



October 04, 2024

Luck Stone Corporation
Attn: Chuck Stilson
P.O. Box 29682
Richmond, VA 23242
chuck.stilson@luckstone.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-002424 | Luck Edgefield Quarry | Edgefield County

Dear Mr. Stilson:

The S.C. Department of Environmental Services (SCDES) has approved the application and reclamation plan for the Luck Edgefield Quarry as of the date of this letter. SCDES has received the reclamation bond submitted in the amount of \$1,234,464.00.

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 Edgefield Quarry is being issued as of the date of this letter. Enclosed are the permit document, reclamation plan, groundwater monitoring 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 compliance manager, Kaylin Joye, at 803-898-1367 or by e-mail at kaylin.joye@des.sc.gov. Mrs. Joye is also the regional mine inspector for this site.

Respectfully,

A handwritten signature in blue ink that reads "Jeremy E. Eddy".

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

Cc: Marty Lindler, Kaylin Joye, Brett Caswell, David Caddell (Edgefield County), Craig Kennedy
Encl: Permit document, reclamation plan, groundwater monitoring plan, and maps.



SC DEPARTMENT of
**ENVIRONMENTAL
SERVICES**

**INDIVIDUAL MINE
OPERATING PERMIT**

**Luck Edgefield Quarry
Luck Stone Corporation**

Luck Stone Corporation, a corporation, has been granted a Mine Operating Permit, Mine Permit Number I-002424, to operate the Luck Edgefield Quarry in accordance with this Permit, the approved Reclamation Plan, the S.C. Mining Act (S.C. Code Sections 48-20-10 *et seq.*, 1976), and Regulations 89-10 *et seq.* The operator shall conduct this operation as represented in documents submitted to support 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-002424
ORIGINALLY ISSUED: October 4, 2024
MODIFIED: N/A



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 Part II and Part IV, respectively, are also a part of this permit.

CONTACT INFORMATION:

Home Office Address:	Luck Stone Corporation 515 Stone Mill Drive Richmond, VA 23242
Local Office Address:	Same as above
Address for Official Mail:	Luck Stone Corporation Attn: Chuck Stilson P.O. Box 29682 Richmond, VA 23242

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]:

Chuck Stilson	Telephone: 804-784-6300
Director of Quarry Design and Development	Email: chuck.stilson@luckstone.com

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

Latitude: <u>33.6221</u>	Longitude: <u>-82.0902</u>
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LOCATION DESCRIPTION: The operation is located in Edgefield County, approximately 6 mile(s) southeast of Clarks Hill, S.C. Specifically, the site is located on State Road S-33-204 (Woodlawn Road), 2.8 miles west of its intersection with Hwy 28 S.

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 to the surrounding environment.

AFFECTED LAND: 344.5 acres of land are to be affected by Luck Stone Corporation under the current mine plan; 344.5 of the affected 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: 5.9 acres are identified as future reserves and are specified on the mine site map. Prior to the initiation of activity in future reserves, the operator shall submit detailed mine and reclamation plans to SCDES for approval.

BUFFER AREAS: 74.1 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. removal of timber) shall require **prior** notification and approval by SCDES.

TOTAL PERMITTED AREA: 424.5 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. Any change in ownership on any portion of land covered by 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 the change of ownership.

Land Owner(s) as Listed on *Land Entry Agreement(s)*:

TMS #: 058-00-00-039-000 (a portion of), Luck Stone Corporation

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

OWNED	<u>424.5</u>	LEASED	<u>0.0</u>	TOTAL	<u>424.5</u>
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Part III: FINANCIAL ASSURANCE FOR RECLAMATION

The financial assurance for reclamation is based upon the total affected acres. Pursuant to Section 48-20-70 and R.89-200, the financial assurance for this mining permit is set at \$1,234,464.00. The financial assurance shall remain in force and continuous throughout the life of the mining operation and shall only be released, partially or in full, 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 granite at the Luck Edgefield Quarry. The maximum depth to the pit floor shall not exceed -100 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 a tract of land owned by the referenced operator. This tract of land is identified in the submitted *Land Entry Agreement (LEA)*.

MINE/PIT CHARACTERIZATION:

The granite will be excavated, processed, and stockpiled on site. Ground clearing will be accomplished by excavators, bulldozers, wheel loaders, rock breakers, road graders, and hole drillers. Removed overburden will be placed in permanent storage areas at locations designated on the mine map. The exposed granite will be drilled, explosives loaded, and blasted to fragment stone into manageable sizes to facilitate loading in haul trucks and conveyance to the processing plant.

The pit shall be excavated in two phases. Phase 1 does not impact any stream/wetland areas. Phase 2 does impact tributaries on site and will require approval from the U.S. Army Corps of Engineers (USACE) prior to any disturbance in these areas. See Part X: Additional Term & Condition #2.

PROCESSING PLANT LOCATED ON MINE SITE:

The processing plant will consist of primary and secondary crushers, screens, conveyors, and loading and hauling machines. Sized products will be stockpiled around the plant site for future transport offsite. Waste screenings and other fines from crushing, washing, and screening the crushed stone will be temporarily stockpiled around the plant site or permanently placed in overburden storage areas.

The plant area shall be constructed in two phases; Phase 1 does not impact any stream/wetland areas; Phase 2 does impact a tributary on-site and will require approval from USACE prior to any disturbance in this area. See Part X: Additional Term & Condition #2.

MINE DEWATERING:

Due to groundwater seepage from natural fractures/joints in the host rock, quarry dewatering may 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 concerning adverse impacts to neighboring wells, the operator is to notify SCDES's Manager of the Mining and Reclamation Section, Columbia, SC, within 48 hours. After investigation, if SCDES determines 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 that permanent water supply is re-established, the operator shall supply the owner with a temporary water supply (e.g., bottled water for drinking, 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 #3* and Appendix B.

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 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 (at the time of the completed application date).

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 update, as appropriate, all necessary State and Federal permits in order to construct and operate the mine.

Part V: MAPS

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

SM-2424-1V1	Mine Map – Phase 1	Dated: January 5, 2024
SM-2424-2V1	Mine Map – Phase 2	Dated: January 5, 2024
SED-2424-1V1	Site Layout	Dated: February 15, 2024
SED-2424-2V1	E&SC Details (1 of 6)	Dated: February 15, 2024
SED-2424-3V1	E&SC Details (2 of 6)	Dated: February 15, 2024
SED-2424-4V1	E&SC Details (3 of 6)	Dated: February 15, 2024
SED-2424-5V1	E&SC Details (4 of 6)	Dated: February 15, 2024
SED-2424-6V1	E&SC Details (5 of 6)	Dated: February 15, 2024
SED-2424-7V1	E&SC Details (6 of 6)	Dated: February 15, 2024

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

RM-2424-1V1	Reclamation Map	Dated: October 18, 2023
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Part VI: PROTECTION OF NATURAL RESOURCES

MINE SITE AND SURROUNDING AREA:

Prior to mining activities, this site’s land use type was undeveloped; the immediate area around this site is mostly undeveloped (Sumter National Forest) with a few rural residences south of the site. The topography of this area is highly variable (i.e., large hills), with surface elevation ranging from 200 - 450 ft. MSL.

PUBLIC SAFETY:

A gate shall be installed at the entrance to the mine site and kept locked during inactive periods. *Warning* and/or *Danger* signs shall be posted around the perimeter of the property. An appropriate fence shall be installed around the affected area as shown on the mine map.

Operator shall use BMPs to prevent accumulation of sediment/soil on public roads carried by trucks and other vehicles exiting the mine site; any accumulations shall be removed by the operator on a daily basis 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 establish procedures to minimize fuel spillage or incidental spillage of other petroleum products during storage, refueling of equipment or in the performance of 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. Per the Mine Safety Health Administration (MSHA) requirements, the hard rock pit walls shall be benched to maintain stability and provide safety. All slopes in unconsolidated material shall be 3H:1V for final reclamation.

PUBLICLY-OWNED PARKS, FORESTS, OR RECREATION AREAS:

The Sumter National Forest is adjacent to this site on the north, south, and west. To prevent an adverse effect on publicly owned land, the operator shall maintain a minimum 50ft. undisturbed buffer and vegetate all perimeter overburden areas as soon as feasible along the border between the mining activity and the public land. This will ensure that proper visual screening will obstruct the operation from view.

WETLANDS AND SURFACE WATER AREAS:

Stevens Creek borders the site to the north and flows west to east. Multiple tributaries reach southward across the site, as shown on the approved mine map. There are approximately two (2) acres of wetlands and approximately four (4) miles of stream channels within the permitted boundary.

The operator shall maintain a minimum 50ft. undisturbed buffer between all land disturbance activity and any USACE jurisdictional wetlands and stream channels. This buffer shall be permanently flagged prior to the initiation of any mine activity. The flags shall be maintained throughout the active mine operation of the site. The operator is allowed to discharge accumulated stormwater—that meets NPDES permit limits—into wetlands through a regulated NPDES outfall.

Phase 2 of pit development and Phase 2 of the processing plant construction is proposed to impact stream channels. See Part X: Additional Term & Condition #2.

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:

Based on the report, *Cultural Resources Reconnaissance Survey, Luck Edgefield, Edgefield County, South Carolina*, five (5) archaeological sites were identified within areas planned to be affected by mine development, and have been evaluated for eligibility for listing in the National Register of Historic Places (NRHP). None of those sites were designated as historic resources or structures that are eligible for listing in the NRHP.

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; surveys were performed, but there are no threatened or endangered species believed to inhabit this area. However, the Tricolored Bat has been proposed to be listed as an endangered species, but a final decision has not been rendered as of the date of permit issuance. See Part X: Additional Terms & Conditions #4.

VISUAL SCREEN:

To appropriately screen the operation from view, the operator shall maintain a minimum 50ft. undisturbed buffer between mining activity and all property lines, as shown on the mine map. A vegetated earthen berm/overburden storage area shall be constructed and maintained on the mine side of this undisturbed buffer, as shown on the mine map. These areas shall be vegetated at the earliest practicable time.

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 will 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 barren of vegetation to stabilize the soil and reduce potential for wind erosion and dust emissions.

Part VII: STANDARD CONDITIONS OF MINE OPERATING PERMIT

SURVEY MONUMENTS:

In accordance to 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 the discretion of SCDES, the operator may be required to mark the area to be affected 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 are to be maintained through additional terms and conditions of this permit or by regulations. Records shall be kept on site or at the office identified for receipt of official mail and 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, the modification request 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 by certified letters of the approval of the transfer by SCDES.

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 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 the State Regulations or violations of the S.C. Mining Act to ensure the purposes of this Act are enforced.

The operator shall comply at all times with all conditions of this mine operating permit. 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-compliance 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 form for the report will be made available to the operator electronically. The operator should receive access to the report form from SCDES by July 1 of each year; however, the operator is ultimately responsible for obtaining the *Annual Reclamation Report* 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 payment. The *Annual Reclamation Report* and Annual Operating Fee are required if there is any permitted land 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 approval by SCDES. Topsoil fill approved by SCDES may be brought in from off-site sources only for the purposes of mine land reclamation.
2. Prior to any mining activities commencing in Phase 2 of the pit or plant area, the operator shall receive the appropriate approvals for stream channel impacts from the USACE. The operator shall submit all necessary approvals to the Mining & Reclamation Program before any disturbances in these areas.
3. Prior to any dewatering activities, four (4) groundwater monitoring wells shall be constructed in the areas delineated in the Groundwater Monitoring Plan (Appendix B). 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. These data shall be submitted quarterly to the Division of Mining and Solid Waste Management by the 28th following the final month of the quarter. The report should include a record of daily precipitation measurements, with monthly rainfall totals graphed to facilitate comparison to well hydrographs.

4. If/when the Tricolored Bat is listed as a threatened or endangered species, the operator shall consult with the USFWS and comply with any new requirements.

APPENDIX A

MODIFICATIONS TO MINE PERMIT I-002424

NUMBER	DATE	DESCRIPTION OF MODIFICATION (PA= Permitted Acreage; AA= Affected, Bonded Acreage; FR= Reserves Acreage, B= Buffer Acreage)
Issued	10/4/24	PA = 424.5ac., AA = 344.5ac., FR = 5.9ac., B = 74.1 ac. Permit issued.

APPENDIX B



Groundwater Monitoring Plan
Luck Edgefield Site
Edgefield County, South Carolina
S&ME Project No. 22350640

PREPARED FOR:

Luck Companies
Post Office Box 29682
Richmond, Virginia 23242

PREPARED BY:

S&ME, Inc.
8646 W. Market Street, Suite 105
Greensboro, North Carolina 27410

February 27, 2024



February 27, 2024

Luck Companies
Post Office Box 29682
Richmond, Virginia 23242

Attention: Mr. Bruce Smith

Submitted via email: brucesmith@luckcompanies.com

Reference: **Groundwater Monitoring Plan
Luck Edgefield Site**
Edgefield County South Carolina
S&ME Project No. 22350640

Dear Mr. Smith:

S&ME, Inc. (S&ME) has prepared the Groundwater Monitoring Plan in association with the proposed Luck Companies aggregate mine in Edgefield County, South Carolina. The Plan provides details as to how Luck Companies will monitor groundwater prior to and during operation of the proposed mine. The approved Plan will be incorporated into SCDHEC Mine permit for the site.

Please contact us at your convenience if there are questions regarding the information contained in this document.

Sincerely,
S&ME, Inc.

A handwritten signature in blue ink, appearing to read 'Nathan Williams'.

Nathan Williams, P.G.
Senior Geologist
nwilliams@smeinc.com



A handwritten signature in blue ink, appearing to read 'Edmund Q.B. Henriques'.

Edmund Q.B. Henriques, LG (NC)
Principal Geologist
ehenriques@smeinc.com

cc: South Carolina Department of Health and Environmental Control
Mining and Reclamation
2600 Bull Street
Columbia, South Carolina 29201
Attention: Mr. Jeremy Eddy (via email eddyje@dhec.sc.gov)



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Appendix I – Figures



1.0 INTRODUCTION

S&ME has prepared this Groundwater Monitoring Plan (Plan) on behalf of Luck Companies in association with the proposed Luck Edgefield aggregate mine located north of Woodlawn Road near Clarks Hill in Edgefield County, South Carolina. The Plan was prepared for submittal to the Mining and Reclamation Section of the South Carolina Department of Health and Environmental Control (SCDHEC) to supplement the *Application For A Mine Operating Permit (Form MR-400)*. The purpose of the Plan is to measure static groundwater levels on a regular basis to establish a pre-mining baseline for groundwater levels and to document changes to groundwater levels during the mining operations. The information gathered will provide a basis to assess if observed changes indicate a potential to impact water supply wells on neighboring properties.

2.0 GROUNDWATER MONITORING

2.1 Proposed Well Locations

The Plan includes installation of four permanent monitoring wells to serve as points to monitor groundwater occurrence within the bedrock aquifer. Monitoring wells LTMW-1, LTMW-2, LTMW-3, and LTMW-4 depicted on **Figure 1, Conceptual Site Plan With Proposed Monitoring Wells, in Appendix I**, will be used to monitor groundwater within the bedrock aquifer. Hereafter, this group of wells will be referred to as the Plan Wells.

The Plan Wells are positioned north, south, east, and west of the proposed mine pits. The Plan Wells will be used to monitor water levels in the bedrock aquifer, and groundwater drawdown associated with dewatering for mine development. Monitoring well LTMW-1 will be positioned between the mine pit and the nearest water supply well, located to the south of the Luck Edgefield site, across Woodlawn Road. As discussed in the S&ME's *Hydrogeologic Assessment Report, Luck Edgefield Site*, dated February 5, 2024, currently there are no known water supply wells to the north, east, or west within a 0.5-mile radius of the proposed pit. Considering the long-term operation of the proposed quarry, and the potential for changes in land use over time in the surrounding area, monitoring wells are also proposed to the north, east, and west of the proposed mine pits. Based on the current undeveloped status of the Luck Edgefield site and considering the need for Luck Companies to develop site grading plans after approval of the mine permit, it may be necessary to make minor modifications of the final locations for the Plan Wells. Accordingly, the locations for these proposed wells should be considered approximate.

