

Project No. 5279.02  
December 21, 2020

Rise Grass Valley, Inc.  
Ben Mossman, President  
333 Crown Point Circle, Suite 215  
Grass Valley, California 95945

**Reference: Idaho-Maryland Mine Project – Centennial Industrial Site**  
10344 & 10350 Centennial Drive  
APNs 009-550-032, 009-550-037, 009-550-038, 009-550-039, 009-550-040 & 009-560-036  
Grass Valley, California 95945

**Subject: Management Plan for Steep Slopes and High Erosion Potential**

Dear Mr. Mossman:

NV5 prepared this management plan to address potential development constraints related to areas of steep slopes and high erosion potential at the 56-acre Centennial Industrial Site (herein referred to as the “Site” or “subject site”) located at 10344 and 10350 Centennial Drive in Grass Valley, California.

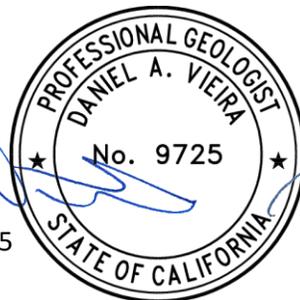
The purpose of this plan is to provide a professional site-specific inventory and analysis of steep slope and high erosion potential areas of the subject site, and to evaluate these constraints and recommend mitigation and/or managed alternatives to avoid or reduce the potential impacts to these areas.

This plan was prepared pursuant to the Nevada County Land Use and Development Code (LUDC), Chapter II, Division 4.3, which establishes site development resources standards that are intended to avoid the impact of development projects on sensitive environmental resources and natural site constraints. Pursuant to the LUDC, the inventory and analysis were performed for the entire Site including all areas of proposed disturbance.

Please contact us with comments or questions regarding this plan.

Sincerely,

NV5



Daniel A. Vieira, P.G. 9725  
Project Geologist



Chuck Kull, G.E. 2359  
Principal Engineer

Sent via email: PDF to Ben Mossman, ceo@risegoldcorp.com

Attached: Figure 1: Typical BMP Details for Steep Slopes  
Sheet 1: Erosion and Sediment Control Plan

F:\1 Projects\5279 Idaho-Maryland Mine\02 Geotechnical\01 Brunswick Site\Steep Slope Management Plan\5279.02 Management Plan for Steep Slopes and High Erosion Potential, IMM Project, Brunswick Site.docx

## 1.0 INTRODUCTION

At the request of Ben Mossman of Rise Grass Valley, Inc., NV5 prepared this management plan to address potential development constraints related to steep slopes and high erosion potential at the 56-acre Centennial Industrial Site (herein referred to as the “Site” or “subject site”) located at 10344 and 10350 Centennial Drive in Grass Valley, California.

### 1.1 PURPOSE

The purpose of this plan is to provide a professional site-specific inventory and analysis of steep slope and high erosion potential areas of the Site, and to evaluate these constraints and recommend mitigation and/or managed alternatives to avoid or reduce the impacts. The inventory and analysis are performed for the entire Site including all areas of proposed disturbance.

### 1.2 REGULATORY FRAMEWORK

Zoning regulations pertaining to steep slopes and high erosion potential are set forth in Chapter II of the Nevada County Land Use and Development Code (LUDC). Division 4.3 of this chapter establishes site development resources standards that are intended to avoid the impact of development projects on sensitive environmental resources and natural site constraints. LUDC Section L-II 4.3.1 states that where avoidance is not possible, development should minimize impacts in a reasonable fashion that strikes a balance between allowing development of the project site and protecting the resource or avoiding the constraint. LUDC Section L-II 4.3.3 establishes the following standards that are to be applied in the following order:

1. Avoiding the impact by designing or re-designing the project so that the resource or constraint is fully protected and not disturbed. Avoidance is the preferred standard unless the Planning Agency determines that implementation of this standard effectively removes the potential for the reasonable development of the parcel.
2. Minimizing the impact through preparation and implementation of a County-approved Management Plan prepared by an independent consultant approved by, or under the direction of, County staff, that limits the degree of impact to the maximum extent possible. Where the Planning Agency determines that avoidance is not acceptable or adversely affects another environmentally-sensitive resource, minimization shall be the preferred standard unless the County determines that the standard will not effectively protect the resource or avoid the constraint to an acceptable level.
3. Compensating for the impact by replacing or providing a substitute resource or environments. Compensation is appropriate where the Planning Agency determines that avoiding or minimizing the impact is not acceptable. Realistic and effective avoidance of impacts and then minimization of impacts must first precede the use of compensatory mitigation.

LUDC Section L-II 4.3.13 requires that management plans for steep slopes and high erosion potential areas include an Erosion and Sediment Control Plan prepared by a licensed geotechnical or civil engineer, engineering geologist, or certified soil erosion control specialist. The Erosion and Sediment Control Plan must comply with the erosion control standards of LUDC Chapter V. LUDC Section L-V 13.14. Plans are to be designed with long-term erosion and sediment control as a primary consideration.

Management plans for steep slopes and high erosion potential are to include an evaluation by a registered geotechnical engineer. If structures are to be constructed on steep slopes, fuel modification (vegetation removal) is required around the structures pursuant to the standards set forth in the LUDC.

### **1.3 REFERENCE DOCUMENTS**

This management plan is based partially on the findings and recommendations presented in the Geotechnical Engineering Report, Idaho-Maryland Mine Project, Centennial Industrial Site (NV5; December 10, 2019).

### **1.4 LIMITATIONS OF THE ASSESSMENT**

NV5's professional services were performed consistent with the generally accepted geotechnical engineering principles and practices employed in northern California. No warranty, expressed or implied, is made or intended in connection with our work.

