# Appendix B

***City of Salinas 2007 Standards to Control Excavation, Cuts, Fills, Clearing, Grading, Sediment and Erosion***

RESOLUTION NO. 19244 (N.C.S.)

**A RESOLUTION ADOPTING REVISED STANDARDS TO CONTROL EXCAVATION, CUTS, FILLS, CLEARING, GRADING, EROSION AND SEDIMENT**

**WHEREAS,** Ordinance No. 1832 (N.C.S.) was adopted by the Salinas City Council on August 25, 1981, to further amend the Uniform Building Code, as adopted and amended by the Salinas City Council on June 2, 1980, pursuant to Ordinance No. 1794; and

**WHEREAS,** Ordinance No. 1832 (N.C.S.) also granted the City Engineer authority to develop, establish, and adopt standards to control excavations, cuts, fills, clearing, earthmoving, grading, erosion, and sediment; and

**WHEREAS,** Standards specification No. 10836, the "Grading Standards", was adopted by the City Council on September 24, 1981, to set for the standards to control excavations, cuts, fills, clearing, grading, erosion, and sediment; and

**WHEREAS,** The Grading Standards must be updated to meet current practices and to address the City's 2005 National Pollutant Discharge Elimination System (NPDES) Permit issued by the State Regional Water Quality Control Board.

**NOW, THEREFORE, BE IT RESOLVED BY THE COUNCIL OF SALINAS** that the revised standards to control excavation, cuts, fills, clearing, grading, erosion and sediment attached hereto are hereby adopted and are hereby incorporated by reference and made a part hereof as if fully set out herein; and

BE IT FURTHER RESOLVED that Resolution 10836 (N.C.S) Adopting and Establishing Standards to Control Excavations, Cuts, Fills, Clearing, Grading, Erosion, and Sediment is hereby rescinded and the contents thereof superceded by the adoption of these revised "Grading Standards"; and

BE IT FURTHER RESOLVED that said revised "Grading Standards" shall be in full force beginning on June 19th, 2007, except for construction of public improvements/facilities, as therein defined in any subdivision, for which approval of the final map for such subdivision have

been given by the City Council of Salinas; and to contracts under construction as of the date of this Resolution.

**PASSED AND ADOPTED** this 19th day of June 2007, by the following vote:

AYES: Councilmembers Barnes, Barrera, De La Rosa, Villegas, and Mayor Donohue

NOES: Councilmember Sanchez

ABSTAIN: None

ABSENT: Councilmember Lutes

Dennis Donohue, Mayor

ATTEST:

Ann Camel, City Clerk

# STANDARDS TO CONTROL EXCAVATIONS, CUTS, FILLS, CLEARING, GRADING, EROSION AND SEDIMENT CITY OF SALINAS 2007

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**SECTION 1 SCOPE AND INTENT** These standards sets forth guidelines, rules, regulations and minimum standard to control excavation, grading, clearing, erosion control, and maintenance, including cut and fill embankments; requires control of all existing and potential condition of accelerated erosion; requires protection of surface water quality by prevention of soil erosion and transport of soil sediments or other pollutants; establishes administrative procedures for issuance of permits; and provides for approval of plans and inspections during construction and maintenance.

**SECTION 2 DEFINITIONS** When used in these standards, the following words shall have the meanings ascribed to them in this section:

(a) "Accelerated Erosion" - Rapid erosion caused by human induced alteration of the vegetation, land surface topography or runoff patterns. Evidence of accelerated erosion is indicated by exposed soils, active gullies, rills, sediment deposits, or slope failures caused by human activities.

(b) "Access and Building Envelope" - An area delineated on the site plan within which all grading, land clearing, and other disturbances for construction of access and/or building will be confined.

(c) "Applicant" - shall refer to a project or permit applicant (see "Permitee").

(d) "Bedrock" - In place, solid, undisturbed rock.

(e) "Bench" - A relatively level step excavated into earth material on which fill is to be placed.

(f) "Best Management Practice (BMP)" - A technique, series of techniques, or device which, when utilized in a designated manner, is proven to be effective in minimizing runoff and the quantity of pollutants that enter the storm drain system. Sedimentation and other products of erosion are considered pollutants to the storm drain system.

(g) "Borrow" - Earth material acquired from an offsite or other onsite location for use in grading on a site.

(h) "City Engineer" -The City Engineer or his designated representative is responsible for the administration and enforcement of these standards.

(i) "Civil Engineer" - A professional Engineer registered in California to practice Civil Engineering works.

(j) "Clearing" - The removal of vegetation and debris down to bare soil by any method.

(k) "Compaction" - The densification of earth and solids or fill by mechanical means.

(l) "Development Permit" - A permit issued for new land use activities, minor land division, building, grading, land clearing, subdivision, planned unit development, and major plan development.

(m) "Drainage Course" - A well-defined, natural or manmade channel, which conveys storm water runoff either year round or intermittently.

(n) "Earth Material" - Rock, natural soil or any combination thereof.

(o) "Engineering Geologist" - A professional geologist registered in California to practice Engineering Geology.

(p) "Erosion" - The wearing away of the ground surface by the actions of water, wind, ice, gravity, or a combination thereof.

(q) "Erosion Hazards" - The susceptibility of a site to erode based on soils, condition and steepness of a slope, rock type, vegetation, and other site factors.

(r) "Erosion Control Measures" – Design features and management practices intended to prevent soil, rock or other material from being dislodged and moved down slope by storm water flows and wind.

(s) "Excavation" - The mechanical removal of earth materials.

(t) "Fill" - The deposit of earth materials by artificial means.

(u) "Grade" - The vertical location of the ground surface or the degree of rise or descent of a slope.

(i) "Existing Grade" -The grade prior to any land disturbance or grading.

(ii) "Rough Grade" -An approximate elevation of the ground surface conforming to the proposed design.

(iii) "As Graded or Finished Grade" -The final grade which conforms to the approved plan.

(v) "Grading" - Any excavation, filling, leveling, or combination thereof (excludes stripping and/or clearing).

(w) "Key" - A designed, compacted fill placed on a bench excavated in undisturbed earth material beneath the toe of a proposed fill slope to develop shearing resistance (see Figure 1).

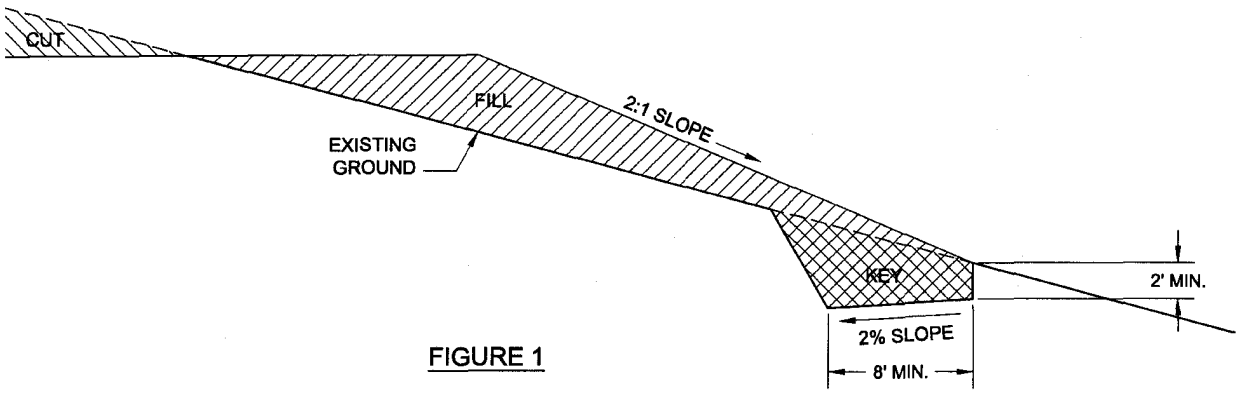



FIGURE 1

(x) "Land Disturbance" - Clearing, excavating, grading, or other manipulation of the natural terrain.

