

GRANITE CONSTRUCTION COMPANY

~Walltown Quarry Project~

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1.0 INTRODUCTION

Granite Construction Company (“Granite”) is proposing a construction aggregates production facility involving a hardrock surface mining operation (“Quarry”), reclamation, and associated processing facilities. Pending the outcome of the County of Sacramento’s (“County”) Zoning Code update process; a Hot Mix Asphalt (HMA) Plant, Ready-Mix Concrete Plant(s), a Construction Materials Recycle (CMR) Plant, Concrete Products Manufacturing (CPM) facilities, Bagged Aggregate Facility, Roofing Tile Manufacturing Facility, and a Dimension Stone Workshop may be added to the project description. **Walltown Quarry** will replace the existing Bradshaw Facility, which will deplete its reserves in approximately 2010-2012.

Offices housing administrative, operation, equipment, and plants departments that are incidental to the construction aggregates production facility; and an equipment shop are also proposed for the site. The mining operation, processing plants, equipment shop, and offices are collectively referred to as the **Walltown Quarry** project (hereafter, “Walltown” or “Project”). In order to supply the required construction aggregate to meet the increasing regional demand and to provide material to construction projects built at night, which are often required by State and Local Agencies to reduce impacts to traffic patterns, Granite is proposing 24-hour per day operation for all facilities, 365 days per year, except for Union holidays.

Granite’s current leasehold is approximately +/-1,400 acres in size. Approximately 40-acres will be adjusted back to the Landowner via a lot line adjustment (LLA). Therefore, the property within which the Project will be located is +/- 1,360 acres in size, of which only +/- 613 acres will be used for mining, processing, roads, berms, and other associated activities. The Quarry will encompass +/- 350 acres. Primary aggregate processing facilities located north of Carson Creek will encompass +/- 107 acres. The HMA Plant(s), Ready-Mix Concrete Plant(s), a CMR Plant, CPM facilities, Bagged Aggregate Facility, Roofing Tile Plant, and a Dimension Stone Workshop, which may be located adjacent to the primary processing facilities, pending the County’s Zone Code update process, are expected to occupy approximately +/- eighty-six (86) acres. On-site roads, berms, landscaping, and bridges will occupy +/- fifty-two (52) acres. The quarry shop will be located on +/- five (5) acres and the potential water treatment facility will use approximately thirteen (13) acres. (See **Exhibit 8. Project Overview.**)

Granite has requested that the Zoning Code be amended to allow ancillary facilities (i.e., HMA Plant(s), Ready-Mix Concrete Plant(s), a CMR Plant, CPM facilities, and Dimension Stone Workshop) as permitted uses under the Surface Mining (SM) zone designation with an approved conditional use permit (CUP). If approved, the scope and nature of this Project and the entitlements requested will be modified accordingly. The County has circulated a Staff Report and the Zoning Code should go to hearing in late 2007.

1.1 Setting

The property is currently designated General Agriculture (80-acres) on the Sacramento County General Plan and has a zoning designation of AG-80. A Surface Mining (SM) overlay is being requested for the entire Project site. (See **Exhibit 7. Rezone Exhibit.**)

An amendment to the General Plan is requested in order to remove the Resource Conservation Area (RCA) designation, which covers approximately 960-acres of the 1,360-acre site, and to add the Aggregate Resource Area (ARA) designation over the entire 1,360-acre site. (See **Exhibit 6. General Plan Amendment Exhibit.**) It is important to note that the purpose of the removal of the RCA designation is due to its inconsistency with the requested SM zoning overlay. The Project has been carefully planned to avoid major oak groves on the site, the major creek corridors, and to minimize impacts to other natural resources.

1.1.1 Regional Location

The Project site is bordered on all sides by open grasslands and is generally located approximately 1.5 miles south of White Rock Road, east of Scott Road, and west of the Sacramento/El Dorado County Line. Carson Creek traverses the Project site, but will not be disturbed by the Project. (See **Exhibit 1. Regional Map.**) The four nearest residences are located approximately 1.2-miles (Barton Family residence), 1.4-miles (Payen Family residence), 1.8-miles (Wilson Family residence), and 2.1-miles (Mehrtens Family residence) from the proposed Quarry. (See **Exhibit 2. Project Location Map.**)

1.1.2 Project Location

The proposed construction aggregates production facility, equipment shop, offices, and other manufacturing facilities would be located on three (3) contiguous assessors parcels of rural land south of White Rock Road and east of Scott Road, in east Sacramento County. The Project consists of 1,360-acres of undeveloped rangeland located within the County of Sacramento ("County") identified by assessor's parcel numbers (ANPs) 072-0110-045, 072-0110-065 and 073-0020-008. (See **Exhibit 2. Project Location Map.**)

The topography of the site varies from gradual slope to steep creek cutbanks and drainages. Elevation (relative to mean sea level) across the site ranges from approximately +240-feet to +420-feet. Carson Creek bisects a portion of the western and northern sections of the property. Numerous dirt access roads are currently present across the property.

1.1.3 Land Use

The Project site consists predominantly of non-native grassland with seasonal wetlands and native oak trees (blue oaks and interior live oak) scattered throughout. Carson Creek traverses the Project site, generally flowing east to west. The land is currently used for seasonal cattle grazing and does not contain any prime farmland, farmland of statewide importance, unique farmland, nor farmland of local importance. After mining has been completed, the Quarry will be reclaimed as a "Reclamation Lake." A portion of the property (i.e., ANPs 072-0110-045 and 073-0020-008) is currently managed under a Williamson Act Conservation Act contract, which allows for the removal of sand, gravel, and other materials. A Notice of Non-Renewal was submitted to the County in 2002.

1.1.4 Mine Operator

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1.1.5 Owner(s) of Surface and Mineral Interest of Property

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2.0 BACKGROUND AND PROJECT OBJECTIVES

2.1 Project Justification

Walltown will provide high quality, Portland Concrete Cement (PCC) grade, aggregates to help ensure that the building and infrastructure needs of the Sacramento Market Area (specifically, Sacramento County and Western El Dorado County) continue to be met for the next 75 to 100 years. In addition, the Project will ensure that Granite will continue to have a secured and permitted supply of aggregate materials to meet its projected internal and customer demand for the described market area.

HMA and Ready-Mix Concrete production plants will also be located adjacent to the quarrying and aggregate processing facilities. By locating the finished product plants next to the raw material source, additional reductions in end use product pricing and significant reductions in air emissions are accomplished by decreasing material handling costs and decreased local and regional truck traffic respectively.

Sacramento County will need in excess of 297 million tons (MT), an average of over 11.5 MT annually, of aggregate over the next twenty-five (25) years (2003-2027). Dupras, 1999, Mineral Land Classification: Portland Cement Concrete-Grade Aggregate and Kaolin Clay Resources in Sacramento County, California, California Department of Conservation, Division of Mines and Geology Open-File Report 99-09. (See Appendix I.) This Project will provide a local source of high quality, PCC grade, aggregates in order to respond to this projected demand. Importation of aggregate resources from outside the County would result in the loss of local jobs and tax revenue, increased transportation and material handling costs, increased environmental (air quality), and increased safety impacts related to increased transportation distances. The request for 24-hour operations is compatible with the lack of local residences in the general vicinity of the site and may help to lessen peak hour traffic by dispersing truck trips over a longer period of time each day.

