



# County of Santa Cruz

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PLANNING DEPARTMENT

701 OCEAN STREET - 4<sup>TH</sup> FLOOR, SANTA CRUZ, CA 95060  
(831) 454-2580 FAX: (831) 454-2131 TDD: (831) 454-2123

TOM BURNS. DIRECTOR

September 27, 2004

**AGENDA DATE: OCTOBER 13, 2004**

Planning Commission  
County of Santa Cruz  
701 Ocean Street  
Santa Cruz, CA 95060

**SUBJECT: CONTINUED PUBLIC HEARING ON GRANITE CONSTRUCTION  
COMPANY FELTON QUARRY FIVE-YEAR REVIEW**

Members of the Commission:

On August 25, 2004 your Commission conducted a public hearing on the Felton Quarry Five-Year Review and continued the matter to October 13, 2004. During the hearing, dust and noise were the subject of testimony from a neighbor and discussion by your Commission. The intent of the motion to continue this item was to allow time for a neighborhood meeting with Granite Construction Company to discuss issues related to noise and dust.

Neighborhood Meetings

On September 8, 2004 a meeting was held at the quarry office, attended by neighbors of the quarry, representatives from Granite Construction Company (GCC) and County staff. An attendance list is included as Attachment 1. The meeting included a discussion of neighborhood issues, including noise, dust, hours of operation and hydrology. At the meeting, GCC agreed to consider measures to further control dust beyond current dust control measures. In addition, GCC agreed to conduct another noise test and, during the test, take neighbors on a tour of the plant while in operation. Copies of letters submitted to staff at the neighborhood meeting are included in Attachment 2.

A noise test and tour took place on September 16, 2004 attended by approximately six neighbors, representatives of GCC and County staff. During the tour the quarry was in full operation, except the asphalt plant because of a lack of orders for that day. A follow-up neighborhood meeting is scheduled for October 6, 2004 to have the noise consultant discuss the test results with the neighbors. Because the test results were not available prior to preparation of this report, we will include information on this topic during our presentation at the October 13, 2004 meeting.

### Air Quality

During the tour on September 16<sup>th</sup>, the group observed operational dust control measures, including moisture conditioning of raw material, sprayers at the primary hopper/crusher and at other critical points along the conveyor and processing plant, and application of water on roads. In an effort to address neighborhood issues raised at both the public hearing and the neighborhood meetings, and further minimize dust, GCC has installed an irrigation system along the edge of the primary truck road through the plant and at the Empire Grade entrance road that automatically applies water to the road to supplement the water truck. A similar automatic road watering system has been in place for a number of years on the Davenport Cement Plant roads.

In addition, on Monday, September 13<sup>th</sup> staff from the Monterey Bay Unified Air Pollution Control District (MBUAPCD) completed an inspection, which included visits to the quarry, as well as to surrounding residences. In a phone conversation the following day, the inspector confirmed to County staff that the mining operation is conducted in compliance with the requirements of the MBUAPCD.

Conditions of Approval for this mining operation and standards from the County Mining Regulations related to air quality are excerpted in Attachment 3. In the staff report for the Five-Year Review staff concluded that the mining operation is conducted in compliance with these conditions and standards. In summary, both County staff and MBUAPCD staff conclude that existing and new dust control measures described above and observed on site minimize off-site dust impacts.

### Noise

At the August 25<sup>th</sup> public hearing and the September 8<sup>th</sup> neighbor meeting, a concern was raised regarding the validity of past noise tests. In response, GCC arranged for another noise test on September 16<sup>th</sup> to coincide with the neighbor's tour of the plant. Although the written report is not available prior to preparation of this staff report, staff is informed by GCC that, consistent with past noise measurements, noise levels are in compliance with conditions of approval and standards of County Mining Regulations. As noted above, information from the latest noise test will be provided to your Commission during our staff presentation.

### Hours of Operation

During the September 8<sup>th</sup> neighbor meeting, a concern was expressed that aspects of the quarry operations are not in compliance with the conditions of approval regarding hours of operation, which are 6:00 A.M. to 8:00 P.M Monday through Saturday for mining and processing, and 6:00 A.M. to 8:00 P.M Monday through Friday for shipping. Maintenance operations may be conducted at any time. The morning following the meeting a neighbor complained of back up alarms and engine noise at 5:40 A.M. A GCC truck driver starting early caused the noise. GCC reports that all employees are

now aware of and observe the operating hours. No additional complaints have been received.