2.2 Well Construction Details

Prior to well construction, Luck Companies will obtain a monitoring well permit from SCDHEC. A South Carolina licensed well driller will drill and install the Plan Wells. The borehole for each well will be drilled using air-hammer or air-rotary drilling methods. Each well will be constructed with a nominal 6-inch diameter, galvanized or PVC well casing installed and grouted in-place. The surface casing will extend from approximately three feet above the ground surface down to the top of bedrock. The remaining portions of each well will be open borehole within the bedrock – no well screen will be installed. The well surface completions will include a lockable well cover affixed to the top of the surface casing pipe. A well tag will be affixed to the surface casing. **Figure 2, Typical Bedrock Well Schematic, in Appendix I**, provides a typical well construction detail for the proposed Plan Wells.



During well drilling, rock cuttings will be collected and logged on-site. A boring log will be prepared documenting at a minimum, depth to top of bedrock, rock type, mineral weathering comments, soft and hard drilling zones, and suspect water bearing zones. Luck Companies will prepare and submit to SCDHEC, a *Well Installation Data Report* following installation of the Plan Wells and obtaining surveyed coordinates and top of casing elevations.

2.3 Monitoring Intervals and Data Collection

The monitoring locations detailed in Section 2.1 will be monitored for depth to water to determine the groundwater elevation. The depth to water will be measured with an electronic water probe and relative to the top of the well casing. The depth to water measurements will be obtained monthly and reported to SCDHEC on a quarterly basis.

The groundwater elevation will be calculated by subtracting the depth to water measurement from the top of casing elevation. The locations of the Plan Wells and top of casing elevations will be measured by a South Carolina licensed surveyor.

Each quarterly report will be submitted to SCDHEC within 30 days and will summarize the current and historical groundwater elevation dataset. If a statistically significant decrease in groundwater elevation occurs, which is determined by a South Carolina licensed geologist or professional engineer to be an indicator that mine dewatering operations have resulted in potential impacts to neighboring wells, then the licensed professional will prepare and submit a written report to SCDHEC within five business days from when the determination is made.

Table 2-1 – Plan Monitoring Summary

Well ID	Surface Casing Length (feet)	Approximate Total Depth (feet)	Monitoring Parameters <i>Monthly prior to mine operation; and Monthly after operations begin</i>	Top of Casing Elevation
LTMW-1	TBD	up to 400	Depth to water	Requires Survey
LTMW-2	TBD	up to 300	Depth to water	Requires Survey
LTMW-3	TBD	up to 300	Depth to water	Requires Survey
LTMW-4	TBD	up to 300	Depth to water	Requires Survey

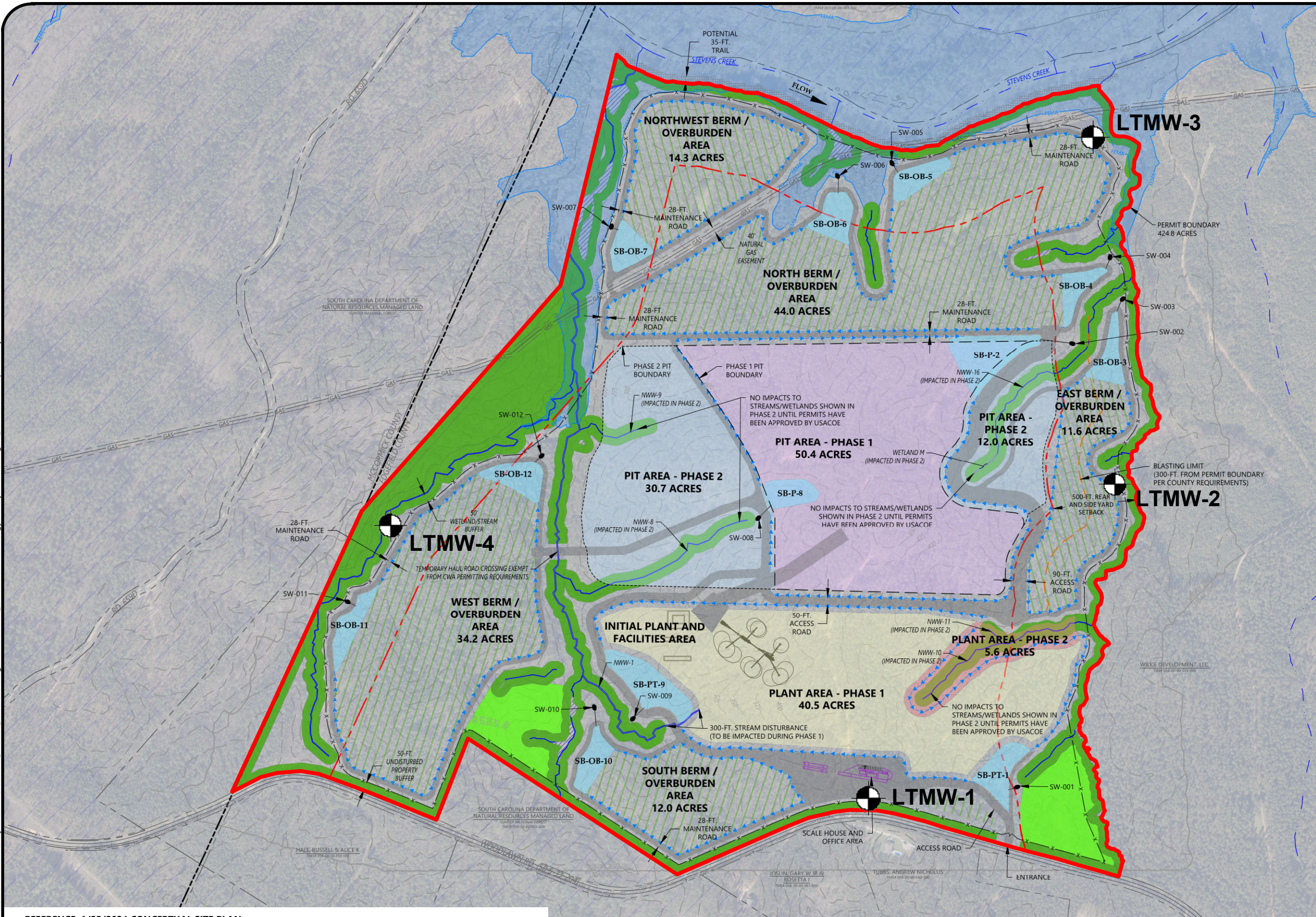
TBD = to be determined at time of drilling based on actual depths to top of rock

Note: The approximate total depths listed for LTMW-2, LTMW-3 and LTMW-4 are less than the approximate total depth of well LTMW-1, based on ground surface elevations at proposed well locations.

Appendices

Appendix I – Figures

Drawing Path: T:\Charlotte-1350\Projects\2022\22350640_Luck Co_Luck Stone Edgefield Mine Site_Wimshoro SC\4 Energy\GIS\HydroModeling\03_SITEPLAN.mxd plotted by D:\Homans 01-29-2024



CONCEPTUAL SITE PLAN WITH PROPOSED MONITORING WELLS

LUCK EDGEFIELD SITE
EDGEFIELD COUNTY, SOUTH CAROLINA

SCALE:
1" = 600'
DATE:
1-29-24
PROJECT NUMBER
22350640
FIGURE NO.

1

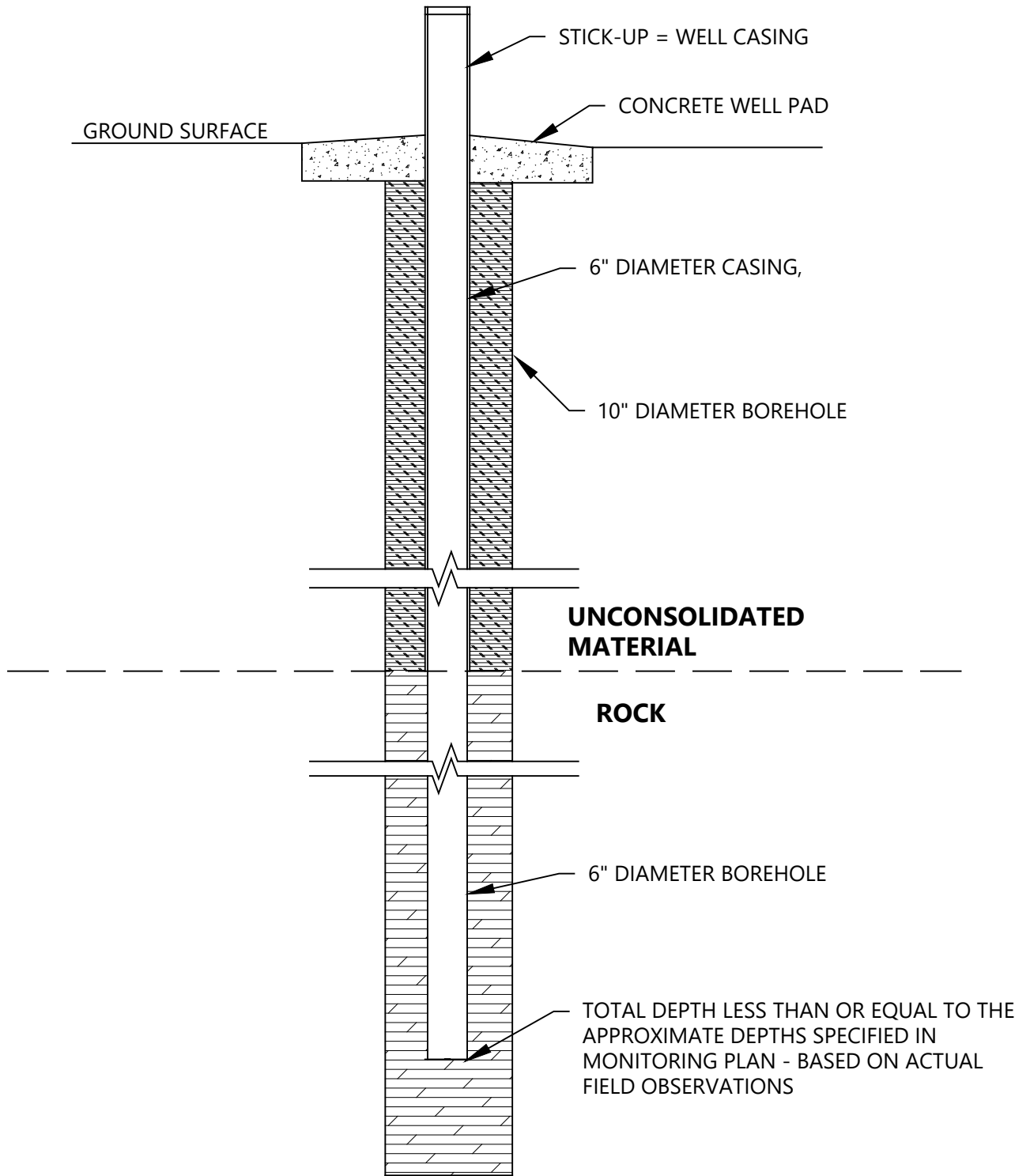
REFERENCE: 1/25/2024 CONCEPTUAL SITE PLAN
THIS MAP IS FOR INFORMATIONAL PURPOSES ONLY.
ALL FEATURE LOCATIONS DISPLAYED ARE
APPROXIMATED. THEY ARE NOT BASED ON CIVIL
SURVEY INFORMATION, UNLESS STATED OTHERWISE.



Monitoring Plan Wells

LEGEND
 SITE BOUNDARY

Drawing Path: C:\Users\murphy\OneDrive - S&ME, Inc\Edgefield Site\PROPOSED WELL SCHEMATIC-rev.dwg



TYPICAL BEDROCK WELL SCHEMATIC

SCALE:

NTS

DATE:

FEB 2024

PROJECT NUMBER

22350640

FIGURE NO.

2



LUCK EDGEFIELD SITE
EDGEFIELD COUNTY, SOUTH CAROLINA

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 in a rural area with land cover consisting of hardwood and pine forests for managed timber. Within the permitted land, undisturbed buffers are established to provide additional protection to adjacent properties, streams, and other sensitive areas. Based on a survey, there are no endangered species or sensitive habitats on-site that will be affected by mining and reclamation.

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 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, cleanup 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. The fence around the property will be inspected and repaired as necessary to provide a barrier to the pit area. The undisturbed buffers will provide wildlife corridors and natural habitat.

Vegetative filters will be established consisting of existing woodlands to provide redundant sediment control to protect wetlands and adjacent properties from mining activities.

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 be regulated by 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 appropriated 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

NONE PROVIDED

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 the granite 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 in the pit is not necessary to achieve final 3:1 slopes in the unconsolidated overburden.

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

NONE PROVIDED

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.

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 reseeded 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 granite 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 granite 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. Sediment basins to be established to control sediment from overburden storage areas and from erosion in disturbed areas will be evaluated at the end of mining. The basins will either be breached, graded and reclaimed as grassland or left in place to function as a detention pond.

Describe the method of restoring or establishing stream channels, stream banks, and site drainage to a condition to minimize erosion, siltation, and other pollution.

Streams to be impacted in phase 2 mining will be permitted and mitigate under the Corps of Engineers permit before any disturbance to the stream or buffer to the stream.

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 relatively 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 where future tenants on the property can use the 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):

[4-Edgefield RECLAMATION MAP-\(2\)- 24X36.pdf - 02/22/2024 10:59 AM](#)

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.

Not applicable

Schedule for Implementing Conservation and Reclamation Practices

Conservation & Reclamation Practices	Segment # or Area	Planned Amount	Planned Year	*Applied Amount	*Applied Year	Notes
Mark wetland buffer WSB-2 & property line buffers PLB-1; PLB-6	Access Road	7.0 ac	2026			NONE PROVIDED
Mark wetland buffer WSB-5	Pit-Phase 1	4.0 ac	2026			NONE PROVIDED
Mark wetland buffer WSB-2; WSB-3; WSB-12; WSB-13, WSB-14	Plant	13.2 ac	2026			NONE PROVIDED
Construct Sediment Basins SB-PT-1; SB-PT -9 and associated diversion channels	Plant	3.7	2026/7			NONE PROVIDED
Construct Fence	Permit Area	17,500 ft	2027			NONE PROVIDED
US Army Corps Nationwide permit to impact stream	Stream NWW-1	300 ft	2026			NONE PROVIDED
Construct Sediment Basins SB-P-2; SB-P-8 and associated diversion channels	Pit - Phase 1	3.3 ac	2026/27			NONE PROVIDED
Construct berms, slope and revegetate for plant area; slope and revegetate	South Berm/Ovbn	19.5 ac	2026/27			NONE PROVIDED
Mark wetland buffers WSB-1; WSB-4; WSB-5	East Berm/Ovbn	11.3 ac	2026/27			NONE PROVIDED
Construct Sediment Basins SB-OB-3 and associated diversion channels East Berm/Ovbn 1.1 ac 2027/28	East Berm/Ovbn	1.1 ac	2026/27			NONE PROVIDED
Development of overburden storage with grading to 3:1 slopes and revegetating East Berm/Ovbn 17.8 ac	East Berm/Ovbn	17.8 ac	2027 - 2035			NONE PROVIDED
Mark property line buffer, PLB-5, and wetland buffer WSB-11; WSB-13; WSB-14	West Berm/Ovb	22.7 ac	TBD			NONE PROVIDED
Construct Sediment Basins SB-OB-11; -SB-OB-12 and associated diversion channels	West Berm/Ovbn	2.5 ac	TBD			NONE PROVIDED
Development of overburden storage with grading to 3:1 slopes and revegetating	West Berm/Ovbn	45.8 ac	TBD			NONE PROVIDED
Deploy silt fencing and/or other sediment control BMPs	Where necessary	As necessary	TBD			NONE PROVIDED