(y) "Low Impact Development (LID)" means the stormwater management approach towards development planning and design that minimizes post-construction stormwater runoff pollutant loads and stormwater runoff quantity, by promoting infiltration and biofiltration, and minimizing the installation of impervious surfaces. The LID design orientation is to minimize the site stormwater runoff impact of development by using design techniques that infiltrate, filter, store, evaporate, and detain runoff close to its source.

(z) "Notice of Intent" - The formal filing to the California State Regional Water Quality Control Board (RWQCB) for coverage under the NPDES General Construction Permit for Discharges of Storm Water Associated with Construction Activity

(aa) "NPDES" – National Pollution Discharge Elimination System is a program, federally authorized by the Clean Water Act, which is aimed at reducing and eliminating pollution sources from entering into natural streams and bodies of water.

(bb) "Owner" - The person or persons shown in the County Recorder's Office as owner of property.

(cc) "Permittee" - The owner, contractor, or any person undertaking land disturbance activities upon a site pursuant to a permit granted by the City.

(dd) "RWQCB – Regional Water Quality Control Board" - State regulatory agencies responsible for runoff water quality and the City of Salinas NPDES program.

(ee) "Riparian and Wetland Resources" - Riparian and wetland resources are generally those areas which fall into one of the following categories:

(i) An area extending 100 feet (measured horizontally) from each side of a perennial stream. Distance shall be measured from the 100-year flood high water mark.

(ii) An area extending 100 feet (measured horizontally) from each side of an intermittent stream. Distance shall be measured from the 100-year flood high water mark.

(iii) An area extending 100 feet from the 100-year flood high water mark of a marsh or a natural body of standing water.

(ff) "Road Gradient (%)" - Vertical rise or distance multiplied by 100 and divided by horizontal run or distance.

(gg) "Runoff" - The movement of surface water over land or improved surfaces such as, but not limited to, streets, parking lots, driveways or sidewalks.

(hh) "Sediment" - Eroded earth material that is carried by water, wind, gravity or ice and deposited into channels, lakes, rivers or other areas.

(ii) "Sediment Control and Debris Facility" - A storm water treatment device facility such as a drainage detention basin, which serves the purpose of collecting water-borne sediment and debris, and is designed to be cleaned periodically.

(jj) "Sediment Control Measures" - Project design features intended to halt or reduce the movement or transport of soil sediments by storm water runoff or drainage flow.

(kk) "Site" - A parcel of land or contiguous parcels where land disturbance including erosion control, clearing, grading, or construction are performed or proposed.

(ll) "Slope" - An inclined ground surface the inclination of which is expressed as a ratio of horizontal distance to vertical distance.

(mm) "Soil" - Naturally occurring mineral and organic earth materials on the immediate surface overlying bedrock or parent material.

(nn) "Soils Engineer" - A Civil Engineer licensed in California who is experienced in soil mechanics and slope stability analysis.

(oo) "Storm Water" - Drainage that has originated as rainfall, which then flows over land.

(pp) "Storm Water Pollution Prevention Plan (SWPPP)" – Implementation plan showing how the quality of storm water runoff will be protected. Required for those projects under the General Permit for Discharges of Storm Water Associated with Construction Activity and as required by the City Engineer. The plan generally a site map and specifically identifies the activities that have the potential to pollute storm water which could enter creeks or other natural drainage channels or the City's storm water drainage system, and describes the pollution prevention measures including Best Management Practices that will be implemented at the site.

(qq) "Stream" - Any watercourse as designated by a solid line or dash and three dots symbol shown on the largest scale of United States Geological Survey map most recently published.

(rr) "SWRCB" – State Water Resources Control Board – State agency to which the Regional Water Quality Control Boards report.

(ss) "10-Year Storm" - A storm with such intensity and duration that its magnitude would only be exceeded on the average once every ten years, or that has a 10% chance of occurrence in any given year.

(tt) "100-year Storm" - A storm with such intensity and duration that its magnitude would only be exceeded on the average once every 100 years, or that has a 1% chance of occurrence in any given year.

(uu) "Terrace" - A relatively level step constructed in the face of a graded slope surface for drainage and maintenance purposes.

(vv) "Topsoil" - Loose, friable, organic, and fertile earth materials on top of a soil profile usually the A - horizon.

(ww) "Waste Discharge Identification (WDID) Number" – Permit number issued by SWRCB for coverage under the General Construction Storm Water Permit.

(xx) "Waterbreak" - A ditch, dike, dip, or combination thereof, constructed to effectively divert water as an aid to erosion control.

**SECTION 3. GENERAL PROVISIONS.**

(a) No person shall cause or allow the persistence of a condition on any site that could cause accelerated erosion. Accelerated erosion shall be controlled and/or prevented by Permitee or the property owner by using measures outlined in subsequent sections as applicable, especially when work is on geologically unstable areas, on slopes above 20%, and/or on soils rated a severe erosion hazard. Additional measures may be necessary and may be specifically required by the City Engineer.

(b) No person shall do or permit to be done any grading which may obstruct, impede or interfere with the natural flow of storm water, whether such waters are unconfined upon the surface of the land or confined within land depressions or natural drainage ways, unimproved channels or watercourses, or improved ditches, channels or conduits, in such manner as to cause flooding where it would not otherwise occur, aggravate any existing flooding condition or cause accelerated erosion.

(c) The property owner and the person(s) doing or causing or directing the grading are responsible for the prevention of damage to any other property, public health and safety. No person shall grade, fill, or excavate on any land so as to endanger any public street, sidewalk, alley, or any other public or private property, or public health and safety without supporting and protecting such property and persons from damage.

(d) The property owner and the person(s) doing or causing or directing the grading are responsible for protecting down-stream areas on or near the site, such as creeks, streams, wetlands, lakes, springs, trees, and riparian habitat that could be affected by the grading. The grading shall be conducted in a manner that prevents environmental damage and is consistent with the current versions of the City of Salinas Standard Specifications, Design Standards and Standard Plans; the City of Salinas Storm Water Development Standards, as the same may be amended from time to time, and the requirements contain herein.

(e) The property owner and the person(s) doing or causing or directing the grading shall put into effect and maintain all Best Management Practices necessary to protect adjacent watercourses and public or private property from damage by erosion, flooding or deposition of mud or debris originating from the site. Precautionary measures must include provisions for properly designed erosion and sediment control measures, so that downstream properties are not affected by upstream erosion or sediment transport by storm water. If, in the opinion of the City Engineer, grading activities result in a need for post-construction runoff control measures, then such measures, (including Low Impact Development devices/systems), will be required to be installed, as specified in the City of Salinas Storm Water Development Standards.

(f) All construction projects that cause land disturbance of one or more acres, or that disturb less than one (1) acre but are part of a larger common plan of development that in total disturbs one (1) or more acres, must meet the applicable requirements of the State of California General Storm Water Permit for Discharges from Construction Activities and the City's NPDES

permit. Applicants for grading permits shall submit a copy of the Notice of Intent (NOI) for application for coverage under the State Water Resources Control Board (SWRCB) General Construction Storm Water Permit, and the Waste Discharge Identification Number (WDID) issued by the SWRCB. A Storm Water Pollution Plan that meets the requirements of the State General Storm Water Permit shall be submitted to the City for approval for all construction projects required to obtain coverage. A grading permit shall not be issued without the NOI and WDID issued by the SWRCB and the approved SWPPP.