### Hydrology

During the September 8" neighbor meeting, a concern was expressed regarding quarry water use and impact on neighborhood wells. This issue has been studied extensively in the past resulting in specific and detailed conditions of approval regarding groundwater hydrology. Since 1992, GCC has implemented a Hydrologic Monitoring Program, which includes semi-annual groundwater sampling and annual reporting to the County. The 2003 monitoring report concludes that groundwater levels over the past 13 years have remained stable and quarry activities are not degrading water quality.

### **CONCLUSION AND RECOMMENDATION**

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 (Attachment 4, Exhibit F)

Sincerely,



David Carlson  
Project Planner  
Environmental Planning

Reviewed By: Ken Hart  
Principal Planner  
Environmental Planning

### Attachments:

1. September 8, 2004 Neighbor Meeting Attendance List
2. Letters from Neighbors
3. 74-633-PQ (Amended) Conditions of Approval and County Mining Regulations Section 16.54.050.c.2.
4. August 25, 2004 Staff Report to the Planning Commission

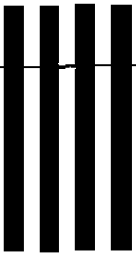
September 8, 2004 Neighbor Meeting Attendance List

1. Geoff Boraston, Environmental Manager, Granite Construction Inc.
2. Steve Grace, Environmental Manager, Granite Construction Co.-Monterey Bay Branch
3. Eric Gaboury, Felton Quarry Plant Superintendent, Granite Construction Co.
4. Kurt Kniffin, Granite Construction Company-Monterey Bay Branch Manager
5. Mike Sinnott, Felton Quarry Property Owner, 952 Eaton Dr. Felton, CA 95018
6. David Carlson, Santa Cruz County, Resource Planner
7. Bill Whiting, 200 McAmant Dr.
8. Harold Simpson, 260 Bonnywood Way
9. Melissa Thompson, 4035 Sylvester Dr.
10. Kathryn and Gerald Yates, 250 Bonnywood Way
11. Rich and Linda Nesladek, 180 Bonnywood Way
12. Rich and Elaine Conley, 363 McAmant Dr.

Additional neighbors not in attendance, wanting to be kept informed:

1. John and Jennifer Kressman, 360 McAmant Dr.
2. Howard and Linda Palmer, 5650 Empire Grade
3. Margie and Lee Marshall, 250 Tassett Ct.
4. Tom and Nancy Blease, 310 McAmant Dr.

**Letters From Neighbors**



## Gerald Yates

303 Potrero Street #29-301 Santa Cruz, California 95060 phone 831.457.9185 fax 831 457.9186

Architect



### Memorandum

**To:** County of Santa Cruz  
Planning Department  
701 Ocean Street  
Santa Cruz, California **95060**

**Attention:** David Carlson

**From:** Jerry Yates

**Date:** September 9, 2004

**Regarding:** Granite Construction Felton Quarry Five-Year Review 74-633-PQ (amended)

**Subject:** Neighborhood **Meeting** & Off Hour Noise

Thank you for attending the neighborhood meeting last night at the quarry. **Your** presence was appreciated. I felt that it was a positive beginning and hopefully will result in a direction that benefits the community and finally satisfactorily mitigates the historical nuisances of quarry dust and noise.

Unfortunately, I also have to report that after listening to Granite Construction staff adamantly state that no operations or vehicular traffic (other than a fuel truck which they promised to curtail in the future) ever commence prior to 6:00 A.M., I was awoken this morning at about 5:40 A.M. by the sound of multiple back up alarms and attendant vehicle and or machinery engine noise. I find it very disheartening that this would happen less than twelve hours after the discussion in which Granite Construction effectively stated ~~that~~ what we hear prior to 6:00 am can't possibly be originating in the **quarry** with the exception of the afore mentioned fuel truck or possibly water trucks.

