Dept of
DEVELOPMENT SERVICES
Building Division

Dept of
PUBLIC WORKS
Engineering Division

Grading & Stormwater Pollution Prevention Implementation Manual

A cooperative effort of the Department of Public Works and Department of Development Services.

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City Council Approval Date:
December 8, 2003

Approved for Printing:

Director of Development Services — **Date** 1-13-04

Director of Public Works/City Engineer — **Date** 1/13/04

RESOLUTION NO. 5189

A RESOLUTION OF THE CITY COUNCIL OF THE
CITY OF SEAL BEACH APPROVING THE GRADING AND STORMWATER
POLLUTION PREVENTION MANUAL,
2003 EDITION

WHEREAS, The Public Works Department of the City of Seal Beach has presented to the City Council a certain publication which is desired by the Public Works Department to be used in the design and construction of grading projects within the City of Seal Beach; and

WHEREAS, Said publication is the Grading and Stormwater Pollution Prevention Manual, 2003 Edition; and

WHEREAS, The City Council desires to approve said publication as the minimum standard to be followed for the design and construction of grading projects within the City of Seal Beach and for projects requiring a Grading Permit; and to authorize the Director of Public Works/City Engineer to make changes to said publication as required by new regulations and for the protection of public health and safety;

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF SEAL BEACH DOES HEREBY RESOLVE, DECLARE, DETERMINE AND ORDER AS FOLLOWS:

SECTION 1. Adoption. adopts said publication as the minimum standard to be followed for the design and construction of grading projects within the City of Seal Beach.

SECTION 2. Authorization. Authorizes the Director of Pubic Works/City Engineer to make changes to said publication as required by new regulations and for the protection of public health and safety.

PASSED, APPROVED AND ADOPTED by the City Council of the City of Seal Beach at a meeting thereof held on the 8th day of December, 2003 by the following vote:

AYES: Councilmembers Sinton, Campbell, Dean Larson, Yost

NOES: Councilmembers None

ABSENT: Councilmembers None

Mayor

ATTEST:

City Clerk

STATE OF CALIFORNIA)
COUNTY OF ORANGE) SS
CITY OF SEAL BEACH)

I, Joanne M. Yeo, City Clerk of the City of Seal Beach, California, do hereby certify that the foregoing resolution is an original copy of Resolution Number 5189 on file in the Office of the City Clerk, passed, approved and adopted by the City Council of the City of Seal Beach at a meeting thereof held on the 8th day of December, 2003.

City Clerk

Grading & Stormwater Pollution Prevention Manual

1. **Introduction**
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3. **Grading Manual:** General and Special Provisions
4. **Filing Instructions/Frequently Asked Questions**
5. **Grading Plan:** Application
6. **Grading Plan**: Checklist for Submittal
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16. **Grading Permit:** As Built Submittal Process
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18. ***Stormwater Pollution Prevention***: Construction Section A-8.0 Local Implementation Plan - Section A-8.0 Construction Component
19. ***Stormwater Pollution Prevention:*** Construction Runoff Guidance Manual

Chapter 9.45 Grading

§ 9.45.005 Definitions. [§ 5A-1]

For the purpose of this chapter, the following words and phrases shall mean:

A. *Approved plans*: the current grading plans bearing the city engineer's stamp of approval.

B. *Approved testing agency*: a facility approved by the city engineer as being capable of performing, under the direction of a civil engineer, the tests required by this chapter.

C. *Borrow*: earth material acquired from an off-site location for use in grading.

D. *Clearing, brushing and grubbing*: mechanical removal of vegetation.

E. *Compaction*: mechanical densification of a fill.

F. *Earth material*: rock or soil in any combination.

G. *Excavation*: mechanical removal of earth material.

H. *Existing grade*: the grade prior to grading.

I. *Fill placement*: mechanical deposit of earth material.

J. *Finished grade*: the stage at which the grade fully conforms to the approved plans.

K. *Grade*: the vertical location of the ground surface.

L. *Grading*: excavation or fill placement in any combination.

M. *Natural grade*: the grade unaltered by artificial means.

N. *Precise grading permit*: a grading permit that is issued on the basis of approved plans that show the precise structure location, finished elevations and on-site improvements.

O. *Preliminary grading permit*: a grading permit that is issued on the basis of approved plans that show interim building pad drainage but do not show precise structure location, finished elevations and on-site improvements.

P. *Rough grade*: the stage at which the grade approximately conforms to the approved plans.

Q. *Slope*: an inclined ground surface, the inclination of which is expressed as a ratio of vertical distance to horizontal distance.

§ 9.45.010 Implementation Manuals. [§ 5A-2]

A. The city engineer may prepare a grading manual and a stormwater pollution prevention manual to facilitate implementation of this chapter. In the event of a conflict between the provisions of this code and either such manual, the provisions of this code shall control.

B. Any permit issued pursuant to this chapter may be suspended or revoked for failure to comply with the grading manual or the stormwater pollution prevention manual. Additionally, any person who fails to comply with either such manual shall be guilty of a misdemeanor.

§ 9.45.015 Grading Permit Requirement. [§ 5A-3]

No person shall perform any of the following activities without first obtaining from the city engineer, and maintaining in full force and effect, a grading permit:

A. Grading or land disturbing or land filling on existing grade that is preparatory to grading.

B. Clearing, brushing and grubbing.

C. Construction of pavement surfacing in excess of 2,500 square feet on existing grade for the purpose of a road or parking lot. This provision does not include resurfacing or maintenance of existing paved surfaces.

D. Alteration of an existing watercourse, channel or revetment by means of excavation, fill placement or installation of rock protection or structural improvements.

§ 9.45.020 Approval or Denial of Grading Permit. [§ 5A-4]

A. Grading permit applications shall be filed with the city engineer on a city-provided form. Applications shall include plans and specifications, as well as supporting data consisting of soil engineering and engineering geology reports,

unless waived by the city engineer. In lieu of preliminary soil engineering reports, the city engineer may require inspection and testing by an approved testing agency.

B. The city engineer may approve or conditionally approve a preliminary grading permit or a precise grading permit if there are no grounds for denial; otherwise the permit shall be denied. A grading permit shall be denied if the city engineer makes any of the following findings:

1. The proposed work does not comply with the general plan, the zoning ordinance or an applicable specific plan and no conditions can be imposed to ensure compliance.

2. The proposed work is liable to constitute an unreasonable hazard to life or property and no conditions can be imposed to mitigate such risk to an acceptable level.

3. The property proposed to be graded is subject to an unreasonable geological or flood hazard and no conditions can be imposed to mitigate such risk to an acceptable level.

C. A grading permit shall automatically expire and become null and void if the authorized work is not commenced within 180 days from the date of permit issuance. Additionally, a grading permit shall automatically expire and become null and void if the authorized work is suspended or abandoned after commencement for a period of 180 days.

§ 9.45.025 Grading Permit Exemptions. [§ 5A-5]

A grading permit shall not be required for any of the following.

A. Excavations below finished grade for basements, building footings, retaining walls or other structures authorized by a building permit provided that the excavation does not have an unsupported height greater than 5' after completion of the structure.

B. Cemetery graves.

C. Refuse disposal sites governed by other laws.

D. Agricultural crop management practices occurring on land that has been farmed during each of the preceding three years.

E. Emergencies posing an immediate danger to life or property, or substantial flood or fire hazards.

F. Excavations within public right-of-way that are performed in accordance with an encroachment permit.

G. Activities meeting all of the following requirements:

1. The land area that is disturbed or filled is 2,500 square feet or less.

2. Natural and finished slopes are less than 10%.

3 Volume of earth material disturbed, stored or used is 50 cubic yards or less.

4. Rainwater runoff is diverted, either during or after construction, from an area smaller than 2,500 square feet.

5. Any impervious surface that is created is 2,500 square feet or less.

6. No drainage way has its stormwater carrying capacity modified.

7. The activity does not take place within 100' from the top of a coastal bluff, the bank of a watercourse, the mean high water-mark (line of vegetation) of a body of water or within the wetlands associated with a watercourse or water body. The distance shall be determined by horizontal measurement.

§ 9.45.030 Grade Elevation Permit. [§ 5A-6]

A. Except as provided in paragraph (d) below, no person shall raise the existing grade of a residential lot without first obtaining a grade elevation permit from the planning commission.

B. Applications for a grade elevation permit shall be submitted to the director of development services on a city-provided form. Notice of a grade elevation permit application shall be given no less than 10 days before the hearing date by publication in a newspaper of general circulation and by mailing to all property owners and addresses within a 300' radius of the subject property.

C. The planning commission may approve, conditionally approve or deny a grade elevation permit after conducting a public hearing on the application. A grade elevation permit shall be denied unless the planning commission makes the following findings:

1. The change of grade will not result in a significant impairment of the primary view from any property located within a 300' radius.

2. The change of grade is compatible with the neighborhood.

D. The director of development services and the city engineer may jointly waive the grade elevation permit requirement in either of the following circumstances:

1. When raising the existing grade is necessary for flood hazard reduction in accordance with law.

2. When raising the existing grade is the only feasible alternative for proper drainage function of the site.

§ 9.45.035 Security. [§ 5A-7]

A. When deemed necessary, the city engineer may require any person issued a grading permit to post security to assure that the work shall be completed in accordance with the permit, the approved plans and this chapter. The amount and form of the security shall be determined by the city engineer.

B. Upon determining that a default has occurred in the performance of any grading permit condition, or that there is a failure to comply with an order issued, the city engineer shall give written notice thereof to the permittee and to the surety if applicable. Such notice shall specify the work to be done, the estimated cost thereof and the deadline for completion. If the work is not satisfactorily performed prior to the deadline, the estimated cost of completing the work (including a mobilization charge equal to 10% of such cost) shall be demanded from the surety or obtained from the security, and the city engineer shall cause such work to be performed.

§ 9.45.040 Fees. [§ 5A-8]

A. The city council may by resolution establish fees to cover the estimated reasonable cost of processing permits and administration of this chapter.

B. If the city engineer performs emergency or other work on private property, the owner of such property shall reimburse the city in full for all expenses incurred by the city. Such expenses shall include without limitation a mobilization charge equal to 10% of the cost of performance of the work.

§ 9.45.045 Inspections. [§ 5A-9]

A. The city engineer may inspect a property prior to approving a grading permit in order to confirm that the application accurately reflects existing conditions.

B. The city engineer may inspect grading operations at the various stages of work requiring approval and at any more frequent intervals necessary to determine whether adequate control is being exercised by the permittee and its professional consultants. If any work to be inspected has been covered or concealed, the city engineer may require the permittee to expose such work at its own cost.

C. Upon determining that any work does not comply with the terms of a grading permit, grade elevation permit, this code or other applicable law, or that the soil or other conditions are not as stated on the permit, the city engineer may order the work stopped. Such order shall be effectuated by service of written notice on any person supervising the performance of the work. The grading operations shall not proceed until written authorization is received from the city engineer.

§ 9.45.050 Grading Standards. [§ 5A-10]

Grading operations shall be conducted in compliance with the following standards:

A. The permittee shall maintain a copy of the approved plans in an obvious and accessible location on the subject property.

B. No grading operations shall be performed between 8:00 p.m. and 7:00 a.m., or on Sundays or federal holidays, on any property located within ½ mile of a structure for human occupancy. The city engineer may waive this restriction upon making a finding that it is unnecessary to protect the public health, safety or welfare in a particular situation. The city engineer may impose more stringent restrictions upon making a finding that they are necessary to protect the public health, safety or welfare in a particular situation.

C. Where an excess of 1,000 cubic yards of earth material is moved on public roadways, all the following requirements shall be satisfied:

1. The permittee shall apply water, a palliative or both as directed by the city engineer to minimize spillage of dust onto public property.

2. The permittee shall maintain public property free of dust, earth material and debris from the grading operations.

3. The grading operations shall be performed in accordance with the approved plans.

4. The last 50' of the access road, as it approaches the intersection with the public roadway, shall have a grade less than or equal to 3%. The access road shall either be posted with flagmen or there shall be 300' of unobstructed sight distance to the intersection from both the public roadway and the access road.

5. A stop sign shall be posted at the entrance of the access road to the public roadway.

6. Advance warning "Truck Crossing" signs shall be posted on the public roadway 400' of the access intersection from each direction. The sign shall be diamond shaped, each side being 30" in length, shall have an orange background, and the letters thereon shall be 5" in height. The sign shall be placed 8' from the edge of the pavement and the base of the sign shall be 5' above the pavement level. The sign shall be covered or removed when the access intersection is not in use.

E. The permittee shall provide the city engineer with two copies of all reports, compaction data and recommendations from its civil engineer, soil engineer, engineering geologist, grading contractor and the approved testing agency.

F. If the permittee's civil engineer, soil engineer, engineering geologist, grading contractor or the approved testing agency finds that the grading operations are not being done in conformance with the approved plans, the discrepancies shall be reported in writing to the city engineer immediately.

G. Grading operations shall stop whenever, during the course of the work, the permittee replaces the civil engineer, the soil engineer, the engineering geologist, the approved testing agency, or the grading contractor of record. This provision shall not apply if the permittee notifies the city engineer in writing of the responsible professional change, and the new responsible professional notifies the city engineer in writing that the work performed to date has been reviewed and approved. This provision also shall not apply if the responsible professional change is between individuals in a single firm.

§ 9.45.055 Completion of Work. [§ 5A-11]

A. The permittee shall notify the city engineer when the grading operation is ready for final inspection. The city engineer shall not issue final approval until all work has been satisfactorily completed in accordance with the approved plans.

B. No building permit shall be issued for a site until grading has been completed pursuant to a precise grading permit.

§ 9.45.060 Violations. [§ 5A-12]

A. Any person who causes grading to be done contrary to the provisions of a grading permit, a grading elevation permit, the approved plans or this chapter is guilty of a misdemeanor.

B. In the event that any grading is done contrary to the provisions of a grading permit, a grading elevation permit, the approved plans or this chapter, the city may take any of the following actions:

1. Record with the county recorder a notice of grading violation. The city engineer shall cause the notice of grading violation to be removed upon determining that the violation no longer exists.

2. Withhold issuance of a building permit, performance of building permit inspections or issuance of a certificate of use and occupancy.

3. Deny approval of a zone change, subdivision map or discretionary permit.

SUBARTICLE 1. GENERAL PROVISIONS

1.1 Authority

City of Seal Beach Grading Ordinance authorizes the Director of Public Works/City Engineer to formulate such rules, procedures, and interpretations as may be necessary or convenient to administer the Grading Ordinance. Such rules, procedures and interpretations, and amendments thereto shall be referred to as the City of Seal Beach Grading Manual.

1.2 Scope and Purpose

The City of Seal Beach Grading Manual (hereinafter referred to as Grading Manual) is a compilation of rules, procedures, and interpretations necessary to carry out the provisions of the City of Seal Beach Grading Ordinance. The Grading Manual is organized to follow the contents of subarticles in the Grading Ordinance.

The purpose of the grading manual is to assist users of the Grading Ordinance by supplementing it with detailed information regarding rules, interpretations, standard specifications, procedures, requirements, forms, and other information applicable to control excavation, grading, and earthwork construction in the City of Seal Beach. Should any portion of the Grading Manual be found to be in conflict with the provisions of the Grading Ordinance, the code provision shall govern.

1.3 Adoption and Revision

The provisions of the Grading Manual including revisions or additions thereto shall be prepared and incorporated by the Director of Public Works/City Engineer.

SUBARTICLE 2. DEFINITIONS

2.1 Definitions

The definitions contained in this subarticle are supplemental to those contained in the Grading Ordinance.

AS-GRADED is the surface conditions extant on completion of grading.

BEDROCK is relatively unweathered, consolidated, or relatively hard formation that underlies the soil and other unconsolidated material.

BENCH is a relatively level step excavated into earth material on which fill is to be placed.

DIRECTOR shall mean Director of Public Works/City Engineer of the City of Seal Beach or his duly delegated representative.

EARTH MATERIAL is any rock, natural soil, or fill and/or any combination thereof.

FAULT is a fracture in the earth's crust along which movement has occurred. A *FAULT* is considered active if movement has occurred within the last ±11,000 years (Holocene geologic time).

FLATLAND SITE is any site which does not fit the definition of a hillside site.

HILLSIDE SITE is a site which entails cut and/or fill grading of three feet (3') or more in vertical height below or above natural ground; or a combination fill-over-cut slope equal to or greater than five feet (5') in vertical height; or where the existing grade is 20 percent (%) or greater; and which may be adversely affected by drainage and/or stability conditions within or from outside the site, or which may cause an adverse affect on adjacent property.

KEY is a designed compacted fill placed in a trench excavated in earth material beneath the toe of a proposed fill slope.

KEYWAY is an excavated trench into competent earth material beneath the toe of a proposed fill slope.

RETAINING WALL is a wall designed to resist the lateral displacement of soil or other materials.

SLOPE STABILITY

GROSS SLOPE STABILITY is the stability of slope material below a plane approximately three to four feet (3-4') deep measured from and perpendicular to the slope face.

SURFICIAL SLOPE STABILITY is the stability of the outer three to four feet (3-4') of slope material measured from and perpendicular to the slope face.

SULFATE (SO) is a chemical compound occurring in some soils which, at above certain levels of concentration, has a corrosive effect on ordinary Portland cement concrete and some metals.

SUBARTICLE 3. RESERVED

SUBARTICLE 4. ORGANIZATION AND ENFORCEMENT

4.1 Powers and Duties of the Director

The powers and duties of the Director shall be as specified in the Grading Ordinance. For single lot residential and commercial re-development or as deemed appropriate, the Director may at his/her discretion delegate the authority for grading to the Building Official.

SUBARTICLE 5. GRADING PERMIT REQUIREMENTS

5.1 Grading Permit Application

The applicant shall submit a complete grading permit/plan check application package including all the items and contents listed on the City application form unless otherwise specified by the Director: Incomplete applications will not be accepted.

5.2 Grading Plan Clearances

Prior to issuance of a grading permit, written clearance may be required from other City departments and divisions and may be required from other agencies. Depending on site conditions and location, written clearance or permits may be required from, but not limited to, the following agencies:

a. California Regional Water Quality Control Board/NPDES
b. California Department of Fish and Game
c. California Division of Industrial Safety
d. Orange County Fire Marshal (fuel modification)
e. Orange County Human Services Agency (Vector Control)
f. California Coastal Commission

5.3 Grading Plan Check

Information on Plans and Specifications: Plans submitted for plan check shall be drawn to scale upon City of Seal Beach standard grading sheets and shall be of sufficient clarity to indicate the nature and extent of the work proposed and show in detail that they will conform to the provisions of this grading manual, the Grading Ordinance, and all relevant laws, ordinances, rules, and regulations.

The first sheet of each set of plans shall give the location of the work and the name and address and telephone number of the owner, the person by whom they were prepared, the project soil engineer, engineering geologist, and when required the project paleontologist and archaeologist. A plan of workable size at a reduced scale may be required when the grading plans exceed two (2) sheets in number.

a. Preliminary Grading Permit:

The plans shall include but not be limited to the following information:

1. Vicinity map of the site.

2. Property limits clearly labeled or otherwise identified and accurate contours of existing ground and details of terrain and area drainage a minimum of fifteen feet (15') beyond property limits (spot elevations may be used on flatland sites).

3. Prominent or natural terrain features.

4. Limiting dimensions including setbacks between property lines and top and toe of slopes, elevations of finish contours to be achieved by the grading, proposed drainage devices and related construction.

5. Details (plan and section) of all surface and subsurface drainage devices, walls, cribbing, dams, and other protective devices to be constructed with or as a part of the proposed work together with a map showing the drainage area and estimated runoff from the area served by any drains.

6. Location of any existing buildings, structures, or trees on the property where the work is to be performed and the location of any buildings or structures on land of adjacent owners which are within 15 feet of the property, or which may be adversely affected by the proposed grading operations.

7. If the grading project includes the movement of earth material to or from the site in an amount considered substantial by the Director or greater than 1000 cubic yards, the permittee shall submit the haul route for review and approval by the City Traffic Engineer prior to the issuance of a grading permit. The Traffic Engineer may suggest alternate routes or special requirements in consideration of the possible impact on the adjacent community environment or effect on the public right-of-way itself, which the Director shall prescribe as a condition of the grading permit. There shall be no additional deposit for the haul route plan check.

8. Additional plans, drawings, calculations, environmental impact information, or other reports required by the Director.

9. Sites larger than one acre shall require a storm water pollution control plan which depicts short- and long-term structural and non-structural Best Management Practices (BMP) in compliance with NPDES.

b. Precise Grading Permit:

The plans shall include the following in addition to the above items listed for Preliminary Grading Permits:

1. The footprint or allowable building area of all proposed structures (including appurtenances).

2. Setback distances between structures and top and toe of slopes.

3. Detailed finish grade and finish floor elevations.

4. Flowlines for typical lot drainage.

5. Details for building footing and side yard swale relationship (including extra height of footing).

6. All proposed concrete flatwork and/or driveways.

7. Sight distance diagrams at intersections.

The Precise Grading Plan shall identify all previous preliminary grading permits issued for the project site. It may include sheets from the preliminary grading plan which show original topography in lieu of reproducing original contours on the precise plan.

c. Grading Plan Submittal List:

Preliminary and Precise Grading Plan Submittal Sheets are included in Appendix A, which identify the items typically required during the grading plan review process.

5.4 Soil and Engineering Geology Report Content

Two (2) copies of each report required in this section shall be submitted as part of the application for grading permit. Each report shall contain all information applicable to the project. Guidelines are provided in Appendix B, "Technical Guidelines for Soil and Geology Reports".

Recommendations contained in the approved reports shall be incorporated into the grading plans and specifications and shall become conditions of the grading permit.

a. Preliminary Soil Report:

Soil engineering reports shall be required for all projects for which a grading permit is required.

The preliminary (initial) soil engineering report shall include information and data regarding the nature, distribution, and the physical and chemical properties of existing soils; conclusions as to adequacy of the site for the proposed grading; recommendations for general and corrective grading procedures; foundation and pavement design criteria and shall provide other recommendations, as necessary, commensurate with the project grading and development.

b. Preliminary Engineering Geology Report:

Engineering geology reports shall be required for all developments on hillside sites where geologic conditions are considered to have a substantial effect on existing and/or future site stability. This requirement may be extended to other sites suspected of being adversely affected by faulting.

The preliminary (initial) engineering geology report shall include a comprehensive description of the site topography and geology; an opinion as to the adequacy of the proposed development from an engineering geologic standpoint; an opinion as to the extent that instability on adjacent properties may adversely affect the property; a description of the field investigation and findings; conclusions regarding the effect of geologic conditions on the proposed development; and specific recommendations for plan modification, corrective grading, and/or special techniques and systems to facilitate a safe and stable development, and shall provide other recommendations as necessary, commensurate with the

project grading and development. The preliminary engineering geology report may be combined with the soil engineering report.

c. Seismicity Report:

A seismicity report shall be required as a condition for issuance of a grading permit and/or building permit for all subdivisions (tracts) and all sites for critical structures (fire stations, nursing homes, etc.) and major structures, as determined by the Director or Building Official.

The report shall be prepared by an engineering geologist, geophysicist, or a civil engineer with expertise in earthquake technology and its application to buildings and other civil engineering works. The scope of the report shall be commensurate with the proposed development and shall reflect the start of art. The seismic report may be combined with the soil and engineering geology reports.

d. Final Reports:

Rough grade and final soil and engineering geology reports shall be submitted in accordance with Subarticle 15 of this Grading Manual.

5.5 Permit Issuance

Either a preliminary or precise grading permit may be issued for a project after the approval of a Tentative Tract or Tentative Parcel Map. Grading permits subject to the above subdivision requirements shall not be issued prior to the approval of the Tentative Maps unless otherwise provided in zoning regulations or approved by the Director.

5.6 Permit Expiration

The time limitations and provisions of Section 106.4, Permits Issuance, of the Uniform Building Code as amended relating to expiration of grading permits, are included in Appendix C.

SUBARTICLE 6. DEPOSITS

All deposits are collected on a full cost recovery basis for both plan check and inspection as specified by resolution of the City Council. Costs incurred by the City are charged against the deposit. Should the deposit be insufficient to cover the City cost, the applicant shall immediately deposit more funds. If the applicant fails to do so, all work shall cease until such time the deposit is restored.

6.1 Plan Checking Deposit

Plan checking deposits on each site shall be based on (1) the volume (cubic yards) of excavation or fill, whichever is greater, and (2) the estimated value of on-site drainage improvements. The amount of the plan checking deposit for grading plans shall be as specified by resolution of the City Council.

For the purpose of this section, on-site drainage improvements shall include but need not be limited to pavement surfacing, inlets, outlet structures, subsurface drainage devices, rip rap, curb and gutter, and erosion control facilities. Asphalt concrete is classified as a secondary drainage device when used for roadway and parking lot surfacing, or other similar uses for the purposes of determining plan checking and permit deposits.

Separate permits and/or deposits shall apply to retaining walls, major drainage structures, and other improvements as prescribed by the Director.

Plans submitted prior to issuance of a permit which are substantially incomplete, or changed from a previous submittal, as determined by the Director, and require additional plan checking are either subject to rejection or shall require a new plan check deposit to be charged by the Director.

The deposit for checking substantial revisions to previously approved grading plans for which a valid permit is active shall be based on the deposits computed from the difference of the total new yardage and/or valuations and the original yardage and/or valuations. The deposit increment shall be calculated at the rate of the combined original and new yardage and/or valuation. The deposit increment used shall be the adopted deposit in effect at the time the revisions were approved. The deposit may be waived if in the opinion of the Director it is not warranted due to the minor nature of the charges.

Erosion control plans checked subsequent to grading permit issuance shall be treated as a substantial revision for the purpose of determining plan checking deposits.

6.2 Pre-inspection Deposit

Before issuance of a grading permit, the Director may collect a grading preinspection deposit, as specified by City Council resolution, to verify site conditions or other special requirements. Where subdivision (tract), multiple housing, or commercial units are part of one grading site, only one deposit is required. Where individual lots are preinspected separately, a deposit shall be charged for each site.

6.3 Grading Permit Deposit

Grading permit deposits on each site shall be based on (1) the volume (cubic yards) of excavation or fill, whichever is greater, and (2) the estimated value of on-site drainage improvements. On-site drainage improvements shall be considered the same as described for plan checking deposits in this Subarticle.

The deposit(s) for authorizing additional grading work to that under a valid grading permit, including erosion control work, shall be computed as specified for plan checking substantial revisions in this Subarticle. No allowance for reduced earthwork volume or valuation shall be permitted.

6.4 Erosion Control Deposit

Plan check deposits shall be based on the estimated value of on-site erosion control improvements. If improvements are shown from the previous rainy season and no changes have been made, no additional deposit will be assessed.

Inspection deposits shall be collected annually based on the estimated value of the improvements.

6.5 Grading Permit Renewal Deposit

Not used

6.6 Reinspection Deposit

When any reinspection is required due to the negligence of the permit holder, his agent, or other responsible persons, or due to the failure of said parties to comply with previous correction instructions, a deposit as established by resolution shall be charged by the Director for each such inspection. The deposit shall be paid before any further inspections are made.

This subsection is not to be interpreted as requiring reinspection deposits the first time a job is rejected for failure to comply with the requirements of this Manual, but as controlling the practice of calling for inspection before the job is ready for such inspection or reinspection.

6.7 Investigation Deposit

Any investigation deposit as established by resolution may be charged by the Director whenever any work for which a permit is required by the Grading Ordinance has been commenced without first obtaining said permit. This deposit shall be paid, and the investigation shall be made prior to the issuance of any permit for said work.

An investigation deposit may be charged for any investigation of a building, structure, site, or any other related work, requested by an owner or authorized agent of such owner. An investigation deposit shall not be charged for complaints against projects under a valid grading permit or for investigations of hazardous conditions as determined by the Director.

6.8 Refunds

a. Permit deposit refunds will be made in an amount equal to whatever City costs has been expended to date of the request, except that no refund will be made for less then fifty dollars ($50.00), and no refund will be made if one (1) year has elapsed from the date of permit issuance.

b. Plan check deposit refunds will be made in an amount equal to whatever City costs has been expended to date of the request, except that no refund will be made for less then fifty dollars ($50.00), and no refund will be made if one (1) year has elapsed from the date of permit issuance

c. Permit and plan check deposits will be refunded in their entirety when inadvertently paid for a project outside the jurisdiction of the City of Seal Beach

or as duplicate deposits, except that no refund will be made if one (1) year has elapsed from the date of payment.

d. All requests for refunds shall be made in writing to the Director.

SUBARTICLE 7. BONDS

7.1 Types of Bonds

In lieu of a surety bond, the applicant may file a cash bond or a letter of credit or time certificate of deposit from financial institutions subject to regulation by the State or Federal governments in an amount equal to that which would be required in the surety bond.

7.2 Bond Amount

The amount of a grading bond shall be based on 30% of the cost of the project cut or fill volume, whichever is greater, and 100% of the cost of the drainage improvements and erosion control facilities being constructed or installed under the permit.

The amount of the bond may be reduced by the Director to the extent that he determines that potential hazards exist and the nature of the project does not justify the full amount.

The amount of the bond may also be increased by the Director up to 100% of the cost of the total cut and fill volume and 100% of the drainage improvements and erosion control facilities if the potential hazards or nature of the project justifies such an increased amount.

7.3 Bond Conditions

Every bond shall be made on the form contained in Appendix D or contain the conditions prescribed therein and be approved as to form by the City Attorney.

