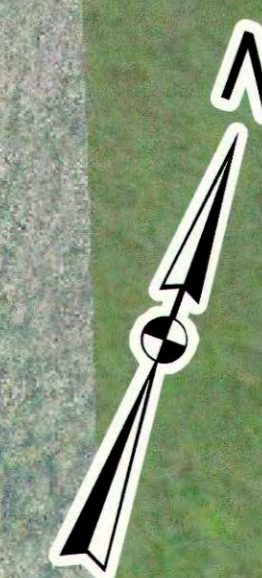




MONITORING WELLS - GROUNDWATER MONITORING PLAN

LUCK STONE
CHESTER COUNTY, SOUTH CAROLINA



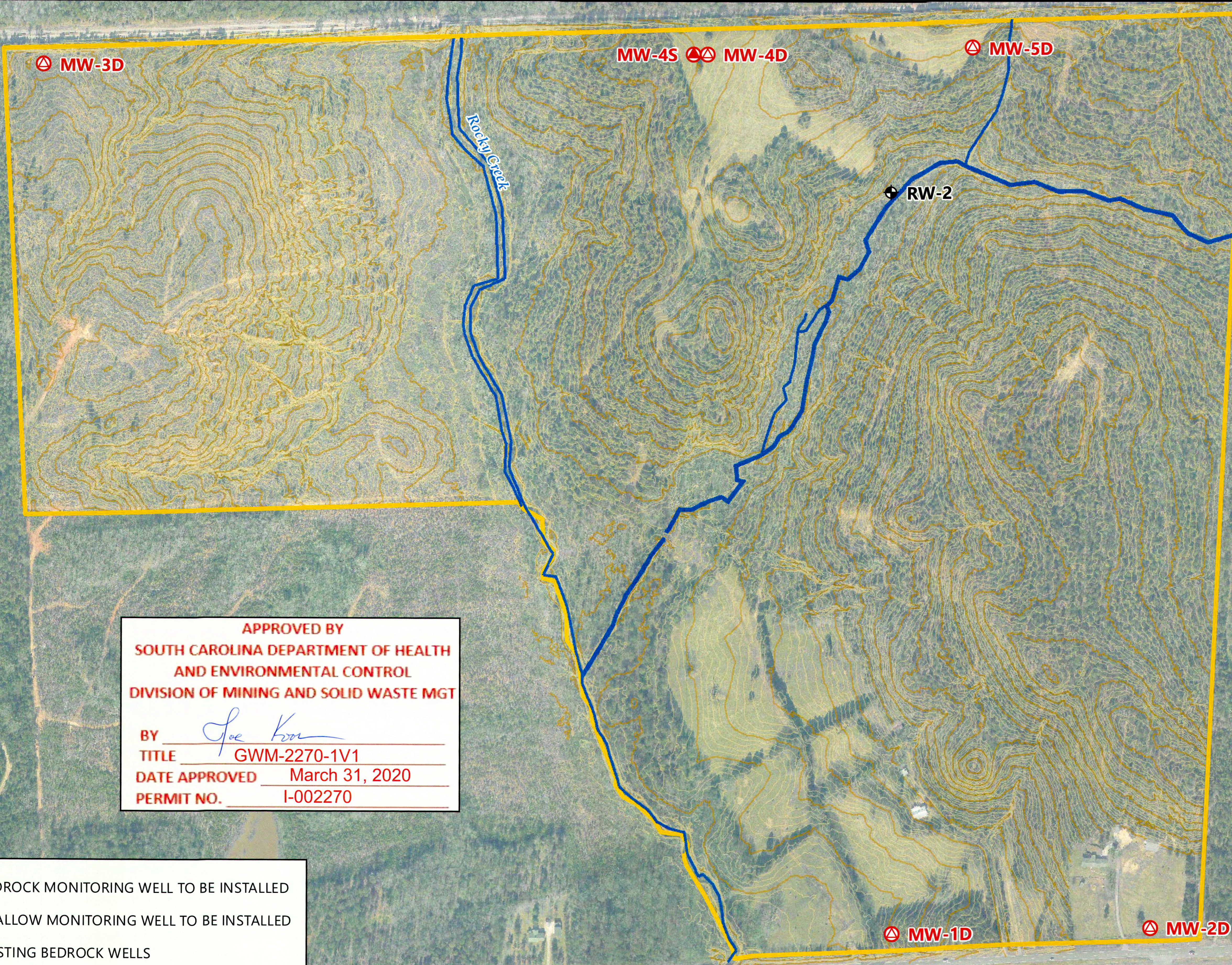
SCALE:
1" = 400'

