property. The Title 17 Zoning Ordinance defines the allowable uses and development standards for each property within the County. The Zoning Ordinance can be found in the El Dorado County Ordinance Code online or by contacting the Development Services Department (DSD).

1.3.2 Purpose

Zoning separates land uses into specific zones such as single-family residential, multi-family residential, commercial, and industrial. Zoning also regulates the intensity of such uses; the setbacks[1] of structures from property lines; and the height and size of structures permitted on a site.

1.3.3 Amendment Process

There are two types of amendments to the Zoning Ordinances:

A. Amending the Zoning Map for a specific property, and

B. Changing the Zoning Ordinance itself.

[1] The horizontal distance between the property line and any structure.

All zone changes must be consistent with the *General Plan* and approved by the Board after public hearings.

1.4 Development Permits

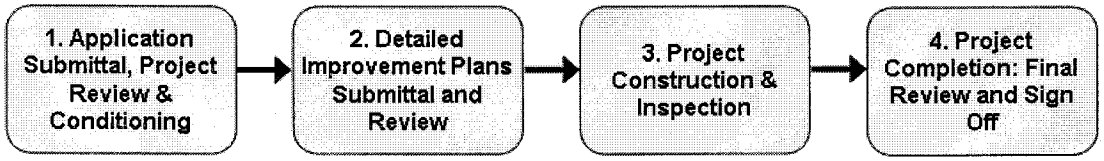
There are many applications for various types of land use and development requests processed by the County. These requests fall within two different land use action categories: ministerial actions and discretionary actions.

A. Ministerial Action. A governmental decision involving little or no personal judgment by the approving authority as to the wisdom or manner of carrying out the project.

B. Discretionary Action. A governmental decision which requires the exercise of judgment or deliberation, as distinguished from situations where the approving authority merely has to determine whether there has been conformance with the applicable statutes, ordinances, or regulations.

1.5 General Process Steps for Discretionary Projects

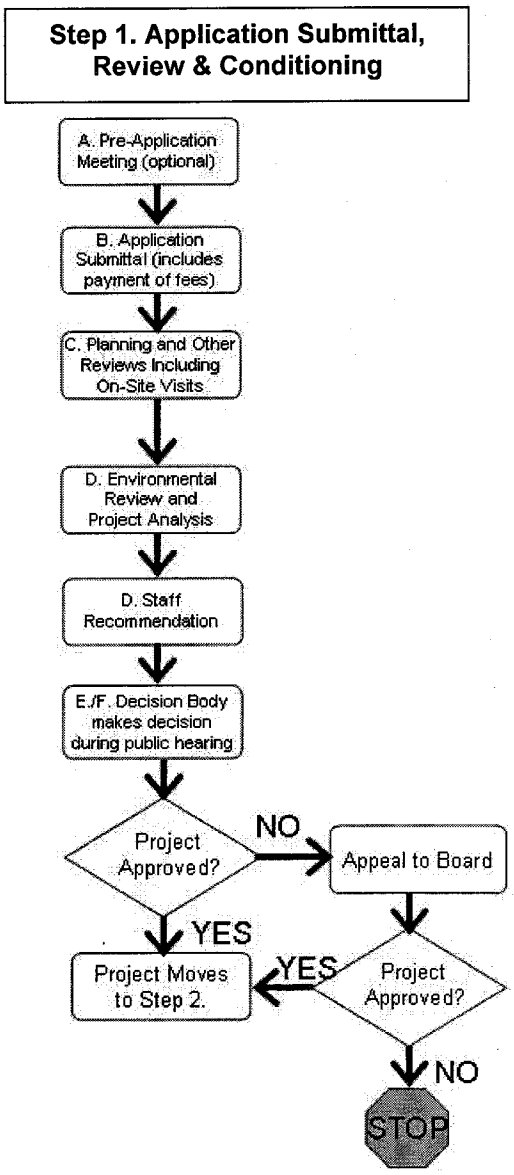
A discretionary project requires four steps before completion:



There is a County departmental review process for each step. Many County Departments can be involved at each step (e.g., DSD, Environmental Management (EMD), Transportation (DOT), Surveyor's Office). Other agencies (e.g., fire protection districts, Community Service Districts) may also be involved. A project cannot move from one step to the next without completing the prior step.

1.5.1 Step 1. Application Submittal, Project Review & Conditioning

The following flow chart provides a basic overview of Step 1.



A. Pre-Application Meeting (Optional). Before the applicant files the application, a Pre-Application review is recommended. Through the Pre-Application review, a project team (composed of County and other agency staff) will review the proposal and point out potential problems that may affect or delay the application, as well as explain many of the requirements in the *General Plan* or other regulations. A preliminary review allows the applicant to become familiar with the County's Ordinances, policies and development review processes, and how they will affect the project. Preliminary reviews also reduce the time and money spent on revising plans to meet County standards before going to a public hearing.

B. Application Filed by Applicant. The applicant files a formal application, submits all required supporting documents, including maps, and pays the necessary fees. A well-drawn set of plans is necessary as part of the application submittal in order for the formal review process to begin.

C. County Staff Review & TAC Meeting. The application is initially reviewed by DSD. Other County departments (e.g., EMD, DOT, etc.) and outside Federal, State, and local agencies (e.g., the local fire protection district) also review the project application. A Technical Advisory Committee (TAC) meeting is held in which the reviewers discuss issues with the project, identify any missing information, and begin developing conditions that the proposed project must meet prior to being approved.

D. Environmental Review (CEQA), Analysis and Staff Recommendation. All discretionary projects are required to go through an environmental review process. The California Environmental Quality Act (CEQA), California Public Resources Code Sections 21000-21177, requires an assessment of every discretionary project's environmental impacts. More information on CEQA can be found at the California Governor's Office of Planning and Research (OPR). (See Chapter 7, Section 7.1 of this manual for contact and website information.) Staff formally compiles the project analysis in a Staff Report and forwards a recommendation to the approving authority.

E. Notice of Public Hearing/Public Input. Once the review process is completed, for discretionary projects, the application is set for hearing. A notice of the public hearing is sent to all property owners within 500 feet of the site. The public notice will provide a brief description of the project, the project address, the project contact person, and the

date of the public hearing. This provides the public an opportunity to learn about the project and to participate in the decision process. Ministerial projects generally do not have public hearings or public notice and the decision is made at the Department level.

F-1. Zoning Administrator Public Hearing. Some permit applications (e.g., Parcel Maps, Special Use Permits, Variances) are forwarded with recommendations from County staff to the Zoning Administrator for a decision. The Zoning Administrator conducts a public hearing to receive input from members of the community prior to issuing a decision.

F-2. Planning Commission[2] Public Hearing. The Planning Commission (Commission) acts upon Tentative Maps for subdivisions, Design Reviews, Planned Developments, Environmental Impact Reports, and other actions as set forth in County Code. The Commission provides recommendations for Zoning and *General Plan* amendment applications to the Board.

G. Board of Supervisors Public Hearing. The Board makes the final decision on legislative acts such as rezoning or *General Plan* amendments.

Appeal Process. Any decision made by the Zoning Administrator or Commission may be appealed by the applicant, or any other affected party, to the Board.

An appeal must be filed within 10 working days from the approving authority decision. An appellant completes the appeal form and submits the form together with the applicable fee. The appellant needs to clearly identify on the form the specific reasons for the appeal. Appeals are heard by the appropriate approving authority in public hearings.

For more information on the appeal process, see Title 16 Subdivisions, Title 17 Zoning Ordinance, and the DSD website.

The following table summarizes the discretionary permit application processes. (Note: Building Permits for single family dwellings do not fall under "discretionary permits".) Most of the steps are applicable to each type of application; however, both the CEQA process and the public hearing process may vary depending upon project type. Consult with DSD to determine which process would be applicable. Applications are available from DSD or on their website.

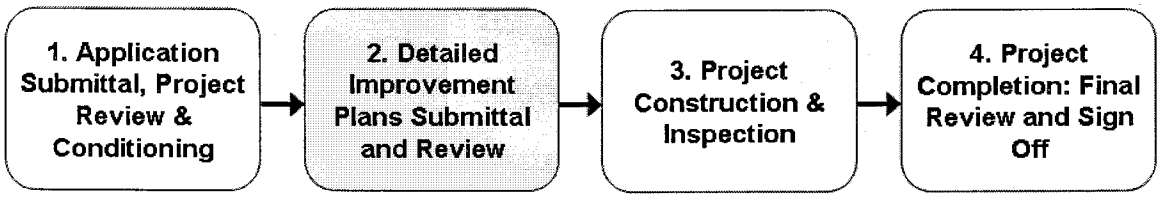
[2] The Body established pursuant to Chapter 3, Title 7 of the California Government Code (see County Code Section 2.27).

Process	Land Use Type	Pre-Application Meeting (Optional)	Planning Staff Review, TAC mtg	Review/ Permits Required By Other Depts.	Environ-mental Review (CEQA)	Notice of Public Hearing	Design Review Committee Public Hearing	Approving Authority		
								Zoning Administrator Public Hearing	Planning Commission Public Hearing	Board of Supervisors Public Hearing
Tentative Map, Subdivision	Residential > 4 lots*	X	X	X	X	X			X	Appealable
Tentative Map, Parcel	Residential < 5 lots, All Commercial & Industrial*	X	X	X	X	X		X With no rezone	X With rezone	Appealable
Design Review	**	X	X	X	X	X	X		X	Appealable
Planned Development (PD)	All	X	X	X	X	X			X	Appealable
Special Use Permit	All	X	X	May be required	X	X		X	X	Appealable
Variance	All	X	X	May be required	X	X		X		Appealable
Site Plan Review* **	All	X	X	X	X	X			X	Appealable
Zone Change, GP Amendment	All	X	X	May be required	X	X			X	X

* Some exceptions apply; see Title 16 Subdivisions for more information.

** Design Reviews are required in Cameron Park, Pollock Pines, and El Dorado Hills for all commercial, industrial, and multi-family projects, and for any projects located adjacent to State Highways and/or zoned with a "Design Control" overlay such as "- DC", "- DS", and "-DH".

*** Site Plan Reviews have multiple purposes and are typically part of ministerial permits but sometimes they require discretionary-like reviews. For example, under the General Plan Policies Interim Interpretive Guidelines, where agricultural or riparian setback relief is requested, or where exemptions to the 30% slope restrictions or tree canopy policies are needed, a Site Plan Review may be required.



1.5.2 Step 2. Detailed Improvement Plans Submittal and Review

After a project has been approved in Step 1, the second step of the land development process requires an applicant to take the conceptual drawings and plans and develop them into detailed implementation plans and drawings (often referred to as "improvement plans") that can be constructed. The applicant may also be required to do additional technical studies (e.g., drainage study) and to provide certain documents (e.g., title report) that will demonstrate that

the development proposed is physically feasible and that the applicant has legal rights to the property.

Some of the improvement plans and documents required in this step can include, but are not limited to, the following:

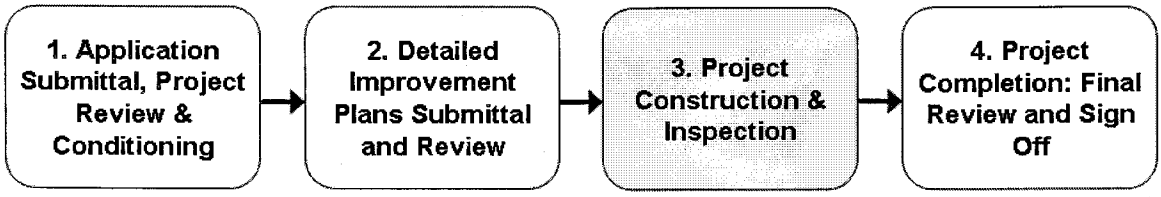
- Approved Tentative and proposed Final Maps,
- Engineer's estimate,
- Title report,
- Grading plans,
- Erosion control plans,
- Drainage study and storm drain plan,
- Geotechnical report,
- Road plans and profiles, including signing/striping and traffic control plans,
- Street lighting and traffic signal plans,
- Utility plans, and
- Right-of-way plans.

Plan checking fees, which are different than project application fees, must also be paid at this time.

The plan check process results in either:

A. Modifications being needed to one or more components of the detailed plans or studies, or

B. In permits being approved. If permits are approved, and if the project includes improvements that affect the County's infrastructure (e.g., roads), the applicant will need to enter into an improvement agreement with the County (see County Code Section 16.16.050).

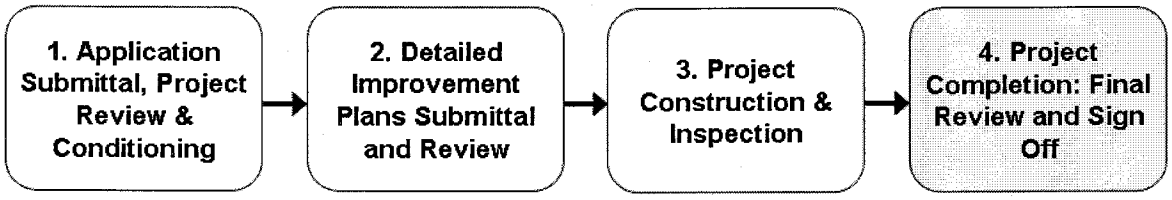


1.5.3 Step 3. Project Construction and Inspection

Once construction permits have been issued, the applicant shall pay inspection fees and have any required insurance and security in place before construction can commence. Most permits have time limits and, in certain circumstances, these time limits can be extended.

A pre-job meeting is scheduled before work begins with County inspectors and various agencies (e.g., applicable water and fire districts, California State Water Quality Control Board, California State Department of Fish & Game, etc.) to review job site requirements

related to safety, protective fencing, erosion control, dust mitigation, etc. After completion of various phases of construction, the work is inspected by County staff, as well as by other applicable agencies, to ensure it is in substantial conformance with the detailed improvement plans.



1.5.4 Step 4. Project Completion: Final Review and Sign Off

When a project is nearing completion, County staff will prepare a short list (typically referred to as a "punch list") of the items that remain to be completed before a project can be finalized. After all items on the punch list have been completed, and the final inspection is signed off by County staff, a project that includes a Road Improvement Agreement (RIA) or a Subdivision Improvement Agreement (SIA) must be sent to the Board for formal approval and acceptance of the improvements. In addition, a project that required a RIA and/or a SIA must have a one year warranty (see Chapter 4, Section 4.2.3.3 of this manual for more information on improvement agreements).

1.6 Design Waivers

1.6.1 Requirements

All discretionary land development projects are required by County Ordinance to conform to the standards of design and improvements as specified in the Design Manuals. Exceptions and exemptions may be described in this manual. If neither an exception nor an exemption can be applied, the applicant may apply for a design waiver as part of the discretionary project application.

1.6.2 Findings

A design waiver must meet the four Findings described in Title 16 Subdivisions, Chapters 16.08 or 16.40 to be approved. The four Findings are:

A. There are special conditions or circumstances peculiar to the property proposed to be subdivided which would justify the waiver,

B. Strict application of the design or improvements requirements of this Chapter would cause extraordinary and unnecessary hardship in developing the property,

C. The waiver would not be injurious to adjacent properties or detrimental to the health, safety, convenience and welfare of the public, and

D. The waiver would not have the effect of nullifying the objectives of this article or any other law or ordinance applicable to the subdivision.

1.6.3 Guidelines for Making Design Waiver Findings

The approving authority cannot approve a design waiver unless it can make written Findings, supported by substantial evidence that the design waiver meets the required Findings of Title 16. Defensible Findings are based on the pertinent evidence that was available to the approving authority. Findings should be more than a mere recitation of the standards; they must provide the factual basis that leads to the conclusion drawn by the approving authority. The following guidelines are provided to assist applicants, staff, and approving authorities in determining valid reasons for a design waiver.

A. **Guidelines for Finding 1.** Design waivers must be limited solely to the physical circumstances of the property, not to the worthiness of the project, financial hardship, or community benefit. The test of bringing property to parity is based on equality of the property rather than equality of the owners.

B. **Guidelines for Finding 2.** Increased cost is not considered a "hardship". However, cost can be a consideration in evaluating a development's "fair share" of required improvements.

C. **Guidelines for Finding 3.** In general, there must be a beneficial component to a design waiver request to meet this Finding. Conditions can be added to a design waiver approval to compensate, or balance for, a design waiver that affects the health, safety, convenience and welfare of the public.

D. **Guidelines for Finding 4.** If another rule already exists (e.g., Fire Code regulation, *General Plan* Policy, County Ordinance, CSD rule, etc.), a design waiver cannot be applied. In that case, the applicant would need to appeal to the appropriate approving authority (or authorities) for a change in the rule.

Examples of items that would **NOT** automatically be grounds for a design waiver include:

- The cost of improvements required,
- Where a permit is required from another agency, and
- Relocation of utilities, including telephone poles.

1.6.4 Process

Design waivers are requested by an applicant as part of the initial project application process, and must be approved by the approving authority along with the project. Design waivers requested after approval of a project, must be approved by the same approving authority. For example, if, during the review of improvement plans, a change is requested, and it could affect the basis on which the project was initially approved, the project will have to be reviewed by DSD to determine if the change would constitute a need for a design waiver. The review, design waiver process (if applicable), and subsequent changes are at the applicant's expense.

1.6.5 Non Applicability of Design Waivers

Design Waivers are only applicable to standards in the Design Manuals. The following items are not eligible for design waivers:

A. Zoning requirements (A Variance or Planned Development is required.), and

B. *General Plan* Policies (A *General Plan* Amendment is required.).

1.6.6 Affordable Housing and Design Waivers

Pursuant to the Affordable Housing Density Bonus Ordinance Title 17, Chapter 17.81, eligible affordable housing development may qualify for incentives, design waivers, or concessions of development standards in the Design Manual.

Design waiver requests based on the Affordable Housing Density Bonus Ordinance shall be processed the same as other design waivers, except that Findings a. and b. shall be replaced with the following Findings:

A. Compliance with the provisions of the Affordable Housing Density Bonus Ordinance, and

B. Special Findings of Title 17 Zoning Ordinance, Section 17.81.050.B.4.

1.7 Qualifications of Plan Preparers

In accordance with State Law (Professional Engineers/Architects Act, Business and Professions Code §§ 6700 – 6799" of the "Government Code), the preparers of various types of plans and maps are required to meet certain licensing qualifications as outlined below.

A. **Topographic Surveys.** Surveys of existing grades for the purpose of providing contours, or for preparing a site grading and drainage plan, shall be performed by either a Land Surveyor or any Civil Engineer. ("Land Surveyor", "Civil Engineer", and "Architect" are defined in Chapter 5 of this manual.)

B. **Grading and Drainage Plan.** Preparation of a site grading and drainage plan must be prepared by a Civil Engineer or Architect, except as otherwise allowed and noted in Chapter 5 of this manual.

C. **Driveway Profile.** The preparation of a profile for a driveway shall be prepared by a Land Surveyor, Architect, or any Civil Engineer.

D. **Site/Plot Plan.** Plot plans indicating the location of all structures relative to property lines must be prepared by a Land Surveyor or a Civil Engineer licensed before January 1, 1982 if the work includes the determination of property boundaries. A Civil Engineer licensed after January 1, 1982, an Architect, or a Landscape Architect, may prepare a site plan as described above provided that the property boundaries have been delineated on the site by a Land Surveyor (or a Civil Engineer licensed prior to January 1, 1982) in

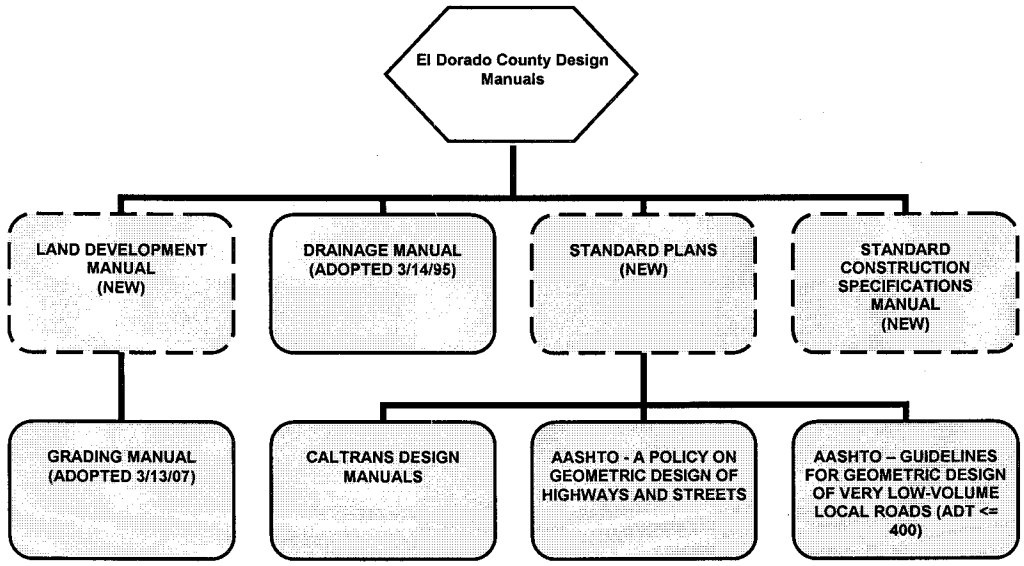
accordance with California's Section 8726 of the Business and Professions Code. For the permit processing of minor projects that do not involve new buildings, the Director of the applicable Department may accept alternative information that meets the intent of these requirements.

E. **Plan of Existing Conditions.** Plot plans showing existing conditions, indicating "existing" drainage and access improvements, are considered topographic surveys and therefore, must be prepared by a Land Surveyor or Civil Engineer.

1.8 Administration

The precursor to this manual is the Design and Improvement Standards Manual (DISM) originally published and adopted by the Board on May 27, 1986 by Resolution No. 136-86. (Amended: May 18, 1990 (Resolution No. 128-90), June 18, 1991 (Resolution No. 199-91), October 20, 1992 (Resolution No. 322-92), March 8, 1994 (Resolution No. 058-94), March 13, 2007 (Resolution 047-2007), and February 12, 2008 (Resolution 31-2008)). The Grading, Erosion, and Sediment Control volume was updated on March 13, 2007 (Resolution No. 047-2007)). A new supporting manual covering the topic of drainage (i.e., The County of El Dorado Drainage Manual), was added to the DISM "library" upon Board adoption on March 14, 1995 (Resolution No. 67-95). The original DISM included primarily design standards related to residential subdivisions.

It is envisioned that this manual is part of what will be a series of design manuals, some of which are still being prepared. The following illustration depicts how this document fits into the series.



——— Existing Manuals - - - - - - Proposed, New Manuals

The County Departments enforcing the Land Development Manual standards (e.g., DSD, DOT, EMD, County Surveyor) will apply the standards of the Land Development Manual (LDM) to applicable new development. Processes described in the LDM may change from

time to time and each Department retains the authority to modify any process described in the LDM, as permitted by law.

Amendments to the LDM text and diagrams will be made from time to time and are generally subject to the Board's approval. Minor errors, edits, and inconsistencies may be resolved by the County Departments as long as the intent and practical application of the standards is maintained.

CHAPTER 2 – SUBDIVISION PROCESSES AND STANDARDS
(draft rev. ~~10/01/10~~ 02/14/11)

Sections:

2.1 Purpose

This Chapter provides an overview of the subdivision process and design standards for all proposed subdivisions, including Parcel Maps, and other discretionary development permits (e.g., Planned Developments, Conditional Use Permits, Design Reviews). The County may adopt plans that include unique design standards for an identified planning area that would supersede some or all of the standards in the Land Development Manual (LDM). These plans may include Specific Plans, Community Plans, Form Based Codes, or other similar programs. Where such plans do not specifically identify different standards than that contained in the LDM, then the LDM standards would apply.

For applications and process information for specific projects and permits, contact Development Services Department (DSD). (See Chapter 7, Section 7.1 of this manual for contact and website information.)

2.2 Subdivision Process Overview

2.2.1 Tentative Map Required

All subdivisions creating two or more lots require approval by the County pursuant to Title 16 Subdivisions and Subdivision Map Act (SMA). The procedure for subdivisions ~~can be generally described as a four step process~~ is described in the following Section 2.2.2.

2.2.2 Process Summary

2.2.2.1 Preliminary Map or Pre-Application Submittal

The Tentative Map process may begin with a Preliminary Map or Pre-Application submittal. This process is useful in order to design the subdivision in compliance with:

A. The *General Plan,*
B. Any applicable Specific Plan,
C. Zoning,
D. Other agency requirements, and
E. All applicable Design Manuals, including this one.

The Pre-Application may also identify any potential problems for a proposed subdivision, and allows the developer to evaluate project alternatives early in the process.

Some subdivision proposals should start with a Preliminary Map application for a more comprehensive evaluation rather than a Pre-Application process. For example, larger subdivisions of 50 lots or more may require Planned Development application, park land dedication, or need special consideration due to project size or location.

Applicants with discretionary projects are encouraged to submit a Pre-Application or Preliminary Map to resolve any development-related issues, streamline the permit process, and reduce application processing costs.

2.2.2.2 Application Submittal

An applicant is required to prepare and assemble the application submittal package based on the submittal checklist in each application. Once the submittal package is assembled, the applicant makes an appointment with DSD Planning Services to submit the application. At the submittal appointment:

A. The applicant and a staff planner will compare the submittal checklist with the submittal materials. The application will not be accepted unless all application checklist requirements are submitted, unless determined to be "not applicable" by staff.

B. The applicant is required to pay the application fees based on the fee schedule adopted by the Board of Supervisors (Board). An application fee "quote" may be requested prior to the submittal appointment in order to prepare pre-cut checks.

2.2.2.3 Review for Completion/TAC Meeting

The application will be assigned to a staff planner.

A. The planner will review the application thoroughly for completeness within 30 days of submittal.

B. The application will be distributed to affected agencies for comments, recommendations, and conditions.

C. A Technical Advisory Committee (TAC) meeting may be scheduled. The TAC is an informal meeting with the applicant and his/her representatives to discuss agency and Department comments and any project issues.

2.2.2.4 Staff Report/CEQA Documentation

After completion of the TAC meeting and resolution of any issues related to the project, the planner will prepare a staff report and the appropriate CEQA documentation. A public hearing will be scheduled. The applicant and property owner (if different than the applicant) will receive a copy of staff's recommendation and conditions prior to the public hearing.

2.2.2.5 Public Hearing

A public hearing is held and staff will present the project recommendations to the approving authority.

A. The applicant or agent should attend in order to respond to any questions or clarify any of staff recommendations.

B. The public is allowed to ask questions and comment on the proposal.

C. The approving authority will consider all information received and make a decision on the project and any project conditions.

D. Decisions by the Zoning Administrator and Planning Commission (Commission) may be appealed to the Board.

2.2.2.6 Tentative Map Approval

Once a Tentative Map is approved, the applicant or property owner has three years to file a Final Map or Parcel Map. Time extensions may be requested to allow additional time (see the Time Extension Application and Chapter 16.74 of Title 16 Subdivisions.).

A. The developer shall submit plans for review and approval that are consistent with the Tentative Map and conditions. Once approved, subdivision construction can commence.

B. Improvement plans shall comply with all conditions of the Tentative Map and adopted standards unless a design waiver has been approved with a Tentative Map. If the improvement plans identify that standards cannot be met, the applicant shall return to DSD to request a design waiver, revised map, or design exception. Design exceptions are subject to review and approval by Department of Transportation (DOT).

2.2.2.7 Final Map and Parcel Map

A. Final (Subdivision) Map process:
   1. An applicant submits a formal application to DSD Planning Services for a Final Map. The applicant will be required to submit documentation demonstrating that all the conditions have been satisfied.
   2. The process concludes with a public hearing before the Board to verify that all conditions required for the Tentative (Subdivision) Map have been completed.

B. Parcel Map process:
   1. An applicant submits a formal application for a Parcel Map to the County Surveyor's Office.
   2. The County Surveyor will verify that all conditions required for the Tentative (Parcel) Map have been completed.

C. Final Map and Parcel Maps, after review and approval, are recorded with the County Recorder's Office

See Chapter 6 of this manual for more information on the County Surveyor's map requirements.

2.3 Submittal Requirements for Tentative Maps

Submittal requirements for Tentative Maps are listed on the DSD application form.

Application submittal requirements change from time to time and it is recommended the applicant consult the DSD website before applying. Preliminary Maps and Pre-Application submittals may be used to clarify submittal requirements.

2.4 Development and Subdivision Standards

2.4.1 General Subdivision Information and Criteria

A. Lot. A lot is the basic development unit - an area with fixed boundaries, used or intended to be used for specific purposes (e.g., open space, recreation, public facilities, one or more buildings and accessory building(s)). See Title 17 Zoning Ordinance for detailed information on specific lot zoning and development standards, including

setbacks and frontage requirements. The following list describes the variety of lot types:

1. **Corner Lot.** A lot located at the intersection of two or more streets having an angle of intersection of not more than 135 degrees. A corner lot shall be wide enough to accommodate all front yard setback requirements (see Title 17 Zoning Ordinance).

2. **Deep Lot.** A lot whose depth is excessive in relation to its frontage (sometimes called a "string bean" lot).

3. **Interior Lot.** A lot bounded by a street on only one side.

~~4. **Reversed Corner Lot.** A corner lot, whose rear abuts the side of another lot.~~

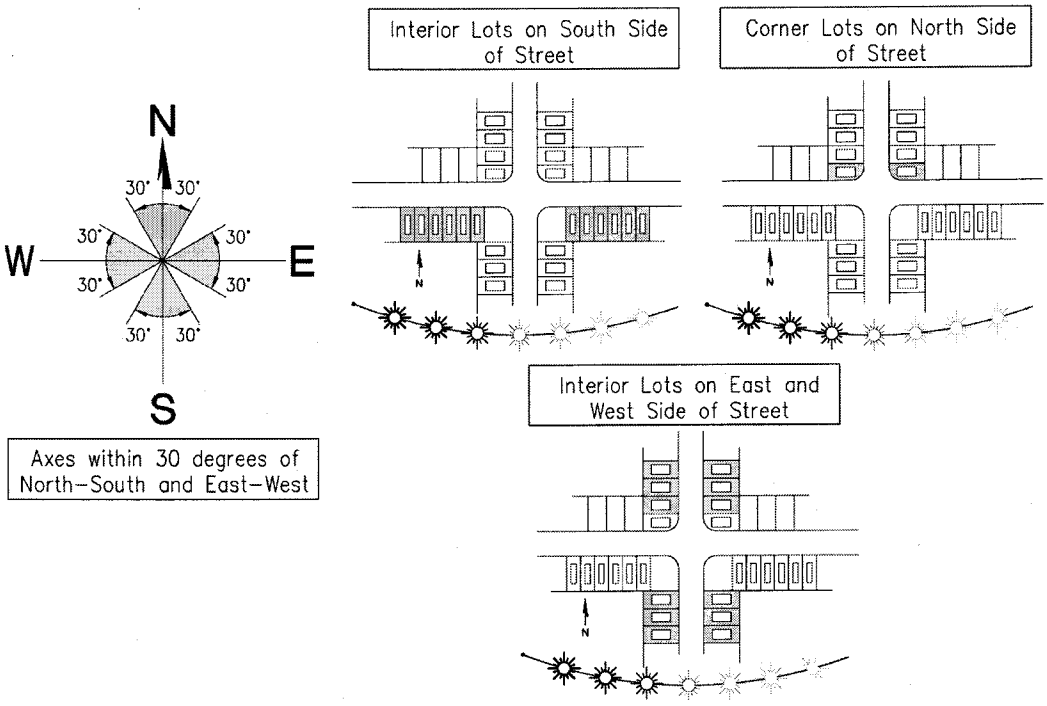
~~5~~4. **Flag Shaped Lot.** A lot which has a narrow strip of land abutting the street (the "flagpole"), providing access and expanding into a larger area (the "flag"), or a narrow strip of land providing access to a natural feature (e.g., a lake, river, etc.). A lot shall not be considered a flag lot if the frontage meets the minimum lot width as established in Title 17 Zoning Ordinance.