(g) The following minimum requirements apply to all construction projects that require coverage under the State General Construction Storm Water Permit:

(i) Sediments generated at the project site shall be controlled using adequate source control and/or structural BMPs.

(ii) Construction-related materials and wastes shall be retained at the project and properly disposed of to avoid discharge to the City storm drain system and waters of the state.

(iii) Unauthorized non-storm water runoff shall be contained at the project site. Authorized non-storm water discharges shall be as defined in the State General Construction Storm Water Permit.

(iv) Erosion from slopes and channels shall be controlled by implementing an effective combination of erosion control (source control) and other BMPs as described in the City of Salinas Standard Specifications, Design Standards, and Standard Plans document, as the same may be amended from time to time, City of Salinas Storm Water Development Standards, and/or equivalent approved manuals that may be identified by the City.

(h) All construction projects shall implement the following BMPs, unless justification is provided and approved by the City in the SWPPP as to why it is not practicable.

(i) Stabilized construction entrance;

(ii) Scheduling of grading activities to minimize bare graded areas during the rainy season;

(iii) Downslope sediment controls (e.g., sediment logs or equivalent);

(iv) Concrete truck washouts;

(v) Storm drain inlet protection;

(vi) Protection of slopes and channels;

(vii) Good housekeeping practices (e.g., trash management, proper material storage, and similar practices); and,

(viii) Additional BMPs as may be designated by the City Engineer prior to issuance of the grading permit due to site conditions.

**SECTION 4. HAZARDOUS CONDITIONS.** Whenever the City Engineer determines that an existing excavation or embankment or cut or fill has become a hazard to life or limb, or endangers property, or adversely effects the safety, use, or stability of a public way or drainage channel or causes significant impact on the natural resources of the area, the owner of the property upon which the excavation, embankment, cut, or fill, is located, or other person or agent in control of said property, upon receipt of notice in writing from the City Engineer shall, within the period specified therein, repair or eliminate such hazard and be in conformance with the requirements of these standards. Long-lived soil sterilants shall not be used on soils or slopes which may need subsequent revegetation for erosion and sediment control. Where feasible, erosion and soil sterility problems shall be corrected no later than the beginning of the next rainy season (approximately October 15).

**SECTION 5. PERMIT APPLICATION AND REQUIREMENTS.**

(a) General - Except as exempted in Section 6 of these standards, a permit shall be obtained from the City by the owner(s) of the property (or agent when authorized in writing) for each site. Approval of a permit for a new development shall require the abatement of any existing human-induced or accelerated erosion problems on the property. Approval of the permit for construction sites of one acre or more is also dependent on verification that a NOI for coverage under the State General Storm Water Construction Permit has been submitted and a WDID issued.

(b) Plans and Specifications - Two sets of plans, plus supporting data, shall be required for each application when required by the City Engineer. Plans shall be drawn to scale upon substantial material, minimum size 19" x 24", and shall be of sufficient clarity to indicate the nature and extent of the work proposed and show in detail that it will conform to the provisions of these standards and all relevant laws and regulations. The first sheet of each set of plans shall include the location and Assessor's Parcel Number(s) of work, the name, telephone number, and address of the owner(s), and the name, telephone number, and address of person by whom they were prepared. The plans shall include the following information in writing, diagrams, and/or scale drawings:

(i) Statements as to the specific intention or ultimate purpose for which the grading is being done.

(ii) General location and vicinity of the proposed site.

(iii) Property lines and accurate contours of the existing ground and details of terrain and area drainage without existing vegetation. Contour intervals shall be one (1) foot when the natural ground slope is less than 5%; two (2) feet when 5 to 10%; and five (5) feet when slope is more than 10%. Contours shall overlap fifteen (15) feet onto adjacent properties.

(iv) Limiting dimensions, elevations or finished contours to be achieved by the grading and proposed drainage channels and related construction, including proposed vegetation, landscaping, finished grade contours will be shown as they relate to surrounding property contours.

(iv) A comparison of runoff with project and without project may be required at the discretion of the City Engineer.

(v) Detailed plans and location of all temporary and permanent structural and non-structural erosion and sediment control measures, and of all surface and subsurface drainage devices, walls, cribbing, dams, sediment basins, storage reservoirs, and other protective devices to be constructed with, or as a part of, the proposed work, together with a map showing the drainage area with the complete drainage network and the estimated runoff of the area served by any drains. The location of any known erosion, flooding or inadequate capacity and condition of drainage courses and flood plains in the pathway of offsite runoff or drainage shall be noted on the plans and/or maps.

(vi) The planned direction and disposition of all storm drainage flow (with approximate grade) from all buildings, yards, lots, driveways, parking areas, and streets.

(vii) Vegetative erosion control and re-vegetation measures for all surfaces exposed or expected to be exposed during grading activities.

(viii) Locations of buildings or structures on the property where the work is to performed and the approximate location of buildings or structures on adjacent lands owned by other owners which is within fifteen (15) feet of the property line, or which may be affected by the proposed operations.

(ix) A statement of the approximate quantity of excavation and fill, along with the appropriate shrinkage factor.

(x) Specifications, when required, shall contain information covering construction and material requirements.

(xi) Estimated starting and completion dates.

(xii) Extent and manner of tree cutting and/or vegetative clearing including a disposal plan.

(xiii) A provision for stockpiling topsoil when necessary for erosion control or landscaping.

(xiv) North Arrow, written and graphic scales.

(c) Storm Water Pollution Prevention Plan (SWPPP) – Shall be submitted for construction sites of one acre or larger. At a minimum, the SWPPP shall address:

(i) A vicinity map showing nearby roadways, the construction site perimeter, and the geographic features and general topography surrounding the site.

(ii) A site map showing the construction project in detail, including the existing and planned paved areas and buildings; general topography both before and after construction; drainage patterns across the project area; and anticipated storm water discharge locations (i.e., the receiving water, a conduit to the receiving water, and/or drain inlets).

(iii) A detailed, site-specific listing of the potential sources of storm water pollution.

(iv) A description of the type and location of erosion and sediment control BMPs to be employed at the site.

(v) The name and telephone number of the qualified person responsible for implementing the SWPPP.

(vi) Certification/signature by the landowner or an authorized representative.

(d) Engineering Requirement - A Civil Engineer licensed by State of California shall prepare and sign the plans and specifications and be coordinator and liaison between other professionals, owners, contractors and the City Engineer if:

(i) Grading is in excess of 2,000 cubic yards (excludes clearing and stripping).

(ii) Major use permits and/or any other projects likely to cause major land disturbances as determined by the City Engineer.

(e) Engineering Reports. When required by the City Engineer, each application for a permit shall be accompanied by two (2) sets of supporting data consisting of a soil and/or Civil Engineering report and/or Engineering Geology report, and/or any other reports deemed necessary by the City Engineer.

(i) The soils engineering report shall include data regarding feasibility of the site for the proposed uses; recommendations for grading, including site preparation and placement of fill; nature, distribution, erosion hazards and strength of existing surface and subsurface soils; foundation recommendations; finished slope stability; design of buttress fills; recommendations for mitigation of seismic forces; surface and subsurface drainage; and soil description, as defined in the USDA Soil Survey of Monterey County, including soil types, depth, erodibility, and vegetative establishment and growing capabilities.

