

# County of Santa Cruz

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## PLANNING DEPARTMENT

701 OCEAN STREET, 4<sup>TH</sup> FLOOR, SANTA CRUZ, CA 95060-4000

(831) 454-2580 FAX: (831) 454-2131 TDD (831) 454-2123

TOM BURNS, DIRECTOR

July 29, 2004

Hearing Date: August 25, 2004

COUNTY OF SANTA CRUZ  
PLANNING COMMISSION  
701 OCEAN STREET  
SANTA CRUZ, CA 95076

SUBJECT: GRANITE CONSTRUCTION FELTON QUARRY FIVE-YEAR REVIEW;  
74-633-PQ (Amended)

Dear Commissioners:

This Five-Year Review of Granite Construction's Felton Quarry ("Quarry") Permit and Certificate of Compliance (COC) is a required condition of Use Permit 74-633-PQ (Amended), as well as the County Mining Ordinance. Section 16.54.074 of the County Mining Ordinance states that a Quarry's permit shall be reviewed by the Planning Commission at a minimum of every five years. The last Review was conducted on September 8, 1999 and was accepted by your commission on September 27, 2000. While this item is a public hearing to investigate permit compliance, the County's Mining Regulations (County Code Section 16.54.074) states:

"New conditions shall not be imposed as part of a review process unless:

- a) there is a threat to public health and safety;
- b) there is a significant injurious threat to the environment;
- c) there is a nuisance;
- d) there is a violation of approval conditions;
- e) there is a change in the scope of operations; or,
- f) the ordinance in effect at the time of the Mining Approval, Certificate of Compliance or Reclamation Plan Approval being reviewed was originally approved, or the Approval itself, authorized imposition of new conditions by the County."

The following analysis and discussion will address the compliance review, including a brief history of the Quarry, site description and location, mining operations and compliance issues.

## **LOCATION AND DESCRIPTION OF OPERATIONS**

The Felton Quarry is located on a granite deposit approximately two miles southwest of the town of Felton in the Santa Cruz Mountains between State Highway 9 and Empire Grade Road (Exhibit A).

The Felton Quarry Operator mines and processes construction aggregate and asphalt concrete (AC) products for construction and maintenance projects throughout Santa Cruz County. The quarry also provides decorative aggregate materials (California Gold path fines, washed aggregates and accent boulders) that are used throughout northern California.

Quarry operations include the excavation, washing, screening, stockpiling and shipping of aggregate resources. Mining operations begin with the stripping of vegetation and removal of topsoil, which is then stockpiled for use in future reclamation activities. The next process is removing raw materials from the deposit by the benching method. The first step in this process is the ripping of the material by a large ripper-equipped bulldozer. This method is occasionally augmented by blasting when necessary. The harvested raw material is loaded onto the primary feeder and a conveyor system transfers the material to the crushing and screening plant for processing.

The process of washing and screening the aggregates to produce the desired products requires the use of large quantities of water. Initially water is stored in a reservoir and is then used for scrubbing and rinsing of the aggregates. The process water is then directed to a clarifier that mechanically separates large amounts of fine sand, silt and clay from the process water. From the clarifier, the process water is directed back to the plant for washing aggregate. The remaining mud-slurry is then sent through a belt press system that squeezes out additional water and leaves stackable mud. This material is then sold/donated as a product or used in onsite reclamation. This wash water system was improved in 1995 to recycle 100% of the water directly from the clarifier/ belt press system and to eliminate flow to the pond system.

The Felton Quarry operations are currently in their 25<sup>th</sup> year of mining under the current mining approval. Since this mining approval has an estimated 50-year operating life, the remaining lifespan of the Quarry, under the current permit, is estimated to be 25 years.

## **BACKGROUND AND HISTORY**

A major Mining Amendment to the Felton Quarry Permit was approved by your Commission on October 27, 1993. The amendment included: (1) amending the Mining Plan; (2) expanding the present mining area to include areas of previous overburden placement and additional overburden storage areas; (3) increasing the depth of mining; (4) allowing periodic nighttime operations for asphalt hot plant operations without pre-approval of the Planning Department; and (5) amending the Reclamation/Re-vegetation Plan.

In 1999, the Planning Department brought the last review to the Planning Commission for consideration. This three-year review included requests by the operator for minor mining amendments to allow for the reduction or increase of the frequency of groundwater sampling if deemed necessary by the County Hydrologist; and to allow additional nighttime or off-hour operations at the discretion of the Planning Director. On September 12, 2000, your commission approved the condition to allow for the reduction or increase of the frequency of groundwater sampling if deemed necessary by the County Hydrologist; and approved ten additional off-hour operations for Monday through Friday and ten additional Saturday off-hour operations.

### **MINING APPROVAL AND COMPLIANCE WITH CONDITIONS OF APPROVAL**

The complete permit conditions for COC 74-633 PQ (Amended) are attached hereto as Exhibit B. Staff's comments are provided after each condition listed in Exhibit B to indicate the status of the quarry operator's compliance. Additionally, major items of interest are summarized below.

#### Off-Hours Operations

One of the most significant issues raised during the last three-year review was the request by Granite Construction for additional off-hours operations.

Per Permit Condition III.E.4, Granite Construction is allowed twenty (20) exceptions for off-hours operations without prior approval from the Planning Director. They are also allowed ten (10) additional exceptions (Monday through Friday) and ten (10) additional exceptions (Saturday daytime) with approval at the discretion of the Planning Director. The following is a summary of the number of off-hour operations that have occurred over the past five years and documents that Granite Construction has complied with all off-hours operation requirements:

1999: three (3) off-hours operations  
2000: seventeen (17) off-hours operations  
2001: ten (10) off-hours operations  
2002: four (4) off-hours operations  
2003: zero (0) off-hours operations.

#### Slope Stability

Cotton Shires & Associates, the Quarry Operator's consulting geologist, have continued to monitor the quarry slopes on a monthly basis. The primary reason that the County imposed the monitoring conditions was to guide the mining so that it increased stability and reduced the future potential for slope movements. The monitoring effort has resulted in the conclusion that there is no evidence of significant movement or headward enlargement of the 1992 rock wedge failure over the past 11 years. Additionally, they report that the operator's rock slope grading has likely increased the stability of the rock slope.

Since no significant movement has been detected over the past 11 years, mining now appears to have increased the site's **stability** to a point where less frequent monitoring would be appropriate. After discussing this matter with County staff, the operator has requested that the frequency of monitoring be decreased from once per month to once every three months. The consulting geologist, in a letter attached as Exhibit **D**, concurs with the modification of the monitoring frequency. Planning staff has reviewed the past and current stability reports and supports the proposed reduction in the frequency of slope monitoring. Staff recommends that your Commission adopt the changes to condition **111. K. 13**, included as Exhibit **E** to this report. The modified condition allows County staff to request more frequent monitoring should renewed slope movement occur.

### Minina Operations

In 2002, mining operations continued within the Phase 2 Mining Area. There are five phases in the mining plan. The mining is progressing in general compliance with the approved mining plan, and re-vegetation of mined areas is occurring as mining proceeds.

Due to the circumstances related to the 1992 rock wedge failure, Granite Construction will need to apply in the near future for a minor amendment to their mining plan to revise final contours. County staff has reviewed a preliminary plan and believe that the revised contours will likely result in less aggregate being removed from the quarry and will result in portions of the final slopes that are less steep than indicated on the current mining plan.

The drainage and settling pond facilities have been installed in accordance with the Mining Approval. Numerous inspections by County Staff over the past year have indicated that these facilities are adequate and functioning properly.

### Reclamation

Reclamation at the quarry is in compliance with the approved Reclamation Plan. An increasing expansion of vegetative cover exists on previously disturbed areas. There has also been continuing efforts to remove invasive species such as French Broom and Pampas Grass.

The Quarry Operator has submitted the required Re-vegetation Report by Greening Associates with each Annual Report.

## **RECOMMENDATIONS**

Following a review of quarry operations, Planning Department staff has concluded that Granite Construction's Felton Quarry is in substantial compliance with its approved Mining Permit Conditions. Staff recommends that your Commission take the following actions:

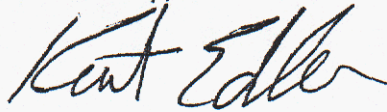


1. Accept and file this Five-Year Review; and
2. Adopt the revised set of Quarry Conditions that include a modification to Condition III.K.13 related to the frequency of slope monitoring (Exhibit F)

## **EXHIBITS**

- A. Location Map
- B. COC 74-633 PQ (Amended) Conditions of Approval with staff comments
- C. Mining / Reclamation Plan and Sections
- D. Cotton, Shires & Associates Report on Slope Stability
- E. Proposed revisions to Condition III.K.13
- F. Revised COC 74-633 PQ (Amended) Conditions of Approval

Sincerely,

A handwritten signature in black ink, appearing to read "Kent Edler". The signature is fluid and cursive, with the first name "Kent" and last name "Edler" clearly distinguishable.

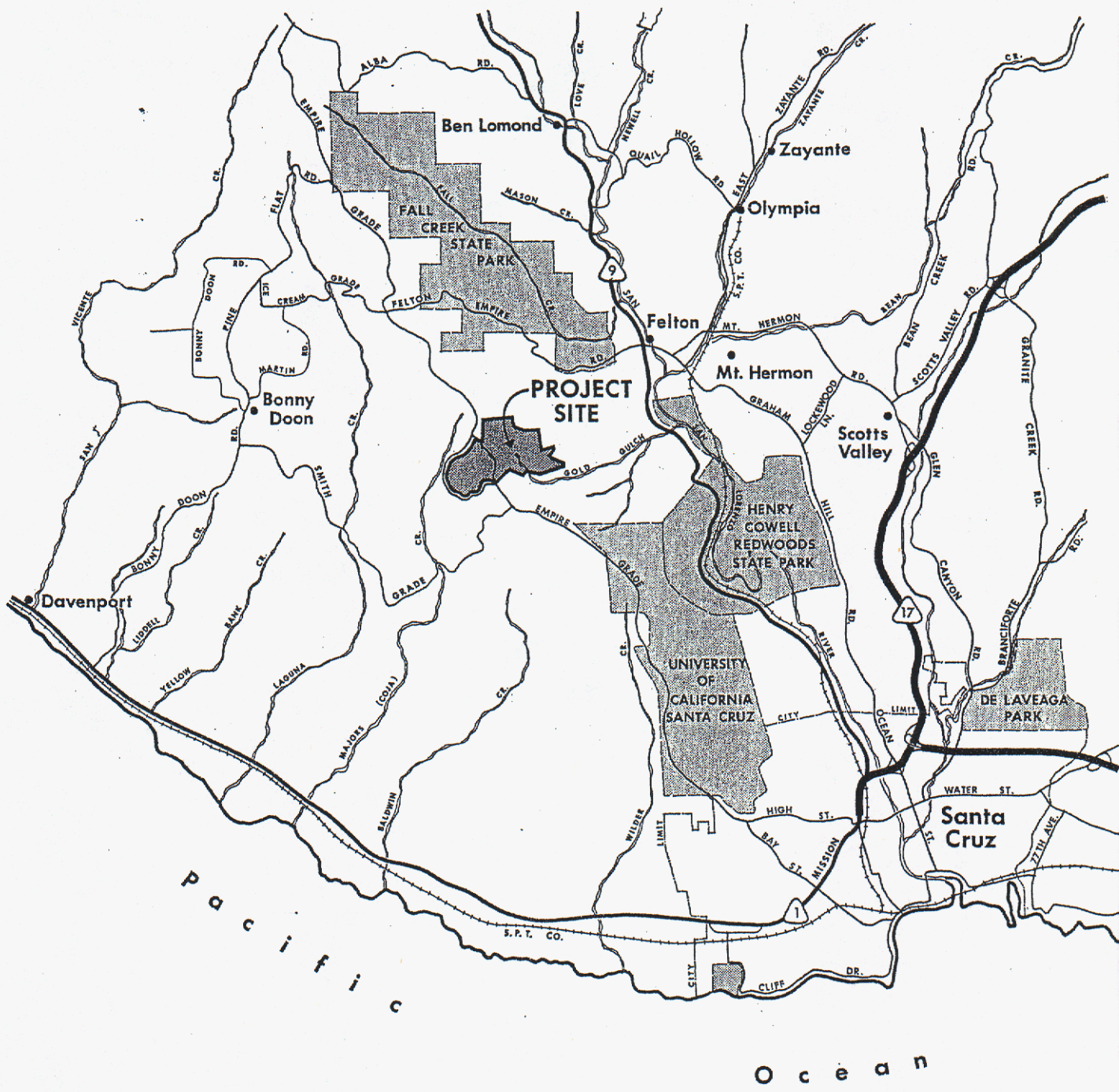
Kent Edler  
Associate Civil Engineer

**STAFF REPORT TO THE PLANNING COMMISSION**

**PERMIT NO. 74-633-PQ (AMENDED)**

APN(S): 062-181-12; 064-201-13, -79, -80, -81; 064-211-67, & -68

**EXHIBIT A**



# LOCATION MAP



## STAFF REPORT TO THE PLANNING COMMISSION

PERMIT NO. 74-633-PQ (AMENDED)  
APN(S): 062-181-12; 064-201-13, -79, -80, -81; 064-211-67, & -68

## EXHIBIT B



FELTON QUARRY  
COC 74-633 PQ (Amended)  
**CONDITIONS OF APPROVAL**  
(Revised 9/27/00 per Planning Commission Hearing for Three-Year Review)