B. Lot Design.

1. **Solar Access Standards** (references: Subdivision Map Act Section 66473.1, *General Plan* Policy 5.6.2.2 and Implementation Measure HO-HH). One or more of the following standards may be included in the portions of detached, single family residential subdivisions that create lots that are 20,000 square feet or less in order to benefit from natural solar heating and cooling:

   a. Design lots such that, on streets that are within 30 degrees of a true east-west axis, the narrowest lots are interior lots on the south side of the street, or corner lots on the north side of the street. On streets that are within 30 degrees of a true north-south axis, the widest lots should be interior lots on the east or west side of the street (see "Solar Design" figure below).

SOLAR DESIGN



b. Establish or dedicate easements for the purpose of assuring that each lot shall have the right to receive sunlight across adjacent lots for any solar energy system as defined in Section 801.5 of the California Civil Code.

c. Design streets, lots and building setbacks so that all habitable buildings in the subdivision are oriented with their long axis running from east to west with a possible variation of 30 degrees to the southwest and 30 degrees to the southeast.

d. Establish CC&Rs that ensure structures (e.g., buildings, walls, fences, satellite dishes, etc.) are not constructed, or new vegetation placed or allowed to grow, so as to obstruct solar access on an adjoining lot.

e. Establish CC&Rs that do not prohibit or unnecessarily restrict solar energy facilities that primarily serve on-site use.

f. Other options may be considered as proposed by the developer to ensure adequate solar access, subject to County approval.

2. **Area Requirement for Lots.** Lots having an average natural slope of 10 percent or greater shall have at least the minimum area and frontage indicated in "Hillside Design", in Section 2.4.1.G of this Chapter, or shall comply with zoning requirements for area and frontage, whichever is more restrictive.

3. **Frontage (Lot Widths).** Shall be determined at the right-of-way line. All lots shall have frontage on a County-maintained street or a street meeting County standards. The minimum lot width shall be as is required within the appropriate zoning category for the project. The frontage of a lot in the turnaround area of a cul-de-sac or along a radius curve may be measured along the curve, at the required building setback. Lot width shall not include road easements, existing or proposed. Lot frontage may be reduced in a Planned Development.

> **Exception (see Section 2.4.2.1 of this Chapter)**
> For residential subdivisions of four or fewer lots, proposed lots ~~may have no frontage on roads that meet~~ are not required to front on a road that meets County design standards, as long as all of the lots being created have driveways installed with the subdivision that:
> a. Meet the requirements of Sections 1271.00 and 1273.10 of the California Code of Regulations, Title 14,
> b. Are at least 12 feet wide and not longer than 1,000 feet (as measured from the center-line of the road to the property line), and
> c. Include a public utilities easement.
> This exception only applies to lots that cannot be further subdivided under the zoning in place at the time the subdivision of four or fewer lots is approved.

4. **Driveway Design Standards.** Construction of driveways is required where the street excavation or embankment exceeds a depth or height of six feet from the finished grade at the property line.

> **Exception**
> As an alternative, the applicant may be required to demonstrate that the driveway requirements can be met concurrently with the approval of improvement plans for the subdivision construction, prior to recordation of the Final Map.

5. **Flag shaped lots are prohibited on mass pad graded ~~lots~~ projects and otherwise discouraged** except as provided for by the provisions of "Hillside Design Standards" described later in this Chapter.

~~6. **Double Frontage Lots.** Where a residential lot is adjacent to a County-maintained road that is not used for direct access to the lot, the lot shall be designed with one or more of the following design standards to minimize impacts on the use of the property:~~

~~a. Deeper lots to allow for deeper building setback requirements,~~

~~b. Sound walls, landscaping, or other methods along the roadway to provide a noise and aesthetic buffer,~~

~~c. Easements to set aside land for buffers, or~~

~~d. Creation of public entities, (e.g., Community Service Districts (CSDs), Lighting & Landscaping Districts, or Zone of Benefits), to maintain easements, landscaping, etc. established to separate the street from the residential lot.~~

~~**Exception**~~
~~For County maintained roads with a low volume of traffic (as determined by DOT) these provisions may be waived.~~

~~7~~6. **Vehicular Access.** For subdivisions of five or more lots, no lots shall be designed with direct vehicular access onto roads that are (or planned to be within the next 20 year timeframe) greater than 2,500 ADT.

Exceptions
a. The subdivision's lots are of such size that turn-around areas can be included, so that vehicles can turn around to exit the lot facing forward, rather than in reverse, and
b. Where unique existing physical constraints or lot design warrants an exception and/or conditions of approval are included to minimize issues such as safety, noise, air quality, traffic, emergency access, etc.

~~8~~7. **Lot Length to Width Ratio.** Lots shall not exceed the following length to width ratios:

a. 3 to 1 for lots less than 10 acres in size,

b. 4 to 1 for lots equal to or greater than 10 acres, but less than or equal to 40 acres in size, and

c. 5 to 1 for lots greater than 40 acres in size.

~~9~~8. **Special Districts.** ~~No lot shall be divided by special assessment district, fire protection district, school district, city, or County boundary lines.~~No new lot may be created where portions of the lot are in different districts.

~~10~~9. **Lot Lines.** Lot lines should be ~~drawn~~ designed so the lines are easy to identify. Lot lines that are irregularly shaped are discouraged due to difficulty in determining setbacks and for purposes of drainage, erosion control, fencing, and landscaping.

~~11~~10. **Lot Design Standards for Reduction of Snow Hazards.** The following snow storage standards shall apply in projects located at or above 3,000 feet elevation (above mean sea level):

a. Provide snow storage areas of a size adequate to store snow removed from parking, driveway, and pedestrian access areas, or have

arrangements by means of recorded easements or equivalent arrangements to remove and store accumulated snow offsite.

b. Snow storage areas shall be designed such that they do not block any lines of sight.

c. Snow storage is not permitted in parking lots, sidewalks, driveways, emergency access areas, and other shared use areas, unless designated as snow storage areas.

d. Storage shall be a minimum of 25 feet away from wetlands, streams, creeks, rivers, lakes, ponds and any other water bodies. Adequate stormwater/sediment catchment basins, coarse gravel berms, or sediment traps/barriers/filters to reduce impacts from potential run off shall be shown on the Tentative Map.

e. Snow storage shall not be located in predominantly shady areas.

f. Areas designated for snow storage shall use suitable plant materials including vigorous ground covers, perennials, willows, and planters with low edges to facilitate plow access. Snow storage areas may be combined with landscaping if the landscaping is designed to be compatible with large amounts of snow.

C. Grading and Erosion Control Requirements. All grading, including mass pad grading for subdivisions and contour grading, shall adhere to:

1. The requirements of Chapter 15.14 El Dorado County Grading, Sediment, and Erosion Control Ordinance,

2. Chapter 5 of this manual, and

3. The current version of the erosion control requirements and specifications created by a multi-agency team including the local Resource Conservation Districts (RCDs), Environmental Management Department (EMD), DSD, and DOT.

A grading permit may be required. If a grading permit is not required, all other requirements as established by the Design Manuals shall be adhered to.

Note: If more than one acre of land will be disturbed, a "Notice of Intent" must be filed with California's Regional Water Quality Control Board. (See Chapter 7, Section 7.1 of this manual for contact and website information.)

For further information on erosion control, see also the resources available from the local RCDs. (See Chapter 7, Section 7.1 of this manual for contact and website information.)

D. Lands Subject to Flood Hazards. All subdivisions must comply with the Flood Damage Prevention Ordinance (Chapter 17.25 of the El Dorado County Code) and the *General Plan* (Goal 6.4).

E. Curbs, Gutters and Sidewalks. Curbs, gutters, and sidewalks are required as shown on the applicable Standard Plans and Section 2.4.2.3 of this Chapter.

F. Model Homes in Subdivisions. Pursuant to the California Subdivision Map Act, model homes may be built before subdivision improvements are completed. A maximum of eight model homes per 50 subdivision lots is allowed, subject to the following improvements being completed prior to any model homes being built:

1. A Temporary Use Permit from DSD Planning Services is required,

2. All utilities must be installed to the model homes unless otherwise permitted under a Temporary Use Permit,

3. All required fire hydrants must be installed and in working order subject to the local fire protection district's approval,

4. All but the last layer of asphalt serving the model homes must be built and approved by DOT,

5. Adequate parking (on-street or off-street) shall be provided for the model homes, and

6. Model homes may include office space for sales employees, subject to approval under the Temporary Use Permit and subsequent Building Permit. The office space shall be converted to living space or garage space prior to sale of the model home for single family dwelling purposes.

G. Hillside Design.

1. The following *General Plan* Policies address development on hillsides, ridgelines and 30 percent slopes:

   a. Objective 2.3.2,

   b. Policy 2.3.2.1,

   c. Objective 7.1.2,

   d. Policy 7.1.2.1, and

   e. Policy 7.1.2.2.

2. Hillside Design Standards

The hillside design standards described below are to be used under any circumstance where the **natural** site cross-slope is 10 percent or greater (e.g., these standards do not apply to mass pad graded lots). The County will consider alternative designs that include an erosion and sediment control plan developed and certified by a Civil Engineer, and approved by the County Engineer[1]. Cross-slope shall be calculated by either dividing the vertical distance by the horizontal distance on a section drawn perpendicular to the contours for the full dimension of the proposed lot at 50 foot intervals with a minimum of two such sections per lot; or by making the same calculation between the highest and lowest point within the lot, whichever results in the highest average cross-slope. The cross-slope is then the average of the sections taken for each lot. Cross-slopes ending in one-half percent or more shall be rounded to the next highest whole number. Each lot shall meet the minimum lot size standard based upon that lot's particular slope.

a. Lot Frontage. [Section to be brought back for further discussion.]

All residential lots shall have a minimum frontage depending on the average slope (natural) of the lot as noted below, or comply with zoning requirements, whichever is more restrictive:

Slope	Minimum Lot Frontage
10-15%	75 feet
16-20%	90 feet
21-25%	105 feet
26-30%	120 feet
31-35%*	135 feet
36-40% *	150 feet

* Lots with slopes over 30 percent are permitted. However, building sites may be limited to areas less than 30 percent slope.

b. Flag Shaped Lots in Hillside Development.

Flag shaped lots shall be permitted when evidence has been provided which clearly indicates that such lots will result in substantially less grading or less impact on the environment. All flag shaped lots shall conform to the following standards:

i. The lot's "flagpole" shall have a minimum width, at any point, of 25 feet.

Exception
See Section 2.4.1.G.2.b.iii of this Chapter.

ii. All cut or fill slope areas created by the driveway shall be contained within the flagpole or slope easements.

[1] DOT Director or his/her designee.

iii. Two adjacent flag shaped lots may use a common driveway provided the "flagpoles" are adjacent and meet the following:

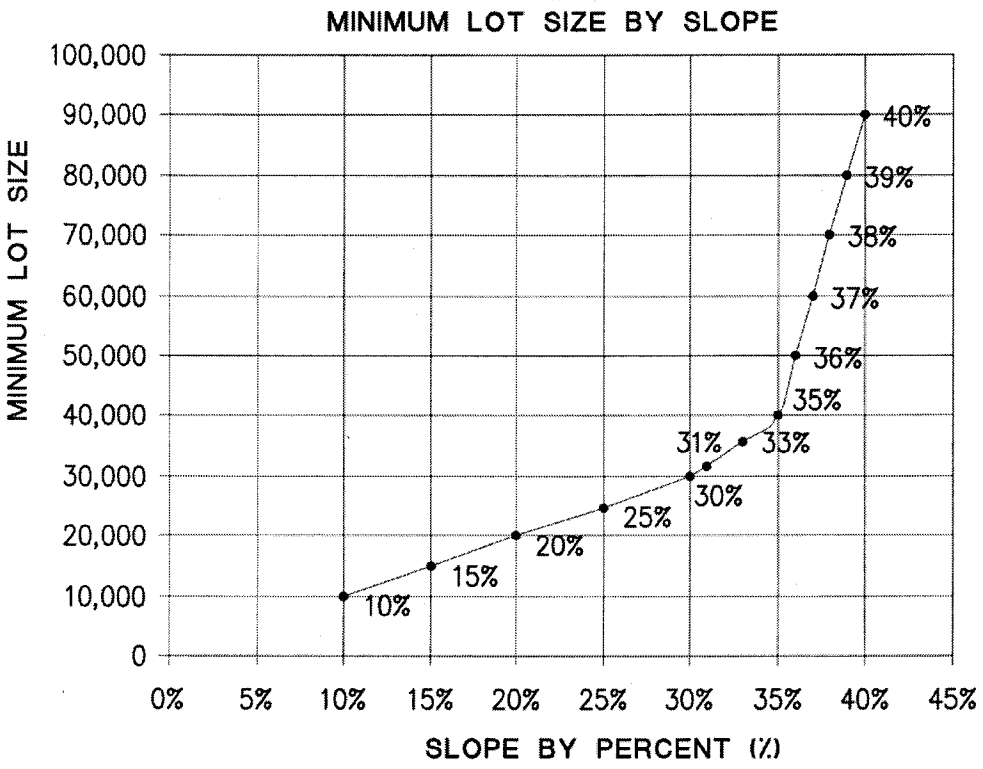
- The lots' flagpoles shall have minimum widths at any point of 12 and ½ feet, ~~and~~
- The driveway is 20 feet wide and contains a turnaround if the flagpole is over 150 feet long, and
- An access and utility easement shall be provided to the use and benefit of both lots served.

Lots that qualify for the exception regarding requirements for street frontage pursuant to Section ~~2.4.1.B.4~~2.4.1.B.3 of this Chapter are not considered Flag Shaped Lots.

c. Residential Lot Size Standards.

The minimum required lot area shall be computed in accordance with the applicable provisions of the "Minimum Lot Size By Slope" graph (Exhibit A). Lot slope shall be calculated as the average cross-slope of the lot as noted above in this section.

EXHIBIT A



* if slopes are less than 10% only zone district standards shall apply.

* Any portion of a lot with slopes exceeding 40% shall not be considered as part of the required minimum lot area.

SLOPE BY PERCENT (%)	10	15	20	25	30	31	33	35	36	37	38	39	40
MINIMUM LOT SIZE (SQ FT)	10,000	15,000	20,000	25,000	30,000	32,000	36,000	40,000	50,000	60,000	70,000	80,000	90,000

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2.4.2 Streets, Street Lighting, Sidewalks, Bike Lanes

The *General Plan* provides general and specific transportation and circulation guidance that must be reflected in the design of new developments (see Policies TC-1a, TC-1b and Table TC-1). This manual, along with the other Design Manuals, provides further definition and clarification to support the *General Plan's* guidance.

New streets and improvements to existing streets shall comply with the applicable Standard Plans. Exceptions from the Standard Plans require County Engineer approval prior to final approval of a Tentative Map by the approving authority.

2.4.2.1 Streets

A. Street designs must conform to all County Ordinances and *General Plan* Policies, California's Fire Safe Regulations and *Fire Code*, as well as standards set forth in all Design Manual(s), including this manual, and the Standard Plans, unless other standards have been adopted by the County (such as in a Specific Plan or Form Based Code). The following are applicable *General Plan* Policies:
   1. Policy TC-1p,
   2. Policy TC-1w,
   3. Policy TC-Xa,
   4. Policy TC-Xf,
   5. Policy 2.2.5.16, and
   6. Policy 6.2.3.2.

B. Street Standards for Subdivisions.
   1. Proof of legal access (e.g., copies of deeded easements and a letter from a Title Company that states that all deeds are valid) ~~is~~ may be required for ~~all~~ streets ~~abutting~~ used to access the proposed development, whether the streets are County-maintained or non-County-maintained.
   2. Access to streets that meet the County's design and level of service standards shall also be provided. Standard access requirements may be modified pursuant to the exceptions listed in the "Frontage" provision (Section 2.4.1.B.3 of this Chapter) or the "Flag Shaped Lots" provision (Section 2.4.1.B.5 of this Chapter). This may require the improvement of non-County-maintained and/or County-maintained roads that provide access to the development. Access improvement requirements may be both "on-site" (physically on the proposed development site), and "off-site" (physically on surrounding lots not part of the proposed development).
   3. Streets and lots may be required to be laid out so as to permit future re-subdivision if they are in a subdivision where a lot is twice the size or greater than the minimum size required in the zoning district.
   4. When a subdivision abuts or contains an existing or proposed new street, limited access highway, or railroad, the following may be required to protect residential properties and separate through and local traffic:
      a. Providing a new separate access road(s) to the lots in the subdivision, and/or
      b. Creating lots that front on the streets in the subdivisions (not onto existing streets). See the Standard Plans for access restrictions.

5. The County may require that a non-vehicular access restriction/easement be recorded on the Final Map or Parcel Map to prohibit future access to a road not intended to provide access to lots.
6. Applicants may be required to dedicate right-of-way to the County for future road improvements and/or expansions to maintain public safety and/or to accommodate projected increased traffic volumes due to the new subdivision.
7. Phased Developments (see Section 4.3.1.9 of this manual).
8. Dead-End Road Width and Turnaround Standards ***(Reference: ~~2007 California Fire Code, Appendix D, Table D103.4~~ The current edition of the Fire Code as ratified by the Board of Supervisors.)***: A turn-around is required for dead-end roads, as depicted in the Standard Plans:

Length (Feet)	Width (Feet)	Turnarounds Required
0 – 150	20 (minimum); the entire length of the road	None Required
151 – 500	20 (minimum); the entire length of the road	1) 96 foot diameter cul-de-sac in accordance with County standard plans; 2) 120 foot Hammerhead, 60 foot "Y"
501 – 750	20 (minimum); the entire length of the road	1) 96 foot diameter cul-de-sac in accordance with County standard plans; 2) 120 foot Hammerhead, 60 foot "Y"
Over 750	See Fire Safe provisions in Subsection 9.c of this Chapter.	

9. For all residential subdivisions:
   a. A second road into/out of the subdivision is required where there are more than 12 lots on a dead-end road. This implements the 25 dwelling unit maximum pursuant to the current edition of the Fire Code as ratified by the Board of Supervisors ~~amendments to the 2007 California Fire Code, Appendix D, Section D107, passed by the El Dorado County fire protection districts, and ratified by the Board in February, 2008~~. This limit assumes one primary and one secondary dwelling unit per lot. Hardship mobile home allowances are not within this total and may be prohibited if there are too many dwelling units on the road (see Section 2.4.2.1.B.9.c of this Chapter).

   > ~~**Exception**~~
   > ~~Where a secondary fire apparatus access road cannot be installed because of topography, waterways, non-negotiable grades, or other similar conditions and where an alternative means of fire protection is provided.~~

   b. Where two roads are required, their connections to the County-maintained road system shall be at locations approved by DOT and the fire protection district having jurisdiction.

c. Dead-end roads shall not be longer than the following lengths, (measured along the centerline of the street from the intersecting centerlines of the intersecting street to the center point of the cul-de-sac bulb or equivalent), or longer than the California Fire Safe standards allow, whichever is more restrictive (see Title 14 Natural Resources Division 1.5 – Department of Forestry, Chapter 7 – Fire Protection, Subchapter 2 SRA Fire Safe Regulations Articles 1 – 5):
   - Lots zoned for less than one acre in size – 800 feet,
   - Lots zoned for 1 acre to 4.99 acres – 1320 feet,
   - Lots zoned for 5 acres to 19.99 acres – 2640 feet, and
   - Lots zoned for 20 acres and above – 5280 feet.

d. An acceptable Fire Safe Plan shall be developed by a Fire Safe Plan preparer acceptable to the El Dorado County Fire Prevention Officers' Association and CAL FIRE.

e. An entity shall be formed for the maintenance of any shared or common roads, parking facilities, landscaping, signs and drainage facilities. If there is an existing entity, the applicant shall modify the appropriate document(s) if the current document(s) does not sufficiently address maintenance of facilities of the proposed project.

f. Subdivisions of four or fewer lots may qualify for the "Frontage Exception" provision of Section 2.4.1.B.3 of this Chapter that would allow a lot to be created that does not have frontage on a road and is served by a driveway.

10. For all non-residential and all multi-family projects:

a. Two points of access are required, unless an exception is given by the fire protection district having jurisdiction.

b. Applicants are encouraged to provide shared access between parking lots in order to limit the need for emergency vehicles to go back out onto the access road.

c. Where two points of access are required, they shall be placed a distance apart subject to approval by DOT and the fire protection district having jurisdiction.

d. Additional driveway and road requirements may be required when building height(s) exceeds 30 feet.

2.4.2.2 Street Lighting

See Chapter 4, Section 4.3.3 of this manual and Title 17 Zoning Ordinance, Outdoor Lighting.

2.4.2.3 Sidewalks, Pedestrian Paths, and Bike Lanes

A. General Policies.

Pedestrian and other non-vehicular circulation systems are an integral part of any development project. Where required, these systems shall be incorporated into the Tentative Map design and noted or described on the Tentative Map. The *General Plan* specifies several policies related to sidewalks, pedestrian paths, and bike lanes:

1. Policy TC-4e,
2. Policy TC-4h,
3. Policy TC-4i,
4. Policy TC-5a,

5. Policy TC-5b, and
6. Policy TC-5c.

B. Sidewalks are required in ~~accordance with the Standard Plans, except for~~:
   1. Residential zoned subdivisions in which ~~all~~ lots are ~~greater than~~ 10,000 square feet or less,
   2. Industrial, commercial, and R&D zoned Parcel Maps in which ~~all~~ lots are ~~greater~~ less than one acre, and
   3. Specific Plans and Planned Developments where there is an adopted plan that addresses pedestrian and non-vehicular circulation within those specific plans. If sidewalks~~, curbs, and gutters~~ are not specifically addressed in the Plan or PD, the requirements listed in the ~~Standard Plans~~ Land Development Manual shall be met.

C. Sidewalks and bike lanes are required within 500 feet of schools, parks, and other public or community facilities (see the El Dorado County Bicycle Transportation Plan for more information on the El Dorado County Transportation Commission's website).

D. In some instances, a pedestrian path (such as an asphalt paved path) may be an acceptable alternative to sidewalks, curbs, and gutters.

E. Standards.
   1. Sidewalk Location. In proposed subdivisions where sidewalks are required, sidewalks shall be installed pursuant to the Standard Plans, and may be required on at least one side of the street into and out of the subdivision.
   2. Sidewalk Width. Sidewalk widths shall be as called out in the Standard Plans. Where sidewalks already exist, new sidewalks may be required to match the existing sidewalks to make for seamless transitions.
   3. ADA. Sidewalks shall be in compliance with the Americans with Disabilities Act (ADA).
   4. Curb and Gutter Requirements. Concrete curbs and gutters shall be used in all subdivisions where lots are less than 20,000 square feet. Grading shall provide for positive, controlled lot drainage to the street and/or storm drain system.

2.4.2.4 Transit

For standards regarding public transit facilities, please see the Transit Design Manual by the El Dorado County Transit Authority. (See Chapter 7, Section 7.1 of this manual for contact and website information.)

2.4.2.5 Frontage Improvements

Where a proposed project has frontage on a County-maintained road, frontage improvements are required, consistent with the Average Daily Trips (ADT) and the applicable design standards, ordinances, laws and *General Plan* policies. Possible frontage improvements may include, but are not limited to: road widening, encroachments, shoulders, curbs, gutters, sidewalks, drainage ditches, vegetation clearance, signage, lighting, pedestrian or bicycle paths, and easements or right-of-way to accommodate the frontage improvements. The level of frontage improvements will be evaluated based on the type of development proposed, the amount of traffic on the frontage road, surrounding development, and other considerations identified through the discretionary process.

2.4.2.6 Frontage Improvement Agreements

Under some circumstances, an "in-lieu" fee may be substituted for frontage improvements (e.g., sidewalks, road widening, etc.). See DSD Planning Services for more information. A Frontage Improvement Agreement providing for the in-lieu fee shall be reviewed and approved by DSD, County Counsel, and the Board.

2.4.3 Drainage Criteria

See the Drainage Manual for more detailed design standards related to drainage.

2.4.4 Water Supply and Distribution System

If the water supply to new development will be either from groundwater or a community water system, see Chapter 3 of this manual for more information.

2.4.4.1 General Plan Policies

A. The following *General Plan* Polices address water supply:
   1. Policy PS 5.2.1.2,
   2. Policy PS 5.2.1.3,
   3. Policy PS 5.2.1.4, and
   4. Policy PS 5.2.1.5.

B. Water supply and distribution systems shall be provided to all lots when lots or parcels are less than five acres and public sewer is not available. Exceptions to this standard may apply if consistent with the parcel size exception standards of the Title 17 Zoning Ordinance.

C. When water supply and distribution systems are provided, they shall be constructed to the public purveyor's requirements. The public purveyor shall have final approval of the design of all water distribution systems.

2.4.4.2 Fire Protection

See Section 2.4.5 of this Chapter for more information.

2.4.4.3 Plans and Specifications

Water supply plans and specifications shall be reviewed, approved, and signed by the fire protection district having jurisdiction and the water district responsible for providing service upon completion of the project.

2.4.4.4 Water Commitment

Prior to approval of the Final Map by the Board, or prior to the filing of a Parcel Map, the required water improvements shall either be completed, or fully identified and described within an approved Subdivision Improvement Agreement.

A. The public purveyor shall submit a letter to DSD Planning Services stating that the water improvements have been completed to its satisfaction or that the improvements described in the subdivision agreement are acceptable to the public purveyor. The letter shall include a statement from the public purveyor that it is willing and able to provide service to each lot of the subdivision when the described improvements are completed.

B. The applicant shall also provide to DSD Planning Services El Dorado Irrigation District's (EID's) "water meter award" letter, or an equivalent in areas served by other water purveyors, which states that each lot has secured a water meter.

2.4.5 Fire Protection and Other Emergency Services

2.4.5.1 General Policies

Fire protection measures are required, including fuel management, to reduce wildfire hazards, fire hydrants, and storage, if necessary.

A. All proposed development shall adhere to the current standards as set forth in:
   1. California's Title 14 Natural Resources, Division 1.5 – Department of Forestry, Chapter 7 – Fire Protection Articles 1-5,
   2. The current edition of the Fire Code as ratified by the Board of Supervisors~~2007 California Fire Code and amendments as ratified by the Board on February 26, 2008~~, or
   3. The standards described in the Design Manuals, whichever is more restrictive.

Exceptions to fire protection requirements can only be made by the entity prescribing the standard.

B. Pursuant to *General Plan* Goal 5.7, prior to approval of new development, adequate and comprehensive emergency services shall be provided, concurrent with development:
   1. Policy 5.7.1.1,
   2. Policy 5.7.2.1,
   3. Policy 5.7.3.1,
   4. Policy 5.7.4.1,
   5. Policy 5.7.4.2,
   6. Objective 6.2.1,
   7. Figure HS-1,
   8. Policy 6.2.2.1,
   9. Policy 6.2.4.1,
   10. Policy 6.2.2.2, and
   11. Policy 6.2.3.4.

2.4.5.2 Standards and Requirements

A. Fire Protection is required:
   1. When subdivisions are proposed within a fire protection district, the minimum fire protection requirements shall be met, unless modified by agreement between the applicant, the structural fire protection district having jurisdiction and any applicable wildland fire protection agencies (e.g., CAL FIRE).
   2. When a subdivision of five or more lots (no matter the size of the lots) is proposed, it shall be within a structural fire protection district.
   3. A proposed subdivision of four or fewer lots, creating lots 9 acres or smaller, shall be within a structural fire protection district.
   4. If a proposed subdivision (of any number of lots) creates lots 9 acres or smaller, and is not within an existing fire protection district, one of the following shall occur:
      a. Annexation to an existing fire protection district; or,

b. Contract for services with existing structural fire protection district until such time as the annexation is finalized.

B. All discretionary residential developments shall have a Fire Safe Plan prepared by a Fire Safe Plan preparer acceptable to the El Dorado County Fire Prevention Officers' Association and CAL FIRE.

C. For non-residential discretionary development, a Fire Safe Plan may be required by the fire protection district having jurisdiction.

D. For more details on what is included in a Fire Safe Plan, see below and Chapter 7, Section 7.1 of this manual for contact and website information for fire protection districts. For more information on qualifications for Fire Safe Plan preparers, contact the fire protection district having jurisdiction.

E. A Fire Safe Plan is a written document prepared for the purpose of establishing minimum wildfire protection standards in conjunction with buildings, construction and development in State Responsibility Areas (SRA)[2] and Local Responsibility Areas (LRA)[3] when required by the fire protection district having jurisdiction.

1. A Plan shall address future design and construction of structures, subdivisions, and developments in SRA.
2. A Plan shall cover access, water supply, fuel (e.g., vegetation) modification, and related local requirements.
3. A Plan shall be determined complete when approved by the fire protection district having jurisdiction and CAL FIRE.
4. The Fire Safe Plan shall include measures to reduce fire hazards, such as:
   a. Expand cleared right-of-ways and enlarge cul-de-sacs,
   b. Address water supply,
   c. Address emergency access,
   d. Perform fuel modification (e.g., selective clearing and thinning) so that fuel load levels are reduced, and
   e. Other reasonable measures to protect structures in areas where structural fire protection does not exist (e.g., if the land division is adjacent to existing water lines, the applicant may be required to extend the water lines for fire protection purposes).