Conservation & Reclamation Practices	Segment # or Area	Planned Amount	Planned Year	*Applied Amount	*Applied Year	Notes
Slope overburden to 3:1 slope along terminal pit wall and revegetate	Pit ♦ Phase 1	25.0 ac	TBD			As mining reaches a terminal wall and feasible to conduct final reclamation
Mark property line buffer, PLB-2, and wetland buffer WSB-1; WSB-6; WSB-7; WSB-8	North Berm/Ovbn	19.7 ac	TBD			NONE PROVIDED
Construct Sediment Basins -SB-OB-4; SB-OB-5; SB-OB-6 and associated diversion channels	North Berm/Ovbn	3.4 ac	TBD			NONE PROVIDED
Development of overburden storage ♦ grading to 3:1 slopes and revegetating North Berm/Ovbn 60.1 TBD	North Berm/Ovbn	60.1 ac	TBD			NONE PROVIDED
Mark property line buffer, PLB-3; and wetland buffer WSB-8; WSB-9 Northwest Berm/Ovbn 8.7 ac TBD	Northwest Berm/Ovbn	8.7 ac	TBD			NONE PROVIDED
Construct Sediment Basins SB-OB-7 and associated diversion channels	Northwest Berm/Ovbn	1.1 ac	TBD			NONE PROVIDED
Development of overburden storage ♦ grading to 3:1 slopes and revegetating	Northwest Berm/Ovbn	20.9 ac	TBD			NONE PROVIDED
Prior to mining in jurisdictional streams NWW-8, NWW-9, NWW-14, NWW-15, & wetlands H & L, a Corps of Engineers 404 permit will be obtained Pit ♦ Phase 2, TBD TBD 404 permit to be issued before wetland, stream or stream and wetland buffers are disturbed	Pit ♦ Phase 2	TBD	TBD			404 permit to be issued before wetland, stream or stream and wetland buffers are disturbed
Prior to expanding Plant area into jurisdictional stream NWW-10 & NWW-11, a Corps of Engineers 404 permit will be obtained	Plant Area	TBD	TBD			404 permit to be issued before stream or stream buffers are disturbed
Route stormwater into pit	Pit ♦ Phases 1 & 2	As necessary	At all times			Route stormwater into pit Pit ♦ Phases 1 & 2 As necessary At all times Where feasible

Conservation & Reclamation Practices	Segment # or Area	Planned Amount	Planned Year	*Applied Amount	*Applied Year	Notes
Slope overburden to 3:1 slope along terminal pit wall and revegetate	Pit ♦ Phase 2	TBD	TBD			As mining reaches a terminal wall and feasible to conduct final reclamation
Temporary stream crossing restored to original grade and reclaimed	Stream NWW-1	0.1 ac	End of mining			Temporary stream crossing restored to original grade and reclaimed Stream NWW-1 0.1 ac End of mining Haul road to West Overburden
Remove mine equipment, process plant equipment, and stone stockpiles	All	All	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-2424-141
Date Approved October 04, 2024
Permit # I-002424

N/F
SOUTH CAROLINA DEPARTMENT OF
NATURAL RESOURCES MANAGED LAND
SUMTER NATIONAL FOREST
TMS 037-00-00-001-000

N/F
SOUTH CAROLINA DEPARTMENT OF
NATURAL RESOURCES MANAGED LAND
SUMTER NATIONAL FOREST

WILKIE DEVELOPMENT, LLC
TMS#058-00-00-039-000

WILKIE DEVELOPMENT, LLC
253-00-00-00
(McCORMICK COUNTY)

N/F
HALE, RUSSELL & ALICE
TMS 256-00-00-002

HALE, RUSSELL & ALICE
058-00-00-059-000

N/F
JOSLIN, GARY W JR &
ROSETTA I
TMS 058-00-00-061-000

N/F
TUBBS, ANDREW NICHOLUS
TMS 058-00-00-060-000

N/F
BARROW, JAMES O IV &
CASEY D
TMS 058-00-00-063-000

PIN: 058-00-00-058-000

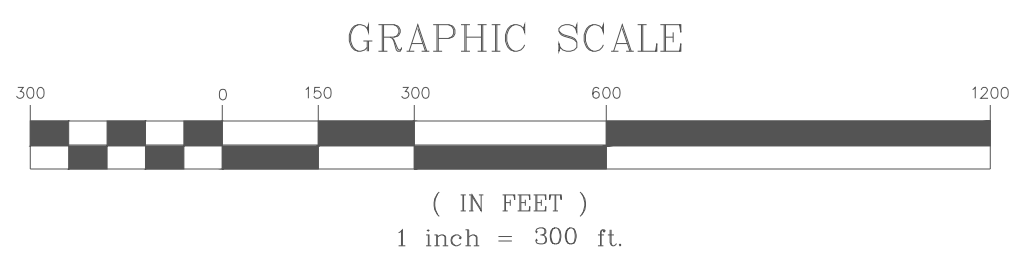
PIN: 058-00-00-039-000
WILKIE DEVELOPMENT, LLC
TMS#058-00-00-039-000

NOTES:

- MINE PERMIT BOUNDARY IS BASED ON SURVEY BY GLENN ASSOCIATES SURVEYING, INC. THE MINE PERMIT AREA IS PART OF AN OVERALL TRACT (TMS# 058-00-00-039-00). THE MINE PERMIT AREA IS EXPECTED TO BE SUBDIVIDED.
- TOPOGRAPHIC CONTOURS WERE SURVEYED BY GLENN ASSOCIATES SURVEYING, INC.
- AQUATIC RESOURCES SHOWN ARE FROM S&ME, INC.
- STORMWATER SEDIMENT BASINS AND STORMWATER DIVERSIONS ARE AS PROVIDED BY S&ME, INC. IN CONJUNCTION WITH THE EROSION AND SEDIMENT CONTROL PLAN.
- SURROUNDING PARCEL DATA ARE FROM EDGEFIELD COUNTY'S GEOGRAPHIC INFORMATION SYSTEM (GIS) DEPARTMENTS.
- MINE DESIGN PROVIDED BY LUCK STONE CORPORATION.
- THE EXISTING TEMPORARY ENTRANCE WILL BE USED UNTIL THE MINE ENTRANCE IS CONSTRUCTED. AFTER THE MINE ENTRANCE IS COMPLETED, THE TEMPORARY ENTRANCE WILL BE RECLAIMED AND NO LONGER USED FOR AN ENTRANCE.
- WHERE NECESSARY DISCHARGES FROM SEDIMENT BASINS WILL BE PIPED UNDER MINE ROADS TO NPDES OUTFALLS.

SUMMARY OF ACREAGE DETAILS

AFFECTED AREA	344.5 ACRES
BUFFER AREA	74.1 ACRES
FUTURE IMPACT AREA	5.9 ACRES
TOTAL PERMIT AREA	424.5 ACRES
BONDED AREA	344.5 ACRES



LEGEND

- PIT (AFFECTED)
- PROCESS PLANT (AFFECTED)
- BERM/OVERBURDEN STORAGE (AFFECTED)
- ACCESS/HAUL ROAD (AFFECTED)
- SEDIMENT BASIN (AFFECTED)
- VEGETATIVE FILTER (VF) (AFFECTED)
- (FUTURE IMPACT)
- WETLANDS (BUFFER)
- 50 FEET PROPERTY LINE AND WETLAND BUFFER (BUFFER)
- PROPERTY LINE
- PERMIT BOUNDARY
- AFFECTED AREA WITHIN MINE PERMIT
- 250 FEET PROPERTY LINE BLASTING SETBACK
- 300 FEET GAS LINE BLASTING SETBACK
- STREAMS
- FEMA FLOOD LINE
- COUNTY LINE
- STORMWATER FLOW DIRECTION
- EXISTING GRADE CONTOUR (5 FEET)
- PERIMETER SECURITY FENCE

NOTE: PERMIT CATEGORY FOR EACH MINE FACILITY INDICATED IN PARENTHESIS

REVISIONS

Date	By	Description

Kennedy Consulting Services, LLC
Craig Kennedy
KCS
Office: 403 Seaside Court, Lenoir, SC 29072
Call: 803.960.2562
Mail: P.O. Box 364, Lenoir, SC 29063
Email: craigenkenny.KCS@gmail.com

Luck Edgefield
Mine Map-Phase I
Prepared for
Luck Stone Corporation
Edgefield County, South Carolina

Project No.: KCS 22-179
Date: 01-05-24
Approved by: RCK
Drawn by: B.C.
Scale: 1"=300'

Sheet No.
1
of
5

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

By: *Jeremy E. Eddy*
Map Name: SM-2424-241
Date Approved: October 04, 2024
Permit #: I-002424

N/F
SOUTH CAROLINA DEPARTMENT OF
NATURAL RESOURCES MANAGED LAND
SUMTER NATIONAL FOREST
TMS 037-00-00-001-000

N/F
SOUTH CAROLINA DEPARTMENT OF
NATURAL RESOURCES MANAGED LAND
SUMTER NATIONAL FOREST

WILKIE DEVELOPMENT, LLC
TMS#058-00-00-039-000

WILKIE DEVELOPMENT, LLC
253-00-00-00
(McCORMICK COUNTY)

N/F
HALE, RUSSELL & ALICE
TMS 256-00-00-002

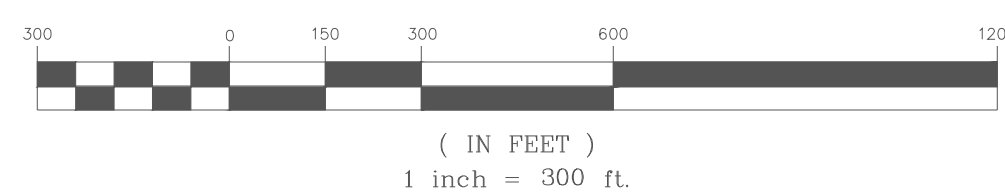
HALE, RUSSELL & ALICE
058-00-00-059-000

US FOREST SERVICE
039-00-00-001-000

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- WHERE NECESSARY DISCHARGES FROM SEDIMENT BASINS WILL BE PIPED UNDER MINE ROADS TO NPDES OUTFALLS.

GRAPHIC SCALE



LEGEND

[Symbol]	PIT (AFFECTED)
[Symbol]	PROCESS PLANT (AFFECTED)
[Symbol]	BERM/OVERBURDEN STORAGE (AFFECTED)
[Symbol]	ACCESS/HAUL ROAD (AFFECTED)
[Symbol]	SEDIMENT BASIN (AFFECTED)
[Symbol]	VEGETATIVE FILTER (VF) (AFFECTED)
[Symbol]	(FUTURE IMPACT)
[Symbol]	WETLANDS (BUFFER)
[Symbol]	50 FEET PROPERTY LINE AND WETLAND BUFFER (BUFFER)
[Symbol]	PROPERTY LINE
[Symbol]	PERMIT BOUNDARY
[Symbol]	AFFECTED AREA WITHIN MINE PERMIT
[Symbol]	250 FEET PROPERTY LINE BLASTING SETBACK
[Symbol]	300 FEET GAS LINE BLASTING SETBACK
[Symbol]	STREAMS
[Symbol]	COUNTY LINE
[Symbol]	FEMA FLOOD LINE
[Symbol]	STORMWATER FLOW DIRECTION
[Symbol]	PERIMETER SECURITY FENCE

NOTE: PERMIT CATEGORY FOR EACH MINE FACILITY INDICATED IN PARENTHESIS

By	Date

REVISIONS

Description

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Luck Edgefield
Mine Map-Phase 2
Prepared for
Luck Stone Corporation
Edgefield County, South Carolina

Project No.: KCS 22-179
Date: 01-05-24
Approved by: RCK
Drawn by: B.C.
Scale: 1"=300'

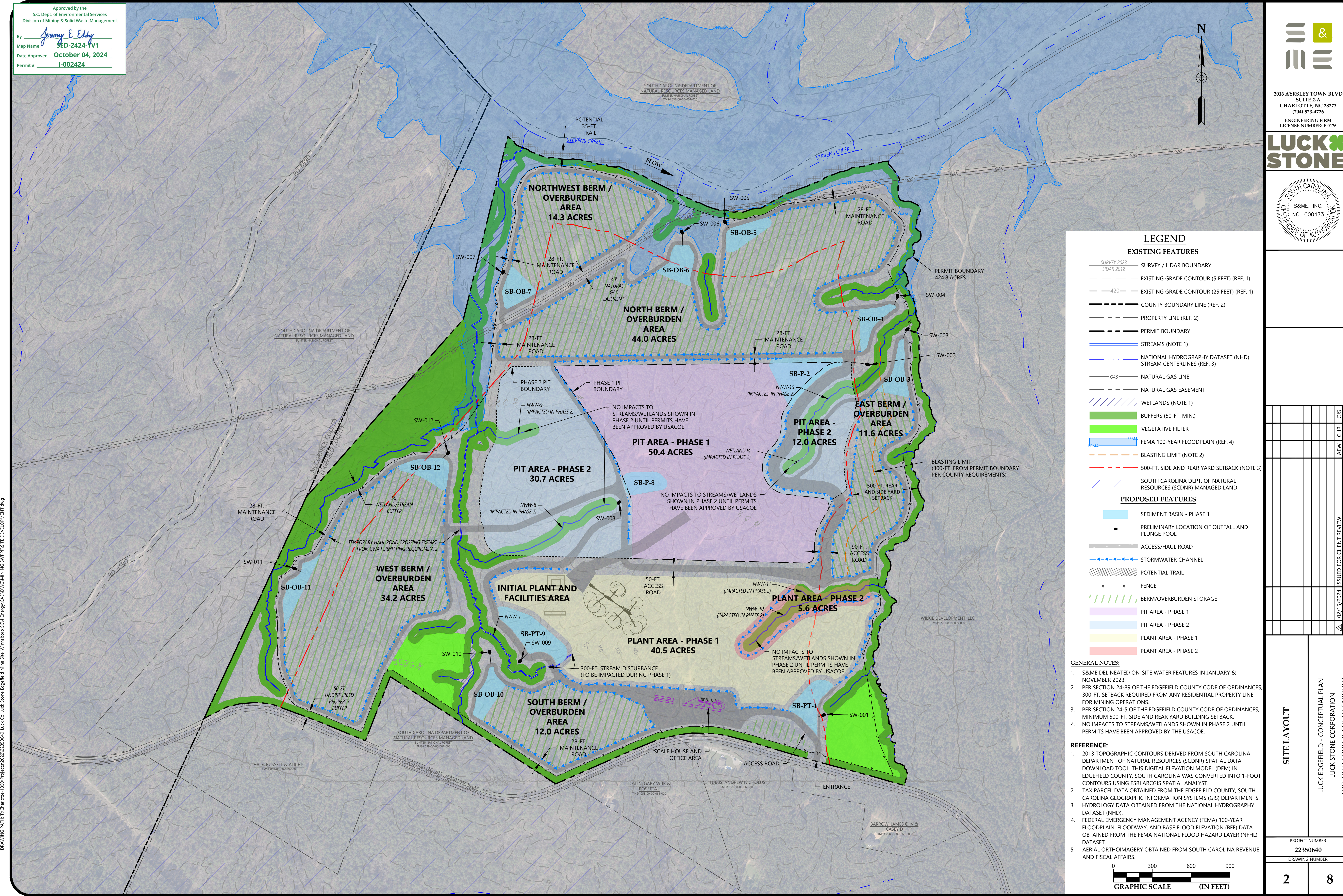
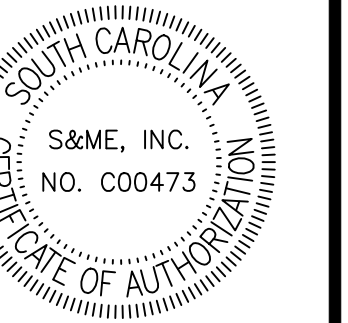
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of
5

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

By Jeremy E. Eddy
Map Name SED-2424-V1
Date Approved October 04, 2024
Permit # I-002424



2016 AYRSLEY TOWN BLVD
SUITE 2-A
CHARLOTTE, NC 28273
(704) 523-4726
ENGINEERING FIRM
LICENSE NUMBER: E-0176



LEGEND

EXISTING FEATURES

- SURVEY / LIDAR BOUNDARY
- EXISTING GRADE CONTOUR (5 FEET) (REF. 1)
- EXISTING GRADE CONTOUR (25 FEET) (REF. 1)
- COUNTY BOUNDARY LINE (REF. 2)
- PROPERTY LINE (REF. 2)
- PERMIT BOUNDARY (424.8 ACRES)
- STREAMS (NOTE 1)
- NATIONAL HYDROGRAPHY DATASET (NHD) STREAM CENTERLINES (REF. 3)
- NATURAL GAS LINE
- NATURAL GAS EASEMENT
- WETLANDS (NOTE 1)
- BUFFERS (50-FT. MIN.)
- VEGETATIVE FILTER
- FEMA 100-YEAR FLOODPLAIN (REF. 4)
- BLASTING LIMIT (NOTE 2)
- 500-FT. SIDE AND REAR YARD SETBACK (NOTE 3)
- SOUTH CAROLINA DEPT. OF NATURAL RESOURCES (SCDNR) MANAGED LAND

PROPOSED FEATURES

- SEDIMENT BASIN - PHASE 1
- PRELIMINARY LOCATION OF OUTFALL AND PLUNGE POOL
- ACCESS/HAUL ROAD
- STORMWATER CHANNEL
- POTENTIAL TRAIL
- FENCE
- BERM/OVERBURDEN STORAGE
- PIT AREA - PHASE 1
- PIT AREA - PHASE 2
- PLANT AREA - PHASE 1
- PLANT AREA - PHASE 2

GENERAL NOTES:

1. S&ME DELINEATED ON-SITE WATER FEATURES IN JANUARY & NOVEMBER 2023.
2. PER SECTION 24-89 OF THE EDGEFIELD COUNTY CODE OF ORDINANCES, 300-FT. SETBACK REQUIRED FROM ANY RESIDENTIAL PROPERTY LINE FOR MINING OPERATIONS.
3. PER SECTION 24-5 OF THE EDGEFIELD COUNTY CODE OF ORDINANCES, MINIMUM 500-FT. SIDE AND REAR YARD BUILDING SETBACK.
4. NO IMPACTS TO STREAMS/WETLANDS SHOWN IN PHASE 2 UNTIL PERMITS HAVE BEEN APPROVED BY THE USACOE.

