



CITY GRADING ORDINANCE



CITY OF
VENTURA

City of San Buenaventura

**CITY ORDINANCE NO. 2007-011
(GRADING)**

Adopted by the City Council on the 16th day of April 2007

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ORDINANCE NO. 2007-011

ORDINANCE OF THE CITY COUNCIL OF THE CITY OF SAN BUENAVENTURA AMENDING DIVISION 12, PART 2, OF THE SAN BUENAVENTURA MUNICIPAL CODE, ENTITLED "GRADING REGULATIONS" BY AMENDING CHAPTERS 12.210 ENTITLED "GENERAL PROVISIONS", 12.215 ENTITLED "GRADING PERMITS", AND 12.220 ENTITLED "GRADING REGULATIONS"

BE IT ORDAINED by the City Council of the City of San Buenaventura as follows:

SECTION 1: That Division 12, Part 2 of the San Buenaventura Municipal Code, entitled "Grading Regulations" be and is hereby amended to read as follows:

**PART 2
GRADING REGULATIONS**

Chapter 12.210 General Provisions

Sec. 12.210.010. Purpose.

A. *Generally.* The purpose of this Part 2 of Division 12 (hereafter, referred to as "this Part" or "Part 2") is to safeguard life, limb, health, property and safety or public welfare by establishing minimum requirements for regulating grading and procedures on property by which these requirements may be enforced. This Part 2 may be referred to and cited as the "Grading Ordinance."

B. *Scope.* All grading shall be performed in accordance with the provisions of this Part and with rules and regulations as established by the City Engineer, and shall be in accordance with City of San Buenaventura Municipal Code, and the requirements of the approved general or specific plan for the area in which the grading is to be done.

Exception: The provisions of this Part shall not apply to the following:

1. Work accomplished under the auspices of land owned and controlled by the United States of America or by the State of California.
2. Work in a public way, dams and drainage structures constructed by or under contract with the City or Ventura County Watershed

Protection District unless the structure forms a portion of the support for a building or a structure coming within the jurisdiction of the Building and Safety Division provided that the provisions of this Part shall apply to land owned or controlled by local agencies and special districts as defined by, and to the extent allowed by, state law.

C. *Hillside Management Program (HMP)*. All grading on property within the boundaries of the Hillside Area described in the HMP shall conform to the grading requirements of the HMP. Lots within the boundaries of the area described in the HMP with a slope less than 20:1 may be exempted from the grading requirements of the HMP by the City Engineer and Community Development Director if they determine that such exceptions will not endanger life, limb, health, property, safety or public welfare.

All grading in areas within the City which include a gradient greater than 5:1 shall conform to the requirements of the City Hillside Management Program (HMP) if the City Engineer determines that conformance is required in order to avoid danger to life, limb, health, property, safety, or public welfare.

D. *Permissive Provisions*. The permissive provisions of this Part do not waive, and shall not be presumed to waive, any limitations, imposed by other statutes or ordinances of the State or City.

E. *Limitations*. If two or more pertinent limitations are not identical, those limitations shall prevail which provide the greater safety to life, limb, health, property and public welfare.

F. *Appeals*. In order to insure a reasonable application of the provision of the Part and an opportunity for aggrieved persons to be heard, any person dissatisfied with the City Engineer's application of this Part, may appeal in writing as provided for in this Part.

G. *Measurements*. Measurements referred to in this Part are shown as both English units (foot/pound/second) and metric units (metric units are in parenthesis following the English units). Measurements used in a grading project shall be English units and may include metric units in parenthesis.

H. *Designated Representatives*. Whenever in this Part the term City Manager, Community Development Director, City Engineer, Building Official, or Parks Manager are used, the terms shall mean and include the designated representatives of the respective City Officials referred to in this Part.

I. *Rules and Regulations.* The City Engineer may enact administrative rules and regulations not in conflict herewith to accomplish the purpose and intent of this Part.

J. *Delegation of Authority.* All findings, approvals, determinations, rule-making, or other exercises of discretionary judgment or any other exercise of delegated authority pursuant to this Part 2 by the public works director, community development director, or the city engineer, or their successors or designees, or any other advisory agency or city official, shall be carried out in a manner consistent with the purposes of this grading ordinance, the Subdivision Map Act, the City's General Plan, the orderly development of the city, sound civil engineering practices, and the protection and advancement of the public welfare.

Sec. 12.210.020. Definitions.

For the purpose of this Part 2, the following terms shall be defined as follows:

Bedrock shall mean the solid undisturbed rock in place either at the ground surface or beneath surficial deposits of gravel, sand or soil.

Building Official shall mean that person charged with the responsibility of enforcing the California Building Code (CBC) and State statutes and ordinances pertaining to their office.

City Engineer shall mean that person charged with the responsibility of coordinating all phases of engineering for the City government.

Civil Engineer shall mean a professional engineer registered in the State of California to practice in the field of civil engineering works.

City Standard Construction Details shall mean that publication of construction drawings developed by the City Engineer and revised from time to time.

Community Development Director shall mean that person charged with the responsibility of coordinating all phases of City growth planning, development, and redevelopment for the City.

Compaction shall mean the densification of a fill by mechanical means.

Continuous observation shall mean nearly full-time visual observation of equipment and materials used therein, sufficient to permit the Engineer to render a professional opinion as to the contractor's conformance with the Engineer's recommendations, plans or specifications.

Engineering Geologist shall mean a geologist licensed in the State of California duly qualified and capable of applying the geological sciences to engineering practice for the purpose of developing and rendering professional opinions regarding how geologic features affect the location, design, construction, operation and maintenance of engineering works.

Excavation shall mean the mechanical or other artificial removal of earth material.

Existing grade shall mean the vertical location of the existing ground surface prior to excavating or filling.

Fill shall mean deposits of soil, rock, or other materials placed by artificial means.

Finished grade shall mean the final grade or elevation of the building site, slope or terrace, which conforms to the approved plan.

Geotechnical Engineer shall mean a civil engineer licensed in the State of California as a Geotechnical Engineer and duly qualified and capable of applying geological sciences, soil mechanics and slope stability analysis to engineering practice.

Grade shall mean the vertical location of the ground surface.

Grading shall mean the removal of soil or deposition of fill or combination thereof, including but not limited to, overexcavation and recompaction.

Hillside Area shall mean all of that area defined as Hillside Area by the City General Plan as it may be amended from time to time.

Hillside Management Program (HMP) shall mean that document of policies, development criteria and submittal requirements established by Resolution No. 89-104 on August 28, 1989 by City Council, and as it may be amended from time to time to implement the General Plan as it relates to Hillside Areas.

Landscape Architect shall mean a landscape architect duly registered as such by the State of California.

Landslide shall mean the falling, slipping or flowing of a mass of land from a higher to a lower level.

Active landslide shall mean a landslide that has been active at any time since January 1, 1952.

Historical landslide shall mean a landslide that was active in historical time prior to 1952 as determined from photographs, maps and written records.

Prehistoric landslide shall mean conditions where there is no record of historical landslide but where geological evidence or topographic expression indicates modification of the terrain by land movement.

Possible prehistoric landslide shall mean areas where there is no record of a historic landslide but where topographic expression or geological evidence suggests the possibility of past land movement.

Overexcavation shall mean excavation below and/or beyond the limits of plan grades and recompaction of soil to improve low density soils per the soil engineer report.

Parks Manager shall mean that person charged with the responsibility of coordinating all phases of parks maintenance for the City.

Periodic observation shall mean intermittent visual observation throughout the course of the project.

Record drawing shall mean the approved updated plan showing the as-graded surface condition upon completion of grading.

Rough grade shall mean the approximate elevation of the ground surface conforming to the approved plan.

Site shall mean any lot or parcel of land or contiguous combination thereof, under the same ownership where grading is performed or permitted.

Slope shall mean an inclined ground surface, the inclination of which is expressed as a ratio (for example 2: 1) of the horizontal distance to a vertical distance. Each number refers to a measurement that utilizes the same unit of measurement.

Soil shall mean all earth material, of whatever origin, overlying bedrock.

Soils Engineer shall mean a civil engineer licensed by the State of California who is experienced in the application of the principles of soil mechanics in the investigation, evaluation, and design of civil works involving the use of earth materials.

Supervisory control shall mean the continuous monitoring of the contractor's work by a resident soil engineer, civil engineer, or geologist, based upon the

engineer's recommendations, plans, or specifications, and the reporting of his opinions of the contractor's fulfillment of these recommendations or adherence to plans and specifications to the City.

Sec. 12.210.030 Appeal Process.

Appeals from permit conditions, or to allow alternate grading methods, or for other forms of relief from determinations or decisions by the City Engineer, may be made to the Public Works Director. The appeal shall be filed within 10 calendar days after the final action, determination, or decision by the city engineer. The appeal shall be on forms as provided by the public works director and shall specifically set forth the grounds for appeal and reason or basis for disagreement with the decision of the city engineer. The Public Works Director shall have the authority to hear such appeals and grant exceptions to particular requirements of this Part 2, or approve alternative grading methods or permit conditions, where the public works director finds such exceptions or alternates provide equivalent levels of protection of the public health and safety, provided that, the Public Works Director may not waive the basic requirement of obtaining a grading permit. Specifically, the public works director shall determine one of the following:

1. The City Engineer's decision was a reasonable interpretation of this Part 2 and that determination shall stand; or
2. Based on findings supported by substantial evidence:
 - a) An exception to a particular permit condition or requirement of this Part 2 can be carried out with adequate protection of the public health and safety and is, therefore, warranted; or
 - b) There are alternate grading methods that will provide equivalent levels of protection of the public health and safety. Such alternates shall be specifically delineated in upholding the appeal.

The decision of the public works director shall be final and there shall be no further appeal to the City Council or any City advisory body.

The filing fee for any such appeal shall be in the amount as provided for appeals of building or construction permits to the Board of Appeals until such time as the City Council amends the City's Users Fee schedule to provide a separate fee for appeals of decisions relating to grading permits. The fee shall be paid at the time of, and as a prerequisite for, filing the appeal.

Chapter 12.215 Grading Permits

Sec. 12.215.010. Required.

A. *Generally.* No person shall commence or perform any grading, and no person shall import or export any earth materials to or from any grading site, without first having obtained a permit therefore from the City Engineer. A separate permit will be required for each site. Retaining walls require a separate permit from Building and Safety.

B. *Exceptions:*

1. An excavation less than 2 feet (0.61 meters) in depth.
2. An excavation that does not create a cut slope steeper than 2:1 and that is not more than five feet (1.52 meters) in height.
3. A fill less than 1 foot (0.30 meters) in depth and placed on natural terrain with a slope flatter than 5:1, and does not obstruct a drainage course.
4. A fill less than 3 feet (0.91 meters) in depth, not intended to support structures, does not exceed 50 cubic yards (38.23 cubic meters) on any one lot, and does not obstruct a drainage course.
5. Excavations below finished grade for basements and footings of buildings authorized by valid building permits. This shall not exempt any fill made with material from such excavation nor exempt any excavation having an unsupported slope steeper than 2:1 height greater than 5 feet (1.52 meters) after the completion of such structure.
6. Excavations below finished grade for retaining walls less than 6 feet (1.82 meters) in height with no surcharge in areas not within the boundaries of the HMP.
7. Excavations below finished grade for retaining walls less than 3 feet (0.91 meters) in height with no surcharge in areas within the boundaries of the HMP.
8. Utility trenches, wells, exploratory excavation under the direction of a soils engineer or geologist, and similar work if the City Engineer determines that such exemption would not endanger life, limb, health, property, safety or public welfare.
9. Excavation for cemetery grave.