These services were performed consistent with NV5's agreement with our client. We are not responsible for the impacts of any changes in standards, practices, or regulations subsequent to performance of our services. We do not warrant the accuracy of information supplied by others, or the use of segregated portions of this report. This report is solely for the use of our client unless noted otherwise. Any reliance on this report by a third party is at the party's sole risk.

The recommendations presented herein will need to be modified to address specific phases of site development during the course of site development. If changes are made to the nature or design of the project as described in this report, then the conclusions and recommendations presented in this report should be considered invalid by all parties. Only our firm can determine the validity of the conclusions and recommendations presented in this report.

The findings of this report are valid as of the present date. Changes in the conditions of the property can occur with the passage of time. The changes may be due to natural processes or to the works of man, on the subject site or adjacent properties. Therefore, we should be allowed to review all project changes and prepare written responses with regards to their impacts on our conclusions and recommendations. The recommendations presented in this report should not be relied upon after a period of two years from the issue date without our review.

## **2.0 SITE DESCRIPTION**

The 56-acre Site is comprised of six contiguous parcels and is located at 10344 Centennial Drive near the city limits of Grass Valley in unincorporated Nevada County, immediately south of Centennial Drive and Idaho Maryland Road and north of East Bennett Road.

The Site is currently vacant, partially-forested open space. The flat-lying eastern, central and northern portions of the site were historically used as mine tailings ponds, and the sandy tailings materials remaining at those locations are to be consolidated and capped under the oversight of the California Department of Toxic Substances Control (DTSC). The Hap Warnke Lumber Mill formerly operated in a three-acre area located in the northeast corner of the Site. The former mill is accessed from Centennial Drive near its intersection with Idaho Maryland Road.

The Site is typified by irregular rolling terrain. Elevations range from approximately 2,470 feet AMSL at Wolf Creek near the northwestern corner of the Site to approximately 2,580 feet AMSL in the southeastern corner of the Site.

The upper, relatively undisturbed southern portion of the Site is typified by forested, moderate north-facing slopes. The remainder of the site is typified by irregular remnant tailings pond surfaces that slope gently to the west and north. The site generally drains to the north towards Wolf Creek, which flows from east to west along the northern Site boundary.

Remnant containment berms are located along the northern and eastern Site boundaries and at other locations within the Site. The berms are typically constructed of mine waste rock, soil and tailings.

## **2.1 GEOLOGY**

According to the Geologic Map of the Chico Quadrangle, California (California Department of Conservation, Division of Mines and Geology, 1992), the Site location is underlain by gabbro and ultramafic rocks associated with the Lake Combie complex. The Geologic Map of the Grass Valley - Colfax Area, Nevada and Placer Counties, California (Tuminas, 1983) depicts the western quarter of the Site location as being underlain by ultramafic rocks and the remainder of the Site location as underlain by gabbro.

## **2.2 SOIL CONDITIONS**

As part of our study, we reviewed the Web Soil Survey (United States Department of Agriculture [USDA] Natural Resource Conservation Service [NRCS]; <https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx>). The soil survey maps the Site location predominantly as Placer Diggings, which is described by the soil survey as “hydraulically-mined areas, placer-mined areas along stream channels, and areas of natural deposits along the stream channels.” The soil survey does not rate the Placer Diggings soil class for erosion hazard potential. The locations mapped as Placer Diggings are actually comprised of hardrock mine tailings resulting from the historical hardrock mining activities described below in Section 2.3.

Soil conditions near the southern Site boundary are mapped as Secca-Rock outcrop complex, which is described as moderately well-drained soil underlain by metabasic or basic rock. According to the soil survey, weathered rock is typically encountered at a depth of approximately four feet below the ground surface (bgs) in areas mapped as Secca-Rock outcrop complex, and rock outcrop typically comprises 10 to 40 percent of the mapped area. The soil survey rates the Secca-Rock outcrop complex soil class as having severe (2-50 percent slopes) erosion hazard potential.

## **2.3 SITE HISTORY**

The Site is historically associated with the Idaho Maryland Mine, a former underground hardrock (lode) gold mining operation. Mining and milling structures associated with the former mine were generally located to the east of the Site, and the Site was used primarily for disposal of mine waste (tailings and waste rock) to land. The historical tailings ponds comprise approximately two-thirds of the site (37.1 acres of the 56.4-acre site).

A Technical Report on the Idaho-Maryland Project, Grass Valley, California (Amec Foster Wheeler, 2017) describes the Idaho-Maryland Mine as one of the most productive and best known gold mines in the United States. Mining was performed by various operators from 1863 to 1956. The mine was a consolidation of several earlier mines including Eureka, Idaho, Maryland, Brunswick, and Union Hill (Amec, 2017). Historical production records indicate the consolidated mines produced a total of 2.4 million ounces of gold from 5.3 million tons of mill feed (Amec, 2017). The mine was reportedly the second largest gold mine in the United States in 1941, producing up to 129,000 ounces of gold per year. The mine did not operate during World War II and did not produce significant gold after the war until its closure in 1956 (Amec, 2017).

Historical lumber milling operations were performed on land to the east of the Site. A former pond is located immediately east of the Site, and the dam retaining the pond straddles the central portion of the Site’s eastern boundary.

### 3.0 IDENTIFICATION OF CONSTRAINTS

LUDC Section L-II 4.3.13 addresses constraints related to areas of steep slopes and high erosion potential. Steep slopes are defined as having a gradient equal to or greater than 30 percent. High erosion hazard areas are defined as areas determined to have highly-erodible soils based on soil surveys prepared by the United States Soil Conservation Service (SCS) and United States Forest Service (USFS).