I drove down to the quarry after being awoken and could not get in as the Empire Grade gate was locked. I went home and left a telephone message for Eric (the manager) at about 6:15 A.M. registering my disappointment

This occurrence reinforces the comments made last evening at our meeting by Harold Simpson, Rich Conley and Melissa Thompson to the effect that their complaints over the last ten years or more have been listened to but largely ignored. It also reinforces the comments made regarding the frustration of the neighbors on the issue of enforcement of the relevant county ordinances and conditions of approval.

If in fact the noise is from water trucks, this is an aspect of quarry operations and should not occur before 6:00 AM and the *quarry* is in violation of its use permit in terms of hours of operations. This fact needs to be included in the current five year review.

To Whom it May Concern.

We live directly above the Quarry and request that you do not approve the additional hours of operation at the Felter Quarry. The noise is so bad that we try to keep windows closed but in the summer it makes that hard to do, which then makes it hard to sleep. There is also a funny smell that is emitted and the dust is so bad that there is a constant brown layer of dust on everything which in the 2 years we've lived here, has given us upper respiratory problems so of course, we are concerned for our health.

Thank you for your consideration to this matter.

Sincerely,

Gerald + Kathryn Yates

Phone 4579187/Fax 4574181. (7) 240 DONALDSON RD. I. LA. Santa Ana CA 92707

September 6, 2004

To: Granite Construction Company

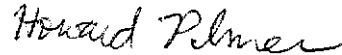
From: Howard & Linda Palmer  
5650 Empire Grade

Subject: Felton Quarry meeting Sep. 8, 2004

We regret that we are unable to attend your meeting with our neighbors on September 8. However, we share their concerns and are hoping to view your presentation via video tape. In particular, we are concerned about the dust, which is a well-known health hazard. We suspect it as a causal factor in the chronic respiratory problems from which we have both suffered since moving here. We are also concerned about the quarry's potential impact on our water supply, in terms of both quantity and quality. Finally, we are bothered by noise from the quarry, particularly when it is operating outside of normal business hours.

We have doubts that the quarry is always operating within local and state environmental regulations. We believe that ongoing independent monitoring is necessary to ensure compliance.

Sincerely,

A handwritten signature in cursive script that reads "Howard Palmer".

Howard & Linda Palmer



8/25/04

County of Santa Cruz  
Planning Commission  
701 Ocean Street  
Santa Cruz, CA 95067

FAX: 831/454-2131

Subject: Granite Construction Felton quarry

Dear Commissioners:

I **am** unable to make the five year review meeting regarding the Felton Quarry. I wanted, however, to provide input regarding the effects the **quarry** has on our neighborhood.


The quarry produces a great deal of noise and dust. I notice a significant increase in my allergy symptom due to the dust coming **from** the **quarry**.

Another area of concern is the number of trucks on Empire Grade. The trucks contribute to deterioration of the roads and significantly affect traffic on the road.

As a long-term resident of **Bonny** Doon, I would like *to* request a reduction in the **quarry** dust, noise, and traffic.

Thank you for your consideration.

Sincerely,

  
Kate Smith/Bill Whiting  
200 McAmant Drive  
Santa Cruz, CA 95060

## Concerned neighbor vs. Granite Quarry

While I readily accept that the quarry is by its very nature a **mining/extraction** process, with the attendant dust and noise problems normally associated with operations of this sort, the possible falsification of test reports, or arbitrary throwing out of tests that the county doesn't like seems to be working in the pocket of the quarry.

The county is not an uninterested impartial party to the Quarry's operation. In reality, the county should recuse themselves from any decision process of this sort. In much the same way as the Supreme Court should not have decided the Florida election results because the choice of Justice nominees is by the person that they chose, the awarding of contracts in this county smacks too much of the "good old boy" syndrome.

Adequate, impartial testing by an outside source should be carried out to satisfy everyone. The county should be "as pure as Caesars wife", not regarded as a rubber stamp for the big money interests.

247  
A

September 3, 2004

We would greatly appreciate any efforts that could be made by the Felton Quarry Management to look into ways to reduce the noise and dust from the Quarry's operation

Tom and Nancy Blease  
310 McAmant Dnve  
423-6915

A handwritten signature in cursive script, appearing to read "Tom and Nancy Blease". The signature is written in dark ink and is positioned below the printed address.