10. Projects constructed by the City. However, all requirements of this grading ordinance shall still apply to City projects, but a permit need not be issued.
11. The provisions of this Part shall not apply to any grading operation which is conducted during a period of emergency or disaster as determined by the City Council, City Attorney or Building Official or which is directly connected with or related to relief of conditions caused by such emergency or disaster.

Sec. 12.215.020. Requirements.

- A. *Plans and Specifications.* With each application for a grading permit and when required by the City Engineer for enforcement of any provisions of the Part, plans and specifications will be submitted in accordance with current City submittal Checklist for grading plans. Except as waived by the City Engineer for small or minor work, the plans shall be prepared and signed by a registered Civil Engineer. Plans and specifications shall be prepared in accordance with the provisions of this Part and shall meet the requirements of the current City Grading Plan Checklist.
- B. *Modification of approved plans.* All modifications of approved Grading Plans must be approved in writing by the City Engineer. All required soils and geological reports shall be submitted with the revised plans. No grading work in connection with the proposed modifications will be permitted without the prior written approval of the City Engineer.
- C. *Engineering geological reports.* Prior to issuance of a grading permit, the City Engineer may require an engineering geological investigation, based upon the most recent grading plan. The engineering geological report shall be prepared and signed by an Engineering Geologist and shall include an adequate description of the geology of the site, conclusions and recommendations regarding the effect of geological conditions on the proposed development.

All reports shall be subject to approval by the City Engineer. Supplemental reports and data may be required by the City Engineer if deemed necessary. Recommendations included in the report and approved by the City Engineer shall be incorporated into the grading plan. Reports shall be required for all developments in hillside areas or other developments as designated by the City Engineer.

- D. *Soils engineering reports.* A soils engineering investigation is required, based upon the proposed grading plan. Such reports shall include

data regarding the nature, distribution and strength of existing soils, conclusions and recommendations for grading procedures, design criteria for corrective measures, or such other criteria as required by the City Engineer. All such reports shall be prepared and signed by a Soils Engineer or Geotechnical Engineer.

Recommendations included in the report and approved by the City Engineer shall be incorporated into the grading plan or specifications.

City Engineer may waive the requirement for soils engineering investigation if the City Engineer determines that such waiver will not endanger life, limb, health, property, safety, or public welfare.

- E. *Changed conditions.* If the soil or other conditions are not as stated in the application for a grading permit, the City Engineer may suspend the grading permit a revised grading plan is approved by the City Engineer
- F. *Waivers.* The City Engineer may waive the requirement for a contour map or subsurface exploration as required by this subsection if it is found that the information on the application is sufficient to show that the work will conform to the provisions of this Part and other relevant laws.
- G. *Preliminary grading plans.* The City Engineer or Community Development Director may require a preliminary grading plan to be prepared as directed by the City Engineer or Community Development Director.

Sec. 12.215.030. Permit Limitations and Conditions.

- A. *General.* The issuance of a grading permit shall constitute an authorization to do only that work which is described on or illustrated on the application for the permit or on the site plans and specifications approved by the City Engineer.
- B. *Responsibility of permittee.* The permittee and the permittee's agents shall carry out the proposed grading in accordance with approved plans and specifications, the conditions of the permit and with the requirements of this Part and all other applicable laws. The permittee and the permittee's agents shall maintain all required protective devices and temporary drainage, maintain dust control and methods of hauling, and observe approved hours of work during the progress of the grading work. The permittee or the permittee's agents shall be responsible for maintenance of the site until such time as a notice of completion/final acceptance has been issued by the City Engineer.

The permittee, permittee's agents, and each or all of them shall become subject to the penalties set forth herein in the event of failure to comply with this Part and other applicable laws of the City of San Buenaventura. No approval shall exonerate the permittee or the permittee's agents from the responsibility of complying with the provisions and intent of this Part.

- C. *Jurisdiction of other agencies.* Permits under the requirements of this Part shall not relieve the owner of responsibility for securing required permits for work to be accomplished which is regulated by any other code, department or division of the City or any other governing agency.
- D. *Tract/Parcel Map requirements.* If a Final Tract/Parcel Map is required under the San Buenaventura Municipal Code or Subdivision Map Act, no grading permit shall be issued for import or export of earth materials to or from, and no grading shall be conducted on, any grading site in the Hillside Area unless a Final Tract/Parcel Map has been approved by the City Council. The City Engineer may waive the requirement that the Final Tract/Parcel Map be approved prior to issuance of a grading permit if the City Engineer determines that such waiver will not endanger life, limb, health, property, safety, or public welfare.

In cases where a waiver is granted in the Hillside Area, a grading permit will not be issued until all required plans are approved by the City Engineer and Community Development Director, following the payment of necessary fees and submittal of any or all required bonding.

- E. *Conditions of permit.* The City Engineer and Community Development Director may impose such regulations with respect to access routes to and from grading sites in the Hillside Area as they shall determine are required in the interest of public health, safety, and welfare and safety precautions involving pedestrian or vehicular traffic.
- F. *Haul.* No permit shall be issued for the export or import of earth materials to or from a grading site in areas involving ingress or egress on streets having less than 17 feet (5.18 meters) in useable width, except upon the following conditions:
 - (1) The size or type of hauling equipment shall be limited in accordance with the width and conditions of the street.
 - (2) Traffic control devices, including flagmen, signs and markers shall be utilized at appropriate places along the designated routes of access to such sites.

- (3) Temporary no parking restrictions may be imposed with the approval of the City Engineer along such routes when determined necessary.
- (4) Such other conditions as may be determined necessary for the public health, safety and welfare shall be imposed.
- (5) In no event shall any export or import of earth materials to or from a grading site in hillside areas be undertaken or conducted except by use of equipment, which complies in all respects with the State Vehicle Code.
- (6) All loads shall be properly trimmed and watered, or otherwise secured so as to prevent spillage from the equipment.
- (7) In all cases where the City Engineer designates the "haul" routes, such designation of routes shall take into consideration the most practical means of transporting the earth materials to or from the grading site consistent with the safety and welfare of residents along the routes.

G. *Conformance with General Plan, policies and the zoning regulations required.* No permit shall be issued for any grading or export or import of earth materials for any grading site except in compliance with the zoning, private street and division of land regulations contained in the San Buenaventura Municipal Code, the Subdivision Map Act of the State of California, the General Plan, the HMP, the Local Coastal Program, the Specific Plan for the area in which the grading is to be accomplished and local, State, and Federal environmental laws and guidelines.

H. *Time limitations.* The permittee shall fully perform and complete all of the work proposed pursuant to the grading permit within the time limit specified in the permit.

If the permittee is unable to complete the work within the specified time, the permittee may, prior to the expiration of the permit, submit a written request for an extension of time in which to complete the work. If, in the opinion of the City Engineer, sufficient justification is shown, the time specified on the permit may be extended for a period of not more than 180 days, but no such extension shall release any surety upon the bond.

I. *Entry upon premises.* The City Engineer, the surety company or the duly authorized representative of either, shall have access to the

premises described in the permit for the purpose of inspecting the progress of the work.

In the event of default in the performance of any term or condition of the permit, the surety or any person employed or engaged on behalf of the surety shall have the right to go upon the premises to complete the required work.

It shall be unlawful for the owner or any other person to interfere with the ingress or egress, from such premises of any authorized representative or agent of any surety company or the City engaged in the work ordered by the City Engineer.

J. *Consent of adjacent property owner.* Whenever any excavation or fill requires entry onto adjacent property for any reason, the permit applicant shall obtain the written consent of the adjacent property owner or their authorized representative, and shall file a copy of said consent with the City Engineer before a permit for such grading work will be issued.

K. *Restrictions during rainy season.*

- (1) That period between the first day of November and the following 15th day of April is hereby determined to be the period in which heavy rainfall normally occurs in the City of San Buenaventura. During this period no grading work in excess of 250 cubic yards (191.15 cubic meters) will be authorized to start on any single grading site under permit where the City Engineer determines that such work will endanger the public health or safety.
- (2) Previously authorized grading work which extends into the rainy season shall be protected by incorporating temporary erosion control devices.
- (3) Plans for erosion control devices shall be submitted to the City Engineer and design approval obtained not later than the first day of October of the coming rainy season. The design of desilting basins which discharge into City streets or natural watercourses shall be under the control of the City Engineer.
- (4) All persons performing any grading operations during that period designated as the rainy season shall put into effect all safety precautions which are necessary in the opinion of the City Engineer. All loose dirt shall be removed from the grading site and adequate anti-erosion or drainage devices, debris basins or other safety devices to protect the life, limb, health and welfare

of private and public property of others from damage of any kind. All temporary erosion control devices, including desilting basins, shall be installed not later than the first day of November of each year.

- (5) No persons shall excavate or fill so as to cause falling rocks, soil or debris in any form to fall, slide or flow onto adjoining properties.
- (6) All grading activity shall conform to the requirements of the Ventura Countywide Stormwater Quality Management Program, the National Pollutant Discharge Elimination System (NPDES) and applicable NPDES permit issued by the State of California Regional Water Quality Control Board including the State General Permit for construction activity, the San Buenaventura Municipal Code and the California Storm Water Best Management Practices. When a Notice of Intent is required under applicable laws or regulations, the City Engineer will require that a copy of the Notice of Intent be submitted to the City Engineer prior to issuance of a grading permit.

Sec. 12.215.040. Conditions of Approval.

In granting any permit under this Part, the City Engineer or City Engineer's authorized representative may attach such conditions as may be reasonably necessary to prevent creation of a nuisance or hazard to public or private property. Such conditions may include, but shall not be limited to:

1. Improvement of any existing grading to bring it up to the standards of this Part.
2. Requirements for fencing of excavations or fills which would otherwise be hazardous.

Sec. 12.215.050. Liability.

Neither the issuance of a permit under the provisions of this Part, nor the compliance with the provisions hereof or with any conditions imposed in the permit issued hereunder, shall relieve any person from responsibility for damage to other persons or property, nor impose any liability upon the City for damage to other persons or property.

Sec. 12.215.060. Denial of Permit.

- A. *Hazardous grading.* A grading permit shall not be issued in any case where the City Engineer finds that the work proposed by the applicant

is classed as hazardous grading and is liable to endanger any private property or result in the deposition of debris on any public way or interfere with any existing drainage course.

- B. *Geological or flood hazard.* If, in the opinion of the City Engineer, the land area for which grading is proposed is subject to geological or flood hazard to the extent that no reasonable amount of corrective work can eliminate or sufficiently reduce the hazard to human life or property, the grading permit and building permits for habitable structures shall be denied.

Chapter 12.220 Grading Regulations

Sec. 12.220.010. Plan Checking and Permit Fees.

- A. *Plan check fees.* For excavation and fill on the same site, the fees shall be based on the volume of the excavation or fill, which ever is greater. Prior to acceptance of plans and specifications for checking, the City Engineer shall collect a plan-check fee. Separate permits and fees shall apply to retaining walls or other structures as indicated in the most recent Uniform Building code as adopted by the City. There shall be no separate charge for standard terrace drains and similar facilities. The fee for a grading permit authorizing additional work to that under a current valid permit shall be the difference between the fee paid for the original permit and the fee calculated for the revised total project. No fee refund will be made.

