

Las Ventanas Erosion Repair

DATE:

August 15, 2023
(Rev.)

Dear Mr. Talley:

PROJECT NUMBER:

SL11970-1

Background:

GeoSolutions, Inc. was contacted to help develop repair recommendations within the Las Ventanas Tract. During this year's rainy season two areas have significant erosion. The erosion is in existing drainage paths. Site 1 is located adjacent to Camino San Gabriel and Site 2 is located off Camino Purisima. The purpose of this revision is to include the locations of the erosion sites. See Figure 1 below for approximate locations.

CLIENT:

Las Ventanas Road
Maintenance
Committee
c/o Wallace Group
Attn: Rob Miller
612 Clarion Court
San Luis Obispo,
California 93401

PROJECT NAME:

Las Ventanas Tract
Arroyo Grande Area,
San Luis Obispo



Figure 1: Erosion Locations

Recommendations:

An existing drainage pipe coming off Camino San Gabriel, Site 1, has created a down cut to rock. The down cut is migrating uphill and could threaten the roadway and existing utilities.

This area can be graded in a way to restore prior contours. To grade this area the soils will need to be "keyed and benched" into underlying rock, see attached key and bench detail.

The surface drainage from the roadway should be conveyed by pipe to the bottom of the hill. At the point of discharge a concrete or rock structure is required to slow velocities and limit future erosion.

Site 2 has eroded a deep incised channel exposing rock. It appears the headwall of the erosion is relatively stable. At Site 2 we recommend the placement of large rock, approximately 1-to-2-ton stone placed on a non-permeable fabric. The large stone should be filled with smaller 6-to-12-inch rock to fill voids and lock the system together.

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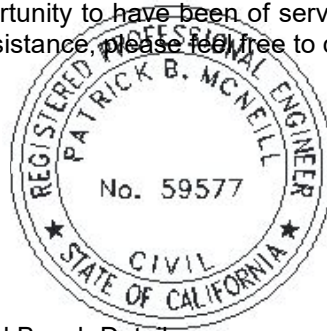
sbinfo@geosolutions.net

Thank you for the opportunity to have been of service in preparing this report. If you have any questions or require additional assistance, please feel free to contact the undersigned at (805) 614-6333.

Sincerely,
GeoSolutions, Inc.

Patrick B. McNeill

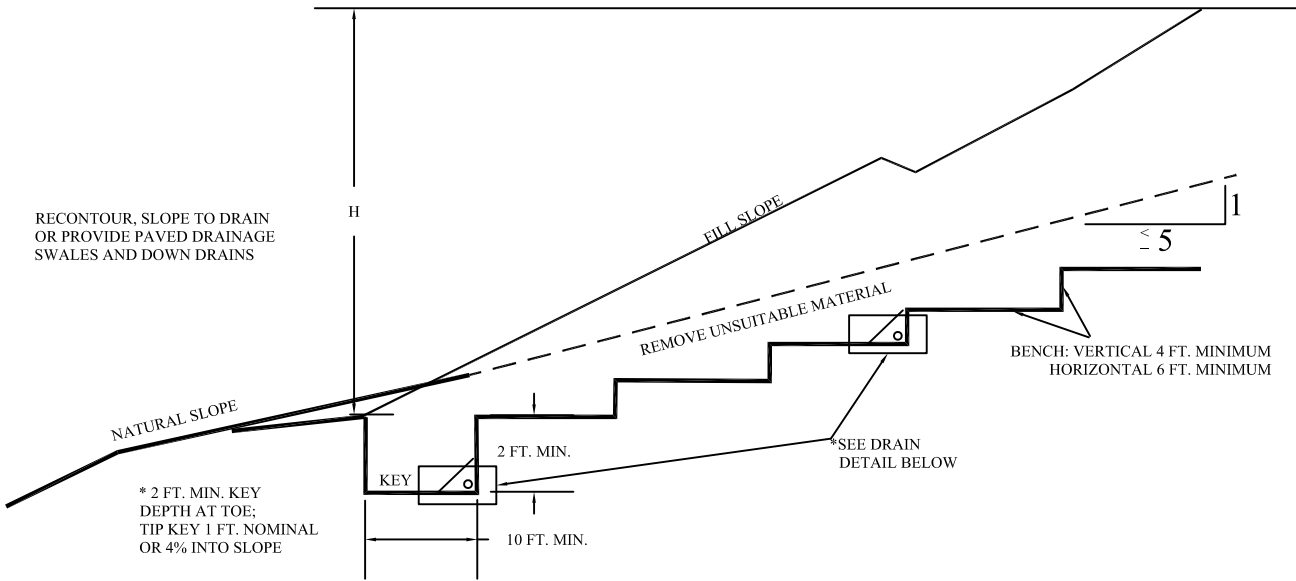
Patrick B. McNeill, PE
Principal



Attachment: Key and Bench Detail

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FILL OVER SLOPE



RECONTOUR, SLOPE TO DRAIN
OR PROVIDE PAVED DRAINAGE
SWALES AND DOWN DRAINS

NATURAL SLOPE

FILL SLOPE

REMOVE UNSUITABLE MATERIAL

BENCH: VERTICAL 4 FT. MINIMUM
HORIZONTAL 6 FT. MINIMUM

* 2 FT. MIN. KEY
DEPTH AT TOE;
TIP KEY 1 FT. NOMINAL
OR 4% INTO SLOPE

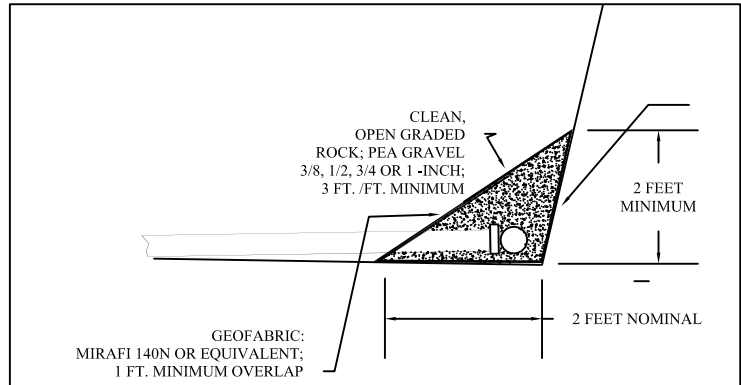
2 FT. MIN.
10 FT. MIN.

*SEE DRAIN
DETAIL BELOW

NOTES:

*BACKDRAIN AS RECOMMENDED BY GEOTECHNICAL
PER DETAIL.

DRAIN DETAIL



NTS

GeoSolutions, Inc.

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KEY AND BENCH WITH BACKDRAIN

**DETAIL
A**