#### 3.1 STEEP SLOPES

Areas of steep slopes (having gradients of 30% or greater) are depicted on Sheet 1, which is based on a grading plan prepared by Nevada City Engineering, Inc. (NCE, 2019). As depicted on the Sheet 1, steep slope gradients are partially present in the following areas:

1. The west-facing downstream dam slope that runs along the eastern Site boundary;
2. Discontinuous portions of relic berms and ditches associated with the former mine tailings ponds; and
3. Discontinuous and infrequent portions of native slopes located in central and southern portions of the Site.

Overall the Site is relatively gently-sloping. NCE estimated that the steep slopes within the proposed area of disturbance comprise approximately 4.1 acres. The majority of this steep slope area is a result of cut and fill associated with the historical mine tailings ponds and the dam on the eastern Site boundary. Discontinuous and infrequent pockets of native slope gradients 30% or greater are present within an area to receive mine rock fill in the central and southern portions of the proposed disturbance area. To NV5's knowledge, no significant rock outcroppings or threatened native plants have been identified in the area that is to receive mine rock fill. The fill is to be placed against the native slope, resulting in a relatively flat finished grades that extends to the north away from the native slope face, as depicted on Sheet 1. During construction, drainage improvements and erosion and sediment control measures are to be implemented as shown on Sheet 1.

#### 3.2 HIGH EROSION POTENTIAL

As described in Section 2.2, the USDA NRCS soil survey maps native soil in the southern portion of the Site as having severe erosion hazard potential. According to the survey, a rating of "severe" indicates that erosion is very likely in the case of soil disturbance without erosion control. For these areas, the Survey advises that erosion control measures are appropriate, including revegetation of bare areas.

The former tailings ponds comprise approximately 37.1 acres of the 56.4-acre Site. Although an erosion hazard potential is not listed by the NRCS, the mine tailings are predominantly sand and silt created by crushing rock, and therefore are considered to have a high erosion potential. The ground surface is exposed in portions of the former tailings ponds, while other portions are vegetated. In general, the tailings pond surfaces are relatively flat-lying.

### 4.0 DISCUSSION OF THE PROPOSED DESIGN

The Site is to be used for land disposal of waste rock and tailings from a hardrock gold mine. Mine rock and tailings are to be placed as engineered fill over the former tailings pond areas after the existing tailings are consolidated and capped. The proposed design is the preferred alternative, and the avoidance of fill placement in the former tailings ponds would require the identification of another location for waste placement. Considering the topography of the Sierra Nevada foothills, it is unlikely that an alternative placement area within a reasonable trucking distance would have less steep slope areas than the relatively flat-lying subject Site. The proposed mining operation and future placement of mine waste at the Site is intended to fund the cleanup and containment of the contaminated historical

mine tailings presently at the Site. Grading recommendations are presented in the Geotechnical Engineering Report, Idaho-Maryland Mine Project, Centennial Industrial Site (NV5; December 10, 2019).

## 5.0 DESCRIPTION OF THE MITIGATION

It is NV5's professional opinion that project development within the constraint areas described above is feasible from a geotechnical engineering standpoint, provided that the following mitigation measures and best management practices (BMPs) for erosion and sediment control are incorporated into the project plans and specifications:

1. Perform earthwork in accordance with the grading recommendations presented in the Geotechnical Engineering Report, Idaho-Maryland Mine Project, Centennial Industrial Site (NV5; December 10, 2019). The report presents recommendations for clearing, fill placement, fill slope grading, drainage, erosion and sediment control, grading plan review and construction monitoring.
2. Incorporate the provisions of the Erosion and Sediment Control Plan into the project design:
  - a. The Erosion and Sediment Control Plan (Sheet 1) is based on a preliminary grading and drainage plan prepared by Nevada City Engineering, Inc. (Sheet B-1; NCE, 2019).
  - b. Hydraulic calculations associated with the drainage improvements are presented in a Preliminary Drainage Analysis (NCE, October 2019) submitted under separate cover.
  - c. Pursuant to LUDC Section L-V 13.14, the Erosion and Sediment Control Plan was prepared with long-term erosion and sediment control as a primary consideration. Sheet 1 depicts the long-term controls at final project development. The temporary BMPs added to the plan by NV5 are intended to provide short-term erosion and sediment controls until vegetation is established.
3. The attached Figure 1 presents typical temporary BMPs for placement of engineered fill against steep slopes as the project progresses. To reduce the possibility of erosion and sediment transport and the need for additional BMPs, the disturbance of steep slope areas should not extend beyond the area proposed to receive fill during that season (i.e., prior to the next anticipated storm event). Figure 1 depicts a maximum recommended vertical distance of 20 feet for removal of vegetation above the elevation of the current fill surface.
4. Pursuant to the National Pollutant Discharge Elimination System (NPDES), coverage is required under the Construction General Permit (Order No. 2009-0009-DWQ) issued by the State Water Resources Control Board (SWRCB) to address discharges of storm water runoff.
  - a. A Notice of Intent (NOI) must be submitted and a permit fee must be paid.
  - b. A Storm Water Pollution Prevention Plan (SWPPP) must be prepared to address storm water BMPs for erosion control, sediment retention and waste management.
  - c. The SWPPP must be updated for each phase of the project and for each stage of project development.

### 5.1 TIME FRAME FOR IMPLEMENTATION

The project schedule includes:

- 18 months of facility construction (January 2021 through June 2022);
- Five years of placement, grading and compaction of engineered fill (June 2022 through December 2027); and
- Two to five years of reclamation (December 2027 to December 2032).

As noted above, the SWPPP must be updated for each phase of the project and for each stage of project development.

## 5.2 SUCCESS STANDARDS

As set forth in the Construction General Permit (Order No. 2009-0009-DWQ), conditions for termination of coverage include:

1. The Site will not pose any additional sediment discharge risk than it did prior to the commencement of construction activity;
2. There is no potential for construction-related storm water pollutants to be discharged into Site runoff;
3. Final stabilization has been reached;
4. Construction materials and wastes have been disposed of properly;
5. Compliance with the Post-Construction Standards in Section XIII of the Construction General Permit has been demonstrated;
6. Post-construction storm water management measures have been installed and a long-term maintenance plan has been established; and
7. All construction-related equipment, materials and any temporary BMPs no longer needed are removed from the Site.

