

SANTA CLARA COUNTY, CALIFORNIA
STEVENS CREEK QUARRY
RECLAMATION PLAN AMENDMENT

CA MINE ID 91-43-0007

SEPTEMBER | 2020

Lead Agency:

Santa Clara County Department of Planning and Development

Prepared for:

Stevens Creek Quarry, Inc.

Preparer:

Benchmark Resources

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70 West Hedding Street, East Wing, 7th Floor, San Jose, CA 95110

Prepared for:

Stevens Creek Quarry, Inc.
12100 Stevens Canyon Road, Cupertino, CA 95014

Preparer:

Benchmark Resources
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- Appendix B Statement of Responsibility
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1. SUMMARY

The following subsections provide an overview of the site and reclamation plan. Appendix A, "Index to Required Content," provides the location in this document for specific requirements, practices, and standards for reclamation plans.

1.1 Purpose and Objectives

The reclamation plan for the Stevens Creek Quarry (SCQ; site) has been prepared in accordance with the requirements of the Surface Mine and Reclamation Act, found in California Public Resources Code (PRC) Section 2710 et seq., Title 14 of California Code of Regulations (CCR) Section 3500 et seq., and Santa Clara County's (County; the lead agency) implementing ordinance (Santa Clara County Surface Mining Ordinance Sections 2.10.040 and 4.10.370). The purpose of this amendment is to update the reclamation responsibilities based on the expansion of the quarry and end use requiring the importation of fill.

The reclamation plan includes actions designed to meet the objectives for implementing physical reclamation of surfaces disturbed by mining and other associated activities. These physical reclamation treatments are intended to:

- Provide for long-term stability of slopes.
- Prevent wind and water erosion by stabilizing the soil surface through proper grading and drainage.
- Implement a revegetation program designed to establish self-sustaining vegetation cover.
- Reclaim the parcels to an open space condition suitable for future development as allowed under the County Zoning Ordinance at reclamation.

1.2 Site Background and Existing Use

Mining activity has been continuous at the site since the 1940s. The existing site is comprised of 5 assessor parcels, but for convenience has historically been referred to as Parcel A (comprised of 2 assessor parcels), and Parcel B (comprised of three assessor parcels). The County granted SCQ a use permit for Parcel A (Use Permit) in January 1984 (modified September 10, 1996) and granted SCQ continued use of Parcel A for 20 years in 1996. Mining of Parcel B is subject to vested rights. A reclamation plan was approved for Parcels A and B in 1983. In 2009, a reclamation plan amendment modifying the reclamation boundary, allowing partial backfill of Parcel B, and amending the revegetation palette was approved by the County. Since 2009, interim phase mining slopes have exhibited signs of instability that could fail before final buttressing when backfill occurs.

The existing quarry site occupies an area of approximately 167 acres. Operations at SCQ currently consist of excavation/extraction of aggregate resources (i.e., rock and gravel), processing (crushing and screening) of aggregate resources, materials recycling, material loading and weighing, and material hauling.

1.3 Reclamation

The site will be reclaimed to an open space condition suitable for future development as allowed under the County Zoning Ordinance at reclamation. After mining is completed, all temporary structures and mining and processing equipment will be removed, finished slopes graded and engineered where necessary, and revegetation of the entire quarry site performed.

2. SITE DESCRIPTION

The following sections provide general site details such as contact information for the mine owner and operator; evidence of landowner notification of reclamation; reclamation responsibility; and site location, size, site features, and land uses.

2.1 Contact Information

Owner of Property Name: Stevens Creek Quarry, Inc.

Owner of Mineral Rights: Stevens Creek Quarry, Inc.

Address: 12100 Stevens Canyon Road, Cupertino, California 95014

Telephone: (408) 253-2512

Parcels: 351-18-048 (65.3 acres [ac]), 351-10-044 (41.9 ac), 351-10-040 (4.4 ac), 351-10-019 (40 ac)

Owner of Leased Property Name: Hanson Permanente Cement, Incorporated

Owner of Leased Property Mineral Rights: Hanson Permanente Cement, Incorporated

Street Address or PO Box: 24001 Stevens Creek Boulevard

City, State, Zip Code: Cupertino, California 95014

Telephone Number: (408) 253-2512

Parcels: 351-10-017 (40 ac), 351-10-033 (159.4 ac), 351-10-039 (35.6 ac), 351-11-001 (503.7 ac)

2.2 Operator

Mine Operator: Stevens Creek Quarry, Inc.

Address: 12100 Stevens Canyon Road, Cupertino, California 95014

Telephone: (408) 253-2512

Contact: Jason Voss

E-mail: jvoss@scqinc.com

2.3 Reclamation Responsibility

A statement for responsibility to complete reclamation in accordance with this plan is provided by the current operator in Appendix B, "Statement of Responsibility."

2.4 Notification of Landowner

Signed landowner notification forms are included in Appendix C, "Notification of Landowners," providing evidence that all landowners have been notified of the proposed use.

2.5 Location, Size, and Legal Description

Stevens Creek Quarry is located approximately 15 miles south of San Jose, California (see Figure 1, "Regional Location," and Figure 2, "Site Location"), at the southwestern limits of Santa Clara County. The parcels and their acreages that would be subject to mining related surface disturbance and reclamation are provided below.

The location is also identified as follows:

- **Assessor's Parcel Numbers (APNs):** 351-18-048 (65.3 acres [ac]), 351-10-044 (41.9 ac), 351-10-040 (4.4 ac), 351-10-019 (40 ac), 351-10-017 (40 ac), 351-10-033 (159.4 ac), 351-10-039 (35.6 ac), 351-11-001 (503.7 ac)
- **U.S. Geological Survey Township and Range:** Sections 21 and 28, Township 7 South, Range 2 West, Mount Diablo Base and Meridian
- **Latitude and Longitude:** 37.296181° and -122.082135°, at site entrance.

The legal description of the property under Stevens Creek Quarry ownership and County parcel maps for the entire site are provided in Appendix D, "Legal Description, Parcel Maps, and Existing Topography."

2.6 Existing and Allowed Land Uses

2.6.1 Land Use Designations

The majority of the site is located within the unincorporated portion of the County. A small portion on the eastern side of the site is located within the City of Cupertino (City). Because quarry operations have been under the County's oversight since operations began, and because the City lacks a surface mining ordinance necessary to regulate mining operations, the two jurisdictions have agreed that the operation is subject to County approval and regulation.

The *City of Cupertino General Plan* land use map (City of Cupertino 2019) does not assign a land use to the amendment area or to the City lands east of this property (see Figure 3, General Plan Land Use Map"). The land use map notes that "Land use densities for lands located outside the urban service area shall be consistent with residential densities established by the *Santa Clara County General Plan*." As shown on Figure 4, "Zoning Map," the City zoning district assigned to the amendment area and neighboring property is Residential Hillside (RHS). Although a quarry is not a permitted or conditionally permitted use in the RHS district, the City previously waived SMARA jurisdiction over the portion of the site (an area on the east side of Parcel B owned by Hanson Permanente Cement via a Memorandum of Understanding with the County [August 2008]). Thus, this small area of the site is not considered a zoning conflict.

The *Santa Clara County General Plan, 1995-2010* (General Plan) (Santa Clara County 1994), classifies the site as Hillside (see Figure 3). The General Plan describes this designation as follows:

R-LU 17: These lands also contain such important resources as grazing lands, mineral deposits, forests, wildlife habitat, rare or locally unique plant and animal communities, historic and archeological sites, and recreational and scenic areas of regional importance, which serve to define the setting for the urbanized portions of Santa Clara County. Given the importance of these lands to the county's overall quality of life, allowable uses shall be consistent with the conservation and wise use of these resources and levels of development shall be limited to avoid increased demand for public services and facilities.

R-LU 18: All allowable uses must be consistent with the basic intent of the 'Hillside' designation. The range of allowable uses shall be limited to:

- a. agriculture and grazing;*
- b. mineral extraction;*
- c. parks and low-density recreational uses and facilities;*
- d. land in its natural state;*
- e. wildlife refuges;*

- f. very low density residential development; and*
- g. commercial, industrial, or institutional uses, which by their nature*
 - i. require remote, rural settings; or*
 - ii. which support the recreational or productive use, study or appreciation of the natural environment.*

As shown on Figure 4, those areas of the site within the County have a zoning designation of HS-d1-sr. The Santa Clara County Zoning Ordinance provides, “Permitted uses include agriculture and grazing, very low-density residential use, low density, low intensity recreation, mineral and other resource extraction, and land in its natural state. Low-intensity commercial, industrial, and institutional uses may also be allowed if they require a remote, rural setting and are sized to primarily serve the rural residents or community, or if they support the recreational or productive use, study, appreciation, or enhancement of the natural environment.”

2.6.2 Existing Entitlements

The original reclamation plan for Stevens Creek Quarry was approved by the County on December 6, 1983. It covered both parcels; Parcel A (subject to a use permit) and Parcel B (subject to vested rights). The Parcel A use permit was approved by the County Board of Supervisors on September 10, 1996. A January 2009 reclamation plan amendment corrected minor discrepancies between actual and planned activities (i.e., minor boundary adjustment, updated mine and reclamation maps, and update revegetation planting palette).

2.7 Existing Site Conditions and Features

2.7.1 Existing Site Operations

As shown on Figure 5, “Existing Conditions Aerial Photograph” and Sheet 1, “Existing Conditions Aerial Photograph,” the site consists of an active quarry; materials stockpiles; a plant for processing aggregate and recycle; a scale; equipment, fuel storage, maintenance, and storage building, constructed drainage ditches and stormwater containment, and access roads. In addition, a gated (locked) entrance at the northeast corner of Parcel A is used by the City of Cupertino for access to compost facilities that are part of a City program. A description of mining activities is provided in Section 3, “Mining,” below. Surrounding active mining and processing operations is open space.

2.7.2 Utilities and Access

Locations of utility features, roads, and other necessary site infrastructure within the vicinity of the site are shown in Figure 5. The following utilities are necessary for operation and are available at the site:

- **Power:** line power and diesel generators
- **Water:** Supplied from stormwater stored in ponds and settling basins
- **Sewage:** Residences on septic, portable facilities are provided throughout the site for personnel.

Three driveways (as shown in Figure 5) currently provide vehicular access to Parcel A from Stevens Canyon Road:

- the main entrance near the southeast corner of Parcel A, used for ingress only;
- an exit-only driveway located about 180 feet northeast of the entrance; and

- a third driveway at roughly the midpoint of the site's frontage on Stevens Canyon Road, used infrequently by trucks that have already been weighed.

A gated (locked) entrance at the northeast corner of Parcel A is used by the City of Cupertino for access to compost facilities that are part of a City program.

2.7.3 Soils

Soils units identified on the site are shown on Figure 6, "Soils." The soils boundaries are approximate and based on the National Resources Conservation Service (NRCS) Web Soil Survey. The following soil types are included within the site boundary:

- Pits, mine
- Merbeth-Literr complex, 30-65 percent slopes
- Mouser-Maymen complex, 30-75 percent slopes
- Katykat-Sanikara complex, 8-30 percent slopes
- Footpath-Mouser complex, 50-75 percent slopes
- Sanikara-Footpath complex, 30-75 percent slopes

2.7.4 Geology

Franciscan-aged greenstone (metabasalt) is the primary rock type mined in the pit. A small volume of Franciscan-aged limestone and graywacke (Calera Limestone—Sliter and McGann, 1992; Walker, 1950) have been mined in the northeast corner of the pit (See Figure 7, "Geology"). Field observations indicate that the majority of the rocks in the pit are sheared metamorphosed mafic volcanics, with occasional metamorphosed pillow basalts found along the upper part of the west side of the pit. The north and west sides of the pit are separated by a NW-SE trending shear zone that is 50 to 100 feet wide (Rogers and Armstrong, 1973, and Sorg and McLaughlin, 1975).

All rocks in the pit are fractured/jointed/sheared to varying levels. The rocks underwent multiple stages of deformation/shearing during subduction and later tectonic events. Localized shearing also occurred during development of the Berrocal fault. Field observations indicate that rocks within the pit can be separated into three zones. These zones consist of two linear greenstone cores and a limestone (sedimentary Franciscan) unit. They are separated from each other by high dip shear zones. Both the shear zones and the rock cores appear to trend southeast-northwest at an oblique angle to the northerly trending Berrocal fault. These units are part of the Franciscan mélange (Raymond, 1984). Even though they appear to be separate units at quarry scale, the rock cores and shear zones are not regional in scale.

Fracturing within the greenstone cores is relatively widely spaced, and the unfractured greenstone is quite hard. When the cores are mined, the larger greenstone blocks are broken up with a concrete breaker (these rocks were blasted in the past). Fracture spacing, block size, and global rock competence all decrease away from the core to the degree that the rock can be ripped. The shear between the two greenstone zones appears to be combination of serpentine, clay, and highly sheared greenstone.

The upper 2 to 20 feet consists of a reddish-brown residual soil. This overlies moderately to highly weathered bedrock (a 50 to 90 percent rock/soil mixture) that can extend another 5 to 20 feet. Below this is slightly weathered bedrock. This has weathered brown but contains no observable soil. It is more fractured than the underlying unweathered bedrock. Overall weathering and fracturing (with respect to

gross rock competence) decreases with depth. Based on color changes and failure mechanisms, the weathered zone extends 80 to 100 feet below the ground surface.

A small area of Franciscan limestones and sedimentary units is located at the northeast corner of the pit (Photo 9). This unit appears to be the southern continuation of a limestone trend on the Kaiser-Permanente quarry. A shear zone separates greenstone from limestone units. The shear zone is 50 to 80 feet wide. Shear indicators were not visible. The Berrocal fault marks the eastern boundary of this area. Like the greenstones, the limestones and sedimentary units are strongly fractured, and it appears that fracturing increases adjacent to the Berrocal fault. Sandstone units at the northeast corner of the quarry (adjacent to the Berrocal fault) showed indications of mineralization while adjacent clays (not the shear zone clays) were moist. No free groundwater was encountered. The moist zone was about 100 feet in diameter and confined to the clays along the eastern border of the pit.

2.7.5 Biological Resources

The project site is mostly disturbed by mining. The outer edges of the site support five natural vegetation communities including annual grassland, California bay forest, oak woodland, chaparral, cattail marsh, and open water. The following provides a description of each vegetation community.

- **Annual Grasslands**—dominated by foxtail chess (*Bromus madritensis*) with wild oats (*Avena fatua*), grassy tarweed (*Madia gracilis*), yellow starthistle (*Centaurea solstitialis*) and many other grasses and herbs present in smaller numbers. Small areas of ruderal vegetation and barren or disturbed areas are included in this category. This community is located in highly disturbed or managed areas within the site.
- **California Bay forest**—dominated by California bay (*Umbellularia californica*) intermixed with big-leaf maple (*Acer macrophyllum*), coast live oak (*Quercus agrifolia*), and western sycamore (*Platanus racemosa*). Understory is typically composed of California wood fern (*Dryopteris arguta*), California blackberry (*Rubus ursinus*), and poison oak (*Toxicodendron diversilobum*). This community is primarily located on north and east facing slopes in the southern half of the site, typically around ponds and creeks.
- **Oak Woodlands**—dominated by Coast live oak, blue oak (*Quercus douglasii*), and leatheroak (*Quercus durata*) with an understory of annual grasses, black mustard (*Brassica nigra*), and/or poison oak. This community is typically located on ridgetops or the upper portions of steep slopes within the site.
- **Chaparral**—co-dominated by California sagebrush (*Artemisia californica*) and coyote brush (*Baccharis pilularis*). Poison oak and foxtail chess are also present in smaller numbers. This community is primarily located on steep south and west facing slopes and is the most common natural community in the site.
- **Cattail Marsh**—dominated by cattail species (*Typha* sp.), but narrow-leaved willow saplings (*Salix exigua*) and rabbitsfoot grass (*Polypogon monspeliensis*) are also present. Cattail marsh occurs along the north and west edges of the westernmost pond in the site.
- **Open Water**—aquatic open water features within the site include a series of ponds following the historic path of the unnamed intermittent stream, starting in the west and extending generally southeast through the review area. A total of seven man-made ponds, which were used as settling ponds for the mining operation, occur along this drainage. Based on aerial photo review all of the ponds have been located at the site for years and in most cases for decades.

Potentially regulated waters of the United States are identified within the site boundaries, per a survey by LSA in 2018. Appendix E, "Special-Status Species with Potential to Occur On-Site," includes a list of special-status plants with the potential to occur within or near the project site, based on a review of the U.S. Geological Society (USGS) 7.5-minute quadrangle topographic maps for Cupertino, Mountain View, San Jose West, Castle Rock Ridge, Big Basin, and Mindego Hill.

2.7.6 Hydrology

Surface Waters and Drainage



The Stevens Creek Quarry is located within the Stevens Creek watershed, which is a 38-square-mile drainage basin with its headwaters high in the Santa Cruz Mountains. The Stevens Creek Reservoir lies in the central and lower portions of the watershed and was constructed in 1935 for the purpose of storing winter runoff for the recharge of the Santa Clara Groundwater Basin during the summer months. The reservoir dam is located southwest of the City, at the point where Stevens Creek emerges from a deep canyon between Monte Bello Ridge and Table Mountain. Swiss Creek, the largest tributary of Stevens Creek, enters the reservoir from the west. The quarry is located immediately west of Stevens Creek Reservoir. Rattlesnake Creek, Swiss Creek, and an unnamed tributary cross the site.

In general, the site is comprised of two stormwater management areas. The first stormwater management area is within the Parcel B mining area. Stormwater flows from the quarry are captured in the pit and stored. Sheet flow from the existing slopes flows down the highwalls and is captured in the bottom of the pit. Culverts and drop inlets are located above the northern and eastern slopes and capture and direct stormwater flows around the quarry highwalls and to the bottom of the pit. The stormwater flows are used for dust control, processing make-up water, or percolates into the surface.