(ii) The civil engineering report shall include hydrological calculations of runoff for 10-year and 100-year storm frequencies when required by the current City of

Salinas Standard Specifications, Design Standards and Standard Plans document; City of Salinas Storm Water Development Standards, and Section12 of this standards specification; conclusions and recommendations for adequate erosion control and grading procedures, comparison of runoff without and within the project; design criteria for corrective measures, including the existing and/or required safe storm drainage capacity of channels onsite and measures used to minimize impervious surface runoff; and opinions and recommendations covering adequacy of site to be developed by the proposed grading.

(iii) The engineering geology report shall include an adequate description of the geology of the site, potential geologic hazard and conclusions and recommendations regarding the effects of geologic conditions on the proposed development plus opinions and recommendations covering the adequacy and stability of the geologic subsurface for cuts and fill loads to be developed by the proposed grading.

(iv) Recommendations included in the reports when approved by the City Engineer shall be incorporated in the plans and specifications.

(f) Variances - A request for variance from the provisions of these standards, the permit conditions, or the plan specifications may be approved, conditionally approved, or denied by the City Engineer. A request for a variance must state in writing the provision to be varied, the proposed substitute provision, when it would apply and its advantages.

(g) Work Time Limits - The permittee shall fully perform and complete all the work required to be done within the time limits specified. If no time limit is specified, the permittee shall complete the work within 180 calendar days after the date of the issuance of the permit. If work has not started within 180 calendar days after the permit is issued, it expires.

If work authorized is started and suspended or abandoned for 180 calendar days, the permit also expires unless stoppage has been authorized in advance by the City Engineer.

If the permittee is unable to complete the work within the specified time he shall, prior to the expiration of the permit, present in writing a request for an extension of time, setting forth the reasons for the requested extension. If, in the opinion of the City Engineer, an extension is warranted, additional time may be granted for the completion of the work.

**SECTION 6. PERMIT EXEMPTIONS.** Excavation, grading, filling, clearing, and/or erosion control work requires a permit from the City except in the following:

(a) Subdivisions and Planned Unit Developments - When improvement plans complying with these standards have been approved.

(b) Building Pads and Driveways - Grading, when done with a valid building permit.

(c) Emergency Work - Work necessary to preserve life or property, provided, however, that when emergency work is performed under this section, the person performing it shall report

the pertinent facts relating to the work to the City Engineer within ten (10) days after commencement of the work. Thereafter the person shall obtain a permit pursuant to Section 29B-6 and perform such work as may be determined by the City Engineer to be reasonably necessary to correct any erosion or conditions with a potential to cause erosion as a result of the emergency work.

(d) Excavations - An excavation which does not exceed fifty (50) cubic yards and which is either less than two (2) feet in depth or which does not create a cut slope greater than five (5) feet in height and steeper than two (2) horizontal to one (1) vertical.

(e) Fill - A fill, except when in a riparian zone, containing permitted materials only which is less than two (2) feet in depth, is placed on natural terrain with a slope flatter than five (5) horizontal to one (1) vertical, does not exceed fifty (50) cubic yards on any site, does not alter or obstruct a drainage course, and will not be used for structural support.

(f) Basements and Footings - An excavation below finished grade for basements and footings of a building, retaining wall or other structure authorized by a valid building permit. This shall not exempt any fill except as provided under subsection (e) of this section, made with the material from such excavation nor exempt any excavation having an unsupported height greater than five (5) feet after the completion of such structures.

(g) Refuse Disposal - Refuse disposal Bins which are permitted and actually being controlled pursuant to other City regulations, and excavations for individual and community sewage disposal systems made pursuant to other City permits.

(h) Wells and Utilities - Excavations for wells or utilities made pursuant to other City permits.

(i) Soil and/or Geological investigation - Exploratory excavations and/or test borings under the direction of either a soils Engineer or Engineering geologist where such excavation is to be returned to the original condition under the direction of such Engineer or geologist within 45 days after the start of work.

(j) Agricultural Work - Use of land operated under a conservation plan by a resource conservation district. Routine plowing, harrowing, discing, listing, leveling, and similar operations necessary to prepare a field for a crop. Not exempted shall be initial grading to convert land from non-productive to crop producing use.

(k) Public Work - Work in connection with public improvement projects for which inspection is provided by the City or other public agency and which complies with these standards.

**SECTION 7. FEES.**

Fees, if any, necessary to implement this standards specification shall be as set forth per Section 11B-4 of the Salinas City Code.

## SECTION 8. SURETIES

(a) If grading is in excess of 2,000 cubic yards, the permittee shall provide a cash deposit, bond or equivalent surety, to the satisfaction of the City, payable to the City to insure compliance with the provisions of the permit and this standards specification. If deemed necessary by the City Engineer, a surety may be required for grading operations of less than 2,000 cubic yards.

(b) Permits for grading shall not be valid and work shall not be started until the required sureties have been provided. Surety shall remain in effect one full winter cycle from October 15 through April 15, after final inspection and approval.

(c)All expenditures by the City for corrective work necessary because of the permittee's failure to comply with the provisions of the permit and this standards specification shall be charged against the surety.

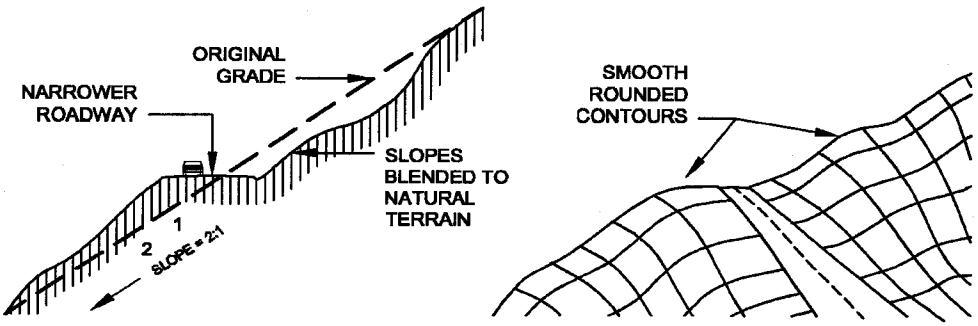
(d) The amount of surety for grading shall be based on the number of cubic yards of material either excavation or fill, whichever is larger, plus the cost of drainage, erosion control and/or other protective devices.

## SECTION 9. DESIGN STANDARDS AND EXCAVATIONS.

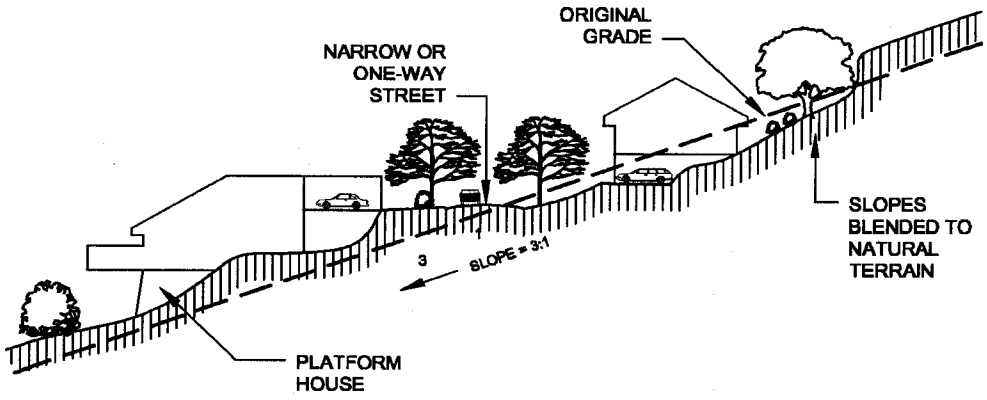
(a) General -Unless otherwise recommended in the soil engineering and/or engineering geology reports approved by the City Engineer, cuts and excavations shall conform to the provisions of this Section.