7.4 Term of Bond

The term of each bond shall begin upon the date of permit issuance and shall remain in effect until the completion of the work to the satisfaction of the Director.

7.5 Substitution

A substitute bond may be filed in lieu of the above-mentioned bonds and the Director may accept the same if it is suitable to insure completion of the work remaining to be performed and in proper form and substance.

SUBARTICLE 8. CUTS

8.1 Cut Slopes

Cut slopes shall be no steeper than two horizontal to one vertical (2:1). In special circumstances where no evidence of previous instability exists and when recommended in the soil engineering or engineering geology report and approved by the Director,

slopes may be constructed steeper than 2:1. In no case shall slopes steeper than 2:1 be approved if 2:1 or flatter slopes are required as a condition of approval of any project by the Planning Commission or the City Council without appropriate revision of said condition by the approving body.

Recommendations in the soil engineering and/or engineering geology report for cut slopes to be steeper than 2:1 shall be accompanied by a slope stability analysis for all slopes greater than five feet (5') in height. The soil engineer shall consider both gross and surficial stability of the slope and provide a written statement approving the slope stability.

SUBARTICLE 9. FILLS

9.1 Fill Location

Fill slopes shall not be constructed on natural slopes steeper than two horizontal to one vertical (2:1) or where the fill slope toes out within twelve feet (12') horizontally of the top of existing or planned cut slopes, outside the permit area boundary, except in the case of slopes of minor height when approved by the Director.

9.2 Preparation of Ground

The ground surface shall be prepared to receive fill by removing vegetation, noncomplying fill, topsoil, and other unsuitable materials and by scarifying to provide a bond with the new fill. Where existing slopes exceed five feet (5') in height and/or are steeper than five horizontal to one vertical (5:1), the ground shall be prepared by benching into sound bedrock or other competent material, as determined by the soil engineer and/or engineering geologist and approved by the Director. The lowermost bench beneath the toe of a fill slope shall be a minimum ten feet (10') in width. The ground surface below the toe of fill shall be prepared for sheet flow runoff, or a paved drain shall be provided.

Where fill is to be placed over a cut slope, the bench under the toe of the fill shall be at least fifteen feet (15') wide, but the cut slope must be made before placing fill and shall meet the approval of the soil engineer and/or engineering geologist as suitable foundation for fill.

Unsuitable soil is soil which is not dense, firm, or unyielding; is highly fractured; or has a high organic content; and in the opinion of the Director, civil engineering, soil engineer, or engineering geologist, is not competent to support other soil or fill, to support structures, or to satisfactorily perform the other functions for which the soil is intended.

9.3 Fill Material

Detrimental amounts of organic material shall not be permitted in fills. Except as outlined below, no rock or similar irreducible material with a maximum dimension greater than twelve inches (12") shall be buried or placed in fills.

The Director may permit placement of larger rock when the soil engineer properly devises a method of placement, continuously inspects placement, and approves the fill stability and competency. The following conditions shall also apply:

a. Prior to issuance of the grading permit, potential rock disposal area(s) shall be delineated on the grading plan.

b. Rock sizes greater than twelve inches (12") in maximum dimension shall be ten feet (10') or more below grade, measured vertically. This depth may be reduced upon recommendation of the soil engineer and approval of the Director providing that the permitted use of the property will not be impaired.

c. Rocks greater than twelve inches (12") shall be placed so as to be completely surrounded by soils; no nesting of rocks will be permitted.

9.4 Compaction

All fills shall be compacted to a minimum of ninety percent (90%) of maximum density as determined by ASTM D1557 or equivalent, as approved by the Director. Field density shall be determined in accordance with ASTM D1556, D2922, or D2937, or equivalent, as approved by the Director.

Locations of field density tests shall be determined by the soil engineer or approved testing agency and shall be sufficient in both horizontal and vertical placement to provide representative testing of all fill placed. Testing in areas of a critical nature or special emphasis shall be in addition to the normal representative samplings.

Exceptions:

a. Fills excepted in the Grading Ordinance and where the Director determines that compaction is not a necessary safety measure to aid in preventing saturation, settlement, slipping, or erosion.

b. Where lower density and very high potential expansion characteristics as defined by Table No. 18-1-B of the Uniform Building Code exist, lesser compaction may be granted by the Director upon justification and recommendation by the soil engineer.

Fill slopes shall be compacted to the finish slope face as specified above. The soil engineer shall provide specifications for the method of placement and compaction of the soil within the zone of the slope face.

Sufficient maximum density determinations by test method specified in Section 9.4 shall be performed during the grading operations to verity that the maximum density curves used are representative of the material placed throughout the fill.

9.5 Slope

Fill slopes shall be no steeper than two horizontal to one vertical (2:1). In special circumstances where no evidence of previous instability exists and when recommended in the soil engineering report and approved by the Director, slopes may be constructed steeper than 2:1. In no case shall slopes steeper than 2:1 be approved if 2:1 or flatter slopes are required as a condition of approval of any project by the Planning

Commission or the City Council without appropriate revision of said condition by the approving body.

Recommendations in the soil engineering report for fill slopes to be steeper than 2:1 shall be accompanied by a slope stability analysis for all slopes greater than five feet (5') in height. The soil engineer shall consider both the gross and surficial stability of the slope and provide a written statement approving the slope stability. In addition, the soil engineer shall recommend alternative methods of construction or compaction requirements necessary for surficial stability.

9.6 Utility Line Backfill

Utility line backfill beneath and adjacent to structures, beneath pavements, adjacent and parallel to the toe of a slope, and in sloping surfaces steeper than ten horizontal to one vertical (10:1), shall be compacted and testing in accordance with Subsection 9.4, Compaction, of this section. Alternately, relative self-compacting material may be used. The material specification and method of placement shall be recommended and inspected by the soil engineer and approved by the Director prior to backfilling.

Utility line backfill in areas other than those stated above need no specified placement method or compaction criterion, but shall require approval by the soil engineer.

The final utility line backfill report from the project soil engineer shall include an approval statement that the backfill is suitable for the intended use.

SUBARTICLE 10. SETBACKS

10.1 Setbacks from Permit Area Boundary

The tops of cuts and toes of fill slopes shall be set back as far as necessary from the outer property boundaries of the permit area, including slope easements, and in accordance with Detail 1.

10.2 Design Standards for Setbacks

The tops and toes of cut and fill slopes shall be set back from structures as far as is necessary for adequacy of foundation support and to prevent damage as a result of water runoff, erosion, or maintenance of the slopes.

Unless otherwise approved by the Director based on recommendations in the approved soil engineering and/or engineering geology report on the approved grading plan, setbacks shall be no less than shown in Detail 1.

10.3 Retaining Walls

Retaining walls may be used to reduce the required setback in accordance with Detail 1 when approved by the Director.

DETAIL 1

Min. Setback from Adjacent Slope					
H (hgt.) Feet	**a**	**b**	**c**	**d**	**e**
0<6	3’	7’	3’	5’	1’
6-14	5’	7’	H/2	H/2 5’ min	H/5
14-30	5’	H/2 10’ max.	H/2	H/2 10’ max.	H/5
+30	5’	10’	15’	10’	6’

TABLE A

H (hgt.) Feet	**Max. Hw**	**Min. Setback f**
0-6	3’	3’ min.
6-12	H/2	H/2
12-30	6’	H/2
+30	6’	15’

TABLE B

SEE Standard Drawing No. G-101 for Figure A and B

1. *PA* means permit area boundary and/or property line; *MFD* means manufactured surface.

2. Setbacks shall also comply with applicable zoning regulations.

3. Table A applies to manufactured slopes and 2:1 or steeper natural slopes. Setbacks from natural slopes flatter than 2:1 shall meet the approval of the Director.

4. "*b*" may be reduced to five feet (5') minimum if an approved drainage device is used; roof gutters and downspouts may be required.

5. "*b*" may be reduced to less than five feet (5') if no drainage is carried on this side and if roof gutters are included.

6. If the slope between "*a*" and "*b*" levels is replaced by a retaining wall, "*a*" may be reduced to zero and "*b*" remains as shown in Table A. The height of the retaining wall shall be controlled by zoning regulations.

7. "*b*" is measured from the face of the structure to the top of the slope.

8. "*d*" is measured from the lower outside edge of the footing along a horizontal line to the face of the slope. Under special circumstances "*d*" may be reduced as recommended in the approved soil report and approved by the Director.

9. The use of retaining walls to reduce setbacks (Figure B) must be approved by the Director.

10. "*f*" may be reduced if the slope is composed of sound rock that is not likely to produce detritus and is recommended by the soil engineer or engineering geologist and approved by the Director.

11. "*a*" and "*e*" shall be two feet (2') when *PA* coincides with arterial or local street right-of-way and when improved sidewalk is adjacent to right-of-way.

12. "*a*" shall be increased as necessary for interceptor drains.

SUBARTICLE 11. DRAINAGE AND TERRACING

11.1 Terrace

Terraces at least six feet (6') in width shall be established at not more than thirty-foot (30') vertical intervals on all cut or fill slopes to control surface drainage and debris, except that where only one (1) terrace is required, it shall be at mid-height. For cut or fill slopes greater than 60 feet and up to 120 feet in vertical height, one terrace at approximately mid-height shall be 12 feet in width. Terrace widths and spacing for cut and fill slopes greater than 120 feet in vertical height shall be designed by the civil engineer and approved by the Director. Suitable access shall be provided to permit proper cleaning and maintenance.

Swales or ditches on 6-foot- and 12-foot-wide terraces shall have a minimum gradient of six percent (6%) and must be paved with reinforced concrete, or approved equal, not less than three inches (3") in thickness. They shall have a minimum depth at the deepest point of eighteen inches (18") and a minimum paved width of five feet (5').

A single run of swale or ditch shall not collect runoff from a tributary area exceeding 13,500 square feet (projected) without discharging into a down drain.

11.2 Subsurface Drainage

Cut and fill slopes shall be provided with approved subsurface drainage as necessary for stability and protection of adjacent properties from the influence of groundwater. The design of such facilities shall be contained in the approved preliminary (initial) soil engineering or engineering geology report and/or shall appear on the approved grading plan pursuant to the approval of the soil engineer and/or the engineering geologist.

Subsurface drainage facilities shall be installed where natural and/or artificially introduced ground water affects or is likely to affect the project in a potentially unstable, hazardous, or otherwise deleterious manner.

11.3 Disposal

All drainage facilities shall be designed to carry unpolluted waters to the nearest practicable drainage way approved by the Director and/or other appropriate jurisdiction as a safe place to deposit such water. Erosion of ground in the area of discharge shall be prevented by installation of non-erosive down drains, rock slope protection (rip rap), energy dissipaters, or other approved devices including a return of flow to a natural sheet flow condition.

Where surface waters are to be conducted or directed onto adjacent property in an unnatural manner, the Director may require the applicant, prior to issuance of a grading permit, to obtain written permission from the owner of said property, accepting the surface waters.

Building sites shall have a sheet flow drainage gradient of two percent (2%) from the structure toward approved swales and/or drainage facilities, unless otherwise waived by the Director. The maximum drainage gradient of an earth swale shall be four percent (4%).

Grading of future building sites under a preliminary grading permit for the purpose of lot sales shall have a sheet flow drainage gradient of two percent (2%) toward approved drainage facilities. The Director may reduce this minimum gradient to one percent (1%) upon the written request of the applicant or his agent, providing the applicant demonstrates the following:

a. Finish grades for drainage of building sites can be constructed in accordance with the requirements of this subsection without importing additional fill, and

b. Sufficient approved swales and/or drainage facilities are constructed to prevent water from ponding on any lot supported by a natural slope or cut or fill slope over five feet (5') in height.

Finish grades, other than above, shall conform to the following minimum drainage gradient standards:

		Minimum Gradient
a.	Earth swales	1.00%
b.	Earth (sheet flow)	1.00%
c.	Asphalt pavement (sheet flow)	1.00%
d.	Concrete drain in earth area	0.50%
e.	Concrete gutter in asphalt paved area	0.28%

11.4 Interceptor Drains

Paved interceptor drains shall be installed along the top of all manufactured slopes where the tributary drainage area flows toward the slope and has a drainage path to top of slope greater than forty feet (40') measured horizontally. Interceptor drains shall be paved with a minimum of three inches (3") of reinforced concrete or gunite. They shall have a minimum depth of eighteen inches (18") and a minimum paved width of thirty-six inches (36") measured horizontally across the drain. The slope of the drain shall be approved by the Director.

11.5 Pipe Specifications

Pipe material specifications shall be shown on the approved plans or in the approved soil report by the civil engineer or soil engineer and approved by the Director. The pipe shall conform to the currently adopted Standard Specifications for Public Works Construction unless otherwise recommended by the civil engineer or soil engineer and approved by the Director.

Approved pipe includes:

a. Asbestos Cement Pipe (ACP):

D-load to be designed and shown on approved grading plans.

1. *Subdrain* – ASTM C508

2. *Stormdrain* – ASTM C663

(a) Maximum velocity, ten feet (10') per second

b. Acrylonitrile Butadiene Styrene (ABS) Solid Wall Pipe:

1. *Subdrain*

(a) ASTM D2752, SDR 35
(b) ASTM D1527, schedule 40

2. *Stormdrain*

(a) ASTM D2751, SDR 35, maximum velocity, eight feet (8') per second
(b) ASTM D1527, schedule 40, maximum velocity, fifteen feet (15') per second

c. Polyvinyl Chloride Plastic Pipe (PVC):

1. *Subdrain*

(a) ASTM D3034, SDR 35
(b) ASTM D1785, schedule 40

2. *Stormdrain*

(a) AST-4 D3034, SDR 35, maximum velocity, eight feet (8') per second
(b) ASTM D1785, schedule 40, maximum velocity, fifteen feet (15') per second

d. Reinforced Concrete Pipe (RCP):

D-load to be designed and shown on approved grading plans.

e. Corrugated Steel Pipe (CSP):

Metal thickness to be designed and shown on approved grading plans. Pipe to be bituminous coated. (Temporary installation only.)

f. Corrugated Aluminum Pipe (CAP):

Metal thickness to be designed and shown on approved grading plans. Pipe to be bituminous coated. (Temporary installation only.)

g. Nonreinforced Concrete Pipe:

Pipe shall be extra-strength.

The maximum flow design parameters may be exceeded in special circumstances when justified and recommended by the civil engineer and approved by the Director.

11.6 Area Drain Grates

The minimum cross-sectional area of area drain grates shall not be less than 100 square inches and shall contain a grate cover having 50% net opening.

11.7 Conduits Beneath Structures

Drainage conduits placed beneath structures shall conform to the requirements for sewer and waste plumbing. PVC and ABS pipes shall be schedule 40.

SUBARTICLE 12. ASPHALT CONCRETE PAVEMENT

12.1 Asphalt Concrete and Untreated Base Standards

When asphalt concrete pavement is proposed for surfacing of private parking lots, private streets, or other similar use, this paving, including the tack coat, prime coat, seal coat, and base course, shall conform to the current City of Seal Beach special provisions for asphalt concrete and untreated base materials unless otherwise approved by the Director.

Exception: The provisions of this section shall not apply when (1) another governmental agency is designated to assume the responsibility for plan check and inspection of private streets, and (2) a private asphalt concrete driveway providing access to a single residence is proposed.

Prime coat shall be placed on subgrade or untreated base when the base will be subjected to substantial construction traffic for long periods of time before asphalt concrete is placed, as determined by the soil engineer and approved by the Director.

Untreated base may require testing by an approved testing agency to insure it compliance with the applicable specifications and special provisions when determined necessary by the Director. Tests may include but shall not be limited to:

a. Sieve analysis
b. Sand equivalent
c. Percent of crushed particles retained by a No. 4 screen

12.2 Subgrade Compaction

The top six inches (6”) of the subgrade material shall be compacted to relative compaction of ninety percent (90%) of maximum density as determined by ASTM D1557 or approved equivalent unless otherwise recommended by the soil engineer in the preliminary soil report and approved by the Director.

12.3 Soil Sterilization

Weed killer shall be required on subgrade if no aggregate base is used.

12.4 Surface Drainage

All concentrated drainage in asphalt paved areas shall be carried by approved concrete drainage devices.

12.5 Pavement Structural Section

The project soil engineer or design civil engineer shall determine the pavement structural section(s) for parking lots/service roads and private streets based on: (1) soils tests of the subgrade soil(s) performed by an approved soil testing laboratory; and (2) anticipated traffic and/or loading conditions. The methods used for soil testing and pavement design shall be that currently in use by the City of Seal Beach for construction of public roadways, or methods acceptable to the Director. Unless otherwise specified

by the soil engineer and approved by the Director, the relative compaction of each layer of compacted base material shall not be less than 95 percent.

In lieu of a recommended structural section from the soil engineer or civil engineer for parking lots/service roads, the following standards may be used as determined by the Director.

		Pavement Structural Section
a.	Parking stall areas	3" AC / 6" UB
b.	Commercial driveways, perimeter drives, and loading areas	3" AC / 10" UB
c.	Industrial driveways, perimeter drives, and loading areas	3" AC / 12" UB

12.6 Driveways

Whenever access is taken from a street, alley, or driveway to an off-street parking area serving four (4) or less dwelling units, the driveway or other vehicular accessway shall have a maximum grade of plus fifteen percent (+15%) or minus six percent (-6%), measured from the street, alley, or driveway grade along the driveway centerline for a distance of not less than eighteen feet (18') from the street, alley, or driveway right-of-way line.

Whenever access is taken from a street, alley, or driveway to an off-street parking area serving industrial, commercial, or professional uses, public or community facilities, or five (5) or more dwelling units, the driveway or other vehicular accessway shall have a maximum grade of plus fifteen percent (+15%) or a minus two percent (-2%) measured from the street, alley, or driveway grade along the driveway centerline for a distance of not more than eighteen feet (18') from the street, alley, or driveway right-of-way line.

SUBARTICLE 13. EROSION CONTROL

13.1 Information on Erosion Control Plans

The plan shall include but not be limited to:

a. The name and 24-hour telephone number of the person responsible for performing emergency erosion control work.

b. The signature of the civil engineer or other qualified individual who prepared the grading plan and who is responsible for inspection and monitoring of the erosion control work.

c. All desilting and erosion protection facilities necessary to protect adjacent property from sediment deposition.

d. The streets and drainage devices that will be completed and paved by October 1.

e. The placement of sandbags or gravel bats, slope planting, or other measures to control erosion from all slopes above and adjacent to roads open to the public. Use of gravel bags is encouraged over sandbags.

f. Sandbag or gravel bag stockpile areas.

g. The plan shall indicate how access will be provided to maintain desilting facilities during wet weather.

h. Temporary soil stabilization measures for graded slopes in excess of 3:1 ratio or three feet (3') in height.

SUBARTICLE 14. GRADING INSPECTION

14.1 Site Inspection by the Director

Prior to any grading, brushing, or clearing, there shall be a pregrading meeting held on the site. Prior to pouring curb and gutter or placement of pavement base material, there shall be a prepaving meeting forty-eight (48) hours prior to paving held on the site. The permittee, or his agent, shall notify the Director at least two (2) working days prior to the meetings and shall be responsible for notifying all principals responsible for grading or paving-related operations.

It shall be the duty of the person doing the work authorized by a permit to notify the Director at least forty-eight (48) hours prior to the work being ready for the following inspections.

a. Excavation and Fill Inspection:

1. *Canyon Cleanout:* After all brush and unsuitable material has been removed and an acceptable base has been exposed but before any fill is placed.

2. *Toe Bench and Key:* After the natural ground or bedrock is exposed and prepared to receive fill but before fill is placed.

3. *Over-Excavation:* After the area has been excavated but before fill is placed.

4. *Excavation:* After the excavation is started but before the vertical depth of the excavation exceeds ten feet (10') and every ten-foot (10') interval thereafter. Continuation of this excavation operation need not await the arrival of the grading inspector provided that proper notification has been made to the Director.

5. *Fill:* After the fill has started but before the vertical height of the fill exceeds ten feet (10') and every ten-foot interval thereafter. Continuation of this fill operation need not await the arrival of the grading inspector provided that proper notification has been made to the Director.

b. Concrete or Gunite Drainage Device Inspection:

1. Alley gutter and/or concrete device draining asphalt:

(a) *Subgrade* (prior to placement of concrete): Subgrade is to be prepared and required reinforcement placed. The civil engineer

shall provide a field memo that line and grade is set in accordance with the approved plans.

(b) *Concrete placement:* Concrete placement need not await the arrival of the grading inspector provided proper notification has been made to the Director.

2. Curb and gutter (private property):

(a) *Subgrade* (prior to placement of concrete): Subgrade is to be made, forms and reinforcement are to be placed. The civil engineer shall provide a field memo that line and grade is set in accordance with the approved plans.

(b) *Concrete placement:* Concrete placement need not await the arrival of the grading inspector provided proper notification has been made to the Director.

3. Terrace drains, down drains, brow ditches, and all other paved drainage devices:

(a) *Subgrade:* Prior to placement of welded wire mesh or reinforcing steel. The civil engineer shall provide a field memo that line and grade is set in accordance with the approved plans.

(b) *Reinforcement:* Thickness control wire and reinforcing steel or welded wire mesh are to be installed but prior to placement of gunite or concrete.

(c) *Concrete placement:* Concrete placement need not await the arrival of the grading inspector provided prior notification has been made to the Director.

4. Sidewalks:

Subgrade: Prior to placement of concrete, subgrade is to be made, forms are to be in place with the required reinforcement. The civil engineer shall provide a field memo that line and grade is set in accordance with the approved plans.

c. <u>Drainage Device Other Than Concrete or Gunite Inspection</u>:

1. Subdrains:

(a) After excavation but prior to placement of filter material and pipe. The subdrain pipe and filter material shall be on-site for inspection.

(b) After filter material and subdrain has been placed but prior to covering with backfill.

2. Storm Drains and Inlets:

   (a) After placement of storm drains but prior to covering with backfill. The civil engineer shall provide a field memo that line and grade is set in accordance with the approved plans.

   (b) After placement of inlet forms but prior to pouring concrete. The civil engineer shall provide a field memo that line and grade is set in accordance with the approved plans.

3. Earth Swales:

   (a) Prior to rough grading approval or lumber drop.

   (b) Prior to final grading approval.

d. Rough Grade Inspection

When all rough grading has been completed. This inspection may be called for at the completion of rough grading without the necessity of the Director having previously reviewed and approved the required reports if the grading was performed under a precise grading permit. Under normal circumstances, all subdrains and slope drains shall be in place and approved as a condition for rough grading approval.

e. Paving Inspection

1. Subgrade:

   After subgrade has been established, tested, and approved by the soil engineer or his qualified representative. The soil engineer shall provide a field memo of compaction test results. The civil engineer shall provide a field memo that line and grade is set in accordance with approved plans.

2. Untreated Base:

   After untreated base course has been placed, tested, and approved by the soil engineer or his qualified representative, but prior to prime coat and asphalt placement. The soil engineer shall provide a field memo of compaction test results. The civil engineer shall provide a field memo that line and grade is set in accordance with the approved plans. Material invoices may be required.

3. Asphalt:

   (a) During asphalt lay down to verify continuous inspection by the soil engineer or his qualified representative or a special inspector when authorized. Material invoices may be required. Asphalt placement need not await the arrival of the grading inspector provided that proper notification has been made to the Director.

(b) Prior to application of seal coat, the paved surface shall be water tested to reveal any irregularities and shall be patched where required. Material invoices may be required after placement of seal coat.

f. Final Inspection:

After all work, including installation of all drainage structures and other protective devices, has been completed and all written professional approvals and the required reports have been submitted. An as-built plan shall be required by the Director pursuant to Section 15.1.

g. Siltation Control Facilities: (Rain season: October 1 to April 30)
(in accordance with the Orange County Construction Runoff Manual)

1. After excavation of desilting basins but prior to fill placement. Prefabricated devices are to be available on-site for inspection.

2. After fill placement for desilting basins but prior to placement of concrete or other non-erosive materials.

3. After completion of an erosion control system in accordance with an approved erosion control plan and the requirements of the Director.

14.2 Special Inspections

The responsibilities and duties of a special inspector as provided in Section 1701, Special Inspections, of the Uniform Building Code as amended are included in Appendix E.

14.3 Alternate Materials and Methods of Construction

a. The provisions of this grading manual are not intended to prevent the use of any material or method of construction not specifically prescribed by the Grading Ordinance or this Grading Manual provided any such alternate has been approved pursuant to this section.

b. The Director may approve any such alternate provided he finds that the proposed design is satisfactory and complies with the provisions of the Grading Ordinance and this Grading Manual and that the material, method, or work offered is for the purpose intended, at least the equivalent of that prescribed in quality, strength, effectiveness, and safety.

c. The Director shall require that sufficient evidence or proof be submitted to substantiate any claims that may be made regarding its use.

d. Whenever there is insufficient evidence of compliance with the provisions of this Grading Manual or evidence that any material or any construction does not conform to the requirements of this Grading Manual or in order to substantiate claims for alternate material or methods of construction, the Director may require

tests as proof of compliance to be made at the expense of the owner or his agent by an approved testing agency.

e. Test methods shall be as specified by this Grading Manual for the material in question. If there are no appropriate test methods specified, the Director shall approve the test procedure. Copies of the results of all such tests shall be retained for a period of not less than two (2) years after the acceptance of the grading.

SUBARTICLE 15. COMPLETION OF WORK

15.1 Final Reports

Upon completion of the grading work and at the final completion of the work under the grading permit but prior to the issuance of building permits or release of grading bonds or issuance of a certificate of use and occupancy, the Director may require:

a. An as-built grading plan prepared by the civil engineer, architect, or other qualified person which shall include corrected original ground surface elevations if necessary, grading ground surface elevations, lot drainage patters, manufactured slope inclination, and location of all drainage facilities and subdrains.

b. A statement in writing by the civil engineer on a City form describing the grading as being substantially in conformance with the approved grading plan and which specifies the following items as appropriate to the project and stage of grading:

1. Line and grade for all engineered drainage devices and retaining walls (rough and precise grading).

2. Line and grade for all building pad elevations (rough grading).

3. Staking of property corners for proper building location (rough grading).

4. Setting of all monuments in accordance with the recorded tract map (rough or precise grading).

5. Location of permanent walls or structures on property corners or property lines (precise grading).

6. Location and inclination of all manufactured slopes (rough and precise grading).

7. Construction of earthen berms and positive building pad drainage (rough and precise grading).

8. All erosion and sedimentation control BMP’s will be maintained until permanents stabilization is received.

When the approved grading plan is not prepared by a civil engineer, the architect or other licensed professional who prepared the plan shall provide written

approval of the grading as being substantially in conformance with the approved grading plan.

c. A final soils engineering report prepared by the soils engineer, including type of field testing performed, suitability of utility trench and retaining wall backfill, summaries of field and laboratory tests, and other substantiating data and comments on any changes made during grading and their effect on the recommendations made in the soils engineering investigation report. Each field density test shall be identified, located on a plan or map, the elevation of test and finish grade elevation shown, and the ASTM method of obtaining the in-place density described, or the approved equal shall be so noted. The soil engineer shall provide a written approval as to the adequacy of the site for the intended use, as affected by soil engineering factors. The Director may require that the soils tests or testing be performed by an approved testing agency.

d. A geology report prepared by the engineering geologist, including a final description of the geology of the site including any new information disclosed during the grading, and the effect of same on recommendations incorporated in the approved grading plan. He shall provide a written approval as to the adequacy of the site for the intended use as affected by geologic factors and, when required by the Director, shall submit an as-built geologic map.

e. A statement prepared by the grading contractor on a City form describing the volume of excavation and fill moved on the project. In addition, if the grading plan was not prepared by a registered civil engineer or registered professional authorized to prepare grading plans and perform inspections, the grading contractor shall submit a written statement that the work was completed in accordance with the approved plans. If the amount of yardage moved has changed from the original permitted yardage, additional deposits may be required, as outlined in Subarticle 6.

f. A statement prepared by the soils engineer on a City form certifying to the supervision of the testing and inspection under his purview during the project.

APPENDIX A

RESERVED

APPENDIX B

TECHNICAL GUIDELINES FOR SOIL AND GEOLOGY REPORTS

CITY OF SEAL BEACH

Technical Guidelines for Soil and Geology Reports

PREFACE

The ultimate responsibility for safe design, construction, and maintenance of any grading project rests with the consulting engineers, geologists, contractors, and the owner. Since site conditions and the proposed development plan varies so greatly between projects, the City recognizes the discretion and judgments that must be used by the consulting professionals. It is, therefore, essential to enhance the general understanding between the permit applicants, consultants, and the City.

The purpose of these technical guidelines is to inform grading permit applicants and their professional consultants of the basic information looked for by the City in reviewing preliminary (initial) soil and geology reports for grading permit applications and rough grade compaction reports. The guidelines used for the preparation of this document are:

> The City of Seal Beach Grading Ordinance, the Uniform Building Code, the California State Board of Registration policy statement (effective 1/1/79) on adequacy of professional geological work as represented by the guidelines for standards of practice issued by the California Division of Mines and Geology, the City of Seal Beach Planning Commission conditions of approval, the City of Seal Beach Subdivision Code, and presently accepted geotechnical engineering and engineering geologic practices.

DESCRIPTION

The technical guidelines are divided into six parts to distinguish report content for different project types and topographic areas to be developed by grading. The more involved grading projects will encompass, but not be limited to, several parts listed below:

Part I — *Single-Family Dwellings (flatland)*—identifies the report content for precise grading permits on single-family dwellings in flatland areas.

