SC DEPARTMENT of ENVIRONMENTAL SERVICES

Division of Mining & Solid Waste Management
Mining & Reclamation Program
2600 Bull Street
Columbia, S.C. 29210

January 09, 2026

Luck Stone Corporation
Attn: Kate Kosloski
P.O. Box 29682
Richmond, VA 23242
kkosloski@luckcompanies.com

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Re: Approval of Application and Reclamation Plan for a Mine Operating Permit
Issuance of an Individual Mine Operating Permit
Mine Permit #I-002442 | Luck Stone Cherokee Quarry | Cherokee County

Dear Mrs. Kosloski:

The S.C. Department of Environmental Services (SCDES) has approved the application and reclamation plan for the Luck Stone Cherokee Quarry as of the date of this letter. SCDES has received the reclamation bond submitted in the amount of $1,509,576.00.

With the receipt of the reclamation bond and the approval of the application and reclamation plan, this letter serves as official notification that the Individual Mine Operating Permit for the Luck Stone Cherokee Quarry is being issued as of the date of this letter. Enclosed are the permit document, reclamation plan, and mine and reclamation maps.

Should there be any questions or if we may be of further assistance, please do not hesitate to contact the project manager, Colby Myers, at 803-898-3079 or by e-mail at Colby.Myers@des.sc.gov.

Respectfully,

Jeremy E. Eddy

Jeremy E. Eddy, P.G.
Manager, Mining & Reclamation Program

Cc: Marty Lindler, Colby Myers, Brett Caswell, Darren Conn (MSHA), Bruce Smith, Brian Parker, Merv Bishop (Cherokee County), Craig Kennedy (Consultant)

Encl: Permit document, reclamation plan, coastal zone consistency determination, and maps.

SC DEPARTMENT of
ENVIRONMENTAL
SERVICES

INDIVIDUAL MINE
OPERATING PERMIT

Luck Stone Cherokee Quarry
Luck Stone Corporation

Luck Stone Corporation, a corporation, has been granted a Mine Operating Permit, Mine Permit Number I-002442, to operate the Luck Stone Cherokee Quarry in accordance with this Permit, the approved Reclamation Plan, the S.C. Mining Act (S.C. Code Ann., Sections 48-20-10 *et seq*.(Rev. 2008 & Supp. 2024), and S.C. Code Ann. Regs. 89-10 *et seq*. (2012). The operator shall conduct this operation as represented in documents submitted to support the mine application and the issuance of this permit.

Jeremy E. Eddy

JEREMY E. EDDY, P.G.
MANAGER - MINING AND RECLAMATION PROGRAM
DIVISION OF MINING AND SOLID WASTE MANAGEMENT

PERMIT NUMBER: I-002442
ORIGINALLY ISSUED: January 9, 2026
MODIFIED: N/A

SC DEPARTMENT of ENVIRONMENTAL SERVICES · EST. 2024 · SCIENCE • SERVICE • SUSTAINABILITY

Part I: GENERAL INFORMATION

In accordance with Section 48-20-60 of the South Carolina Mining Act, this Mine Operating Permit will remain valid unless it terminates as set forth in R.89-270 or is revoked in accordance with Section 48-20-160 and R.89-280. The anticipated mining completion date is shown on the *Schedule for Conservation and Reclamation Practices* in the *Reclamation Plan*.

The approved *Permit Application, Reclamation Plan*, and all supplemental information referenced herein are an integral part of this permit. *Land Entry Agreements and Mine Maps,* as identified in Parts II and V, respectively, are also part of this permit.

CONTACT INFORMATION:

Home Office Address:	Luck Stone Corporation PO Box 29682 Richmond, VA 23242
Local Office Address:	Luck Stone Corporation 515 Stone Mill Dr. Richmond, VA 23242
Address for Official Mail:	Same as Home Office Address

Company personnel and title to be the contact for official business and correspondence [South Carolina Department of Environmental Services (SCDES) should be notified in writing immediately of any change in contact, address, telephone, or e-mail]:

Kate Kosloski	Telephone:	804-400-2591
Greenfield Development Manager	Email:	kkosloski@luckcompanies.com

LOCATION: The mine is located on the Gaffney and Cowpens Quadrangle, SC, U.S.G.S. 7.5' Topographic Maps. The approximate geographic coordinates for the site are:

Latitude: 35.076 Longitude: -81.747

LOCATION DESCRIPTION: The operation is located in Cherokee County, approximately 5.5 miles west of Gaffney, S.C. Specifically, the site is located 0.75 miles west of Exit 87 from I-85.

Part II: PERMITTED LAND

This permit allows Luck Stone Corporation, also referred to as the operator, to conduct mining operations within the permitted land as defined through the *Land Entry Agreement* submitted as part of the application. Permitted land, as defined by Section 48-20-40(18), is "the affected land in addition to (a) lands identified for future mining to become affected land; (b) and undisturbed or buffer area that is or may become adjacent to the affected land." Therefore, this permit grants the operator the right to conduct active mining operations within the specified affected land, delineate land for future mine areas as future reserves, and to establish undisturbed buffer zones to mitigate any adverse effects on the surrounding environment.

AFFECTED LAND: 253.3 acres of land are to be affected by Luck Stone Corporation under the current mine plan; 253.3 acres are currently bonded. The affected acres are derived from the operator's response in the *Application for a Mine Operating Permit* and are shown on the approved mine map(s).

FUTURE RESERVES: 0.0 acres are identified as future reserves and are specified on the mine site map. Prior to initiating activity in future reserves, the operator shall submit detailed mine and reclamation plans to SCDES for approval.

BUFFER AREAS: 94.3 acres are identified as buffer area, setbacks, or areas that will not be disturbed beyond the pre-mine natural state. These buffer areas are identified on the mine site map. Acres designated as buffer areas are not bonded under the reclamation bond. Any activity within the buffer areas (e.g. timber removal) shall require **prior** notification and approval from SCDES.

TOTAL PERMITTED AREA: 347.6 acres as submitted on the *Land Entry Agreement*(s).

LAND ENTRY AGREEMENTS: The operator is required to furnish and maintain up-to-date *Land Entry Agreements* on all lands covered under this permit. The operator is responsible for furnishing the appropriate and completed *Land Entry Agreements* (Forms MR-600 or MR-700) to SCDES within 30 days of change in ownership when there is any change in ownership of any portion of the land covered by this permit. See Part X: Additional Terms & Conditions #2 for more information.

Land Owner(s) as Listed on *Land Entry Agreement*(*s*):
TMS #: 027-00-00-035.000, 045-00-00-053.000 Luck Stone Corporation

Total acres of the contiguous tract(s) of land for which the permit is granted:

OWNED 347.6 LEASED 0.0 TOTAL 347.6

Part III: FINANCIAL ASSURANCE FOR RECLAMATION

Financial assurance for reclamation is based on the total affected acres. Pursuant to Section 48-20-70 and R.89-200, the financial assurance for this mining permit is set at $1,509,576.00. The financial assurance shall remain in force and continuous throughout the life of the mining operation and shall only be released, in whole or in part, back to the operator after the operator has completed reclamation in accordance with the approved *Reclamation Plan* and the minimum standards in R.89-330.

Part IV: MINE OPERATIONS

Luck Stone Corporation is permitted to mine gneiss at the Luck Stone Cherokee Quarry. The maximum depth to the pit floor shall not exceed 300 feet mean sea level (to an approximate elevation of 400 feet below ground surface as measured from the lowest ground surface elevation). Mining will take place on tracts of land owned by the referenced operator. These tracts of land are identified in the submitted *Land Entry Agreement*s (LEAs).

MINE/PIT CHARACTERIZATION:
The gneiss will be excavated, processed, and stockpiled on site. Ground clearing will be accomplished by an excavator and other miscellaneous site clearing and grading equipment. The overburden will be placed in permanent storage areas at locations designated on the mine map. The exposed gneiss will be drilled. Also, explosives will be loaded and blasted to fragment the stone into manageable sizes to facilitate loading in haul trucks and crushing by the primary crusher. Stone passing through the primary crusher will be transported to the processing plant by conveyor belt for further processing.

PROCESSING PLANT LOCATED ON MINE SITE:
The processing plant will consist of primary and secondary crushers, screens, conveyors, and loading and hauling machines. Waste screenings and other fines from crushing, washing, and screening the crushed stone will be stockpiled around the plant site or placed in overburden storage areas.

MINE DEWATERING:
Due to groundwater seepage from natural fractures/joints in the host rock, quarry dewatering will be necessary when the pit floor extends below the water table. Additionally, where feasible, stormwater runoff shall be diverted into the pit, collected into the sump, and discharged in the same manner as groundwater. Any accumulation of groundwater and stormwater shall be pumped into a sediment basin prior to discharge. Water discharged from the mine to a receiving stream must be discharged through an outfall regulated by an NPDES permit.

If an operator receives a complaint regarding adverse impacts on neighboring wells, the operator must notify SCDES's Manager of the Mining and Reclamation Section in Columbia, SC, within 48 hours. After investigation, if SCDES determines that dewatering activities at the mine are affecting a drinking water well or water supply well, the operator shall be responsible for repairing, deepening, or re-drilling such wells. Until the permanent water supply is re-established, the operator shall provide the owner with a temporary water supply (e.g., bottled water for drinking and provisions for laundry).

Active pumping and discharge of water shall cease if the dewatering discharge causes flooding conditions to property downstream of the mine site.

See Part X: *Additional Terms and Conditions* #4.

BLASTING:
Blasting is permitted at this site. Blasting activities shall be conducted in accordance with R.89-150.

Pursuant to R.89-150A., the operator shall conduct a pre-blast survey on inhabited structures within one-half mile of any blasting, prior to the commencement of any blasting activities. The survey shall be completed by a third-party consultant, and a copy of the report shall be sent to SCDES, the operator, and the landowner. Upon review and approval, SCDES will then grant permission to begin blasting activities.

Pursuant to R.89-150J., the operator shall report any suspected incident of flyrock outside of the permitted area resulting from blasting operations. Pursuant to R.89-150E., the operator shall report if the peak particle velocity exceeds one (1.0) inch per second at the immediate location of any dwelling not owned by the operator (or where a waiver of damage has been submitted to SCDES). These incidents shall be reported to SCDES within 24 hours of the blast, and a written report shall be submitted to SCDES within five (5) business days.

Pursuant to R.89-150H., the operator shall maintain a minimum distance of 250 feet from contiguous property boundaries when conducting blasting. Additionally, pursuant to R.89-150I., the operator shall maintain a minimum distance as shown on the approved mine map between the nearest point of blasting and any structures not owned by the operator or where a waiver of damage has been submitted to SCDES.

NOISE MONITORING AND CONTROL:
The operator shall use Best Management Practices (BMPs) to minimize noise from the mine site. These noise BMPs shall include, at a minimum, proper maintenance of mufflers on equipment (trucks, trackhoes, pumps, etc.) and consideration of special buffering measures if planning to operate equipment during nighttime hours.

OTHER STATE OR FEDERAL PERMITS:
The operator must obtain, maintain, and, as appropriate, update all necessary State and Federal permits to construct and operate the mine.

Part V: MAPS

The mine site maps were prepared by Kennedy Consulting Services. These maps are further identified with the following SCDES map numbers and are part of the operating permit:

SM-2442-1V1 Mine Map Dated: August 1, 2025

SM-2442-2V1	Erosion & Sediment Control Map	Dated: May 9, 2025
SED-2442-1V1	Erosion & Sediment Control Plan 1	Dated: May 9, 2025
SED-2442-2V1	Erosion & Sediment Control Plan 2	Dated: May 9, 2025

The reclamation map was prepared by Kennedy Consulting Services. This map is further identified with the following SCDES map number and is part of the operating permit:

RM-2442-1V1	Reclamation Map	Dated: April 24, 2025

Part VI: PROTECTION OF NATURAL RESOURCES

MINE SITE AND SURROUNDING AREA:

Prior to mining activities, this site's land use was an SCDOT borrow pit, with the remainder undeveloped; the immediate area around this site is undeveloped and agricultural. The topography of this area is moderately variable (i.e., several hills and dales), with surface elevation ranging from 700 to 869 ft. MSL. I-85 borders the site to the south. There are a few rural residences within the vicinity of the site. A powerline easement passes through the western segment of the site, owned by Duke Energy.

PUBLIC SAFETY:

A gate shall be installed at the mine site entrance and kept locked during inactive periods. *Warning* and/or *Danger* signs shall be posted around the perimeter of the property. In the future, if SCDES determines it necessary, an appropriate fence shall be installed around the affected area.

Operator shall use BMPs to prevent sediment/soil from accumulating on public roads, carried by trucks and other vehicles exiting the mine site; any accumulations shall be removed by the operator daily, or more frequently if needed. To reduce the potential of trackout on public roads, the operator shall construct a paved road that extends the width of the haul road and stretches a minimum of one hundred (100) feet in length.

The operator shall establish a protected area or procedures to minimize fuel or incidental spillage of other petroleum products during storage, refueling of equipment, or routine maintenance on equipment. Contaminated materials resulting from contact with petroleum products shall be removed from the site and disposed of properly to prevent contamination to ground and surface water resources.

To maintain stable mine walls, the unconsolidated saprolite shall be sloped to a stable configuration no steeper than 2H:1V during active mining and no steeper than 3H:1V for final reclamation. Per Mine Safety and Health Administration (MSHA) requirements, the hard rock pit walls shall be benched to maintain stability and ensure safety.

PUBLICLY-OWNED PARKS, FORESTS, OR RECREATION AREAS:

There are no publicly owned parks, forests, or recreation areas near this mine site.

WETLANDS AND SURFACE WATER AREAS:

Thicketty Creek Reservoir #19 is located approximately 100ft north of the mine site. Thicketty Creek runs from the western side of the site into Thicketty Creek Reservoir #19.