**1) EXHIBITS**

Quarry operations shall be described in the following exhibits except where modified by the conditions below. All exhibits are on file with the Planning Department

- A. Felton Quarry, Quarry Regulations; Felton Quarry; 1974.
- B. Asphalt Plant Operation, Planned Quarry Permit Application; Granite Construction Company; 1975.
- C. Surveyor Map of the Land of Felton Quarry; Robert Baldwin; May 1974.
- D. Topographic Map of Felton Quarry (existing contours); Maurice-Helmkamp-Musser; May 10, 1974.
- E. Draft Environmental Impact Report, Felton Quarry; Environs; August 1978.
- F. Final Environmental Impact Report, Felton Quarry; Environs; November 1978.
- G. Addendum to the EIR for Proposed Operations, Felton Quarry, Environs; July 1979.
- H. Response to comments on the Hydrologic Elements of the Addendum to the EIR for the Proposed Felton Quarry expansion; Environs; October 1979.
- I. "Review of Mining Progression Plans, Phases 1 through 5, Felton Quarry Pit Slope, Santa Cruz County, California" Rogers/Pacific Professional Engineering Consultants, May 17, 1993. Plate 1 through Plate 5, Felton Quarry Mining Progression Plan.
- J. "Phase 1 Engineered Drainage Plan", Rogers/Pacific Professional Engineering Consultants, April 29, 1993.
- K. "Felton Quarry Area Hydrogeologic Evaluation Report, R.L. Stollar and Associates (now Watkins-Johnson Environmental, Inc.), June 12, 1992, Hydrologic Monitoring Program, Section 8.0, Pages 8-1 through 8-14.
- L. "Storm Drainage and Siltation Pond Study for Granite Construction Company, Felton Quarry," Ifland Engineers, Inc., December, 1991.
- M. "Felton Quarry Amended Revegetation Plan," Habitat Restoration Group, April 12, 1991, 27 pages with Appendices, Sheets 1 through 3.
- N. "Riparian Revegetation Plan and Revegetation Monitoring Plan, Addendum to amended Revegetation Plan of April 12, 1991, "Greening Associates, December, 1992. 10 pages.
- O. "A Wildlife Habitat Monitoring Plan for Felton Quarry," Greening Associates, 7 pages with Appendix.
- P. Application No. 94-0144, Request for minor variation to Mining Approval 74-633 (Amended) to include the use of a polymer water clarifier to the product washing system, as conditioned. Approval: April 11, 1994.
- Q. Environmental Determination/Mitigated Negative Declaration dated July, 1999.

COPIES OF THE ABOVE DOCUMENTS ARE AVAILABLE AT THE COUNTY OF SANTA CRUZ PLANNING DEPARTMENT.

## II. GENERAL PROVISIONS

- A. This Planned Quarry Pennit shall supersede **all provisions** of **Use Pennit 1574-U**, and 74-633-PQ.

**No** Continent (N/C)

- B. This permit is for the extraction, **processing**, **storage**, and **shipping** of the sand and aggregate resources obtained **from the property**, including the hot plant facilities for production of asphalt conducted in accordance with the descriptions in the exhibit documents and as modified by the conditions of **this permit** for a 50 year excavation project.

N/C

- C. Minor variations to this Approval meeting the standards of County Code Section 18.10.134 and requested by the **mining operator** or staff which do not change the general concept of **use** and operation, and which do not adversely affect the environment, **may** be approved in writing by the Planning Director following review and recommendation by the County's Environmental Coordinator.

N/C

- D. If at any time the Planning Director determines that there is a **substantial** noncompliance with any of these conditions, and/or Exhibits, the **Planning Director** shall forward a recommendation to the Planning Commission to **set** a hearing to consider revocation of **this Approval** in accordance with the provisions of County Code Section 18.10.136.

N/C

- E. Within 45-days from the date of issuance of this **Mining Amendment Approval**, the property owner and applicant shall sign, **date** and return two copies of the **Approval** to indicate acceptance and **agreement** with the conditions thereof. By signing this Approval, **property owners** agree to file a Declaration with the **County's Recorder Office** within 45 days from the date of acceptance, **binding** themselves and any future **owners or lessees** to the revegetation and reclamation requirements of this **Approval**. The Declaration shall be supplied by the **Planning Director**. **Failure** to sign the approval or record the declaration as **described above** shall render **this Mining Approval** null and void and **all mining operations** shall **cease** at the Quarry site except reclamation and revegetation **work** in accordance with the above listed exhibits.

N/C

- F. All mining and reclamation activities shall conform with the **Conditions** of Approval and with the regulations of the following agencies as they apply to the mining operations. The mining operator shall provide the County with copies of any permits issued by these agencies and any permit **amendments**, within 30 days of receipt.

1. Central Coast Regional Water Quality Control **Board**
2. **Monterey Bay** Unified Air Pollution Control District

3. California Department of Fish and Game
4. State Coastal Commission

*In Compliance.*

- G. This Approval shall be reviewed by the Planning Commission within three years from the date of issuance. In connection with such review, the Planning Commission shall take public testimony and **shall** otherwise investigate the permittee's compliance with the conditions of *this* Mining Approval Amendment, and shall be empowered to amend the conditions of the Approval if necessary to eliminate nuisance conditions or to mitigate problems resulting from a change of circumstances.

*This item before your Commission is the required Five-year Review as required by the County mining ordinance.*

- H. In conjunction with the annual report to the State Geologist required by SMARA, an **annual** report to the Planning Director shall be prepared by a professional determined by the Planning Director as qualified to prepare such report. Thereport shall be submitted by the mining operator to the Planning Director by April 1 of each year. If the Planning Director determines the need for an independent consultant with specialized expertise, the mining operator shall obtain such consultant. All costs of such report and its review shall be paid by the mining operator. Thereport shall include the following unless waived or modified in writing by the Planning Director (Mit. #1, 2, 3, 4, 5, and 6):
1. A report on compliance with all Conditions of Approval including the required monitoring programs.
  2. An analysis of any significant changes in environmental conditions or in the mining operation which have not been anticipated in this Approval.
  3. A current aerial photograph of the entire site (1"=200' scale) showing property **lines**, facilities, stripped areas, and revegetated and reclaimed areas, together with a report on the extent of excavation and reclamation completed in the previous year and projected for the coming year.
  4. Every **fifth** year, a current aerial photogrametric topographical map prepared from current aerial photographs map (1"=200' scale with a 10 foot contour interval) showing all the requirements of II.H.3. above.
  5. A revegetation report prepared by a botanist, horticulturist or plant ecologist retained by the mining operator and approved by the Planning Director. The revegetation report shall describe the degree of success in achieving the objectives of the **revegetation** plan, and shall identify any changes or additional measures which may facilitate achievement of the desired results.
  6. Written verification of the renewal and/or validity of the **financial** assurance.
  7. A report to be held as proprietary information in accordance with the County's Mining Regulations, stating the annual amounts of production and shipping of **mining** products, and the estimated time to complete mining in the permitted area.
  8. Monitoring logs for all wells, piezometers and springs (if any) for the entire year, and analysis thereof,

as described in Conditions III.D.11.

9. A noise report prepared by a qualified noise/acoustical consultant retained by the mining operator and approved by the Planning Director. Each noise report shall determine whether or not the mining operator is in compliance with noise standards contained in the County Mining Regulations, and shall investigate and make recommendations regarding (relative to noise mitigations): (i) Any Mining equipment used at the mining site; (ii) Proposed and existing noise protection; (iii) Any other significant impact resulting from mining operations. The mining operator shall implement all recommendations of the noise consultant determined to be necessary by the Planning Director for compliance with the conditions of the Mining Approval.
10. All reports submitted to the Monterey Bay Unified Air Pollution Control District.
11. A log of nighttime operations as required by Condition III.E.4.(c).
12. A copy of this required annual report with all proprietary information removed shall also be submitted for staff inclusion on the next regularly scheduled Planning Commission consent agenda for Planning Commission review.

*Due to changes in staffing, Planning Department quarry staff have recently become aware of this requirement. While all of the subject annual reports were reviewed and accepted by the Planning Department, they were not placed on the Planning Commission's consent agenda. Should Commissioners wish to review any or all of these reports, they are on file with the Planning Department*

- I. All costs for the County's inspections and review of Annual Reports and other reports submitted by the Quarry shall be paid by the Quarry, within 30 days after billing.

*In Compliance, Granite Construction has paid all costs invoiced for County inspections and reviews.*

- J. All mining operations shall be in compliance with the State's Surface Mining and Reclamation Act (SMARA).

*In Compliance. During the annual quarry inspection required by SMARA, County staff found the quarry to be in compliance with SMARA.*

- K. In the event that future County inspections of the subject property disclose non-compliance with any conditions of this Approval or any violation of the County Code, the operator shall pay to the County the full cost of such County inspections, including any follow-up inspections and/or necessary enforcement actions, up to and including Approval revocation.

N/C

### III. OPERATING REQUIREMENTS

The establishment, operation, and maintenance of the quarry facility shall be in compliance with the requirements of Sections 14.06.060 and 14.06.070 of the Santa Cruz County Code except where modified below.

- A. Noise and Vibration



1. Maximum operating noise at the site boundaries (not including haul trucks or construction activities) shall not exceed the limits of Section 13.04.236.25(C) of the County Zoning Ordinance. Average noise levels at the site boundaries shall conform to an LDN (day/night weighted average) of 60 DBA.

*In compliance. Although Section 13.04 of the County Code was repealed in 1992, County Code Section 13.10.345.5 requires noise to meet the County's General Plan Land Use Compatibility Chart for Exterior Community Noise (General Plan Figure 6-1). This chart identifies a "normally acceptable" exterior noise exposure compatibility level of 60 dB Ldn, which is consistent with the previous Code Section 13.04.236.25 (C).*

*In 2002, the quarry performed noise monitoring of quarry activities during a 24-hour period when Granite Construction was performing nighttime operations. The monitoring devices were set up on the deck of the most impacted residence (5662 Empire Grade). The results of the noise study revealed that the noise exposure to the residence was 54dB Ldn.*

*In 2003, Granite Construction did not have nighttime operations, so they performed noise monitoring during a 24-hour period without nighttime operations. The monitoring devices were set up at 5662 Empire Grade as well as at a newly constructed residence located at 240 Bonnywood Way (Yates residence), which is located closer to the quarry than the residence at 5662 Empire Grade. The results of the noise study revealed that the noise exposure to the residence at 5662 Empire Grade was 48dB and was 52dB at the Yates Residence.*

2. Off-site vibrations shall be subject to the provisions of Section 13.04.236.25(F) of the County Code.

*Section 13.04.236.25(F) of the County Code was deleted in 1982, when the Zoning Ordinance was updated. Current, blasting is the only vibration detectable by human senses beyond the boundaries of the quarry. Vibrations attributable to blasting are regulated by MSHA (the Mine Safety and Health Administration). Blasting occurs at the quarry generally a few times a year.*

3. Blasting procedures shall utilize time-delayed multiple charges to minimize noise and shock wave disturbances.

*In Compliance. The quarry utilizes non-electric time-delayed caps used in multiple drilled hole patterns for all blasts.*

## B. Air Quality

1. Stripping and mining activities shall be conducted in a manner to minimize the generation of dust.

*In Compliance. The quarry is following their approved phased mining plan and is also following the reclamation procedures outlined in the phased mining plan. One of the purposes of the phased mining plan and reclamation is to limit the exposed area that could generate dust.*

*Additionally, the moisture content of the material entering the plant is monitored and recorded for the Monterey Bay Unified Air Pollution Control District. The area around the primary feeder in the pit, the primary jaw crusher, and transfer point on the conveyor system are kept wet to minimize dust.*

2. All roads on the property shall be either surfaced, treated, or sprinkled with water frequently enough to

insure that windblown materials do not present a problem to adjacent properties or public roads.

*In Compliance. Paved quarry roads are watered when necessary to prevent dust. The unpaved roads are treated with ~~liger~~ sulfate and watered.*

C. Surface Hydrology

1. Process water shall be isolated in a separate, closed, recycling system of ponds and conveyances.

*In Compliance. The aggregate process system utilized by the quarry recycles 100% of the water from their clarifier/ belt press system. This eliminates process water from flowing to the ponds. The quarry only pulls water from the ponds to make up for evaporation or product retention.*

2. Site drainage from all disturbed areas, including all mining, processing, or stockpile areas, shall be directed to detention and settling basins prior to release from the property. Detention facilities shall be designed to handle a 2 hour, 100 year storm event and limit storm water flows from the property to those which would occur under natural conditions. The ponds shall also be designed to provide a median detention time of at least 20 to 40 minutes for design storms up to a 2 hour, 100 year event.