The second stormwater management area captures stormwater flows from the aggregates processing area on Parcel B and all facilities located within Parcel A. Surface drainage at the facility generally flows southeast toward Stevens Creek Reservoir. Within this drainage area Rattlesnake Creek and the unnamed tributary flow into Swiss Creek. Stormwater basins on the site are located along Rattlesnake Creek, which runs along the southern edges of both Parcels A and B. Stormwater runoff within the processing area on Parcel B and captured and conveyed by a system of conveyance pipes and stormwater runoff from Parcel A flows over the site surface into either the Middle or Lower Settling Basin. As part of the terms of its discharge permit from the RWQCB, the quarry operator regularly monitors water quality of the discharge from the quarry and is required to submit quarterly monitoring reports to the RWQCB.

Groundwater

There are a series of houses on the hill south of the quarry (Monte Bello Ridge). The water supply to some of those houses is provided by wells. The bottom of some of the eastern wells extends below the elevation of the quarry floor while the bottom of wells higher in the hills is above the elevation of the quarry floor. The quarry is separated from these houses (and wells) by a Swiss Creek, an ephemeral drainage in Rattlesnake Canyon. Rattlesnake Canyon acts as a hydrologic barrier between the quarry and the hill south of the quarry. The elevation of the creek (and the base of the valley) adjacent to the quarry is between 650 and 690 feet msl. The lowest elevation of the quarry floor is projected to be between 700 and 725 feet msl. When quarrying is finished, the quarry will be filled with approximately 200 feet of fill. Subdrain lines are and will be incorporated into the fill. The

quarry is relatively dry, and there is no record of long-term, large water inflows into the quarry or historic need for drainage wells to control water inflows. There is no record of water wells within 1000 feet west, north, or east of the quarry. The Parcel B quarry has been active for more than 40 years, and portions have been excavated to approximately 725-foot elevation. The quarry effectively acts as a drainage pit.

Seepage areas have been observed in the quarry walls, located in the west face near the south end of the quarry, and in the middle of the north face. The seeps have produced between 5 and 10 gallons per hour. The flow from these seeps is currently directed into the existing gravity drainage system. There is no indication that drainage wells have been used in or around the quarry. The majority of the quarry walls are covered with fill, and no obvious indications of seepage were seen in those areas. A seasonally dry valley and dry stream above this part of the quarry trend towards the northwest corner of the quarry. The majority of effects on the surrounding groundwater have already occurred. It is likely that bedrock groundwater levels adjacent to the quarry will rise when the quarry is backfilled.

2.8 Pre-SMARA Surfaces

Although the site operated before SMARA was implemented, no Pre-SMARA surfaces exist on-site that would be excluded from reclamation under this plan.

3. MINING

The following sections cover mining details and activities related to ensuring mining activities align with the reclamation plan.

3.1 Material Quantity and Type

The primary mineral being mined at the site is Franciscan-aged greenstone (metabasalt) rock for aggregate production. Smaller quantities of Franciscan-aged limestone and graywacke (Calera Limestone) have been extracted from the northeast corner of Parcel B. Approximately 41 million tons of materials (i.e., marketable material and overburden) remain within Parcel B to be mined.

3.2 Mining Initiation and Termination Dates

Mining has been ongoing since the 1940s. In consideration of a fluctuating demand for materials based on a fluctuating economy, mining will be complete by December 31, 2040. Backfilling, grading, and reclamation activities are expected to require an additional 5-years after extraction activities cease.

3.3 Mining Depth

The maximum anticipated depth of surface mining is 700 feet msl.

3.4 Quarry Design and Operations

As shown on Figure 8, "Mine Plan," Figure 9, "Mine Plan Cross Sections," Sheet 2, "Mine Plan," and Sheet 3, "Mine Plan Cross Sections," expansion of mining operations will occur along the western face of the existing Parcel B highwall. A layback is needed for stability purposes and will be developed in a manner that also provides mineral reserves. The extended highwall will be developed by mining new benches to a bottom elevation of 860 feet mean sea level in the northern portion of the pit, and 700 feet

mean sea level in the center and southern portion of the pit. The highwall will be developed by stripping and transporting materials to the processing facilities for crushing and stockpiling. Cut slopes are planned to be 2H:1V. To achieve these angles on the west slope, portions of the west pit boundary must be adjusted farther west to provide area to cut the slopes into native stable material and remove the current, potentially unstable material within the steeper slopes. The quarry floor is planned to have a maximum depth of 700 feet msl, with gently sloping floors that drain southerly and westerly. The bottom of the pit will then be backfilled to 900-feet msl with fill slopes not to exceed 3H:1V overall.

This mine plan provides for 2.6 million tons of material moved annually with the 30 percent overburden waste factor, for a maximum annual crusher feed of 2 million tons (1.33 million cubic yards) per year for up to 30 years of production at SCQ. Approximately 30 percent of the materials mined are expected to be overburden (unmarketable materials). Overburden generated from the mining is hauled to designated areas and stored temporarily. Overburden will remain on-site to be used for reclamation (i.e., for backfilling the pit and creating the 3H:1V fill slopes). The topography of the completed Parcel B will be a broad valley, oriented north-south. The ponds will remain.

As shown on Figures 8 and 9, the central portion of Parcel B will be mined down to an elevation of 700 feet msl. This will create an approximately 40-acre flat pad. This elevation is consistent with the currently approved mine plan and no further changes are proposed.

Stevens Creek Quarry, Inc. has an agreement with the adjacent landowner to extend Parcel B mining east to correct a reclamation boundary encroachment and integrate that correction with other reclamation for the entire parcel. The reclamation-related grading is limited by a power-line corridor and related structures to a wedge-shaped, 9-acre area. Additionally, a new proposed lease area encompassing approximately 85-acres, extends to the west of Parcel B, termed the West Wall Extension. This area will provide for creation of a shallower overall slope for long-term stability, as well as approximately 35 million tons of supplemental reserves. Expanding the reclamation boundary will allow the mine operator to lay back the slope and blend it with the final Parcel B reclamation contours. After sloping is completed, fill will be placed and vegetated to create a 2:1 slope.

A 1.5-acre fill area exists on the parcel bordering the western boundary of Parcel B (the same landowner of the parcel on the east side of Parcel B). The landowner has consented that the fill can remain until reclamation. This fill will be removed at reclamation and the area returned to its approximate preexisting topography. The operator will revegetate this area.

3.5 Equipment Storage

Equipment, supplies, and other materials are stored in designated areas. Current storage areas are shown in Figure 5.

4. RECLAMATION

4.1 Reclamation Plan and Surface Treatment

4.1.1 Subsequent Use and Approach

The site will be reclaimed to an open space condition suitable for future development as allowed under the County Zoning Ordinance at reclamation. After mining is complete, all temporary structures and mining and processing equipment will be removed, finished slopes will be graded and engineered where necessary, fill will be imported and used to backfill slopes to reclamation specifications, and revegetation



of the entire quarry site will be performed. Final quarry cut slopes will be graded at a 2H:1V angle and fill slopes will be graded at a 3H:1V angle. Upon reaching design depth, onsite “waste” material and imported fill will be used to elevate the floor of Parcel B from its design depth of 700 feet msl to 900 feet msl. Existing permanent Parcel A infrastructure, including the office, shop, access road, and trucking facility, will remain. The remaining portion of Parcel A will be decompacted and graded. A mix of hydroseeding or broadcast seeding and container plants will be used to revegetate the site. The plan for reclamation is shown on Figure 10, “Reclamation Plan,” Figure 11, “Reclamation Plan Cross-Sections,” Sheet 4, “Reclamation Plan,” and Sheet 5, “Reclamation Plan Cross Sections.”

4.1.2 Surface to Remain

Paved and unpaved access roads that provide access to the interior of the site will remain for site access, monitoring, security, and fire protection. The office, shop, and trucking facility on Parcel A will also remain.

4.1.3 Impact on Future Mining

Reclamation activities will not physically or economically preclude future access to mineral resources, should additional recovery be pursued in the future. The open space that would be left in place on-site would have no impacts on future mining.

4.1.4 Public Safety Considerations

The quarry is private property and setback from the nearest public roadway by approximately $\frac{3}{4}$ mile; the second land use of open space will not increase the level of public exposure to the site.

4.2 Soil Salvage and Storage, Amendments, and Preparation

Soil material used for reclamation is largely from mining, but also is from import of fill. Soil is stored in stockpiles at various locations throughout the site (see Figure 5) until needed for use in fill slope reclamation or to assist revegetation in meeting performance standards (see Section 4.3.3, “Revegetation Success Criteria”). However, initial revegetation of completed/temporary slopes indicates that revegetation goals will be met without placement of topsoil, which reduces erosion and sedimentation problems. Timing of soil use is described in Section 4.7, “Phased Reclamation.”

4.2.1 Soil Salvage and Storage

Virtually all surfaces at the quarry were developed prior to SMARA when soil salvage and stockpiling for reclamation were not commonly practiced. As a result, little native soil is available. Vegetation and soil removal for excavation activities will be limited to areas of new surface disturbance, primarily the West Wall Expansion area. The following sections provide a description of vegetation removal, soil stripping and savaging, and stockpiling practices.

Vegetation Removal

When undisturbed areas are initially graded for mining, soil will be harvested from those areas and stockpiled on-site or used in concurrent reclamation. Before soil is harvested, the area will be cleared of woody vegetation and root balls using chainsaws and a portable excavator. Plant debris will be chipped in place and mixed with the topsoil, used for erosion control, or disposed of offsite. Vegetation clearing will only occur when operations initiate mining of the uppermost level and until marketable materials are encountered.

Soils Stripping, Salvaging, and Stockpiling

The geologic materials at the Stevens Creek Quarry vary, and areas of nonmarketable “waste” are periodically encountered. This material is designated to be used in construction of final Parcel B fill slopes and pad. These “waste” materials are removed from new mining areas within no more than 1 year of when mining is scheduled to occur.

The following actions will be implemented related to soil harvesting, stockpiling, and placement:

- Soil and vegetation removal will not precede mining by more than 1 year and will be kept to a minimum.
- After soil is stripped, it will be hauled and stored in a designated soil stockpile if it cannot be used at that time for concurrent reclamation activities.
- The soil will be compacted as little as possible. If compacting of a portion of the stockpiles is necessary for stability, compacting will occur to minimum extent necessary.
- The soil should be dry if it must be harvested, moved, stored, or worked during mining or reclamation activities.
- Soil stockpile areas will be identified and well-marked.
- Relocation of soil after it is stockpiled will be minimized.
- If soil is stored during the winter rainy season, erosion control measures will be implemented.
- Placement of soil resources for reclamation should:
 - use a small bulldozer or similar equipment to rip and blend the soil materials as necessary.
 - be track walked to stabilize the soil material, and then the surface will be scarified to allow for proper seed germination.
 - remove rocks and plant material in excess of four inches to the extent feasible.

4.2.2 Soil Amendments

Soil conditions are not likely to limit the establishment of vegetation; stockpiled fill materials have rapidly revegetated voluntarily. Upon completion of quarry operations and before revegetation of soil begins, a soil analysis will be performed. Based on the results of the soil analysis, fertilizer and soil amendments may be used, as recommended, to ensure revegetation success.

If fertilizers and amendments are determined to be necessary, the following actions will be applied to ensure they do not cause contamination of surface or groundwater:

- Manufacturers’ directions for use, storage, and disposal of fertilizers will be followed to ensure their safe use.
- Fertilizer will typically be applied once to promote initial seed and container plant establishment for erosion control purposes on areas planned for revegetation.

A SWPPP will continue to be required during reclamation activities and is required to be updated to provide BMPs for current conditions during reclamation. The SWPPP will include a determination, based on the quantity of fertilizers and amendments determined to be necessary, of whether the potential exists for sufficient pH, dissolved oxygen content, or nitrogen (i.e., nitrate, nitrite, and total nitrogen) and

phosphorous loading in receiving waters to require testing for these pollutants as part of water sampling of stormwater discharges. The fertilization rates provided below will be amended as needed to conform to the soil analysis report recommendations.

Upon completion of quarry operations and before revegetation of soil begins, a soil analysis will be performed.

4.2.3 Criteria for Imported Soil

SCQ will accept imported surplus construction soil to backfill the quarry area. This soil would be subject to site-specific acceptance criteria developed in coordination with regulatory agencies according to the following guidelines:

1. *California Environmental Protection Agency Department of Toxic Substances Control (DTSC) Information Advisory on Clean Imported Fill Material* guidance document (DTSC 2001);
2. constituents of concern limits established via the RWQCB environmental screening levels and California Human Health Screening Levels (to establish whether the material is considered a “designated waste” under the California Water Code, in which case it would not meet the Quarry’s acceptance criteria);
3. federal and state hazardous and nonhazardous waste criteria; and
4. Background concentration data using DTSC, U.S. Environmental Protection Agency Commercial Regional Screening Levels, and federal Resource Conservation and Recovery Act guidelines.

Acceptance of soil will be determined for each individual source location (e.g., construction project), and all soil imported to the site will be subject to testing and quality controls to ensure it meets the site-specific acceptance criteria. Imported soil is anticipated to be received and unloaded near the processing plant on Parcel B if not directly unloaded in the fill placement area.

4.3 Revegetation



Revegetation will occur on the Parcel B slopes and fill pad and Parcel A overburden and recycled materials stockpile. Parcel A ancillary facility areas, including the office, shop, access road, and trucking facility, will remain and not be revegetated. The proposed revegetation area totals approximately 95-acres. See Figure 10 for the revegetation locations.

4.3.1 Revegetation

Table 1, “Species for General Seeding,” provides a list of plant species to be used.

Contoured surfaces would be amended as necessary and covered with grass, herb, and shrub species via seeding either bulk seed spread with a broadcast seeder, or by hydroseeding at the discretion of the operator. Drainage ditches and roads not to remain will be left bare until the completion of the contouring and slope seeding, at which time roads will be ripped and revegetated. The limited areas of steep benches on quarry highwalls will not be recontoured, but they will be seeded. Native seed mixes for reclamation are listed in Table 1 and were developed from local field tests.

**TABLE 1
SPECIES FOR GENERAL SEEDING**

Scientific Name	Common Name	Pure Live Seed (lb./acre)	Bulk Seed (lb./acre)
SHRUBS			
<i>Artemisia californica</i>	California sagebrush	1.4	16
<i>Baccharis pilularis</i>	coyote brush	0.2	20
<i>Eriogonum fasciculatum</i>	California buckwheat	1.0	20
<i>Salvia leucophylla</i>	purple sage	0.7	2
<i>Salvia mellifera</i>	black sage	1.1	3
GRASSES AND HERBS			
<i>Achillea millefolium</i>	yarrow	1.7	2
<i>Artemisia douglasiana</i>	mugwort	0.1	1
<i>Bromus carinatus</i>	California brome	4.6	6
<i>Elymus glaucus</i>	blue wildrye	4.6	6
<i>Eschscholzia californica</i>	California poppy	1.2	2
<i>Heterotheca grandiflora</i>	telegraph weed	0.2	1
<i>Acmispon americanus var. americanus</i>	Spanish clover	0.7	1
<i>Acmispon glaber</i>	deerweed	1.5	2
<i>Lupinus nanus</i>	sky lupine	0.8	1
<i>Melica californica</i>	California melic	1.3	2
<i>Stipa pulchra</i>	purple needlegrass	2.9	4
<i>Poa secunda</i>	one-sided bluegrass	1.3	2
<i>Trifolium willdenovii</i>	tomcat clover	1.4	2
TOTAL		26.7	93

4.3.2 Revegetation Timing and Protection

Planting shall be conducted during the most favorable period of the year for plant establishment typically late fall prior to winter rains. Protection measures such as high visibility fencing and screening shall be used where needed to prevent unauthorized vehicle access or wildlife to promote revegetation success. Protection measures shall be maintained until revegetation efforts are successfully completed per the success criteria outline in the section below.

4.3.3 Revegetation Success Criteria

Performance standards will be measured through comparisons of species richness, absolute plant cover, species composition, and the presence of noxious weeds. Acceptable threshold values for each of these parameters are presented in Table 2, "Performance Standards for Revegetation Areas". This table describes the minimum targets for plant survival, species composition, and plant cover. These performance standards were tailored based on growth patterns for the plants in Table 2, above. Performance standards represent anticipated conditions five (5) years after installation.

**TABLE 2
PERFORMANCE STANDARDS FOR REVEGETATED AREAS**

Performance Criteria	Monitoring Method	Year 1	Year 2	Year 3	Year 4	Year 5
Species Richness (number of species relative to reference location)	Transect/plots	25%	50%	65%	70%	75%

Performance Criteria	Monitoring Method	Year 1	Year 2	Year 3	Year 4	Year 5
Plant Cover (absolute cover relative to reference location, 80-90 percent confidence level)	Transect/plots or aerial photo analysis	25%	50%	65%	70%	75%
Noxious Weed Cover (absolute cover of Cal- IPC "High" rated noxious weeds)	Transect/plots or ocular assessment and mapping of entire revegetated area	<30%	<30%	<20%	<20%	<20%

4.3.4 Test Plots

Test plots may be required to determine the suitability of growth media, refine the seed mix, determine appropriate seed mix application rates, and other factors affecting revegetation success. To the extent necessary, 100-foot x 100-foot test plots, as well as control and no seed plot areas, will be established. These plots will be representative of quarry slope and fill areas. The test plots will be maintained and monitored, and tests will be conducted to refine revegetation techniques and seeding rates to meet performance standards. Additional tests will be conducted if the initial tests and active revegetation are not successful.