The operator shall maintain a minimum 50 ft undisturbed buffer between all land disturbing activities and any USACE jurisdictional wetlands, as shown on the mine maps. This buffer shall be permanently flagged prior to the initiation of any mine activity. The flags shall be maintained throughout the site's active mine operation. The operator is allowed to discharge accumulated stormwater–that meets NPDES permit limits–into wetlands through a regulated NPDES outfall.

The operator shall comply with the NPDES General Permit for Non-metallic Mineral Mining and Stormwater Pollution Prevention Plan developed for the mine.

SIGNIFICANT CULTURAL OR HISTORICAL SITES:
A report, entitled *Due Diligence Desktop Review and Archaeological Reconnaissance of the Luck Cherokee Quarry*, dated March 07, 2025, was submitted to SCDES and the S.C. State Historic Preservation Office. A pre-contact resource has been identified within the northern section of the site and a stone structure has been identified within the western section of the site, as shown on the mine map. A minimum 50ft undisturbed buffer shall be maintained between these resources and any land disturbing activity, as shown on the approved mine maps. This buffer shall be permanently flagged prior to the initiation of any mine activity. The flags shall be maintained throughout the site's active mine operation.

If archaeological materials are encountered prior to or during the construction of mine facilities or during mining, the S.C. Department of Archives and History and SCDES should be notified immediately. Archaeological materials consist of any items, fifty years or older, which were made or used by humans. These items include, but are not limited to, stone projectile points (arrowheads), ceramic sherds, bricks, oyster shell, worked wood, bone and stone, metal and glass objects, human skeletal remains, and concentrations of charcoal and stones below the ground surface. These materials may be present on the ground surface and/or under the surface of the ground.

WILDLIFE:
Common wildlife typical to this area can be found in and around this site. Threatened and endangered species surveys, entitled *Threatened and Endangered Species Habitat Assessment and Survey* and *Sandplain Agalinis Survey Results,* were conducted for this site.

This site contains suitable habitat for the Tricolored Bat (*Perimyotis subflavus*) and the Sandplain Agalinis (*Agalinis decemloba*); the Dwarf-flowered Heartleaf (*Hexastylis naniflora*) is a species known to inhabit this area. Please see Part X: *Additional Terms and Conditions* #5-7 for additional information related to the protection/relocation of these species.

VISUAL SCREEN:
To appropriately screen the operation from view, the operator shall maintain a minimum 50 ft undisturbed buffer between mining activity and all property lines, as shown on the mine map. A vegetated earthen berm or brush barrier shall be constructed and maintained on the mine side of this undisturbed buffer, as shown on the mine map.

ACID WATER GENERATION:
Acid water is not anticipated to be generated from the oxidation of existing minerals currently found on this site.

AIR QUALITY:
The mine operator shall use appropriate measures (e.g., water truck, dust suppressants) to control fugitive dust created by moving equipment along haul roads. The operator, where feasible, shall establish vegetation in non-active mine areas that are barren to stabilize the soil and reduce the potential for wind erosion and dust emissions.

Part VII: STANDARD CONDITIONS OF MINE OPERATING PERMIT

SURVEY MONUMENTS:
In accordance with R.89-130, the operator shall install and maintain the two required permanent survey monuments or control points within the permitted area, as shown on the mine site map. At SCDES's discretion, the operator may be required to mark the affected area with flagging or other appropriate measures.

RIGHT OF ENTRY:
Pursuant to Section 48-20-130 and R.89-240, the operator shall grant SCDES and/or duly appointed representatives access to the permitted area for inspection to determine whether the operator has complied with the reclamation plan, the requirements of this chapter, rules and regulations promulgated hereunder, and any terms and conditions of this permit.

RECORDS RETENTION:
All records shall be maintained in accordance with the additional terms and conditions of this permit or in accordance with regulations. Records shall be kept on site or at the office designated for receipt of official mail and shall be open for inspection during normal business hours. The records shall be maintained for a minimum of three (3) years or as specified by SCDES. The operator shall furnish copies of the records upon request to SCDES.

PERMIT MODIFICATIONS:
Pursuant to Section 48-20-80, the operator may modify the permit and/or *Reclamation Plan* upon approval by SCDES. Requests for permit and/or *Reclamation Plan* modifications may be made to SCDES on Form MR-1300. The operator shall submit any requested supporting data for consideration during SCDES's evaluation of the modification request. If a modification request is determined to be substantial by SCDES, it will be public-noticed pursuant to R.89-100, and a modification fee will be required as specified in R.89-340. If SCDES determines activities proposed under the *Reclamation Plan* and other terms and conditions of the permit are failing to achieve the purpose and requirements of the S.C. Mining Act and Regulations, SCDES shall notify the operator of its intentions to modify the permit and/or *Reclamation Plan* pursuant to Section 48-20-150.

TRANSFER OF PERMIT:
Pursuant to Section 48-20-70, this permit may be transferred to another responsible party. The transfer of the permit must be conducted in accordance with R.89-230. The transferor of the permit will remain liable for all reclamation obligations until all required documents, plans, and the replacement reclamation bond have been submitted and approved by SCDES. The transfer will be considered complete when all parties have received notification of SCDES's approval by certified letter.

DURATION OF MINE OPERATING PERMIT:
In accordance with Section 48-20-60, this Mine Operating Permit will remain valid unless this permit terminates as set forth in R.89-270 or is revoked in accordance with Section 48-20-160 and R.89-280. The proposed anticipated mining completion date is shown on the *Schedule for Conservation and Reclamation Practices* in the *Reclamation Plan*.

Pursuant to R.89-80(B), the operator shall conduct reclamation simultaneously with mining whenever feasible. Reclamation shall be initiated at the earliest practicable time, but no later than 180 days following termination of mining of any segment of the mine and shall be completed within two years after completion or termination of mining on any segment of the mine.

Part VIII: ENFORCEMENT ACTIONS

Pursuant to Section 48-20-30 of the S.C. Mining Act, "SCDES has ultimate authority, subject to the appeal provisions of this chapter, over all mining, as defined in this chapter, and the provisions of the chapter regulating and controlling such activity." This allows SCDES to assist, cooperate with, or supersede other State agencies in taking enforcement action on violations of State Regulations or the S.C. Mining Act to ensure the purposes of this Act are enforced.

The operator shall comply with all conditions of this mine operating permit at all times. Non-compliance with this mining permit, statute, or regulations could lead to permit revocation and bond forfeiture pursuant to Sections 48-20-160 and 48-20-170 or other enforcement action allowed by law.

Compliance with the Mine Operating Permit requires the operator to conduct the mining operation as described in the approved *Application for a Mine Operating Permit*. Variance from the *Application for a Mine Operating Permit,* this permit, statute, or regulation, without first receiving SCDES approval, shall be deemed non-compliant with the permit.

An operator or official representative of the mine operator who willfully violates the provisions of the S.C. Mining Act, rules and regulations, or willfully misrepresents any fact in any action taken pursuant to this chapter or willfully gives false information in any application or report required by this chapter shall be deemed guilty of a misdemeanor and, upon conviction, shall be fined not less than one hundred dollars nor more than one thousand dollars for each offense. Each day of continued violation after written notification shall be considered a separate offense.

The operator is responsible for all mining activity on the permitted mine site.

Part IX: REPORTS

ANNUAL RECLAMATION REPORTS:
The operator shall comply with Section 48-20-120 and Regulation 89-210 and submit an *Annual Reclamation Report* on Form MR-1100 as supplied by SCDES. The report form will be made available to the operator electronically. The operator should receive access to the *Annual Reclamation Report* form from SCDES by July 1 of each year; however, the operator is ultimately responsible for obtaining the form and is not excused from penalty fees for failure to submit the report on time.

The Annual Operating Fee is a part of the *Annual Reclamation Report*. Failure to submit a complete *Annual Reclamation Report* and fee, in accordance with Section 48-20-120 and R.89-340, will result in a late penalty fee. The *Annual Reclamation Report* and Annual Operating Fee are required if any permitted land is not fully reclaimed and released by SCDES by June 30 of *each* year.

SPECIAL REPORTS:
SCDES may at any time request information, data, or explanations from the operator as to conditions relating to the permitted mine site. Such requests from SCDES shall be made in writing to the operator with an appropriate time frame stated for the submittal of the requested information to SCDES. The operator must produce the information requested within the timeframe specified by SCDES.

Part X: ADDITIONAL TERMS AND CONDITIONS

1. Temporary or permanent placement of refuse and debris (e.g., concrete, brick, asphalt) from off-site locations is prohibited without written approval by SCDES. Topsoil fill approved by SCDES may be brought onto the site from off-site sources only for the purposes of mine land reclamation.

2. Prior to the initiation of any mining activities at this site, the operator shall submit a letter from an attorney that attests to the ownership of the land and ownership of the mineral rights by the permittee, which will validate the MR-600 submitted in the initial application. If the permittee does not purchase the land and mineral rights covered under this permit, an MR-700 must be submitted along with an updated attorney letter attesting to the landowner's ownership of the land and the mineral rights, and to an agreement between the landowner and permittee that allows the land to be mined.

3. Dam Impact Mitigation Responsibility: The operator shall be fully responsible for mitigating any structural or environmental damages to the Thicketty Creek WCD 19 Dam (the "Dam") that are demonstrated, through credible evidence, to have resulted strictly from mining activities conducted under this permit. Upon such determination by an independent, qualified third-party engineer or SCDES, the operator shall, at its sole expense, undertake all necessary corrective measures to repair, stabilize, or otherwise remedy the impacts to the Dam in a timely and effective manner. Baseline conditions of the Dam shall be assessed and recorded with an initial dam survey prior to blasting. Subsequent monitoring and reporting shall be conducted in accordance with Monitoring and Reporting Requirements below. Any additional development work, outside of the operator's activities, that occurs on properties around the mine permit area shall be analyzed separately for possible additive impacts to the dam structure.

Monitoring and Reporting Requirements: The operator shall collect and record piezometer and seismograph readings at the Dam and other relevant monitoring points on a monthly basis, or more frequently if required by SCDES. These readings shall be compiled into a quarterly report that includes: the date and time of each reading, Instrument locations, and a Summary of findings and any anomalies.

This data shall be submitted quarterly to the Division of Mining and Solid Waste Management by the 28th day of the month following the end of the quarter.

These reports shall be recorded and, upon request, made available to the Cherokee County Soil and Water Conservation District.

4. Prior to any mining activities, five (5) groundwater monitoring wells shall be constructed in the areas delineated in the approved Groundwater Monitoring Plan (Appendix B). These monitoring wells shall be constructed prior to the initiation of dewatering activities.

The monitoring wells shall be installed by a certified well driller in accordance with R.61-71: Well Standards and Regulations. The surveyed elevation of the measuring point, relative to an established benchmark, must be submitted with the driller/geologist's log for each well. Groundwater monitoring wells shall be measured monthly. Groundwater elevations shall be normalized to mean sea level, and hydrographs plotted for each monitoring well. This data shall be submitted quarterly to the Division of Mining and Solid Waste Management by the 28th day of the month following the end of the quarter.

5. Tricolored Bat: As of the issuance of this permit, the tricolored bat is not a federally or state-protected species; however, it has been proposed for federal listing. The operator shall consult with the U.S. Fish and Wildlife Service (USFWS) within thirty (30) days of the tricolored bat's federal listing (if/when approved) and shall comply with the USFWS's recommendations.

6. Sandplain Agalinis: The applicant shall maintain a minimum 50ft buffer from roadways, streams, and rights-of-way, where sandplain agalinis are typically found, per the approved mine map for this site. Should sandplain agalinis be found within the project area, the operator shall notify SCDES and South Carolina Department of Natural Resources (SCDNR) within 24 hours of an occurrence and contact Botany@dnr.sc.gov.

7. Dwarf-flowered Heartleaf: The operator shall establish and maintain a minimum 50ft undisturbed buffer around all existing populations and their habitat. Appropriate BMPs shall be installed to prevent sedimentation into these areas. Should any Dwarf-flowered Heartleaves be found within the project area, the operator shall notify SCDES and SCDNR within 24 hours of the occurrence.

APPENDIX A

MODIFICATIONS TO MINE PERMIT I-002442

NUMBER	DATE	DESCRIPTION OF MODIFICATION (PA= Permitted Acreage; AA= Affected, Bonded Acreage; FR= Reserves Acreage, B= Buffer Acreage)
Issued	1/9/26	PA = 347.6ac., AA = 253.3ac. (253.3 bonded), FR = 0.0ac., B = 94.3ac. Permit issued.

APPENDIX B

GROUNDWATER MONITORING PLAN: LUCK CHEROKEE

OLD POST ROAD
CHEROKEE COUNTY, SOUTH CAROLINA

LUCK COMPANIES

Prepared For:
Luck Stone Corporation
P.O. Box 29682
Richmond, Virginia 23242

SOUTH CAROLINA
BUNNELL-LAMMONS ENGINEERING, INC.
No. CO1452
CERTIFICATE OF AUTHORIZATION

BLE Project Number 24-24056

May 12, 2025

SOUTH CAROLINA
REGISTERED PROFESSIONAL GEOLOGIST
No. 2844
5/12/25
TIMOTHY JOHN DANIEL

SOUTH CAROLINA
LICENSED PROFESSIONAL ENGINEER
No. 27867
5/12/2025
DAVID R. LOFTIS

BUNNELL LAMMONS ENGINEERING
6004 Ponders Court | Greenville, SC 29615
864.288.1265 864.288.4330 info@blecorp.com
BLECORP.COM

BUNNELL LAMMONS ENGINEERING

May 12, 2025

Luck Companies
P.O. Box 29682
Richmond, Virginia 23242

Attention: Mr. Bruce Smith
Greenfield Development Manager

Subject: **Groundwater Monitoring Plan: Luck Cherokee**
Luck Companies
Cherokee County, South Carolina
BLE Project Number 24-24056

Dear Mr. Smith:

As authorized, Bunnell Lammons Engineering, Inc. (BLE) has prepared the Groundwater Monitoring Plan (GWMP) herein in association with the proposed Luck Companies aggregate quarry in Cherokee County, South Carolina (herein referred to as the "Site"). The plan herein provides details regarding the monitoring of groundwater elevation prior to and during operation of the proposed aggregate quarry in accordance with South Carolina Department of Environmental Services (SCDES) Form MR-400. A hydrogeologic assessment report including estimated drawdown of the water table surrounding the facility was submitted by BLE under a separate cover on May 1, 2025.