*In Compliance. All storm water runoff is detained in settling basins. The ponds are laid out and built in accordance with the approved Storm Drainage and Siltation Pond Study by Ifland Engineers for a 2-hour, 100-year storm event.*

3. The outflow from the detention ponds shall be conveyed across the access road by closed culvert and shall be released in such a manner as to minimize erosion hazards.

*In Compliance.*

4. Pond facilities shall not be relocated on the property without first submitting a revised drainage plan, calculations, and structural certification prepared by a registered civil engineer.

*In Compliance.*

5. Prior to construction of any new detention ponds which will maintain a residual impoundment greater than 15 feet in depth, a reconnaissance study prepared by a qualified professional limnologist shall be submitted which addresses potential water quality impacts, notably the potential for adverse water quality impacts of manganese concentrations. The recommendations of the study shall be incorporated in the construction and maintenance of such ponds.

*In Compliance.*

6. All catchment basins, drainageways, culverts, pumps, pipelines, etc. shall be maintained on a regular basis to ensure proper functioning free of breakage, siltation deposits, or malfunction.

*In Compliance.*

7. The applicant shall maintain and dispose of any petroleum products on the property in such a manner that no contamination of ground or surface waters will occur.

*In Compliance.*

8. Drainage improvements *shall* be in accordance with the approved engineered drainage plans by Ifland Engineers dated December 1991 and the above referenced Rogers/Pacific "Review of Phase 1 Drainage." Amendments to the Ifland Engineers, Inc. plan shall be submitted to County Planning for review and approval prior to implementation (Mit. #2).

*In Compliance. The ponds are laid out and built in accordance with the approved Storm Drainage and Siltation Pond Study by Ifland Engineers for a 2-hour, 100-year storm event. The quarry is currently transitioning from Phase 2 to Phase 3, so the Phase 1 drainage plan is no longer applicable.*

9. Operation of the detention pond evacuation plan prepared by Ifland Engineers shall continue. The plan shall utilize an electric powered pump, with a diesel powered back-up system in case of loss of electric power. **Back up system** shall be in place at all times during October 15 to April 15. Results of all water sampling *shall* be included in the quarry's annual report (Mit. #2).

*In Compliance. The quarry keeps an electric pump and diesel pump onsite. Copies of discharge results submitted by the quarry to the CRWQCB have been submitted with the quarry's annual report*

10. Sediment basins shall be cleaned out annually prior to October 15<sup>th</sup>. A siltation marking device shall be installed which notes remaining pond capacity of major settling basins. Annual reporting of basin capacity by Hydrological consultant in-lieu of marker system is acceptable (Mit. #2).

*In Compliance.*

11. Spoil material from **annual** dredging of settling basins shall not be allowed to enter streams or settling basins. **Spoils** shall be deposited in *such* a way that is safe and requires no maintenance. Seeding and mulching prior to October 15<sup>th</sup> shall be required if spoil placement requires (Mit. #2).

*In Compliance.*

D. Groundwater Hydrology

1. FELTON QUARRY (QUARRY) will establish, and submit evidence of same to **FOREST LAKES MUTUAL WATER COMPANY (FLMWC)** within two (2) years from the date of issuance of the 1979 Use Permit, a source of groundwater producing at least nine (9) acre feet per year of groundwater starting as of the beginning of the third year from the date of issuance of the Use Permit, and shall provide at least a total of eighteen (18) acre feet per year of ground water by the beginning of the ninth year from the date of issuance of the Use Permit.

QUARRY shall have the **right** to inspect, at reasonable times and upon reasonable notice, the meters and other records pertaining to the corporation yard wells.

*In Compliance. The well system required to supply 18 acre-feet of water to FLMWC was completed in 1991. FLMWC pulled 17.75 acre-feet in 2002 and 19.08 acre-feet in 2003.*

2. The water to be provided to FLMWC by QUARRY shall be ground water which shall be comparable



in quality to the ground water presently ~~drawn from~~ FLMWC'S corporation yard wells, within reasonable tolerances. "Presently drawn" shall mean the quality of this ground water based upon data collected ~~from~~ the corporation yard wells by FLMWC for a six (6) month period following issuance of the Use Permit. Duplicate samples of water taken shall be given to the QUARRY for testing, should it so desire.

*In Compliance. Water pumped from the well is processed through a water treatment plant to reduce iron and manganese levels.*

3. The water sources developed by QUARRY to supply FLMWC as provided above shall not interfere with the FLMWC corporation yard wells. Further, the quarry operation shall not interfere with the water quality of the corporation yard wells.

*In Compliance. Water quality and quantity reports are submitted to the Planning Department semi-annually. The reports indicate that there is no change in water quality or quantity of FLMWC wells attributable to the quarry.*

4. QUARRY shall deliver, through water pipelines, the required water to FLMWC'S corporation yard for connection into the FLMWC water system. A meter shall be installed at the delivery point by QUARRY, with the meter accessible to FLMWC and to be maintained and replaced, if necessary, by QUARRY.

*In Compliance.*

5. FLMWC shall have the right to specify the rate of delivery of the water from QUARRY, staying within nine (9) or eighteen (18) acre feet per year, as the case may be, with a maximum monthly delivery of one-sixth (1/6) of the annual total, or one-seventh (1/7) of the same if QUARRY provides adequate storage capacity to meet this latter requirement.

*In Compliance.*

6. The QUARRY well, or wells, as well as the transmission lines, shall be constructed, installed and maintained according to standards of the State of California, applicable to FLMWC; and the overall system shall be comparable in quality to FLMWC'S present system in the corporation yard.

*In Compliance.*

7. If FLMWC establishes that the loss of water at the corporation yard well field is more than nine (9) acre feet per year at any time during the third through the eighth year, or more than eighteen (18) acre feet per year thereafter, and said loss is attributable to the quarry operations, the QUARRY must supply FLMWC sufficient additional water to replace such loss.

*In Compliance. No water loss attributable to the quarry has been established.*

8. At the end of the fifty (50) year use Permit, and if QUARRY does not seek an extension of the Use Permit, or subsequent to the end of the thirty-month year of the Use Permit, should QUARRY abandon the quarry operation, QUARRY shall transfer to FLMWC the well or wells supplying the water to FLMWC, all equipment and transmission lines pertaining to same, easements for access, maintenance and replacement of equipment and transmission lines, and the right to draw water from the well or



wells. However, should QUARRY abandon the quarry operation prior to the end of the thirty-ninth year of the Use Permit, the above transfer shall take place only if FLMWC establishes that its corporation yard well field has been damaged by the quarry operation.

Should such transfer occur, QUARRY agrees that the system being transferred shall be in good working condition at the time of transfer.

*N/C*

9. The QUARRY shall, within one (1) year from the issuance of the 1979 Use Permit, provide eighteen (18) acre feet of detention ponds, and a total of twenty-four **(24)** acre feet of same within the first ten (10) years from the issuance of the Use Permit. ~~Thereafter~~, the QUARRY shall provide one-half (1/2) acre of additional detention storage for every new acre of net disturbed area. Net disturbed area shall mean the area where the overburden is removed **less** the area which has been revegetated by the QUARRY.

*In Compliance. Approximately 30 acre-feet of detention capacity is maintained by the quarry.*

13. To the extent allowed by law, and in view of the fact that Conditions III.C.1 through III.C.19, and Conditions III.G.1 through III.G.5 as amended herein **are** for the benefit and protection of the shareholders of the FLMWC and other residents within the area served by FLMWC, QUARRY agrees that FLMWC may seek directly through Court action to compel QUARRY to perform these Conditions, or obtain damages or injunctive relief for the failure of QUARRY to perform ~~same~~, without the necessity of first requesting enforcement by the County of Santa Cruz. The prevailing party in such litigation shall be entitled to reasonable attorney's fees and actual costs incurred. In addition, FLMWC shall have the right, upon reasonable notice and at reasonable times, to inspect those operations of QUARRY which involve performing the conditions set forth in this paragraph. Reasonable notice shall include such **time** as is necessary to comply with all requirements of **the State** of California pertaining to a person or persons entering the QUARRY property.

*N/C*

11. The Hydrologic Monitoring Program prepared for this project by Watkins-Johnson Environmental, Inc., dated June 12, 1992, shall be implemented. The frequency of water quality sampling and groundwater level measuring shall occur two times per year during August and April unless the County Hydrologist **determines** that an increase or decrease in **the frequency** of sampling is appropriate based on water quality trends reported in the **annual** hydrologic monitoring report. At a **minimum**, water quality monitoring shall occur in August of each year and groundwater level measurements shall occur two times per year during August and April. This monitoring shall include measurements of groundwater elevations and water sampling collected for general chemical analysis. Analysis shall be conducted by a certified water quality testing laboratory. The results of **all** monitoring and chemical analysis shall be submitted to County Planning **as** part of the quarry's annual report and shall include biannual comparisons in the findings of monitoring results. **Any** water quality changes of 15% or more shall be discussed in the report including methods to tract (sic) water quality trends, and to remediate any negative impacts if trends of deteriorating water quality continues (Mit. #3).

*In Compliance. The quarry has submitted copies of their hydrologic consultant's annual report to the Planning Department on an annual basis.*

12. The following measures shall be implemented in addition to the Monitoring Program prepared by Watkins-Johnson (Mit. #3):
- A "Class A Evaporation Pan" shall be installed near the quarry office rain gauge to measure the rate of evaporation and to provide a more accurate measurement of amount of infiltration occurring from the detention ponds. Results of monitoring shall be included in the annual hydrological report.
  - Two additional monitoring wells shall be installed, one located near the existing detention ponds and the other located proximate and northeast of the future relocated detention ponds for Phase 3. The same monitoring as specified in the Watkins-Johnson Monitoring Report for the existing wells shall be conducted (depth of wells shall be sufficient to reach year-around groundwater levels with 300 feet being the maximum necessary depth);
  - Water quality sampling at the headwaters of the tributary to Gold Gulch (located directly south of Limestone Brook) shall be conducted in the same fashion as other surface water quality monitoring on the site;
  - The quarry's hydrologic consultant shall include in the twice/year reports, hydrographs of groundwater level measurements that compare current groundwater levels with the levels shown in the previous report.

*In Compliance.*

13. Groundwater level and water quality monitoring, analyses and reporting shall be increased to a quarterly frequency (August, November, February, May) if documented trends of deterioration of surface water or groundwater are not successfully remediated by the quarry over a two-year period. This more frequent monitoring shall determine if a public health concern may be created through continued quarrying activities. In this case, all quarrying activities may be required to cease by the County until it can be demonstrated that the threat to public health no longer exists (Mit. #3).

*No negative trend has been determined through 2003.*

**E. Days and Hours of Operation**

1. All mining and processing activities at the site shall be confined to between the hours of 6:00 A.M. and 8:00 P.M., Monday through Saturday. Maintenance operations may be conducted at any time.

*In Compliance. The normal startup time at the quarry is 1 a.m. On heavy paving days, the asphalt plant starts at 6 a.m. The latest quitting time is 6 p.m.*

2. All shipping activities shall normally be confined to between the hours of 6:00 A.M. and 8:00 P.M., Monday through Friday.

*In Compliance. Normal shipping hours at the quarry are from 7 a.m. to 3:30 p.m.*

3. Blasting activity shall be confined to between the hours of 7:30 A.M. and 6:00 P.M.

*In Compliance.*

4. Twenty (20) exceptions to III.E.2 for the off hour operations of the asphalt plant are allowed without prior approval of the Planning Director. An additional 10 exceptions to Condition III.E.2 per year may be granted at the discretion of the Planning Director for off-hour operations Monday thru Friday, and 10 additional exceptions for Saturday (daytime) operations for a maximum of 40 exceptions per year. These off hour operations *are* authorized for the quarry providing that (Mit. #5 and Mit. #A.1):

*In Compliance. Granite Construction had three (3) off-hours operations in 1999; seventeen (17) in 2000; ten (10) in 2001; four (4) in 2002 and none (0) in 2003.*

- a. Off hours shall be defined as those hours that are not included in the normal hours of operation and shipping authorized by this permit. One off hour operation shall be defined as one night or one weekend day.

*N/C*

In order to obtain approval for 20 additional offhours operations at the discretion of the Planning Director (for a maximum total of 40 exceptions per year), the quarry operator shall submit a letter to the Planning Director demonstrating the need for the additional offhours work and the quarry operator's ability to adequately address any noise, odor, or other related complaints by local residents.

*In Compliance.*

The ~~Quarry~~ shall keep a list of local residents who request notification of off-hours operations. These neighbors shall be notified prior to the operation as soon as practical.

*In Compliance.*

- d. A log of off-hour operations shall be kept and included in the annual report including days and hours of operation and the size, number and destination of haul trucks required.

*In Compliance. Logs are on file in the Planning Department*

Off hour Asphalt operation shall be limited to public agency projects only.

*In Compliance.*

- f. This amendment of off-hour operations shall be reviewed by the Planning Commission during the three-year review of the mining operation, and within one year of this Mining Approval Amendment. The Planning Department staff shall report back to the Planning Commission regarding the success of mitigations for truck noise and asphalt odor associated with off-hour operations.