The Project will provide for the retention of existing high-paying jobs as well as the addition of new ones, and will generate local government revenue through its

property and sales tax payments. The County will levy property taxes on the Project site property and onsite equipment. Sales taxes will be generated by sales of aggregate products by the Project, purchases of taxable goods required for Project operations, and purchases of taxable consumer products by employees of the Project.

It is anticipated that the Project will directly employ approximately 75, high-paid, union workers in addition to approximately 25 full salaried staff. The construction aggregate produced from the Project will maintain approximately 500 other craft construction workers and another 100 full salaried staff personal for Granite's Sacramento Area heavy civil construction business. A third party Economic Impact Analysis will be prepared for the Project and submitted under a different cover.

2.1.1 Aggregate Use

PCC grade aggregate, which includes round stone (e.g., natural sand and gravels) and crushed stone, is one of the most basic materials used in the construction industry. Construction grade aggregate is the preferred infrastructure construction material in the County and is used in a myriad of construction projects.

In its loose form, different sizes of aggregate are used for riprap and in foundations such as roads, structures, backfill, pipe bedding, and leach fields. When combined with Portland cement, aggregate can also be used to make Portland Cement Concrete (PCC), which, in turn, is used in a host of construction applications such as roadways, building foundations, aqueducts, dams, schools, hospitals, churches, playgrounds, mass transit facilities, and airport runways. In addition, when crushed and coated with heated asphalt, construction grade aggregate is also used to make hot mix asphalt (HMA), a durable all-weather road and highway surface. Collectively, construction grade aggregate provides 80-96% of the total material volume in these products and, as such, is a fundamental commodity in the construction industry.

2.1.2 Aggregate Demand

Given the widespread use of aggregate in the construction industry, it is not surprising that Sacramento County, like other regions in the Central Valley, requires a substantial and constant supply of high quality, PCC grade, aggregate to meet its ongoing infrastructure and construction needs. The California Department of Conservation (DOC) has estimated that the average annual demand for aggregate in Sacramento County is approximately 7.7 tons per person. (See **Table 4 of Appendix C.**) Projecting that against a known County population of 1,230,700 (US Census 2000), it could have been anticipated that approximately 9.5 MT of construction grade aggregate would have been required to meet the annual needs of Sacramento County in 2000. (10.4 MT of aggregate was actually produced in 2000.) Table I shows the correlation between population and aggregate demand for the Sacramento County

since 1980. Aggregate mine operators were first required by the DOC to report annual production rates in their annual compliance reports in 1980.

Table I. Sacramento County Historical Aggregate Demand

Year	Sacramento County Population	Recorded Aggregate Production (Tons)	Per-Capita Consumption (tons per Person)
1980	787,900	6,484,000	8.23
1982	831,900	4,991,000	6.00
1984	867,400	5,483,000	6.32
1986	914,700	6,924,000	7.57
1988	977,200	8,423,000	8.62
1990	1,049,000	6,476,000	6.17
1992	1,095,700	4,971,000	4.54
1994	1,113,600	6,827,000	6.13
1995	1,117,700	7,241,000	6.48
1996	1,132,100	8,167,000	7.21
1997	1,146,800	9,897,000	8.63
1998	1,166,300	8,068,000	6.92
1999	1,185,800	11,707,000	9.87
2000	1,230,039	10,374,675	8.43
2001	1,266,145	14,405,244	11.38
2002	1,301,621	12,412,710	9.54
2003	1,330,711	12,463,677	9.37

Note: Data from the CA Department of Conservation (SMARA reporting began in 1980)

Moreover, as the County's population increases, there is a corresponding increase in demand for PCC and construction grade aggregate. This increased demand is necessary to satisfy the community's need for growth and is essential for its continued vitality. Dupras at page 13. In the Sacramento region, the population is anticipated to increase significantly over the next twenty years, resulting in a similar increase in the demand for aggregate. (See **Table 5 of Appendix C.**) Therefore, given population projections, available aggregate resources within Sacramento County must be mined to their maximum potential to meet the demand created by this significant influx of new residents.

Sacramento Area Counsel of Governments (SACOG) estimates that Sacramento County's population will reach 1,695,506 by 2025 and 1,942,756 by 2050. SACOG also estimates that El Dorado County's population will reach 194,412 by 2025 and 235,197 by 2050 (SACOG Information Center). The majority of this increase is projected to occur in the Western portion of the County that would potentially be serviced by the Project. Since no aggregate resource is available to the west of the City of Sacramento (Cache Creek producers are already at maximum production), the Project would presumably service all of the Sacramento County. Assuming an annual consumption of

7.7 tons per person, the demand for construction material in the Sacramento Area will be approximately **15 MT per year in 2025 and 17 MT per year by 2050**. Table II compares the projected populations for Sacramento and El Dorado Counties to project aggregate demand.

Table II. Projected Aggregate Demand for Sacramento and El Dorado Counties

Year	Projected Sac Co. Population	Projected El Dorado Co. Population	Total Project Population	Projected Aggregate Demand (Tons)
2005	1,335,279	140,394	1,475,673	11,362,682
2010	1,459,968	158,081	1,618,049	12,458,977
2015	1,574,413	174,952	1,749,365	13,470,111
2020	1,646,056	186,255	1,832,311	14,108,795
2025	1,695,506	194,412	1,889,918	14,552,369
2030	1,744,956	202,569	1,947,525	14,995,943
2035	1,794,406	210,726	2,005,132	15,439,516
2040	1,843,856	218,883	2,062,739	15,883,090
2045	1,893,306	227,040	2,120,346	16,326,664
2050	1,942,756	235,197	2,177,953	16,770,238

Figure A graphically shows the findings of Table II.

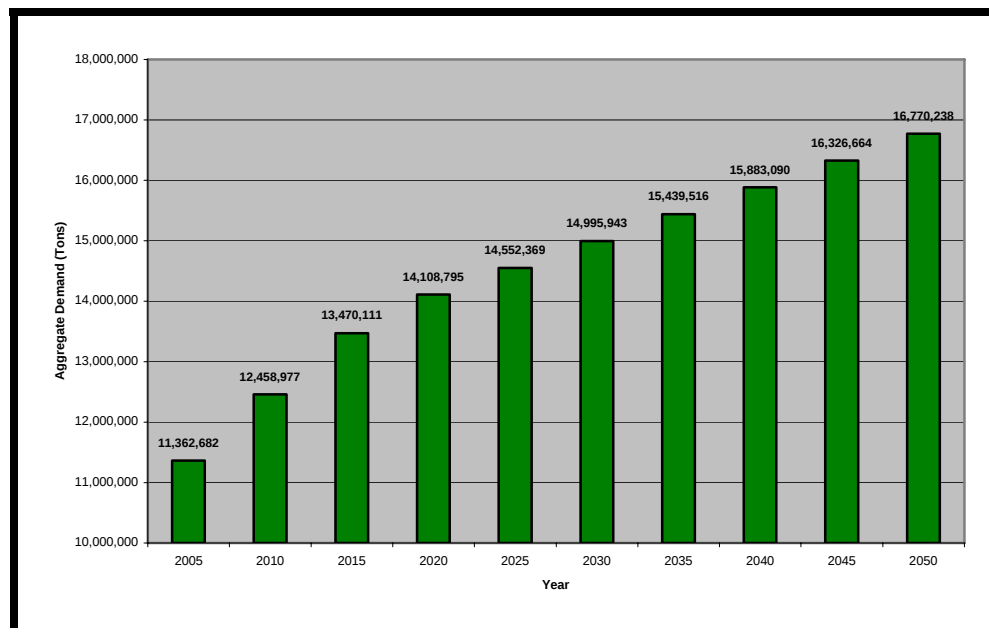


Figure A. Projected Aggregate Demand for Sacramento and El Dorado Counties

2.1.3 Mining Constraints

Notwithstanding the current and growing need for aggregate, there are several physical, political, and economic factors that limit its production.