If you have any questions concerning this report, please contact Timothy J. Daniel at (864) 288-1265.

Sincerely,
BUNNELL LAMMONS ENGINEERING INC.

Timothy J. Daniel, P.G.
Project Geologist
Registered, South Carolina #2385

SOUTH CAROLINA REGISTERED PROFESSIONAL GEOLOGIST No. 2844 5/12/25 TIMOTHY JOHN DANIEL

David R. Loftis, P.E.
Senior Engineer
Registered, South Carolina #27867

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER No. 27867 5/12/2025 DAVID R. LOFTIS

cc: Jeremy Eddy – South Carolina SCDES, Mining Reclamation
Mark Williams – Luck Companies
Clint Courson, CHMM – Hodges, Harbin, Newberry & Tribble
Brant Lane, P.E. – Hodges, Harbin, Newberry & Tribble

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FIGURES

1.0 INTRODUCTION

1.1 Background Information and Objective

BLE has prepared this GWMP on behalf of Luck Companies in association with the proposed Luck Cherokee aggregate quarry. The Site is located north of Old Post Road and interstate I-85, approximately five miles west of Gaffney, Cherokee County, South Carolina (see **Figure 1**).

This GWMP was prepared for submittal to the Mining Reclamation Section of the South Carolina Department Environmental Services (SCDES) as required by SCDES Form MR-400 (Application for a Mine Operating Permit). The GWMP provides details regarding the collection of baseline groundwater elevations prior to site development and to document changes in water table elevations during mining activities.

2.0 GROUNDWATER MONITORING

2.1 Groundwater Monitoring Well Locations

The proposed groundwater monitoring network for the Luck Cherokee facility consists of five (5) groundwater monitoring wells (see **Figure 2**). Four (4) wells (MW-1D, MW-2, MW-3, MW-4) will be installed to intersect water bearing fractures within the bedrock aquifer across the Site. One (1) well (MW-1S) will be installed to monitor groundwater in the shallow residuum in the general vicinity of private wells near the southern property boundary.

2.2 SCDES Well Permit Application

A monitoring well installation permit application will be submitted to SCDES for approval prior to performing well installation activities. The application package will include the following:

- SCDES Form D-3736;
- Drilling procedures;
- Monitoring well construction procedures;
- A typical monitoring well construction diagram;
- A site location map; and
- A site plan showing the proposed well locations.

Once a SCDES Permit has been issued, the monitoring wells will be scheduled for installation.

2.3 Groundwater Monitoring Well Construction

A South Carolina licensed well driller will perform the well installations, under the supervision of qualified field personnel at the direction of a South Carolina licensed Geologist or Engineer. The monitoring wells will be constructed in accordance with South Carolina Well Construction Standards – *SCDES Regulation No. 61-71.H*.

Groundwater monitoring wells set to intersect water bearing fractures within the bedrock aquifer will be constructed of 6-inch nominal diameter Schedule 40 PVC pipe (or similar) from the ground surface to the top

of competent bedrock. The remainder of each well will be completed "open hole", from the top of competent bedrock to the total depth. No well screen will be used unless site-specific conditions require it.

Groundwater monitoring wells installed in shallow residuum above the bedrock will be constructed of 2-inch nominal diameter Schedule 40 PVC casing inserted into a 6-inch (or larger) diameter borehole. The bottom 10-foot section will be a manufactured well screen with 0.010-inch-wide slots. Silica filter sand will be placed in the borehole annulus around the well screen. A hydrated bentonite seal will be placed on top of the filter sand backfill to seal the monitoring well at the desired level. The remaining well annulus will be grouted with a 5% bentonite-cement mixture to within one-foot of the ground surface.

The surface completion of each well will consist of a locking protective steel cover, with a 3-foot by 3-foot concrete pad. A vent hole will be drilled in the PVC casing near the top of the well and a weep hole will be drilled near the base of the steel cover. Each well will have an identification tag secured to the locking steel cover with its corresponding well number and construction details.

A licensed land surveyor registered in South Carolina will perform the as-built surveying for each well.

2.4 Monitoring Intervals, Data Collection, and Reporting

The proposed monitoring well locations were selected to monitor changes in water table elevation across the Site. Proposed monitoring wells MW-1S, MW-1D, MW-2, and MW-3 are located in the vicinity of private drinking water wells south, west, and north of the proposed extraction area (see **Figure 2**). Proposed monitoring well MW-4 is located between the proposed facility and Thicketty Creek Watershed Reservoir No. 19.

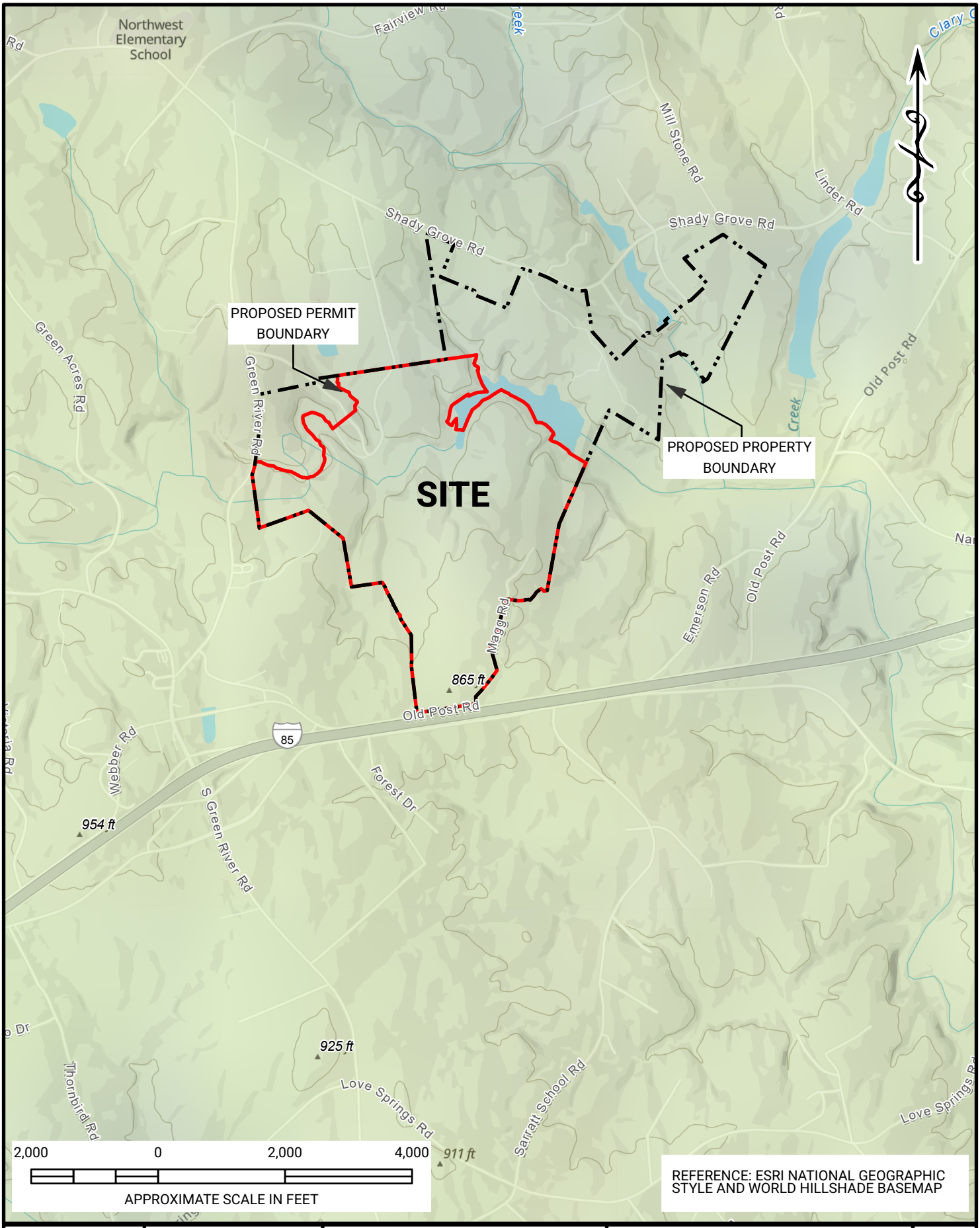
Monthly monitoring will consist of depth to groundwater measurements collected from each groundwater monitoring well at the facility and daily precipitation measurements from a tipping bucket rain gauge with integrated datalogger. Groundwater elevations will be normalized to the North American Vertical Datum of 1988 (NAVD88) and plotted over time for each monitoring well.

Quarterly data reports will be submitted to the Division of Mining and Solid Waste Management (DMSWM) by the 28th day of the month following the end of the quarter. Each quarterly report will include a description of the field procedures and observations, groundwater elevation data plotted over time, and a record of daily precipitation measurements with monthly rainfall totals presented in graphical form.

Should the DSMWM identify groundwater elevation trends that could cause significant adverse impacts to nearby wells, a South Carolina-licensed professional geologist or engineer will be retained to conduct a further investigation of the potential impacts.

No groundwater sampling activities for laboratory analysis are planned.

FIGURES



DRAWN: TAO	DATE: 4-30-25	BUNNELL LAMMONS ENGINEERING	SITE LOCATION MAP PROPOSED LUCK CHEROKEE CHEROKEE COUNTY, SOUTH CAROLINA
CHECKED: TJD	FILE: 24-24056 SLM		FIGURE 1
APPROVED: DRL	JOB NO: 24-24056		

LEGEND

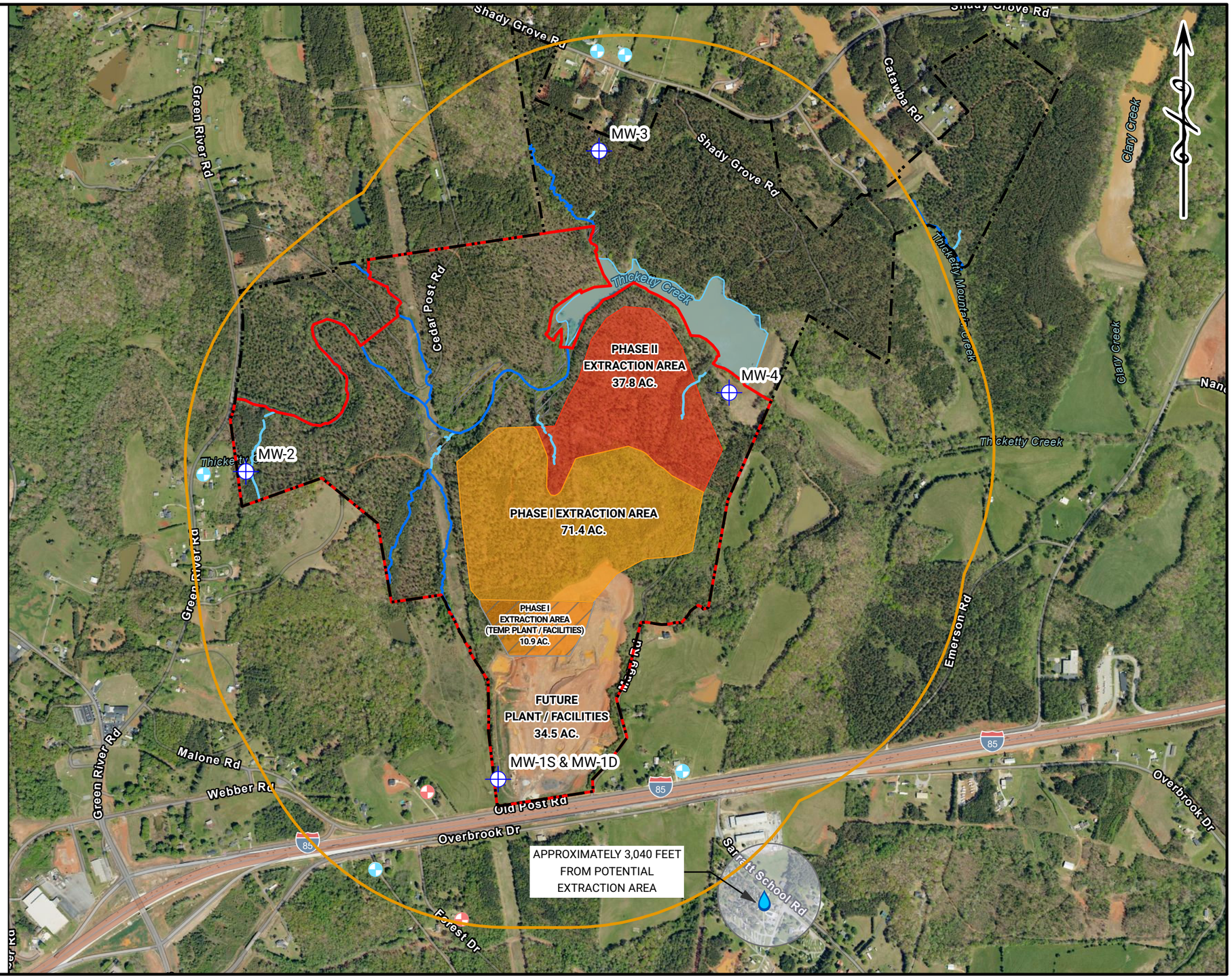
- PROPOSED GROUNDWATER MONITORING WELL
- PROPOSED PROPERTY BOUNDARY
- PROPOSED PERMIT BOUNDARY
- PHASE 1 EXTRACTION AREA
- PHASE 1 EXTRACTION AREA AND TEMPORARY PLANT FACILITIES
- PHASE 2 EXTRACTION AREA
- 0.5 MILE RADIUS AROUND PROPOSED EXTRACTION AREA
- CONFIRMED PRIVATE DRINKING WATER WELL
- SUSPECTED PRIVATE DRINKING WATER WELL
- PUBLIC WATER SUPPLY WELL PWSW
- EXISTING LOW VOLUME BUFFER 500 FEET
- JURISDICTIONAL SURFACE WATER
- JURISDICTIONAL INTERMITTENT STREAM
- JURISDICTIONAL PERENNIAL STREAM
- JURISDICTIONAL WETLANDS

NOTES:
1. PROPOSED GROUNDWATER MONITORING WELL LOCATIONS ARE APPROXIMATE AND MAY BE ADJUSTED BASED ON SITE CONDITIONS ENCOUNTERED AT TIME OF DRILLING.
2. PRIVATE DRINKING WATER WELL LOCATIONS ARE APPROXIMATE.
3. VEHICULAR AREA RECONNAISSANCE PERFORMED BY BLE IN SEPTEMBER 2024.