*This Five-year Review includes an analysis of off-hour operations.*

5. To reduce noise levels of the asphalt plant and truck traffic for off-hour operations, the Quarry shall construct and/or implement the following improvements (Mit. #5 and Mit. #A.1 and Mit. #B.):

- a. Construction and permanent maintenance of ~~noise baffling~~ or some other ~~type~~ of noise reduction barriers on the dust collector ~~exhaust~~ system.

*In Compliance.*

- b. Installation and permanent maintenance of a ~~muffler~~ device on the pneumatic ~~system~~ that operates the hopper flaps.

*In Compliance. Mufflers were installed in 1993.*

- c. Install all other recommendations ~~of~~ acoustical engineer noise reports to reduce decibel level for surrounding neighborhood.

*In Compliance.*

- d. ~~The~~ quarry operator ~~shall~~ monitor ~~and~~ keep records of speed and noise levels of trucks from the quarry entrance at Empire ~~Grade~~ to the intersection of Bay Avenue and Highway 1 (Mission ~~Street~~) during off-hour operations. This shall be accomplished using a vehicle equipped with a ~~radar~~ detector and a decibel ~~meter~~. ~~The~~ vehicle shall set up at random locations along the entire route to ensure compliance. The records ~~shall~~ be made available to the County at the close of each paving project, and shall be submitted to the Planning Department as part of the quarry's annual report.

*In Compliance.*

- e. The ~~quarry~~ shall post notices in the community of ~~each~~ upcoming off-hour operation. Notices shall inform readers of the range of dates within which the operation may begin, the possible hours of operation, the expected duration of ~~the~~ operation and shall display the appropriate telephone number at the ~~Planning~~ Department to which to report complaints of excessive noise. The notices shall be posted on Bay ~~Street~~ at each of four intersections: Nobel/Iowa, Escalona, King, and Mission, 48 hours in advance of the projected ~~start~~ of the operation.

*In Compliance.*

- f. Notices of off-hour operations shall be mailed to the City of Santa Cruz Public Works and ~~Planning~~ Departments, and the County of ~~Santa~~ Cruz Planning Department, 48 hours in advance of the projected ~~start~~ date.

*In Compliance.*

- g. If widespread complaints ~~are~~ received from residents within the Bay ~~Street~~ area (with consideration of acoustical and vehicle ~~speed~~ data ~~provided~~ by the quarry operator) further approvals by the Planning ~~Director~~ for off-hour operations will not be granted. The Community Response to Noise chart (ISO R1996) will be used as guidance to determine the number and nature of Complaints that represent a ~~significant~~ impact.

*In Compliance.*

6. To reduce objectionable odors during off-hour operations the applicant shall use:



- a. A silo load-out and weigh system to load trucks, which includes a fugitive fumes recovery system which shall be interlocked ~~so~~ as to only allow the loading of trucks while the recovery system is operating. The fugitive fumes recovery system shall be maintained in good working order (Mit. #C).

*In Compliance.*

- b. Cover trucks loaded with asphalt

*In Compliance.*

F. Insurance.

1. Verification of insurance coverage in compliance with the ~~requirements~~ of the County Quarry regulations shall be provided within three (3) months of the issuance of this permit and with each ~~annual~~ report.

*In Compliance.*

G. Roads and Transportation

1. The applicant shall maintain the entrance roads reasonably ~~free~~ of dust and debris resulting from the site operations and shall load trucks in such a manner ~~as~~ to minimize spillage on haul routes.

*In Compliance.*

2. The applicant shall maintain an affirmative action program to inform ~~all truck~~ drivers of their obligation to comply with State and Federal vehicle noise regulations and State and local traffic regulations, and to encourage programs of vehicle safety and driving courtesy.

*In Compliance,*

3. Within one (1) year of the abandonment of Quarry Bend Road, the ends of the road shall be closed off with solid wood gates, fencing, earthen berms, and landscaping as required to discourage public access while providing adequate fire protection access in accordance with a plan to be approved by ~~staff~~ or approved plans on file.

*In Compliance.*

4. Within one (1) year ~~of~~ the issuance of this permit, internal haul routes for stripping and mining materials shall be developed so that public roads shall not be required to move materials from one ~~part~~ of the site to another.

*In Compliance.*

5. The private access roads leading to San Lorenzo Avenue and Empire Grade shall be maintained at a minimum paved width of 16 feet.

*In Compliance.*

6. Gates approved by the State Division of Forestry and the Felton Fire Protection District shall be maintained at the property entrances from Empire Grade and San Lorenzo Avenue to prevent unauthorized public access through the site during non-working hours.

*In Compliance.*

7. Off-road vehicles shall be prohibited on the property except those operated by company employees.

*In Compliance. Fencing is maintained at access points to keep off road vehicles out*

8. Nighttime and off-hour operations shall use the Empire Grade entrance to the Quarry only. No use of San Lorenzo Avenue will be allowed except during the daytime hours listed in Condition III.E.2. (amended) above.
  - a. Truck shipment from the Quarry shall be limited to the existing routes along Empire Grade and San Lorenzo Avenue. Use of Highway 9, south to Santa Cruz, and Graham Hill Road for destination in Santa Cruz and beyond is not permitted.

*In Compliance.*

H. Revegetation, Screening, Erosion Control

1. All unvegetated disturbed areas not actively involved in the excavation or processing activities shall be seeded with grass at the start of the rainy season each year to establish a ground cover to reduce visibility and erosion potential.

*In Compliance.*

2. Within one (1) year of the issuance of this permit the banks of Limestone Brook, including the side slopes extending up to the entrance road and the hot-batch plant, shall be planted in native brush and tree species to maximize the shading of the canyon and waterways and to minimize the erosion potential.

*In Compliance. Completed in 1974.*

3. The entrance from Empire Grade and the ends of Quarry Bend Road shall be provided with screen plantings to minimize visibility into the property and the view of any excavation areas.

*In Compliance. Planting of redwoods occurred in 1992 and supplemental seeding of other native species occurred in 1993, 1994 and 1995.*

4. The benches on final slopes shall be provided with a planting medium composed of topsoil and compost removed from excavation areas mixed into a minimum 1 foot thick layer of porous gravel material, and a similar planting medium shall be drifted down the face of the cut slopes. The final slopes shall be seeded with native plant species and planted with tree seedlings. Adequate fertilization and irrigation shall be provided for a minimum of 2 years to ensure proper establishment and growth of plants.

*In Compliance. The majority of the quarry has not been mined to the final slopes. The final slopes that have been achieved are experiencing successful re-vegetation.*

5. The operator shall institute a yearly control program of non-native plant species, including Acacia, Scotch Broom, Pampas Grass, and Periwinkle.

*In Compliance. The quarry's re-vegetation specialist, Greening Associates, removes non-native plant species on a yearly basis. A report of their control program is included in the quarry's annual report. Inspections by planning staff have verified the success of the removal of the non-native plant species.*

6. All revegetation and reclamation shall be implemented in accordance with the requirements of Exhibits M, N, and O of this Amended Mining Approval.

*In Compliance. A 2003 revegetation report by Greening Associates indicates that there is an increasing trend in vegetative cover, particularly at the North Work Face. Greening's 2003 report indicates that at the North Work Face, approximately 62% of the area has achieved the 20-year success criteria, compared to approximately only 28% in 1998.*

#### I. Signing

1. Within three (3) months of the issuance of this permit, the signing requirements of the Quarry Regulations Ordinance shall be completed. The property shall also be posted to prohibit the use of off-road vehicles and firearms.

*In Compliance. Signs are posted at the gates leading to the site as well as the gates along Empire Grade Road.*

#### J. Bonding

1. The quarry shall maintain an adequate financial assurance to ensure reclamation in accordance with the approved Reclamation Plan and compliance with the County's Mining Regulations and SMARA.

*In Compliance. A bond from Granite Construction for \$955,157 is currently bound to the County of Santa Cruz and the Department of Conservation, Office of Mine Reclamation.*

#### K. Excavation and Grading

1. Final side-slopes shall be stepped or scarified to provide soil and vegetation retention, and the thickest feasible blanket of overburden strippings shall be replaced on the benches and drifted down the side-slopes to provide for groundwater retention and establishment of vegetation.

*In Compliance. Most of the Felton Quarry's slopes have not yet been excavated to final grade, but the final slopes that have been excavated have been stepped and have soil on the benches for revegetation.*

2. Excavations shall maintain a setback of 50 feet from the property line measured in a horizontal plane from the property boundary (excavations may thereby extend closer to the property line where the site

risers up ~~from~~ the property boundary), except as amended ~~herein~~.

*In Compliance.*

3. Prior to any ~~relocation~~ of the entrance road descending from Empire Grade, the applicant shall submit detailed engineering design plans for the new road placement prepared by a registered civil engineer and obtain amendment of this permit by the Planning Commission. Excavations ~~where~~ physically possible shall take place behind a barrier formed by the entrance road to protect the adjacent Forest Lakes development from the noise and visibility of operations. Excavations adjacent to the access road shall not be below the level of the road for the first 50 feet and then shall follow the configuration for final slopes as specified above.

N/A

4. Prior to any excavations west of Limestone Brook below an elevation of 900 feet, the operator shall submit revised drainage plans to be approved by County staff. Excavations on site shall not be below the 700 foot elevation.

N/A.

5. Prior to excavating or undermining the present utility easement on Quarry Bend Road, the operator shall relocate the easement and telephone lines to the satisfaction of the Pacific Telephone Company and Pacific Gas and Electric Company.

*In Compliance. This was completed in 1988.*

6. Topsoil and vegetation removed during the quarrying process shall be stockpiled in a level area and to minimize sight ~~from~~ adjacent public roads. The stockpiles shall not exceed 60 feet in a horizontal dimension or 15 feet in height and adequate drainage protection shall be provided.

*In Compliance.*

7. The existing fill operation at the head of Limestone Brook shall be conducted in accordance with the provisions of the permit from the California Department of Fish and Game.

*In Compliance. Completed in 1974.*

8. All final excavations shall provide for positive surface drainage to prevent the ponding or accumulation of storm waters or natural seepage except in the planned drainage pond facilities.

*In Compliance.*

9. In the event that significant paleontological or archaeological finds are made on the quarrying site, all operations shall be halted within 200 feet of the find and the Planning Department Director shall be immediately notified. Operations may be resumed in three working days following notification of the Planning Department unless specific request is made to allow additional time for proper excavation of fossils or artifacts in accordance with the provisions of the County's Native American Cultural Sites Ordinance.

*None Found.*



10. The operator shall endeavor to minimize the surface area of the quarry which is disturbed at any given time to the greatest extent compatible with mining and marketing requirements.

*In Compliance.*

1. No excavation or disturbance of Assessor's Parcel Number 62-181-08 shall be allowed during the time the Open Space Easement Contract (**OS-6-72**) with the County is in force.

*In Compliance.*

12. All mining of the Active Mining Area of the south pit workface shall be limited to a maximum interim gradient of 3/4:1 (horizontal:vertical). In some cases, slopes of 1/2:1 will be acceptable if first approved by both the quarry's geologic consultant and County Planning ~~Staff~~ (Mit. #1).

*In Compliance.*

3. Inclinometers with surface reading capability shall be installed behind the cut for Phase 1 mining (approximately 200 feet northwest of the slide ~~area~~) to detect any slope movement. Monitoring and recording of inclinometer readings shall be done ~~once/month~~ by the quarry's geologic consultant until quarry operators have been trained by the consultant to perform these readings. Thereafter, monthly readings may be performed by the quarry personnel who shall submit the results of each reading to the consulting geologist and County Planning Staff on a monthly basis. The frequency of these readings shall be increased if deemed warranted by evolving site conditions ~~as~~ determined by the County Planning Geologist (Mit. #1).

*In Compliance. Cotton Shires and Associates is monitoring the inclinometers on a monthly basis. Monthly reports are being sent to the Planning Department. No significant movement of the slope face has been detected over the past 11 years.*

*Since no significant movement has been detected over the past 11 years, the Operator is requesting a reduction in the frequency of monitoring from once/month to once/quarter.*

14. The quarry's consulting geologist shall observe the quarry operation on a minimum basis of once/quarter (every three months) and report on the quarry program on an annual basis. The report shall be submitted to County Planning within 20 days of the quarry's annual report and shall (Mit. #1):
  1. Document the geologic structure exposed by the quarry as shown on the geologic map of the March 17, 1993, Rogers/Pacific report;
  2. Discuss the success of the quarry's activities regarding stability and make recommendations about continuing operations;
  3. Discuss the results of the inclinometer readings conducted ~~over~~ the year, including the consultant's supervision of quarry personnel's monitoring of the inclinometers. The quarry shall immediately notify the County Planning Department if and (sic) adverse geologic conditions become exposed during the monitoring or inspections of quarry activities and coordinate with County Planning on the remedial action to be taken.