DATE:
12-18-19

PROJECT NUMBER
4261-19-029

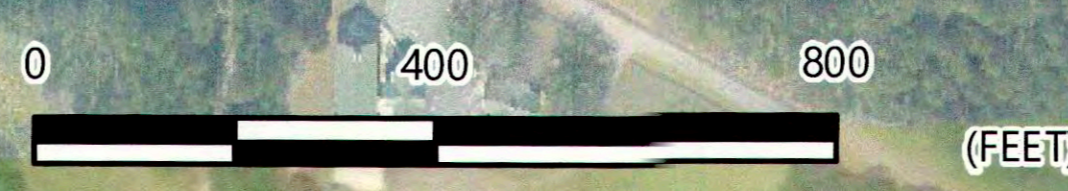
FIGURE NO.

1

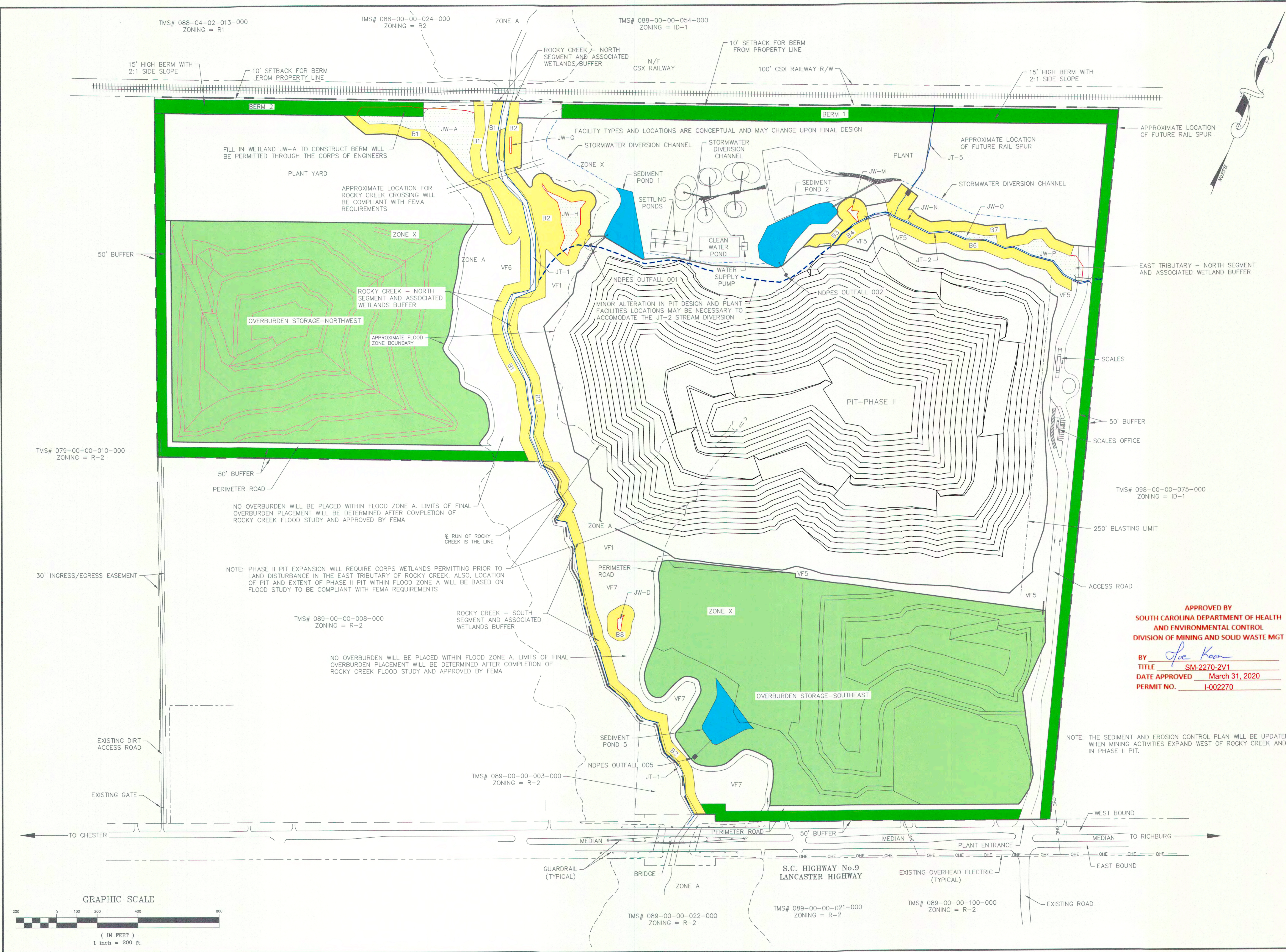


APPROVED BY
SOUTH CAROLINA DEPARTMENT OF HEALTH
AND ENVIRONMENTAL CONTROL
DIVISION OF MINING AND SOLID WASTE MGT
BY Joe Koon
TITLE GWM-2270-1V1
DATE APPROVED March 31, 2020
PERMIT NO. I-002270

- BEDROCK MONITORING WELL TO BE INSTALLED
- SHALLOW MONITORING WELL TO BE INSTALLED
- EXISTING BEDROCK WELLS
- STREAM
- PROJECT SITE



REFERENCE:
JANUARY 2019 AERIAL PHOTOGRAPH AND 1-FOOT LIDAR TOPOGRAPHY OBTAINED FROM LUCK COMPANIES. THIS MAP IS FOR INFORMATIONAL PURPOSES ONLY. ALL FEATURE LOCATIONS DISPLAYED ARE APPROXIMATED. THEY ARE NOT BASED ON CIVIL SURVEY INFORMATION, UNLESS STATED OTHERWISE.



REVISIONS	
Description	Date
1 CHANGED N-W-A TO J-W-A; MERGED J-W-B WITH J-W-A	11-12-19 BC
2 HAIL ROAD TO PLANT FROM PIT RE-ROUTED TO AVOID J-W-M	11-12-19 BC
3 JT-5 CULVERT LENGTH REVISED AND BUFFER ADDED WHERE STREAM DAYLIGHTS	11-12-19 BC