8/25/04

county of santa Cruz  
Planning Commission  
701 Ocean Street  
Santa Cruz, CA 95067

FAX: 831/454-2131

**Subject Granite Construction Felton quarry**

Dear Commissioners:

I am unable to make the five year review meeting regarding the Felton Quarry. I wanted, however, to provide input regarding the effects the quarry has on our neighborhood.


The quarry produces a great deal of noise and dust. I notice a significant increase in my allergy symptoms due to the dust coming from the quarry.

Another area of concern is the number of trucks on Empire Grade. The trucks contribute to deterioration of the roads and significantly affect traffic on the road.

As a long-term resident of Bonny Doon, I would like to request a reduction in the quarry dust, noise, and traffic.

Thank you for your consideration.

Sincerely,

  
Kate Smith/Bill Whiting  
200 McAmant Drive  
Santa Cruz, CA 95060

### **Conditions and Standards Related to Air Quality**

#### 74-633-PQ (Amended) Conditions of Approval

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

Condition III.B.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.

#### County Mining Regulations Section 16.54.050(c)(2)

(i) Each mining operation and reclamation activity shall be conducted in compliance with the requirements of the Monterey Bay Unified Air Pollution Control District.

(ii) Removal of vegetation shall only be permitted in accordance with the approved phasing plan.

(iii) Each mining operation shall be conducted so as to minimize dust, particulate matter (PM<sub>10</sub>), crystalline silica, and any other potentially significant effect of wind erosion.

(iv) Each interior road within the mining site shall be surfaced, treated or watered frequently enough to preclude wind and traffic generated dust from creating a nuisance affecting any nearby property or public road.

(v) Each exterior entrance road shall be maintained reasonably free of dust and debris resulting from any mining operation. Each truck departing the mining site shall be loaded, wetted down or tarped in such a manner so as to comply with all state or federal laws and minimize spillage on any haul route.

(vi) In a dry weather period during high wind conditions, each mining operation on an exposed slope shall be curtailed. Stockpiled sand products shall be watered or treated in a manner approved by the Planning Director during periods of high wind conditions so as to minimize off-site dust nuisance to nearby property.

(vii) Each area vegetated with native species or communities, in either existing or reclaimed portions of any mining site shall be protected from dust nuisance by a method approved by the Planning Director.

(viii) Each unvegetated disturbed area not actively involved in a mining operation, including any interim slope which does not meet final contours, shall be hydromulched, hydroseeded or otherwise treated by the start of the rainy season each year by a method and in a manner approved by the Planning Director so as to minimize off-site dust nuisance.

**August 25, 2004 Staff Report to the Planning Commission**



# County of Santa Cruz

## PLANNING DEPARTMENT

701 OCEAN STREET, 4<sup>TH</sup> FLOOR, SANTA CRUZ, CA 95060-4000  
(831) 454-2580 FAX (831) 454-2131 TDO (831) 454-2123  
TOM BURNS, DIRECTOR

July 20, 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. Staffs 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 III. 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,