The amount of the plan-checking fee for the grading plans shall be as set by Council resolution from time to time.

- B. *Permit fees.* A fee for each grading permit shall be paid prior to the issuance of said permit. Double fees will be assessed where grading has been accomplished without an authorized permit. Fees shall be as set by Council resolution from time to time.

Sec. 12.220.020. Grading Bonds.

- A. *Requirements.* A permit will not be issued for excavation or fill of more than 500 cubic yards (382.30 cubic meters) in hillside areas, more than 1,000 cubic yards (764.60 cubic meters) in other areas, or for work which requires retaining walls, until the permittee shall post with the City Engineer a bond for the benefit of the City. The bond shall be executed by the owner and a corporate surety authorized to do business in this State as a surety in an amount sufficient to cover the cost of the project, including corrective work necessary to remove

and eliminate geological hazards. All bonds shall be executed on forms obtainable from the City Engineer.

Exception: The City Engineer may waive the requirement that a bond be posted before a permit is issued as provided in this section if the City Engineer determines that no potential hazard would exist if the grading is not completed.

- B. *Cash or deposit agreement in lieu of bond.* In lieu of a surety bond the applicant may file a deposit agreement or deposit cash or other security as may be approved by the City, with the City Engineer upon the terms and conditions and in an amount equal to that, which would be required in the surety bond. The deposit submitted with the cash bond may be in the form of cash or negotiable United States securities. The deposit agreement shall be on forms approved by the City Engineer.
- C. *Application of bond to adjacent property.* Where grading is required on property adjacent to the grading site under permit to complete a project satisfactorily, written consent must be obtained from the adjacent owner and a copy of the written consent submitted to the City Engineer prior to commencement of grading on the adjacent property. The owner of such adjacent property need not provide an additional grading bond, if the original is of sufficient amount to include such additional grading.
- D. *Conditions of the bond, deposit agreement, or cash deposit.* Every bond, deposit agreement or cash deposit shall be conditioned that the permittee shall:
 - (1) Comply with all of the provisions of this Part and all other applicable laws and ordinances.
 - (2) Comply with all of the terms and conditions of the permit for excavation and fill to the satisfaction of the City Engineer.
- E. *Period and termination of bond, deposit agreement, or cash deposit.* The term of each security shall begin upon the date of filing with and shall remain in effect until the completion of the work to the satisfaction of the City Engineer, plus an additional period of one year. Such completion shall be evidenced by issuance of a Grading Certificate signed by the City Engineer. In the event of failure to complete the work and failure to comply with all of the conditions and terms of the permit, the City Engineer may order the work to be completed as required by the permit and to the satisfaction of his office. The surety executing such bond or such deposit, shall continue to be firmly bound

under a continuing obligation for the payment of all necessary costs and expenses that may be incurred or expended by the City in causing any and all of such required work to be accomplished and that said surety or the depositor assents to any lawful extensions of time within which to construct and complete such work. In the case of a cash deposit or deposit agreement, any unused portion shall be refunded to the permittee.

After the work has been completed to the satisfaction of the City Engineer, the City Engineer may release or exonerate the bond, deposit agreement, or cash deposit earlier than the additional one year period if the City Engineer determines that the public health and welfare is not jeopardized. In no case shall the security be released earlier than 4 months after the grading work has been completed to the satisfaction of the City Engineer.

- F. *Amount of security.* The amount of the security shall be based upon the estimated cost plus 25%, as determined by the number of cubic yards of material in either excavation or fill, whichever is the greater amount, and shall include the cost of all retaining walls, drainage structures, erosion control, and other protective devices as may lawfully be required.

Sec. 12.220.030. Hazardous Soil and Earth Conditions.

Whenever the City Engineer determines by inspection that any land or any existing excavation or fill has from any cause become a menace to life or limb, endangers public or private property or affects the safety, usability or stability of a public way, the owner or other entity in legal control of the property concerned shall, upon receipt of written notice thereof from the City Engineer, correct such condition in accordance with the provisions of this Part and the requirements and conditions set forth in such notice to eliminate the undesirable condition.

The owner, or other person in control of such property shall immediately commence the work required by such notice and shall complete same within a maximum time of 120 days from the date of such notice unless a shorter period of time for completion has been specified in the notice, in which case the owner or other person shall comply within such time as specified.

Sec. 12.220.040. General Requirements.

- A. *Supervision.*

The permittee shall provide sufficient supervisory control during the grading operation to insure compliance with approved plans and with the San Buenaventura Ordinance Code. When required by the City Engineer,

the permittee shall obtain the services of a Geotechnical Engineer or Soils Engineer to monitor the work. The Geotechnical Engineer and Soils Engineer shall be properly qualified in accordance with Section 12.210.020 of this Part and qualified to perform such services within the City.

B. Safety precautions during grading.

If, at any stage of work on an excavation or fill, the City Engineer determines by inspection that further work as authorized by an existing permit is likely to endanger any property or public way, the City Engineer may require that plans for such work be amended to include adequate safety precautions as a condition to allow the work to continue. Safety precautions may include, but shall not be limited to, specifying a flatter exposed slope or construction of additional drainage facilities, berms, terracing, compaction, cribbing, retaining walls or buttress fills, slough walls, desilting basins, check dams, benching, wire mesh and guniting, rock fences, revetments or diversion walls.

C. Violations.

1. It shall be unlawful for any person to fail, refuse or neglect to comply with the following provisions:
 - (a) All orders issued by the City Engineer or the Building Official pursuant to the provisions of this Part.
 - (b) All conditions imposed on Grading Permits Pursuant to the provisions of this Part.
 - (c) All rules and regulations of the City Engineer with respect to grading which were in effect at the time the grading permit was issued.
2. Any person, firm or corporation violating any of the provisions of this Part shall be deemed guilty of a misdemeanor and each such person shall be deemed guilty of a separate offense for each and every day or portion thereof during which any violation of any of the provisions of this Part is committed, continued, or permitted, and upon conviction of any such violation said person shall be punishable by a fine of not more than \$1,000, or by imprisonment for not more than six months, or by both such fine and imprisonment.
3. Stop work orders. Whenever any construction or work is being done contrary to the provisions of any law or ordinance or public or private property is endangered, the City Engineer may issue a

written notice to the responsible party to stop work on that portion of the work on which the violation has occurred or upon which the danger exists. The notice shall state the nature of the violation or of the danger and no work s be done on that portion until the violation has been rectified and approval obtained from the City Engineer or until, as a condition for continuance of the work, special precautions to eliminate the hazards have been approved and imposed by the City Engineer and performed by the permittee.

D. Grading Inspection.

1. All construction or work for which a permit is required shall be subject to inspections by authorized employees of the City, and certain types of work, as determined by the City Engineer, shall have either continuous or periodic observation by a Civil Engineer, Soils Engineer, or Engineering Geologist employed by the applicant or property owner as a condition of issuance of the Grading Permit. Prior to issuing a Grading Certificate, an inspection shall be made of all construction or work for which a permit has been issued.
2. Exposure of work. Whenever any work, on which inspections are required, as specified inspection, is covered or concealed by additional work without having first been inspected, the City Engineer may require that such work be exposed for examination. The work of exposing and recovering shall not entail expense to the City of San Buenaventura.
3. Notice. The permittee or the permittee's agent shall notify the City Engineer 24 hours in advance of the time when the grading operation is ready for each of the following inspections.
 - (a) *Initial inspection:* When the permittee is ready to begin work, but before any grading or brushing is started.
 - (b) *Toe inspection:* After the natural ground is exposed and prepared to receive fill, but prior to the placement of any fill.
 - (c) *Excavation inspection:* After the excavation is started, but before the vertical depth of the excavation exceeds ten feet (3.05 meters).
 - (d) *Fill inspection:* After the fill emplacement is started, but before the vertical height of the lifts exceeds ten feet (3.05 meters).
 - (e) *Drainage device inspection:* After forms and pipe are in place, but before any concrete is placed.

- (f) *Rough grading*: When all rough grading has been completed. This may be called for at the completion of the rough grading without the necessity of the City Engineer having previously reviewed and approved the reports.
 - (g) *Final*: When all work, including installation of all drainage structures, other protective devices, and planting and slope stab stabilization has been completed and the "As Graded" plan and required reports have been submitted.
 - (h) *Other Inspection*: In addition to the called inspections above, the City Engineer may make other inspections of any work to ascertain compliance with the provisions of this Part and other laws.
4. Special Inspections. Where necessary the City Engineer may require the permittee or property owner to employ:
- (a) A Civil Engineer to monitor all grading.
 - (b) A Soils Engineer to provide either periodic or continuous soils inspection.
 - (c) An Engineering Geologist to provide geological inspections.

The employment of the above shall not be deemed to render unnecessary any inspections described in this Part except that on any work requiring continuous monitoring by a Civil Engineer, the inspections required by this Section may be delegated to the Civil Engineer by the City Engineer. If the Civil Engineer fulfilling engineering responsibility under this section finds that work is not being done in conformance with this Part or the plans and specifications approved by the City Engineer, the Civil Engineer shall immediately notify the person in charge of the grading work and the City Engineer in writing of the non-conformity and the corrective measures to be taken.

The Civil Engineer monitoring grading work shall, immediately notify the City Engineer in writing upon the termination of his or her engineering services.

All work shall immediately stop upon the termination of the services of the Civil Engineer whose name appears on the Grading Permit as having been approved to monitor the grading work, and it shall not commence again until the new approved Civil Engineer certifies

in writing to the City Engineer that he/she has reviewed all phases of the project and is thoroughly familiar with it. Upon receipt of this notice the City Engineer will give written notice that work may proceed.

5. Final Reports. Upon completion of the work, the City Engineer may require the permittee or property owner to have prepared the following reports and information:

- (a) Report from a Registered Civil Engineer certifying that all grading; lot drainage and drainage facilities have been completed in conformance with the approved plans and this Part.
- (b) An as-graded plan of the completed work.
- (c) A soils engineering report including a statement that the portion of the work concerning the preparation of the existing ground surface and the placing and compaction of fill is in conformance with the approved plans and the appropriate provisions of this section entitled "Fills."

The report shall also include the recommended soil-bearing capacity, a finding as to the expansive characteristics of the soil and the presence of buttress fills on a lot-by-lot basis, the location of subdrains, and a summary of tests. The location of such tests and the limits of the compacted fill shall be shown on a final plan, which shall also show by plan and cross section the location of any rock disposal areas and/or buttress fills, if such were involved in the grading.

- (d) An engineering geological report by an Engineering Geologist based on the as-graded plan including specific approval of the grading as affected by geological factors. Where necessary, a revised geological map and cross-sections including faults and other geologic structures, and any recommendations necessary shall be included.

E. Excavations.

- 1. *Height.* Cut slopes which exceed 100 feet (30.48 meters) in vertical height shall be constructed with a minimum of one bench for each 100 feet (30.48 meters) in vertical height. The benches shall be evenly spaced on the slope and shall have a minimum width of 30 feet (9.14 meters). The cross section of benches shall be the as shown in City Standard Construction Details.