REFERENCE:

1. 2013 TOPOGRAPHIC CONTOURS DERIVED FROM SOUTH CAROLINA DEPARTMENT OF NATURAL RESOURCES (SCDNR) SPATIAL DATA DOWNLOAD TOOL. THIS DIGITAL ELEVATION MODEL (DEM) IN EDGEFIELD COUNTY, SOUTH CAROLINA WAS CONVERTED INTO 1-FOOT CONTOURS USING ESRI ARCGIS SPATIAL ANALYST.
2. TAX PARCEL DATA OBTAINED FROM THE EDGEFIELD COUNTY, SOUTH CAROLINA GEOGRAPHIC INFORMATION SYSTEMS (GIS) DEPARTMENTS.
3. HYDROLOGY DATA OBTAINED FROM THE NATIONAL HYDROGRAPHY DATASET (NHD).
4. FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) 100-YEAR FLOODPLAIN, FLOODWAY, AND BASE FLOOD ELEVATION (BFE) DATA OBTAINED FROM THE FEMA NATIONAL FLOOD HAZARD LAYER (NFHL) DATASET.
5. AERIAL ORTHOIMAGERY OBTAINED FROM SOUTH CAROLINA REVENUE AND FISCAL AFFAIRS.



NO.	DATE	ISSUED FOR CLIENT REVIEW	BY	CHK	C/S	APV
	02/15/2024					

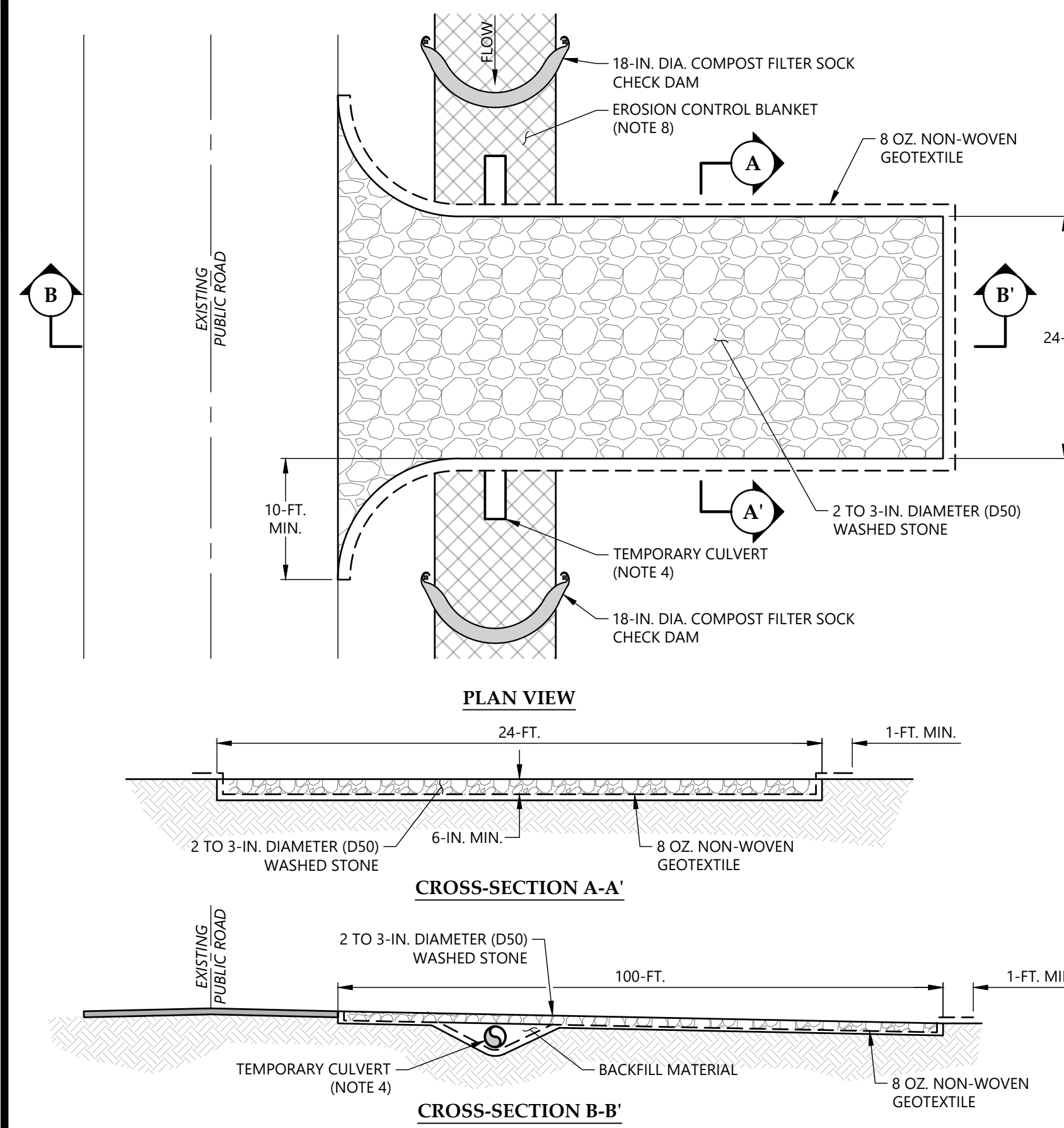
SITE LAYOUT

LUCK EDGEFIELD - CONCEPTUAL PLAN
LUCK STONE CORPORATION
EDGEFIELD COUNTY, SOUTH CAROLINA

PROJECT NUMBER
22350640

DRAWING NUMBER
2 8

DRAWING PATH: T:\Character\1350\Projects\2023\22350640_Luck Co. Luck Stone Edgefield Mine Site_Winnabow SCL Energy\CADD\DWG\Mining SWPPP\Site Development.dwg



GENERAL NOTES

1. DUE TO SITE CONSTRAINTS THE WIDTH AND LENGTH MAY BE ADJUSTED BASED ON CONDITIONS IN THE FIELD.
2. APPROPRIATE SIGNAGE WILL BE POSTED ALONG THE ROAD TO INFORM THE GENERAL PUBLIC OF POTENTIAL CONSTRUCTION TRAFFIC PER REQUIREMENTS.
3. STOCKPILE TOPSOIL FROM CONSTRUCTION ENTRANCE DURING FINAL CLEANUP. THE NEAREST UPSTREAM AND DOWNSTREAM CULVERT DIAMETER(S) WILL BE OBSERVED AT EACH LOCATION A CONSTRUCTION ENTRANCE IS TO BE INSTALLED WITHIN A ROADSIDE SWALE/DITCH. DIAMETER OF TEMPORARY CULVERT SHALL BE THE LARGER OF EITHER THE CULVERT, BUT NO LESS THAN 18-IN. IN DIAMETER. CONTRACTOR SHALL FIELD VERIFY AND DETERMINE APPROPRIATE CULVERT TO BE USED.
4. INSTALL 18-IN. DIA. COMPOST FILTER SOCK CHECK DAMS IN ROADSIDE SWALE/DITCH AT UPSTREAM AND DOWNSTREAM LOCATIONS OF LIMITS OF DISTURBANCE.
5. THE CONSTRUCTION ENTRANCE AND CULVERT (IF PRESENT), WILL BE REMOVED WHEN CONSTRUCTION ACTIVITIES CEASE ON THE PROJECT. THE REMOVED STONE AND SEDIMENT FROM THE ENTRANCE WILL BE HAULED OFF-SITE AND DISPOSED OF PROPERLY.
6. UPON REMOVAL OF THE CONSTRUCTION ENTRANCE, THE CONTRACTOR SHALL BRING THE AREA TO ORIGINAL GRADE AND STABILIZE IT. IF A TEMPORARY CULVERT WAS UTILIZED IN CONJUNCTION WITH THE CONSTRUCTION ENTRANCE, THE CONTRACTOR SHALL INSTALL EROSION CONTROL BLANKET AND 18-IN. DIA. COMPOST FILTER SOCK CHECK DAMS WITHIN ROADSIDE SWALE/DITCH.
7. EROSION CONTROL BLANKET SHALL BE NORTH AMERICAN GREEN BIONET SC150BN OR ENGINEER APPROVED EQUIVALENT.
8. INSTALL THREE 18-IN. DIA. COMPOST FILTER SOCK CHECK DAMS IN EACH IMPACTED SWALE/DITCH; UPSTREAM, DOWNSTREAM, AND MIDDLE OF SWALE/DITCH.

MAINTENANCE NOTES

1. ALL SEDIMENT AND EROSION CONTROLS SHALL BE INSPECTED AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND AFTER ANY STORM EVENT OF GREATER THAN 0.5 INCHES OF PRECIPITATION DURING ANY 24-HOUR PERIOD. INSPECTIONS MUST BE CONDUCTED UNTIL FINAL STABILIZATION IS REACHED ON ALL AREAS OF THE CONSTRUCTION SITE.
2. THE ENTRANCE WILL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO EXISTING ROADWAYS. SEDIMENT TRACKED, SPILLED, DROPPED OR OTHERWISE DEPOSITED ONTO ROADWAYS WILL BE SWEEPED UP AS SOON AS PRACTICAL AND PLACED BACK WITHIN THE APPROVED DISTURBED AREA.
3. IF EXCESS SEDIMENT HAS CLOGGED THE STONE, THE ENTRANCE WILL BE TOPDRESSED WITH NEW STONE AS NEEDED. REPLACEMENT OF THE STONE MAY BECOME NECESSARY WHEN THE STONE BECOMES ENTIRELY FILLED WITH SEDIMENT AND MUD.

REFERENCE: DETAIL BASED ON SCDHEC STORM WATER MANAGEMENT BMP HANDBOOK DATED JULY 31, 2005 (PORTIONS REVISED MAY 2014).

1
3 CONSTRUCTION ENTRANCE
SCALE: N.T.S.

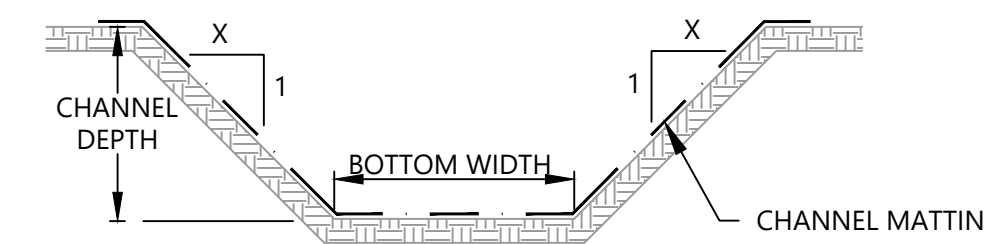
Approved by the
S.C. Dept. of Environmental Services
Division of Mining & Solid Waste Management
By Jeremy E. Eddy
Map Name SED-2424-2V1
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CHANNEL NOTES:

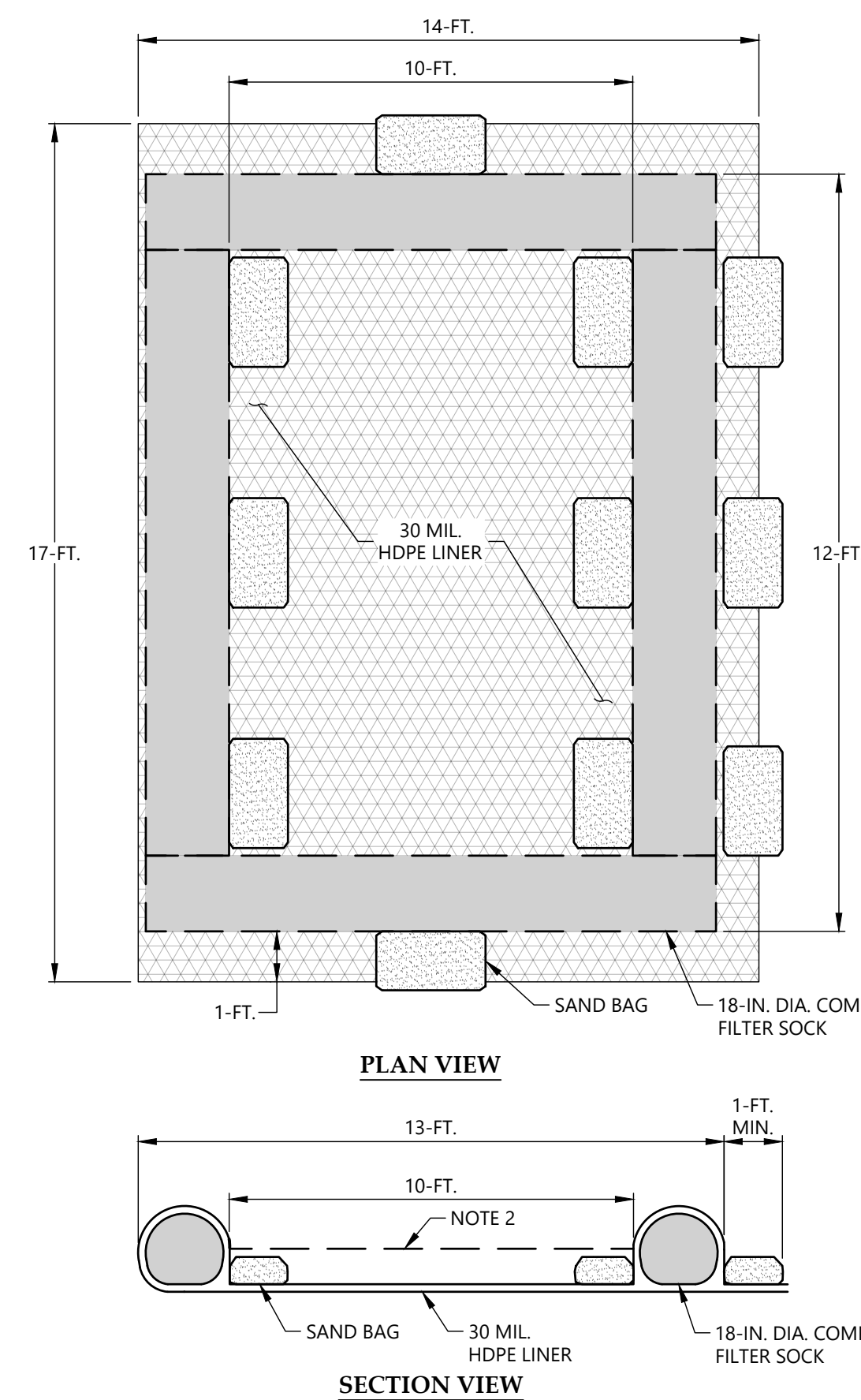
1. SEE PLAN SHEETS FOR CHANNEL LOCATION, DIMENSIONING AND STABILIZATION MATTING (TYPE SPECIFIED IN TABLE OR ENGINEER APPROVED EQUIVALENT)
2. SEE DRAWINGS FOR CHECK DAM/SEDIMENT TUBE LOCATION AND SPACING WITHIN CHANNELS.

