

**KNOXVILLE/KNOX COUNTY METROPOLITAN PLANNING COMMISSION  
 USE ON REVIEW REPORT**

▶ **FILE #:** 11-F-15-UR

**AGENDA ITEM #:** 45

**AGENDA DATE:** 11/12/2015

▶ **APPLICANT:** **AGGREGATES USA, LLC**

OWNER(S): Aggregates USA, LLC

TAX ID NUMBER: 17 038, 039.03, PART OF 41.01, AND PART OF 41.02 [View map on KGIS](#)

JURISDICTION: County Commission District 7

STREET ADDRESS: 1949 E Raccoon Valley Rd

▶ **LOCATION:** **North side of E. Raccoon Valley Rd., east of Interstate 75.**

▶ **APPX. SIZE OF TRACT:** **43 acres**

SECTOR PLAN: North County

GROWTH POLICY PLAN: Planned Growth Area and Rural

ACCESSIBILITY: Access is via E. Raccoon Valley Rd., a minor arterial street with 36' of pavement width within 100' of right-of-way.

UTILITIES: Water Source: Hallsdale-Powell Utility District  
 Sewer Source: Hallsdale-Powell Utility District

WATERSHED: Bullrun Creek

▶ **ZONING:** **A (Agricultural) and I (Industrial) pending**

▶ **EXISTING LAND USE:** **Vacant land**

▶ **PROPOSED USE:** **Expansion of stone quarry (mining)**

HISTORY OF ZONING: The western portion of the mining expansion area was rezoned to I (Industrial) on 9/28/2015 (8-F-15-RZ) and the middle portion is pending rezoning (10-A-15-RZ). The original quarry property was rezoned to allow mining in 1998 and expanded in 2000.

SURROUNDING LAND USE AND ZONING: North: Mining / I (Industrial)  
 South: Commercial, Mobile home park, Rural residential and Vacant land / CA (General Business), RB (General Residential), and I (Industrial)  
 East: Single family - Rural residential and Vacant land / A (Agricultural) and LI (Light Industrial)  
 West: Commercial and Interstate 75 / CA (General Business)

NEIGHBORHOOD CONTEXT: The I-75/Raccoon Valley Drive interchange has a low intensity of development but on the east side where the subject properties are located there is an active rock quarry, truck stop and a restaurant. The sector plan proposes that this area develop with industrial and warehouse/distribution related uses.

**STAFF RECOMMENDATION:**

▶ **APPROVE the request to expand the mining and mineral extraction operation in the A (Agricultural) and I (Industrial) zone as shown in the Plan of Operations (Amendment I), subject to 10 conditions:**

1. Meeting all requirements of the Knox County Health Department.
2. Approval of this application by the Knox County Board of Commissioners.
3. All roadways providing access to this site will either be paved or constructed with an all-weather driving surface and maintained as to eliminate any nuisance form dust of neighboring properties.
4. No new access to Raccoon Valley Dr. shall be constructed without amending the plan of operation through the use on review process.
5. Obtaining all required State and Federal water quality and mining permits.
6. Meeting all other requirements of the Tennessee Dept. of Environment and Conservation.
7. Bond must be posted with Knox County in the amount of \$100.00 per acre of land to be excavated as required by the Knox County Zoning Ordinance.
8. Meeting all requirements of the Knox County Zoning Ordinance.
9. Meeting all requirements of the Knox County Dept. of Engineering and Public Works.
10. The quarry will be developed as shown on the site plan submitted with the application subject to any changes made necessary to comply to with the requirements of the Knox County Zoning Ordinance.

**COMMENTS:**

The applicant currently owns and operates on approximately 216 acres located in Knox County at the quarry site, and an additional 119 acres in Anderson County. The expansion of the quarry will add approximately 43 acres. The useful life of the quarry is expected to be in excess of fifty years.

The expansion is not expected to generate additional traffic. The access road is anticipated to be relocated as shown on the Mining Sequence map. There are two future alignments that use the existing access to Raccoon Valley Dr., however, instead of following the existing access to the east side of the property, the two new access road options traverse the south side of the ridge to the east and then north into the site at a low point of the ridgeline. In the future the applicant may consider relocating the Raccoon Valley Dr. access location further east. If this does happen the plan of operations will need to be amended and approved by MPC and County Commission.

The plan as submitted meets the requirements of Article 4, Section 4.50.02 of the Knox County Zoning Ordinance dealing with surface mining. The applicant is proposing to construct earthen berms and vegetation to visually screen the property. The berms and bare areas along the property perimeter will be revegetated and reforested.

With the conditions noted, the staff finds this plan meets the requirements for approval of a mining and mineral extraction operation in the Agricultural and Industrial zones, and meets the general criteria for approval of a Use on Review.

**EFFECT OF THE PROPOSAL ON THE SUBJECT PROPERTY, SURROUNDING PROPERTIES AND THE COMMUNITY AS A WHOLE**

1. The proposal will have no impact on schools.
2. The proposal will have minimal impact on street traffic.
3. The proposed rerouting of the access road to the quarry will be remain a minimum of 100 feet from neighboring property lines, which will be maintained as a vegetated buffer.
4. Earthen berms and vegetation will be used to visually screen the property and reduce noise and dust. The berms and bare areas along the property perimeter will be revegetated and reforested.
5. Utilities are available to serve the development.