REFERENCES:
PROPOSED BOUNDARIES PROVIDED BY HODGES, HARBIN, NEWBERRY TRIBBLE; PUBLIC WATER SUPPLY WELL AND PROTECTION ZONES SOUTH CAROLINA DEPT. OF ENVIRONMENTAL SERVICES FORMERLY SC DHEC GIS CLEARINGHOUSE; ROADS US CENSUS, TIGER 2023 ; BASEMAP US NAIP NATURAL COLOR IMAGERY DATED 4 26 2021

1,000 0 1,000 2,000

APPROXIMATE SCALE IN FEET



DRAWN BY:	TAO	DATE:	5-1-25	REVISIONS	
CHECKED BY:	TJD	FILE NAME:	24056 GWMN	No. / DESCRIPTION / BY	
APPROVED BY:	DRL	JOB NO:	24-24056		

BUNNELL LAMMONS ENGINEERING

PROPOSED GROUNDWATER MONITORING NETWORK
PROPOSED LUCK CHEROKEE
CHEROKEE COUNTY, SOUTH CAROLINA

FIGURE
2

MR-500 Reclamation Plan for an Individual Mine Operating Permit

Environmental Protection

Describe practices to protect adjacent resources such as roads, wildlife areas, woodland, cropland and others during mining and reclamation.
The mine permit area is located in a rural area with land cover consisting of hardwood and pine forests for managed timber. Of the permitted land, 94.3 acres will be undisturbed buffer to provide additional protections to adjacent properties, creeks and other sensitive areas. Based on a Threatened and Endangered species assessment the endangered species plant, Dwarf-flowered Heartleaf, was found within the permit area. Luck Stone will avoid the plant locations as shown in HHNT's Threatened and Endangered Species Assessment and Survey Report attached to this application. Luck Stone will consult with US Fish and Wildlife and SC Department of Natural Resources on how best manage this plant.

Describe proposed methods to limit significant adverse effects on adjacent surface water and groundwater resources.
Proper reclamation of the mine site will include stabilizing all overburden storage piles with vegetation, removal of mine equipment both mobile and stationary, clean-up of any spillage of petroleum products, and removal of scrap material. Once mining is terminated, groundwater levels will rebound to approximate original levels. The mining process will not use chemicals in the mining or processing of crushed stone; consequently, there is no potential for chemical contamination to groundwater resources. Additionally, vegetative filters of existing vegetation will provide redundancy to active sediment control measures to further protect adjacent surface water resources.

Describe proposed methods to limit significant adverse effects on known significant cultural or historic sites within the proposed permitted area.
New South Associates, Inc. identified two resources of possible eligibility to be listed in the National Registry of Historic Places. A Pre-Contact Resources area identified within the mine permit area will be avoided and protected by a 100-foot buffer. The Stone Structure located in the Thickette Creek floodplain will be protected by buffers around the streams and wetlands.

Describe method to prevent or eliminate conditions that could be hazardous to animal or fish life in or adjacent to the permitted area.
Proper reclamation of the mine site will include stabilizing all overburden storage piles with vegetation, removal of mine equipment both mobile and stationary, clean-up of any spillage of petroleum products, and removal of scrap material. Setbacks, established buffers and soil stabilization along stream banks will provide protection to fisheries in nearby streams. Establishing 3:1 slopes around the pit and overburden storage areas will remove hazardous conditions for the public and indigenous animal populations. On final reclamation, a fence or other suitable and approved barrier around the pit will be constructed. The undisturbed buffer will provide wildlife corridors and natural habitat.

Describe how applicant will comply with State air quality and water quality standards as established by the South Carolina Department of Environmental Services.
To operate the mine and processing plant, the mine operator will obtain the Air Quality Construction Permit and the Air Quality Operating Permit. These permits set the quantity of air particulates that can be emitted to be protective of air quality standards.

With the termination of mining all mobile mine equipment and processing plant equipment will be removed from site. Once the process plant equipment is removed from site, the Air Quality Operating Permit can be terminated. Stone stockpiles, fines and barren soils, (potential sources of dust after mining), will be either removed (stone stockpiles) or stabilized with vegetation to eliminate windblown dust.

Discharges from the quarry will qualify for the NPDES General Permit for Discharges Associated with Nonmetal Mineral Mining Facilities. These standards are set to be protective of aquatic life and human health and safety. Prior to discharge into waters of the State, stormwater and groundwater will be treated by appropriately sized and designed sediment basins. Upon final reclamation, vegetation will be established to control erosion and protect water quality.

Reclamation of Affected Area

State useful purpose(s) the affected land is being proposed for reclamation.
Grassland
Lake or Pond

Feasibility Documentation Attachment

NONE PROVIDED

Comment

Standard reclamation practices that does not necessitate closure plans or backfilling. Not applicable

Will the final maximum surface gradient (slope) in soil, sand, or other unconsolidated materials be steeper than 3 Horizontal : 1 Vertical (18 degrees or 33 percent)?

No

How will the final slopes in unconsolidated material be accomplished?

The overburden stripped to expose gneiss will be placed in overburden storage areas or earthen berms. The final overburden slope around the pit perimeter will be cut slopes at a 3:1 grade for stability and safety. Backfilling is not necessary within the pit to achieve final 3:1 slopes.

If the slope will be by backfilling, demonstrate that

there is adequate material to accomplish the stated final gradient. If gradient is to be achieved by bringing in material from outside the permitted area, state the nature of the material and approximate quantities. If the gradient is to be achieved by grading, show that there is adequate area for grading to achieve gradient (i.e., adequate distance between the property line and edge of highwall).

Final slopes calculations or other supporting information attachment(s)

NONE PROVIDED

Comment

Slopes will be obtained by grading. Backfilling to obtain 3:1 slopes will not be necessary.

Describe the plan for revegetation or other surface treatment of affected area(s). The revegetation plan shall include but not be limited to the following: (a) planned soil test; (b) site preparation and fertilization; (c) seed or plant selection; (d) rate of seeding or amount of planting per acre; (e) maintenance.

(a) Planned Soil Test

Soil analysis will be performed to determine the need for pH adjustment and nutrients. Different soils will be sampled separately. Soil samples will be taken in advance of planting. Soil samples will be submitted to the cooperative NRCS or Clemson extension services or commercial lab for analysis.

(b) Site Preparation & fertilization

Grading, shaping, and other earth moving will be completed to the extent necessary to permit seeding or planting. Tillage shall be the minimum needed to break compaction; incorporate fertilizers when incorporation of them is required; and provide enough loose soil to cover the seed when seed are to be drilled or covered by harrowing or cultipacking.

Soil amendments will be added as necessary to promote conditions suitable for plant growth (i.e., organic matter). Agricultural limestone will be uniformly spread and incorporated as soon as possible to allow for the pH adjustment. Incorporation also benefits relatively immobile nutrients such as phosphorus when needed. Type and rate of fertilization will be determined based upon soil analysis.

(c) & (d) Seed or Plant Selection and Seeding Rates

Plants shall be selected based on species characteristics, site and soil conditions, the planned land use and maintenance of the area, the time of year the planting is made, and the needs and desires of the land user. Availability of seed will be one of the criteria for plant selection.

Piedmont
Spring Seeding Mix

Grass or legume Optimum
Planting Date Seeding Rate
(# per acre) Comments
Browntop millet April- August 10 Serve as short term cover
Bermudagrass (common)
or
Coastal Panicgrass March–June

February - June 4

20 broadcast, 12 drilled Hulled (chaff removed)

Pure Live Seed (PLS)
Annual lespedeza (Kobe) March - July 10 Use scarified seed and inoculate

Piedmont
Fall Seeding Mix
Grass or legume Optimum
Planting Date Seeding Rate
(# per acre) Comments
Rye (Abruzzi) or Oats Sept-Dec. 10 Serve as short term cover
Bermudagrass (common)
or
Switchgrass Aug-Nov

Oct-May 8

10 Unhulled (in chaff)
Crimson clover (optional) Aug - Dec 10 Serve as short term cover, inoculate

(e) Maintenance
The revegetated site will be maintained through periodic inspections to detect areas with significant erosion, seed germination failure or significant plant die off. Additionally, site will be inspected after significant storm events to detect wash outs or gullies in planted areas. Damaged areas will be repaired where necessary by fixing erosion damage and reseeding as necessary.

Does the possibility exist for (a) acid rock drainage; (b) where the National Pollutant Discharge Elimination Systems (NPDES) Permit has discharge limitation parameters other than pH and Total Suspended Solids (TSS); (c) chemically treated tailings or stockpiles (excludes fertilizer or lime for revegetation purposes)?
No

Describe the methods to control contaminants and permanently dispose any mine waste. This includes any soil, rock (overburden), mineral, scrap, tailings, fines, slimes, or other material directly connected with the mining, cleaning, and preparation of mineral substances mined. It also includes all waste material deposited on or in the permit area from any source.
Fines created from processing gneiss are not "clay slime"; thus, they will not create an unstable sediment mass in settling ponds. These fines will accumulate in the clarification ponds of the wash circuit and periodically removed and either sold as a by-product or placed in overburden storage.

Describe the method of reclaiming settling and/or sediment ponds.
Fines created from processing gneiss are not "clay slime"; thus, they will not create an unstable sediment mass in settling ponds. These fines, that are chemically inert, will accumulate in the clarification ponds of the wash circuit and periodically removed and either sold as a co-product or placed in overburden storage that will be reclaimed. Stormwater sediment basin reclamation will be determined at end of mining. Ponds either will be left as viable ponds or dams breached, site graded and revegetated.

Describe the method of restoring or establishing stream channels, stream banks, and site drainage to a condition to minimize erosion, siltation, and other pollution.
Stream crossings from pit to Berm/Overburden Storage B and from Berm/Overburden Storage B to Berm/Overburden Storage C will be temporary crossings. At the end of mining, all fill within wetlands or streams will be removed, original grades restored, and sites revegetated.

What are the maintenance plans to insure that the reclamation practices established on the affected land will not deteriorate before released by the Department?
Areas that have undergone final reclamation practices will be maintained through periodic inspections and conducting any necessary repairs in a timely manner.

For final reclamation, submit information about practices to provide for safety to persons and to adjoining property in all excavations. Identify areas of potential danger (vertical walls, unstable slopes, unstable surface on clay slimes, etc.) and provide appropriate safety provisions.

Prior to commencing final reclamation activities, the operator intends to conduct both market, community, and zoning investigations to determine the best and proper utilization for post mine development. By example, this may include uses such as parks & community space, agricultural/timber, commercial ventures, or residential uses. Upon determination, any plans shall incorporate all necessary activities associated with necessary and responsible bonded reclamation requirements. This shall include continued focus to provide safety to persons and adjoining areas. The outer perimeter of the reclaimed pit will be secured by fencing or other approved and appropriate security practice.

The following mine segments will be reclaimed to provide safety to persons and adjoining areas.

Highwalls -- The relative shallow overburden will be sloped to a 3:1 gradient around the pit perimeter. Due to the sloped overburden and water filled pit, exposure of rock highwalls will be limited.

Unstable Slopes -- All overburden storage areas will be sloped to 3h:1v gradient and vegetated. Soils placed to a 3:1 gradient are stable and are not prone to landslides.

What provisions will be taken to prevent noxious, odious, or foul pools of water from collecting and remaining on the mined area? For mines to be reclaimed as lakes or ponds, provide supporting information that a minimum water depth of four (4) feet on at least fifty percent (50%) of the pond surface area can be maintained.

The final pit will be reclaimed as a lake and will meet the above referenced regulatory requirement for sufficient depth. Areas of the affected land not reclaimed to ponds will be properly graded to prevent unwanted pools of water from collecting and prevent foul water from forming.

Identify any structures (e.g. buildings, roads) that are proposed to remain as part of final reclamation. Provide justification for leaving any structures.

The office building and other support buildings may be left upon final reclamation as future tenants on the property may have use for these facilities. Also, some of the haul roads may be left to provide access to the property. All areas will be sloped and stabilized to prevent erosion and control sediment.

Attach a copy of a map of the area (referred to as the RECLAMATION MAP) that shows the reclamation practices and conservation practices to be implemented. The following should be shown (A through P - see below):

Luck Cherokee - RECLAMATION MAP-3- 400 24X36; v1.1; Sht 2 of 3 Aug 1, 2025.pdf - 08/01/2025 05:05 PM

Comment

NONE PROVIDED

A. The outline of the proposed final limits of the excavation during the number of years for which the permit is requested.

B. The approximate final surface gradient(s) and contour(s) of the area to be reclaimed. This would include the sides and bottoms of mines reclaimed ponds and lakes.

C. The outline of the tailings disposal area.

D. The outline of disposal areas for spoil and refuse (exclusive of tailings ponds).

E. The approximate location of the mean shore line of any impoundment or water body and inlet and/or outlet structures which will remain upon final reclamation.

