



PLACER COUNTY ENGINEERING AND SURVEYING DIVISION

AUBURN OFFICE
3091 County Center Dr, Auburn, CA 95603
530-745-3000 / FAX 530-745-7589
Website: www.placer.ca.gov

TAHOE OFFICE
775 North Lake Blvd., Tahoe City, CA 96145
PO Box 1909, Tahoe City, CA 96145
530-581-6227 / FAX 530-581-6204

GRADING PERMIT APPLICATION

Grading in Placer County is subject to Article 15.48, Grading, Erosion and Sediment Control Ordinance.

To obtain a Grading Permit, please follow these steps:

1. Fill out the Grading Permit Questionnaire and Exemption Verification Form.
2. Provide two (2) sets of grading plans (one for ESD and one for Planning Services).
3. Grading plans shall provide the following information: Sufficient topographical information for ESD review; include spot elevations, slopes, the limits of grading, location of all existing and proposed structures, septic systems, fences, and property lines; show all features and directions of flow before and after the grading project; show appropriate erosion control Best Management Practices (BMPs); and show area of vegetation removal. The drawing should be at a minimum scale of 1" = 40' or larger (i.e., 1" = 30', 1" = 20', 1" = 10', etc.) for all required information to be easily reviewed. All required information shall be provided for a minimum of 100' beyond the area of grading even when this area extends into the adjacent property. ****Show erosion control plan.****
4. Engineer required grading plans shall be provided when cuts and fills involve a combined total of 1,500 cubic yards of material, where depth of fill exceeds 10 feet, for an access road serving five or more existing or potential residences, for construction of a retaining wall equal to or greater than 4 feet in height, for construction of a private vehicular bridge, or where otherwise required in Article 15.48.310. Requirements for engineered grading plans are listed in Article 15.48.320. ***If your project has a retaining wall over 4 feet in height, two sets of Structural Engineering calculations signed and stamped by a licensed engineer are required with the engineered grading plans.***
5. Submit the Grading Permit Questionnaire, Exemption Verification Form, and grading plans (plus structural engineering calculations and drainage report, if applicable) to the Front Counter at the Community Development Resource Agency, Auburn or Tahoe office location as identified above, with the current application fee for the cost of processing, evaluation, and inspection.
6. The grading plans will be preliminarily reviewed to determine if they are adequate for environmental review and issuance of the Grading Permit. If the plans are adequate, the application package will be routed to the Planning Services Division for completion of the environmental review process. If it is determined that the grading project is categorically exempt from the provisions of the California Environmental Quality Act (CEQA), the application packet will be returned to the ESD for further review and processing. You will be contacted directly by Planning Services if the project is determined not to be categorically exempt.
7. For Grading Permit requests to do grading work east of the Sierra Crest between October 15th and May 1st, additional requirements may apply depending on the rules/restrictions of other regulatory agencies. Please contact the Tahoe office for specific requirements.
8. A letter of approval from the Tahoe Regional Planning Agency (TRPA), in addition to a Grading Permit from the CDRA, may be required for any grading on land that is within the Tahoe Basin, but which does not have an approved Building Permit.

GRADING PERMIT QUESTIONNAIRE

Permit #: _____

Date: _____

Property Owner(s): _____ Telephone: _____

Property Owner(s) Mailing Address: _____

Agent Name: _____ Telephone: _____ Email: _____

Project Location/Description: _____

Building Permit #: _____ APN: _____ Tahoe Basin? Y N

Type of Project (i.e., residential, pond, retaining wall, MUP, VAA, etc.) _____

List any existing entitlements or permits on this parcel: _____

YES NO

<input type="checkbox"/>	<input type="checkbox"/>	1.	Are you placing or removing (or in combination) a total of 250 cubic yards or more of material? If project located in Tahoe Basin – Is the total material more than 3 cubic yards or area of disturbance greater than 200 square feet?
<input type="checkbox"/>	<input type="checkbox"/>	2.	Are you adjacent to a stream, waterway, canal, sewage disposal system, in a flood plain, or building a private vehicular bridge?
<input type="checkbox"/>	<input type="checkbox"/>	3.	Do you have a retaining wall(s), 4 feet or higher, as measured from the bottom of the footing? Or a surcharge, if less than 4 feet high?
<input type="checkbox"/>	<input type="checkbox"/>	4.	Are you going to have cut or fill depths on the property greater than 4 feet? If project located in Tahoe Basin – Is the fill depth greater than 3 feet?
<input type="checkbox"/>	<input type="checkbox"/>	5.	Are you going to remove vegetation on 10,000 square feet or more on slopes of 10% or greater; or 1 acre or more on slopes less than 10%? If project located in Tahoe Basin – Is clearing of vegetation more than 1,000 square feet of area?
<input type="checkbox"/>	<input type="checkbox"/>	6.	Does this or adjacent property have drainage problems?
<input type="checkbox"/>	<input type="checkbox"/>	7.	Is any proposed work within 2 feet of the adjacent property line? Note: Maximum slopes are 2 to 1 (two feet of run to one foot of rise).
<input type="checkbox"/>	<input type="checkbox"/>	8.	Will your work affect any public facilities such as County roads, canals, or other? Show any utility poles, lines, canals, etc. in detail.
<input type="checkbox"/>	<input type="checkbox"/>	9.	Will the grading create unstable or erodible slopes?
<input type="checkbox"/>	<input type="checkbox"/>	10.	Has the utility company been contacted to mark underground utilities?
<input type="checkbox"/>	<input type="checkbox"/>	11.	Is septic or well present on this property? If yes, please see Environmental Health for sign-off.