4 REMOVE DEFINITION OF OVERBURDEN PLACEMENT IN FLOOD ZONE A	12-11-19 BC

Kennedy Consulting Services, LLC
 Craig Kennedy, P.G.
KCS
 Office: 403 Seaside Court, Lexington, SC 29072 P.O. Box 364 Irmo, SC 29063
 Tel: 803.399.1133 • Call 803.960.3562 • craigkennedy.kcs@gmail.com

APPROVED BY
SOUTH CAROLINA DEPARTMENT OF HEALTH
AND ENVIRONMENTAL CONTROL
DIVISION OF MINING AND SOLID WASTE MGT
 BY Joe Koon
 TITLE SM-2270-2V1
 DATE APPROVED March 31, 2020
 PERMIT NO. I-002270

Chester Quarry
Mine Map - Phase II
 Prepared for
Luck Stone Corporation
 Chester County - South Carolina

Project No. KCS 18-102
 Date: 02-27-19
 Approved by: RCK
 Drawn by: B.C.
 Scale: 1"=200'

Sheet No.
2
 of
3



REVISIONS	
Description	Date
1 REMOVE DEPICTION OF OVERBURDEN IN FLOOD ZONE A	12-30-19

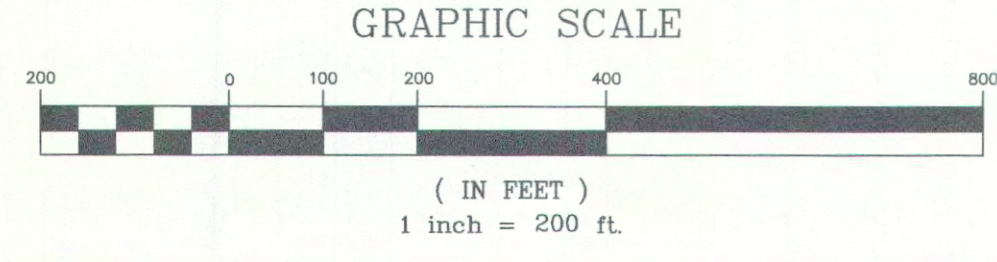
Kennedy Consulting Services, LLC
 Craig Kennedy, P.G.
KCS
 Office: 403 Seaside Court, Lexington, SC 29072
 P.O. Box 364, Irmo, SC 29063
 Tel: 803.399.1133 • Call 803.960.2462 • craigkennedy.kcs@gmail.com

