

COUNTY OF SAN MATEO
ENVIRONMENTAL SERVICES AGENCY
PLANNING AND BUILDING DIVISION

**REGULATIONS FOR EXCAVATING, GRADING, FILLING AND
CLEARING ON LANDS IN UNINCORPORATED SAN MATEO COUNTY**
[From Chapter 8, Division VII, San Mateo County Ordinance Code]

SECTION 8600. SCOPE AND PURPOSE. It is the declared intent of the County of San Mateo to promote the conservation of natural resources, including topography and vegetation, as well as to protect health and safety, which includes the reduction or elimination of the hazards of earth slides, mud flows, rock falls, undue settlement, erosion, siltation, and flooding, or other special conditions. To achieve these goals, the adverse effects of grading, cut and fill operations, land clearing, water runoff, and soil erosion must be minimized. Therefore, the following regulatory provisions of this chapter shall apply for the purpose of stringent control of all aspects of grading and clearing operations and to establish procedure for issuance, administration and enforcement of a permit.

SECTION 8600.1. APPLICATION OF CHAPTER. This chapter shall apply to all grading and excavating operations conducted in the unincorporated portions of the County, unless such operations are specifically excepted or unless a permit for such operations is required in accordance with Sections 6501 and 6502 of this ordinance code.

SECTION 8601. DEFINITIONS. For the purposes of this chapter, the following definitions shall apply.

SECTION 8601.1. ARCHITECT shall mean a professional architect registered in and by the State of California.

SECTION 8601.2. AS-GRADED is the surface conditions extant on completion of grading.

SECTION 8601.3. BEDROCK is in-place solid rock.

SECTION 8601.4. BENCH is a relatively level step excavated into earth material on which fill is to be placed, or within a cut or fill slope.

SECTION 8601.5. BEST MANAGEMENT PRACTICES HANDBOOK is a compilation of erosion and sediment control measures which is maintained by the County Planning and Building Division.

SECTION 8601.6. BLENDING is a term for the intermixing and compaction of natural site soils (such as materials from two natural soil horizons), or for the intermixing of natural site soils with imported soil or other materials.

SECTION 8601.7. BORROW is earth material acquired from on- or off-site locations for use in grading on a site.

SECTION 8601.8. BUTTRESS FILL shall mean a compacted fill placed in such a manner as to buttress and retain weak or unstable materials.

SECTION 8601.9. CERTIFICATION shall mean a written engineering or geological opinion concerning the progress and completion of the work.

SECTION 8601.10. CIVIL ENGINEER shall mean a professional engineer registered in and by the State of California to practice in the field of civil works (see Section 8606.2).

SECTION 8601.11. CIVIL ENGINEERING shall mean the application of the knowledge of the forces of nature, principles of mechanics and the properties of materials to the evaluation, design and construction of civil works.

SECTION 8601.12. CONTOUR ROUNDING is the rounding of cut and fill slopes in the horizontal and vertical planes to promote stability, to blend with existing contours or to provide horizontal variation, and to eliminate the artificial appearance of slopes.

SECTION 8601.13. COMPACTION is the densification of a fill by mechanical or other means.

SECTION 8601.14. COMPETENT MATERIAL shall mean earth material capable of withstanding the loads or forces which are to be imposed upon it without failure or detrimental settlement as certified by the appropriate geotechnical consultant.

SECTION 8601.15. COUNTY, where referring to approvals, denials or waivers, shall mean the County of San Mateo, or its designees.

SECTION 8601.16. DEPTH OF CUT OR FILL shall be the vertical distance between existing natural ground and the finish elevation at any location.

SECTION 8601.17. DRAINAGE WAY is a natural or manmade channel which collects and intermittently or continuously conveys stormwater runoff.

SECTION 8601.18. DUST CONTROL PLAN is a written procedure describing the method, equipment, and materials to be used in minimizing and controlling dust arising from the construction activities.

SECTION 8601.19. EARTH MATERIAL is any rock, or natural soil or any combination thereof.

SECTION 8601.20. ENGINEERING GEOLOGIST shall mean a professional engineering geologist certified in and by the State of California to practice in the field of engineering geology (see Section 8606.3).

SECTION 8601.21. ENGINEERING GEOLOGY shall mean the application of geologic knowledge and principles in the investigation and evaluation of naturally occurring rock and soil for use in the design of civil works.

SECTION 8601.22. EROSION is the wearing away of the ground surface as a result of the movement of wind, or water.

SECTION 8601.23. EROSION CONTROL PLAN is a written report describing the measures, materials and implementation schedule proposed for erosion control on a grading site, as per Performance Standards for Erosion and Sediment Control Plans described in the Grading Permit Performance Standards Handbook.

SECTION 8601.24. EXCAVATION is the mechanical removal of earth material.

SECTION 8601.25. FILL is a deposit of earth or waste material placed by artificial means. (Engineered fill is material placed according to the recommendations and under the observation of a geotechnical consultant.)

SECTION 8601.26. GEOTECHNICAL CONSULTANT shall mean soil engineer or engineering geologist.

SECTION 8601.27. GRADE shall mean the vertical location of the ground surface.

SECTION 8601.28. GRADE, EXISTING is the grade prior to grading.

SECTION 8601.29. GRADE, FINISH is the final grade of the site which conforms to the approved plan.

SECTION 8601.30. GRADE, ROUGH is the stage at which the grade approximately conforms to the approved plan.

SECTION 8601.31. GRADING is any excavating, filling, or placement of earth materials or combination thereof.

SECTION 8601.32. GRADING PERMIT PERFORMANCE STANDARDS is a handbook to be used by the applicant which details requirements for Erosion and Sediment Control Plans, Grading Standards, Geotechnical Report Guidelines and Dust Control Plan Guidelines.

SECTION 8601.33. HEIGHT OF CUT AND FILL SLOPES shall be the finish vertical distance from the top to toe of slope.

SECTION 8601.34. **KEY** is a trench (or bench) excavated in competent earth material beneath a proposed fill for placement of engineered fill.

SECTION 8601.35. **LAND CLEARING** is the removal of vegetation down to the duff or bare soil by any method.

SECTION 8601.36. **LAND CLEARING PERMIT** is a permit granted by the Planning Director or Planning Commission which authorizes the permittee to carry out land clearing.

SECTION 8601.37. **LAND DISTURBANCE/LAND DISTURBING ACTIVITY** is clearing, grading or other manipulation of the terrain.

SECTION 8601.38. **MINIMUM STANDARDS FOR GEOTECHNICAL REPORTS** is a handbook which details the information to be included in a geotechnical report.

SECTION 8601.39. **NESTING** is the placement of large rocks such that voids in the fill are created and that proper compaction becomes difficult or impossible.

SECTION 8601.40. **REPLACEMENT** is the removal and wasting of soil materials as judged unsuitable for the support of dwellings or other site improvements, and their replacement with suitable soil materials properly engineered.

SECTION 8601.41. **REWORKING** is the removal, or processing and subsequent mechanical densification or consolidation of existing soil material for reasons of deficiency in one or more respects.

SECTION 8601.42. **SIGNIFICANT** shall mean any detrimental effect on the physical or natural state which cannot be adequately mitigated and as identified by Sections 21,000 et seq. of the California Public Resources Code.

SECTION 8601.43. **SITE** is any lot or parcel of land or continuous combination thereof, where grading is anticipated.

SECTION 8601.44. **SLOPE** is an inclined ground surface the inclination of which is expressed as a ratio of horizontal distance to vertical distance.

SECTION 8601.45. **SOIL** is the highly weathered top layer of the earth's surface, excluding bedrock, but including any otherwise unconsolidated earth materials.

SECTION 8601.46. **SOIL ENGINEER** shall mean a civil engineer experienced and knowledgeable in the practice of soil engineering (see Section 8606.3).

SECTION 8601.47. **SOIL ENGINEERING** shall mean the application of the principles of soil mechanics in the investigation, evaluation and design of civil works involving the use of earth materials and the inspection and testing of the construction thereof.

SECTION 8601.48. STABILIZATION is a term for any procedure that will result in increased shear strength in a soil.

SECTION 8601.49. STRUCTURE shall mean something constructed or built, as a building, a wall, a bridge, a road, a dam, etc.

SECTION 8601.50. TERRACE is a relatively level step constructed in the face of a graded slope surface for drainage and maintenance purposes.

SECTION 8601.51. VARIABLE SLOPE is the variation of a cut or fill slope in the vertical plane to blend with existing contours and vertical undulation to eliminate the artificial appearance of slopes or to take advantage of inherent characteristics of the slope material.

SECTION 8601.52. WASTE MATERIAL is non-hazardous useless or discarded material.

