

**AN ORDINANCE TO AMEND THE UNIFIED DEVELOPMENT CODE**

WHEREAS, following a public hearing and meeting advertised in accordance with O.C.G.A. §§ 36-66-4 and 50-14-1 *et seq.*, the Douglas County Planning and Zoning Board and Douglas County Board of Commissioners has considered and adopted various amendments to the Unified Development Code.

NOW, THEREFORE BE IT ORDAINED by the Douglas County Board of Commissioners that the Unified Development Code is amended as follows:

**SECTION ONE**

The text of Article 3, Restrictions of Particular Uses, Division II, Restrictions on Certain Uses, Section 342, Quarries or Mining Operations in the Unified Development Code is amended to include the following as shown by the underlining of text and to delete the following as shown by the strikethrough of text:

Sec. 342 - Quarries or mining operations.

(Amended 08/02/2011 - TXT-2011-01, § 9; amended 08/03/2010 - TXT-2010-03, § 10; amended 02/05/2019 - TXT-2019-01, § amended 08/06/2019 – TXT-2019-2 )

Quarries or mining operations, including the removal or extraction of dirt, sand and soil, are subject to the following requirements:

**342 (a) Purpose and intent.**

Special Use approval for quarries or mining operations is specifically established to allow for the mining, extraction, crushing, and quarrying, as appropriate, of sand, rock, precious metals, and other minerals or elements removed from the earth. Special Use approval for quarries or mining operations allows for a range of other uses that may be accessory to mining operations or economically linked to such uses.

Extensive building and operation setbacks and generous buffers are required to ensure the previously listed activities do not pose physical hazards or nuisances (e.g., dust, noise, vibration, etc.) to neighboring dwellings, schools, parks, places of worship, hospitals, commercial buildings, and public buildings and roads.

This section shall not prohibit the removal of earth and rock and filling and grading in any district done for land development purposes.

**342 (b) Application requirements.**

All applications seeking Special Use approval shall include the following in addition to the requirements for Special Uses under the Procedures and Permits Article 12 of this Code:

- (1) An operation plan must be a part of such application. Operations plans, if approved, ~~shall~~ must be considered conditions of development approval, unless otherwise specified. The operation plan must contain, at a minimum, the following:
  - a. Proposed locations of phased mining operations and phases of all operations associated with the mining extraction activity.
  - b. Date of commencement of the operation and its expected duration.
  - c. Proposed hours and days of operation.
  - d. The description of the method of operation, including the proposed locations or disposition of topsoil, overburden, and by-products, on- or off-site.
  - e. A description of the nature of mining operations, method(s) of extraction, and equipment and materials (e.g., explosives) to be used.
- (2) The applicant ~~shall~~ must submit copies of all documents submitted to the Georgia Department of Natural Resources or any other state agency/department for the purpose of obtaining a state mining permit. It ~~shall~~ will be the responsibility of the applicant to update all information during the state application process, including the final disposition of the state permit process.
- (3) A reclamation plan must be ~~a part of such application~~ included with the Special Use Permit application. The reclamation plan ~~shall~~ must include, at a minimum, a description of how the excavated land will be restored, statement of intended future use of the land, and phasing and timing estimates of reclamation and rehabilitation activities. Reclamation plans, if approved, ~~shall~~ will be considered conditions of development approval, unless otherwise specified by the Board of Commissioners.
- (4) The applicant ~~shall~~ must submit written evidence by a geologist, or other competent professional qualified to make such a judgement, that the site to be used for mining contains a mineral resource area or other valuable surface or subsurface substances that can be economically mined.
- (5) The applicant ~~shall~~ must submit a study that identifies any state or county maintained road within or adjacent to the property, and shall state any repaving, alterations, turning lanes or other additions necessary to accommodate the potential increase of traffic volume or weight occasioned by the proposed operations.

a. Traffic Study Required

The applicant must prepare and submit a formal traffic study with written report for the specified property prepared and stamped by a professional engineer including the following:

1. A vicinity map showing location of the proposed development in relation to the transportation system;
2. A description of proposed development including size and nature of the entire proposed development and proposed site access points;
3. A proposed site plan;