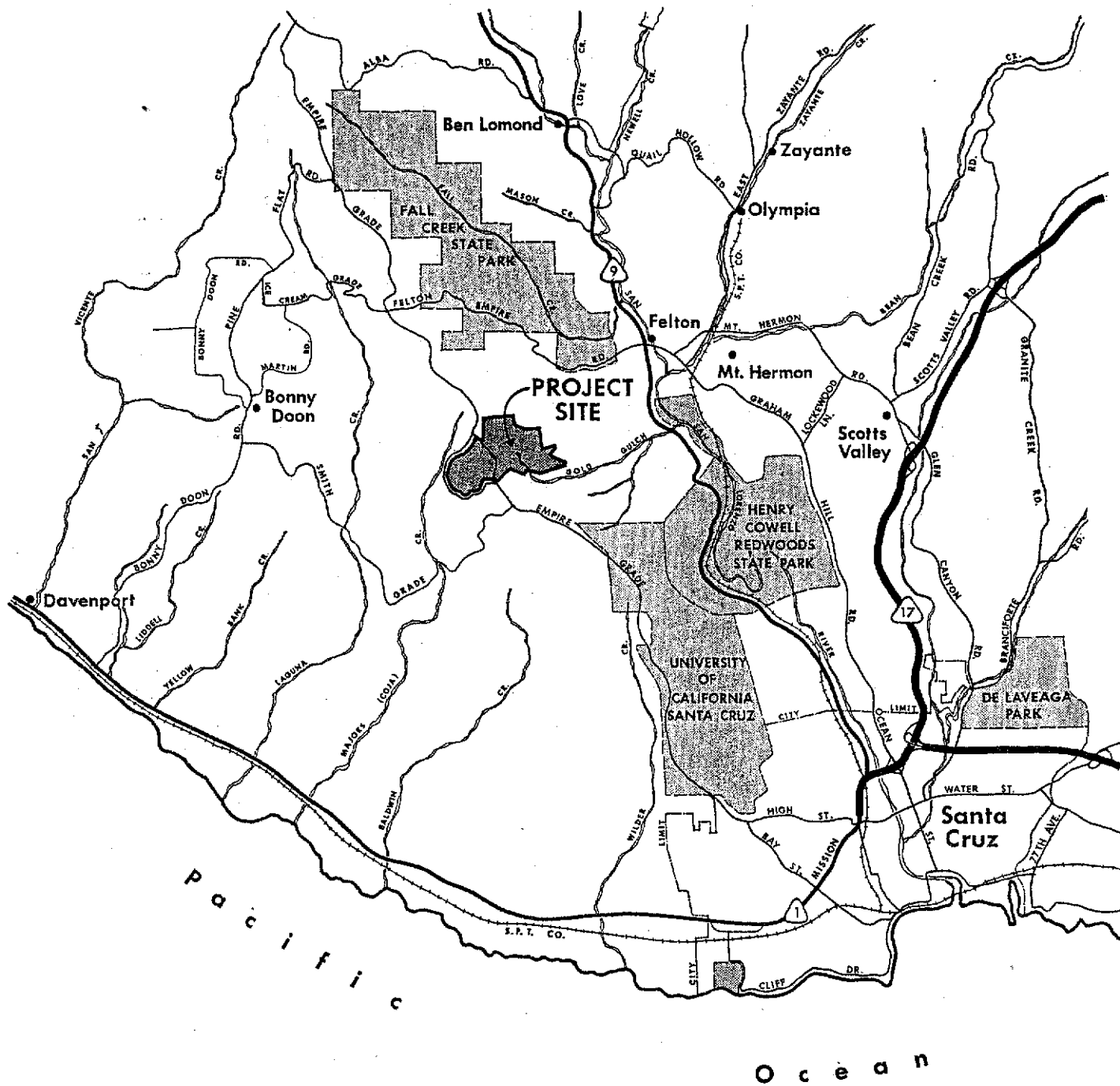
A handwritten signature in black ink, appearing to read "Kent Edler", with a stylized, flowing script.

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**



NORTH

0 1 2 MILES

# 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 Permit shall supersede all provisions of Use Permit 1574-U, and 74-633-PQ.

**~~N/C~~ Comment(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 Quany 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. The report 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 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 dBA 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 54 dBA 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 48 dBA and was 52 dBA 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. Currently, 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 lingen 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. A 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 Island 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 prepped 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-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.

*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.***

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.

*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 track (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. 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.

***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 start up time at the quarry is 7 am. On heavy paving days, the asphalt plant starts at 6 am. The latest quitting time is 6 pm.***

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 am to 3:30 pm.***

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***

- 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.

***In Compliance.***

- 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.

***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***

- e. 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/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 of 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 Site 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.*

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.

*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.*

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/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):
  - 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.

***In Compliance.*** *AN 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 onfile 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 IILC.8 through 11 (Surface Hydrology)