SECTION 8601.53. WATERCOURSE is a blue line perennial or intermittent stream as shown on USGS topographic 7 1/2 minute quadrangle series maps.

SECTION 8602. PERMIT REQUIREMENTS. For the purpose of this chapter and to establish an orderly procedure for excavating, grading, filling and clearing, land disturbing activities shall be handled in two distinct phases.

SECTION 8602.1. GRADING. A grading permit shall be required for activities involving grading except as exempted in Section 8603 of this chapter.

SECTION 8602.2. CLEARING. A land clearing permit for the removal of vegetation shall be required when:

- (a) The land area to be cleared is 5,000 sq. ft. or greater, within any two-year period except in County Scenic Corridors where vegetation removal is greater than 1,000 sq. ft.
- (b) Existing slopes are greater than 20 percent.
- (c) The land area to be cleared is in any sensitive habitat or buffer zone as identified in the County General Plan.

SECTION 8603. EXEMPTIONS. The following exemptions shall not apply to land disturbances within natural drainage channels.

No person shall do any grading or land clearing without first having obtained a permit from the County required by this chapter, except for the following:

SECTION 8603.1. An excavation below finished grade for basements and footings of a building, retaining wall, swimming pool, or other structure authorized by a valid building permit. This statement shall not exempt from permit requirement under this chapter, any fill made with the material on- or off-site from such excavation nor exempt any excavation having an unsupported height greater than 5 feet after the completion of such structure, nor when any single purpose excavation exceeds 250 cubic yards.

SECTION 8603.2. Cemetery graves.

SECTION 8603.3. Approved grading in conjunction with a timber harvest permit issued by the County of San Mateo.

SECTION 8603.4. Excavations for water wells or utilities.

SECTION 8603.5. Mining, quarrying, excavating, processing, stockpiling of rock, sand, gravel, aggregate or clay, provided a valid surface mining and reclamation permit issued by the County of San Mateo is in effect.

SECTION 8603.6. Exploratory excavations under the direction of soils engineer or engineering geologists. Such excavations are not to result in an erodible, hazardous, or unstable state. The County Geologist shall be informed of such explorations at least two (2) working days prior to commencement of work.

SECTION 8603.7. An excavation which is less than 2 feet in maximum vertical depth made on competent natural terrain with a slope flatter than five horizontal to one vertical and which creates slopes no steeper than two horizontal to one vertical and removes less than 150 cubic yards of material.

SECTION 8603.8. A fill less than 2 feet in depth, placed on natural terrain with a slope flatter than five horizontal to one vertical, not intended to support structures, and which does not exceed 150 cubic yards on any one parcel, and does not obstruct a drainage course or affect structural integrity of adjacent property.

SECTION 8603.9. Work conducted in any County street, public right-of-way or easement when the work is for a public facility, public utility or other public purposes, or is controlled by other permits.

SECTION 8603.10. Emergency work as authorized by the Planning Director necessary to protect life, limb or property; or to maintain the safety, use or stability of a public way or drainage way.

SECTION 8603.11. The land area to be cleared is for fire protection purposes as required by the San Mateo County Fire Ordinance, Chapter 15, Fire Protection Regulations.

SECTION 8603.12. The land area to be cleared is for routine agricultural activities including but not limited to plowing, harrowing, disking, ridging, listing, leveling, and similar operations to prepare a field for a crop, or the land area to be cleared is for resource management such as brush clearing, erosion control or other resource management programs carried out under the purview of the Resource Conservation District.

SECTION 8603.13. Gardening for home use.

SECTION 8603.14. Agricultural use of land that is operated in accordance with a conservation plan approved by and implemented according to the practices of the Resource Conservation District (RCD) or when it is determined by the RCD that such use will not cause excessive erosion or sediment losses, based on applicable soil loss tolerance values.

SECTION 8603.15. Grading projects for purposes of soil conservation that have been approved by the San Mateo County Resource Conservation District (RCD) when plans for such project have been filed by the RCD with the Planning Division and the Department of Public Works and with the submittal of a certificate of exemption from the Resource Conservation District.

SECTION 8603.16. Agricultural water impoundments not exceeding the minimum limitations of the State Dams and Reservoir Act of 1967 (Sections 6000 et seq. of the Water Code) when approved by the San Mateo County Resource Conservation District and with the submittal of a certificate of exemption from the RCD and provided plans are to be filed with the Planning Division and the Department of Public Works by the RCD.

SECTION 8603.17. The land area to be cleared is to be carried out under an approved Forest Improvement Program or Chaparral Management Program under the purview of the California Department of Forestry when plans for such projects have been filed with the Planning Division.

SECTION 8603.18. Repair of storm damage consisting of slide repair, debris removal and water impoundment replacement on agricultural lands carried out under the purview of the ASCS or RCD provided that such activity does not create hazards to other lands.

SECTION 8604. PROCEDURE.

SECTION 8604.1. APPLICATION REQUIREMENTS.

- (a) Grading Permit Application Requirements. To obtain a grading permit, the applicant shall first file a written application with the Planning and Building Division on a form provided by the Planning Director.

The application shall be accompanied by the following material:

- (1) Where applicable, a letter from the property owner authorizing the property owner's representative to sign the application.
- (2) Fees as set by resolution of the Board of Supervisors.
- (3) A civil engineer's estimate of the quantity of materials to be moved.
- (4) A geotechnical report except when waived by the Director of Public Works. The applicant must comply with the Uniform Building Code and the County of San Mateo Minimum Standards for Geotechnical Reports.
- (5) Two sets of grading plans. When the permit is to be heard by the Planning Commission, seven sets of plans are required. The plans shall be prepared and signed by a civil engineer and shall be 24" x 36" and in a form approved by the Director of Public Works. Where a geotechnical report has been required, the geotechnical consultant shall certify on the San Mateo County Geotechnical Consultant Approval Form that applicable portions of the plans have been prepared in accordance with the recommendations contained in the geotechnical report. The plan shall contain at least the following items (additional material may be required to show conformance of the proposed grading with the requirements of this division and other related ordinances).
 - a) A vicinity map or other means of adequately indicating the site location.
 - b) Boundary lines of the site.
 - c) If there is a proposed subdivision, each lot or parcel of land into which the site is proposed to be divided.
 - d) The location of any existing buildings, structures, easements, or underground utilities on the property where the work is to be performed, and the location of any buildings or structures on adjacent land within 50 feet of the proposed work.
 - e) Accurate contours showing the topography of the existing ground extending at least 10 feet outside all boundary lines of the project site, based on elevations taken on adjacent property or other means approved by the Director of Public Works. The contour lines shall be at intervals sufficient to show the configuration of the ground before grading relative to a bench mark established at or adjacent to the grading site.
 - f) All of the proposed uses for which the proposed grading is necessary.

- g) Elevations, locations, extent and slope of all proposed grading shown by contours, or other acceptable means, and location of any rock disposal areas, buttress fills, subdrains, or other special features to be included in the work. Contours of the finished surface of all proposed grading shall also be included.
- h) A statement of the quantities of material to be excavated and/or filled and the amount of such material to be imported to, or exported from, the site. Approved disposal sites must be used.
- i) Location and nature of known or suspected soil or geologic hazard areas.
- j) Approximate boundaries of any areas with a history of flooding.
- k) Location, width, direction of flow and approximate location of top and toes of banks of any watercourses.
- l) General location and character of vegetation covering the site and the locations of trees with a trunk diameter of 12 inches or more, measured at a point 4 1/2 feet above average ground level, within 12 feet of the area to be disturbed by the proposed grading.
- m) A detailed plan for erosion and sediment control, both during construction and permanent, unless the site has no slopes greater than 2 percent or unless waived or modified by the Director of Public Works (see Erosion and Sediment Control Plan, Grading Permit Performance Standards Handbook).
- n) A plan for dust control (see Dust Control Plans, Grading Permit Performance Standards).
- o) Name and signature of the registered civil engineer (when required) under whose direction the grading plan is prepared.
- p) Specifications, and cross-sections, profiles, elevations, dimensions and construction details based on accurate field data.
- q) Construction details for roads, watercourses, culverts, bridges and drainage devices, retaining walls, gabion walls, cribbing, dams, and other improvements existing or to be constructed, together with supporting calculations and maps.
- r) Such other information as the Director of Public Works or Planning Director may require.

- (b) Agricultural Water Impoundments Permit Requirements. Plans and profiles not under the purview of the RCD and therefore not exempt under Section 8603.18 shall be prepared by a licensed engineer as required by the Director of Public Works and be subject to permits and approvals from the Planning Division. All construction must be in accordance with approved plans and specifications and, when required, is to be done in the presence of and certified by a licensed soils engineer or engineering geologist as appropriate.
- (c) Land Clearing Permit Application Requirements. To obtain a land clearing permit, the applicant shall first file a written application with the Planning and Building Division on a form provided by the Planning Director.