Part II — *Single-Family Dwellings (hillside)*—identifies the report content for precise grading permits on single-family dwellings in hillside areas (additive to the requirements of Part I).

Part III — *Single-Family Dwellings (supplemental information)*—identifies additional report content which may be needed with Part I and Part II depending on the site conditions and development proposed (additive to the requirements of Parts I and II).

Part IV — *Commercial and Industrial Sites*—identifies the report content for precise grading permits on commercial and industrial sites including apartment complexes (additive to the requirements of Part I and applicable items of Part III).

Part V — *Residential, Commercial, and Industrial Subdivisions (tracts and parcels)*—identifies the report content for preliminary grading permits of large commercial

and industrial subdivisions and preliminary and precise grading permits of residential subdivisions in flatland and hillside areas (additive to the requirements of Part I and applicable items of Parts II and III).

Part IV *Rough Grade Compaction Reports*—identifies the report content for preliminary reports and rough grade compaction reports for precise grading permits.

Due to particular site conditions, proposed improvements or the policies of testing firms or project consultants, some of these items may be included in subsequent reports on the same project with the conditional approval of the City.

GRADING PLAN REVIEW REPORT

A grading plan review report is an evaluation of the conclusions and recommendations in the preliminary soil and geology report as they relate to the proposed grading plan. It is usually required when there are changes in the proposed developments, consulting firms, soil engineer or engineering geologist, an update of the preliminary report or signatures are needed, or the project is a conversion to precise permit application. The grading plan review reports are supplements to the preliminary reports and are an opportunity for the consultants to review the planned development. The purpose is to determine if the preliminary reports are adequate and complete for the presently planned grading and construction on the site and if the conclusions and recommendations still apply to the proposed operations. It is not intended that the soil engineer or engineering geologist approve or disapprove the grading plan, but provides them an opportunity to update the preliminary reports and include additions or qualifications as necessary. The date and name of the person preparing the latest grading plan reviewed should be identified for reference purposes.

PART I
TECHNICAL GUIDELINES FOR PRELIMINARY REPORTS (SOIL REPORTS) ON SINGLE-FAMILY DWELLINGS IN FLATLAND AREAS

A. General

1. Signature and RCE number of project soil engineer.

2. Job address.

3. Location description and/or location index map with reference north, scale, etc.

4. Description of site conditions (topography, relief, vegetation, man-made features, drainage and watershed).

5. Proposed grading (general scope, amount, special equipment, and/or methods if applicable).

6. Planned construction (type of structure and use, type of construction and foundation/floor system, number of stories, estimated structural loads).

B. Field Investigations

1. Scope (date work done, investigative methods, sampling methods, logs of borings/test pits, elevations of borings/test pits for reference of materials and samples to finished grade or footing elevations, identify real or assumed elevations.

2. Plan with legend showing: site limits, terrain features, man-made features, boring/test pit locations, proposed improvements (including slopes with ratios, soil limits, daylight lines, paving areas, retaining walls, subdrains, over excavation/cleanout/uncertified fill areas).

3. Location of all samples taken, surface, and subsurface.

4. Groundwater conditions and potential (future natural and artificial seepage effects).

C. Engineering/Material and Characteristics and Testing

1. Test methods used, type or condition of samples, applicable engineering graphics and calculations, results of all tests, and sample locations of all test samples.

2. Unified soil classification of materials.

3. Material competency and strength.[1]

   a. Field densities (and relative compactions where pertinent) and moisture content.

   b. Shear strength of foundation material (drained or undrained conditions, effective stress or total stress analysis, in-situ or remolded samples must be identified).

   c. Consolidation or settlement potential.

   d. Expansion potential.

4. Maximum density-optimum moisture parameters of proposed fill material if available by Uniform Building Code Appendix 33 or approved equivalent.

5. Shrinkage and/or bulking factors.

D. Foundation Design Criteria

1. Footing depth and width.[1]

[1] *UBC requirements may be used as an alternative: soil classification of founding materials by UBC Standard No. 18-1 and use minimums and maximums based on UBC Tables 18-1-A and 18-1-B or approved equivalent.*

2. Criteria for foundation material preparation.[1]

3. Allowable bearing values based on testing.[1]

4. Lateral pressures (active, passive, or at rest conditions) and coefficient of friction.[1]

5. Settlement—total, differential, and rate of settlement.

E. Reference

1. In supplemental or grading plan review reports referencing earlier reports, supply copies of those referenced reports or applicable portions as required by the Director.

F. Conclusions and Recommendations

1. Ground preparation (clearing, unsuitable material removal, scarification and moisturization).

2. Fill support:

   a. Suitability and precompaction conditions of in-situ materials (describe test results and other pertinent data to be used to determine suitability).

   b. Densification and moisturization of dewatering measures (equipment, surcharge, and settlement monitoring if applicable).

3. Placement of fill:

   a. Material approved (on-site, imported).

   b. Methods and standard (Uniform Building Code Appendix 33 or approved equivalent).

   c. Testing (minimum 90% relative compaction by Uniform Building Code Appendix 33 or equivalent) and frequency of field density testing by vertical intervals and/or volume of fill.

4. Elimination of cut/fill or other differential transitions beneath improvements.

   5. Utility trenches:

   a. Backfill specifications and recommendations under structures, pavements, and slopes (minimum 90% relative compaction using native materials) versus landscape and other areas.

[1] *UBC requirements may be used as an alternative: soil classification of founding materials by UBC Standard No. 29-1 and use minimums and maximums based on UBC Tables 29-A and 29-B or approved equivalent.*

6. Provisions for approval inspections and necessary testing during and on completion of grading.

7. Opinion as to adequacy of site for the proposed development. (This option should also be summarized in the first part of the report.)

8. Other pertinent geotechnical information for the safe development of the site.

PART II
TECHNICAL GUIDELINES FOR PRELIMINARY REPORTS (SOIL AND GEOLOGY REPORTS) SINGLE-FAMILY DWELLINGS IN HILLSIDE AREAS

All guidelines listed in Part I for preliminary reports are applicable in addition to the following:

A. General

1. Engineering geology report with signature and CEG number of project engineering geologist (generally needed depending on site conditions and proposed developments).

2. Source of base map with date.

3. Geologist performing mapping (if different than signing CEG).

4. Geological setting including general description, index of site on portion of recent large-scale geologic map (if available), and references to previous reports (or published papers) and aerial photo data on site area.

5. Topographic features and relationship to site geology (outcrop distribution, slope height and angles and/or ratios, dip slopes, cliffs, faults contacts, erosion pattern, etc.).

B. Field Investigations

1. Geologic map showing: site geology, approximate location of proposed keyways, proposed buttresses, proposed or existing subdrains, seeps or springs, etc., and be suitable for the general purpose in its size, scale, and manifestation and contains an adequate legend. The map should have highlighted representative geologic data of sufficient amount and location for evaluation of: general rock or soil unit distribution, geologic structure, downslope movement features (including soil/rock creep), groundwater conditions, subsidence/settlement features or potential, and other pertinent site characteristics.

2. Substantiation of any known gross differences of opinion with recently available geologic reports or published data or maps on site area.

C. Earth Materials (Bedrock and Surficial Units)

1. Unit classification, general lithologic type, geologic age, origin.

2. Unit description and characteristics (in sequence for relative age) including:

    a. Composition, texture, fabric, liquification, moisture, etc.

    b. Pertinent engineering geologic attributes (clayey, weak, loose; alignments, fissility, planar boundaries; pervious or water-bearing parts; susceptibility to mass wasting, erosion, piping, or compressibility).

    c. Distribution, dimensions, or occurrence (supplemental to data furnished on illustrations).

    d. Suitability as construction and foundation material.

    e. Effects and extent of weathering (existing and relationship to project design and future site stability, material strength, etc.).

D. Geologic Structure

1. General structure.

2. Distribution of structural features including position, attitude, pattern, and frequency of:

    a. Fissures, joints, shears, faults, and other features of discontinuity.

    b. Bedding, folds, and other planar features.

3. Character of structural features including: continuity, width of zones and activity, dominant vs. subordinate, planar nature, plunge, depth, open vs. closed (degree of cementation or infilling), gouge.

4. Structural or cross-sections (one or more appropriately positioned and referenced on map; especially through critical areas, slopes, and slides) of suitable size and engineering scale; with labeled units, features, and structures; and a legend. These sections should correlate with surface and subsurface data showing representative dip components, projections, and stratigraphic/structural relationships.

E. Stability Features and Conditions

1. Adequate mapping, sections and description showing position, dimensions and type of existing downslope movement features including soil/rock creep, flows, falls, slumps, slides if any.

2. Activity, cause, or contributing factors of downslope movement features.

3. Recent erosion, deposition, or flooding features.

4. Subsidence/settlement, piping, solution, or other void features or conditions.

5. Groundwater and surface drainage characteristics or features.

    a. Surface expression (past and present); permeability/porosity of near surface materials.

    b. Actual or potential aquifers or conduits, perching situations, barriers, or other controls to percolation and groundwater movement and fluctuation of groundwater levels at the site.

F. Conclusions and Recommendations (Including Slope and Site Stability)

1. Unsuitable material removal (canyon cleanout, over excavation, etc.).

2. Keyways and benching for existing slopes steeper than 5:1.

3. Specifications for the method of placement and compaction of soil within the zone of the slope face.

4. Slope stability—susceptibility to mass-wasting (creep to rapid failure potential).

    a. Favorable or unfavorable interrelationships of fractures (joints, shears, faults, or zones) to planar structures (bedding, contacts, folds, plunges, weathered zones, etc.) and to each other forming potential failure planes, veneers, masses, or blocks.

    b. Favorable or unfavorable interrelationships of geologic structures, conditions, and potential failure planes to natural and/or man-made topography forming actual or potential adverse dips and contacts, adverse fractures (jointing, shearing, faulting), adverse fold limbs or synclinal axes, adverse earth masses or blocks.

    c. Favorable or unfavorable interrelationships of height of existing or proposed slopes to present and future (weathering effects, rate, depth, etc.) strength of earth materials.

    d. Slope stability effects onto or from developed, natural, or proposed slopes of adjacent properties.

5. Statement of site stability and summary of actual and potential unstable situations relative to the proposed site configuration and necessary stabilization or remedial measures for downslope movements, erosion, groundwater, or settlement/subsidence effects. Opinion and recommendations of surficial and gross stabilities of natural and manufactured slopes.

6. Provisions for necessary inspections of excavations to competent material by the project engineering geologist and/or soil engineer and their approval and/or testing of material competency.

7. Geologic feasibility of the site for the proposed development. (This opinion should also be summarized in the first part of the report.)

PART III
TECHNICAL GUIDELINES FOR PRELIMINARY REPORTS (SOIL AND GEOLOGY REPORTS) SINGLE-FAMILY DWELLINGS: SUPPLEMENT TO PARTS I AND II

This section includes additional report content that may be necessary depending on project site conditions or proposed developments for either flatland or hillside locations.

A. General

1. *Site conditions*—distress on existing improvements in area (expansive, settlement/subsidence, or creep areas).

2. *Proposed grading*—special grading equipment or methods needed for resistant, saturated, or other unusual materials or situations.

3. Proposed rock disposal methods (for clasts and residuals larger than 12 inches) and disposal areas (include on geotechnical plan if disposal area is on site).

4. References to publications and other reports cited.

B. Engineering/Material Characteristics and Testing

1. Shear strength evaluations and results (drained or undrained conditions, effective stress or total stress analysis, in-situ or remolded samples).

2. Expansivity analyses of foundation material (test by UBC Standard No. 18-2 or approved equivalent and classify potential by UBC Table No. 18-1-B).

3. Material densities and/or penetration tests (Standard Penetration or other methods of known correlation to material density).

4. Soluble sulfate content of soils in contact with concrete (test by ASTM D516 or equivalent).

5. Gradation/size analyses, if appropriate.

6. Atterberg limit analysis and parameters, if appropriate.

7. Geophysical survey, if appropriate—graphics and results.

8. Include all test methods used, type or condition of sample used, applicable engineering graphics and calculations, results of all tests, sample locations of all test samples.

C. Slope Stability Analysis

(Dependent on slope height and ratios, strength of earth materials, internal structure, susceptibility to weathering, actual or potential groundwater, surficial covering, proximity to site improvements or structures, and proposed landscaping and maintenance).

1. Gross stability of natural or man-made slopes with calculations, graphics, supporting data, and applicable parameters.

2. Surficial stability of slopes with calculations, graphics, supporting data, and applicable parameters.

D. Seismic evaluation should include regional seismicity; potential for strong shaking, ground rupture, and liquefaction; applicable parameters (peak and/or design ground acceleration, duration of strong shaking, site period) or reference to UBC standards for earthquake design (Chapter 16).

E. Foundation Design Criteria—Special Provision for Expansive Earth Materials

1. Footing design and placement criteria.

2. Slab thickness, reinforcement, separation and expansion joints, construction joints, doweling, or ties.

3. Bridging, grade beam specifications, and recommendations, when applicable.

4. Prestressed (post-tensioned) floatation slab specifications and recommendations if this system is proposed.

5. Exterior flatwork recommendations.

6. Moisture barriers and/or selective grading (aggregate or sand base or other subbase).

7. Soil moisture measures.

    a. Treatment prior to concrete pouring: “prepour moistening”, “presoaking”, or “presaturation”.

    b. Drainage/irrigation controls to maintain moisture content in foundation materials (including increased positive drainage, paving, cut-off walls, sealed planters, gutters, and downspouts, etc.).

F. Foundation Design Criteria—Other Special Provisions

1. Soluble sulfate content specifications and recommendations based on UBC Section 1904.3 and table 19-A-4.

2. Footing setback from base of slopes and other setbacks (faults, fracture zones, contacts, etc.).

3. Effects of adjacent loads when footings are at differing elevations.

4. Deep foundation systems.

    a. Allowable bearing values.

b. Foundation design criteria, parameters, and calculations when applicable.

c. Additional loads or potential loads caused by geologic conditions (parameters and calculations).

5. Engineering calculations with supporting data and applicable parameters used as a basis for recommended values. These will be needed depending on the values presented relative to the foundation materials, groundwater table, proposed improvements, and imposed loads.

G. Retaining Walls; Design Criteria on Proposed Walls (Surcharged or greater than three feet (3') in height above the base)

1. Slope surcharge and geologic surcharge factors, parameters, and calculations.

2. Drainage and backfill requirements including waterproofing of living areas and suitable drains.

3. Allowable bearing values, lateral bearing resistance and coefficient of friction based on testing or UBC (Chapter 18).

4. Active, passive, or at-rest lateral pressure.

5. Footing setback from base of slopes or from slope face.

H. Conclusions and Recommendations

1. Corrective or selective grading.

2. Subgrade specifications and recommendations.

3. Soil cement or lime stabilization.

4. Rock clast disposal.

5. Blasting.

6. Irrigation/drainage controls, dewatering, surface and subsurface drains and subdrains.

7. Special planting and irrigation measures, slope coverings, and other erosion control measures which may be apparent from the preparation of the geotechnical report.

8. Slough walls (including free board on retaining walls).

9. Protection of existing structures during grading.

10. Foundation/wall excavation inspections and approval by engineering geologist and/or soil engineer.

11. Shoring requirements.

12. Actual or potential effects extending into site from adjacent areas or from the site into adjacent areas and recommendations pertaining to stability, erosion, sedimentation, groundwater, etc.

13. Stabilization measures (see note under items for guidelines and minimums).

    a. Fill blankets for pads or stabilization blankets for slopes.

    b. Stabilization fills: specifications (including subdrains and landscape) and parameters (include stability analysis and calculations if geologically surcharged).

    c. Buttress fills: specifications (including landscape), subdrains, stability analysis with calculations and supporting test data and parameters.

14. Fill over cut slope specifications and recommendations.

15. Subsidence, hydrocompaction and piping potential, factors, time frame, and recommendations.

PART IV
TECHNICAL GUIDELINES FOR PRELIMINARY SOIL AND GEOLOGY REPORTS ON PRECISE COMMERCIAL/INDUSTRIAL GRADING APPLICATIONS

This section includes the necessary report content in addition to Part I and applicable items of Parts II and III for the proposed commercial/industrial development.

A. Pavement Design (Indicate Areas and Type on Geotechnical Plan)

1. AC pavement design criteria.

    a. R-value testing: method (California 301-f or equivalent), results, sample location(s), or provide minimum AC sections per excavation and Grading Ordinance.

    b. Traffic indices or projected loading conditions.

    c. AC structural sections: parking areas, access areas, service areas, heavy vehicle areas.

    d. Untreated base compaction recommendations (minimum 95% relative compaction).

    e. Subgrade recommendations: minimum depth, compaction (minimum 90% relative compaction); special recommendations for bridging, or founding, e.g., soil cement or lime treatment, over excavation, selective grading, etc.

2. Concrete pavement.

    a. Minimum thickness and reinforcement.

    b. Size of poured or sawed sections; expansion joints.

    c. Untreated base specifications and recommendations.

    d. Subgrade recommendations.

B. Seismic evaluation of site (if site involves a critical or major structure or is in close proximity to an active fault); see Part III for description of necessary content.

PART V
TECHNICAL GUIDELINES FOR PRELIMINARY SOIL AND GEOLOGY REPORTS ON RESIDENTIAL OR COMMERCIAL/INDUSTRIAL SUBDIVISIONS (TRACTS AND PARCELS); FLATLAND OR HILLSIDE AREAS

This section includes necessary report content in addition to Part I and the applicable items of Parts II and III.

A. Seismic evaluation of site (see Part III for description of necessary content).

B. Evaluation of expansivity of site.

C. Stability evaluation of site, slopes, tract boundary areas, etc.

PART VI
TECHNICAL GUIDELINES FOR ROUGH GRADE COMPACTION REPORTS

A. General

1. Signature and RCE or RGE number of project soil engineer.

2. Job address, lot, and tract number.

3. Grading permit number.

B. Placement of Fill

1. Purpose for which fill was placed.

2. Preparation of natural grade to receive fill.

3. Placement of fill (depth of layers, watering, etc.).

4. Equipment used for compaction.

5. Method of compacting outer slope area.

C. Testing (Compaction)

1. Test procedure (field and laboratory).
2. Plot plan with the location of all density tests.
3. Summary of test results.
    a. Test identification number.
    b. Test method performed.
    c. Maximum dry density.
    d. Optimum moisture.
    e. Field dry density.
    f. Field moisture.
    g. Relative compaction.
    h. Approximate elevation of test.
    i. Approximate finish grade elevation at test site.

D. Testing (Utility Trench Compaction)

1. Location of test.
2. Depth of trench and test.
3. Method of backfill and compaction equipment.
4. Summary of test results.

E. Testing (Other)

1. Summary of expansion test results (identify lots or areas with swelling potential, plot test locations on plot plan).
2. Summary of soluble sulfate test results.
3. Summary of “R” value tests for asphalt concrete design if applicable.

F. As-Built Conditions

1. Plot plan showing limits of the approved compacted fill area (approximate pad elevation, depth of fill, areas of over excavation, canyon cleanout, buttress fills, stabilization fills, and subdrains).

2. Treatment of “daylight” or cut/fill transition zones (extent of over excavation outside of footing).

3. Type of soil encountered during grading (fill, in-situ, imported borrow).

4. Groundwater conditions identified and subdrains or other methods used to mitigate adverse effects.

5. Geologic conditions encountered.

6. Comments on changes made during grading and their effect on the recommendations made in the geotechnical report.

G. Recommendations and Opinions

1. Footing recommendations and bearing value on compacted fill or natural soils.

2. Footing and floor slab recommendations based on results of expansion and soluble sulfate tests (construction details of footing if applicable).

3. Pavement structural section design recommendations and specifications if applicable.

4. Opinion of the suitability of natural soil to support the fill or structure.

5. Approval as to the adequacy of the site for the intended use, as affected by soil engineering and/or geologic factors.

6. Opinion as to the gross and surficial stability of all slopes.

7. Opinion as to the suitability of utility trench and retaining wall backfill.

8. A statement that the soil engineering and engineering geologic aspects of the grading having been inspected and are in compliance with the applicable conditions of the Grading permit and the soil engineer’s and engineering geologist’s recommendations.

APPENDIX C

PERMIT EXPIRATION

SECTION 106.4 PERMITS ISSUANCE OF THE UNIFORM BUILDING CODE, AS AMENDED PERMIT EXPIRATION, SECTION 106.4, PERMITS ISSUANCE OF THE UNIFORM BUILDING CODE, AS AMENDED

Section 106.4 of said Uniform Building Code is hereby amended to read as follows:

Building Permits —Section 106.4.

(106.4.1) Issuance. The application, plans and specifications, and other data filed by an applicant for a permit shall be reviewed by the Director. Such plans may be reviewed by other City departments to verify compliance with any applicable laws and ordinances under their jurisdiction. If the Director finds that the work described in an application for a permit and the plans, specifications, and other data filed therewith conform to the requirements of this Code and other pertinent laws and ordinances, and that the deposit specified has been paid, he shall issue a permit therefor to the applicant.

When the Director issues the permit where plans are required, he shall endorse in writing or stamp on both sets of plans and specifications, "APPROVED". Such approved plans and specifications shall not be changed, modified, or altered without authorization from the Director, and all work shall be done in accordance with the approved plans.

The Director may issue a permit for the construction of part of a building or structure before the entire plans and specifications for the whole building or structure have been submitted or approved provided adequate information and detailed statements have been filed complying with all pertinent requirements of this Code. The holder of such permit shall proceed at his own risk without assurance that the permit for the entire building or structure will be granted.

(106.4.2) Retention of Plans. One set of approved plans, specifications, and computations shall be retained by the Building Official for a period of not less than ninety (90) days from date of completion of the work covered therein, and one set of approved plans and specifications shall be returned to the applicant, which said set shall be kept on the site of the building or work at all times during which the work authorized thereby is in progress.

(106.4.3) Validity. The issuance or granting of a permit or approval of plans and specifications shall not be construed to be a permit for, or an approval of, any violation of any of the provisions of this Code or of any other ordinance of the County. No permit presuming to give authority to violate or cancel the provisions of this Code shall be valid.

The issuance of a permit based upon plans, specifications, and other data shall not prevent the Director from thereafter requiring the correction of errors in said plans, specifications, and any other data, or from preventing building operations being carried on thereunder when in violation of this Code or of any other ordinance of the County.

(106.4.4) Expiration. Every permit issued by the Director under the provisions of this Code shall expire by limitation and become null and void if the building or work authorized by such permit is not commenced within one hundred eight (180) days from the date of such permit or if the building or work authorized by such permit is suspended or abandoned at any time after the work is commenced for a period of one hundred eighty (180) days. Before such work can be recommenced, a permit shall be first renewed or obtained so to do, and the deposit therefor shall be one-half the amount required for the original permit for such work; provided, however, that:

(1) No changes have been made in the original plans and specifications for such work, and

(2) Such suspension or abandonment has not exceeded one year, and

(3) A re-endorsement of the compliance of the plans with the applicable regulations, by the Environmental Management Agency, shall be obtained.

Any permittee may apply for an extension of the time within which he may commence work under that permit when he is unable to commence work within the time required by this section for good and satisfactory reasons. The Director may extend the time for action by the permittee for a period not exceeding 180 days upon written request by the permittee showing that circumstances beyond the control of the permittee have prevented action from being taken. Such written request shall be submitted no later than sixty (60) days after expiration of the permit. No permit shall be extended more than once. In order to renew action on a permit after expiration, the permittee shall pay a new full permit deposit.

(106.4.4.1) Change of Contractor or of Ownership. A permit issued hereunder shall expire upon a change of ownership or a change of contractor regarding the building, structure, or grading for which said permit was issued if the work thereon has not been completed, and a new permit shall be required for the completion of the work. If the provisions of section (106.4.4) above are not applicable and if no changes have been made to the plans and specifications last submitted to the Director, no charge, other than the permit issuance deposit, shall be made for the issuance of the new permit under such circumstances. If however, changes have been made to the plan and specifications last submitted to the Director, a permit deposit based upon the valuation of the work or the yardage to be completed as provided for hereof shall be charged to the permit applicant.

(106.4.5) Suspension or Revocation. The Director may, in writing, suspend or revoke a permit issued under provisions of this Code whenever the permit is issued in error or on the basis of incorrect information supplied or in violation of any ordinance or regulation of any of the provisions of this Code.

APPENDIX D

SURETY BOND FORM

CITY OF SEAL BEACH

GRADING BOND

See Section 11 of this manual

IRREVOCABLE LETTER OF CREDIT

[Bank Name and Address]
*This form is an EXAMPLE only and wording must be as shown on the **Bank's letterhead.***

TO: CITY OF SEAL BEACH
Public Works Department
211 8th Street
Seal Beach CA 90403

DATE: _____
LETTER OF CREDIT NO.: _____
AMOUNT: _____

At the requires of (the "Customer"), (the "Bank") hereby establishes in your favor an Irrevocable Letter of Credit ("the Credit") for a total amount of $_____ available by your sight draft, drawn on (the "Bank") expiring *, unless automatically renewed as provided herein.

This Letter of Credit shall be automatically extended for additional periods of one year from the present or future expiration date, unless we notify you and (the "Customer") via courier or certified mail at least 120 (one hundred twenty) calendar days prior to the then expiration date that we have elected not to renew this Letter of Credit. Thirty (30) days after receipt of such notice, you may draw on this Letter of Credit by presentation of the documents mentioned herein.

This Credit is issued in connection with the obligation of (the "Customer") for grading and pertinent improvements (outlined in Grading Permit No. _____) to property located at _____ within the City of Seal Beach, California. A drawing under this Credit shall be made by your presenting to us this Letter of Credit, and a demand in writing signed by a person who has been duly authorized to sign on your behalf.

Said demand shall refer to this Credit by the above number, shall state the amount demanded and shall certify one of the following:

a. That the customer has failed to comply with the conditions of the grading permit, after 15 (fifteen) days written notice to the customer demanding compliance with the conditions of said permit; or
b. The work authorized by the above permit has been left in a hazardous condition; or
c. The work remains incomplete and the City of Seal Beach has received notice that we have elected not to renew this Letter of Credit.

Upon receipt of the said documents we shall pay to you the amount stated in the said demand to be payable to you without inquiring whether you have a right to such amount as between yourself and the customer, provided that such amount, together with the other amounts paid to you under this Credit, if any, do not exceed the amount of the Credit. This Credit shall be terminated upon receipt of your letter certifying that subject grading has been completed in a satisfactory manner.

*Must be at least 2 (two) years from date of issuance.

BANK: _____

By: _____

(Authorized Representative)
(Notary Acknowledgement Attached)

CITY OF SEAL BEACH
TIME CERTIFICATE OF DEPOSIT

DEFINITIONS:

Assignor	Person depositing funds for certificate.
Assignee	The City of Seal Beach.
Federal Insurance Agency	Name of federal agency insuring the bank or savings and loan association issuing certificate.

INSTRUCTIONS FOR COMPLETING CERTIFICATE OF DEPOSIT FORM:

1. Certificate to be made payable to City of Seal Beach.
2. Minimum maturity date shown on certificate shall be six (6) months.
3. Face of certificate needs to state funds will be automatically renewed after maturity date.
4. Attach notary acknowledgements for signatures of authorized officer of bank or savings and loan association and assignor.
5. Submit original certificate or passbook and certificate of deposit form.

CERTIFICATE OF DEPOSIT
ASSIGNMENT

TO: CITY OF SEAL BEACH
Public Works Department
211 8th Street
Seal Beach CA 90403

DATE: _____
CERTIFICATE OF DEPOSIT NO.: _____
AMOUNT: $_____

[Name], hereinafter referred to as "Assignor", whose address is _____, does hereby assign and set over to City of Seal Beach hereinafter referred to as Assignee, all right, title and interest of whatever nature, of Assignor, in and to the insured account of Assignor in the *[Bank or Savings & Loan Association]* evidenced by a time certificate of deposit in the amount of $_____, which is delivered to the Assignee herewith. Assignor agrees that this assignment carries with it the right in the insurance of the account by the *[Appropriate Federal Insurance Agency]* and includes and gives the right to the Assignee to redeem, collect, and withdraw the full amount of such account at any time without notice to the Assignor. Assignor agrees that this assignment is given as security for the following:

Completion of Grading and Improvements at: *[Project Address]* (Grading Permit No. _____) and that the Assignee may, without notice to Assignor, redeem, collect and withdraw the account for the purpose of having not fulfilled the above agreement.

[Bank or Savings & Loan Association] acknowledges the assignment of the account and certificate identified above to the Assignee.

_____ Dated: _____
(Assignor)

(Notary Acknowledgement Attached)

RECEIPT FOR NOTICE OF ASSIGNMENT

Receipt is hereby acknowledged to the Assignee of written notice of the Assignment to said Assignee of the account and certificate identified above. We have noted in our records the Assignee's interest in said account as shown by the above assignment and have retained a copy of this document. We hereby certify that we have received no notice of lien, encumbrance, hold, claim, or obligation of the above-identified account prior to the assignment to the Assignee. We agree to make payment to the Assignee immediately upon request.

_____ Dated: _____

(Authorized Officer)

_____

(Bank or Savings & Loan Association)

_____

(Address)

_____

(Notary Acknowledgements Attached)

CITY OF SEAL BEACH

GRADING PERMIT CASH BOND

This agreement is entered into between _____, hereinafter referred to as "Principal" and the City of Seal Beach, or its assigns, hereinafter referred to as "City", to ensure the completion of grading required by Grading Permit No. _____ on the property located at _____.