(b) Slope - The slope of cut surfaces shall be no steeper than is safe for the intended use. Cut slopes shall be no steeper than two (2) horizontal to one (1) vertical, and shall not exceed twenty (20) feet in vertical height or exceed seventy-five (75) feet slope distance without a bench or terrace break. Due to individual site soils and geology, flatter and shorter slope lengths may be required, or steeper and longer slope lengths may be allowed when reviewed and found by the City Engineer to be consistent with building and safety. Cut slopes greater than three (3) horizontal to one (1) vertical shall only be permitted when installed with sufficient erosion control measures. Cut slopes shall be rounded off so as to blend in with natural terrain (see Figure 2).

# ROAD CUTS & FILLS




# DEVELOPMENT CUTS & FILLS



## MAX. HEIGHTS AND LENGTHS OF CUT & FILL SLOPES

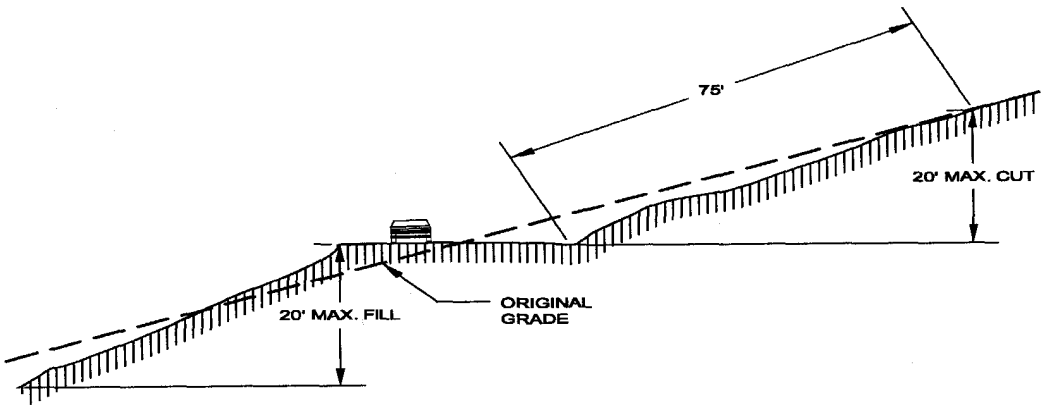



**FIGURE 2**

(c) Stockpiles - Stockpile material for trenches and pits will be put up slope, when possible, of the excavation to be promptly backfilled and compacted into trenches and pits. Excavated material not needed at the site will be removed or disposed of at a location and/or manner approved by the City Engineer.

(d) Vegetative Protection - All earth cuts shall be planted or otherwise protected from the storm runoff erosion within thirty (30) days of the completion of final erosion control and grading work. Planting shall be irrigated to establish a root system before the rainy season, if necessary in the opinion of the City Engineer.

**SECTION 10. DESIGN STANDARDS FOR FILL.**

(a) General - Unless otherwise recommended in the soil engineering and/or engineering geology reports approved by the City Engineer, fill shall conform to the provisions of this section.

(b) Fill Location - Fill shall not be constructed on natural slopes steeper than two (2) to one (1) unless an Engineer devises a method of placement which will ensure the fill will remain in place. Cut slopes greater than three (3) horizontal to one (1) vertical shall only be permitted when installed with sufficient erosion control measures. The toe of the fill shall be no closer than twelve (12) feet horizontally to the top of existing or planned cut slopes. The area beyond the toe of the fill shall be sloped for sheet overflow or a drain shall be provided. (See Figure 3).

(c) Fill Slopes -The slope of fill surfaces can be no steeper than is safe for the intended use. Fill slopes shall be no steeper than two (2) to one (1) and shall not exceed twenty (20) feet vertical height or seventy-five (75) feet slope distance without a terrace break. Due to individual soil properties, shorter and flatter slopes may be required or steeper and longer slopes may be

allowed upon review by the City Engineer if he finds the deviations consistent with stability and safety. Tops of fill slopes shall be rounded off so as to blend with the natural terrain (See Figure 2).

(d) Ground Preparation - Natural ground surface over which fills are planned shall first be cleaned of all trash, vegetation, stumps, debris, non-complying fill, top soil and other unsuitable materials and shall be scarified prior to the placement of the fill. Where slopes are 3:1 three (3) to one (1) or steeper and/or twenty (20) feet or more in height, an 8-foot wide (minimum) key shall be dug into undisturbed, solid competent soil or bedrock beneath the toe of the proposed fill. On minor fills, a key of less than eight (8) feet may be approved by the City Engineer. The key must be cut and approved as a suitable foundation for fill before placing any fill. (See Figure 1 and 3).

(e) Materials Permitted - Only approved material free from tree stumps, detrimental amounts of organic matter, trash, garbage, sod, peat and/or similar materials shall be used. Rocks, asphalt concrete and/or broken concrete larger than six (6) inches in greatest dimension shall not be used unless the method of placement with appropriate technical analysis/justification is approved by the City Engineer. Topsoil may be used in the top 12-inch surface layer to aid in planting and landscaping.

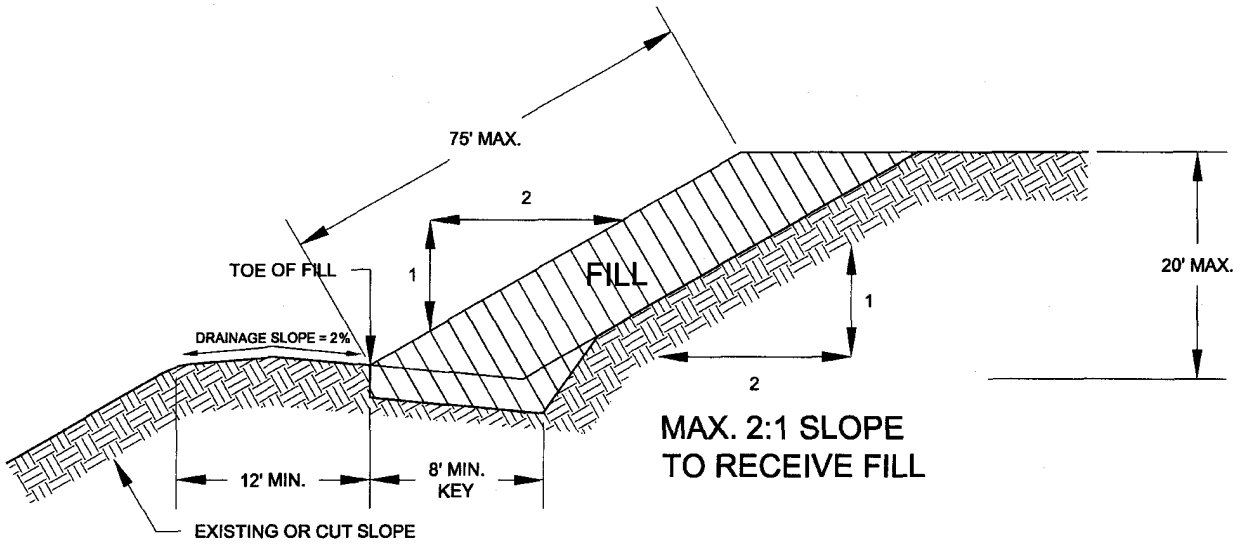



**FIGURE 3**

(f) Compaction of Fill - All fills shall be compacted to a minimum relative dry density of 90 percent as determined by ASTM D-1557-78 or CALTRANS test method under California 216. Field density verification must be submitted for any fill twelve (12) inches or more in depth