F. Water supply for subdivisions of five or more lots.

The supply system and source, public purveyor or private system, shall provide a minimum of 60,000 usable gallons of storage for five to 25 lots; 125,000 gallons for 25 to 50 lots; and 200,000 gallons for 50 or more lots. The water supply system and source shall be located at the direction of DSD and based on comments received from the fire protection district having jurisdiction.

1. Where water distribution systems are not available, the following will be considered by the fire protection district having jurisdiction:
   a. Tanks,
   b. Reservoirs,
   c. Canals, and
   d. Other systems as may be approved by the structural fire protection district.
2. A facility for refilling fire trucks shall be provided for taking of water from the water supplies and shall conform to the Standard Plans. The standard plans may be modified by the fire protection district having jurisdiction in that area where structural conditions require it.
3. Fire hydrant locations shall be approved by the fire protection district having jurisdiction.

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[2] The area within the County where the California Department of Forestry and Fire Protection (CAL FIRE) has primary financial responsibility for preventing and suppressing wildland fires. This does not necessarily include structural fire protection but CAL FIRE may provide such protection under "automatic aid agreements". The prevention and suppression of fires in all areas not classified as SRA are the primary responsibility of the local or Federal fire agency.

[3] Incorporated cities which have assumed fire protection within what otherwise would be a State Responsibility Area. The cities of Placerville and South Lake Tahoe are LRAs.

2.4.6 Water Supply for Lots Not Supplied with Water by a Public Agency

See Chapter 3 of this manual for more detail on design standards.

2.4.7 Sewage Collection and Disposal Systems

2.4.7.1 General Policies

The following *General Plan* policies apply:

A. Policy 5.3.1.1,
B. Policy 5.3.1.2,
C. Policy 5.3.1.3,
D. Policy 5.3.1.4,
E. Policy 5.3.1.7, and
F. Policy 5.3.2.3.

2.4.7.2 Requirements

A. There are four options available to new development to provide sewage disposal:
   1. On-site sewage disposal systems (e.g., septic systems),
   2. Community wastewater systems with flow less than 5000 gallons per day,
   3. Community wastewater systems with flow greater than 5000 gallons per day, and
   4. Sewage disposal provided by a public purveyor.

   See Chapter 3 of this manual for more detail on standards for on-site sewage disposal systems and community wastewater systems with flow less than 5000 gallons per day. For community wastewater systems with flows greater than 5000 gallons per day, obtain a waste discharge permit from the California Water Quality Control Board, Central Valley.

   If a public sewer provider is proposed, the design of the sewage facilities, connections, etc., shall meet the provider's standards. See the appropriate public purveyor for their standards.

B. Prior to filing a Final Map or Parcel Map, sewer service shall be available for immediate use or as required in Section 2.4.7.4 of this Chapter.
   1. A Civil Engineer shall provide documentation that demonstrates that the sewage system will be able to accommodate any future growth in the permitted area. No building permits can be approved without a Civil Engineer's certification that the sewage system can accommodate the proposed increase in sewage.
   2. A grading permit may be required for the trenching to install the wastewater system. See Chapter 5 of this manual for more information. All sewer mains, manholes, and laterals, shall be placed, successfully tested, and the backfill compacted prior to the surfacing of the streets affected. Any trenching that affects the County's right-of-ways shall require at a minimum an encroachment permit. Contact DOT for more information.

2.4.7.3 Plans and Specifications

Prior to the approval of the Final Map or filing a Parcel Map (for commercial or industrial development), the applicant shall submit to the County Engineer, plans of the sewage

collection and disposal system prepared by a Civil Engineer, of sufficient detail to enable the County Engineer to ascertain whether such system conforms to the standards set forth herein and to standard-acceptable engineering practices. Such plans and specifications shall also be reviewed and signed by the authorized representative of the entity that will operate the sewer system(s), certifying it has approved the final construction plans and specifications. A letter shall be provided to the County Engineer by the public entity's engineer, stating that the provider is willing to maintain and operate the sewer system upon its completion.

The County Engineer or the public purveyor may require additional improvements for sewer systems having unusual problems.

2.4.7.4 Sewer Commitment

Prior to approval of a Final Map by the Board, or prior to the filing of a Parcel Map, the required sewer improvements shall be completed or described within a Subdivision Improvement Agreement (SIA) and a security provided to guarantee completion. The public purveyor shall submit a letter stating the sewer improvements have been completed to its satisfaction or that the improvements described in the SIA are acceptable to the public purveyor. The letter shall include a statement from the public purveyor that it is willing and able to provide service to each lot of the subdivision when the described improvements are completed.

2.4.8 Underground Power and Communication Utility Systems

2.4.8.1 General Policies

The following *General Plan* Policies apply to power and communication systems:

A. Objective 5.6.1, and
B. Policy 5.6.1.1.

2.4.8.2 Standards of Construction

A. Pacific Gas & Electric (PG&E) requires all power lines to be undergrounded in new: (1) Residential Subdivisions, (2) Residential Developments, (3) Commercial Developments, (4) Industrial Developments, and (5) locations that are in proximity to and visible from designated Scenic Areas (reference PUC Electric Rule 15-Distribution Line Extensions).

There are some **exceptions** such as for subdivisions with lots of three acres or more. Contact PG&E for more information. (See Chapter 7, Section 7.1 for contact and website information.)

B. Multi-family and non-residential development in Community Regions and Rural Centers shall, where feasible and appropriate, underground existing and new utilities in accordance with PUC rules and regulations.
C. Electrical and communication systems shall be installed as shown in the Standard Plans and in accordance with the applicable utility's rules and regulations.
D. Electrical and communication systems in streets shall be placed before pavement is constructed and shall be constructed in conformance with the plans.
E. Surface facilities that will be located in paved areas shall have traffic frames and lids conforming to the Standard Plans.
F. Surface facilities that protrude from the finished grades shall be located so that they will not cause a hazard.

G. The final plans and specifications shall show the work to be performed by the applicant, normally consisting of conduit, pull boxes and transformer pads. Wires are typically supplied by the utility entity and need not be shown on the plans.

2.4.8.3 Plans and Specifications

Prior to the approval of the Final Map, the applicant shall submit to the County Engineer plans showing the location of the electrical and communication systems of sufficient detail to enable the County Engineer to ascertain whether such systems conform to the standards set forth herein and to standard-acceptable engineering practices. Such plans and specifications shall be approved by the authorized representative of the entity operating the electrical or communication systems and shall be accompanied by a letter from the entity stating that the entity and applicant have entered into an agreement that will provide the utility's service to a lot line at each lot in the subdivision. A letter shall be provided to the County Engineer by each provider's engineer, stating that the provider is willing to maintain and operate the system upon its completion.

See Chapter 4 of this manual, as well as the Standard Plans for more details.

2.4.9 Encroachments on County-Maintained Roads

All encroachments onto County-maintained roads shall comply with California Streets and Highways Code 942 and County Ordinance Code Chapter 12.08 et seq. and the standards in the Design Manuals. See Chapter 4 of this manual, as well as the Standard Plans for more details.

2.4.10 Landscaping

Where landscaping is required, reference Title 17 Zoning Ordinance and the Water Conserving Landscape Standards adopted by the Board in Resolution 69-93 on February 23, 1993, or as most recently amended (reference: *General Plan* "Policy 5.6.2.1").

For landscaping standards in road medians (including trees), or in close proximity of a roadway, see the Standard Plans.

2.4.11 Wetlands, Archaeological and Cultural Resources, and Native Tree Preservation

2.4.11.1 General Policies

The following General Plan policies address impacts to important habitat areas:

A. Policy 7.3.3.1,
B. Policy 7.3.3.3,
C. Policy 7.3.3.4,
D. Policy 7.3.3.5,
E. Policy 7.4.1.6,
F. Policy 7.4.2.2, and
G. Policy 7.4.2.8.

2.4.11.2 Wetland Preservation Standards

A. No person engaging in construction activity shall:
   1. Ignore or discount the regulatory requirements of State or Federal agencies applicable to any project,
   2. Fill or substantially alter any existing wetland area without first obtaining an appropriate permit(s) from the U.S. Army Corps of Engineers, California Department of Fish and Game, or other State or Federal agency with jurisdiction over wetlands and wildlife resources,
   3. Park or operate any motor vehicle within the wetland area,
   4. Place or store any equipment or construction materials within the wetland area, and
   5. Place or allow to flow into the wetland any oil, fuel, concrete mix or other deleterious substance.

B. Where construction activity is proposed within 50 feet of a wetland area:
   1. The wetland area should be clearly marked with flagged lath or other removable marking device, and
   2. A deleterious substance filter shall be installed within any drainage course leaving the construction zone and entering the wetland area.

C. Discretionary permits may require setbacks from wetlands, for biological mitigation, water quality, flood damage prevention, or other purposes identified through the discretionary process.

2.4.11.3 Archaeological and Cultural Resources

Protection or mitigation of archaeological and cultural resources may be required when found on-site. Cultural Resource studies are required with application submittal and must meet the Guidelines for Cultural Resource Studies. Resources protection may be required by the State Historic Preservation Office or as approved by the County discretionary permit, based on the permit's Cultural Resources study. Recommendations from the permit's Cultural Resource study may be incorporated into the conditions of approval for discretionary permits.

2.4.11.4 Oak Tree Preservation

A. Oak tree protection plans shall comply with the Oak Woodland Management Plan adopted May 6, 2008 and Section 17.73 of the Zoning Ordinance (Ordinance 4771 approved May 6, 2008).

B. Oak Tree Protection Construction Standards.
   For the use of this section, oak trees are defined as being healthy and having a diameter at breast height (dbh) of six inches or greater, or for a tree with multiple trunks with an aggregate of at least 10 inches dbh.
   1. No person engaging in construction activity shall:
      a. Change the amount of irrigation provided to any oak tree from that which was provided prior to the commencement of construction activity,
      b. Trench, grade, or pave into the drip line area of an oak tree,
      c. Park or operate any motor vehicle within the drip line area of any oak tree,
      d. Place or store any equipment or construction materials within the drip line of any oak tree,
      e. Attach any signs, ropes, cables, or any other items to any oak tree, and

f. Place or allow to flow into or over the drip line area of any oak tree any oil, fuel, concrete mix, or other deleterious substance.

2. Where construction activity is proposed within 50 feet of an oak tree:
   a. A minimum four foot tall temporary fence shall be placed around the protected area prior to the work beginning,
   b. No grade changes shall occur within the protected area unless specifically indicated in the plans,
   c. No trenching shall be allowed within the protected area. If it is necessary to install underground utilities within the temporary fence the utility trench shall be hand dug so as not to cut any roots over two inches in diameter, or a line may be bored or drilled,
   d. Only dead, weakened, diseased, or dangerous branches shall be removed, and only by the recommendation of, or under supervision of, a licensed arborist. Any roots two inches in diameter or larger that must be cut shall be cleanly cut with pruning (not excavation) equipment, and
   e. Excessive dust accumulation shall be hosed off from the foliage of oak trees as recommended by an arborist during the construction of the project.

2.4.12 Protection of Agricultural Lands

The following *General Plan* policies apply to new projects:

A. Policy 8.1.3.1,

B. Policy 8.1.3.2, and

C. Policy 8.1.4.1.

The design of projects shall take these policy requirements into consideration, through clustering and lot design that provides the opportunity to meet the minimum lot size and setback requirements. Refer to Title 16 Subdivisions, Title 17 Zoning Ordinance, the *General Plan* Policies 8.1.3.2 and 8.4.1.2, and the General Plan Interim Interpretive Guidelines.

2.4.13 Airport Land Use Plans

All development shall comply with any applicable Airport Comprehensive Land Use Plan (CLUPs) policies. There are adopted CLUPs for Georgetown, Cameron Park, Placerville, and South Lake Tahoe airports. Consult with DSD. (Reference *General Plan* Policy 6.8.1.1.)

CHAPTER 3 – SEWAGE, WATER REQUIREMENTS, AND AIR QUALITY (draft rev. 10/01/10)

Sections:

3.1 Introduction

The following pages incorporate State requirements, County Ordinances, Board of Supervisors (Board) Resolutions, and Environmental Management Department (EMD) policies, concerning water supplies and sewage disposal for lot creation. This Chapter of this manual describes what must be done to prove that each lot can support an onsite sewage disposal system and onsite water supply. This process shall be completed by an applicant prior to approval by the Planning Commission (Commission) or Zoning Administrator. For more information and definitions, visit EMD's website. (See Chapter 7, Section 7.1 of this manual for contact and website information.)

Waste from within the Lake Tahoe watershed shall be placed only into a sewer system and treatment facility sufficient to handle and treat any such waste and transportation facilities sufficient to transport any resultant effluent outside the Lake Tahoe watershed (California Water Code Section 13951).

3.1.1 Zone Change and General Plan Amendments

A feasibility report is required for proposed projects that would require a zone change or *General Plan* amendment that, if approved, would increase development densities in areas where public sewer and/or public water is not available.

A. Onsite Wastewater Treatment Systems. A site evaluation, including soil test pits and percolation tests on at least 10 percent of the proposed lots shall be conducted as part of the feasibility report for zone change approval. All soil types, as delineated in the USDA Soil Survey of El Dorado Area, California, that are present within the zone change request for a specific parcel(s) shall be included. Proposed test pit sites shall be spread throughout the project to obtain an accurate representation of the project sewage disposal capability and sites shall be pre-approved by EMD prior to digging. The test locations shall be accurately shown on a site map. Site evaluations shall be scheduled to include EMD staff in the process. EMD staff may require additional site evaluations

and percolation tests when field conditions indicate that there may be development constraints for wastewater disposal.

3.2 Site Evaluation for Wastewater Disposal

The purpose of the site evaluation is to determine whether or not a lot can accommodate an onsite wastewater treatment system, and is required for both ministerial and discretionary applications. The site evaluation includes a soil observation pit (test trench) and percolation test to determine the soil's ability to treat and dispose of wastewater. EMD shall observe all soil observation pits. The overall site shall be evaluated by the Consultant/Designer[1]. Any specific limitations or conditions that may affect the proposed onsite wastewater disposal system shall be addressed in the site evaluation report.

A site evaluation report is transferable and runs with the land. The report is based upon property conditions at the time of the site evaluation. Changes made to the property after the site evaluation may render the designated area unacceptable. Examples of types of changes include: grading, cuts and fills, new structures, wells, ponds, etc. The property owner must take care not to encumber or alter the designated area in a manner that affects the future system.

In addition, changes in State laws, regulations, County Ordinances, or other policies, governing onsite wastewater treatment systems may necessitate modifications to site evaluation and reporting requirements as well.

3.2.1 Site Evaluation Process

Only licensed Consultants/Designers shall conduct the site evaluation. The Consultant/Designer assists the property owner in locating the appropriate wastewater disposal site on the lot. The Consultant/Designer shall evaluate the soil observation pit(s) and prepare the site evaluation report. The Consultant/Designer shall schedule the time and date of the soil observation pits with EMD.

3.2.2 Soil Observation Pit(s)

The soil observation pits are to be dug in the area of the proposed wastewater disposal area. If needed, additional soil observation pits may be required to locate a suitable area for the wastewater disposal system, specifically in an area of potential groundwater or shallow soils.

3.2.3 Site Evaluation Report

The Site Evaluation Report shall have the following information on a site map that is drawn to scale:

A. Required disposal area,

B. Location of percolation test holes and test pits,

[1] For this Chapter of this manual.

C. Distance from disposal areas to property lines, easements, driveways, and structures,

D. Existing structures,

E. Existing or proposed cuts and/or fills on the property which may affect the onsite wastewater disposal system,

F. Location of all wells on the lot or on adjacent lots that may affect the onsite wastewater disposal system,

G. Location of rivers, streams, lakes, ponds, water supply(s), ditches, springs, and wetland areas that may affect the onsite wastewater disposal system,

H. Percent of slope of the ground in the wastewater disposal area. (Note: Areas of lots that are less than 30 percent slope shall be reserved for wastewater disposal.),

I. Significant rock outcrops, cuts, fills, and slopes 30 percent or greater which may affect the onsite wastewater disposal system, and

J. Frontage road and all easements pertaining to the property which may affect the onsite wastewater disposal system.

The overall site shall be evaluated by the Consultant/Designer for considerations that may affect the lot's ability to support an onsite wastewater disposal system. Some of these considerations are slopes 30 percent or greater, and setbacks from property lines, easements, wells, drainage courses, wetland areas, and cut banks. Any specific limitations or conditions that may impact the proposed onsite wastewater disposal system shall be addressed in the report.

3.3 Suitable Wastewater Disposal Areas

3.3.1 Soil and Groundwater Determination

A. Effective soil depth shall be four feet below the bottom of the design depth.

B. Depth to groundwater shall be a minimum of five feet below the bottom of the design depth.

C. Slopes in designated sewage disposal area shall not exceed 30 percent.

3.3.2 Percolation Tests

A. All percolation tests shall be conducted using standard procedures. See EMD's website.

B. The location of the percolation test holes shall be evenly distributed horizontally and vertically in the proposed leaching area.

C. The minimum number of test holes to be dug is four.

D. Deep trench designs shall be tested at varying depths for proper evaluation of soil.

3.3.3 Minimum Area to Be Shown on Each Lot

For Tentative Maps to be served by onsite sewage disposal systems, the applicant or agent shall provide a feasibility report. Feasibility reports for onsite sewage disposal systems must be approved by EMD in the form of a written statement prior to a proposed project being scheduled for hearing with either the Commission or the Zoning Administrator.

A site evaluation on at least 10 percent of the proposed lots shall be conducted as part of the feasibility report for Tentative Map approval. All soil types listed by the USDA Soil Survey of El Dorado Area, California, shall be included. Proposed test pit sites shall be spread throughout the project to obtain an accurate representation of the project sewage disposal capability and sites shall be pre-approved by EMD prior to digging. The test locations shall be accurately shown on the Tentative Map. Site evaluations shall be scheduled to include EMD in the process. EMD may require additional site evaluations when field conditions indicate the need in order to approve the proposal for onsite sewage disposal.

All proposed lots shall have a site evaluation conducted and meet criteria in Table 3.3.3 A as a condition for Final Map approval.

The suitable wastewater disposal areas shall be shown on all Tentative Maps. Suitable wastewater disposal areas shall meet all the requirements for an onsite wastewater disposal system, and shall be located so as not to conflict with any other applicable County requirements, including those contained in the *General Plan*.

A. The size of available wastewater disposal areas shown on each proposed lot shall correspond to the table below:

Table 3.3.3.A

PERCOLATION RATE (minutes/inch)	MINIMUM DISPOSAL AREA (square feet)
Less than 10	3,500
11-20	4,800
21-40	6,700
41-60	8,200
61-80	9,500
81-100	10,700
101-120[1]	11,700
121-140	12,500
141-160	13,500
161-180	14,300
181-200	15,100
201-220	15,800
221-240	16,500

Greater than 240 CRWQCB requirement	Unsuitable for wastewater disposal

(1) Proposed State Water Quality Control Board regulations may limit percolation rates for new lots to below 120 minutes per inch (mpi).

B. Proposed subdivisions of greater than 99 lots shall be submitted for review to the California Regional Water Quality Control Board, Central Valley Region (CRWQCB).

3.4 Community Sewage Disposal Systems

3.4.1 Background

EMD shall consider applications for private community wastewater collection and on-site disposal systems ("community systems"). A "community system" is a system which serves more than one lot and may include packaged wastewater treatment plants as acceptable alternatives to traditional wastewater treatment facilities.

This section shall govern the management of all community systems not proposed to be connected to an existing public sewer facility. This section is intended to regulate the use of new community systems, or the expansion of capacity for existing community systems, constructed after the effective date of this section for the treatment and disposal of domestic sewage. This section shall be applicable to those users, including residential, commercial, and industrial developments, whose waste discharge can be considered domestic sewage.

3.4.2 Requirements

Community systems shall meet the following requirements:

A. Ensure protection of the public health,

B. Assure reliable and reasonable service to the customer,

C. Prevent degradation of surface and/or subsurface waters,

D. Minimize any other detrimental environmental effects that could result from the collection, treatment, storage, and disposal of sewage or wastewater associated with on-site sewage disposal systems,

E. In order to set up a community system, the applicant shall cause to be formed a Property Owner's Association, Community Service District, Zone of Benefit, or similar body, hereinafter called "Body", which shall be responsible for the normal and routine operation of a community system,

F. In the event of problems with the operation and maintenance by the Body, the Body shall take all steps necessary to correct the problems in a timely fashion to the satisfaction of EMD,

G. A defined area of benefit and service fees shall be established prior to the recordation of a Final Map. The funding for this area of benefit shall be set up so as to accrue funds to provide for the future repair or replacement of major components of the system. The level of funding shall be reviewed under authority of the Board on a yearly basis to determine if sufficient monies are available to provide the necessary ability to correct any foreseeable problems with the system. The operating permit shall stipulate the manner in which this funding can be used for project repair or replacement,

H. The County may require a bond or other accepted surety to cover the initial period until sufficient funds have accrued to the service areas to handle potential problems. The amount of surety may be reduced annually by the amount equal to the reserve funds accrued within the past year,

I. The operating permit shall be continued until the system, in its entirety, has been abandoned and the dwelling units and other buildings served by such system have been connected to a public sewer system,

J. When a sub regional sewer treatment plant and collection system becomes available, a review of the system will be made. If it is determined by EMD to be advantageous, the system shall be connected to the public sewer system.

K. All systems shall be designed by a qualified Registered Professional Engineer, Geologist, or Environmental Health Specialist[2] as approved by EMD. The design shall be approved by EMD or when applicable, the CRWQCB. Construction shall be supervised by the appropriate agencies, Engineer, and Body,

L. The Body will be accountable to the County for the correction of problems or nuisance conditions that may develop,

M. Prior to recordation of the Final Map, the applicant must have approved contractual agreement with the Body,

N. The County has no obligation to issue a permit or enter into a contractual agreement with the applicant solely as a result of this section or these requirements,

O. The Body shall obtain an operating permit and be responsible for operation and maintenance of sewer facilities within the County-maintained streets. In the case of a single owner of a multi-unit residential or recreational type facility (such as a mobile home park or campground), the owner shall be the Body. Provisions shall be made in the operating permit to prevent the termination without the concurrence of all parties. The operating permit shall be tied to the property services so that EMD shall have the authority to assess the Body for any expense incurred, with the right to lien the property should the Body default. The Body must be able to collect funds for the normal operation and maintenance of the system. The Body must have in its employment or a contract with, a person(s) to operate, monitor, and routinely maintain the system on a

[2] A person registered as an Environmental Health Specialist (REHS) by the State of California.

day-to-day basis. This person(s) shall be a "Certified Onsite Wastewater System Inspector" or State-licensed "Wastewater Treatment Plant Operator". The level of certification shall be commensurate with the required duties and responsibilities.

3.5 Supplemental Treatment Systems

3.5.1 Background

Supplemental treatment systems perform additional wastewater treatment designed to reduce biochemical oxygen demand (BOD) and total suspended solids (TSS) concentrations, and are special design systems that may be used to serve individual single-family residences, multi-family residences, commercial establishments, and institutional or industrial facilities.

3.5.2 Requirements

A. Subdivisions, multi residential, multi structural, commercial, and industrial developments using supplemental treatment systems shall form an entity to manage the system.

B. The system shall be installed by one of the following licensed contractors:

1. Licensed General Engineering Contractor (Class A),

2. General Building Contractor (Class B),

3. Sanitation System Contractor (Specialty Class C-42), or

4. Plumbing Contractor (Specialty Class C-36 in accordance with the California Business and Professions Code, Sections 7056, 7057, and 7058 and Article 3, Division 8); Title 16 of the California Code of Regulations; and who is familiar with the supplemental treatment system being installed.

C. Notwithstanding any other provisions, final approval of the proposed supplemental treatment system(s) shall be at the discretion of the EMD Director.

D. Gray water systems shall comply with Title 22 of the State Water Code and Gray Water Regulations of the Uniform Plumbing Code.

3.5.3 Design Standards

A. Engineering plans and site data for supplemental treatment systems shall be submitted in accordance with EMD's standard wastewater disposal application procedures.

B. Site evaluations, including soil profile and percolation testing, shall be conducted in accordance with EMD's standard procedures.

C. Soil separation between the bottom of the dispersal field and high seasonal groundwater, impervious layer of soil or bedrock, or fractured/weathered bedrock may be reduced to three feet.

D. Onsite Wastewater Treatment Systems with supplemental treatment components shall:

1. Be equipped with a visual or audible alarm, as well as a telemetric alarm, that alert the owner and service provider in the event of a system malfunction.

2. At a minimum, provide for 24-hour wastewater storage based on design flow as a means to minimize pollution from overflow discharge after a system malfunction or power outage.

3.5.4 Inspections

A. Designs for supplemental treatment systems shall be signed by a Consultant/Designer.

1. The Consultant/Designer shall also be responsible for the inspection of system installation to assure conformance with approved plans, and shall provide an "As-Built" drawing of the installation to the County and property owner.

2. The construction inspection by the Consultant/Designer shall be in addition to standard County inspection.

B. The Consultant/Designer shall provide a construction inspection schedule with the design plan which identifies critical points during construction at which time inspections will occur.

C. Owner/applicant shall grant access to EMD for the periodic inspections of system operation.

3.5.5 Operation, Maintenance and Monitoring Instructions

The Consultant/Designer shall provide operation, maintenance, and monitoring instructions in the design which are brief and simple guidelines regarding the operation of the system, owner responsibilities, and system monitoring requirements.

3.6 Operating Permits

A. In addition to a construction permit, an operating permit is required for:

1. All supplemental treatment systems,

2. Pump stations connected to a public sewer system,

3. Large commercial systems,

4. All existing systems requiring repair or additions that are multi family developments with sewage flows exceeding 2500 gallons per day,

5. All commercial and industrial developments not operating under waste discharge requirements set by the State's CRWQCB, and

6. Any special design systems requiring operating permits, as determined by the EMD Director.

B. Operating permits shall be issued at the time of final approval of the system and are required to be renewed every year, at a minimum. Operating permits shall also be renewed at the time of sale or, in the case of commercial properties, upon change of occupants.

C. An operating permit shall include a contract with a "Certified Onsite Wastewater System Inspector" ("COWA", "NAWT", "NEHA", or other recognized certification program for Onsite Wastewater Treatment inspectors) or a State-licensed Wastewater Treatment Plant Operator, to inspect the system every six months and file a report with EMD within 30 days after the inspection. Further, if the system has a grease trap or interceptor, it shall be inspected and cleaned every three months or as needed.

D. Operating permits are intended to serve as the tool for verifying the adequacy of the system performance and maintenance and operation. Permit conditions shall include monitoring and inspection requirements, and other provisions as specified by the Consultant/Designer.

E. Renewal of an operating permit requires the submission of an application, an application fee, and the written results of required system monitoring and inspection.

F. Failure to submit a renewal application, the required fee, or specified monitoring and inspection data; or failure to undertake any required corrective work specified by EMD, may be cause for non-renewal or revocation of the operating permit, as well as referral to County Counsel for collection, and the District Attorney for prosecution.

G. Monitoring requirements shall be recorded with the Recorder's Office.

3.7 Performance Monitoring and Reporting

3.7.1 Systems Under Operating Permits

A. Monitoring of systems shall be conducted by or under the supervision of the Consultant/Designer. The County shall conduct spot-check inspections of the systems and may also be present to observe the performance of monitoring activities by others.

B. Monitoring results shall be submitted to EMD annually, by July 1st, for the preceding 12-month period ending on May 31st.

1. The monitoring report shall be signed by the Certified Onsite Wastewater System Inspector or a State-licensed Wastewater Treatment Plant Operator responsible for the monitoring.

2. Notwithstanding the annual report, the County shall be notified immediately of any significant system problems observed during routine inspection and monitoring or at any other time.

C. Monitoring requirements will vary depending upon the specific type of system but, in general, they will include the following:

1. Recording of wastewater flow based on water meter readings, pump event counters, elapsed time meters, or other approved methods.

2. Inspection and recording of water levels in any monitoring points in the disposal field.

3. Inspection and observation of pump operation or other mechanical equipment; and general inspection of treatment and disposal area for evidence of seepage, effluent surfacing, erosion, or other indicators of system malfunction.

4. The frequency and monitoring shall be in accordance with the supplemental treatment performance requirements of the CRWQCB as well as the Consultant/Designer's criteria.

D. Monitoring frequency may be increased if system problems are experienced. Monitoring frequency for each system or type of system will be established by the Consultant/Designer, with agreement from EMD.

3.8 Minimum Setback Distances for Sewage Disposal Areas

Table 3.8.A.

FEATURE REQUIRING SETBACK [4]	DISPOSAL FIELD AND REPLACEMENT AREA	SEPTIC TANK
Perennial stream, lake, pond, marsh or wetland [2]	100'	50'
Well, spring (public or domestic)	100'	100'
Seasonal wet area	50'	50'
Intermittent stream or drainage course [1]	50'	25'
Lake or pond used for drinking water [2]	200'	100'
Road easements, driveways, Buildings [3]	10'	5'
Domestic water service line	5'	5'
Cuts or fills (down gradient)	4x height or depth of cut or fill, 25' maximum	10'
Swimming pools	10'	5'
Property line adjoining private property	10'	5'

[1] Measured from the edge.

(2) Measured from the 10-year high water mark.
(3) Buildings include porches and steps, whether covered or uncovered, breezeways, roofed porte-cocheres, roofed patios, carports, walks, covered driveways, and similar structures or appurtenances.
(4) Definitions in this table are from El Dorado County Board of Supervisors Resolution #259-99.

3.9 Land Development Water Supply Standards

3.9.1 Proof of Water for Tentative Map Approval

3.9.1.1 Background

As part of the review and approval process for a Tentative Map, the applicant shall demonstrate through production testing, water quality testing, and other studies, that the groundwater supply is adequate to meet the highest demand associated with the project in question. The report must be signed and stamped by the Consultant/Designer.

For lot development dependent on groundwater wells, proof of an adequate water supply shall also be determined from well production and water quality testing (see *General Plan* Policy 5.2.3.2).

3.9.1.2 Testing Requirements

A. For Tentative Maps of more than 10 proposed lots, a minimum of 10 percent of the proposed lots shall have a well drilled. For proof of adequate water quantity, these wells shall have a 24 hour pump test conducted. Proposed well sites shall be spread throughout the project to obtain an accurate representation of the project water supply and sites shall be pre-approved by EMD prior to drilling. The well locations shall be accurately shown on the Tentative Map.

B. Wells that do not meet the minimum quantity or quality requirements of this section shall be replaced and tested by at least two additional wells, in addition to the 10 percent required above, as determined by EMD. If a well is drilled on every proposed lot meeting the minimum production criteria of County Policy 800-02 or the Well Construction and Water Supply Standards Ordinance and minimum water quality standards, the map may be deemed acceptable for proof of adequate water. For Tentative Maps of 10 lots or less, a feasibility report may be substituted for well drilling.