NOTES:

1. Construction activity over 1 acre requires evidence of a State-issued Waste Discharge Identification (WDID) number under the State NPDES General Construction Permit.
2. If the property is served by septic and/or well, there may be an EHS field review and fee.
3. Any administrative decisions or requirements in regard to a Grading Permit may be appealed, within 15 calendar days, to the Placer County Planning Commission, 3091 County Center Drive, Auburn, CA 95603.
4. If you have questions regarding grading plans and/or the permit application process, please call:
 Auburn office: Engineering and Surveying Department (530) 745-7518, Sarah Gillmore
 Planning Services Division (530) 745-3110
 Tahoe office: Engineering and Surveying Department (530) 581-6226, Andy Deinken
 Planning Services Division (530) 581-6280

Owner/Agent Signature: _____ Date: _____



PLACER COUNTY PLANNING SERVICES DIVISION

AUBURN OFFICE
3091 County Center Dr, Auburn, CA 95603
530-745-3000/FAX 530-745-3080
Website : www.placer.ca.gov
E-mail : planning@placer.ca.gov

TAHOE OFFICE
775 North Lake Blvd., Tahoe City, CA 96146
PO Box 1909, Tahoe City, CA 96145
530-581-6280/FAX 530-581-6282

EXEMPTION VERIFICATION

Fee \$ _____ Receipt # _____ Accepted by _____ Date Received: _____ Permit #: _____

--TO BE COMPLETED BY APPLICANT--

Assessor's Parcel Number(s) _____

Property Owner _____

Mailing Address _____ City _____ State _____

Phone _____ E-mail address _____

Project Location -- Be Specific _____

Proposed Project _____

	YES	NO
1. Are any trees located on the property within 50' of any proposed grading? (if yes, show all tree locations and their driplines within 50' of any grading activity)	_____	_____
2. Is the project within a floodplain?	_____	_____
3. Are any archaeological, cultural, or historical sites present?	_____	_____
4. Are any wetlands, riparian areas, or vernal pools present onsite?	_____	_____
5. Are any rare, threatened, or endangered species present onsite?	_____	_____
6. Is the project within an overflight zone of any airport?	_____	_____
7. Can the project impact, or be impacted by, either landfill operations, or sewage disposal facilities?	_____	_____
8. Is the project within the Tahoe Basin?	_____	_____
9. Is there any grading associated with this project?	_____	_____
10. Is there a significant amount (10,000 sq. ft. or more) of impervious surface (paving, roof, sidewalk, etc.) proposed?	_____	_____
11. Is there a potential for increased traffic?	_____	_____

Signature of individual completing this form _____

Printed name and telephone number _____

--TO BE COMPLETED BY REVIEWER--

Categorical Exemption Class and Number _____

Project Planner _____

Field Verification Date _____

Field Planner _____

Name

Title

PART 4. PLANS AND SPECIFICATIONS
(Excerpt From Placer County Grading Ordinance)

- 15.48.300 Application--Plans.
- A. Each application for a grading permit shall include the following:
1. A completed application form;
 2. Two complete sets of grading plans;
 3. Profiles, cross sections, and specifications as required;
 4. A complete drainage report as required by the community development resource agency;
 5. The application fee as determined by the board of supervisors.
 6. Where applicable, evidence of coverage, or application for coverage, under an NPDES General Construction Permit.
- B. The plans and other documents will be reviewed by the community development resource agency. The applicant and/or project engineer will be notified of any necessary changes to the plans. When the plans and other documents have been approved by the community development resource agency, a grading permit will be issued for the project. All work must be done in strict conformance with the approved plans and documents. The approved plans shall not be changed or altered except in accordance with the provisions of this article. (Ord. 5373-B (part), 2005; Ord. 5056-B (part), 2000)
- 15.48.310 Grading plans--Engineer required.
- A. All plans and specifications shall be prepared and signed by a civil engineer except that the community development resource agency may waive this requirement if the proposed grading does not:
1. Endanger the public health, safety and welfare;
 2. Require cuts and fills involving a combined total of one thousand five hundred (1,500) cubic yards of dirt or more, or where depth of fill exceeds ten (10) feet;
 3. Include an access road serving five or more existing or potential residences;
 4. Require a cut or fill that is situated so as to cause unduly increased soil pressure or reduce earth support upon adjacent structure or property;
 5. Include the construction of any drainage or sediment control structures, culverts, or facilities or substantial alteration of any existing drainage course;
 6. Include the creation or aggravation of an unstable slope condition;
 7. Require construction of any retaining wall over four feet in height;
 8. Include the construction of a vehicular bridge. (Ord. 5373-B (part), 2005; Ord. 5056-B (part), 2000)
- 15.48.320 Requirements for engineered grading plans.
- Grading plans and specifications shall be prepared and signed by a civil engineer, as provided herein.
- A. The plans shall include the following:
1. All plans shall be on twenty-four (24) inch by thirty-six (36) inch sheets unless otherwise approved, and shall be drawn at a scale no less than one inch equals one hundred (100) feet;