4.3.5 Weed Abatement

Weed control is necessary to reduce the occurrence of undesirable invasive and noxious species of plants that could interfere with revegetation efforts or increase fire hazards. Weeds are undesired, generally introduced, invasive plants that can compete with revegetation efforts. However, many introduced species occur widely in the region and are common in both the surrounding active quarry and adjacent natural open space lands. Eradication of all weeds is therefore unachievable; therefore, specific noxious plant species are targeted for control.

Species listed by Cal-IPC (2006) as highly invasive will be targeted during maintenance of revegetation efforts if they exceed the designated threshold of twenty percent cover. Invasive plant species typically found on-site and in surrounding lands include yellow star thistle (*Centaurea solstitialis*, annual), black mustard (*Brassica nigra*, annual), stinkwort (*Dittrichia graveolens*, annual), pampas grass (*Cortaderia spp.*, perennial), and fennel (*Foeniculum vulgare*, perennial). Weed control methods may include chemical and mechanical removal techniques depending on the species and number of individuals encountered.

4.3.6 Monitoring and Maintenance

Monitoring

A qualified biologist, restoration ecologist, or landscape architect will monitor general site conditions following revegetation to ensure that performance standards have been met. Improvements and repairs will be made for a period of at least five (5) years following revegetation. General site inspections will be conducted at least twice per year, before the rainy season (approximately September) and after the rainy season (approximately March). Revegetation sites will be identified on a map and monitored to assure that standards are adequately achieved within a minimum of 80 percent confidence levels. Sampling plots will be selected randomly throughout the areas seeded to determine species richness and percent cover of each species. These assessments will document the general site conditions and identify immediate maintenance needs, such as weed control and erosion repair.



Maintenance

Maintenance of revegetated areas, including weed control, will occur as necessary based on monitoring and the evaluation of meeting performance standards. Maintenance of revegetated areas will consist of reseeding unsuccessful revegetation areas to the extent necessary to achieve the performance goals, to limit the extent of noxious weeds, and to repair erosion damage. If revegetation efforts are not successful within five (5) years following initial seeding, the underperforming areas will be re-evaluated to determine measures necessary to improve performance.

4.4 Geotechnical

4.4.1 Quarry Slopes

Quarry slopes will have an overall final grade of either 2H:1V or 1H:1V, as specified on the grading plan. Benches will be approximately 25 feet wide with a highwall of approximately 50 feet. A memo prepared by Norfleet Consultants supporting the slope design is included as Appendix F, "Slope Stability Memo."

4.4.2 Fill Slopes

Fill slopes will be constructed to have an overall grade of 3:1 without benches/highwalls.

4.5 Environmental Protection

The following subsections provide a description of environmental protections related to sensitive plant and wildlife habitat and hydrology and water quality. In addition to these requirements, SMARA Section 2772.1(a)(7)(B) requires that official copy of the reclamation plan amendment include an index showing any permit conditions of approval or binding mitigation measures adopted or certified pursuant to the California Environmental Quality Act that are necessary to comply with SMARA and the County's Surface Mining Ordinance. Those conditions of approval and mitigation measures are included in an Appendix G, "Conditions of Approval," and are considered part of the reclamation compliance requirements.

4.5.1 Water Quality Protections

Surface Water and Erosion Control

Surface mining and reclamation activities are conducted in a manner that protects on-site and downstream beneficial uses of water. Existing water quality protection measures at the facility are described in the storm water pollution prevention plan (SWPPP) (updated regularly to reflect current site conditions) and the spill prevention control and countermeasure plan (SPCCP). The most recent SWPPP and SPCCP are provided in Appendix H, "Storm Water Pollution Prevention Plan," and Appendix I, "Spill Prevention Control and Countermeasure Plan." Figure 12, "Drainage Plan," shows the site drainage at the completion of reclamation.

Excavations are conducted in a manner to keep adjacent streams, percolation ponds, or water bearing strata free from undesirable obstruction, siltation, contamination, or pollution. Existing settling ponds are maintained to intercept sediment. Settling ponds and other retention devices are maintained to control sediments so that no sediments are deposited in Stevens Creek Reservoir from the site as a result of the surface mining process.

The SWPPP describes stormwater drainage facilities, identifies possible water pollution sources that could affect the quality of stormwater discharged from the facility, and documents best management

practices (BMPs) that have been implemented to minimize or prevent discharge of pollutants that may be in stormwater. Measures in the SWPPP to control erosion and sedimentation include:

- diverting surface water away from the stockpiles and tops of cut slopes;
- tarping all topsoil stockpiles during the rainy season;
- installing wattles around the base of topsoil stockpiles, if evidence of erosion exists;
- regrading and compacting areas with deep and wide erosion rills;
- limiting activities during wet weather;
- limiting use of unpaved roads at the secondary entrance on Lower Quarry Floor during the rainy season; and
- monthly visual inspections during reclamation activities.

As part of the terms of its discharge permit from the San Francisco Bay Regional Water Quality Control Board (San Francisco Bay RWQCB), the quarry operator regularly monitors water quality of the discharge from the quarry and must submit quarterly monitoring reports to the San Francisco Bay RWQCB. The only discharge from the site occurs at the point where Swiss Creek leaves the site and flows into a culvert under Stevens Canyon Road that flows into Stevens Creek Reservoir.

Groundwater

Water for site operations is currently obtained from the on-site settling basins and groundwater is not used. Moreover, implementation of the reclamation plan would not result in a substantial net change in water use, although some additional water would be necessary for dust control during grading of the area and to establish vegetation on the reclaimed slopes. As a result, the project would not substantially deplete groundwater supplies.

No creeks or other natural drainages are located within mining areas. On completion of mining and reclamation, runoff from Parcel B would be routed to detention basin(s) the existing settling basins for fines settlement prior to runoff into the natural watercourse. that would fully contain the water (there would be no off-site discharge). Therefore, the project would not interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table.

4.5.2 Sensitive Species and Habitat



Wildlife Habitat Protection Measures

As described in Section 2.7.5 above, the site contains potentially suitable biological habitat for several special-status wildlife and bird species. In addition to special-status species, nests of nearly all other native birds are protected by the Migratory Bird Treaty Act and California Fish and Game Code. To avoid potential impacts to these special status species the following measures would be implemented in consultation with a qualified biologist:



reconstruction Surveys: Ground disturbance into undisturbed areas and vegetation (tree and shrub) removal would be planned to avoid the various habitats and/or breeding season for most species. If such clearing would occur during those seasons, preconstruction surveys will be performed.

Use of Buffers to Avoid Sensitive Habitats or Nests: If preconstruction surveys determine that habitat or nests are found close enough to the land clearing and tree removal area, the biologist

will determine a construction-free buffer zone to be established around the area to prevent potential impact.



State and/or Federal Permitting: If avoidance is not feasible the operator will be required to obtain the appropriate permits from state and/or federal agencies prior to disturbance.

Species Protection

Listed species shall be conserved or mitigated as prescribed by the federal and California Endangered Species Acts.

4.6 Removal and Closure Activities

The following subsections describe those project components that will be removed or remain and their related reclamation activities

4.6.1 Waste Disposal

Any remaining mine waste at closure will be disposed of consistent with Title 27, Chapter 7, Article 1 of the CCR (formerly codified as CCR Title 23, Chapter 15, Article 7). No waste from mining will remain on-site. The SWPPP will ensure all other waste is disposed of in accordance with state and local health and safety ordinances.

4.6.2 Structure and Equipment Removal

The existing developed surfaces on Parcel A would remain following reclamation including the machine shop, quarry office building, and Rich Voss trucking facility. All other structures and equipment will be removed. Any compacted surface will be decompacted prior to revegetation.

4.6.3 Roads

Developed surfaces, perimeter maintenance roads, and access roads will remain for subsequent land uses as shown on Figure 10 and Sheet 3. All other compacted surfaces will be stripped of roadbase (if any), decompacted, and revegetated.

4.6.4 Closure of Openings

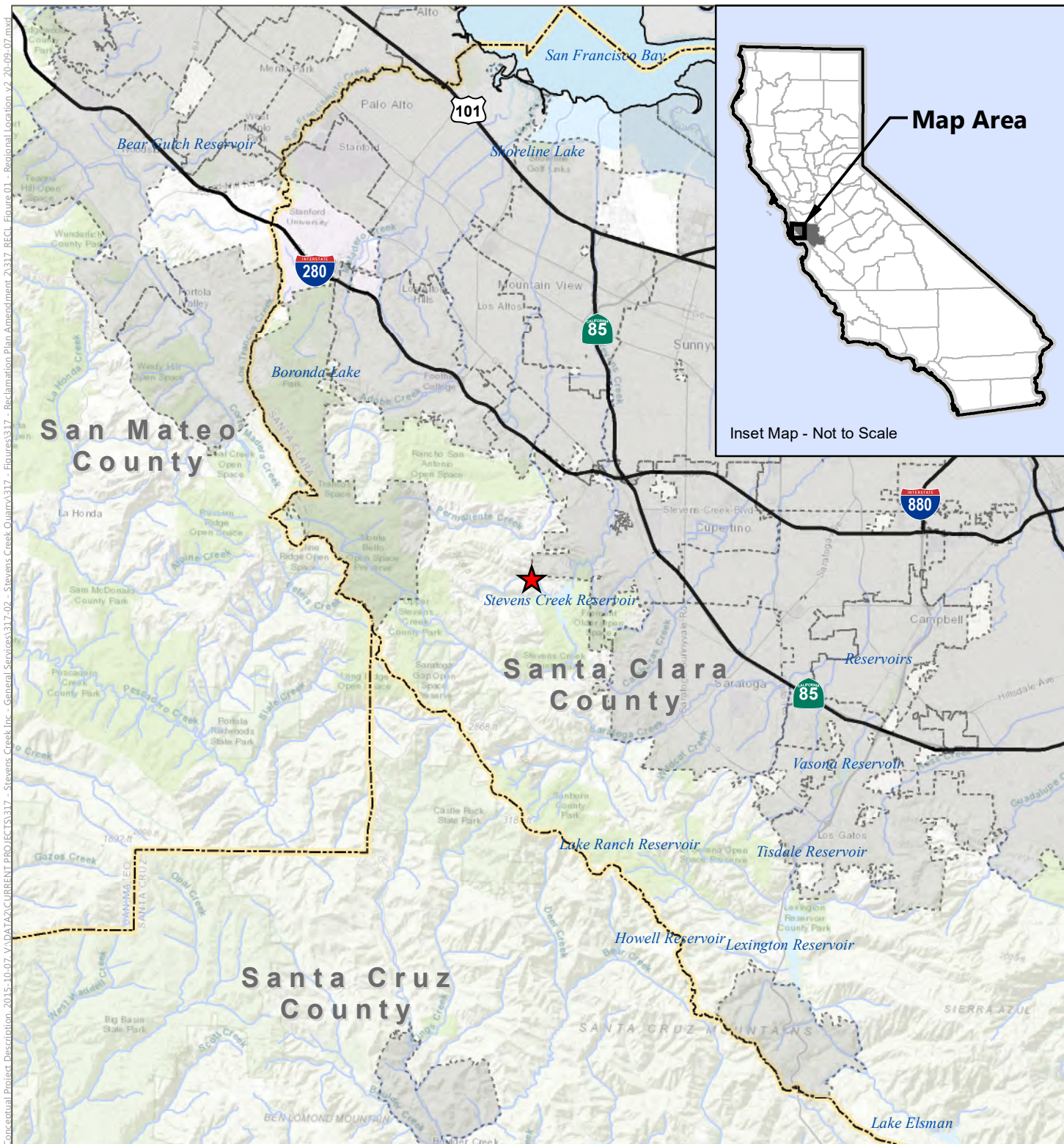
Drill holes, water wells, monitoring wells will be completed or abandoned in accordance with current laws, unless demonstrated necessary for the proposed end use.

4.7 Phased Reclamation

Fill will be placed in the Parcel B (see Figure 10 and 11) and cannot be placed until mining is complete. Revegetation of Parcel B can begin after all fill is placed and graded.







No fill or topsoil is necessary in Parcel A and revegetation of the northernmost portion of the northeast hillside has begun. The remaining portion of the northeast hillside will be revegetated after the material stockpile has been removed, which will occur after mining is complete.

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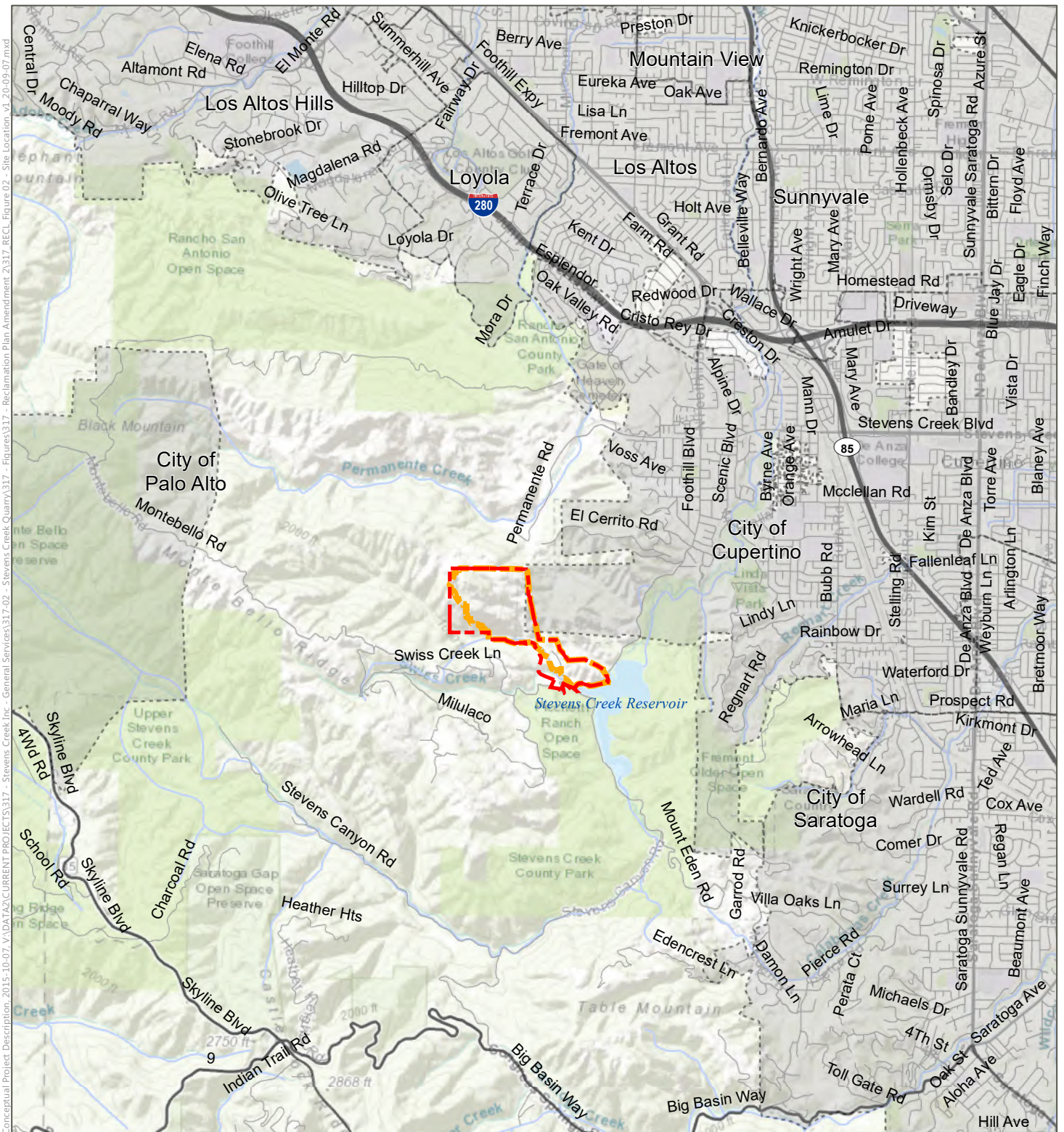


SOURCES: ESRI World Shaded Relief accessed Sept. 2020, ESRI World Topographic Map accessed Sept. 2020; ESRI World Streetmap, 2009; compiled by Benchmark Resources in 2020

NOTES: This figure was prepared for land use planning and informational purposes only. The info shown and its accuracy are reflective of the date the data was accessed or produced.