The application for a land clearing permit shall be accompanied by the following materials:

- (1) Where applicable, a letter from the property owner authorizing the property owner's representative to sign the application.
- (2) Fees as set by resolution of the Board of Supervisors.
- (3) An Erosion Control Plan (as specified in the Performance Standards Handbook).
- (4) Plan for the removal of vegetation. The plan shall include at a minimum:
 - a) A vicinity map or other means of adequately indicating the site location.
 - b) Boundary lines of the site.
 - c) Location of area to be cleared.
 - d) Location of existing structures on the site.
 - e) A plan for disposal of the removed vegetation.
 - f) Purpose of removal.

SECTION 8604.2. REVIEW, REFERRAL AND REPORT.

- (a) Prior to acceptance, the application shall be reviewed by the Planning Division and the Department of Public Works for compliance with Section 8604.1(a) or 8604.1(b). Additional information may subsequently be required to demonstrate compliance with this chapter.

- (b) The Planning Division shall refer the application to the Department of Public Works and other interested departments and agencies for comment and recommendation.

In reviewing the application and plans and making his recommendations, the Director of Public Works shall report whether the grading as proposed complies with the standards as detailed in Section 8605 and shall recommend conditions to assure such compliance.

- (c) It shall be the duty of the Planning Director to forward the application together with recommendations thereon to the appropriate body specified in Section 8604.3 for its action.

SECTION 8604.3. DECISION MAKING AUTHORITY. The following person or body shall grant the indicated permits as required by this chapter:

The Planning Commission: All grading and land clearing permits in State or County Scenic Road Corridors.

Planning Director: Land clearing permits outside State or County Scenic Road Corridors; grading permits for agricultural water impoundments which do not qualify for exemption under Section 8603.16 and which are located outside State and County Scenic Road Corridors; and grading permits involving cut or fill not to exceed 1,000 cubic bank yards.

Zoning Hearing Officer: All other grading permits.

SECTION 8604.4. PUBLIC HEARING AND COMMENT.

- (a) The Zoning Hearing Officer, Planning Commission or Board of Supervisors shall hold a public hearing before taking action on any grading or land clearing permit which is before them.
- (b) A public hearing on a grading or land clearing permit may be held concurrently with any other public hearing on the project held by the appropriate person or body specified in Section 8604.3.
- (c) In addition to testifying at a public hearing, any person may submit written comment on an application for a grading or land clearing permit, or on a permit appeal, at any time prior to the close of the applicable public hearing. If no public hearing is required, written comments may be submitted prior to the decision date specified in any notice required by Section 8604.5. Written comments shall be submitted to the Planning Director who shall forward them to the appropriate person, commission or board.

SECTION 8604.5. NOTICE REQUIREMENTS. Where a public hearing is required, notice shall be given as required for use permits in Section 6503 of the San Mateo County Ordinance Code, Zoning Annex, if in the opinion of the Planning Director the grading activity may affect properties beyond 300 feet from the property line, additional notice may be required as deemed appropriate. In addition, ten (10) days prior to action by the Planning Director, notice of grading permits required for agricultural water impoundments shall be given in the same manner; such notice shall specify the date on which a decision will be made.

SECTION 8604.6. FINDINGS, CONDITIONS AND ACTION.

- (a) The decision making authority will review the report submitted by the Planning Division regarding the permit and make the following findings in any action to approve the permit:
 - (1) That the granting of the permit will not have a significant adverse effect on the environment.
 - (2) That the project conforms to the criteria of this chapter, including the standards referenced in Section 8605.
 - (3) That the project is consistent with the General Plan.
- (b) Approval of a permit required by this chapter shall be conditioned as necessary to ensure conformance with this chapter. For agricultural water impoundments, the permit may be conditioned as appropriate to include such requirements as having adequate evidence of water rights provided by the State Division of Water Rights in advance of construction. The approving authority may require modification and resubmittal of project plans, drawings and specifications. When modification and resubmittal of plans is required, action shall be deferred for a sufficient period of time to allow the Planning Director to prepare his recommendation on the modified project.
- (c) After reviewing the evidence regarding the application for permit, the decision making authority shall either grant or deny the permit based on the conditions and findings described in Section 8604.6(a) and (b).

SECTION 8604.7. APPEALS. The action of the decision maker in authorizing or denying a permit may be appealed by the applicant, or any other person who is aggrieved by issuance of or non-issuance of the permit or any conditions thereof.

Permits considered and acted upon by the Planning Director or Zoning Hearing Officer may be appealed to the Planning Commission, by filing a written notice of appeal with the Planning Division within ten (10) calendar days from issuance or denial of said permit. The Planning Commission shall hear such appeal and render a decision following such hearing. The decision of the Planning Commission is appealable to the

Board of Supervisors in the manner described above. The decision of the Board of Supervisors shall be final. The action taken by the decision maker shall be reported to the affected parties.

SECTION 8604.8. DURATION OF PERMIT. If a substantial amount of work authorized by any permit is not commenced within eight (8) months of the date of issuance or as otherwise indicated on the face of the permit, or on the improvement agreement, or if said work is not completed within one (1) year of commencement or as otherwise indicated on the permit or the improvement agreement, the permit shall expire and become void.

SECTION 8604.9. RENEWAL. The renewal of an expired permit in accordance with subsection (a) may be administratively approved by the Planning Director providing no changes to the plans have been made. An application for such renewal must be made in writing no later than one month prior to the expiration date, in the same manner as specified for in the original application. The fees for such renewal will be one half (1/2) the original fee. Two renewals may be granted. Extensions beyond two renewals require a complete new application and must be submitted with full fees.

SECTION 8604.10. PERMIT AMENDMENT. Upon application by the permittee, the permit required by this chapter may be amended by the approving authority. Application for and action on an amendment shall be accomplished in the same manner specified by this chapter for initial approval of the permit. All sections of this chapter shall apply to the permit amendment.

SECTION 8604.11. SECURITIES. The County may require the applicant, as a condition of issuing a permit required by this chapter, to post a security in an amount as determined by the County. The security shall be of sufficient amount to ensure compliance with the conditions of the permit, this chapter, and to repair any damage that may result from the land disturbing activity. Release of the security shall occur one year after installation of the measures and be conditioned on the faithful performance of the conditions of the permit.

Securities will be released only upon satisfactory completion of the work and completion of a one-year warranty period required by the County. When landscaping or erosion control measures are required, a separate security shall be posted for a period of two-growing seasons. The security shall be based upon the cost of placement or replacement of the landscaping or the work performed, whichever is greater.

SECTION 8605. STANDARDS. The following standards delineate levels of design and control to be met during the project. Their purpose is to assure that development is accomplished so as to minimize adverse effects on the existing terrain and to minimize the potential for erosion.

SECTION 8605.1. EROSION AND SEDIMENT CONTROL. An erosion and sediment control plan and subsequent implementation shall be required except where an

environmental assessment by the County Planning Division of the site shows that such plan is not necessary. Plans shall conform to standards as detailed in the Grading Permit Performance Standards Handbook.

SECTION 8605.2. GRADING. Performance standards, as detailed in the Grading Permit Performance Standards Handbook, are to apply to all aspects of the proposed grading and are intended to be operational during all stages of development.

SECTION 8605.3. GEOTECHNICAL REPORTS. When it is determined by the Department of Public Works that conditions on the project site warrant a geotechnical report (see 8604.1(a) – Grading Permit Application Requirements), the report shall be prepared by a professional geotechnical consultant under the direction of a soils engineer and an engineering geologist in accordance with the current Minimum Standards for Geotechnical Reports and the Grading Permit Performance Standards Handbook.

SECTION 8605.4. DUST CONTROL PLANS. All projects must submit dust control plans as detailed in the Grading Permit Performance Standards Handbook.

SECTION 8605.5. FIRE SAFETY. All equipment used in grading operations shall meet spark arrester and fire fighting tool requirements as specified in the California Public Resources Code.

SECTION 8605.6. TIME RESTRICTIONS. The period from October 15 to April 15 has been determined to be the period in which heavy rainfall normally occurs in the County. During said period, no land disturbing activity shall be authorized on any single site under a permit if the Planning Director determines that such work will endanger the public health or safety or cause excessive erosion.

SECTION 8606. RESPONSIBILITIES DURING PROJECT IMPLEMENTATION.

SECTION 8606.1. RIGHT OF INSPECTION. All land disturbing activities for which a permit is required shall be subject to inspection by the County. In addition to the inspections specified in Sections 8606.2 and 8606.3, the County may make such other inspections as it deems necessary to determine that the work is being performed in compliance with the requirements of this chapter.