Chester Quarry
 Reclamation Map
 Prepared for
Luck Stone Corporation
 Chester County, South Carolina

Project No. KCS 18-102
 Date: 02-27-19
 Approved by: RCK
 Drawn by: B.C.
 Scale: 1"=200'

Sheet No.
3
 of
3

APPROVED BY
SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL
DIVISION OF MINING AND SOLID WASTE MGT
 BY: *[Signature]*
 TITLE: **RM-2270-1V1**
 DATE APPROVED: **March 31, 2020**
 PERMIT NO.: **I-002270**



A woman with long brown hair, wearing a yellow hard hat with a logo, safety glasses, and a high-visibility yellow safety vest over a blue long-sleeved shirt, stands in profile at a quarry or construction site. The background shows a large stack of colorful shipping containers (red, orange, blue) and a yellow excavator under a bright blue sky with scattered white clouds. The ground is paved and has some orange traffic cones and white barriers.

**The Economic
Impact of
Luck Companies
on South Carolina**

Development,
Construction, &
Operation of the
**Chester County
Quarry Site**



Prepared by:

Joseph C. Von Nessen, Ph.D.

Research Economist

September 1, 2021

Author Profile

Dr. Joseph C. Von Nessen is a research economist in the Division of Research at the Darla Moore School of Business where he specializes in regional economics, regional economic forecasting and housing economics. He regularly conducts a wide variety of economic impact analyses, feasibility studies and independent market research projects for clients in both the private and public sector.

Dr. Von Nessen engages in industry-level and regional economic forecasting for organizations at the state, national and international level. He has served as lead researcher on projects with clients as diverse as Sonoco, BlueCross BlueShield, Michelin, Boeing and the Savannah River National Lab, among others. He has also been the recipient of many grants from both local and national sources, including the U.S. Department of Energy and the U.S. Department of Defense.



Joseph C. Von Nessen, Ph.D.
Research Economist

Dr. Von Nessen is also responsible for the preparation and presentation of the University of South Carolina's annual statewide economic forecast. He serves on the advisory committee of the South Carolina Board of Economic Advisors and is regularly invited to brief the Federal Reserve Bank of Richmond on economic conditions in South Carolina. He frequently appears on programs at national conventions, including the International Builders Show, the 21st Century Building Expo and the North American Regional Science Council and its subsidiaries.

In addition, Dr. Von Nessen specializes in housing economics and residential real estate and provides economic and marketing research and consulting services to builders, developers and other businesses in the housing industry on a regular basis. His recent academic research has focused on the application of hedonic house price modeling to the housing industry. He is a member of the National Association of Home Builders and is actively involved with the local branches of the Home Builders Association and the Association of REALTORS throughout South Carolina.

Dr. Von Nessen is a frequent speaker for business and government leaders throughout the southeast, providing information and consultation about business, housing markets and local economies. He also makes frequent media appearances to discuss various local economic topics of interest.

EXECUTIVE SUMMARY

Luck Companies, founded in 1923, is a family owned and operated business organization that has been building and serving strong communities for nearly 100 years. Through three generations of family leadership, Luck Companies prides itself on being consistently driven by the values of integrity, commitment, leadership, and creativity in order to ignite the potential of its employees, associates, and the communities that it supports in order to make a positive and lasting impact.

Headquartered in Richmond, Virginia, Luck Companies maintains three primary business units in the sustainable production of quality aggregate materials and related services that serve as the foundation for roads, bridges, buildings, and other outdoor structures. The largest business unit is Luck Stone, which currently operates 24 locations across Virginia, the Carolinas, and Georgia. However, Luck Companies structures its properties to maximize the incorporation of all three of its business units, including through community and third-party opportunities.