C. For Parcel Maps, a minimum of one well shall have a 24 hour pump test or there shall be a well drilled on each parcel that meets the minimum standards of County Policy 800-02 or the Well Construction and Water Supply Standards Ordinance. For Parcel Maps, a feasibility report may be substituted for well drilling.

D. Tentative Maps that include rezoning may require a larger percentage of lots to show adequate quantity and quality of water.

E. The test method shall be approved by EMD prior to testing. These wells shall also be tested for water quality requirements.

F. The 24 hour production capacity of each tested well shall meet or exceed five gallons per minute.

G. Water sources **may not** be combined to meet the minimum production requirement for proposed lots.

H. Water quality testing shall be performed on these pump-tested wells for the following:
   1. Primary acute health risks:
      a. Total and fecal coliform,

b. Nitrate (as NO3),
c. Nitrite (as nitrogen), and
d. Nitrate plus Nitrite (sum as nitrogen).

2. Primary chronic (long term use) health risks:
   a. Aluminum,
   b. Antimony,
   c. Arsenic,
   d. Asbestos,
   e. Barium,
   f. Beryllium,
   g. Cadmium,
   h. Chromium,
   i. Fluoride,
   j. Mercury,
   k. Nickel,
   l. Selenium, and
   m. Thallium.
3. Secondary standards for taste, odor, and appearance:
   a. Bicarbonate, carbonate, and hydroxide alkalinity,
   b. Foaming agents (MBAS),
   c. Odor-threshold,
   d. Methyl-tert-butyl ether (MTBE)-also a primary health standard,
   e. Specific conductance or total dissolved solids,
   f. Calcium,
   g. Chloride,
   h. Color,
   i. Copper,
   j. Iron,
   k. Magnesium,
   l. Manganese,
   m. pH,
   n. Silver,
   o. Sodium,
   p. Sulfate,
   q. Thiobencarb,
   r. Turbidity,
   s. Total hardness, and
   t. Zinc.
4. Initial results that exceed standards shall be re-sampled by an approved third-party to determine compliance.
5. If the level of any inorganic chemical exceeds the Maximum Containment Level (MCL), a second sample shall be collected within 14 days to confirm the result. If the second sample result again exceeds the MCL, the well will not be acceptable as proof of an adequate water supply for the purpose of land development.
6. If the second sample result does not exceed the MCL, a third sample shall be taken to confirm the result.

7. **If testing confirms that the water quality exceeds State primary acute health risk standards, the well shall not be acceptable as proof of an adequate water supply for the purpose of land development.**
8. If testing confirms that the water quality exceeds State primary chronic (long term use) health risk standards, listed above, EMD may consider approval of a treatment process to meet safe health standards for a potable water supply. (See Section 3.9.1.3 of this Chapter.)
9. Water systems that serve five or more connections shall be operated by a legally created public entity.
10. For lot development dependent on creation of a public water system, all State regulations relating to public water systems, including adequate Technical, Managerial, and Financial Capabilities, shall be met. Contact California Department of Public Health, Division of Drinking Water and Environmental Management. (See Chapter 7, Section 7.1 of this manual for contact and website information.)
11. Public Water System wells are required to be pump tested following criteria specified by the California Department of Public Health, Division of Drinking Water and Environmental Management.

3.9.1.3 Treatment Process

A. Applicability and Intent
   1. Treatment and monitoring shall be implemented in cases when State primary chronic (long term use) health risk standards are exceeded.
   2. This section shall govern the management of individual systems not proposed to be connected to an existing public water supply. This section shall be applicable to those users, including residential, commercial, and industrial developments, whose water is supplied by individual wells.
   3. This section shall be liberally construed to:
      a. Ensure protection of the public health, and
      b. To assure reliable and reasonable service to the property owner.

B. Requirements:
   1. The proposal shall provide, at a minimum, all of the following:
      a. A treatment process, certified by a third-party (ANSI, NSF, State Department of Public Health, or other official agency) that will consistently maintain the level of the chemical(s) to a safe level.
      b. The applicant shall cause to be formed a Property Owner's Association, CSD, Zone of Benefit, or similar body, (hereinafter called "Body"), which shall be responsible for the normal and routine maintenance and operation of the system(s).
      c. The Body shall provide a State Certified Water Treatment Plant Operator to operate and maintain the treatment system; and to report to EMD.
   2. An operating permit shall be obtained from EMD and stipulate the manner in which this funding can be used for project repair or replacement.
   3. The County may require a bond or other accepted surety to cover the initial period until sufficient funds have accrued to the service areas to handle potential problems. The amount of surety may be reduced annually by the amount equal to the reserve funds accrued within the past year.

4. The operating permit shall be continued until the system, in its entirety, has been abandoned and the dwelling units and other buildings served by such system have been connected to a public water system.
5. The Body shall be accountable to the County for the correction of problems or nuisance conditions that may develop.
6. Prior to recordation of the Final Map, the applicant shall have created the Body that will be responsible for operation and maintenance of all water facilities within the development.
7. In the event of problems with the operation and maintenance by the Body, the Body shall take all steps necessary to correct the problems in a timely fashion to the satisfaction of EMD.
8. A defined area of benefit and service fees within shall be established prior to the recordation of a Final Map. The funding for this area of benefit shall be set up so as to accrue funds to provide for the future repair or replacement of major components of the system(s). The level of funding shall be reviewed under authority of the Board on a yearly basis to determine if sufficient monies are available to provide the necessary ability to correct any foreseeable problems with the system(s).

3.9.2 Lot Size

Pursuant to *General Plan* Policies 5.2.3.5 and 5.3.1.2, all lots using individual wells and individual septic systems shall average at least 5 acres. Adjustments may be considered consistent with the parcel size exception policy and ordinances. In areas with groundwater supply limitations, the lot size may be required to average not less than 10 acres.

3.9.3 Setbacks

Table 3.9.3.A.

Potential Contamination Source	Minimum Setback Distance to Well (in feet)[1]
Sewer line (main or lateral)	50
Public drinking water main	50
Onsite wastewater treatment system (both septic tank and leach lines)	100
Animal or fowl enclosure with solid wastes constituting a nuisance [2]	100
Abandoned dump site	1000
Flooded areas and drainages	Avoid or divert away from well

[1] Lesser or greater separation distances may be approved by EMD based on specific site conditions.
[2] As defined in the County's "Solid Waste Management Ordinance".

Notes:

A. It is recommended that a well be placed at least 100 feet from a property line to protect the well from development on an adjacent lot.
B. If a drill site is located within zoning setbacks (as prescribed in the County's Title 17 Zoning Ordinance), no structure over 30" high can be constructed over the wellhead.

3.9.4 Justification for Final Map Approval

Prior to the filing of a Final Map, acceptable proof shall be provided to EMD that each lot has a safe and reliable water supply.

3.9.5 Water Requirements for Final Map Approval

A. Water wells must be:

1. Constructed to the standards specified in Water Well Standards, State of California, Department of Water Resources, Bulletins 74-81, 74-90, and subsequent supplements or revisions, and

2. Capable of providing **to each connection** a minimum of five gallons per minute, either from the well itself or a combination of well and storage (see Chapter 2 of this manual and the fire protection district having jurisdiction).

B. Wells producing less than one gallon per minute shall not be accepted as an adequate water supply for the purpose of a building permit.

C. The production capacity of a well for a single family dwelling shall be determined from a four hour well production test per EMD's requirements. The production capacity is **valid for two years** from the date of testing and shall be certified with an original signature by a licensed Well Driller, Pump Contractor, or other professional person approved by EMD.

D. Well production test reports shall include the start and end time of the test period. Test reports shall be submitted on company letterhead and signed by the person performing the test.

E. A report of water quality, analyzed by a California State certified laboratory, shall be submitted to EMD on the proposed water supply.

F. Water quality reports shall include, at a minimum, all of the required constituents in Section 3.9.1 of this Chapter.

G. Water supplies that exceed State primary drinking water health standards for chronic contaminants shall have a deed restriction recorded on the lot that the water supply is not potable without installation of a certified treatment system that reduces the contaminant level to safe health standards.

H. Additional water quality parameters may be required depending on the location of the lot, susceptibility to other contaminants, results of testing conducted during Tentative Map proof of water documentation, and future drinking water standards.

3.9.6 Zone Change and General Plan Amendments

This section applies to water supplies for individual wells.

For zone changes, a minimum of 10 percent of the maximum allowable lots shall have a well drilled. For proof of adequate water quantity, these wells shall have a 24 hour pump test conducted. The well sites shall be spread throughout the project area to provide an accurate representation of the project water supply. The well sites shall be accurately shown on a site map and submitted with the zone change land feasibility report.

3.10 Air Quality

3.10.1 Permit Requirements

State law requires any facility that has the potential to emit air contaminants to apply for a permit from the AQMD. Contact the District for further information.

CHAPTER 4 – TRANSPORTATION (draft rev. ~~10/01/10~~ 02/14/11)

Sections:

4.1 Background

While this manual includes design standards for all County departments, as well as the El Dorado County fire protection districts, there are some processes and standards that are either unique to Department of Transportation (DOT), or that are its primary responsibility. This Chapter describes DOT's application processes and the components of an application that must be submitted for discretionary projects. It also contains design and construction standards and is a companion chapter to the other chapters in this manual, as well as the County's other Design Manuals (e.g., County of El Dorado Drainage Manual, Standards Plans, etc.). DOT also has responsibility for some miscellaneous permits that affect the County's roads. These are described briefly in this Chapter, but for more information and application forms contact DOT. (See Chapter 7, Section 7.1 of this manual for contact and website information.) Note: If your project is in the Lake Tahoe basin or vicinity, it may also be subject to Tahoe Regional Planning Agency's (TRPA's) requirements. Contact TRPA for more information. (See Chapter 7, Section 7.1 of this manual for contact and website information.)

4.1.1 Primary Goal

DOT's primary goal is to serve the transportation needs of residents and visitors to the County, and includes the following specific responsibilities:

A. Reviewing and recommending conditions for proposed new development projects (e.g., Tentative Maps, Parcel Maps, Design Reviews, subdivision maps, etc.) to ensure they meet the County's standards related to road design, traffic operations, drainage, storm water quality, and erosion control.

B. Reviewing, issuing, and monitoring permits that affect the County's roads and bridges (e.g., encroachment permits, road closure permits).

C. Inspecting new development under construction to ensure it meets design, safety, and construction plans and requirements.

4.1.2 DOT Permits, Projects, and Other Processes

There are a number of different permits, projects, and other processes that DOT is either a party to, or has sole responsibility for. These are listed in the following sections.

4.1.2.1 Discretionary Projects

DOT is part of a County team, led by Development Services Department (DSD) Planning Services, that reviews and conditions discretionary projects including:

- Tentative Maps,
- Special Use Permits,
- Design Reviews,
- Planned Developments,
- *General Plan* Amendments, and
- Rezone Applications.

4.1.2.2 Miscellaneous Permits

Separate permits are issued for specific purposes. Some of these are stand-alone permits or are in conjunction with discretionary projects. These include:

A. Grading:
   - Off-site (in the County's right-of-way), and
   - Subdivision (related to roads and drainage).

B. Utility Encroachments, and

C. Miscellaneous Encroachments:
   - Driveway Access/Obstructions,
   - Timber Harvest Temporary Encroachments,
   - Oversized Loads, and
   - Special Functions/Events.

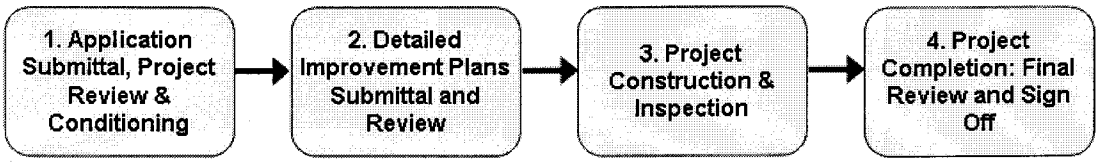
4.1.2.3 Other Processes

DOT is responsible for processing applicant's requests to vacate and abandon existing easements that were granted to the County (not other parties). These are referred to as "General Vacations" (Vacations) and "Summary Abandonment of Easements" (AOEs). Vacations and AOEs are typically a by-product of some other type of change to the land in question, such as Parcel Maps, Tentative Maps, right-of-way acquisitions for roads, etc. They are not technically permits as they require approval by the Board of Supervisors (Board). When an applicant for a discretionary project is required to dedicate a portion of their real property to the County, typically for purposes such as road and other public infrastructures, DOT will assist the applicant with the "Irrevocable Offer of Dedication" (IOD) process.

4.2 General Process Description for Discretionary Projects

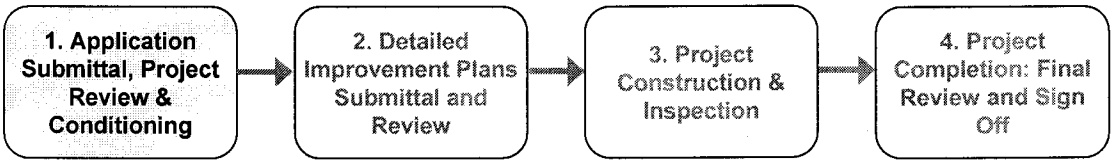
4.2.1 General Process Steps for Discretionary Projects (as applied to DOT)

A discretionary project goes through four steps before completion:



There is a County departmental (e.g., DSD, Environmental Management Department (EMD), DOT, Surveyor's Office) and other agencies (e.g., fire protection districts, Community Service Districts) review process for each of the four steps as described generally in Chapter 1 of this manual. The steps, as pertains to DOT processes and requirements, are described below.

4.2.2 Step 1. Application Submittal, Project Review and Conditioning

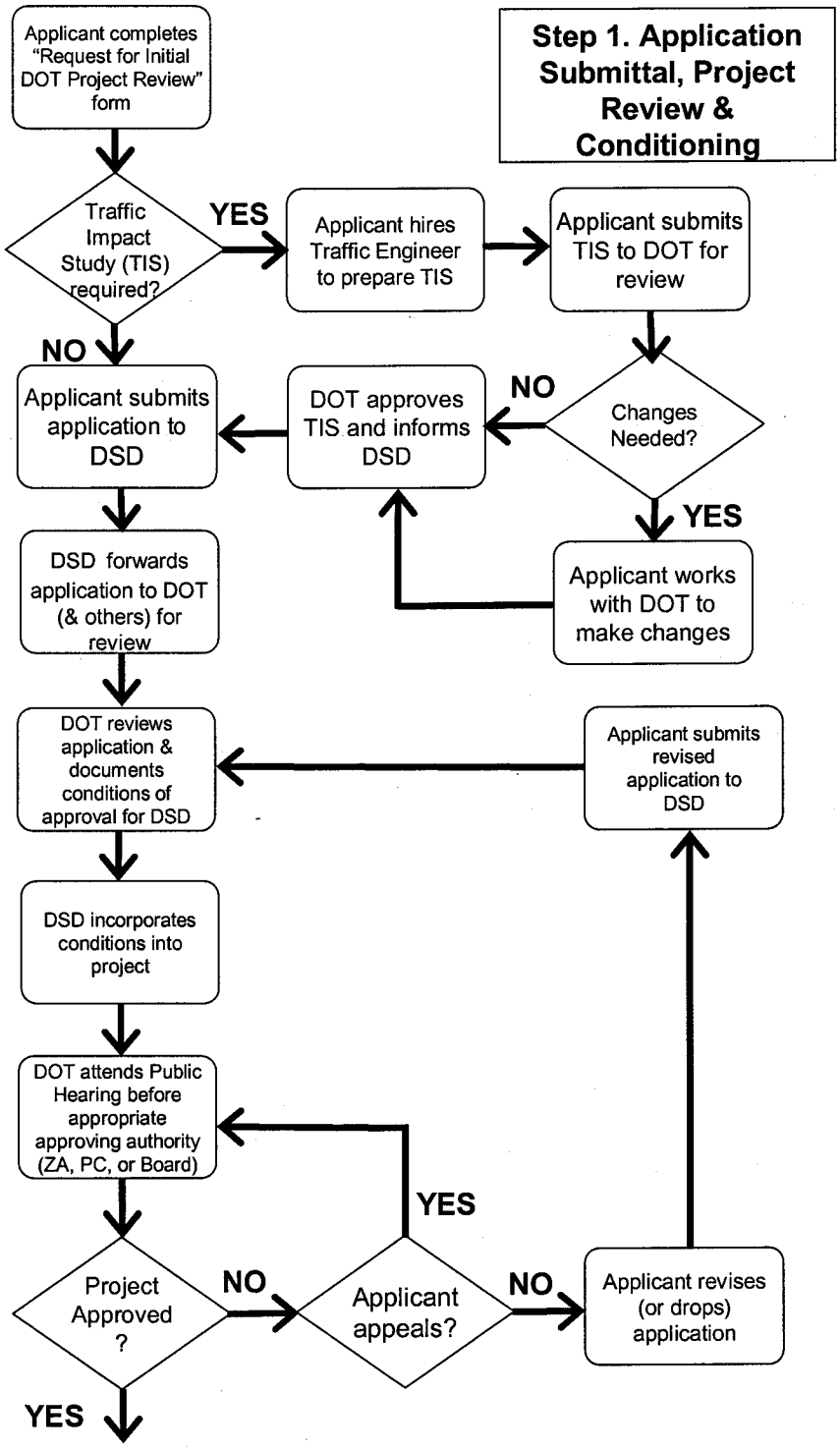


Most construction in the County requires approval from DSD. Anyone interested in undertaking a discretionary project is encouraged to arrange a "Pre-Application" meeting with DSD. At this preliminary stage, a Pre-Application meeting allows for early review of a project to identify any potential issues the project may have in light of the *General Plan*, zoning, and CEQA.

As part of Step 1, a traffic study may be required. Before completing a formal project application, see DOT's website for more information regarding when traffic studies are required.

Once a formal project application and the appropriate fees are submitted to DSD, the plans are routed to DOT's Discretionary Review team, as well as to other County departments for review.

During the project review process, DOT reviews and evaluates traffic impacts of a project, including all aspects that involve roads and bridges, as well as facilities that affect the public right-of-way (i.e. traffic signals, in-ground and overhead utilities, streetlights, landscaping, etc.). DOT and DSD also review proposed grading.



Proceed to Design and Step 2.

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DOT will respond to DSD with a list of recommended conditions. If the applicant does not agree with certain conditions that DOT, or others, places on the project, the applicant may be able to apply for a "design waiver" to ask the approving authority to waive a particular standard. For more information on design waivers, see Chapter 1 of this manual.

A. DOT staff reviews and analyzes a proposed project application for compliance with, or impact on, the following subject areas:

1. Traffic Impacts Analysis (TIA). The *General Plan* requires that all new development fully mitigate all traffic impacts associated with the project. Thus, a traffic study may be required,

2. Consistency with the *General Plan's* Transportation and Circulation Element,

3. Right-of-Way,

4. El Dorado County Bicycle Transportation Plan,

5. Grading,

6. Drainage and Water Quality,

7. Easements,

8. Street Improvements (e.g., surface improvements, storm and sanitary sewer, street lights, traffic signals, landscaping, etc.),

9. Private Streets,

10. Under-grounding of Overhead Utilities, and

11. Existing Assessment Districts/Zones of Benefit.

B. DOT primarily reviews the existing and proposed public infrastructure necessary for:

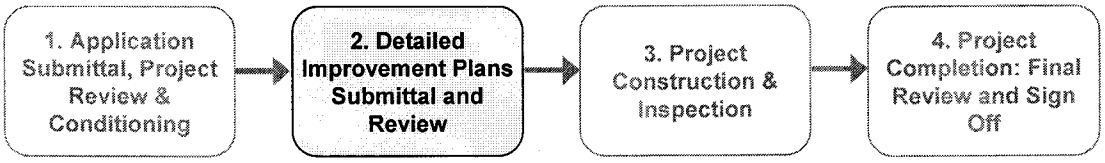
1. The ability to support the development application, and

2. Any grading necessary to develop the site.

Note: Grading is a shared responsibility with DSD. Depending on the type of project, either DSD, DOT, or both, may review the grading of a proposed project. A current version of a "Preliminary Grading Plan Checklist" is available on DOT's website.

To ensure a quick and effective review of an application, it is important that the plans detail all of the public improvements adjacent to the project as well as any necessary grading.

4.2.3 Step 2. Detailed Improvement Plans Submittal and Review

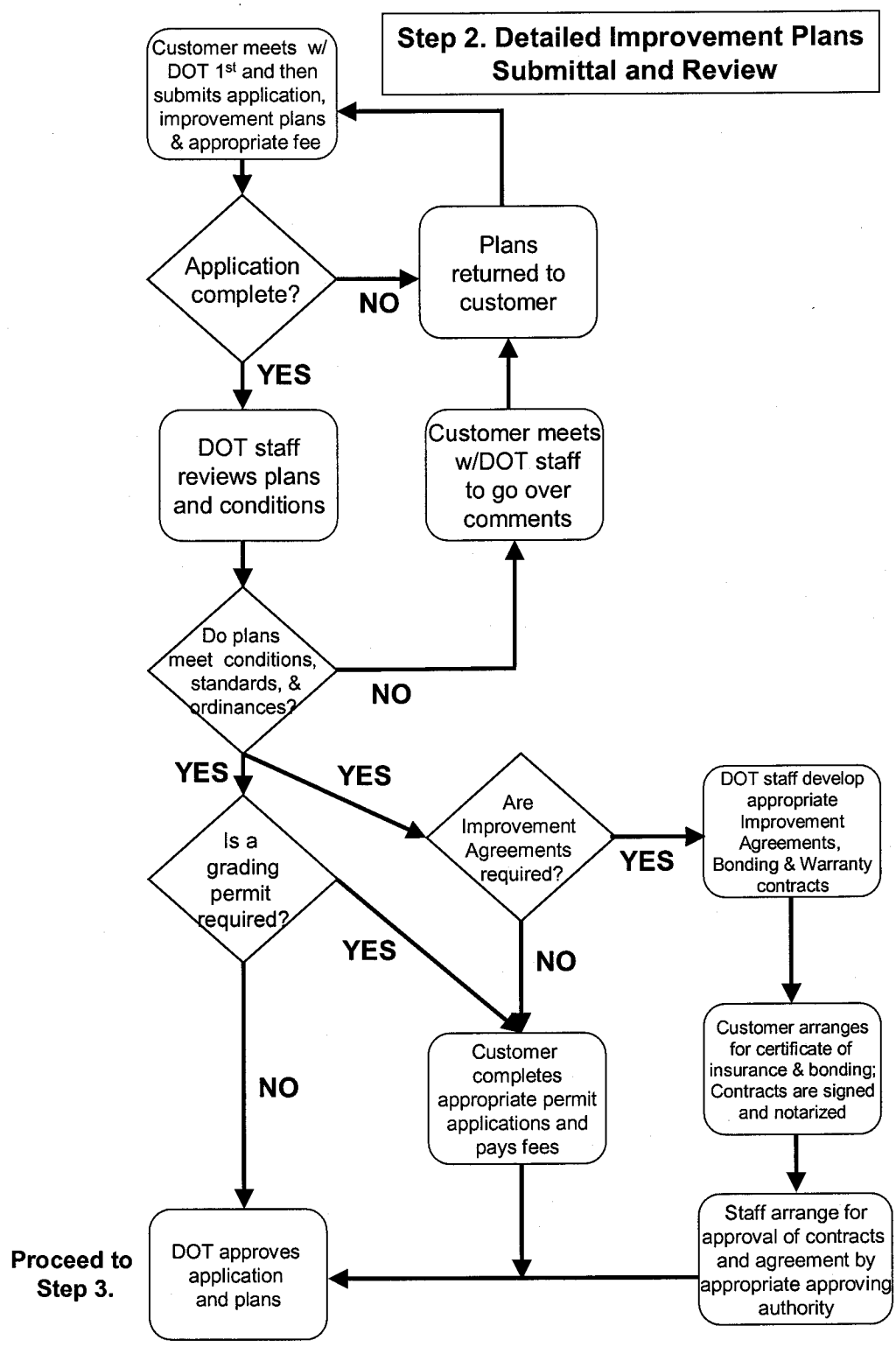


4.2.3.1 Preparing Improvement Plans

Once a project is approved by the approving authority, an applicant shall schedule a preparatory meeting with DOT before creating any detailed improvement plans. DOT may waive this requirement upon a signed request from the property owner. DOT will provide information as to what will be needed on the detailed improvement plans. After the preparatory meeting, the applicant then creates and submits the detailed plans for all of the specific improvements that are needed to construct a project, which may include road improvements in the County right-of-way. DOT staff will also work with the applicant to prepare any required agreements. As part of the detailed improvement plans, DOT is primarily concerned with items such as signing and striping, right-of-way, landscaping and fencing, traffic signals, drainage, erosion control, etc. These detailed improvement plans are submitted to DOT, along with the appropriate fees, for plan checking. Plans shall adhere to the conditions placed on the project as well as to all County Ordinances and design standards. If public improvements (e.g., road widening, addition of traffic signals) are required as part of a project approval, the applicant's Civil Engineer shall create these detailed improvement plans as well.

A. Improvement plans prepared for the construction of public improvements, in support of a private development, shall be completed at no cost to the County. All County services required for review, approval and inspection shall be paid for by cost recovery fees collected from the applicant.
B. Plans shall be adequate to bid and build the improvements at the correct location and elevation and shall be based on the County standards.
C. Plans shall be legible.
D. At initial submittal, the plans and supporting Engineering Reports must be substantially complete, sealed and marked "preliminary, not for construction" until the plan check process has been fully completed. At final plan check, the plans shall be complete, signed, sealed and ready for construction.

Incomplete plans will be returned for completion prior to any review taking place. See DOT's website for a current checklist.



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4.2.3.2 Initial Submittal

It is strongly recommended that you make an appointment to submit your detailed improvement plans to DOT, (530) 621-5900.

When submitting Improvement Plans, include the following:

A. Application.

B. Plans Prepared in Accordance with DOT Requirements. Plans shall follow requirements set forth in DOT's Improvements Checklist. The coversheet on the plans shall include DOT's "Standard Improvement Plan Notes" and "Erosion Control Notes". The plans shall also follow DOT's standard plan for symbols and legends, which are based on Caltrans' standards. These documents can be obtained from DOT's website. See below for a sample list of plans and information needed for submittal:

1. Current title report showing any easements and boundaries,
2. Road plans, profiles and sight distance triangle profiles (40' scale), or as appropriate to convey the information,
3. Signing and striping plan,
4. Grading plan,
5. Storm drain plan,
6. Erosion control plan,
7. Post-construction run-off control facilities,
8. Wet utility plans (e.g., sewer, water, reclaimed water, etc.),
9. Dry utility plans (e.g., electricity, cable, phone, etc.),
10. Traffic control plan (if working in existing roadways),
11. Traffic signal plans and notes (marked "preliminary, not for construction" at initial submittal and sealed, signed and ready for construction at final submittal),
12. Landscape & entry plans,
13. Retaining wall plans, profiles & cross sections related to road improvements - other retaining walls shall have retaining wall plans and typical cross sections,
14. Retaining wall structural calculations (sealed and signed),
15. Right-of-way plans, including monument setting to indicate right-of-ways,
16. Assessor's parcel book page(s),
17. Tentative Maps,
18. Conditions of approval (as a separate attachment),
19. Traffic study (sealed and signed),
20. Drawings of abutting/joining road & drainage improvements,
21. Drainage study (including Post-construction runoff control facilities) (sealed and signed),
22. Storm Water Mitigation Report (see Storm Water Management Plan),
23. Soils report (sealed and signed),
24. Structural/other calculations (sealed and signed),
25. CEQA status with supporting documentation,
26. New aerial surveys when required to be done in conjunction with a road improvement plan (contact DOT for specifics), and
27. Copies of permits from other agencies (e.g., U.S. Army Corp of Engineers, California Department of Fish & Game, Cal-EPA, Regional Water Quality Control Board, etc.).

C. **Engineer's Estimate.** Include a Civil Engineer's estimate showing unit prices, quantity and extensions for all construction items. Contact DOT for unit price estimates. The engineer's estimate shall be signed and sealed prior to final approval.

D. **Plan Review Fee.** Include a plan review fee; refer to the DSD/DOT website for the current fee schedule or contact DOT for further assistance.

4.2.3.3 Improvement Agreements

A. If an improvement agreement is required, it should be initiated with DOT as soon as feasible. An improvement agreement is a contract that the applicant enters into with the County to ensure that the applicant completes the improvements for the proposed project. The County has very specific requirements for improvement agreements that need to be executed before any work can commence. The required improvement agreements are identified by DOT as part of the plan check/review process. Examples of improvement agreements include:

1. **Subdivision Improvement Agreement (SIA).** For parcel splits into 5 or more lots. This agreement is required in accordance with the Subdivision Map Act to ensure construction of the required public improvements, and covers the on-site work done.
2. **Road Improvement Agreement (RIA).** For work done in the County's right-of-way and/or for other off-site improvements.
3. **Parcel Map Improvement Agreement (PMIA).** This agreement is similar to an SIA but applies to parcel splits of 4 or fewer lots if the lots are residential and 5 or more if non-residential.

B. Below is a sample list of information needed by DOT to create improvement agreements:

1. Owner's name, type of entity (e.g., corporation, partnership, homeowner's association, etc.), and principal place of business,
2. Applicant's name, type of entity, and principal place of business,
3. Total cost of all improvements,
4. Current Assessor's Parcel Number (APN),
5. Permit name and number, and
6. Date improvement plans signed.

4.2.3.4 Additional Plans

If the project includes any of the following, additional plans shall be prepared and submitted:

A. **Traffic Signal Construction or Modification.** Plans shall be prepared by a Civil Engineer and consistent with the Standard Plans.

B. **Sewage Collection & Disposal System.** If the improvement plan includes provisions for an onsite system, see Chapter 3 of this manual. If the improvement plan includes provisions for an offsite sewage collection and disposal system, the applicant shall submit to DOT, sufficient detailed plans of the sewage collection and disposal system prepared by a Civil Engineer, to enable the County Engineer to ascertain whether such system conforms to the standards set forth herein and to standard acceptable engineering practices. Such plans and specifications shall also be reviewed and signed by the authorized representative of the entity that will operate the sewer system(s), certifying it has approved the final construction plans and specifications. A letter shall be provided to DSD Planning Services by the public entity's engineer, stating that the provider is willing to maintain and operate the sewer system upon its completion.