*In Compliance. All reports by the quarry's Geologic Consultant, Cotton Shires and Associates, have been received and adequately address the quarry's operations. Copies of the reports are on file in the Planning Department.*

15. All mining excavations shall be conducted in accordance with the recommendations of the "Review of Mining Progression Plans, Phases 1 through 5" by Rogers/Pacific, dated April 29, 1993 (Mit. #1).

*In Compliance.*

16. Prior to commencing a new mining phase, the quarry's geologic consultant shall conduct a "Phase Closure Inspection" and submit in report form the results of the inspection to County Planning. The report shall discuss the same issues as required by the annual report for geologic issues (Mit. #1).

*In Compliance.*

L. Mitigation Monitoring Plan

The mitigation measures listed under this heading have been incorporated into the Conditions of Approval for this project in order to mitigate or avoid significant effects on the environment. As required by Section 21081.6 of the California Public Resource Code, a monitoring and reporting program for the above mitigations is hereby adopted as a condition of approval for this project. This monitoring program is specifically described following each mitigation measure listed below. The purpose of this monitoring is to ensure compliance with the environmental mitigations during project implementation and operation. Failure to comply with the Conditions of Approval, including the terms of the adopted monitoring program, may result in permit revocation pursuant to Section 18.10.462 of the Santa Cruz County Code. All mitigation monitoring shall be documented in the required Annual Report. If the next quarterly inspection following the submittal of the Annual Report shows non-compliance with any provision of this Mining Approval Amendment, enforcement actions in accordance with the County Code and SMARA will be implemented to achieve compliance.

1. Mitigation Measure: Condition II.H.10 (Air Quality)

Monitoring Program: Planning Staff review of communication submitted to the Monterey Bay Unified Air Pollution Control District contained in the annual reports as required by Condition II.H.10 and staff quarterly inspections will document compliance with this mitigation. Non-compliance with the air quality conditions required by the Air Pollution Control District will be documented in the annual reports. Remedial measures are the responsibility of the Air Pollution Control District.

2. Mitigation Measure: Condition I.C.8 through 11 (Surface Hydrology)

Monitoring Program: Planning staff review of the hydrology section of the required annual report (Condition II.H.8) prepared by the consulting hydrologist will document sampling of water discharge. Planning staff quarterly inspections will verify pump backup system, sediment pond cleaning and spoil placement and treatment condition requirements prior to commencement of each rainy season.

*In Compliance.*

3. Mitigation Measure: Condition III.D.11 through 13 (Groundwater Protection)

Monitoring Program: Planning staff review of hydrology section of the required annual reports (Condition II.H.) prepared by the consulting hydrologist and staff quarterly inspections will verify compliance with this mitigation. Compliance with this mitigation will be documented by the consulting hydrologist's report and included in *the* annual report with recommendations for remedial measures, *if* required.

*In Compliance.*

4. Mitigation Measure: Condition II.H and Exhibit "O" of the Amended Mining Approval (Revegetation/Reclamation Plan)

Monitoring Program: Planning Staff review of the revegetation report section of annual reports as required by condition II.H and quarterly inspection will document compliance with Exhibits "M", "N", and "O" of the Amended Mining Approval. A "Wildlife Monitoring Plan" by Greening Associates, September 1993 has been reviewed and approved by Planning staff and included in the Amended Mining Approval as Exhibit "O". The success criteria defined in the Wildlife and Revegetation Monitoring plans will be documented in each annual report by the consulting biologist with remedial measures if non-compliance is noted.

*In Compliance.*

5. Mitigation Measure: III.E. 1 through 4(d) (Noise Monitoring)

Monitoring Program: Planning staff review of the noise monitoring reports in the required annual reports (Condition II.H.) and staff quarterly inspections will document compliance with this mitigation.

*In Compliance.*

6. Mitigation Measure: Condition III.K. 12 through 15 (Slope Stability)

Monitoring Program: Planning Staff review of the geology section of the required annual reports (Condition II.H.), prepared by the consulting geologist as conditioned and staff quarterly inspections will document compliance with this mitigation. Compliance with this mitigation will be documented by the consulting geologist's report and included in the annual report with recommendations for remedial action, if required.

*In Compliance.*

13. Mitigation Measure: Condition III.E.5 (Off hour operations)

Monitoring Program: Planning Staff review of the noise and speed records included in the annual reports and ongoing review of complaint records will document compliance with this mitigation.

*In Compliance.*



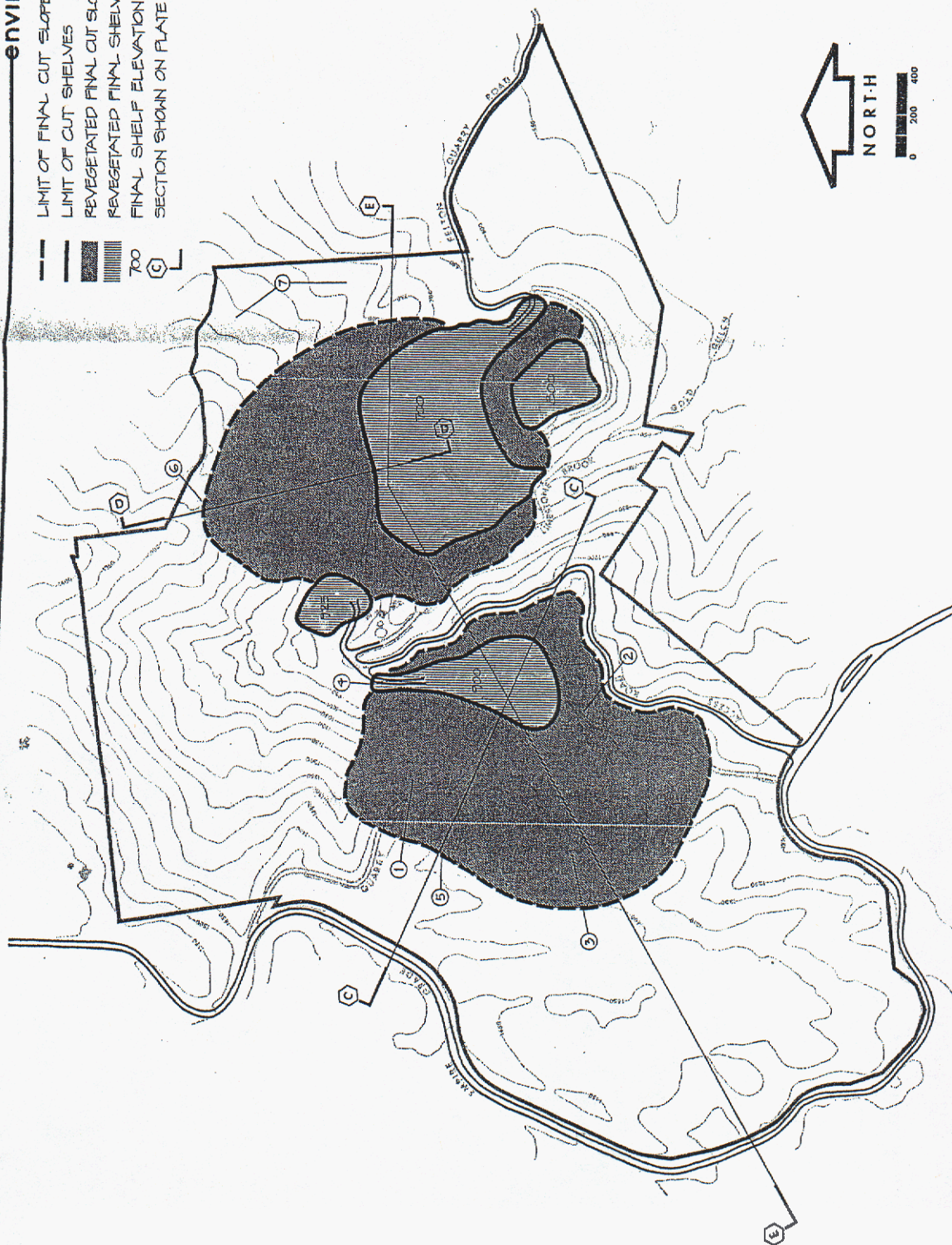
**STAFF REPORT TO THE PLANNING COMMISSION**

PERMIT NO. 74-633-PQ (AMENDED)  
APN(S): 062-181-12; 064-201-13, -79, -80, -81; 064-211-67, & -68

**EXHIBIT C**



LIMIT OF FINAL CUT SLOPES  
LIMIT OF CUT SHELVES  
REVEGETATED FINAL CUT SLOPES  
REVEGETATED FINAL SHELVES  
FINAL SHELF ELEVATION  
SECTION SHOWN ON PLATE 11



NORTH-H

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# MINING/RECLAMATION PLAN AT END OF 50 YEARS

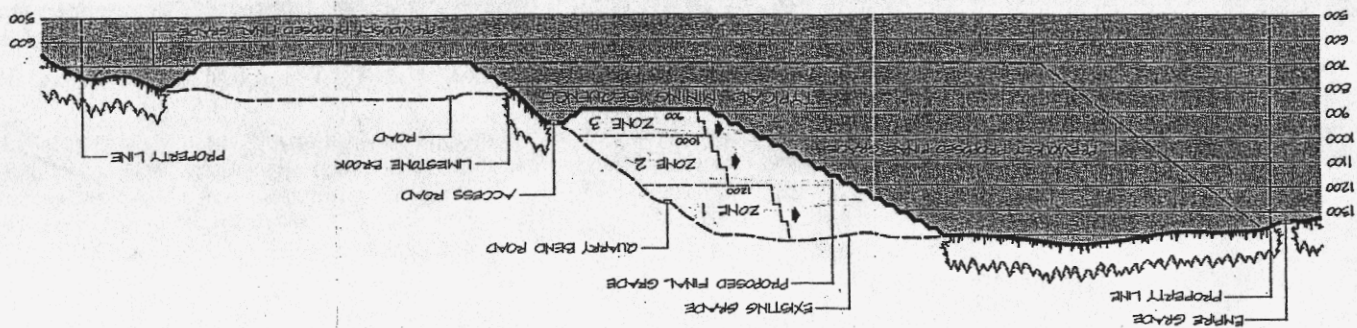
# PLATE 10



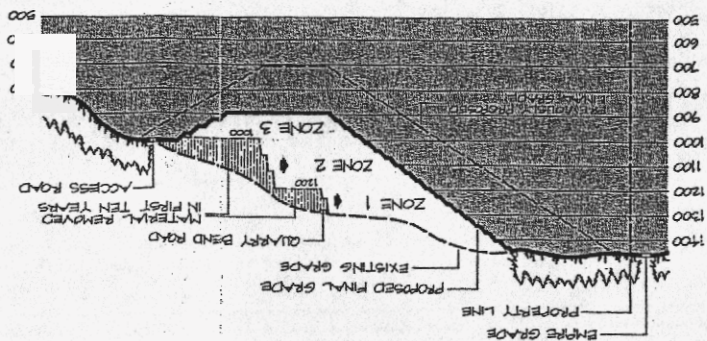
## PLATE 11

LOCATION OF SECTIONS SHOWN ON PLATE 10

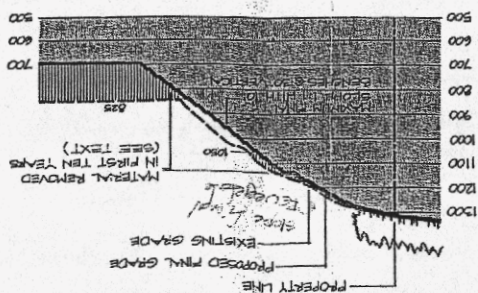
CUT ELEVATIONS ARE DIAGRAMMATIC



CUT ELEVATIONS ARE DIAGNOSTIC



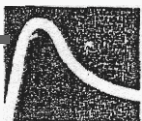
CUT ELEVATIONS ARE DIVERGENT



**STAFF REPORT TO THE PLANNING COMMISSION**

PERMIT NO. 74-633-PQ (AMENDED)  
APN(S): 062-181-12; 064-201-13, -79, -80, -81; 064-211-67, & -68

**EXHIBIT D**

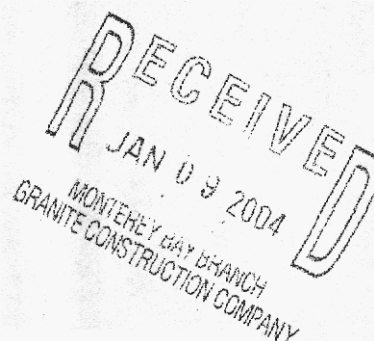


**COTTON, SHIRES & ASSOCIATES, INC.**  
CONSULTING ENGINEERS AND GEOLOGISTS

January 8, 2004  
G0123A

Mr. Ross Kashiwagi  
Plant Manager  
GRANITE CONSTRUCTION COMPANY  
P.O. Box 720  
Watsonville, CA 95077

SUBJECT: Inclinometer Reading Schedule  
West Pit Slope Area - Felton Quarry.  
RE: Granite Construction Company  
Felton, California



Dear Mr. Kashiwagi:

As you are aware, localized block toppling and rock wedge failures occurred in the West Pit Slope Area of the Felton Quarry in 1993. Following these instabilities, an inclinometer was installed in 1993 for monitoring purposes, and three additional inclinometers were installed in 2000. Geolith Consultants monitored the instruments up to May of 2001, and no slope displacement was noted. Since May of 2001, we have been reading these four inclinometers on a monthly basis. During our monthly monitoring visits, we also carefully observe the areas around the inclinometers and the quarry slopes for any signs of new ground cracks that might indicate reactivation of the 1993 slope instability. Since we began monitoring in 2001, we have not seen any significant signs of movement from either the inclinometers or from our monthly observations. Consequently, unless the quarrying activity in the West Pit Slope Area is significantly accelerated (or the topography or groundwater conditions are significantly changed), in our opinion, the monitoring schedule can be reduced to a quarterly basis.