At the most basic level, the location and supply of aggregate, like other naturally occurring resources, is finite in nature. Generally speaking, round stone (e.g., sand and gravel) aggregate deposits are found in areas where glaciation, stream transportation, abrasive stream action, and the natural sorting and washing away of soft particles associated with stream flows. Absent these unique circumstances, aggregate deposits do not typically form, and, as a result, the location and supply of available aggregate is extremely limited. If the factors described below preclude all sand and gravel aggregate deposits from being mined, then hard rock quarries, similar to the proposed Quarry, are required to meet the demand for construction material. Typically, sand and gravel deposits are depleted prior to hardrock quarries being considered because the sand and gravel deposits are typically easier and cheaper to mine and the naturally round stone is often preferred by concrete manufacturers that are not familiar with finishing concrete made from crushed stone. However, crushed stone has the ability to make concrete with significantly higher strengths than round stone.

In Sacramento County, the formation of aggregate deposits has primarily occurred along the ancestral precursor of the American River and its tributaries, as those waterways have shifted course over the past half-million years. Because of this natural stream migration, a wedge of sand, gravel, and other associated flood plain materials have gradually been created from which PCC grade aggregate has historically been mined. Dupras at page 32.

Beyond these basic geologic considerations, the California Department of Conservation has established four key criteria (e.g., Quality, Quantity, Minability, and Accessibility), common throughout the mining industry, that are instructive in evaluating the viability of mining this limited natural resource. Dupras at pages 13-14. Permitability is another factor that must be considered when evaluating a potential site.

2.1.4 Aggregate Quality

As noted above, the primary demand and use of aggregate is for infrastructure and construction related activities. However, the quality of aggregate deposits varies widely, and not all varieties are suitable for construction related uses. In this regard, the California Department of Transportation (“Caltrans”), individual county transportation departments, and local municipalities have established strict standards and specifications for the types of aggregate products, which may be used for infrastructure and construction projects under their jurisdictions.

As a result, some otherwise significant stream channel deposits are unsuitable for use in the construction industry. Most notable are aggregate deposits that contain

an unacceptably high proportion of inferior materials, including physically unsound rock, or rock that is mixed with significant amounts of silt, clay, or peaty soil. In addition, a stream channel deposit may be deemed unsuitable for use due to undesirable coatings of opaline silica or extensive degrees of weathering.

Even if an aggregate deposit passes these baseline quality standards, the deposit may still be deemed undesirable by the construction industry itself if the rock's lithology or petrology results in a need for above average amounts of concrete cement or other mixing products to make it viable for use.

2.1.5 Aggregate Quantity

Assuming an aggregate deposit is of sufficient quality, the next question is whether it is of sufficient quantity to justify mining operations. This is a question of economic feasibility. Surface mining and production of PCC grade aggregate is significantly expensive, in that it requires substantial initial investments for land acquisition, permitting, plant construction, as well as long term costs associated with labor and reclamation. Absent a deposit of significant size, the cost of initiating and operating an aggregate mine is simply prohibitive. An aggregate processing facility capable of producing 3-6 MT per year will cost approximately \$40 Million to design and construct.

2.1.6 Mineability

Although a deposit may contain a significant quantity of high quality PCC aggregate material, it may be located or configured in such a way as to preclude mining. While mineability is initially a question of physical constraints, in the Sacramento Region, as in most regions, mineability is also largely driven by local land use decisions. For instance, urban development adjacent to an existing aggregate deposit can result in a site being effectively precluded from mining due to the potential incompatibility of mining with adjacent residential, commercial, or industrial uses. This is particularly true in Sacramento County along the areas north and south of the American River and adjacent to the Highway 50 corridor.

Also, policy decisions by local jurisdictions have expressly prohibited aggregate mining on otherwise viable sites altogether. An excellent example of this is the American River Parkway. As noted above, the American River and its ancestral precursors are the source of the majority of the region's existing aggregate deposits and, as a result, the river has historically been host to a variety of surface mining operations. However, in the early 1970's, Sacramento County officials determined that aggregate mining was incompatible with the American River Parkway and, thus, gradually eliminated mining from the area. As a result, 4,000 acres of high-grade aggregate were excluded from the region's supply of available deposits.

An otherwise viable aggregate deposit may also be precluded from mining due to split property ownership. In some circumstances, as with the South of Elder Creek Road designated Aggregate Resource Area (ARA), a site may have as many as 200 or more different property owners, making it impossible to effectively organize the site into a single producing project.

2.1.7 Accessibility

One of the most significant issues in determining a mine's viability is accessibility of an aggregate deposit to local infrastructure and markets. Aggregate production is extremely sensitive to changes in transportation costs. In a consumer market used to buying and selling aggregate based on cost differences of pennies per ton, minor increases in aggregate costs are considered substantial to consumers. Because of this, producers endeavor to identify deposits that are close to both a sufficiently sized production facility and, in turn, an existing market. This is due to the simple fact that the farther aggregate is transported, either to a processing facility or ultimately to the market, the greater the cost to the end user. Because the aggregate industry is so competitive, minor increases in pricing can undermine a company's ability to function in the marketplace.

2.1.8 Environmental Costs

As talked about in detail in UC Berkeley Working Paper No. 994 (**Appendix G**), the opening of a new site for the production of aggregates has both direct and indirect impacts on the environment. The indirect impacts include changes in the environmental costs of hauling aggregates and possible changes in the level of construction activity. The paper shows that the most likely effect of a new aggregate site is to reduce the truck miles used for aggregate hauling, which is an environmental benefit. Also described in the paper is the overall local change in construction activity induced by a new site, which is likely to be extremely small.

To illustrate the indirect impacts of hauling aggregates, **Exhibit 14 (Material Haul Analysis)** compares the projected hauling costs and air emissions from the Walltown to three (3) out of County sources to three separate locations within the County (e.g., Downtown Sacramento, Elk Grove, and Folsom). Since the Yuba Gold Field is the only aggregate reserve currently identified by the State DOC, which could possibly supply a comparable amount of material as Walltown, it is reasonable to only compare Walltown with the Yuba Gold Fields in terms of haul distances. Table III. shows the difference in one-way haul distances to the three identified locations from Walltown and the Yuba Gold Fields. Walltown would replace the market share that Granite's Bradshaw Facility currently supplies.

Table III. Haul Distances

Material Source	Downtown Sacramento (Miles)	Elk Grove (Miles)	Folsom (Miles)	Average (Miles)
Yuba Gold Fields	46	66	48	53
Walltown Quarry	27	26	5	19
Difference	-19	-40	-43	-34

The long distance transportation of aggregate also has several tangible environmental effects. In addition to wear and tear on transportation infrastructure and increased use of fossil fuels, the additional truck miles associated with transporting aggregate from distant sources can have a substantial effect on a regions air quality due to increased truck emissions. Table IV shows the difference in annual air emissions, assuming a maximum of 6 MT per year of production, and average haul distances to typical Sacramento County locals. (Walltown production is not expected to reach 6 MT per year for several years.)