SECTION 8606.2. RESPONSIBILITIES OF CIVIL ENGINEER.

- (a) For engineered grading, it shall be the responsibility of the civil engineer who prepares the approved grading plan to incorporate all recommendations from the geotechnical reports into the grading plan. The civil engineer shall also be responsible for the inspection and certification of the grading within the engineer's area of technical specialty. This responsibility shall include, but need not be limited to, inspection and certification as to the establishment of line, grade and drainage of the development area. The civil engineer shall act as the

coordinating agent in the event the need arises for liaison between the other professionals, the contractor and the County. The civil engineer shall also be responsible for the preparation of revised plans and the submission of as-graded grading plans (see Section 8606.6) upon completion of the work.

- (b) Prior to foundation work, the permittee's engineer shall certify that the building pad elevations do not vary more than two-tenths (0.2) of a foot from the approved pad elevations.
- (c) When work has been completed, the civil engineer shall certify that all grading, lot drainage and drainage facilities have been completed and the slope planting installed in conformance with the approved plans and the requirements of this chapter.

SECTION 8606.3. RESPONSIBILITIES OF THE SOILS ENGINEER AND ENGINEERING GEOLOGIST.

- (a) During grading, all necessary reports, compaction data, and geotechnical recommendations shall be submitted to the permittee's civil engineer and the Department of Public Works by the soils engineer and the engineering geologist.
- (b) The soils engineer's area of responsibility shall include, but need not be limited to, the professional inspection and certification concerning the preparation of ground to receive fills, testing for required compaction, stability of all finish slopes and design of buttress and replacement fills, and the design and need for subdrains and other groundwater control devices, where required, incorporating data supplied by the engineering geologist.
- (c) The engineering geologist's area of responsibility shall include, but need not be limited to, professional inspection and certification of the adequacy of natural ground for receiving fills and the stability of cut slopes with respect to geological matters. Applicable findings shall be reported to the soils engineer and the civil engineer for engineering analysis.
- (d) During grading, periodic density tests shall be made by the geotechnical consultant and submitted to the Department of Public Works. Dry density, moisture content, and the location, elevation and sampling date of each sample taken shall be reported, along with sufficient data to correlate with laboratory analyses submitted. In addition, the location and type of all surface and subsurface water control measures shall be submitted.
- (e) Upon completion of the grading, the geotechnical consultant shall certify that the site was graded and filled with material in accordance with approved specifications and approved geotechnical recommendations. The certification should be completed on the Geotechnical Consultant Approval Form provided by the Department of Public Works.

SECTION 8606.4. CHANGE OF CONSULTANT. If the civil engineer, the geotechnical consultant or the testing agency of record is changed during the course of the work, the work shall be stopped until the replacement has agreed to accept the responsibility within the area of its technical competence for certification upon completion of the work.

SECTION 8606.5. NONCOMPLIANCE. If, in the course of fulfilling its responsibility under this chapter, the civil engineer, the geotechnical consultant or the testing agency finds that the work is not being done in conformance with this chapter, or the approved grading plans, the discrepancies shall be reported immediately in writing to the person in charge of the grading work and to the Department of Public Works and the Planning Director. Recommendations for corrective measures, if necessary, shall be submitted. Project work shall be stopped until corrective measures are approved by the County.

SECTION 8606.6. SUPPLEMENTAL REPORTS. Upon completion of the rough grading work, and at the final completion of the work, the County may require the following reports and drawings and supplements thereto:

- (a) An as-graded grading plan prepared by the civil engineer including original ground surface elevations, as-graded ground surface elevations, lot drainage patterns and locations and elevations of all surface and subsurface drainage facilities, cut fill lines and all other pertinent information including, but not limited to, buttress and replacement fills, restricted from building areas, etc.
- (b) An as-built grading report prepared by the geotechnical consultant including locations and elevations of field density tests, 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 soil engineering investigation report. The report shall include a final description and if necessary, a map of the geology of the site including any new information disclosed during the grading and its effect upon site grading. A certification shall be provided approving the adequacy of the site for the intended use as affected by soil and geologic factors.

SECTION 8606.7. EMERGENCY PREVENTATIVE MAINTENANCE. In any event that a condition should arise during the grading operations which may become a hazard, whether or not such condition was caused through negligence or act of God, immediate remedial action to mitigate hazard shall be taken under the direction of the civil and/or geotechnical consultant. Within three working days, a written report describing the remedial work shall be sent to the County for review.

SECTION 8607. ENFORCEMENT.

SECTION 8607.1. ENFORCEMENT BY PLANNING DIRECTOR. The Planning Director shall enforce the provisions of this chapter and the terms and conditions of any grading or land clearing permit. If the Planning Director determines that grading or clearing has been done without a required permit, or that grading or land clearing has

been done in violation of any of the terms and conditions of an issued permit, or that any person has otherwise failed to comply with the requirements of this chapter, the Planning Director shall do the following:

- (a) Direct that a Stop Work Order be issued on all construction being carried out on the property affected by the violation, if one has not yet been issued under Section 8608.1.
- (b) In the event that any violation presents an immediate threat to the public health or safety, require that the property owner or permit applicant, as may be appropriate, take such steps as are necessary to protect the public health or safety, in accordance with the procedure set forth in Section 8607.3.
- (c) Require that the property owner or permit applicant, as appropriate, prepare and implement a grading plan which meets the requirements of this chapter and which accomplishes one of the following:
 - (1) Restores the property to the condition which existed prior to the violation;
 - (2) Requires such remedial work as is necessary to make the grading or land clearing work already completed conform with all requirements of this chapter;
 - (3) Requires such remedial work as is necessary to mitigate impacts of the grading work so that such work conforms as nearly as possible to all requirements of this chapter. The Planning Director's determination shall be guided by the factors set forth in Section 8607.4.

A Stop Work Order issued pursuant to this section shall apply to any and all construction or other development being carried out on the property affected by a violation under this section, including, but not limited to, any residential structure to be served by an illegally graded access road or driveway. The Stop Work Order will not be lifted as to any such construction or other development until such time as the grading or land clearing violation has been corrected as provided for in this section.

SECTION 8607.2. NUISANCE. The provisions of this chapter shall not be construed to authorize any person to maintain a private or public nuisance upon their property, and compliance with the terms of this chapter shall not be a defense in any action to abate such nuisance.

SECTION 8607.3. PROCEDURE FOR EMERGENCY WORK. In the event that the Planning Director determines that grading or land clearing work has been done without a permit, or in violation of the terms or conditions of a permit, or in violation of any provision of this chapter, such that there is presented an immediate and substantial threat of physical injury or death, or irreversible environmental damage, the Planning

Director shall immediately direct that a Stop Work Order be issued, and shall give written notice to the permittee or landowner, as appropriate, stating:

- (a) The nature of the violation.
- (b) The facts upon which a determination has been made that the violation constitutes an immediate and substantial threat of physical injury or death, or irreversible environmental damage.
- (c) The work to be completed and/or repairs to be made to correct the violation.
- (d) The time within which the work is to be completed.

If after ten (10) days from the receipt of the Notice the applicant fails to respond or to meet the requirements of the Notice within the time limit set by the Planning Director, the Planning Director shall cause such work to be done and deduct the cost therefrom from any cash deposit or other security, if any has been previously posted, or otherwise direct such action as is necessary to recover the costs of such work. Any work performed under this section shall not relieve the owner or permit applicant, as appropriate, from the requirement to comply with the requirements of Section 8607.1, above. The remedy provided herein is not exclusive and shall not preclude the County from employing any other means of enforcement otherwise provided by law.

SECTION 8607.4. RESTORATION OR REMEDIAL WORK. In determining what remedial action shall be required as provided by Section 8607.1(c), the Planning Director shall consider restoration to original condition as the most appropriate remedy, conformance with all requirements of this chapter as the next most appropriate remedy, and mitigation to conform as nearly as possible to the requirements of this chapter as the least appropriate remedy. In making the necessary determination, the Planning Director shall consider:

- (a) The amount of grading which has been done in violation of this chapter.
- (b) The amount of grading which would be necessary to either restore the property to its original condition or to bring the grading into conformance with the requirements of this chapter.
- (c) The environmental damage which would occur as a result of either restoring the property to its original condition or bringing the grading into conformance with the requirements of this chapter.
- (d) The economic feasibility of either restoring the property to its original condition or bringing the grading into conformance with the requirements of this chapter.
- (e) The degree of culpability of the person committing the violation.

- (f) Any other factor relevant to a proper determination of the matter.