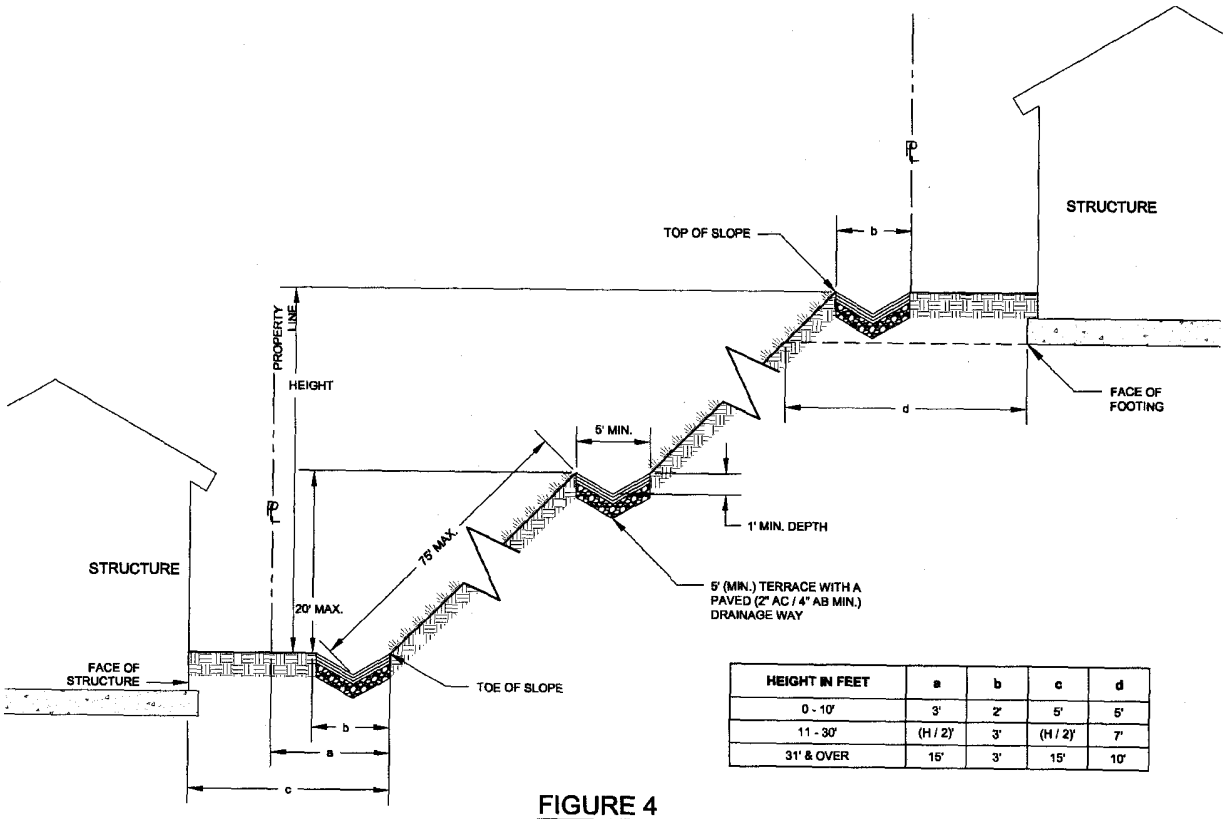
where such fill may support the foundation for a structure. A higher relative dry density and/or additional compaction tests may be required at any time by the City Engineer.

(g) Vegetative Protection - All earth fill shall be planted or otherwise protected from the effects of storm runoff within thirty (30) days of the completion of final grading and planting shall be irrigated to establish a root system, if necessary in the opinion of the City Engineer.

## SECTION 11 DESIGN STANDARDS FOR CUT AND FILL SETBACKS.

(a) General - Unless otherwise recommended in the approved soil engineering and/or engineering geology reports and shown on the approved grading plan, setbacks shall conform to this section and be no less than as shown in Figure 4.

(b) Minimum Setbacks (Figure 4) - Tops and toes of cut and filled slopes shall be set back from property boundaries and structures as far as necessary for the safety of the adjacent properties and to prevent damage resulting from water runoff, by flooding, erosion of the slopes, or by sediment deposition.




| HEIGHT IN FEET | a | b | c | d |
|---|---|---|---|---|
| 0 - 10' | 3' | 2' | 5' | 5' |
| 11 - 30' | (H / 2)' | 3' | (H / 2)' | 7' |
| 31' & OVER | 15' | 3' | 15' | 10' |

FIGURE 4

(c) Stream and Riparian Setbacks - Tops and toes of cut and/or filled slopes shall be set back, as designated and defined in the City's General Plan to provide and maintain an

undisturbed protective strip between the grading and the riparian corridor. This strip shall have sufficient filter capacity to prevent degradation of water quality as determined by a biologist approved by the City Engineer. If it is determined that the filter capacity of the protective strip is insufficient, additional erosion control may be required by increasing the width of the protective strip or with structural measures and/or by seeding, planting, mulching of bare soil areas.

(d) Retaining Walls - Retaining walls when keyed into stable foundations and capable of sustaining the design loads, may be used to reduce the required cut and fill setbacks when recommended by the Civil or Soil Engineers and approved by the City Engineer.

(e) Restrictions and/or minimums may be increased or relaxed upon review by the City Engineer if he finds the deviations consistent with safety and stability and to provide access for slope maintenance and drainageways.

## SECTION 12. DESIGN STANDARDS FOR DRAINAGE AND TERRACES.

(a) General.

(i) Site design will incorporate measures for reducing runoff and water quality impacts in compliance with the current City of Salinas NPDES storm water permit and current City design standards. Drainage facilities and terraces shall conform to these provisions. To the extent practicable, and as required by the City of Salinas Standard Specifications, Design Standards, and Standard Plans document, and the City's Storm Water Development Standards; peak storm drainage runoff and sediment rates may not exceed predevelopment rates. A pro-rata share of the cost of off-site erosion sediment, and flood control improvements and/or for maintenance to the principal drainageway may be required by the City Engineer to handle the increased peak runoff and/or sediment generated by the development if greater than predevelopment rates.

(ii) All drainage facilities shall be designed to carry surface and subsurface waters to a street, storm drain or watercourse, while minimizing the amount of said discharge. Adequate provisions shall be made to avoid damage to adjacent and downstream properties. All areas shall be graded and drained so that water will not pond or accumulate.

(iii) Drainage shall not cause downstream storm water quality degradation, erosion or endanger the stability of any cut or fill slope or any building or structure. If surface drainage is discharged onto any adjoining property, it shall be discharged in such a manner that it will not cause erosion or endanger any cut or fill slope or any building or structure.

(b) Runoff Calculations - Plans and specifications prepared for subdivisions of five (5) acres or more, or as required by the current City of Salinas Standard Specifications, Design Standards and Standard Plans document; and the City's Storm Water Development Standards , shall show, by table and/or calculations, the peak rates of storm runoff both before and after

development for the 10-year and 100-year storms. Runoff calculations shall be performed according to the requirements of said standards. A combination of storage and controlled release of storm water runoff may be required by the City Engineer.

(c) Drainage Facilities.

