

FILE RECORD*

PA 98-5144

Department File Number: PA 98-5144 - Ordinance PA 1188

Subject Property: Map 19-02-00 Taxlot 3500, located within Section 30

Owner: Ross Bradford

Applicant: B.J. Equipment Company

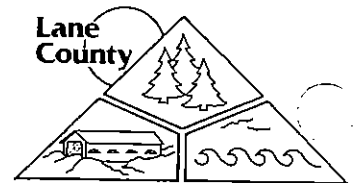
Property Location: 1½ miles south of Cloverdale Road, east of Creswell

Proposal: ORDINANCE PA 1188 ---IN THE MATTER OF AMENDING THE LANE COUNTY RURAL COMPREHENSIVE PLAN TO REVISE THE "SIGNIFICANT MINERAL AND AGGREGATE RESOURCES INVENTORY", REDESIGNATE FROM "FOREST" TO "NATURAL RESOURCE: MINERAL", REZONE FROM "F-1/NON-IMPACTED FOREST LANDS" TO "QM/QUARRY AND MINE OPERATIONS" AND ALLOW MINING FOR 40 ACRES OF LAND PURSUANT TO LANE CODE 16.400 AND 16.252 AND THE GOAL 5 OREGON ADMINISTRATIVE RULES (OAR 660-023); AND ADOPTING SAVINGS AND SEVERABILITY CLAUSES (FILE PA 99-5144; B. J. EQUIPMENT COMPANY)

*Containing items submitted into the record prior to February 15, 2003

FILE RECORD CONTENT SHEET

PA 98-5144



<u>No.</u>	<u>Item</u>	<u>Date</u>
1.	Application for Plan Amendment and Zone Change,	9/24/98
2.	Owners Authorization,	9/24/98
3.	Notice Map	10/13/98
4.	Lane County Rural Addressing Map 19-02 Index (portion)	10/13/98
5.	Zoning Map Plot #440	10/13/98
6.	Zoning Map Plot #429	10/13/98
7.	National Wetlands Inventory Map, Jasper Quad	10/13/98
8.	Lane County Rural Addressing Map 19-03-13 (portion)	10/13/98
9.	Lane County Rural Addressing Map 19-03-24 (portion)	10/13/98
10.	Lane County Rural Addressing Map 19-02-18 (portion)	10/13/98
11.	Lane County Rural Addressing Map 19-02-19 (north portion)	10/13/98
12.	Lane County Rural Addressing Map 19-02-19 (south portion)	10/13/98
13.	Cedarcroft Road, recording Instrument Book 11 Page 309	10/13/98
14.	Notice of Incomplete Application, 2p.	10/13/98
15.	Supplement to Traffic Impact Analysis, 9pp.	10/15/98
16.	Addendum to PA 98-5144	10/30/98
17.	Letter from Kris Jeremiah, 4pp.	11/2/98
18.	Letter from Robert Still	11/30/98
19.	Letter from Daniel O'Gorman	12/2/98
20.	Letter from Dale Burgess	12/7/98
21.	Letter from K.L. Harroun & Kathleen Wells	12/8/98
22.	Letter from Julie Cartmill	12/8/98
23.	Letter from James Crews	12/9/98
24.	Letter from Carl Cartmill	12/9/98
25.	Letter from Francis W. Rogers	12/9/98
26.	Letter from Beverly Rogers	12/9/98
27.	Letter from Gerald Fleischli	12/9/98
28.	Letter from Jesse Castillo	12/9/98
29.	Letter from Evalyn Lemon	12/9/98
30.	Letter from Carol & David Matthews	12/10/98
31.	Letter from Robert Ackerman / Helen Falk	12/11/98
32.	Letter from Robert Meyers	12/11/98
33.	Letter from Vicki Curry	12/11/98
34.	Letter from William & Carolyn Kent	12/11/98
35.	Letter from John Bianco	12/11/98
36.	Letter from David & Marilyn Calder	12/14/98
37.	Letter from Rick Millhollin	1/5/99
38.	Letter from James Spickerman	1/11/99
39.	Letter from Carl Cartmill	1/20/99
40.	Certification of Notification/Delivery	2/3/99
41.	Certificate of Posting	2/4/99
42.	Certification of Mailing	2/10/99
43.	Letter from Dan O'Gorman	2/17/99
44.	Amended Application for Post Acknowledgement/Plan Amendment	2/17/99
45.	Electronic Mail from Lloyd Holtcamp to Thom Lanfear	2/19/99
46.	Planning Commission Staff Report	2/22/99
47.	Letter from Gerald Fleischli, M.D., 10pp.	2/22/99
48.	Applicant's Response to Staff Report, 10pp.	3/2/99

Public Works
LAND MANAGEMENT DIVISION
http://www.LaneCounty.org/PW_LMD/



FILE RECORD CONTENT SHEET

PA 98-5144

<u>No.</u>	<u>Item</u>	<u>Date</u>
49.	Letter from Century West Engineering Corporation	3/2/99
50.	Memorandum of the Bear Creek Neighbors in Opposition, 29pp.	3/2/99
51.	Letter from Christopher Clemow to William Sherlock, 3pp.	3/2/99
52.	March 2, 1999 Planning Commission Sign-Up Sheets 2pp.	3/2/99
53.	Lane County Planning Commission Agenda	3/2/99
54.	Letter from Suzanne Amos	3/2/99
55.	Report from Environmental Solutions, 6pp. w/exhibits	3/2/99
56.	Bear Creek Neighborhood Petition, 13pp.	3/2/99
57.	Letter from Creswell School District	3/2/99
58.	Letter from Emerald Junior Academy	3/2/99
59.	Letter from Rick Millhollin, 2pp. w/photos	3/2/99
60.	Letter from Chuck Swenson	3/2/99
61.	Letter from Gerald Fleischli, 4pp. w/photo	3/2/99
62.	Letter from Marla Swenson w/photos	3/2/99
63.	Letter from Bob Meyers, 2pp.	3/2/99
64.	Letter from Diane Lane, 2pp.	3/2/99
65.	Letter from Linda Fleischli, 2pp w/photos	3/2/99
66.	Letter from Carl Cartmill, 2pp.	3/2/99
67.	Letter from Vicki Curry, 2pp. w/photos	3/2/99
68.	Letter from Robert & Lorraine Still, 3pp w/attachments	3/2/99
69.	Letter from Kim Meyers, 2pp w/photos	3/2/99
70.	Letter from Marie Woods, 3pp.	3/2/99
71.	Letter from Janet & Dale Burgess, 2pp. w/photo	3/2/99
72.	Letter from Bill & Carolyn Kent, 2pp. w/photos	3/2/99
73.	Letter from Ken Harroun & Kathleen Wells, 3pp.	3/2/99
74.	Letter from David & Carol Matthews, 2pp.	3/2/99
75.	Photos, 28pp.	3/2/99
76.	Letter from Chuck & Marla Swenson	3/3/99
77.	Electronic Mail from William Castillo to Thom Lanfear	3/9/99
78.	Memo to Planning Commission	3/10/99
79.	Planning Commission Sign-up Sheet	3/16/99
80.	Applicant's Response to Testimony, 12pp.	3/16/99
81.	Letter from Branch Engineering	3/16/99
82.	Letter from William Helmer, 2pp.	3/16/99
83.	Letter from Nancy Holzhauser, Wildlife Biologist	3/16/99
84.	Letter from Sue Ordonez	3/16/99
85.	Letter from Jerome Garger, 2pp.	3/16/99
86.	Letter from Tim Marshall	3/17/99
87.	Letter from Willard Evanson, Walter Hoffmann & D. Sogge	3/22/99
88.	Letter from Douglas Dupriest, 6pp.	3/23/99
89.	Letter from Jane Burgess to Ross Bradford, 12/3/98	3/23/99
90.	ODFW "Elk Management in Blue Mountain Habitats, 3pp.	3/23/99
91.	"Using Expert Opinion to Evaluate a Habitat Effectiveness Model for Elk in Western Oregon and Washington" by USDA, Forest Service, 2pp.	3/23/99
92.	Letter from Dale & Jan Burgess and Diane Lane, 2pp.	3/23/99
93.	Letter from Gary Woods	3/23/99

FILE RECORD CONTENT SHEET

PA 98-5144

<u>No.</u>	<u>Item</u>	<u>Date</u>
94.	Letter from Vicki Curry, 3pp.	3/23/99
95.	Letter from Gerald Fleischli	3/23/99
96.	Letter from Julie Cartmill	3/23/99
97.	Letter from Bob Still	3/23/99
98.	Letter from Diane Lane	3/23/99
99.	Letter from Evalyn Z. Lemon & Jesse Castillo, 2pp.	3/23/99
100.	Letter from William Helmer w/attachment	3/23/99
101.	Fax from Heritage Research Associates Inc.	3/23/99
102.	Electronic Mail from Lloyd Holtcamp to Thom Lanfear	3/23/99
103.	Supplemental Staff Report	3/29/99
104.	Applicant's Response to Post Hearing Submittals	3/30/99
105.	Lane County Planning Commission Minutes of March 2, 1999	3/30/99
106.	Lane County Planning Commission Minutes of March 16, 1999	3/30/99
107.	Memorandum from Lloyd Holtcamp, Transportation Planning	4/6/99
108.	Lane County Planning Commission Minutes of April 6, 1999	4/6/99
109.	Letter from James Spickerman	4/20/99
110.	Submittal by Lloyd Holtcamp	4/26/99
	a) Letter from Lloyd Holtcamp	
	b) Preliminary Pavement Assessment	
111.	E-Mail from Gerald Fleischli	4/28/99
112.	Letter from Greg Hume	5/3/99
113.	E-Mail from Lloyd Holtcamp	5/6/99
114.	Proposed Findings from Applicant	5/17/99
115.	Submittal from Bear Creek neighbors	7/23/99
	a) Letter from Bear Creek Neighbors	
	b) Findings of Bear Creek Neighbors	
	c) Luba Notes	
116.	Submittal from Bear Creek Neighbors	8/24/99
	a) Letter from Linda Fleischli	
	b) Petition to Post Weight Limit on Cedarcroft Road	
117.	Letter from ODOT	7/14/99
118.	Submittal from Gerald Fleischli	9/21/99
	a) Letter from Gerald Fleischli	
	b) Truck Noise Levels by Art Noxon	
119.	Letter to Stephen Vorhes	12/17/99
120.	Submittal by Jim Spickerman	1/25/00
	a) Fax Cover page	
	b) Truck Volume Graph	
	c) Legislative History, Appendix H	
	d) Memo to LCDC from Bob Rindy DLCD of June 12, 1996	
121.	Submittal from Linda & Gerald Fleischli	2/1/00
	a) Letter	
	b) "The Chronicle" January 26, 2000	
122.	Submittal from Jim Spickerman	2/16/00
	a) Letter to Stephen Vorhes	
	b) Letter to Bob Rindy dated 2/14/00	