2. *Slope.* Excavations shall not be made with a cut face steeper in slope than 2:1.

Exception: The City Engineer may permit the excavation to be made with a cut face steeper in slope than 2:1, if the applicant shows through subsurface exploration by both a Soils Engineer and an Engineering Geologist to the satisfaction of the City Engineer that the materials making up the slope of the excavation and the underlying bedrock is capable of standing on a steeper slope with a factor of safety of not less than 1.5 for static loads.

3. *Excavation setback.* Excavations shall not extend below a line that is projected at an angle of 2:1 from the nearest point of any footing or foundation of any building or structure unless such footing or foundation is first properly underpinned or supported against settlement or a Civil Engineer has determined to the satisfaction of the City Engineer that the proposed excavation will not affect the existing structure.
4. *Unstable slopes.* If the material of the slope is of such composition and character as to be unstable, considering all types of anticipated loading and moisture conditions, the Engineering Geologist or Soils Engineer shall, by testing and analysis, provide specific criteria for its stabilization by reduction of slope angle, buttressing, or by a combination of these or other means so as to produce a stable slope with a factor of safety not less than 1.5 for static loads.
5. *Cut slope setback.* All cut slopes shall be within properties or parcels under one ownership. That is, they shall not be divided horizontally by property lines. Tops of cut slopes shall not be made nearer than one foot (0.30 meters) plus one-fifth the height of the cut to a project boundary, but need not exceed a horizontal distance of 10 feet (3.05 meters). If the City Engineer determines that the above is unnecessary because of special conditions, the City Engineer may make adjustments as a condition of the Grading Permit.
6. *Interceptor terraces.* On cut slopes exceeding 25 feet (7.62 meters) in height, interceptor terraces shall be constructed in accordance with City Standards. Terraces shall be paved with concrete on cut slopes and, shall have a minimum width of 8 feet (2.44 meters) and shall be spaced at maximum intervals of 25 feet (7.62 meters) measured vertically. Where only one terrace is utilized, it shall be placed at mid-height. All terraces and

downdrains must comply with the provisions for "Erosion Control Drainage Devices" set forth in this Part.

7. *Diverter terraces.* Diverter Terraces shall be constructed in accordance with the requirements contained under Erosion Control and Drainage Devices of this Part.

F. Fills.

1. *Slope.* No fill shall be made which creates any exposed surface steeper in slope than 2:1, except under one or more of the following conditions:
 - (a) A retaining wall or other approved support is provided.
 - (b) The City Engineer may permit a fill to be made which creates an exposed surface steeper in slope than 2:1 if the applicant shows through the investigation and report, to be approved by the City Engineer, of a Soils Engineer and Engineering Geologist that the strength characteristics of the material to be used in the fill are such as to produce a safe and stable slope with a factor of safety not less than 1.5 for static loads and the areas on which the fill is to be placed have sufficient strength characteristics to support the fill within reasonable settlement values.
2. *Slope reduction.* The City Engineer may require that the fill be constructed with an exposed surface flatter than 2:1 if, under the particular conditions, such flatter surface is determined by the City Engineer to be necessary for stability or safety.
3. *Height.* Fill slopes which exceed 100 feet (30.48 meters) in vertical height shall be constructed with a minimum of one bench for each 100 feet (30.48 meters) in vertical height. The benches shall be evenly spaced on the slope and shall have a minimum width of 30 feet (9.14 meters).
4. *Interceptor terraces.* On fill slopes exceeding 25 feet (7.62 meters) in height, interceptor terraces shall be constructed in accordance with City standards. Terraces shall be paved with concrete on fill slopes and, shall have a minimum width of 8 feet (2.44 meters) and shall be spaced at maximum intervals of 25 feet (7.62 meters) measured vertically. Where only one terrace is utilized, it shall be placed at mid-height. All terraces and downdrains must comply with the provisions for "Erosion Control and Drainage Devices" set forth in this Part.

5. *Placement.* All fills shall be placed, compacted, inspected, and tested in accordance with the following provisions. If the strict enforcement of this Section is determined by the City Engineer to be unnecessary because of the proposed or probable use of land, the City Engineer may waive these requirements.

These requirements shall not be waived when structures are to be supported by the fill or where they are necessary as a safety measure to aid in preventing the saturation, settling, slipping or erosion of the fill.

- (a) *Preparation of Ground.* The existing ground surface shall be prepared to receive fill by removing vegetation, noncomplying fill, or other incompetent material. Where the slope of the ground surface is 5:1 or steeper, the fill shall be supported on level benches cut into competent material. The bench under the toe of a fill slope steeper than 5:1 shall be at least 10 feet (3.05 meters) wide. The area beyond the toe of fill shall be sloped for sheet overflow or a paved drain shall be provided. When fill is to be placed over a cut, the bench under the toe of fill shall be at least 10 feet (3.05 meters) wide, but the cut shall be made before placing the fill and before acceptance by the Civil Engineer, as a suitable foundation for fill.
- (b) *Subdrains.* Except where recommended by a Soils Engineer as not being necessary, subdrains shall be provided under all fills placed in natural drainage courses and in other locations where seepage is evident. Such subdrainage systems shall be of a material and design approved by the Soils Engineer and acceptable to the City Engineer. The permittee shall provide periodic monitoring during the process of subdrain installation to conform with approved plans and Soils Engineer's recommendations. Such monitoring shall be done by the soil, testing agency employed by the permittee. The locations of the subdrains shall be shown on a plan approved by the Soils Engineer.
- (c) *Fill Material.* Organic material shall not be permitted in fills. Soil containing small amounts of roots may be allowed, providing that the roots are in a quantity and distributed in a manner that will not be detrimental to the future use of the site and the use of such material is approved by a Soils Engineer and the City Engineer.

No rock or similar irreducible materials with a maximum dimension greater than 8 inches (0.20 meters) shall be buried or placed in fill except as recommended by the soil engineer, approved by the City Engineer, and meeting the following requirements:

- (1) The oversized material shall be placed 10 feet (3.05 meters) or more below finish grade.
- (2) The Soils Engineer shall be present while the oversized material is placed and covered.
- (3) The reports submitted by the Soils Engineer shall acknowledge the placement of the oversized material and whether the work was performed in accordance with his recommendations and the approved plans.
- (4) The location of oversized rock dispersal areas shall be shown on the as-graded plan.

Rock or similar irreducible materials less than 8 inches (0.20 meters) in greatest dimension shall be placed in such a manner as to prevent nesting of oversize particles and to assure that all voids are filled with fine-grained materials.

- (d) The fill shall be spread in a series of loose lifts, each not exceeding 8 inches (0.20 meters) in thickness, and shall be compacted by sheepsfoot roller or other approved method after each layer is spread. The next lift shall not be placed until the compacted lift is tested or authorized by the Soils Engineer or City Engineer, respectively.
- (e) The moisture content of the fill material shall be controlled at the time of spreading and compaction to obtain required relative compaction. A soils engineer shall establish the allowable moisture range, which minimizes settlement.
- (f) All fills shall be compacted to a minimum of ninety percent of maximum density as determined by A.S.T.M. Method D 1557. The City Engineer may approve, alternate minimum compaction densities where a Soils Engineer or Geotechnical Engineer has determined to the satisfaction of the City Engineer that alternate minimum compaction densities are necessary to achieve the maximum benefit from soil consolidation. If the required degree of relative compaction cannot be attained on sloped surfaces, the slope shall be over

filled and cutback until the compacted inner core is exposed. Field density shall be determined by A.S.T.M. Method D 1556 or other methods approved by the City Engineer, which give equivalent results.

- (g) A sufficient number of tests shall, occur to satisfy the Engineer that all requirements have been met. As a minimum, a field density test, as herein provided, shall be taken for each 2 feet (0.61 meters) of fill, or portion thereof, measured vertically from the lowest point of the area to be filled and for each 1,000 cubic yards (764.60 cubic meters) of fill placed. In addition, in the case of subdivisions, at least one field density test shall be taken on each lot which receives fill. One field density test shall be taken on the slope face for every 4 feet (1.22 meters) in elevation of the slope or every 1,000 square feet (92.90 square meters) of slope for each lot.

- 6. *Rough Grading Certificate.* All fills regulated by this Part shall be tested for relative compaction by a soils testing agency. A certificate of compliance with the terms testing of this Section and the Grading Permit, setting forth densities, relative compaction and other soil characteristics shall be prepared and signed by a Soils engineer. This report shall be submitted to and approved by the City Engineer before any final approval of the fill is given and before any foundation construction begins.
- 7. *Toe location.* Fills, that toe out on natural slopes which are steeper than 2:1 shall not be permitted.

Exception: The City Engineer may permit the placement of fill on slopes as steep as 1½:1, if the applicant shows through subsurface exploration and appropriate analysis by both a Soils Engineer and an Engineering Geologist, to the satisfaction of the City Engineer, that the material making up the natural slope is capable of supporting the proposed fill.

- 8. *Toe setback.* Toes of fill slopes shall not be made nearer to a project boundary line than one half the height of the fill, but need not exceed a horizontal distance of 20 feet (6.10 meters). Fill slopes shall not be divided horizontally by property lines. If the City Engineer determines that the above is unnecessary because of special conditions, the City Engineer may make adjustments as a condition of the Grading Permit.
- 9. *Combined cut and fill slopes.* Combined cut and fill slopes shall meet the requirements of paragraphs (a), (b), (c), and (d) of this

Section insofar as steepness, height, and benching are concerned except that, where the slope exceeds 25 feet (7.62 meters), in height, the required bench shall be placed at the top of the cut slope.

10. *Old fills.* All existing man-made fills, on any and all sites will be properly evaluated and recommendations and design criteria for corrective measures shall be included within the soils engineering report, if deficiencies exist.
11. *Progress reports.* Periodic soils reports by a Soils Engineer certifying the compaction or acceptability of all fills will be required monthly for projects extending 3 months or longer. These shall include, but need not be limited to, inspection of cleared areas and benches prepared to receive fill, and removal of soil and unsuitable materials, the placement and compaction of fill materials, and the inspection of buttress fills, subdrains, and similar devices.

The City Engineer may require sufficient inspection by an Engineering Geologist to assure all geologic conditions have been adequately considered. Where geologic conditions warrant, the City Engineer may require periodic geologic reports. These inspections and reports may be required to include but need not be limited to inspection of cut slopes, canyons during clearing, operations for groundwater and earth material conditions, placement of subdrains, benches prior to placement of fill, and possible spring locations.

G. Planting and Irrigation of Cut and Fill Slopes.

1. *General.* All fill and cut slopes greater than 4 feet (1.22 meters) in vertical height, and any natural slopes from which native vegetation has been removed, which are determined by the City Engineer to be subject to erosion shall be planted and irrigated with an irrigation system to promote the growth of ground cover plants to protect the slopes against erosion, as required by this section. The owner shall be responsible for planting and maintaining all slopes where such is required in this section.
2. *Minimum requirements.*
 - (a) Low slopes to 15 feet (4.57 meters) in vertical height.
 - (1) Plant with grass or ground cover plants as recommended on the approved planting schedule. Other plants recommended

by a Landscape Architect will be considered for approval by the Parks Manager.

- (2) An irrigation system shall be installed to irrigate these slopes as a part of the onsite plumbing installation, unless otherwise approved by the City Engineer.
- (3) The owner shall water the slopes which have been planted with grasses and ground cover plants at sufficient time intervals to promote growth.