2. A title block. Plans shall be entitled "grading plan" and state the purpose of the proposed grading and the name of the engineer or firm by whom this plan is prepared, owner's name and address, and site address;
3. A vicinity sketch (not at map scale) indicating the location of the site relative to the principal roads, lakes and watercourses in the area;
4. North arrow and scale;
5. A site plan indicating the extent of the work and any proposed divisions of land;
6. The complete site boundaries and locations of any easements and rights-of-way traversing or adjacent to the property;
7. The location of all existing or proposed roads, buildings, wells, pipelines, watercourses, septic systems or areas reserved for on-site sewage disposal, and any other structures, facilities, and features of the site, as well as the location of all improvements on lots within fifty (50) feet of the proposed work;
8. Location and nature of known or suspected soil or geologic hazard areas, including but not limited to serpentine rock areas, landslides, etc.;
9. Accurate contour lines of the existing terrain and proposed finished grade at intervals not greater than five feet, or spot elevations twenty-five (25) feet on center showing all topographic features and drainage patterns throughout the area where the proposed grading is to occur relative to a bench mark established on site. The contour lines/spot elevations shall be extended to a minimum of fifty (50) feet beyond the affected area, and further, if needed, to define intercepted drainage, and shall be extended a minimum of one hundred (100) feet outside of any future road right-of-way;
10. Approximate location of cut and fill lines extent and finished slopes of all proposed grading and the limits of grading for all proposed grading work, including borrow and stockpile areas;
11. Location, width, direction of flow and approximate location of any watercourses including tops and toes of banks;
12. Approximate boundaries of any areas with histories of flooding;
13. Cross sections, profiles, elevations, dimensions, and construction details based on accurate field data as may be required after initial review of plans;
14. Construction details for roads, 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 may be required after initial review of plans;
15. Proposed provisions for storm drainage control and any existing or proposed flood control facilities or septic tank disposal fields or areas reserved for on-site sewage disposal near the grading;
16. A detailed erosion and sediment control plan including specific locations, construction details, and supporting calculations for temporary and permanent sediment control structures and facilities;
17. A revegetation plan, including temporary erosion control plantings, permanent slope plantings, replacement of temporary groundcover, and irrigation facilities.

B. Additional supporting information which may be required includes, but is not necessarily limited to:

1. An estimate of the quantities of excavation and fill;
2. The location of any borrow site or location for disposal of surplus material;
3. A projected schedule of operations, including, as a minimum, the dates of:
 - a. Commencement of work;
 - b. Start and finish of rough grading;
 - c. Completion of drainage facilities;
 - d. Completion of work in any watercourse;

- e. Completion of erosion and sediment control facilities;
 - f. Completion of hydromulching and other 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;
4. Itemized cost estimate of the proposed grading and related work;
 5. A complete drainage study in conformance with the Placer County flood control and water conservation district's stormwater management manual (latest edition);
 6. Geotechnical investigation report and recommendations addressing the proposed work. (Ord. 5056-B (part), 2000)

NOTICE TO ALL BUILDING CONTRACTORS

PLACER COUNTY GRADING ORDINANCE, SECTION 15.48.070 EXEMPTIONS STATES:

“Unless in conflict with provisions of adopted general and/or specific plans, or provisions applicable to the Tahoe Basin as described in Section 15.48.120, the following grading may be done without obtaining a permit. Exemption from the requirement of a permit shall not be deemed permission to violate any provision of this article.”

SECTION 15.48.040 GRADING, STATES:

“No person shall do or permit to be done any grading in such a manner that quantities of dirt, soil, rock, debris or other material substantially in excess of natural levels are washed, eroded or otherwise moved from the site, except as specifically provided for by a permit. In no event shall grading activities cause or contribute to the violation of provisions of any applicable NPDES stormwater discharge permit. [Ord. 5056-B (part), 2000]”

A major problem that exists with building construction is the failure to prevent major erosion.

You are responsible to place appropriate erosion control measures when inclement weather is imminent and maintain them until permanent facilities are in place. For guidance on selecting site-specific erosion control BMPs and proper installation techniques, DPW recommends the California Stormwater Quality Association Stormwater Best Management Practice (BMP) Handbook for construction. (www.cabmphandbooks.com). The selected BMPs should reduce pollutant loading in the project's runoff to maximum extent practicable. Failure to implement erosion control BMPs will result in a **STOP WORK NOTICE** being posted until the violation is satisfactorily resolved.

NOTICE TO CONSTRUCTION PERMITEES CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD STORMWATER PERMIT REQUIREMENTS

Background

Stormwater discharges associated with construction activity are a potentially significant source of pollutants. The most common pollutant associated with construction is sediment. Sediment and other construction-related wastes can degrade water quality in creeks, rivers, lakes and other water bodies. In 1992, the State Water Resources Control Board adopted a statewide General Permit for all stormwater discharges associated with construction activity that disturbs five or more acres of land. The General permit is intended to ensure that construction activity does not impact water quality.

Modifications have been made to the General Permit and became effective March 2003. The change is that all construction sites disturbing one acre or more of land will be required to obtain permit coverage.

What You Need To Do

You need to obtain General Permit coverage if stormwater discharges from your site and either of the following apply:

- Construction activity results in one or more acres of land disturbance, including clearing, grading excavating, staging areas and stockpiles or;
- The project is part of a larger common plan of development or sale (i.e. subdivisions, groups of lots with or without a homeowner's association, some lot line adjustments) that results in one or more acres of land disturbance.