FILE RECORD CONTENT SHEET

PA 98-5144

<u>No.</u>	<u>Item</u>	<u>Date</u>
	c) Appendix H Legislative History	
	d) Memorandum to JWS from SAC dated 1/28/00	
	e) Testimony of Karen Green	
	f) April 12, 1996 testimony draft	
	g) April 17, 1996 testimony draft pg.1	
	h) April 17, 1996 testimony draft pg. 37	
	i) Letter from Branch Engineering dated December 20, 1999	
	j) AASHTO Chapter IV Cross Section Elements	
123.	E-mail from Lloyd Holtcamp	3/2/00
124.	Letter from Stephen Vorhes to James Spickerman	3/23/00
125.	Submittal from James Spickerman	10/23/00
	a) Letter to Thom Lanfear	
	b) Draft Findings	
126.	Additions to Notice List	3/23/01
127.	Suggested Revisions to Findings by Lloyd Holtcamp	4/14/01
128.	Letter from James Spickerman to Thom Lanfear	4/24/01
129.	Road Construction Plans for Cedarcroft Road	5/9/01
130.	Letter from Thom Lanfear to James Spickerman	5/9/01
131.	Submittal from Jerry and Linda Fleischli	6/4/01
	a) Letter to Thom Lanfear	
	b) Noise Report from Arthur Noxon	
132.	Submittal from James Spickerman	11/8/01
	a) Letter to Thom Lanfear	
	b) Proposed Findings	
133.	Submittal from James Spickerman	11/27/01
	a) Letter to Thom Lanfear	
	b) Revision to Pg. 10 of Proposed Findings	
134.	Letter from James Spickerman	5/6/02
135.	Map of Bear Creek and Cedarcroft Roads	6/20/02
136.	E-mail from Lloyd Holtcamp	6/20/02
137.	Notice to DLCD	2/14/03

APPLICATION FOR A PLAN AMENDMENT AND ZONE CHANGE

Map No.: T19 R2 S30 Taxlot #3500

Submitted by: Ross Bradford
82452 Bradford Rd.
Creswell, OR 97426

Agent: BJ Equipment Company
P.O. Box 543
Cottage Grove, OR 97424
(541) 747-6261

FILE # PA 98-5144
EXHIBIT # 1

APPLICATION

APPLICATION FOR A PLAN AMENDMENT AND ZONE CHANGE

EXCLUSIVE FOREST USE - F-1/RCP ZONE TO NATURAL RESOURCE -
QM/RCP

APPLICATION DATE: September 23, 1998

I. PROPOSAL DESCRIPTION

A. APPLICANT:

Ross Bradford
82452 Bradford Rd.
Creswell, OR 97426

B. AGENT:

B.J. Equipment Company
P.O. Box 543
Cottage Grove, OR 97424

C. PROPOSAL:

To amend the Comprehensive Plan designation and zoning on 40.0 acres of land from Forest/F-1 to Natural Resource/QM. The applicant requests protection of a previously unidentified aggregate site under provisions of the Goal 5 Rule (OAR 660-16) with the applicable Natural Resource plan designation and the Quarry and Mining Operations zoning district.

II. GENERAL INFORMATION

A. LOCATION AND SITE DESCRIPTION:

Map No.: Township 19 Range 02 Section 30 Taxlot #3500
LC Tax Acct: #823383
Zoning: F-1
Size: 40.0 acres

The 40 acres involved in this application is a 40 acre parcel (taxlot #3500) located in Township 19 Range 2 Section 30, which was deeded by Frank Bradford to Ross Bradford in 1949. Ross Bradford purchased a frontend loader in 1964 and proceeded to use rock found on his property for his personal use. In 1968 Bill McBee

dynamited the existing quarry site and Ross used the rock he could without crushing it. Later he hired a portable crushing company to crush rock for his personal use. The aggregate site contains 40 acres located in tax lot #3500. The applicant also owns 216 acres North and East for a total of 256 acres.

B. SURROUNDING AREA:

Parcels to the North, South, East, and West are zoned F-1.

No neighboring residences are located within 1500 feet of the quarry site.

C. SERVICES:

School: School Dst 40
Fire: Creswell Fire District
Police: Lane County Sheriff
Sewer: N/A
Water: N/A
Access: Cedarcroft Road
Electricity: N/A
Phone: N/A

III. QUARRY MINING AND PROCESSING OPERATION

A. EXISTING STATUS:

The quarry was originally developed as a very small site by the applicant. The applicant has further developed the quarry in recent years and processes rock on site. The rock has been used to construct roads on site and was therefore not subject to permits from Lane County or the State Department of Geology and was not an inventoried site by Lane County or DOGAMI. Through application of this plan amendment and the Goal 5 Rule process the site will be placed on both inventories and protected as a Goal 5 resource site.

B. PROPOSED OPERATION:

Forty acres of Taxlot #3500 will be developed for aggregate extraction, processing, and storage. Test excavation has been conducted on the purposed site to

confirm the expanded area containing aggregate. The 40 acre site includes the aggregate area developed to date and includes additional area for extraction, processing and stockpiling.

The applicant intends to extract rock from the existing quarry site after obtaining appropriate permits from Lane County and DOGAMI. The rock will be processed on site and transported to other locations or stockpiled for later use.

The primary intended use of the rock in the near future is for commercial sales for private roads, residential roads, and county, state, and federal highways. The applicant intends to produce crushed rock for base material. Rock to be provided at the site will include ¾"-0, 1"-0, 1 ½"-0, 3"-0, 6"-0, open and pit run.

IV. APPLICABLE PLAN AMENDMENT CRITERIA AND ANALYSIS

A. LANE CODE 16.400 (6) (h) (iii)

The Board may amend or supplement the Rural Comprehensive Plan upon making the following finding:

(aa) For Major and Minor Amendments as defined in LC 16.400 (8) (a) below, the Plan component or amendment meets all applicable requirements of local and state law, including Statewide Planning Goals and Oregon Administrative Rules.

The plan amendment proposal meets all legal requirements in that it is being processed pursuant to the requirements of Lane Code and the acknowledged Comprehensive Plan. As is shown in subsequent sections of this report, the amendment meets Statewide Planning Goals and OAR requirements.

(bb) For Major and Minor Amendments as defined in LC 16.400 (8) (a) below, the Plan amendment or component is:

(i-i) necessary to correct an identified error in the Plan; or

(ii-ii) necessary to fulfill an identified public or community need for the intended result of the component or amendment; or

- (iii-iii) necessary to comply with the mandate of local, state or federal policy or law; or
- (iv-iv) necessary to provide for the implementation of adopted Plan policy or elements, or
- (v-v) otherwise deemed by the Board, for reasons briefly set forth in its decision, to be desirable, appropriate or proper.

The amendment proposed meets criteria (iii-iii) above.

- (iii-iii) necessary to comply with the mandate of local, state or federal policy or law;

ORS 197.250 specifies compliance with goals required. The aggregate extraction and processing within the Nonimpacted Forest Lands (F-1/RCP) zone may occur only on sites which are inventoried within the County Comprehensive Plan. The subject site is not currently included in the County's inventory of aggregate sites. Statewide Planning Goal 5 requires that all aggregate sites be inventoried pursuant to the Goal 5 Rule. The Goal 5 Rule procedure must be processed through a plan amendment, thus requiring this application to meet State and County requirements.

- (cc) For Minor Amendments as defined in LC 16.400 (8) (a), the Plan amendment or component does not conflict with adopted Policies of the Rural Comprehensive Plan, and if possible, achieves policy support.

The proposed amendment complies with all applicable Rural Comprehensive Plan Policies as discussed below:

Goal 4 (Forest Land)
Policy 4

Forest operations, practices and auxiliary uses shall be allowed on forestlands subject only to such regulation of uses as are found in the Oregon Forest Practices Act, ORS 527.722.

The site of the quarry and the proposed area of expansion is extremely rocky. This area is definitely not one of the 'best' which by this policy should be reserved exclusively for forest purposes. Other soil shown on SCS soils maps as being within the quarry operations are Nekia,

Bellpine, and Witzel with varying slopes. Nekia has agricultural capability ratings of III and VI, Bellpine has agricultural capability ratings of IV and VI. Witzel has agricultural capability rating of VI. Any actual class III soil on the parcel will not likely be affected by the quarry operation, as extraction will take place only where the concentration of rock exists. Further, the location of the only 'High Value Soils' exist in the lower northwest corner of the 40 acre parcel and consists of approximately 1 ½ acres. Recognition of the quarry site will therefore not conflict with this plan policy.

Goal 4 (Forest Land)

Policy 5:

Prohibit residences on Non-Impacted Forest Lands except for the maintenance, repair or replacement of existing residences.

The activity proposed will utilize an existing quarry site and an existing access road. No dwellings are proposed by this application. All nearby lands are zoned as agriculture or forest. No agricultural/forest activities occur on nearby lands which would be impacted by the quarry operation.

Goal 4 (Forest Land)

Policy 14:

Lane County recognizes that the Oregon Forest Practices Act shall be the only mechanism regulating the growing and harvesting of forest tree species on commercial forest lands unless Goal #5 resource sites have been recognized and identified as being more important through an analysis of ESEE consequences and conflict resolution as per Goal #5.

ORS 527.722 (2) (e) allows aggregate mining subject to ORS 215.298 which requires that aggregate extraction and processing occur only on sites inventoried in the County plan. This plan amendment will place the site on the County inventory which will allow aggregate mining as provided by ORS 527.722. Also included herein is an analysis of ESEE consequences and conflict resolution as per Goal #5.

Further, as documented in the Timber Management Plan prepared in 1989 by a service forester, the following cover areas note: Cover Type 1 has "rocky soils and limited top soil". Cover Type 2 has "shallow rocky soils". Cover Type 3 "southwest portion of type 3 is on a ridge top and is extremely rocky". Cover Type 10 "is a cleared area consisting of rock". "Rocky site. No growth potential."

Goal 5 (Mineral and Aggregate Resources)

Policy 1:

Known mineral resource sites within the County which are limited to those identified in Appendix 'D' of the "Mineral and Aggregate Resources Working Paper", shall be conserved for both present and future uses through the application of appropriate Plan designations and compatible land use regulation measures. Such designation and regulation is to take place after application of the requirements of Goal 5 Rule (OAR 660-16-000 through 660-16-0250 which is addressed in Appendix 'J' of the "Mineral and Aggregate Resources Working Paper".