The Construction General Permit requires that the permittee certify in writing that final stabilization conditions are satisfied.

## 5.3 MONITORING OF MITIGATION MEASURES

Monitoring requirements are set forth in the Construction General Permit (Order No. 2009-0009-DWQ) and are summarized below:

1. Narrative effluent standards:
  - a. Storm water discharges and authorized non-storm water discharges regulated by the General Permit shall not contain a hazardous substance equal to or in excess of reportable quantities established in 40 C.F.R. §§ 117.3 and 302.4, unless a separate NPDES Permit has been issued to regulate those discharges.
  - b. Dischargers shall minimize or prevent pollutants in storm water discharges and authorized non-storm water discharges through the use of controls, structures, and management practices that achieve Best Available Technology Economically Achievable (BAT) for toxic and non-conventional pollutants and Best Conventional Pollution Control Technology BCT for conventional pollutants.
2. Numeric Action Levels:
  - a. Dischargers are subject to a pH Numeric Action Level (NAL) of 6.5-8.5 and a turbidity NAL of 250 NTU.
3. Receiving Water Limitations
  - a. The Construction General Permit requires all enrolled dischargers to determine the receiving waters potentially affected by their discharges and to comply with all applicable water quality standards, including any more stringent standards applicable to a water body.
4. Visual Monitoring Requirements for Qualifying Rain Events
  - a. Visually observe storm water discharges at all discharge locations within two business days (48 hours) after each qualifying rain event.

- b. Visually observe the discharge of stored or contained storm water that is derived from and discharged subsequent to a qualifying rain event producing precipitation of ½ inch or more at the time of discharge. Stored or contained storm water that will likely discharge after operating hours due to anticipated precipitation shall be observed prior to the discharge during operating hours.
  - c. Record the time, date and rain gauge reading of all qualifying rain events.
  - d. Within 2 business days (48 hours) prior to each qualifying rain event, visually observe (1) All storm water drainage areas to identify any spills, leaks, or uncontrolled pollutant sources. If needed, the discharger shall implement appropriate corrective actions.(2) All BMPs to identify whether they have been properly implemented. (3) Any storm water storage and containment areas to detect leaks and ensure maintenance of adequate freeboard.
  - e. Visually observe the presence or absence of floating and suspended materials, a sheen on the surface, discolorations, turbidity, odors, and source(s) of any observed pollutants.
  - f. Conduct post rain event visual observations to (1) identify whether BMPs were adequately designed, implemented, and effective, and (2) identify additional BMPs and revise the SWPPP accordingly.
  - g. Maintain on-site records of all visual observations, personnel performing the observations, observation dates, weather conditions, locations observed, and corrective actions taken in response to the observations.
5. Water Quality Sampling and Analysis:
- a. Collect storm water grab samples from sampling locations, as defined in the Construction General Permit. The storm water grab sample(s) obtained shall be representative of the flow and characteristics of the discharge.
  - b. At minimum, collect 3 samples per day of the qualifying event.
  - c. Ensure that the grab samples collected of stored or contained storm water are from discharges subsequent to a qualifying rain event (producing precipitation of ½ inch or more at the time of discharge).
  - d. Analyze their effluent samples for (1) pH and turbidity, and (2) Any additional parameters for which monitoring is required by the Regional Water Board.
6. Effluent Sampling Locations
- a. Perform sampling and analysis of storm water discharges to characterize discharges associated with construction activity from the entire project disturbed area.
  - b. Collect effluent samples at all discharge points where storm water is discharged off-site.
  - c. Ensure that storm water discharge collected and observed represent the effluent in each drainage area based on visual observation of the water and upstream conditions.
  - d. Monitor and report Site run-on from surrounding areas if there is reason to believe run-on may contribute to an exceedance.
7. Ensure that all sampling and sample preservation are in accordance with the current edition of "Standard Methods for the Examination of Water and Wastewater" (American Public Health Association).
- a. All monitoring instruments and equipment (including a discharger's own field instruments for measuring pH and turbidity) should be calibrated and maintained in accordance with manufacturers' specifications to ensure accurate measurements.

- b. Ensure that all laboratory analyses are conducted according to test procedures under 40 CFR Part 136, unless other test procedures have been specified in the Construction General Permit or by the Regional Water Board.
- c. With the exception of field analysis conducted by the discharger for turbidity and pH, all analyses should be sent to and conducted at a laboratory certified for such analyses by the State Department of Health Services.

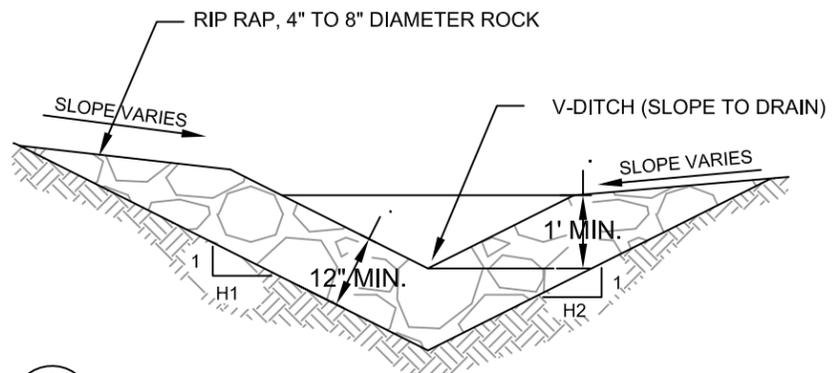
#### **5.4 REMEDIATION MEASURES IN THE EVENT OF FAILURE OF MITIGATION**

The Construction General Permit (Order No. 2009-0009-DWQ) establishes a pH Numeric Action Level (NAL) of 6.5 to 8.5, and a turbidity NAL of 250 NTU. The purpose of the NALs and associated monitoring requirements is to provide operational information regarding the performance of the measures used at the Site to minimize the discharge of pollutants and to protect beneficial uses and receiving waters from the adverse effects of construction-related storm water discharges.