Contact Us

For further information or for General permit application forms, please visit our websites or contact the Regional Board field inspection staff person responsible for your jurisdiction:

State Water Resources Control Board www.swrcb.ca.gov/stormwtr
(916) 341-5536

California Regional Water Quality Control Board, Central Valley Region
<http://www.waterboards.ca.gov/centralvalley>
(916) 464-4764

California Regional Water Quality Control Board, Lahontan Region
<http://www.waterboards.ca.gov/lahontan/index.htm>
(530) 542-5436

Placer County Stormwater Information <http://www.placer.ca.gov/Works/StrmWtr.aspx> (530) 745-7500

Tahoe Regional Planning Agency
<http://www.trpa.org/BMPInfo/bmp.html>
(775) 588-4547

Stormwater Quality Contact Information

Erosion Control Products Vendors	See “Yellow Pages”
Placer County, Auburn Building Division.....	530-745-3023
Placer County, Tahoe City Building Division.....	530-581-6211
Placer County Stormwater Quality Division	530-745-7500
Tahoe Regional Planning Agency.....	775-588-4547
Auburn, City of.....	530-823-4211 Ext. 130
Lincoln, City of.....	916-645-4070 Ext. 232
Loomis, Town of.....	916-652-1840
Rocklin, City of	916-625-5000
Roseville, City of.....	916-774-5417
Truckee, Town of.....	530-582-2938

Additional Information

- ◆ **Water Quality Violation:** State and Federal regulations prohibit all polluted discharges to the storm drain system. Such discharges are also in violation of Placer County Stormwater Quality Ordinance, Article 8.28 of the Placer County Code which can be viewed at <http://qcode.us/codes/placercounty> . The County also has grading permit requirements which are described in Grading Ordinance Article 15.48.
- ◆ **State Permit Requirements:** Sites where one acre or more are disturbed are required by the State to obtain a construction stormwater permit from the **State Water Resources Control Board**. Go to: http://www.waterboards.ca.gov/water_issues/programs/stormwater/construction.shtml for permit information. Disturbed areas include all area where vegetation is removed including areas to the paved or graded, building sites, parking areas, storage areas and access roads.

For general stormwater program information, please see the Placer County Stormwater Program webpage at <http://www.placer.ca.gov/Departments/Works/StrmWtr.aspx> or call the Stormwater Quality Division at (530) 745-7500.

Helpful Websites:

California Stormwater Quality Association	www.casqa.org
Central Valley Regional Water Quality Control Board	http://www.waterboards.ca.gov/centralvalley/
Lahontan Regional Water Quality Control Board	http://www.waterboards.ca.gov/lahontan/
Sacramento Stormwater Quality Partnership	www.sacramentostormwater.org
Lake Tahoe Best Management Practices	www.tahoebmp.org
Tahoe Regional Planning Agency	www.trpa.org
Sediment Source Control Handbook	http://www.waterboards.ca.gov/lahontan/waterissues/available_documents/carec.shtml

EXAMPLE OF ACCEPTABLE GRADING PLAN

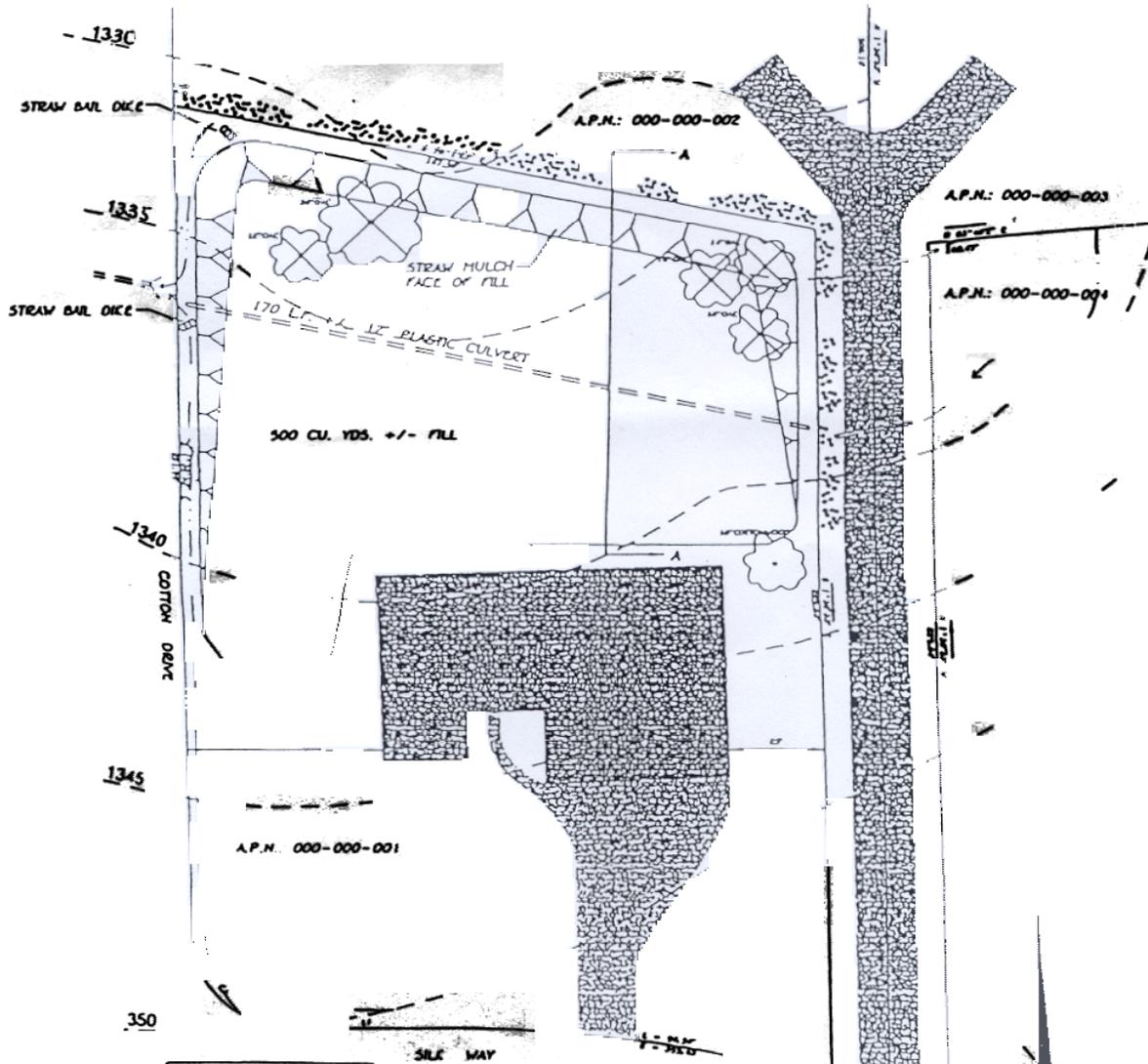
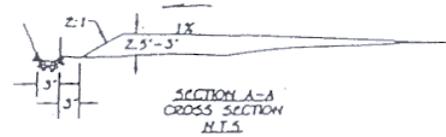
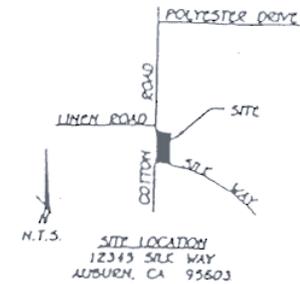
INFORMATION REQUIRED