(i) Natural drainage ways shall not be disturbed and existing drainage courses shall not be obstructed or obliterated without mitigating measures installed that have been approved by the City Engineer. Grading equipment shall not disturb and/or cross a flowing stream unless absolutely necessary and only with prior approval from the City Engineer.

(ii) Whenever a grading operation obstructs or impairs the flow of runoff in an existing drainage course, a culvert, bridge or other suitable drainage facility designed and acceptable to the City Engineer shall be installed to convey the flow past the point of impairment. No construction materials or construction by-products shall be discarded in any drainageway or riparian zone.

(iii) Where needed, drainage channels shall be culverts, pipe drains, paved, rock, or vegetative channels designed to safely carry existing and potential off-site runoff from a fully developed area upstream as well as local on-site surface and subsurface waters to an adequate drainage course designated for such purposes by the City Engineer. Properly designed energy dissipaters may be required at the point of discharge.

(iv) Culvert size and industry standard materials shall be used in accordance with City standard design criteria and as approved by the City Engineer. Minimum diameter shall be fifteen (15) inches.

(v) Cuts, fills, and retaining walls shall have subsurface drainage facilities as necessary for stability.

(vi) Berms, ditches, interceptor drains, or swales, may be constructed at the top of cut and fill slopes when necessary for protection against water runoff. When required by the City Engineer, minimum size interceptor drains above cut slopes with a tributary drainage path greater than forty (40) feet measured horizontally or an area larger than 1/3 acre shall be constructed of an approved impervious non- erodible material a minimum of three (3) inches thick, one (1) foot deep, three (3) feet wide and discharge into downdrains. Asphalt ditches will not be allowed. Energy dissipaters may also be required by the City Engineer.

(vii) At least a one percent (1%) grade will be required toward an improved storm drainage facility, either existing or planned, from all building sites, pads, yards, roof drains, driveways, etc.

(viii) Measures to control storm water runoff at the source shall be included in the grading plan design.

(d) Terraces.

(i) Terraces at least six (6) feet in width shall be established at not more than 20-foot vertical intervals or 75-foot slope intervals. Suitable access shall be provided to permit proper grading and maintenance of these terraces. Where only one terrace is required, it shall be at mid-height (see Figure 4).

(ii) Swales or interceptor drains, ditches, on terraces and on the top of cut slopes, shall be designed to carry water and sediment to safe disposal structures and areas and shall have a minimum appropriate gradient and must be protected with an approved non-erodible material a minimum of 3 inches thick, 1 foot deep, and 5 feet wide. A maintenance plan may be required by the City Engineer.

## SECTION 13. DESIGN STANDARDS FOR EROSION AND SEDIMENT CONTROL.

(a) General. The following shall apply to the control of erosion and sediment from grading operations:

(i) Grading plans shall be designed with long-term erosion and sediment control as a primary consideration.

(ii) No grading operations shall be conducted during the rainy season (October 15th – April 15th) except upon a clear demonstration, to the satisfaction of the City Engineer, that adequate site erosion control measures are to be taken to minimize risk of increased erosion and sediment discharge from the site.

(iii) Should grading be permitted during the rainy season, the smallest practicable area of erodible land shall be exposed at any one time during grading operations and the time of exposure shall be minimized.

(iv) Natural features, including vegetation, terrain, watercourses and similar resources shall be preserved wherever possible. Limits of grading shall be clearly defined and marked to prevent damage by construction equipment.

(iv) Permanent vegetation and structures for erosion and sediment control shall be installed prior to October 15th.

(vi) Adequate provision shall be made for long-term maintenance of permanent erosion and sediment control structures and vegetation.

(vii) No topsoil shall be removed from the site unless otherwise directed or approved by the City Engineer. Topsoil overburden shall be stockpiled and redistributed within the graded area after rough grading to provide a suitable base for seeding and planting. Runoff from the stockpiled area shall be controlled to prevent erosion and resultant sedimentation of receiving water.

(viii) Runoff shall not be discharged from the site in quantities or at velocities substantially above those which occurred before grading except into drainage facilities whose design has been specifically approved by the City Engineer.

(ix) Permitee shall implement BMPs to ensure that vehicles do not track or spill earth materials into public streets and shall immediately remove such materials if this occurs.

(x) Should increased erosion and sediment discharge occur or become imminent, permittee shall take all necessary steps to control such discharge. Such steps may include construction of additional facilities or removal or alteration of facilities required by approved erosion and sediment control plans. Facilities removed or altered shall be restored as soon as possible afterward or appropriate changes in the plan shall be immediately implemented pursuant to this standards specification. Permittee shall take prompt action to resolve emergency problems.

(xi) If the project is abandoned after vegetation removal has taken place, the area shall be stabilized and planted as required herein. If the work is suspended for an extended period, the City Engineer may require interim planting as needed to control erosion and sediment transport.

(b) Erosion and Sediment Control Plans: Erosion and sediment control plans shall comply with the following requirements. For construction projects of one acre or more that must submit a SWPPP, the Erosion and Sediment Control Plan shall be incorporated as part of the SWPPP.

(i) The erosion and sediment control plans shall provide the location and description of all planned temporary and permanent erosion and sediment control measures, design and application standards specifications, and maintenance schedule.

(ii) Erosion and sediment control plans shall be designed to prevent increased discharge of sediment at all stages of grading and development from initial disturbance of the ground to project completion. Every feasible effort shall be made to ensure that site stabilization is permanent. If grading occurs in distinct phases or the site will remain unstable through more than one rainy season, more than one set of plans may be required as determined by the City Engineer. Plans shall indicate the implementation period and the state of construction where applicable.

(iii) The structural and hydraulic adequacy of all storm water containment or conveyance facilities shown on the erosion and sediment control plans shall be verified by a Civil Engineer, who shall so attest on the plans. Sufficient calculations and supporting material to demonstrate such adequacy shall accompany the plans when submitted.

(iv) Erosion and sediment control plans shall include an effective re-vegetation program to stabilize all disturbed areas which will not be otherwise protected.

(v) Erosion and sediment control plans shall be designed with sufficient flexibility to meet unanticipated field conditions.

(vi) Erosion and sediment control plans shall provide for inspection and repair of all erosion and sediment control facilities at the close of each working day during the rainy season and for specific sediment cleanout and vegetation maintenance criteria.

(vii) Erosion and sediment control plans shall comply with the recommendations for BMPs as described in the City of Salinas Stormwater Development Standards and the City's Standard Specifications, Design Standards and Standards Plans document), as the same may be amended from time to time, City of Salinas Storm Water Development Standards, and/or equivalent approved manuals that may be identified by the City and any civil engineer, geotechnical engineer, engineering geologist, or landscape architect involved in preparation of the grading plans.

(viii) The City Engineer may, in his sole discretion, waive the requirement for an erosion and sediment control plan if, in his opinion no significant erosion or sediment discharge hazard exists. The requirement for a SWPPP for applicable sites (one acre or larger) cannot be waived.

(c) Erosion and Sediment Control Requirements. The following requirements for erosion and sediment control shall apply.

(i) General - Access and building envelopes shall be delineated on the development plans when necessary to keep disturbance out of particularly erodible areas. New lots shall not be created which will require access road and driveways to cross slopes exceeding 20% (5 to 1)for distances greater than fifty (50) feet, unless adequate mitigation measures are provided. Exposed soil shall be protected from erosion by temporary and/or permanent measures, as approved by the City Engineer.

(ii) Slope - Structures on existing slopes exceeding 20% shall utilize pole, step or other such foundation that does not require major land disturbance (See Figure 2).