Exception: Where the City Engineer finds the slope is located in such an area to make hand watering possible, conveniently located hose bibs will be accepted in lieu of the required irrigation system when a hose no longer than 50 feet (15 meters) would be necessary.

(b) Medium slopes 15 feet (4.57 meters) to 38 feet (11.58 meters) in vertical height.

- (1) Plant with grass or ground cover plants as recommended on the approved planting schedule. Other plants may be recommended by a landscape architect for approval by the Parks Manager.
- (2) In addition to ground cover plants, approved shrubs having a one gallon minimum size at 10 feet (3.05 meters) on center in both directions on the slope may be used when the irrigation system is available for irrigation may be used. The plants and planting pattern may be varied to include trees upon the recommendation of the landscape architect and approved by the Parks Manager.
- (3) An adequate irrigation system shall be installed during grading, prior to planting of shrubs and trees.

(c) High slopes 38 feet (11.58 meters) or over in vertical height.

- (1) Plant with grass or ground cover plants as recommended on the approved schedule. Other plants recommended by landscape architects may be submitted to the Parks Manager for approval.
- (2) In addition to ground cover plants, approved shrubs having a minimum one-gallon size at ten feet (3.05 meters) on center

in both directions on the slope, or trees at 20 feet (6.10 meters) on center both ways may be used.

A combination of shrubs and trees may be utilized. This plant and planting pattern may be varied upon the recommendation of a landscape architect and approval by the Parks Manager.

- (3) Slopes exceeding a height where a drainage terrace is required shall be planted with shrubs, minimum size one-gallon, two feet (0.61 meters) on center, parallel to the benches and within two feet (0.61 meters) of the uphill side. Larger varieties may be staggered one each side of the bench as an alternative.
- (4) An adequately designed irrigation system shall be installed prior to planting shrubs and trees.

3. *Special Requirements For Irrigation Systems.*

- (a) Plans for irrigation system shall be submitted to and approved by the Parks Manager prior to installation.
- (b) The irrigation system shall be designed to provide a uniform water coverage at a rate of precipitation of not less than 1/10 inch (2.54 millimeters) per hour nor more than 3/10 inch (7.62 millimeters) per hour on the planted slope. In no event shall the rate of precipitation duration of sprinkling be permitted to create a saturated condition and cause an erosion problem, or allow the discharge of excess water into any public or private street.
- (c) A check valve and balance cock shall be installed in the system where drainage from sprinkler heads will create an erosion problem.
- (d) Adequate backflow protection shall be installed in each irrigation system as required by the Uniform Plumbing Code.
- (e) A function test of the irrigation system shall be performed by the installer for every irrigation system prior to approval.
- (f) Where PVC pipes are used on slopes, they shall be a minimum of schedule 40 embedded at least 8 inches (203.20 mm) below grade. Such pipes may be exposed for above ground installation provided they are ASTM rated as resistant to ultraviolet sunlight. All risers, sprinkler heads, valves and

fittings shall be brass or galvanized metal, or rated as sunlight resistant.

4. *Plants.* All plants required by this section shall be selected from a list approved by the Parks Manager.

H. Erosion Control and Drainage Devices.

1. *Water disposal.* All drainage facilities shall be designed to carry waters to the nearest practicable drainage way approved by the City Engineer as a safe place to deposit such waters. Erosion of ground in the area of discharge shall be prevented by installation of non-erosive downdrains or other devices.
2. *Interceptor terraces.* Paved (concrete) interceptor terraces shall have a minimum width of 8 feet (2.44 meters), a minimum depth of one foot (0.30 meters), and shall be installed on the face of all cut and fill slopes at intervals not to exceed 25 feet (7.62 meters) measured along a vertical plane.

The longitudinal slope of interceptor terraces shall not be less than 4 percent or more than 12%, and any change in rate of grade within these allowable slopes shall increase the grade in the direction of flow.

A single run of a terrace shall not exceed 150 feet (45.72 meters) to a downdrain.

Downdrains shall be embedded and round pipes enclosed in concrete shaped as shown in the City Standard Construction Details, or an alternate design which is prepared by a Civil Engineer and acceptable to the City Engineer.

The cross section of interceptor terraces shall meet the specifications shown in the City Standard Construction Details.

3. *Diverter terraces.* Paved (concrete) diverter terraces, 3 feet (0.91 meters) in width and 1 foot (0.30 meters) in depth, constructed as shown in the City Standard Construction Details shall be installed at the top of all cut slopes where the tributary drainage area above has a slope exceeding 10 horizontal to 1 vertical and a horizontal projection of greater than 40 feet (12.19 meters).
4. *Berms.* Berms as shown in the City Standard Construction Details, shall be constructed at the top of all slopes.

5. *Vee channels.* Where a slough wall is required at the toe of the slope or a retaining wall is built to support any cut or fill, a Vee Channel shall be constructed behind the wall to carry off the slope waters.

6. *Inlet structures, downdrains and outlet structures.*

(a) Inlet structures. Inlet structures shall be of concrete or galvanized steel hot-dipped in asphalt or equivalent. The inlet shall be grated or of such entry shape as to prevent entry of objects of greater than 4 inches (0.10 meters) in dimension. Wet structures shall be placed as shown in the City Standard Construction Details and shall be so shaped as to minimize entry losses. An overflow structure into the "Vee" downdrains shall be provided.

(b) Downdrains. Pipe downdrains shall be Corrugated Steel Pipe, galvanized, hot dipped in asphalt or equivalent with paved invert or reinforced concrete pipe, D-850 or P.V.C. SDR 35 or HDPE in conformance with the City Standard Construction Details, and shall have a diameter of a size required by run-off calculations, but not less than 12 inches (0.30 meters).

Open downdrains shall be of concrete or corrugated galvanized steel hot-dipped in asphalt or its equivalent with paved invert. Open channel downdrains shall be designed by a Civil Engineer and shall have a minimum capacity equal to four times the required pipe size. The alignment of downdrains shall be such as to conserve velocity head.

(c) Outlet structures. Outlet structures shall be of concrete or as approved by City Engineer.

Where outletting into streets, the structure shall be of a design approved by the City Engineer.

Where outletting into natural watercourses or other approved locations, the structure shall be provided with adequate velocity reducers, diversion walls, rip-rap, concrete aprons or similar energy dissipator as approved by City Engineer or other jurisdictional agency. All slope drainage shall be collected and disposed of in the drainage device.

7. *Run-off computations.* Run-off shall be based upon the proper 50-year isohyetal and the run-off calculation shall be based upon the latest methods approved by the City Engineer.

8. *Drainage dispersal wall.* A drainage dispersal wall shall be constructed in conformance with the City Standard Construction Details whenever it is necessary to convert channel flow to sheet flow.
9. *Site drainage.* All building pads shall slope a minimum of 2% to an approved drainage device or to a public street. Where used, the drainage device shall be an adequately designed system of catch basins and drain lines which conducts the water to a street, storm drain or natural watercourse approved by the City Engineer, as a safe place to deposit such waters. Refer to City Building Code for fine grading requirements and drainage around building foundations (Chapter 12.115).
10. *Maintenance of drainage.* Drainage in conformance with the provisions of this Part shall be maintained during and subsequent to construction. Suitable access shall be provided to permit cleaning and maintenance of all drainage and erosion control devices.

I. Driveway Slopes.

Driveways shall have a maximum slope of 5:1 (20%) and shall terminate at both ends with vertical curves. The vertical curve of the bottom of the driveway slope shall have a minimum length of 5 feet (1.52 meters). The vertical curve at the top of the driveway slope shall have a minimum length of 10 feet (3.05 meters). Vertical curves at grade changes, which exceed 0.5 %, shall have a minimum length of 5 feet (1.52 meters).

Sec. 12.220.050. Building Setback

- A. *Building setback.* Building foundations shall be located clear of all slopes in accordance with the California Building Code (CBC) as adopted by the City of San Buenaventura.

Sec. 12.220.060. Buttress Fills.

- A. *General.* A buttress fill is a designed compacted earth fill used for providing lateral support to an unstabilized soil mass. All buttress fills shall comply with the most restrictive of the requirements of this section or other sections of this Part.
- B. *Foundation.* The ability of the foundation soil to support the buttress shall be investigated and a Soils Engineer shall provide specifications

for keying of the base of the buttress and for bonding the buttress to the natural ground.

- C. *Base width.* The minimum base width of a buttress fill shall not be less than 15 feet (4.57 meters). The width of a buttress fill may vary uniformly to a top width of not less than 12 feet (3.66 meters).
- D. *Height.* The maximum height of buttress fill shall be 30 feet (9.14 meters) unless the Soils Engineer provides substantiating calculations to justify a height greater than 30 feet.
- E. *Slope.* The exposed surface of a buttress fill shall not exceed a slope of 2:1.

Exception: The City Engineer may permit a buttress fill to be made which creates an exposed surface steeper in slope than 2:1 provided:

1. The use of the steeper slope is determined to be necessary due to special design limitations on the site; and
 2. The gradient does not exceed 1 1/2 horizontal to 1 vertical; and
 3. The applicant shows through investigation, subsurface exploration, analyses and report by both a qualified Soils Engineer and an Engineering Geologist to the City Engineer's satisfaction, that the buttress fill to be used and the underlying bedrock supporting the fill will have strength characteristics sufficient to produce a stable slope with a minimum factor of safety not less than 1.5 under static loads.
- F. *Subdrain.* Subdrains which blanket the entire back face of the buttress or which occur at intervals shall be provided to prevent buildup of hydrostatic pressure. Details of subdrains shall be provided by the Soils Engineer or Geotechnical Engineer.
 - G. *Blanket seals.* Blanket seals of relatively impervious material shall be required on cut pads above buttress fills where grading exposes the strata to infiltration of water. The blanket shall be of 2-foot (0.61 meters) minimum thickness or of such greater dimension as specified by the Soils Engineer or Geotechnical Engineer.
 - H. *Design.* Design calculations for all buttress fills shall be prepared by a Civil Engineer or Soils Engineer and submitted to the City Engineer.

For design purposes, a maximum value of 75 psf (3.6 kN/m²), cohesion and an angle of internal friction of six degrees may be used to determine the resistance of the bedding plane. Use of greater values shall be substantiated by tests taken along the probable slip plane under conditions simulating the worst possible field conditions. The method of performing these tests shall be included in the Soils Engineer's reports.

The mass of earth to be retained shall be assumed to extend a minimum distance from the top face edge of the buttress equal to (a) the vertical height of the buttress when the surface slope above does not exceed 6 degrees, or (b) 100 feet (30.48 meters) when the surface slope above the buttress exceeds 6 degrees.

The type, percentage of compaction, cohesion and angle of internal friction of the materials to be placed in the buttress shall be specified. The buttress fill shall be designed for a minimum safety factor of 1.50 based upon the smaller value of ultimate or residual shear strength of the fill material.

- I. *Deviations.* Upon recommendation by a Soils Engineer, deviations from the above requirements other than those set forth in Subsection "E" above may be approved if the City Engineer determines that the proposed deviations do not endanger life, limb, health, property, safety, or public welfare.

Sec. 12.220.070. Areas Subject to Geologically Hazardous Conditions.