Table IV. Annual Air Emissions¹

Criteria Pollutant	Yuba Gold Fields 53-Miles (One Way) (Tons per Year)	Walltown Quarry 19-Miles (One-Way) (Tons per Year)	Difference (Tons per Year)
NOx	7,998	2,437	-5,561
ROC	1,331	477	-854
CO	5,186	1,859	-3,327
PM ₁₀	1,191	427	-764

3.0 PROJECT COMPONENTS

Granite is proposing a construction aggregates production facility involving a hardrock surface mining operation ("Quarry"), reclamation, and associated processing facilities. Offices housing administrative, operation, equipment, and plants departments that are incidental to the construction aggregates production facility; and an equipment shop are also proposed for the site. Granite would prefer to locate the permanent HMA and Ready-Mix Concrete plants and other accessory uses directly adjacent to the Aggregate Plant, but the current Zoning Code requires these facilities to be located in a Heavy-Industrial (M-2) zone.

Sacramento County is currently in the process of updating the Zoning Code. Granite has requested that it be amended to allow ancillary facilities (i.e., HMA Plant(s),

¹ Emission Factors based on CA Mobile Emissions Inventory, EMFAC2000 ver. 2.03

Ready-Mix Concrete Plant(s), a CMR Plant, CPM facilities, and Dimension Stone Workshop) as permitted uses under the Surface Mining (SM) zone designation with an approved CUP. If approved, the scope and nature of this Project and the entitlements requested will be modified accordingly. The County has circulated a Staff Report and the Zoning Code should go to hearing in late 2007.

The Project site is 1,360-acres in size, of which only 613-acres will be used for mining, processing, and other associated activities. The mined material (Quartz-Diorite and Slate) will be used to produce high quality, PCC grade, aggregate products and other aggregate products including, but not limited to the following: riprap, ballast, aggregate base, HMA aggregate, and other site work aggregate. In order to implement the proposed mining and reclamation activities, the Project includes a request for the following entitlements:

- 1) A **General Plan Amendment** to remove the Resource Conservation Area (RCA) designation, which covers approximately 960-acres of the 1,360-acre site, and add the Aggregate Resource Area (ARA) designation over the entire 1,360-acre site;
- 2) A **Lot Line Adjustment (LLA)** to adjust 40-acres of assessors parcel number 072-0110-045 to 072-0120-017;
- 3) A **Rezone** of 1,360-acres from AG-80 (Agriculture, 80-acre minimum lot size) to Ag-80(SM) (surface mining overlay);
- 4) A **Conditional Use Permit (CUP)** to mine mineral resources and to process material at the site (the CUP shall be in a form transferable to the Landowner); and
- 5) A **Reclamation Plan** to adequately demonstrate the reclamation and reuse of the mined area.

3.1 General Plan Amendment

As shown on Exhibit 6, a General Plan Amendment to remove the Resource Conservation Area (RCA) designation, which covers approximately 960-acres or the 1,360-acre site, and add the Aggregate Resource Area (ARA) designation over the entire 1,360-acre site is requested as part of this application. The purpose of the ARA combining designation is to identify the areas as having valuable mineral resources, feasible and appropriate for mining, and to protect those resources as open space until the area is mined.

3.2 Lot Line Adjustment

As shown on Exhibit 5, a lot line adjustment (LLAs) is requested as part of this application as follows:

- LLA to adjust +/- 40 acres of APN 072-0110-045 to 072-0120-017. The resulting APN 072-0120-017 will be +/-1,080-acres and the resulting 073-0020-008 will be +/- 760-acres.

Table V provides a summary of the size of the subject APNs before and after the LLAs.

Table V. Lot Line Adjustments

Assessors Parcel Number (APN)	Initial Acreage	Final Acreage
072-0110-045	+/- 800-Acres	+/- 760-Acres
072-0120-017	+/- 1,040-Acres	+/- 1,080-Acres
Total =	+/- 1,840-Acres	+/- 1,840-Acres

3.3 Property Rezoning

As shown on **Exhibit 7**, it is requested that 1,360-acres of AG-80 (Agriculture, 80-acre minimum lot size) be rezoned to Ag-80(SM) (surface mining overlay). The rezone will take place after the LLA is complete. Table VI. Located on the following page shows a summary of the requested property rezones.

The purpose of the SM Combining Zone (Section 235-40, Sacramento County Zoning Code) is to protect the mineral resources of Sacramento County from incompatible land use; to manage the mineral resources; to assure the County of an adequate supply of these resources with due consideration for the environment; and to provide for the restoration of mined lands for future use. The goals to be pursued by establishment of this zone include:

- (a) That mineral resource areas be protected from preclusive and incompatible land uses;
- (b) That surface mining be controlled to provide for protection of the environment;
- (c) That surface mining be controlled to protect the public health, safety, welfare, and property values of residents living near surface mining operations; and
- (d) That provisions be made for the reclamation of mined lands.

Table VI. shows a summary of the requested property rezones.

Table VI. Rezones

Assessors Parcel Number (APN)	Acreage	Initial Zoning	Final Zoning
072-0110-045	+/- 760-Acres	AG-80	AG-80(SM)
073-0020-008	+/- 320-Acres	AG-80	AG-80(SM)
072-0110-065	+/- 280-Acres	AG-80	AG-80(SM)
Total =	+/-1,360-Acres	AG-80	AG-80(SM)

3.4 Conditional Use Permit

Mining uses are requested for the proposed AG-80(SM) zoned lands. Chapter 1: Residential-Open Space Land Use Table, Article 1 (Open Space Land Use Table, Sacramento County Zoning Code) shows “Surface Mining” as a permitted use in AG-80 zoning upon compliance with the maintenance of the special condition (37). Special Condition (37) also requires surface mining operations have the SM Combining Zone pursuant to Title II, Chapter 35, Article 4.

Title II, Chapter 35, Article 4: Surface Mining (Combining Land use Zone), Section 235-42 (Sacramento County Zone Code) states that “Mining Uses” are permitted subject to approval of a CUP by the County Board of Supervisors (BOS) after receipt of a recommendation on such use by the County Project Planning Commission. The Aggregate mining proposed by this application is defined as a Mining Use, thus a Conditional Use Permit is required.

Granite has requested that the Zoning Code be amended to allow ancillary facilities (i.e., HMA Plant(s), Ready-Mix Concrete Plant(s), a CMR Plant, CPM facilities, and Dimension Stone Workshop) as permitted uses under the Surface Mining (SM) zone designation with an approved CUP. If approved, the scope and nature of this Project and the entitlements requested will be modified accordingly. The County has circulated a Staff Report and the Zoning Code should go to hearing in late 2007.

3.5 Mining Plan

The proposed Project will take place over 75 to 100 years, depending on average annual production rates. Annual production has historically fluctuated by as much as 50% per year. Aggregate production is tied to a number of factors besides overall population growth in the region including, but not limited to the following: public spending on infrastructure; competition pricing; location of construction projects in proximity to the plant; size and type of construction projects; and the overall availability and efficiency of the production plant.

An estimated 353-MT of salable material (not including soil overburden) will be mined over the duration of the Project. The mining and processing facility(s) will have the capability to produce greater than 6 MT of product per year. For purposes of the environmental analysis (i.e., Traffic Analysis, Air Quality Analysis, etc.) conducted for the Environmental Impact Report (EIR), this Application is applying for a minimum of 6 MT of material production and sales per year. It is expected that production rates will increase over time as the population in the Sacramento Region continues to grow. Granite anticipates producing over 4 MT of material per year from the onset of the Project and reaching the 6 MT per year level within 15-years.