4. A description of adjacent land uses and roadway network including road names, classifications, lane configurations, traffic control and pedestrian, bicycle and transit facilities;
5. Traffic volumes on existing roads at proposed access point measured within the last 12 months;
6. Operational analysis including average delay, level of service, volumes/capacity ratios, and queue length analysis of intersection of site access and main road and any additional study intersection(s);
7. Accident data summary and analysis (data may be obtained from the City);
8. Safety analysis of proposed site access including stopping sight distance, intersection sight distance, and operational characteristics;
9. Growth factor based on historical count data in the area;
10. Future no build base year volumes and performance evaluation;
11. Future no build horizon year (5 years beyond base year) volumes and performance evaluation;
12. Any assumptions including pass-by and internal capture;
13. Trip generation from ITE latest edition;
14. Trip distribution to show distribution percentages and volumes;
15. Access location and spacing;
16. Turn lane warrants and analysis;
17. Driveway analysis including lane configuration, queue lengths, throat length and channelization;
18. Future build base year volumes and performance evaluation;
19. Future build conditions horizon year (5 years beyond base year) volumes and performance evaluation;
20. Parking needs, required and provided spaces;
21. Description and analysis of mitigation measures; and
22. Appendix to include applicable raw count data, calculation sheets, computer software output of performance evaluation, and warrant worksheets.

b. Road Maintenance Bond Required

1. A road maintenance and damage bond, in a form and value consistent with County Department of Transportation standards, must be prepared for use by the County as guarantee against the event the operation damages any public roads adjoining the operational property. Said bond must remain in force until such time as the operations have ceased and all reclamation operations have been completed and accepted by the State Department of Natural Resources.
- (6) The applicant ~~shall~~ must submit a statement regarding the intended use of explosives or other hazardous materials and the methods and procedures proposed for handling, use, storage, and disposal of the materials.
- (7) A well ~~and soil~~ study must be completed as a part of such application. ~~The well and soil study shall include all properties within 1,000 feet of the applicant's property boundaries.~~ The well study must consist of baseline testing of up to three wells located within 1,500 feet of the proposed perimeter of the mining area. If there are no existing

wells within 1,500 feet, baseline testing must be required of the nearest located wells. Preference will be given to wells located on adjacent land where the property owners have requested testing, in writing, and granted permission for access to their property. Baseline must establish, at a minimum, bacteria and turbidity levels, potential groundwater drawdown due to pumping at the proposed mining area and establish the seasonal high and low water levels for future reference. All tests must be performed by a "Qualified Ground water Scientist." "Qualified" means a professional engineer or geologist registered to practice in Georgia who has received a baccalaureate or post-graduate degree in the natural sciences or engineering and has sufficient training and experience in groundwater hydrology and related fields that enable that individual to make sound professional judgments regarding groundwater monitoring, contaminant fate and transport, and corrective action.

- (8) In the event the applicant is not required to obtain a bond in connection with the state mining permit issued by the Georgia Department of Natural Resources, the Board of Commissioners may at its discretion require a bond calculated on a specific amount per acre for the purposes of ensuring proper reclamation. The Board of Commissioners shall not require a bond if the applicant is required to obtain a bond in connection with its state mining permit.
- (9) The applicant ~~shall~~ must submit an impact statement prepared by a qualified professional that addresses the impact of the proposed mining operation on abutting and nearby buildings, uses, and properties, nearby shall include all properties within 1,000 feet of the mining property boundaries. The impact statement shall address those external effects likely to exist if said use is established, including but not limited to, electromagnetic interference, noise, vibration, fumes, odors, dust and air particulates, illumination, truck traffic, and water table protection. The impact statement ~~shall~~ must recommend specific measures to mitigate such impacts and provisions for monitoring and enforcing mitigation measures, and, if approved, the recommendations of the impact statement ~~shall~~ must be considered conditions of approval, unless otherwise specified by action of the Board of Commissioners.
- (10) The applicant ~~shall~~ must submit documentation that it has obtained a state mining permit from the Georgia Department of Natural Resources, and if applicable, any bond required in conjunction with the state mining permit.

### **342 (c) Restrictions.**

- (1) Hours of Operation: No operation ~~shall~~ may be allowed between the hours of 7:00 p.m. and 7:00 a.m. during the months of November, December, January, February, and March. No operation ~~shall~~ may be allowed between the hours of 9:00 p.m. and 6:30 a.m. during the months of April, May, June, July, August, September and October. No operation ~~shall~~ may be permitted on Sundays, New Years, Independence Day, Thanksgiving or Christmas Day. These restrictions ~~shall~~ will not apply to routine maintenance and may be varied for special projects, including Department of Transportation projects and large commercial projects, with the mutual concurrence of the Director of Development Services and the County Manager.