Before any work may commence, the property owner or permit applicant, as appropriate, shall provide a bond or other equivalent security, in the amount estimated for completion of the work. In the event the property owner or permit applicant fails to do the required work, the Planning Director shall direct that the proceeds of the security be used to complete the required work.

SECTION 8608. VIOLATIONS.

SECTION 8608.1. STOP WORK ORDER. If the Chief Building Official finds any grading work for which a permit is required but not issued, or the grading is in substantial noncompliance with an issued permit, or the plans and specifications relating thereto, he may order the work stopped by posting the site or by written notice and may issue an abatement order. No further grading may be done except on approval of the Planning Director. Conditions may be imposed as necessary to protect the health, safety and welfare of the public, including the condition that corrective work be done within a designated time as specified in Section 8607.1 of this chapter.

SECTION 8608.2. RECORD NOTICE OF VIOLATION. Record a Notice of Grading Violation in the Office of the County Recorder and notify the owner of the affected real property and any other known party responsible for the violation. If the property owner or other responsible party disagrees that the grading violates this chapter, proof may be submitted to the Planning Director, including documentation and engineering reports that a grading permit is not required.

If the Planning Director determines that a grading permit is required, the property owner and/or party responsible for the grading work shall apply for the necessary grading permit within a specified time period by the Planning Director. Failure to apply for the grading permit or failure to comply with all permit conditions constitutes a grading violation. The Planning Director may refer any grading violation to the County Counsel or to the District Attorney for prosecution.

SECTION 8608.3. NOTICE OF EXPUNGEMENT. A notice of expungement of the notice of violation shall be recorded with the County Recorder when:

- (a) The Planning Director or other appellate authority determines that a grading permit is not required; or
- (b) All work has been completed and approved by the Planning Director.

SECTION 8608.4. MISDEMEANOR. Violations of this ordinance shall be a misdemeanor and shall be punishable as provided for in Sections 1200-1203 of the San Mateo County Ordinance Code.

SECTION 8608.5. ADDITIONAL PROSECUTIONS. When applicable, violations may be prosecuted as an Unfair Business Practice under the Business and Professions Code.

SECTION 8609. SEPARABILITY. If any section, subsection, sentence, clause, or phrase of this ordinance is for any reason held to be invalid or unconstitutional by the decision of a court of competent jurisdiction, it shall not affect the remaining portions of this ordinance.

JE:FC – JKEN1668_WFR.DOC
(5/5/05)

Camille Leung

From: JTUTTLEC@aol.com
Sent: Thursday, March 16, 2017 10:42 AM
To: Camille Leung
Subject: Re: The Highlands Lots 5 thru 11

Camille,

At your request, I did a little research on the School locations in the Highlands looking for any adverse effect on the School that might result from our construction activities on Lots 5 thru 11.

The only public School that I could find is the Highlands Elementary School. It's located at Bunker Hill and Lesington Avenue. This is about a half block from the location of the earlier constructed Lots 1 thru 4

Lots 5 thru 8 are on Ticonderoga Drive. Lots 9, 10 and 11 are on Cul du Sacs that feed into Ticonderoga Drive.

Ticonderoga Drive is on the opposite end of the Highlands residential area, Our construction activity will have no adverse effect on the School and school activities including the transportation of students.

Cordially,

Jack Chamberlain

TECHNICAL MEMORANDUM

Date: September 20, 2018

BKF Job Number: 19950158-20

Deliver To: Mr. Steve Monowitz
Director of Building and Planning
San Mateo County
Planning & Building Department
455 County Center, 2nd Floor
Redwood City, CA 94063

cc: Jack Chamberlain
Pete Bentley, SMCo. Bldg.
Camille Leung, SMCo. Planning
Scott Fitinghoff, CEG
Jonathan Tang, BKF

RESUBMITTAL

From: Roland Haga, PE, PLS, Leed®AP
Vice President, BKF Engineers

SEP 25 2018

San Mateo County
Building Inspection

Subject: Highland Estates Lots 5-11 Response to County Comments

The purpose of this memorandum is to present of responses to the County of San Mateo comments received on September 9, 2018 via email for Highland Estates Lots 5 through 11. BKF responses to comments are in bold text.

LOT 11

1. *In Cornerstone's report of 10/30/15 p.18, the geotechnical engineer of record recommended existing fills (shown in Figure 9 the same report) to be removed in the proposed driveway and slab-on-grade. Please estimate the volume of the removal, as well as any fill that may be required following removal.*

Response: Please see response memo by Cornerstone Earth Group.

2. *In the Civil Plans, please show that the riprap for the outfall will be keyed into the bedrock, as stated in the Geo letter of 8/10/2018. Please show the location of sandstone (an alternative to bedrock) in plan-view relative to location of outfall.*

Response: Please see revised sheets C11.40 and C11.71 for outlet rock riprap keyed into the sandstone. Please also see revised sheets C11.30 and C11.40 for approximate location of sandstone in plan-view relative to the location of outfall.

LOT 5-8

1. *Please explain "slope mitigation export credit". Why are these cut volumes subtracted from other cut volumes? Also, the total excavation volumes for Lots 5-8 for slope repair do not match estimate*

provided in 7/8/2018 letter from Cornerstone. Please clarify. Additionally, the volume of imported fill needed for slope repairs needs to be added to overall grading calculations. The values shall be consistent with the 7/8/2018 letter from Cornerstone, or an explanation of the discrepancies must be provided, along with evidence that Cornerstone has reviewed and approved the associated changes.

Response: The export credit is earthwork cut material associated with site strippings and shrinkage factors associated with the slope mitigation requirement on Lots 5 through 8 and as identified and referenced in the July 8, 2017 Geotechnical letter from Cornerstone Earth Group¹. The following is a summary of the unsuitable materials from site strippings and earthwork shrinkage for lots 5-8:

	Lot 5	Lot 6	Lot 7	Lot 8	5-8 Total
Slope Mitigation Cut (CY) from Site Stripping and Shrinkage	520 Export	580 Export	660 Export	1,220 Export	2,980 Export

Taking lots 5-8 grading and the slope mitigation cut from site stripping and shrinkage factors, the resulting grading for lots 5-8 are as follows:

	Lot 5	Lot 6	Lot 7	Lot 8	5-8 Total
Cut (CY)	1,740	2,030	2,170	2,080	8,020
Slope Mitigation Cut (CY) from Site Stripping and Shrinkage	520	580	660	1,220	2,980
Fill (CY)	0	0	40	90	130
Net (CY)	1,220 Export	1,450 Export	1,470 Export	770 Export	4,910 Export

The total earthwork export from Lots 5-8 is 4,910 cubic yards, equivalent to approximately 409 total truck trips. Taking into consideration unsuitable materials associated with slope mitigation site strippings and shrinkage, the total earthwork export from Lots 5-8 is 7,890 cubic yards, equivalent to approximately 658 total truck trips.

The total earthwork export from Lots 9-11 is 800 cubic yards (per Improvement Plans dated May 10, 2018), equivalent to approximately 67 total truck trips.

The associated truck trips and off-haul weekly durations for Lots 5-11 with and without the unsuitable materials associated with slope mitigation site strippings and shrinkage are as follows:

	Lots 5-11 5,710 CY Export (without unsuitable material from slope mitigation) Off-Haul Truck Duration	Lots 5-11 8,690 CY Export (with unsuitable material from slope mitigation) Off-Haul Truck Duration
5 Trucks Per Day	19 to 20 weeks	28 to 29 weeks
10 Trucks Per Day	9 to 10 weeks	14 to 15 weeks
15 Trucks Per Day	6 to 7 weeks	9 to 10 weeks
20 Trucks Per Day	4 to 5 weeks	7 to 8 weeks

At 20 trucks per day, the off-hauling associated with the Lots 5-11 export is less than the traffic volumes of 68 daily project operations (prorated from twelve lots for seven lots, Lots 5-11) trips per day² and is significantly less than the project traffic volumes from the daily project operations over a 7-8 week period. This is consistent with what was analyzed as part of the Recirculated Draft EIR Section 2.3 Environmental Analysis, Transportation³.

LOT 9-11 (outfall riprap)

- The stormwater outfall rock riprap uses CASQA's EC-10 as guidance. EC-11, "Slope Drains", is also relevant, given the hillside on which this feature will be located. However, we note that EC-9, 10, and 11 are for "Temporary concentrated flow conveyance controls", as stated in CASQA's Handbook. As the proposed drainage infrastructure is for permanent use, alternative design guidance must be followed.*

Response: The CASQA EC-10 Velocity Dissipation Devices is a design standard for outlet protection based on flow discharge for sediment and erosion control. The basis and standards of CASQA are established and reference equivalent design standards for permanent flow discharge, these include:

- **Manual of Standards of Erosion and Sediment Control Measures, Association of Bay Area Governments (ABAG), May 1995⁴.**
- **Stormwater Quality Handbooks Construction Site Best Management Practices (BMPs) Manual, State of California Department of Transportation (Caltrans), November 2000⁶.**

CASQA EC-10 Velocity Dissipation Devices is consistent with permanent concentrated flow discharge conveyance controls and is consistent with the ABAG Standards and Caltrans BMPs for sediment and erosion control. BKF calculations and design are based on and exceed these standards in accordance with our professional recommendations. In addition, San Mateo County Public Works Department has reviewed, commented and approved our calculations and design in May 2018.