As described above in Section 2.1, the need for aggregate is directly correlated with population demographics. The current demand for construction aggregate in Sacramento County is approximately 9.5 MT per year. Additionally, based on the Sacramento Area Council of Governments' (SACOG) March 2001 Projects, the six (6) county region will have a demand of approximately 11 MT per year by 2005 and 15 MT by 2025. Walltown will have the capability to service significant portion of this demand. Table VII shows a breakdown of soil, overburden, and aggregate reserves.

Table VII shows an itemization of the general geologic components of the Project.

Table VII. Aggregate Reserves

Quarry Phase	Quarry Progression (years)	Total Production (Tons)	Quartz-Diorite (Tons)	Slate (Tons)
I	1-4	9,044,100	9,044,100	0
II	5-7	12,831,000	10,346,700	2,484,300
III	8-10	18,807,150	14,620,650	4,186,500
IV	11-15	30,503,450	24,436,950	6,066,500
V	16-25	78,868,000	68,009,000	10,859,000
VI	26-45	97,612,600	75,094,300	22,518,300
VII	46-62	105,726,900	72,708,400	33,018,500
	TOTAL	353,393,200	274,260,100	79,133,100

Granite has spent significant time and effort evaluating the physical and geochemical characteristics of the different rock types located within the Quarry. The

material has proven to be very high quality and suitable for PCC grade production. No Asbestos has been detected in any of the samples and the material has shown an estimated average Quartz content of less than 5%, with most samples being non-detect. Naturally occurring Arsenic has been detected in several samples throughout the Quarry and is currently under technical evaluation. The site will comply with all applicable local, state, or federal regulations during operations, reclamation, and site closure. Up to 80% of the material produced from the Quarry will end up encapsulated in a concrete product. Any arsenic in the Quarry or in material produced at the Quarry will be handled in accordance with applicable laws and in conjunction with the oversight of the State and Federal authorities with jurisdiction. In order to aid in the preparation of the EIR and ensure it is a complete and informative document, supplemental information will be submitted to the County, under separate covers, that addresses this issue in detail.

3.6.1 Mining Goals

The main goals of the Mining Plan can be summarized as:

- 1) Minimize impacts from mining operations on adjacent property owners and public;
- 2) Minimize impacts to surface and groundwater resources;
- 3) Minimize impacts to the environment (wetlands, oak habitat, air quality, special status species, etc.);
- 4) Maximize the aggregate reserves;
- 5) Maintain flexibility in mining operations and phasing; and
- 6) Produce enough PCC grade aggregate to meet significant portion of the future regional demand.

3.6.2 Mining Method

An estimated 353-MT of salable material will be mined over the 75 to 100 year period of the Project. A detailed Mine Plan is included with the application materials.

The proposed primary Quarry extraction area (not including Plant Sites) will encompass approximately 350-acres. Quarrying activities will conform to the phasing plan described below. Because of the high density of the rock deposit at the Project site, the opportunity exists to greatly minimize the total surface footprint (e.g., acreage) of the area mined in comparison to other mining projects in Sacramento County, which traditionally have alluvial deposits that are significantly shallower in depth. The mining footprint for this Project is expected to encompass less than +/- 5% of the land area that

would typically be affected by the mining of any alluvial deposit in Sacramento County based on a tons per acre comparison.

Organic materials and topsoil will be removed from the proposed extraction area with scrapers and bulldozers. Approximately 1.6 million cubic yards of overburden will be removed in phases and placed in stockpiles adjacent to the proposed excavation areas. Soil stockpiles will be less than 40-feet in height and will have side slopes no steeper than 2:1 (horizontal:vertical). The temporary soil stockpiles will be vegetated to reduce the potential for erosion, fugitive dust, and to support the soil fertility. Stockpiled overburden that is not part of the visual screen or required for site reclamation purposes will be available for sale. As part of this Application, Granite is requesting the ability to sell up to 1 MT of overburden from the Project site, if it is determined that the overburden material is not required for site reclamation purposes.

Rock and nonsoil overburden may be ripped and dozed or drilled and blasted to allow excavation (depending on site conditions). Bulldozers will be used for ripping and dozing; drill rigs and powder trucks will be used for drilling and blasting. The required amount of overburden will be stored on-site and used in the reclamation process; while excess overburden will be sold off-site.

The loosened material will be loaded and hauled with either front-end loaders and trucks or scrapers and bulldozers. Benches will be developed during the loading and hauling processes to maintain the stability of the excavation. Since this is hardrock aggregate, periodic blasting will be necessary in order to break up the rock and make it manageable for transportation, crushing, and processing. Benching will progress until the slopes conform to the ultimate reclaimed benches shown in the Surface Mining and Reclamation plan and recommendations made in the *Geologic Investigation and Slope Stability Report* prepared by Wallace-Kuhl & Associates (WKA). Once the overburden has been removed and stockpiled, mining in the Quarry will be conducted to an average depth of approximately 350-feet below the existing surface, with the deepest mining depth being approximately 400-feet. (See **Exhibit 10. Surface Mining Plan.**)

Quarried material will be hauled and/or conveyed to either the processing plant or to temporary stockpiles as dictated by market conditions. Motor graders will be used to maintain the haulage routes. Water trucks will be used to control particulate emissions during loading and hauling operations.

The groundwater hydrology studies (**Appendix 6. Hydrogeologic Investigation Report.**) show that the Quarry will have to be dewatered during active mining operations. Additional groundwater monitoring and modeling will take place during the environmental review of the Project to determine project-level and cumulative impacts from dewatering operations and future water quality of the Reclamation Lake. Initial groundwater sampling and testing has shown that Arsenic is currently present at elevated levels in the groundwater. Potential environmental concerns related to the Arsenic in the groundwater are currently being evaluated. In order to aid in the preparation of the EIR and ensure it is a complete and informative document,

supplemental information will be submitted to the County, under separate covers, that addresses this issue in detail. An Ecological Heath Risk Assessment is currently be prepared for the Reclamation Lake.

Where possible, equipment fueling, and maintenance will take place in designated areas. The fueling and maintenance area will have an impermeable base and drainage will be directed to an oil/water separator for treatment in order to prevent contamination of the surrounding soil and groundwater.

Fueling and maintenance associated with track-mounted equipment shall be conducted with proper safeguards to prevent hazardous materials releases. Spill containment materials will be stored in the mining area to allow rapid response and control of any spills during maintenance activities.

Site development, mining, and reclamation activities of the Project will progress as described in the following Phases.

Phase 1--Site Development (Portable Plant):

The initial phase (0 to 5-years) will include access road construction, plant site development, quarry development, and facility construction. Overburden will be stripped for the plant sites and offices then stockpiled, as described above, used in mitigation berms, or removed from the site and used as engineered fill for construction projects. As described above, Granite is requesting the ability to sell up to 1 MT of overburden from the Project site, if it is determined that the overburden material is not required for site reclamation purposes. As shown on the **Exhibit 10**, the overburden material will be placed in berms where feasible and landscaped to provide visual and noise mitigation of the quarrying and processing facilities or removed from the site to be used as import for construction projects. A portion of the material that will be stripped from the plant sites will be good hardrock material. This material may be processed with a Portable Plant or stockpiled, to be processed by the Permanent Aggregate Plant during Phase 2. The Portable Plant will have the capability of processing up to 4 MT per year. Phase 1 also includes initial development of the Quarry. Quarried material will be processed with the Portable Plant. The Portable Plant will stay in production until the Permanent Plant is in full operation.