This application for a plan amendment will achieve the appropriate Natural Resource plan designation for the identified resource site and will place the site on the list of mineral sites in Appendix 'D' of the Mineral and Aggregate Resources Working Paper. The application includes an analysis under the requirements of the Goal 5 Rule (OAR 660-16-000 through 660-16-025).

Goal 5 (Mineral and Aggregate Resources)

Policy 7:

Mineral and aggregate resource sites, which on the basis of substantial evidence, are considered for inclusion in Appendix 'D' of the Mineral and Aggregate Resources Working Paper pursuant to the application of the Goal 5 Rule (OAR 660-16-00/025, shall also show evidence of substantial resource utility over time. Any site evaluation shall also address possible impacts on agricultural lands, forestlands and residential development (existing or planned). For sites

within the Willamette River Greenway or near Goal 5 inventoried resources, notification of the potential conflict shall be sent to the appropriate body (e.g., Pioneer Museum, Oregon Department of Fish and Wildlife, etc.

This policy is, on the most part, implemented through application of Lane Code 16.400 (8)(c) standards and the Goal 5 Rule analysis, both of which are provided in following sections of this report. Evidence of substantial resource utility over time is based on the fact that more than 2,560,000 tons of high quality aggregate is available at the site. With an extraction rate of 50,000 to 100,000 cubic yards per year the site will provide rock for 20 to 40 years. Specific projects may increase production from the quarry site on an 'as needed' basis.

This site is not within the Willamette River Greenway nor near any other specifically inventoried Goal 5 resource site.

Goal 5 (Mineral and Aggregate Resources)
Policy 10:

Newly discovered or known or suspected sites, for which there is inadequate substantive information to allow a determination of quality, quantity, significance and conflicts with other uses, are identified in Appendix "F" of the "Mineral and Aggregate Resources Working Paper". All sites listed in Appendix "F", including sites used pursuant to Special Use Permits issued after the effective date of this Policy, shall be examined pursuant to the Goal 5 Rule (OAR 660-16-000 through 660-16-025), for inclusion in the County's resource inventory no later than the time of completion of the next Periodic Review of the Lane County Rural Comprehensive Plan. Until then, the alternative procedures of Special Use Permits may be used to authorize mineral and aggregate extraction and accessory activities on a short-term limited or intermittent basis as provided in Lane Code Chapter 16. In addition to meeting the criteria specified in Lane Code Chapter 16, mineral and aggregate extraction and accessory uses shall be substantially compatible with the livability of existing development of

abutting property and the surrounding vicinity, and the duration of the permit shall not extend beyond the next Periodic Review unless found appropriate during Periodic Review. Conditions enhancing compatibility may be adopted as required.

The subject quarry site is not listed in the Lane County Mineral and Aggregate Working Paper as either a designated site or a "1B" site subject to future Goal 5 analysis. As a newly discovered site it must be evaluated pursuant to the Goal 5 Rule within the framework of the plan amendment process.

This site is isolated from surrounding ownerships by distance, terrain and vegetation. The closest neighboring dwelling is located on taxlot #4304 to the southwest approximately 2,600 feet from the exposed quarry site. The parcel is surrounded by undeveloped forestland. The quarry designation is therefore compatible with surrounding land uses.

- (cc) For Minor Amendments as defined in LC 16.400 (8) (a), the Plan amendment or component is compatible with the existing structure of the Rural Comprehensive Plan, and is consistent with the unamended portions or elements of the Plan.

The plan amendment procedure requested follows the existing procedural structure of the Comprehensive Plan. No land use designations which do not now exist are being requested. By virtue of being a Minor Amendment, the impact of the proposal will be site specific and consistent with unamended portions of the plan diagram. As shown above the request conforms with existing plan policies and therefore is consistent with the unamended elements of the plan.

B. LANE CODE 16.400 (8)

- (a)(i) Minor Amendment: An amendment limited to the Plan Diagram only and, if requiring an exception to Statewide Planning Goals, justifies the exception solely on the basis that the resource land is already built upon or is irrevocably committed to other uses not allowed by an applicable goal.

The amendment is limited to the plan diagram only and thus qualifies as a Minor Amendment for purposes of this review.

(c) Minor Amendment proposals initiated by an applicant shall provide adequate documentation to allow complete evaluation of the proposal to determine if the findings required by LC 16.400 (6) (h) (iii) can be affirmatively made. Unless waived in writing by the planning director, the applicant shall supply documentation concerning the following:

(i) A complete description of the proposal and its relationship to the Plan.

The required description is provided in the introductory section of this application. The proposed use of the site is for aggregate extraction and processing as provided within the Natural Resource Plan designation category. This designation will be applied to a site to be recognized as an inventoried aggregate resource site by the working paper component of the Comprehensive Plan.

(ii) An analysis responding to each of the required findings of LC 16.400 (6) (h) (iii).

The required analysis has been provided in the previous section of this application.

(iii) An assessment of the probable impacts of implementing the proposed amendment, including the following:

(aa) Evaluation of land use and ownership patterns of the area of the amendment;

The site is located primarily upon a ridgeline within the Southwestern portion of a single 40 acre ownership. Land to the North and East of this ownership is undeveloped forestland. The nearest dwelling is 2600 feet Southwest of the quarry along Bradford Road. As discussed in the following Goal 5 Rule analysis, the quarry use would not

1

have any substantial detrimental impact on the use of surrounding properties.

- (bb) Availability of public and/or private facilities and services to the area of the amendment, including transportation, water supply and sewage disposal;

The property obtains access via a private road which extends approximately 4,000 feet from the quarry to Cedarcroft Road to the Northeast. The property is not located within a designated groundwater limited area. The aggregate extraction and processing allowed by the amendment will not necessarily require the use of sewage disposal systems or electric or telephone facilities although an electric service line extends up Cedarcroft Road approximately $\frac{3}{4}$ of a mile. A sewage disposal system, if needed, will be an on-site system designed for an individual user.

- (cc) Impact of the amendment on proximate natural resources, resource lands or resource site, including a Statewide Planning Goal 5 "ESEE" conflict analysis where applicable;

Proximate resource lands are forestlands and agricultural lands (owned by the applicant). The quarry operation will not have an adverse effect on farm or forest management activities. Because it occurs on lands consisting of exposed or thinly buried rock and is not well suited for farming or tree growing, the actual quarry will occupy land which has very limited use for commercial farm or forest production. The quarry is a limited site confined to the area of the resource and a small perimeter operational area and will not spill over into adjoining farm or forestlands. A minor amount of land is expected to be taken out of forest production as the quarry is expanded. On site machinery is restricted to the site itself. Normal quarrying procedures call for dust control through the use of water sprays, therefore fire hazards are no greater (and possibly less) than those caused by farming or logging equipment and slash burning.

A Goal 5 "ESEE" analysis is included in a following portion of this application.

(dd) Natural hazards affecting or affected by the proposal:

There are no know natural hazards which exist on or near the subject property.

(ee) For a proposed amendment to a nonresidential, nonagricultural or non forest designation, an assessment of employment gain or loss, tax revenue impacts and public service/facility costs, as compared to equivalent factors for the existing uses to be replaced by the proposal;

1. Employment: Full operation at the proposed quarry site is expected to fluctuate between one and five employees depending on production demands. Gross annual revenue expected from the operation will exceed \$100,000. This revenue would include salaries, materials and other operating expenses, and income from the resource. The proposed quarry is, by its nature, located on thin soils which are not considered as agricultural land and are poorly suited for timber production. However, for purposes of comparison, a forestry operation operating on cubic foot site class 3 soil will provide an annual "income" of about \$417 per acre per year (based on 24 acres of land producing \$10,000 worth of timber) This income would include salaries paid to employees at the time of harvest, as well as other expenses, overhead and profit. The proposed quarry site may eventually occupy up to 40 acres in area which would have small monetary impact on annual forest related income, since harvesting was recently completed. The gross annual income of the quarrying operation is expected to be significantly increased over future forestry revenues. The number of employees per acre will be significantly greater than that for the same amount of forestland.

Although the property is zoned as Forestland the area of aggregate extraction contains rocky soil which is not 'best' for forestry use. Therefore the quarry use will not displace income or employment from forestry operations.

2. Tax Impacts: Tax impacts will follow the assessed value of the property. Presently the land is valued at approximately \$57.60 per acre as forestland. The

expected valuation of the property will increase to about \$1500 per acre based on market value as a quarry site. The next tax income increase to Lane County will be positive.

3. Public Service/Facility Costs: Farming, forestry and quarrying require a well maintained highway system for the hauling of products. Because the quarry will operate more intensively than an equivalent amount of farm or forestland, it will require proportionately more highway services by contributing more wear on the roads. Although there will be more use (and wear) on nearby roads used by the quarry, its proximity to market will result in an overall reduction in use of the general road system due to a shorter haul distance. The quarry will not require greater amounts of other services, such as fire protection, schools, electric or telephone facilities.

(ff) For a proposed amendment to a nonresidential, nonagricultural or non forest designation, an inventory of reasonable alternative sites now appropriately designated by the Rural Comprehensive Plan within the jurisdictional area of the Plan and located in the general vicinity of the proposed amendment;

Aggregate sites are a finite Goal 5 resource and exist only where adequate quantities of suitable rock can be economically extracted. As per the Goal 5 Rule, the resource must be protected where it exists and consideration of alternative locations is not applicable.

V. GOAL 5 RULE (OAR 660-16-00 THROUGH 025)

The Goal 5 Rule process requires a complex analysis of potential resource sites beginning with a determination of its significance and concluding with plan designation to protect qualifying sites. For this application the Goal 5 Rule procedure established by the Oregon Concrete and Aggregate Producers Association, Inc. (OCAPA) will be followed. The procedure was developed in consultation with the Department of Land Conservation and Development (DLCD), the Oregon Department of Transportation (ODOT) and the Oregon Department of Geology and Mineral Industries (DOGAMI). OCAPA prepared a handbook entitled "Handbook for

Applying Goal 5 to Aggregate Resources" which involves the six steps discussed below.

1. Significance (location, quality, quantity)

The resource is located as shown on the attached exhibits and a survey was conducted to identify the precise extraction site. As discussed previously, the location is favorable with respect to potential extraction activities due to proximity to major road systems and market areas. The 'impacted area' of the resource site can be identified as those farm/forest parcels immediately adjacent to it and extending approximately .5 mile from the specified 40 acre site.

Based on on-site analysis which includes a geological evaluation, an engineering review and a current rock quality test, 300,000 cubic yards of high quality material exists within the primary 2 acre operating area and an additional 1,600,000 cubic yards is located within the 40 acre site. The site includes rock which exceeds all local, State and Federal standards for all applications of aggregate use. Testing typical for the Goal 5 Rule analysis were applied which include the Oregon air degradation, sodium sulphate soundness and L.A. abrasion durability tests

The quantity of material, as stated above, includes approximately 1,900,000 cubic yards of available material within the 40 acre area. The overburden consists of shallow rocky soil varying between 0 to 10' in depth. The estimated volume of overburden on site is 120,000 cubic yards.