C. **Landscaping in the Public Right-of-Way.** Plans shall be consistent with the Standard Plans, the Policy G-1 adopted 12/22/87, Ordinance 12.12.070 Prohibited Trees, and the Water Conserving Landscape Standards ("Resolution R-69-93") adopted February 23, 1993. A "Lighting and Landscaping District" (LLD) shall be created (or some other funding mechanism acceptable to the County) to pay for future maintenance requirements.

D. **Street Light Construction or Modification.** Plans shall be prepared by a Civil Engineer and consistent with the Standard Plans.

4.2.3.5 Plan Review

Upon receipt of the initial package, County staff will review the plans for completeness.

A. If the initial submittal is complete, staff will review the plans and call the applicant for an appointment, at the applicant's option, to review staff's comments. Any corrections or clarifications that are required shall be made. The applicant may make an appointment with DOT to review the revised plans. If all changes have been made as requested, the applicant is ready for final submittal.

B. If the initial submittal is **incomplete** (incomplete design, missing plans, etc.) staff will return the plans to the applicant for completion prior to any review taking place. This can potentially delay DOT's approval, which is required to get a building permit, grading permit, road improvement agreement, or other authority to move a project forward into construction.

4.2.3.6 Final Submittal

Upon final submittal, the applicant shall satisfy all of the following conditions prior to project improvement plans approval and permit issuance:

A. **Original Improvement Plans.** Submit the original plans together with all County checkprints. The plans shall be signed and wet stamped by a Civil Engineer.

B. **Additional Plans.** Any other plans (e.g., Landscaping, Non County-maintained roads, Traffic Signal, etc.) necessary for this project shall also be complete and ready for approval.

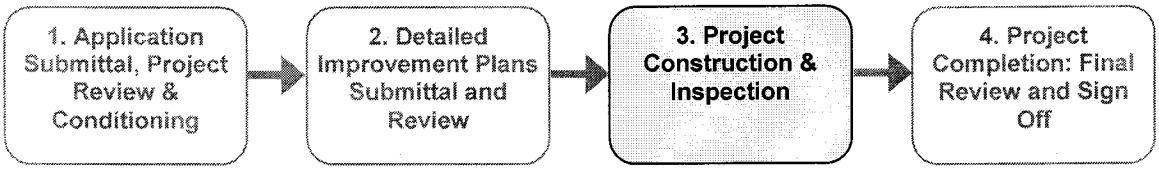
C. **Discretionary Conditions.** Documentation shall be provided that demonstrates that the original conditions placed upon the project when it was approved have been satisfied. (e.g.: a narrative, table, or matrix describing how the plans meet the conditions.)

D. **Improvement Agreements.** Execute and notarize any improvement agreements, security instruments, and permits prepared by DOT staff.

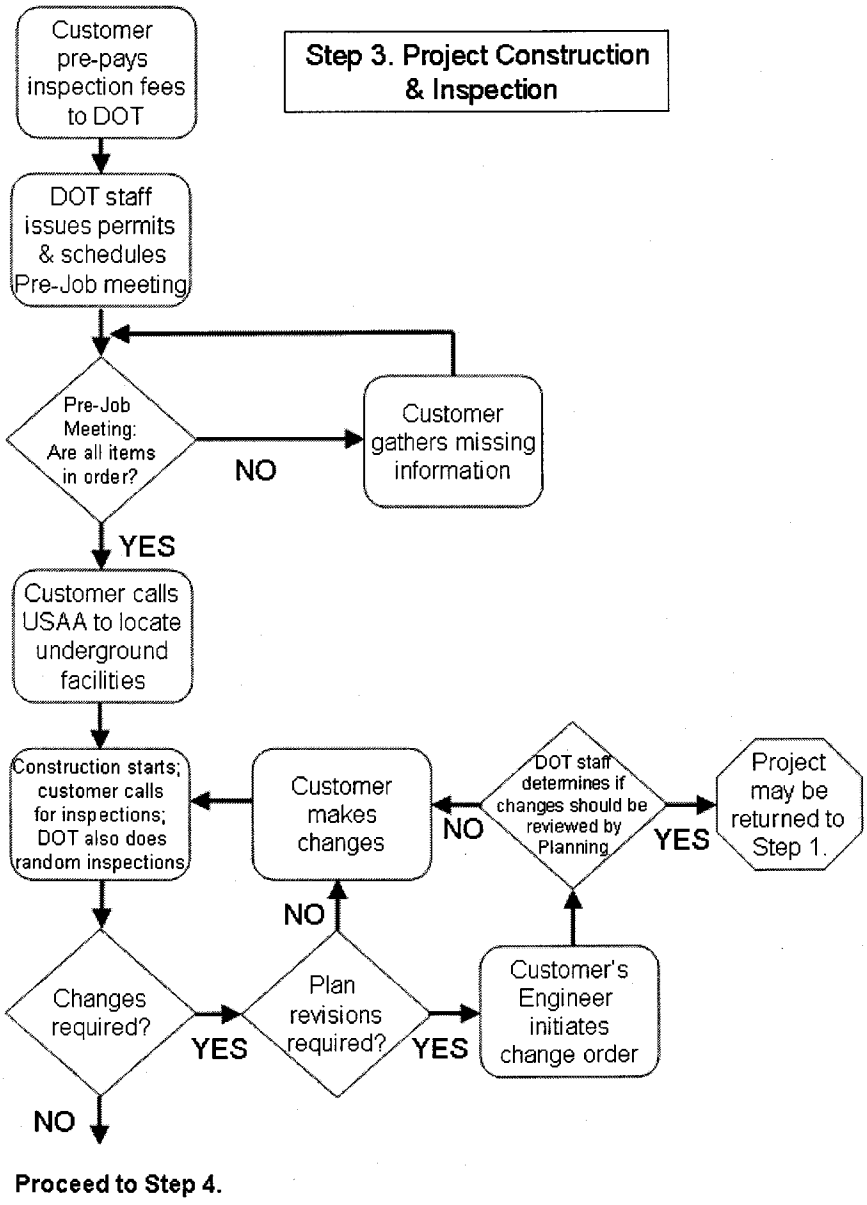
E. **Security.** Projects and agreements (e.g., RIAs, SIAs) require some form of security (see Ordinance 16.16.050 Security to Guarantee Performance of the improvement agreement for more information on the forms of security the County will accept). County staff will provide the forms necessary for the required agreement.

F. **Policy of Insurance.** A policy of insurance which meets all County requirements shall be maintained throughout the course of an agreement. The policy of insurance shall explicitly name the County as an additional insured and a certificate evidencing this coverage shall be provided to the County. Contact DOT for more information regarding insurance requirements.

4.2.4 Step 3. Project Construction and Inspection



The Construction phase is the actual implementation of a project. Prior to permits being issued, the applicant shall pay inspection fees and have any required insurance and bonding in place. Most permits have time limits; however, in certain circumstances, these time limits can be extended.



4.2.4.1 Pre-Job Meeting

Once all documents have been provided, a pre-job meeting is scheduled before work begins and includes the applicant's team (e.g., the applicant or designated representative, design engineers, soils engineers, etc.), County departmental inspectors (e.g., DOT, EMD, DSD), and various agencies (e.g., EID, PG&E, State Department of Fish & Game, etc.) to go over job site requirements related to safety, protective fencing, erosion control, dust mitigation, storm water quality, etc. The inspectors will also ask the applicant to bring approved plans and permits to ensure all documents are in order.

Before any digging begins, call or check online with Underground Service Alert (USA), to determine the location of any underground facilities that should be avoided. USA is an organization with the sole purpose to make people aware of the locations of USA's members' underground facilities (electrical line, water line, gas pipeline) to prevent accidents. USA can be found online. (See Chapter 7, Section 7.1 of this manual for contact and website information.)

Some important items typically required for large projects such as subdivisions and commercial projects include:

A. **A Staging Plan** for how the proposed work will be done and over what time period. For example, for a proposed widening of an existing road, one lane may be closed first while a new adjacent lane is constructed.

B. **A Traffic Control Plan** for work in County roads and right-of-ways. The County will review the plans and issue a Traffic Safety Order that shall be kept on-site.

C. **Staking**. In most cases, all staking is done by the applicant/developer's survey crews, including monuments and streetlight locations.

D. **Material Submittals for Traffic Signals**. If a traffic signal is to be designed by a consultant, the design and the material submittals are to be reviewed and stamped by the consultant's Civil Engineer prior to submittal to the County for review. (Note: Traffic signals cannot be staked until the County approves the material submittals.)

E. **Utility Encroachment Permit(s)** may be required (discussed later in this Chapter).

4.2.4.2 Inspection

After completion of various phases of construction, work is inspected by County inspectors, as well as by other applicable agencies, to ensure it matches the detailed improvement plans. Rejected work shall be corrected and re-inspected.

The project inspector is an authorized representative of the County Engineer, acting exclusively for the benefit of the County, authorized to make all necessary inspections of the work performed and of the materials furnished for conformance to the improvement plans and contract documents.

At the time of this writing, DOT requires 48 hours advance notice for inspection services. To schedule an inspection, call (530) 621-5900.

4.2.4.3 Plan Revisions

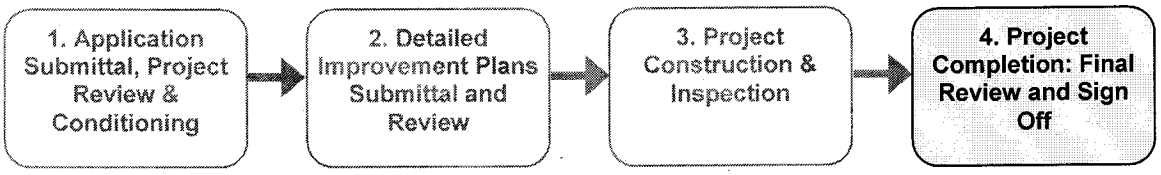
A. The design change shall be based on recommendations made by the applicant's engineer and shall be approved by the County Engineer prior to revising the original plans.

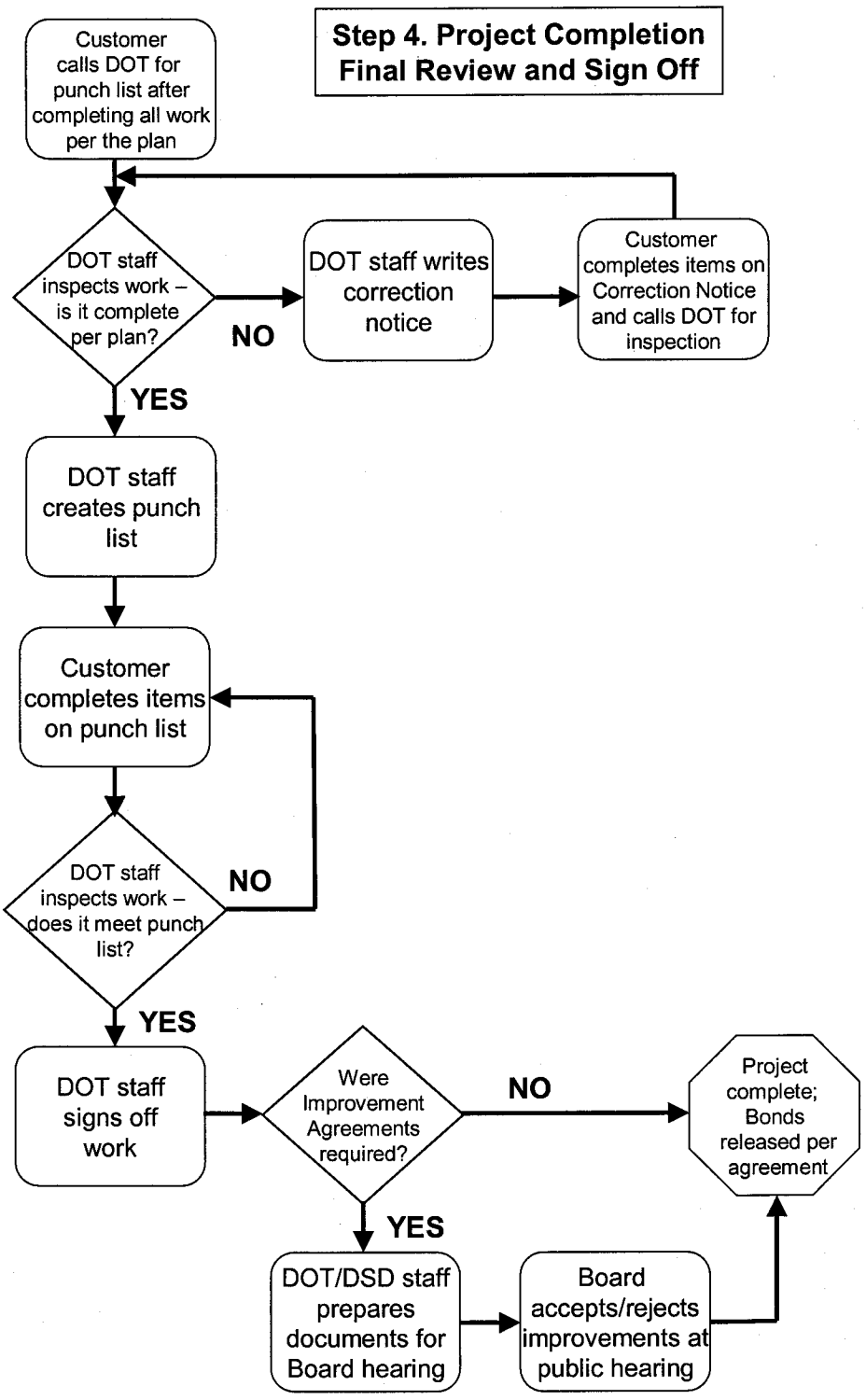
B. If changes may impact any of the original components that formed the basis for the project's approval, the project may have to be re-reviewed by DSD Planning Services.
C. All changes to the original plans shall be made by the applicant's Civil Engineer, signed by the owner, contractor and engineer.
D. A duplicate set of plan sheets shall be submitted along with an explanation of the change and why it is being made.
E. DOT's County Engineer will be the final signature on the plan revisions.

The applicant's Civil Engineer will discuss the change with DOT's County Engineer and/or submit a check set indicating the proposed change.

A. When making changes to the original, cross out or shade the old so that it is still legible and add the new, together with a revision number inside a diamond symbol.
B. Add a cloud bubble to denote the change. Return the changed plan to DOT.
C. If the proposed change is acceptable to DOT, the County Engineer will sign the plan revisions. At that time, the applicant's engineer shall provide DOT with copies of the revised sheet(s).
D. Note that for substantial changes, the bonding requirements may need to be changed as well.

4.2.5 Step 4. Project Completion: Final Review and Sign Off





4.2.5.1 Punch Lists for the Project

When a project is nearing completion, the DOT inspector will prepare a short list ("punch list") of the items that remain to be completed before a project can be finalized. DOT's "punch list" includes all administrative requirements that need to be completed associated with a project. A

punch list will not be created until everything has already been done on the approved plans. After all items on the punch list have been completed to the satisfaction of the DOT inspector, the project will be signed off ("finaled"). Below is a sample punch list of items. For more information, refer to DOT's website or contact DOT's Land Development Services team.

Sample Punch List (sent to owner and person who signed agreement):

A. All improvement plans, change orders, terms of subdivision agreements, engineer's estimates, and conditions of approval are complete,
B. Compliance certifications completed by the Civil and Geotechnical engineers for any lots that required them,
C. Acceptance and completion letters from all applicable parties (e.g., Community Service Districts (CSDs) or Homeowner's Associations, utility companies, Resource Conservation Districts, etc.),
D. Record drawing checkprints (including utility composites, landscaping plans, and grading plans). Record drawings shall be stamped, certified and signed by the applicant's Civil Engineer,
E. All Plan Revisions signed off and noted in the "Revision" Block on the plans and labeled at the site of the change,
F. If asbestiform-containing soils are present and mitigation has been completed, documentation that test results, reports, and locations have been submitted and a completion and acceptance letter from Air Quality Management District (AQMD),
G. Drainage ditches built within their easements and operational per the plans, and
H. All fees and bills paid current including inspection fees and Zone of Benefit taxes.

Note: All record drawing checkprints, including dry utilities and landscaping plans, and acceptance letters, shall be submitted together at the same time.

4.2.5.2 Road Acceptance

A. A project that includes a RIA or SIA shall be approved and accepted by the Board before the County will take ownership and responsibility for maintenance of the improvements.
B. A Zone of Benefit may be required to be formed by the applicant so that the residents pay for the ongoing maintenance of the improvements.
C. In those instances in which the applicant proposes non County-maintained improvements (e.g., non-County-maintained streets), the applicant shall set up a governing body (e.g., Homeowners' Association, Road Association, Zone of Benefit, CSD) which will be responsible for ongoing maintenance of these improvements.
D. All proposed County-maintained and non-County-maintained facilities shall meet applicable County standards.

4.2.5.3 Board of Supervisors Acceptance

In addition to items listed above on the sample punch list, the following shall be completed and verified by DOT before preparation begins for the Board's acceptance of improvements:

A. All items shown on improvement plans, change orders, subdivision agreements, engineer's estimate, and Tentative Map conditions of approval,
B. All slopes, drainage facilities and utilities within rights-of-way or easements,
C. Driveways placed per plans and where cuts/fills are greater than six feet,
D. Tentative Map conditions met,

E. Landscaping acceptance, if applicable, by CSD or other like entity,
F. Acceptable post-construction Best Management Practices (BMPs) in place to address California's water quality requirements,
G. Drainage walk-through with Zone of Benefit maintenance representative,
H. Street grading within right-of-way of slope easements,
I. All documentation (e.g., contracts, agreements, legal descriptions, etc.) for the developer or the County to acquire necessary offsite property or easements, and
J. All fees paid current.

Note that items may differ for each project. This list serves as the starting basis for applicants and DOT. For questions related to your particular project, contact DOT.

4.2.5.4 Occupancy

No occupancy will be allowed until the following are complete and operational and have been approved by the County: roadways; storm, sanitary, and water facilities; driveways and sidewalks; and streetlights and/or traffic signals.

4.2.6 Fees

DOT services required for review, approval, permitting, inspection, or recordation associated with discretionary projects, shall be paid for by cost recovery fees collected from the applicant. For more information, contact DOT's Land Development Services Team.

4.3 Standards for Discretionary Development

These standards shall apply to all discretionary development, except where specifically noted.

The terms "streets", "roads", "highways", "boulevards", and "routes" are used interchangeably to refer to means of circulating various types of traffic but primarily the automobile.

4.3.1 Streets

4.3.1.1 Access

See Chapter 2, Section 2.5.3 of this manual.

4.3.1.2 Drainage

A. All drainage improvements shall conform to the Drainage Manual.
B. Roads shall have well-defined roadside ditches or inlets directing surface water away from the roadway to an adequate drainage system.
C. Water shall not cross the road surface but shall be conveyed through a culvert of adequate size to accommodate storm water without flooding the roadway.
D. If a history of roadway flooding or damage caused by inadequate drainage facilities exists, the existing road shall not be approved for an access road unless sufficient improvements are made to eliminate the flooding problem.

4.3.1.3 Gates

Gates are not permitted across any public roads (non-County-maintained or County-maintained). Gates may be permitted with a special use permit across private roads.

4.3.1.4 Improvement Requirements

A. Any development that requires improvements to existing roads and/or the addition of new roads shall include the setting of monuments placed by a licensed land surveyor, to indicate the road right-of-way. A Record of Survey may also be required under Section 8762 of the California Business and Professions Code.

B. All survey work shall be done on horizontal datum NAD83 (California State Plane Coordinates, Zone 2, U.S. Survey Feet) and vertical datum NGVD 1929 or NAVD 88, or as approved by DOT. The epoch shall be specified. Any existing survey information available from the National Geodetic Survey or from DOT shall also be used. (See Chapter 7, Section 7.1 of this manual for contact and website information.) All plans and maps shall include a statement on the cover sheet confirming which horizontal and vertical datums have been used.

C. Other improvement requirements shall be as identified in the Standard Plans.

4.3.1.5 Erosion Control

For erosion control construction requirements and standard notes for improvement plans, see the Resource Conservation District website. (See Chapter 7, Section 7.1 of this manual for contact and website information.)

4.3.1.6 Street Signage

A. Street name signs of a type and construction approved by the County Engineer shall be placed at each intersection (refer to the Standard Plans).

B. Traffic control signs shall be placed where designated by the County Engineer and shall meet the appropriate standard plan in the Standard Plans and the California Manual of Uniform Traffic Control Devices.

C. A sign at each access of a development reading, "This Road is Not County Maintained" (or a DOT-approved equivalent), shall be placed in a prominent location for developments which include non-County-maintained roads.

D. Street names shall be approved by the County's Surveyor's Office. See Chapter 6 of this manual and the Surveyor's website for more information on street names. (See Chapter 7, Section 7.1 of this manual for contact and website information.)

4.3.1.7 On-Street Parking

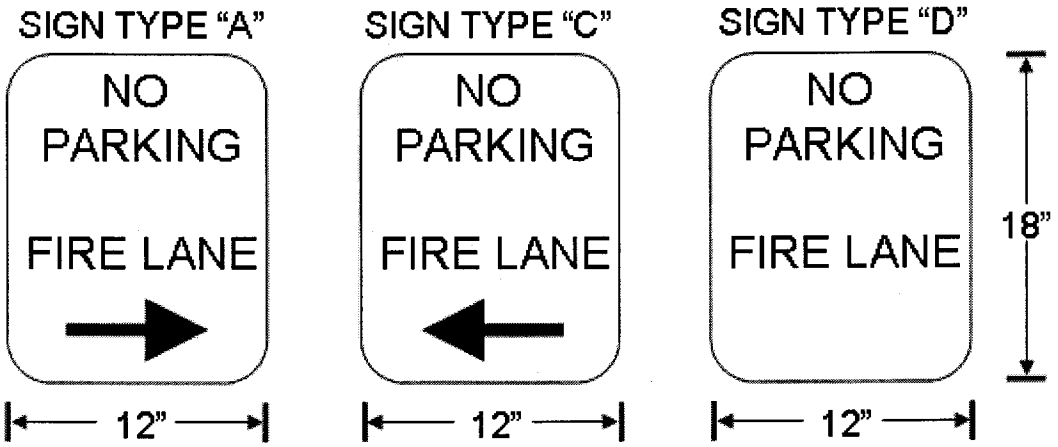
A. Pursuant to the current edition of the Fire Code as ratified by the Board of Supervisors~~2007 California Fire Code and amendments as ratified by the Board February 2008~~, and where required by the fire protection district having jurisdiction, roads shall be marked with permanent "NO PARKING—FIRE LANE" signs complying with the figures below.

B. Signs shall have a minimum dimension of 12 inches wide by 18 inches high and have red letters on a white reflective background.

C. Signs shall be posted on one or both sides of the road as follows:

1. Roads from 20 to 29 feet in width shall be posted on both sides as a fire lane, with no parking allowed on either side of the roadway.
2. Roads from 30 to 35 feet in width shall be posted on one side as "No Parking, Fire Lane", with parking allowed only on the opposite side of the roadway.
3. Roads 36 feet and greater width may allow parking on both sides of the roadway.

D. When signs are required, the applicant shall arrange for a funding mechanism, such as a Homeowners Association or Lighting and Landscaping District, to pay for the ongoing maintenance of these parking restrictions.



(Fire Safe Regulations: not applicable)

4.3.1.8 Other Requirements

The County Engineer may require additional design and construction requirements as determined to be necessary to prevent excessive operating costs, protection against deterioration, and obsolescence.

4.3.1.9 Staged Developments

There are some exceptions to these standards associated with phased or staged developments. The following exceptions may be applied to the County's road standards in phased developments, with the approval of the County Engineer:

Exceptions

A. Some proposed streets may be required to extend to the boundary line of the development. Temporary turnarounds shall be created in compliance with the standards for permanent turnarounds. Temporary turnarounds may be created with temporary easements shown on the map. A barrier approved by the County Engineer shall be installed at the end of the improved street (refer to the Standard Plans). A temporary turnaround easement shall be removed by a "Certificate of Correction" completed by the applicant, upon the improvement of the road that changes the dead-end road to a through road.

B. Streets that are one-half the width of the applicable standard road plan are not allowed unless they are planned as part of staged construction of a four lane street and two travel lanes, one in each direction, are constructed.

4.3.1.10 Weight

A. Street structural sections shall be designed using normal pavement design methods found in the Caltrans Highway Design Manual, Chapters 600-670, Pavement Engineering for Roadways. Bridges shall be designed using the California Amendments to the AASHTO LRFD Bridge Design Specifications HL93 and P15 (permit) for bridges. Reference the following Caltrans documents:

1. Bridge Design Specifications,

2. Bridge Design Aides,
3. Bridge Design Details,
4. Bridge Design Detail Sheets, and
5. Bridge Design Memo to Designers.

B. The above referenced standards will provide adequate structures to support all legal commercial vehicles as set forth in the California Vehicle Code, Sections 35550 – 35558, and for fire trucks as set forth in the California Code of Regulations, Title 21, Division 2, Chapter 7.

4.3.1.11 Access Management

A. Access management is a set of techniques that State and local governments use to control access to highways and roadways. It includes several techniques designed to:
   1. Increase the capacity of these roads,
   2. Manage congestion, and
   3. Reduce accidents.

B. This is often done by designating an appropriate level of access control for each of a variety of facilities. Local residential roads are typically allowed full access, while major highways and freeways allow very little.

C. Depending on the type of project proposed and the existing traffic volume and safety conditions in the surrounding area, DOT may require the applicant to do any of the following:
   1. Increase spacing between signals and intersections,
   2. Alter driveway location, spacing, and design,
   3. Install new, or modify existing, exclusive turning lanes,
   4. Install median treatments, including two-way left turn lanes that allow turn movements in multiple directions from a center lane and raised medians that prevent movements across a roadway,
   5. Provide service and frontage roads,
   6. Implement land use policies that limit right-of-way access to highways, and
   7. Add recordation of vehicular access restrictions.

4.3.2 Driveways

The following standards apply to driveways:

A. A driveway shall serve no more than two buildings with no more than three dwelling units on a single parcel, and any number of accessory buildings (Reference California Fire Safe Regulations, Section 1271.00 of Article 1). A road is required where more than one parcel shall be served.

B. Distance between driveways shall be consistent with requirements shown in the Standard Plans and safe traffic engineering practices.

See the Standard Plans for details of driveway encroachment construction requirements.

4.3.3 Street Lighting

A. Street lighting may be allowed or required by Specific Plans or as part of Planned Developments. Street lighting may also be required by the County Engineer as needed for traffic safety purposes (e.g., intersections with high pedestrian usage at night).

B. Where street lighting is required or proposed, its construction shall meet the standards described in the Standard Plans.

C. Where street lighting is required or proposed, a funding/maintenance entity (such as a Lighting and Landscaping District) shall be formed to pay for the ongoing energy costs and maintenance, subject to review and approval by DOT.

D. Electric service and system wiring for new streetlights shall be underground except where conditions prohibit such installation.

E. All existing streetlights, including those on the site frontage(s) on both sides of the street and 100 feet beyond the property lines, shall be shown on developer-submitted improvement plans. Street lights mounted on utility poles shall also be shown.

4.3.4 Traffic Signals

The construction of new traffic signals is a condition that may be placed on a project during the discretionary review phase. The requirement for new traffic signals often comes about through a traffic impact analysis report that is prepared in support of the permit application.

If the traffic impact analysis report determines the need for a new traffic signal at an intersection, the applicant shall construct the traffic signal or, contribute a fair share amount toward the future construction of the traffic signal, at the discretion of the County.

4.3.4.1 Guidelines

A. Installation of traffic signals is determined through an operational and safety study.

B. "Signal warrant studies" are part of a traffic impact analysis report. Signal warrant studies are performed to substantiate the need for the installation of a traffic signal at an intersection. The warrants are those included in the California Manual on Uniform Traffic Control Devices, Chapter 4, Section C.

C. When it is determined that the installation of a traffic signal is necessary for public safety at those locations where development results in a new intersection or access point, or adds a new leg to an existing intersection, that intersection or access shall be signalized prior to use and always prior to completion of the first phase of construction.

D. Traffic signals are coordinated and reviewed through DOT (refer to the Standard Plans).

4.3.5 Sidewalks, Curb, and Gutter

Standards regarding sidewalks are in Chapter 2, Section 2.5.3 of this manual and in the Standard Plans.

4.3.6 Onsite Improvement Requirements

Parking areas shall be sloped at least two percent in at least one direction to prevent ponding and icing. Areas subject to Americans with Disabilities Act (ADA) guidelines may slope at a minimum of one percent. Also see the Title 17 Zoning Ordinance for off-street parking requirements and Standard Plans for on-street parking standard plans.

4.3.7 Underground Power, Communication, and Other Utility Systems

4.3.7.1 Standards of Construction

A. Utility plans indicating exact location of trenches, crossings and structures shall be approved before any utility placement.

B. Gas, electrical and communication systems shall have 30 inch minimum cover to finished grade when in a public street.

C. Gas, electrical and communication systems in public streets shall be placed before pavement is constructed and shall be accurately constructed in conformance with the plans.

D. Surface facilities that will be located in paved areas shall have traffic frames and lids conforming to the Standard Plans.

E. Surface facilities that extend above the finished grades shall be located so that they will not cause a hazard.

F. The final improvement plans and specifications shall show the work to be performed by the applicant, normally consisting of conduit, pull boxes and transformer pads. Wires are normally supplied by the utility entity and need not be shown on the plans.

G. No non-yielding obstructions, including transformers, splice boxes, and other structures, may be placed within 20 feet of edge of pavement unless vertical curb and gutter has been placed, in which case 6 feet from the top back of curb will be the minimum limit. Structures may also require protection posts.

H. Water service installations in roadways with cuts or fills greater than six feet in height and slopes steeper than three to one shall have the meter box set at finish grade next to the road in the location directed by the district. The service line shall then be extended five feet beyond the slope catch-point with PVC schedule 40, sized to match the service. Ends of lines shall be marked with an acceptable permanent marker, for example steel T-posts, painted blue.

I. Water meter boxes, sewer clean-outs and other utility boxes shall be set flush with the grade if in a walk area such as behind the curb.

J. Structural backfill for all manholes in streets shall conform to Section 19-3.06 of the Caltrans Standard Specifications.

4.3.7.2 Plans and Specifications

A. Prior to County acceptance, the applicant shall submit to the County Engineer, plans showing the location of the electrical and communication systems prepared by a Civil Engineer, of sufficient detail to enable the County Engineer to ascertain whether such systems conform to the standards set forth herein and to standard acceptable engineering practices.

B. Such plans and specifications shall be approved by the authorized representative of the entity operating the electrical or communication systems and shall be accompanied by a letter from the entity stating that the entity and applicant have entered into an

agreement that will provide the utility's service to the lot line at each lot in the subdivision.