- A. *General.* The provisions of this section shall be fully complied with prior to issuance of a grading permit in areas subject to existing or potential slides, unstable soil, or geologic hazards or other hazardous conditions as determined by the City Engineer.
- B. *Records and maps.* The City Engineer or Building Official may adopt maps delineating areas of relative hazard for the application of this section.
- C. *Permission to do work.*
 1. *Active landslide and historic landslide areas.* No building or grading permits shall be issued for development in active or historic landslide areas until, and unless, stabilization of the entire slide or soil mass which may have an adverse effect on the proposed development or access thereto can be satisfactorily demonstrated to the City Engineer and the Building Official.

2. *Prehistoric landslide or questionable areas.* No building or grading permit shall be issued for development in prehistoric landslide or questionable areas except by specific approval of the City Engineer and the Building Official, based upon a geological report by an approved Soils Engineer or Geologist, attesting to the apparent safety of the proposed developments, and stating that the development is not located in an area subject to slides or unstable soil which may have an adverse effect on the proposed development or access thereto.

3. *Geologically Hazardous Areas.*
 - (a) An engineering geology report by a Geotechnical Engineer or Engineering Geologist shall be submitted to the City Engineer for approval for all grading or construction sites which meet the following criteria:
 - (1) All projects which require a soils, geotechnical, or geological report under other sections of this Part.
 - (2) All projects which are within the boundaries of special study areas, seismic zones, geohazard zones, or moderate or high liquefaction hazard zones.

Exclusions: Single story additions to single family residences may be excluded from these requirements if the City Engineer or the Building Official determines that such exemption would not endanger life, limb, health, property, safety or public welfare.
 - (b) Where the engineering geology report determines that there is a significant potential geological hazard, mitigation measures as recommended in the report and approved by the City Engineer shall be performed.

4. *Other conditions.* If, in the opinion of the City Engineer or the Building Official, there is evidence of potentially hazardous conditions other than those covered by Items 1, 2, and 3 of subsection "c", above satisfactory reports from approved Soils Engineers and Engineering Geologists may be required. If such reports are required, a permit may be issued if the reports testify to the apparent safety of the development. If in the opinion of the City Engineer, or Building Official it is found that the area in question has elements of hazard or, if the reports so indicate, a permit may be refused.

SECTION 2: The City Council hereby determines that this Ordinance is exempt from review under CEQA and Section 15308 of the State CEQA Guidelines because it is a set of regulations adopted for the protection of the environment. Further, this Ordinance consists only of minor revisions and clarifications to an existing body of local regulations and specification of procedures related thereto and will not have the effect of deleting or substantially changing any regulatory standards or findings required therefore. This Ordinance, therefore, is an action is being taken for enhanced protection of the environment and that does not have the potential to cause significant effects on the environment, directly or indirectly.

SECTION 3: This Ordinance shall take effect upon the 31st day after its final passage and adoption.

PASSED AND ADOPTED this 16th day of April 2007

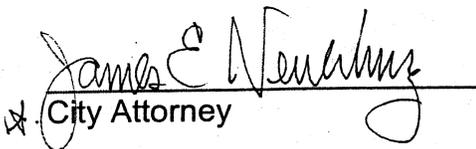


Carl E. Morehouse, Mayor

ATTEST:



City Clerk
APPROVED AS TO FORM:



City Attorney

STATE OF CALIFORNIA)
COUNTY OF VENTURA) ss
CITY OF SAN BUENAVENTURA)

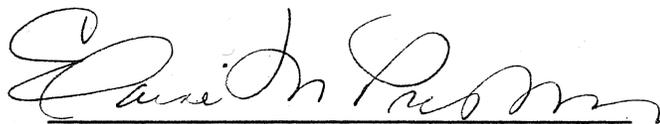
I, ELAINE M. PRESTON, Deputy City Clerk of the City of San Buenaventura, California, certify that the foregoing Ordinance was passed and adopted by the City Council of the City of San Buenaventura, at a regular meeting on April 16, 2007, by the following vote:

AYES: Councilmembers Brennan, Summers, Fulton, Andrews, Monahan, Weir, and Morehouse.

NOES: None.

ABSENT: None.

IN WITNESS WHEREOF, I have set my hand and affixed the seal of the City of San Buenaventura on April 17, 2007.

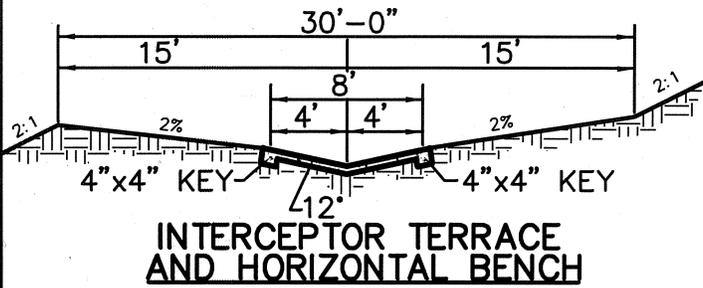


Deputy City Clerk

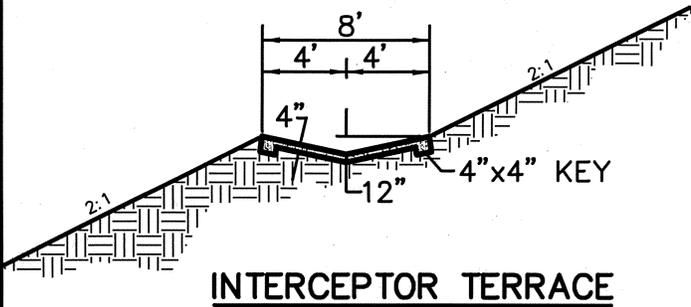


INTERCEPTOR AND DIVERTER TERRACE NOTES

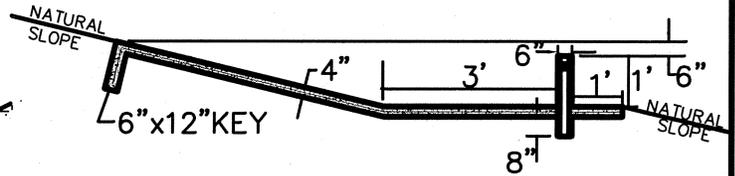
1. TERRACES SHALL BE CONCRETE AND SHALL BE FORMED BEFORE POURING CONCRETE. FORMS SHALL BE SET TO GRADE AND ALIGNMENT AT ALL BREAKS IN THE CROSS-SECTIONS. THE CONCRETE SHALL BE SCREED TO CROSS-SECTION.
2. ALL TERRACES SHALL BE REINFORCED WITH 6"x6" - #10 WELDED WIRE FABRIC OR EQUIVALENT REINFORCING STEEL.
3. THE LONGITUDINAL SLOPE SHALL BE NOT LESS THAN 4% AND NOT MORE THAN 12%.
4. REQUIRED EVERY 25' OF VERT. HEIGHT FOR CUT & FILL SLOPE
5. A SINGLE RUN SHALL NOT EXCEED 150' TO A DOWN DRAIN.
6. ANY CHANGE IN THE RATE OF SLOPE SHALL INCREASE THE GRADE IN THE DIRECTION OF FLOW.



INTERCEPTOR TERRACE AND HORIZONTAL BENCH



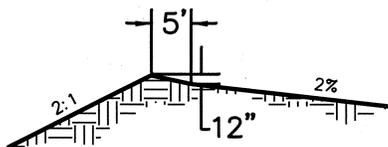
INTERCEPTOR TERRACE



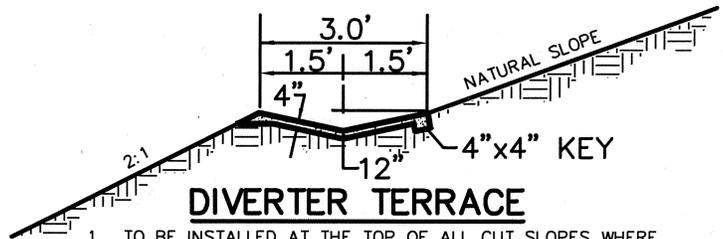
DRAINAGE DISPERSAL WALL

TO CONVERT CHANNEL FLOW TO SHEET FLOW

1. GROUT ALL CELLS AND OMIT ALLHEAD JOINTS FIRST COURSE
2. WALL TO BE LOCATED ALONG CONTOUR LINE TO ESTABLISH UNIFORM OVERFLOW OR SEEPAGE.
3. LENGTH OF WALL TO EQUAL LENGTH OF CONTOUR LINE AFFECTED BY GRADING.
4. DRAINAGE DISPERSAL WALLS SHALL BE REINFORCED WITH 6"x6" - #10 WELDED WIRE FABRIC OR EQUIVALENT REINFORCING STEEL.

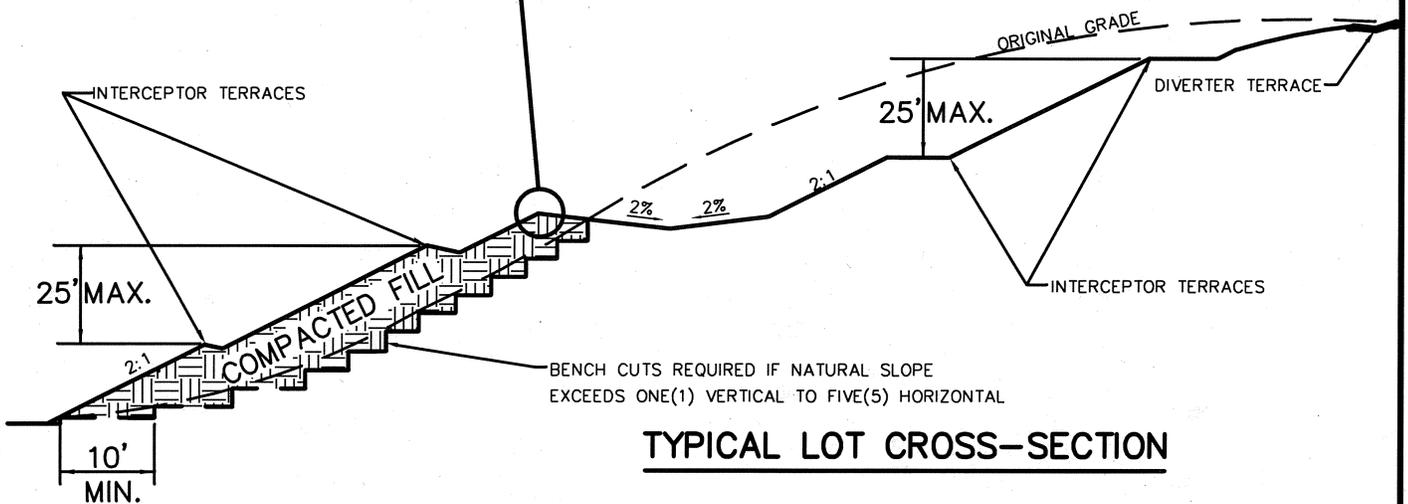


BERM DETAIL



DIVERTER TERRACE

1. TO BE INSTALLED AT THE TOP OF ALL CUT SLOPES WHERE THE TRIBUTORY DRAINAGE AREA ABOVE HAS A SLOPE EXCEEDING 10(TEN) HORIZONTAL TO 1(ONE) VERTICAL; AND A HORIZONTAL PROJECTION OF GREATER THAN 40 FEET.