**CONFORMITY OF THE PROPOSAL TO CRITERIA ESTABLISHED BY THE KNOX COUNTY ZONING ORDINANCE**

1. The proposed expansion of the mining operation is consistent with the general standards for uses permitted on review: The proposed development is consistent with the adopted plans and policies of the General Plan and Sector Plan. The use is in harmony with the general purpose and intent of the Zoning Ordinance. The use is compatible with the character of the area where it is proposed. The use will not significantly injure the value of adjacent property. The use will not draw additional traffic through residential areas.
2. The proposal meets all relevant requirements of the I (Industrial) and A (Agricultural) zoning districts, and for a use on review.

**CONFORMITY OF THE PROPOSAL TO ADOPTED MPC PLANS**

1. The General Plan recommends protecting residential neighborhoods from encroachment of industrial (and commercial) uses. There is a small residential neighborhood directly across E. Raccoon Valley Dr., however, the majority of the area requesting I (Industrial) zoning will be buffered from the neighborhood and Raccoon

Valley Dr. by properties that are currently zoned CA (General Business).

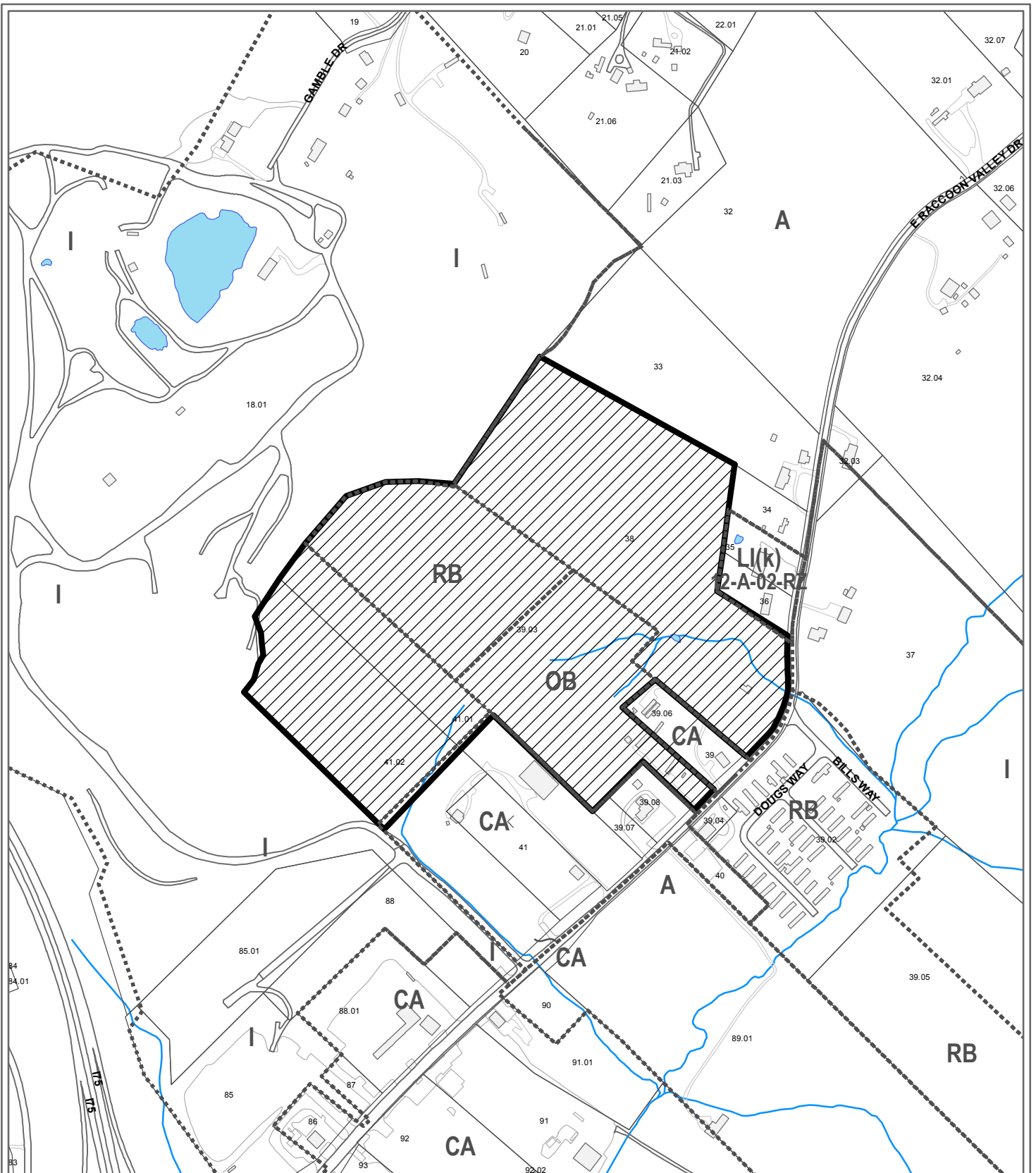
2. The Hillside and Ridgetop Protection Plan (HRPP) recommends that commercial and industrial development locate on slopes less than 15 percent, however, it does not specifically address mining operations such as a stone quarry.

3. The site has split sector plan designations, HIM (Mining), pending, and AG (Agricultural). Both land use classifications allows consideration of mining operations.

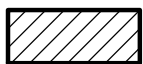
ESTIMATED TRAFFIC IMPACT: Not required.

ESTIMATED STUDENT YIELD: Not applicable.

MPC's approval or denial of this request is final, unless the action is appealed to the Knox County Board of Zoning Appeals. The date of the Knox County Board of Zoning Appeals hearing will depend on when the appeal application is filed. Appellants have 30 days to appeal an MPC decision in the County.