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

***In Compliance.***

3. Mitigation Measure: Condition IIID. 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**

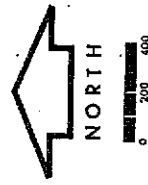
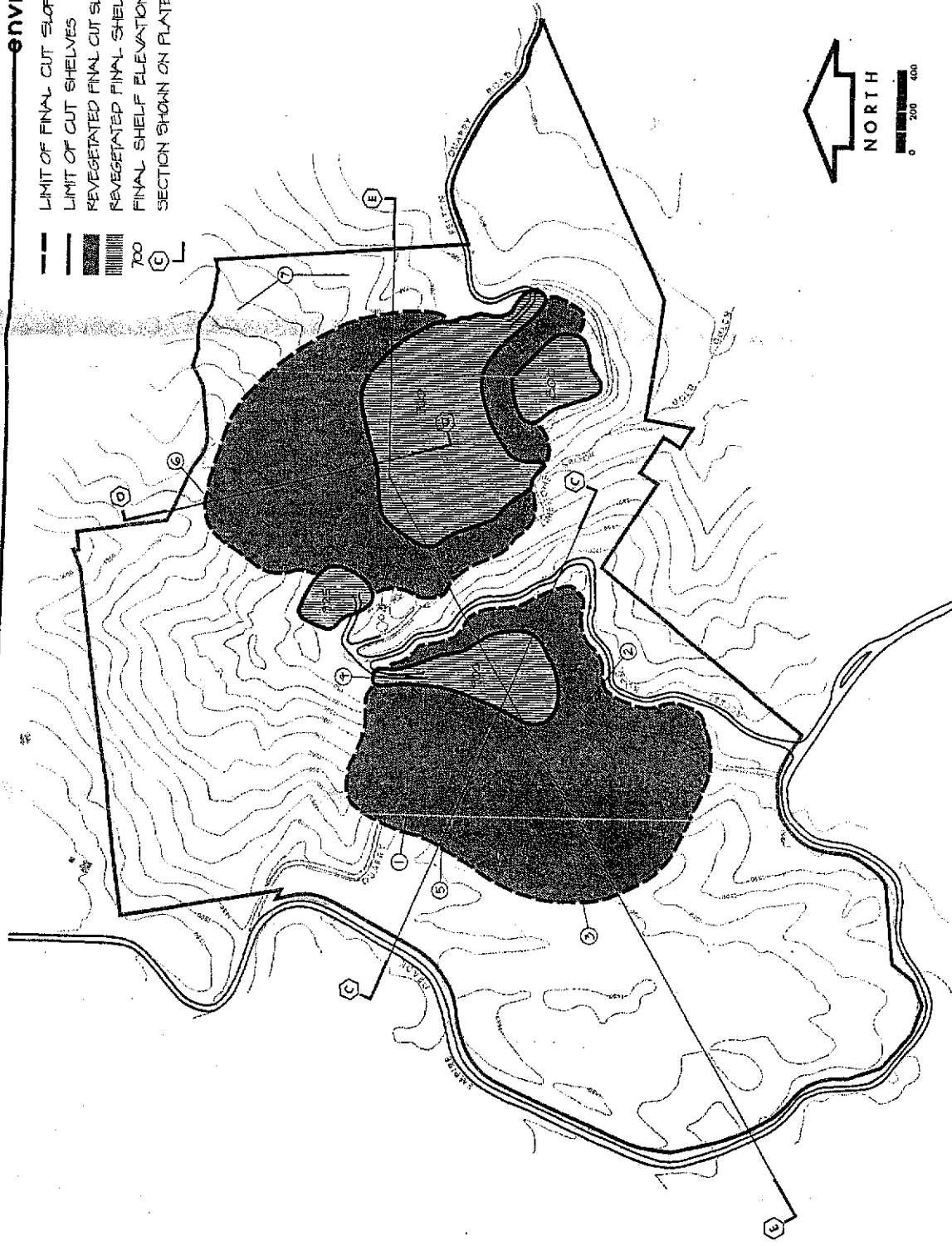
PERMIT NO. 74-633-PQ (AMENDED)  
APN(S): 062-181-12; 064-201-13, -79, -80, -81; 064-211-67, & -68