TYPICAL LOT CROSS-SECTION

CITY OF SAN BUENAVENTURA

PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

DESIGNED BY: B.W.

DRAWN BY: bh

CHECKED BY: K.W.

APPROVED BY: Robert L. Williams
LAND DEVELOPMENT ENGINEER

**TERRACE DRAINS AND
TYPICAL LOT CROSS SECTION**

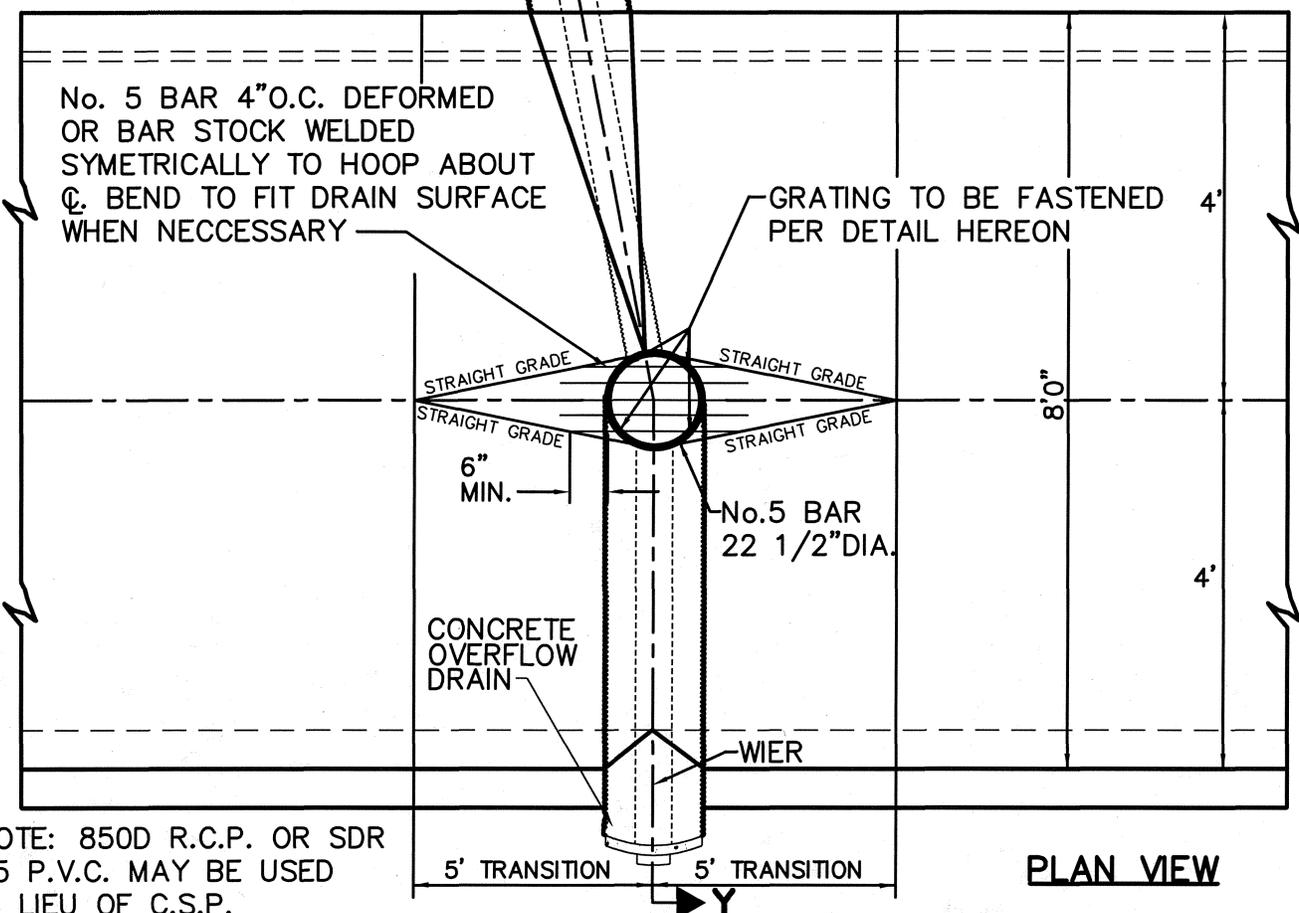
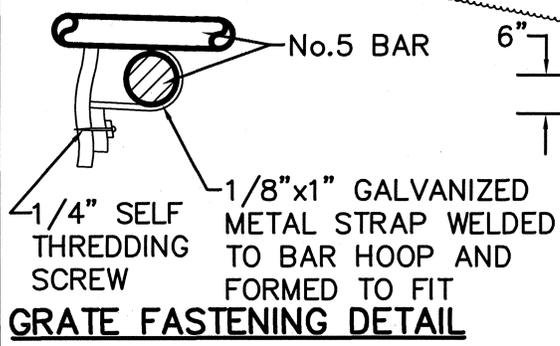
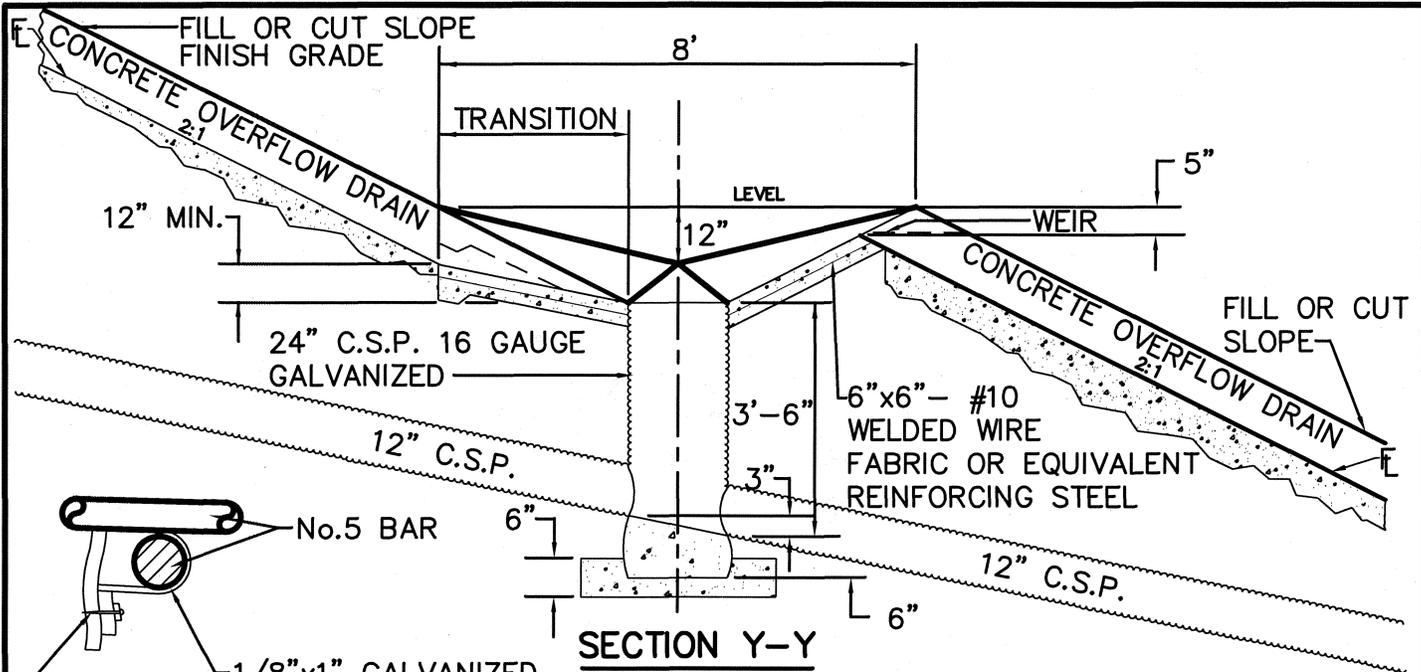
APPROVED BY: R.C.R.
CITY ENGINEER R.C.E. 37064

DATE 5-16-07

STD. DET. NO.

501

SHEET
1 of 1



NOTE: 850D R.C.P. OR SDR 35 P.V.C. MAY BE USED IN LIEU OF C.S.P.

CITY OF SAN BUENAVENTURA

PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

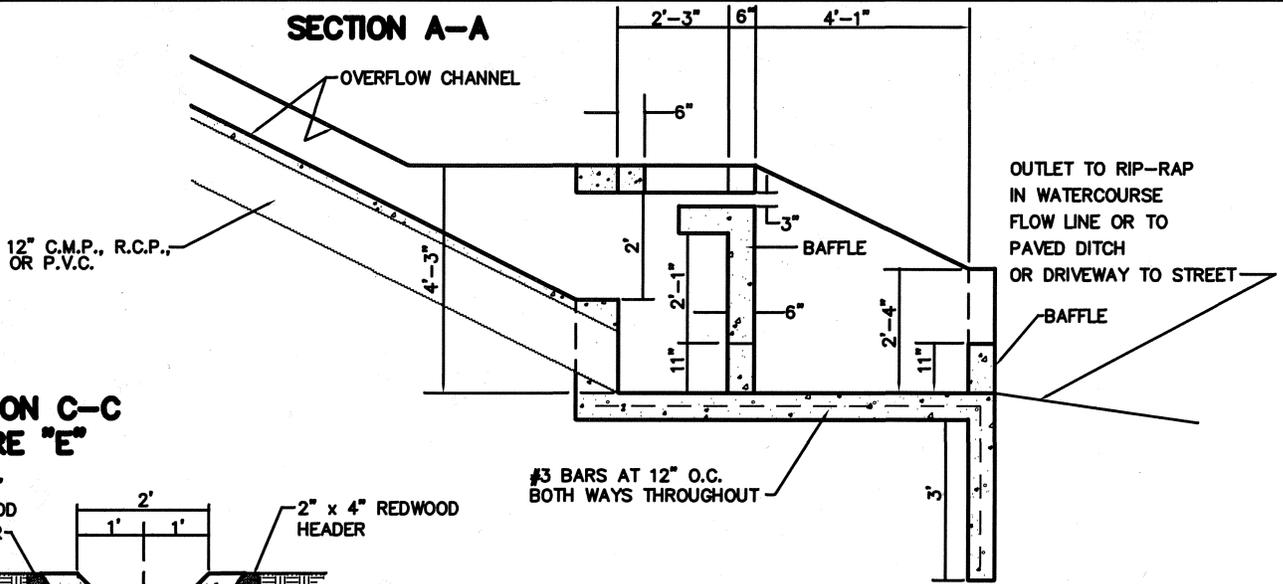
DESIGNED BY: K.L.
 DRAWN BY: D.T.
 CHECKED BY: A.C.
 APPROVED BY: Robert L. Williams
 LAND DEVELOPMENT ENGINEER