**11-F-15-UR  
USE ON REVIEW**



Mining expansion in I (Industrial) (pending) and A (Agricultural)

Petitioner: Aggregates USA, LLC

Map No: 17

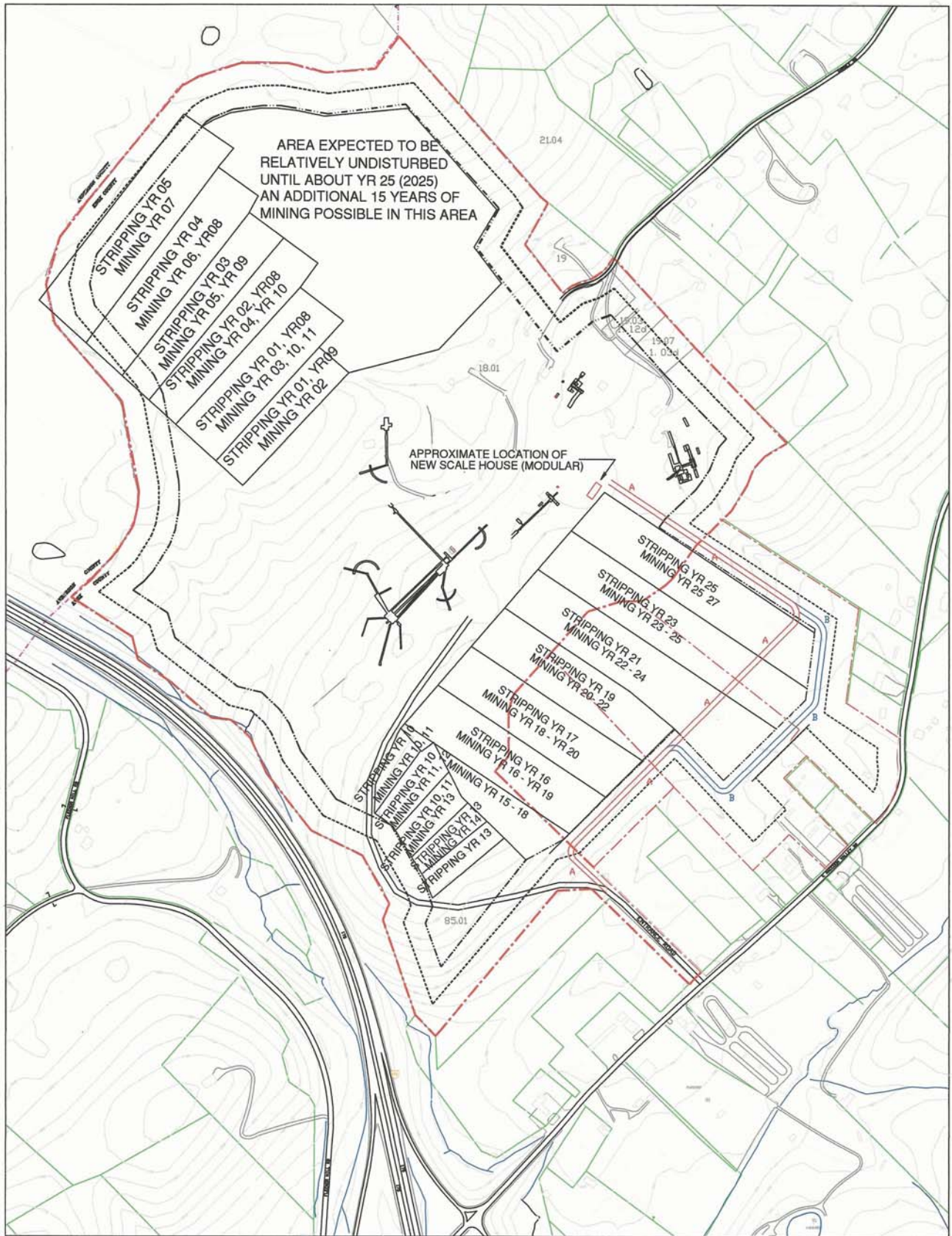
Jurisdiction: County



Original Print Date: 10/27/2015

Revised:

Metropolitan Planning Commission \* City / County Building \* Knoxville, TN 37902



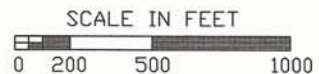
# AGGREGATES USA (I-75), LLC

MINING SEQUENCE (AMENDMENT 1)  
NORTH OF RACCOON VALLEY ROAD

- - - - - AGGREGATES USA (I-75), LLC, AND PROPERTY TO BE REZONED TO I - INDUSTRIAL ZONE
- 100-FOOT SETBACK LINE
- 200 FOOT SETBACK LINE
- NEW INITIAL ACCESS ROAD ALIGNMENT "A" - CONCEPT
- NEW FUTURE ACCESS ROAD ALIGNMENT "B" - CONCEPT