Luck Companies maintains a commitment to making a positive impact throughout South Carolina—economically, environmentally and in the community. In addition, their stated interest in South Carolina is part of a long-term growth strategy for the company: one that prioritizes the prosperity of people, drives their associates to build lasting relationships, and facilitates Luck Companies' ability to provide high quality aggregates materials and services that will support the growth of the state for decades to come.

In 2021, in addition to its existing location in Kershaw County, Luck Companies is planning to expand its presence in South Carolina by acquiring undeveloped land and then building and operating three new quarries - a process known as greenfielding. This will include a quarry and real estate development area located in Chester County. The purpose of this study is to specifically quantify the potential future economic impacts that will likely arise from the development of the Chester County quarry - both on Chester County itself and on the state of South Carolina as a whole. The key findings of this study are as follows:

continues on next page



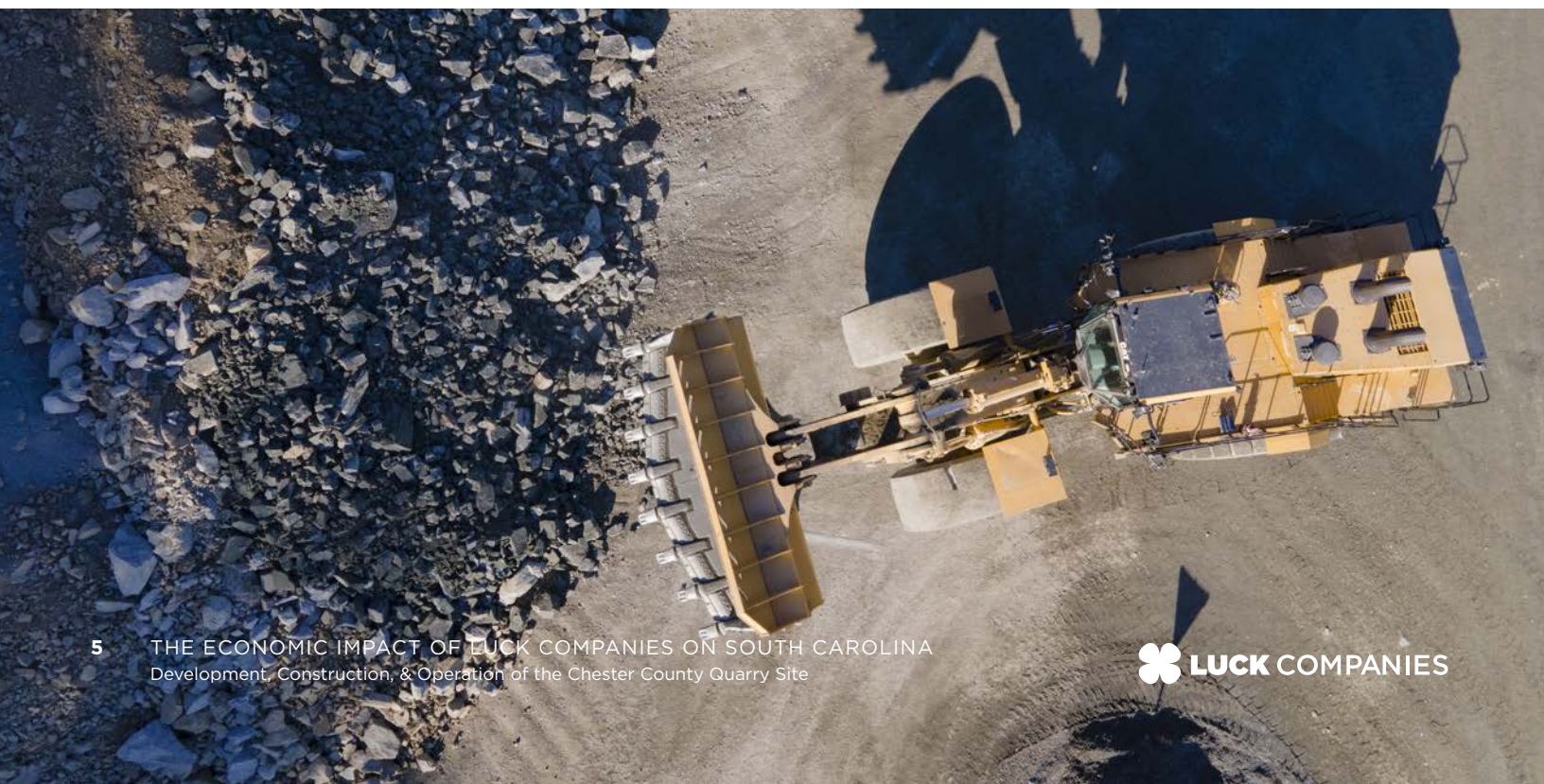
- *When the Chester quarry project moves forward, Luck Companies is expected to invest approximately \$93.0 million towards construction and site development over the next 20 years in two investment phases of ten years each. The average annual capital expenditures during Phase I (Years 1-10) will approximate \$3.9 million, which will then increase to \$5.4 million annually during Phase II (Years 11-20).*
- *The total economic impact of the Chester quarry is estimated to generate an employment multiplier of 1.6. This implies that for every 10 jobs created directly by the Chester quarry, another 6 jobs, on average, will be created elsewhere in Chester County. Moreover, this employment multiplier increases to 2.2 when examined for the state of South Carolina as a whole. These multiplier effects would primarily be the result of the high degree of local purchasing on the part of Luck Companies.*