-  Site Location
-  City Boundary
-  County Boundary
-  Major Highway
-  Waterway
-  Water Body

Regional Location
STEVENS CREEK QUARRY
USE PERMIT & RECLAMATION PLAN AMENDMENT
Figure 1

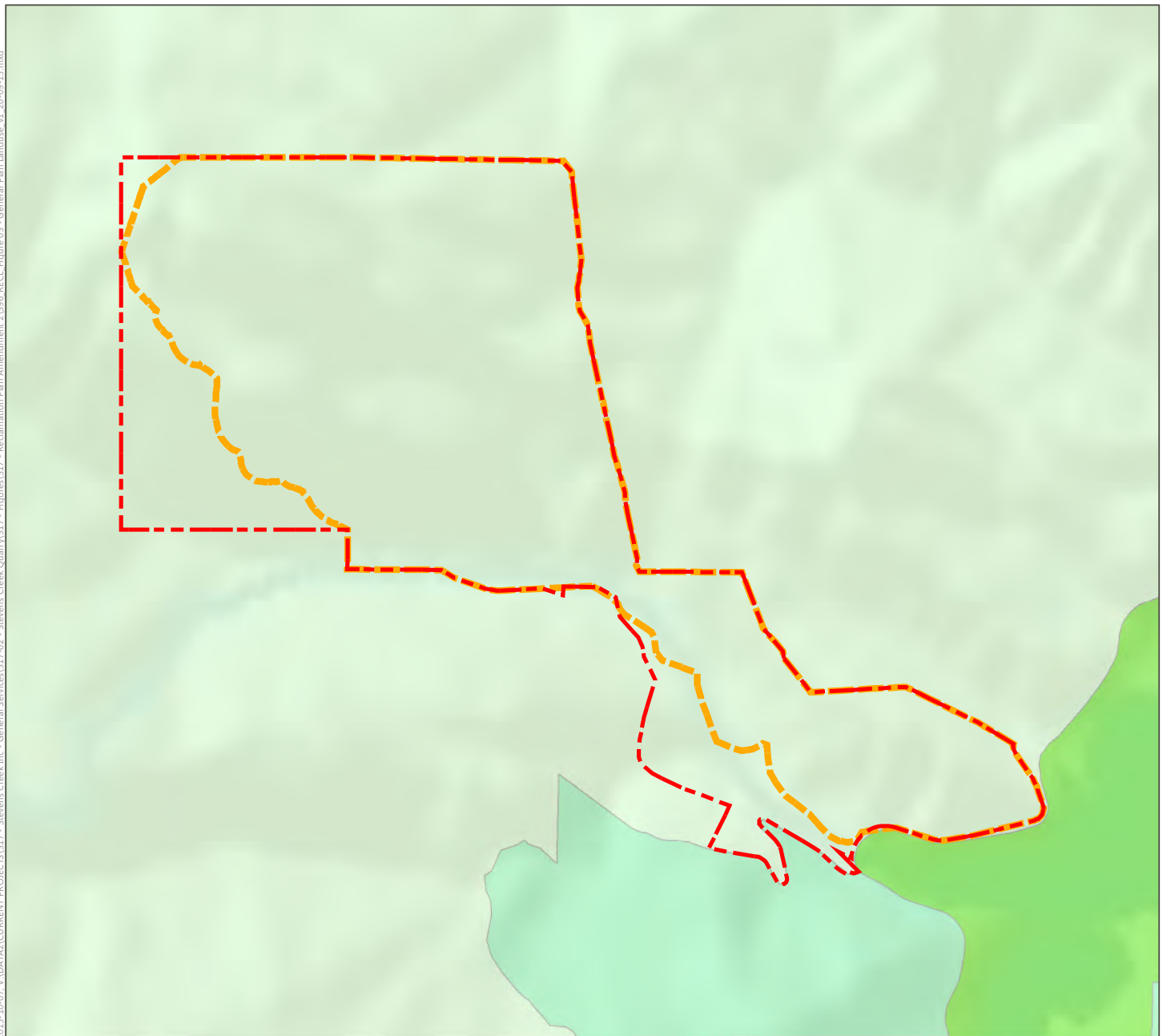


SOURCES: ESRI World Shaded Relief accessed Sept. 2020, ESRI World Topographic Map accessed Sept. 2020; ESRI World Streetmap, 2009; adapted by Benchmark Resources in 2020






NOTES:

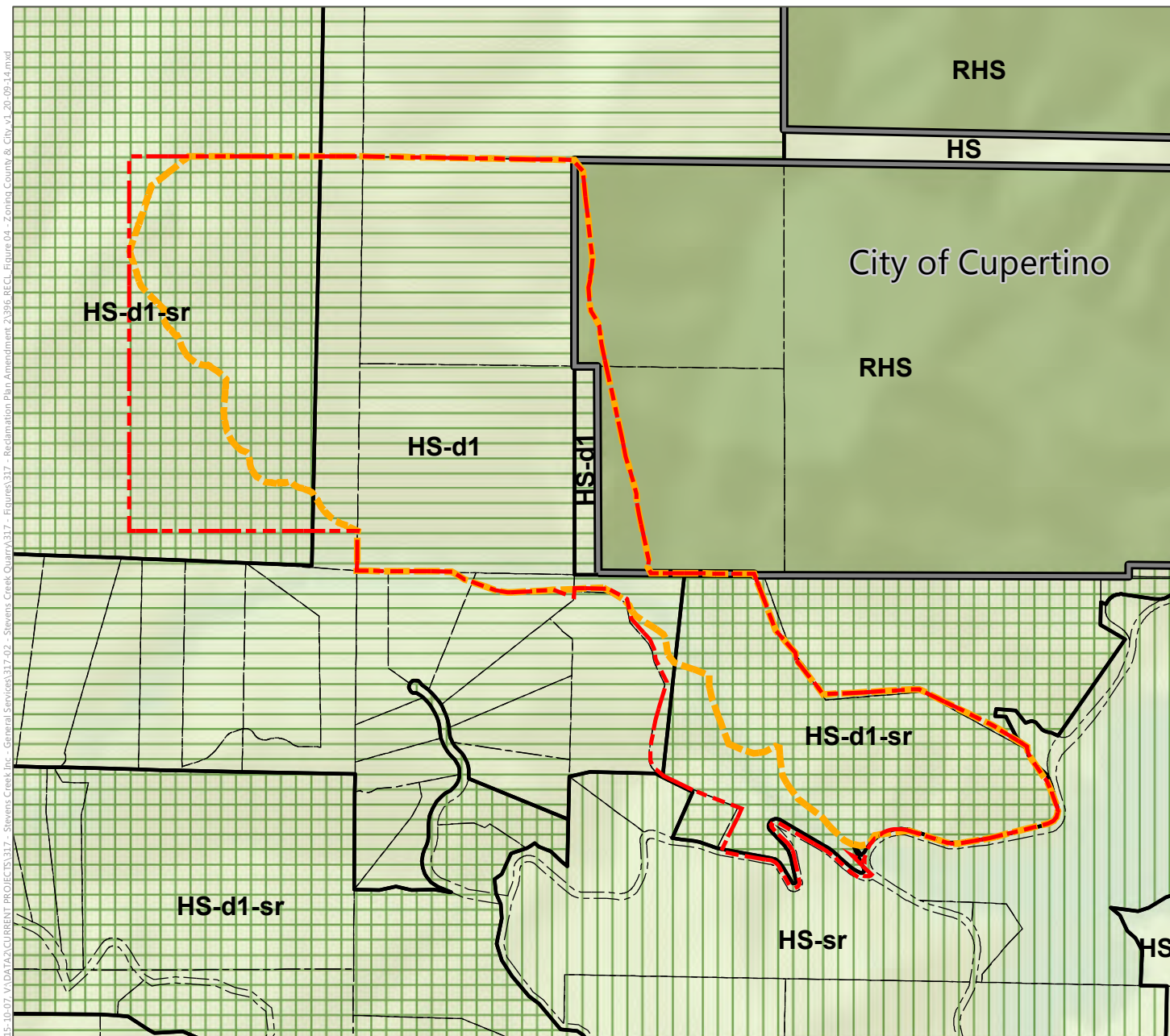
1. Property boundary for illustrative purposes only.
2. This figure was prepared for land use planning and informational purposes only. The information shown and its accuracy are reflective of the date the data was accessed or produced.

Site Location
STEVENS CREEK QUARRY
USE PERMIT & RECLAMATION PLAN AMENDMENT
Figure 2







SOURCES: General Plan Designations—County of Santa Clara Planning Office, 1995 Santa Clara County General Plan, updated Oct. 2016; ESRI World Shaded Relief accessed Sept. 2020; compiled by Benchmark Resources in 2020




-  Site Boundary
-  Reclamation Plan/Surface Disturbance Boundary
-  Hillsides
-  Other Public Open Lands
-  Regional Parks, Existing




SOURCES: County Zoning—Santa Clara County Zoning Atlas, pg. 105, updated Aug. 2016; City Zoning—City of Cupertino Zoning Map, prepared by the Community Development Department, updated Sept. 3 2019; Parcels—SCC Assessor's Dept, SCC Info Services Dept, 2017; ESRI World Shaded Relief accessed Sept. 2020; compiled by Benchmark Resources in 2020

-  Site Boundary
-  Reclamation Plan/Surface Disturbance Boundary
-  Cupertino City Limit
-  Parcel Lines

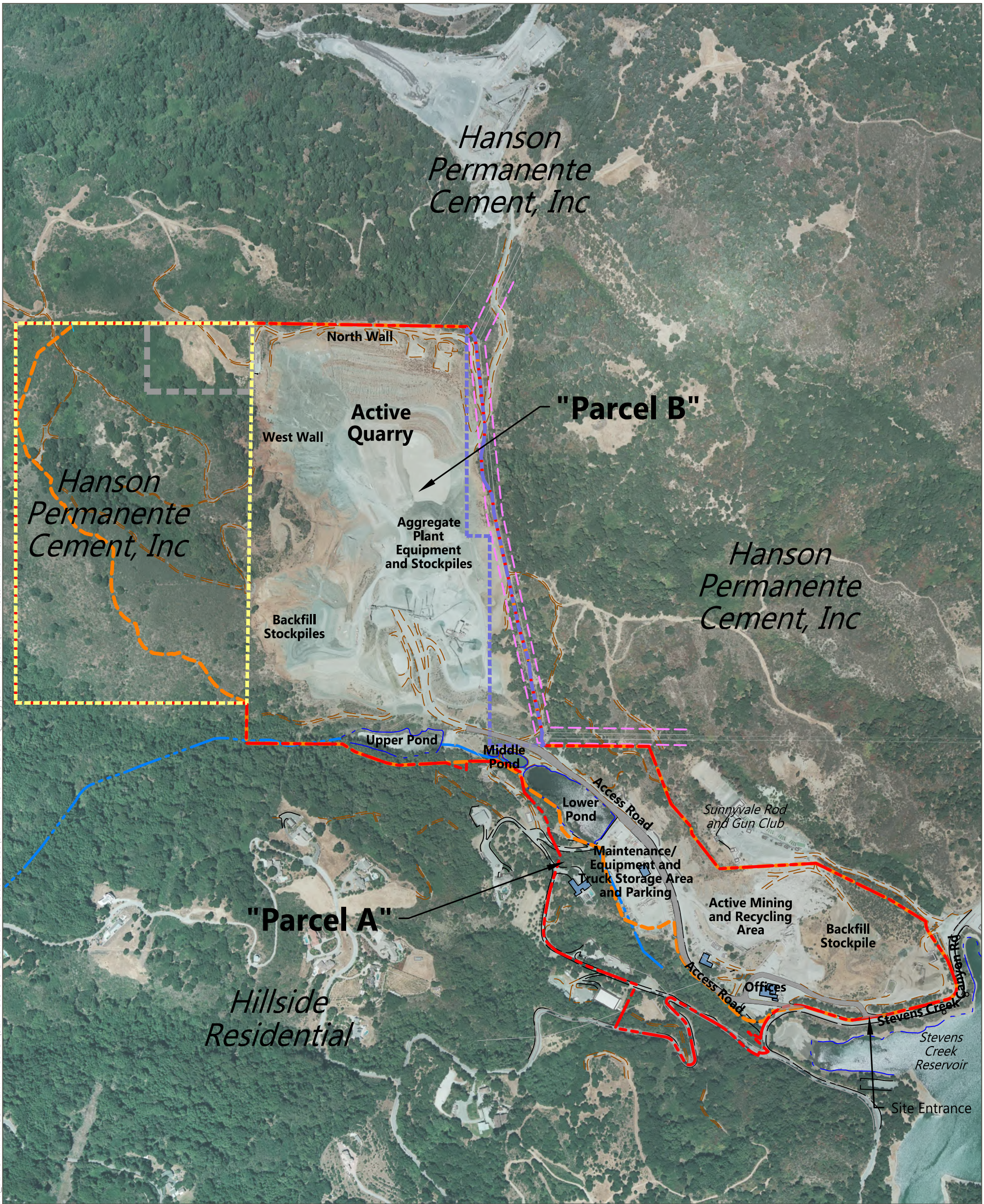
County of Santa Clara Zoning

-  **HS** Hillside
-  **d1** Combining District: -d1 District (Santa Clara Valley Viewshed)
-  **sr** Combining District: -sr District (Scenic Roads)

City of Cupertino Zoning

-  **RHS** Residential Hillside

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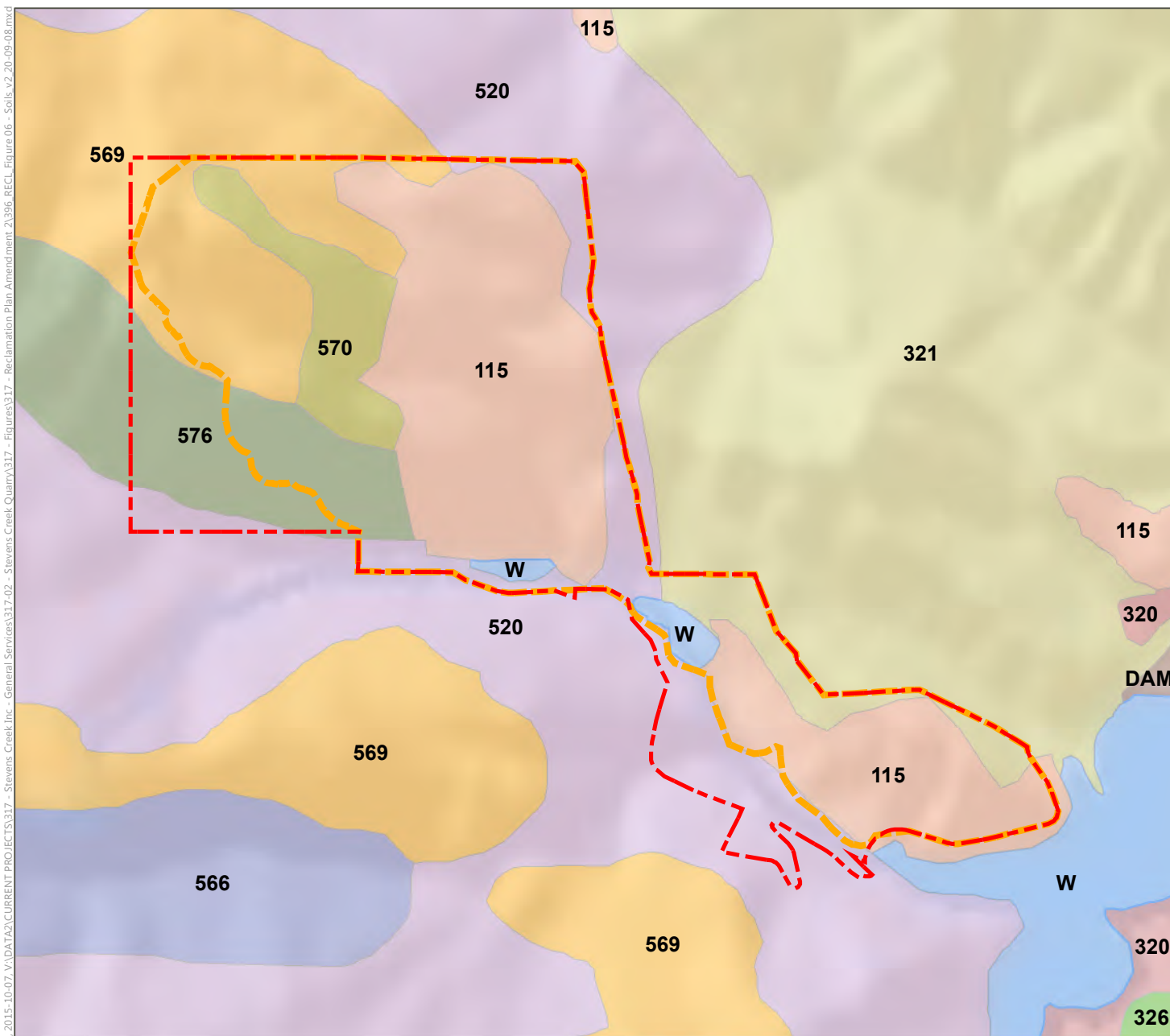


SOURCE: Aerial-Muir Consulting Inc, flown 8-13-2020;
compiled by Benchmark Resources in 2020

NOTES:

1. Material reviewed and utilized to prepare reclamation plan boundary was informed by orthophotography and srvey data prepared by Muir Consulting, Inc., flown on 6-18-2020.
2. See Sheet 1 for applicable existing conditions aerial photography footnotes.