Construction of the Permanent Aggregate Plant, HMA Plant, and Ready-Mix Concrete plant are part of Phase 1. While these facilities are being constructed, the southwestern portion of the Quarry will be the primary mining location. The Permanent Aggregate Plant HMA Plant, Ready-Mix Concrete, and CMR plants will be constructed in the location shown on the attached Mining Plans. A new access road and bridge will be constructed over Carson Creek to access the Quarry. Landscaped mitigation berms will be constructed along the generally southern and western borders of the plant site to minimize impacts to neighbors.

The CMR Plant may be a portable crushing and screening plant that will be delivered to the site when stockpiled asphalt and concrete debris justifies its use. In conjunction with the structural work, utilities will be brought to the site, water will be developed, and the bridge across Carson Creek will be constructed.

Phases 2-7—Mining (Permanent Aggregate Plant):

Prior to and concurrent with mining, Granite will undertake a substantial planting project on the site to provide visual screening to the active quarrying and processing operation, as shown and described on **Exhibit 12**. (See **Exhibit 12. Landscaping, Fencing, and Berming Plan.**). The plantings will include native grasses, flowers, and fast growing Redwood and Maple trees. In addition, a portion of the overburden will be used for berming and contouring, consistent with the topography in the area, to provide for a natural screening of mining activities. Phase 2 includes full-scale mining activities, which will have duration of approximately 75 to 100-years, depending largely on market conditions. The Permanent Aggregate Plant will have the capacity to process greater than six (6) MT per year and the reserve of saleable aggregate within the quarry is approximately 353 MT. Annual production has historically varied up 50% per year, thus Granite is requesting the prolonged permit. Approximately eighty (80) MT of the reserve is Slate. During Phase 2 the Permanent Aggregate Plant will be expanded to include a Slate circuit.

Unlike the alluvial deposits currently being mined in Sacramento County, the materials to be mined consist primarily of high quality Quartz-Diorite and other hardrock aggregates. The hardrock requires periodic blasting in order to break up the rock and make it manageable for crushing and processing. Blasts will be designed to minimize off-site impacts. The duration of each blast will be less than one (1) second and any off-site impacts of the blasting will be negligible. The blasting frequency will depend on production requirements. It is currently anticipated that blasting will occur twice per week during high production years. After each blast, mobile equipment will transport and place the dislodged rock into a primary crusher located within the quarry to further reduce the rock size.

As mining progresses below surface elevations, benches will be developed during the loading and hauling processes to maintain the stability of the excavation. Benching will progress until the slopes conform to the ultimate reclaimed benches shown in the Surface Mining Plan. The benches are based on recommendations made by WKA in conjunction with Sierra Geotechnical, Call & Nicholas, and Wheeldon Geology. (See **Appendix A.**). **Sheet 5 of 10, Exhibit 10** shows the dimensions of and slope angles for the twelve (12) designated sectors of the Quarry. The overall slope of the Quarry high walls depend primarily on the geologic and geomechanic properties of the rock. Due to the complexity of the geology and fracture system at the Project site, twelve (12) mining sectors, with varying overall slopes, are incorporated into the Mining Plan. These benches are portrayed on the Surface Mining Plan.

The active Quarry will need to be dewatered for mining activities. One or two production wells will be placed in appropriate locations within the Quarry and be operated in conjunction with dewatering sump pumps located on the surface of the pit floor. Potential impacts to surface (Carson Creek) and groundwater resources are described in the Hydrogeologic Investigation Report (**Appendix S**). This will be a focus area of the Project-level and cumulative environmental review. A dewatering system will be designed to mitigate potential impacts to Carson Creek and regional groundwater flow.

Site Reclamation:

A detailed Reclamation Plan is included within the application materials. Reclamation of the Quarry walls will occur concurrently with mining. The final mining slopes below the Reclamation Lake water surface elevation (WSE) will be completed as shown on the Reclamation Plan. Quarry walls located above the WSE of the Reclamation Lake will be completed concurrent with active mining, where feasible.

Once active mining activities are complete at the site, final quarry reclamation will proceed. Dewatering activities will be discontinued, and the Quarry will begin to fill with water. As the ultimate WSE of the “Reclamation Lake” is reached, Granite will institute final Mining Slope Reclamation and Habitat Reclamation in accordance with the approved Reclamation Plan.

Quarry high walls above the final water level will be properly sloped to provide access to the Reclamation Lake. Reclamation slopes will vary from (0.33:1) to (10:1) horizontal to vertical with benching variations. The slope variation will provide for a sound and stable reclamation of the land while also creating a more natural landscape setting. Where feasible and appropriate, the horizontal benches will be backfilled with stockpiled overburden and planted with native vegetation.

The duration of the Reclamation Phase depends on the length of time the Reclamation Lake takes to fill to the ultimate WSE. Slope reconstruction and revegetation activities will be complete within three (3) years of the completion of active mining activities.

3.7 Proposed Processing Facilities

The Project includes the construction and operation of an Aggregate Plant (Portable and Permanent). These plants will be constructed in the locations shown on Exhibit 8 (Project Overview). The Portable Plant will operate at within the quarry and at the plant site area. Granite has requested that the Zoning Code be amended to allow ancillary facilities (i.e., HMA Plant(s), Ready-Mix Concrete Plant(s), a CMR Plant, CPM facilities, and Dimension Stone Workshop) as permitted uses under the Surface Mining (SM) zone designation with an approved conditional use permit (CUP). If approved, the scope and nature of this Project and the entitlements requested will be modified

accordingly. The County has circulated a Staff Report and the Zoning Code should go to hearing in late 2007.

It is intended that water for the Project will be provided primarily by on-site wells, but may need to be supplemented via a pipeline from an off-site source. Long-term pump tests showed pumping rates of approximately 600-gpm and 850-gpm for two production wells located on-site. Initial estimates show that on-site water production will sufficiently supply the Project. If required in the future, the appropriate easements and water rights will be secured for conveyance of off-site water to the Project.

3.7.1 Aggregate Processing Plant(s)

The aggregate processing plants will have the capacity to wash, crush, and screen greater than six (6) MT per year. (For purposes of the environmental review, Granite is requesting a minimum annual production limit of 6 MT.) Material will be transferred from the active mining areas to the processing plant via a conveyor system, when economically feasible, or by off-highway trucks. Due to the limited aggregate reserves at the existing Bradshaw Facility, the aggregate processing plant needs to be operational by January 2011. The Sacramento Metropolitan Air Quality Management District (SMAQMD) will require a Permit to Operate.

Because it is a hardrock material, only a small amount of silt and clay fines will be washed from the rock, and subsequently discharged with the water into a clarifying system and recycling ponds either in the excavation or at the plant site. After the silt and clay fine materials settle out, clear water will be recycled back to the plant for the washing of additional aggregate. If required, small management ponds will be located in the Plant and Quarry areas to further settle the silt and clay fines. The excess water will evaporate from the fines. The fines will then be amended for use as soil or mixed into aggregate base and blend products for sale, sold as engineering fill, or used for site reclamation.