1. APPLICANT'S NAME, ADDRESS AND PHONE NUMBER
2. ASSESSOR'S PARCEL NUMBER
3. SITE PLAN
4. VICINITY MAP (SITE LOCATION)
5. AMOUNT OF EARTH BEING MOVED
6. CROSS SECTION
7. GRADING AREA
8. DIRECTION AND DEGREE OF SLOPE AND/OR EXISTING CONTOURS
9. DRAINAGE AREAS AND STREAMS
10. SIZE AND LOCATION OF TREES AND DRIPLINE
11. BEST MANAGEMENT PRACTICES (EG. SHOW BALE DIKES)

APPLICANT'S NAME:	Joe Applicant
STREET ADDRESS:	12345 Silk Way
CITY:	Auburn
PHONE:	000-0000
A.P.N. #:	000-000-001
DATE:	12/19/98



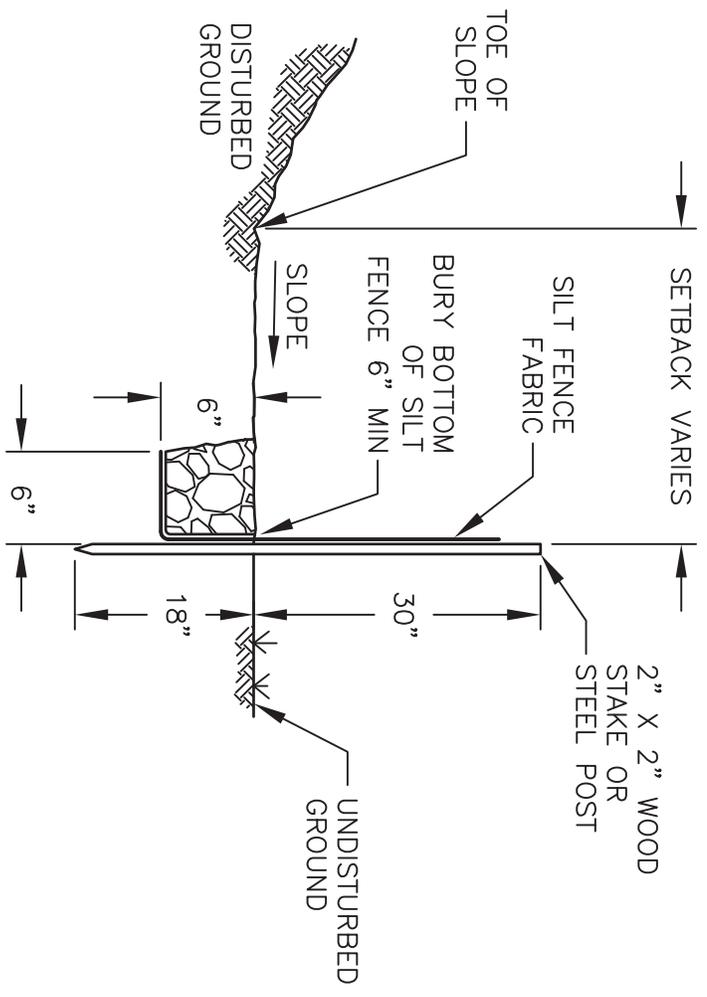
= CONTOURS OF EXISTING TOPOGRAPHY



Curve	Length	Radius	Delta
C1	16.24	170.00	10.0000
C2	16.24	170.00	10.0000
C3	16.24	170.00	10.0000

Line	Length	Bearing
L1	40.00	0

SCALE 1"=30'