Based upon the quality testing, bore and excavation data and geotechnical analysis, the site exceeds all applicable standards for aggregate use. The aggregate is located with the area identified on the maps provided. With an estimated annual extraction rate of 50,000 to 100,000 cubic yards per year, a minimum 20 to 40 year supply of aggregate exists at the site. The site is therefore a 'significant' aggregate resource under the Goal 5 Rule standards. As a 'significant' site the resource must be included in the County plan inventory as a 1c site and must then be analyzed for conflicting uses pursuant to the Goal 5 Rule.

2. Examination for conflicting uses within the impact area

Conflicting uses as defined by the Goal 5 Rule are those, "which if allowed, could negatively impact a Goal 5 resource site". Quarry sites are Goal 5 resources, and thus the Rule is applicable here. Conflicting uses may be uses allowed by the F-1 zone which would be retained adjacent to the new QM zoned site, uses represented by other inventoried Goal 5 sites in the impact area of the proposal, or activities such as existing residential development in the vicinity of the proposed quarry site.

The 'impact' area applicable to the quarry site is generally considered to be that area within $\frac{1}{4}$ mile of the site. For purposes of the conflict analysis the $\frac{1}{4}$ mile measurement will be made from the outside edge of the 40 acre site to be redesignated. Since the entire surrounding area is all zoned F-1, the surrounding land will act largely as a buffer for the extraction and processing operation. Quarry extraction and mining boundaries will be constrained to within 150' of all surrounding property lines.

The impact area to the South, West, and East is zoned Nonimpact Forest (F-1). The impact area to the North is owned by applicant and also zoned Nonimpact Forest (F-1).

That portion of the impact area owned by the applicant can be controlled to prohibit or limit conflicting uses. The applicant intends to prevent future conflicting uses on his property by recording a deed restriction designating the quarry as the primary use and making other uses subordinate and subject to activities conducted relative to the quarry operation. This will assure that any use developed on this property, if owned by others in the future, will not impact or be unacceptably impacted by the quarry. The primary concern would, of course, be dwellings as farm and forest uses which are deemed as compatible with the quarry use.

The entire 40 acre parcel is therefore surrounded by Nonimpact Forest (F-1) zoning.

3. Determination if conflicting uses exist

Zones within the impact area contain a number of permitted uses, most of which would not adversely impact or be impacted by the quarry site and thus should not be considered 'conflicting uses'. Examples are farming and forestry activities. The quarry site itself is not generally suitable for farming or forestry due to landform and shallow soils. Its continued use as a quarry will therefore have no measurable impact on the supply of agricultural or forest land. Offsite impacts will also be minimal, since the noise and dust of a quarry operation is not likely to have a significant impact on logging or agricultural operations taking place on nearby lands. Quarrying activity is also a use which is recognized within the EFU, F-1, and F-2 zones.

Other possible uses could, however, adversely affect the site and possibly render it unsuitable for eventual extraction. These are potential 'conflicting uses' and would include permitted recreational sites and fish/wildlife management areas, and special uses including farm and forest related dwellings. No area zoned RR-5 exists within the impact area to result in a major potential for conflicts, however such possibility exists and therefore warrants further analysis. Because potential conflicts may exist the following analysis is required.

4. Economic, social, environmental and energy (ESEE) analysis

a. Economic Consequences:

The requested plan amendment and QM zoning would preempt or limit the conflicting uses on the site itself and probably on lands immediately adjacent to the site thereby preserving the aggregate (Goal 5) resource. It would not necessarily preclude potential conflicting uses within the entire impact area if such uses are allowed subject to the impacts created by the quarry operation. The economic consequences of designating the quarry site will be to promote the economic benefit from use of the resource and to help fulfill the annual need for aggregate material which amounts to 15 tons per Oregon resident. Although the use would not allow public revenue or private income benefits of recreational site development or fish/wildlife management area, the property is not identified for such development nor is it particularly suited for such use with its isolated location, lack of distinguishing features or

uncommon plant or animal life. No beneficial economic consequences of disallowing the quarry in favor of other Goal 5 resources therefore exists.

The economic consequences of any potential special use is difficult to assess because of the uncertain nature of the special use, which itself must comply with a number of approval criteria. The most common special use in the EFU or F-1 and 2 zones is a farm or forest related dwelling unit. The economic consequences of eliminating the potential dwelling on or nearby the quarry site would be the loss of a limited amount of property tax revenue. However, alternative locations for dwelling units on other unaffected F-1, F-2 and EFU lands are plentiful, which would mitigate residential zoned land. The quarry will not prevent residential use of these lands.

The economic consequences of disallowing the quarry would be loss of the income and tax revenue net gains previously documented, plus an increased cost for construction of projects in the area requiring a ready, proximate supply of rock. Therefore, designation of the property for aggregate extraction will have positive overall economic affect.

b. Social Consequences:

The social impacts from the elimination of future potential conflicting uses would be a reduction in possible recreational site options for the public, wildlife management alternatives, and a disincentive to landowners to construct dwelling units or other EFU or F-1/F-2 special uses in the nearby vicinity of the quarry. Social impacts of disallowing the proposed quarry would be a continued reduction in the supply of readily available aggregate supply within the immediate area, which would in turn generate social costs (noise, traffic) of transporting the material from other sites elsewhere in the County.

The extraction site itself is located on a ridge which slopes to the North creating a natural buffer and barrier for properties South, West, and East. In addition, a natural vegetative buffer exists between properties and access to the quarry is from the Northeast where it will not affect nearby lands. Based upon these factors, the quarry use will not likely prohibit the placement of dwellings within (or outside) the impact area on properties

not owned by the applicant. There are therefore no negative social consequences which might result from recognition of the quarry site.

c. Environmental Consequences:

A quarry is a very site-specific use, so offsite environmental impacts are expected to be limited to possible dust and noise impacts of truck travel to and from the site and, to a lesser extent, dust and noise from the quarry operation itself. The impacts of a quarry at this location are limited due to the distance to residences (minimum 2600 feet), its elevated location, its road access which does not pass by any developed properties and by its being surrounded by dense forest vegetation. Certain identified conflicting uses (e.g., recreational facilities and dwellings) may generate greater intensities of noise and other impacts due to the larger number of people involved with such uses.

The site is located in a Major Big Game Range (also a Goal 5 resource), and at certain times the quarrying activity may tend to affect big game activity within the area. This property is not known to be in a migration path nor is it uncommonly suited for big game use. Because most of the County is considered to be Major or Peripheral Big Game Range, big game can easily locate alternative habitats on nearby forested lands if any displacement actually occurs. However, since the site currently has an existing quarry, further impacts are anticipated to be minimal or nonexistent. Some of the potential conflicting uses, such as dwellings and recreational facilities, could have far greater impacts on local big game.

d. Energy Consequences:

Due to the operation of trucks and heavy machinery, a quarry site is energy intensive. However, certain conflicting uses, such as recreational facilities (especially those attracting motorized vehicles) are energy intensive as well. Although some conflicting uses may be less energy intensive than a quarry site might be, the consequences of not providing for the quarry are likely to be substantial in that the site is located in an area close to the intended market which would otherwise require a longer haul and additional energy use in the form of fuel and road repair.

5. ESEE analysis conclusion

The subject parcel contains an existing quarry which, through the Goal 5 review process, is appropriately considered for inclusion as an aggregate resource site within appendix D of the County's Mineral and Aggregate Working Paper (inventory). As discussed above, limited potential conflicts appear to exist within the impact area which would be caused by such designation. The above ESEE analysis shows a favorable result from designating the site for aggregate extraction as opposed to other potential uses which could possibly be established on this or nearby lands.

Designation of the site as a natural resource and application of QM zoning will protect the site in the County plan and will allow its utilization. However impacts of the use will be mitigated through the subsequent processing of a Site Review permit as required by the QM zone prior to operation of the quarry. Pursuant to the Goal 5 rule this site will be a 3A site on the County inventory as the site review procedure will control the use in a manner which will not require the application of limitations upon potential conflicting uses other than those imposed by the existing applicable zoning ordinances themselves.

6. Site designation

In accordance with the Goal 5 Rule, the subject site has been found to be a significant aggregate resource. The ESEE analysis results in the conclusion that the site is to be protected but Site Review procedures are in place to mitigate impacts created by the use of the quarry. The site should therefore be redesignated to Natural Resource and rezoned to Quarry Mining in order to protect the resource as required by Goal 5.

VI. EVALUATION OF PROPOSAL AGAINST APPLICABLE ZONE CHANGE CRITERIA

A. RURAL COMPREHENSIVE PLAN POLICIES

The proposal complies with those certain plan policies having to do with the treatment of mineral and aggregate resources. It does not conflict with any of those policies as discussed in a previous section of this report.

B. LANE CODE 16.252 (2) - ZONINGS AND REZONINGS

This section of the Code requires that rezonings be 'enacted to achieve the general purposes of the Chapter and shall not be contrary to the public interest'. They are also to be consistent with the specific purposes of the proposed zone, applicable plan elements and Statewide Planning Goals for which the County has not yet achieved acknowledgment.

The variety of criteria involved in a plan amendment proceeding, which in this case must precede the zone change, assures that the zone change is correctly carried out and that it is in compliance with the numerous purposes of the chapter.

LC 16.212 (Quarry and Mining) provides a number of purpose statements having to do with the operation of quarry activities. The proposed quarry operation complies with these statements. No land use activities other than quarrying and continued timber production (an allowed use) are anticipated on the site.

Since the County Rural Comprehensive Plan is acknowledged, no Statewide Planning Goal examination beyond that provided in connection with the plan amendment is required.