## **EXHIBIT C**

environ

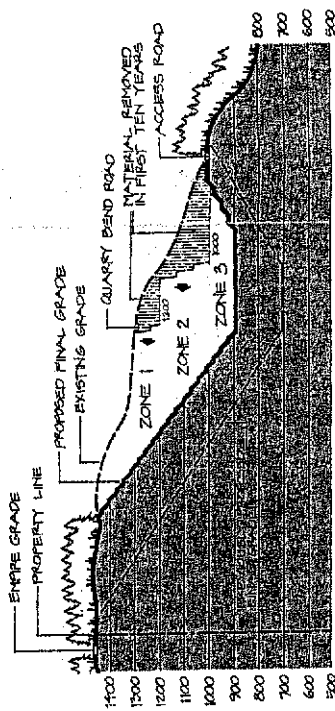
- LIMIT OF FINAL CUT SLOPES
- LIMIT OF CUT SHELVES
- REVEGETATED FINAL CUT SLOPES
- REVEGETATED FINAL SHELVES
- FINAL SHELF ELEVATION
- SECTION SHOWN ON PLATE 11

700  
C



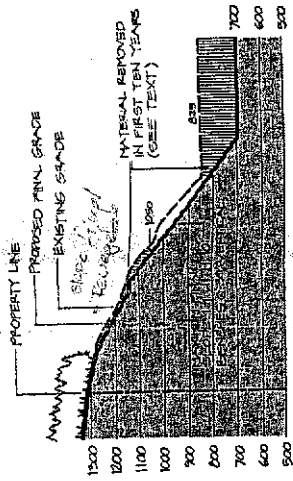
# MINING/RECLAMATION PLAN AT END OF 50 YEARS

PLATE 10



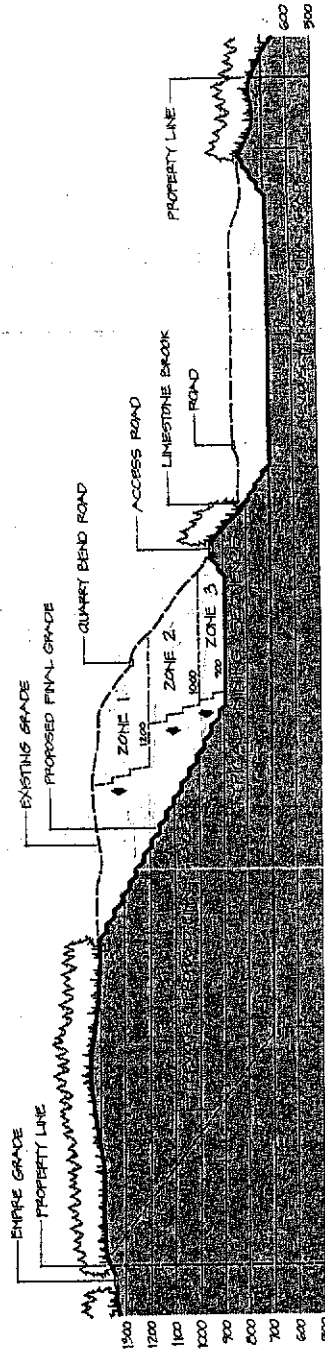
### SECTION C-C

CUT ELEVATIONS ARE DIAGNOSTIC



### SECTION D-D

CUT ELEVATIONS ARE DIAGNOSTIC



### SECTION E-E

CUT ELEVATIONS ARE DIAGNOSTIC

LOCATION OF SECTIONS SHOWN ON PLATE 10

## MINING/RECLAMATION SECTIONS AT END OF 50 YEARS

PLATE 11

**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**

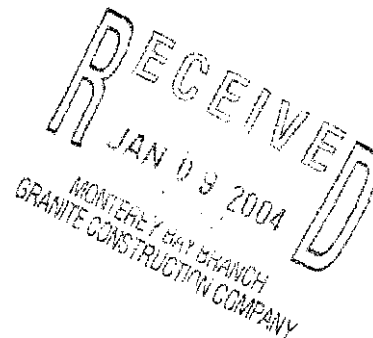


**COTTON, SHIRES & ASSOCIATES, INC.**  
CONSULTING ENGINEERS AND GEOLOGISTS

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

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**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 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. The report 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 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.II.
  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". 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.

- 1 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 Quany shall construct and/or implement the following improvements (Mit. X5 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. Notice 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 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).
  - 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.
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.
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.
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 ~~se~~ of the cut slopes. The ~~fin~~ slopes shall be seeded with native plant species and planted with tree seedlings. Adequate fertilizati~~on~~ 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 Ordinances 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 in 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 physical 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 of 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

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 3/4:1 (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).
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 Rogersi 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 IILC.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.