DRAWING DATE: OCTOBER 22, 2015



**REVISED 10/27/2015**











**11-F-15-UR Agenda Item # 45**

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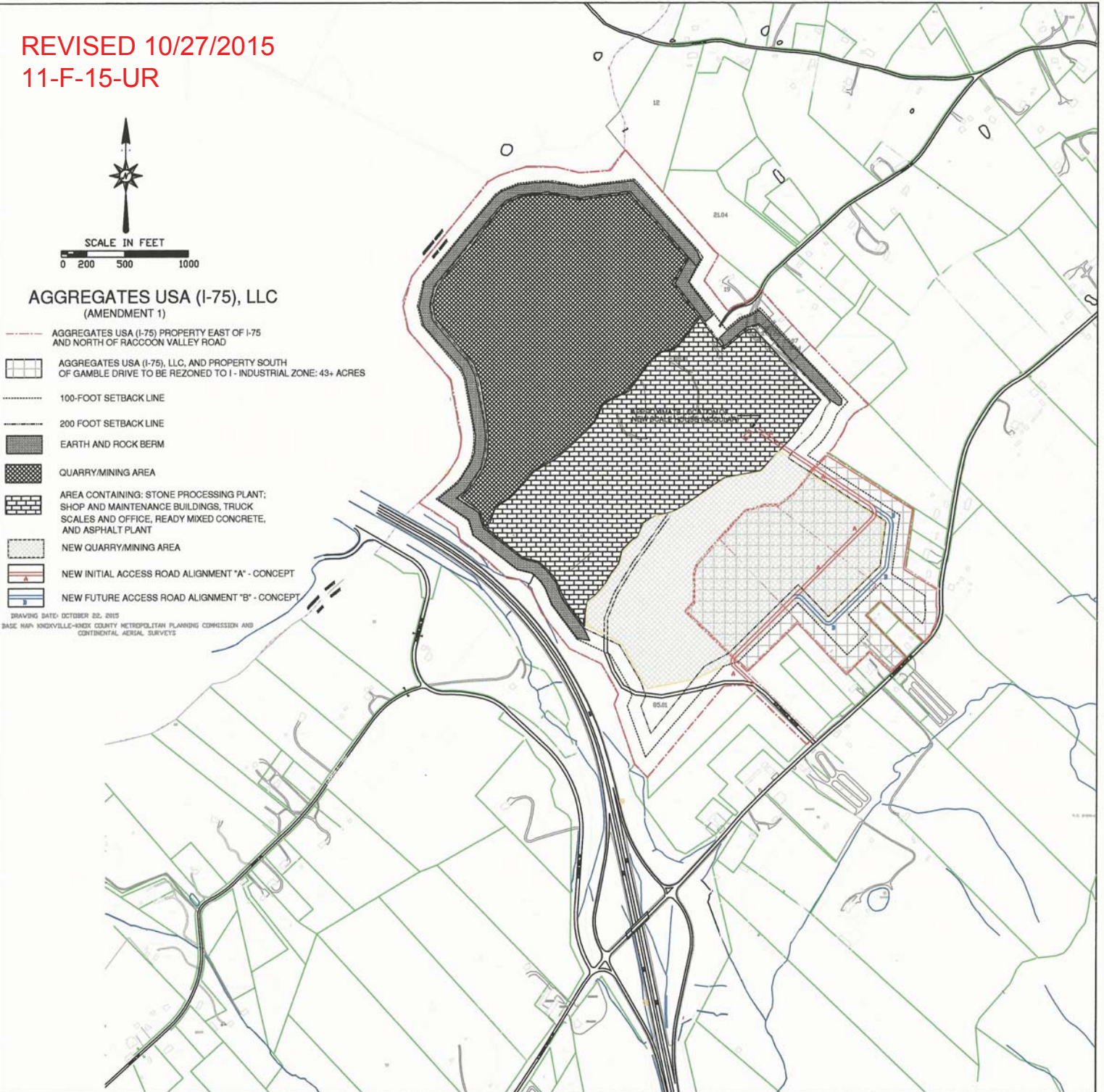


SCALE IN FEET  
0 200 500 1000

**AGGREGATES USA (I-75), LLC**  
(AMENDMENT 1)

-  AGGREGATES USA (I-75) PROPERTY EAST OF I-75 AND NORTH OF RACCOON VALLEY ROAD
-  AGGREGATES USA (I-75), LLC, AND PROPERTY SOUTH OF GAMBLE DRIVE TO BE REZONED TO I - INDUSTRIAL ZONE: 43+ ACRES
-  100-FOOT SETBACK LINE
-  200 FOOT SETBACK LINE
-  EARTH AND ROCK BERM
-  QUARRY/MINING AREA
-  AREA CONTAINING: STONE PROCESSING PLANT; SHOP AND MAINTENANCE BUILDINGS, TRUCK SCALES AND OFFICE, READY MIXED CONCRETE, AND ASPHALT PLANT
-  NEW QUARRY/MINING AREA
-  NEW INITIAL ACCESS ROAD ALIGNMENT "A" - CONCEPT
-  NEW FUTURE ACCESS ROAD ALIGNMENT "B" - CONCEPT

DRAWING DATE: OCTOBER 22, 2015  
BASE MAP: KNOXVILLE-KNOX COUNTY METROPOLITAN PLANNING COMMISSION AND CONTINENTAL AERIAL SURVEYS





**AGGREGATES USA, LLC**

# **PLAN OF OPERATIONS (Amendment I)**

**Aggregates USA (I-75 Quarry), LLC**

**1949 East Raccoon Valley Drive  
Heiskell, TN 37754**

**Original: September 25, 2015**

**Modifications per MPC Staff Site Visit on October 20, 2015**

**REVISED 10/27/2015  
11-F-15-UR**

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- Section 1: Plan of Operations  
(Amendment I with modifications)
- Section 2: Mining Plan (Amendment I)
- Section 3: Quarry Map, Probable Mine Sequence  
Drawing, and Property Aerial Photograph  
(Amendment I with modifications)