**LIMITATIONS**

Cotton, Shires and Associates, Inc. has employed engineering geologic procedures that are within the standard of practice for our industry, and any opinions and conclusions are made in accordance with generally accepted principles and practices of the profession. This warranty is in lieu of all other warranties, either expressed or implied.

Please call if you have any questions.

Sincerely,

**COTTON, SHIRES AND ASSOCIATES INC.**

Dale R. Marcum  
Senior Geologic Engineer  
PE 65837

William R. Cotton  
Principal Engineering Geologist  
CEG 882

WRC:DRM:st

Northern California Office  
330 Village Lane  
Los Gatos, CA 95030-7218  
(408) 354-5542 • Fax (408) 354-1852  
e-mail: losgatos@cottonshires.com

www.cottonshires.com

Southern California Office  
5245 Avenida Encinas • Suite A  
Carlsbad, CA 92008-4374  
(760) 931-2700 • Fax: (760) 931-1020  
e-mail: carlsbad@cottonshires.com



**STAFF REPORT TO THE PLANNING COMMISSION**

PERMIT NO. 74-633-PQ (AMENDED)  
APN(S): 062-181-12; 064-201-13, -79, -80, -81; 064-211-67, & -68

**EXHIBIT E**

FELTON QUARRY  
COC 74-633 PQ (Amended)  
PROPOSED REVISIONS TO CONDITION III.K.13  
(new wording in **bold font**)

Inclinometers with surface reading capability **shall** be installed behind the cut for Phase 1 **mining** (approximately 200 feet northwest of the slide **area**) to detect any slope movement. Monitoring and recording of inclinometer readings **shall be** done once ~~month~~ each **quarter (every three months)** by the **quarry's** geologic consultant. ~~until quarry operators have been trained by the consultant to perform these readings. Thereafter, monthly readings may be performed by the quarry personnel who~~ **The quarry's geologic consultant shall** submit the results of each **reading** to ~~the consulting geologist and~~ County Planning Staff on an ~~monthly~~ **annual** basis with the Quarry's annual report ~~unless~~ a significant movement occurs. The frequency of these **readings shall** be increased if deemed warranted by evolving site conditions as determined by ~~the County~~ **the County** Geologist (Mit. #1). **Should a significant slope movement occur, or should the monitoring indicate a significant change in the inclinometer readings, the geologic consultant must contact the County both verbally and in writing of the change(s) within 48 hours and shall make recommendations to address the observed changes.**

## **STAFF REPORT TO THE PLANNING COMMISSION**

PERMIT NO. 74-633-PQ (AMENDED)  
APN(S): 062-181-12; 064-201-13, -79, -80, -81; 064-211-67, & -68

## **EXHIBIT F**

FELTON QUARRY  
COC 74-633 PQ (Amended)  
CONDITIONS OF APPROVAL  
(Revised per August 25, 2004 Planning Commission ~~Hearing~~ Five-Year Review)

I. EXHIBITS

Quarry operations ~~shall~~ be described in the following exhibits except where modified by the conditions below. All exhibits ~~are~~ on file with the Planning Department.

- A. Felton Quarry, Quarry Regulations; Felton ~~Quarry~~; 1974.
- B. Asphalt Plant Operation, Planned ~~Quarry~~ Permit Application; Granite Construction Company; 1975.
- C. Surveyor Map of the Land of Felton ~~Quarry~~, Robert Baldwin; May 1974.
- D. Topographic Map of Felton ~~Quarry~~ (existing contours); ~~Maurice Helmkamp-Musser~~; May 10, 1974.
- E. Draft Environmental Impact Report, Felton ~~Quarry~~, Environs; August 1978.
- F. Final ~~Environmental~~ Impact Report, Felton ~~Quarry~~; Environs; November 1978.
- G. Addendum to the EIR for Proposed Operations, Felton ~~Quarry~~, Environs; July 1979.
- H. Response to comments on the Hydrologic Elements of ~~the~~ Addendum to the EIR for the Proposed Felton Quarry expansion; Environs; October 1979.
- I. "Review of Mining Progression Plans, Phases 1 ~~through~~ 5, Felton ~~Quarry~~ Pit Slope, Santa Cruz County, California" Rogers/Pacific Professional Engineering Consultants, May 17, 1993. Plate 1 ~~through~~ Plate 5, Felton Quarry Mining Progression Plan.
- J. "Phase 1 Engineered Drainage Plan", Rogers/Pacific Professional Engineering Consultants, April 29, 1993.
- K. "Felton ~~Quarry~~ Area Hydrogeologic Evaluation Report, R.L. Stollar and Associates (now Watkins-Johnson Environmental, Inc.), June 12, 1992, Hydrologic Monitoring Program, Section 8.0, Pages 8-1 ~~through~~ 8-14.
- L. "Storm Drainage and Siltation Pond Study for Granite Construction Company, Felton ~~Quarry~~," Ifland Engineers, Inc., December, 1991.
- M. "Felton ~~Quarry~~ Amended Revegetation Plan," Habitat Restoration Group, April 12, 1991, 27 pages with Appendices, Sheets 1 ~~through~~ 3.
- N. "Riparian Revegetation Plan and Revegetation Monitoring Plan, Addendum to amended Revegetation Plan of April 12, 1991," Greening Associates, December, 1992. 10 pages.
- O. "A Wildlife Habitat Monitoring Plan for Felton ~~Quarry~~," Greening Associates, 7 pages with Appendix.
- P. Application No. 94-0144, Request for minor ~~variation~~ to Mining Approval 74-633 (Amended) to include the use of a polymer water clarifier to the product washing system, as conditioned. Approval: April 11, 1994.
- Q. Environmental ~~Determination~~/Mitigated Negative Declaration dated July, 1999.



COPIES OF THE ABOVE DOCUMENTS ARE AVAILABLE AT THE COUNTY OF SANTA CRUZ PLANNING DEPARTMENT.

II. GENERAL PROVISIONS

- A. This Planned Quarry Permit shall supersede all provisions of Use Permit 1574-U, and 74-633-PQ.
- B. This permit is for the extraction, processing, storage, and shipping of the sand and aggregate resources obtained from the property, including the hot plant facilities for production of asphalt conducted in accordance with the descriptions in the exhibit documents and as modified by the conditions of this permit for a 50 year excavation project.
- C. Minor variations to this Approval meeting the standards of County Code Section 18.10.134 and requested by the mining operator or staff which do not change the general concept of use and operation, and which do not adversely affect the environment, may be approved in writing by the Planning Director following review and recommendation by the County's Environmental Coordinator.
- D. If at any time the Planning Director determines that there is a substantial noncompliance with any of these conditions, and/or Exhibits, the Planning Director shall forward a recommendation to the Planning Commission to set a hearing to consider revocation of this Approval in accordance with the provisions of County Code Section 18.10.136.
- E. Within 45-days from the date of issuance of this Mining Amendment Approval, the property owner and applicant shall sign, date and return two copies of the Approval to indicate acceptance and agreement with the conditions thereof. By signing this Approval, property owners agree to file a Declaration with the County's Recorder Office within 45 days from the date of acceptance, binding themselves and any future owners or lessees to the revegetation and reclamation requirements of this Approval. The Declaration shall be supplied by the Planning Director. Failure to sign the approval or record the declaration as described above shall render this Mining Approval null and void and all mining operations shall cease at the Quarry site except reclamation and revegetation work in accordance with the above listed exhibits.
- F. All mining and reclamation activities shall conform with the Conditions of Approval and with the regulations of the following agencies as they apply to the mining operations. The mining operator shall provide the County with copies of any permits issued by these agencies and any permit amendments, within 30 days of receipt.
  - 1. Central Coast Regional Water Quality Control Board
  - 2. Monterey Bay Unified Air Pollution Control District
  - 3. California Department of Fish and Game
  - 4. State Coastal Commission
- G. This Approval shall be reviewed by the Planning Commission within three years from the date of issuance. In connection with such review, the Planning Commission shall take public testimony and shall otherwise investigate the permittee's compliance with the conditions of this Mining Approval Amendment, and shall be empowered to amend the conditions of the Approval if necessary to eliminate nuisance conditions or to mitigate problems resulting from a change of circumstances.

- H. In conjunction with the annual report to the State Geologist required by SMARA, an annual report to the Planning Director shall be prepared by a professional determined by the Planning Director as qualified to prepare such report. Thereport shall be submitted by the mining operator to the Planning Director by April 1 of each year. If the Planning Director determines the need for an independent consultant with specialized expertise, the mining operator shall obtain such consultant. All costs of such report and its review shall be paid by the mining operator. The report shall include the following unless waived or modified in writing by the Planning Director (Mit. #1, 2, 3, 4, 5, and 6):
1. A report on compliance with all Conditions of Approval including the required monitoring programs.
  2. An analysis of any significant changes in environmental conditions or in the mining operation which have not been anticipated in this Approval.
  3. A current aerial photograph of the entire site (1"=200' scale) showing property lines, facilities, stripped areas, and revegetated and reclaimed areas, together with a report on the extent of excavation and reclamation completed in the previous year and projected for the coming year.
  4. Every fifth year, a current aerial photogrametric topographical map prepared from current aerial photographs map (1"=200' scale with a 10 foot contour interval) showing all the requirements of L.H. 3. above.
  5. A revegetation report prepared by a botanist, horticulturist or plant ecologist retained by the mining operator and approved by the Planning Director. The revegetation report shall describe the degree of success in achieving the objectives of the revegetation plan, and shall identify any changes or additional measures which may facilitate achievement of the desired results.
  6. Written verification of the renewal and/or validity of the financial assurance.
  7. A report to be held as proprietary information in accordance with the County's Mining Regulations, stating the annual amounts of production and shipping of mining products, and the estimated time to complete mining in the permitted area.
  8. Monitoring logs for all wells, piezometers and springs (if any) for the entire year, and analysis thereof, as described in Conditions III.D. 11.
  9. A noise report prepared by a qualified noise/acoustical consultant retained by the mining operator and approved by the Planning Director. Each noise report shall determine whether or not the mining operator is in compliance with noise standards contained in the County Mining Regulations, and shall investigate and make recommendations regarding (relative to noise mitigations): (i) Any Mining equipment used at the mining site; (ii) Proposed and existing noise protection; (iii) Any other significant impact resulting from mining operations. The mining operator shall implement all recommendations of the noise consultant determined to be necessary by the Planning Director for compliance with the conditions of the Mining Approval.
  10. All reports submitted to the Monterey Bay Unified Air Pollution Control District.
  11. A log of nighttime operations as required by Condition III.E.4.(c).

12. A copy of this required annual report with all proprietary information removed shall also be submitted for staff inclusion on the next regularly scheduled Planning Commission consent agenda for Planning Commission review.
- I. All costs for the County's inspections and review of Annual Reports and other reports submitted by the Quarry shall be paid by the Quarry, within 30 days after billing.
- J. All mining operations shall be in compliance with the State's Surface Mining and Reclamation Act (SMARA).
- K. In the event that future County inspections of the subject property disclose non-compliance with any conditions of this Approval or any violation of the County Code, the operator shall pay to the County the full cost of such County inspections, including any follow-up inspections and/or necessary enforcement actions up to and including Approval revocation.

### III. OPERATING REQUIREMENTS

The establishment, operation, and maintenance of the quarry facility shall be in compliance with the requirements of Sections 14.06.060 and 14.06.070 of the Santa Cruz County Code except where modified below.

- A. Noise and Vibration
  1. Maximum operating noise at the site boundaries (not including haul trucks or construction activities) shall not exceed the limits of Section 13.04.236.25 (C) of the County Zoning Ordinance. Average noise levels at the site boundaries shall conform to an LDN (day/night weighted average) of 60 DBA.
  2. Off-site vibrations shall be subject to the provisions of Section 13.04.236.25 (F) of the County Code.
  3. Blasting procedures shall utilize time-delayed multiple charges to minimize noise and shock wave disturbances.
- B. Air Quality
  1. Stripping and mining activities shall be conducted in a manner to minimize the generation of dust.
  2. All roads on the property shall be either surfaced, treated, or sprinkled with water frequently enough to insure that windblown materials do not present a problem to adjacent properties or public roads.
- C. Surface Hydrology
  1. Process water shall be isolated in a separate, closed, recycling system of ponds and conveyances.
  2. Site drainage from all disturbed areas, including all mining, processing, or stockpile areas, shall be directed to detention and settling basins prior to release from the property. Detention facilities shall be designed to handle a 2 hour, 100 year storm event and limit storm water flows from the property to those which would occur under natural conditions. The ponds shall also be designed to provide a median detention time of at least 20 to 40 minutes for design storms up to a 2 hour, 100 year event.
  3. The outflow from the detention ponds shall be conveyed across the access road by closed culvert and



shall be released in such a manner as to minimize erosion hazards.