- (2) Barrier: Any area being excavated for mining ~~shall~~ must be entirely enclosed within a barrier fence of at least 6 feet ~~high~~ in height located at least 10 feet back from the edge of any excavation but also must be constructed of such material and at such height and such construction and height as to be demonstrably able to exclude children and animals from the quarry area.
- (3) Gates: Gates must be provided at all points of vehicular and pedestrian ingress and egress and shall be locked when not in regular use.
- (4) Illumination: All work areas shall be sufficiently illuminated, naturally or artificially, in accordance with the form of the operation and the stated hours of operation. No direct artificial illumination resulting from the operation shall fall on any land not covered by the application.
- (5) Noise: Strict compliance with the Douglas County Noise Ordinance, Sections 11-71 through 11-81, ~~shall~~ must be observed.
- (6) Maximum Depth: The maximum depth of excavation ~~shall~~ must not be below existing seasonal high groundwater level, as determined in Section 342(b)7 above, except in cases where the reclamation plan indicates that a lake or lakes will be a part of the final use of the land or where such plan indicates that adequate fill from overburden is to be used to refill such excavation. No excavation ~~shall~~ may be allowed to lower the water table of the surrounding inhabited properties.
- (7) Notices: Notices ~~shall~~ must be posted at regular intervals along the outer limits of the property, which ~~shall~~ must warn against trespassing and ~~shall~~ must contain a statement pertaining to the use of explosives, if applicable.
- (8) Electromagnetic Interference: There ~~shall~~ must be no electromagnetic interference that adversely affects the operation of any equipment beyond the property boundary other than that belonging to the creator of such interference, or that does not conform to the regulations of the Federal Communications Commission.
- (9) Glare and Heat: Every use and activity shall be so operated that it does not emit heat or heated air beyond the boundary of the lot on which it is located. No direct or sky-reflected glare shall emanate from any use or activity so as to be visible at any point on or beyond the boundary of the lot on which such use or activity is located.
- (10) Odor: No continuous, frequent, or repetitive emission of odors or odor-causing substances which would be offensive beyond any property line of any mining operation will be permitted. An odor emitted no more than 15 minutes in any one day shall not be deemed as continuous, frequent, or repetitive. The existence of an odor shall be presumed when analysis by a competent technician demonstrates that a discernible odor is being emitted. Any process which may involve the creation or emission of any odors shall be provided with a primary and a secondary safeguard system, the secondary safeguard system is required so that control will be maintained if the primary safeguard system fails.
- (11) Smoke and Particulate Matter: Emissions shall not exceed applicable state standards as adopted in Rules of the Georgia Department of Natural Resources, Environmental

Protection Division, Chapter 391-3-1, Air Quality Control, as may be amended from time to time.

- (12) Groundwater Monitoring: Drawdown tests on the original baseline wells first tested as part of the well study in Section 342(b)(7) must be conducted when the mining operator receives a written request from a well owner who demonstrates the quantity of water in their well has been impacted by mining operations.

**342 (d) Blasting and Vibration ground.**

**(1) Blasting Generally**

- a. The mining operation and activities must comply with all local, state, and federal laws, rules or regulations pertaining to blasting activities.
- b. Upon request by the Board of Commissioners, the operator must provide access to the blasting logs and seismographic records to the County.
- c. Blasting may occur only during the Hours of Operation, as enumerated in Section 342(c)(1).
- d. Blasting must be conducted in a manner designed to prevent injury to persons or damage to property outside the permit area.
- e. An accurate blasting log must be prepared and maintained for each blast fired. Each blasting log must include, but not be restricted to the following information:
  1. Name of the individual in charge of the blasting event.
  2. Blast location reference (latitude/longitude).
  3. Date and time of blasting event.
  4. Weather conditions at time of blasting event.
  5. Diagram of blast hole configuration and layout.
  6. Number of blast holes for the blasting event.
  7. Blast hole depth and diameter.
  8. Drilled Spacing and burden for blast holes.
  9. Maximum holes per delay or maximum number of delays per hole.
  10. Maximum pounds of explosives per hole and per delay.
  11. Depth of and type of blasting stemming used
  12. Total pounds of explosives used, including primers and initiating cord.
  13. Distance to nearest habitable structure not owned by the mine operator or owner.
  14. Seismographic record of the blasting event including the instrument, sensitivity and calibration signal of the gain setting and certification of annual calibration and the following:
    - a). Peak particle velocities in the three orthogonal components and peak air overpressure;
    - b). Time history of the three components of the ground motion and air overpressure produced by the blasting event;
    - c). Latitude and longitude of the seismograph during the recording event;
    - d). Distance from the blasting event;
    - e). Name of the property;
    - f). Name of the individual and firm taking the seismographic readings; and
    - g). Name of the individual and firm analyzing the seismographic record.