- *The capital investments towards construction and site development are expected to generate a total economic impact of nearly \$118 million in Chester County by the end of Phase II (Year 20), with an average of 47 temporary jobs supported (directly or indirectly) per year between Years 1 and 20 along with approximately \$43.0 million in total compensation over this same time period. When examined at the state level, the estimated total impact of all construction and site development associated with the Chester site by the end of Phase II increases to \$158 million, which will support a total of 61 jobs annually over the 20-year investment period.*
- *The operations of the new Chester County quarry are expected to begin during the second year of construction and site development. These operations are projected to scale up consistently for five years until meeting demand and then continuing a steady projected revenue growth rate of four percent per year. This schedule implies that the economic impact of all operations associated with the quarry will total nearly \$408 million for Chester County over the first 20 years of operations. By the 20th year, the quarry is expected to support \$30.8 million in economic output annually along with 44 permanent jobs. For the state of South Carolina, the annual impact estimates of the Chester site increase to \$38.1 million by the 20th year of operations along with 59 permanent jobs.*
- *In addition to the development and operation of a new quarry site in Chester County, Luck Companies is also planning to engage in the site development and construction of additional industrial commercial property on adjacent land in Chester County for external use. Through expanding basic infrastructure in Chester County, Luck Companies is increasing the local resources available to the county to aid in their efforts towards proactively recruiting businesses and engaging in broader economic development efforts. Furthermore, through active participation with local community colleges, Luck Companies will also engage and support broader regional efforts towards expanding workforce training. These types of resource expansions can lead to sizable long-run economic benefits that will help to sustain regional growth for far longer than just the lifetime of the quarry.*
- *The operation and opportunities associated with the Luck Companies' Chester site has the ability to provide Chester County with long-term, multi-generational employment sustainability. The long-term viability and necessity of local production coupled with projected increases in local growth rates implies that Luck Companies has the potential to significantly reduce unemployment in and around Chester County in the coming years.*