(iii) Runoff Control - Where concentrated runoff will occur, it will be carried in pipe or culvert conduits or over a non-erodible surface (paved, rocked, or vegetated) with discharge points clearly shown on the development plans. When necessary to prevent erosion, conduits must have proper energy dissipaters at the point of discharge.

(iv) Protection of Down Slopes - Best Management Practices shall be implemented to minimize damage to the face of cuts and fills. Down slopes shall be protected

from surface water runoff from above by dikes, swales or cut-off ditches, or other measures, as needed.

(v) Building Site Runoff - Runoff from buildings, roads, driveways and the total site area shall be controlled by berms, swales, ditches, structures, vegetative filter strips and/or catchbasins to adequately reduce the escape of sediment from the site.

(vi) Sediment and Debris Control Facilities - Temporary and permanent sediment and debris control facilities shall be installed whenever and wherever necessary to protect the project and downstream properties from erosion and sediment/debris discharge.

(vii) Vegetative Removal - Development plans shall indicate the areas where vegetation is to be removed and replaced within the building and access envelopes. Vegetation removal shall be limited to that area necessary and as indicated on the approved development plan. The method and time shall be such that the erosive effects are minimized.

(viii) Vegetative Disposal - Vegetation removed during clearing operations shall be disposed of by chipping, used as mulch, compost, and/or disposed off site in a manner approved by the City Engineer.

(ix) Topsoil - To promote regrowth of vegetation, the topsoil shall be stockpiled and reapplied upon completion of grading on slopes of less than 5:1 (20%). Soil stockpiles and exposed soil shall be protected from erosion at all times. Excess topsoil shall be disposed off site in a manner approved by the City Engineer.

(x) Temporary Vegetation - Temporary vegetation sufficient to stabilize the soil as permanent vegetation cover is maturing shall be established on all disturbed areas as needed and as each stage of grading is completed.

(d) Winter Operations - October 15 to April 15.

(i) Grading projects that are started but not completed by October 15$^{th}$ of each year are to be "winterized" by installation of planned erosion and sediment control measures, which shall be maintained in good repair through the following April 15$^{th}$, and until the project is completed.

(ii) During the period of October 15$^{th}$ to April 15$^{th}$, or other dates as determined by the City Engineer, all planned erosion and sediment control measures shall be installed prior to start of grading operations, unless approval for phased control measure installation is requested of and granted by the City Engineer prior to grading or construction permit issuance.

(iii) When work is allowed, existing ground cover shall not be cleared, destroyed, or disturbed more than fifteen (15) days prior to grading or construction work unless approved in advance by the City Engineer.

(iv) When land development work is allowed during the normal, rainy winter season, adequate erosion and sediment control measures must be in place during any land disturbance, and temporary erosion control measures, when needed, must be applied to all soils bared at the end of each day.

(v) During winter, sufficient erosion control materials of straw, plastic, netting, etc., shall be kept on the site at all times to be installed immediately by the permittee upon advent of any rainfall or wind that may be expected to cause erosion and sediment discharge.

(vi) All major cut and fill slopes within the access and building envelope without established vegetation shall be adequately protected between October 15 and April 15 by mulching or other methods approved by the City Engineer.

(vii) All erosion and sediment control measures, including plantings and mulching, shall be closely monitored throughout the winter and runoff problems corrected promptly. Mulching shall be anchored by punching or tacking into the soil or by the use of netting. A minimum of 1000 lbs. of straw, or equivalent, per each 10,000 square feet of slope surface will be required to be anchored. An additional amount may be required by the City Engineer. All erosion and/or slippage of banks shall be repaired by the permittee at his expense.

(viii) Within ten (10) working days after seeding, fertilizing and/or mulching, the permittee will commence watering of the seeded areas or slopes and shall continue until the rains come and/or the ground cover is fully developed and/or self-sufficient. All control measures including berms, diversion catch basins, sediment traps, etc., shall be installed prior to seeding and mulching.

(e) Dust - Dust from grading operations must be controlled. Dust control shall consist of applying water or other dust palliatives, or covering small stockpiles or areas, as necessary to prevent or alleviate dust nuisance generated by construction activities. Periodic street sweeping may also be required by the City Engineer.

(f) Sediment Tracking Control - Sediment shall be prevented or controlled from being tracked off-site by vehicles leaving the construction area using appropriate Best Management Practices such as stabilized construction entrances/exits, stabilized construction roadways, and entrance/exit tire washes.

(g) Erosion and Sediment Control Coordination with Project Installation.

(i) All vegetative and/or structural measures required to safely discharge any runoff generated by the project shall be installed during the first or initial construction phase of the project.

(ii) Land shall be developed in increments of workable size which can be completed in a single construction season. Erosion and sediment control measures shall be coordinated with a sequence of grading, development, and construction operations and all necessary erosion control measures shall be put in effect prior to the commencement of the next work increment and/or winter rainy season.

(iii) Prior to completion and final acceptance of the project, all erosion control measures must be in place and all exposed bare soil shall be mulched, fertilized and otherwise prepared so that it is planted to a permanent vegetative cover. Native or naturalized vegetation should be used. The City Engineer may require watering of planted areas to initiate and assure growth.

(h) Livestock - Where necessary to assure that water quality is not affected by the keeping of livestock, vegetative buffer and/or filter strips shall be established on all downhill sides of areas where livestock are kept. The width of the buffer strip shall be determined by the City Engineer. Also, additional erosion control measures, such as diversion, dissipaters and sediment basins may be required to control runoff from these areas where livestock have destroyed and torn up protective vegetation.

(i) Maintenance - All on-site erosion control facilities shall be properly maintained by the owners for the life of the project so that they do not become nuisances with stagnant water, heavy algae growth, insect breeding, odors, discarded debris, and/or safety hazards. Vegetative maintenance required may include mowing, fertilization, irrigation and/or reseeding.

(j) Storm Drain Inlets' Sediment shall be prevented from entering the storm drainage system by implementing approved storm drain inlet Best Management Practices.

## SECTION 14. INSPECTIONS AND COMPLIANCE.

(a) General - Excavation, grading, filling, clearing and erosion and sediment control work requiring a permit shall be subject to inspection by the City Engineer. In lieu of inspection by City staff employees, the City Engineer may require supervision, regular inspection, and special testing be performed, together with a letter of compliance by the licensed professional who prepared the approved plan; or the City Engineer may require supervision inspection, and testing, together with a letter of compliance submitted by an approved independent testing agency.

(b) Inspections Required - The following inspections shall be required:

(i) Periodic ongoing inspection during project progress, including compaction and special testing as may be required by the approved plan.

(ii) Final inspection determining compliance with terms and conditions of these standards and permit.

(c) Compliance with Storm Water Pollution Prevention Plan Requirements for Construction Sites - Periodic inspections shall include inspection for compliance with implementation of storm water pollution prevention Best Management Practices, as required by approved SWPPPs and City ordinances, including the Storm Water Management and Discharge Control Ordinance and the City's NPDES permit. Enforcement of storm water pollution prevention compliance shall be as stated in the Storm Water Discharge and Control Ordinance.

(d) Notification - The permittee shall notify the City Engineer two working days prior to the beginning of the operation authorized by the permit, and one complete working day prior to any inspection or testing requested by the permittee.

(e) Right of Entry - Filing of an application for a permit under these standards constitutes a grant of permission for the City to enter the permit area for the purpose of administering these standards from the date of the application to the termination of the erosion control maintenance period. If necessary, the City Engineer shall be supplied with a key or lock combination, or permitted to install a City lock.