3.7.2 Hot Mix Asphalt (HMA) Plant

The HMA plant will have the capacity to produce up to two (2) MT of asphaltic concrete per year with a peak daily production of 20,000 tons (T) per day.

The HMA plant(s) will dry aggregates in a rotary drum using a Natural Gas (NG) or Propane fired burner, which produces non-significant emissions of NO_x, ROC, CO, and SO_x and very small quantities of PM₁₀. Additional PM₁₀ is produced from the handling and drying of the aggregates. PM₁₀ emissions associated with the HMA operation are controlled using a baghouse particulate collection system. The collection efficiency of baghouses is about 75% to 99% for particles between 10 microns and one micron. For particles smaller than five microns, the collection efficiency is closer to

75%. When normal aggregate materials are used, the collection efficiency of the baghouse is 99.99%.^{2 3}

Emissions from the combustion of the NG and or Propane will be controlled through the use of a low NOx burner capable of complying with the most current emission limits set forth by SMAQMD. In addition, since this plant will be subject to New Source Review by the SMAQMD, the plant will be subject to Best Available Control Technology (BACT) analysis at the time of permitting.

3.7.3 Concrete Batch Plant(s)

The Ready-Mix Concrete Batch Plant(s) will have the capacity to produce two (2) million cubic yards (MCY) of concrete per year with a peak production of 10,000 CY per day.

The Ready-Mix Concrete Plant(s) mixes cement, aggregate, and water to produce concrete. Emissions of PM₁₀ are associated with the handling of raw aggregate material. These PM₁₀ emissions are controlled by a baghouse particulate collection system. The plant will be a stationary source, which will be subject to New Source Review by the SMAQMD and a separate BACT analysis, independent of the HMA, and Aggregate Plants.

3.7.4 Construction Materials Recycle (CMR) Plant

This application also requests the approval to operate a portable recycled aggregate plant on-site as part of the described aggregate processing plant. The Construction Materials Recycle Plant will have the capacity to produce one (1) MT of product per year, with a peak production of 10,000 T per day. This one (1) MT of production is in addition to the expected, natural Aggregate production and sales.

Historically, the State and County have allowed, advocated, and required the use of recycled productions in public works construction projects. As regional aggregate resources become limited, recycled asphalt product (RAP) will continue to play a larger role in construction product mix designs. Often, old asphalt and concrete, which is torn up to make way for newer roadways is stockpiled and wasted; or worse yet—sent to the local landfill. This material may be recrushed and incorporated into construction products.

² National Asphalt Pavement Association, The Fundamentals of the Operation and Maintenance of the Exhaust Gas System in a Hot Mix Asphalt Facility, Information Series 52/87, Riverdale, Maryland, 301-779-8817

³ California Air Resources Board, Compliance Division, Hot Mix Asphalt Facilities. Compliance Assistance Program. August 1990

3.7.5 Dimension Stone Workshop

As part of this application, Granite is requesting the ability to locate a Dimension Stone Workshop on-site. The dimension stone would be cut, polished, sold, and delivered from a warehouse complex.

3.7.6 Concrete Products Manufacturing (CPM) Facilities

3.7.7 Bagged Aggregate Facility

3.7.8 Roofing Tile Manufacturing

3.8 Reclamation Plan

The Reclamation Lake shown on the attached Reclamation Plan (**Exhibit 13**) is based on preliminary predictions of WSE. The Reclamation Lake that will form after completion of mining and dewatering activities will create open water habitat.

Reclamation slopes will vary from (0.33:1) to (10:1) horizontal to vertical with benching variations. Irregularities in mined surfaces, such as ledges and shelves, shallow cavities, undercut edges, cracks, fissures, crevices, and other irregular surfaces, can be used by a variety of wildlife. Perch hunting birds, such as a prairie falcons and other raptors, and aerial insectivores, such as flycatchers and swallows, may hunt from the ledges. Great horned owls and barn owls, which are known to nest on ledges and in cavities on steep, rocky faces, and cliff swallows, barn swallows, and black phoebes, and other ledge-nesting species may also use the habitat. Bats may nest or roost in cracks and ledges in the vertical and near vertical banks.

3.8.1 Wetland and Endangered Species

Biological Assessments (**Appendix V**) have been completed for the Project. Potential impacts to vegetation, wildlife, and wetlands were assessed and described in detail. **Appendix F** includes the following studies: Vegetation and Wildlife Assessment; Wetlands Delineation; Arborist Report; Branchiopods Survey; Special Status Species Survey; California Red-Legged Frog Assessment; California Tiger Salamander Assessment; and an Elderberry Survey.

The overall Project would affect approximately 11.98 acres of wetlands, including

wetlands that are subject to jurisdiction by the U.S. Army Corps of Engineers (“Corps”) under Section 404 of the Clean Water Act. Table VII shows a breakdown of the types of wetlands impacted. The Section 404 permit will require consultation with the U.S. Fish and Wildlife Service (“Service”) and National Marine Fisheries Service (NMFS) under Section 7 of the Endangered Species Act on specific mitigation measures for the federally listed vernal pool fairy shrimp and Central Valley steelhead trout, respectively. The Section 404 permit will also require preparation of a separate wetland mitigation plan that specifically addresses impacts on jurisdictional waters and wetlands, mitigation ratios for these impacts, and a plan to insure no net loss of habitat values.

As delineated in the field, Table VII shows a breakdown of the types of wetlands impacted.

Table VII. Impacted Wetlands

Wetland Type	Impact Acreage
Vernal Pool	0.182
Seasonal Wetland	1.022
Seasonal Wetland Swale	4.491
Seep	0.187
Intermittent Drainage	0.898
Pond	4.218
Ephemeral Drainage	0.978
Total =	11.976

The mitigation measures and wetland habitat creation detailed by this plan are expected to be implemented during *Phase 1 (A & B) - Site Development* of the proposed Project. All mitigation for impacts to waters of the US will take place off-site. Granite will either purchase wetland mitigation credits at a Corps approved “creation” or “compensatory” wetland mitigation bank, construct wetlands, or protect wetlands on a nearby site deemed appropriate by the Corps.

Minor impacts on vernal pool habitat (approximately 0.06-acres) that will occur during the Project will be mitigated off-site in a Service approved mitigation bank. This mitigation will be addressed in the Corps Section 404 permit mitigation plan, which is being prepared for the Project.

3.8.2 Oak Tree Mitigation

The Project will impact approximately 312 mature oak trees. The loss of these trees will be mitigated on and/or off-site per the County's Oak Tree Preservation Ordinance standards at the Landowner's discretion. An Arborist Report is included in **Appendix S**.

3.8.3 Reclamation Goals

The main goals of the Reclamation Plan can be summarized as follows:

- 1) Maintain the quality of surface and groundwater;
- 2) Provide habitat restoration;
- 3) Develop high quality natural habitat that is dominated by native plants; and
- 4) Ensure the compatibility with surrounding land uses and sensitive wildlife habitat, in order to minimize adverse impacts.

3.8.4 Reclamation Phasing

Reclamation of the Project site will be completed concurrent with active mining and in phases over a 3-year period post mining and processing.