NOW, THEREFORE, IT IS AGREED THAT:

1. Principal agrees to indemnify, protect, defend, and hold harmless the City and its elected and appointed officers, agents, and employees from any and all claims, demands, costs, or liability arising from or connected with the undertaking provided hereunder due to the negligent acts, errors, or omissions of Principal. Principal will reimburse the City for any expenditures, including reasonable attorney's deposits, incurred by the City in enforcing the terms of this Agreement, or incurred by the City in defending against claims ultimately determined to be due to negligent acts, errors, or omissions of the Principal.

2. Principal does herewith post a cash bond in the amount of $_____ for which City acknowledges receipt.

3. a) If Principal complies with all the provisions of the "City of Seal Beach Grading Ordinance"; and other applicable laws, and ordinances; and

   b) Complies with all of the terms and conditions of the permit for excavation or fill to the satisfaction of the Director of Public Works/City Engineer; and

   c) Completes all of the work contemplated under the permit within the time limit specified in the permit, and any extension or extensions thereof, or completes the work to a safe condition satisfactory to the Director of Public Works/City Engineer, the cash bond shall be released.

4. a) If principal, or its heirs, successors, executors, administrators, or assigns fails to comply with the aforementioned requirements, the Director of Public Works/City Engineer may order the work required by the permit to be completed or put in a safe condition to his satisfaction.

   b) The cash bond shall be used as necessary to pay for the completion of this work. After completion of the work, any funds remaining in this bond shall be refunded to the Principal.

   c) If the cost of the work exceeds the amount of this bond, Principal hereby agrees to reimburse the City for such excess costs.

   d) Principal agrees that if the City brings suit to collect for the work contemplated by this permit, that the reasonable attorney's deposits as fixed by the court shall be paid by the Principal.

5. Principal hereby stipulates and agrees that no change, extension of time, alteration, or addition to the terms of the Agreement, the work to be performed thereunder, with the specifications accompanying the Agreement, shall in any way affect its obligations on this bond. Principal hereby waives notice of any such change, extension of time, alteration, or addition to the terms of the Agreement, the work, or the specifications.

Dated: _____

Principal:

_____
(Signature)

_____
(Printed Name)

City Receipt No.:_____

_____
(Title)

_____
Address

_____

(Attach Notary Acknowledgement)

APPENDIX E

SPECIAL INSPECTIONS

SECTION 1701, SPECIAL INSPECTIONS OF THE UNIFORM BUILDING CODE, AS AMENDED

(See Uniform Building Code, Ch. 17, pages 1-165 and 1-166)

APPENDIX F

MINIMUM STANDARDS FOR SLOPE STABILITY ANALYSIS

(See LA/ASCE Geotechnical Group Committee on Seismic Stability of Soil and Rock)

APPENDIX G

PROTECTION OF ADJACENT PROPERTY

CALIFORNIA CIVIL CODE, SECTION 832

CALIFORNIA CIVIL CODE, SECTION 832

Lateral and subjacent support; excavations; degree of care; damages; protection of other structures.

Each coterminous owner is entitled to the lateral and subjacent support which his land receives from the adjoining land, subject to the right of the owner of the adjoining land to make proper and usual excavations on the same for purposes of construction or improvement, under the following conditions:

1. Any owner of land or his lessee intending to make or to permit an excavation shall give reasonable notice to the owner or owners of adjoining lands and of buildings or other structures, stating the depth to which such excavation is intended to be made, and when the excavating will begin.

2. In making any excavation, ordinary care and skill shall be used, and reasonable precautions taken to sustain the adjoining land as such, without regard to any building or other structure which may be thereon, and there shall be no liability for damage done to any such building or other structure by reason of the excavation, except as otherwise provided or allowed by law.

3. If at any time it appears that the excavation is to be of a greater depth than are the walls or foundations of any adjoining building or other structure, and is to be so close as to endanger the building or other structure in any way, then the owner of the building or other structure must be allowed at least 30 days if he so desires, in which to take measures to protect the same from any damage, or in which to extend the foundations thereof, and he must be given for the same purposes reasonable license to enter on the land on which the excavation is to be or is being made.

4. If the excavation is intended to be or is deeper than the standard depth of foundations, which depth is defined to be a depth of * * * nine feet (9') below the adjacent curb level, at the point where the joint property line intersects the curb and if on the land of the coterminous owner there is any building or other structure the **wall** or foundation of which goes to standard depth or deeper, then the owner of the land on which the excavation is being made shall, if given the necessary license to enter on the adjoining land, protect the owner thereof, from any damage by reason of the excavation, and shall be liable to the owner of such property for any such damage, excepting only for minor settlement cracks in buildings or other structures.

FILING INSTRUCTIONS - FREQUENTLY ASKED QUESTIONS FOR GRADING

The following instructions are intended to provide the necessary information and procedures to facilitate the processing of your applications. Your cooperation with these instructions will insure that your application can be processed in the most expeditious manner possible.

What happens after the Developer has their plans approved by the Engineering Division?

After the City Engineer signs your grading plans, your Contractor must apply for a grading permit.

What if I decide to do the work without a grading plan?

This is a serious and costly situation. First, the City will stop you mid-work until you submit plans and obtain the required approvals and may make changes in work that has already been performed. In addition, there is a double fee charge for after the fact work.

When can work start? Is there any work I can start before plans are issued?

Work can only be started once the City approves plans AND a separate grading permit is issued. Two working days notice is required to allow for proper scheduling of inspections. The Contractor must keep an approved grading permit and approved set of plans at the job site at all times.

Who can pull a grading permit?

Only a licensed Contractor can pull the grading permit. The homeowner can not act as an agent for the Contractor in this situation. This protects the property owner from any possible bad practices of the Contractor.

Why do I need grading inspections?

Inspections are important to ensure that what the Engineering Division has approved is followed through in the field. These inspections benefit the homeowner and adjacent homeowners in preventing future liabilities and problems due to Contractor error. Upon completion of major grading work, the Applicant's Engineer must submit the proper certifications as outlined in the grading manual in conformance with the approved grading plan.

How much does a grading permit cost?

Initial cost deposit for inspection is designated in the Council approved fee resolution but for a single family home would be approximately $140 but can be significantly more for larger projects. Repeated site visits and corrections by the Engineer will require additional deposits for cost recovery.

Are there other regulatory requirements?

Construction activities that disturb one or more acres of land will be required to comply with a general Construction NPDES Storm Water Permit from the State Water Resources Control Board. The purpose is to control erosion, silt and contaminated runoff from the construction sites. There may be more regulatory agencies involved in your project depending on its size and scope. Please refer to the *Construction Runoff Guidance Manual*.

When does the Engineering Division review for off-site improvement such as non-standard or inadequate curb, gutter, parkway, and sidewalk?

Per the City code, when a property is redeveloped, the City Engineer will require replacement by the developer/owner of non-standard or inadequate improvements. Usually this entails removal of concrete parkway, replacement of sidewalk, and installation of new curb and gutter. The cost of this off-site review is separate and does not include inspection costs should work be required. The Contractor would then have to obtain a separate public works permit for the required work and complete said work prior to issuance of certificate of occupancy or a release of any deposits.

If you have any questions, please call the Engineering Division, Department of Public Works at (562) 431-2527 ext 317.

Application for Grading Plan Submittal

Incomplete Submittals will not be accepted.

Department of **PUBLIC WORKS**

Quickbase Plan Check #:

Initial submittal Date

Development Type

- ❑ Single Family Residential
- ❑ One-Lot Commercial/Industrial
- ❑ Tract Residential
- ❑ Tract Commercial/Industrial
- ❑ Other

Property Acreage

Site Address #	Street Name

Tract/Parcel Map No.	Lots

Tentative Tract /Parcel Map No.

Plan Title:	# of Sheets

Engineer License#:	Engineer Name:

Engineering Firm Name, Address:

Phone Number	Fax Number

Property legal owner name, address, phone number

Proposed contractor/developer name, address, phone number

Initial Application	**Received and Verified Complete by:**	**Entered in Plan Check Database by:**
❑ Complete ❑ Incomplete (Reject)	**Date:**	**Date:**

Deposit Collected:

FIRST CHECK:

- ❑ *Completed Application*
- ❑ *Plan Checklist completed by Developer's Engineer*
- ❑ *4 sets stamped and signed rolled bluelines of the grading plan*
- ❑ *1 set of stamped and signed, folded 8 ½ by 11, of grading plan*
- ❑ *2 sets of stamped and signed soils report*
- ❑ *2 sets of stamped and signed hydrology/hydraulics calculations*
- ❑ *3 sets Preliminary Water Quality Management Plan (WQMP)*
- ❑ *3 sets erosion control plan (October – April)*
- ❑ *2 copies of application from State Water Quality Resources Control Board (if applicable – Site disturbed more than 1 acre)*
- ❑ *2 copies of Coastal Development Permit Application*
- ❑ *2 copies of approval from other agencies*

SUBSEQUENT CHECKS:

- ❑ *3 sets of stamped bluelines,*
- ❑ *1 previous check prints and review criteria*
- ❑ *2 sets of revised hydrology and previous hydrology check*
- ❑ *1 previous hydrology check*

FINAL SUBMITTAL FOR CITY APPROVAL:

- ❑ *Originals on mylar. All sheets must be stamped by engineer,*
- ❑ *Final hydrology & hydraulic calcs*
- ❑ *Other agency approvals (Coastal and SWRCB)*

REQUIRED PLANS AFTER APPROVAL:

- ❑ *3 sets of bluelines of approved mylars (1 folded, 2 rolled).*

REVISION SUBMITTAL:

Submit one blueline with revisions marked in red for City Engineer's approval and cost estimate.

Check print will be returned with any additional comments (if applicable) to original firm submitting the plans.

Submit originals and last check print with the changes for the City Engineer's signature. Pay any additional deposits (if required).

After revision has been signed, we request one set of bluelines, and the originals (reduced mylar set if plans are larger than 24" by 36")

Distribution: Applicant, Plan Checker, Director of Public Works, Building Official, Building Address File, PW Plan Check File

	Checklist Grading Plan Submittal (Check One) ❑ Developer's Engineer ❑ City Plan Checker	Department of **PUBLIC WORKS** **PLAN CHECK TRACKING #**

Development Type	Site address (Include Address Number and Street Name if available – otherwise use Legal Description Lot – Block – Tract)
❑ Single Family Residential ❑ One-Lot Commercial/Industrial ❑ Tract Residential ❑ Tract Commercial/Industrial ❑ Other	

Plan Title:	# of Sheets	Engineer License#:	Engineer Name:

Engineering Firm Name, Address,:	**Responding to the following Grading Plan Check Sheet does not guarantee that the plans will be approved.** **Responses to the above may raise further questions and require further revisions of the plans.**

The Designer must consult the Grading Ordinance, Grading & Stormwater Pollution Prevention Implementation Manual during the design. In a case of discrepancy between the checklist and the manual, the manual shall prevail.

Model Sites and Commercial/Industrial Developments: Precise grading plans shall show grading, paving, temporary parking lots, sidewalks, drainage devices, driveways, drive approaches, walls (retaining and screen), access ramps, erosion control, signing, striping, and all other improvements as necessary including those within the right of way). Decorative paving shall be constructed per the precise grading plan, and referenced on the landscaping plan. A separate grading permit is required for models and model site parking lots. Another grading permit will be required for final model conversion and removal of temporary parking lot, including an updated geotechnical report.

Tract Improvements: Precise grading plans should show grading, walls (retaining and screen), driveway construction. Improvements plans should be referenced and should include all street improvements, drainage devices, drive approaches, signing and striping, access ramps, and sidewalks.

ADDITIONAL INFORMATION REQUIRED FOR APPROVAL	
Submit an itemized summary of the cost of all drainage devices and on site improvements, including cost of grading and asphalt paving.	❑ Yes ❑ No ❑ N/A

Grade Elevation Permit	
Is the proposed grade elevation greater than the existing grade? If yes, a separate Grade Elevation Permit will be required (per section 9.45.30 of the Grading Ordinance).	❑ Yes ❑ No ❑ N/A

Submit plans and obtain clearance from: ❑ **Development Services/Planning** – (At a minimum, the Planning department must approve the proposed footprint meets the required setbacks. Send copy of the plan to Planning for review. Planning must also stamp the mylar approved prior to the start of precise grading and issuance of the permit.) ❑ **Traffic Engineering** (Commercial Sites) ❑ **California Regional Water Quality Control Board** (If applicable) Construction activities that disturb one or more acres of land will be required to comply with a general Construction NPDES Storm Water Permit from the State Water Resources Control Board. ❑ **California Department of Fish & Game** (submit questionnaire with date of mailing to CDFG) (If applicable) ❑ **California Coastal Commission** (If applicable)	❑ Yes ❑ No ❑ N/A
Minimum Cash Bond required in the amount of ($1,000 minimum for Single Family Residential) $ _____.	❑ Yes ❑ No ❑ N/A
A notarized letter of permission from adjacent property owner(s) is required for slope encroachment or other offsite grading or work. Include legal description and Assessor's Parcel number	❑ Yes ❑ No ❑ N/A
A notarized letter of permission is required from adjacent property owner(s) for acceptance of unnatural drainage. Include legal description and Assessor's Parcel number. Applicant must have this document recorded.	❑ Yes ❑ No ❑ **N/A**
Retaining walls are not a part of the grading permit and must go through a separate approval process from the building department. Submit for separate building permit. Show location of retaining walls on Grading Plan plus top of wall, top of footing elevations, adjacent finished surface elevations, and a typical section. *Note on Plans.*	❑ Yes ❑ No ❑ **N/A**
Encroachments in the public right of way are not part of the grading permit and must go through a separate approval process from the Engineering Division. *Note on Plans:* All new developments greater than 400 sf will require a separate off-site improvement review by the City Engineer for replacement of inadequate curb, gutter, and sidewalk or non-standard improvements in the public right of way. The Contractor must pay for and obtain a public works permit prior to work. No certificate of occupancy will be issued until all required improvements are made.	❑ Yes ❑ No ❑ **N/A**
Submit a Soils Report.	❑ Yes ❑ No ❑ **N/A**
Submit a hydrology study and/or hydraulic calculations.	❑ Yes ❑ No ❑ **N/A**
GRADING PLAN TITLE SHEET	
Has Engineer followed Sample Plan Format?	❑ Yes ❑ No ❑ **N/A**
Show City's Standard Grading Notes & Erosion Control Notes	❑ Yes

	❑ No ❑ **N/A**
Reference any previous grading permit numbers	❑ Yes ❑ No ❑ **N/A**
Job number is for use by design engineer.	❑ Yes ❑ No ❑ **N/A**
Show on plans name, address and telephone number of: ___ Owner and/or Developer ___ Architect ___ Paleontologist, Archeologist (If applicable) ___ Civil Engineer ___ Grading Contractor ___ Engineering Geologist ___ 24 Hour Erosion Control Phone Number This information must be updated annually and kept current by applicant.	❑ Yes ❑ No ❑ **N/A**
Show on Title Sheet: ___ Assigned Site Address (Street # and Name), Lot, Tract, and APN numbers ___ Abbreviations ___ Benchmark ___ Vicinity Map	❑ Yes ❑ No ❑ **N/A**
Show yardage figures on title sheet: _____yds Cut _____yds Overexcavation _____yds Natural fill _____yds Import _____yds Export	❑ Yes ❑ No ❑ **N/A**
GRADING PLAN, GENERAL	
Grading permit number space shall remain blank and should be filled in during 1st revision or during preparation of as-built plans. Reference any previous grading permit numbers. Show on each sheet of plans.	❑ Yes ❑ No ❑ **N/A**
Plans to be signed and stamped by a licensed Civil Engineer. Show license number,expiration, and stamp on each sheet of plans.	❑ Yes ❑ No ❑ **N/A**
Soils Report shall be prepared as stated in the Grading Manual signed by CA registered Engineer. Copy of approval has been received.	❑ Yes ❑ No ❑ **N/A**

Plans to be signed and stamped by a licensed Geotechnical Engineer. Show license number,expiration, and stamp on each sheet of plans.	❑ Yes ❑ No ❑ **N/A**
Show on plans: ___ Grading Limits ___ North Arrow ___ Scale ___ Legend ___ Permit Limits ___ Property Lines ___ Tract Number ___ Lot Numbers All information including tentative and final tract/parcel numbers, lots, community development approval, and benchmark shall be completed.	❑ Yes ❑ No ❑ **N/A**
Grading plans shall in conformance with the design standards identified in the City's Grading Manual. Examples of design requirements to be met would include: maximum/minimum slope ratio; minimum slopes for swales, erosion control, etc.	❑ Yes ❑ No ❑ **N/A**
Show location of all existing and proposed structures, buried tanks and wells within 15 feet of property line and on property.	❑ Yes ❑ No ❑ **N/A**
Show grading pads, finish flow, garage finish floor elevations.	❑ Yes ❑ No ❑ **N/A**
Show all cut/fill daylight lines.	❑ Yes ❑ No ❑ **N/A**
Show existing offsite terrace and drainage features that could significantly affect the project.	❑ Yes ❑ No ❑ **N/A**
Show existing and proposed elevations (using contours for hillside sites).	❑ Yes ❑ No ❑ **N/A**
Show existing and proposed elevations using contours and/or spot elevations (for flatland sites).	❑ Yes ❑ No ❑ **N/A**
Show sections through property and adjoining properties, including any structure within 15 feet from property line.	❑ Yes ❑ No ❑ **N/A**
Show detail on plan how finished grades meet adjoining property.	❑ Yes ❑ No ❑ **N/A**
Indicate disposition of excess earth materials. A separate permit may be required.	❑ Yes ❑ No

	❑ **N/A**
Add the following to the plan: ❑ Paving notes. (If required). ❑ Detail sheets. ❑ Show street width and centerline.	❑ Yes ❑ No ❑ **N/A**
DRAINAGE	
Show plan and section details of typical lot and roof drainage.	❑ Yes ❑ No ❑ **N/A**
Show location and provide details for all subdrain system (1), as recommended in the soil/geology report, by _____dated. Show sub-drain details with disposal points, flow line elevations, and pipe material. Drains shall not outlet concentrated flows onto private property or at property lines.	❑ Yes ❑ No ❑ **N/A**
Maximum gradient for sheet flow 10%	❑ Yes ❑ No ❑ **N/A**
Minimum acceptable gradients: ❑ 1.0% Earth ❑ 1.0% Asphaltic concrete ❑ 0.5% Concrete in earth ❑ 0.3% Concrete in A.C. ❑ 2.0% Lot swales ❑ 6.0% Terrace drains ❑ 2.0% Interceptor drains	❑ Yes ❑ No ❑ **N/A**
Show plan and section details of typical lot drainage. Minimum 2%, maximum 21%, away from a building pad to a swale is required for a minimum distance of 3 ft.	❑ Yes ❑ No ❑ **N/A**
Drainage shall be conducted to a street, natural watercourse or other approved location.	❑ Yes ❑ No ❑ **N/A**
Drainage over a manufactured slope is not permitted except in approved devices. Hydrology calculations provided for surface drains.	❑ Yes ❑ No ❑ **N/A**
Interceptor drains (brow ditches) at top of manufactured slopes are required to intercept surface drainage. Show on plans and provide detail.	❑ Yes ❑ No ❑ **N/A**

Cut off walls are required at inlet of paved drains. Show detail on plan.	❑ Yes ❑ No ❑ **N/A**
Velocity reducers (i.e. energy dissipaters) and trash racks are required where drains discharge onto natural ground. If rip-rap is to be used specify class and size. Show on plan and provide detail. Downstream discharge (i.e. creek, channel) must be taken into consideration. Maintenance responsibility should be outlined and approved.	❑ Yes ❑ No ❑ **N/A**
Concentrated drainage exceeding 4% gradient requires concrete, gunite or other approved non-erosive device.	❑ Yes ❑ No ❑ **N/A**
Revise plans to show complete details for all drainage structures, i.e.	❑ Yes ❑ No ❑ **N/A**
Provide concrete device in asphalt section to carry concentrated water.	❑ Yes ❑ No ❑ **N/A**
Show detail and locations of extra depth footings.	❑ Yes ❑ No ❑ **N/A**
Provide 7' setback from top of slope to building to accommodate graded drainage swale or 5' setback with P.C.C. device to carry drainage, lots _____	❑ Yes ❑ No ❑ **N/A**
Drainage easements are required for off-site facilities. Verify with tract map.	❑ Yes ❑ No ❑ **N/A**
Show flow line elevations of all swales and other drainage devices.	❑ Yes ❑ No ❑ **N/A**
SLOPES	
Provide setbacks as outlined in the City Code.	❑ Yes ❑ No ❑ **N/A**
A berm, 12" high by 4' wide is required at tops of all slopes. Illustrate with typical detail.	❑ Yes ❑ No ❑ **N/A**
Show detail of typical slope benching preparatory to fill placement.	❑ Yes ❑ No ❑ **N/A**
Provide a minimum 6' wide terrace at maximum 30-foot intervals measured vertically. Minimum paved width to be 5' with 18" depth (flowline to top of paved conc.).	❑ Yes

	❑ No ❑ **N/A**
A downdrain shall be installed for every single run of terrace drain that collects run-off from a slop watershed area of 13,500 sq. ft.	❑ Yes ❑ No ❑ **N/A**
Show on plans the proposed location and fully dimensioned cross sectional details of all buttress fills recommended by the project soil engineer and/or engineering geologist.	❑ Yes ❑ No ❑ **N/A**
Show top and toe of cut and fill slopes.	❑ Yes ❑ No ❑ **N/A**
Incorporate the following hillside design criteria or justify in writing by the licensed civil engineer why it does not apply to your project. ❑ Slope rounding ❑ Slope contouring at daylight line. ❑ Undulating slopes with a minimum of long flat, inclined planes and acute angels. ❑ Max slope height ____(Type B – 35 feet), Type C – 20 feet). ❑ Ten-foot bench exclusive of drainage facilities. ❑ Manufactured (cut and fill) slopes shall have a maximum slope ratio of 2:1 (26 degrees)	❑ Yes ❑ No ❑ N/A
NPDES EROSION	
Approved erosion control measures are to be installed and functional during the rainy season from Oct. 1st to April 30th. Justify design with hydrology and hydraulic calculations. Additional fees may be required. Submit improvement cost and yardage breakdown. Erosion control plans are required for all grading plans. Hydrology/hydraulic calculations shall be submitted for all desilting basins. Erosion control plans shall include storm water pollution control prevention elements which include the limits of disturbance, access points, location of staging equipment, estimation of sources and quantities of storm water pollutants, and appropriate Best Management Practices (BMPs) to reduce storm water pollutants	❑ Yes ❑ No ❑ **N/A**
An NPDES General Construction Activity Storm Water Permit from the State Water Resources Control Board(SWRCB) is required for construction on sites larger than 1 acres or on sites that are part of a larger project greater than 1 acre. A copy of the letter from the SWRCB must be obtained to show that the Notice of Intent (NOI) for the permit has been filed.	❑ Yes ❑ No ❑ **N/A**
NPDES Best Management Practices are required to be consistent with the City's Local Implementation Plan (LIP)Chapter 7 recommendations.	❑ Yes ❑ No ❑ **N/A**
Structural BMPs include: Preliminary Water Quality Management Plan per section 7 of the LIP LIP section 7, Figure A-7.2. Checklist for categorizing development and significant redevelopment project as priority or non-priority.	❑ Yes ❑ No ❑ **N/A**

Non-structural BMPs include: Water Quality Management Plan	❑ Yes ❑ No ❑ **N/A**
MISCELLANEOUS	
Delineate areas of over-excavation and re-compaction as recommended by the soils engineer. Detail and show volume as separate item. Where depth exceeds 12", soils engineer to verify recommended compaction in his final report.	❑ Yes ❑ No ❑ **N/A**
Delineate on the plans and provide details for rock disposal areas as recommended by the engineer.	❑ Yes ❑ No ❑ **N/A**
Grades are in conformance to tentative map grades. List any elevation differences (if greater than 2 feet	❑ Yes ❑ No ❑ **N/A**
For commercial sites and when required show and plot sight distance triangles at all intersections and driveways.	❑ Yes ❑ No ❑ **N/A**
Show all existing utilities and services including but not limited to vaults, manholes, boxes, overhead feeds. Existing overhead utilities shall be placed underground.	❑ Yes ❑ No ❑ **N/A**
Submit profiles of driveway approaches and driveways and/or provide elevations and dimensions. Drive approaches and/or driveways shall not have grade breaks in excess of 15%.	❑ Yes ❑ No ❑ **N/A**
Minimum thickness for PCC sidewalks is 4". Minimum pavement sections are 3" AC/6" AB for parking and 4" AC/10" AB for commercial drives and loading areas. Lime treatment is not allowed without approval of the City Engineer.	❑ Yes ❑ No ❑ **N/A**
Show and label all easements (existing and future).	❑ Yes ❑ No ❑ **N/A**
Show any screen walls on the plans and include a typical section.	❑ Yes ❑ No ❑ **N/A**
All trash enclosures shall have a concrete pad under them with a minimum 10' wide apron in front. Thickness of PCC shall be recommended by the soils engineer from approved soil report.	❑ Yes ❑ No ❑ **N/A**

ADDITIONAL COMMENTS FROM PLAN CHECKER	

ATTACH ADDITIONAL SHEETS IF NECESSARY

	STANDARD GRADING NOTES	Department of **PUBLIC WORKS**

100. **START OF WORK:** No work **whatsoever** shall be started without first having obtained a grading permit and Public Works permit from the City of Seal Beach.

101. **NOTIFICATIONS**

1. **INSPECTION:** Inspection shall be called for through the Engineering Division, City of Seal Beach, (562) 431-2527, TWO working days in advance prior to starting work.

2. **UTILITIES:** The Contractor shall give utility companies TWO working days in advance notice prior to working around their facilities.

3. **UNDERGROUND SERVICE ALERT:** The Contractor shall call Underground Service Alert 1 (800) 422-4133 TWO working days prior to any excavation.

4. **ADJACENT PROPERTY:** Prior to commencing any excavation, the Contractor shall notify in writing the owners of adjoining buildings not less than TEN days before such excavation is made that the excavation is to be made and that the adjoining buildings should be protected.

5. **DISCR EPANCIES:** The Contractor shall immediately notify the City of Seal Beach and the Civil Engineer upon discovering any discrepancies, errors, or omissions in the plans and shall receive clarification on those items prior to proceeding.

6. **GRADE STAKES:** The Contractor shall notify the City Engineer TWO working days in advance of pouring to approve the grade stakes for all drainage.

7. **PRE-CON MEETING:** Grading shall not be started without first notifying the City Grading Inspector TWO working days in advance and holding a pre-construction meeting. A pre-construction meeting on the site is required, (only for developments other than individual single family residences), before the start of grading with the following people present: owner, grading contractor, design civil engineer, soils engineer, geologist, city grading inspector and when required, archaeologist and paleontologist.

102. **PLANS AND SPECS:** The approved set of plans, grading permit and any referred standards or documents on the plans, including all approved revisions thereto shall be on the job site at all times. Failure to have such on site shall be considered a stop work by Contractor.

103. **HOURS OF OPERATION:** Grading operations including maintenance of equipment and materials delivery within one-half mile of a human occupancy shall not be conducted after 5:00 p.m., and before 7:00 a.m. on any day and no work shall be done on Saturdays, Sunday, and holidays or per the City Code.

104. **REQUIREMENTS:**

1. All excavations, foundations, retaining walls and grading shall conform to the Uniform Building Code, Chapters 29 and 70 and shall be done in conformance with the

recommendations of the preliminary soils investigation prepared by _____

2. **OTHER PERMITS**: The Grading Contractor shall obtain all necessary OSHA and NPDES permits. The Grading Contractor shall be held responsible for compliance with the applicable permit requirements.

3. **EXCAVATION SAFETY:** All excavation shall be in accordance with safety standards specified in CAL-OSHA. Each sidewall shall be shored or sloped in accordance with OSHA regulations, as required to prevent hazardous conditions**.**

4. **PLAN CHANGES:** No changes in the plans will be made and no extra work performed unless so approved by the City Engineer.

5. **STANDARD SPECS:** All work shall be in accordance with the requirements of the City Engineering Department and the latest adopted editions of: Standard Specifications for Public Works Construction (Green Book), including supplements and the Orange County Environmental Management Agency (all in latest edition) Standard Plans for Public Works Construction and any applicable City Standard Plans. When referenced on the plans, a copy of the mentioned document shall also be retained on the site. Whenever special requirements conflict on any subject matter, the City Engineer shall determine which requirement or code shall govern.

6. **EXCAVATION OF TRENCHES:** The Contractor shall obtain and provide the City with a copy of a permit from the division of Industrial Safety prior to commencing the excavation of a trench five feet in depth or greater.

7. **HAUL ROUTE PERMIT:** The owner or grading contractor shall obtain a haul route permit when an excess of 1,000 cubic yards of earth or in an amount considered substantial by the Director is to be transported to or from a permitted site on public roadways. The permit shall be obtained prior to commencement of import or export of materials.

8. **DUST CONTROL PERMIT:** The permittee is responsible for dust control measures and compliance with all South Coast AQMD rules and regulations. Permittee is responsible for obtaining all required permits and approvals from AQMD. All grading operations shall be suspended during second (or worse) stage smog alerts by AQMD.

9. **SANITARY FACILITIES:** Sanitary facilities shall be maintained on the site and not in the City right-of-way.