**Section 1 Plan of Operations  
(Amendment I, 9-25-2015 with Modifications)**

**Proposed Expansion of Existing Zoned and Permitted  
Rock Quarry by Aggregates USA, LLC located at  
1949 East Raccoon Valley Drive, Heiskell, TN 37754**

**Company Information**

Aggregates USA, LLC is headquartered in Birmingham, Alabama and is owned by SPO Partners II, LP located in Mill Valley California. Aggregates USA, LLC owns and operates stone quarries and sales yards in Tennessee, Virginia, Georgia, and Florida. In Knox County, Tennessee Aggregates USA, LLC owns and operates the I-75, Forks of The River, and Midway quarries along with the Coster sales yard and has a Regional Administrative Office located at 9509 Diggs Gap Road, Heiskell, TN 37754. The Aggregates USA, LLC facilities in Knox County were previously owned by Rinker Materials, Incorporated and prior to that American Limestone Company. Aggregates USA, LLC employees over 260 personnel with over 45 of them assigned to facilities in Knox County of which approximately 10 are assigned to the I-75 Quarry.

**The Industry**

The quarrying industry is a unique and necessary industry dating back to the beginnings of civilization. Materials from quarrying are used in everything from construction of homes, churches, schools, railroads, roads, and bridges to our national security infrastructure, government buildings, and national monuments. The industry has advanced through history to the modern processes taking advantage of new technology to reduce energy use, labor saving automation, increased safety, and greater environmental responsibility to produce a vital product for our society. Modern Americans use as much as 20 tons of mineral products and fuels per person per year. Of these 20 tons, as much as 12 tons per year are crushed stone and sand. Crushed stone goes into a variety of products everyone uses daily although they may not realize it. Concrete in sidewalks, roadways, bridges, walls, floors, and foundations contains 80% crushed stone. Asphalt pavement contains as much as 94% crushed stone and sand aggregates. Crushed stone also goes into: gravel roads and lanes, the base for roadways, foundations, bedding stone for pipelines, rip rap for

erosion control, stone for bank stabilization, filter media in water treatment plants, fillers in paper and plastics, concrete block, glass and fiberglass making, agricultural lime, chemical manufacture, cement making, and many other uses.

The crushed stone industry is very sensitive to location both from a geologic and customer focus. Crushed stone is one of the lowest priced basic commodities. Its price and market area is sensitive to transportation distances. It is important to locate quarries as close to the market area as possible to keep costs to the consumer as low as possible. Truck transportation is the only logical method to transport crushed stone in the Knox County market. Location of a quarry close to major highways and interstates is essential to maximize ease of product distribution and keep traffic patterns from affecting sensitive areas such as residential and high density business areas.

Rock quarrying is a long-term proposition. Gone are the days when a quarry was opened for a short-term project such as a specific stretch of interstate and then abandoned. Emphasis is now on locating sites where a quarry can be developed which will serve the community for an extended time period (50 plus years). This allows for stability of traffic patterns and surrounding development and also allows the quarry operator the time to establish an operation that will be operated in the most efficient manner possible. Upon completion of mining there are many options for reuse/reclamation of quarries. Previously quarried properties have become parks or greenways with hiking/biking/walking trails, nature centers for education and conservation, subdivision sites, golf courses, business complexes, freshwater reservoirs for public water supply, and storm water detention areas for communities. Reclamation of this site would be amenable to the creation of a park/greenway (e.g. Mead's Quarry at Ijams Nature Center and the old Vulcan City Quarry at Fort Dickerson Park), business complex, residential area with golf course, or freshwater storage reservoir for North Knox County.

## **INTRODUCTION**

Knox County is continuing to experience steady growth, with much of the growth being located in the west, southwest/northwest, and north county areas. Growth continues to move north along Interstate 75 as evidenced by the continued development along the Callahan Drive and Emory Road Exits. The closest and most economical source of crushed stone to provide materials for this development area is the Aggregates USA (I-75 Quarry), LLC operation. Other sources of crushed stone to provide materials for this area of development are in the eastern and western parts of the county. Crushed stone is sensitive to location, as price for the product increases with increasing distance from the source. This results in situations where it isn't uncommon for the transportation costs to exceed the value of the stone. Crushed stone operations are also restricted to where quality stone exists. While there are abundant rock outcroppings in Knox County, quantities of quality stone in sufficient volume for quarrying in areas with well-developed transportation infrastructure that are away from major residential and business developments are uncommon.

It was the presence of quality stone, in a growing part of the county but still rural in nature, with a well-developed infrastructure, that caused American Limestone Company (ALC) the predecessor to Aggregates USA, LLC (AUSA) to acquire, zone, and permit the properties that currently make up the Aggregates USA (I-75 Quarry), LLC Extension operation. AUSA believes this is a good location to continue to develop the existing quarry to serve the long term needs of Knox County, as well as parts of Anderson and Union counties.

## **LOCATION**

The quarry's physical address is 1949 East Raccoon Valley Drive, Heiskell, Tennessee 37754 and the approximate geographic center of the site is latitude 36-07-06 north and longitude 84-01-28 west. The properties were originally acquired by ALC from CEE BEE LLC and a number of individuals east of Interstate Highway 75 and north and south of Gamble Drive. These properties occur on and north of Flint Ridge, and along part of Chestnut Ridge, northeast of the interchange

of Raccoon Valley Road with Interstate Highway 75. The northern boundary of the properties is the Knox County - Anderson County line.