VII. ATTACHMENTS

- A. Site Plan
- B. Topographic survey
- C. Geological Evaluation
- D. Engineering Review
- E. Working Paper Map and Listings
- F. RLANDS Tax Printouts and Assessors Map
- G. Soils Map
- H. Timber Management Plan
- I. Traffic Impact Analysis

ATTACHMENTS

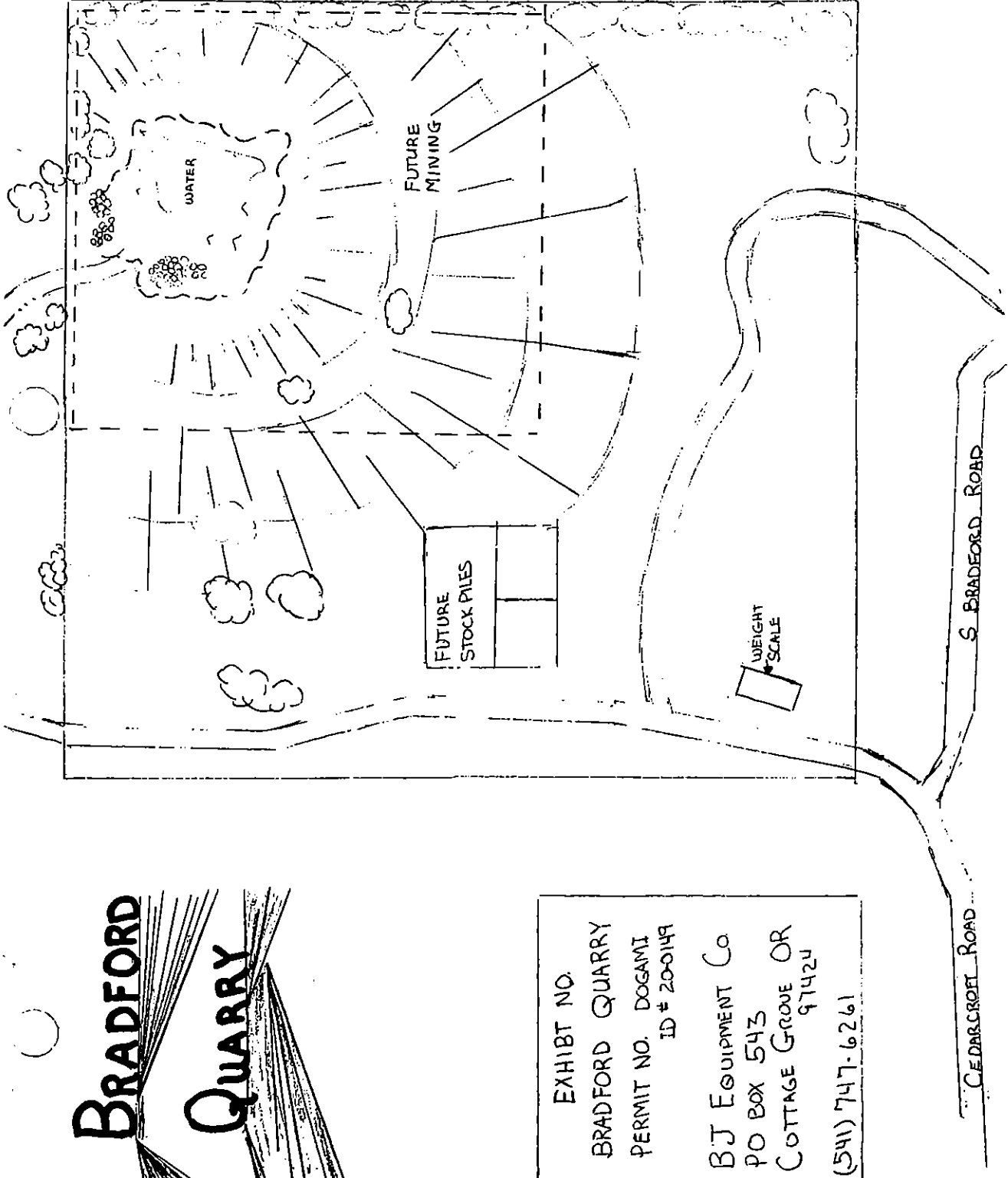


BRADFORD Quarry

EXHIBIT NO.
BRADFORD QUARRY
PERMIT NO. DOGAMI
ID # 200149
BJ Equipment Co
PO BOX 543
COTTAGE GROVE OR
97424
(541) 747-6261

EXPLANATION

- ~ ~ ~ EXISTING QUARRY (APPROX 1:2 SLOPE)
- - - DOGAMI PERMIT BOUNDARY (1/3 ACRE)
- PROPERTY BOUNDARY
- ⊗ STOCK PILE
- ⋯ EXISTING EASEMENT
- ⌒ SLOPE



"A"

Draw your Development Plan in the space below. A drawing of your entire lot or parcel if it's less than one acre. If your lot or parcel is one acre or more in size, draw only the development site below, and also draw a separate Parcel Plan on the other side of this sheet (Side 2).
 Fill in the Property Information box. Select a drawing scale that will let your development or parcel be completely shown on this sheet (see examples below the Checklist). Use the Checklist to make sure you have everything you need on your drawing. Draw in black ink or #2 pencil. Refer to Development Guide No. 6.1 for sample drawings.

Development Plan shows development on the entire lot or parcel. Needed only if lot or parcel is one acre or larger.
 Parcel Plan shows development on only one lot or parcel. If it's less than one acre.

MD File No. _____
 Property Information

Owner Name
Ross Bradford

Owner Address
8245 2 Bradford Rd

City/Township/County
Creswell OR

Zip Code
97426

Owner Phone No.
541-895-2394

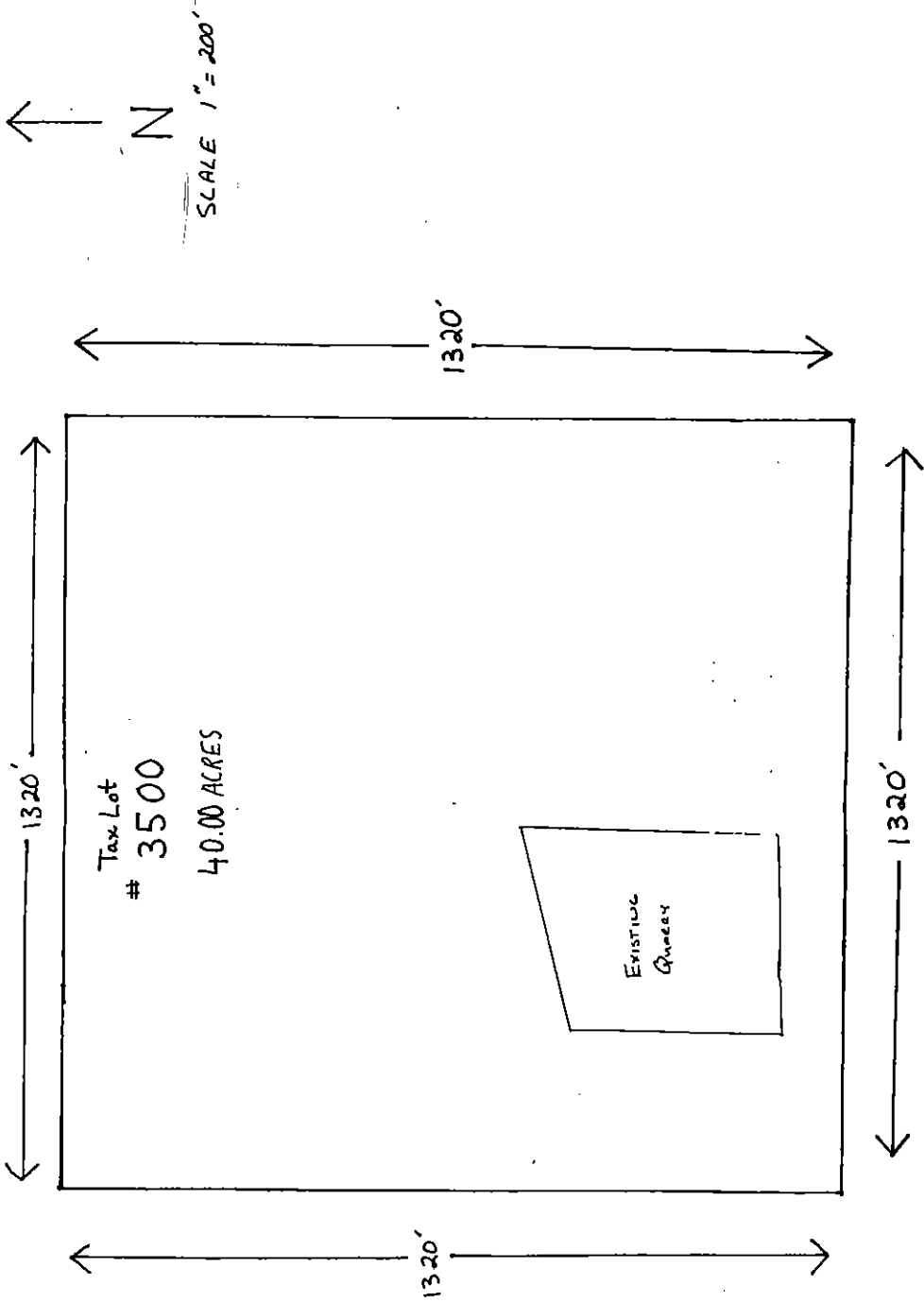
Parcel Map and Tax Lot No.
3500

Size of Parcel in Acres
40.00

Development Plan Checklist

- Be sure to draw or list:
- 1. An arrow pointing North
 - 2. Accurate shape and size of parcel or development site
 - 3. Location and dimensions of all structures (existing or proposed), and distances of each to property lines
 - 4. Location of septic tank, drainfield, and replacement drainfield, and distances of each to structures and property lines
 - 5. Location of well, and distance to drainfield
 - 6. Utility accesses
 - 7. Driveway access and parking areas
 - 8. Powerlines or other easements across property
 - 9. Natural Features (unless shown on Parcel Plan)

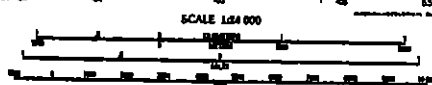
Suggested Scales for Drawing:
 1 inch = 20-feet
 1 inch = 40-feet





BY THE UNITED STATES GEOLOGICAL SURVEY
UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WASHINGTON, D. C. 20541
Produced from original
photorelief drawings. Information
shown on this map
is made from barometric, baric, and other readings.

PROVISIONAL MAP
Produced from original
photorelief drawings. Information
shown on this map
is made from barometric, baric, and other readings.



CONTOUR INTERVAL 50 FEET
SUPPLEMENTARY CONTOUR INTERVAL IN FEET
OTHER ELEVATIONS GIVEN TO THE NEAREST FOOT
AS SHOWN ON THIS MAP

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

ROAD LEGEND

Improved Road: ———
Unimproved Road: - - - - -
Trail:

○ National Road □ U.S. Route ○ State Route

"B"

JASPER, OREG.
PROVISIONAL EDITION 1988
4323-10-77-681



Oregon

John A. Kitzhaber, M.D., Governor

Department of Geology & Mineral Industries

Mined Land Reclamation

1536 Queen Avenue SE

Albany, OR 97321-6687

(541) 967-2039

FAX (541) 967-2075

Report of Onsite Inspection

|||||

Kristofer Jeremiah
PO Box 543
Cottage Grove OR 97424

20-0149
Section 30, Twp 19S, Range 2W
Bradford Quarry

Date Of Inspection: July 23, 1998

Kris Jeremiah accompanied me on this initial inspection of a proposed rock quarry located roughly 4 miles east of Creswell. The application materials are being circulated to other resource agencies at this time for comment. Enclosed is a site map which requires a signature. Please review the map for accuracy then sign and return it as soon as possible.