CHANNEL SUMMARY TABLE						
CHANNEL ID	AVERAGE LONGITUDINAL SLOPE (FT./FT.)	BOTTOM WIDTH (FT.)	LEFT SIDE SLOPE (X:1V)	RIGHT SIDE SLOPE (X:1V)	CHANNEL DEPTH (FT.)	CHANNEL MATTING

THE CHANNEL SUMMARY TABLE WILL BE POPULATED FOLLOWING THE DETAILED DESIGN.



2
3 CHANNEL
SCALE: N.T.S.



GENERAL NOTES

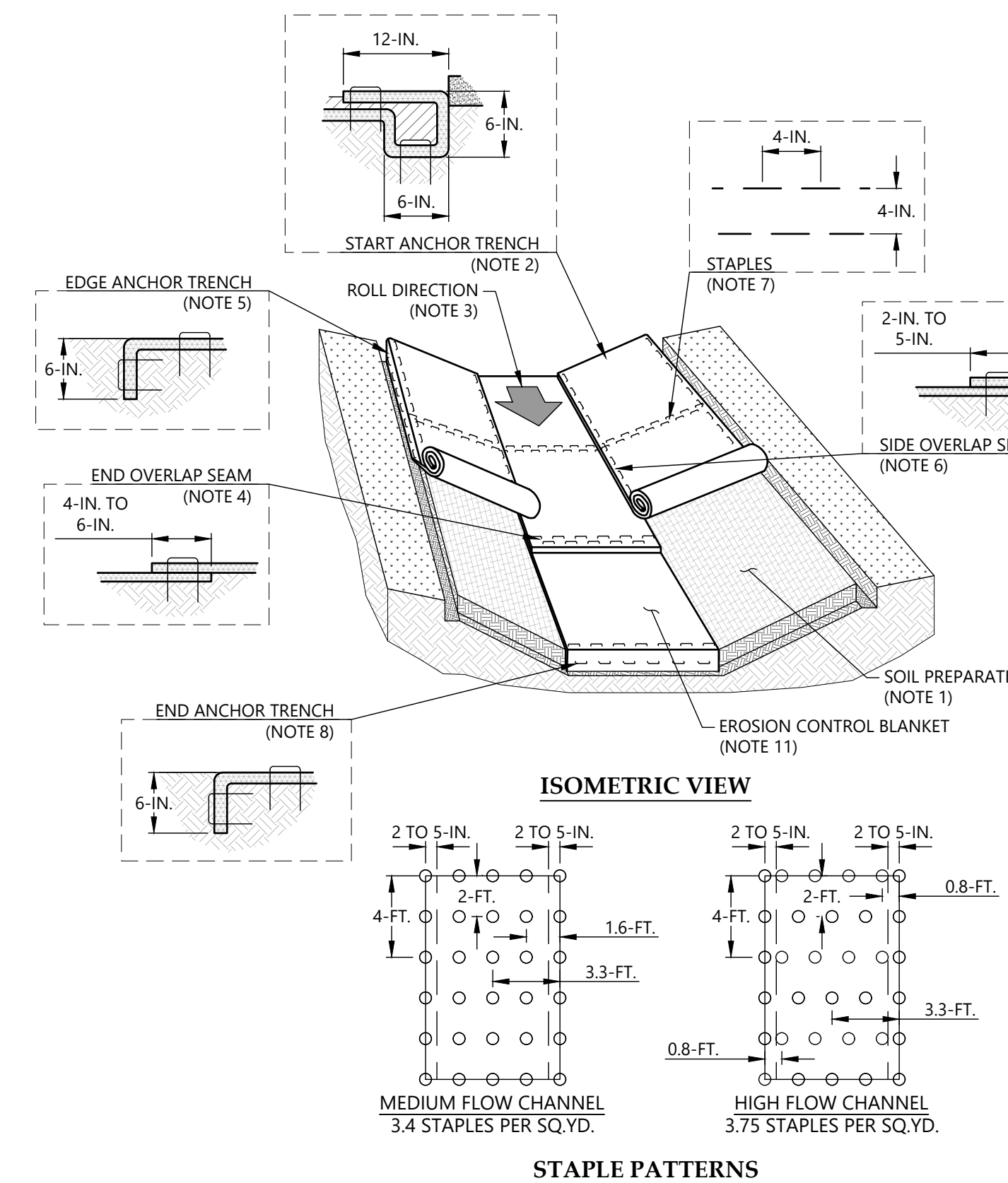
1. ACTUAL LOCATION DETERMINED IN FIELD.
2. CONCRETE WASHOUT STRUCTURES REQUIRING ADDITIONAL CAPACITY SHALL INCLUDE EXCAVATED PIT BENEATH HDPE LINER OF WASHOUT RETENTION AREA. DEPTH OF PIT VARIES DEPENDING ON REQUIRED CAPACITY.
3. CONCRETE WASHOUT STRUCTURE NEEDS TO BE CLEARLY MARKED WITH SIGNAGE NOTING DEVICE WITH LETTERS A MINIMUM OF 5-IN. IN HEIGHT AND WITHIN 30-FT. OF STRUCTURE.
4. DO NOT DISCHARGE CONCRETE OR CEMENT SLURRY FROM THE SITE.
5. INSTALL TEMPORARY CONCRETE WASHOUTS PER LOCAL REQUIREMENTS, WHERE APPLICABLE. IF AN ALTERNATE METHOD OR PRODUCT IS TO BE USED, CONTACT YOUR APPROVAL AUTHORITY FOR REVIEW AND APPROVAL. IF LOCAL STANDARD DETAILS ARE NOT AVAILABLE, USE THIS DETAIL. IF THIS DETAIL IS USED, OWNER'S DESIGNATED ENVIRONMENTAL REPRESENTATIVE MAY APPROVE ALTERNATIVE MATERIALS PRIOR TO INSTALLATION.
6. DO NOT USE CONCRETE WASHOUTS FOR DEWATERING OR STORING DEFECTIVE CURB OR SIDEWALK SECTIONS. STORMWATER ACCUMULATED WITHIN THE WASHOUT MAY NOT BE PUMPED INTO OR DISCHARGED TO THE STORM DRAIN SYSTEM OR RECEIVING SURFACE WATERS. LIQUID WASTE MUST BE PUMPED OUT AND REMOVED FROM PROJECT.
7. LOCATE WASHOUTS AT LEAST 50-FT. FROM STORM DRAIN INLETS AND SURFACE WATERS UNLESS IT CAN BE SHOWN THAT NO OTHER ALTERNATIVES ARE REASONABLY AVAILABLE. AT A MINIMUM, INSTALL PROTECTION OF STORM DRAIN INLET(S) CLOSEST TO THE WASHOUT WHICH COULD RECEIVE SPILLS OR OVERFLOW.
8. LOCATE WASHOUTS IN AN EASILY ACCESSIBLE AREA, ON LEVEL GROUND AND INSTALL A STONE ENTRANCE PAD IN FRONT OF THE WASHOUT. ADDITIONAL CONTROLS MAY BE REQUIRED BY THE APPROVING AUTHORITY.
9. INSTALL AT LEAST ONE SIGN DIRECTING CONCRETE TRUCKS TO THE WASHOUT WITHIN THE PROJECT LIMITS. POST SIGNAGE ON THE WASHOUT ITSELF TO IDENTIFY THIS LOCATION.

MAINTENANCE NOTES

1. THE CONCRETE WASHOUT STRUCTURES SHALL BE MAINTAINED WHEN THE LIQUID AND/OR SOLID REACHES 1/2 OF THE STRUCTURE'S CAPACITY TO PROVIDE ADEQUATE HOLDING CAPACITY WITH A MINIMUM 6-IN. OF FREEBOARD.
2. DISPOSE OF, OR RECYCLE SETTLED, HARDENED CONCRETE RESIDUE IN ACCORDANCE WITH LOCAL AND STATE SOLID WASTE REGULATIONS AND AT AN APPROVED FACILITY.
3. MANAGE WASHOUT FROM MORTAR MIXERS IN ACCORDANCE WITH THE ABOVE ITEM AND IN ADDITION PLACE THE MIXER AND ASSOCIATED MATERIALS ON IMPERVIOUS BARRIER AND WITHIN LOT PERIMETER SILT FENCE.
4. REMOVE LEAVINGS FROM THE WASHOUT WHEN AT APPROXIMATELY 1/2 CAPACITY TO LIMIT OVERFLOW EVENTS. REPLACE THE HDPE LINER, SAND BAGS OR OTHER TEMPORARY STRUCTURAL COMPONENTS WHEN NO LONGER FUNCTIONAL. WHEN UTILIZING ALTERNATIVE OR PROPRIETARY PRODUCTS, FOLLOW MANUFACTURER'S INSTRUCTIONS.
5. AT THE COMPLETION OF THE CONCRETE WORK, REMOVE REMAINING LEAVINGS AND DISPOSE IN AN APPROVED DISPOSAL FACILITY. STABILIZE ANY DISTURBANCE CAUSED BY REMOVAL OF WASHOUT.

REFERENCE: DETAIL BASED ON SCDHEC STORM WATER MANAGEMENT BMP HANDBOOK DATED JULY 31, 2005, REVISED MARCH 2014, AND NCDCEP EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL, CHAPTERS 6 AND 8 REVISED, MAY 2013.

3
3 CONCRETE WASHOUT
SCALE: N.T.S.



GENERAL NOTES

1. PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECPS), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
2. BEGIN AT THE TOP OF THE CHANNEL BY ANCHORING THE RECPS IN A 6-INCH DEEP BY 6-IN. WIDE TRENCH WITH APPROXIMATELY 12-IN. OF RECPS EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE RECPS WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12-IN. APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO THE COMPACTED SOIL, AND FOLD THE REMAINING 12-IN. PORTION OF RECPS BACK OVER THE SEED AND COMPACTED SOIL. SECURE RECPS OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12-IN. APART ACROSS THE WIDTH OF THE RECPS.
3. ROLL CENTER RECPS IN DIRECTION OF WATER FLOW IN BOTTOM OF CHANNEL. RECPS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL RECPS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE.
4. PLACE CONSECUTIVE RECPS END-OVER-END (SHINGLE STYLE) WITH A 4 TO 6-IN. OVERLAP. USE A DOUBLE ROW OF STAPLES STAGGERED 4-IN. APART AND 4-INCH ON CENTER TO SECURE RECPS.
5. FULL LENGTH EDGE OF RECPS AT TOP OF SIDE SLOPES MUST BE ANCHORED WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12-IN. APART IN A 6-IN. DEEP X 6-IN. WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
6. ADJACENT RECPS MUST BE OVERLAPPED APPROXIMATELY 2-IN. TO 5-IN. (DEPENDING ON RECPS TYPE) AND STAPLED.
7. IN HIGH FLOW CHANNEL APPLICATIONS A STAPLE CHECK SLOT IS RECOMMENDED AT 30-FT. TO 40-FT. INTERVALS. USE A DOUBLE ROW OF STAPLES STAGGERED 4-IN. APART AND 4-IN. ON CENTER OVER ENTIRE WIDTH OF THE CHANNEL.
8. THE TERMINAL END OF THE RECPS MUST BE ANCHORED WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12-IN. APART IN A 6-IN. DEEP BY 6-IN. WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
9. HORIZONTAL STAPLE SPACING SHOULD BE ALTERED IF NECESSARY TO ALLOW STAPLES TO SECURE THE CRITICAL POINTS ALONG THE CHANNEL SURFACE.
10. IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6-IN. MAY BE NECESSARY TO PROPERLY SECURE THE RECPS.
11. EROSION CONTROL BLANKETS SHALL BE NORTH AMERICAN GREEN OR ENGINEER APPROVED ALTERNATE. REFER TO PLAN VIEW DRAWINGS FOR NORTH AMERICAN GREEN'S PRODUCT NAME FOR SPECIFIC GRADE OF EROSION CONTROL BLANKET FOR EACH ROADSIDE SWALE/DITCH.
12. FOLLOW MANUFACTURER'S SPECIFICATIONS IF THERE IS A DISCREPANCY IN NOTES OR IF ENGINEER APPROVED ALTERNATIVE IS USED.

MAINTENANCE NOTES

1. ALL SEDIMENT AND EROSION CONTROLS SHALL BE INSPECTED AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND AFTER ANY STORM EVENT OF GREATER THAN 0.5 INCHES OF PRECIPITATION DURING ANY 24-HOUR PERIOD. INSPECTIONS MUST BE CONDUCTED UNTIL FINAL STABILIZATION IS REACHED ON ALL AREAS OF THE CONSTRUCTION SITE.
2. GOOD CONTACT WITH THE GROUND MUST BE MAINTAINED, AND EROSION MUST NOT OCCUR BENEATH THE RECPS.
3. ANY AREAS OF THE RECPS THAT ARE DAMAGED OR NOT IN CLOSE CONTACT WITH THE GROUND SHALL BE REPAIRED AND STAPLED.
4. IF EROSION OCCURS DUE TO POORLY CONTROLLED DRAINAGE, THE PROBLEM SHALL BE FIXED AND THE ERODED AREA PROTECTED.
5. MONITOR AND REPAIR THE RECPS AS NECESSARY UNTIL GROUND COVER IS ESTABLISHED.

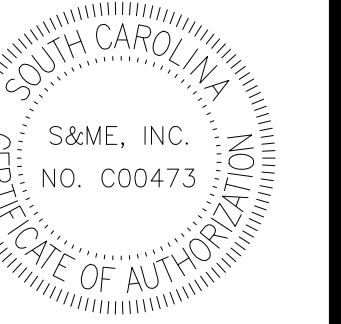
REFERENCE: DETAIL BASED ON SCDHEC STORM WATER MANAGEMENT BMP HANDBOOK DATED JULY 31, 2015 (PORTIONS REVISED MAY 2014) AND NORTH AMERICAN GREEN INSTALLATION GUIDE.

4
3 CHANNEL MATTING
SCALE: N.T.S.