C. A letter shall be provided to the County Engineer by each service provider, stating that the provider is willing to maintain and operate the system upon its completion.

4.3.8 Storm Water Quality and Drainage

The County is subject to State and Federal laws, as well as its own ordinance, prohibiting the discharge from any property of anything except clean rainwater into the County's storm drains and waterways.

A. All types of potential contaminants from jobsites are prohibited, including
   1. Sediment,
   2. Oil,
   3. Other vehicle fluids,
   4. Concrete washout,
   5. Paint,
   6. Landscaping materials,
   7. Fertilizers,
   8. Pesticides, and
   9. Trash.

B. Sites which involve one acre or more of disturbed soil area, or are part of a larger common plan of development that encompasses one acre or more of disturbed soil, are required to file a "Notice of Intent" (NOI) with the Regional Water Quality Control Board. (See Chapter 7, Section 7.1 of this manual for contact and website information.)

   This requirement applies in the Tahoe region as well.

C. DSD, Agriculture Department, and DOT review the majority of "Erosion Control Improvement Plans" submitted through the permit and project process. The El Dorado County & Georgetown Divide Resource Conservation District has been contracted through the County to review certain "Erosion Control Improvement Plans". More information can be found on-line at EMD's website. (See Chapter 7, Section 7.1 of this manual for contact and website information.)

D. See Chapter 5 of this manual for more information on BMPs for grading in general. In addition, BMPs specific to agricultural grading can be found by contacting the Agriculture Department.

E. See the Drainage Manual and Storm Water Management Plan for requirements and standards related to stormwater drainage.

F. See the Standard Plans for standards related to manholes, inlets, etc.

4.3.9 Design Waivers and Design Exceptions Policy

Design waivers are discussed in Chapter 1 of this manual. In addition, DOT has a "Design Exceptions Policy" that applies in any situations where a deviation from a DOT design standard is requested.

4.4 Miscellaneous Permits

There are several permits that are issued directly by DOT either in conjunction with a discretionary project, or separately for a specific, stand-alone purpose. For example, a commercial project to build a new shopping center may trigger a Design Review process that will ultimately include not only improvement plans as part of the discretionary review process, but also DOT-issued permits for grading, utility, and driveway encroachments after project approval. Another example is when a homeowner wants to add an additional driveway encroachment onto a County road from his/her property; the applicant would submit a stand-alone encroachment permit to DOT. DOT permits include the following:

4.4.1 Grading Permits

At the time of this writing, grading is a joint responsibility between DSD and DOT. Depending on the project, one or both organizations may need to review the grading plan. (See Chapter 5 of this manual for a description of which department is responsible for the various types of grading permits.)

Pursuant to Section 15.14.130 of the Grading Ordinance, when applicable, a grading permit is required for earth moving activities conducted on private property within the unincorporated area of the County in order to protect neighboring properties, public welfare, and water quality of streams, rivers and lakes.

In order for a permit to be issued, a proposed grading project shall be consistent with:

- The *General Plan*,
- Any applicable Specific Plan,
- The Grading, Erosion and Sediment Control Ordinance,
- Chapter 5 of this manual, and
- The Building Code currently in force.

The grading permits that DOT issues typically are requirements associated with the conditions of approval of discretionary projects. Specifically:

A. "Off-site" grading in the County right-of-way, usually in conjunction with roadways or drainage around roadways.

B. Any grading associated with new subdivisions (including Parcel Maps) for all land use types (e.g., residential, commercial, etc.).

C. Grading in subdivisions which includes inspection of roadways and drainage.

D. Drainage encompasses, among other things, the grading required to create lots and ensure that they drain properly. One form of grading used to create lots is called "mass pad" grading. Examples of when a DOT-issued grading permit may be required include:

1. A new commercial building on a County-maintained road which requires grading in the County right-of-way to widen the roadway and create a turn-in to the parking lot for the new building;

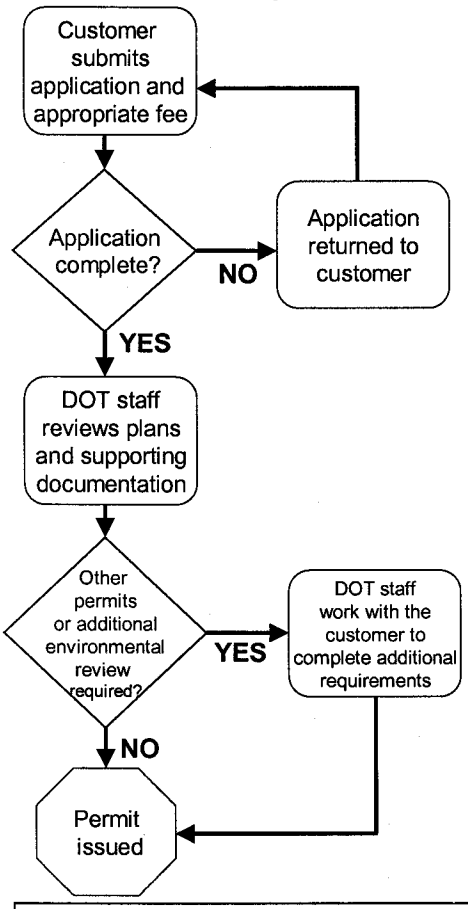
2. A new subdivision development, where new roads will be developed and/or where drainage needs to be reviewed.

Grading plans prepared for the moving of soil, in support of private development, shall be completed at no cost to the County. All County services required for the review, approval and inspection of grading plans and operations shall be paid for by cost recovery fees collected from the applicant.

4.4.1.1 Submittal Instructions

For any grading permit, submit the items as outlined in Chapter 5 of this manual.

After a discretionary project has been approved:



GRADING PERMIT PROCESS

4.4.2 Utility Encroachment Permits

Utility permits follow the rules and process described in the County's Ordinance Title 12, Chapter 12.08 Road Encroachments. This permit is required whenever temporary use of the public right-of-way is requested for utility trench construction, for improvements to a maximum value of $100,000. (Above this threshold, a RIA is required.)

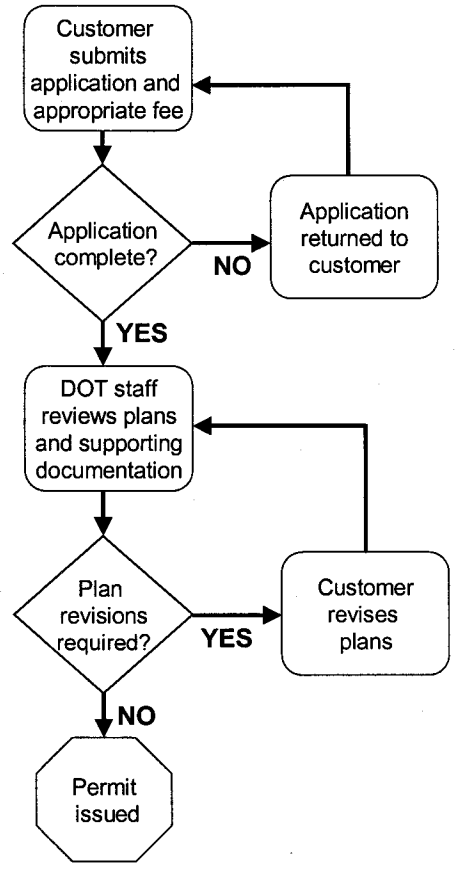
Typical examples of when a utility encroachment is required include:

A. Installation of a utility trench in a residential or industrial subdivision,

B. Installation of utility services to a new use (e.g., commercial, residential, or industrial building),

C. Installation or upgrading of utility service to an existing structure, and

D. Expansion or modification of transmission or distribution facilities by a public utility.



UTILITY ENCROACHMENT PERMIT PROCESS

4.4.3 Miscellaneous Encroachments

4.4.3.1 Driveway/Obstruction Encroachment Permits

This permit is required when:

A. A property owner wants to modify, replace or construct a new or additional driveway, or

B. A property owner wishes to put a fixed object in the County's right-of-way.

4.4.3.2 Timber Harvest Temporary Encroachment Permits

Encroachments onto County-maintained roads for the purposes of timber harvesting, shall follow the rules and process described in the County's Ordinance Title 12, Chapter 12.08 Road Encroachments. This permit is required whenever temporary use of the public right-of-way is requested for timber harvesting.

4.4.3.3 Oversized Load Permits

Oversized load permits are required for any vehicles, or their loads, that are equal to or greater than eight feet wide. An application and appropriate fee shall be submitted to DOT.

4.4.3.4 Special Function Permits

A Special Function Permit is needed for any special events such as parades, foot or bicycle races that use the County's roads (reference County Ordinance Title 12, Chapter 12.37 Parades).

4.5 Other

4.5.1 General Vacations and Summary Abandonment of Easements (AOE)

General Vacations and Abandonment of Easements may be required as part of a land development project.

4.5.2 Irrevocable Offer of Dedication (IOD)

IODs are typically used when an applicant either desires, or is required, to convey right-of-way, in fee, or an easement to the County, usually as a condition of approval for a discretionary project.

CHAPTER 5 – GRADING, EROSION, AND SEDIMENT CONTROL
(draft rev. 10/01/10)

Sections:

Note: This Chapter was most recently called Volume III: Grading, Erosion and Sediment Control and was last updated by Board Resolution #047-2007 in 2007 along with Title 15.14 El Dorado County Grading, Sediment and Erosion Control Ordinance (Grading Ordinance). This manual, and particularly this Chapter, supersedes Volume III in its entirety.

In this Chapter, the following definitions apply:

- **Architect.** An individual holding a current license to practice architecture in the State of California.
- **Borrow.** Earth material acquired from an off-site location for use in grading on a site.
- **Civil Engineer.** An individual currently registered as a Civil Engineer by the State of California.
- **Compaction.** The increase of density of a soil or rock by mechanical means.
- **Design Professional.** Refers to a California registered Civil Engineer or Land Surveyor, or a California licensed Architect, Landscape Architect, Geologist, or Engineering Geologist; whose license is current and who practices under the authorization provided in the "Practice Act" of their particular profession as set forth in the "California Business and Professions Code".
- **Design Professional in Responsible Charge.** Refers to the individual engaged by the owner to act as the design professional in responsible charge. When required by the County Building Official, that individual shall be designated on the permit application.
- **Engineering Geologist.** A licensed Professional Geologist certified as an Engineering Geologist by the State of California.
- **Exposed Wall Face.** The vertical distance measured from the finish grade (consolidated soil or rock) at the toe of a retaining wall to the top of the wall.
- **Geologist.** A person licensed by the State of California as a Professional Geologist.
- **Geotechnical Engineer.** A Civil Engineer who holds a valid authorization to use the title "Geotechnical Engineer," as provided in the "State of California Business and Professions Code". The terms "Geotechnical Engineer", "Soils Engineer" and "Soil Engineer" are deemed to be synonymous.
- **Geotechnical Report.** The documentation of a study or investigation made by a Geotechnical Engineer or Civil Engineer of the earth materials (See "Geotechnical Engineering") at the proposed development site. This documentation shall include an engineering evaluation of the properties of the encountered earth materials and recommendations for their disturbance, removal, modification, or replacement to prepare the project site for its proposed use. The terms "Geotechnical Report", "Soils Report" and "Soil Report" are deemed to be synonymous.

- **Keyway; Key.** A special backfilled excavation which is constructed beneath the toe area of a planned fill slope on sloping ground to improve the stability of the slope.
- **Land Surveyor.** A Professional Land Surveyor licensed by the State of California.
- **Landscape Architect.** An individual holding a current license to practice landscape architecture in the State of California under the authority of the "Landscape Architects Practice Act" of the "California Business and Professions Code".
- **Licensed Professional.** An individual that meets the definition in the current "California Professional Engineers, Land Surveyors, Architects and Landscape Architects Act".
- **Mass Pad Grading; Mass Lot Grading.** Typically done in conjunction with a subdivision where building pads and adequate drainage are created for each lot. Often results in removal of most/all vegetation in the subdivision to make adequate room for buildings and drainage.
- **Retaining Wall.** Walls constructed to withstand lateral earth and/or fluid pressures, including any live and dead load surcharge, the self weight of the wall, and earthquake loads in accordance with accepted engineering practice. This definition also applies to free standing swimming pool walls.
- **Surcharge; Surcharge Load.** For the purpose of this manual, surcharge refers to an additional weight added to soil that can influence the stability of a soil mass or retaining wall. Examples of surcharge loads include structures, vehicles, snow, above ground swimming pools, stacks of material such as firewood and building products, large trees, the additional weight of earth due to an ascending backslope behind a wall, etc.
- **Terrace.** A relatively level step constructed on the face of a graded cut or fill slope surface for drainage, maintenance, or other purposes. (Note: For purposes of this manual, "benches" are located under a fill and "terraces" are located on the face of a constructed slope.)

5.1 General Policies

A. Any project that proposes grading, whether it is ministerial or discretionary, may require a grading permit, unless the project is exempted under the provisions of the Grading Ordinance. Grading permits may be required for residential building permits (all types), subdivisions, Parcel Maps, commercial projects, industrial projects, research & development projects, multi-family projects, etc. Even if a grading permit is not required, all other requirements as established by the Design Manuals shall be followed. Projects proposed in the Tahoe Basin shall meet the Tahoe Regional Planning Agency's (TRPA) requirements (see Section 5.3.3.5 of this Chapter).

B. Except as otherwise noted in this Chapter, the provisions of the currently adopted "Soils and Foundations" and "Grading Appendix" chapters of the California Building Code (CBC), shall apply.

C. This Chapter is not intended to supersede or otherwise pre-empt any applicable local, State, or Federal law or regulation. Where conflicts may occur between this Chapter and such laws or regulations, the most restrictive shall apply.

D. Natural features, including vegetation, oak trees, watercourses, wetlands, steep slopes and similar resources shall be preserved consistent with the Policies, Objectives, and Implementation Measures of the *General Plan*, any applicable Specific Plan, the requirements of Title 17 Zoning Ordinance, the conditions of approval of any applicable discretionary permit, the "Oak Tree and Wetlands Preservation" standards included in this manual, and the requirements of the grading permit under which the work is conducted.

E. Grading permits shall not be approved for a discretionary project until the discretionary project is approved by the approving authority. Grading permits for ministerial applications which are zoned commercial, multi-family, industrial, or research & development, and all public facilities (e.g., parks, utilities, roads), shall not be issued without a Building Permit application which has been submitted to Development Services Department (DSD) Building Services for plan review. In unusual circumstances, the approving authority responsible for issuing the grading permit may make an exception to these requirements.

F. Agricultural grading is exempt from these provisions but may require an agricultural grading permit. The Agriculture Department shall be contacted for specific requirements relating to agriculture grading.

G. No person shall perform any grading work or place obstructions within the right-of-way of a public road or street, or within a public easement under the jurisdiction of the County, without prior approval of the County Engineer.

H. County-maintained roads shall comply with the Standard Plans, and standard specifications.

Note: It is the applicant's responsibility to apply for the appropriate permit from the appropriate approving authority. An exemption granted by one Department does not entitle an applicant to an automatic exemption from obtaining a grading permit issued by another Department, if the project falls under the purview of the latter. For more information, contact DSD. (See Chapter 7, Section 7.1 of this manual for contact and website information.)

5.2 Design and Construction Standards

This manual contains multiple references to various agencies and source documents including contact information. These references can be found in a handout located at the DSD counter or website.

5.2.1 Earthwork

All earthwork shall comply with the applicable Chapters and Appendix sections of the California Building Code (CBC) for design and construction standards. The following provisions reflect additional local requirements or clarifications:

5.2.1.1 Excavation – Cut Slope Standards

A. **Unsupported Foliation or Bedding Planes.** No slope shall be cut at an angle steeper than the bedding/foliation planes or orientation of the principal joint sets in any formation where such planes or joints dip down toward the proposed cut face. A cut slope with this underlying condition (i.e. downslope-dipping bedding planes or joint sets) may be permitted if the Engineering, Geotechnical Engineering and Engineering Geology Reports demonstrate that the slope would be stable at a steeper angle.

> **Exception**
> Requirements may be modified if recommended in an acceptable Geologic Report or Geotechnical Report.

5.2.1.2 Fill Construction Standards

Completed fills shall comply with the applicable provisions of the CBC, unless recommended otherwise in an acceptable Geotechnical Report.

5.2.1.3 Terrace and Terrace Drainage Requirements

A. Interceptor (Brow) Ditches. Interceptor ditches shall be provided above all cut or fill slopes exceeding 10 feet in height if the tributary drainage area above the cut slopes toward the cut and has a drainage path greater than 40 feet measured horizontally. Interceptor ditches shall be designed to accommodate the flow volume and velocity of runoff estimated for a 100-year storm event as determined in a County-accepted Drainage Report prepared by a Civil Engineer. They shall have a minimum depth of 12 inches and a minimum width of 30 inches measured horizontally across the drain. An alternate design prepared by a design professional may be approved.

B. Ditches shall be designed to accommodate 100 year storm events, but are not mandated to provide extra 1 foot "free board" as may otherwise be required in the Drainage Manual.

5.2.2 Storm Water Management Requirements, Erosion and Sediment Control, and Drainage

A. For projects on the West Slope of the Sierra Nevada in the County, storm water management, erosion and sediment control and drainage shall comply with the adopted Drainage Manual, Storm Water Management Plan (SWMP) and **current** California State Water Resources Control Board's (SWRCB) Order(s) regulating construction activities.

B. Minimum construction site Best Management Practices (BMPs) listed in the SWMP and the Minimum Construction Site Storm Water Management Practices available on EMD's website. (See Chapter 7, Section 7.1 of this manual for contact and website information.) SWMP shall be implemented on all projects to control erosion and sediment, and other construction-related pollutants.

Other approved BMPs are found in the SWMP, Section 4.4 Construction Site Runoff Controls and the Stormwater Best Management Practice (BMP) Construction Handbook published by the California Stormwater Quality Association. (See Chapter 7, Section 7.1 of this manual for contact and website information.)

C. Erosion and sediment control measures shall include an effective revegetation program to stabilize all disturbed areas which will not be otherwise protected. See Vegetation Establishment Guidelines for the Sierra Nevada Foothills and Mountains published by the High Sierra Resource Conservation and Development Council (refer to EMD's website).

D. Topsoil Salvage. No topsoil shall be removed from the site unless otherwise directed or authorized by the approving authority issuing the grading permit. Topsoil overburden shall be stockpiled and redistributed within the disturbed area to provide a suitable base for seeding and planting. Runoff from the stockpiled area shall be controlled to prevent erosion and resultant sedimentation of receiving water.

E. Drainage and Acceptance of Historic Runoff. All grading projects shall be designed to convey the runoff water historically delivered to the site from off-site property to an adequate storm drain or existing watercourse.

For projects in the Tahoe Basin, the provisions of this manual shall apply, except where those provisions are in conflict with the requirements of the Lahontan Regional Water Quality Control Board (RWQCB) or TRPA. In such cases, the requirements of the Lahontan RWQCB or TRPA shall take precedence. Further information may be found at the Lahontan RWQCB's website. (See Chapter 7, Section 7.1 of this manual for contact and website information.)

5.2.3 Setbacks

5.2.3.1 General Requirement

Cut and fill slopes shall be set back from permit area boundaries in accordance with the CBC.

5.2.4 Mass Pad Grading

"Mass pad grading" (also known as mass lot grading) means the grading or disturbance of the surface of any lot or parcel more than the percentage specified below for the size of the lot or parcel in question:

Percentage (%) of Land Area Disturbed	**Parcel Size** *(square feet)*
80	Less than 6,000
60	6,000-19,999
50	20,000-43,559
30	43,560-87,120
20	Greater than 87,120

Mass pad grading is usually, but not always, associated with subdivisions in which the grading of all lots is more efficiently done at one time. Also, due to the terrain encountered in the County, mass pad grading may be necessary to create adequately-drained, near-level building sites and to provide for adequate access to these sites.

5.2.4.1 Basic Principles

A. The volume of grading shall be limited to that necessary to accomplish the proposed development. It is the intent of this section, consistent with the *General Plan*, that all grading shall reflect the natural gradient and contours of the site, to the greatest extent possible.

B. Grading shall be designed to minimize the creation of extensive, artificial banks or terraces which may be visible from public streets or other public views.

C. Grading shall conform to the design standards provided in this manual unless demonstrated through adequate analysis and report that an alternate design can provide a stable slope that avoids severe erosion and other hazards.

D. To the extent that it is consistent with sound engineering practices and the need to provide proper drainage and roadway configuration, pad elevations shall be determined with the objective to preserve native trees which are generally in good health (see Chapter 2 of this manual for standards related to oak tree protection).

E. Cross-lot or rear-lot drainage shall generally be avoided. However rear-lot drainage can be utilized when it reduces the rear-lot vertical difference between adjacent lots. When rear-lot drainage is proposed, a properly designed drainage system shall be installed to collect drainage on each lot. When cross lot drainage does occur, it shall be contained within dedicated drainage easements. This drainage shall be conveyed via closed conduit or v-ditch, to either a natural drainage course of adequate size or an appropriately sized storm drain system within the public roadway unless exceptions are provided by an approved drainage study.

5.2.4.2 Contour Grading

A. Front Yards. In order to minimize a "stair step" effect on streetscapes in padded lot areas, the transitional slope areas along the side lot lines in the front yards shall be softened by reducing the slope or by contouring the top and toe of the slope into the front yards of each unit. Front yard landscaping shall be required to be installed by the applicant in areas where mass pad grading is combined with a build-out program.

B. Rear Yards. In order to allow for a maximum of usable rear yard, and to provide proper drainage between lots, contour grading shall not be required along rear lot lines nor along side lot lines in those areas which are not visible from a public street.

5.2.4.3 House Construction

The Building Official, at final inspection for any house, shall verify that pad slopes and drainage substantially conform to approved plans.

5.2.4.4 Subsequent Construction

For mass pad graded lots on which homes have been built, and which are subject to County permit issuance for construction of a secondary structure including but not limited to, pools, gazebos, etc., evidence of conformance to the original lot drainage pattern shall be provided as part of the building permit for secondary structures, or a revised lot drainage plan shall be submitted for review and approval. A revised drainage plan shall provide for positive, controlled lot drainage. These shall be subject to the final sign-off by the approving authority issuing the permit.

5.2.5 Retaining Wall Design and Construction

The purpose of this section is to provide basic information to assist applicants in obtaining permits, ensuring proper design and construction of the wall system, and in obtaining the proper inspections.

5.2.5.1 Governing Standards and Guidelines

Retaining walls shall be designed in accordance with the applicable Chapters and Appendices of the latest edition of the CBC, in addition to the applicable provisions provided in this section. All retaining walls requiring a permit shall consider earthquake loading in accordance with the applicable Chapters of the Building Code.

A Reference Guide is available at the approving authority responsible for issuing the permit.

5.2.5.2 Permit Requirements

Construction of retaining walls requires a permit and is regulated by local building and zoning codes and this manual.

Exception
Walls retaining less than four feet of earth measured from the bottom of the footing, and that have a finish grade above and below the wall sloping less than 5:1 (five horizontal to one vertical) and do not impound Class I, II, or III-A liquids as those liquids are defined in the CBC, are exempt from permit. Walls built on the property line or within a perpendicular distance from the property line equal to the height of the exposed wall face shall not be constructed of wood.

All walls located within a County-maintained road right-of-way are subject to review and approval by the Department of Transportation (DOT).

5.2.5.3 Design Requirements

All permitted retaining walls require a soils investigation in accordance with the CBC.

Exception
Walls, or a combination of walls, constructed of concrete or masonry that are less then 10 feet in height. Soil design parameters and requirements for site observation shall be in accordance with the CBC.

Seismic design is required for all permitted retaining walls unless exempted by exception in the CBC. However, all rockery walls require a seismic analysis. Seismic design may be submitted in accordance with the Federal Highway Administration (FHWA) methods provided in the referenced standard, provided local parameters are used in the design. At the discretion of the design professional, the seismic thrust may be evaluated with the pseudo-static Mononabe-Okabe equation, or walls may be designed using the approximated value of the resultant seismic force = $14H^2$ positioned 0.6H above the top of the footing or base, where "H" is the retained earth height. In addition, Mechanically Stabilized Earth (MSE) wall designs shall include the horizontal inertia force of the reinforced fill. The Mononabe-Okabe inertia force equation may be used, or, walls may be designed using the approximated value of the inertia force = 20HL positioned 0.5H above the base, where "H" is the retained earth height and "L" is the depth of reinforced fill.

Minimum Design Requirements:

A. Retaining walls shall be designed to withstand lateral earth and/or fluid pressures, including any live and dead load surcharge, the self weight of the wall, and earthquake loads; all in accordance with accepted engineering practice, the CBC, and all applicable International Code Counsel (ICC) or International Conference of Building Officials (ICBO) Legacy Evaluation Reports. Snow on ground surcharge loads of 20 psf or less may be ignored.

B. All retaining wall heights are measured from the bottom of the footing to the top of the wall.

C. Walls shall be designed for the minimum factors of safety shown in Table 1. Combined loading factors shall be in accordance with the CBC.

D. Justification shall be provided for lateral pressure resistance used in the top 12 inches or above frost line is used.

E. Concrete retaining walls designed to resist earthquake forces shall be constructed of concrete with a minimum strength as specified in ACI 318 and the CBC.

F. Rockery walls shall not have chinking on the exposed face and the minimum weight of cap rocks shall be 200 pounds.

G. Drainage behind walls shall be provided in accordance with the CBC.

H. Restrained walls shall not be backfilled until restrained connection and supporting elements are completed or temporary shoring is in place.

Table 1. External Stability Factors of Safety *

Failure Mode	Factor of Safety
Soil bearing capacity	2.0-3.0
Sliding	1.5
Overturning	1.5
Overturning of MSE walls	2.0
Supporting elements of a restrained wall	1.5
Global stability	1.5

* The above safety factors may be used with the various load combinations of the CBC.

5.2.5.4 Plan Check Submittal Requirements

A. All plans must be drawn to scale. Two copies of all plans, calculations and supporting documents are required for submittal. Design professional prepared material shall be stamped and wet signed,

B. Plot Plan indicating the location, accurate width of the wall, length and height of the wall, lot drainage patterns, top and bottom of wall elevations and finish grade contours, and the distance to the property line, easements and adjacent structures on the lot (refer to Section 5.2.3 of this Chapter for setback requirements),

C. Typical cross section(s),

D. Elevation views for clarification of complex wall configurations,

E. Special inspection and structural observation requirements shall be listed on the Plan Title Sheet,

F. The calculations shall reference the design parameters and soil type used in the design if a Soils Report is not provided,

G. If the manufacturer provides a "Standardized Design", provide the standardized manual with a Design Professional's wet signed stamp on the cover sheet. The applicant shall

highlight on the plan the wall to be used for construction. All the provisions of the standardized wall shall apply, including slope configuration and material type,

H. A Soil Investigation Report providing the design parameters for use in the design of the walls, as required in Section 5.2.5.3 of the Chapter, and

I. One copy of the latest Design Manual and the ICC-ES Report if the wall is a manufactured product (i.e. keystone wall, anchor wall, etc.).

5.2.5.5 Construction

Retaining walls must be constructed per the plans, the approved engineering calculations; and, where applicable, the manufacturer's installation manual, and the latest ICC-ES Report.

5.2.5.6 Inspections

The following inspections will be required during the retaining wall construction:

Inspections by County Staff. The schedules in the following tables provide an abbreviated description of the minimum inspections required for retaining walls.

Segmental or MSE Retaining Walls

Inspection	Scope of Inspection
1st	Footing/leveling pad; Batter (if any); Discuss Special Inspection procedures (if applicable), drain(s), and backfill compaction & testing.
2nd	Lowest layer of grid or third course of modules; Permeable drain material; Batter; Backfill Compaction Report; Grid, type, length, taut.
3rd	Mid layer of grid or mid course of modules; Permeable drain material; Batter; Backfill Compaction Report; Grid, type, length, taut.
Final	Drain to daylight; Cap layers; Batter; Erosion control; Backfill Compaction Report; Special Inspection Report.

Rockery Retaining Walls

Inspection	Scope of Inspection
1st	Footing/leveling pad; Batter (if any); Discuss Special Inspection procedures (if applicable), drain(s), and backfill compaction.
2nd	Mid-height of wall; Permeable drain material; Batter; Backfill Compaction Report.
Final	Drain to daylight; Cap rocks; Batter; Erosion control; Backfill Compaction Report; Special Inspection Report.

Reinforced Concrete Retaining Walls

Inspection	Scope of Inspection
1st	Footing pad and size; Key size; Reinforcement; Soil condition at toe; Discuss Special Inspection procedures (if applicable).
2nd	Prior to concrete pour; Wall forms and reinforcement (must be accessible); Anchor bolts and hardware placement.
3rd	Drain(s); Wall waterproofing; Restrained support or temporary shoring per design professional; Discuss drain rock and backfill compaction procedures.
Final	Drain to daylight; Weep holes; Restrained support; Erosion control; Backfill Compaction Report; Special Inspection Report.

Block (Masonry) Retaining Walls

Inspection	Scope of Inspection
1st	Footing pad and size; Key size; Reinforcement; Soil condition at toe; Discuss Special Inspection procedures (if applicable).
2nd	Four foot lift, prior to grout pour; Block, mortar joints, reinforcement and grout cells.
3rd	Top lift, prior to last grout pour; Block, mortar joints, reinforcement and grout cells; Anchor bolts and hardware placement.
4th	Drain(s); Wall waterproofing; Restrained support or temporary shoring per design professional; Discuss drain rock and backfill compaction procedures.
Final	Drain to daylight; Weep holes; Restrained support; Erosion control; Backfill Compaction Report; Special Inspection Report.

Special Inspection by Qualified Professional. When required, the following special inspections shall be performed by the designer or a certified inspector acceptable to the County, and testing shall be performed by a qualified testing agency acceptable to the County. Special inspections are in addition to the required inspections performed by County Building inspectors.

Special Inspections and Testing

Item	Continuous	Periodic
Soil Compaction		X
Reinforced Concrete	X	
Structural Masonry	X	
Shotcrete	X	
Segmental or Rockery Wall Placement		X
Grids and Tie Backs		X
Gabion or Crib Wall		X
ICC or ICBO Legacy Report	As Specified	As Specified
Structural Observation	As Specified	As Specified

A. Compaction testing of soil backfill (excluding drain rock) shall be provided at an appropriate interval to verify proper compaction levels are obtained.

B. Segmental or MSE walls shall be constructed under the observation of the design professional, and shall include review of the footing pad, base course and geogrid placement, face batter, wall facing cavity (if any) backfill, review of compaction testing, and overall compliance with the plans.