10. **DRAINAGE PROTECTION:** All existing drainage courses on the project site must continue to function until facilities to handle storm water are approved and functional. Approved protective measures and temporary drainage provisions shall be used to protect adjoining properties during grading. In all cases, the permittee shall be held liable for any damage due to obstructing natural drainage patterns.

11. **COMPLIANCE STATEMENT:** The Grading Contractor shall submit a statement of compliance to the approved grading plan prior to final approval.

12. **REFERENCED REPORTS:** Preliminary Soils and Geology Reports and all subsequent reports as approved by the City Engineer are considered a part of the approved grading plan.

13. **WORK ACROSS PROPERTY LINE:** Written permission is required from any adjacent property owners whenever work is proposed across the property line (including the alteration of water courses).

105. **STORMWATER RUNOFF**: Discharges of material other than stormwater are allowed only when necessary for performance and completion of construction practices and where they do not: cause or contribute to a violation of any water quality standard; cause or threaten to cause pollution, contamination, or nuisance; or contain a hazardous substance or a quantity reportable under federal regulations 40 CFR parts 117 and 302. Potential pollutants include but are not limited to: sediment, erosion, solid or liquid chemical spills; wastes from paints, stains, sealants, glues, limes, pesticides, herbicides, wood preservatives and solvents; asbestos fibers, paint flakes or stucco fragments; fuels, oils, lubricants, and hydraulic, radiator or battery fluids; fertilizers, vehicle/equipment wash water and concrete wash water; concrete, detergent or floatable wastes; wastes from any engine/equipment steam cleaning or chemical degreasing; and super chlorinated potable water line flushings, during construction, disposal of such materials should occur in a specified and controlled and temporary area on-site, physically separated from potential storm water run-off, with the ultimate disposal in accordance with local, state, and federal requirements.

1. Dewatering of contaminated groundwater, or discharging contaminated soils via surface erosion is prohibited. Dewatering of non-contaminated groundwater requires a National Pollutant Discharge Elimination System Permit from the respective State Regional Water Quality Control Board.

2. All Storm Drain Inlets shall be stenciled with glued marker stencils or painted with "No Dumping, Drains To Ocean" with the City approved stencil in blue paint. (Developer shall obtain stencil directly from city.)

REQUIRED NDPES/WATER QUALITY NOTES

- Sediment from areas disturbed by construction shall be retained on site using structural controls to the maximum extent practicable.
- Stockpiles of soil shall be properly contained to minimize sediment transport from the site to streets, drainage facilities or adjacent properties via runoff, vehicle tracking, or wind.
- Appropriate BMPs for construction-related materials, wastes, spills or resides shall be implemented to minimize transport from the site to streets, drainage facilities, or adjoining property by wind or runoff.
- Runoff from equipment and vehicle washing shall be contained at construction sites unless treated to remove sediment and other pollutants
- All construction contractor and subcontractor personnel are to be made aware of the required best management practices and good housekeeping measures for the project site and any associated construction staging areas.
- At the end of each day of construction activity all construction debris and waste materials shall be collected and properly disposed in trash or recycle bins
- Construction sites shall be maintained in such a condition that an anticipated storm does not carry wastes or pollutants off the site. Discharges of material other than stormwater are allowed only when necessary for performance and completion of construction practices and where they do not: cause or contribute to a violation of any water quality standard; cause or threaten to cause pollution, contamination or nuisance; or contain a

hazardous substance in a quantity reportable under Federal Regulations 40 CFR Parts 117 and 302.

Potential pollutants include but are not limited to: solid or liquid chemical spills; wastes from paints, stains, sealants, glues, lime, pesticides, herbicides, wood preservatives and solvents, asbestos fibers, paint flakes or stucco fragments; fuels, oils, lubricants, and hydraulic, radiator or battery fluids; concrete, detergent or floatable wastes; wastes from any engine/equipment steam cleaning or chemical degreasing; and superchlorinated potable water line flushings.

During construction, disposal of such materials should occur in a specified and controlled temporary area on-site physically separated from potential stormwater runoff, with ultimate disposal in accordance with local, state, and federal requirements.

- Dewatering of contaminated groundwater, or discharging contaminated soils via surface erosion is prohibited. Dewatering of non-contaminated groundwater requires a National Pollutant Discharge Elimination System (NPDES) permit from the respective State Regional Water Quality Control Board.

106. UTILITIES:

1. The domestic water line shall have a minimum of 10' horizontal distance from sanitary sewer. Refer to State requirements and City Engineering Standards.

2. The Contractor shall assume all liability and responsibility for all existing utilities shown and not shown on the plans.

3. A minimum clearance of six (6) inches shall be maintained above, below, or beside any existing substructures.

4. Backfill the trench with two sacks of sand slurry when existing native soil under or over the pipe is removed.

5. The Contractor shall not operate main line water valves.

6. All utilities serving the property shall be installed underground or shall provide for future underground power, telephone connections, and cable T.V.

7. The location and protection of all utilities is the responsibility of the permittee.

107. EXCAVATION

1. **Grading Estimate:** Estimated quantity of grading must be on title sheet of plans.

2. **Previous Fill**: Any previous fill observed in the vicinity of excavations must be removed to firm native soil prior to placement of the controlled fill.

3. **Unusual Conditions:** When unusual conditions are encountered on the site, the Soils Engineer shall be consulted for recommendations to ensure the remedial measures outlined or not included in the soils report.

4. **Dust Control:** The Contractor shall keep the construction area sufficiently dampened to control dust caused by grading and construction. Water shall be applied to the site twice daily during grading operations or as otherwise directed by the City Inspector in compliance with South Coast AQMD rule 403 (Fugitive Dust Emission). A grading operations plan may be required including watering procedures to minimize dust, and

equipment procedures to minimize vehicle emissions from grading equipment. Contractor shall at all times provide reasonable control of dust caused by wind.

5. **Material Stockpile:** Location for stockpiling of excess material shall be approved by the City Engineer prior to the start of excavation. Stockpiling and/or vehicle staging areas shall be located as far as practical from sensitive noise receptors (e.g. residential areas).

6. **Surplus Material:** All unsuitable and surplus material shall become the property of the Contractor, and shall be removed from the site. Export soil must be transported to a legal dumpsite or to a permitted site approved by the City Engineer.

7. **Ground Water:** In areas where ground water will be encountered during construction, the concrete slabs shall be constructed over a 6 mil plastic membrane. The plastic membrane should be properly lapped, sealed, and protected with two inches of sand.

8. **Unfavorable Weather:** No fill shall be placed, spread, or rolled during unfavorable weather conditions. When work operations are interrupted by rains, fill operations shall not resume until the Soils Engineer field tests and determine the right moisture content and density of the fill.

9. **Soils Engineer's Inspection**: The Soils Engineer shall provide inspection for the site clearing and grading in order to certify that the grading was done in accordance with the approved plans and grading specifications. Soils Engineer shall observe and test all grading and compaction operations. Compaction reports shall be filed with the City Engineer. The Soils Engineer and Geologist shall perform sufficient inspections and be available during grading and construction to verify compliance with the plans, specifications, and the code within their permitted area.

10. **Design Civil Engineer:** The Design Civil Engineer shall be available during grading to verify compliance with the plans, specifications and, any special conditions of the permit within their permitted area.

11. **Backfill Material:** The type of soil or required import to be used for backfill shall be examined, tested and approved by the Soils Engineer prior to delivery to the site.

12. **Water Removal**: The Contractor shall provide and maintain at all times during construction ample means and devices with which to promptly remove and properly dispose of all water from any source entering the excavations and other parts of the work.

13. Any dirt, rock, or construction material that may be tracked or dropped within the public right-of-way during the transportation of said material or by equipment associated with the project shall be cleaned or removed daily and as deemed necessary by the Grading Inspector.

14. **Site Maintenance**: Construction sites shall be maintained in such condition that an anticipated storm does not carry wastes or pollutants off the site.

108. **PUBLIC IMPROVEMENTS**: All existing public improvements removed or damaged shall be replaced in kind.

109. **ABANDONED WELLS**: Any abandoned oil and water wells shall be abandoned in compliance with the specifications approved by Orange County, Human Services Agency, Division of Environmental Health and in accordance with the standard procedures and ordinances of the State of California.

110. **ABANDONED SEWERS**: Any existing sewers, cesspools, and septic tanks shall be abandoned in compliance with the Uniform Plumbing Code and to the approval of the City Engineer.

111. **INADEQUATE OR NON-STANDARD IMPROVEMENTS IN THE PUBLIC RIGHT OF WAY:** In accordance with the City Code, the City Engineer will determine whether curb, gutter, and sidewalk is inadequate or non-standard at the end of the work. The Contractor shall obtain and pay for a public works permit and complete the required work prior to any release of any cash bonds or issuance of a certificate of occupancy.

112. Grading shall not vary more than 0.02 feet under areas to be paved for walks, driveways, curb and gutter, and building or structure slabs.

113. **INSPECTION:** The inspector will observe the work and notify the PERMITTEE or his agent wherein if it fails to comply with the approved plans and specifications. The PERMITTEE or his agent shall notify the City Engineer a minimum of two working days before the grading operation is ready for each of the following inspections:

1. **Initial Inspection**: When the PERMITTEE is ready to begin work, but before any grading or brushing is started;

2. **Toe Inspection**: After the natural ground is exposed and prepared to receive fill but before any fill is placed;

3. **Excavation Inspection**: After the excavation emplacement is started, but before the vertical depth of the excavation exceeds ten feet;

4. **Fill Inspection**: After the fill emplacement is started, but before the vertical height of the lifts exceeds ten feet;

5. **Drainage Device Inspection**: After forms and pipes are in place, but before any concrete is placed;

6. **Rough Grading**: The site will be considered ready for rough grading certification when the following items are complete;

    1. Grading to approximate final elevation, (within 0.1 ft.);

    2. Staking of property lines;

    3. Location and gradient of cut and fill slopes;

    4. Location, cross-sectional configurations and flowline gradient of drainage swales and terraces (graded ready for paving);

    5. Berms installed where indicated;

    6. Required drainage slopes provided on building pads;

    7. Approved irrigation system plans (where required);

    8. Receipt of grading inspection certificate (rough grading);

7. **Final Grading**: The site will be considered ready for final grading certification when the following items are completed:

1. All required devices have been installed;

2. Slope planting established and irrigation's systems provided (where required);

3. Adequate provisions have been made for drainage of surface waters from each building site;

4. As graded plan and required reports have been submitted;

5. The grading contractor shall submit a statement in writing that the work under his direction was performed in accordance with the approved plans and requirements of this code or wherein such work was not in accordance with such plans and code (grading contractors statement);

114. **Flood Plain Certification:** Upon completion of the structure, the engineer or surveyor shall provide a certificate of elevations with the City Engineer, certifying that the lowest floor elevation is properly elevated as shown on the plan (above the base flood elevation as indicated in the Federal Emergency Management Agency Flood Insurance Rate Map.

115. **Civil Engineer's Certifications:** The Civil Engineer signing these plans shall be responsible to incorporate all recommendations from the Soils Engineering or engineering geology reports into the grading plan. His responsibility shall include, but need not be limited to inspections and approval as to the establishment of line, grade and drainage of the development area and assuring the accuracy and acceptability of the work hereon. The Civil Engineer shall submit certifications of rough grading and precise grading on forms provided by the Agency.

116. **As-Builts**: The Civil Engineer also shall be responsible for the submission of as-graded grading plans upon completion of the work.

1. Proposed revisions to the grading plan shall be drawn in red pencil on bluelines of the approved plans. A set of bluelines will then be submitted to the City Engineering Division for review and approval. The original plans **SHALL NOT** be changed until the revision has been approved by the City Engineer.

117. **Record of Survey:** The Surveyor shall file a Record of Survey with the Orange County Surveyor's Office within 90 days after the setting of the required property corner monuments. The Developer shall provide the City of Seal Beach a mylar of the Record Survey prior to issuance of building occupancy permit.

118. **Water Quality Management Plan (WQMP)** conditions listed in Section A-7.5.5 of the City of Seal Beach Local Implementation Plan (LIP) shall apply to this project.

A-7.5.5 Plan Check: Issuance of Grading or Building Permits

The construction plans submitted by the applicant for plan check must incorporate all of the structural BMPs identified in an approved Project WQMP. Therefore, the City will require applicants to obtain approval of the final Project WQMP prior to submitting construction plans for plan check.

General or Special Notes for Plan Sheets

Prior to the issuance of a grading or building permit, the City shall require the permit applicant to include the following as general or special notes on the plan sheets for new development or significant redevelopment projects:

- Sediment from areas disturbed by construction shall be retained on site using structural controls to the maximum extent practicable.
- Stockpiles of soil shall be properly contained to minimize sediment transport from the site to streets, drainage facilities or adjacent properties via runoff, vehicle tracking, or wind.
- Appropriate BMPs for construction-related materials, wastes, spills or resides shall be implemented to minimize transport from the site to streets, drainage facilities, or adjoining property by wind or runoff.
- Runoff from equipment and vehicle washing shall be contained at construction sites unless treated to remove sediment and other pollutants.

- All construction contractor and subcontractor personnel are to be made aware of the required best management practices and good housekeeping measures for the project site and any associated construction staging areas.

- At the end of each day of construction activity all construction debris and waste materials shall be collected and properly disposed in trash or recycle bins.

- Construction sites shall be maintained in such a condition that an anticipated storm does not carry wastes or pollutants off the site. Discharges of material other than stormwater are allowed only when necessary for performance and completion of construction practices and where they do not: cause or contribute to a violation of any water quality standard; cause or threaten to cause pollution, contamination or nuisance; or contain a hazardous substance in a quantity reportable under Federal Regulations 40 CFR Parts 117 and 302.

  Potential pollutants include but are not limited to: solid or liquid chemical spills; wastes from paints, stains, sealants, glues, lime, pesticides, herbicides, wood preservatives and solvents, asbestos fibers, paint flakes or stucco fragments; fuels, oils, lubricants, and hydraulic, radiator or battery fluids; concrete, detergent or floatable wastes; wastes from any engine/equipment steam cleaning or chemical degreasing; and superchlorinated potable water line flushings.

  During construction, disposal of such materials should occur in a specified and controlled temporary area on-site physically separated from potential stormwater runoff, with ultimate disposal in accordance with local, state and federal requirements.

  - Dewatering of contaminated groundwater, or discharging contaminated soils via surface erosion is prohibited. Dewatering of non-contaminated groundwater requires a National Pollutant Discharge Elimination System (NPDES) permit from the respective State Regional Water Quality Control Board.

  Plan Check for Private Projects with Land Use Permits

  For projects with land use permits, the City shall review the environmental (CEQA) documentation (including the Mitigation Monitoring and Reporting Program), the conditions of approval and the approved Project WQMP for an understanding of the water quality issues and structural BMPs required. The City shall review construction plans for conformity with the approved Project WQMP. If the selected BMPs were approved in concept during the land use entitlement process, the City shall require the applicant to submit detailed construction plans showing locations and design details of all BMPs that are in substantial conformance with the preliminary approvals. The City shall

review a project's construction plans to assure that the plans are consistent with the BMP design criteria and guidance provided in **DAMP Section 7, Exhibit 7.II.**

Plan Check for Projects with By-Right Zoning (Ministerial Projects)

For projects with by-right zoning or projects that do not need discretionary review, the City shall first review the proposed Project WQMP for conformity with the requirements described in **DAMP Section 7.7** and **DAMP Section 7, Exhibit 7.II**. The approved Project WQMP shall then be used in reviewing the construction plans for consistency with the BMP design criteria and guidance provided in **DAMP Section 7, Exhibit 7.II**.

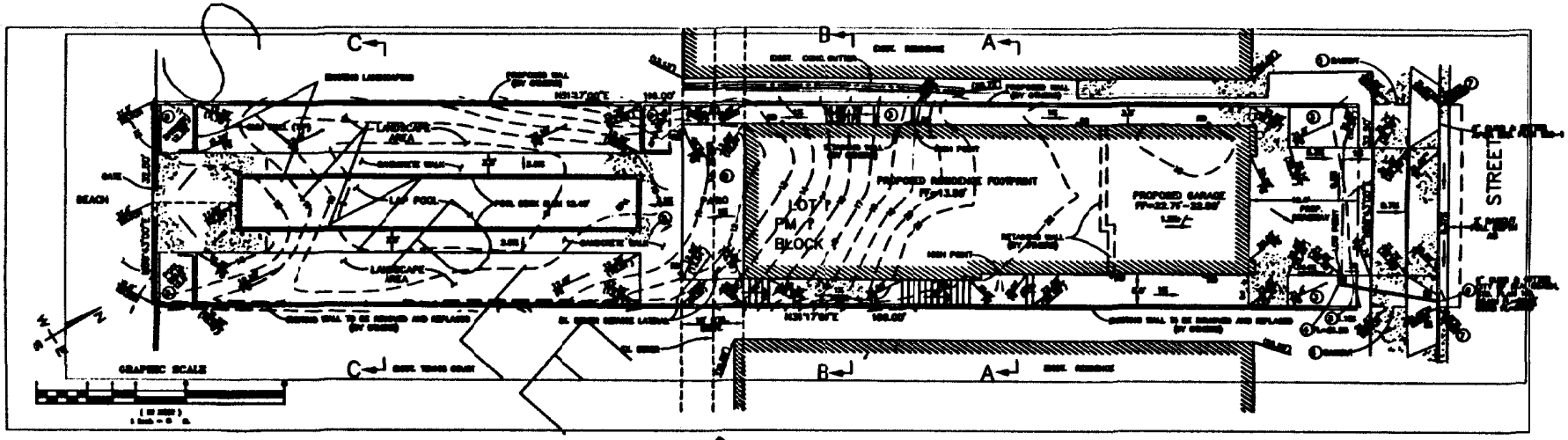
Plan Check for Public Agency Projects

Prior to initiating grading or construction activities, the City shall ensure that the construction plans for its public works projects reflect the structural BMPs described in the approved Project WQMP. In conducting the design review process for its public agency projects, the City shall review the construction plans and specifications for conformity with the approved Project WQMP and for consistency with the BMP design criteria and guidance provided in **DAMP Section 7, Exhibit 7.II**.

Plan Check for Projects with Alternative Treatment Control BMPs (See **DAMP Section 7, Exhibit 7.II Section 3.3.3.**)

If an applicant elected to utilize Alternative Treatment Control BMPs in a project's construction plans, the City shall require the project's engineer of record to certify that the Alternative Treatment Control BMPs are equally or more effective in pollutant reduction than comparable BMPs found in the Model WQMP.

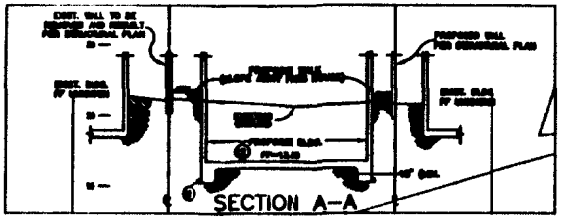
Bond Release: All requests for bond releases must be in writing and to the City Engineer.

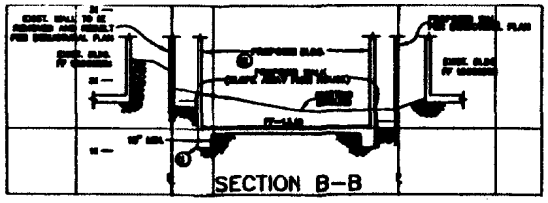


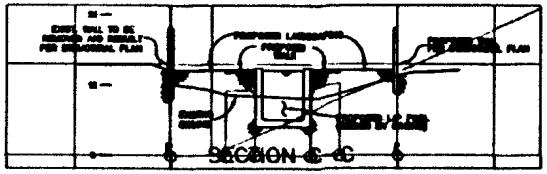
PLAN

PROJECT SECTIONS

SCALE 1"=5'





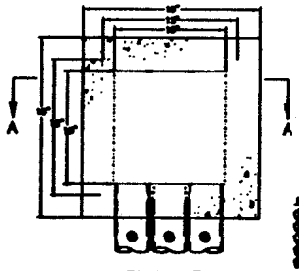


LEGEND

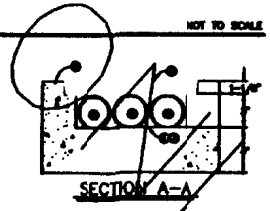
CONSTRUCTION NOTES

DRAIN BOX DETAIL

NOT TO SCALE



PLAN VIEW



ENGINEERING COMPANY

PROPERTY'S ADDRESS

GRADING PLAN & SECTIONS

OWNER'S NAME

GRADING PERMIT NO.

C.2

Application for a Public Works Permit

Department of
PUBLIC WORKS

What type of permit are you applying for? (Check only one)

- ☐ Above Ground Cabinet (Needs City Engineer Approval)
- ☐ Alley: Panel Replacement
- ☐ Building Materials: Street Obstruction
- ☐ Concrete Flatwork: Sidewalk, Curb, Gutter, or Driveway Approach
- ☐ Crane Permit
- ☐ Dumpster Street Obstruction
- ☐ Grading Precise: Commercial Single Lot
- ☐ Grading Precise: Commercial Tract
- ☒ Grading Precise: SFR Single Lot
- ☐ Grading Precise: SFR Tract
- ☐ Grading Rough: Commercial Single Lot
- ☐ Grading Rough: Commercial Tract
- ☐ Grading Rough: SFR Single Lot
- ☐ Grading Rough: SFR Tract
- ☐ Monitoring Well: within Public Right of Way
- ☐ Non Std: Other
- ☐ Non Std: Wall in ROW
- ☐ OTHER: Needs City Engineer Approval
- ☐ Scalfolds: within Public ROW
- ☐ Sewer: Abandon and Cap House Connection
- ☐ Sewer: New House Connection
- ☐ Sewer: Other- Need City Engineer Approval
- ☐ Sewer: Repair Existing House Connection
- ☐ Street Cut/Excavation: Utility
- ☐ Traffic: Lane Closure
- ☐ Trees: Planting
- ☐ Trees: Removal
- ☐ Trees: Trimming
- ☐ Water: 3/4" (Existing Only)Service Connection
- ☐ Water: Hydrant Meter
- ☐ Water: New 1 1/2" Service Connection
- ☐ Water: New 1" Service Connection
- ☐ Water: New 10" Service Connection
- ☐ Water: New 2" Service Connection
- ☐ Water: New 6" Service Connection
- ☐ Water: New 8" Service Connection

Provide a detailed description of the proposed work (Attach 3 copies of Plans/Sketch):

S.F. GRADING PLAN 111 FIRST STREET

Provide estimated quantities if applicable:

Sidewalk (SF)	Curb & Gutter (LF)	Driveway (SF)	Alley R & R (SF)	Street Cut (SF)	Concrete Parkway Removal (SF)	Trees (EA)
100	25	50	200	NONE	NA	2

If this work is for a utility company, please check which type:

- ☐ Energy
- ☐ Gas
- ☐ Phone
- ☐ Sewer
- ☐ Water

Date on which this application was made MM-DD-YYYY _____

What is the estimated start date? 1-1-04 **finish date?** 11-1-04

Where is the proposed work located?

- [x] Private Property
- [ ] Public: City Owned Building/Facility
- [ ] Public: Street ROW

Street # 111 **Street Name** FIRST STREET
Cross Street OCEAN

APN Number 001-001-1245 *(Required for Private Property Work)*

Please provide any additional location description necessary:
(include Tract Information for New Development)

CONTRACTOR INFORMATION	
Name of Firm: ABC GRADING	Representative JOE GRADER
Address, City, Zip: 1234 STREET, CITY CITY, CA 90740	
Phone: 562-123-9876	Fax: 562-123-9877
24 Hr Emergency #: 562-123-9898	E-mail JOE@ABCGRADING.COM
☐ A: General Engineering ☐ C-8: Concrete ☒ C-12: Earthwork and Paving ☐ C-34: Pipeline Contractor ☐ C-42: Sanitation System ☐ Other (_____) Please check with Staff. Only certain contractor's may work in the ROW.	State Contractor's License # 771,111 City Business License #: 1234

OWNER INFORMATION	
Name: JOE & CATHY JONES	Phone: 562-123-4567
Address, City, Zip: 111 First St., Seal Beach, CA 90740	

NOTES/COMMENTS:

SB-PUBLIC WORKS Permit ID---DPW00041

DATE 02-03-2002

(Copies to: Engineering, Inspection, Finance, Applicant)

Grading Precise: SFR Single Lot__Permit

Inspection is Required: Call (562) 594-8553 TWO WORKING DAYS IN ADVANCE

This application is only proposing the following work: Grading Precise: SFR Single Lot Work types can not be combined and separate permits are required for each type of work.

Site Location

Street Address-- 211 8th St Cross Street-- Central Ave

Other-(Include lot, block and track information for tract work)--

Detailed Description of Proposed Work

SAMPLE

Contractor/Applicant Information (refer to http://www.cslb.ca.gov/contractors/index.html)

License-- 123456 Representative-- John Doe Company Name-- Contractor's Incorporated Address-- 311 Central Avenue -- Huntington Beach -- 90740 Phone-- (562) 111-1234 Fax-- (562) 111-1234 24 Hour Contact-- (562) 222-3333 E-mail-- contractor@yahoo.com

Property Owner Information

Owner-- John Citizen Address-- 311 8th Street -- Cypress -- CA -- 90740 Phone-- (555) 555-8888

Permit Costs

001.000.30700: Application Fee--	$ 20
001.000.20262: Inspection Deposit --	$ 100
001.000.20263: Cash Security Deposit-- (Note: A refundable surety deposit may required for certain permits. Permitee is responsible for initiating the refund by calling for a final inspection and sign off. Upon sign off, a refund of the deposit minus any deductions determined by the Department, can be processed within six weeks.)	$ 300
043.000.35042: Sewer Connection Charge--	$ 0
019.000.35042: Water Connection Charge--	$ 0
017.000.20225: Hydrant Meter Deposit--	$ 0
017.000.35530: Meter Cost--	$ 0
017.000.35530: Meter Box Cost--	$ 0
001.000.20263: Other Deposit/Charge--	$ 2
TOTAL AMOUNT COLLECTED--	$ 422

Standard Conditions of Approval

GENERAL PROVISIONS: All work and material required, unless otherwise specified, shall be in accordance with Rules and Regulations adopted by the Director of Public Works, City Standard Plans and Specifications for Public Works Construction, 2000 or Latest Edition. This permit is subject to all existing conditions of approval and zoning regulations for the site.

DEFINITIONS: The "Contractor" is the Permitee or authorized agent who performs the work under the permit. The Engineer is the Director of Public Works or his authorized agent.

REVOCATION: This permit is revocable at the option of the Director of Public Works.

EXPIRATION: This permit is void if work is not started within 30 days **(03-05-2002)** and completed within 120 days **(06-03-2002)** of the date of issuance. Dumpster Permits expire 45 days **(03-20-2002)** from the date of issuance

NON-TRANSFERABLE: The Contractor can not transfer this permit to any other party.

DOCUMENTS ON SITE: The permit, these standard provisions, and WATCH manual (for work in the street) must be kept at the site of the work and be shown, on demand, to any authorized City representative or any law enforcement officer. Failure to observe this requirement shall be considered as a suspension of Work by the Contractor until such time the Contractor complies.

INSURANCE: All Contractors and subcontractors shall provide a Certificate of Workmen Compensation Insurance with the City of Seal Beach named as Certificate Holder.

BONDS: A bond or cash deposit may be required at any time for the replacement of existing improvements. The Engineer shall determine the amount of the Bond.

LICENSES: All construction work in the Public Right of Way must be performed by properly licensed Contractors unless waived by the Engineer. The Contractor and

Subcontractors performing the work shall have a City Business License. Concrete Flatwork such as driveways, sidewalks, curb and gutter, concrete street or alley require A or C8, Asphalt Street and Alley require A or C12, Sewer Laterals require A or C34 or C42, Sewer Mainlines or Storm Drains require A or C34 or C42, and Underground Utilities such as Water, Gas or Oil require A or C34.

WORK WITHOUT PERMITS: Work that has been done prior to issuance of a permit is subject to rejection and or/fine. The fine is double the permit fees for the work.

REMOVAL OF UNDERGROUND SERVICE ALERT MARKS: The Contractor shall remove all USA markings upon completion of the work.

PERMIT REVOCATION: In the event of revocation, the Contractor shall immediately cease all operations and restore the City Right of Way to the satisfaction of Engineer. The Contractor shall pay any and all costs involved in the events of restoration.

TRAFFIC CONTROL: The Contractor shall establish and maintain traffic control in accodance with the WATCH-Work Area Traffic Control Handbook, latest edition and per City Standard Traffic Control Provisions. Failure to observe this requirement shall be considered as a suspension of Work by the Contractor until such time the Contractor complies. Contractor shall maintain two-way traffic flow at all times. The Contractor shall install and maintain adequate construction zone signs and barricades and shall provide for the services of flagmen when necessary to protect the public. The Contractor shall use illuminated arrow boards on all City arterials and as required by the engineer.

LANE CLOSURES: The Contractor shall obtain written approval from the Engineer prior to closing any lane of through traffic. The Contractor shall submit a lane closure plan and/or detour plan for approval prior to construction per the City Standard Traffic Control Provisions. The plan may consist of a reference to a standard plan or diagram in the latest edition of CALTRANS Manual of Traffic Control or WATCH. The Contractor shall submit said plan a minimum of two working days prior to proposed implementation. If approved, the Contractor shall notify the City Police and Fire Departments of the Closure.