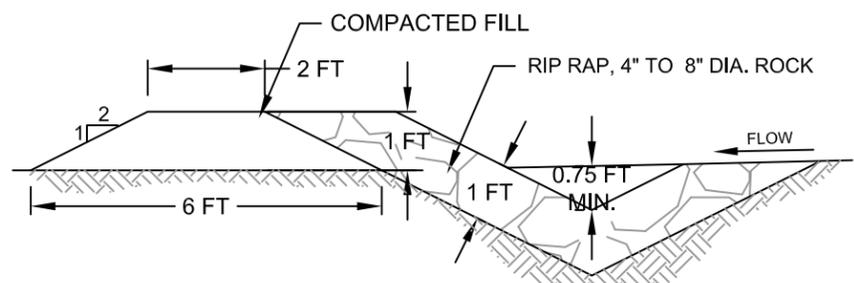
The Construction General Permit requires dischargers with NAL exceedances to immediately implement additional BMPs and revise their Storm Water Pollution Prevention Plan (SWPPP) accordingly to either prevent pollutants and authorized non-storm water discharges from contaminating storm water, or to substantially reduce the pollutants to levels consistently below the NALs. NAL exceedances are reported in the State Water Boards SMARTS system, and the discharger is required to provide an NAL Exceedance Report when requested by a Regional Water Board.

#### **5.5 PERFORMANCE BOND**

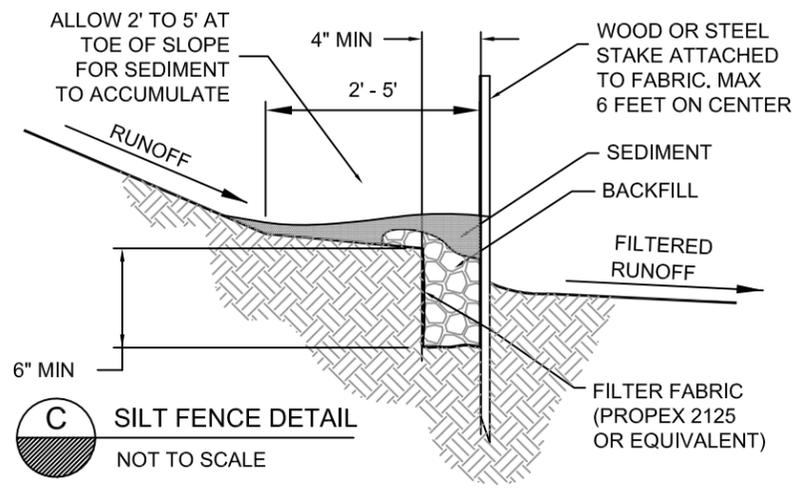
Pursuant to LUDC Section L-II 4.3.3, a monetary deposit may be required at the discretion of the Planning Agency. NV5 anticipates that the financial assurance required as part of the project's reclamation plan may also be considered a suitable mechanism to serve as a performance bond for LUDC Section L-II 4.3.3.



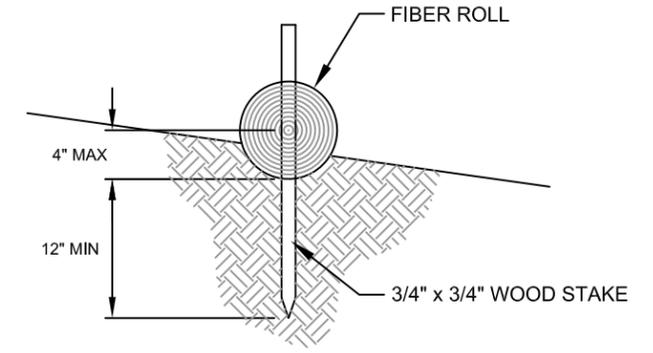
**A V-DITCH DETAIL**  
NOT TO SCALE - SEE APPENDIX G FOR SIZING



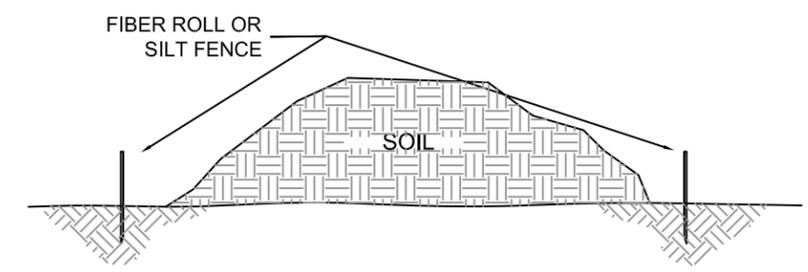
**B SURFACE WATER DIVERSION BERM DETAIL**  
NOT TO SCALE