C. Rockery walls shall be constructed under the observation of the design professional, and shall include review of the footing pad, rock and backfill placement, review of compaction testing, and overall compliance with the plans.

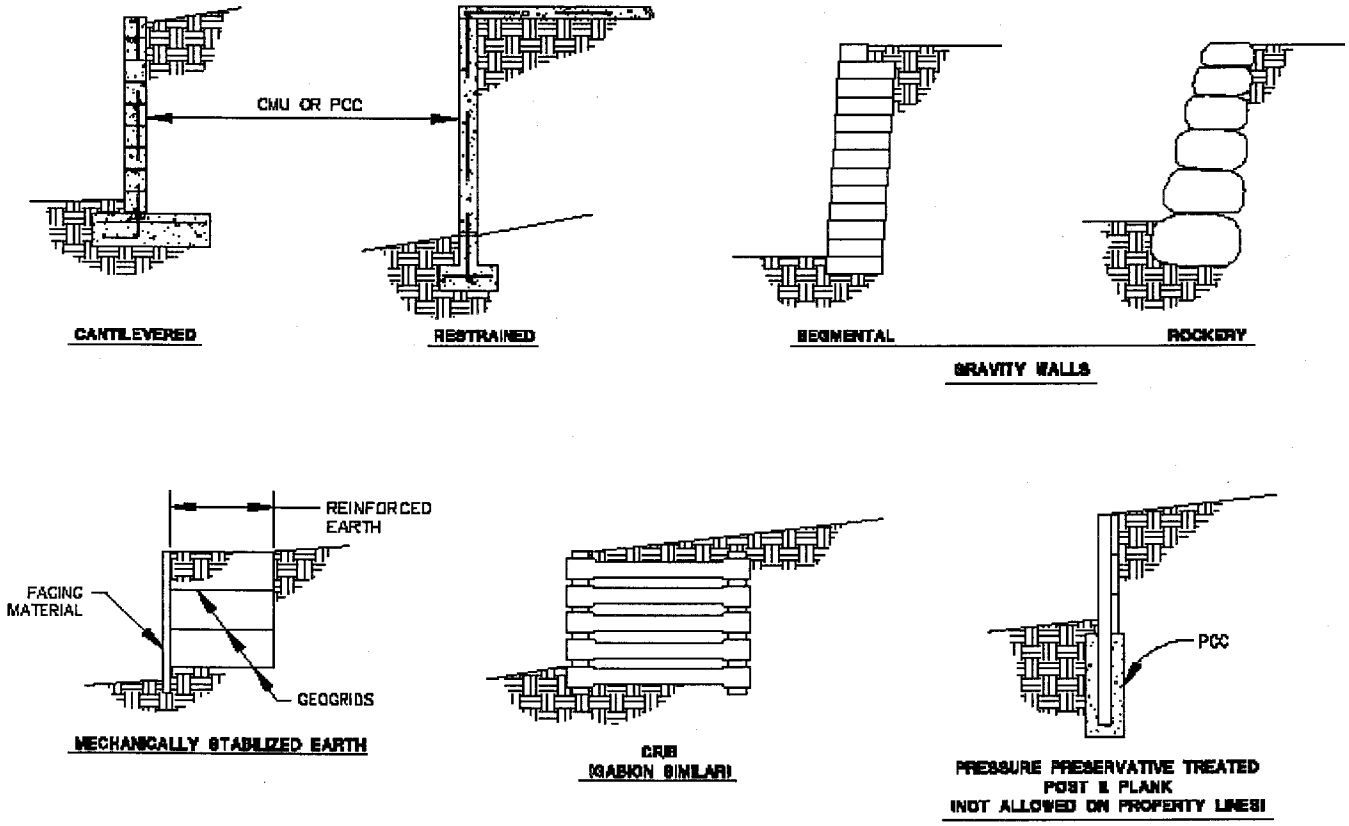
D. Soil characteristics shall be observed by the design professional or the geotechnical engineer to confirm that they are consistent with the assumptions used in the wall design.

E. Compaction and Special Inspection or Structural Observation Reports shall be provided before or at the time of inspection by the County. Reports not prepared by the design professional shall be reviewed and approved by the design professional before being

provided to the County. All final reports shall be provided to the County before final inspection. On projects where a design professional in responsible charge has been designated by the owner, that person shall review and approve all reports before they are provided to the County.

5.2.5.7 Appendices

Code references, general information, Retaining Wall Design Checklist, and examples of different types of retaining walls, as illustrated below, can be found in the reference guide available at the approving authority for issuing the permit.



DRAWING #1
PICTORAL GLOSSARY OF RETAINING WALL TYPES
NOT TO SCALE

5.3 Grading Permit Application and Procedures

5.3.1 Responsibilities

Review and regulation of grading is a joint responsibility shared between DSD, DOT, and the Agriculture Department. Depending on the project, one or more organizations may need to review the grading plan. This may include non-County agencies such as the California

Department of Fish and Game, public utilities, etc. A list of these agencies is available at DSD. The following table identifies the responsible Department for various types of grading permits.

Type of Grading	Examples/Clarification	Type of Project Association	Responsible Department
Agricultural Grading	Grading that involves the conversion of one acre or more of undisturbed vegetation to agricultural cropland (Reference *General Plan* Policy 7.1.2.7)	Agricultural only; not done in conjunction with development of any structures	Agriculture Department
Residential Grading	Grading associated with the construction of single-family dwellings, accessory buildings, swimming pools, retaining walls, or residential driveways and multi-family site developments that are not associated with a division of land or off-site improvements	Single-Family building permits, Multi-Family building permits, and associated on-site structures	DSD
Non-Residential Development Grading (also known as "Commercial Grading")	Grading done on sites that are not residential and that are not associated with a division of land or off-site improvements	Non-Residential building permits such as commercial or industrial buildings	DSD
General Grading	Grading unrelated to the construction of single-family residences, accessory buildings, or residential driveways; Typical general grading would include ponds, pads for horse arenas, additional parking areas, and rural (non-County maintained) access roads	General grading covers miscellaneous on-site grading not associated with structures	DSD
Subdivision Grading	All subdivision grading (including Parcel Maps) irrespective of the type of land use (e.g., residential, commercial, etc.) includes mass pad grading across the property line of two or more, existing or proposed, contiguous lots or parcels	Subdivision grading is associated with discretionary projects	DOT
Right of Way, Encroachments and Public Utility/Drainage Easements	Grading that takes place within the County's right-of-way	Grading in the County's right-of-way is typically associated with discretionary projects or DOT's CIP projects	DOT

*Source: Exhibit A of Resolution # 048-2007 adopted by the Board of Supervisors as Implementation of Chapter 15.14 of the County Code.

5.3.1.1 Transfer of Professional Responsibility

If the design professional is changed:

A. Prior to Permit Issuance. It shall be the duty of the applicant to notify the Building Official, in writing, of such change and to provide documentation that a replacement(s) has agreed to accept responsibility within the required area(s) of technical competence. The permit shall not be issued until such documentation is provided.

B. After Permit Issuance. The work shall be stopped until the approving authority has been notified, in writing, that the replacement(s) has agreed to accept responsibility within the area of technical competence for approval upon completion of the work. It shall be the duty of the applicant to provide notification of such change prior to the commencement or recommencement of such grading or associated work. (Adapted from Section 3317.8 of the 2001 CBC.)

5.3.2 Submittal Requirements

5.3.2.1 Grading Plans

A. Agricultural grading plans shall be prepared to the specifications of the Agriculture Department. All other grading plans submitted to the County in support of a permit application shall be prepared by qualified individuals as discussed below and shall include the following:

1. **Certification.** The signature and professional stamp of the design professional except as provided in Section 5.3.2.4 of this Chapter.
2. **Plan Size.** Plans shall be submitted on sheets 24 inches by 36 inches unless an alternate paper size has been approved.
3. **Number of Copies.** A minimum of three complete sets of grading plans shall be submitted.
4. **Title Block.** Plans shall be entitled "Grading Plan" and state the purpose of the proposed grading. The name of the design professional responsible for plan preparation and the design professional in responsible charge shall be listed. The title block shall be located at the lower right corner or along the right edge of the plan sheet.
5. **Topographic Features.** Accurate contour lines drawn at intervals not greater than two feet of elevation, unless an alternate interval has been authorized by the approving authority issuing the permit, depicting topographic features and drainage patterns and the configuration of the ground before and after grading in the area proposed to be disturbed and immediately adjacent areas, relative to an established bench mark. Topographic maps shall be prepared by a design professional.
6. **Limits of Grading.** The plans shall clearly delineate the boundaries between areas of cut, areas of fill placement, and areas that would remain at natural or pre-existing grade.
7. **Property Boundaries.** Property lines and easements shall be clearly marked.
8. **Construction Details.** Construction details for roads (including structural pavement sections), man-made watercourses, culverts, bridges and drainage devices, retaining walls, cribbing, dams, and other improvements existing or to be constructed, together with supporting calculations and maps as required.
9. **Cross-sections.** Cross-sections, profiles, elevations, dimensions and construction details shall be provided based on accurate field data.

10. **Erosion Control.** For projects greater than one acre in Disturbed Soil Area (DSA) the following are required:
    a. Waste Discharge Identification Number (WDID) Letter from the SWRCB, or Central Valley RWQCB, and
    b. Storm Water Pollution Prevention Plan (SWPPP).
11. **Preliminary Landscape and Irrigation Plan.** A preliminary landscaping and irrigation plan to demonstrate consistency with Title 17 Zoning Ordinance and any discretionary approvals associated with the grading permit.
12. **Material Volume Estimate.** An estimate of the quantities of excavation and fill, adjusted for anticipated swell or shrinkage.
13. **Stockpiles and Borrow Sites.** The location of any on-site stockpile, borrow site, or location for storage of surplus material.
14. **Design Professional in Responsible Charge.** The name and contact information of the design professional in responsible charge shall be identified on the plans.
15. **Certificate Block.** A certificate block (i.e. signature block for licensed professionals), shall be provided on the cover sheet of the project plans.
16. **Cost Estimate.** The applicant shall submit a detailed cost estimate covering the proposed work, except if the project is limited to grading associated with a single family dwelling on an individual lot.

5.3.2.2 Storm Water Management, Erosion and Sediment Control

A. Control of storm water, erosion, sediment and other construction related pollutants is required for all grading projects.
    1. **Storm Water Pollution Prevention Plan (SWPPP).** A SWPPP and WDID are required for projects exceeding one acre in DSA by the conditions of the general permit from the SWRCB (see Section 5.2.2 of this Chapter). Requirements for the SWPPP are found in the general permit, and the Storm Water Management Plan (SWMP). A copy of the SWPPP shall be kept on the project site at all times and made available to representatives of the County or State upon request.
    2. **RCD Approval.** The applicant must submit grading plans (including SWPPP) to the Resource Conservation District (RCD) and obtain approval from the RCD for all erosion and sediment control practices prior to issuance of a grading permit by the County.
    3. **Professional Recommendations.** SWPPPs shall comply with the recommendations of the design professional.
    4. **Engineered Facilities.** The structural and hydraulic adequacy of all storm water containment or conveyance facilities shown on the plans shall be certified by the design professional through stamp and signature on the accepted plans. Sufficient calculations and supporting material to demonstrate such adequacy shall accompany the plans when submitted. Adequate provision shall be made for long-term maintenance of permanent erosion-control and sediment-control structures.
    5. **Inspection, Repair, and Maintenance.** Inspection, repair, and maintenance of all erosion and sediment control facilities are required during the rainy season (October 15th – May 1st), and for sediment cleanout and vegetation maintenance. Inspection, maintenance and repair of construction site BMPs

shall occur at least once per week, and prior to and immediately after storm events. During extended storm events, construction site BMPs shall be inspected at least once every 24 hours.

5.3.2.3 Technical Reports

Certain technical reports may be required as part of a grading permit application. The types of reports, the qualifications of the report preparer and the circumstances under which a report is required are discussed below:

A. **Geotechnical Report.** It is prepared under the direct supervision of, and sealed and signed by, a design professional and shall be submitted at the time of application for all project types as required by the CBC.

B. **Geologic Report.** It is prepared under the direct supervision of, and signed by, a Certified Engineering Geologist or qualified Professional Geologist and shall be submitted at the time of application if:
   1. Such a report is required by the approving authority issuing the permit, and
   2. The project is located in an area of known geologic hazards such as unstable slopes, collapsible soils, severe erosion, rockfall or seismically-induced ground failure.

   The Soil or Geologic Study Report shall conform to the requirements of the CBC.

C. **Drainage Report.** It is prepared by a design professional in conformance with the design criteria provided in the Drainage Manual and is required with all grading permit applications. All drainage reports shall be prepared under the direct supervision of, and signed and stamped, by a design professional in conformance with the guidelines and design criteria provided in the Drainage Manual. These reports shall contain, at a minimum, the following:
   1. A vicinity map showing the location of the site relative to known cultural features such as towns and roads,
   2. A topographic map of the site upon which the location of all watershed boundaries and watercourses are marked,
   3. Calculations that estimate the pre-project and post-project runoff, and
   4. Recommendations for placement and design of any necessary drainage facilities.

Exceptions
1. The requirement is waived for minor projects where a study is not required by another regulatory agency, or
2. The project involves development of a single family dwelling. (A drainage study may be required due to special circumstances or the requirements of another regulatory agency.)

5.3.2.4 Waiver of the Requirement for Design Professional Prepared Plans

The requirement that grading plans (with the exception of agricultural grading plans) submitted for County review be prepared, signed and stamped by a design professional may be waived if **all** of the following conditions are met:

A. The proposed grading would not endanger public health, safety or welfare,
B. Cuts and fills do not exceed a combined total of 500 cubic yards,
C. The grading does not involve an access road serving three or more existing or potential residences,
D. A fill intended to support structures is not proposed,

E. All proposed cuts or fills would be designed to avoid adverse affects on any adjacent structure or property,
F. The construction of drainage or sediment-control structures, culverts or facilities would not be required,
G. The alteration of an existing drainage course would not occur,
H. An unstable slope condition would not be created,
I. The grading would not affect the channelized flow of the 100-year storm event,
J. The plan is prepared by the property owner of record for the subject parcel as allowed under the California Business and Professions Code, Section 6744, and
K. The submitted plans meet all other requirements of the Design Manuals.

5.3.3 Grading Permit Processing Procedures

5.3.3.1 Review of Permit Applications

The design of proposed grading projects shall be reviewed for consistency with the *General Plan*, the Title 17 Zoning Ordinance, the CBC, conditions of approval from discretionary actions by the County, the requirements of Title 15.14, the Drainage Manual, this manual and other applicable regulations. Only grading projects found consistent with all applicable design standards, laws and regulations, and conditions of approval may be issued a grading permit.

5.3.3.2 County Review of Technical Reports

Any Engineering, Geotechnical or Geologic Study Report shall be subject to the review and acceptance of the approving authority issuing the permit. As part of the approving authority's review of the submitted report, supplemental reports and data may be required prior to report acceptance. Reports may be found inadequate for County use based on inaccurate description of the conditions on the project site, failure to address the technical issues identified by the County, failure to meet established standards of professional practice, the lack of clear professional recommendations, or the lack of an original signature and stamp affixed by the design professional responsible for the work. Recommendations included in reports shall be incorporated in the final plans and specifications.

5.3.3.3 Compliance with CEQA

The California Environmental Quality Act (CEQA) may require the preparation of environmental documents concerning a proposed grading project. In such event, the County may function as the lead agency or responsible agency. The applicant will be advised as to any additional information required with the permit application. The applicant shall be required to pay all costs associated with the preparation and processing of an environmental document. The department issuing the permit shall decide whether to prepare the document itself or retain a consultant(s) to prepare the document.

5.3.3.4 Standard Conditions of Approval

A. **Consistency with County Design Standards.** The proposed grading shall conform to the design standards established in the Design Manuals, including this manual.
B. **Follow-up to a Discretionary Approval.** Where a proposed grading project would implement a discretionary permit approval (i.e., Special Use Permit, subdivision of land, etc), no grading permit shall be issued prior to approval of the discretionary use by the approving authority.

C. Compliance with Terms of Approval. The permit shall be limited to work shown on the grading plans. In issuing a permit, the approving authority issuing the permit may impose any condition of approval deemed necessary to protect the health, safety and welfare of the public, to prevent the creation of a hazard to public or private property, and to assure proper completion of the grading, including but not limited to:

1. Mitigation of adverse environmental impacts disclosed in any environmental document,
2. Reconfiguration of any existing graded surface to comply with the standards of this manual,
3. Installation of fencing or other protective devices to avoid work site hazards or environmental damage,
4. Requirements for dust, erosion, sediment and noise control, hours of operation and season of work, weather conditions, sequence of work, access roads and haul routes,
5. Requirements for safeguarding watercourses from deposition of sediment or debris in quantities exceeding natural levels,
6. Requirements for safeguarding areas reserved for on-site sewage disposal,
7. Demonstration by the applicant, through adequate engineering or geologic analysis and report, that the site of the proposed grading activities is not subject to unstable slopes, substantial settlement, erosion, flooding or seismic hazards or that such hazards are adequately mitigated by the design recommendations included in the submitted report(s), and
8. Demonstration by the applicant of compliance with State or Federal regulations.

A Grading Permit issued by the approving authority shall not relieve the applicant of the responsibility for securing other permits or approvals as required by other County agencies or agencies of the State or Federal government.

D. Changed Conditions. Where conditions encountered in the grading operation deviate from that anticipated in the Geotechnical and Geologic Study Reports, or where such conditions warrant changes to the recommendations contained in the original studies, revised reports may be required.

E. Safety. Excavations shall not endanger life or property. Access to any temporary or permanent excavation that constitutes a potential safety hazard shall be restricted by fencing or other barrier as long as such hazard exists. Excavation safety measures shall conform to any applicable CAL-OSHA standards.

F. Setbacks. Grading and other development shall be set back from property boundaries, established easements, creeks or other water bodies, steep natural slopes and other resources as required by the *General Plan*, the Title 17 Zoning Ordinance, the conditions of approval of any applicable subdivision map or discretionary permit, the CBC and this manual. Setback distances may be increased based on a recommendation included in an acceptable Geotechnical or Geologic Report. Any request for a reduced setback would require similar documentation and would be reviewed for consistency with the *General Plan*, Title 17 Zoning Ordinance and other applicable regulations.

G. Protection of Levees. No person shall excavate or remove any material from, or otherwise alter, any levee required for river, creek, bay, or local drainage control, without prior consent of the approving authority responsible for the maintenance of the levee.

H. **Obstruction of Storm Waters.** Grading activities that obstruct, divert, impede or interfere with the natural flow of storm waters within man-made channels or natural watercourses are prohibited unless it is demonstrated that all of the following are true:
   1. The proposed activities will not cause flooding or exacerbate an existing flooding condition as documented in a County-accepted drainage report conforming to the requirements set forth in the Drainage Manual,
   2. The proposed activities would not result in severe or ongoing erosion, and
   3. The applicant is in compliance with applicable sections of the State of California Water Code, State of California Fish and Game Code, The National Clean Water Act, the SWMP, and other applicable local, State, and Federal laws.

5.3.3.5 Tahoe Basin Special Conditions of Approval

A. **General.** All grading projects shall conform to the rules and regulations of TRPA. (See Section 7.1 of this manual for contact and website information.)

B. **Grading Season.** Grading shall be prohibited during the period from October 15th through May 1st unless otherwise provided in this manual. The County requires complete winterization of any project by October 15th pursuant to TRPA Code of Ordinances, Section 64.2.

C. **Other Agencies.** All grading work shall conform to any restriction required by other Federal, State, or local agencies.

D. **Applicability.** Except for Section 15.14.140 Exemptions, the provisions of the Grading, Erosion and Sediment Control Ordinance, Chapter 15.14, shall apply to grading activities in the Tahoe Basin.

E. **Permit Waivers.** The requirement for a grading permit may be waived if the work complies with all of the following conditions:
   1. The excavation does not exceed five feet in vertical depth at its deepest point measured from the existing ground surface, there is not a reasonable possibility of interception of a water table, and the volume of earth moved does not exceed three cubic yards,
   2. The fill does not exceed three feet in vertical depth at its deepest point measured from the original ground surface and the fill material does not exceed three cubic yards per site, and
   3. Disturbance, injury, or removal of vegetation has been authorized by a TRPA project approval in accordance with TRPA Code of Ordinances, Section 65.2.

5.3.3.6 Grading Plans for Stockpiles

Plans submitted for a stockpile permit application must comply with the application requirements listed in this manual. The plan must also contain all of the following:

A. The estimated date the stockpile will be removed from the site. This date shall not exceed one year from the date of initial placement. An extension of time may be granted for good cause shown,

B. A prominent note stating that the final inspection shall not be complete until all of the stockpiled material has been removed from the site, or utilized as part of a permitted development project, and that all required permanent erosion control devices and materials are in place, and

C. A written statement signed by the landowner that acknowledges and accepts the following:

1. The landowner authorizes the placement, temporary storage and removal of earth materials on the subject property as specified in the approved grading plans,
2. The landowner is solely responsible for the stockpile and for compliance with the terms and conditions of approval included in any relevant permit, and
3. The person (named) submitting the permit application is acting as an agent of the landowner.

5.3.3.7 Modification of Approved Plans

A. Requests for modifications of an approved final plan shall be submitted to the approving authority for review.

B. All necessary geotechnical and geological information, and all design details shall accompany any proposed modification.

C. The proposed modification shall be consistent with any applicable subdivision map or use permit conditions of approval.

5.3.3.8 Water Impoundments

A. DSOD-Regulated. Water impoundments involving a dam greater than twenty-five feet in height or storage of more that fifty acre-feet of water (or other design thresholds currently adopted by the State) are under the jurisdiction of the State of California Department of Water Resources, Division of Safety of Dams (DSOD). The height of a dam shall be measured from the lowest elevation of the outside limit of the dam to the maximum possible water storage elevation (i.e. the spillway elevation). Such reservoirs require a grading permit issued by the County with engineering review and approval by DSOD. The grading permit can only be issued if the project is found in conformance with County regulations, including the *General Plan*.

B. Non-DSOD Regulated. Construction of any dam or obstruction to water flow shall require a grading permit pursuant to Ordinance Code, Section 15.14.130 and this manual. Design and construction standards for non-jurisdictional dams are established in the Drainage Manual. The construction of dams shall follow the current practices of the DSOD as set forth in the Guidelines for the Design and Construction of Small Embankment Dams.

5.3.4 Inspections and Construction Requirements

5.3.4.1 Inspections

A. Construction Schedule. When required, a project schedule shall be provided that includes, at a minimum, the dates for the following:

1. Commencement of work,
2. Start and finish of rough grading,
3. Completion of drainage facilities,
4. Completion of work in any watercourse,
5. Completion of erosion and sediment control facilities, and
6. Completion of hydro mulching and other drought-resistant landscaping. If rough grading is proposed between October 15th and May 1st, a more detailed schedule of grading activities and use of erosion and sediment control facilities may be required; Final schedule to be provided after the grading permit is issued prior to the beginning of construction.

B. Regular Inspections. The County may inspect any work done under the authority of a permit granted pursuant to the Grading Ordinance. No applicant shall be deemed to have complied with this Ordinance until a final inspection of the work has been completed by the County and it has been determined, in writing, that the work has been completed in accordance with all requirements and conditions of the permit. The applicant shall provide adequate access to the site for inspection during the performance of all grading work and for a minimum period of one year after the final inspection of all improvements.

C. Violation and Abatement Inspections. Pursuant to Section 5.3.4.1.D.1 of this Chapter, the approving authority issuing the permit may require site inspections to investigate an alleged violation of the Grading Ordinance, or inspections necessary to document the abatement of a verified violation of this Ordinance.

D. Special Inspections.

1. Criteria for Special Inspections. As a condition of any permit, or as part of the investigation or abatement of a violation of the Grading Ordinance, the approving authority issuing the permit, may require the applicant to provide periodic or continuous monitoring of the construction activities under the direction and responsibility of the design professional within their area of expertise and licensure. The applicant shall contract for such services and be responsible for the payment of all costs. Continuous or periodic observation and reporting by the design professional shall include, but not be limited to, the following situations:
   a. During the preparation of a site or the placement of fills which exceed three feet in depth on slopes which exceed 10 percent,
   b. Fill placement for vehicular ways shall be continuously inspected when fills exceed 10 feet in height,
   c. During the preparation of a site for the placement of any fill and during the placement of such fill which is intended to support any building or structure,
   d. During the installation of subsurface drainage facilities, and
   e. Construction of retaining wall; see Section 5.2.6 of this Chapter.

   The use of a licensed professional for inspections or observations shall not preclude additional inspections by representatives of the County.
2. Special Inspection Reports. Reports filed by the design professional regarding a Special Inspection shall state, in writing, a professional opinion based on personal knowledge that adequate inspection has been performed and the work accomplished during the period covered by the report has been completed in substantial accordance with the approved plans and specifications.

E. Progress Reports. When required, periodic progress reports shall be provided under the direction of the design professional in responsible charge that address the following:

1. Laboratory test results,
2. Slope stability,
3. Material placement,
4. Retaining wall installation,
5. Drainage facilities installation,
6. Utilities installation,
7. Compliance with special permit or plan requirements, and
8. Other technical issues.

F. **Storm Water Inspections.** Inspection and monitoring of construction BMPs is required to reduce or eliminate erosion and sediment or other pollutant discharge to storm drains and waterways.

G. **Final Technical Reports.** Upon completion of grading work, a final report(s) may be required that addresses geotechnical, geologic, drainage or engineering issues and includes, but is not limited to, the following:

1. A complete record of all field and laboratory tests including location and elevation of all field tests,
2. A professional opinion regarding slope stability, soil bearing capacity, and any other pertinent information,
3. Recommendations regarding foundation and roadway design, including soil bearing potential, and building restrictions or setbacks from the top or toe of slopes, and
4. A declaration of professional opinion by the design professional, in the format required by the approving authority, as to whether the work was done in substantial accordance with the recommendations contained in the accepted soil or geologic reports and in conformance with the approved plans and specifications, including but not limited to, line, grade and drainage design.

H. **As-built Plans.** When required, the applicant shall submit an "as-built" grading plan following completion of grading operations in an acceptable format.

5.3.4.2 Construction Site Requirements

A. **Protection of Existing Utilities.** The applicant shall take all reasonable measures to prevent or avoid damage to existing public utilities or services. The applicant shall be responsible for the cost of repair of any damage to facilities resulting from the grading activities performed under the authority of the permit.

B. **Protection of Adjacent Property.** The owner of record of the property upon which the grading permit is issued is responsible for any physical damage to adjacent property resulting from the grading activities. All persons shall take all reasonable measures to prevent or avoid damage to any adjoining public street, sidewalk, alley or other public or private property.

C. **Advance Notice.** The applicant shall construction-stake the site and notify the approving authority at least 48 hours prior to the start of work.

D. **Grading Limits.** Limits of grading shall be clearly defined and marked in the field to prevent damage by construction equipment. Wetlands and oak trees shall be protected from construction activity as described in Chapter 2 of this manual.

E. **Minimization of Exposed Area.** During the rainy season (October 15th – May 1st), the smallest practical area of erodible land shall be exposed at any one time during grading operations and the time of exposure shall be minimized.

F. **Storm Water, Erosion and Sediment Control.** The applicant shall fully comply with the requirements of the SWMP, Clean Water Act, the SWRCB Rules and Regulations, and other applicable orders and permits issued from time to time by the SWRCB. The applicant is responsible for the following during construction operations:

1. Implementation and maintenance of storm water and non-storm water BMPs to reduce or eliminate discharge of sediment or other pollutants to any watercourse, drainage system, or adjacent property,
2. Damage to watercourses and adjacent properties in the form of erosion, flooding, or deposition which may result from the permitted grading, and

3. Sediment deposition onto public or private vehicle ways.

Construction site BMPs shall be inspected by the applicnat weekly during the rainy season, and in advance of forecasted storm events. Following any storm event, BMPs shall be inspected for effectiveness and replaced and/or supplemented as necessary.

See Sections 5.2.2 and 5.3.2 of this Chapter for further information.

G. Approved Plans. One set of approved plans and permit shall be retained on the site and made available for use by the County inspector at all times during the work.

CHAPTER 6 – SURVEYING AND MAPPING (draft rev. ~~10/01/10~~ 02/14/11)

Sections:

6.1 General Summary

The County Surveyor's Office checks maps and supporting documents for compliance with Federal, State and local laws. Projects that are reviewed by the Surveyor's Office include all Record of Survey Maps, Parcel Maps, Final Maps, Lot Line Adjustments, Ministerial Certificates of Compliance, road names and addresses, and other discretionary or ministerial projects that affect boundary lines. These maps, exhibits, official documents, and descriptions, in most cases, must be prepared by a California Professional Land Surveyor or a California Registered Civil Engineer who is qualified to perform land surveying. Authority to review and approve falls within the provisions of Section 66410 of the Government Code of the State of California, The Subdivision Map Act (hereafter referred to as SMA); Section 8700 of the Business and Professions Code of the State of California, The Professional Land Surveyors Act (hereafter referred to as the LS Act) and Title 16 Subdivisions of the Ordinance Code (hereafter referred to as County Code).

For this Chapter:

A. "Lot" refers to a basic land division unit created by a "Final Map" and "parcel" refers to a basic land division unit created by a "Parcel Map", or created by written description without the benefit of any map.

B. To distinguish between the two different types of Tentative Maps, "Tentative Subdivision Map" and "Tentative Parcel Map" are used. "Tentative Parcel Map" typically refers to residential land divisions of four or fewer lots, and commercial subdivisions of any number of parcels. "Tentative Subdivision Map" typically refers to residential land divisions of five or more lots (see the Title 16 Subdivisions for further information).

County Surveyor services required for review, approval and recordation, shall be paid for by cost recovery fees collected from the applicant. See the current fee schedule at the County Surveyor's website. (See Chapter 7, Section 7.1 of this manual for contact and website information.)

6.2. Land Divisions

Under the provisions of the SMA and County Code, anyone subdividing land in El Dorado County is required to prepare a Parcel Map or a Final Map. The required map must show how the land is to be subdivided, and what public dedications are to be made as a result of the subdivision.

Section 66411 of the SMA requires local agencies to regulate and control the design of subdivisions. The process of subdividing land by map can be separated into two phases, the Tentative Map phase and the Parcel or Final Map phase. The Tentative Map phase is overseen by the Development Services Department (DSD) and establishes the conditions of approval. Once the Tentative Map is approved, the Parcel or Final Map can be submitted to the County Surveyor for review and approval. The Final Map phase is managed by DSD with the County Surveyor reviewing and approving the actual map. The Parcel Map phase is managed, reviewed and approved by the County Surveyor, and includes the actual filing of the Parcel Map with the County Recorder.