F. The approximate locations of access roads, haul roads, ramps or buildings which will remain upon final reclamation.

G. The approximate locations of various vegetative treatments.

H. The proposed locations of re-established streams, ditches or drainage channels to provide for site drainage.

I. The proposed locations of diversions, terraces, silt fences, brush barriers or other Best Management Practices to be used for preventing or controlling erosion and off-site siltation.

J. Proposed locations of the measures to provide safety to persons and adjoining property.

K. Segments of the mine that can be mined and reclaimed as an ongoing basis.

L. The boundaries of the permitted area.

M. The boundaries of the affected area for the anticipated life of the mine.

N. The boundaries of the 100-year floodplain, where appropriate.

O. Identify sections of mine where the final surface gradient will be achieved by grading and/or backfilling.

P. A legend showing the name of the applicant, the name of the proposed mine, the north arrow, the county, the scale, the date of preparation and the name and title of the person who prepared the map.

THE REQUIRED RECLAMATION MAP SHALL HAVE A NEAT, LEGIBLE APPEARANCE AND BE OF SUFFICIENT SCALE TO CLEARLY SHOW THE REQUIRED INFORMATION LISTED ABOVE. THE BASE FOR THE MAP SHALL BE EITHER A SPECIALLY PREPARED LINE DRAWING, AERIAL PHOTOGRAPH, ENLARGED USGS TOPOGRAPHIC MAP OR A RECENTLY PREPARED PLAT. RECLAMATION MAP SHOULD BE THE SAME SCALE USED FOR THE SITE MAP.

Schedule for Implementation of Conservation and Reclamation Practices

As stated in Section 48-20-90 of the S.C. Mining Act, reclamation activities, to the extent feasible, must be conducted simultaneously with mining operations. Identify which areas or segments of the mine are not feasible to reclaim simultaneously with mining. Provide reasons why reclamation can not proceed simultaneously with mining in these areas.
The open pit to mine the gneiss will not be feasible to mine and reclaim in segments.

Schedule for Implementing Conservation and Reclamation Practices

Conservation & Reclamation Practices	Segment # or Area	Planned Amount	Planned Year	*Applied Amount	*Applied Year	Notes
Mark wetland & property line buffers along access road, berms & streams	PLB-1, SWB-3	27.4 ac	2027			*NONE PROVIDED*
Mark wetland buffers & FEMA line for Pit Phase 1 & Ovbn Storage B	SWB-2, B-2, B-3, SWB-3, PLB-4 & B5	34.7 ac	2027			*NONE PROVIDED*
Mark property line buffers along process plant & Pit Ph 1	PLB-1, PLB-2	8.0 ac	2027			*NONE PROVIDED*
Construct Sediment Basins and associated diversion channels for plant	SB-1 & SB-8	7.3 ac	2027/28			*NONE PROVIDED*
Construct Sediment Basins and associated diversion channels Pit Phase 1	SB-2, SB-4, SB-5, SB-6	2.9 ac	2027/28			*NONE PROVIDED*
Construct berms, slope and revegetate	Berms A & Visual Screen	19.4 ac	2027/28			*NONE PROVIDED*
Deploy sediment control to construct temporary haul road from pit to Ovbn B	Haul Road	2.5 ac	2027/28			*NONE PROVIDED*
Construct Berm/Overburden Storage - grading to 3:1 slopes and revegetating	Berm/Ovbn B	27.0 ac	2026			*NONE PROVIDED*
Deploy silt fencing and/or other sediment control BMPs	Where necessary	As necessary	All times			*NONE PROVIDED*
Slope overburden to 3:1 slope along terminal pit wall and revegetate	Pit Phase 1	13.7 ac	TBD			As feasible
Mark wetland buffers & FEMA line for Pit Phase 2	SWB-3 & B2	25.0 ac	TBD			*NONE PROVIDED*

Conservation & Reclamation Practices	Segment # or Area	Planned Amount	Planned Year	*Applied Amount	*Applied Year	Notes
Route stormwater into pit	Pit Phases 1 & 2	As necessary	All times			Where feasible
Slope overburden to 3:1 slope along terminal pit wall and revegetate	Pit Phase 2	10.0 ac	TBD			*NONE PROVIDED*
Mark Pre-Contact Resource preservation and buffer area	Pre-Contact Area & B8	6.8 ac	TBD			*NONE PROVIDED*
Temporary Haul Road crossing Thicketty Creek to Ovbn C	Thicketty Creek (STH)	1.7 ac	TBD			Haul Road to overburden storage areas C
Construct Sediment Basins and associated diversion channels Ovbn storage C	SB-11 & SB-12	4.3 ac	TBD			*NONE PROVIDED*
Development of overburden storage grading to 3:1 slopes and revegetating	Ovbn Storage C	25.8 ac	TBD			*NONE PROVIDED*
Mining exempted stream crossings by haul roads will be restored to original grade and reclaimed	Stream SSC & SSD	*NONE PROVIDED*	End of mining			Haul Road to overburden storage areas B & C
Construction perimeter fence or other suitable barrier around final pit	Pit	11,000 feet	End of mining			*NONE PROVIDED*
Remove mine equipment, process plant equipment, and stone stockpiles	Plant	34.5 Ac	End of mining			*NONE PROVIDED*

*Applied fields to be completed by department

Approved by the
S.C. Dept. of Environmental Services
Division of Mining & Solid Waste Management

By Jeremy E. Eddy

Map Name SM-2442-1V1

Date Approved January 09, 2026

Permit # I-002442

NOTES

1. PARCEL LINES, FLOODPLAIN, POWER LINE EASEMENTS AND EXISTING TOPOGRAPY PROVIDED BY GLENN ASSOCIATES SURVEYING, INC.
2. THE MINE PERMIT AREA INCLUDES111.68 ACRES OF PARCEL TMS# 045-00-00-053.000 AND 235.76 ACRES OF PARCEL TMS# 027-00-00-035.000.
3. AQUATIC RESOURCES DELINEATION PROVIDED BY HODGES, HARBIN, NEWBERRY & TRIBBLE, INC.
4. STORMWATER SEDIMENT BASINS AND DIVERSIONS ARE AS PROVIDED BY HODGES, HARBIN, NEWBERRY & TRIBBLE, INC. IN CONJUNCTION WITH THE EROSION AND SEDIMENT CONTROL PLAN.
5. SURROUNDING PARCEL DATA ARE FROM CHEROKEE COUNTY GEOGRAPHIC INFORMATION SYSTEM (GIS) DEPARTMENT.
6. HAUL ROAD STREAM CROSSINGS TO BERM/OVERBURDEN STORAGE AREAS B & C ARE TEMPORARY.
7. MINE DESIGN PROVIDED BY LUCK STONE CORPORATION
8. THE DWARF-FLOWERED HEARTLEAF PLANT LOCATIONS ARE SHOWN IN HHNT'S *THREATENED AND ENDANGERED SPECIES ASSESSMENT AND SURVEY* ON FIGURE 5. SECTION 5, PAGE 8 OF THE REPORT STATES THERE WILL BE, "*…A 50-FOOT UNDISTURBED VEGETATIVE BUFFER AROUND ALL EXISTING PLANTS POPULATIONS…*"
9. NO MINING, I.E., EXCAVATIONS, WILL BE CONDUCTED WITHIN 50 FEET OF DUKE ENERGY TRANSMISSION EASEMENT.

ACREAGE SUMMARY TABLE – LUCK CHEROKEE

CATEGORY	CURRENT ACREAGE	AMENDED ACREAGE	UPDATED TOTAL ACREAGE	NOTES
AFFECTED				
Open Pit Segments	120.1			
Overburden storage/berms	72.2			
Processing plant	32.4			
Other	28.6			
AFFECTED TOTAL	253.3			
BUFFER AREAS	94.3			
FUTURE IMPACT AREAS	0.0			
TOTAL PERMIT AREA	347.6			
BONDED ACREAGE	253.3			

Notes:
1. Processing Plant – A temporary processing plant area is located within Phase 3 Pit.
2. "Other" category includes office, haul roads and sediment basins.

LEGEND

- PIT
- BERM/OVERBURDEN STORAGE
- PROCESS PLANT
- ACCESS/HAUL ROAD
  HAUL ROAD GRADING
- SEDIMENT BASIN
- WETLANDS
- 50 FOOT PROPERTY LINE AND WETLAND UNDISTURBED BUFFER
- ADDITIONAL BUFFER THAT ALLOWS FOR LAND MANAGEMENT PRACTICES
- CULTURAL & HISTORIC BUFFER
- PROPERTY LINE
- PERMIT BOUNDARY
- AFFECTED AREA
- BONDED AREA
- FEMA FLOOD LINE
- 250 FEET PROPERTY LINE BLASTING SETBACK
- BLASTING LIMIT WITHIN PIT
- STREAMS
- STORMWATER FLOW
- 800 EXISTING GRADE CONTOUR (10 FEET)
- DRAINAGE STRUCTURES

GRAPHIC SCALE

400 0 200 400 800 1200

(IN FEET)
1 inch = 400 ft.

REVISIONS

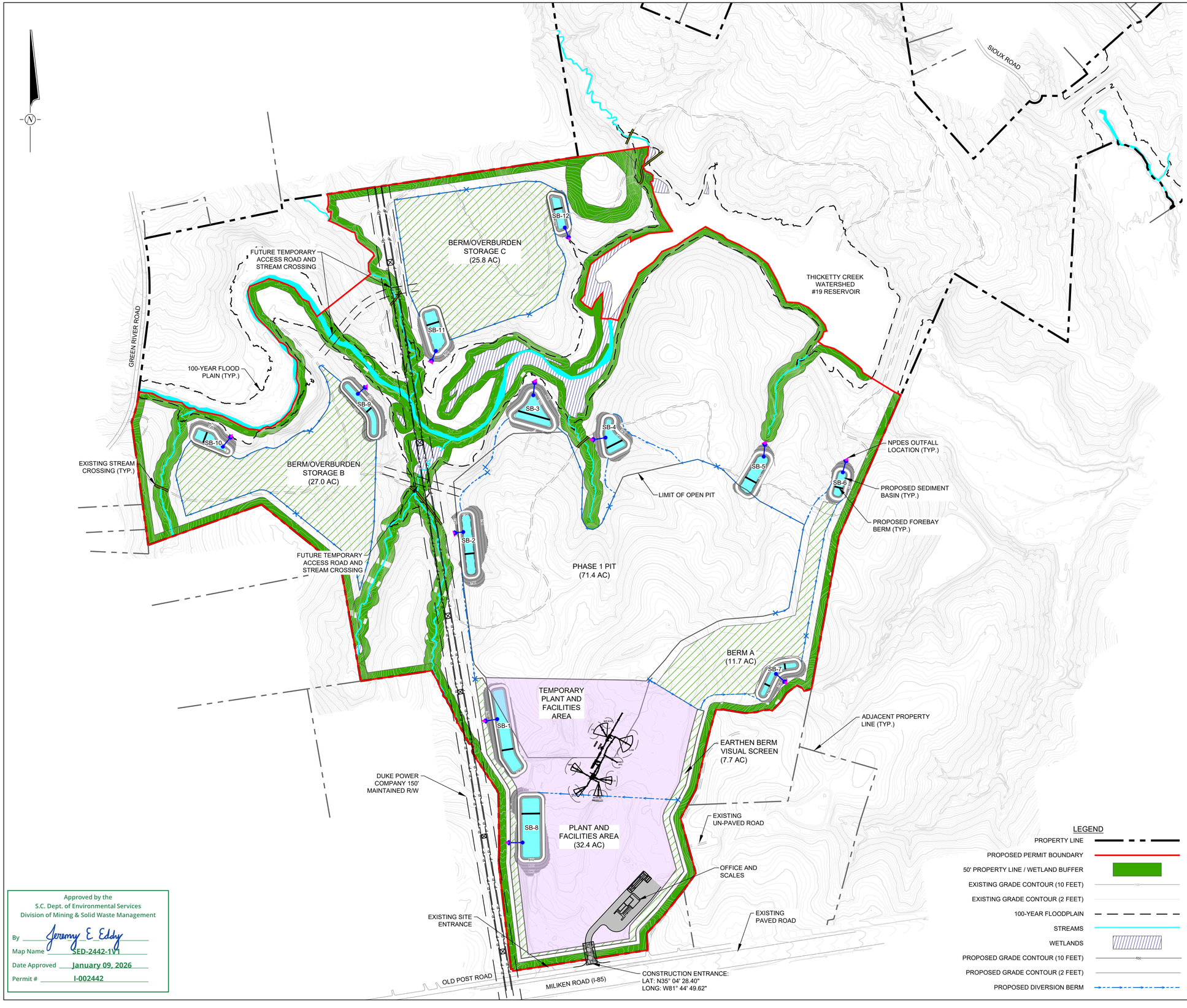
	Description	Date	By
1	HAUL ROADS TO BERMS/OVERBURDEN STORAGE AREAS B AND C RELOCATED. SEDIMENT BASINS SB-2 & SB-9 RELOCATED	8-1-25	RCK

Kennedy Consulting Services, LLC
Craig Kennedy, KCS
Office: 403 Seaside court Lexington, SC 29072 Cell 803.960.2562
Mail: P.O. Box 364 Irmo, SC 29063 craigkennedy.KCS@gmail.com

Luck Cherokee
Mine Map
Prepared for
Luck Stone Corporation
Cherokee County, South Carolina

Project No.: KCS 24-220
Date: 04-24-25
Approved by: RCK
Drawn by: B.C.
Scale: 1"=400'