	Site Boundary	±250 acres		Dirt Road
	Reclamation Plan/ Surface Disturbance Boundary	±210 acres		Asphalt Road
	Existing Hanson Lease	±10 acres		Water Border
	Planned Hanson Lease	±83 acres		Swiss Creek
	Area to Remain Under Permanente Quarry Reclamation Plan Until Needed by Stevens Creek Quarry	±7 acres		Power Line
	100-foot Power Line Easement			Building



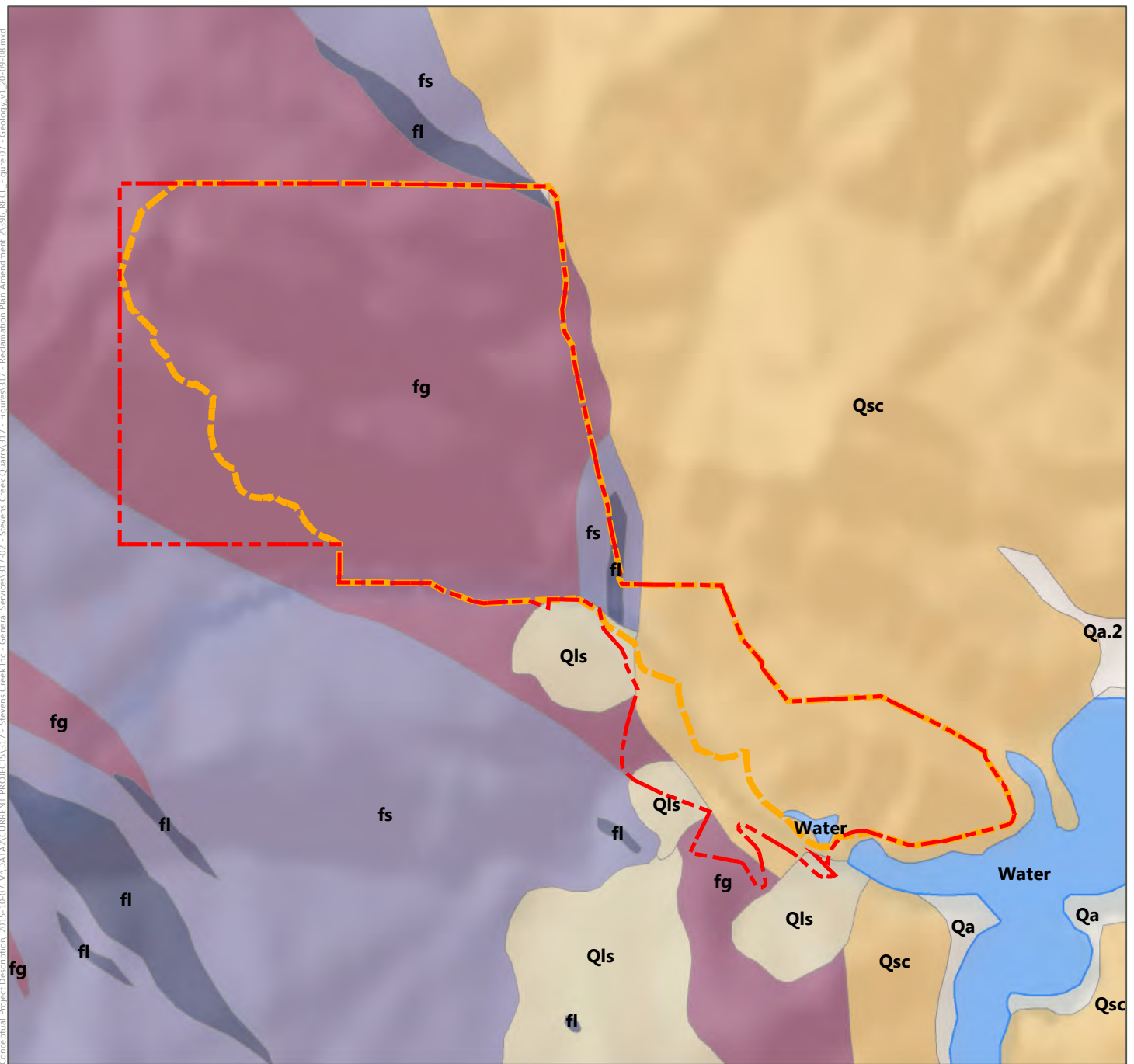
SOURCES: ESRI World Shaded Relief accessed Sept. 2020, U.S. Department of Agriculture Natural Resources Conservation Service Web Soils Survey, accessed Sept. 2020; adapted by Benchmark Resources in 2020

Site Boundary Reclamation Plan/Surface Disturbance Boundary



Map Units

325 Airship-Minlum complex, 40 to 65 percent slopes	566 Mouser-Katykat-Sanikara complex, 50 to 75 percent slopes
570 Footpath-Mouser complex, 50 to 75 percent slopes	520 Mouser-Maymen complex, 30 to 75 percent slopes
569 Katykata-Sanikara complex, 8 to 30 percent slopes	115 Pits, mine
DAM Large dams	576 Sanikara-Footpath complex, 30 to 75 percent slopes
320 Literr-Merbeth complex, 15 to 30 percent slopes	W Water
321 Merbeth-Literr complex, 30 to 65 percent slopes	

Conceptual Project Description, 2015-10-07, \\VADATA\CURRENT PROJECTS\317 - Stevens Creek Quarry\317 - Figures\317 - Reclamation Plan Amendment 2\396 RECL Figure 07 - Geology v1 20-09-08.mxd



SOURCES: ESRI World Shaded Relief accessed Sept. 2020, National Geologic Map Database, Cupertino & San Jose West Quadrangles, 2007; digitized and compiled by Benchmark Resources in 2020

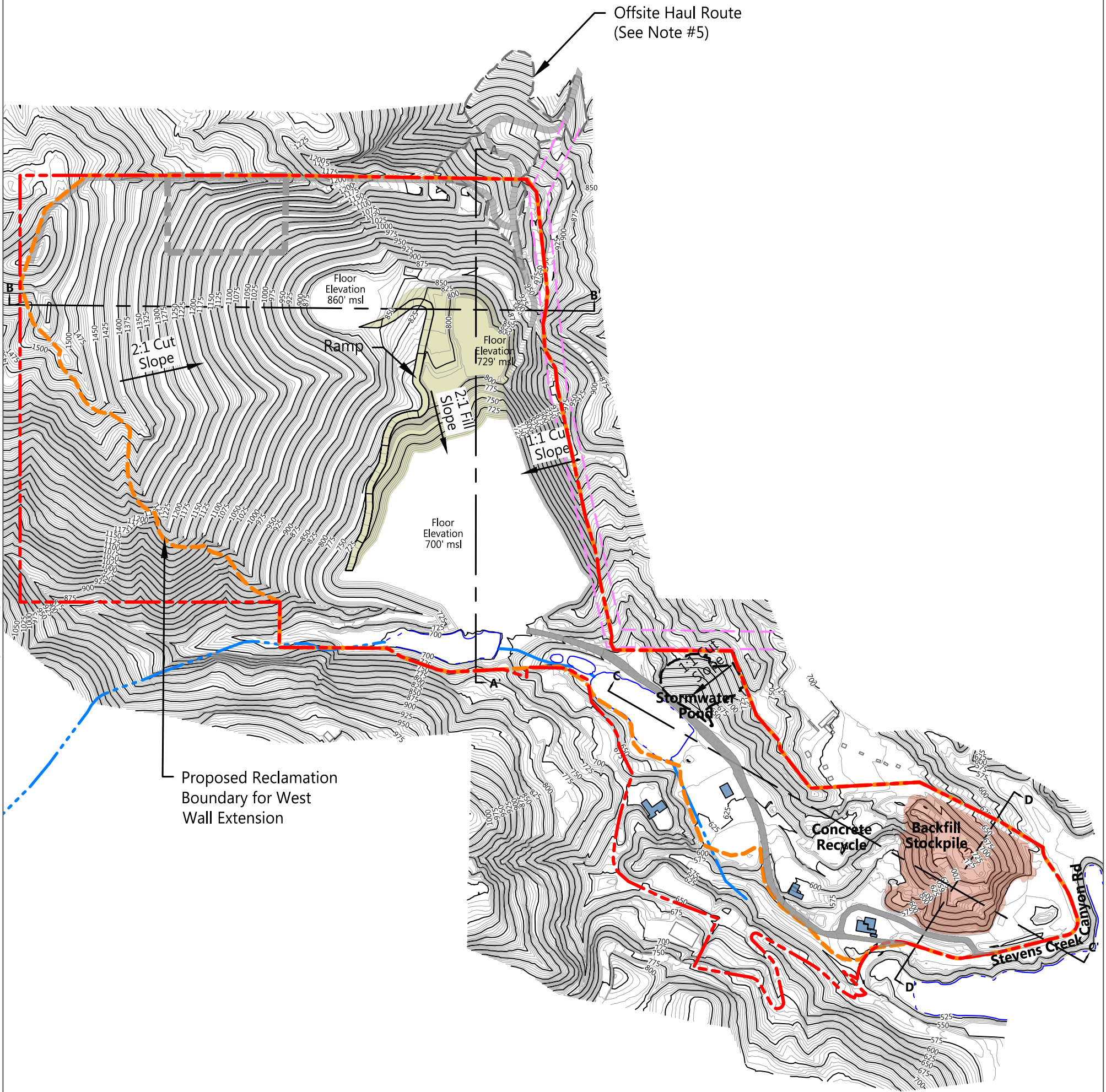
 Site Boundary  Reclamation Plan/Surface Disturbance Boundary

Map Units

fg Franciscan Assemblage, greenstone
fl Franciscan Assemblage, limestone
fs Franciscan Assemblage, sandstone
Qls Landslide Debris

Qsc Santa Clara Formation/Nonmarine Sedimentary Rocks
Qa Surficial Sediments
Qa.2 Surficial Sediments, younger stream alluvium
Water Water

D:\BENCHMARK CURRENT PROJECT\317 - Stevens Creek Quarry\317 - General Services\317-02 - Stevens Creek Quarry\317 - Figures\317 - Reclamation Plan Amendment 2

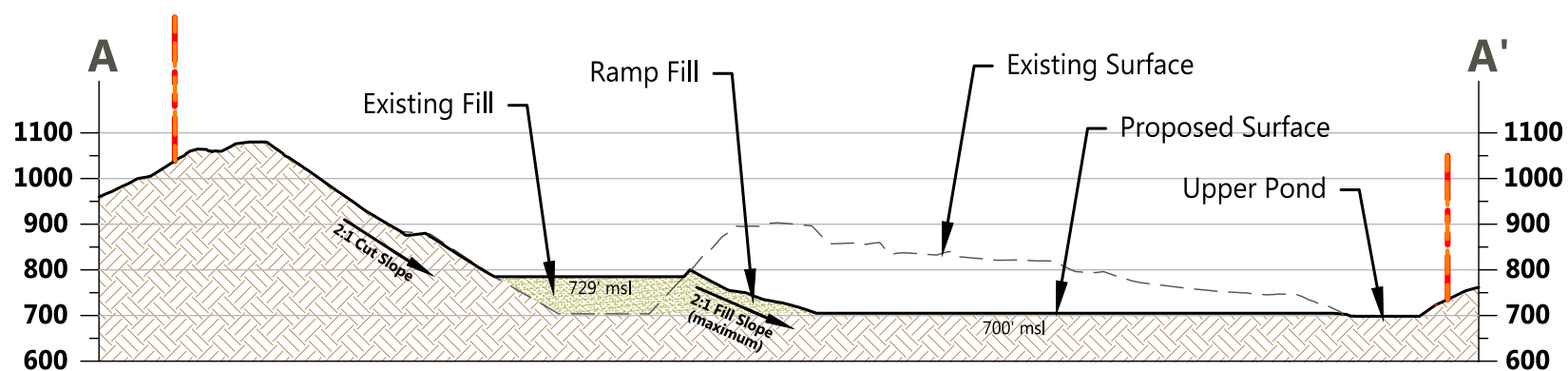


SOURCE: Topography—Muir Consulting, Inc., flown 6-18-2020; mine plan compiled by Benchmark Resources in 2020

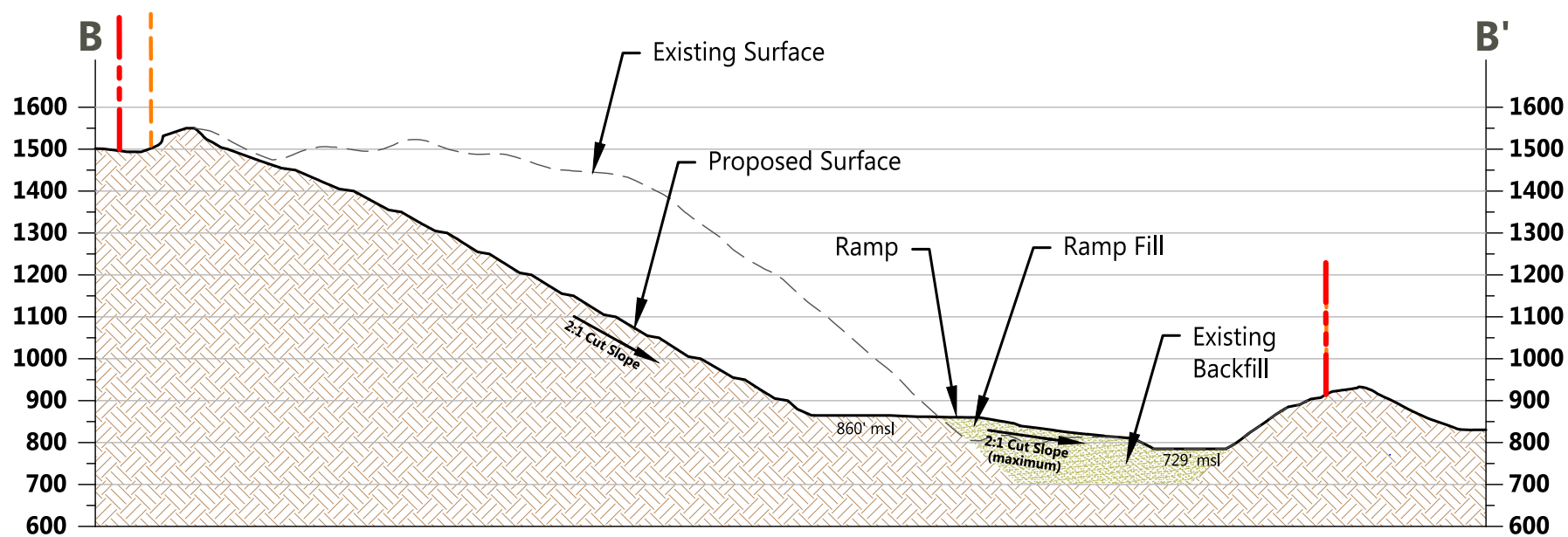
NOTES:

1. Mining Slope: 2h:1v overall cut slope angle.
2. East Wall Slope: 1h:1v overall cut slope angle.
3. Stormwater Pond Slope: 2h:1v overall cut slope angle.
4. Grading offset from site boundary a minimum of 25'.
5. See Permanente Quarry Amended Reclamation Plan, May 2019 for Off-highway Materials Haul Route.
6. Contour interval = 5'-minor, 25'-major.
7. "msl" = mean sea level.
8. See Figure 9 for cross sections shown.
10. See Sheet 2 for mine plan Professional Engineer and Professional Geologist stamp and signature.
11. Material reviewed and utilized to prepare this conceptual design included orthophotography and topography prepared by Muir Consulting, Inc., flown on 6-18-2020.

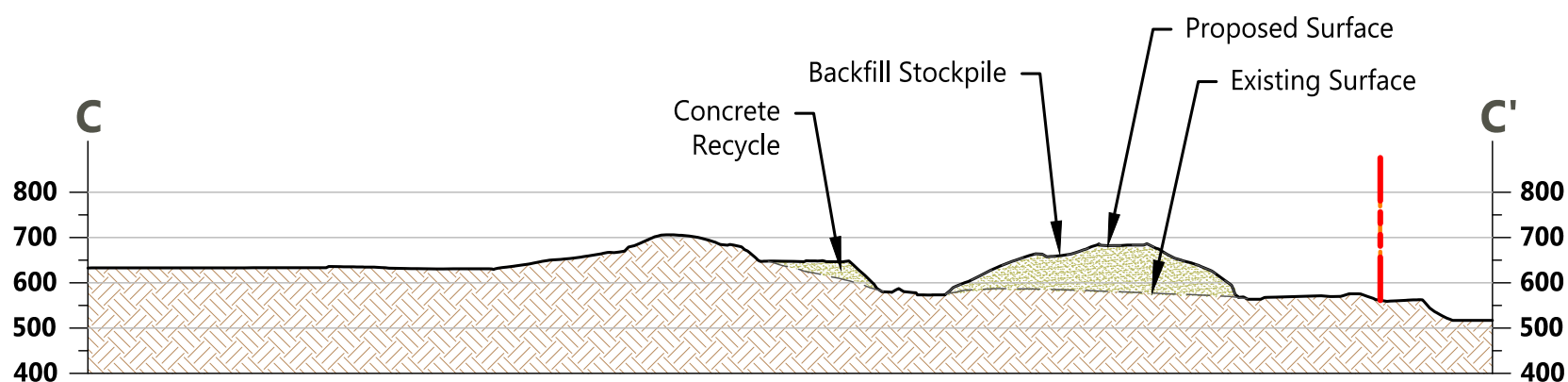
	Site Boundary	±250 acres		Access Road
	Reclamation Plan/ Surface Disturbance Boundary	±210 acres		Water Border
	Area to Remain Under Permanent Quarry Reclamation Plan Until Needed by Stevens Creek Quarry	±7 acres		Swiss Creek Cross Section
	100-foot Power Line Easement			Building
	Existing/Ramp Fill Area	±13 acres		
	Backfill Stockpile Area	±10 acres		



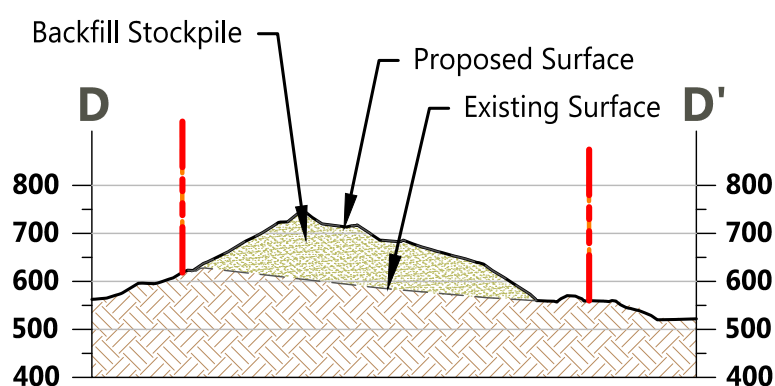
CROSS SECTION A-A'



CROSS SECTION B-B'



CROSS SECTION C-C'