**TERRACE DRAIN
INLET STRUCTURE**

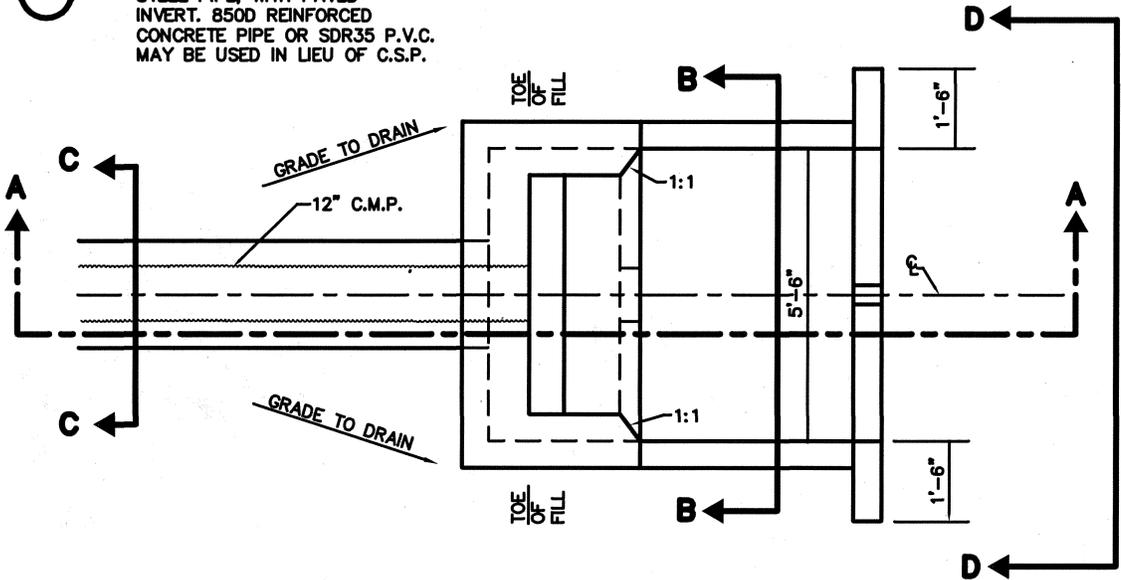
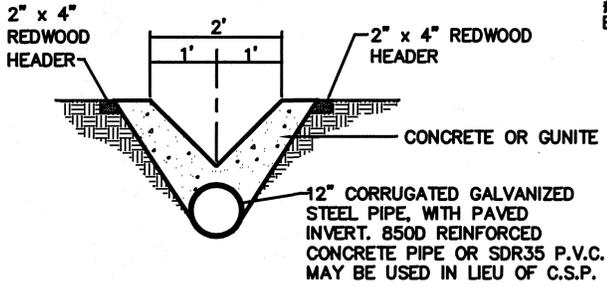
APPROVED BY: [Signature] DATE 5-16-07
 CITY ENGINEER R.C.E. 37064

STD. DET. NO.
502
SHEET
1 of 1

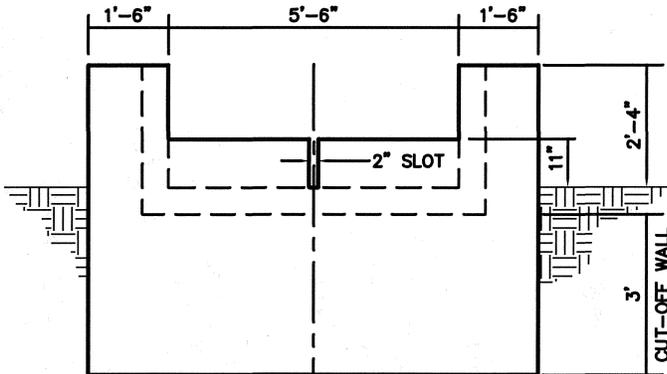
SECTION A-A



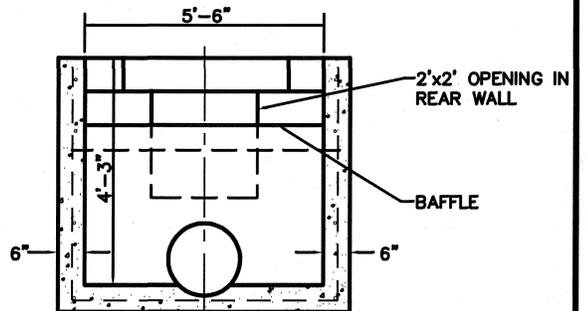
**SECTION C-C
FIGURE "E"**



SECTION D-D



SECTION B-B



CITY OF SAN BUENAVENTURA

PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

DESIGNED BY: B.W.

DRAWN BY: bh

CHECKED BY: K.W.

APPROVED BY: Robert L. Williams
LAND DEVELOPMENT ENGINEER

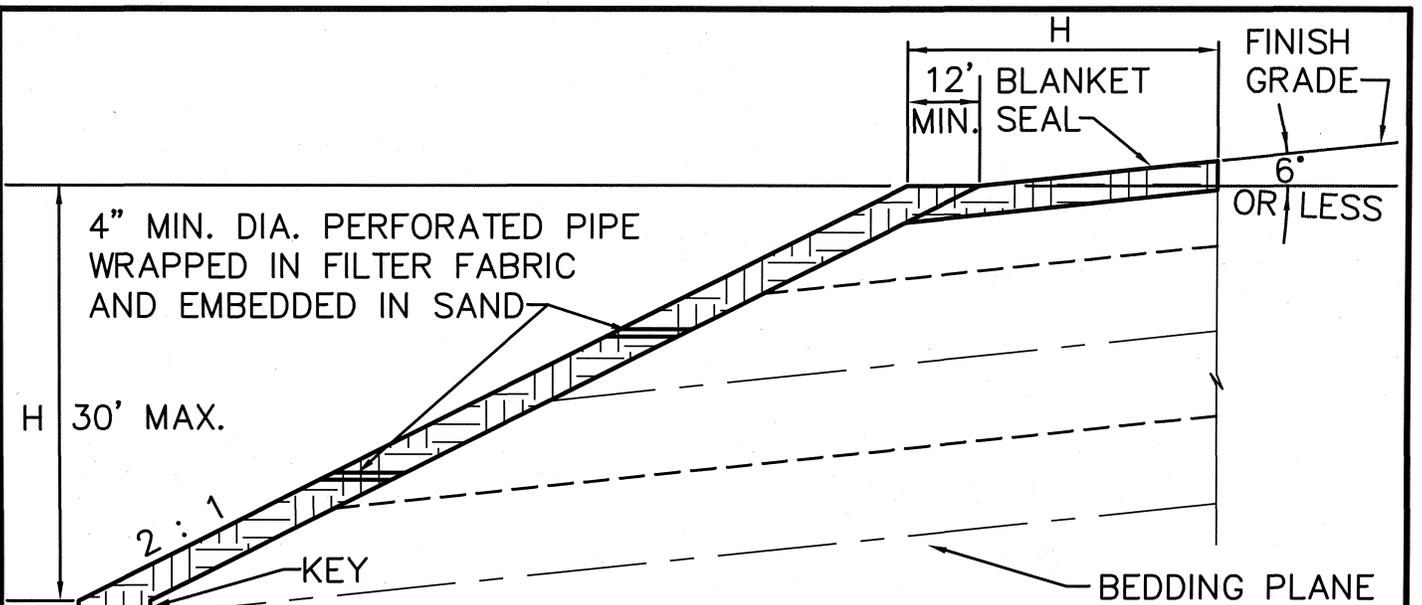
**TERRACE DRAINS
OUTLET STRUCTURE**

APPROVED BY: [Signature] DATE 5-16-07
CITY ENGINEER R.C.E. 37064

STD. DET. NO.

503

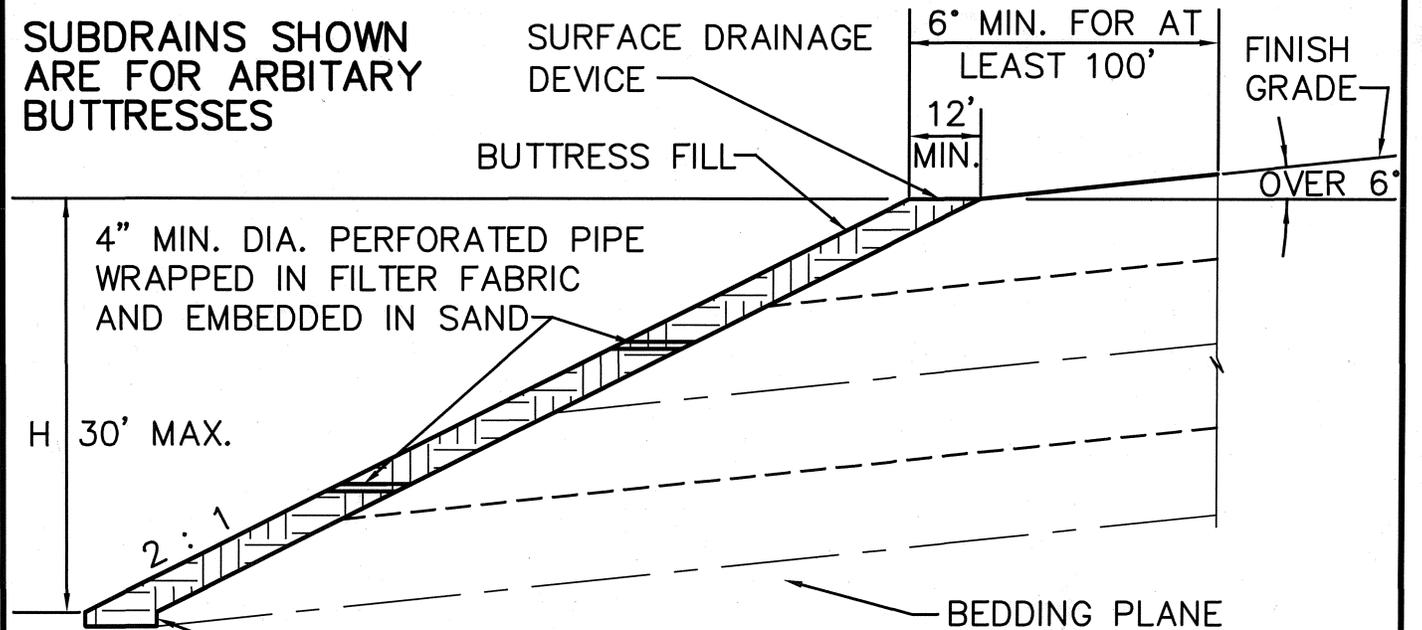
SHEET
1 of 1



SURFACE SLOPE ABOVE BUTTRESS NOT EXCEEDING 6°

1. THE MAIN BASE WIDTH OF A BUTTRESS FILL SHALL NOT BE LESS THAN 15' NOR LESS THAN ONE-HALF IT'S HEIGHT. WHICHEVER IS GREATER.
2. BLANKET SEALS 2' IN THICKNESS OF RELATIVELY IMPERVIOUS MATERIAL SHALL BE REQUIRED ON CUT PADS ABOVE BUTTRESS FILLS WHERE GRADING EXPOSES THE STRATA TO INFILTRATION OF WATER.

SUBDRAINS SHOWN ARE FOR ARBITRARY BUTTRESSES



SURFACE SLOPE ABOVE BUTTRESS EXCEEDING 6°

CITY OF SAN BUENAVENTURA

PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

DESIGNED BY: M.E.
DRAWN BY: D.T.
CHECKED BY: A.C.
APPROVED BY: Robert L. Williams
LAND DEVELOPMENT ENGINEER

APPROVED BY: R.C.E. DATE 5-16-07
CITY ENGINEER R.C.E. 37064

STD. DET. NO.
504
SHEET
1 of 1

BUTTRESS FILLS