Sheet No. 1 of 3



W1 W2 L RIP-RAP OUTLET PROTECTION

BASIN NO.	RIP-RAP SIZE	LENGTH(L)	W1	W2
1	CLASS B	20'	6'	22'
2	CLASS B	18'	6'	20'
3	CLASS B	22'	6'	24'
4	CLASS A	13'	6'	15'
5	CLASS B	18'	6'	20'
6	CLASS A	13'	6'	15'
7	CLASS A	13'	6'	15'
8	CLASS B	18'	6'	20'
9	CLASS A	13'	6'	15'
10	CLASS A	13'	6'	15'
11	CLASS A	17'	6'	19'
12	CLASS A	13'	6'	15'

EROSION & SEDIMENT CONTROL NOTES:

1. PERIMETER SEDIMENT AND EROSION CONTROL DEVICES ARE TO BE INSTALLED PRIOR TO BEGINNING LAND DISTURBING ACTIVITIES.
2. EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLANS DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE.
3. EROSION & SEDIMENT CONTROL BMPs AS SHOWN ON THESE PLANS SHALL BE CONSIDERED THE MINIMUM REQUIRED. IT IS THE OPERATOR'S RESPONSIBILITY TO ADEQUATELY CONTROL STORMWATER IN THE PROJECT AREA AND TO REDUCE OFF-SITE DISCHARGE OF SEDIMENT TO THE MAXIMUM EXTENT PRACTICAL.
4. ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 14 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING.
5. SOIL STOCKPILES AND SEDIMENT BASINS SHALL BE LOCATED OUTSIDE OF ANY NATURAL BUFFER.
6. SOIL STOCKPILES SHALL BE ENCLOSED IN SILT FENCE AND UTILIZE DIVERSION BERMS ALONG SIDE SLOPES TO PREVENT EROSION.
7. A DOUBLE ROW OF SILT FENCE SHALL BE USED WHERE ANY LAND DISTURBING ACTIVITY TAKES PLACE ADJACENT TO JURISDICTIONAL WETLANDS OR STREAMS WITHIN 200 FEET.
8. OUTLET PROTECTION SHALL BE INSTALLED AT EACH SEDIMENT BASIN OUTFALL AS PROVIDED IN THE ABOVE TABLE.
9. DUST GENERATION SHALL BE MINIMIZED THROUGH THE APPROPRIATE APPLICATION OF WATER OR OTHER DUST SUPPRESSION TECHNIQUES.
10. FINAL STABILIZATION OF DISTURBED AREAS WHERE CONSTRUCTION ACTIVITIES HAVE PERMANENTLY CEASED SHALL BE INITIATED NO MORE THAN 14 DAYS AFTER EARTH-DISTURBING ACTIVITIES HAVE PERMANENTLY CEASED.
11. THERE WILL BE NO IMPACT TO ANY JURISDICTIONAL WETLAND OR STREAMS PRIOR TO OBTAINING ALL NECESSARY PERMITS FROM THE ARMY CORPS OF ENGINEERS AND SCDES.
12. FUTURE TEMPORARY ACCESS ROAD AND STREAM CROSSING DESIGNS WILL INCLUDE COMPLETE DESIGNS AND EROSION AND SEDIMENTATION CONTROL DETAILS PRIOR TO ANY DISTURBANCE IN THESE AREAS.

GENERAL NOTES:

1. PARCEL LINES, FLOODPLAIN, POWER LINE EASEMENTS AND EXISTING TOPOGRAPHY SURVEY PROVIDED BY GLENN ASSOCIATES SURVEYING, INC. IN JANUARY 2025. HORIZONTAL DATUM IS SOUTH CAROLINA NAD 83 (2011), INTERNATIONAL FEET.
2. AQUATIC RESOURCE DELINEATION PERFORMED BY HHNT ECOLOGISTS 11/11/2024-11/13/2024. DEPICTED WATERS OF THE U.S. DELINEATION REMAINS AN OPINION OF HHNT UNTIL FORMALLY VERIFIED IN WRITING BY THE U.S. ARMY CORPS OF ENGINEERS VIA A FORMAL DETERMINATION LETTER. PRIOR TO SUBMITTING SURFACE MINING PLANS TO SCDES A WATERS OF THE U.S. DELINEATION WILL BE SUBMITTED TO THE USACE.

300 150 0 300 600
GRAPHIC SCALE IN FEET

LEGEND
- PROPERTY LINE
- PROPOSED PERMIT BOUNDARY
- 50' PROPERTY LINE / WETLAND BUFFER
- EXISTING GRADE CONTOUR (10 FEET)
- EXISTING GRADE CONTOUR (2 FEET)
- 100-YEAR FLOODPLAIN
- STREAMS
- WETLANDS
- PROPOSED GRADE CONTOUR (10 FEET)
- PROPOSED GRADE CONTOUR (2 FEET)
- PROPOSED DIVERSION BERM

SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION HODGES, HARBIN, NEWBERRY & TRIBBLE, INC. No. C00614

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER No. 21474 H. BRANT LANE 7/16/25

REVISION 1: 7/16/2025 - REVISED POND NO. 2 AND 9 DESIGN AND STREAM CROSSING LOCATION

Approved by the
S.C. Dept. of Environmental Services
Division of Mining & Solid Waste Management
By Jeremy E Eddy
Map Name SED-2442-1V1
Date Approved January 09, 2026
Permit # I-002442

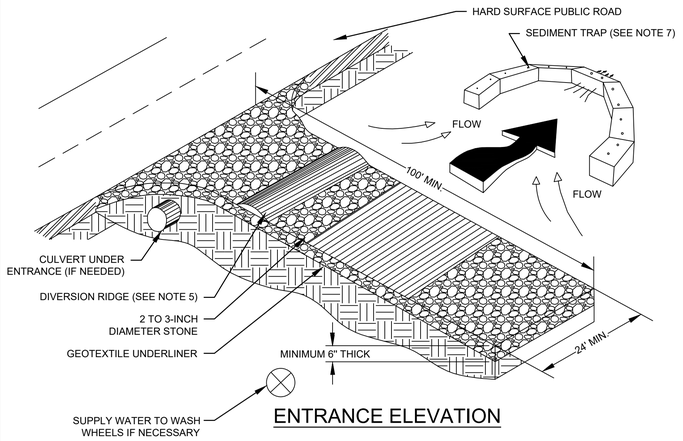
INITIAL EROSION AND SEDIMENT CONTROL PLAN

LUCK CHEROKEE
INITIAL EROSION & SEDIMENT CONTROL PLAN
FOR
LUCK STONE CORPORATION
CHEROKEE COUNTY, SOUTH CAROLINA

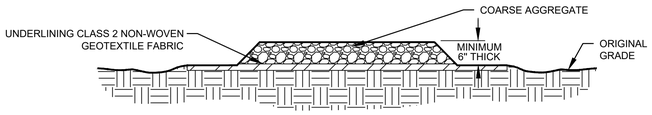
HHNT ENVIRONMENTAL CONSULTANTS
HODGES, HARBIN, NEWBERRY & TRIBBLE, INC.
3920 ARKWRIGHT RD.
SUITE 101
MACON, GEORGIA 31210
(478) 743-7175
(478) 743-7175 (FAX)

PROJ. NO.	4780-025-01	DWG. LUCK-CHRK-E&SC	EDIT 05-09-2025
SCALE	1" = 300'	SHEET 2 OF 4	
DATE	MAY 2025		

1



ENTRANCE ELEVATION



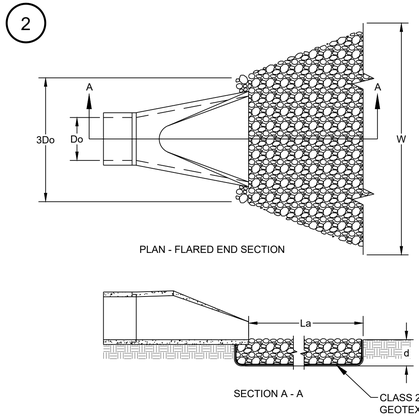
NOTES:
1. AVOID LOCATING ON STEEP SLOPES OR AT CURVES ON PUBLIC ROADS.
2. REMOVE ALL VEGETATION AND OTHER UNSUITABLE MATERIAL FROM THE FOUNDATION AREA, GRADE, AND CROWN FOR POSITIVE DRAINAGE.
3. GRAVEL PAD SHALL HAVE A MINIMUM THICKNESS OF 6".
4. PAD WIDTH SHALL BE EQUAL TO FULL WIDTH AT ALL POINTS OF VEHICULAR EGRESS, BUT NO LESS THAN 24'.
5. A DIVERSION RIDGE SHOULD BE CONSTRUCTED WHEN GRADE TOWARD PAVED AREA IS GREATER THAN 2%.
6. INSTALL PIPE UNDER THE ENTRANCE IF NEEDED TO MAINTAIN DRAINAGE DITCHES.
7. WHEN WASHING IS REQUIRED, IT SHOULD BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT POND (DIVERT ALL SURFACE RUNOFF AND DRAINAGE FROM THE ENTRANCE TO A SEDIMENT CONTROL DEVICE).
8. WASHRACKS AND/OR TIRE WASHERS MAY BE REQUIRED DEPENDING ON SCALE AND CIRCUMSTANCE. IF NECESSARY, WASHRACK DESIGN MAY CONSIST OF ANY MATERIAL SUITABLE FOR TRUCK TRAFFIC THAT REMOVES MUD AND DIRT.

MAINTENANCE DURING CONSTRUCTION:
1. INSPECTIONS OF SEDIMENT BASINS SHOULD BE CONDUCTED ONCE EVERY CALENDAR WEEK AND, AS RECOMMENDED, WITHIN 24-HOURS OF EACH RAINFALL EVENT THAT PRODUCES 1/2-INCH OR MORE OF PRECIPITATION.
2. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH 2-3 INCH STONE, AS CONDITIONS DEMAND, AND REPAIR AND/OR CLEANOUT OF ANY STRUCTURES TO TRAP SEDIMENT.
3. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES OR SITE ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.

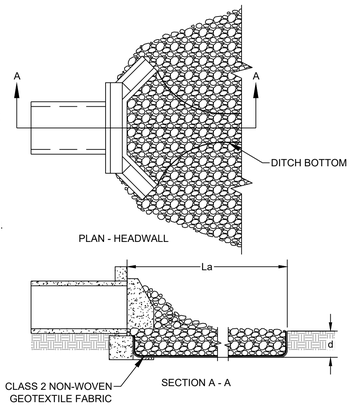
CONSTRUCTION ENTRANCE

SCALE: NOT TO SCALE

2



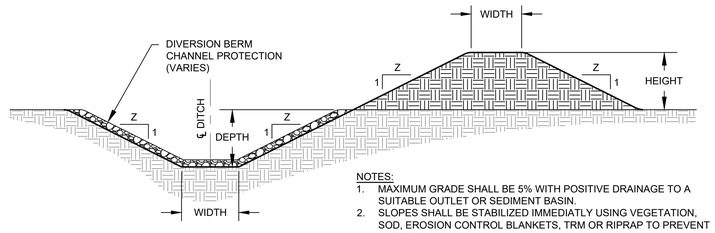
NOTES:
1. La IS THE LENGTH OF THE RIPRAP APRON.
2. d = 2 TIMES THE MAXIMUM RIPRAP DIAMETER BUT NOT LESS THAN 6".
3. IN A WELL-DEFINED CHANNEL, EXTEND THE APRON UP IN THE CHANNEL BANKS TO AN ELEVATION OF 6" ABOVE THE MAXIMUM TAILWATER DEPTH OR TO THE TOP OF THE BANK, WHICHEVER IS LESS.
4. A CLASS 2 NON-WOVEN GEOTEXTILE FABRIC SHOULD BE INSTALLED BETWEEN THE RIPRAP AND SOIL FOUNDATION.



OUTLET PROTECTION

SCALE: NOT TO SCALE

3



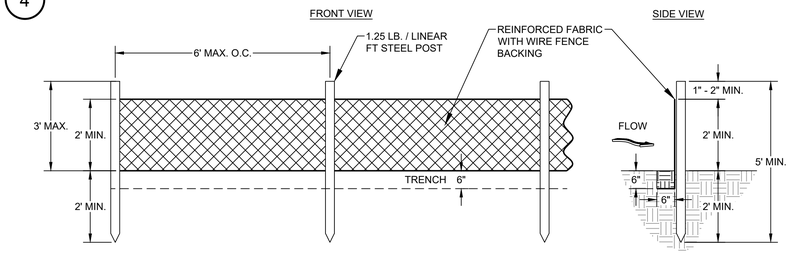
NOTES:
1. MAXIMUM GRADE SHALL BE 5% WITH POSITIVE DRAINAGE TO A SUITABLE OUTLET OR SEDIMENT BASIN.
2. SLOPES SHALL BE STABILIZED IMMEDIATLY USING VEGETATION, SOD, EROSION CONTROL BLANKETS, TRM OR RIPRAP TO PREVENT EROSION.
3. SPECIFIC DIVERSION BERM CHANNEL PROTECTION DESIGN TO BE PERFORMED AT TIME OF CONSTRUCTION.

MAINTENANCE DURING CONSTRUCTION:
1. INSPECTIONS OF DIVERSION BERMS AND CHANNELS SHOULD BE CONDUCTED ONCE EVERY CALENDAR WEEK AND, AS RECOMMENDED, WITHIN 24-HOURS OF EACH RAINFALL EVENT THAT PRODUCES 1/2-INCH OR MORE OF PRECIPITATION.
2. DAMAGE CAUSED BY CONSTRUCTION TRAFFIC OR OTHER ACTIVITY MUST BE REPAIRED BEFORE THE END OF EACH WORKING DAY.