4. Pond facilities shall not be relocated on the property without first submitting a revised drainage plan, calculations, and structural certification prepared by a registered civil engineer.
5. Prior to construction of any new detention ponds which will maintain a residual impoundment greater than 15 feet in depth, a reconnaissance study prepared by a qualified professional limnologist shall be submitted which addresses potential water quality impacts, notably the potential for adverse water quality impacts of manganese concentrations. The recommendations of the study shall be incorporated in the construction and maintenance of such ponds.
6. All catchment basins, drainageways, culverts, pumps, pipelines, etc. shall be maintained on a regular basis to ensure proper functioning free of breakage, siltation deposits, or malfunction.
7. The applicant shall maintain and dispose of any petroleum products on the property in such a manner that no contamination of ground or surface waters will occur.
8. Drainage improvements shall be in accordance with the approved engineered drainage plans by Ifland Engineers dated December 1991 and the above referenced Rogers/Pacific "Review of Phase 1 Drainage." Amendments to the Ifland Engineers, Inc. plan shall be submitted to County Planning for review and approval prior to implementation (Mit. #2).
9. Operation of the detention pond evacuation plan prepared by Ifland Engineers shall continue. The plan shall utilize an electric powered pump, with a diesel powered back-up system in case of loss of electric power. Back up system shall be in place at all times during October 15 to April 15. Results of all water sampling shall be included in the quarry's annual report (Mit. #2).
10. Sediment basins shall be cleaned out annually prior to October 15<sup>th</sup>. A siltation marking device shall be installed which notes remaining pond capacity of major settling basins. Annual reporting of basin capacity by Hydrological consultant in-lieu of marker system is acceptable (Mit. #2).
11. Spoil material from annual dredging of settling basins shall not be allowed to enter streams or settling basins. Spoils shall be deposited in such a way that is safe and requires no maintenance. Seeding and mulching prior to October 15<sup>th</sup> shall be required if spoil placement requires (Mit. #2).

D. Groundwater Hydrology

1. FELTON QUARRY (QUARRY) will establish, and submit evidence of same to FOREST LAKES MUTUAL WATER COMPANY (FLMWC) within two (2) years from the date of issuance of the 1979 Use Permit, a source of groundwater producing at least nine (9) acre feet per year of groundwater starting as of the beginning of the third year from the date of issuance of the Use Permit, and shall provide at least a total of eighteen (18) acre feet per year of ground water by the beginning of the ninth year from the date of issuance of the Use Permit.

QUARRY shall have the right to inspect, at reasonable times and upon reasonable notice, the meters and other records pertaining to the corporation yard wells.

2. The water to be provided to FLMWC by QUARRY shall be ground water which shall be comparable in quality to the ground water presently drawn from FLMWC'S corporation yard wells, within



reasonable tolerances. "Presently **drawn**" shall mean the quality of ~~this~~ ground water based upon data collected from the corporation yard wells by FLMWC for a six (6) month period following issuance of the Use Permit. Duplicate samples of water taken shall be given to the QUARRY for testing, should it so desire.

3. The water sources developed by QUARRY to supply FLMWC as provided above shall not interfere with the FLMWC corporation yard wells. Further, the quarry operation shall not interfere with the water quality of the corporation yard wells.
4. QUARRY shall deliver, through water pipelines, the required water to FLMWC'S corporation yard for connection into the FLMWC water system. A meter shall be installed at the delivery point by QUARRY, with the meter accessible to FLMWC and to be maintained and replaced, if necessary, by QUARRY.
5. FLMWC shall have the right to specify the rate of delivery of the water from QUARRY, staying within nine (9) or eighteen (18) acre feet per year, as the case may be, with a **maximum** monthly delivery of one-sixth (1/6) of the annual total, or one-seventh (1/7) of the same if QUARRY provides adequate storage capacity to meet this latter requirement.
6. The QUARRY well, or wells, as well as the transmission lines, shall be constructed, installed and maintained according to standards of the State of California, applicable to **FLMWC**; and the overall system shall be comparable in quality to FLMWC'S present system in the corporation yard.
7. If FLMWC establishes that the loss of water at the corporation yard well field is more than nine (9) acre feet per year at any time during the third through the eighth year, or more than eighteen (18) acre feet per year thereafter, and said **loss** is attributable to the **quarry** operations, the QUARRY must supply FLMWC sufficient additional water to replace such **loss**.
8. At the end of the **fifty** (50) year **use** Permit, and if QUARRY does not seek an extension of the Use Permit, or subsequent to the end of the thirty-ninth year of the Use Permit, should QUARRY abandon the quarry operation, QUARRY shall transfer to FLMWC the well or wells supplying the water to FLMWC, all equipment and transmission lines pertaining to same, easements for access, maintenance and replacement of equipment and transmission lines, and the right to draw water from the well or wells. However, should QUARRY abandon the quarry operation prior to the end of the thirty-ninth year of the **Use** Permit, the above transfer shall take place only if FLMWC establishes that its corporation yard well field has been damaged by the quarry operation.  
  
Should such transfer occur, QUARRY agrees that the system being transferred shall be in good working condition at the time of transfer.
9. The QUARRY shall, within one (1) year from the issuance of the 1979 **Use** Permit, provide eighteen (18) acre feet of detention ponds, and a total of twenty-four (24) **acre** feet of same within the first **ten** (10) years from the issuance of the **Use** Permit. Thereafter, the QUARRY shall provide one-half (1/2) acre of additional detention storage for every new acre of net disturbed area. Net disturbed area shall **mean** the area where the overburden is removed less the area which has been revegetated by the QUARRY.
10. To the extent allowed by law, and in view of the fact that Conditions **III.C.1 through III.C.19**, and Conditions **III.G.1 through III.G.5** as amended herein are for the benefit and protection of the

shareholders of the FLMWC and other residents within the area served by FLMWC, QUARRY agrees that FLMWC may seek directly through **Court action** to compel QUARRY to perform these Conditions, or obtain damages or injunctive relief for the failure of QUARRY to perform same, without the necessity of first requesting enforcement by the County of Santa Cruz. The prevailing party in such litigation shall be entitled to reasonable attorney's fees and actual costs incurred. In addition, FLMWC shall have the right, upon reasonable notice and at reasonable times, to inspect those operations of QUARRY which involve performing the conditions set forth in this paragraph. Reasonable notice shall include such **time** as is necessary to comply with all requirements of the State of California pertaining to a person or persons entering the QUARRY property.

11. **The** Hydrologic Monitoring Program prepared for this project by Watkins-Johnson Environmental, Inc., dated **June 12, 1992**, shall be implemented. The frequency of water quality sampling and groundwater level measuring shall occur two **times per year** during August and April unless the County Hydrologist determines that an increase or decrease in the frequency of **sampling** is appropriate based on water quality **trends** reported in the **annual** hydrologic monitoring report. At a minimum, water quality monitoring shall occur in August of each year and groundwater level measurements shall occur two **times per year** during August and April. **This monitoring** shall include measurements of groundwater elevations and water sampling collected for **general chemical analysis**. Analysis shall be conducted by a **certified** water quality testing laboratory. The results of all monitoring and chemical analysis shall be submitted to County Planning as **part of the quarry's annual report** and shall include biannual comparisons in the findings of monitoring results. Any water quality changes of **15%** or more shall be discussed in the report including methods to tract (sic) water quality trends, and to remediate any negative impacts if trends of deteriorating water quality continues (**Mit. #3**).
12. The following measures shall be implemented in addition to the Monitoring Program **prepared by** Watkins-Johnson (**Mit. #3**):
  - a. A **"Class A** Evaporation Pan" shall be installed near the **quarry office** rain gauge to measure the rate of evaporation and to provide a more accurate **measurement** of amount of infiltration occurring **from** the detention ponds. Results of monitoring shall be included in the annual hydrological report.
  - b. Two additional monitoring wells shall be installed, one located near the existing detention ponds and the other located proximate and northeast of the future relocated detention ponds for **Phase 3**. **The same monitoring** as specified in the Watkins-Johnson Monitoring Report for the existing wells shall be conducted (depth of wells shall be **sufficient** to reach year-around groundwater levels with 300 feet being the maximum necessary depth);
  - c. Water quality sampling at the headwaters of the **tributary** to Gold Gulch (located directly south of Limestone Brook) shall be conducted in the same fashion as other surface water quality monitoring on the site;
  - d. The **quarry's** hydrologic consultant shall include in the twice/year reports, hydrographs of groundwater level measurements that compare current groundwater levels with the levels shown in the previous report.
7. Groundwater level and water quality monitoring, **analyses** and reporting shall be increased to a quarterly frequency (August, November, February, May) if documented trends of deterioration of surface water or groundwater are not **successfully remediated by** the quarry over a two year period. **This**

more frequent monitoring shall determine if a public health concern may be created through continued quarrying activities. In this case, all quarrying activities may be required to cease by the County until it can be demonstrated that the threat to public health no longer exists (Mit. #3).

E. Days and Hours of Operation

1. All mining and processing activities at the site shall be confined to between the hours of 6:00 A.M. and 8:00 P.M., Monday through Saturday. Maintenance operations may be conducted at any time.
2. All shipping activities shall normally be confined to between the hours of 6:00 A.M. and 8:00 P.M., Monday through Friday.
3. Blasting activity shall be confined to between the hours of 7:30 A.M. and 6:00 P.M.
4. Twenty (20) exceptions to III.E.2 for the off hour operations of the asphalt plant are allowed without prior approval of the Planning Director. An additional 10 exceptions to Condition III.E.2 per year may be granted at the discretion of the Planning Director for off-hour operations Monday thru Friday, and 10 additional exceptions for Saturday (daytime) operations for a maximum of 40 exceptions per year. These off hour operations are authorized for the quarry providing that (Mit. #5 and Mit. #A.1):
  - a. Off hours shall be defined as those hours that are not included in the normal hours of operation and shipping authorized by this permit. One off hour operation shall be defined as one night or one weekend day.
  - b. In order to obtain approval for 20 additional off hours operations at the discretion of the Planning Director (for a maximum total of 40 exceptions per year), the quarry operator shall submit a letter to the Planning Director demonstrating the need for the additional off hours work and the quarry operator's ability to adequately address any noise, odor, or other related complaints by local residents.
  - c. The Quarry shall keep a list of local residents who request notification of off-hours operations. These neighbors shall be notified prior to the operation as soon as practical.
  - d. A log of off-hour operations shall be kept and included in the annual report including days and hours of operation and the size, number and destination of haul trucks required.
  - e. Off hour Asphalt operation shall be limited to public agency projects only.
  - f. This amendment of off-hour operations shall be reviewed by the Planning Commission during the three-year review of the mining operation, and within one year of this Mining Approval Amendment. The Planning Department staff shall report back to the Planning Commission regarding the success of mitigations for truck noise and asphalt odor associated with off-hour operations.
5. To reduce noise levels of the asphalt plant and truck traffic for off-hour operations, the Quarry shall construct and/or implement the following improvements (Mit. #5 and Mit. #A.1 and Mit. #B.):
  - a. Construction and permanent maintenance of noise baffling or some other type of noise reduction barriers on the dust collector exhaust system.



- b. Installation and permanent maintenance of a muffler device on the pneumatic **system** that operates the hopper flaps.
  - c. ~~Install all~~ other recommendations of **acoustical engineer** noise reports to ~~reduce~~ **decibel** level for surrounding neighborhood.
  - d. The quarry operator shall monitor and **keep** records of speed and noise levels of **trucks** from the **quarry** entrance at Empire Grade to the intersection of Bay **Avenue** and Highway 1 (**Mission Street**) during off-hour operations. **This** shall be accomplished using a vehicle equipped with a radar detector and a decibel meter. **The** vehicle shall set up at random locations along the **entire** route to ensure compliance. The records ~~shall~~ be made available to **the** County at the close of each paving project, and shall be submitted to **the Planning Department** as part of the **quarry's** annual report.
  - e. The quarry shall post notices in **the** community of **each upcoming** off hour operation. Notices shall inform readers of the range of dates within which the operation **may** begin, the possible hours **of** operation, the **expected** duration of the operation and shall display **the** appropriate telephone number at the Planning Department **to** which to report complaints of excessive noise. **The** notices shall be posted on Bay **Street at each** of four intersections: Nobel/Iowa, Escalona, King, and **Mission**, 48 hours in advance of the projected start of the operation.
  - f. Notices of off-hour operations shall be ~~mailed to the~~ City of Santa Cruz Public Works and Planning Departments, and the County of Santa Cruz Planning Department, 48 hours in advance of the projected start date.
  - g. If widespread complaints are received from residents within the Bay Street area (with consideration of acoustical and vehicle speed data provided by the quarry operator) further approvals by the Planning Director for off-hour operations will not be granted. The Community Response to Noise chart (ISO R1996) will be used as guidance to determine the number and nature of complaints that represent a significant impact.
6. To reduce objectionable odors during offhour operations ~~the~~ applicant shall use:
- a. A silo load-out and weigh system to load trucks, which includes a fugitive fumes recovery system which shall be interlocked so as to only allow the loading of trucks while the recovery **system** is operating. The fugitive fumes recovery system shall be maintained in good working order (Mit. #C).
  - b. Cover trucks loaded with asphalt

**F. Insurance.**

- 1. Verification of insurance coverage in Compliance with ~~the~~ requirements of the County Quarry regulations shall be provided within **three (3) months** of the issuance of this permit and with each annual report.