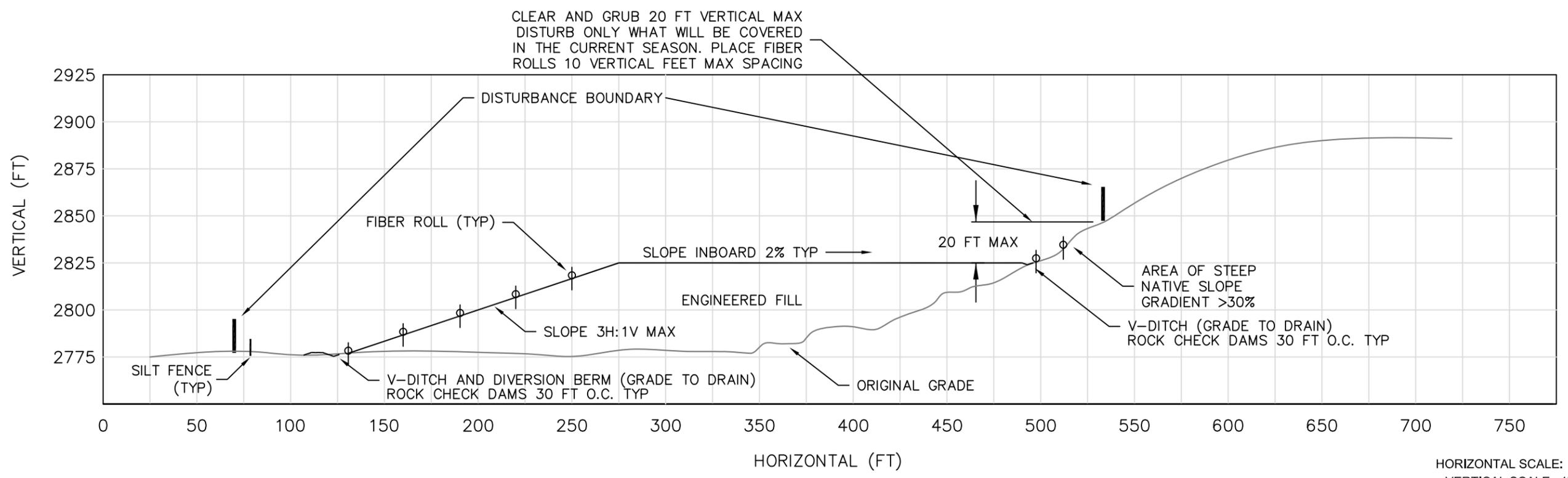
**C SILT FENCE DETAIL**  
NOT TO SCALE



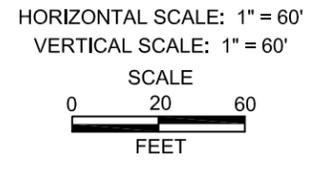
**D FIBER ROLL DETAIL**  
NOT TO SCALE



**E STOCKPILE EROSION CONTROL DETAIL**  
NOT TO SCALE



TYPICAL SECTION



DRAWING NO.:	FIGURE 1
DESIGNED BY:	DAV
DRAWN BY:	WAL
H&K PROJECT:	5279.02
DATE:	OCTOBER 2020
NO.	
REVISIONS	
DATE	

SEDIMENT AND EROSION CONTROL BEST MANAGEMENT PRACTICES

SLOPES OVER 30 PERCENT  
TYPICAL DETAILS



PRELIMINARY  
GRADING AND DRAINAGE PLAN  
PREPARED BY NEVADA CITY  
ENGINEERING, INC.

SEDIMENT AND EROSION  
CONTROL NOTES ADDED BY  
NV5 (DECEMBER 2020)



INSTALL PROTECTIVE FENCING TO PRESERVE EXISTING VEGETATION WHERE NO CONSTRUCTION ACTIVITY IS PLANNED FOR THE CURRENT SEASON.

PERFORM EARTHWORK IN ACCORDANCE WITH THE GRADING RECOMMENDATIONS PRESENTED IN THE GEOTECHNICAL ENGINEERING REPORT, BUILDING CODE AND INDUSTRY STANDARDS.

APPLY SEED, FERTILIZER, MULCH AND SOIL BINDERS TO ALL DISTURBED SOIL AREAS PRIOR TO THE START OF THE STORM SEASON. SEED AND FERTILIZER COMPONENTS AND QUANTITIES MUST COMPLY WITH THE REQUIREMENTS OF THE SWPPP, THE RECLAMATION PLAN AND THE RECOMMENDATIONS OF THE LOCAL RESOURCE CONSERVATION DISTRICT.

HYDRAULIC CALCULATIONS ASSOCIATED WITH THE DRAINAGE IMPROVEMENTS ARE PRESENTED IN A PRELIMINARY DRAINAGE ANALYSIS (NCE, OCTOBER 2019) SUBMITTED UNDER SEPARATE COVER.  
CONSTRUCT TEMPORARY BMPs FOR PLACEMENT OF ENGINEERED FILL AGAINST STEEP SLOPES PURSUANT TO FIGURE 1.  
DISTURBANCE OF STEEP SLOPE AREAS SHOULD NOT EXTEND BEYOND THE AREA PROPOSED TO RECEIVE FILL DURING THAT SEASON (I.E., PRIOR TO THE NEXT ANTICIPATED STORM EVENT).  
MAXIMUM RECOMMENDED VERTICAL DISTANCE IS 20 FEET FOR REMOVAL OF VEGETATION ABOVE THE ELEVATION OF THE CURRENT FILL SURFACE.

PURSUANT TO THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES), COVERAGE IS REQUIRED UNDER THE CONSTRUCTION GENERAL PERMIT (ORDER NO. 2009-0009-DWQ) ISSUED BY THE STATE WATER RESOURCES CONTROL BOARD (SWRCB) TO ADDRESS DISCHARGES OF STORM WATER RUNOFF. A NOTICE OF INTENT (NOI) MUST BE SUBMITTED AND A PERMIT FEE MUST BE PAID. A STORM WATER POLLUTION PREVENTION PLAN (SWPPP) MUST BE PREPARED TO ADDRESS STORM WATER BMPs FOR EROSION CONTROL, SEDIMENT RETENTION AND WASTE MANAGEMENT. THE SWPPP MUST BE UPDATED FOR EACH PHASE OF THE PROJECT AND FOR EACH STAGE OF PROJECT DEVELOPMENT.