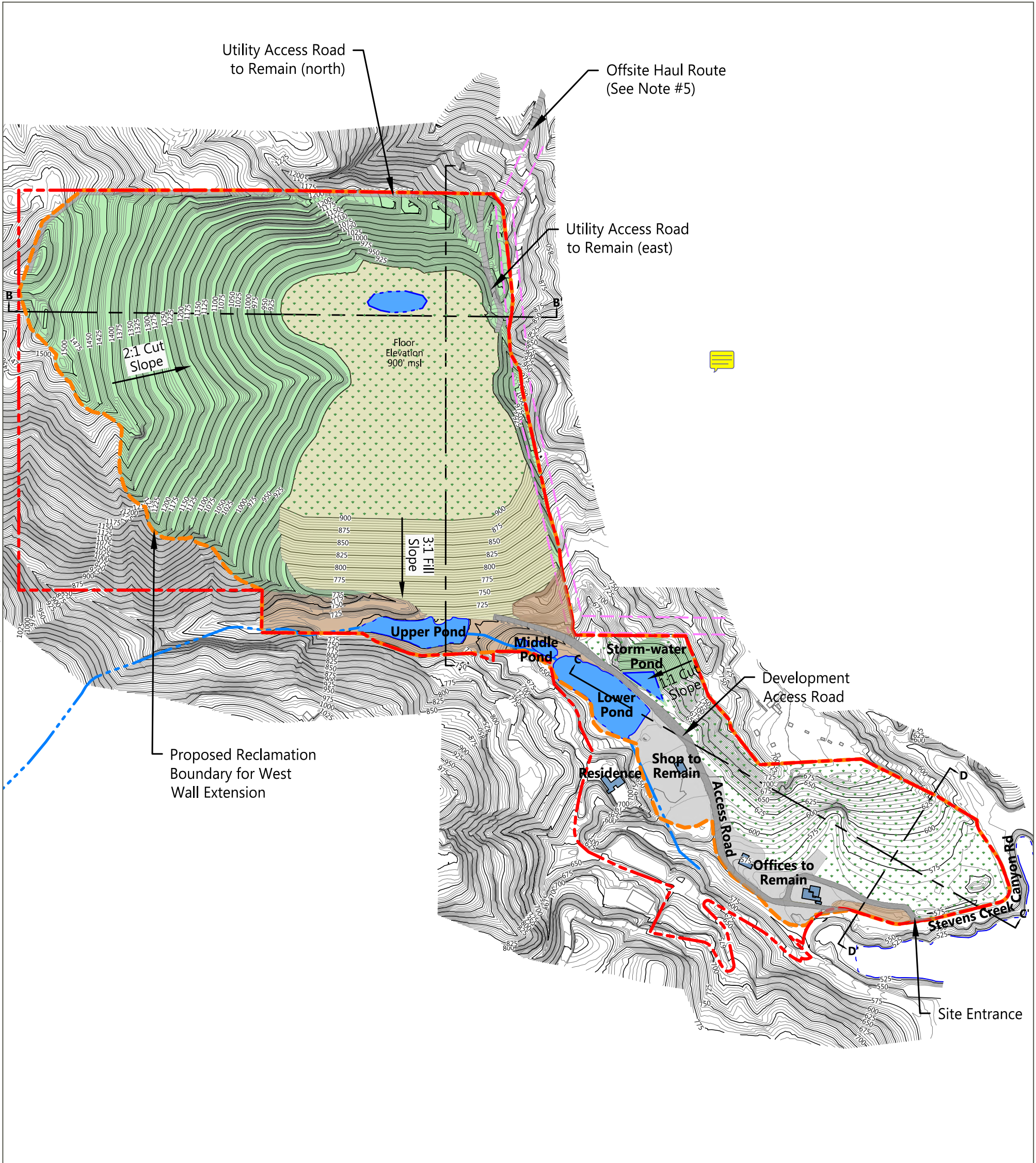
CROSS SECTION D-D'

SOURCE: Topography—Muir Consulting, Inc., flown 6-18-2020; mine plan compiled by Benchmark Resources in 2020

NOTES:

1. Mining Slope: 2h:1v overall cut slope angle.
2. East Wall Slope: 1h:1v overall cut slope angle.
3. "msl" = mean sea level.
4. See Figure 8 for cross section locations shown.
5. See Sheet 3 for mine plan cross sections Professional Engineer and Professional Geologist stamp and signature.
6. Material reviewed and utilized to prepare this conceptual design included orthophotography and topography prepared by Muir Consulting, Inc., flown on 6-18-2020.

	Site Boundary	±250 acres
	Reclamation Plan/ Surface Disturbance Boundary	±210 acres



SOURCE: Topography–Muir Consulting, Inc., flown 6-18-2020; mine plan compiled by Benchmark Resources in 2020

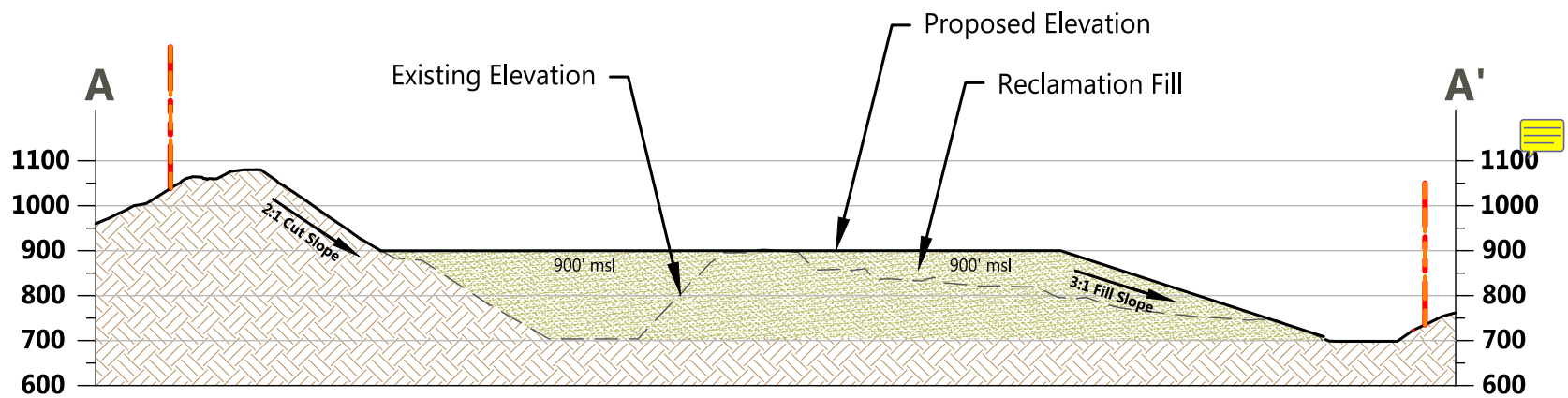
NOTES:

1. Mining Slope: 2h:1v overall cut slope angle.
2. East Wall Slope: 1h:1v overall cut slope angle.
3. Fill Slope: 3h:1v overall fill slope angle.
4. Grading offset from site boundary a minimum of 25'.
5. See Permanente Quarry Amended Reclamation Plan, May 2019 for Off-highway Materials Haul Route.
6. Contour interval = 5'-minor, 25'-major.
7. "msl" = mean sea level.
8. See Figure 11 for cross sections shown.
6. See Sheet 4 for reclamation plan Professional Engineer and Professional Geologist stamp and signature.
7. Material reviewed and utilized to prepare this conceptual design included orthophotography and topography prepared by Muir Consulting, Inc., flown on 6-18-2020.

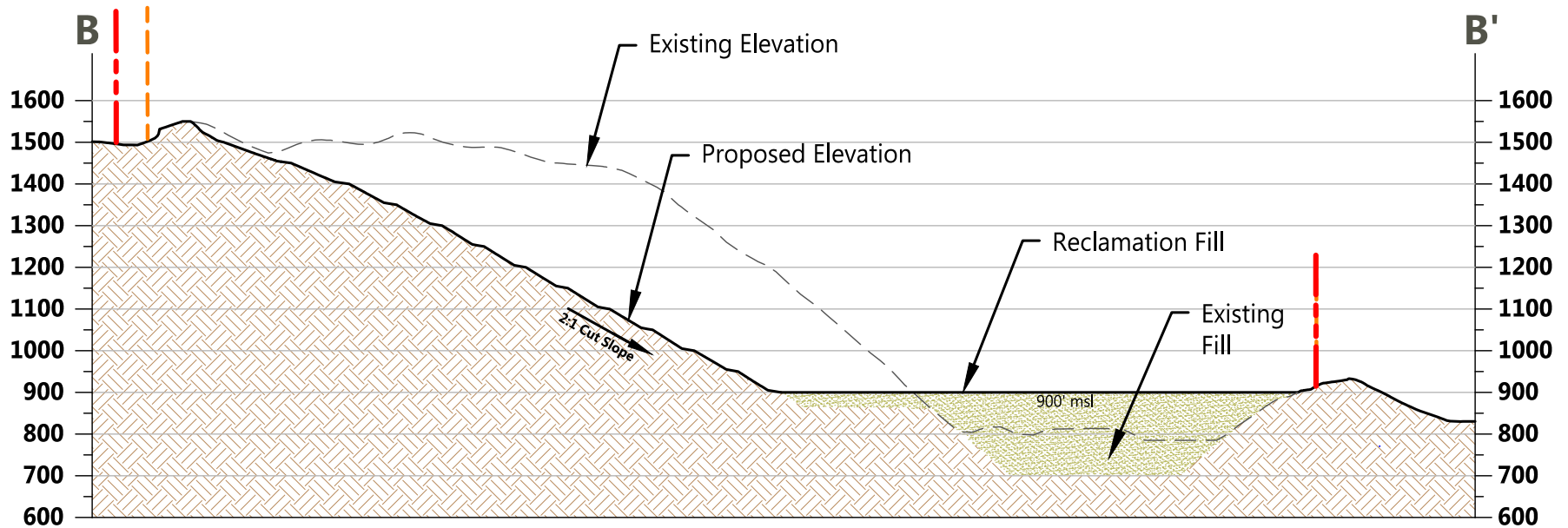
	Site Boundary	±250 acres
	Reclamation Plan/Surface Disturbance Boundary	±210 acres
	100-foot Power Line Easement	
	Swiss Creek	
	Cross Section	
	Building	

Reclamation	
	Grasses & Herbs (not on Backfill) ±30 acres
	Backfill (no revegetation) ±20 acres
	Backfill w/ Grasses & Herbs ±39 acres
	Grasses, Herbs, & Shrubs ±90 acres
	Development and Buildings to Remain ±9 acres
	Undisturbed ±8 acres
	Stormwater Pond ±7 acres
	Roads to Remain ±7 acres

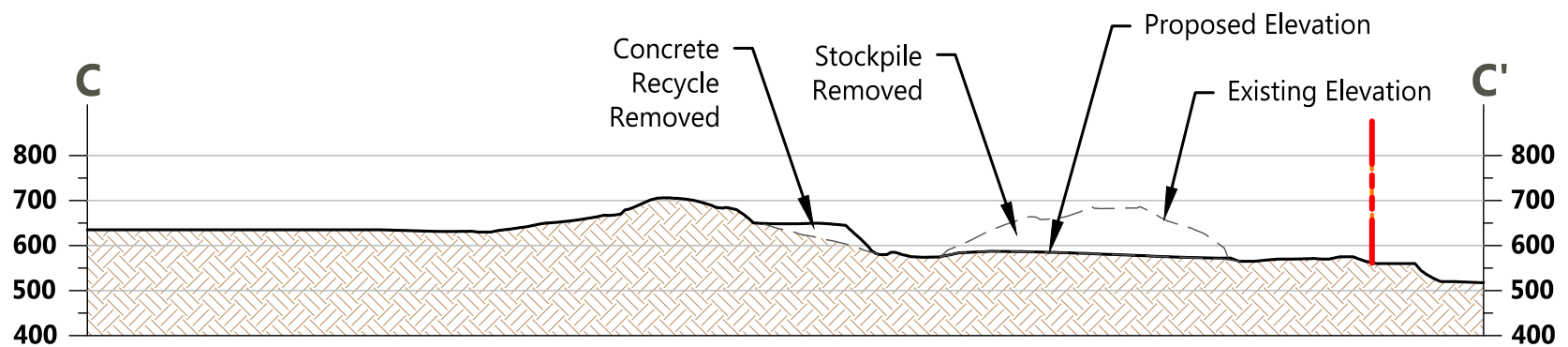
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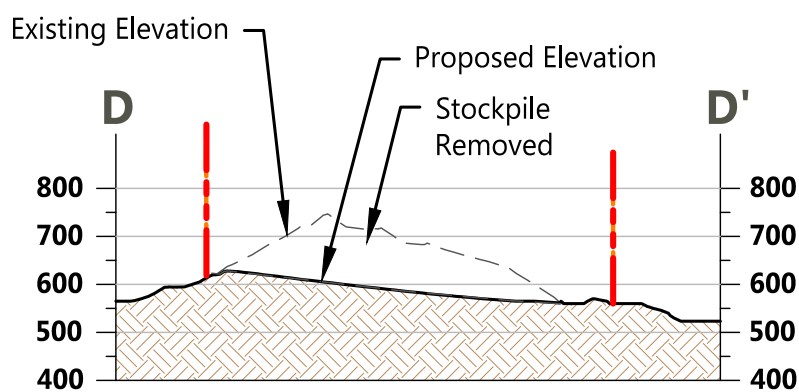
CROSS SECTION A-A'



CROSS SECTION B-B'



CROSS SECTION C-C'



CROSS SECTION D-D'

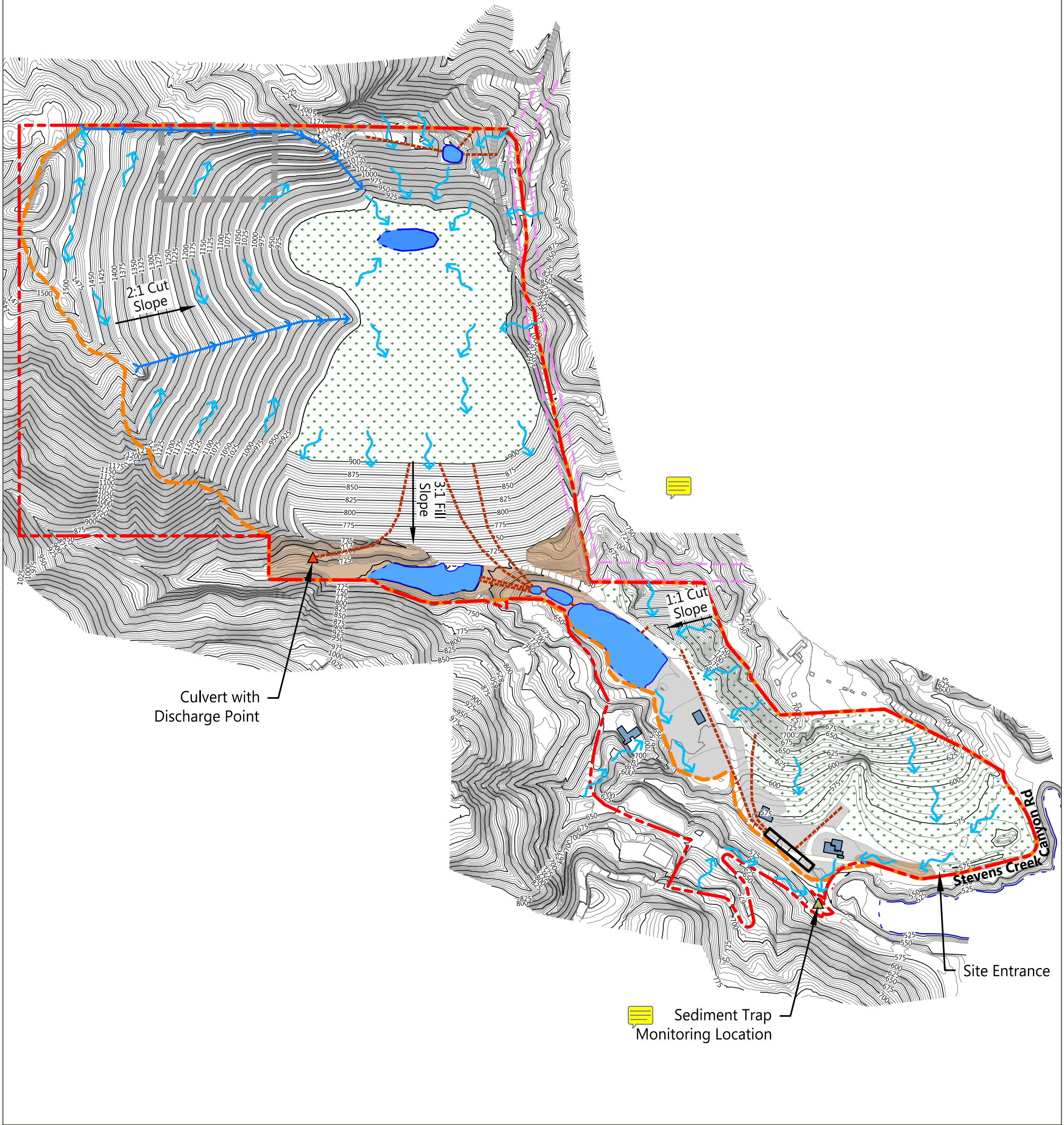
SOURCE: Topography-Muir Consulting, Inc., flown 6-18-2020; mine plan compiled by Benchmark Resources in 2020

NOTES:

1. Mining Slope: 2h:1v overall cut slope angle.
2. East Wall Slope: 1h:1v overall cut slope angle.
3. Fill Slope: 3h:1v overall fill slope angle.
4. "msl" = mean sea level.
5. See Figure 10 for cross section locations shown.
5. See Sheet 5 for reclamation plan cross sections Professional Engineer and Professional Geologist stamp and signature.
6. Material reviewed and utilized to prepare this conceptual design included orthophotography and topography prepared by Muir Consulting, Inc., flown on 6-18-2020.