DRAWING PATH: T:\Character\1350\Projects\2023\2350640\Luck Co. Luck Stone Edgfield Mine Site\Winnaboo SCL Energy\CADD\DWG\MINING SWPPP\DETAILS (SHEET 1 OF 9).dwg



2016 AYRSLEY TOWN BLVD.
SUITE 2-A
CHARLOTTE, NC 28273
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LICENSE NUMBER: E-0176



NO.	DATE	ISSUED FOR CLIENT REVIEW	BY	CHK	APV	DESCRIPTION
	02/15/2024		AEW	CHR	CIS	

DETAILS (1 OF 6)

LUCK EDGEFIELD - CONCEPTUAL PLAN
LUCK STONE CORPORATION
EDGEFIELD COUNTY, SOUTH CAROLINA

PROJECT NUMBER
22350640
DRAWING NUMBER

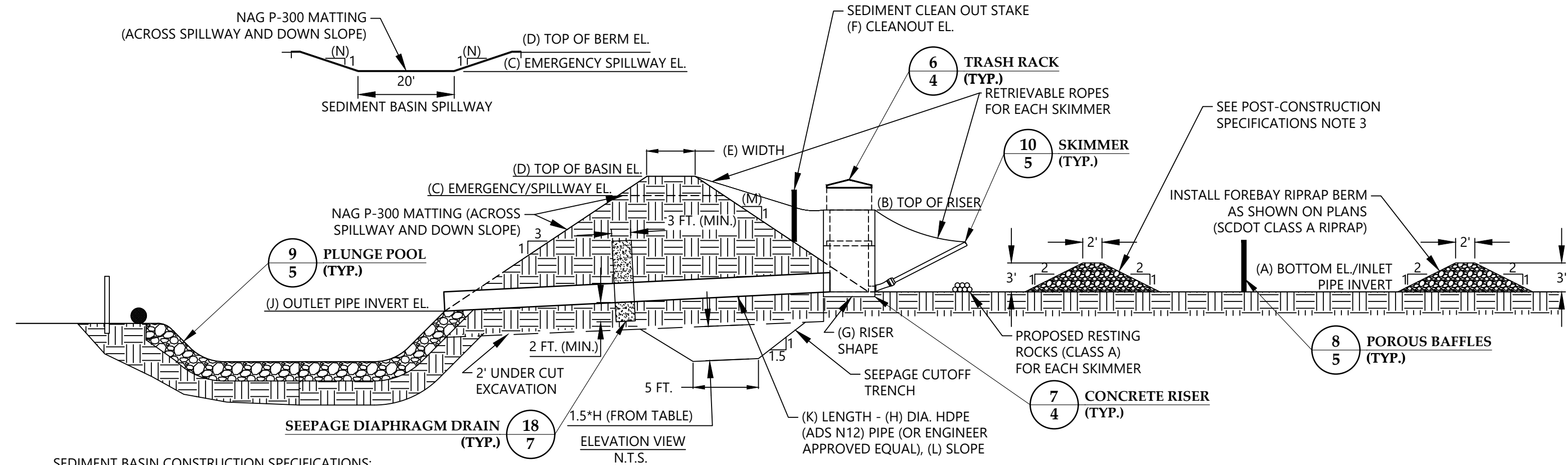
3 **8**

SEDIMENTATION BASIN CONSTRUCTION SPECIFICATIONS:

- 1. BASIN PREPARATIONS:** PLACE TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES PER THE PLANS. CLEAR, GRUB AND STRIP TOPSOIL FROM THE EMBANKMENT TO REMOVE VEGETATION, STUMPS, ROOTS, ORGANIC MATERIAL, TRASH, ROCK MATERIAL AND OTHER OBJECTIONABLE MATERIAL. REMOVE SEDIMENT, PERVIOUS MATERIAL, ORGANIC MATERIAL TO THE DESIGN ELEVATION AND DIMENSIONS OF THE BASIN. KEEP BASIN DRY DURING CONSTRUCTION ACTIVITIES. THE FLOOR OF THE BASIN SHALL BE GRADED TO THE FINAL ELEVATION SHOWN ON THE DRAWINGS AND THE GRADED BASIN SHALL BE COMPACTED WITH A MINIMUM 10-TON SMOOTH DRUM (NON-VIBRATORY) COMPACTOR AND THEN PROOF-ROLLED. PROOF-ROLL THE ENTIRE SEDIMENTATION BASIN FLOOR. THE PROOF ROLLING SHALL BE OBSERVED AND EVALUATED BY THE ENGINEER OR HIS REPRESENTATIVE.
- 2. PRINCIPAL SPILLWAY, BARREL AND SKIMMER:** CONSTRUCT THE BARREL ACCORDING TO THE BELOW TEMPORARY SEDIMENT BASIN DETAIL. SECURE ALL CONNECTIONS BETWEEN BARREL AND RISER SECTIONS BY APPROVED WATERTIGHT ASSEMBLIES. ATTACH BASIN SKIMMER TO RISER BY APPROVED WATERTIGHT ASSEMBLIES (SEE SKIMMER DETAIL). DO NOT USE PERVIOUS MATERIAL SUCH AS SAND, GRAVEL, SILT, OR CRUSHED STONE AS BACKFILL MATERIAL AROUND THE PIPE. PLACE THE FILL MATERIAL AROUND THE PIPE SPILLWAY IN 4-IN. LOOSE LAYERS AND COMPACT IT AROUND THE PIPE TO 95 PERCENT OR GREATER AS THE REST OF THE EMBANKMENT FILL. CARE MUST BE TAKEN NOT TO RAISE THE PIPE FROM FIRM CONTACT WITH ITS FOUNDATION WHEN COMPACTING UNDER THE PIPE HAUNCHES. PLACE A MINIMUM DEPTH OF TWO FEET OF HAND COMPACTED BACKFILL OVER THE PIPE SPILLWAY BEFORE CROSSING THE PIPE WITH COMPACTION EQUIPMENT OR CONSTRUCTION EQUIPMENT.
- 3. EMBANKMENT CONSTRUCTION:** USE CLEAN FILL MATERIAL BROUGHT TO SITE OR EXCAVATED FROM APPROVED AREAS ON SITE. IT SHALL BE CLEAN MINERAL SOIL, FREE OF ROOTS, WOODY VEGETATION, ROCKS AND OTHER OBJECTIONABLE MATERIAL. SCARIFY AREAS AND EACH COMPACTED LIFT ON WHICH FILL IS TO BE PLACED BEFORE PLACING THE FILL. THE FILL OPTIMUM MOISTURE CONTENT SHALL BE MAINTAINED BETWEEN OPTIMUM AND THREE PERCENT ABOVE OPTIMUM. FILL SHALL BE COMPACTED NOT LESS THAN 95 PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D698 METHOD A. THE CONTRACTOR SHALL DEMONSTRATE SOIL DENSITY BY SOIL COMPACTION PER THE PLANS AND SPECIFICATIONS WITH A MINIMUM OF TWO DENSITY TESTS PER LIFT WITH TESTS SPACED EVENLY AND REPRESENTATIVE OF THE EMBANKMENT FILL. ONE FAILED TEST REQUIRES THAT THE LIFT BE RE-COMPACTED AND RE-TESTED AT TWO LOCATIONS UNTIL REQUIRED COMPACTION IS ACHIEVED. NO VEGETATIVE COVER MATERIAL SHALL BE PLACED ON COMPACTED FILL LAYERS BEFORE THE ENGINEER REVIEWS AND APPROVES THE DENSITY DATA FROM THE TESTING PERFORMED. THE ENGINEER MAY EVALUATE COMPACTION AND REPORT THE RESULTS TO THE CONTRACTOR. FAILED SOIL DENSITY TESTS PERFORMED BY THE ENGINEER WILL REQUIRE THAT THE COMPACTED MATERIAL BE REMOVED AND RE-INSTALLED PER THE PLANS AND SPECIFICATIONS.
- 4. OUTLET DISCHARGE:** EFFLUENT FROM THE PRINCIPAL SPILLWAY BARREL FROM THE SEDIMENT BASIN SHALL HAVE AN SEEPAGE DIAPHRAGM DRAIN AND SHALL DISCHARGE TO A PLUNGE POOL (SEE DETAIL).
- 5. EMERGENCY SPILLWAY:** INSTALL THE EMERGENCY SPILLWAY IN THE UNDISTURBED SOIL. TOLERANCE TO DESIGN ELEVATIONS IS +/- 0.2 FEET; TOLERANCE TO DESIGN GRADES IS +/- 1.0 PERCENT; AND TOLERANCE FOR WIDTHS AND LENGTHS IS +/- 1.0 FT. NO DEVIATION FROM THE SPECIFIED TOLERANCES SHALL BE ALLOWED. LINE THE SPILLWAY WITH LAMINATED PLASTIC OR IMPERMEABLE GEOTEXTILE FABRIC. THE FABRIC SHALL HAVE DIMENSIONS LARGE ENOUGH TO COVER THE BOTTOM AND SIDES AND EXTEND ONTO THE TOP OF THE DAM FOR ANCHORING IN A TRENCH. THE EDGES SHALL BE SECURED WITH 8-IN. STAPLES OR PINS. THE FABRIC SHALL BE LONG ENOUGH TO EXTEND DOWN THE SLOPE AND EXIT ONTO STABLE GROUND. THE WIDTH OF THE FABRIC SHALL BE ONE PIECE, TO PREVENT WATER FROM ACCESS BENEATH THE FABRIC, JOINING OR SPLICING OF SECTIONS ACROSS THE WIDTH SHALL NOT BE ALLOWED. THE LENGTH OF THE FABRIC MAY BE COMPOSED OF SECTIONS SPANNING THE ENTIRE SPILLWAY WIDTH. UPPER SECTIONS SHALL OVERLAP LOWER SECTIONS SO THAT WATER CANNOT FLOW UNDER THE FABRIC. SECURE THE UPPER EDGE AND SIDES OF THE FABRIC IN A TRENCH WITH STAPLES OR PINS (ADAPTED FROM "A MANUAL FOR DESIGNING INSTALLING AND MAINTAINING SKIMMER SEDIMENT BASINS" FEBRUARY, 1999 J.W. FAIRCLOTH & SON). A 6-IN. VEGETATIVE COVER SHALL BE PLACED ON TOP OF THE GEOTEXTILE FABRIC. EROSION CONTROL MATTING SHALL BE PLACED ON TOP OF THE VEGETATIVE LAYER.
- 6. INLETS:** INSTALL INLETS TO DISCHARGE WATER INTO THE FOREBAYS IN A MANNER TO PREVENT EROSION.
- 7. EROSION CONTROL:** CONSTRUCT THE STRUCTURE SO THAT THE DISTURBED AREA IS MINIMIZED. DIVERT SURFACE WATER AWAY FROM THE BARE AREAS. COMPLETE THE EMBANKMENT BEFORE ADDITIONAL UPSTREAM AREA IS CLEARED. STABILIZE THE EMERGENCY SPILLWAY EMBANKMENT AND ALL OTHER DISTURBED AREAS ABOVE THE CREST OF THE PRINCIPAL SPILLWAY IMMEDIATELY AFTER CONSTRUCTION (REFERENCES: SURFACE STABILIZATION).

MAINTENANCE:

- 1. CHECK SEDIMENT BASIN AFTER PERIODS OF SIGNIFICANT RUNOFF.** REMOVE SEDIMENT AND RESTORE THE BASIN TO ITS ORIGINAL DIMENSIONS WHEN SEDIMENT ACCUMULATES TO ONE-HALF THE DESIGN DEPTH AS MARKED BY THE SEDIMENT CLEANOUT STAKE.
- 2. CHECK THE EMBANKMENT, SPILLWAYS AND OUTLET FOR EROSION DAMAGE AND EVALUATE THE EMBANKMENT FOR PIPING AND SETTLEMENT.** MAKE ALL NECESSARY REPAIRS IMMEDIATELY. REMOVE ALL TRASH AND DEBRIS FROM THE RISER AND POOL AREA.
- 3. ALL SEDIMENT AND EROSION CONTROLS SHALL BE INSPECTED AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND AFTER ANY STORM EVENT OF GREATER THAN 0.5 INCHES OF PRECIPITATION DURING ANY 24-HOUR PERIOD.** INSPECTIONS MUST BE CONDUCTED UNTIL FINAL STABILIZATION IS REACHED ON ALL AREAS OF THE CONSTRUCTION SITE. REMOVE SEDIMENT AND RESTORE THE BASIN TO ITS ORIGINAL DIMENSIONS WHEN SEDIMENT ACCUMULATES TO ONE-HALF THE HEIGHT OF THE BASIN DEPTH. FIRST PULL THE SKIMMER TO ONE SIDE TO ACCESS SEDIMENT BELOW FOR REMOVAL. EXCAVATE THE SEDIMENT FROM THE ENTIRE BASIN, NOT LIMITED TO THE SKIMMER LOCATION OR WITHIN THE FIRST BASIN CELL. CUT OR REMOVE VEGETATION FROM THE BOTTOM OF THE BASIN THAT LIMITS OPERATION OF THE SKIMMER OR RESTRICTS ITS ABILITY TO FLOAT.
- 4. REPAIR DAMAGED BAFFLES.** RE-ANCHOR BAFFLES IF WATER IS FLOWING UNDERNEATH OR AROUND THEM.
- 5. REMOVE CLOGS FROM SKIMMER BY JERKING ON THE ROPE TO BOB THE SKIMMER, OR PULL THE SKIMMER TO ONE SIDE OF THE BASIN AND REMOVE THE DEBRIS.** CHECK THE ORIFICE INSIDE THE SKIMMER FOR DEBRIS. IF PRESENT, REMOVE THE DEBRIS. IF THE SKIMMER ARM OR BARREL IS CLOGGED, REMOVE THE ORIFICE WITH WATER TO RESTORE FLOW, OR USE A PLUMBERS SNAKE TO REMOVE THE CLOG. REPLACE THE ORIFICE BEFORE REPOSITIONING THE SKIMMER.
- 6. CHECK THE FABRIC LINED SPILLWAY FOR DAMAGE AND MAKE REQUIRED REPAIRS WITH FABRIC THAT SPANS THE FULL WIDTH OF THE SPILLWAY.** CHECK THE EMBANKMENT, SPILLWAYS, AND OUTLET FOR EROSION DAMAGE, AND INSPECT THE EMBANKMENT FOR PIPING AND SETTLEMENT. MAKE NECESSARY REPAIRS IMMEDIATELY. REMOVE ALL TRASH AND OTHER DEBRIS FROM THE SKIMMER, RISER, AND POOL AREAS.
- 7. FREEZING WEATHER CAN RESULT IN ICE FORMING IN THE BASIN.** PREVENT ICE FROM CLOGGING THE SKIMMER.



SEDIMENT BASIN CONSTRUCTION SPECIFICATIONS:

- 1. ASSEMBLE THE SKIMMER AS DESIGNED (PER THE SKIMMER DETAIL).**
- 2. LAY THE ASSEMBLED SKIMMER ON THE BOTTOM OF THE BASIN.** SECURE THE CONNECTIONS BETWEEN THE INLET BASIN SKIMMER FLEXIBLE JOINT TO THE RISER ORIFICE BY APPROVED WATERTIGHT ASSEMBLIES. POSITION THE SKIMMER OVER THE SUPPORT PAD. ATTACH A ROPE TO THE SKIMMER AND ANCHOR IT TO THE SIDE OF THE BASIN FOR ACCESS TO THE SKIMMER FOR FUTURE MAINTENANCE.

POST-CONSTRUCTION SPECIFICATIONS:

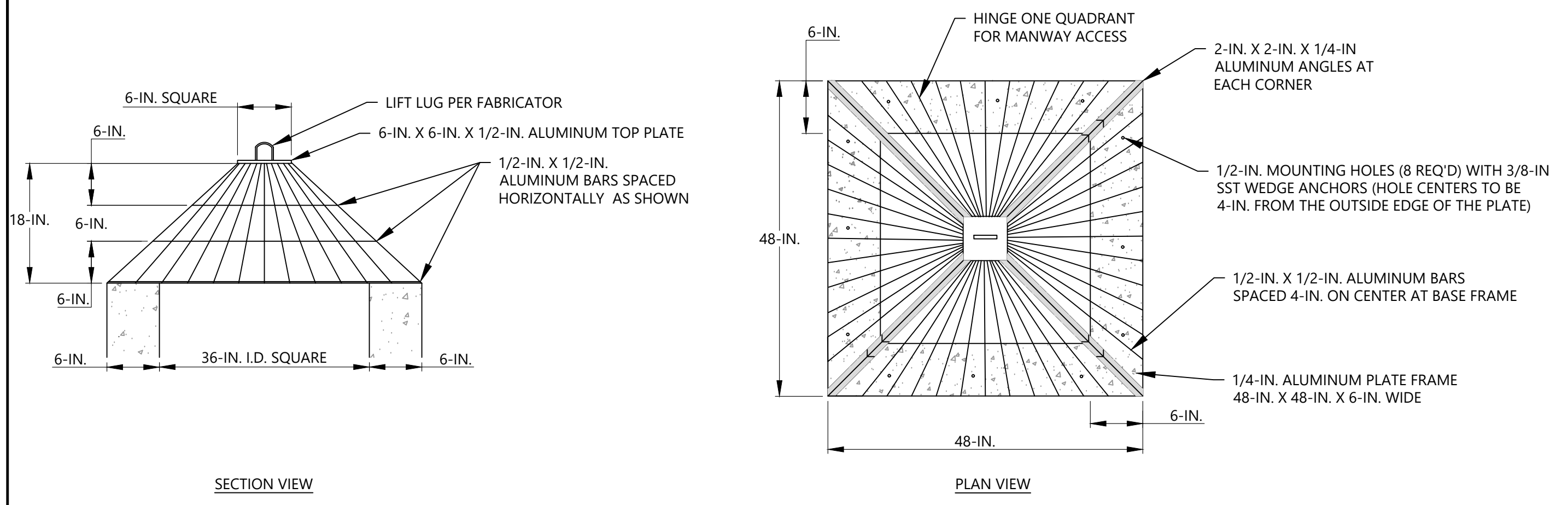
WHEN THE AREAS CONTRIBUTING SEDIMENT TO THE SYSTEM HAVE BEEN STABILIZED, PROCEDURES CAN BE TAKEN TO RESTORE THE SYSTEM TO ITS PERMANENT USE. THE FOLLOWING REMOVAL AND RESTORATION PROCEDURE IS RECOMMENDED. DURING THIS PROCESS CAREFUL CONSIDERATION SHOULD BE TAKEN TO PROTECT RECEIVING WATERS FROM SEDIMENT POLLUTION AND EROSION DAMAGE.