BATCHING: Sandbags shall be placed at the downstream end of the gutter for all except lumber storage. Gutters and sidewalks shall be kept free of dirt and debris. Streets shall be swept clean. Dirt shall not be hosed down unless a vacuum system is deployed. Cones shall be placed around all construction vehicles.

DUMPSTER/BUILDING MATERIALS: Permits for Street Obstructions expire after 45 days. Obstructions placed in the area bordered by PCH, Seal Beach Boulevard, Electric Avenue and 13th Street require that the applicant post no parking signs on the opposite side of the street for the duration of the obstruction. The applicant must affix a copy of the dumpster permit outside of the dumpster in a clear water proof holder. Dumpster shall have adequate reflectors where warranted. Building Materials: Material must not occupy space extending more than ten feet out from curb of same side and only in front of premises for which permit was granted. Sidewalks must be kept clear at all times. No building material or debris shall be stored within 25 feet of any fire hydrant. Warning lights shall be maintained on each end of material or debris, during the whole of each night, from one hour after sunset until one hour before sunrise. Street must be cleaned within 5 days after completion of the work for which permit was obtained. Gutters must be kept clear at all times.

PEDESTRIAN ACCESS: The Contractor shall maintain pedestrian walkways with safety fencing or barrier separation from adjacent excavation when unattended.

ADDITIONAL INSPECTION: If in the estimation of the Engineer, the Contractor has caused additional inspection costs to the City, the Contractor shall pay, upon demand, the inspection costs computed by the Engineer.

FAILURE TO PAY: If the Contractor, upon demand, fails to pay any deficiency as provided, or fail to pay any other costs due the City for which no deposit has been made, the City may recover the same action in a court of competent jurisdiction. Until such deficiency or cost is paid in full, no further permits shall be issued to the Contractor.

TRENCHES AND EXCAVATIONS: The Contractor shall sawcut all asphalt and concrete pavements cuts per City Standard Plans. If required or permitted by the Engineer, the Contractor may bore under existing improvements. The Contractor shall "Plate" any excavation per WATCH and open all lanes to traffic at the completion of work each day. Immediately upon backfill of the street excavation, the Contractor shall replace and maintain temporary bituminous surfacing in areas where existing pavement has been removed. When used, the Contractor shall fasten down metal plates to prevent moving. The Contractor shall apply a "tack-coat" to all contact surfaces of pavement joints. The permanent replacement of all pavement and base shall be 1" thicker than existing and the edges of all A.C. patches shall be sealed with asphalt emulsion.

BEDDING AND BACKFILL: Bedding and backfill for pipes and multi-ducts shall be installed per Orange County Environmental Management Agency Standard Plan No. 1319.

CONCRETE: The Contractor shall remove and replace sidewalks, curb and gutter, etc...between weakened-plane joints, expansion joints, or score marks. In the event the curb, gutter, or sidewalk is damaged, it must be replaced to the satisfaction of the Engineer at Contractor expense. Forms and sub-grade must be inspected and approved before ordering Portland Cement Concrete or Asphaltic Concrete. The Contractor shall use Class 560-C-3250 concrete unless otherwise approved in writing.

COMPACTION: The relative compaction of all bedding and backfill materials shall be 90 percent except the upper 6 inches, which shall be compacted to 95 percent. When required by the Engineer, the Contractor shall provide and pay for compaction tests by a certified laboratory acceptable to the Engineer. In lieu of compaction test, the Contractor may backfill the trench with two sack cement sand slurry upon approval of the Engineer.

DRAINAGE: The Contractor shall provide and maintain, at all times during construction, ample means and devices with which to promptly remove and properly dispose of all water from any source entering the excavation and other parts of the work.

DISCHARGES INTO STORM DRAINS - SEE BEST MANAGEMENT PRACTICES: The Contractor shall not allow any pollutants or non-stormwater run-off from its operation to enter the storm drain.

DAMAGE TO STRIPING: The Contractor shall replace in like and kind any striping damaged by its operations. The Contractor shall replace the entire legend and not portions.

PARKWAY AND MEDIAN EXACVATIONS: When excavating in planted areas, the Contractor shall replace plants, shrubs, and sod in like and kind to match its original condition.

HOURS OF WORK: The Contractor shall work only work between the hours of 8 a.m. to 5 p.m., Monday through Friday.

FIRE HYDANTS: Access to fire hydrants shall be maintained at all times.

HYDRANT METERS: Applicant must be charged and file separate paperwork for each meter move. Only UTILITY DIVISION personnel may move hydrant meters.

CLEAN UP: Streets in the construction site and in the surrounding area shall be cleaned within 24 hours after the work is completed. The Contractor shall keep the site clean at all times to the satisfaction of the Engineer. The Contractor shall keep dust under control.

PROTECTION OF EXISTING IMPROVEMENTS: The Contractor shall pay for and replace any existing improvements it damages or removes to the satisfaction of the Engineer.

SHEETING, SHORING AND BRACING: In all operations, the requirements of the State Division of Industrial Safety for trenches, excavation and shoring will apply. For trenches in excess of 5 feet in depth, the Contractor shall obtain a permit from Division of Industrial Safety.

NOTIFICATION: The Contractor shall give two working days of notice in advance for inspection, exclusion of Fridays, Saturdays, Sundays and Holidays. Per Section 4216/4217 of the Government Code, the Contractor shall notify Underground Service Alert 800 -422-4133 and obtain a Dig Alert I.D. Number two working days in advance of excavation to locate utilities. It shall be the responsibility of the Contractor to notify all utility companies before starting any construction that may involve underground or overhead facilities, and pay for any removal or relocation work necessary. The following is a partial list of Utility Companies: PHONE: (310) 437-011, ELECTRIC: (714) 835-3833, GAS: (714) 894-3368, CITY WATER: (562) 493-8660 ext 433, CITY SEWER (562) 493 8660 ext 432, CABLE:(562) 493-2295

UTILITY SERVICE CONNECTIONS: Approved plans are required prior to starting work. Only a licensed A general contractor or a contractor with the appropriate combination of licenses are allowed. All work must be done in accordance with the approved plan and City Engineer standards and provisions. Inspection is required from both the ENGINEERING DIVISION 431-2527 and the UTILITY DIVISION 431-8660 ext 409. A minimum of two working days is required to schedule an appointment. The applicant shall contact the UTILITY DIVISION to inquire about the type of box, meter, and location required. All are subject to the approval of the UTILITY DIVISION field personnel. NOTE: A SEPARATE PERMIT BUST BE TAKEN FOR EXCAVATIONS, STREETS, OR ALLEY CUTS in the Public Right of Way. A permit will not be granted unless the appropriate parties are SIGNED UP and accounts are in GOOD STANDING with the FINANCE DEPARTMENT.

CRANES: Any person operating a crane in or upon the public street must comply with the following regulations. (a) No unauthorized person or vehicle is to be permitted to pass or stand under the boom or load. All unauthorized persons and vehicles must be kept at a safe distance from such operations. (b) Flagpersons, barricades, signs, lights, and warning devices are to be provided. (c) Pedestrians shall not be directed into vehicular traffic lanes including the parking lane. (d) Cranes or accessory units shall be parked a safe distance from all intersections and not block crosswalks at any time unless authorized by proper authority. (e) If the job site poses unusual or potentially unsafe conditions for pedestrians or vehicles, the job shall be scheduled at the most advantageous time. The Department may be called for necessary assistance. Work shall be scheduled to avoid heavily traveled streets during peak traffic hours; i.e., 7:00 a.m. to 9:00 a.m. and 3:30 p.m. to 6:00 p.m. (f) The contractor shall be liable for all damage that occurs to public streets or improvements or property herein which is caused by or results from operation of a crane in the public street. (g) Any condition specified by the Board in granting the permit, including, but, not limited to, the hours and days that cranes may be parked or operated in a public street; and safety measures to be taken by the permittee.

WARRANTY: Work done shall be guaranteed for a period of one year. Failure of the City Inspector to detect flaws in work shall not relieve the applicant or Contractor of this responsibility.

Notice - HOLD HARMLESS, INDEMNIFICATION and ACKNOWLEDGEMENTS

This is not a valid permit unless the applicant has properly executed all the required documents and acknowledgements associated with this activity and the department has approved for issuance.
In consideration of the granting of this permit, I agree that the City and any other officer, employee, or agent thereof shall be saved harmless by the applicant from any liability or responsibility for any liability or responsibility for any accident, loss or damage to persons or property, happening or occurring as the proximate result of any of the work undertaken under the terms of this application and the permit or permits which may be granted in response thereto, and that of said liabilities are hereby assumed by applicant.

I further agree that if any part of this installation interferes with the future use of the right of way by the general public, it must be removed or relocated, as designated by the City Engineer at the expense of the permittee or his successor in interest.

I further certify under the penalty of perjury that I am authorized to represent the Person, Firm, or Corporation for whom the application is made.

I acknowledge that I have read and agree to this application and all its attached conditions.

I agree to pay to correct any items installed which do not comply with the requirements for this permit.

To the fullest extent permitted by law, Indemnitor hereby agrees, at its sole cost and expense, to defend, protect, indemnify, and hold harmless the City of Seal Beach and its elected officials, officers, attorneys, agents, employees, volunteers, successors, and assigns (collectively *Indemnitees*) from and against any and all damages, costs, expenses, liabilities, claims, demands, causes of action, proceedings, expenses, judgments, penalties, liens, and losses of any nature whatsoever, including fees of accountants, attorneys, or other professionals and all costs associated therewith (collectively *Liabilities*), arising or claimed to arise, directly or indirectly, out of, in connection with, resulting from, or related to any act, failure to act, error, or omission of Indemnitor or any of its officers, agents, servants, employees, subcontractors, materialmen, suppliers or their officers, agents, servants or employees, arising or claimed to arise, directly or indirectly, out of, in connection with, resulting from, or related to the above-referenced contract, agreement, license, or permit (the Agreement) or the performance or failure to perform any term, provision, covenant, or condition of the Agreement, including this indemnity provision. This indemnity provision is effective regardless of any prior, concurrent, or subsequent active or passive negligence by Indemnitees and shall operate to fully indemnify Indemnitees against any such negligence. This indemnity provision shall survive the termination of the Agreement and is in addition to any other rights or remedies which Indemnitees may have under the law. Payment is not required as a condition precedent to an Indemnitee's right to recover under this indemnity provision, and an entry of judgment against an Indemnitee shall be conclusive in favor of the Indemnitee's right to recover under this indemnity provision. Indemnitor shall pay Indemnitees for any attorneys fees and costs incurred in enforcing this indemnification provision. Notwithstanding the foregoing, nothing in this instrument shall be construed to encompass (a) Indemnitees' sole negligence or willful misconduct to the limited extent that the underlying Agreement is subject to Civil Code section 2782(a) or (b) the contracting public agency's active negligence to the limited extent that the underlying Agreement is subject to Civil Code section 2782(b). This indemnity is effective without reference to the existence or applicability of any insurance coverages which may have been required under the Agreement or any additional insured endorsements which may extend to Indemnitees. Indemnitor, on behalf of itself and all parties claiming under or through it, hereby waives all rights of subrogation and contribution against the Indemnitees, while acting within the scope of their duties, from all claims, losses and liabilities arising out of or incident to activities or operations performed by or on behalf of the Indemnitor regardless of any prior, concurrent, or subsequent active or passive negligence by the Indemnitees. In the event there is more than one person or entity named in the Agreement as an Indemnitor, then all obligations, liablilities, covenants and conditions under this instrument shall be joint and several.

Contractor/Applicant/Indemnitor (print name) _____ (sign) X _____
Date _____

Project Pollution Prevention: Stormwater Runoff - Best Management Practices Statement -- - KEEP OUR OCEAN CLEAN!

[redacted]

Storm water runoff from construction sites has been shown to be a major source of water pollution. The following represents the minimum standards of good housekeeping, which must be implemented on all construction sites regardless of size.

(A) All persons working at the site should obtain, read, and understand the best management practices pamphlets for the type(s) of construction being done.

(B) Stockpiles of soil, demolition, debris, cement, sand, topsoil, etc, must be covered with a waterproof material or bermed to prevent being washed off site.

(C) Fuels, oils, paints, solvents, and other liquid materials must be kept inside bermed areas. Spills must not be washed to the street.

(D) Waste concrete must not be washed into the street, storm drain catch basins, or public right-of-way. All dust and slurry from concrete cutting must be removed using a wet-dry vacuum or equivalent.

(E) Trash and other construction solid wastes must be placed in a covered trash receptacle.

(F) Eroded soil from disturbed slopes must be contained using berms, silt fences, settling basins, or good erosion management practices such as reseeding.

(G) Wash water from cleaning construction vehicles and equipment must be kept on-site within a containment area.

!!!IMPORTANT!!! Construction activity resulting in a land disturbance of **one acre or more**, or less than one acres but part of a larger common plan of development or sale must obtain the Construction Activities Storm Water General Permit (General Permit). Construction activity includes clearing, grading, excavation, stockpiling, and reconstruction of existing facilities involving removal and replacement.

NO GRADING PERMIT FOR MORE THAN 1-ACRE IS VALID UNLESS PROOF OF THIS HAS BEEN SUBMITTED AND ATTACHED TO THIS PERMIT.

THE FOLLOWING BMPs HAVE BEEN MADE AVAILABLE TO THE CONTRACTOR AND THE CONTRACTOR UNDERSTANDS IT IS THEIR RESPONSIBILITY TO UNDERSTAND AND IMPLEMENT THE APPROPRIATE BMP APPLICATION AS IT APPLIES TO THIS PERMIT:

EROSION CONTROL BMPs: EC-1 Scheduling EC-2 Preservation of Existing Vegetation EC-3 Hydraulic Mulch EC-4 Hydroseeding EC-5 Soil Binders EC-6 Straw Mulch EC-7 Geotextiles, Plastic Covers & Erosion Control Blankets/ Mats EC-8 Wood Mulching EC-9 Earth Dikes/ Drainage Swales & Lined Ditches EC-9 Earth Dikes/ Drainage Swales & Lined Ditches EC-10 Outlet Protection/ Velocity Dissipation Devices EC-11 Slope Drains

SEDIMENT CONTROL BMPs: SE-1 Silt Fence SE-2 Desilting Basin SE-3 Sediment Trap SE-4 Check Dam SE-5 Fiber Rolls SE-6 Gravel Bag Berm SE-7 Street Sweeping and Vacuuming SE-8 Sandbag Barrier SE-9 Straw Bale Barrier SE-10 Storm Drain Inlet Protection

WIND EROSION CONTROL BMPs: WE-1 Wind Erosion Control Tracking Control BMPs TC-1 Stabilized Construction Entrance/ Exit TC-2 Stabilized Construction Roadway TC-3 Entrance/Outlet Tire Wash

NON-STORMWATER CONTROL BMPs: NS-1 Water Conservation Practices NS-2 Dewatering Operations NS-3 Paving and Grinding Operations NS-4 Temporary Stream Crossing NS-5 Clear Water Diversion NS-6 Illicit Connection/Illegal Discharge Detection and Reporting NS-7 Potable Water/Irrigation NS-8 Vehicle and Equipment Cleaning NS-9 Vehicle and Equipment Fueling NS-10 Vehicle and Equipment Maintenance NS-11 Pile Driving Operations NS-12 Concrete Curing NS-13 Concrete Finishing NS-14 Material and Equipment Use Over Water NS-15 Structure Demolition/Removal Over or Adjacent to Water NS-16 Temporary Batch Plants NS-17 Streambank Stabilization

WASTE MANAGEMENT AND MATERIALS POLLUTION CONTROL BMPs: WM-1 Material Delivery and Storage WM-2 Material Use WM-3 Stockpile Management WM-4 Spill Prevention and Control WM-5 Solid Waste Management WM-6 Hazardous Waste Management WM-7 Contaminated Soil Management WM-8 Concrete Waste Management WM-9 Sanitary/ Septic Waste Management WM-10 Liquid Waste Management

We, the undersigned, hereby state that we have read, understand and will comply with all rules and regulations of storm water runoff pollution prevention (SWRPPP) stipulated thereto, to the satisfaction of the City Engineer.

Contractor/Applicant (print name) _____ (sign) X _____
Date _____

FOR DEPARTMENT USE ONLY: Approval and Special Conditions

Staff Comments/Special Conditions--This is not a valid permit unless it is signed by the City Engineer or authorized designee. –

Authorization #--
DPW00041

Received By-- DD

Date-- 02-01-2000

Issued by-- DD –Signature X

Date-- 02-03-2002

Inspection is Required: Call (562) 594-8553 TWO WORKING DAYS IN ADVANCE

Pre Demolition_____ Date_____

Backfill/Compaction_____ Date _____

Concrete Pour _____ Date _____

Ashpalt _____ Date_____

Flow Test _____ Date _____

Other (_____) _____ Date _____

Finaled by–

Date–

Comments–

CITY OF SEAL BEACH

GRADING PERMIT CASH BOND

This agreement is entered into between _____, hereinafter referred to as "Principal" and the City of Seal Beach, or its assigns, hereinafter referred to as "City", to ensure the completion of grading required by Grading Permit No. _____ on the property located at _____.

NOW, THEREFORE, IT IS AGREED THAT:

1. Principal agrees to indemnify, protect, defend, and hold harmless the City and its elected and appointed officers, agents, and employees from any and all claims, demands, costs, or liability arising from or connected with the undertaking provided hereunder due to the negligent acts, errors, or omissions of Principal. Principal will reimburse the City for any expenditures, including reasonable attorney's fees, incurred by the City in enforcing the terms of this Agreement, or incurred by the City in defending against claims ultimately determined to be due to negligent acts, errors, or omissions of the Principal.

2. Principal does herewith post a cash bond in the amount of $_____ for which City acknowledges receipt.

3. a) If Principal complies with all the provisions of the "City of Seal Beach Grading Ordinance"; and other applicable laws, and ordinances; and

   b) Complies with all of the terms and conditions of the permit for excavation or fill to the satisfaction of the Director of Public Works/City Engineer; and

   c) Completes all of the work contemplated under the permit within the time limit specified in the permit, and any extension or extensions thereof, or completes the work to a safe condition satisfactory to the Director of Public Works/City Engineer, the cash bond shall be released.

4. a) If principal, or its heirs, successors, executors, administrators, or assigns fails to comply with the aforementioned requirements, the Director of Public Works/City Engineer may order the work required by the permit to be completed or put in a safe condition to his satisfaction.

   b) The cash bond shall be used as necessary to pay for the completion of this work. After completion of the work, any funds remaining in this bond shall be refunded to the Principal.

   c) If the cost of the work exceeds the amount of this bond, Principal hereby agrees to reimburse the City for such excess costs.

   d) Principal agrees that if the City brings suit to collect for the work contemplated by this permit, that the reasonable attorney's fees as fixed by the court shall be paid by the Principal.

5. Principal hereby stipulates and agrees that no change, extension of time, alteration, or addition to the terms of the Agreement, the work to be performed

thereunder, with the specifications accompanying the Agreement, shall in any way affect its obligations on this bond. Principal hereby waives notice of any such change, extension of time, alteration, or addition to the terms of the Agreement, the work, or the specifications.

Dated: _____

Principal:

_____
(Signature)

_____
(Printed Name)

City Receipt No.:_____

_____
(Title)

_____
Address

_____

(Attach Notary Acknowledgement)

Bond No. _____

GRADING BOND FOR FAITHFUL PERFORMANCE
CITY OF SEAL BEACH

KNOW ALL PERSONS BY THESE PRESENTS that:

WHEREAS, the City Council of the CITY OF SEAL BEACH, State of California ("City"), and _____

_____

_____

_____

(Name, address, and telephone number of Principal)

("Principal") have entered into a written agreement dated _____, 20___, whereby Principal is required to construct certain improvements as shown on the Grading Plan accompanying Grading Permit No._____, which plan is made a part of said Permit and which improvements are:

WHEREAS, said Principal is required under the terms of said agreement to furnish a bond to guarantee completion of said improvements.

NOW, THEREFORE, we, the Principal and _____

_____

_____

_____,

(Name, address, and telephone number of Surety)

as Surety, are held and firmly bound unto City in the penal sum of _____

_____Dollars

($_____) lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, successors, executors and administrators, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH THAT if the above bounded Principal, his or its heirs, executors, administrators, successors or assigns, shall in all things stand to and abide by, and well and truly keep and perform the covenants, conditions and provisions in the said agreement and any alteration thereof made as therein provided, on his or their part, to be kept and performed at the time and in the manner therein specified, and in all respects according to their true intent and meaning, and shall indemnify and save harmless City, its officers, agents and employees, as therein stipulated, then this obligation shall become null and void; otherwise it shall be and remain in full force and effect.

As part of the obligation secured hereby and in addition to the face amount specified therefor, there shall be included costs and reasonable expenses and fees, including reasonable attorney's fees, incurred by City in successfully enforcing such obligation, all to be taxed as costs and included in any judgment rendered.

The Surety hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the agreement or to the work to be performed thereunder or the specifications accompanying the same shall in anywise affect its obligations on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the agreement or to the work or to the specifications. Surety hereby waives the provisions of California Civil Code §§ 2845 and 2849. The City of Seal Beach is the principal beneficiary of this bond and has all rights of a party thereto.

IN WITNESS WHEREOF, this instrument has been duly executed by Principal and Surety on the date set forth below.

Dated: _____

"Principal"	"Surety"
By: _____	By: _____
Its	Its
By: _____	By: _____
Its	Its
(Seal)	*(Seal)*

Note: This bond must be dated, all signatures must be notarized, and evidence of the authority of any person signing as attorney-in-fact must be attached.

STATE OF CALIFORNIA)
) ss.
COUNTY OF)

On _____, before me, _____ , Notary Public, personally appeared _____ personally known to me (or proved to me on the basis of satisfactory evidence) to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

Signature _____
Notary Public

STATE OF CALIFORNIA)
) ss.
COUNTY OF)

On _____, before me, _____ , Notary Public, personally appeared _____ personally known to me (or proved to me on the basis of satisfactory evidence) to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

Signature _____
Notary Public

STATE OF CALIFORNIA)
) ss.
COUNTY OF)

On _____, before me, _____ , Notary Public, personally appeared _____ personally known to me (or proved to me on the basis of satisfactory evidence) to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

Signature _____
Notary Public

STATE OF CALIFORNIA)
) ss.
COUNTY OF)

On _____, before me, _____ , Notary Public, personally appeared _____ personally known to me (or proved to me on the basis of satisfactory evidence) to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

Signature _____
Notary Public

CITY OF SEAL BEACH
211 8th Street, 2nd Floor
Seal Beach CA 90740
(562) 430-8533 Engineering

GRADING CONTRACTOR STATEMENT OF COMPLIANCE

Re: Grading Permit No.:_____

Date:_____

Project: Tract/Parcel Map No.: _____**Lot(s):** _____**, inclusive**

Address:_____

Owner:_____

I declare that the grading was done in accordance with the plans and specifications, the grading ordinance and the recommendations of the Civil Engineer, Soils Engineer and Engineering Geologist. It is understood that this declaration includes only those aspects of the work that can be determined by me, as a competent grading contractor.

The cubic yardage involved in our contract for this grading project was:

Estimated Excavation: CY	Actual Excavation: CY
Estimated Fill: CY	Actual Fill: CY
Estimated Import: CY	Actual Import: CY

Grading Contractor:

_____

_____

_____

_____ License No.:_____

Signature

CITY OF SEAL BEACH
211 8th Street, 2nd Floor
Seal Beach CA 90740
(562) 430-8533 Engineering

SOILS ENGINEER'S CERTIFICATE OF COMPLIANCE

Re: **Grading Permit No.:**_____

Date:_____

Project: **Tract/Parcel Map No.:** _____ **Lot(s):** _____**, inclusive**

Address:_____

Owner:_____

General Contractor:_____

Work Began:_____ **Work Completed:**_____

I In accordance with the requirements of the Seal Beach Engineering Division and the requirements of the Building Code, I certify that I have personally supervised the observation and testing during placement and compaction of earth fills described in the approved soils report for this project. It is my judgment that work is complete on this project as outlined above is in substantial compliance with said codes. This certification does not include exact horizontal or vertical control or dimensions of the earthwork within the purview of others.

Name of Soils Engineer and Geotechnical Firm Address:

_____

_____

_____

Place Stamp Here

_____
Signature

R.C.E. No.:_____

Expiration Date:_____

CITY OF SEAL BEACH
211 8th Street, 2nd Floor
Seal Beach CA 90740
(562) 430-8533 Engineering

CIVIL ENGINEER'S CERTIFICATE OF ROUGH GRADE

Re: **Grading Permit No.:**_____

Date:_____

Project: **Tract/Parcel Map No.:** _____ **Lot(s):** _____**, inclusive**

Address:_____

Owner:_____

General Contractor:_____

Permitted yardage: **Cut** _____**CY** **Fill** _____**CY**

Final yardage: **Cut** _____**CY** **Fill** _____**CY**

I hereby approve the rough grading for the referenced project in accordance with my responsibilities under the requirements for the Engineering Division of the City of Seal Beach. The volume of earth materials moved by cut and/or fill grading ***agrees/does not agree*** with the permitted yardage stated on the approved grading plan. Rough grading has been completed substantially in conformance with the approved grading plan, which includes:

1. Line and grade for all engineered drainage devices and retaining walls (graded and
2. ready for paving or construction).
3. Line and grade for all building pad elevations.
4. Staking of property corners for proper building location.
5. Setting of all monuments in accordance with the recorded tract map.
6. Location and inclination of all manufactured slopes.
7. Construction of earthen berms and positive building pad drainage.

(All exceptions from items listed above must be noted.)

Name of Civil Engineer and Address:

_____

_____

_____

Place Stamp Here

_____
Signature

R.C.E. No.:_____

Expiration Date:_____

CITY OF SEAL BEACH
211 8th Street, 2nd Floor
Seal Beach CA 90740
(562) ~~430-8533~~ Engineering

CIVIL ENGINEER'S CERTIFICATE OF PRECISE GRADE

Re: **Grading Permit No.:**_____

Date:_____

Project: **Tract/Parcel Map No.:** _____**Lot(s):** _____**, inclusive**

Address:_____

Owner:_____

General Contractor:_____

I hereby approve the precise grading for the referenced project in accordance with my responsibilities under the Engineering Division of the City of Seal Beach. The volume of earth materials moved by cut and/or fill grading ***agrees/does not agree*** with the permitted yardage stated on the approved grading plan. Precise grading has been completed substantially in conformance with the approved grading plan, which includes:

1. Line and grade for all engineered drainage devices and retaining walls.
2. Setting of all monuments in accordance with the recorded tract map. All centerline ties
3. have been submitted to the City.
4. Location of permanent walls or structures on property corners or property lines.
5. Location and inclination of all manufactured slopes.
6. Construction of earthen berms and positive building pad drainage.

(All exceptions from items listed above must be noted.)

Name of Civil Engineer and Address:

_____

_____

_____

Place Stamp Here

_____
Signature

R.C.E. No.:_____

Expiration Date:_____

CITY OF SEAL BEACH
211 8th Street, 2nd Floor
Seal Beach CA 90740
(562) 430-8533 Engineering

RECORD DRAWING SUBMITTAL PROCESS FOR GRADING, STREET, STORM DRAIN, TRAFFIC SIGNAL, AND LANDSCAPING IMPROVEMENT PLANS

1. Submit one set of blueline with as-built revisions redlined. "RECORD DRAWING" must be stamped on each page. The inspector will review and field verify the as-built changes on the drawings. If any corrections are required, he will mark the blueline and they will be returned to the engineer.
2. Continue to submit one set of blueline as required above, including the previously redlined submittal for reference and a copy of the "RECORD DRAWING Review Sheet".
3. Once all of the appropriate changes are made, they must be drafted onto the original mylar drawings. **"AS-BUILT" must be stamped on *each page* of the originals**, preferably in the lower right-hand corner or near the revision block. All permanent changes must be made by the engineer or landscape architect that originally prepared the plans.
4. If the original plans are:
   a. Size 30" x 42", the changes should be made on the original drawings (typically held by the engineer/architect).
   b. Size 24" x 36", they must be checked out from the City and the changes should be made on these plans.
5. The final submittal to the City should include the original mylars and the previously redlined blueline. The inspector will then sign the original approving the as-built revisions.
6. Once the mylars have been signed, the City will retain the originals (reduced duplicate mylars size 24" x 36" are required if the original plans are oversized). The developer shall make two sets of 4"x 6" microfiche (one original, one duplicate) placed in separate envelopes for the City's files.
7. Microfiche is required for all plans **except grading**.

A bonded reprographics company shall pick up the as-built drawings to make the microfiche. The microfiche should be appropriately labeled (i.e. Tract 58268 - Street and Storm Drain Improvements; Traffic Signal at Seal Beach Boulevard/Westminster; Parcel Map 12-878, Parcel 8- Landscaping Improvements). The labeling should be directed by the engineer/architect on the work order form to the reprographics company.

PLEASE NOTE: ALL AS-BUILT PLANS AND MICROFICHE MUST BE RECEIVED PRIOR TO ANY BOND RELEASES.

CHAPTER 26B

STORM WATER MANAGEMENT PROGRAM
(National Pollution Discharge Elimination System Permits Program)

Section 26B-1. Definitions.

A. "Authorized Inspector" shall mean the City Manager and persons designated and under the instruction and supervision of him/her, who are assigned to investigate compliance and detect violations of this Chapter.

B. "City" shall mean the City of Seal Beach, Orange County, California.

C. "Co-Permittee" shall mean the County of Orange, the Orange County Flood Control District, and/or any one of the thirty-one (31) municipalities, including the City of Seal Beach, which are responsible for compliance with the terms of the NPDES Permit.