Overburden Stripping:

As mining is initiated, overburden will be stripped and separated into topsoil and subsoil stockpiles. Before stripping operations are initiated, stockpile sites will be identified on plan maps and clearly marked in the field. Most of this soil will be used to reclaim portions of the exposed mining benches and Plant sites. Overburden stockpiles will be planted with a suitable crop mix to reduce erosion, help maintain aeration and microbiological activity, and control dust. Water will be applied initially to control dust until the late fall when the stockpiles will be broadcast seeded or hydrosseeded with the cover crop mix. A major portion of the overburden will be used to construct the landforms and berms along the perimeter of the Plant site and Quarry, but a portion will also be removed from the site and used as engineered fill for construction projects. Granite requests the ability to sell up to 1 MT of overburden from the Project site, if it is determined that the overburden material is not required for reclamation purposes.

Plant Site and Office Complex Reclamation:

Upon completion of processing operations at the Permanent Aggregate and other plant facilities, the impacted areas will be regraded as shown on the attached Reclamation Plan. The stockpiled overburden will be evenly spread across the sites and reclaimed for Agriculture uses. Reclamation grades are designed to drain surface

runoff into the water quality/detention basins to continue water treatment of agriculture water before being discharged into Carson Creek. The water basins will also be used for irrigation and for livestock watering. Details of the planting and agriculture management plans will be provided in the final Reclamation Plan. The detention basins will be regraded to a more natural shape and planted with native species to attract wildlife usage.

Quarry Slope Reclamation:

Quarry benches will be mined to the dimensions shown on **Exhibit 10. Surface Mining Plan**. Benches located below the final Reclamation Lake WSE will not be altered during reclamation. Quarry benches located above the WSE will be reclaimed by a variety of methods.

Portions of the mining area will have (10:1) horizontal to vertical slopes to provide good access and use of the Reclamation Lake. An access road will also be constructed down to the Reclamation Lake. Other slopes will have (2:1) horizontal to vertical slopes above the WSE. These slopes will be planted with native grasses and trees. Portions of the slopes will look and behave like the slopes surrounding a drawn down water storage reservoir. Stockpiled topsoil overburden will be placed on the slope and planted with native riparian vegetation. Variable widths of riparian habitat will be created above the emergent marsh of the Reclamation Lake.

The top mining bench will be sloped back to original ground at a (2:1) horizontal to vertical maximum slope, as shown on the attached Reclamation Plan. A shallow water bench (5% Slope) will be created along the perimeter of the Reclamation Lake. The 5% grade will transition into the 2:1 slope. Stockpiled topsoil and low quality rock overburden will be placed on the slope and planted with native riparian vegetation. Variable widths of riparian habitat will be created above the emergent marsh of the Reclamation Lake.

3.8.5 Reclamation Performance Standards

A general mitigation-monitoring program and performance standards for each habitat type will be developed in conjunction with the Reclamation Plan. This section discusses the performance standards for topsoil salvage and maintenance criteria set forth in the SMARA. Site reclamation will comply with all SMARA requirements. Performance standards for non-agriculture reclamation are discussed in detail within the Habitat Restoration section of the Reclamation Plan.

§ 3711. Performance Standards for Topsoil Maintenance, and Redistribution.

When the approved Reclamation Plan calls for revegetation or cultivation of disturbed lands, the following performance standards shall apply to topsoil salvage, maintenance and redistribution activities:

- (a) All salvageable topsoil suitable for revegetation shall be removed as a separate layer from areas to be disturbed by mining operations. Topsoil and vegetation removal shall not precede surface mining activities by more than one year, unless a longer time period is approved by the lead agency.
- (b) Topsoil resources shall be mapped prior to stripping and the location of topsoil stockpiles shall be shown on a map in the Reclamation Plan. If the amount of topsoil needed to cover all surfaces to be revegetated is not available on site, other suitable material capable of sustaining vegetation (such as subsoil) shall be removed as a separate layer for use as a suitable growth media. Topsoil and suitable growth media shall be maintained in separate stockpiles. Test plots may be required to determine the suitability of growth media for revegetation purposes.
- (c) Soil Salvage operations and phases of reclamation shall be carried out in accordance with a schedule that: (1) is set forth in the approved Reclamation Plan; (2) minimizes the area disturbed; and (3) is designed to achieve maximum revegetation success allowable under the mining plan.
- (d) Topsoil and suitable growth media shall be used to phase reclamation as soon as can be accommodated by the mining schedule presented in the approved Reclamation Plan following the mining of an area. Topsoil and suitable growth media that cannot be utilized immediately for reclamation shall be stockpiled in an area where it will not be disturbed until needed for reclamation. Topsoil and suitable growth media stockpiles shall be planted with a vegetative cover or shall be protected by other equally effective measures to prevent water and wind erosion and to discourage weeds. Relocation of topsoil or suitable growth media stockpiles for purposes other than reclamation shall require prior written approval from the lead agency.
- (e) Topsoil and suitable growth media shall be redistributed in a manner that results in a stable, uniform thickness consistent with the approved end use, site configuration, and drainage patterns.

3.8.6 Net Gains

Granite will incorporate its public “Net Gain” philosophy into the operation and reclamation of this Project site.

Accordingly, Granite will be applying, on a \$2 cents per ton basis, a portion of the proceeds from the Project towards the protection, preservation, enhancement, and/or maintenance of open space activities in the East County region including, but limited to: agriculture, recreation, educational, and habitat land uses. For example, if Granite sells 4-MT in a given calendar year, then \$80,000 ($4,000,000 * \0.02) will be spent or set

aside for the enhancement of the East County region, as described above. This commitment does not apply to other properties held by the Landowner.

3.9 Access Routes

All ingress and egress to the Project will be from White Rock Road. Parking for employees, customers, and equipment will be provided on-site. Anticipated truck routes from the Project will be north on the access road (Scott Road “Extension”, an existing County R.O.W.) to the White Rock Road, then either east or west on White Rock Road or north to Highway 50 and surrounding regions. A detailed traffic plan will be prepared in conjunction with the County Department of Environmental Review (DERA) and Department of Transportation (DOT).

4.0 CONCLUSION

As defined by the State Department of Conservation, Sacramento County alone will need in excess of 297 MT, an average of over 11.5 MT annually, of aggregate over the next twenty-five (25) years (2003-2027). Currently, the County has only approximately 60 MT of permitted aggregate remaining and the two largest producing plants will be out of reserves within four (4) to seven (6) years, depending on market conditions.

Similar to the existing Bradshaw Facility, which will deplete its reserves in 2010-2012, Walltown will provide high-grade quality, PCC grade, aggregate resource to help ensure that the building and infrastructure needs of the Sacramento Market Area (specifically, Sacramento County and Western El Dorado County) continue to be met for the next 75-100 years. The demand for construction material in the Sacramento Market Area will be approximately **15 MT per year in 2025 and 17 MT per year by 2050.**

Aside from the obvious economic benefits to the County and Sacramento Region created by aggregate, asphalt, and concrete production; Walltown will provide additional opportunities for a future development.

Due to Walltown's close proximity to the Sacramento Market Area, the long distance transportation of aggregate, which has several tangible environmental effects, will be minimized to the greatest extent feasible by implementing the Project.

It is anticipated that the project will directly employ approximately 75, high-paid, union workers and approximately 25 full salaried staff. The construction aggregate produced from the Project will maintain approximately 500 other craft construction workers and 150 full salaried staff personal for Granite's Sacramento Area heavy civil construction business.

The Net Gains package will provide a significant long-term funding source for the County to apply towards the protection, preservation, enhancement, and/or maintenance of open space activities in the East County region including, but limited to: agriculture, recreation, educational, and habitat land uses.