--- Site Boundary ±250acres
--- Reclamation Plan/
Surface Disturbance Boundary ±210 acres

D:\BENCHMARK CURRENT PROJECT\317 - Stevens Creek Quarry\317 - Figures\317 - Reclamation Plan Amendment 2



SOURCE: Topography—Muir Consulting, Inc., flown 6-18-2020; mine plan compiled by Benchmark Resources in 2020

NOTES:

1. Mining Slope: 2h:1v overall cut slope angle.
2. East Wall Slope: 1h:1v overall cut slope angle.
3. Fill Slope: 3h:1v overall cut slope angle.
4. Grading offset from site boundary a minimum of 25.'
5. See Permanente Quarry Amended Reclamation Plan, May 2019 for Off-highway Materials Haul Route.
6. Contour interval = 5'-minor, 25'-major.
7. "msl" = mean sea level.
8. Material reviewed and utilized to prepare this conceptual design included orthophotography and topography prepared by Muir Consulting, Inc., flown on 6-18-2020.

- | | | | |
|--|---|--|-----------------------------------|
| | Property Boundary | | Culvert |
| | Reclamation Plan/
Surface Disturbance Boundary | | V-Ditch |
| | Area to Remain Under Permanent
Quarry Reclamation Plan Until
Needed by Stevens Creek Quarry | | Concrete Drainage Box |
| | 100-foot Power Line Easement | | Water Flow Direction |
| | Roads to Remain | | Discharge Point |
| | | | Sediment Trap Monitoring Location |
| | | | Storm-water Pond |

DA BENCHMARK CURRENT PROJECT 317 - Stevens Creek Inc - General Services 317.02 - Stevens Creek Quarry 317 - Figures 317 - Reclamation Plan Amendment 2



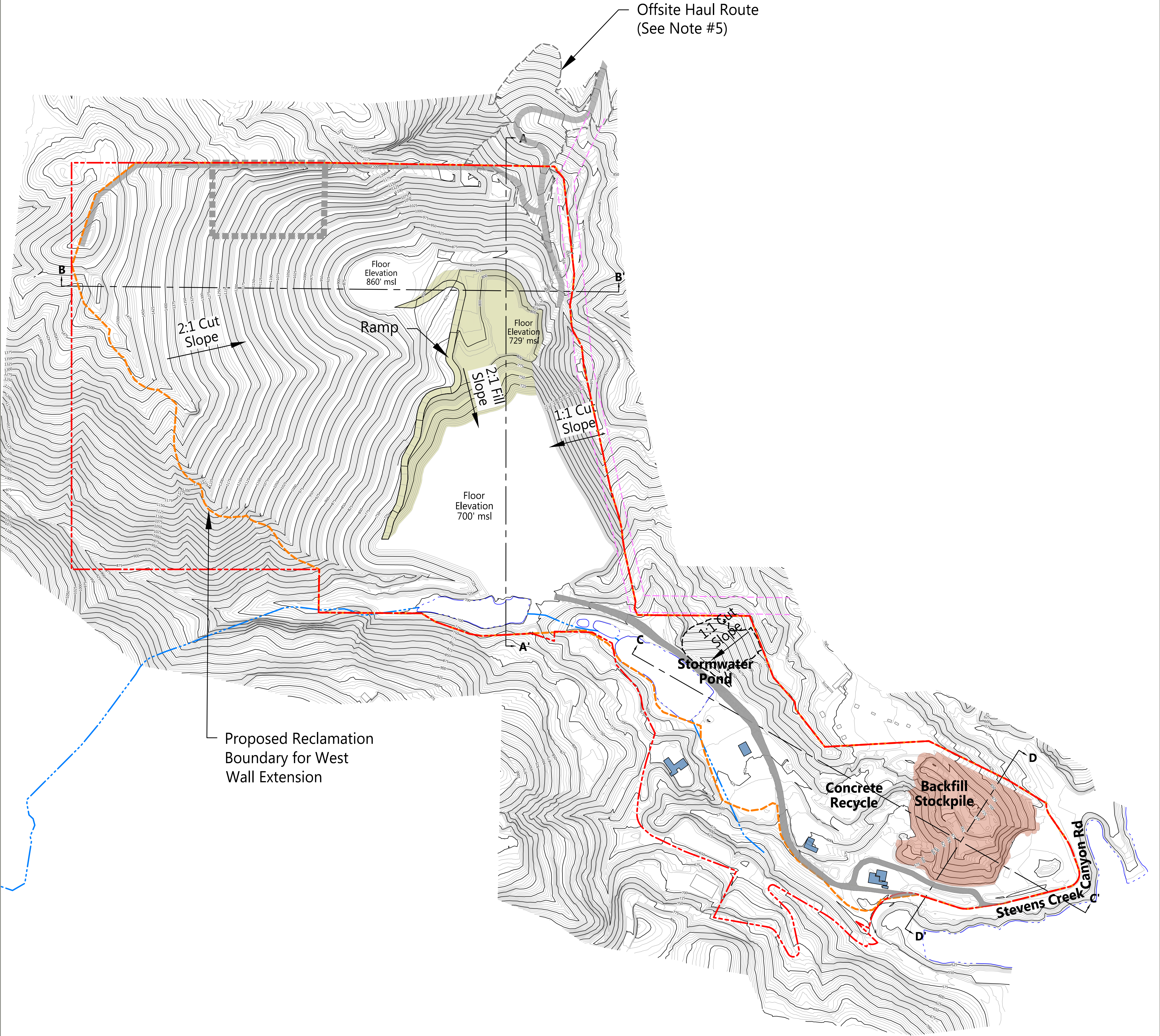
SOURCE: Aerial-Muir Consulting Inc, flown 8-13-2020; compiled by Benchmark Resources in 2020

- NOTES:
1. Material reviewed and utilized to prepare reclamation plan boundary was informed by orthophotography and survey data prepared by Muir Consulting, Inc., flown on 6-18-2020.
 2. See Appendix D for stamped and signed Professional Surveyor boundary and topography.

Professional Stamp & Signature

Site Boundary	±250 acres	Access Road
Reclamation Plan/ Surface Disturbance Boundary	±210 acres	Water Border
Area to Remain Under Permanente Quarry Reclamation Plan Until Needed by Stevens Creek Quarry	±7 acres	Swiss Creek
100-foot Power Line Easement		Cross Section
Existing/Ramp Fill Area	±13 acres	Building
Backfill Stockpile Area	±10 acres	

D:\BENCHMARK CURRENT PROJECT\317 - Stevens Creek Quarry\317 - Figures\317 - Reclamation Plan Amendment 2



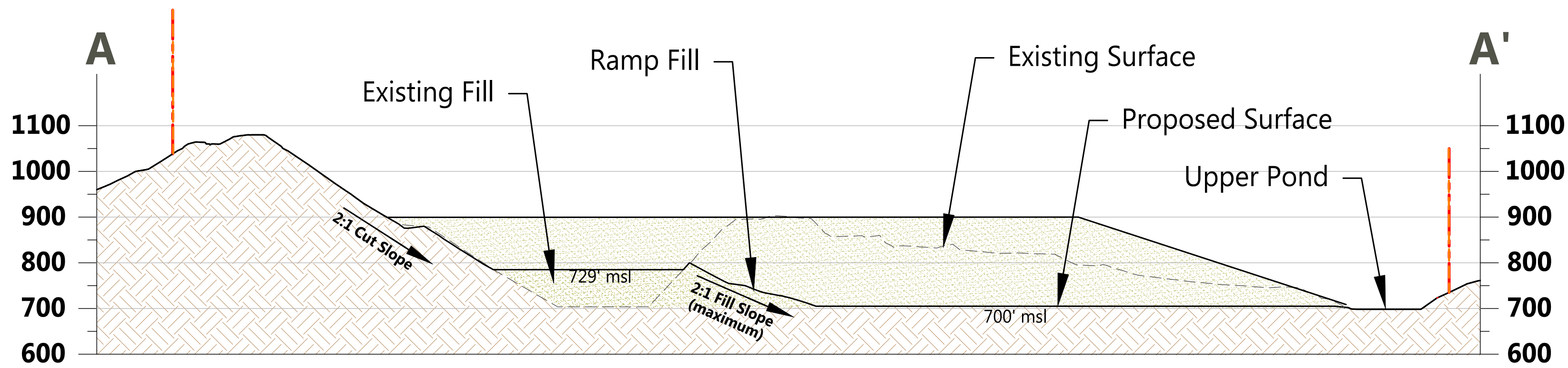
- SOURCE: Topography—Muir Consulting, Inc., flown 6-18-2020; mine plan compiled by Benchmark Resources in 2020
- NOTES:
1. Mining Slope: 2h:1v overall cut slope angle.
 2. East Wall Slope: 1h:1v overall cut slope angle.
 3. Storm Water Pond Slope: 2h:1v overall cut slope angle.
 4. Grading offset from site boundary a minimum of 25'.
 5. See Permanente Quarry Amended Reclamation Plan, May 2019 for Off-highway Materials Haul Route.
 6. Contour interval = 5'-minor, 25'-major.
 7. "msl" = mean sea level.
 10. See Sheet 3 for cross sections shown.
 11. See Appendix D for stamped and signed Professional Surveyor boundary and topography.
 12. Access roads, buildings, water supply and power to remain for ongoing and future land uses following mine reclamation.
 13. While this plan reflects best available data, mine development may vary due to actual geologic conditions encountered, engineering, and other considerations; however the area affected by mining activities would be within the reclamation plan/surface disturbance boundary.

Professional Stamp & Signature

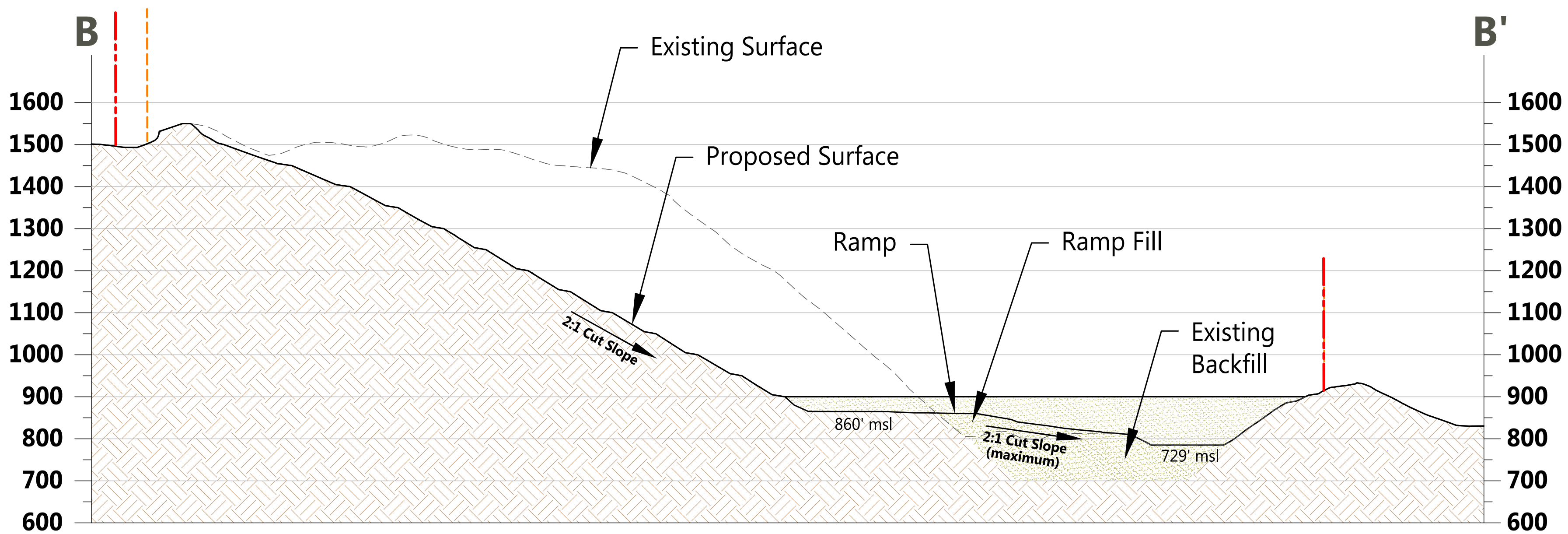


Site Boundary	±250 acres	Access Road
Reclamation Plan/ Surface Disturbance Boundary	±210 acres	Water Border
Area to Remain Under Permanente Quarry Reclamation Plan Until Needed by Stevens Creek Quarry	±7 acres	Swiss Creek
100-foot Power Line Easement		Cross Section
Existing/Ramp Fill Area	±13 acres	Building
Backfill Stockpile Area	±10 acres	

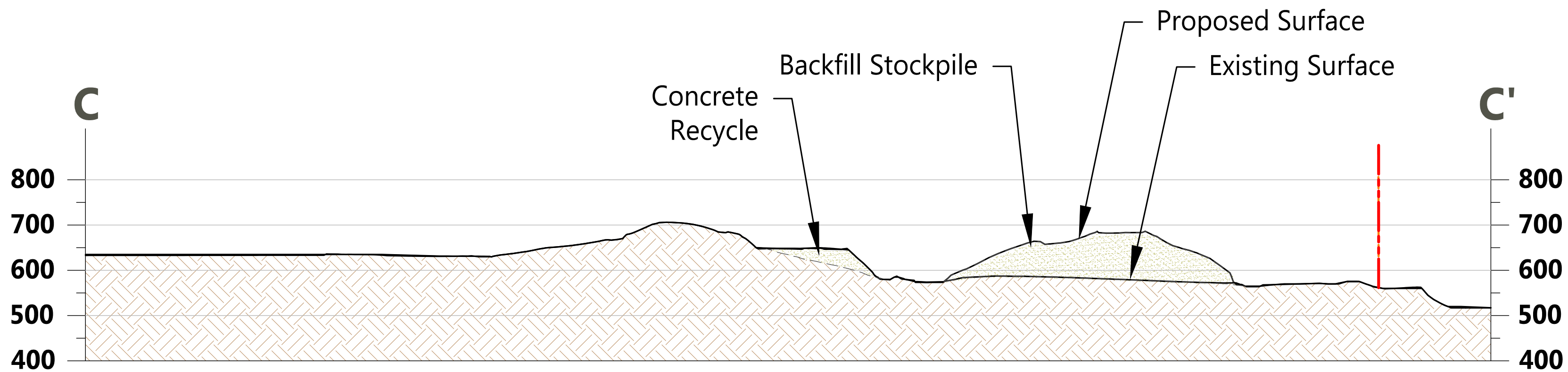
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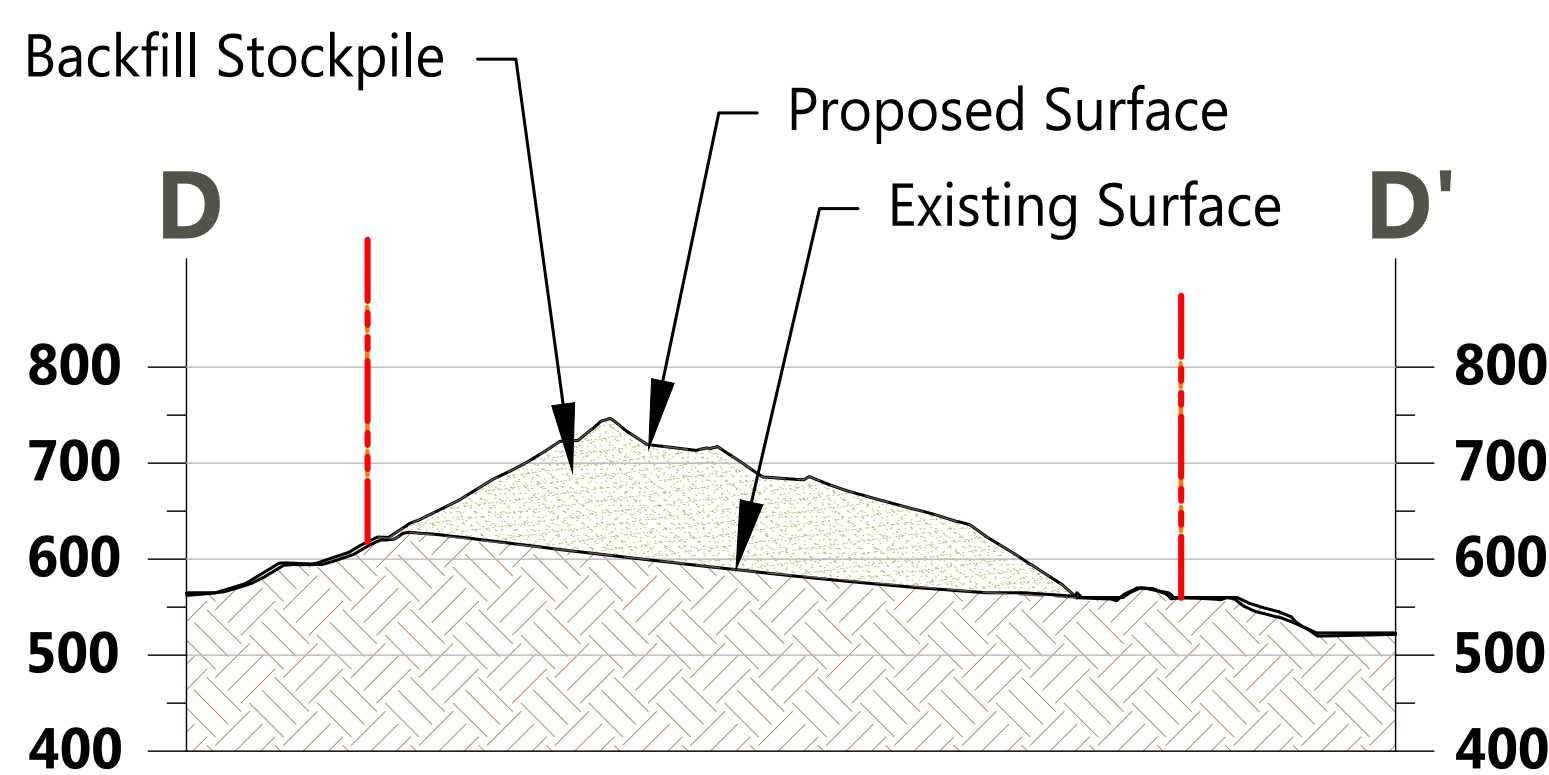
CROSS SECTION A-A'