D. "DAMP" shall mean the Orange County Drainage Area Management Plan, as the same may be amended from time to time.

E. "Development Project Guidance" shall mean DAMP Chapter VII and the Appendix thereto, entitled Best Management Practices for New Development Including Non-Residential Construction Projects.

F. "Discharge" shall mean any release, spill, leak, pump, flow, escape, leaching (including subsurface migration or deposition to groundwater), dumping or disposal of any liquid, semi-solid or solid substance.

G. "Discharge Exception" shall mean the group of activities not restricted or prohibited by this Chapter, including only:

K. "Hearing Officer" shall mean the City Manager or his/her designee, who shall preside at the administrative hearings authorized by this Chapter and issue final decisions on the matters raised therein.

L. "Invoice for Costs" shall mean the actual costs and expenses of the City, including but not limited to administrative overhead, salaries and other expenses recoverable under State law, incurred during any Inspection conducted pursuant to Section VI of this Chapter 26B, where a Notice of Noncompliance, Administrative Compliance Order or other enforcement option under Section 26B-5 of this Chapter is utilized to obtain compliance with this Chapter.

M. "Illicit Connection" shall mean any man-made conveyance or drainage system, pipeline, conduit, inlet or outlet, through which the Discharge of any Pollutant to the Storm Water Drainage System occurs or may occur. The term Illicit Connection shall not include Legal Nonconforming Connections or connections to the Storm Water Drainage System that are hereinafter authorized by the agency with jurisdiction over the system at the location at which the connection is made.

N. "Legal Nonconforming Connection" shall mean connections to the Storm Water Drainage System existing as of the adoption of this Chapter 26B that were in compliance with all federal, state and local rules, regulations, statutes and administrative requirements in effect at the time the connection was established, including but not limited to any discharge permitted pursuant to the terms and conditions of pre-existing individual discharge permit.

O. "New Development" shall mean all public and private residential (whether single family, multi-unit or planned unit development), industrial, commercial, retail, and other non-residential construction projects, or mass grading for future construction, for which either a discretionary land use approval, grading permit, building permit or safety permit is required.

P. "NPDES Permit" shall mean the municipal discharge permit(s) issued by the Santa Ana Regional Water Quality Control Board and entitled Waste Discharge Requirements for the County of Orange, Orange County Flood Control District and the Incorporated Cities of Orange County Within the Santa Ana Region Storm Water Runoff Management Program (Areawide Urban Storm Water Runoff), Orange County Order No. 90-71 (NPDES No. CA 8000180) (the "Santa Ana Regional Board Permit"). The Santa Ana Regional Board NPDES Permit shall be referred to hereinafter as the "NPDES Permit."

concrete pouring and cleanup wash water or use of concrete detergents; steam cleaning or sand blasting residues; use of chemical degreasing or diluting agents; and super chlorinated water generated by potable water line flushing),

(9) Materials causing an increase in biochemical oxygen demand, chemical oxygen demand or total organic carbon,

(10) Materials which contain base/neutral or acid extractible organic compounds,

(11) Those Pollutants defined in S.1362(6) of the Federal Clean Water Act,

(12) Any other constituent or material that may interfere with or adversely affect the beneficial uses of the receiving waters, flora or fauna of the State.

The term "Pollutant" shall not include uncontaminated storm water, potable water or reclaimed water generated by a lawfully permitted water treatment facility.

S. "Private Property" shall mean any real property, irrespective of ownership, which is not open to the general public.

T. "Prohibited Discharge" shall mean any Discharge, which is not composed entirely of storm water or which contains any Pollutant, from public or Private Property to (i) the Storm Water Drainage System; (ii) any upstream flow, which is tributary to the Storm Water Drainage System; (iii) any groundwater, river, stream, creek, wash or dry weather arroyo, wetlands area, marsh, coastal slough, or (iv) any coastal harbor, bay or the Pacific Ocean. The term Prohibited Discharge shall not include: (a) Discharges occurring in compliance with the NPDES Permit, (b) Discharges occurring pursuant to a State General Permit or other Regional Water Quality Control Board, State Water Resources Control Board or U.S. Environmental Protection Agency issued NPDES permit or permit waiver, (c) Discharges authorized pursuant to a permit issued under Section 26B-6 hereof, (d) Discharges allowable under the Discharge Exception, or (e) Discharges allowable under the Domestic Sewage Exception.

U. "Responsible Party" shall mean the Person(s) identified in, and responsible for compliance with, the provisions of a water quality management plan approved by the City Department of Environmental Services.

(1) For all structural improvements to property installed for the purpose of Discharge to the Storm Water Conveyance System, the expiration of five (5) years from the adoption of this Chapter.

(2) For all nonstructural improvements to property (including natural surface flow patterns, depressions or channels traversing one or more properties) existing for the purpose of Discharge to the Storm Water Conveyance System, the expiration of six (6) months following delivery of a notice to the owner or occupant of the property, which states a Legal Nonconforming Connection has been identified. The notice of a Legal Nonconforming Connection shall state the date of expiration of use under this Chapter.

C. A civil or administrative violation of Section 26B-2(A) shall occur without regard for the negligence or intent of the violator to construct, maintain, operate or utilize an Illicit Connection or to cause, allow or facilitate any Prohibited Discharge.

D. If an Authorized Inspector reasonably determines that a Discharge, which is otherwise within the Discharge Exception, may adversely affect the beneficial uses of receiving waters, then the Authorized Inspector may give written notice to the owner of the property or facility that the Discharge Exception shall not apply to the subject Discharge following expiration of the thirty (30) day period commencing upon delivery of the notice. Upon expiration of the thirty (30) day period any such discharge shall constitute a violation of Section 26B-2(A).

E. The owner or occupant of property on which a Legal Nonconforming Connection exists may request an administrative hearing, pursuant to the procedures set forth in Sections 26B-5(A) (6)-(10) for an extension of the period allowed for continued use of the connection. A reasonable extension of use may be authorized by the City Manager upon consideration of the following factors:

(1) The potential adverse effects of the continued use of the connection upon the beneficial uses of receiving waters;

(2) The economic investment of the discharger in the Legal Nonconforming Connection; and

(3) The financial effect upon the discharger of a compelled termination of the Legal Nonconforming Connection.

(6) Each water quality management plan shall name a Responsible Party for the project.

(7) The owner of a New Development or Significant Redevelopment project, his/her successors and assigns, and each names Responsible Party, shall implement and adhere to the terms, conditions and requirements of the approved water quality management plan.

(i) Each failure by the owner of the property, his/her successors or assigns, or a named Responsible Party, to implement and adhere to the terms, conditions and requirements of an approved water quality management plan shall constitute a violation of this Chapter.

(8) The Public Works Department may require that the water quality management plan be recorded with the County Recorder's office by the property owner. The signature of the owner of the property, any successive owner or the named Responsible Party shall be sufficient for the recording of the plan or any revised plan and a signature on behalf of the City shall not be required for recordation.

B. Cost Recovery.

The costs and expenses of the Public Works Department incurred in the review, approval, or revision of any water quality management plan, or in the approval or revision of any such plan, shall be assessed to the property owner or Responsible Party and shall be immediately due and payable to the City. The Public Works Department may instead elect to require a deposit of estimated costs and expenses. The actual costs and expenses shall be deducted from the costs and expenses. The actual costs and expenses shall be deducted from the deposit, and the balance, if any, refunded to the property owner or Responsible Party.

C. Litter Control.

No person shall discard any waste material, including but not limited to common household rubbish or garbage of any kind (whether generated or accumulated at a residence, business or other location), upon any public or private property, whether occupied, open or vacant, including but not limited to any street, sidewalk, alley, right-of-way, open area or point of entry to the Storm Water Drainage System.

(vii) evaluating compliance with any permit issued pursuant to Section VIII hereof, and

(viii) investigating the condition of any Legal Nonconforming Connection.

(4) Portable Equipment. For purposes of verifying compliance with this ordinance, the Authorized Inspector may inspect any vehicle, truck, trailer, tank truck or other mobile equipment.

(5) Records Review. The Authorized Inspector may inspect all records of the owner or occupant of private property relating to chemicals or processes presently or previously occurring on-site, including material and/or chemical inventories, facilities maps or schematics and diagrams, Material Safety Data Sheets, hazardous waste manifests, business plans, pollution prevention plans, State General Permits, Storm Water Pollution Prevention Plans, Monitoring Program Plans and any other record(s) relating to Illicit Connections, Prohibited discharges, a Legal Nonconforming Connection or any other source of contribution or potential contribution of Pollutants to the Storm Water Drainage System.

(6) Sample & Test. The Authorized Inspector may inspect, sample and test any area runoff, soils area (including groundwater testing), process discharge, materials within any waste storage area (including any container contents), and/or treatment system discharge for the purpose of determining the potential for contribution of pollutants to the Storm Water Drainage System. The Authorized Inspector may investigate the integrity of all storm drain and sanitary sewer systems, any Legal Nonconforming Connection or other pipelines on the property using appropriate tests, including but not limited to smoke and dye tests or video surveys. The Authorized Inspector may take photographs or video tape, make measurements or drawings, and create any other record reasonably necessary to document conditions on the property.

(7) Monitoring. The Authorized Inspector may erect and maintain monitoring devices for the purpose of measuring any Discharge or potential source of Discharge to the Storm Water Drainage System.

(b) The owner of private property or a responsible party subject to the requirements of any water quality management plan to ensure implementation of, and adherence to, the terms, conditions and requirements of the plan;

(c) A permittee subject to the requirements of any permit issued pursuant to Section 26B-6 hereof to ensure compliance with the terms, conditions and requirements of the permit;

(d) Any person responsible for an Illicit Connection or Prohibited Discharge.

(ii) The Administrative Compliance Order may include the following terms and requirements:

(a) Specific steps and time schedules for compliance as reasonably necessary to prevent threatened or future unauthorized discharges, including but not limited to the threat of a Prohibited Discharge from any pond, pit, well, surface impoundment, holding or storage area;

(b) Specific steps and time schedules for compliance as reasonably necessary to discontinue any Illicit Connection;

(c) Specific requirements for containment, cleanup, removal, storage, installation of overhead covering, or proper disposal of any Pollutant having the potential to contact storm water runoff;

(d) Any other terms or requirements reasonably calculated to prevent continued or threatened violations of this Chapter 26B, including, but not limited to requirements for compliance with best management practices guidance documents promulgated by any federal, State of California or regional agency;

(e) Any other terms or requirements reasonably calculated to achieve full compliance with the terms, conditions and requirements of any water quality management plan, or permit issued pursuant hereto.

(i) If any owner or occupant, permittee or Responsible Party, or any other person fails to either pay the Invoice for Costs or appeal successfully the Invoice for Costs in accordance with Section 26B-5(A)(6) then the Enforcing Attorney may institute collection proceedings.

(5) Delivery of Notice. Any Notice of Noncompliance, Administrative Compliance Order, Cease and Desist Order or Invoice of Costs to be delivered pursuant to the requirements of this Chapter shall be subject to the following:

(i) The notice shall state that the recipient has a right to appeal the matter as set forth in Section 26B-5(A)(6) through Section 26B-5(A)(10) of this Chapter.

(ii) Delivery shall be deemed complete upon any of the following: (a) personal service to the recipient; (b) deposit in the U. S. mail, postage pre-paid for first class delivery; or (c) facsimile service with confirmation of receipt.

(iii) Where the recipient of notice is the owner of the property, the address for notice shall be the address from the most recently issued equalized assessment roll for the property or as otherwise appears in the current records of the City.

(iv) Where the owner or occupant of any private property cannot be located after the reasonable efforts of the Authorized Inspector, a Notice of Noncompliance or Cease and Desist Order shall be deemed delivered after posting on the property for a period of ten (10) business days.

(6) Administrative Hearing for Notices of Noncompliance, Administrative Compliance Orders, Invoices for Costs and Adverse Determinations. Except as set forth in Sub-section (8) below, any person receiving a Notice of Noncompliance, Administrative Compliance Order, a notice of Legal Nonconforming Connection, an Invoice for Costs, or any person who is subject to any adverse determination made pursuant to this Chapter, may appeal the matter by requesting an administrative hearing.

final decision shall be made pursuant to the provisions of the Code of Civil Procedure Sections 1094.5 and 1094.6 and shall be commenced within ninety (90) days following issuance of the final decision.

(i) Notwithstanding this Subsection 10, the final decision of the Hearing Officer in any proceeding determining the validity of a Cease and Desist Order or following an emergency abatement action shall be mailed within five (5) business days following the conclusion of the hearing.

(11) City Abatement. In the event the owner of private property, the operator of a facility, a permittee, a Responsible Party, or any other person fails to comply with any provision of a compliance schedule issued pursuant to this Chapter, the Authorized Inspector may request the Enforcing Attorney to obtain an abatement warrant or other appropriate judicial authorization to enter the property, abate the condition and restore the area. Any costs incurred by the City in obtaining and carrying out an abatement warrant or other judicial authorization may be recovered pursuant to Section 26B-5(A)(4).

B. Nuisance.

Any condition in violation of the prohibitions of this Chapter, including but not limited to the maintenance or use of any Illicit Connection or the occurrence of any Prohibited Discharge, shall constitute a threat to the public health, safety and welfare, and is declared and deemed a public nuisance pursuant to Government Code S.38771.

(1) Court Order to Enjoin or Abatement. At the request of the City Manager, the Enforcing Attorney may seek a court order to enjoin and/or abate the nuisance.

(2) Notice to Owner and Occupant. Prior to seeking any court order to enjoin or abate a nuisance or threatened nuisance, the City Manager or his/her designee shall provide notice of the proposed injunction or abatement to the owner and occupant, if any, of the property where the nuisance or threatened nuisance is occurring.

(3) Emergency Abatement. In the event the nuisance constitutes an imminent danger to public safety or the

(2) Infractions. Any person who may otherwise be charged with a misdemeanor under this chapter may be charged, at the discretion of the prosecuting attorney, with an infraction punishable by a fine of not more than $100 for the first violation, $200 for a second violation, and a fine not exceeding $500 for each additional violation occurring within one year.

(3) Misdemeanors. Any person who negligently or knowingly violates any provision of this chapter, undertakes to conceal any violation of this chapter, continues any violation of this chapter after notice thereof, or violates the terms, conditions and requirements of any water quality management plan or permit, shall be guilty of a misdemeanor punishable by a fine of not more than $1000 or by imprisonment for a period of not more than six months, or both.

D. Consecutive Violations.

Each day in which a violation occurs and each separate failure to comply with either a separate provision of this chapter, an Administrative Compliance Order, a Cease and Desist Order, an applicable water quality management plan, or a permit issued pursuant to this chapter, shall constitute a separate violation of this ordinance punishable by fines or sentences issued in accordance herewith.

E. Non-exclusive Remedies.

Each and every remedy available for the enforcement of this chapter shall be non-exclusive and it is within the discretion of the Authorized Inspector or Enforcing Attorney to seek cumulative remedies, except that multiple monetary fees or penalties shall not be available for any single violation of this chapter.

F. Citations.

Pursuant to Penal Code S.836.5, the Authorized Inspector shall have the authority to cause the arrest of any person committing a violation of this chapter. The person shall be released and issued a citation to appear before a magistrate in accordance with Penal Code S.853.5, S.853.6, and S.853.9, unless the person demands to be taken before a magistrate. Following issuance of any citation the Authorized Inspector shall refer the matter to the Enforcing Attorney.

(i) all costs incurred in enforcement of the chapter, including but not limited to costs relating to investigation, sampling, monitoring, inspection, administrative expenses, legal expenses including costs and attorney fees, all other expenses as authorized by law, and consequential damages,

(ii) all costs incurred in mitigating harm to the environment or reducing the threat to human health, and

(iii) damages for irreparable harm to the environment.

(2) The Enforcing Attorney is authorized to file actions for civil damages resulting from any trespass or nuisance occurring on public land or to the Storm Water Drainage System from any violation of this chapter where the same has caused damage, contamination or harm to the environment, public property or the Storm Water Drainage System.

(3) The remedies available to the City pursuant to the provisions of this chapter shall not limit the right of the City to seek any other remedy that may be available by law.

Section 26B-6. Permits.

A. Discharge Permit Procedure.

(1) Permit. On application of the owner of private property or the operator of any facility, which property or facility is not otherwise subject to the requirements of a State General Permit, the City Manager or his/her designee may issue a permit authorizing the release of non-storm water discharges to the Storm Water Drainage System if:

(i) The discharge of material or constituents is reasonably necessary for the conduct of otherwise legal activities on the property, and

(ii) The discharge will not cause a nuisance, impair the beneficial uses of receiving waters, or cause any reduction in established water quality standards.

(vi) Other terms and conditions appropriate to ensure compliance with the provisions of this chapter and the protection of receiving waters, including requirements for compliance with best management practices guidance documents approved by any federal, State, or regional agency.

(5) General Permit. The permit may, in accordance with the conditions identified in Section 26B-6(A)(4) above, be prepared as a general permit applicable to a specific category of activities. If a general permit is issued, any person intending to discharge within the scope of the authorization provided by the general permit may do so by filing an application to discharge with the City Manager or his/her designee. No discharge within the scope of the general permit shall occur until such application is so filed and approved.

(i) Notwithstanding the foregoing in this Subsection 5, the City Manager, in his/her discretion, may eliminate the requirement that an application for a general permit be filed for any specific activity for which a general permit has been issued.

(6) Permit Fees. The permission to discharge may be conditioned upon the applicant's payment of the City's processing costs, in accordance with a fee schedule adopted by separate resolution, as follows:

(i) For individually issued permits, the costs of reviewing the permit application, preparing and issuing the permit, and the costs reasonably related to administering this permit program.

(ii) For general permits, the costs of reviewing the permit application, that portion of the costs of preparing the general permit which is reasonably attributable to the permittee's application for the general permit, and the costs reasonably related to administering the general permit program.

B. Permit Suspension, Revocation or Modification.

(1) The City Manager may suspend or revoke any permit when it is determined that:

C. Permit Enforcement.

(1) Penalties. Any violation of the terms, conditions and requirements of any permit issued pursuant to this Chapter shall constitute a violation of this chapter and subject the violator to the administrative, civil and criminal remedies available under this chapter.

D. Compliance with the terms, conditions and requirements of a permit issued pursuant to this chapter shall not relieve the permittee from compliance with all federal, state and local laws, regulations and permit requirements, applicable to the activity for which the permit is issued.

(1) Limited Permittee Rights. Permits issued under this chapter are for the person or entity identified therein as the "Permittee" only, and authorize the specific operation at the specific location identified in the permit. The issuance of a Permit does not vest the permittee with a continuing right to Discharge.

(2) Transfer of Permits. No permit may be transferred to allow:

(i) A Discharge to the Storm Water Drainage System at a location other than the location stated in the original permit, or

(ii) A Discharge by a person or entity other than the permittee named in the permit, provided however, that the City may approve a transfer if written approval is obtained, in advance, from the City Manager or his/her designee.

Section 26B-7. Miscellaneous.

A. The City Council may elect to contract for the services of any public agency or private enterprise to carry out the planning approvals, inspections, permits and enforcement authorized by this chapter.

B. Compliance Disclaimer.

Full compliance by any person or entity with the provisions of this chapter shall not preclude the need to comply with other local, state or federal statutory or regulatory requirements, which may be required for the control of the discharge of pollutants into storm water and/or the protection of storm water quality.

(Ord. No. 1394)

Stormwater Pollution Prevention – Section A-8.0 Construction Component (LIP)

Section A-8.0 Construction Component of City's adopted Local Implementation is incorporated herein by reference within the Grading Manual. Within this document the applicant's engineer and contractor may find the appropriate:

- Best Management Practice (BMP) Fact sheets

CATEGORY	BMP #	BMP NAME
Erosion Control BMPs	EC-1	Scheduling
	EC-2	Preservation of Existing Vegetation
	EC-3	Hydraulic Mulch
	EC-4	Hydroseeding
	EC-5	Soil Binders
	EC-6	Straw Mulch
	EC-7	Geotextiles, Plastic Covers & Erosion Control Blankets/ Mats
	EC-8	Wood Mulching
	EC-9	Earth Dikes/ Drainage Swales & Lined Ditches
	EC-9	Earth Dikes/ Drainage Swales & Lined Ditches
	EC-10	Outlet Protection/ Velocity Dissipation Devices
	EC-11	Slope Drains
Sediment Control BMPs	SE-1	Silt Fence
	SE-2	Desilting Basin
	SE-3	Sediment Trap
	SE-4	Check Dam
	SE-5	Fiber Rolls
	SE-6	Gravel Bag Berm
	SE-7	Street Sweeping and Vacuuming
	SE-8	Sandbag Barrier
	SE-9	Straw Bale Barrier
	SE-10	Storm Drain Inlet Protection
Wind Erosion Control BMPs	WE-1	Wind Erosion Control
Tracking Control BMPs	TC-1	Stabilized Construction Entrance/ Exit
	TC-2	Stabilized Construction Roadway
	TC-3	Entrance/Outlet Tire Wash
Non-Stormwater Control BMPs	NS-1	Water Conservation Practices
	NS-2	Dewatering Operations
	NS-3	Paving and Grinding Operations
	NS-4	Temporary Stream Crossing
	NS-5	Clear Water Diversion
	NS-6	Illicit Connection/Illegal Discharge Detection and Reporting
	NS-7	Potable Water/Irrigation
	NS-8	Vehicle and Equipment Cleaning
	NS-9	Vehicle and Equipment Fueling
	NS-10	Vehicle and Equipment Maintenance
	NS-11	Pile Driving Operations
	NS-12	Concrete Curing
	NS-13	Concrete Finishing
	NS-14	Material and Equipment Use Over Water
	NS-15	Structure Demolition/Removal Over or Adjacent to Water
	NS-16	Temporary Batch Plants
	NS-17	Streambank Stabilization

CATEGORY	BMP #	BMP NAME
Waste Management & Materials Pollution Control BMPs	WM-1	Material Delivery and Storage
	WM-2	Material Use
	WM-3	Stockpile Management
	WM-4	Spill Prevention and Control
	WM-5	Solid Waste Management
	WM-6	Hazardous Waste Management
	WM-7	Contaminated Soil Management
	WM-8	Concrete Waste Management
	WM-9	Sanitary/ Septic Waste Management
	WM-10	Liquid Waste Management

- Standard plans for construction site BMP's
  - OCEMA 1328 Sandbag Velocity Reducer
  - OCEMA 1329 Street Desilting Basin
  - OCEMA 1330 Temporary Drainage Inlet
- Stormwater Pollution Prevention Plan Template

The applicant's Engineer shall incorporate into the design and the contractor shall implement during construction Section A-8.0 Construction Component of City's adopted Local Implementation Plan (LIP).

Orange County Stormwater Program

Construction Runoff Guidance Manual

August 2003

PROJECT Pollution PREVENTION

A cooperative project of the County of Orange, the cities of Orange County, and the Orange County Flood Control District

Contents

List of Tables

Section 1
Introduction

This *Construction Site Runoff Manual* (Manual) presents the construction requirements developed as part of the countywide Drainage Area Management Plan (DAMP) for compliance with the third term National Pollutant Discharge Elimination System (NPDES) municipal stormwater permits issued by the Santa Ana (Order No. R8-2002-0010, NPDES No. CAS618030) and San Diego (Order No. R9-2002-0001, NPDES No. CAS0108740) Regional Water Quality Control Boards (Regional Boards). This Manual additionally complements requirements in the County and City Water Quality Ordinances and Grading Ordinances. The information in this Manual is intended to assist applicants for building or grading permits to understand the water quality requirements during the construction phase of new development and significant redevelopment projects.

The goal of this Manual and the program described in the DAMP is to control pollutant discharges from construction sites. Water from construction sites can be a major transporter of sediment and other pollutants. Activities and materials used on construction sites may be a source of pollutants. These include paints, lacquers, and primers; herbicides and pesticides; landscaping and soil stabilization residues; soaps and detergents; wood preservatives; equipment fuels, lubricants, coolants, and hydraulic fluids; and cleaning solvents.

These pollutants can leak from heavy equipment, be spilled, or can be eroded by rain from exposed soil or stockpiles. Once released, they can be transported into the receiving waters of Orange County, where they may become available to enter aquatic food chains, cause fish toxicity problems, contribute to algal blooms, impair recreational uses, and degrade drinking water sources.

1.1 Regulatory Background

Various permits and ordinances have been adopted to address water quality impacts from urban and construction site runoff. Summarized below are the relevant regulations and their applicability to construction sites.

1.1.1 Orange County NPDES Permits

In early 2002, the San Diego and Santa Ana Regional Boards issued NPDES permits that regulate stormwater discharge from municipal storm drain systems. The permits require the County and cities to implement a program to eliminate significant pollutant discharges from construction activities by requiring the implementation of appropriate Best Management Practices (BMPs) on all construction sites. BMPs are activities, practices, procedures, or devices implemented to avoid, prevent or reduce pollution of the municipal storm drain system and receiving waters.

1.1.2 General Construction NPDES Permit

In 1999, the State Water Resources Control Board adopted Order No., 99-08-DWQ, *National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS000002, Waste Discharge Requirements (WDRs) for Discharges of Stormwater Runoff Associated with Construction Activity (General Construction Permit).* This permit was subsequently amended to include smaller construction sites. The General Construction Permit requires that construction sites with 1 acre or greater of soil disturbance or less than 1 acre but part of a greater common plan of development apply for coverage for discharges under the General Construction Permit by submitting a Notice of Intent (NOI) for coverage, developing a stormwater pollution prevention plan (SWPPP), and implementing Best Management Practices (BMPs) to address construction site pollutants.

The County's and Cities' construction site requirements are coordinated with, but separate from the General Construction Permit. The General Construction Permit applies regardless of whether a construction site discharges directly to receiving waters or to a municipal storm drain system. Inspections of construction sites by County / Cities or by Regional Board staff are separate and carry different enforcement actions / mechanisms.

1.1.3 Water Quality Ordinances

The County and Cities in Orange County have adopted Water Quality Ordinances. The purpose of the Ordinances is the improvement of water quality and compliance with NPDES permit requirements for the control of urban pollutants. The ordinances prohibit non-stormwater discharges to the municipal storm drain system unless covered by the discharge exceptions and require that pollutants in stormwater be reduced to the maximum extent practicable using BMPs. The Ordinances require that potential pollution causing activities comply with the requirements in the DAMP. The Ordinances further provide a legal mechanism for enforcement actions to be taken.

1.1.4 Grading Ordinances

Municipal Grading Ordinances set the rules and regulations for grading operations including operations preparatory to grading on private property. In addition to other requirements, the Ordinances require that a project owner, developer or contractor prepare erosion control plans (ECPs), obtain a grading permit, and implement and maintain erosion and sediment control BMPs. The Ordinances additionally describe County / City inspection and legal enforcement mechanisms.

1.2 Glossary

A glossary of key terms used in this Manual is included at the end of the document.

Section 2
Requirements of Construction Projects

2.1 Applicability

All construction project proponents are responsible for implementing BMPs to assure compliance with the Water Quality Ordinance and, where applicable, the Grading Ordinance. A **construction project** for the purposes of these requirements is any site for which building or grading permits are issued and where an activity results in the disturbance of soil such as soil movement, grading, excavation, clearing, road construction, structure construction, or structure demolition; and sites where uncovered storage (stockpiling) of materials and wastes such as dirt, sand or fertilizer occurs; or exterior mixing of cementaceous products such as concrete, mortar or stucco will occur.

The DAMP establishes a tiered BMP implementation system as a requirement of building and grading permits during the construction process. This system identifies minimum BMP requirements that must be implemented by the responsible parties for construction projects. Responsible parties include the owner of the construction property, the construction contractor, and any other individual or entity performing construction activities.

Projects that do not meet the definition of a construction project described above are exempt from the minimum BMP requirements. Examples of projects that might be considered exempt would be similar to the following:

- Interior Remodeling
- Mechanical Permit Work
- Electrical Permit Work
- Tenant Improvements
- Signs
- Changes of Use within an Existing Building
- Temporary Mobile Home and Trailer Permits
- Minor Permits Accessory to an Existing Building (such as patio covers and decks).

Exemption from the minimum BMP requirements does not relieve the project owner or contractor from adhering to the basic discharge prohibitions identified in the Water Quality and Grading Ordinances (see Section 2.3.1).

2.2 General Requirements

Construction projects are required to comply with two interrelated sets of municipal directives with respect to water quality management: (1) compliance with applicable discharge prohibition requirements set forth in the Water Quality Ordinance to prevent unauthorized non-stormwater discharges, and (2) implementation of BMPs to the maximum extent practicable, in accordance with the DAMP and local agency requirements, to reduce contaminants in stormwater discharges.

In addition, construction projects that involve 1 acre or greater of soil disturbance must comply with the General Construction Permit. The discharge prohibitions and BMP requirements are consistent with and complementary to the requirements of the General Construction Permit. Therefore, compliance with the State's General Construction permit will typically lead to compliance with the County / Cities' BMP implementation requirements. However, the County or Cities may require Erosion Control Plans (ECPs) showing all BMPs for construction, even when a project disturbs less than 1 acre of soil and is not covered by the General Construction Permit (i.e., not a part of a larger common plan of development).

Table 2-1 shows the general requirements and expectations for construction projects based on size of land disturbance.