SECTION *One*

Introduction

The investment activities in which Luck Companies is expected to engage across the state of South Carolina in the coming years has the potential to generate significant long-run economic benefits for the Palmetto State. This includes the site development, construction, and long-term operations of three new quarry sites in South Carolina – including a quarry site in Chester County. This study has specifically quantified the economic impacts that would likely arise from the new Chester quarry – both on Chester County itself and the state of South Carolina as a whole.

When the Chester quarry project moves forward, Luck Companies is expected to invest approximately \$93.0 million towards construction and site development over the next 20 years. These capital investments will likely generate a total economic impact of nearly \$118 million in Chester County over this 20-year time period along with an average of 47 jobs annually. When examined at the state level, this impact increases to over \$158 million and 61 jobs. As construction and site development is completed, the operations of the quarry will begin, thus leading to additional local economic activity. Operations are specifically anticipated to begin during the second year of construction and site development, and all ongoing operations will generate nearly \$408 million in additional economic activity for Chester County during the first 20 years of operations. By the 20th year, the quarry is estimated to generate \$30.8 million in economic annually along with 44 permanent jobs. For the state of South Carolina, the Chester site's impact increases to \$38.1 million along with 59 permanent jobs.





The presence of Luck Companies also has the potential to impact broader economic growth trends of the Chester County region. For example, part of the plans surrounding the development and operation of the Chester quarry includes the development of additional commercial property on adjacent land for external use. Such an expansion of basic infrastructure increases county-level resources to proactively recruit businesses and engage in broader long-run economic development efforts.

As South Carolina continues to recover from the COVID-19 pandemic, capital investments and new, sustainable business activities that help to support higher rates of long-run economic growth have become more important for the state than perhaps ever before. The South Carolina-based investments of Luck Companies, in particular, serve not only to boost long-run rates of economic growth through providing a sizable number of jobs and incomes for local residents, but also through supporting broader investments in more rural areas of the state where economic growth is needed most. It is these types of sustainable, long-term investments that will help put South Carolina in a position to continue to outpace the nation's economic growth rate in the 2020s as it has over the previous decade.

The remainder of this study is organized as follows: Section II provides a brief history of Luck Companies; Section III then details economic impact methodology and the specific empirical techniques used to quantify all estimates in this report; Section IV follows by documenting the primary results of this study through highlighting the economic impact of the Chester quarry on the regions of Chester County and the state of South Carolina as a whole – including all impacts resulting from the economic multiplier effect; finally, Section V offers a brief conclusion.

SECTION *Two*

A Brief History of Luck Companies

Luck Companies, founded in 1923, is a family owned and operated business organization that has been building and serving strong communities for nearly 100 years. Through three generations of family leadership, Luck Companies prides itself on being consistently driven by the values of integrity, commitment, creativity, and leadership in order to ignite the potential of its employees, associates, and the communities that it supports in order to make a positive and lasting impact.

Headquartered in Richmond, Virginia, Luck Companies maintains three primary business units in the sustainable production of quality aggregate materials and related services that serve as the foundation for roads, bridges, buildings, and other outdoor structures. The largest business unit is Luck Stone, which currently operates 24 locations across Virginia, the Carolinas, and Georgia. However, Luck Companies structures its properties to maximize the incorporation of all three of its business units, including through community and third-party opportunities.

Luck Stone is a producer of crushed stone, sand, and gravel – known collectively as aggregate materials – and serves the construction, civil engineering, and environmental industries. Luck Ecosystems is an industry leader in scientifically-based environmental performance products and provides a range of solutions to manage the effects of storm water runoff in a variety of outdoor settings. This includes keeping waterways more pollutant-free, supporting plant growth, and optimizing outdoor sports playing surfaces. Luck Real Estate Ventures specializes in the development of industrial and commercial land.

In 2021, Luck Companies plans to expand its presence in South Carolina by acquiring undeveloped land and then building and operating three new quarries in the counties of Chester, Fairfield, and Spartanburg – a process known as greenfielding. When combined with Luck Stone’s existing quarry located in Kershaw County, these four quarry operations will represent Luck Stone’s total business activities in South Carolina.



LOOKING BACK, LOOKING

Forward

Luck Benefits Package

The commitment of Luck Companies to the communities that it serves is evident not only through its business activities but also through the additional contributions it provides to the people of the community. Such contributions begin with the benefits package available for all of the associates at Luck Companies. Associates have access to a wide range of resources designed to maximize their physical, mental, and financial well-being. The benefits package of Luck Companies includes access to each of the following:

- The Luck Companies Retirement Plan, which provides a pension benefit upon retirement from the company
- Medical coverage, including 100 percent coverage of preventative care
- Telemedicine, which provides 24/7/365 access to a primary care or pediatric medical provider for non-emergency services over the phone or through video chat
- Wellness resources & incentives, which include access to professionals in the fields of mental health, substance abuse, financial counseling, adoption education, child and senior care services, pet care, and legal counseling
- Lifestyle management programs and wellness/fitness coaching programs
- Pre-natal education and support programs
- Health savings accounts, flexible spending accounts, dental care, vision care, life insurance, and disability insurance
- Credit union membership
- Product discounts
- Tuition assistance and reimbursement
- Uniform allowance

Source: Luck Companies, 2021

The Luck Companies Foundation offers grants and charitable donations to local, purpose-driven organizations and also partners with non-profits to lead work that results in long-term, positive outcomes for the local communities. Over the past five years, Luck Companies has awarded over \$4 million through its foundation.