Present land uses are mixed within one mile of the boundary of the quarry. To the northeast and southwest of the quarry much of the area is rural, consisting of farms, woodlands, and home sites. The area around the Raccoon Valley Road interchange has and is seeing steady development with a motel, truck stop/fuel station, maintenance facilities, trucking company terminals, commercial developments, a rock quarry, asphalt plant, ready mix concrete plant, commercial camp ground, water treatment plant, and the Chestnut Ridge Landfill.

Present zoning in the area is mixed. The south and southwestern part of the quarry property is presently zoned I - Industrial, with the remainder of the quarry to the north along the Anderson County line zoned A - Agricultural. Properties adjoining the site to the north, northeast and, east, and to the southwest across Interstate Highway 75, are zoned A - Agricultural. Properties adjoining the site on the southeast along Raccoon Valley Road in the interchange area are zoned CA, CB, RB, OB, LI and I. Lands southeast of the interchange are zoned CA, A, RB, and I. Southwest of the interchange properties are zoned CA, CH, I, A, OB, and RB. Northwest of the interchange, properties are zoned CA, A, LI and I.

#### **QUARRY ACCESS**

Access to the property is via a paved entrance roadway located approximately 1600 feet northeast of the eastern ramps of the Raccoon Valley Drive -Interstate 75 interchange. A two lane gravel access road crosses Flint Ridge to provide access to the quarry's facilities and other ancillary facilities such as asphalt or ready mix concrete plants. The entrance road is gated to restrict access during non-business hours.

With the acquisition of the new property and continued quarry development, Aggregates USA will re-evaluate the location of the current two lane gravel road that crosses the ridge accessing the quarry and ancillary facilities. Aggregates USA will evaluate two possible options for relocating the road. Option 1 (currently proposed and depicted on the Quarry Map as A and B) would move the quarry access road to the northeast intersecting with the current paved entrance where you start up the ridge. The relocated road would move northeast down the ridge across the new property staying between the quarry pit and the 100' buffer along neighboring property lines and then cut north across the ridge accessing the quarry. Proposal A (red) would be constructed first with Proposal B (blue) only being constructed if future pit development necessitates. Option 2 (not depicted) would move the quarry entrance point on Raccoon Valley Drive approximately 1600 feet further northeast of the current entrance to the most northeast parcel of land that Aggregates USA is acquiring. If Option 2 were decided upon in the future, Aggregates USA would first get approval from the Knoxville-Knox County Metropolitan Planning Commission, Knox County Commission, Tennessee Department of Transportation, and any other appropriate agencies. The new road accessing the quarry from the entrance on Raccoon Valley Drive would be paved to assist in control of dust, runoff, and tracking.

Trucks are used to transport crushed stone products to customers and traffic should remain as it is currently by being consistent with sales. Raccoon Valley Drive is a state numbered highway - Tennessee Highway 170 that has been improved in the area of the entrance by widening with a center turn lane. Truck traffic travels Raccoon Valley Drive towards delivery sites and/or enters onto Interstate Highway 75 for transit north or south to customers. With the proposed future relocation of the quarry access road it is most probable that the truck scale and office will be relocated. Along with the relocation of the scales and paving, devices to assist in cleaning truck tires will also be installed.

## **GEOMORPHOLOGY AND GEOLOGY**

The property at the quarry site is characterized by two distinct ridges with an intervening valley. The valley is a dry valley in that surface water flows sink into the ground after a short distance and join the area groundwater flow. This is expedited by small sinkholes throughout the area and the thick residual soil blanket that has developed. Flint Ridge is the southern ridge, characterized by steep slopes near the crest. Chestnut ridge is the northern ridge, characterized by gentle slopes rising to crest elevations similar to that of Flint Ridge. Drainage flows southwest between the ridges and then southeast along drain ways along Interstate Highway 75.

Geologically, the property is underlain by limestone, dolomite, and shales of Ordovician Age. Flint Ridge is underlain by red, green and gray colored shales and shaley limestones on the Middle Ordovician age Moccasin Formation. These formations un-conformably overlie gray colored Knox Group limestone and dolomite of Lower Ordovician Age. The contact between the formations falls just northwest of the crest of Flint Ridge. The rocks dip to the southeast at approximately 15° to 20°. Core drilling has shown that weathering has created a thick blanket of clay soil and chert fragments over the Knox Group rocks. This material must be removed to access the quality stone. Quarrying and drilling activities have proven the presence of limestone and dolomite which meets all requirements for aggregates with the exception of skid resistance. This stone is acceptable for all uses except for skid resistant surfacing on high-traffic count roads.

## **DEVELOPMENT PLAN**

Aggregates USA, LLC currently owns and operates on approximately 216 acres located in Knox County at the quarry site. The additional property acquisitions will add approximately 43 acres for a new approximate total of 259 acres. The entire site permitted with the Tennessee Department of Environment and Conservations (TDEC) for quarrying activities, which consists of land in Knox and Anderson Counties, is approximately 378 acres.

American Limestone Company originally owned and zoned the property for quarrying activities. Rinker Materials was the first company to obtain the necessary permits from TDEC and the Knox County Department of Air Quality Management Division (KCDQM) and began operations at the quarry. American Limestone Company originally proposed to ultimately quarry approximately 72 acres in the area north and northwest of Gamble Drive. This quarry pit would be developed to a depth of greater than 300 feet and based on projected reserve and annual production levels it would operate for at least 50 years. The remaining acreage in this area would consist of setbacks and overburden storage. This location places the north pit on the southeast slopes of Chestnut Ridge. Flint Ridge along with overburden removed from the quarry site shield the pit from view along Raccoon Valley Drive and Interstate 75. The overburden berm outside toe is set back 100 feet from the property line and quarry excavations are set back 200 feet from the property line.