Table 2-1
General Requirements for Construction Water Quality Management

Project Description	Water Quality Requirements
Construction Projects ≥ 1 Acre Soil Disturbance	■ Apply for local grading or building permit ■ Comply with grading or building permit and local ordinances ■ Submit Notice of Intent (NOI) for General Construction Permit Coverage to SWRCB ■ Prepare a SWPPP ■ Implement SWPPP ■ Implement BMPs as required by the County/Cities and the General Construction Permit ■ Submit General Construction Permit Notice of Termination (NOT) to Regional Board at project conclusion
Other Projects	■ Apply for local grading or building permit ■ Comply with grading or building permit and local ordinances ■ Implement BMPs as required by the County/Cities

2.3.1 Discharge Prohibitions on Construction Sites

Without exception, discharges of stormwater from a construction site to the municipal storm drain system or receiving waters are prohibited if the discharge contains pollutants that have not been reduced to the maximum extent practicable through the implementation of BMPs. In general, construction activities require the implementation of a combination of BMPs to control erosion and sediment transport, and pollutants from materials and waste management storage and activities.

Non-stormwater discharges from a construction site to the municipal storm drain system or receiving waters are prohibited. Exceptions to prohibitions of non-stormwater discharges include (a full list is available in the Water Quality Ordinance):

- Discharges composed entirely of stormwater, or
- Discharges for which the discharger has reduced to the maximum extent practicable the amount of pollutants through implementation of BMPs, or
- Discharges from certain activities that may be present on a construction site including landscape irrigation, diverted stream flows, rising groundwater and de minimis groundwater infiltration to the municipal storm drain system, passive foundation drains, and flows from riparian habitats and wetlands.

2.3.2 BMP Implementation

Construction project owners, developers, or contractors must implement the BMP requirements in the DAMP or equivalent measures, methods, or practices. Proper selection of BMPs depends on numerous factors that are specific to individual sites and activities, and therefore the DAMP does not advocate or require the use of particular practices unless the County / City determines that BMPs implemented by the project proponent are not adequate to prevent discharges of pollutants. In that case, implementation of specific BMPs, additional BMPs, and / or other controls may be required. BMPs are described more fully in Section 3.

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Section 3
Best Management Practices (BMPs) for Construction Projects

This section presents construction stormwater management requirements and required temporary construction site BMPs. Permanent post-construction BMPs are not addressed in this document. These requirements can be found in the Model Water Quality Management Plan (WQMP), Exhibit 7.II in Section 7 of the DAMP.

3.1 BMP Implementation Requirements

All construction projects must implement BMPs to prevent or reduce pollutant discharges into the municipal storm drain system or receiving waters. The implementation requirements depend on size of disturbed soil area, and in the Santa Ana Permit area, proximity to Areas of Special Biological Significance (ASBS–see Glossary).

Based on the size of disturbed soil area and location of construction sites, two categories of BMP implementation have been identified[1]. These categories are described in Table 3-1 and correspond to priorities that the County and Cities assign to construction sites as discussed further in Section 5.1.

Table 3-1
BMP Implementation Requirements for Construction Projects

Site Area	Priority	BMP Requirements
Total Disturbed Soil Area <1 Acre (except as noted below)	Low	■ Meet minimum requirements (Section 3.2) ■ Implement all appropriate Construction BMPs (Section 3.4)
Total Disturbed Soil Area ≥1 Acres (covered by General Permit)	Medium	■ Meet minimum requirements (Section 3.2) ■ Implement Site Management Requirements (Section 3.3) ■ Implement all appropriate Construction BMPs (Section 3.4) ■ Comply with General Construction Permit (except if <1 Acre)
OR Within the Santa Ana Regional Board jurisdiction where the total Disturbed Soil Area is <1 Acre and tributary to and/or within 500 feet of an ASBS	High	

[1] The County or Cities may elect to require specific minimum BMPs for each prioritization category.

3.2 Minimum Requirements

All construction projects regardless of size are required, at a minimum, to implement an effective combination of erosion and sediment controls and waste and materials management BMPs. These minimum requirements are summarized in Table 3-2 and must be conveyed to construction contractors as part of the plan notes or on a separate erosion control plan as required by the agency.

Table 3-2
Minimum Requirements for All Construction Sites

Category	Minimum Requirements
Erosion and Sediment Control	Sediments from areas disturbed by construction shall be retained on site using an effective combination of erosion and sediment controls to the maximum extent practicable and stockpiles of soil shall be properly contained to minimize sediment transport from the site to streets, drainage facilities or adjacent properties via runoff, vehicle tracking, or wind.
Waste and Materials Management Control	Construction-related materials, wastes, spills or residues shall be retained on site to minimize transport from the site to streets, drainage facilities, or adjoining property by wind or runoff.

BMPs that may be used to meet the minimum requirements are described later in this Section.

3.3 Site Management Requirements

The following requirements are for deployment of selected construction BMPs and apply to all projects with one acre or greater of soil disturbance and projects tributary to or within 500 feet of an ASBS within the Santa Ana Regional Board jurisdiction with less than 1 acre of soil disturbance. BMPs that may be used to meet the site management requirements are described later in this Section.

Dry Season Requirements (May 1 through September 30)

A. Wind erosion BMPs (dust control) shall be implemented.

B. Sediment control BMPs shall be installed and maintained at all operational storm drain inlets internal to the project.

C. BMPs to control off-site sediment tracking shall be implemented and maintained.

D. Appropriate waste management and materials pollution control BMPs shall be implemented to prevent the contamination of stormwater by wastes and construction materials.

E. Appropriate non-stormwater BMPs shall be implemented to reduce or prevent the contamination of stormwater from construction activities.

F. There shall be a "weather triggered" action plan and the ability to deploy standby sediment control BMPs as needed to protect all exposed portions of the site within 48 hours of a predicted storm event (a predicted storm event is defined as a National Weather Service forecasted, 50% chance of rain).

G. Sufficient materials needed to install standby *sediment control BMPs* (at the site perimeter, site slopes, and operational inlets within the site) necessary to reduce or prevent sediment discharges from exposed portions of the site shall be stored on site. Areas that have already been protected from erosion using physical stabilization or established vegetation stabilization BMPs as described in item H below are not considered "exposed" for purposes of this requirement.

H. Deployment of permanent erosion control BMPs (physical or vegetation) should commence as soon as practical on slopes that are completed for any portion of the site. Standby BMP materials should not be relied upon to prevent erosion of slopes that have been completed.

Wet Season Requirements (October 1 through April 30)

In addition to the Dry Season Requirements:

A. Sediment control BMPs shall be implemented at all appropriate locations along the site perimeter, at all operational storm drain inlets and at all non-active slopes, to provide sufficient protection for storms likely to occur during the rainy season.

B. Adequate physical or vegetation erosion control BMPs (temporary or permanent) shall be installed and established for all completed slopes prior to the start of the rainy season. These BMPs must be maintained throughout the rainy season. If a selected BMP fails, it must be repaired and improved, or replaced with an acceptable alternate as soon as it is safe to do so. Repairs or replacements must result in an adequate BMP or additional BMPs should be installed to provide adequate protection.

C. The amount of exposed soil allowed at one time shall not exceed that which can be adequately protected by deploying standby erosion control and sediment control BMPs prior to a predicted rainstorm.

D. All disturbed areas that are not completed but that are not being actively graded (non-active area) shall be protected from erosion with temporary or permanent

BMPs (erosion and sediment control). The ability to deploy standby BMP materials is not sufficient for these areas. Erosion and sediment control BMPs must actually be deployed. This includes all building pads, unfinished roads and slopes.

E. Sufficient materials needed to install standby *erosion and sediment control BMPs* necessary to protect all exposed portions of the site from erosion and to reduce or prevent sediment discharges shall be stored on site. Areas that have already been protected from erosion using permanent physical stabilization or established vegetation stabilization BMPs are not considered "exposed" for purposes of this requirement.

3.4 Construction BMPs

In order to meet the minimum requirements for all projects and the site management requirements for medium and high priority projects, construction contractors must select, install, and maintain appropriate BMPs on all construction projects. BMPs must be installed in accordance with an industry recommended standard or in accordance with the General Construction Permit. BMPs are tools that are used to ensure sites meet the requirements outlined above. Selection of BMPs is a site-specific process and as such, no specific type or number of BMPs is required[2].

Described below are the construction BMPs from the California Stormwater Best Management Practice Handbook, Construction, 2003 Edition (see Section 3.6 for further information). The Handbook contains BMP fact sheets for six major categories of BMPs and guidelines on how to select erosion and sediment controls as well as material and waste management controls. These categories of BMPs and their applicability are discussed below.

- Erosion Control
- Sediment Control
- Wind Erosion Control
- Tracking Control
- Non-Stormwater Management
- Waste Management & Materials Pollution Control

3.4.1 Erosion Control

Erosion Control is any source control practice that protects the soil surface and prevents the soil particles from being detached by rainfall or wind. One or more of the following

[2] The County or Cities may elect to require specific minimum BMPs for each prioritization category.

physical and/or vegetation stabilization BMPs, are required to prevent or reduce, to the maximum extent practicable, erosion from exposed slopes.

Physical Stabilization:

If physical stabilization is selected, materials must be appropriate to the circumstances in which they are deployed, and sufficient material must be deployed. Chemicals that may affect water quality should not be used.

EC-3 Hydraulic Mulch
EC-4 Hydroseeding
EC-5 Soil Binders
EC-6 Straw Mulch
EC-7 Geotextiles & Mats

Vegetation Stabilization:

If vegetative stabilization is selected, the stabilizing vegetation must be installed, irrigated and established prior to the onset of the storm season (October 1). Established vegetation is defined as a subsurface mat of intertwined mature roots with a uniform vegetative coverage of 70 percent of the natural vegetative coverage or more on disturbed areas. In the event stabilizing vegetation has not been established by October 1, other forms of physical stabilization must be employed to prevent erosion during storm events until the stabilizing vegetation is established.

EC-4 Hydroseeding (to establish interim vegetation)

Wind Erosion (Dust) Control:

Apply water or other dust palliatives as necessary to prevent or alleviate dust nuisance:

WE-1 Wind Erosion Control

3.4.2 Sediment Control

Sediment Control is any practice that traps the soil particles after they have been detached and moved by wind or water. Sediment control measures are usually passive systems that rely on filtering or settling the particles out of the water or wind that is transporting them.

Perimeter Protection:

Protect the perimeter of the site or exposed area from sediment ingress/discharge in sheet flows using one or more of the following:

SE-1 Silt Fence
SE-5 Fiber Rolls
SE-6 Gravel Bag Berm

SE-8 Sand Bag Barrier

SE-9 Straw Bale Barrier

Storm Drain Inlet Protection:

Protect all operational storm drain inlets internal to the project by using:

SE-10 Storm Drain Inlet Protection

Resource Protection:

Protect Environmentally Sensitive Areas (ESAs) and watercourses from sediment in sheet flows by using one or more of the following:

SE-1 Silt Fence

SE-5 Fiber Rolls

SE-6 Gravel Bag Berm

SE-8 Sand Bag Barrier

SE-9 Straw Bale Barrier

Sediment Capture:

Capture sediments in channeled stormwater by using one or more of the following:

SE-3 Sediment Trap

SE-10 Storm Drain Inlet Protection

SE-2 Sediment Basin (Sediment Basin(s) must be designed in accordance with the General Permit or other industry standard).

Velocity Reduction:

Reduce the discharge velocity of stormwater by using one or more of the following:

SE-1 Silt Fence

SE-4 Check Dam

SE-2 Sediment Basin

EC-10 Outlet Protection / Velocity Dissipation Devices

Off-site Sediment Tracking:

Reduce or prevent sediment from being tracked off-site by using one or more of the following:

TC-1 Stabilized Construction Entrance / Exit

TC-2 Construction Road Stabilization

TC-3 Entrance / Outlet Tire Wash

3.4.3 Waste Management

Reduce or prevent the contamination of stormwater by wastes through proper management of the following types of wastes:

- Solid
- Sanitary
- Concrete
- Hazardous
- Equipment–related wastes

BMPs that must be implemented for handling, storing, and disposing of wastes generated by a construction project to reduce or prevent the release of waste materials into stormwater discharges include:

WM-4 Spill Prevention and Control
WM-5 Solid Waste Management
WM-6 Hazardous Waste Management
WM-7 Contaminated Soil Management
WM-8 Concrete Waste management
WM-9 Sanitary / Septic Waste Management
WM-10 Liquid Waste Management
NS-8 Vehicle and Equipment Cleaning
NS-9 Vehicle and Equipment Fueling
NS-10 Vehicle and Equipment Maintenance

3.4.4 Materials Management

Reduce or prevent the contamination of stormwater from construction materials by covering and / or providing secondary containment of storage areas and / or by taking adequate precautions when handling materials. BMPs to implement for handling, storing, and using construction materials to prevent the release of those materials into stormwater discharges are:

WM-1 Material Delivery and Storage
WM-2 Material Use
WM-3 Stockpile Management

3.4.5 Non-Stormwater Management

Non-stormwater management BMPs limit or reduce potential pollutants at their source before they are exposed to stormwater. These BMPs are also referred to as "good housekeeping practices" that involve day-to-day operations of the construction site and

are usually under the control of the contractor. BMPs to implement for non-stormwater management, depending on the conditions and/or applicability of deployment are:

NS-1 Water Conservation Practices
NS-2 Dewatering Operations
NS-3 Paving and Grinding Operations
NS-4 Temporary Stream Crossing
NS-5 Clear Water Diversion
NS-6 Illicit Connection/ Discharge
NS-7 Potable Water/Irrigation
NS-8 Vehicle and Equipment Cleaning
NS-9 Vehicle and Equipment Fueling
NS-10 Vehicle and Equipment Maintenance
NS-11 Pile Driving Operations
NS-12 Concrete Curing
NS-13 Concrete Finishing
NS-14 Materials and Equipment Use Over Water
NS-15 Demolition/ Adjacent to Water
NS-16 Temporary Batch Plants

3.5 BMP Standard Plans

Accepted standard plans that may be used for construction BMPs are found in the Orange County Environmental Management Agency (now PFRD) Standard Plans, 1996 Edition. This includes the following BMPs standard plans: Sandbag Velocity Reducer (No. 1328) and Temporary Drainage Inlet (No. 1330). These standard plans may be downloaded from http://www.ocwatersheds.com, under Stormwater Program/Documents.

3.6 BMP References

The primary reference for construction, implementation, and maintenance of construction BMPs is the California Stormwater Best Management Practice Handbook – Construction. This handbook has been recently revised and the latest version can be purchased or downloaded from http://www.cabmphandbooks.com.

Section 4
Documentation Requirements

This section presents documentation requirements for construction projects. The documentation requirements are summarized below in Table 4-1.

Table 4-1
Documentation Requirements for Construction Projects

Site Area	Documentation Requirement
Total Disturbed Soil Area < 1 Acre	■ BMPs to meet Minimum Requirements as Standard Conditions in Grading or Building Permit, or as Plan Notes (Erosion Control Plan at the discretion of the County/City)
Total Disturbed Soil Area ≥ 1 Acres (covered by General Construction Permit)	■ Proof of Submittal of NOI ■ Stormwater Pollution Prevention Plan (SWPPP) ■ Erosion Control Plans (ECPs) meeting Minimum Requirements and Site Management Requirements ■ BMPs to meet Minimum Requirements and Site Management Requirements as Standard Conditions or Plan Notes (if no Grading Permit)

4.1 Documentation Requirements for Construction Projects Subject to the General Construction Permit

The following describe the process to be followed for a private construction project that is subject to the General Construction Permit (1 acre or greater of soil disturbance or less than 1 acre but part of a greater common plan of development):

- The project owner, developer, or contractor is responsible for preparing the Notice of Intent (NOI) and submitting it to the State Water Resources Control Board. Before receiving a grading or building permit, the project owner, developer, or contractor must submit to the County / City proof of submittal for General Construction Permit coverage.

- For grading permit projects, an Erosion Control Plan must be submitted in accordance with the County / City grading ordinance.

- Prior to the start of construction, a SWPPP meeting the requirements of the General Construction Permit must be prepared by the owner, developer, or contractor. The SWPPP must be implemented year-round throughout the duration of the project's

construction. A SWPPP Template is available for download from http://cabmphandbooks.com. It is important to note that the County/City and its staff are not responsible for reviewing, approving, or enforcing the SWPPP; these are responsibilities of the Santa Ana or San Diego Regional Boards and their staffs. County/City Inspector(s) may choose to use the SWPPP as an informal tool for on-site inspections; thus, the SWPPP must be made available upon the inspector's request.

- Once the project owner, developer, or contractor receives a grading or building permit (if applicable) and initiates construction, BMPs must be implemented throughout the duration of the project as specified in Table 3.1.

- To comply with the General Construction Permit, the contractor must perform inspections before and after storm events and once each 24-hour period during extended storm events to identify BMP effectiveness and implement repairs or design changes as soon as feasible depending upon field conditions. The results of all inspections and assessments must be documented and copies of the completed inspection checklists must be maintained with the SWPPP.

- The County/City will inspect and enforce issued and applicable ordinances as noted in Section 5, including implementation of BMPs as specified in Table 3.1. The County/City will notify the appropriate Regional Board of non-compliance when the non-compliance meets the criteria of posing a threat to human or environmental health.

- Once project construction is completed and the site fully complies with the final stabilization requirements of the General Construction Permit, the owner/developer will submit a Notice of Termination (NOT) to the State Water Resources Control Board.

4.2 Documentation Requirements for Other Sites (< 1 Acre)

Private construction projects disturbing < 1 acre of soil must implement BMPs to comply with minimum requirements listed in Table 3-2. Projects covered under a grading permit are required to develop Erosion Control Plans (ECPs). These ECPs must show proposed locations of the erosion control BMPs that will be implemented during the construction. If the project is tributary to or within 500 feet of an ASBS in the Santa Ana Regional Board region, site management requirements (Section 3.3) shall also apply.

Section 5
Municipal Inspection of Construction Sites

The County / City will perform inspections of construction sites to verify that the requirements of the DAMP are being implemented and maintained, and that construction sites appropriately comply with requirements of local permits (building, grading, NPDES, etc.) and Ordinances (Grading, Water Quality, and others) as detailed in this Manual and as augmented by the local agency, and that they continue to protect water quality.

5.1 Prioritization of Construction Site Threat to Water Quality

The County / City will evaluate the potential threat to water quality posed by the construction activity and assign a threat priority of low, medium, or high. Based on the threat of prioritization the County / City will set an inspection frequency to ensure that BMPs are adequate, are being implemented and maintained properly, and that no discharge violations are occurring. Factors considered in the threat prioritization include:

- Size and type of the construction project
- Time of Construction – rainy season (October 1 - April 30) versus dry season
- Location- tributary to an impaired waterway or near an ASBS or ESA
- Site topography

5.2 Inspection Frequencies

Construction sites will be inspected, according to the priority established by the County / City, until construction activity is complete. The minimum frequency of construction site inspections is shown in Table 5-1:

Table 5-1
Minimum Inspection Frequency of Construction Projects

Construction Site Priority	Rainy Season (October 1 - April 30)		Dry Season (May 1 - September 30)
	Projects within the jurisdiction of the Santa Ana Regional Board	Projects within the jurisdiction of the San Diego Regional Board	
High	Once per month	Once per week *	As needed
Medium	Twice during the season		As needed
Low	Once during the season	Twice during the season	As needed
* Or monthly if the County/City has submitted a written statement to the San Diego Regional Board			

5.3 Inspection Responsibilities

At a minimum, the following will be addressed during inspections:

- Ensure that the owner / developer / contractor is meeting the construction program requirements of the DAMP;
- Ensure that there is an effective combination of erosion, sediment, and material and waste management BMPs being implemented and maintained in order to reduce or prevent the discharge of pollutants into stormwater conveyances and receiving waters;
- Ensure that the owner / developer / contractor implements and maintains appropriate BMPs on a year round basis;
- Ensure no discharge violations (excessive sediment, oil sheen, trash, etc.) are occurring or pose a reasonable threat of occurring;
- Ensure that, if issues are noted during the inspections, appropriate corrective actions are taken.

The primary mechanism that inspectors will use to determine if the minimum requirements and BMPs for construction activities are being met will be to assess the site against the minimum requirements (Table 3-2) and the approved plans. The minimum

requirements are intended to be easy to interpret field observations that allow an assessment of site conditions during both dry and wet season conditions.

The inspector will utilize the following framework when conducting an inspection:

- Review contractor's self-inspection checklist to determine whether minimum self-inspections have been performed;
- Review the applicable County / City required erosion and sediment control plans and contract documents and determine whether they are being properly implemented;
- Determine if BMPs are being effectively implemented in accordance with the approved plans and suggested list of BMPs, and are maintained properly;
- Determine whether the owner / developer / contractor is making appropriate adjustments when ineffective BMPs are found; and
- Determine if discharges are occurring from the site or are flowing into onsite storm drain inlets and determine if such discharges are prohibited.

If a discharge violation is observed, or if BMPs are either not implemented or not being maintained properly, enforcement actions may be imposed. If the inspected site does not meet the minimum requirements, inspectors will follow-up within a reasonable period to assure that all applicable requirements are implemented.

5.4 Enforcement Actions

The County / City inspectors and / or other staff who possess internal enforcement authority through established policies and procedures will undertake enforcement of construction projects. Inspectors will enforce compliance with the construction program, grading or building permit, and local ordinances such as the Water Quality Ordinance. The inspectors will document violations observed.

If an inspector observes a significant and / or immediate threat to water quality, action will be taken to require the developer / contractor to immediately cease the discharge and the County / City will be obligated to forward this information to the Regional Water Quality Control Board for review of additional enforcement action or remediation requirements.

The County / City enforcement steps that may be taken by inspectors include but are not limited to:

- Verbal Warning
- Written Actions under the Water Quality Ordinance
    - Notice of Non-Compliance

  - Administrative Compliance Order
  - Administrative Citations or Fines
  - Cease and Desist Order
  - Civil and Criminal Actions
- Written Actions under Building / Grading Ordinances
  - Corrective Action Notice
  - Stop Work Order
  - Revocation of Permit(s) and / or Denial of Future Permits
  - Civil and Criminal Actions

In selecting enforcement options, the inspector will normally apply similar enforcement actions to violations of a similar nature. However, a more severe enforcement action may be taken when a violator has either a history of non-compliance or has failed to take good faith actions to eliminate continued violations. If egregious or unusual circumstances are indicated, a higher level of enforcement action will be taken.

Verbal Warnings:

Typically, the initial method of requesting corrective action and enforcing compliance will be a verbal warning from the inspector to the contractor. The inspector will notify the developer / contractor's project supervisor of the violation and document the violation and the notification to the contractor's project supervisor in the inspection file. A specific time frame for correcting the problem and a follow-up inspection date will be documented by the inspector. In judging the degree of severity, the inspector may also take into account any history of similar or repeated violations by the same developer or contractor at this or other sites.

Written Warnings:

If a deficiency that was noted in a prior verbal warning is not corrected by the next inspection, or the severity of the violation is such that a verbal warning is not strong enough, a written warning will be issued. The written warning will describe the deficiency that is to be corrected, suggested corrective action(s), the specific time frame for correction, and a date for a follow-up inspection.

A copy of the written warning will be provided to the contractor's project supervisor and another copy may be provided to the owner / developer. A copy will be placed in the active inspection file. Once the violation has been corrected to the satisfaction of the inspector, the inspector will document compliance in the inspection file. Depending on the severity of the violation(s), the options for issuing written warnings for enforcement of local ordinances and grading / building permits on private construction projects may vary. Written warnings include, but are not limited to, Notice of Non-Compliance, Administrative Compliance Order, Administrative Citations or Fines, and Cease and Desist Order.

Stop Work Orders:

If a written warning has not been addressed by the next inspection, or if the developer / contractor has not complied with their permit requirements, or if a significant threat to water quality is observed (such as a failure of BMPs resulting in a significant release of sediment or other pollutants off site), a stop work order will be issued by the inspector or the appropriate official. Stop work orders prohibit further construction activity until the problem is resolved and provide a time frame for correcting the problem.

The stop work order will describe the infraction and specify what corrective action must be taken. A copy of the stop work order will be given to the contractor's project supervisor and placed in the active inspection file. A copy of the stop work order will also be sent to the owner / developer. To restart work once a stop work order has been issued, the contractor's project supervisor must request the inspector to re-inspect the project and verify that the deficiencies have been satisfactorily corrected. If the inspector is satisfied with the corrections, the inspector may sign off on that phase of the project, and work may proceed. In severe cases, the building or grading permit may be revoked.

Revocation of Permit(s) and/or Denial of Future Permits:

In severe cases of non-compliance or significant discharges, it may be necessary to revoke the grading and / or building permit that a developer / contractor is working under, withhold final approval, or deny future permits on the project. The developer / contractor would then have to re-apply for permits and meet any requirements that the County / City may place on the project.

Civil and Criminal Actions:

In severe cases, the County / City may also use Civil and or Criminal court actions under local ordinances, such as the Water Quality Ordinance, which may result in significant fines levied upon the non-compliant responsible parties.

Glossary

The following definitions are important in understanding the County / City's construction stormwater protection program.

ASBS – Area of Special Biological Significance. The Water Quality Control Plan for Ocean Waters of California (California Ocean Plan) designates 35 Areas of Special Biological Significance, two of which lie within the Santa Ana Regional Board jurisdiction:

- Newport Beach Marine Life Refuge (HU801.110)
- Irvine Coast Marine Life Refuge (HU801.110)

BMP – Best Management Practices (BMPs) are activities, practices, procedures, or facilities implemented to avoid, prevent, or reduce pollution of the stormwater system and receiving waters.

Construction Project - any site for which building or grading permits are issued and where an activity results in the disturbance of soil such as soil movement, grading, excavation, clearing, road construction, structure construction, or structure demolition; and sites where uncovered storage of materials and wastes such as dirt, sand, or fertilizer occurs; or exterior mixing of cementaceous products such as concrete, mortar, or stucco will occur.

Demolition - an activity involving the demolishing or the destruction of a structure, facilities, or associated appurtenances.

Erosion Control - the activity of reducing or eliminating erosion (the wearing away of the ground surface as a result of the movement of wind, water, and / or ice) by using a combination of Best Management Practices to protect adjacent private property, watercourses, public facilities, and receiving waters from an abnormal deposition of sediment or dust.

Erosion Control Plan – A plan (including drawings, specifications, or other requirements) detailing the methods of implementing an erosion control system.

Discharge – the release spill, leak, pump, flow, escape, leaching, dumping or disposal of any liquid, semi-solid, or solid substance.

Environmentally Sensitive Area (ESA) – includes but is not limited to all Clean Water Act Section 303(d) impaired water bodies; areas designated in the Ocean Plan as Areas of Special Biological Significance (ASBS) or by the State Water Resources Control Board (Water Quality Control Plan and amendments); water bodies designated with the RARE beneficial use by the State Water Resources Control Board (Water Quality Control Plan and amendments); areas designated as preserves or equivalent under the Natural Community Conservation Planning Program; and any areas designated as Critical

Aquatic Resources (CARS) or other equivalent environmentally sensitive areas which have been identified by the County or City.

Municipal Storm Drain System – the street gutter, channel, storm drain, catch basin, constructed drain, lined diversion structure, wash area, inlet, outlet, or other facility, which is part of or tributary to the County-wide stormwater runoff system and owned, operated, maintained, or controlled by the County / City, and used for the purpose of collecting, storing, transporting, or disposing of stormwater.

Non-stormwater – any runoff or discharge not entirely composed of stormwater.

Notice of Intent (NOI) – an application submitted by the owner / operator of a project that constitutes his intent to be authorized by an NPDES permit issued for stormwater discharges associated with the construction activity indicated.

Notice of Termination - a form to discontinue coverage under an NPDES general permit for stormwater discharges associated with industrial activity and stormwater discharges associated with construction activity.

Pollutant – any liquid, solid or semi-solid substances that will interfere with or adversely affect the beneficial uses of the receiving waters, flora, or fauna of the state. A more detailed definition is included in the Water Quality Ordinance. Generally, pollutants can include such items as:

- Artificial materials
- Household wastes
- Metals and Non-metals
- Petroleum and related hydrocarbons
- Animal wastes
- Substances having a pH less than 6.5 or greater than 8.6, or unusual coloration, turbidity or odor
- Waste materials, sediment, and wastewater generated by construction sites and construction activities
- Pollutants defined by the Federal Clean Water Act
- Other constituents or materials, including but not limited to pesticides, herbicides, fertilizers, fecal coliform, fecal streptococcus or enterococcus, or eroded soils, sediment and particulate materials.

Receiving Water - A river, lake, ocean, stream, or other watercourse identified in the Basin Plan into which waters may be discharged.

Regional Board – Regional Water Quality Control Boards administer water quality requirements within a watershed region. There are nine Regional Boards under the SWRCB. The San Diego Regional Board and the Santa Ana Regional Board have jurisdiction in Orange County.

Stormwater -stormwater runoff and snow melt runoff

SWRCB – State Water Resources Control Board, California agency that implements and enforces water quality and NPDES permit requirements and oversees the Regional Boards.

Stormwater Pollution Prevention Plan (SWPPP) - Document required by the General Construction Permit to be developed and implemented by construction sites with 1 acre or greater of soil disturbance, or less than 1 acre but part of a greater common plan of development. The SWPPP emphasizes the use of appropriately selected, correctly installed, and maintained pollution reduction BMPs. This approach provides the flexibility necessary to establish BMPs that can effectively address source control of pollutants during changing construction activities.

Waste Discharge Identification (WDID) Number - an identification number assigned by the Storm Water Resources Control Board upon receipt of a complete NOI.