**G. Roads and Transportation**



1. The applicant shall maintain the entrance roads reasonably free of dust and debris resulting from the site operations and shall load trucks in such a manner as to minimize spillage on haul routes.  
  
The applicant shall maintain an affirmative action **program** to inform all truck drivers of their obligation to comply with State and Federal vehicle noise regulations and State and local traffic regulations, and to encourage programs of vehicle safety and driving courtesy.
3. Within one (1) year of the abandonment of Quany Bend Road, the ends of the road shall be closed off with solid wood gates, fencing, earthen berms, and landscaping as required to discourage public access while providing adequate fire protection access in accordance with a plan to be approved by staff or approved plans on file.
4. Within one (1) year of the issuance of this permit, internal haul routes for stripping and mining materials shall be developed so that public roads shall not be required to move materials from one part of the site to another.
5. The private access roads leading to San Lorenzo Avenue and Empire Grade shall be maintained at a minimum paved width of 16 feet.
6. Gates approved by the State Division of Forestry and the Felton Fire Protection District shall be maintained at the property entrances from Empire Grade and San Lorenzo Avenue to prevent unauthorized public access through the site during non-working hours.
7. Off-road vehicles shall be prohibited on the property except those operated by company employees.
8. Nighttime and off-hour operations shall use the Empire Grade entrance to the Quarry only. No use of San Lorenzo Avenue will be allowed except during the daytime hours listed in Condition III.E.2. (amended) above.
  - a.. Truck shipment from the Quarry shall be limited to the existing routes along Empire Grade and San Lorenzo Avenue. Use of Highway 9, south to Santa Cruz, and Graham Hill Road for destination in Santa **Cruz** and beyond is not permitted.

H. Revegetation, Screening, Erosion Control

1. All unvegetated disturbed areas not actively involved in the excavation or processing activities **shall** be seeded with grass at the start of the rainy season each year to establish a ground cover to reduce visibility and erosion potential.
2. Within one (1) year of the issuance of this permit the banks of Limestone Brook, including the side slopes extending up to the entrance road and the hot-batch plant, shall be planted in native brush and tree species to maximize the shading of the canyon and waterways and to minimize the erosion potential.
3. The entrance from Empire Grade and the ends of Quarry Bend Road shall be provided with screen plantings to minimize visibility into the property and the view of any excavation areas.
4. The benches on final slopes shall be provided with a planting medium composed of topsoil and compost removed from excavation areas mixed into a minimum 1 foot thick layer of porous gravel

material, and a similar planting ~~medium~~ shall be drifted ~~down~~ the face of the ~~cut slopes~~. The final slopes shall be seeded with native plant ~~species~~ and planted with tree seedlings. Adequate fertilization and irrigation shall be provided for a ~~minimum~~ of 2 years to ensure proper establishment and growth of plants.

5. The operator shall institute a yearly control ~~program~~ of non-native plant species, including Acacia, Scotch Broom, Pampas ~~Grass~~, and Periwinkle.
6. All ~~revegetation/reclamation~~ shall be implemented in accordance with the requirements of Exhibits M, N, and O of this Amended Mining Approval.

I. signing

1. Within three (3) months of the issuance of ~~this permit~~, the signing requirements of the Quarry Regulations Ordinance shall be completed. The property shall also be posted to prohibit the ~~use~~ of off-road vehicles and ~~firearms~~.

J. Bonding

1. The ~~quarry~~ shall maintain an adequate financial ~~assurance~~ to ensure reclamation in accordance with the approved Reclamation Plan and compliance with the County's Mining Regulations and SMARA.

K. Excavation and Grading

1. Final side-slopes shall be stepped or scarified to ~~provide~~ soil and vegetation retention, and the thickest feasible blanket of overburden strippings shall be replaced on the benches and ~~drifted~~ down the side-slopes to provide for ~~groundwater~~ retention and establishment of vegetation.
2. Excavations shall maintain a setback of 50 feet from the property line measured ~~m~~ a horizontal plane ~~from~~ the property boundary (excavations may thereby extend closer to the property line ~~where the site rises up from the property boundary~~), except as ~~amended~~ herein.
3. Prior to any relocation of the entrance road descending ~~from~~ Empire Grade, the applicant shall submit detailed engineering design plans for the ~~new~~ road placement prepared by a registered civil engineer and obtain amendment of this permit by the Planning Commission. Excavations where physically ~~possible~~ shall take place behind a barrier ~~formed~~ by the entrance road to protect the adjacent Forest ~~Lakes~~ development from the noise and visibility of operations. Excavations adjacent to the access ~~road~~ shall not be below the level of the road for the first 50 feet and then shall follow the configuration for final slopes ~~as~~ specified above.
4. Prior to any excavations ~~west~~ of Limestone Brook below an ~~elevation~~ of 900 feet, the operator shall submit revised drainage plans to be approved by County ~~staff~~. Excavations on site shall not be below the 700 foot elevation.
5. Prior to excavating or undermining the present utility easement on ~~Quarry~~ Bend Road, the operator shall relocate the easement and telephone lines to the satisfaction of the Pacific Telephone Company and Pacific Gas and Electric Company.
6. ~~Topsoil~~ and vegetation removed during the ~~quarrying~~ process shall be stockpiled in a level area and to

minimize sight from adjacent public roads. The stockpiles shall not exceed 60 feet in a horizontal dimension or **15** feet in height and adequate drainage protection shall be provided.

7. **The** existing fill operation at the head of Limestone **Brook** shall be conducted in accordance with **the** provisions of the permit from the California Department of Fish and **Game**.
8. All final excavations shall provide for positive surface drainage to prevent the ponding or accumulation of storm waters or natural seepage except in **the** planned drainage pond facilities.
9. In the event that significant paleontological or archaeological **finds** are **made** on the **quarrying** site, all operations shall be halted within 200 feet of the find and the Planning Department Director shall be immediately notified. Operations may be resumed in three working days following notification of the Planning Department unless specific request is made to allow additional time for proper excavation **of** fossils or artifacts in accordance with the provisions of the County's Native American Cultural Sites Ordinance.
10. The operator shall endeavor to minimize the surface area of the **quarry** which is disturbed at any given time to **the** greatest extent compatible with mining and marketing requirements.
11. No excavation or disturbance of Assessor's Parcel Number 62-181-08 shall be allowed during the time the Open Space Easement Contract (**OS-6-72**) with the County **is** in force.
12. All mining of the Active Mining Area of the **south** pit workface shall be limited to a maximum interim gradient of 3/41 (**horizontal:vertical**). In some cases, slopes of 1/21 will be acceptable if first approved by both the **quarry's** geologic consultant and County Planning Staff (**Mit. #1**).
13. Inclinometers with surface reading capability shall be installed behind the cut for Phase 1 mining (approximately 200 **feet** northwest of the slide area) to detect any slope movement. Monitoring and recording of inclinometer readings shall be done once each **quarter** (every three months) by **the quarry's** geologic consultant. The **quarry's** geologic consultant shall submit the results of each reading to County Planning Staff on an annual basis with the **Quarry's** annual report unless a significant movement occurs. The frequency of **these** readings shall be increased if deemed warranted by evolving site conditions as determined by the County Planning Geologist (**Mit. #1**). Should a significant slope movement occur, or should **the** monitoring indicate a significant change in the inclinometer readings, **the** geologic consultant must contact **the** County both verbally and in writing of the change(s) within **48** hours and shall make recommendations to **address** the observed changes.
14. The **quarry's** consulting geologist shall observe the **quarry** operation on a minimum basis of **once/quarter** (every **three** months) and report on the **quarry** program on an annual basis. The report shall be submitted to County Planning within **20 days** of the **quarry's** annual report and shall (**Mit. #1**):
  - a. Document the geologic **structure** exposed by the **quarry** as **shown** on the geologic map of the March 17, 1993, Rogers/Pacific report;
  - b. Discuss the success of the **quarry's** activities regarding stability and make recommendations about continuing operations;
  - c. Discuss the results of the **inclinometer** readings conducted over the year, including the consultant's supervision of **quarry** personnel's monitoring of the inclinometers. **The quarry**



shall immediately notify the County **Planning** Department if and (sic) adverse geologic conditions become exposed during the monitoring or inspections of quarry activities and coordinate with County Planning on the remedial action to be taken.

15. All mining excavations shall be conducted in accordance with the recommendations of the "Review of Mining Progression Plans, Phases 1 through 5" by Rogers/Pacific, dated April 29, 1993 (Mit. #1).
16. Prior to commencing a new mining phase, the quarry's geologic consultant shall conduct a "Phase Closure Inspection" and submit in report form the results of the inspection to County **Planning**. The report shall discuss the same issues as required by the annual report for geologic issues (Mit. #1).

L. Mitigation Monitoring Plan

The mitigation measures listed under this heading have been incorporated into the Conditions of Approval for this project in order to mitigate or avoid significant effects on the environment. As required by Section 21081.6 of the California Public Resource Code, a monitoring and reporting program for the above mitigations is hereby adopted as a condition of approval for this project. This monitoring program is specifically described following each mitigation measure listed below. The purpose of this monitoring is to ensure compliance with the environmental mitigations during project implementation and operation. Failure to comply with the Conditions of Approval, including the terms of the adopted monitoring program, may result in permit revocation pursuant to Section 18.10.462 of the Santa Cruz County Code. All mitigation monitoring shall be documented in the required Annual Report. If the next quarterly inspection following the submittal of the Annual Report shows non-compliance with any provision of this Mining Approval Amendment, enforcement actions in accordance with the County Code and SMARA will be implemented to achieve compliance.

1. Mitigation Measure: Condition II.H.10 (Air Quality)

**Monitoring Program:** Planning Staff review of communication submitted to the Monterey Bay Unified Air Pollution Control District contained in the annual reports as required by Condition II.H.10 and staff quarterly inspections will document compliance with this mitigation. Non-compliance with the air quality conditions required by the Air Pollution Control District will be documented in the annual reports. Remedial measures are the responsibility of the Air Pollution Control District.

2. Mitigation Measure: Condition III.C.8 through 11 (Surface Hydrology)

**Monitoring Program:** Planning staff review of the hydrology section of the required annual report (Condition II.H.8) prepared by the consulting hydrologist will document sampling of water discharge. Planning staff quarterly inspections will verify pump backup system, sediment pond cleaning and spoil placement and treatment condition requirements prior to commencement of each rainy season.

3. Mitigation Measure: Condition III.D.11 through 13 (Groundwater Protection)

**Monitoring Program:** Planning staff review of hydrology section of the required annual reports (Condition II.H.) prepared by the consulting hydrologist and staff quarterly inspections will verify compliance with this mitigation. Compliance with this mitigation will be documented by the consulting hydrologist's report and included in the annual report with recommendations for remedial measures, if required.



4. Mitigation Measure: Condition II.H and Exhibit "O" of the Amended Mining Approval (Revegetation/Reclamation Plan)

**Monitoring Program:** Planning Staff review of the revegetation report section of **annual** reports as required by Condition II.H and **quarterly inspection** will document compliance with Exhibits "M", "N", and "O" of the Amended Mining Approval. A "Wildlife Monitoring Plan" by Greening Associates, September 1993 has been reviewed and approved by Planning staff and included in the Amended Mining Approval as Exhibit "O". The success **criteria** defined in the Wildlife and Revegetation Monitoring plans will be documented in each **annual** report by the consulting biologist with remedial measures if non-compliance is noted.

5. Mitigation Measure: III.E.1 through 4(d) (*Noise Monitoring*)

**Monitoring Program:** Planning staff review of the noise monitoring reports in the **required** annual reports (Condition II.H.) and staff quarterly inspections will document compliance with **this** mitigation.

6. Mitigation Measure: Condition III.K.12 through 15 (Slope Stability)

**Monitoring Program:** Planning Staff review of the geology **section** of the required annual reports (Condition II.H.), prepared by the consulting geologist as conditioned and staff **quarterly** inspections will document compliance with this mitigation. Compliance with **this** mitigation will be documented by the consulting geologist's report and included in the annual report with recommendations for remedial action, if required.

7. Mitigation Measure: Condition III.E.5 (~~Off~~hour operations)

**Monitoring Program:** Planning Staff review of the noise and speed records included in the annual reports and ongoing review of complaint records will document compliance with **this** mitigation.