When Rinker Materials began operations on the site the south pit, processing plant, stockpile, and other operation areas covered an area of about 60 acres. This area is on the northwest side of Flint Ridge and also shielded from view from Raccoon Valley Drive. The main plant was built on fill from overburden removed from the site and placed in the valley occupied by the old Gamble Drive area. Drainage for the area upstream of the fill is provided by culverts properly designed and sized to prevent water backing up on adjoining property. The facility plant pond consisting of approximately two acres exists at the upstream end of the fill. This pond provides water for dust suppression in plant operations and settling of storm water for portions of the site before flowing to the facility retention pond located at permitted NPDES Outfall 001. Location of the rock crushing plant is situated in an area such that no powered equipment is within 500 feet of any property line.



Aggregates USA proposes to continue the development of the south pit on the newly acquired property delaying the higher cost of developing the north pit. The processing plant is shielded from view from the interstate by continuation of the previously mentioned berms and forested areas. As operations progress on the new property a berm along with natural forested screening will also be included on the eastern side of the operations area to shield properties in that direction. The berms, once they reach their final height and width, will be covered with soil previously stockpiled on site, then seeded with grasses and planted where necessary in trees. The relocation of the quarry access road will be re-evaluated as the appropriate time has previously described.

### **ENVIRONMENTAL, SAFETY, AND HEALTH ASPECTS**

Safety and Health, drilling and blasting, air quality, water quality, waste management, noise, and aesthetics are addressed in the following sections. Aggregates USA, LLC is acutely aware of the public's interest concerning these issues and it can and does successfully address and control these aspects of the operation.

#### **(Safety and Health)**

The quarry operates under the guidelines of the United States Department of Labor-Mine Safety and Health Administration (MSHA). Federal MSHA inspectors inspect the quarry a minimum of two (2) per fiscal year. MSHA requires all employs that participate in mining activities at the site to be trained miners. MSHA regulates and inspects aspects of the operation such as (noise and dust exposures, pit development, overburden removal/placement, plant and mobile equipment operation, petroleum management, employee training, general cleanliness, and other related items).

#### **(Drilling and Blasting)**

Drilling and blasting is the only efficient way to obtain rock from this type of deposit for making crushed stone aggregates. Aggregates USA, LLC contracts with licensed drillers, blasters, and seismic monitoring professionals to perform and monitor these activities at

the quarry. Drilling is conducted by compressed air or hydraulic percussion drills on a precisely laid out pattern. This pattern of holes is designed to maximize breakage of the rock and minimize the amount of explosives used. The major type of explosives used in modern quarrying are ANFO, ANFO emulsions, or water gels. These explosives are brought to the site by a contractor, loaded into the holes following precise guidelines as to the amount of explosives that can be used, and detonated by a licensed blaster. The blasting contractor and/or a separate seismic monitoring company monitor each blast and record seismograph readings. Aggregates USA, LLC operates two other quarries in Knox County and complies with the county, state, and federal performance standards related to these activities. The Tennessee State Fire Marshall's Office regulates such activities and periodically inspects the records for compliance that are required to be kept for three (3) years from the date the blast occurs.

**(Air Quality)**

The emission of pollutants to the air in Knox County is regulated by the Knox County Department of Air Quality Management (KCDAQM). Permits to construct and operate crushed stone processing equipment are obtained from the Department. Currently Aggregates USA, LLC maintains four (4) Operating Permits from the Department to operate processing equipment at the quarry. Sources of dust at a quarry tend to be crushers, screens, certain stockpiles, and roadways. Emissions from these sources can generally be controlled by the application of water using spray nozzles at selected sites, and partial to complete enclosure of selected equipment. Dust from roadways can best be suppressed by use of a water truck to keep roadways wet.

**(Water Quality)**

Sources of possible water pollutants at a quarry are generally from stormwater runoff, plant and equipment wash down water, pit pump-out, and plant process (stone wash water and dust suppression) water. Pollutants most likely to be found are suspended solids, oil and grease, and low or high pH levels. These and any other pollutants of interest potentially present in water at mining sites in Tennessee are

regulated by the Tennessee Department of Environment and Conservation (TDEC), Division of Water Resources - Surface Mining Section. Operation of a quarry requires the possession of an NPDES permit from TDEC. The most common method of water pollution control is the construction of sedimentation basins with controlled discharge points, water collection points and recycling through the process, best management practices, and diversion structures to prevent water from becoming affected by contact with quarry operations. All of these techniques are used at the quarry. Aggregates USA, LLC maintains one (1) process water and one (1) storm water outfall in the Knox County portion of the quarry site and three (3) process water outfalls in the Anderson County portion via NPDES Permit No. TN0079341.

**(Waste Materials)**

Natural wastes generated at a quarry site tend to come from two areas dirt/low quality rock and vegetative debris associated with the removal of overburden or site preparation for other facilities. The initial overburden resulting from site development was used mainly in the construction of the fill for the plant and operating site and berms along the property edges. After that when possible overburden is sold as a fill product on construction projects with any excess overburden being placed in berms and storage areas on site. The management of these materials is regulated by TDEC-Division of Water Resources - Surface Mining Section.