DIVERSION BERM CHANNEL

SCALE: 1" = 5'

4



NOTES:
1. FLOWS MAY NECESSITATE THE PLACEMENT OF HAY BALES IN FRONT OF FILTER FABRIC (EXCEPT IN DITCH CHANNELS).
2. THE FILTER FABRIC SHALL BE CHOSEN FROM THE SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION QUALIFIED PRODUCT LISTING (QPL), APPROVAL SHEET #34.
3. FABRIC SHALL BE REINFORCED WITH WIRE FENCE BACKING AND 12" OF THE FABRIC SHALL BE EXTENDED INTO THE TRENCH.
4. FABRIC SHALL BE ATTACHED IN ACCORDANCE WITH THE "SOUTH CAROLINA DES STORM WATER MANAGEMENT BMP FIELD MANUAL".
5. SILT FENCE WILL BE INSTALLED PRIOR TO OR CONCURRENT WITH LAND DISTURBING ACTIVITIES.

MAINTENANCE DURING CONSTRUCTION:
1. INSPECT AND REPAIR FENCE AFTER EACH STORM EVENT AND REMOVE SEDIMENT WHEN IT REACHES 1/3 THE HEIGHT OF THE SILT FENCE.
2. REMOVED SEDIMENT SHALL BE DEPOSITED TO AN AREA THAT WILL NOT CONTRIBUTE SEDIMENT OFF-SITE AND CAN BE PERMANENTLY STABILIZED.
3. SILT FENCE SHOULD BE REMOVED WITHIN 30 DAYS AFTER FINAL STABILIZATION IS ACHIEVED AND ONCE REMOVED, THE RESULTING DISTURBED AREA SHALL BE PERMANENTLY STABILIZED.

REINFORCED SILT FENCE

SCALE: 1" = 2'

Approved by the
S.C. Dept. of Environmental Services
Division of Mining & Solid Waste Management

By Jeremy E. Eddy
Map Name SED-2442-2V1
Date Approved January 09, 2026
Permit # I-002442

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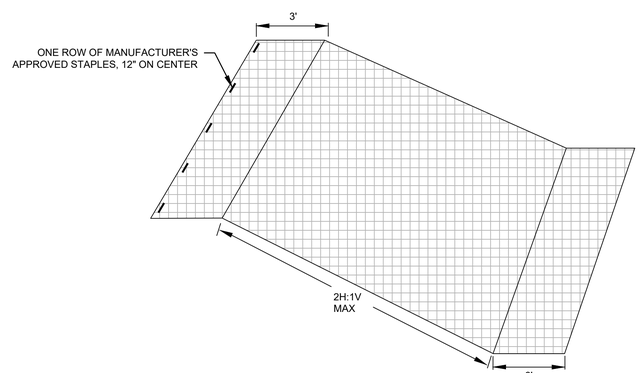

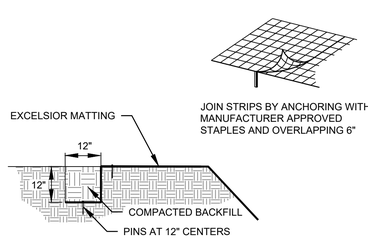

NOTES:
1. INSTALL SEED PRIOR TO PLACEMENT OF MATTING.
2. INSTALL DOWNSTREAM OR DOWNWIND MAT FIRST AND INSTALL NEXT MAT OVER THE LEADING EDGE AND OVERLAP 6 INCHES.
3. INSTALL ALL MATS IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.
4. IF 3' RUNOUT AT TOP OF SLOPE IS NOT PROVIDED FOR EXCELSIOR MATTING, MAT SHALL BE ANCHORED IN TRENCH IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS.
5. STAPLE PATTERN SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS.
6. TRM ON SLOPES MAY BE INSTALLED IN A SIMILAR MANNER BUT SHALL BE ANCHORED IN TRENCHES AT THE TOP AND BOTTOM OF SLOPES AS RECOMMENDED BY THE MANUFACTURER.

MAINTENANCE DURING CONSTRUCTION:
1. INSPECTIONS OF SLOPE STABILIZATION MATTING SHOULD BE CONDUCTED ONCE EVERY CALENDAR WEEK AND, AS RECOMMENDED, WITHIN 24-HOURS OF EACH RAINFALL EVENT THAT PRODUCES 1/2-INCH OR MORE OF PRECIPITATION.
2. DAMAGE CAUSED BY CONSTRUCTION TRAFFIC OR OTHER ACTIVITY MUST BE REPAIRED BEFORE THE END OF EACH WORKING DAY.

SLOPE STABILIZATION (EXCELSIOR WOOD FIBER MATTING)

SCALE: NOT TO SCALE

SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION
HODGES, HARBIM, NEWBERRY & TRIBBLE, INC.
No. C00614

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER
No. 21474
R. BRANT LANE
7/16/25

EROSION CONTROL DETAILS

LUCK CHEROKEE
INITIAL EROSION & SEDIMENT CONTROL PLAN
FOR
LUCK STONE CORPORATION
CHEROKEE COUNTY, SOUTH CAROLINA

HNT ENVIRONMENTAL CONSULTANTS
HODGES, HARBIN, NEWBERRY & TRIBBLE, INC.
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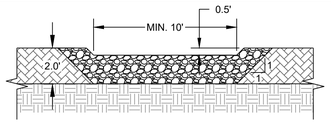
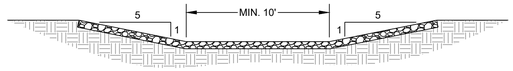
3920 ARKWRIGHT RD.
SUITE 101
MACON, GEORGIA 31210

PROJ. NO.	4780-025-01	DWG. LUCK-CHRK-E&SC	EDIT 05-09-2025
SCALE	AS SHOWN	SHEET 3 OF 4	
DATE	MAY 2025		

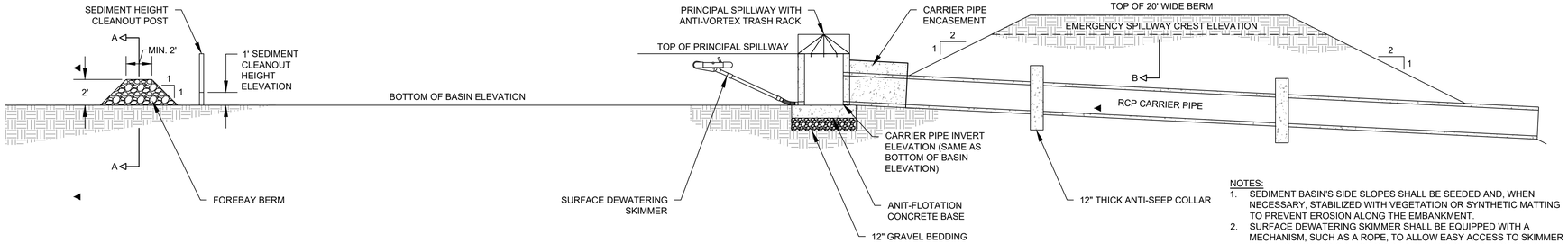
1



SECTION A-A FOREBAY BERM



SECTION B-B EMERGENCY SPILLWAY



SEDIMENT BASIN DATA

	POND #1	POND #2	POND #3	POND #4	POND #5	POND #6	POND #7	POND #8	POND #9	POND #10	POND #11	POND #12
BOTTOM OF BASIN ELEVATION (FT)	784.00	727.00	696.00	714.00	737.00	728.00	782.00	802.00	714.00	718.50	700.50	692.00
SEDIMENT CLEANOUT HEIGHT ELEVATION (FT)	785.00	728.00	697.00	715.00	738.00	729.00	783.00	803.00	715.00	719.50	701.50	693.00
TOP OF FOREBAY BERM ELEVATION (FT)	786.00	729.00	698.00	716.00	739.00	730.00	784.00	804.00	716.00	720.50	702.50	694.00
SEDIMENT STORAGE VOLUME REQUIRED @ 3,600 CF / AC (CF)	90,180	66,744	90,180	41,580	59,256	14,724	35,784	90,468	40,932	30,960	50,256	33,588
SEDIMENT STORAGE @ RISER CREST ELEVATION (CF)	241,078	160,647	213,557	107,047	142,851	34,083	87,123	264,830	114,124	77,704	120,387	80,962
SEDIMENT STORAGE VOLUME REQUIRED WITHIN FOREBAY (CF)	18,036	13,349	18,036	8,316	11,851	2,945	7,157	18,094	8,186	6,192	10,051	6,718
SEDIMENT STORAGE @ FOREBAY BERM HEIGHT (CF)	24,108	16,645	22,903	10,592	14,009	6,114	10,992	25,527	14,973	9,074	13,814	8,952
TOP OF PRINCIPAL SPILLWAY ELEVATION (FT)	789.00	732.75	703.00	719.50	743.00	731.50	787.75	807.00	719.50	723.75	705.50	697.50
10YR, 24-HOUR STORM EVENT ELEVATION (FT)	789.39	732.99	703.28	719.64	743.22	731.63	787.90	807.27	719.60	723.88	705.71	697.65
25YR, 24-HOUR STORM EVENT ELEVATION (FT)	790.03	733.43	703.81	719.92	743.66	731.95	788.23	807.68	719.80	724.19	706.14	698.01
EMERGENCY SPILLWAY CREST WIDTH (5:1 SIDE SLOPES) (FT)	20'	20'	25'	20'	20'	20'	20'	20'	20'	20'	20'	20'
EMERGENCY SPILLWAY CREST ELEVATION (FT)	790.40	735.00	704.30	721.00	744.50	733.00	789.00	808.50	720.75	725.00	706.75	699.00
100YR, 24-HOUR STORM EVENT ELEVATION (FT)	791.27	735.02	705.30	721.07	745.06	732.46	789.25	809.01	720.67	725.14	707.30	699.07
TOP OF BERM ELEVATION (FT)	792.00	736.00	706.00	722.00	746.00	734.00	790.00	810.00	722.00	726.00	708.00	700.00

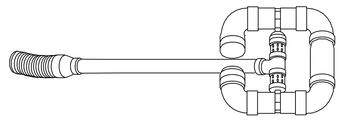
NOTES:
1. SEDIMENT BASIN'S SIDE SLOPES SHALL BE SEEDED AND, WHEN NECESSARY, STABILIZED WITH VEGETATION OR SYNTHETIC MATTING TO PREVENT EROSION ALONG THE EMBANKMENT.
2. SURFACE DEWATERING SKIMMER SHALL BE EQUIPPED WITH A MECHANISM, SUCH AS A ROPE, TO ALLOW EASY ACCESS TO SKIMMER FOR UNCLOGGING ORIFICE OR PERFORMING OTHER NECESSARY MAINTENANCE.
3. THE FOREBAY BERM SHOULD BE CONSTRUCTED ACROSS THE BOTTOM OF THE BASIN WIDTH AT THE LOCATION IN THE PLANS. IT SHALL CONSIST OF RIPRAP, GABION, OR AN EARTHEN BERM WITH A ROCK FILLED OUTLET.

MAINTENANCE DURING CONSTRUCTION:
1. REMOVE ACCUMULATED SEDIMENT WHEN IT REACHES HALF THE HEIGHT OF THE FOREBAY BERM.
2. REMOVED SEDIMENT FROM THE BASIN SHALL BE PLACED IN STOCKPILE STORAGE AREAS OR SPREAD THINLY ACROSS THE DISTURBED AREA . REMOVED SEDIMENT SHALL BE STABILIZED AFTER IT IS RELOCATED.
3. INSPECTIONS OF SEDIMENT BASINS SHOULD BE CONDUCTED ONCE EVERY CALENDAR WEEK AND, AS RECOMMENDED, WITHIN 24-HOURS OF EACH RAINFALL EVENT THAT PRODUCES 1/2-INCH OR MORE OF PRECIPITATION.
4. ALL TEMPORARY SEDIMENT BASINS, WHICH ARE NOT TO BE CONVERTED TO A DETENTION BASIN POST-CONSTRUCTION, SHOULD BE REMOVED WITHIN 30 DAYS AFTER FINAL STABILIZATION IS ACHIEVED.
5. DISTURBED AREAS RESULTING FROM THE REMOVAL OF THE SEDIMENT BASIN SHOULD BE PERMANENTLY STABILIZED AND ADDITIONAL BMP, SUCH AS SILT FENCE, SHOULD BE UTILIZED TO ACCEPT STORMWATER RUNOFF FROM THIS DISTURBED AREA UNTIL FINAL STABILIZATION IS REACHED.

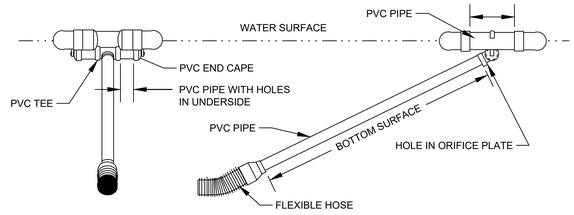
PROPOSED SEDIMENT BASINS

SCALE: 1" = 5'

2



SKIMMER PERSPECTIVE



SKIMMER FRONTAL SECTION VIEW

SKIMMER SIDE SECTION VIEW

NOTE:
1. SKIMMER CONFIGURATION IS TYPICAL. SEE TABLE ON DETAIL 3 FOR SIZING DETAILS.