- NOTES:**
1. DO NOT USE IN STREAMS, CHANNELS, DRAIN INLETS, OR ANYWHERE FLOW IS CONCENTRATED. DO NOT USE TO DIVERT FLOW.
 2. THE MAXIMUM LENGTH OF SLOPE DRAINING TO ANY POINT ALONG THE SILT FENCE SHALL BE 200'.
 3. SILT FENCE FABRIC SHALL BE WOVEN POLYPROPYLENE; WIDTH = 36" MIN, TENSILE STRENGTH = 100 LB MIN.
 4. THE FOLLOWING CRITERIA IS RECOMMENDED FOR SELECTION OF THE FABRIC EQUIVALENT OPENING SIZE (EOS):
 A. IF 50% OR LESS OF THE SOIL, BY WEIGHT, WILL PASS THE U.S. STANDARD SIEVE NO. 200, SELECT THE EOS TO RETAIN 85% OF THE SOIL. THE EOS SHALL NOT BE FINER THAN EOS70.
 B. FOR ALL OTHER SOIL TYPES, THE EOS SHALL BE NO LARGER THAN THE OPENINGS IN THE U.S. STANDARD SIEVE NO. 70 EXCEPT WHERE DIRECT DISCHARGE TO A STREAM, LAKE, OR WETLAND WILL OCCUR, THEN THE EOS SHALL BE NO LARGER THAN STANDARD SIEVE NO. 100.
 5. CONNECTION/JOINING OF SILT FENCES SHALL BE COMPLETED BY TIGHTLY OVERLAPPING THE ENDS OF THE ROLLS A MINIMUM OF 12" OR BY OVERLAPPING THE END POSTS AND SECURING THE TWO POSTS TOGETHER TIGHTLY WITH PLASTIC WIRE TIES AND/OR STEEL BAILING WIRE (9 GAUGE OR HEAVIER).
 6. STAKES SHALL BE SPACED AT 8'-0" MAX AND SHALL BE POSITIONED ON DOWNSLOPE SIDE OF FENCE.
 7. STAPLES USED TO FASTEN THE FENCE FABRIC TO THE STAKES SHALL BE NOT LESS THAN 1.25" LONG AND SHALL BE FABRICATED FROM 15 GAUGE OR HEAVIER WIRE. PLASTIC WIRE TIES AND/OR STEEL BAILING WIRE (9 GAUGE OR HEAVIER) MAY BE SUBSTITUTED. NOT LESS THAN 4 STAPLES/TIES SHALL BE USED ON EACH STAKE.
 8. THE LAST 8' OF FENCE SHALL BE TURNED UPSLOPE.
 9. SILT FENCES SHALL BE LEFT IN PLACE, REGULARLY INSPECTED, AND MAINTAINED UNTIL THE UPSLOPE AREA IS PERMANENTLY STABILIZED.
 10. SEDIMENT SHALL BE REMOVED BEFORE THE SEDIMENT ACCUMULATION REACHES ONE-THIRD OF THE BARRIER HEIGHT.



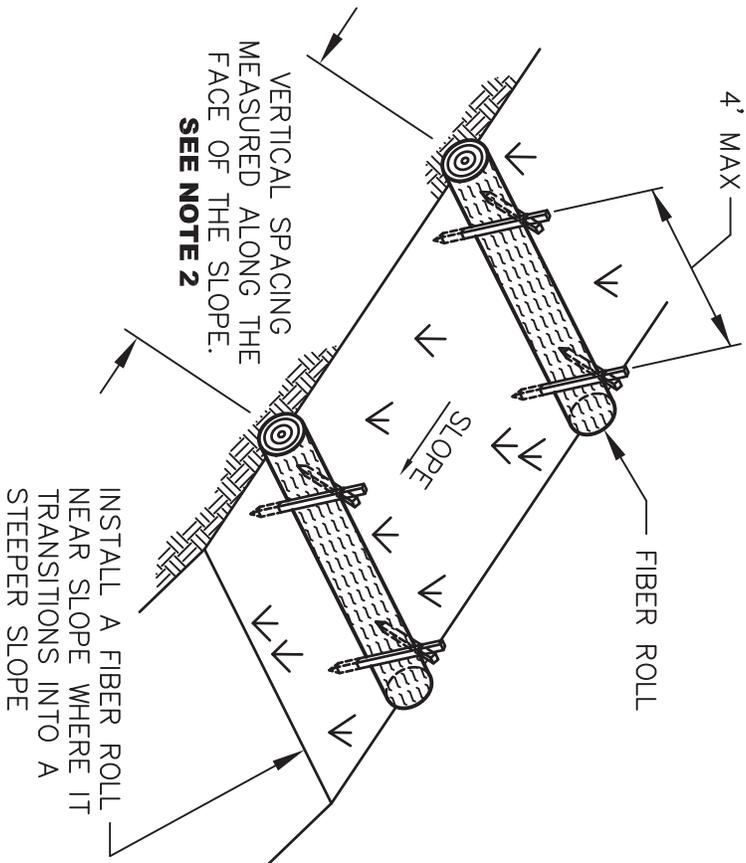
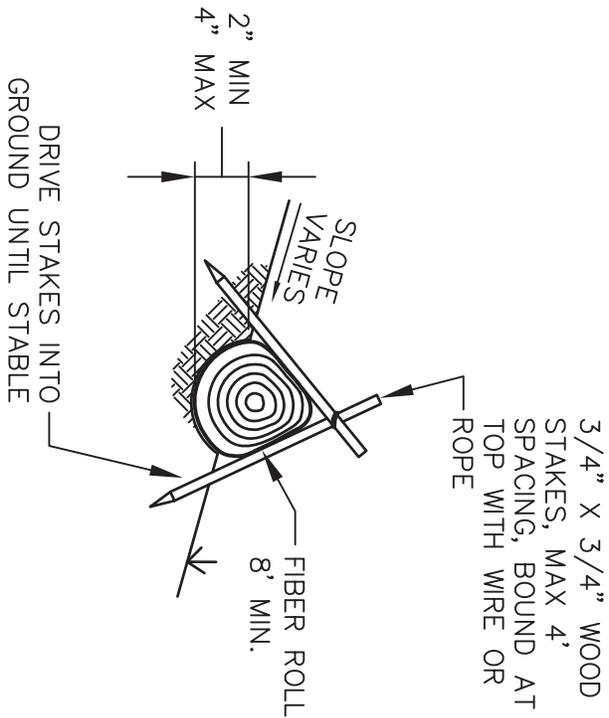
COUNTY OF PLACER CDRA ENGINEERING & SURVEYING