Solid waste from daily operations include office materials, wood, empty containers, tires, used filters, used oil, batteries, spent solvent, scrap metal, used rubber belting, used tires, and decommissioned equipment. Aggregates USA, LLC follows a philosophy of reduce and recycle to minimize the generation of solid waste. Among the items recycled are batteries, used oil, used filters, used antifreeze, spent solvent, scrap metal, used rubber belting and tires. Items reused include used rubber belting for shorter belts and other uses, scrap metal, parts from decommissioned equipment, and recycled/refreshed solvents. Potential hazardous wastes are recycled when possible or properly managed as special or universal wastes.

Hazardous waste generation at quarry sites is minimal and the site should qualify as a Conditionally Exempt Small Quantity Generator if necessary. Non-hazardous waste not sent for recycling or reuse will be placed in a dumpster provided by a commercial waste handler such as Waste Management for proper disposal in a landfill. The management of these wastes is regulated by the TDEC - Division of Solid Waste Management.

**(Noise)**

Noise at a quarry site comes from blasting and operation of mobile and stationary equipment. Aggregates USA, LLC complies with the Knox County noise level standards on and beyond the property boundaries. The location of the plant and quarry between two ridges screens neighboring properties. The use of operational noise reduction measures and the use of berms and vegetation for sight and sound barriers provide further protection.

Blasting provides the loudest source of noise however; the location and instantaneous nature of the blast will have no long-term effect. Blasting occurs normally once to twice a week during the busiest times and generally around the noon hour to midafternoon if possible. The short duration of the blast is within Knox County performance standard guidelines and Aggregates USA, LLC takes every step possible to minimize noise from this activity. Seismographs with microphones will be used at selected sites to determine noise levels associated with blasting.

**(Aesthetics)**

The quarry pit and operating plant are shielded from view on Raccoon Valley Drive by Flint Ride. Views from Interstate 75 and other places along the property are shielded by earth berms and vegetation. The entrance is landscaped and gated. As operations progress Aggregates USA, LLC will continue the reshaping, revegetation, and reforestation, of berms and bare areas along the property perimeter. Reclamation of the site is based on the specific conditions of the property when quarrying has ceased and the needs of the surrounding community.

There are several possible scenarios that could work on this site. In all cases equipment would be removed. Foundations would be removed, covered, or incorporated into the site usage. Possible reclamation and reuse scenarios are a park/greenway with lake, business complex, residential area with golf course, or freshwater storage reservoir for the community. All scenarios include a lake of greater than 70 acres.

### **SUMMARY**

Aggregates USA, LLC and its predecessors have operated quarries in Knox County, East and Middle Tennessee, Georgia, Kentucky, and Virginia for many years with the I-75 Quarry being in operation for approximately ten years. There is a long-term market need for quality crushed stone provided by the I-75 Quarry to meet the needs of the growing northern Knox County market as well as southeastern Anderson County and southwestern Union County markets. The deposit of quality dolomitic limestone of the Knox Group located at the I-75 Quarry can meet these needs. This location is still somewhat rural area in nature, although commercial and industrial growth is beginning to take place. It is adjacent to the Raccoon Valley Road interchange with Interstate Highway 75, providing an excellent transportation route for trucks carrying stone products with minimal disturbance to narrow and congested residential streets.

**Section 2 Mine Plan (Amendment I, 9-25-2015)**

**Mining Plan  
(Amendment I)  
September 25, 2015**

**Aggregates USA (I-75 Quarry), LLC  
1949 East Raccoon Valley Drive**

Initial overburden removal activities began at the quarry in approximately 2005 with work in the north pit progressing in a north and northwest direction. The development work for the access road and processing plant location resulted in a face on the ridge along the southeastern portion of the property that created what would become the south pit. The larger volume of land initially acquired by American Limestone Company in 1999 and 2000 was in the vicinity of the proposed north pit so it was initially believed this would be the best place to establish a long term quarry pit. Less land was available for acquisition in the vicinity of the south pit at that time.

When Rinker Materials began developing the quarry a greater volume of overburden, mud seams, and inconsistent layers of rock at shallower depths were encountered in the northern pit than were originally expected making it much more expensive than anticipated to initially develop. As overburden removal and mining activities progressed in both pits it became apparent that though there was less acreage to mine in the south pit. The south pit area was more suitable for mining in the present due to less overburden and more consistent layers of stone at more shallow depths reducing the initial cost of establishing the quarry. Due to the economic downturn experienced over the last 8-10 years and the resulting lower volume of stone sales than originally projected. The development of the north pit slowed as the development of the south pit grew because of the lower cost to operate.

In 2015 three land parcels that border the southeastern property line of the quarry along Raccoon Valley Drive became available for purchase and Aggregates USA acquired options to purchase the three parcels. The addition of the three parcels totaling approximately 43 acres in

size would allow the continued development of the south pit delaying the need to develop the more costly north pit. Mining activities in the south pit would progress from the current highwall in a south/southeast direction and then northeast along the ridge. At current production levels this would extend the life of the south pit by approximately twenty years allowing for the absorption overtime of the higher costs of developing the north pit. With the reserves in the expanded south pit and the development of the north pit there would be in excess of fifty years of reserves at current production levels guaranteeing a cost effective source of stone for the growth needs in Knox and the surrounding counties.



**Section 3**

**Map of Property, Probable Mine Sequence Map, and  
Property Aerial Photograph**

**(Amendment I, 9-25-2015 with Modifications)**