LOT 8-11

1. *The Civil plans must show the extent of earth work required to ensure the stability of all affected areas, as discussed by Sherry and Scott F. during that last round of comments. To this end, a simplified geologic plan overlaid on the proposed site plan, showing all areas where fill may need to be removed, must be provided.*

Response: Please see sheets C5.91, C5.92, C6.91, C6.92, C7.91, C7.92, C8.91 and C8.92 for site plan extents of earthwork required as part of the slope mitigation on Lots 5-8. See sheets C9.91, C9.92, C10.91 and C10.92 for site plan extents of earthwork required as part of the slope mitigation on Lots 9-11.

- Enclosures:
1. Summary of Estimated Soil/Bedrock Earthwork, Quantities Related to Geotechnical Mitigation, Highland Estates (Lots 5 to 8) Ticonderoga Drive, San Mateo, California, prepared by Cornerstone Earth Group, dated July 8, 2017.
 2. Transportation Impact Assessment for Highland Estates, by Fehr & peers, dated September 2008.
 3. Revisions to the Recirculated Draft Environmental Impact Report Section 2.3 Environmental Analysis, Transportation, dated December 2009.
 4. Appendix G Design of Outlet Protection of the Manual of Standards of Erosion and Sediment Control Measures, Association of Bay Area Governments (ABAG).
 5. Cover Sheet for Stormwater Quality Handbooks Construction Site Best Management Practices (BMPs) Manual, State of California Department of Transportation (Caltrans), dated November 2000.

Date: July 8, 2017
Project No.: 230-1-9
Prepared For: Mr. Jack Chamberlain
TICONDEROGA PARTNERS, LLC
655 Skyway, Suite 230
San Carlos, California 94070
Re: Summary of Estimated Soil/Bedrock Earthwork
Quantities Related to Geotechnical Mitigation
Highland Estates (Lots 5 to 8)
Ticonderoga Drive
San Mateo, California

Dear Mr. Chamberlain:

As requested, this letter presents our summary of estimated soil/bedrock earthwork quantities related to geotechnical mitigation for Lots 5 to 8 of the Highland Estates project in the County of San Mateo, California. Our services were performed in accordance with our proposal and agreement, dated July 1, 2017. As you know, our firm prepared a report for this project, titled "Updated Geotechnical Investigation, Highland Estates Lots 5 through 11, Ticonderoga Drive/Cobblehill Place/Cowpens Way, San Mateo, California" dated October 30, 2015. Prior to our 2015 report, over the decades there have been several geotechnical and geologic related investigations and analysis of the soil and bedrock conditions and recommendations made to mitigate the shallow landsliding occurring at Lots 5 to 8 and these documents are summarized in the above report and incorporated into the letter by reference. The project Civil Engineer has prepared design level grading plans for Lots 5 to 8 and these are presented on Sheets C5.3, C6.3, C7.3, and C8.3 of the plan sets for each lot.

Discussion of Earthwork and Estimated Quantities Related to Geotechnical Mitigation

As identified in the previous geotechnical and geologic reports and project EIR, shallow landsliding has been identified as a geologic/geotechnical condition that needs to be addressed during the site development. Cornerstone and other geotechnical engineers and engineering geologists have concluded that development of these lots is feasible and have provided geotechnical recommendations to mitigate the shallow landsliding.

Grading will be performed at Lots 5 to 8 to establish the building pads, retaining walls, driveways, street improvements along Ticonderoga Drive including construction of the retaining wall required by the public works department, and mitigation of shallow landsliding. Grading will be performed at the same time for Lots 5 to 8. In general, the mitigation work will consist of performing earthwork (grading) to excavate or remove the landslide materials down to undisturbed bedrock materials to establish keyways and benches, installation of subsurface

drains to control ground water, and replacement with suitable excavated soils as compacted fills.

The earthwork related to this geotechnical mitigation is estimated to include up to 25,000 cubic yards for excavation below the design grades shown on the project grading plans to excavate the landslide materials and establish keyways and benches in the undisturbed ground. Some of this excavated material will not be suitable for reuse because it will have too much organics or will not meet the target shear strength properties for reuse at the project site. The unsuitable material will be identified during grading by our staff and will be stockpiled for off-haul. Based on our observations at the site and experience on similar projects, we estimate the upper 1 to 2 feet of the graded surface area of the site below the site proposed site grades will be unsuitable for re-use because of high organic content. Based on discussions with BKF, we understand this corresponds to about 1,000 to 2,000 cubic yards. During excavation below the surficial unsuitable material, we anticipate that small pockets of additional unsuitable material will be encountered the either has too much organics and/or does not meet the target soil shear strength properties; the volume of material for this portion of the excavated material is estimated to be on the order of 500 yards corresponding to about 1/2 of a percent of the 25,000 cubic yards of excavation of the landslide materials. When the suitable excavated material is reused and compacted to backfill the excavation resulting from removal of the landslide material, it will "shrink" which means that at least 10 percent or more material will have to be used to restore the grades back to the original ground surface or structural excavation grades for the residences. The earthwork quantity for "shrinkage" is estimated to be on the order of 2,500 yards for this project. In summary, we estimate that 4,000 to 5,000 yards of suitable material will be needed to balance the above items related to geotechnical earthwork mitigation for Lots 5 to 8.

Closure

We hope this provides the information you need at this time. Recommendations presented in this letter have been prepared for the sole use of Ticonderoga Partners, LLC specifically for the Highland Estates Lots 5 to 8 project in San Mateo County, California. Our professional services were performed, our findings obtained, and our recommendations prepared in accordance with generally accepted geotechnical engineering principles and practices at this time and location. No warranties are either expressed or implied. The estimated volumes described above are based on our experience with similar projects with similar geologic conditions but the actual quantities will be determined in the field during grading and we recommend that you carry a contingency in the project budget to cover any variations. The limitations described in our report are incorporated into the letter by reference.

If you have any questions or need any additional information from us, please call and we will be glad to discuss them with you.

Sincerely,

Cornerstone Earth Group, Inc.

Scott E. Fitinghoff, P.E., G.E.
Senior Principal Engineer

SEF:sef

Addressee (1 by email)

EXECUTIVE SUMMARY

This report presents the findings, conclusions, and recommendations of the transportation impact study conducted by Fehr & Peers for the Highland Estates project, an eleven-unit single family residential development proposed in unincorporated San Mateo County, California. The proposed project would subdivide an approximately 99-acre parcel into eleven lots, with the remaining 92.46-acre parcel to be designated as common open space. The residential units would range in size from 2,800 to 3,600 square feet.

STUDY APPROACH

This study analyzed traffic conditions at three existing intersections, as shown on Figure 3. The intersections, as well as the transit, bicycle, and pedestrian networks were analyzed under four scenarios:

1. Existing Conditions
2. Existing With Project Conditions
3. Cumulative (Year 2030) No Project Conditions
4. Cumulative (Year 2030) with Project Conditions

These scenarios were compared against each other using the significance criteria identified by governing documents to determine project impacts. Near-term conditions were qualitatively discussed to address the influence of the three San Francisco Public Utilities Commission (SFPUC) construction projects in the vicinity of the study area.

SUMMARY OF FINDINGS

The proposed project would generate 108 daily, 13 AM peak hour, and 15 PM peak hour total vehicle trips. This equates to approximately 0.5% of all vehicle trips on local streets in the study area, while it would represent about half of that under Cumulative (Year 2030) conditions.

The project's contribution to projected traffic growth at each study intersection between Existing and Cumulative conditions would be low, representing an average contribution of less than 1% of overall cumulative growth.

According to the significance criteria, the proposed project would have a **less-than-significant** impact on the study intersections and surrounding transportation network under Existing and Cumulative conditions.

(3)

the project under this design has decreased from 2,200 cubic yards to 700 cubic yards (not including 200 cubic yards of drain rock).

None of the other attributes of the project, including project footprint, locations of the home sites, and staging, have changed.