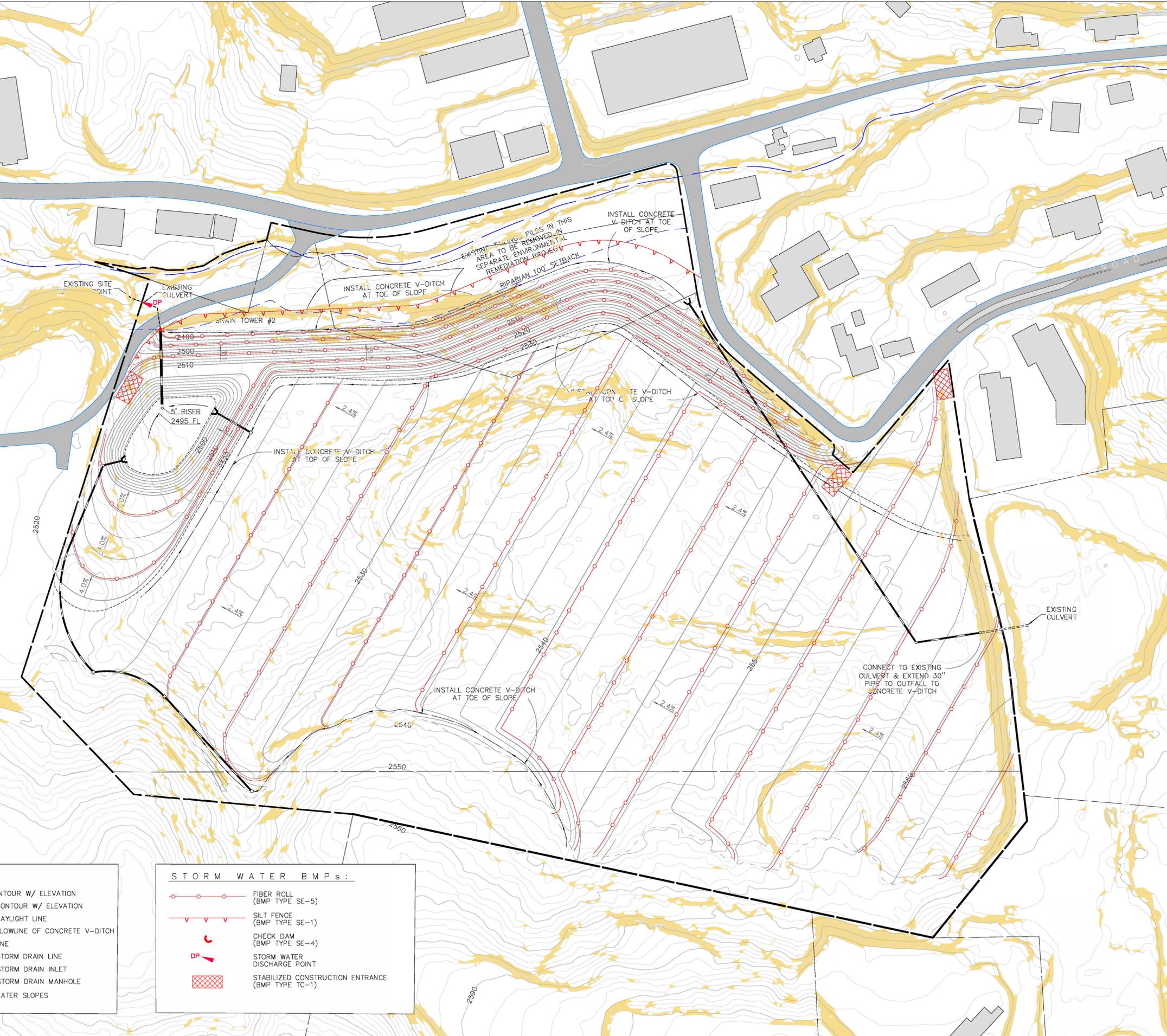
REVISION:	DATE:	DESCRIPTION:
BMPs	12/15/20	Preliminary BMP layout added by NV5 to support management plan.