Luck Companies also supports its associates through matching donations through associate giving. Moreover, the Luck Companies Foundation offers grants and charitable donations to local, purpose-driven organizations and also partners with non-profits to lead work that results in long-term, positive outcomes for the local communities. Over the past five years, Luck Companies has awarded over \$4 million through its foundation. These grants are primarily focused in the areas of Values Based Leadership and Environmental Stewardship.

Luck Companies' Values

Luck Companies' dedication to Values Based Leadership (VBL) stems from their commitment to people and values. The spirit of VBL embodies living, working, and leading in alignment with your personal core values, principles, beliefs and purpose to ignite the extraordinary potential in those around you. As the deep-rooted foundation of this organization, these values extend to business and community interactions through their people and the Luck Foundation philanthropy.



LEADERSHIP

Ignites human potential and performance

COMMITMENT

Takes personal responsibility for the success of self, others and the organization

INTEGRITY

Earns the trust and respect of others

CREATIVITY

Delivers ideas and innovation that add value



Source: Luck Companies, 2021

SECTION *Three*

Economic Impact Methodology



This economic impact analysis seeks to determine the impact, or economic footprint, that Luck Companies will have within the state of South Carolina through the development and operation of three new quarries in addition to the current operations of an existing quarry in Kershaw County. Such an impact can be measured by estimating how the expenditures (or purchases) associated with each quarry will likely increase the demand for goods and services in the local economy. For example, if Luck Companies were to make a large local purchase of new equipment or of transportation services from local vendors, the total change in total employment or gross state product that would result from this increase in demand could be estimated. There are three standard categories that are generally estimated that summarize the major contributions of an organization – including Luck Companies – to its local economy: economic output, employment, and total compensation. Each of these categories, in turn, can be broken down into direct, indirect, and induced effects.

The direct effect reflects all of the expenditures that Luck Companies makes directly within a particular region. This includes, for example, employee wages and benefits, mining development, equipment, vendors, and other overhead and administrative costs. These expenditures represent the initial change to the local economy.

The indirect effect reflects all of the additional economic impacts resulting from inter-industry linkages between local businesses within a particular region. For example, if Luck Companies were to make a large in-state purchase of machinery for one of the quarries, the machinery vendor would then have to purchase additional inputs from its suppliers and hire additional workers to handle this new order volume. The suppliers of the machinery vendor would then also experience an increase in demand and have to purchase additional staff and other inputs as well. These indirect effects ripple throughout the quarry's host county as well as the state of South Carolina as a whole and affect many industrial sectors. The total size of the indirect effect is a function of the size of the local supplier network and the size of the initial direct effects.



The induced effect reflects all of the additional economic impacts that result from increases in household spending due to changes in wages. For example, assume again that Luck Companies were to make a large machinery purchase in Chester County. The machinery vendor would purchase additional inputs and hire additional labor. These new workers, in turn, would spend some of their new income on goods and services in a variety of industries within the county – including housing, food, and entertainment. The housing, food, and entertainment industries in Chester County would then see an increase in demand, leading to the hiring of additional workers in these industries, leading to further increases in household spending, and so on.

These successive rounds of indirect and induced effects do not go on forever, which is why a specific value can be calculated for each of them. In each round of spending, money is “leaked out” of the county for a variety of reasons. For example, workers will save some of their additional income and part of the income they do spend will be spent outside of the county. Businesses, too, will necessarily purchase some input materials from outside of the county.

An economic multiplier can be used to determine the total economic impact (direct, indirect, and induced) that results from an initial change in economic activity (the direct effect). For example, if Luck Companies spent \$10 million on machine equipment and this led to a total increase in economic output of \$15 million across all industries in the economy, the economic output multiplier would be 1.5. Multiplier effects vary across industries and, as mentioned above, depend largely on the size of the supplier network. They also depend on the size of the economic region being analyzed. For example, a \$10 million purchase would have a larger impact in South Carolina than on Chester County alone. In addition to economic output, multiplier effects are also calculated for employment and total compensation.