**Table 2.0-1
Changes to Proposed Earthwork**

Area	Originally Proposed Cut (cy)	Revised Cut (cy)	Change	Originally Proposed Fill (cy)	Revised Fill (cy)	Change
Lots 1-4	500	500	0	200	2,300	+2,100
Lots 5-8	1,000	4,700	+3,700	1,000	700 ¹	-300
Lots 9 and 10	900	300	-600	2,900	2,900	0
Lot 11	1,300	1,200	-100	1,300	1,000	-300
TOTAL	3,700	6,700	+3,000	5,900	7,600	+1,700
Import	2,200	900	-1,300			

¹Includes 200 cubic yards of drain rock.

2.3 ENVIRONMENTAL ANALYSIS

The changes to the proposed development project described above are evaluated below to determine whether they would result in a new significant impact or increase the severity of previously disclosed impacts of the project. As the analysis shows, the changes to the grading quantities would not result in additional significant environmental impacts not addressed in the recirculated draft EIR or increase the severity of previously identified environmental impacts. No new mitigation measures are required.

Aesthetics

Although the cut and fill quantities provided in the recirculated draft EIR have been revised, the base elevations and locations of the home sites and all other subdivision improvements discussed and evaluated in the recirculated draft EIR remain unchanged. Therefore, Impacts AES-1 through AES-4, which are based on home elevations and locations, remain unchanged and the same mitigation and improvement measures apply to the proposed project.

Biological Resources

The changes to the cut and fill quantities do not alter the project footprint as presented in the recirculated draft EIR. Therefore, Impacts BIO-1 through BIO-11 remain unchanged and the same mitigation measures still apply to the proposed project.

Geology and Soils

The analysis of impacts related to geology and soils provided in the recirculated draft EIR focuses on the locations of the proposed homes and subdivision improvements relative to landslides, unstable geologic units, and other potential geologic hazards. As the locations of the proposed homes and subdivision improvements remain unchanged, Impacts GEO-1 through GEO-6 remain unchanged and the same mitigation measures apply to the proposed project.

Other Resource Topics

Global Climate Change

The changes in grading quantities do not affect the project's estimated construction greenhouse gas emissions as the emissions that were estimated using URBEMIS2007 are based on the amount of total disturbed acreage which has not changed. Therefore, Impact GCC-1 remains unchanged.

Air Quality

The changes in grading quantities do not affect the project's estimated construction emissions as the emissions that were estimated using URBEMIS2007 are based on the amount of total disturbed acreage which has not changed. Therefore, Impact AQ-1 remains unchanged.

Noise

If all the proposed homes are constructed concurrently, the change in grading quantities would reduce project noise impacts as less imported fill would be required than previously analyzed (about 1,300 cubic yards less than before of fill would be imported). Approximately 75 truck trips would be involved in the transport of 900 cubic yards of imported fill compared to 183 truck trips for the transport of 2,200 cubic yards of imported fill analyzed in the recirculated draft EIR. Assuming that five truck trips to import fill could be completed daily, the total site import process could be completed within three weeks rather than four to five weeks as previously analyzed. Therefore, the noise impacts from truck traffic associated with site grading would be less than previously analyzed.

If the proposed home sites are constructed one at a time, the homes on lots 9 and 10 would require a net import of 2,600 cubic yards of fill, which exceeds the 2,200 cubic yards previously analyzed in the recirculated draft EIR by approximately 18 percent, and would result in 217 truck trips compared to 183 truck trips analyzed in the recirculated draft EIR. However, this small increase in truck traffic (34 truck trips) would not substantially increase the noise impact because typically it takes a substantial increase in traffic to increase noise levels by a perceptible amount (such as a doubling of traffic volumes for a 3 decibel increase). Furthermore, the additional 34 truck trips would occur over the course of several weeks during grading activities. Mitigation Measure NOI-1 would still apply to the proposed project, which would reduce Impact NOI-1 to a less than significant level with mitigation.

Hazards and Hazardous Materials

The changes in cut and fill quantities do not alter the project footprint as presented in the recirculated draft EIR or increase the risk of exposure to hazardous materials. Therefore, Impacts HAZMAT-1 and HAZMAT-2 remain unchanged and the same mitigation measures apply to the proposed project.

Transportation

If all of the homes are constructed concurrently, the change in grading quantities would reduce construction-related traffic impacts as less imported fill would be required than previously analyzed. Approximately 75 truck trips would be involved in the transport of 900 cubic yards of imported fill compared to 183 truck trips for the transport of 2,200 cubic yards of imported fill. Assuming that five truck trips to import fill could be completed daily, the total site import process could be completed within three weeks rather than four to five weeks as previously analyzed. Therefore, the number of daily truck trips would remain the same but the duration of truck activity would be shorter and the less than significant traffic impacts from truck traffic associated with site grading would be experienced over a shorter period of time than previously analyzed.

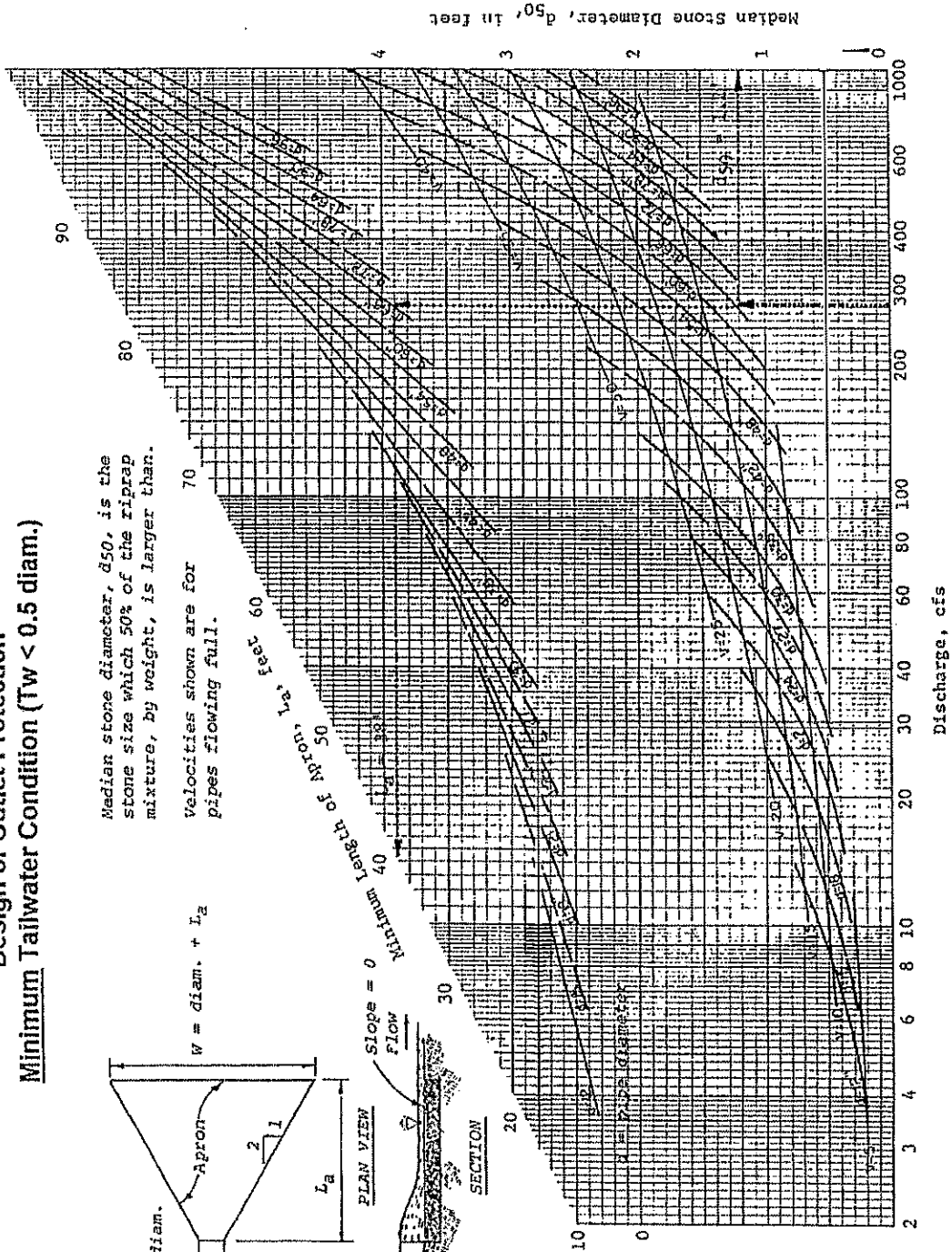
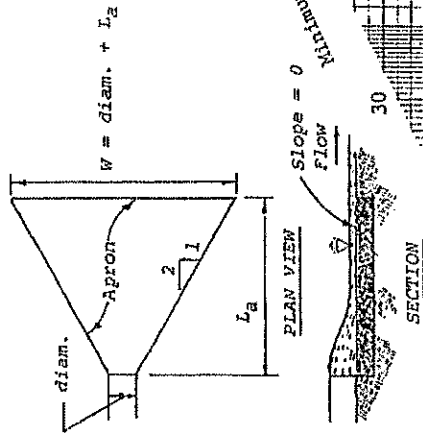
If the homes were constructed one at a time, lots 9 and 10 would require a net import of 2,600 cubic yards of fill, which exceeds the 2,200 cubic yards previously analyzed by approximately 18 percent and would result in 217 truck trips compared to 183 truck trips analyzed in the recirculated draft EIR. However, this small increase in truck traffic (34 truck trips) does not present a substantial increase in the traffic impact from what was previously analyzed. Even with this increase, the project's daily construction truck trips would be substantially less than the daily vehicle trips from project operation, and as the analysis in the recirculated draft EIR shows, project operations would not result in a significant traffic impact. Improvement Measure TRANS-1 would still apply to the proposed project such that truck trips would not occur during peak traffic hours and Impact TRANS-1 would still be less than significant.