Location and Access

Access to the site is via Highway 58 east out of Eugene for approximately 3 miles to Cloverdale Road, then south on Cloverdale Road to Bear Creek Road. Travel southeast on Bear Creek Road for approximately 1 mile to a Cedarcroft Road. Then travel south on Cedarcroft Road for approximately 1.5 miles to Bradford Road. Continue up the hill on Bradford Road for 0.5 miles to an unmarked gravel road on the right. Take this road north for approximately 600 feet to the site.

Existing Conditions and Vegetation

A quarry exists on the property which has been used for forest access and on-site use in the past. Current disturbance is on the order of 2 acres (approximately 1.2 acres were disturbed as of 1994). There is an excavation into the floor which collects rain water and contained several feet of water at the time of this inspection. There are several hundred yards of stockpiled crushed rock near the entrance to the site. Some overburden has been stripped toward the east and west sides of the ridge.

Rock outcrop is exposed in several areas on the ridge to be mined. Overburden varies greatly in depth from no overburden to several feet. The site is currently poorly vegetated due to the lack of topsoil. The entire permit area has been logged and is currently revegetated with scattered Douglas fir, pine, and brush.

The proposed quarry site is located on the relatively flat top of a ridge, however the slopes east and west of the ridge are quite steep. Care will need to be taken when placing overburden on or near these slopes to make sure that unstable overburden piles are not created. A permit condition is being added limiting the volume which can be placed in stockpiles along the slopes.

Inspected by:

Peter J. Wampler
Reclamationist
Mined Land Reclamation

c: Lane County Planning Department
DEQ - Salem
Ross Bradford

PJW/cc:07/31/98, 20-0149 07-23-98ir

Waterways and Storm Water

The nearest drainage to the site is located down a steep slope to the southwest of the site. This drainage is shown with a solid blue line on the USGS topographic map indicating that it may be perennial. Kris Jeremiah indicated that he plans to divert water to the east and west of the site. No discharge of storm water from the site is permitted without a 1200A storm water permit.

Mining and Reclamation

The proposal calls for permitting 20 acres within a larger 40 acre parcel leased for mining. Mining will be a hill top removal with overburden stored on the east and west sides of the extraction area. Product stockpiles and scales are planned for a flatter area northeast of the extraction area (see enclosed map). The rock to be mined is what appears to be an altered Andesite with minor amounts of sulfide present.

The nearest residence is over one mile away from the proposed extraction area. Natural screening by trees should not prevent the quarry from being visible from this residence.

The site will be returned to a forestry post-mining land use. In order to accomplish this post-mining use replacement of topsoil and overburden will be necessary. Permit condition # 3 requires that a minimum of 18" of topsoil or overburden be placed on reclaimed areas.

Permit Conditions and Bonding

Initial bond for the site will be set at \$7,500 for the first five acres of disturbance. I recommend granting the above Operating Permit with the following conditions;

The Permittee shall:

1. not create stockpiles higher than 15 feet above original ground surface without obtaining approval from DOGAMI.
2. allow no discharge of storm water or process water from the site.
3. respread a minimum of 18" of topsoil or overburden upon final reclamation.
4. seed and mulch all exposed overburden prior to October 1 of each year to prevent erosion.

GEOTECHNICAL INVESTIGATION

**AGGREGATE RESOURCE
QUALITY/QUANTITY
EVALUATION**

LANE COUNTY, OREGON

September 10, 1998

D



LEADING THROUGH EFFECTIVE SOLUTIONS

September 10, 1998

Mr. Kristofer Jeremiah
B J Equipment Company
34964 Hwy 58
Eugene, OR 97405
(541)747-6261
(541)988-4320 Fax

**AGGREGATE RESOURCE QUALITY/QUANTITY EVALUATION
40 ACRE PARCEL DESIGNATED AS 19 02 30 TAX LOT 3500
LANE COUNTY, OREGON
Project NO.: 12327.001.01**

Dear Mr. Jeremiah:

As requested, personnel from Century West Engineering observed, logged and sampled 6 test borings at the above referenced site. The site is within Section 30, Township 19S, Range 2W and is located south of Bear Creek Road, directly south-west of Cedarcroft Road. See vicinity map, figure 1, for project location.

The subject site consists of 40 total acres of which approximately 20 acres will be permitted for the mining operation. The mining will be a hill top removal located in the south west quadrant of the subject 40 acres parcel with scales, stockpiles and loading areas located at the north east quadrant of the 40 acre parcel. An existing excavation, known as Bradford Quarry, now exists on the hill top with stockpiled crushed material located south and east of the existing excavation. Some overburden materials have been graded and stockpiled north-east and west of the existing quarry. Our evaluation includes laboratory testing of on site materials to be used as construction aggregate material. The laboratory testing is per the requirements of the Statewide Planning Goal 5 for Aggregate Resources and includes Oregon Air Degradation, Soundness and L. A. Rattler(LAR) tests.

SUB-SURFACE CONDITIONS

The site sub-surface soil and rock conditions were investigated using 6 test borings done in the south-west quadrant of the subject site. See site map, Figure 2, for boring locations. The borings were excavated by BJ Equipment Company using a Gardner-Denver SCH 5000C rock drill unit. Borings 1, 2 and 3 were done in the area of the existing quarry where the overburden materials had been removed and stockpiled. Borings 4 and 5 were done in relatively undisturbed areas and indicated overburden soil materials of approximately 10 feet. Boring 6 was done north of the proposed mining area and indicated overburden material to a depth of 35 feet below existing surface. The overburden soils consist of a silty sand material with a mixture of gravels, cobbles and boulders. The site rock is of an Igneous-Volcanic configuration which was formed directly from molten rock that cooled quickly on or near the earth's surface. The rock is gray brown in color and of basaltic composition and is low to non vesicular. Borings 1 through 5 were excavated to a depth of 70 feet

below the existing elevation at each boring. The boring logs can be found in the appendix of this report.

LABORATORY TESTING

Per the Goal 5 Rules the site rock was tested for the following:

Los Angeles Rattler (LAR) ASTM C-131, OAHDM 211

Test Result	Percent Loss 18.8%	Specification <30.0%
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Oregon Air Degradation OSHD TM 208

Test Result	Percent Passing #20 17.8%	Specification <30.0%
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	Sediment Height 1.5"	Specification <3.0"
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Soundness ASTM C-88, OSHD TM 206

Test Result	Total Coarse Loss 5.7%	Specification 12.0% Max
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The test results indicate the site rock meets requirements as a high quality rock source. Test data results can be found in the appendix of this report.

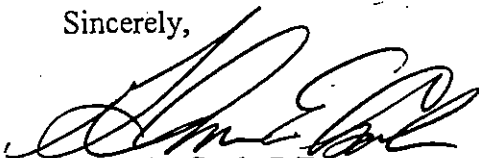
CONCLUSIONS

In reviewing a "Report of Onsite Inspection" dated July 23, 1998, by Mr. Peter J. Wampler of the Oregon Department of Geology & Mineral Industries, the mining operation will cover an area of approximately 12 acres located in the south-west quadrant of the subject site with the total permitted area consisting of 20 acres. Our field investigation and site observation indicates that the subject site has varied depths of overburden soil material that range from 0 to 10 feet below existing surface. Below the overburden material is a basaltic rock that extends to a depth in excess of 70 feet below existing surface.

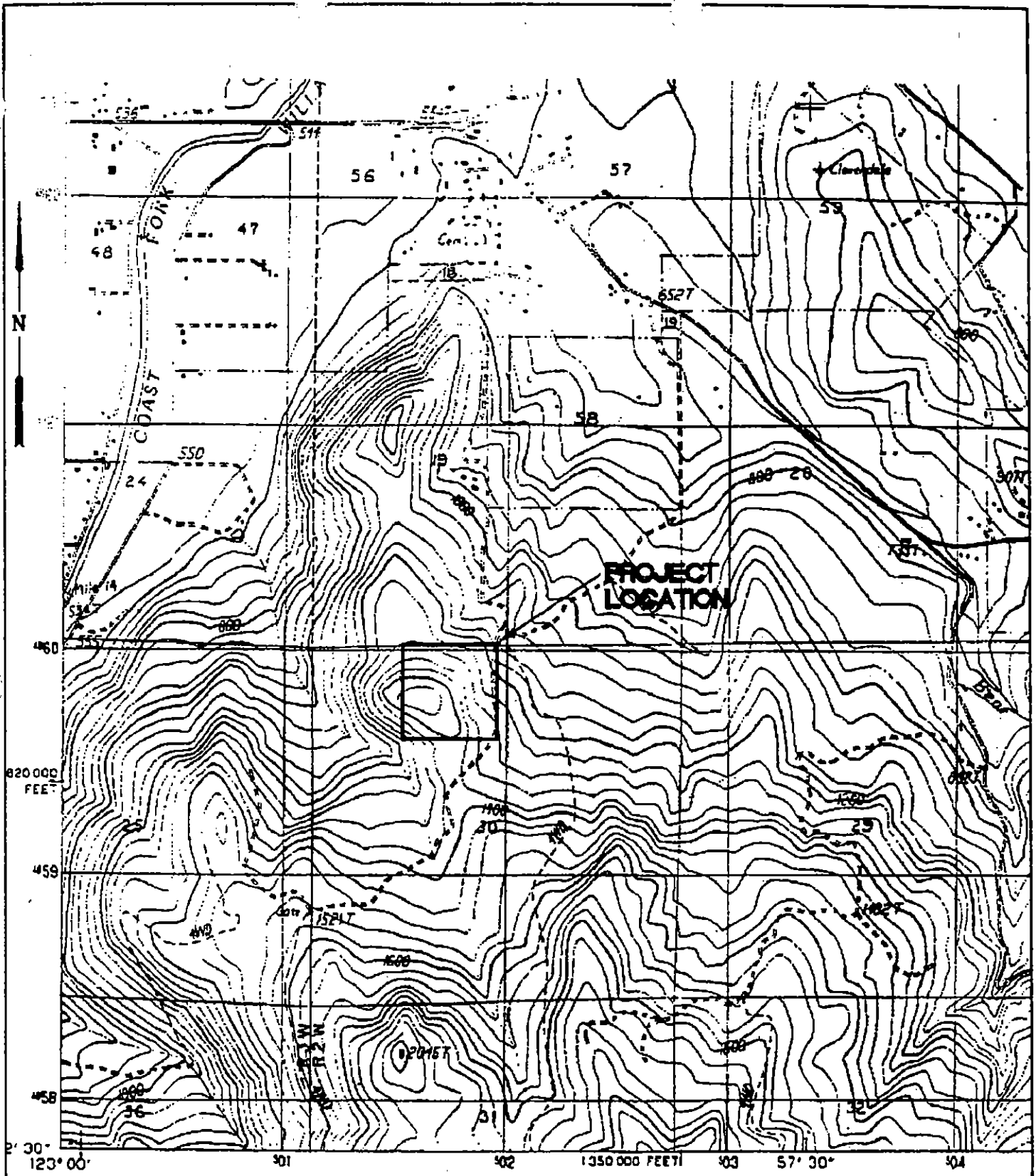
The proposed mining operation will consist of removing and stockpiling the top soil and excavating and processing the basaltic rock material for use as construction aggregate. It is estimated that approximately 120,000 cubic yards of overburden material will be generated in the stripping operation and approximately 2,560,000 tons of high quality rock is available for construction aggregate processing. These calculations have assumed an average of a 6 foot depth of overburden and 70 feet of rock excavation. It is most likely that the rock extends to depths greater than the 70 foot depth used for the quantity calculation.