SILT FENCE

DATE: APR. 2015

SCALE: NOT TO SCALE

PLATE
204



STAKING AND ENTRENCHMENT DETAIL

TYPICAL FIBER ROLL INSTALLATION

NOTES:

1. FIBER ROLLS SHOULD CONSIST OF STRAW, FLAX, WOOD EXCELSIOR OR COCONUT FIBERS BOUND IN A TIGHT TUBULAR ROLL.
2. LOCATE FIBER ROLLS ON LEVEL CONTOURS SPACED AS FOLLOWS:
 - SLOPE INCLINATION OF 4:1 (H:V) OR FLATTER: FIBER ROLLS SHOULD BE PLACED AT A MAXIMUM INTERVAL OF 20 FT.
 - SLOPE INCLINATION BETWEEN 4:1 AND 2:1 (H:V): FIBER ROLLS SHOULD BE PLACED AT A MAXIMUM INTERVAL OF 15 FT.
 - SLOPE INCLINATION OF 2:1 (H:V) OR GREATER: FIBER ROLLS SHOULD BE PLACED AT A MAXIMUM INTERVAL OF 10 FT.
3. TURN THE ENDS OF THE FIBER ROLL UP SLOPE TO PREVENT RUNOFF FROM GOING AROUND THE ROLL.
4. IF MORE THAN ONE FIBER ROLL IS PLACED IN A ROW, THE ROLLS SHOULD BE OVERLAPPED, NOT ABUTTED.
5. FIBER ROLLS MAY BE USED FOR DRAINAGE INLET PROTECTION IF PROPERLY ANCHORED.
6. SEDIMENT SHOULD BE REMOVED WHEN SEDIMENT ACCUMULATION REACHES ONE-HALF THE SEDIMENT STORAGE DEPTH.



COUNTY OF PLACER CDRA ENGINEERING & SURVEYING

FIBER ROLL INSTALLATION ON SLOPES

DATE: APR. 2015

SCALE: NOT TO SCALE



PLATE
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INTRODUCTION

The winter of 1996-1997, with its unusually heavy rainfall, emphasized the need to provide and maintain adequate drainage facilities for all types of property, private homes, business properties and undeveloped lots. Placer County has provided this pamphlet to guide and to assist property owners in avoiding drainage problems on their property, and help avert the creation of problems for their neighbors.

The purpose of this publication is to summarize the more important laws and rules pertaining to drainage of storm waters, which rules are of interest and concern to all property owners. This summary does not purport to include all details of the various laws, rules and Court decisions. A property owner with a specific problem should consult applicable laws, rules and decisions, and discuss such with the appropriate governmental agency involved, private counsel, or civil engineer. This summary is presented simply as a convenient, concise guide to the major rules of water drainage applicable to property owners.

RESPONSIBILITY

Many lots in urban areas are created by subdividers. Subject to the review of the City or County having jurisdiction, the subdivider's engineer designs roads, utilities and drainage systems which are then constructed. Generally, the drainage provided takes care of streets and replaces natural drainage facilities, such as streams and gullies, which may be disturbed by the development. Drainage of individual lots need not be provided by the subdivider. At the time an individual lot is sold, any drainage problems on the lot become the responsibility of the new owner. While the City or County will require the subdivider to take care of general, area-wide drainage, the degree to which drainage of individual lots is taken care of is largely up to the developer of the parcel in question.

In some cases the lot ownership passes to a builder before being sold to a new home owner. In this case, the lot drainage provided depends to a great extent on the thoroughness of the builder. The plans for homes are reviewed by the City or County for compliance with the International Building Code, or other local

ordinance; however, drainage is not necessarily included in this review.

In any case, after a home is purchased, the responsibility for drainage lies with the owner and not the subdivider, builder, City or County.

*****DRAINAGE LAW*****

Drainage law is complicated but the courts have made some general rulings of which the homeowner should be aware:

1. The downstream property owner is obligated to accept and make provision for those waters which are the natural flow from the land above.
2. The upstream property owner shall not concentrate water where it was not concentrated before without making proper provision for its dispersion without damage to the downstream property owner.
3. The upstream property owner may reasonably increase drainage runoff by paving or constructing other impervious surfaces, including buildings, without liability. The upstream property owner may not further increase drainage runoff by diversion of water which previously drained to another area.
4. No property owner shall block, or permit to be blocked, any drainage channel, ditch, or pipe. No property owner shall divert drainage water without properly providing for its dispersion.

PROBLEMS

Improper control of drainage can create many problems other than the obvious one of flooding. Uncontrolled surface drainage creates erosion of slopes and pollutes surface waters. The County Stormwater ordinance prohibits the discharge of sediment from your property.

Disposal of water into banks by sub-surface drains can create landslides. Improperly drained foundations can cause settlement and increase exposure to rot and structural damage. These, and other similar reasons, are good cause for treating drainage like any other regular maintenance problem around a house.