CROSS SECTION B-B'



CROSS SECTION C-C'



CROSS SECTION D-D'

SOURCE: Topography—Muir Consulting, Inc., flown 6-18-2020; mine plan compiled by Benchmark Resources in 2020

NOTES:

Mine design assumptions and parameters:

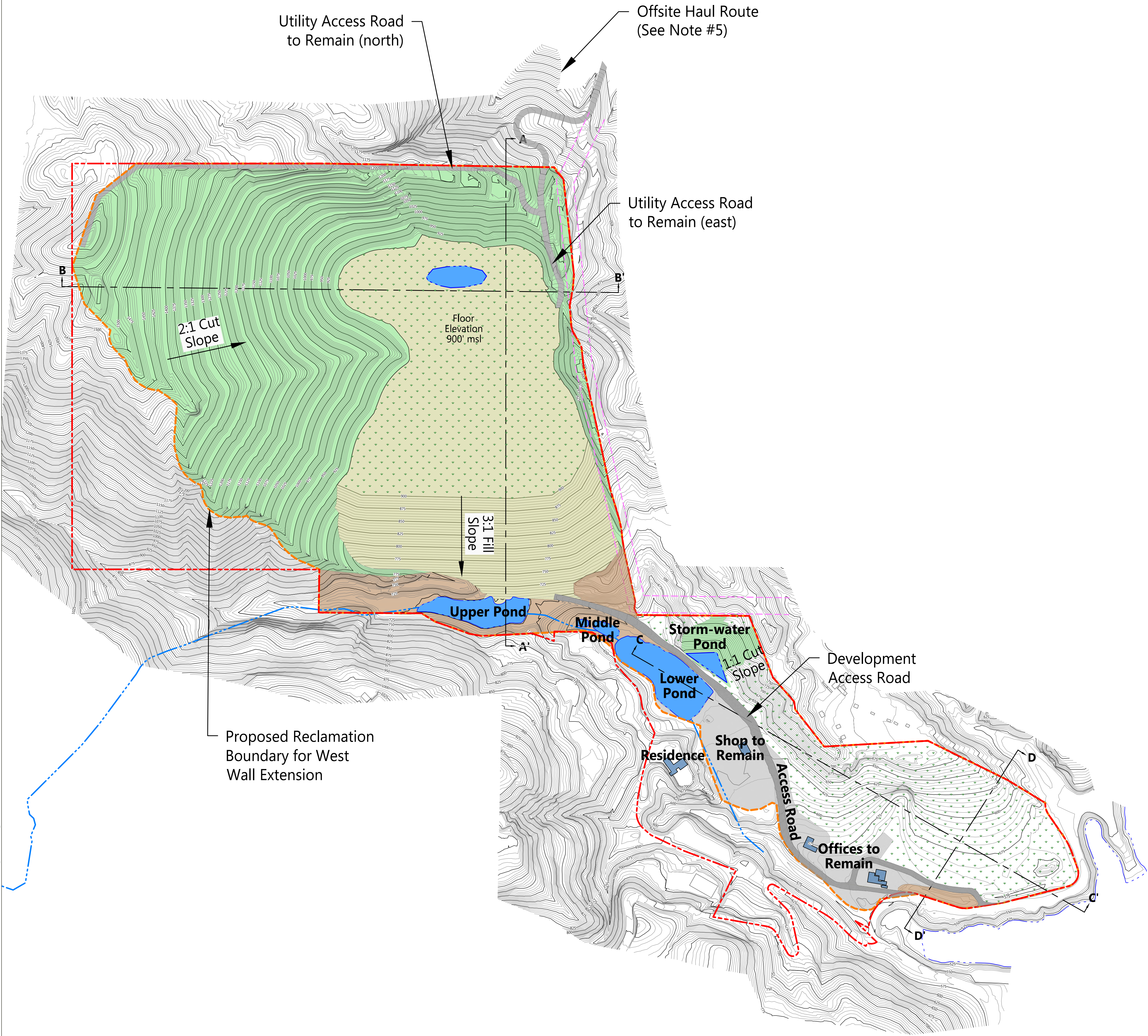
1. Mining Slope: 2h:1v overall cut slope angle.
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3. "msl" = mean sea level.
4. See Sheet 2 for cross section locations shown.
5. See Appendix D for stamped and signed Professional Surveyor boundary and topography.
6. Material reviewed and utilized to prepare this conceptual design included orthophotography and topography prepared by Muir Consulting, Inc., flown on 6-18-2020.
7. While this plan reflects best available data, mine development may vary due to actual geologic conditions encountered, engineering, and other considerations; however the area affected by mining activities would be within the reclamation plan/surface disturbance boundary.

Professional Stamp & Signature



--- Site Boundary ±250 acres
--- Reclamation Plan/Surface Disturbance Boundary ±210 acres

D:\BENCHMARK CURRENT PROJECT\317 - Stevens Creek Quarry\317 - Figures\317 - Reclamation Plan Amendment 2



- SOURCE: Topography—Muir Consulting, Inc., flown 6-18-2020; mine plan compiled by Benchmark Resources in 2020
- NOTES:
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 2. East Wall Slope: 1h:1v overall cut slope angle.
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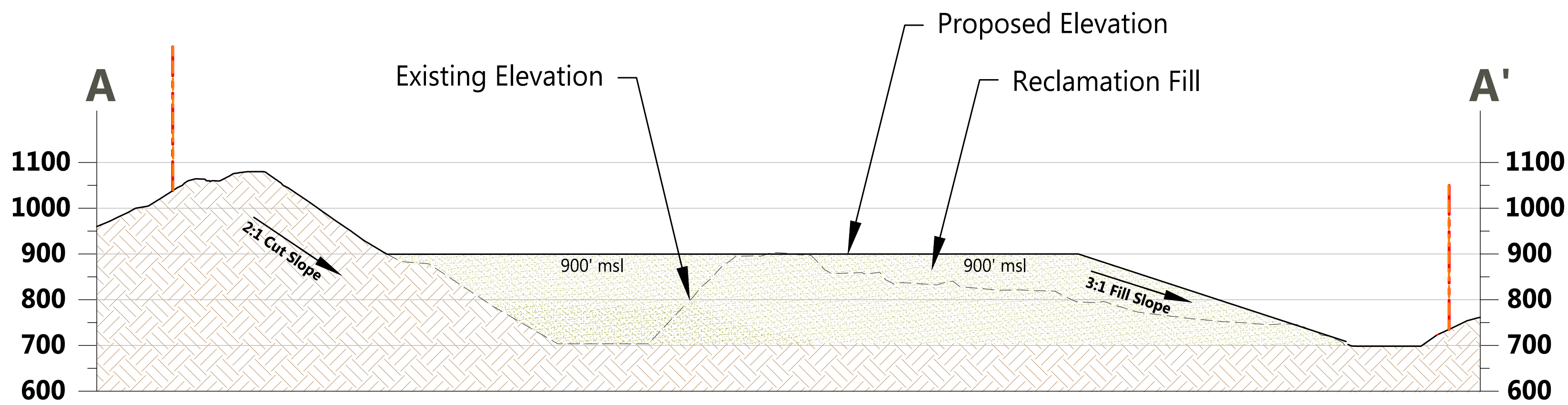
Professional Stamp & Signature

- Site Boundary
- Reclamation Plan/
Surface Disturbance Boundary
- 100-foot Power Line Easement
- Swiss Creek
- Cross Section
- Building

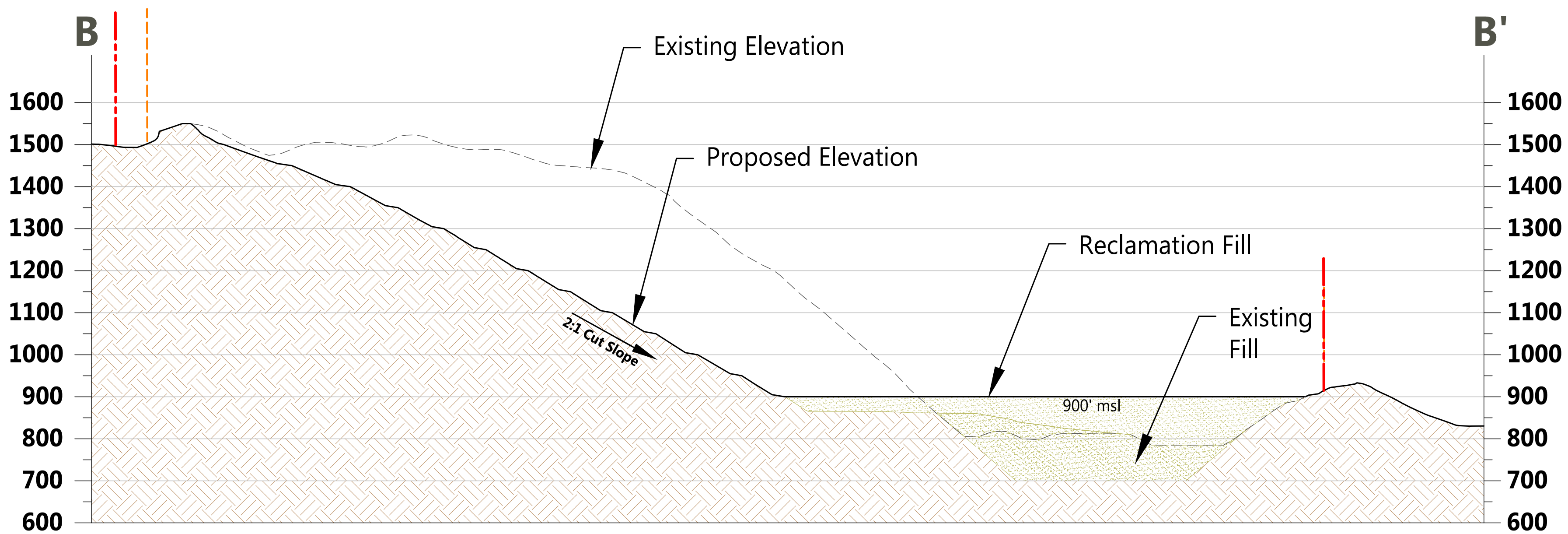
±250 acres
±210 acres

Reclamation		
	Grasses & Herbs (not on Backfill)	±30 acres
	Backfill (no revegetation)	±20 acres
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	Roads to Remain	±7 acres

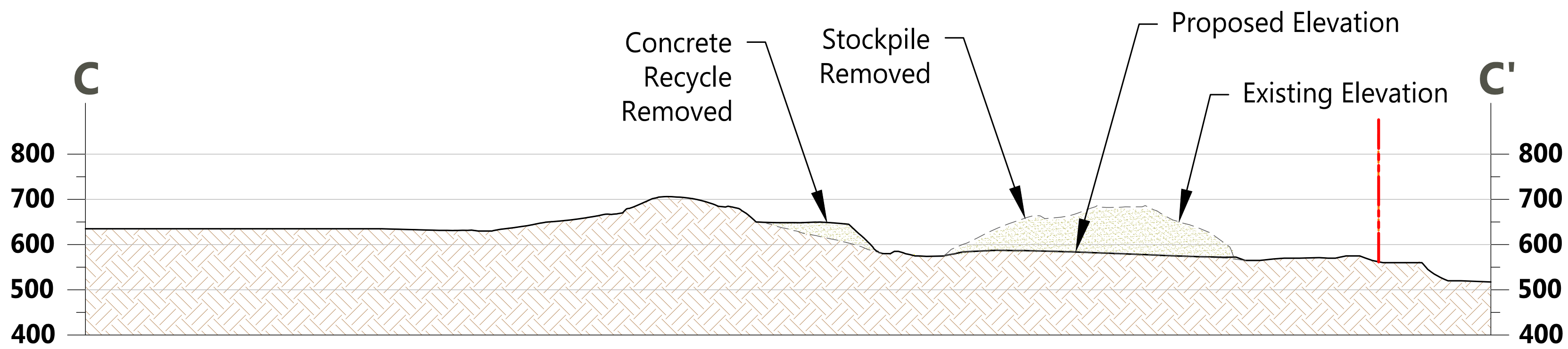
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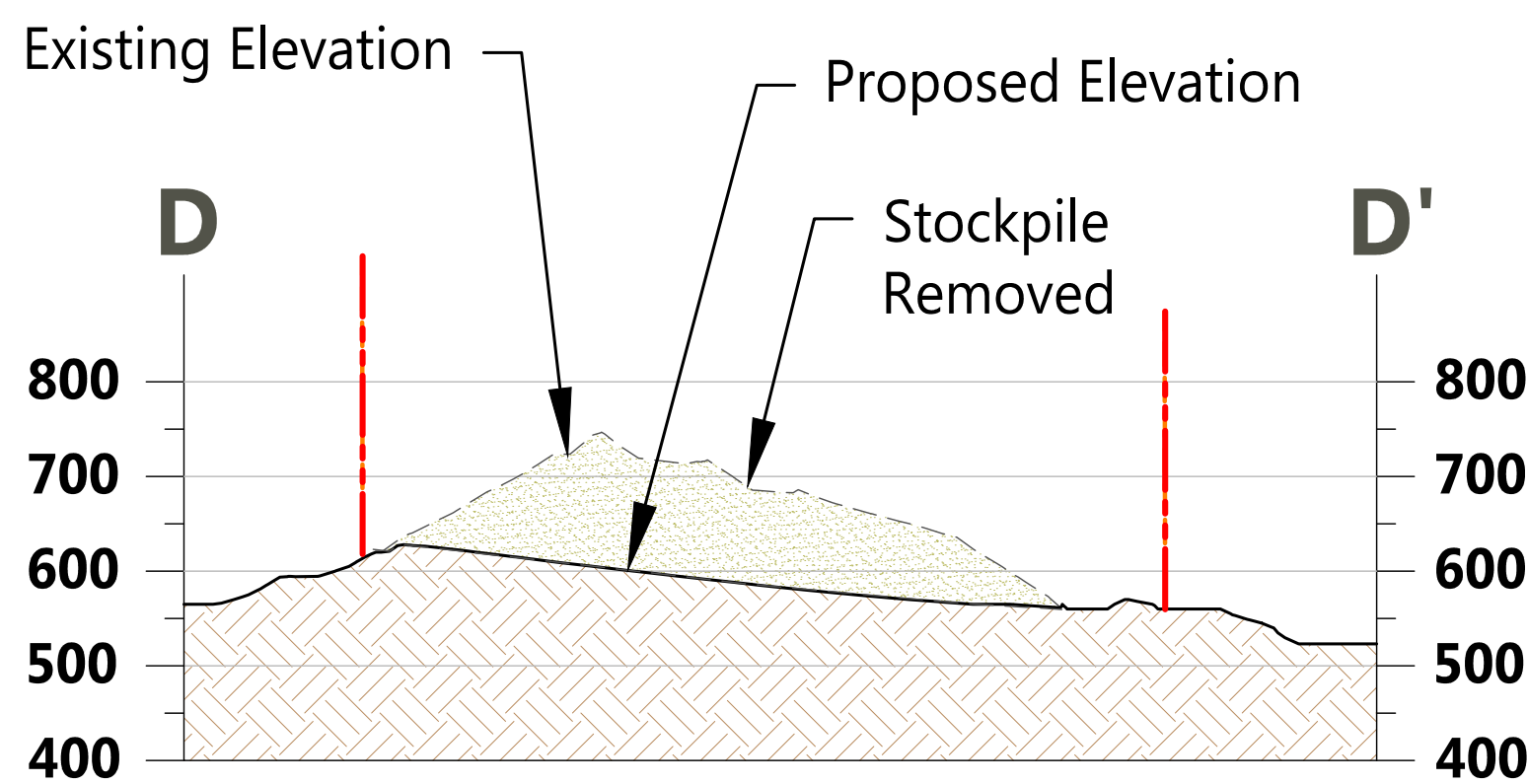
CROSS SECTION A-A'



CROSS SECTION B-B'



CROSS SECTION C-C'



CROSS SECTION D-D'

SOURCE: Topography—Muir Consulting, Inc., flown 6-18-2020; mine plan compiled by Benchmark Resources in 2020

NOTES:

- Mine design assumptions and parameters:
- Mining Slope: 2h:1v overall cut slope angle.
- East Wall Slope: 1h:1v overall cut slope angle.
- Fill Slope: 3h:1v overall fill slope angle.
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Professional Stamp & Signature



--- Site Boundary ±250 acres
--- Reclamation Plan/Surface Disturbance Boundary ±210 acres

REFERENCES AND RESOURCES

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NRCS. *See* U.S. Natural Resources Conservation Service.

City of Cupertino. 2016 (September 20). City of Cupertino Land Use Map. Prepared by the Community Development and GIS Departments. Originally adopted November 15, 2005.

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U.S. Natural Resources Conservation Service. 2015. *Supplement to the Soil Survey of the Santa Clara Area, California, Western Part*. Available: http://soils.usda.gov/survey/printed_surveys/. Accessed September 12, 2018.