To provide uniformity and consistency, and to ensure that the notes and statements required on a map meet the provisions of the SMA, LS Act and County Code, a list of standard notes and statements for Parcel and Final Maps can be obtained from the County Surveyor's website.

6.2.1 Final Map

The Final Map must include, at a minimum, the following:

A. All of the technical requirements cited in the County Code and the SMA, such as size, format, content, basis of bearings and map title.

B. Applicable statements and certificates.

C. Be substantially the same as the approved Tentative Subdivision Map as to the number of units or lots, lot sizes, street alignment and right-of-way widths, property rights reservations, and dedication of any public easements or other dedications or conveyances.

D. Include the names of all streets, public and private, and all monumentation required by the SMA, LS Act, and County Code.

E. All conditions placed on the Tentative Subdivision Map must be met.

An applicant may elect to file a Final Map covering only a portion of the approved Tentative Subdivision Map. Such a submission shall be in compliance as the phase is approved by DSD. Each such Final Map shall be named and filed as a numerical unit of the approved Tentative Subdivision Map. All of the requirements for approval of a Final Map shall apply to the approval covering a portion of the Tentative Subdivision Map. A Final Map and the subdivision agreements required shall provide for the construction of the improvements as may be necessary to constitute a logical and orderly development of the whole subdivision by units.

6.2.1.1 Form and Contents

The Final Map shall be prepared by, or under the direction of, a California Professional Land Surveyor or California Registered Civil Engineer (who is authorized to perform land surveying), shall be based upon a survey, and shall conform to all of the following provisions:

A. **Materials.** The Final Map shall be legibly drawn, printed or reproduced by a process guaranteeing a permanent record in black India drawing ink on polyester drafting film with a thickness of four mil. Certificates, affidavits and acknowledgements may be legibly stamped or printed upon the map with black India drawing ink.

B. **Size.** The size of each sheet shall be 18 inches by 26 inches. A marginal line shall be drawn completely around each sheet leaving an entirely blank margin of one inch. The scale of the map shall be large enough to show all details clearly and enough sheets shall be used to accomplish this end. The particular number of the sheet and total number of sheets comprising the map shall be stated on each of the sheets, and its relation to each adjoining sheet shall be clearly shown.

C. **Survey and Math Data.** The Final Map shall show all survey and mathematical data necessary to:

1. Locate all monuments,
2. Locate and retrace any and all interior boundary lines appearing thereon including:
   a. Bearings and distances of straight lines,
   b. The radii and chord bearings,
   c. Chord distances of all curves, and
   d. Such information as may be necessary to determine the location of the centers of curves when the curves are non-tangent.

D. **Exterior Boundary.** The exterior boundary of the land included within the subdivision shall be indicated by a heavy-line border.

E. **Location.** The Final Map shall show the location of the subdivision, its relation to surrounding surveys, and the names of all adjacent subdivisions or adjacent ownership. The north arrow, scale, and basis of bearing shall be shown.

F. **Map Title.** The title of the Final Map shall be the name of the subdivision map as it appears on the approved Tentative Subdivision Map, unless changed with the approval of DSD. The title shall identify section, township, and range, and prior maps, if any.

G. **Map Number.** The Tentative Subdivision Map number and date of approval by the Board of Supervisors (Board) shall be clearly shown in the lower left hand corner.

H. **Easements Data.** The width and actual locations of all easements shall be clearly shown.

I. **Lots Data.** Each lot shall be numbered or lettered, showing the area in square feet to the nearest five feet or in acres to the nearest thousandths of an acre.

J. **Streets Data.** Each street width and name shall be shown.

K. **Monuments.** The location and type of all monuments shall be shown, including all monuments required to be set by the SMA and County Code. All existing monuments shall be shown.

L. The title, notes, legend, basis of bearing, references, and amendments shall be placed on each survey sheet. Any of the foregoing in this subsection may be deleted when found superfluous by the County Surveyor.

M. **Amending Maps.** Maps filed for the purpose of amending a previously recorded Final Map shall include in the title *"Amending Final Map"* and shall conspicuously include a list of all the approved amendments.

N. **Reversion Maps.** Maps filed for the purpose of showing land previously subdivided into numbered or lettered lots being reverted to acreage, shall include in the title "*Final Map for Reversion to Acreage*".

6.2.1.2 Certificates and Statements

The following certificates shall appear on the Final Map (see the County Surveyor's website for current SMA statements):

A. **Owner's Certificate.** The signed and acknowledged certificate of the owners of the land consenting to the preparation, offering for dedication to the County those lots and or easements designated upon the Final Map to be devoted to public purposes, if any, including the underlying fee, if required, and the recording of the Final Map.

B. **Surveyor's Statement** of the Professional Land Surveyor responsible for the survey that the map is in conformance with the SMA and local ordinance.

C. **County Surveyor's Statement that:**
   1. The map is substantially the same as the Tentative Map with any approved alterations thereof,
   2. The provisions of the Subdivision Map Act and any local ordinances have been satisfied, and
   3. The map is technically correct.

D. **DSD Director's Statement** that the map conforms to the approved Tentative Subdivision Map and that all conditions imposed upon the approval have been satisfied.

E. **County Engineer's Statement** that all improvements required have been completed, or the applicant has executed the necessary agreement and submitted the required bond or deposit to secure the completion of the required improvements.

F. **County Tax Collector's Statement** that there are no liens against any portion of the subdivision for unpaid State, County, city or local taxes, or special assessments.

G. **County Clerk's Statement** that the Board approved the map and accepted or rejected any lots or easements offered for dedication to public uses.

H. **County Recorder's Certificate** that the map is accepted for filing.

I. Where the Surveyor's Statement states that all of the monuments will be set on or before a specified later date, the applicant shall furnish to the County Surveyor a bond or cash deposit in an amount equal to the estimated cost of setting the monuments, guaranteeing payment.

6.2.1.3 Filing Process

A. When all of the certificates required by the SMA and County Code have been executed, except those of the County Clerk and County Recorder, the Final Map may be submitted for action to the Board.

B. Upon Final Map approval by the Board, the Final Map may be submitted to the County Clerk to be signed and stamped.

C. After the County Clerk has executed the Certificate of Approval of the Board, the Final Map may be submitted to the County Recorder for filing, by executing the "Recorder's Statement" on the map, provided that:
   1. The applicant has furnished to the County Recorder a guarantee of title certifying the names of all persons whose consent is necessary to pass clear title to the land, and
   2. All acknowledgements appear on the certificates consenting to the preparation of the map and offers of dedication.

6.2.1.4 Timely Filing

To obtain a "Timely Filing" of a Final Map, prior to the expiration date of a Tentative Subdivision Map, or any extension thereof, all items must be completed as set forth below:

A. The County Surveyor must have received the original Final Map with the signatures of all those having record title interest, the Surveyor of Record, and the Tax Collector.

B. The County Engineer must have received a subdivision improvement agreement and adequate surety executed by the Final Map applicant.

C. DSD must have received documentation demonstrating satisfaction of all applicable conditions of approval of the Tentative Subdivision Map.

6.2.2 Parcel Map

The Parcel Map must include, at a minimum, the following:

A. All of the technical requirements delineated in the County Code and the SMA, such as size, format, content, basis of bearings, and map title.

B. Applicable statements and certificates.

C. The same data contained in the approved Tentative Parcel Map, such as the number of units or parcels, street alignment and right-of-way width, property rights reservations, and dedication of any public easements or other dedications or conveyances.

D. The names of all streets, public and private, and all monumentation required by the SMA, LS Act, and the County Code.

6.2.2.1 Form and Contents

The Parcel Map shall be prepared by, or under the direction of, a California Professional Land Surveyor or California Registered Civil Engineer who is authorized to perform land surveying; and shall be based upon a field survey or compiled from recorded data; and shall conform to all of the following provisions:

A. Materials. The Parcel Map shall be legibly drawn, printed or reproduced by a process guaranteeing a permanent record in black India drawing ink on polyester drafting film with a thickness of four mil. Certificates, affidavits and acknowledgements may be legibly stamped or printed upon the map with black India drawing ink.

B. Size. The size of each sheet shall be 18 x 26 inches. A marginal line shall be drawn completely around each sheet leaving an entirely blank margin of one inch. The scale of the map shall be large enough to show all details clearly and enough sheets shall be used to accomplish this end. The particular number of the sheet and total number of sheets comprising the map shall be stated on each of the sheets, and its relation to each adjoining sheet shall be clearly shown.

C. Survey and Math Data. The Parcel Map shall show all survey and mathematical data necessary to:

1. Locate all monuments,
2. Locate and retrace any and all interior boundary lines appearing thereon including:
   a. Bearings and distances of straight lines,
   b. The radii and chord bearings,

c. Chord distances of all curves, and
d. Such information as may be necessary to determine the location of the centers of curves when the curves are non-tangent.

D. Exterior Boundary. The exterior boundary of the land included within the subdivision shall be indicated by a heavy-line border.

E. Location. The Parcel Map shall show the location of the subdivision, its relation to surrounding surveys, and the names of all adjacent subdivisions or adjacent ownership. The north arrow, scale, and basis of bearing shall be shown.

F. Map Title. The title of the Parcel Map shall be labeled as a Parcel Map in the heading and identify section, township, and range, and prior maps, if any.

G. Map Number. The Tentative Parcel Map number and date of approval by the approving authority shall be clearly shown in the lower left hand corner.

H. Easements Data. The width and actual locations of all easements shall be clearly shown.

I. Parcel Data. Each parcel shall be numbered or lettered showing the area, in square feet to the nearest five feet or in acres to the nearest thousandths of an acre.

J. Streets Data. Each street width and name shall be shown.

K. Monuments. The location and type of all monuments shall be shown, including all monuments required to be set by the SMA and County Code. All existing monuments shall be shown.

L. The title, notes, legend, basis of bearing, references, and amendments shall be placed on each survey sheet. Any of the foregoing in this subsection may be deleted when found superfluous by the County Surveyor.

6.2.2.2 Certificates and Statements

The following certificates shall appear on the Parcel Map (see the County Surveyor's website for current SMA statements):

A. Owner's Certificate, or a cross reference to the document recorded as the Owner's Certificate, signed and acknowledging that they have consented to the preparation, offering for dedication to the public those parcels and easements designated upon the Parcel Map to be devoted to public purposes, if any, and the recording of the Parcel Map.

B. Surveyor's Statement of the professional Land Surveyor responsible for the survey.

C. County Surveyor's Statement that the map is substantially the same as the Tentative Parcel Map with any approved alterations thereof, that the provisions of the SMA and County Code have been satisfied, that the map is technically correct, and acknowledgement of accepted or rejected parcels or easements offered for dedication to public uses.

D. County Recorder's Statement that the map is accepted for filing.

6.2.2.3 Filing Process

A. The County Surveyor may submit the Parcel Map to the County Recorder for filing after all agencies validate, by letter, that all conditions imposed by said agencies have been satisfied.

B. The County Recorder may accept the Parcel Map for filing by executing the "Recorder's Statement" on the map, provided the applicant has furnished to the County Recorder a guarantee of title certifying the names of all persons whose consent is

necessary to pass clear title to the land, and all acknowledgements thereto appear on the certificates consenting to the preparation of the map and offers of dedication.

6.2.3 Amending Maps and Corrections

The purpose of an Amending Final or Parcel Map (Amending Map) or Certificate of Correction is to correct an error (see Section 66469 of the SMA.), or to show changes in circumstances that make any or all of the conditions of the map no longer appropriate or necessary (see Section 66472.1 of the SMA).

After a Final or Parcel Map is filed with the County Recorder, it may be amended by a Certificate of Correction or an Amending Map where a finding is made by the approving authority to change the conditions of the map.

6.2.3.1 Form and Content

A. The Amending Map or, if applicable, a Certificate of Correction, shall be prepared by, or under the direction of, a California Professional Land Surveyor or a California Registered Civil Engineer who is authorized to perform land surveying services.

B. The Amending Map shall follow the standard form, content, and Certificates and Statements as outlined in Sections 6.2.1 and 6.2.2 of this Chapter.

C. The Certificate of Correction shall be in the County-approved "Certificate of Correction" format.

D. Upon the filing of the Amended Map or Certificate of Correction, the original map shall be deemed to have been conclusively so corrected and, thereafter, shall impart constructive notice of all such corrections in the same manner as though set forth upon the original map.

6.2.4 Mapping Standards

All Final Maps, Parcel Maps, and Record of Surveys shall conform to the requirements set forth in this Chapter of this manual, unless provided for in the current SMA and LS Act.

6.2.4.1 Mapping

A. Scale. The scale of the map shall be adequate to provide legibility.

B. Lettering Size. The minimum height of all lettering shall be 1/8 inch.

C. Multiple Sheets. When the map consists of more than two sheets, exclusive of the certificate sheet, a key map showing the relation of the sheets shall be placed on the first map sheet. The sheets shall be numbered beginning with the certificate sheets, then continuing with map sheets.

D. Dimensions. Dimension of lots or parcels shall be given as total dimensions, corner to corner, and shall be shown in feet and hundredths of a foot.

E. Monuments. The map shall show clearly what monuments or other evidence were found on the ground to determine the boundaries of the subdivision.

F. Bearing and Measurements. The bearing and length of every lot or parcel line, block line, and boundary line shall be shown. Bearing and lengths of chords, radii, arc length, and delta for all curves, as may be necessary to determine the location of the center of curves and tangent points, shall be shown. All radial lines shall be identified.

G. **Easements.** Final Maps and Parcel Maps shall show all easements to which the lots are subject. The easements must be clearly labeled by solid capital letters and identified, and if already of record, the record reference given. If any easement is not definitely located by record, a statement of such must appear on the map sheet. Easements shall be denoted by fine dashed lines. The width of the easement and the lengths and bearings of the lines thereof, and sufficient ties thereto, to definitely locate the easement with respect to the subdivision must be shown. If the easement is being dedicated by the map, it shall be properly referenced in the owner's certificate with the appropriate acknowledgement in the Board Clerk's or County Surveyor's Statement.

H. **Boundaries.** ~~Boundary lines of all political subdivisions adjacent to the subdivision shall be clearly designated and referenced.~~ Boundary lines of any County, City or State that directly adjoin or intersect the subdivision shall be clearly designated.

I. **Accuracy.** Map accuracy shall be such that any and all calculated closures shall be 1 in 10,000 or greater.

6.2.4.2 Surveying

A. **Basis of Bearings.** Each map shall contain a basis of bearings notation which includes the description and bearing of the line used as the basis and:

1. The record data of the map or document from which it was obtained, or
2. A statement that says bearing is based on either a solar, polaris or GPS observation.

The following are acceptable basis of bearings:

1. Recorded maps,
2. Astronomical observation,
3. California Coordinate System. Maps with this basis of bearing shall also include a control scheme through which the coordinates were determined from points of known coordinates, and
4. Government records and other records as approved by the County Surveyor.

Note: If any map for any proposed land development project may affect the County's right-of-way, please refer to Chapter 4 of this manual. The applicant may be required to use existing survey information and/or Department of Transportation's (DOT) basis of bearings.

B. **Accuracy.** All field survey accuracy shall be in compliance with acceptable surveying practices.

C. **Monuments.** All lot or parcel corners shall be monumented in subdivisions and include permanent horizontal control monuments sufficient to re-establish the subdivision control at the direction of the County Surveyor.

6.2.5 Road Naming

In many cases a Final or Parcel Map will require newly created access roads to be named. The road naming process is managed by the County Surveyor and includes approvals by the fire protection district having jurisdiction and the U.S. Post Office responsible for mail delivery to

the area. The process description and the forms needed may be obtained from the County Surveyor's website.

6.2.5.1 Form and Contents

The Road Name Petition must be filled out completely and the applicant must obtain all the required signatures. The petition, a copy of the Assessors Map, and fee must be submitted to the County Surveyor.

6.2.5.2 Process

The road names must follow the County's policy on road naming. The approved road name will appear on the Final or Parcel Map. The applicant shall, within 30 days of notification, install a permanent sign as shown on the County Surveyor's website.

6.3 Lot Line Adjustments and Mergers

6.3.1 Lot Line Adjustments (See Chapter 16.53, Lot Line Adjustments, of Title 16 Subdivisions.)

The purpose of a Lot Line Adjustment is to permit minor changes in boundary or property lines between parcels without requiring the entire subdivision map process. A Lot Line Adjustment:

A. Is limited to four or less adjoining parcels,

B. Results when land taken from one parcel is added to an adjacent parcel, and

C. Does not create a greater number of parcels.

A Lot Line Adjustment shall not be permitted without the approval of DSD, Tax Collector and County Surveyor.

6.3.1.1 Form and Contents

The Lot Line Adjustment descriptions and applicable map shall be prepared by, or under the direction of, a California Professional Land Surveyor or California Registered Civil Engineer who is authorized to perform land surveying services.

A Lot Line Adjustment shall be reflected in a deed and a Record of Survey shall be completed ~~as~~ when required by Section 8762 of the California Business and Professions Code, unless the new boundary line appears on a Final Map or Parcel Map.

6.3.1.2 Certificates and Statements

The Lot Line Adjustment descriptions and applicable map shall follow the standard form, content, Certificates and Statements as outlined in Section 6.2.2 of this Chapter.

6.3.1.3 Filing Process

Real property taxes must be current on all parcels involved in the proposed Lot Line Adjustment and all record title interest holders must consent to the adjustments.

6.3.2 Parcel Merger

The purpose of a Parcel Merger is to combine adjoining parcels into one parcel. A Parcel Merger shall not be permitted without the approval of DSD, Tax Collector and County Surveyor.

6.3.2.1 Form and Content

The Parcel Merger descriptions and certificate or map shall be prepared by, or under the direction of, a California Professional Land Surveyor or California Registered Civil Engineer who is authorized to perform land surveying services.

A Parcel Merger shall be reflected in a Certificate of Merger document and a Record of Survey where required by Section 8762 of the California Business and Professions Code.

Exception
A Certificate of Merger is not required if the new parcel merger is on a Final Map or Parcel Map.

6.3.2.2 Certificates and Statements

The Parcel Merger certificate shall be in the County-approved "Certificate of Merge" format, or the applicable map shall follow the standard form, content, Certificates and Statements as outlined in Section 6.2.2 of this Chapter.

6.3.2.3 Filing Process

Real property taxes must be current on all parcels involved in the proposed Parcel Merger and all record title interest holders must consent to the merger.

6.4 Other

The County Surveyor is responsible for a variety of other functions pertaining to development. Some of those functions are listed in the subsections below.

6.4.1 Road Naming of Existing Roads

In many cases, a building permit will require existing unnamed roads to be named. The road naming process is managed by the County Surveyor and includes approvals by the fire protection district having jurisdiction, the U.S. Post Office providing mail delivery to the area, and a large percentage of the property owners along the road being named. The process description and forms needed are available on the County Surveyor website.

6.4.1.1 Form and Contents

The Road Name Petition must be filled out completely and the applicant must obtain all the required signatures. The petition, a copy of the Assessors Map, and fee must be submitted to the County Surveyor.

6.4.1.2 Process

The road names shall follow the County's Policy on road naming. The applicant shall, within 30 days of notification, install a permanent sign meeting the standards as shown on the County Surveyor website.

6.4.2 Addressing

In many cases a building permit will require an address. The address numbering process is managed by the County Surveyor and includes approvals by the local Post Office and the fire protection district having jurisdiction. The process is described on the County Surveyor website.

6.4.2.1 Form and Contents

The address will be determined from the DSD-approved site plan.

6.4.3 Certificates of Compliance

In some cases a building permit or other development will require a Certificate of Compliance. Although the Certificate of Compliance process is managed by the County Surveyor, it may require the involvement of DSD to complete. The process description and forms can be obtained from the County Surveyor website. See also the Certificates of Compliance Ordinance, Section 16.76 of the County Code.

6.4.3.1 Form and Contents

The Certificate of Compliance application must be filled out completely and all supporting data attached.

6.4.3.2 Process

As of March 4, 1972, the SMA required that new parcels of land could only be created lawfully by recording a Parcel Map or a Final Map. Parcels created in violation of these requirements may not be eligible to obtain building or development permits. The Certificate of Compliance application process can be used to make these unlawfully created parcels legal parcels.

There are three major categories of Certificate of Compliance applications:

A. The Certificate of Compliance is processed by DSD, which may require a public hearing and compliance with applicable development standards (see Chapter 2 of this manual).

B. The Certificate of Compliance is processed by the County Surveyor without a public hearing and is Unconditional under the following rules:
   1. The parcel is one of less than five parcels created by the same owner from the original parcel prior to March 4, 1972, or
   2. The parcel is the result of a division which created parcels of 40 acres or larger, or is not less than a quarter of a quarter section, created prior to March 4, 1972, or
   3. The parcel is a Final or Parcel Map remainder created prior to January 1, 1980, or
   4. The parcel was created in violation of the SMA or local ordinance and subsequently issued any permit or grant of approval for development.

C. The Certificate of Compliance is processed by the County Surveyor without a public hearing and is Conditional under the following rules:
   1. The parcel was one of five or more parcels created by separate ownership transfer of a deed, or similar document, by the same owner from the original

parcel prior to March 4, 1972, and the parcel appears on the 1972 tax roll as a separate parcel, or

2. The parcel was created by a gift deed or grant deed with zero transfer tax between the dates of March 4, 1972 and October 10, 1983, where fewer than five parcels were created by the same owner from the original parcel, or
3. The parcel was the result of a division which created parcels 40 acres or larger, or not less than a quarter of a quarter section after March 4, 1972 and prior to January 7, 1992, and fewer than five parcels were created by the same owner from the original parcel.

CHAPTER 7 – ADDITIONAL RESOURCES (draft rev. 10/01/10)

Sections:

7.1 Contact Information

El Dorado County

Department	Phone Number	Website
El Dorado County		www.edcgov.us
Agriculture Department	(530) 621-5520	www.edcgov.us/ag
Air Quality Management District	(530) 621-6662	www.edcgov.us/emd/apcd/index.html
Board of Supervisors	(530) 621-5390	www.edcgov.us/bos/index.html
County Counsel	(530) 621-5770	www.edcgov.us/counsel.html
Department of Transportation	(530) 621-5900	www.edcgov.us/DOT/index.html
Development Services Department, Building	(530) 621-5775	www.edcgov.us/building/index.asp
Development Services Department, Planning	(530) 621-5355	www.edcgov.us/Planning/index.asp
Economic Development	(530) 621-5595	www.edcgov.us/economic
Environmental Management Department	(530) 621-5300	www.edcgov.us/emd
Planning Commission (Contact Planning Services)	(530) 621-5355	www.edcgov.us/Planning/PC.html
Surveyor's Office	(530) 621-5440	www.edcgov.us/surveyor

Fire Protection Districts

District	Phone Number	Website
California Department of Forestry and Protection (CAL FIRE)	(530) 644-2345	www.fire.ca.gov
Cameron Park	(530) 672-7336	www.cameronpark.org/fire.html
Diamond Springs-El Dorado	(530) 626-3190	www.diamondfire.org
El Dorado County	(530) 644-9630	
El Dorado Hills	(916) 933-6623	www.edhfire.com
Garden Valley	(530) 333-1240	
Georgetown	(530) 333-4111	www.georgetownfiredepartment.com
Latrobe	(530) 677-6366	
Lake Valley	(530)577-3737	
Meeks Bay	(530)525-7548	www.meeksbayfire.com
Mosquito	(530)626-9017	
Pioneer	(530)620-4444	
Rescue	(530)677-1868	www.rescuefiredepartment.org

Other Agencies, Companies

Agency/Company	Phone Number	Website
AT&T	(530) 888-2031	
California Department of Public Health, Division of Drinking Water and Environmental Management	(916) 449-5600	www.cdph.ca.gov
California Department of Transportation (Caltrans)	(916) 654-5266	www.dot.ca.gov
California Department of Fish and Game		www.dfg.ca.gov
California Governor's Office of Planning and Research (OPR)		www.opr.ca.gov
California Stormwater Quality Association		www.casqa.org
California Water Quality Control Board, Central Valley	(916) 464-3291	www.waterboards.ca.gov/ centralvalley/business_help
Cameron Park Community Services District	(530) 677-2231	www.cameronpark.org
City of Placerville	(530) 642-5200	www.ci.placerville.ca.us
City of South Lake Tahoe	(530) 542-6000	www.ci.south.lake.tahoe.ca.us
Comcast		
El Dorado County Transit Authority		www.eldoradotransit.com
El Dorado County Transportation Commission	(530) 642-5260	www.edctc.org
El Dorado Hills Community Services District	(916) 933-6624	www.edhcsd.org
El Dorado Irrigation District	(530) 622-4513	www.eid.org
EDC Resource Conservation District	(530) 295-5630	www.eldoradorcd.org
El Dorado LAFCO	(530) 295-2707	www.co.el-dorado.ca.us/lafco
Georgetown Divide Public Utilities District	(530) 333-4356	www.gd-pud.org
Georgetown RCD	(530) 295-5630	www.eldoradorcd.org
Lahontan Regional Water Quality Control Board (RWQCB)		www.waterboards.ca.gov/lahontan
National Geodetic Survey		www.ngs.noaa.gov
Office of Planning and Research		www.opr.ca.gov
Pacific Gas & Electric (PG&E)	(530) 621-7265	www.pge.com/index.html
Surveyors, Architects, Geologists, and Engineers (SAGE)		www.sagesite.org
Sierra Pacific	(800) 824-8856	www.sierrapacific.com
South Tahoe PUD	(530) 544-6474	www.stpud.us
Tahoe RCD	(530) 543-1501	www.tahoercd.org
Tahoe Regional Planning Agency (TRPA)	(775) 588-4547	www.trpa.org
US Army Corps of Engineers		www.usace.army.mil

7.2 Abbreviations/References

AASHTO	American Association of State Highway and Transportation Officials
ADT/AADT	Average Daily Traffic/Average Annual Daily Traffic
ADA	Americans with Disabilities Act (Federal)
AHJ	Agency Having Jurisdiction (California Fire Code)
AOE	Summary Abandonment of Easements
APN	Assessor's Parcel Number
APWA	American Public Works Association
ASTM	American Society for Testing and Materials
BLA	Boundary Line Adjustment
BMP	Best Management Practice
CAL FIRE	California Department of Forestry and Fire Protection (also "CDF")
Cal/OSHA	California Department of Industrial Relations
California Fire Code	(Reference California Building Code)
California Fire Safe Regulations	(Reference California Government Code Section 1270)
Caltrans	California Department of Transportation
CBC	California Building Code
CC&Rs	Covenants, Conditions and Restrictions
CCR	California Code of Regulations
CD	Compact Disc
CDF	California Department of Forestry and Fire Protection (also "CAL FIRE")
CEQA	California Environmental Quality Act
CFC	California Fire Code
CFR	Code of Federal Regulations
CIP	Capital Improvement Program
CNEL	Community Noise Equivalent Level
CSD	Community Services District (Reference California Government Code Section 61000 et seq.)
CTC	California Transportation Commission
dB	Decibel
dBA	The "A-weighted" scale for measuring sound in decibels
DSD	Development Services Department
DSOD	California Department of Water Resources, Division of Safety of Dams
DOT	El Dorado County Department of Transportation
EDC	El Dorado County
EDCCWPP	El Dorado County Community Wildfire Protection Plan
EDCTA	El Dorado County Transit Authority
EDCTC	El Dorado County Transportation Commission
EFFHR	Emergency Fuel Fire Hazard Reduction
EID	El Dorado Irrigation District
EIR	Environmental Impact Report
EMD	Environmental Management Department
FAA	Federal Aviation Administration
FD	Fire Department; often a Fire Protection District
FEMA	Federal Emergency Management Agency

FHSZ	Fire Hazard Severity Zone
FHWA	Federal Highway Administration
FIL	Facilities Improvement Letter
FIRM	Flood Insurance Rate Maps (Federal)
FPD	Fire Protection District
GDPUD	Georgetown Divide Public Utility District
GPS	Global Positioning System
HDM	Highway Design Manual
HOA	Homeowner's Association (Reference California Civil Code Section 1351)
IBC	International Building Code
ICBO/ICC	International Conference of Building Officials/International Code Council
INRMP	Integrated Natural Resources Management Plan (Reference General Plan Policy 7.4.2.8)
L_{dn}	Equivalent Day/Night Sound Level
L_{eq}	Equivalent Sound Level
LAFCO	Local Agency Formation Commission (Reference California Government Code Section 56000)
LDM	Land Development Manual
LLD	Lighting and Landscaping District
LOS	Level of Service
LRA	Local Responsibility Area (regarding Fire Protection); Cities of Placerville and South Lake Tahoe are LRAs
MPH	Miles Per Hour
MUTCD	Manual on Uniform Traffic Control Devices (State)
ND	Negative Declaration or Neg Dec
NEPA	National Environmental Policy Act
NFPA	National Fire Protection Association
NHS	National Highway System (Federal)
NPDES	National Pollutant Discharge Elimination System
NST	National Standard Thread
NWI	National Wetlands Inventory map
OES	El Dorado County Office of Emergency Services
OPR	Office of Planning and Research (State)
PD	Planned Development
PG&E	Pacific Gas & Electric
PL	Platted Lands
PMIA	Parcel Map Improvement Agreement
PSF	Pounds per Square Foot
PSI	Pounds per Square Inch
PUC	Public Utilities Commission (State)
RCD	Resource Conservation District (Reference Division of the California Public Resources Code)
RIA	Road Improvement Agreement
RPF	Registered Professional Forester
ROW	Right of Way
R/W	Right of Way

RWQCB	Regional Water Quality Control Board (State)
SACOG	Sacramento Area Council of Governments
SD	Structure Design
SIA	Subdivision Improvement Agreement
SP	El Dorado County Standard Plans
SPE	Same Practical Effect
SRA	State Responsibility Area
SWMP	Storm Water Management Plan
Surety	(Reference California Civil Code Section 2787 et seq.)
TAC	Technical Advisory Committee
TI	Traffic Index
TIA	Traffic Impact Analysis
TIFF	Tagged Image File Format
TIM	Traffic Impact Mitigation
TRPA	Tahoe Regional Planning Agency
UPC	Uniform Plumbing Code
USA	Underground Service Alert
USFS	United States Forest Service - In El Dorado County this refers either to the El-Dorado National Forest or to the Lake Tahoe Management Unit
USGS	United States Geological Survey
WUI	Wildland Urban Interface
ZA	Zoning Administrator
Zone of Benefit	(Reference California Government Code Sections 25211 et seq. and its predecessor Section 25210 et seq.)