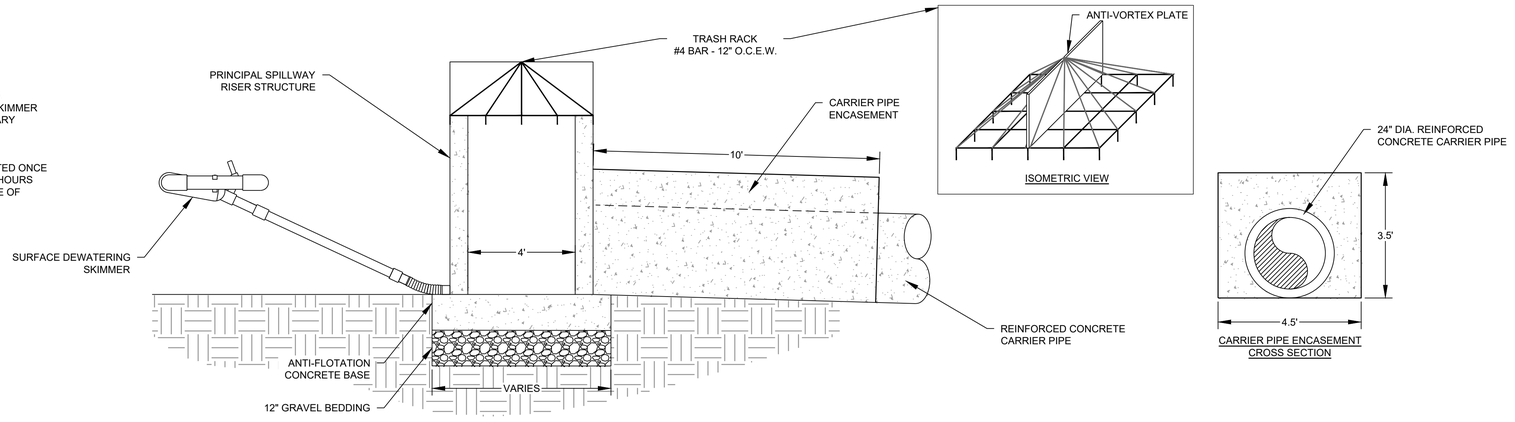
SURFACE DEWATERING SKIMMER

SCALE: NOT TO SCALE

3

NOTES:
1. SURFACE DEWATERING SKIMMER SHALL BE EQUIPPED WITH A MECHANISM, SUCH AS A ROPE, TO ALLOW EASY ACCESS TO SKIMMER FOR UNCLOGGING ORIFICE OR PERFORMING OTHER NECESSARY MAINTENANCE.

MAINTENANCE DURING CONSTRUCTION:
1. INSPECTIONS OF PRINCIPAL SPILLWAYS SHOULD BE CONDUCTED ONCE EVERY CALENDAR WEEK AND, AS RECOMMENDED, WITHIN 24-HOURS OF EACH RAINFALL EVENT THAT PRODUCES 1/2-INCH OR MORE OF PRECIPITATION.



ISOMETRIC VIEW

CARRIER PIPE ENCASEMENT CROSS SECTION

PRINCIPAL SPILLWAY CONCRETE STRUCTURE

	POND #1	POND #2	POND #3	POND #4	POND #5	POND #6	POND #7	POND #8	POND #9	POND #10	POND #11	POND #12
SIZE (6" WALL THICKNESS) (FT)	4' x 4'	4' x 4'	4' x 4'	4' x 4'	4' x 4'	4' x 4'	4' x 4'	4' x 4'	4' x 4'	4' x 4'	4' x 4'	4' x 4'
HEIGHT (FT)	5.00	5.75	7.00	5.50	6.00	3.50	5.75	5.00	5.50	5.25	5.00	5.50
INVERT ELEVATION (BOTTOM OF STRUCTURE / TOP OF BASE) (FT)	784.00	727.00	696.00	714.00	737.00	728.00	782.00	802.00	714.00	718.50	700.50	692.00
TOP OF PRINCIPAL SPILLWAY ELEVATION (FT)	789.00	732.75	703.00	719.50	743.00	732.00	787.75	807.00	719.50	723.75	705.50	697.50
ANTI-FLOTATION CONCRETE BASE DIMENSIONS (L x W x H) (FT)	6' x 6' x 2'	6' x 6' x 2'	6.5' x 6.5' x 2'	6' x 6' x 2'	6' x 6' x 2'	6' x 6' x 2'	6' x 6' x 2'	6' x 6' x 2'	6' x 6' x 2'	6' x 6' x 2'	6' x 6' x 2'	6' x 6' x 2'
SURFACE DEWATERING SKIMMER (NUMBER - DIAMETER)	1 - 8"	1 - 6"	1 - 8"	1 - 5"	1 - 6"	1 - 3"	1 - 5"	1 - 8"	1 - 5"	1 - 4"	1 - 5"	1 - 5"
INVERT ELEVATION FOR SURFACE DEWATERING SKIMMER (FT.)	784.00	727.00	696.00	714.00	737.00	728.00	782.00	802.00	714.00	718.50	700.50	692.00

NOTE:
SURFACE DEWATERING SKIMMER SIZE IS BASED ON FAIRCLOTH SKIMMERS. ALTERNATIVE SKIMMERS WITH EQUIVALENT FLOWS MAY BE UTILIZED AT THE OPERATOR'S DISCRETION.

RCP CARRIER PIPE

	POND #1	POND #2	POND #3	POND #4	POND #5	POND #6	POND #7	POND #8	POND #9	POND #10	POND #11	POND #12
DIAMETER (IN)	24"	24"	24"	24"	24"	24"	24"	24"	24"	24"	24"	24"
LENGTH (FT)	76'	53'	81'	80'	78'	76'	76'	90'	63'	79'	67'	68'
SLOPE (%)	18.42%	1.89%	12.35%	20.00%	16.67%	23.68%	18.42%	2.22%	9.52%	20.89%	15.67%	14.71%
INLET INVERT ELEVATION (FT)	784.00	727.00	696.00	714.00	737.00	728.00	782.00	802.00	714.00	718.50	700.50	692.00
OUTLET INVERT ELEVATION (FT)	770.00	726.00	686.00	698.00	724.00	710.00	768.00	800.00	708.00	702.00	690.00	682.00
NO. & SIZE OF ANTI-SEEP COLLARS (12" WALL THICKNESS) (FT)	2 - 8.0 x 8.0	2 - 5.5 x 5.5	2 - 8.0 x 8.0	2 - 8.0 x 8.0	2 - 8.0 x 8.0	2 - 8.0 x 8.0	2 - 8.0 x 8.0	2 - 5.5 x 5.5	2 - 6.0 x 6.0	2 - 8.0 x 8.0	2 - 8.0 x 8.0	2 - 8.0 x 8.0
CARRIER PIPE ENCASEMENT (L x W x H) (FT)	10.0 x 4.5 x 3.5	10.0 x 4.5 x 3.5	10.0 x 4.5 x 3.5	10.0 x 4.5 x 3.5	10.0 x 4.5 x 3.5	10.0 x 4.5 x 3.5	10.0 x 4.5 x 3.5	10.0 x 4.5 x 3.5	10.0 x 4.5 x 3.5	10.0 x 4.5 x 3.5	10.0 x 4.5 x 3.5	10.0 x 4.5 x 3.5

PRINCIPAL SPILLWAY

SCALE: NOT TO SCALE

Approved by the
S.C. Dept. of Environmental Services
Division of Mining & Solid Waste Management

By Jeremy E. Eddy

Map Name SED-2442-3V1

Date Approved January 09, 2026

Permit # I-002442

SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION — HODGES, HARBIN, NEWBERRY & TRIBBLE, INC. — No. C00614

SOUTH CAROLINA — LICENSED PROFESSIONAL ENGINEER — No. 21474 — BRANT LANE — 7/16/25

REVISION 1: 7/16/2025 - REVISED POND NO. 2 AND 9 DESIGN

SEDIMENT BASIN DETAILS

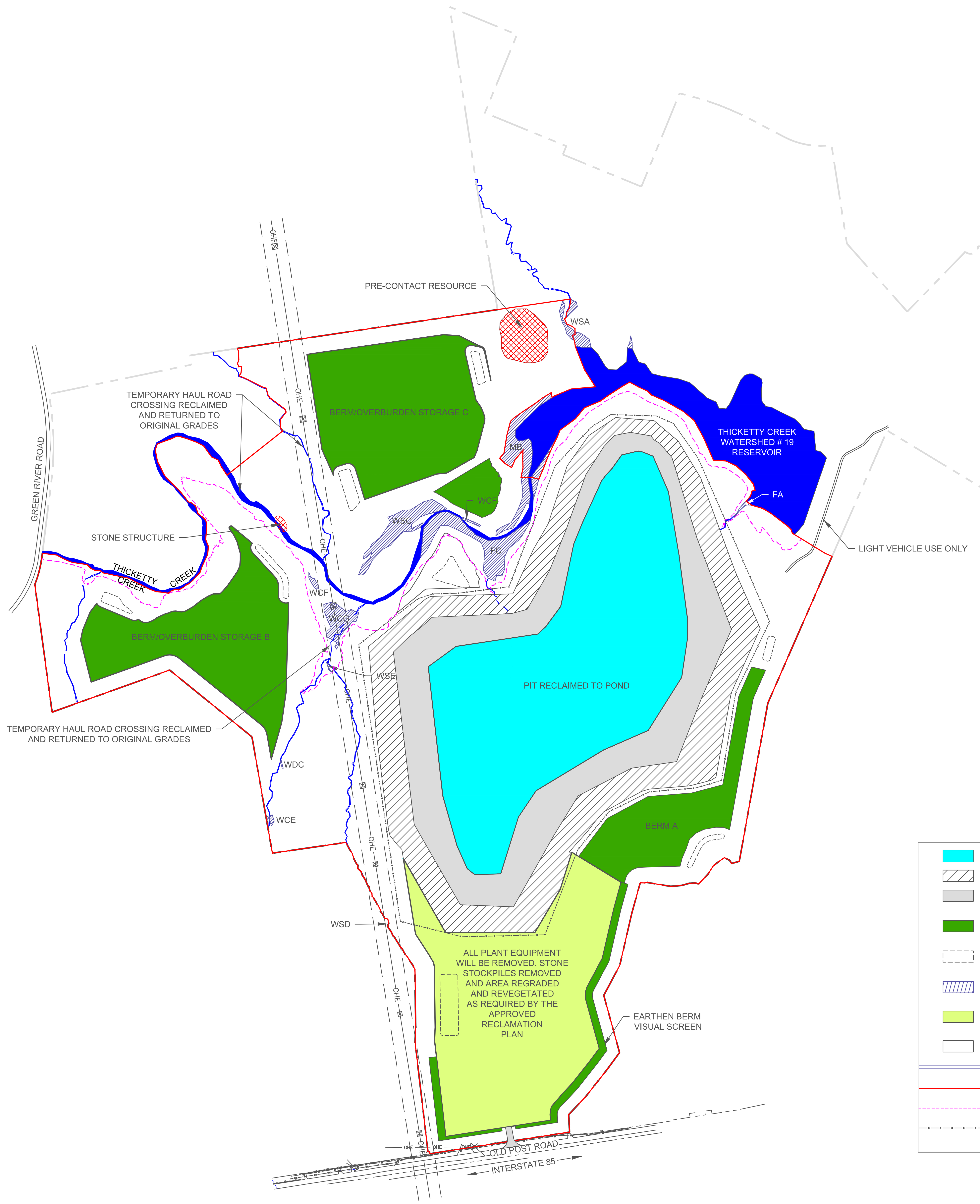
LUCK CHEROKEE
INITIAL EROSION & SEDIMENT CONTROL PLAN
FOR
LUCK STONE CORPORATION
CHEROKEE COUNTY, SOUTH CAROLINA

(478) 743-7175
(478) 743-7175 (FAX)
HNT ENVIRONMENTAL CONSULTANTS
HODGES, HARBIN, NEWBERRY & TRIBBLE, INC.
3920 ARKWRIGHT RD.
SUITE 101
MACON, GEORGIA 31210

PROJ. NO.	4780-025-01	DWG. LUCK-CHRK-E&SC	EDIT 05-09-2025
SCALE	AS SHOWN	SHEET 4 OF 4	
DATE	MAY 2025		

Approved by the
S.C. Dept. of Environmental Services
Division of Mining & Solid Waste Management

By Jeremy E. Eddy
Map Name RM-2442-1V1
Date Approved January 09, 2026
Permit # I-002442



NORTH

LEGEND

- PIT RECLAIMED TO POND
- PIT OVERBURDEN GRADED TO 3:1 SLOPE & REVEGETATED
- PIT WITH EXPOSED ROCK HIGHWALLS
- OVERBURDEN/BERMS GRADED TO OVERALL 3:1 SLOPE AND REVEGETATED, ASSOCIATED SEDIMENT BASINS, GRADED AND REVEGETATED
- RECLAIMED SEDIMENT BASINS
- WETLANDS – UNDISTURBED
- PROCESS PLANT EQUIPMENT AND STOCKPILES REMOVED AREA GRADED AND REVEGETATED, PROCESS AND SEDIMENT POND GRADED AND REVEGETATED
- PREVIOUS BUFFER AREAS, FUTURE IMPACT AREA – UNDISTURBED
- STREAMS – UNDISTURBED
- PERMIT BOUNDARY
- FEMA FLOOD LINE
- FENCE OR OTHER SUITABLE AND APPROVED BARRIER?

GRAPHIC SCALE

400 0 200 400 800 1200

(IN FEET)
1 inch = 400 ft.

NOTES

1. PARCEL LINES, FLOODPLAIN, AND POWER LINE EASEMENTS PROVIDED BY GLENN ASSOICATES SURVEYING, INC.
2. THE MINE PERMIT AREA INCLUDES111.68 ACRES OF PARCEL TMS# 045-00-00-053.000 AND 235.76 ACRES OF PARCEL TMS# 027-00-00-035.000.
3. AQUATIC RESOURCES DELINEATION PROVIDED BY HODGES, HARBIN, NEWBERRY & TRIBBLE, INC.
4. MINE DESIGN PROVIDED BY LUCK STONE CORPORATION

REVISIONS

	Description	Date	By
1	HAUL ROADS TO BERMS/OVERBURDEN STORAGE AREAS B AND C RELOCATED	8-1-5	RCK

Kennedy Consulting Services, LLC
Craig Kennedy,
KCS
403 Seaside court Lexington, SC 29072
Cell 803.960.2562
Mail:
P.O. Box 364 Irmo, SC 29063
craigkennedy.KCS@gmail.com

Luck Cherokee
Reclamation Map
Prepared for
Luck Stone Corporation
Cherokee County, South Carolina

Project No.: KCS 24-220
Date: 04-24-25
Approved by: RCK
Drawn by: B.C.
Scale: 1"=400'

Sheet No.
2
of
3