



# Oregon

Kate Brown, Governor

## Department of Transportation

Region 4 Project Delivery

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**DATE:** March 29, 2019

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**REVIEWED  
By:** Russ Frost, C.E.G.  
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EXPIRES: 02-01-2020

**SUBJECT:** 2019 Maintenance Rock Production – Bakeoven Quarry

**RE:** Material Source Narrative  
Bakeoven Quarry  
ODOT Source #OR-33-051-4  
DOGAMI #33-0017  
US97 MP 58.13  
Wasco County

This memo and attachments should be duplicated and distributed to **all** bidders that inquire about the material source, as per Section 00120.25 of the Oregon Standard Specifications for Construction, 2018 ed. This material source is an ODOT owned source of aggregate materials. For this project, the material source is being offered as a mandatory source for the production of aggregate materials including excavation, processing and stockpiling of the aggregate material. All proposed changes to the development plans or special provisions for the material source must receive approval of the Engineer.

The mandatory material source is an existing rock quarry known as Bakeoven Quarry and is located in the NE¼ of Section 21, T. 6 S., R. 16 E., W.M., in Wasco County. This site is located adjacent west of Bakeoven Road approximately 2.8 miles north of The Sherman Highway (US97) at MP 58.13. The site has approximately 1.5 acres available for processing and stockpiling.

The current development plan for this source was prepared based upon the estimate of the current project requiring approximately 9,500 cubic yards of 2.5"-0 shoulder aggregate. The

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excavation area shown on the plan sheet GM Rock Production Site Plan within the Contract plans is anticipated to contain adequate material necessary to complete the project with the above proposed quantity. Swell in volume of excavated materials can vary depending on the equipment used, the condition of the in-place material, blasting techniques, the amount of handling and other factors. Bidding contractors are advised to determine an appropriate swell volume for the material based upon their experience and the equipment and handling methods used.

As per Oregon Standard Specifications for Construction, Section 00120.15 Examination of Work Site and Solicitation Documents; Consideration of Conditions to be Encountered, Contractors shall carefully examine the available information for the material source, and become familiar with the existing conditions, the appearance of the site, and the conditions they expect to encounter prior to bid submittal.

**Source Geology**

Bakeoven Quarry is mapped as Tcr, Grande Ronde Basalt formation.<sup>1</sup> The Grande Ronde Basalt formation is one of the four main formations that comprise the Miocene Columbia River Basalt Group that forms the Deschutes-Columbia Plateau physiographic province.<sup>2</sup>

Rock samples from the quarry face were collected in 1973 and submitted to the ODOT Materials Testing laboratory for qualification testing. Test results show that the rock sampled passed Agency specifications for AC aggregate. No current rock quality testing has been completed for the source.

**Current Project-Specific Design**

The strategy for use of the site and production of materials is to expand the existing single bench excavation to the east and excavate materials within the pit floor to produce a generally level floor elevation for expansion of the processing area. Approximate excavation location, elevations, and dimensions are shown on the site plan and cross sections provide in the bid package. The excavation will require the removal of previously shot rock within the pit floor and extending the excavation to the east. The new excavation area will require the removal of approximately 6 to 12 inches of overburden and existing soil stockpiles. Overburden and soils stockpiles should be used to establish safety berms around the excavation area as shown.

Contractors should anticipate materials produced by blasting in the excavation area to be a mixture of shot rock of various dimensions. The blast plan should take into account the need to reduce the production of oversize material.

The operating special provisions in Section 00235 require the Contractor to use and process all material meeting quality requirements whether existing or loosened in the excavation area including oversize materials. Special equipment or equipment setup may be necessary for size reduction of oversize material within the existing or loosened and excavated material. Stockpiling of up to 50 cubic yards of oversize material is allowed at the source at the location shown.

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<sup>1</sup>Walker, George W. and MacLeod, Norman S., Geologic Map of Oregon, United States Geologic Survey, Denver, CO, 1991.

<sup>2</sup>Orr, E.L., W.N. Orr, and E.M. Baldwin. 2000. Geology of Oregon, 5th ed. Kendall/Hunt Publishing Company, Dubuque, Iowa, p 157.

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This operating plan will allow for removal of the required material to produce aggregate products for this project and leave the site in a condition that will allow for systematic development in the future. It is important that access to the top of excavated slopes be constructed properly and be maintained. The quarry floor must be left in a uniform and reasonably smooth and level condition.

**Blasting**

Blasting specifications are described in Section 00235 of the Special Provisions and 00335 of the Standard Specifications. These specifications include providing the Project Manager with a blasting plan for review 14 days prior to drilling and blasting work. Written notification of blasting dates and times are to be provided to the Project Manager and nearby property owners and residences at least 48 hours in advance and again the day of the blast. A blasting report must also be submitted detailing the blast outcome within 48 hours of the blast.

Special consideration should be given to reduce fly rock to prevent damage to the existing power line that traverses the site shown in the plan sheet. Special Provision 00150 provides contact information regarding the power utility. Standard Specification 00335.40(b) describes blasting protection methods for above ground utilities.

**Source Use History**

Information concerning the operation history in this material source is limited. The source was last utilized for the Shaniko Rock Production project in 1974, in which 25,000 cubic yards of material was excavated. We are unaware of any problems associated with past operations, with the exception of the production of oversize material.

**Additional Information**

Documentation contained within this Material Source Narrative Packet is for informational purposes only. If additional information about the material source is desired, contact the Project Manager's office. An appointment will be scheduled to view ODOT material source files. Someone from the Geology staff must be present when the information is being reviewed; this is to assure accuracy and consistency in the distribution of information.

**Attachments:**

1. DOGAMI Permit
2. Wasco County Land Use