CENTENNIAL SITE  
**RISE GRASS VALLEY INC.**  
SEC. 26, T.16N., R.8E., M.D.M.  
NEVADA COUNTY, CALIFORNIA

**EROSION AND  
SEDIMENT  
CONTROL PLAN**

NOTES

- REQUIREMENTS OF THE NEVADA COUNTY LAND USE AND DEVELOPMENT CODE (NLC) SECTION LV.13.14.
- PLANS SHALL BE DESIGNED WITH LONG-TERM EROSION AND SEDIMENT CONTROL AS A PRIMARY CONSIDERATION.
- GRADING AND CONSTRUCTION ACTIVITIES DURING THE RAINY SEASON SHALL PROVIDE EROSION AND SEDIMENT CONTROL MEASURES EXCEPT UPON A CLEAR DEMONSTRATION TO THE SATISFACTION OF THE BUILDING OFFICIAL THAT AT NO STAGE OF THE WORK WILL THERE BE ANY SUBSTANTIAL RISK OF INCREASED SEDIMENT DISCHARGE FROM THE SITE.
- SHOULD LAND DISTURBANCE 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.
- NATURAL FEATURES, INCLUDING VEGETATION, TERRAIN, WATERCOURSES AND SIMILAR RESOURCES SHALL BE PRESERVED WHEREVER POSSIBLE. LIMITS OF LAND DISTURBANCE SHALL BE CLEARLY DEFINED AND MARKED TO PREVENT DAMAGE BY CONSTRUCTION EQUIPMENT.
- PERMANENT DROUGHT-RESISTANT VEGETATION AND STRUCTURES FOR EROSION AND SEDIMENT CONTROL SHALL BE INSTALLED AS SOON AS POSSIBLE.
- PROVISION SHALL BE MADE FOR LONG-TERM MAINTENANCE OF PERMANENT EROSION AND SEDIMENT CONTROL STRUCTURES AND VEGETATION.
- NO TOPSOIL SHALL BE REMOVED FROM THE SITE UNLESS OTHERWISE DIRECTED OR APPROVED BY THE BUILDING OFFICIAL. TOPSOIL 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.
- RUNOFF SHALL NOT BE DISCHARGED FROM THE SITE IN QUANTITIES OR AT VELOCITIES SUBSTANTIALLY ABOVE THOSE THAT OCCURRED BEFORE LAND DISTURBANCE, OR CHANNELLED, CONCENTRATED OR REDIRECTED EXCEPT INTO DRAINAGE FACILITIES WHOSE DESIGN HAS BEEN SPECIFICALLY APPROVED BY THE BUILDING OFFICIAL.
- THE PERMITTEE SHALL TAKE REASONABLE PRECAUTIONS TO ENSURE THAT VEHICLES DO NOT TRACK OR SPILL EARTH MATERIALS INTO PUBLIC STREETS AND SHALL IMMEDIATELY REMOVE SUCH MATERIALS IF THIS OCCURS.
- SHOULD INCREASED SEDIMENT DISCHARGE OCCUR OR BECOME IMMINENT, THE 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 REQUESTED PURSUANT TO THIS CHAPTER. PERMITTEE SHALL TAKE PROMPT ACTION TO RESOLVE EMERGENCY PROBLEMS; OTHERWISE, THE BUILDING OFFICIAL MAY TAKE SUCH ACTIONS AS REQUIRED TO ABATE A HAZARDOUS PUBLIC NUISANCE.
- ALL AREAS WHERE CONSTRUCTION ACTIVITIES HAVE BEEN COMPLETED BETWEEN APRIL 15TH AND OCTOBER 15TH SHALL BE PLANTED NO LATER THAN NOVEMBER 1ST. LAND DISTURBANCE AREAS COMPLETED AT OTHER TIMES OF THE YEAR SHALL BE PLANTED WITHIN 15 DAYS. IF REVEGETATION IS INFEASIBLE OR CANNOT BE EXPECTED TO STABILIZE AN ERODIBLE AREA WITH ASSURANCE DURING ANY PART OF THE RAINY SEASON AND THE UNSTABLE AREA EXCEEDS 1,500 SQUARE FEET, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES OR IRRIGATION OF PLANTED SLOPES MAY BE REQUIRED AS APPROPRIATE TO PREVENT INCREASED SEDIMENT DISCHARGE.
- EROSION AND SEDIMENT CONTROL PLANS SHALL BE DESIGNED TO PREVENT INCREASED DISCHARGE OF SEDIMENT AT ALL STAGES OF GRADING AND CONSTRUCTION ACTIVITIES FROM INITIAL DISTURBANCE OF THE GROUND TO PROJECT COMPLETION. EVERY FEASIBLE EFFORT SHALL BE MADE TO ENSURE THAT SITE STABILIZATION IS PERMANENT. PLANS SHALL INDICATE THE IMPLEMENTATION PERIOD AND THE STAGE OF CONSTRUCTION WHERE APPLICABLE.
- EROSION AND SEDIMENT CONTROL PLANS SHALL COMPLY WITH THE RECOMMENDATIONS OF ANY CIVIL ENGINEER, GEOTECHNICAL ENGINEER, ENGINEERING GEOLOGIST, ARCHITECT, OR SOIL EROSION CONTROL SPECIALIST INVOLVED IN PREPARATION OF THE GRADING PLANS.
- 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, AND HE SHALL SO ATTEST ON THE PLANS. SUFFICIENT CALCULATIONS AND SUPPORTING MATERIAL TO DEMONSTRATE SUCH ADEQUACY SHALL ACCOMPANY THE PLANS WHEN SUBMITTED.
- EROSION AND SEDIMENT CONTROL PLANS SHALL BE DESIGNED TO MEET ANTICIPATED FIELD CONDITIONS.
- 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 CLEAN-OUT AND VEGETATION MAINTENANCE CRITERIA.
- EROSION AND SEDIMENT CONTROL SHALL BE PERFORMED IN GENERAL COMPLIANCE WITH THE EROSION AND SEDIMENT CONTROL GUIDELINES FOR DEVELOPING AREAS OF THE SIERRAS PUBLISHED BY HIGH SIERRA RESOURCE CONSERVATION AND DEVELOPMENT COUNCIL.
- EROSION CONTROL MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH THE ISSUED GRADING AND/OR CONSTRUCTION PLANS PRIOR TO ANY RAIN EVENT. ANY GRADING COMPLETED BETWEEN OCTOBER 15TH AND APRIL 15TH SHALL HAVE ALL EROSION CONTROL MATERIALS THAT ARE REQUIRED BE INSTALLED IN ACCORDANCE WITH THE ISSUED CONSTRUCTION AND GRADING PLANS ON-SITE.



**LEGEND:**

	EXISTING CONTOUR W/ ELEVATION
	PROPOSED CONTOUR W/ ELEVATION
	PROPOSED DAYLIGHT LINE
	PROPOSED FLOWLINE OF CONCRETE V-DITCH
	PROPERTY LINE
	PROPOSED STORM DRAIN LINE
	PROPOSED STORM DRAIN INLET
	PROPOSED STORM DRAIN MANHOLE
	30% OR GREATER SLOPES

**STORM WATER BMPs:**

	FIBER ROLL (BMP TYPE SE-5)
	SILT FENCE (BMP TYPE SE-1)
	CHECK DAM (BMP TYPE SE-4)
	STORM WATER DISCHARGE POINT
	STABILIZED CONSTRUCTION ENTRANCE (BMP TYPE TC-1)