- 1. REMOVE EROSION AND SEDIMENT CONTROL DEVICES (SKIMMER, BAFFLES, 30 MIL LINER, AND STAINLESS STEEL STRAP).**
- 2. EXCAVATE THE BASIN TO THE ORIGINAL PROPOSED BOTTOM OF BASIN ELEVATION PER THE PLANS TO REMOVE ANY ACCUMULATED SEDIMENT.** MAINTAIN THE DESIGNED SIDE SLOPES AND APPLY SLOPE MATTING PER THE DETAIL.
- 3. INSTALL RIPRAP BERM (SCDOT CLASS A RIPRAP), AT MINIMUM 5-FT AWAY FROM RISER.** RIPRAP BERM IS TO BE USED TO HELP PREVENT THE RISER ORIFICE FROM CLOGGING. SEE DETAIL FOR SIZE AND GEOMETRY OF BERM.
- 4. STABILIZE THE BASIN AND ANY AREAS DISTURBED DURING EROSION AND SEDIMENT CONTROL DEVICE AND SEDIMENT REMOVAL.**

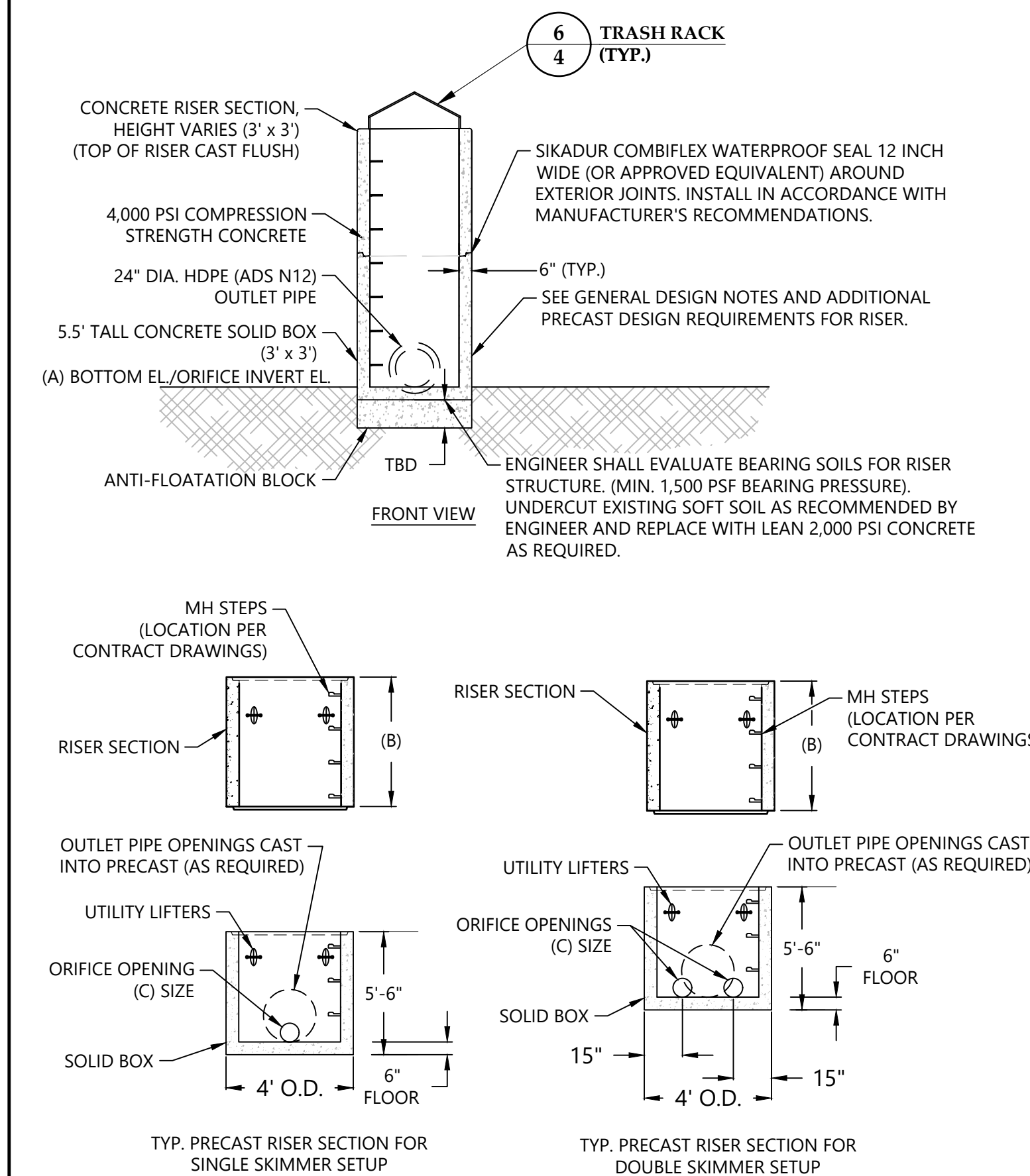
SEDIMENT BASIN SUMMARY TABLE														
SEDIMENT BASIN ID	A	B	C	D	E	F	G	H	I	J	K	L	M	N
	BOTTOM OF BASIN ELEVATION (FT.)	TOP OF RISER ELEVATION (FT.)	EMERGENCY SPILLWAY CREST ELEVATION (FT.)	TOP OF BERM ELEVATION (FT.)	TOP OF BERM WIDTH (FT.)	CLEAN OUT ELEVATION (FT.)	RISER SHAPE (FT. X FT.)	OUTLET PIPE DIAMETER (DO) (FT.)	OUTLET PIPE UPSTREAM INV. ELEVATION (FT.)	OUTLET PIPE DOWNSTREAM INV. ELEVATION (FT.)	LENGTH OF OUTLET PIPE (FT.)	SLOPE OF OUTLET PIPE (%)	INTERIOR SIDE SLOPES (Z FT. X 1 FT.)	EMERGENCY SPILLWAY INTERIOR SIDE SLOPES (Z FT. X 1 FT.)

THE SEDIMENT BASIN SUMMARY TABLE WILL BE POPULATED FOLLOWING THE DETAILED DESIGN.

5
4 SEDIMENT BASIN - CONCRETE RISER
SCALE: N.T.S.



6
4 TRASH RACK
SCALE: N.T.S.



ADDITIONAL PRECAST DESIGN REQUIREMENTS:

- RISER SHALL BE DESIGNED FOR A WATER PRESSURE OF 1,300 PSF AND HORIZONTAL SOIL PRESSURE OF 700 PSF. (TOTAL HORIZONTAL PRESSURE OF 2,000 PSF).
- STRENGTH DESIGN METHOD IN ACCORDANCE WITH (I.A.W.) ACI318.
- APPLICABLE DESIGN DOCUMENTS (CURRENT EDITIONS):
 - ACI318 BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE (MAIN DESIGN SPECIFICATIONS).
 - ASTM C890 STANDARD PRACTICE FOR MINIMUM STRUCTURAL LOADING FOR MONOLITHIC OR SECTIONAL PRECAST CONCRETE WATER AND WASTEWATER STRUCTURES (LOADING SPECIFICATIONS).
 - ASTM C913 STANDARD SPECIFICATIONS FOR PRECAST CONCRETE AND WATER AND WASTEWATER STRUCTURES.
- MAX DEPTH TO INVERT OF PRECAST (I.E. FLOOR) = 15\"/>

CONCRETE RISER SUMMARY TABLE				
SEDIMENT BASIN ID	A	B	C	D
	BOTTOM EL./ ORIFICE INVERT EL. (FT.)	RISER SECTION HEIGHT (FT.)	ORIFICE SIZE (IN.)	RISER BOTTOM EL. (FT.)

THE CONCRETE RISER SUMMARY TABLE WILL BE POPULATED FOLLOWING THE DETAILED DESIGN.

7
4 CONCRETE RISER
SCALE: N.T.S.

Approved by the
S.C. Dept. of Environmental Services
Division of Mining & Solid Waste Management
By: *Jeremy E. Eddy*
Map Name: **SED-2424-3V1**
Date Approved: **October 04, 2024**
Permit #: **I-002424**

DRAWING PATH: T:\Charlotte-1350\Projects\2022\2350640_Luck_Co_Luck_Stone_Edgefield_Mine_Site_Wimaboro_Sc4_Energy\CADD\DWG\Mining_SwPPP\DETAILS_SHEET 2 OF 9.dwg

2016 AYRSLEY TOWN BLVD.
SUITE 2-A
CHARLOTTE, NC 28273
(704) 523-4726
ENGINEERING FIRM
LICENSE NUMBER: F-0176

LUCK & STONE

SOUTH CAROLINA
S&ME, INC.
NO. C00473
STATE OF AUTHORIZATION

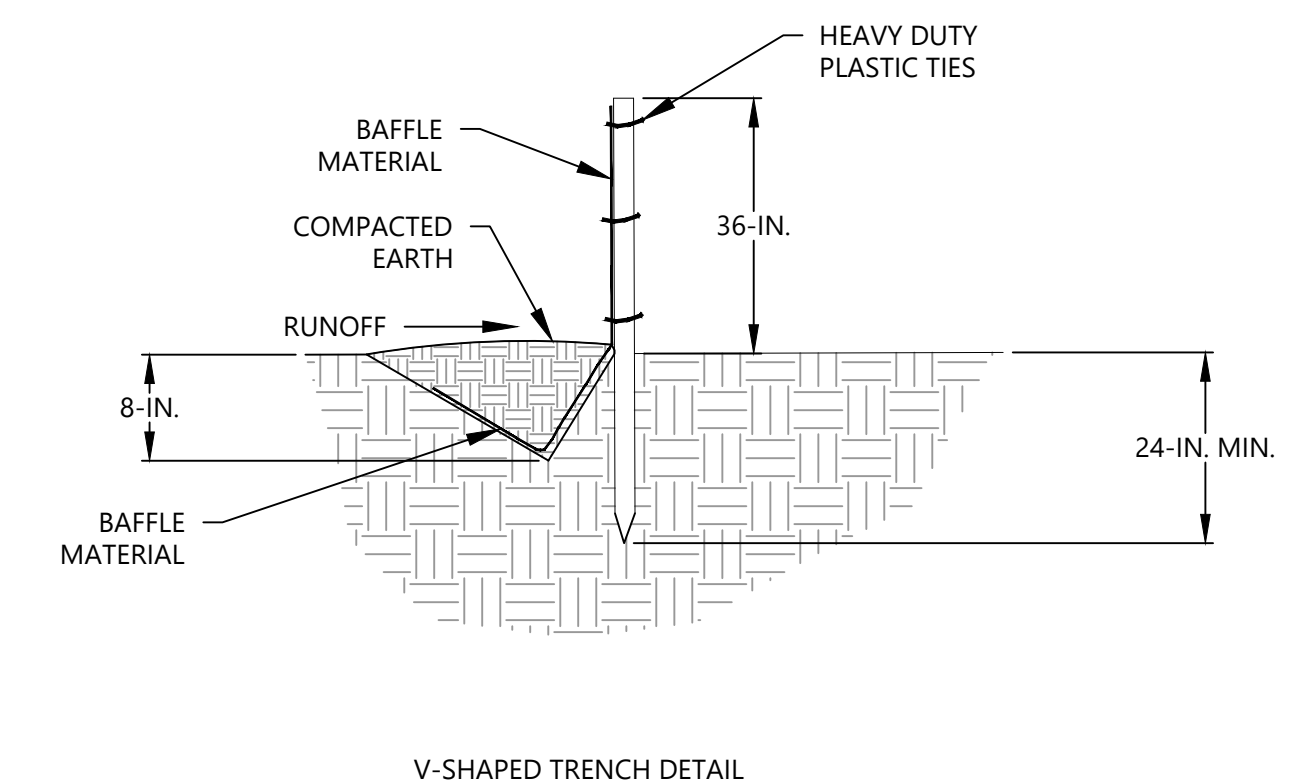
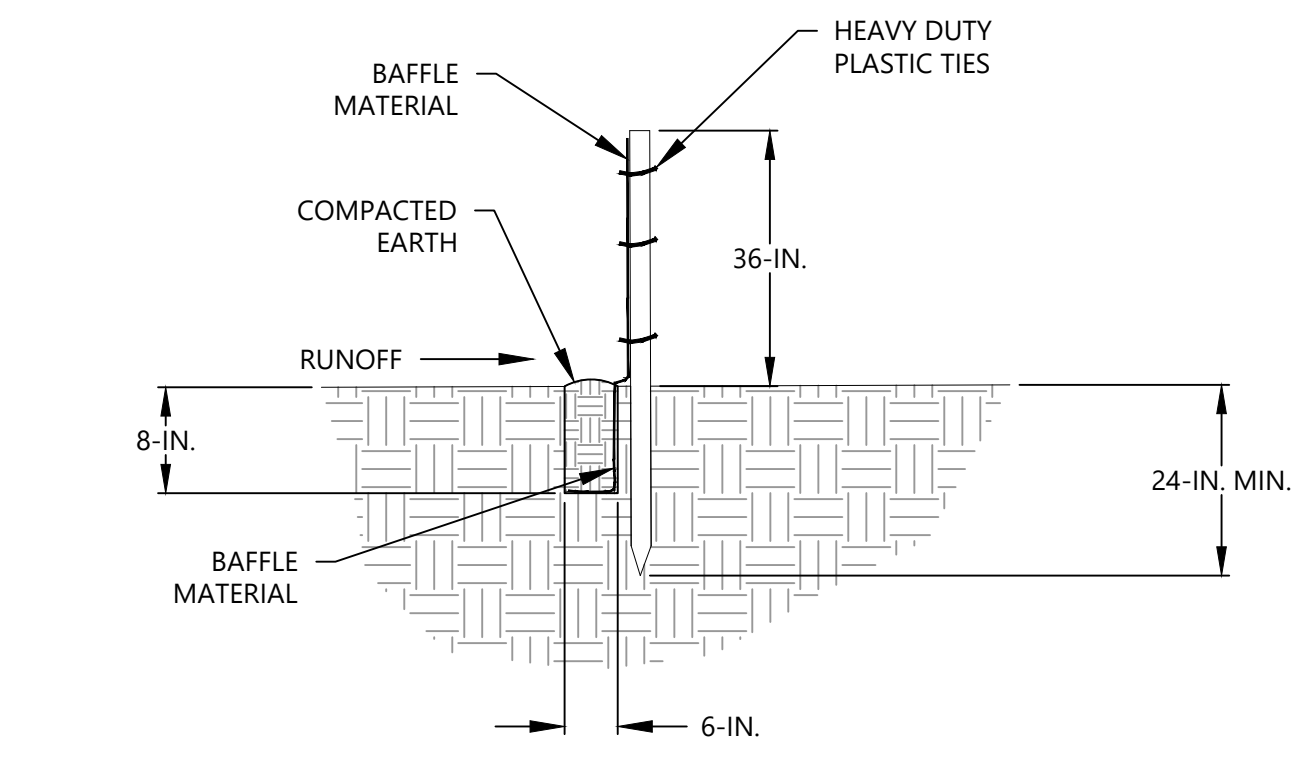
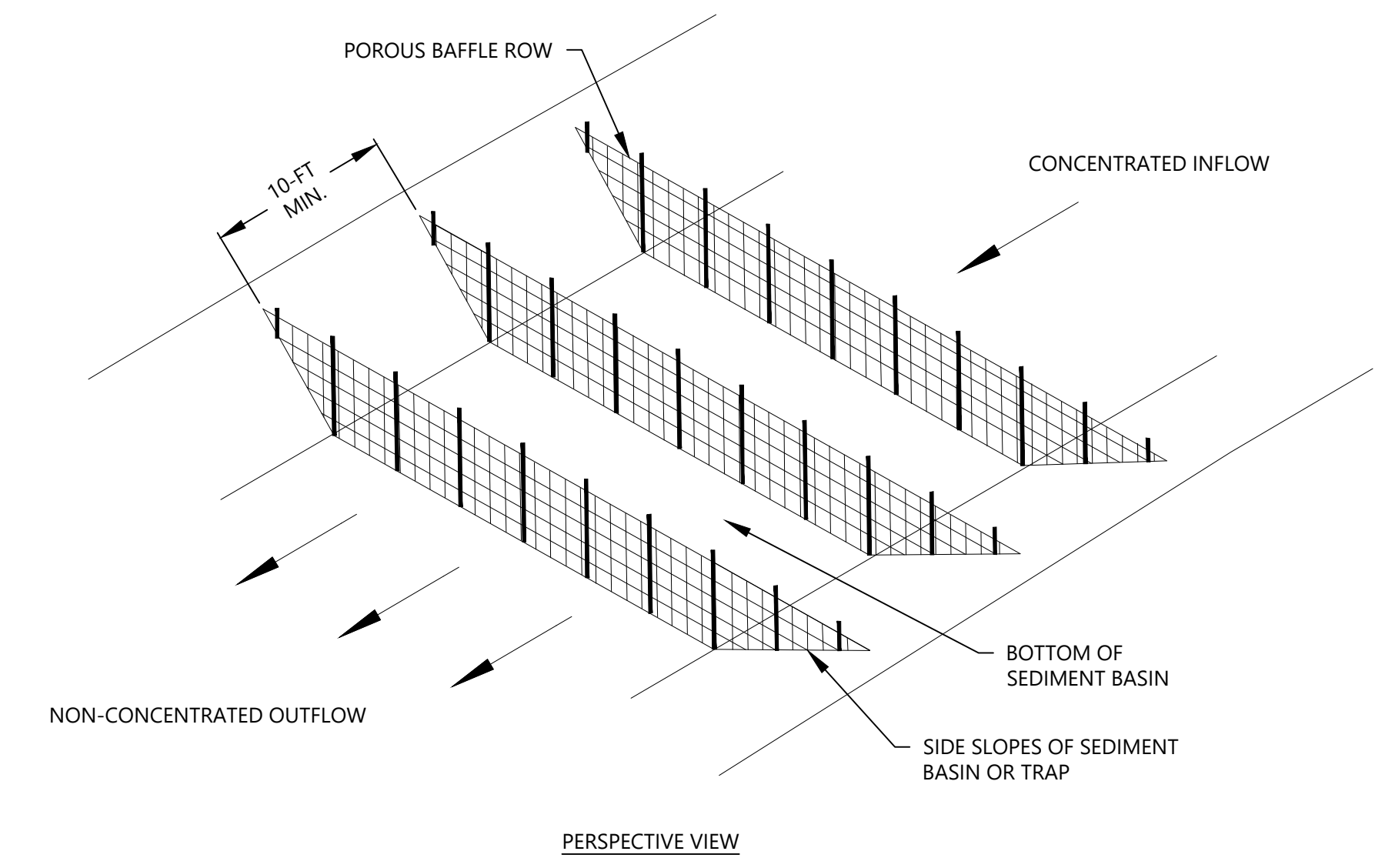
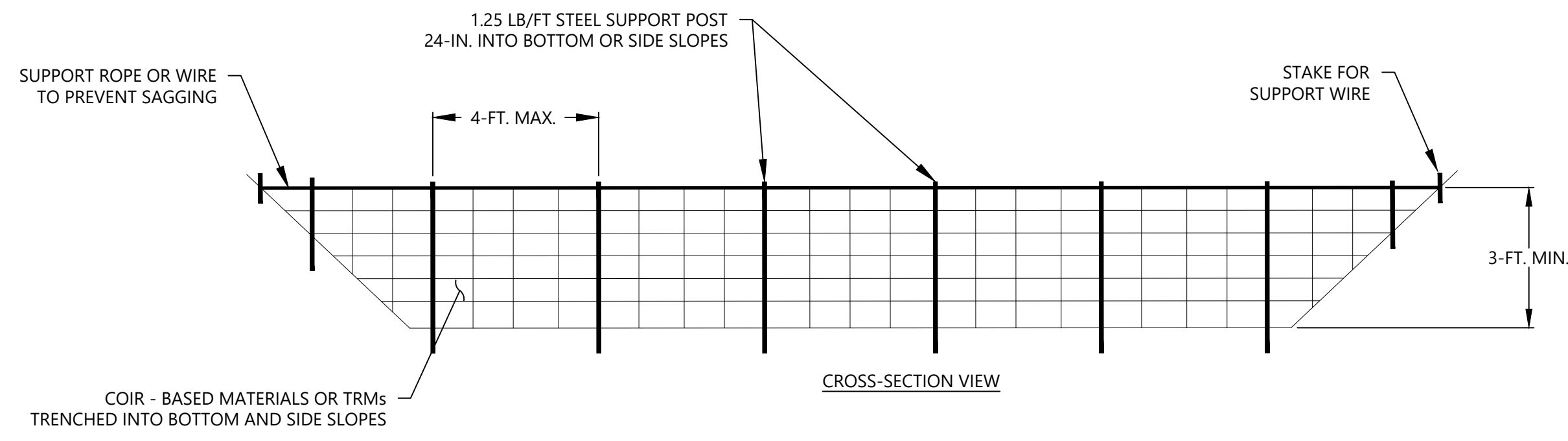
NO.	DATE	ISSUED FOR CLIENT REVIEW	DESCRIPTION	BY	CHK	CIS	APV
	02/15/2024						