(2) Preblast Survey

- a. The owner or resident of any property within one-half mile of any property used for mining, as measured from the boundary of any property used for mining, must be contacted by the mining operator via letter at least 30 days before the start of any blasting activity, notifying the property owner or resident as to how they may request a pre-blast survey.
- b. If requested in writing by a property owner or resident, the mining operator is required to carry out an inspection of any dwelling or structure within one-half mile of any property used for mining, as measured from the boundary of any property used for mining.
- c. After the inspection, a final written inspection report must be created. The final written inspection report must be signed by the person making the report. Copies of the written inspection report must be provided to the Board of Commissioners and to the property owner or resident who requested the inspection.
- d. The written inspection report must determine and photographically define the condition of the dwelling or structure and must document any pre-existing cracks and defects and other physical factors that could reasonably be affected by the blasting event. Structures such as pipelines, cables and transmission lines, cisterns, and other water systems must also be inspected. The assessment of these structures may be limited to visible surface conditions and other readily available information.

(3) Ground Vibration

- (1) a. Vibration as measured at the boundary of any property used for mining ~~shall~~ may not exceed 1.0 inches per second peak velocity, steady state, or 2.0 inches per second, impact state.
- (2) b. Exemptions: These provisions shall not apply to:
  - ~~a.1.~~ 1. Vibration resulting from the operation of any road vehicle.
  - ~~b.2.~~ 2. Vibration resulting from construction activities and equipment.
  - ~~e.3.~~ 3. Vibration resulting from roadway maintenance and repair equipment.
- (3) c. Method of measurement: Vibration measurement procedures ~~shall~~ must conform to the following:
  - ~~a.1.~~ 1. Instrumentation ~~shall~~ must be capable of measuring RMS (Root Mean Square) value of the vibration velocity over the frequency range of 2 to 250 Hz.
  - ~~b.2.~~ 2. Measurement values ~~shall~~ must be recorded for a sufficient period of observation to provide a representative sample.
  - ~~e.3.~~ 3. Attachment of the vibration transducer to the ground ~~shall~~ must be by magnetic or screw attachment to a steel bar of a minimum of 9 inches in length, driven to a depth of 3 inches to 1 foot in the ground. The mass of the transducer should closely match the density of the ground or other material it displaces.

(4) Air Overpressure.

- a. Air overpressure as measured at the boundary of any property used for mining must not exceed the maximum limit of 133 dB.

- b. Air overpressure must be monitored with blasting seismographs that meet the guidelines established by the international Society of Explosives Engineer's (ISEE) document "Performance Specifications for Blasting Seismographs" (2000) developed by the ISEE Standards Committee.
- c. Higher air overpressure limits may be independently established based on technical justifications presented by a qualified person, such as an engineer or other certified expert in blasting related projects, to the Board of Commissioners. The Board of Commissioners must approve the higher air overpressure limits by a majority vote.

(5) Flyrock

- a. Flyrock travelling in the air or along the ground must not be cast from the blast site in an uncontrolled manner that could result in injury to personnel or damage to property.
- b. Flyrock must not be propelled from the blast site onto other property, unless the mining operator has received a written waiver from the property owner upon which the flyrock may be propelled upon.

**342 (e) Distance requirements.**

- (1) Soil or sand removal or extraction operations.

Such uses ~~shall~~ must not be established within 500 feet of the lot line of a property with a residential use or 200 feet of the lot line of a property with any other use.

- (2) Quarries and open pit mines.

The operational and removal area of such uses ~~shall~~ must not be established within 4,000 feet of the lot line of a property with a residential use and within 2,000 feet of the lot line of a property with any other use.

**342 (f) Modification of restrictions.**

Modification of restrictions is permitted in accordance with Section 1303, Special Exception Variances.

**342 (g) State permits.**

A copy of the Georgia Department of Natural Resources permit approval shall be maintained on file with the Development Services Department.

**Note**— See editor's note, § 306.

AND, PURSUANT TO THE REQUIREMENTS ESTABLISHED by the Douglas County Unified Development Code, this ordinance is adopted and ordained effective this 6<sup>th</sup> day of August, 2019.