WET WEATHER MAINTENANCE OF HOMESITES

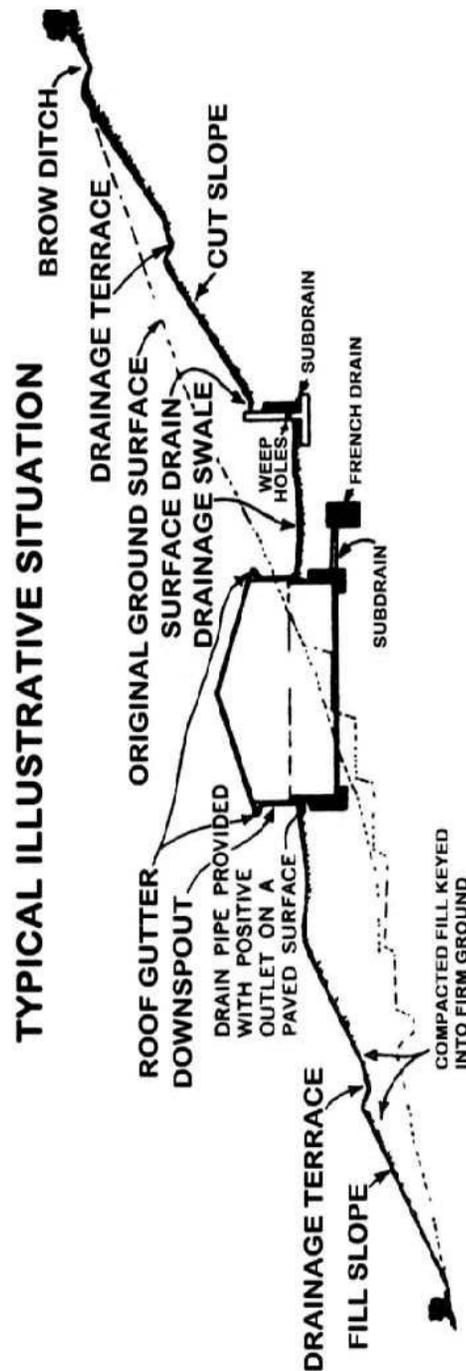
1. DO clear surface and terrace drains, catch basins and ditches and check them frequently during the rainy season, with a shovel, if necessary. Ask your neighbors to do likewise.
2. DO be sure that all drains have outlets. Under the right conditions, this can be tested simply on a dry day with a hose. If blockage is evident, you may have to use a drain auger.
3. DO keep drain openings, ditches, catchbasins, etc. clear of debris and other material which could block them in a storm.
4. DO check roof drains, gutters, and down spouts to be sure they are clear. Depending on your location, if you do not have roof gutters and down spouts, you may wish to install them because roofs and their wide, flat surfaces will shed tremendous quantities of water. Without gutters or other adequate drainage, water falling from the eaves ponds against foundation and basement walls.
5. DO check all drains and outlets at the top of slopes to be sure that they are clear and that water will not overflow the slope itself, causing erosion.
6. DO check for loose fill above and below your property if you live on a slope or terrace. Clean all interceptor ditches at tops and toes of slopes to remove dirt and debris.

DON'TS

1. DON'T block terrace drains, brow ditches, on slopes or at the tops of cut slopes on sloping ground. These are generally located on terraces and designed to carry runoff water to a place where it can be safely distributed. Generally, a little shovel work will remove any accumulation of dirt and other debris which clogs the drain. If several homes are located on the same terrace, it is a good idea to check with your neighbors. Water backed up on their property may eventually reach you. Water backed up on surface drains will tend to overflow and seep into the terraces, creating less stable slopes and possible slippage.
2. DON'T permit water to gather above or on the edge of slopes (ponding). Water gathering here

will tend to either seep into the ground, loosening fill or natural ground, or will overflow on the slope and begin erosion. Erosion may quickly destroy fill or natural ground.

3. DON'T connect roof drains, roof gutters, or down spouts to sub-drains. Arrange them so that they will flow out onto a grass area or infiltration trench or rain barrel with overflow piped to the street where the water may be dissipated. Overloading of the sub-drains tends to weaken the foundation soil.
4. DON'T spill water over slopes, even where this may seem a good way to prevent ponding. This tends to develop erosion and, in the case of fill, can eat away carefully engineered and compacted land. Install pipes down the slope where necessary to carry drainage to a point of disposal.
5. DON'T drop loose fill over slopes. It is not compacted to the same strength as the slope itself and will tend to slide with heavy moisture. The sliding may clog terrace drains below or may cause additional damage in weakening the slope. If you live below a slope, try to be sure that loose fill is not dumped above it.
6. DON'T discharge extra water in French drains. If located close to the top of slopes as it may cause slope failure in that vicinity. French drains are sometimes used to get rid of runoff water at the base of a slope when other methods are not readily available. The drains help disburse the water over a larger area.
7. DON'T let water gather against foundation, retaining walls and basement walls. These walls are built to withstand the ordinary moisture in the ground. If water is permitted to pond against them, it may seep through them causing dampness and leakage inside the basement, and sometimes will erode away beneath foundation walls and retaining walls. This can cause heavy structural damage.
8. DON'T block swales which have been graded around your house or the lot pad. These shallow ditches have been put there for the purpose of infiltration of water. Ponding of water beyond 72 hours creates a Vector Control issue. Overflow drainage provisions may be needed to pipe water to street during periods of heavy rain.



WATCH OUT for WATER

SIMPLE RULES AND SUGGESTIONS PERTAINING TO DRAINAGE OF STORM WATERS

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References:

Placer County Grading Ordinance (Article 15.48)

Placer County Stormwater Ordinance (Article 8.28)

Adapted from a publication by the City of Larkspur

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