If you have any questions concerning this report or the exploration, do not hesitate to contact our office at (541) 388-3500.

Sincerely,



Glenn E. Cook, P.E.
Geotechnical Engineer



FROM "JASPER, OREGON"
U.S.G.S. QUAD SHEET, 1986

VICINITY MAP

1" = 2000'

DESIGNED BY: GEC CHECKED BY: GEC

DRAWN BY: GGW SCALE: 1"=2000'

PROJECT NO.: 12327001

VICINITY MAP
AGGREGATE RESOURCE
B. J. EQUIPMENT
EUGENE, OREGON

DATE: 7/22/98

FIGURE: 1

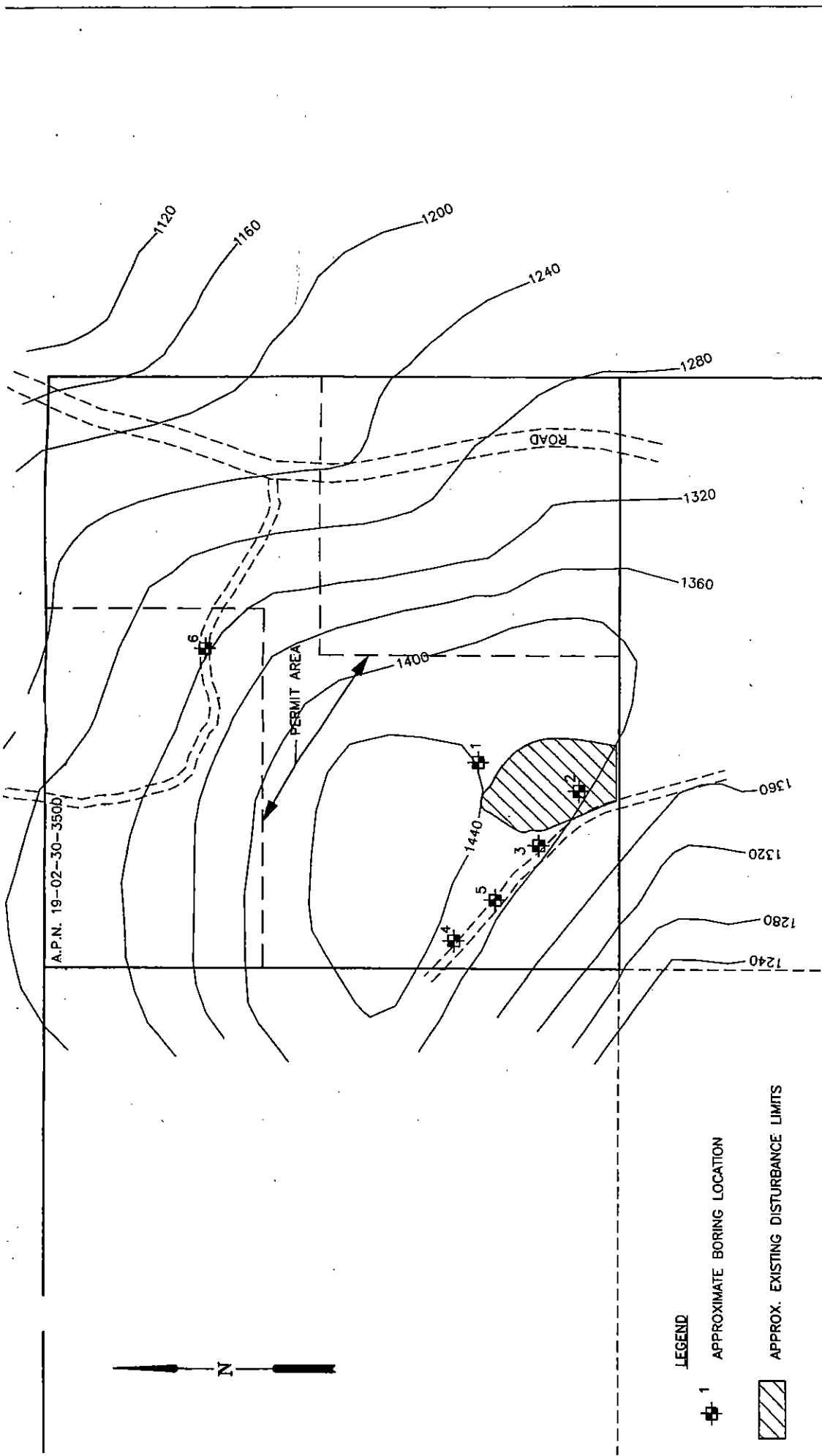


century west

ENGINEERING CORPORATION

1444 NW COLLEGE WAY, BEND, OR 97701

(541)388-3500 (541)388-5062 FAX



LEGEND
 1 APPROXIMATE BORING LOCATION

APPROX. EXISTING DISTURBANCE LIMITS

DESIGNED BY: GEC DRAWN BY: GGW CHECKED BY: GEC PROJECT NO.: 12327001		DATE: 7/22/98 SCALE: 1"=200' SEC.: C:\DWG			SITE MAP AGGREGATE RESOURCE B. J. EQUIPMENT EUGENE, OREGON	FIGURE 2

B.J. Equipment Co.
Eugene, Oregon
Aggregate Resource Evaluation

Date Excavated : 7/7/98 Sampling Method : N/A
Hole Diameter : 6 Inches Logged By : Glenn Cook
Drilling Contractor : BJ Equipment Co. Total Depth : 70 feet bgs
Drill Rig : Gardner-Denver SCH 5000C

Project No.: 12327.001.01

Depth in Feet	GRAPHIC	USCS	DESCRIPTION
0		ML	Sandy clay SILT, with gravels, reddish brown, moist, moderately firm.
5			BASALT bedrock, gray, dense, minor fractures.
10			
15			
20			
25			
30			
35		VL	
40			
45			
50			
55			
60			
65			
70			

B.J. Equipment Co.
Eugene, Oregon
Aggregate Resource Evaluation

Date Excavated : 7/7/98 Sampling Method : N/A
Hole Diameter : 6 inches Logged By : Glenn Cook
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

Project No.: 12327.001.01

Depth in Feet	GRAPHIC	USCS	DESCRIPTION
0			BASALT bedrock, gray, dense, minor fractures.
5			
10			
15			
20			
25			
30			
35		VL	
40			
45			
50			
55			
60			
65			
70			

B.J. Equipment Co.
Eugene, Oregon
Aggregate Resource Evaluation

Date Excavated : 7/7/98 Sampling Method : N/A
Hole Diameter : 6 inches Logged By : Glenn Cook
Drilling Contractor : BJ Equipment Co. Total Depth : 70 feet bgs
Drill Rig : Gardner-Denver SCH 5000C

Project No.: 12327.001.01

Depth in Feet	GRAPHIC	USCS	DESCRIPTION
0		SM	Silty SAND, with gravels, reddish brown, dry, moderately
0		VL	BASALT bedrock, gray, dense.
5			
10			
15			
15			BASALT bedrock, light brown, moderately dense, moderately fractured, some minor (6") soil seams.
20			
25			
25			BASALT bedrock, gray, dense, minor fractures.
30			
35			
40			
45			
45			BASALT bedrock, gray, dense, minor fractures.
50			
55			
60			
65			
70			



centurywest
ENGINEERING CORPORATION

LOG OF BORING B4

(Page 1 of 1)

B.J. Equipment Co.
Eugene, Oregon
Aggregate Resource Evaluation

Date Excavated : 7/7/98
Hole Diameter : 6 Inches
Drilling Contractor : BJ Equipment Co.
Drill Rig : Gardner-Denver SCH 5000C
Sampling Method : N/A
Logged By : Glenn Cook
Total Depth : 70 feet bgs



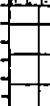

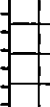



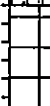
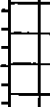
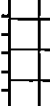

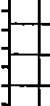

Project No.: 12327.001.01

Depth in Feet	GRAPHIC	USCS	DESCRIPTION
0		SM	Silty SAND, with gravels, cobbles and boulders.
5			
10		VL	BASALT, gray, dense, minor fractures.
15			
20			
25			
30			
35		SM	Silty SAND, with cobbles, reddish brown.
40			
45		VL	BASALT bedrock, gray, dense, minor fractures.
50			
55			
60			
65			
70			

B.J. Equipment Co.
Eugene, Oregon
Aggregate Resource Evaluation

Date Excavated : 7/7/98 Sampling Method : N/A
Hole Diameter : 6 Inches Logged By : Glenn Cook
Drilling Contractor : BJ Equipment Co. Total Depth : 70 feet bgs
Drill Rig : Gardner-Denver SCH 5000C

Project No.: 12327.001.01

Depth in Feet	GRAPHIC	USCS	DESCRIPTION
0			
5		SM	Silty SAND, with cobbles.
10			BASALT, gray, dense, minor fractures.
15			
20		VL	
25			
30			
35		SM	Silty SAND, light brown.
40			
45			BASALT bedrock, gray, dense, minor fractures.
50			
55		VL	
60			
65			
70			



ENGINEERING CORPORATION

LOG OF BORING B6

(Page 1 of 1)

B.J. Equipment Co.
Eugene, Oregon
Aggregate Resource Evaluation

Project No.: 12327.001.01

Date Excavated	: 7/7/98	Sampling Method	: N/A
Hole Diameter	: 6 inches	Logged By	: Glenn Cook
Drilling Contractor	: BJ Equipment Co.	Total Depth	: 70 feet bgs
Drill Rig	: Gardner-Denver SCH 5000C		