APPENDIX G SAMPLE DESIGN OF OUTLET PROTECTION

Design of Outlet Protection Minimum Tailwater Condition ($T_w < 0.5$ diam.)

Median stone diameter, d_{50} , is the stone size which 50% of the riprap mixture, by weight, is larger than.

Velocities shown are for pipes flowing full.





State of California
Department of Transportation

Storm Water Quality Handbooks

Project Planning and Design Guide

Storm Water Pollution Prevention Plan (SWPPP)
and Water Pollution Control Program (WPCP) Preparation Manual



***Construction Site
Best Management Practices (BMPs) Manual***

November 2000

Date: September 21, 2018
Project No.: 230-1-6
Prepared For: Mr. Jack and Noel Chamberlain
TICONDEROGA PARTNERS, LLC
655 Skyway, Suite 230
San Carlos, California 94070
Re: Response to County of San Mateo
Planning Comments Dated September 5, 2018 on Lots 5 to 11
San Mateo Highlands
San Mateo, California

Dear Mr. Chamberlain:

As requested, this letter presents our response to the County of San Mateo, Planning and Building Department comments received in an email from Ms. Camille Leung on September 5, 2018 for the above referenced project. Our services were performed in accordance with our proposal and agreement, dated April 20, 2016. As you know, our firm prepared a report for this project, titled "Updated Geotechnical Investigation, Highland Estates Lots 5 through 11, Ticonderoga Drive/Cobblehill Place/Cowpens Way, San Mateo, California" dated October 30, 2015. Additionally, our firm has provided many follow-up letters on this project as requested by the Planning Department. The most recent comments are reiterated below with a response to each one of them.

Response to Comments

Comment #1: LOT 11 - 1. In Cornerstone's report of 10/30/15 p.18, the geotechnical engineer of record recommended existing fills (shown in Figure 9 the same report) to be removed in the proposed driveway and slab-on-grade. Please estimate the volume of the removal, as well as any fill that may be required following removal.

Response: Based on our review, we have made an estimate on the volume of fills removal during the mitigation grading and fill that will be required to backfill the over-excavations in the table below. This table also includes our estimate of NEF (None Expansive Fill) to be placed beneath the driveway and garage slabs-on-grade areas. The volume estimates were made by dividing the driveway and garage areas into sublots and projecting the depth of fill from the geotechnical exploration data from the project geotechnical report. It is noted that the actual over-excavation depths (and volumes) will be determined in the field by our representative during grading based on the soil/bedrock conditions observed and they may vary from the estimates summarized below. The estimates below relate to geotechnical mitigation of the undocumented fill and expansive soil conditions and are somewhat independent of the earthwork summary provided on Sheet C11.10 of the project plans.

Lot 11 – Summary of Earthwork Volumes for Driveway & Garage Over-Excavation and Re-Compaction of Undocumented Fill and Add NEF						
Area: Driveway (D) or Garage (G)	Over- excavation (OX) Existing Fill from E.G. to Bottom of Fill	Re-Use Soil from Bottom of OX to Bottom of NEF	Add More Soil to Adjust for ~15% compaction shrinkage of Undocumented Fill	Add Soil to get to Bottom of NEF	Off-haul Extra Soil (-) or Import (+)	Import (+) NEF (8" AB)
	[yd ³]	[yd ³]	[yd ³]	[yd ³]	[yd ³]	[yd ³]
D-1	83	62	9	0	-12 (off- haul)	14
D-2	129	64	10	0	-55 (off- haul)	22
D-3	98	61	9	0	-28 (off- haul)	16
D-4	57	43	7	0	-7 (off-haul)	4
G-1	152	152	23	13	+36 (import)	6
Total [yd³]	519	382	58	13	-66 (off- haul)	+62(import)

Comment #2: LOT 11 - 2. In the Civil Plans, please show that the riprap for the outfall will be keyed into the bedrock, as stated in the Geo letter of 8/10/2018. Please show the location of sandstone (an alternative to bedrock) in plan-view relative to location of outfall.

Response: Please see response memo by BKF dated September 20, 2018.

Comment #3: LOT 5-8 - 3. Please explain "slope mitigation export credit". Why are these cut volumes subtracted from other cut volumes? Also, the total excavation volumes for Lots 5-8 for slope repair do not match estimate provided in 7/8/2018 letter from Cornerstone. Please clarify. Additionally, the volume of imported fill needed for slope repairs needs to be added to overall grading calculations. The values shall be consistent with the 7/8/2018 letter from Cornerstone, or an explanation of the discrepancies must be provided, along with evidence that Cornerstone has reviewed and approved the associated changes.

Response: Please see response memo by BKF dated September 20, 2018.

Comment #4: LOT 9-11 (outfall riprap) - 4. The stormwater outfall rock riprap uses CASQA's EC-10 as guidance. EC-11, "Slope Drains", is also relevant, given the hillside on which this feature will be located. However, we note that EC-9, 10, and 11 are for "Temporary concentrated flow conveyance controls", as stated in CASQA's Handbook. As the proposed drainage infrastructure is for permanent use, alternative design guidance must be followed.

Response: Please see response memo by BKF dated September 20, 2018.

Comment #5: LOT 8-11 - 5. The Civil plans must show the extent of earth work required to ensure the stability of all affected areas, as discussed by Sherry and Scott F. during that last round of comments. To this end, a simplified geologic plan overlaid on the proposed site plan, showing all areas where fill may need to be removed, must be provided.

Response: Please see response memo by BKF dated September 20, 2018.

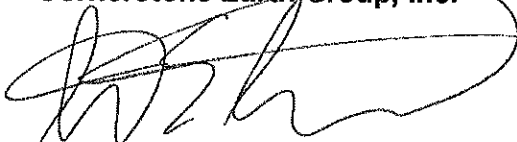
Closure

We hope this provides the information you need at this time. Information and opinions presented in this letter have been prepared for the sole use of Ticonderoga Partners, LLC specifically for the properties at Lots 5 to 11 of the Highland Estates project in San Mateo, California. Our professional services were performed, our findings obtained, and our recommendations prepared in accordance with generally accepted geotechnical engineering principles and practices at this time and location. No warranties are either expressed or implied.

If you have any questions or need any additional information from us, please call and we will be glad to discuss them with you.

Sincerely,

Cornerstone Earth Group, Inc.



Scott E. Fitinghoff, P.E., G.E.
Senior Principal Engineer



SEF:sef

Addressee (1 by email)



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BUILDERS, INC.

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MAR 18 2014

San Mateo County
Planning Division

Transportation plan for Highland Estates Phase 1 Bunker Hill Drive

All delivery, dump, or concrete trucks will leave the site by going down Bunker Hill Drive to Polhemus, traveling to the 92 Freeway to Highway 101. They will arrive on the same route in reverse.

Any trucking activities will be scheduled after the peak traffic hours of 7:30 am to 8:30 am and before the peak evening hours of 5:00 pm to 6:00 pm. Peak traffic hours were determined by the Highland Estates Administrative Draft Transportation impact study done in Sept. 2008.



Transportation plan for Highland Estates Phase 2

Accessing Cobble Hill, Cowpens and Ticonderoga Roads

All deliveries, dump or concrete trucks will arrive to the construction sites at Ticonderoga road, Cowpens road and Cobble Hill road by way of Highway 92 to Polhemus Road to Ticonderoga Road. All trucks and deliveries will exit along the same route in reverse.

Any truck and deliveries will be scheduled after peak traffic hours of 7:30 to 8:30 AM and before the peak evening hours of 5:00 to 6:00 PM. Peak traffic hours were determined by the Highlands Estates Administrative Draft transportation impact study done in September of 2008.

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