Depth in Feet	GRAPHIC	USCS	DESCRIPTION
---------------------	---------	------	-------------

0			Clay SILT, with some gravels, medium brown, damp, moderately firm.
5			
10			
15			
20		ML	
25			
30			
35			
40			
45			
50			
55			
60			

Client: CWEC
 Project: BJ Equipment
 Sampled By:
 Sample Des: Rock

 Date Received: 7/9/98
 Date Tested: 7/14/98
 Ordered By:
 Date Sampled:

Lab # 1180

AGGREGATE DURABILITY TESTS

LOS ANGELES RATTLER (LAR) ASTM C-131, OSHD TM 211

		PERCENT LOSS	SPEC.
INITIAL WT.	5005.8	18.8%	<30.0 %
FINAL WT.	4066.9		
GRADING	A		

OREGON AIR DEGRADATION, OSHD TM 208

Initial Weight	100.4		
Weight Retained On #20	82.5		
Percent Passing #20	17.8%	Specification	<30.0 %
Sediment Height	1.5"	Specification	<3.0"

SOUNDNESS ASTM C-88, OSHD TM 206

Coarse Fraction

Size	Grading	In. Wt.	Wt. After	Weighted Average Loss
1 1/2-3/4	33.0%	1511.1	1486	0.55%
3/4-3/8	33.0%	1000.8	941.6	1.95%
3/8-#4	33.0%	302.6	273.3	3.20%
Total Coarse Loss				5.7%
Specification				12.0% max

WORKING PAPER:

Mineral & Aggregate Resources

DRAFT

FEB ~ 1982

COMPREHENSIVE PLAN REVISION
LANE COUNTY, OREGON

"E"

WORKING PAPER: MINERAL AND AGGREGATE RESOURCES

I. INTRODUCTION

The purpose of this Working Paper is to identify and analyze Lane County's supply and demand for aggregate and mineral resources. The Paper also identifies potentially conflicting uses and discusses protection methods in the form of Policy needs.

a .

II. ABSTRACT

- A. While the history of Lane County is linked with mining, there currently is no significant production of metals.
- B. The County's largest deposits of known metals exist in the form of sulfides of lead, zinc and copper. Bulk concentrates of all these sulfides can be produced very easily, but they cannot be sold due to difficulties in processing.
- C. Metal deposits are distributed along a north-south line running through the western foothills of the Cascade Range.
- D. Some high quality clay suitable for pottery exists in the County, as well as common clay suitable for brick and tile.
- E. No significant quantities of oil, gas or coal have been discovered in the County.
- F. All significant deposits of minerals, except clay, are currently designated for timber production, which does not preclude their long-term development potential.
- G. Mining for minerals could significantly impact the Lane County economy if economic and technological climates become more favorable.
- H. Aggregate is a non-renewable resource whose demand is closely tied to population growth and development patterns.
- I. By the year 2000, Lane County may have a demand for as much as 2090 acres of aggregate.
- J. The Eugene-Springfield Metropolitan Area, which contains 2740 acres of land owned and zoned for sand and gravel extraction, has sufficient identified and protected aggregate resources to meet the County's forecast needs until the year 2000.
- K. There is an identified and known supply of about 151 million tons of aggregate in the non-metropolitan area of the County.
- L. Cumulative demand for aggregate to the year 2000 may be as much as 51 million tons in nonmetropolitan Lane County.
- M. Rural aggregate resource sites should be considered closely for protective regulations.

While the history of the County is linked to mining, there are currently no large-scale metal producing mines. This condition could change provided economic and technical conditions become more favorable for mining and mineral sales. Lane County's precious metals exist in veins containing ores with sulfides of lead, zinc, copper and antimony. Bulk concentrates of these sulfide ores can be produced relatively easily, but they cannot be sold profitably without complex selective processing.

Supply and Demand

With the exception of clay, no mines in the County are producing. However, there remains a great quantity of minerals in compounds too difficult for a single operator to separate with today's technology at an economically feasible price. Nearly all of the known sources of metals are found in the Bohemia region of the Umpqua National Forest (Map, Appendix A). Areas of mineralization that have not yet been well inventoried are more or less evenly distributed along a north-south line running through the center of the Cascade Tertiary volcanic rocks.

High quality alumina and sand clay is perhaps the County's second most available mineral resource next to sand and gravel. Further development of this abundant resource is a real possibility.

Other organic material such as coal, natural gas and oil may exist in commercially available amounts and forms in the County. However, exploration has just begun, and there has not been a report of a significant find. Minerals such as gold and silver may be present in small noncommercial quantities outside the Cascades, the result of hydrologic action.

Specific minerals are discussed below.

CLAY: Lane County's clay is of the high-alumina and silica-sand variety. Deposits of high-grade refractory clay occur at Hobart Butte (see Map). Exploration by drilling has revealed the presence of nearly 12 million tons of clay. This deposit has been determined to be suitable as a source of alumina. Future development of a large operation at this deposit is a possibility. According to the State Water Resources Board's "Upper Willamette River Basin Study" (April 1961), common clay for brick and tile occurs north of Mable and west of Junction City. The amount of deposits, while extensive, are unknown. Other minor deposits of common clay may be found in the central Willamette Valley area.

The high-alumina deposits have been mined and transported to Willamina for processing. Yearly production figures are unknown. Local processing may be a possibility in the future. A brick and tile plant located in Monroe uses the common clay. Demand is not expected to deplete this available resource.

COPPER: Lane County's copper is in the form of copper sulfides and oxides in ores from veins also containing lead, zinc, gold, silver and antimony. Geologists estimate that extensive copper-molybdenum porphyry-type ore bodies lie deep in these areas. While amounts and general quality are unknown targets for exploration, concentrations should be in known mineralized centers. Minor deposits of native copper have been found in the Cottage Grove area and may exist in the other identified mineralized areas.

PUMICE: Pumice deposits of commercially exploitable quality and quantity exist within the Three Sisters Wilderness Area. Claims filed on these deposits have been the subject of extensive litigation in the recent past. The validity of the claims has been upheld by the courts and, according to recent news articles, the federal government will not appeal the ruling. The future of these claims is uncertain at this point. Perhaps mining operations will be undertaken or yet another round of litigation will occur.

Development Conflicts

Most of the identified mineralized areas within Lane County that contain metals are located on public lands administered by the U.S. Department of Agriculture through the Forest Service and the U.S. Department of the Interior through the Bureau of Land Management. The United States General Mining Law of 1872 as amended, governs the prospecting for, locating, and claiming of metallic and related non-metallic minerals on federal public lands. The responsibility for management of mineral resources under U.S. mining law lies with the U.S. Department of the Interior. The Forest Service and BLM have responsibility for management of surface resources of federal public lands and therefore management of mining activities relative to their effects on surface resources.

Both the Willamette and Umpqua National Forests have identified, in environmental statements, the potential for mineralized areas to produce timber. But both go on to state that this identification will have no adverse impact on the long-term mineral-producing potential of these areas; they will be available when needed. The major effects of current land use allocations on mineral exploration and extraction are limited to the extent mining activities must meet quality requirement levels for other resources (air, water, soil) as well as applicable terms of mining laws.

Although there are several hundred mining claims with the National Forests, mineral production has been minor and sporadic with no known mines currently in production. The possibility exists that with improved exploration and processing methods, additional mineral resources will be developed.

The current forest resource designation of the mineralized areas does not appear to preclude their development potential. Forest management and mining activities are considered to be compatible activities by most authorities. Present forest zones in the County (F-1, F-2, FM and FF-20 districts) allow for limited mineral exploration, but place actual mining of any significant scale (annual removal of more than 500 cubic yards of material) in the category of a special or conditional use. Members of the Bohemia Mine Owners Association have contended that forest zoning is not adequate for their needs. Testimony by members at previous hearings has favored a special zoning district of a multiple use nature and tailored to the unique needs of the area and its resources.

The County's Row River-London Subarea Plan Diagram designates known important mineral areas as "Natural Resource: Timber/Mineral." The designation is to preserve known mineral resources for future use by precluding potential land use conflicts. Specifically, the Subarea Plan designates Hobart/Black Butte area and the Bohemia area this way.

Information on quantity was standardized to be in terms of cubic yards. Wherever possible, attempts were made to estimate existing potential supplies as opposed to quantifying existing stockpiles of mined material. Looking at the volume of materials potentially available for future extraction will facilitate long-range planning efforts to insure the protection of supplies to meet future needs. It should be noted that the accuracy of the data is limited. The problem with the supply figures is in large part due to the lack of data on distribution of existing unmined aggregate reserves. In many cases, individual suppliers have only a cursory knowledge of the extent of their resources. For future planning efforts more background work needs to be done in order to accurately assess the resource base within the County.

After the inventory was completed, the County was divided into four analysis areas (north, south, east, west) correlating to census tract boundaries. The north section includes Coburg, the McKenzie Valley, Junction City and the Veneta area; the west section includes Florence, Mapleton and the Western Coast Range; the south section contains Cottage Grove, Creswell and Lorane; and the east section includes Lowell, Dexter and Oakridge. Supply estimates were derived for each section. The data were then coupled with estimates of demand for each section in order to assess localized needs and supply/demand pictures for each individual section of the County (see Appendix G, Map).

DEMAND: For purposes of forecasting demand, much of the basic methodology and assumptions have been adopted from the Eugene-Springfield Metro Area General Plan Update. The 1980 demand figures were derived from the per capita consumption figure (22 tons per capita annually) and 1980 census data.

In order to assess differing needs and consumption rates for various regions within the County, it was divided into four sections as noted above. Population projections to the year 2000 were developed for each section, based on the Population Working Paper produced for the County Plan Revision Effort. For areas within Urban Growth Boundaries, one projection was chosen for population in the year 2000 for each city. For rural areas, however, two sets of projections were generated: high and low. Total demand per section was derived from the sum of projections for the small cities, their UGB's and each rural census tract within the section. Estimates for cumulative demand have been generated for both the high and low projections.

After the two sets of figures were derived, they were converted to demand levels using the per capita consumption rate. Annual demand figures were generated for 1980 and 2000. Cumulative demand for each section to the year 2000 was forecast through linear interpolation. A line of uniform slope was generated for low and high projections for the two dates. The midpoint value of this line was then multiplied by 20 (the number of years) to arrive at cumulative demand for each section to the year 2000. Appendix H identifies the assumptions that affect the demand analysis.

Analysis of Supply and Demand

Lane County's sand and gravel resources, while not unlimited, are quite abundant. Glacial action and erosion of the Cascades have spread aggregate resources throughout the upper Willamette Valley. Most of the