DETAILS (2 OF 6)

LUCK EDGEFIELD - CONCEPTUAL PLAN
LUCK STONE CORPORATION
EDGEFIELD COUNTY, SOUTH CAROLINA

PROJECT NUMBER
22350640
DRAWING NUMBER

4 **8**

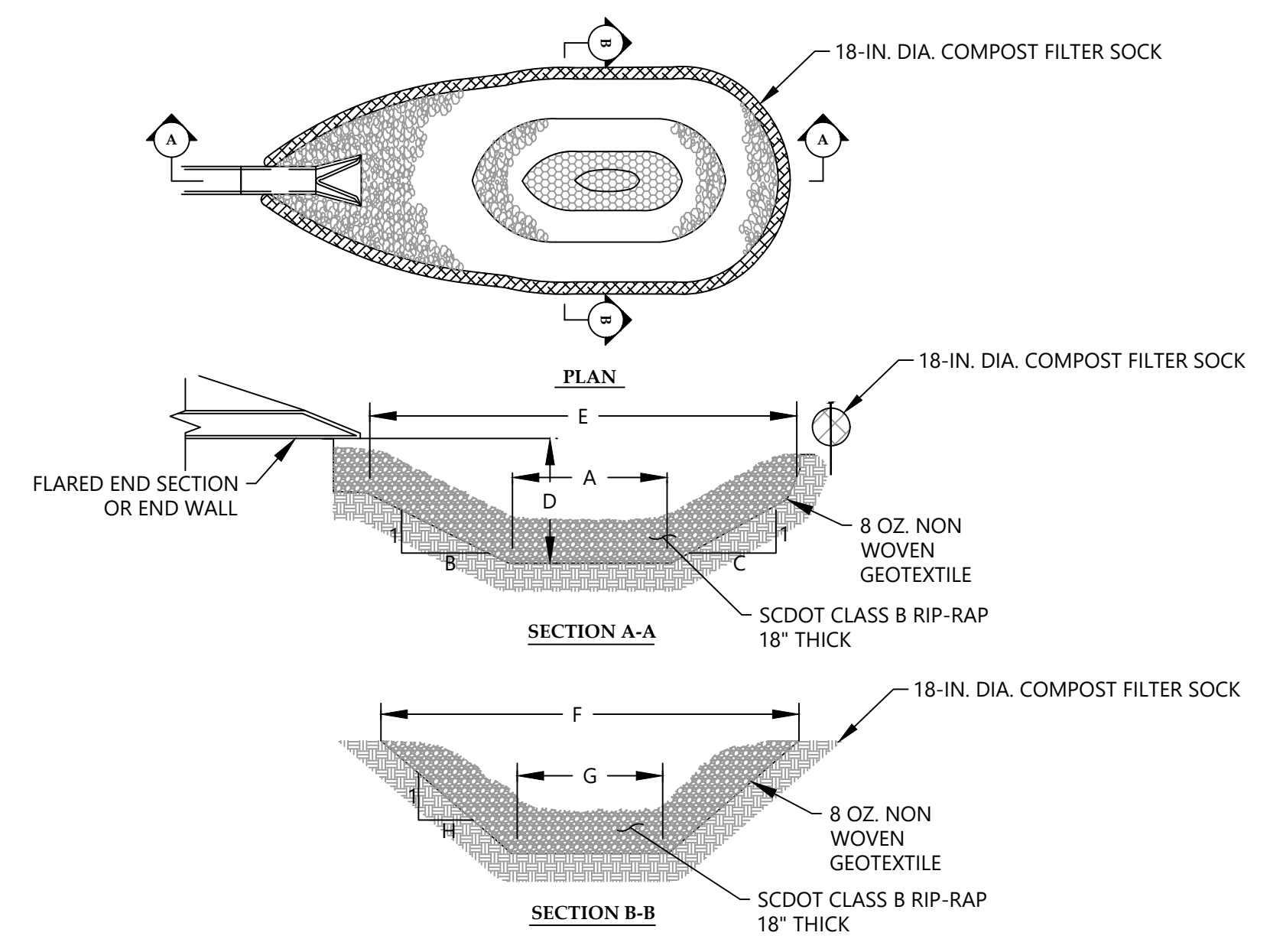


- BAFFLES - POST REQUIREMENTS:**
- POROUS BAFFLE POSTS MUST BE 60-IN. TO 96-IN. LONG STEEL POSTS THAT MEET, AT A MINIMUM, THE FOLLOWING PHYSICAL CHARACTERISTICS:
 - COMPOSED OF A HIGH STRENGTH STEEL WITH A MINIMUM YIELD STRENGTH OF 50,000 PSI.
 - INCLUDE A STANDARD "T" SECTION WITH A NOMINAL FACE WIDTH OF 1.38-IN. AND A NOMINAL "T" LENGTH OF 1.48-IN.
 - WEIGH 1.25 POUNDS PER FOOT ($\pm 8\%$).
 - POSTS SHALL BE EQUIPPED WITH PROJECTIONS TO AID IN FASTENING OF BAFFLE MATERIAL.
 - INSTALL POSTS TO A MINIMUM OF 24-IN. A MINIMUM HEIGHT OF 1-IN. TO 2-IN. ABOVE THE FABRIC SHALL BE MAINTAINED, AND A MAXIMUM HEIGHT OF 3-FT. SHALL BE MAINTAINED ABOVE THE GROUND.
 - POST SPACING SHALL BE AT A MAXIMUM OF 4-FT. ON CENTER.
- BAFFLES - MATERIAL REQUIREMENTS:**
- BAFFLE MATERIAL MUST BE COMPOSED OF COIR-BASED MATERIALS OR TURF REINFORCEMENT MATTING (TRM) THAT CONSISTS OF THE FOLLOWING REQUIREMENTS:
 - HAVE A LIGHT PENETRATION (% OPENINGS) BETWEEN 10-35%;
 - FREE OF LOOSE STRAW MATERIAL;
 - HAVE A MINIMUM TENSILE STRENGTH OF 145 LB/FT. AND;
 - HAVE A MINIMUM WIDTH OF 48-IN.
 - 12-IN. OF THE FABRIC SHOULD BE PLACED WITHIN THE EXCAVATED TRENCH AND TOED IN WHEN THE TRENCH IS BACKFILLED OR BAFFLE MATERIAL MAY BE STAPLED INTO GROUND BY USING 12-IN. STAPLES WITH A MAXIMUM SPACING OF 12-IN.
 - BAFFLE MATERIAL SHALL BE PURCHASED IN CONTINUOUS ROLLS AND CUT TO THE WIDTH OF THE SEDIMENT BASIN OR TRAP TO AVOID JOINTS.
- BAFFLES - GENERAL NOTES:**
- ATTACH BAFFLE TO THE STEEL POSTS USING HEAVY-DUTY PLASTIC TIES THAT ARE EVENLY SPACED ALONG THE ABOVE GROUND PORTION OF EACH POST.
 - INSTALL THE BAFFLE ROWS PERPENDICULAR TO THE DIRECTION OF THE STORMWATER FLOW AND PLACE EACH BAFFLE THE PROPER DISTANCE FROM INLET AND OUTLETS TO ALLOW ACCESS FOR MAINTENANCE AND CLEAN-OUT AS PER THE PLANS.
 - EXTEND BAFFLE TO A MINIMUM OF 3 FEET IN HEIGHT.
- BAFFLES - INSPECTION & MAINTENANCE:**
- THE KEY TO FUNCTIONAL POROUS BAFFLES IS WEEKLY INSPECTION, ROUTINE MAINTENANCE, AND REGULAR SEDIMENT REMOVAL.
 - ALL SEDIMENT AND EROSION CONTROLS SHALL BE INSPECTED AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND AFTER ANY STORM EVENT OF GREATER THAN 0.5 INCHES OF PRECIPITATION DURING ANY 24-HOUR PERIOD. INSPECTIONS MUST BE CONDUCTED UNTIL FINAL STABILIZATION IS REACHED ON ALL AREAS OF THE CONSTRUCTION SITE.
 - ATTENTION TO SEDIMENT ACCUMULATIONS ALONG EACH ROW OF BAFFLES IS EXTREMELY IMPORTANT. ACCUMULATED SEDIMENT SHOULD BE CONTINUALLY MONITORED AND REMOVED WHEN NECESSARY.
 - REMOVE ACCUMULATED SEDIMENT WHEN IT REACHES 1/3 THE HEIGHT OF THE BAFFLE ROW OR WHEN IT REACHES THE CLEAN-OUT HEIGHT OF THE SEDIMENT BASIN OR TRAP, WHICHEVER IS REACHED FIRST.
 - REMOVED SEDIMENT SHALL BE PLACED IN STOCKPILE STORAGE AREAS OR SPREAD THINLY ACROSS DISTURBED AREA. STABILIZE THE REMOVED SEDIMENT AFTER IT IS RELOCATED.
 - CHECK FOR AREAS WHERE STORMWATER RUNOFF HAS ERODED A CHANNEL BENEATH EACH ROW OF BAFFLES, OR WHERE THE BAFFLE HAS SAGGED OR COLLAPSED DUE TO RUNOFF OVERTOPPING THE BAFFLE.
 - CHECK FOR TEARS/RIPS WITHIN THE BAFFLES, AREAS WHERE THE BAFFLE HAS BEGUN TO DECOMPOSE, AND FOR ANY OTHER CIRCUMSTANCE THAT MAY RENDER THE BAFFLE INEFFECTIVE. REMOVED DAMAGED BAFFLES AND REINSTALL NEW BAFFLES IMMEDIATELY.
 - POROUS BAFFLES SHOULD BE REMOVED WITHIN 30 DAYS AFTER FINAL STABILIZATION IS ACHIEVED AND ONCE IT IS REMOVED, THE RESULTING DISTURBED AREA SHALL BE PERMANENTLY STABILIZED.
 - REMOVE ANY ACCUMULATED SEDIMENT UPON BAFFLE REMOVAL. DISPOSE OF SEDIMENT OFF-SITE ACCORDING TO STATE AND LOCAL REGULATIONS.

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

By Jeremy E. Eddy
Map Name SED-2424-V1
Date Approved October 04, 2024
Permit # I-002424

8 POROUS BAFFLES
SCALE: N.T.S.

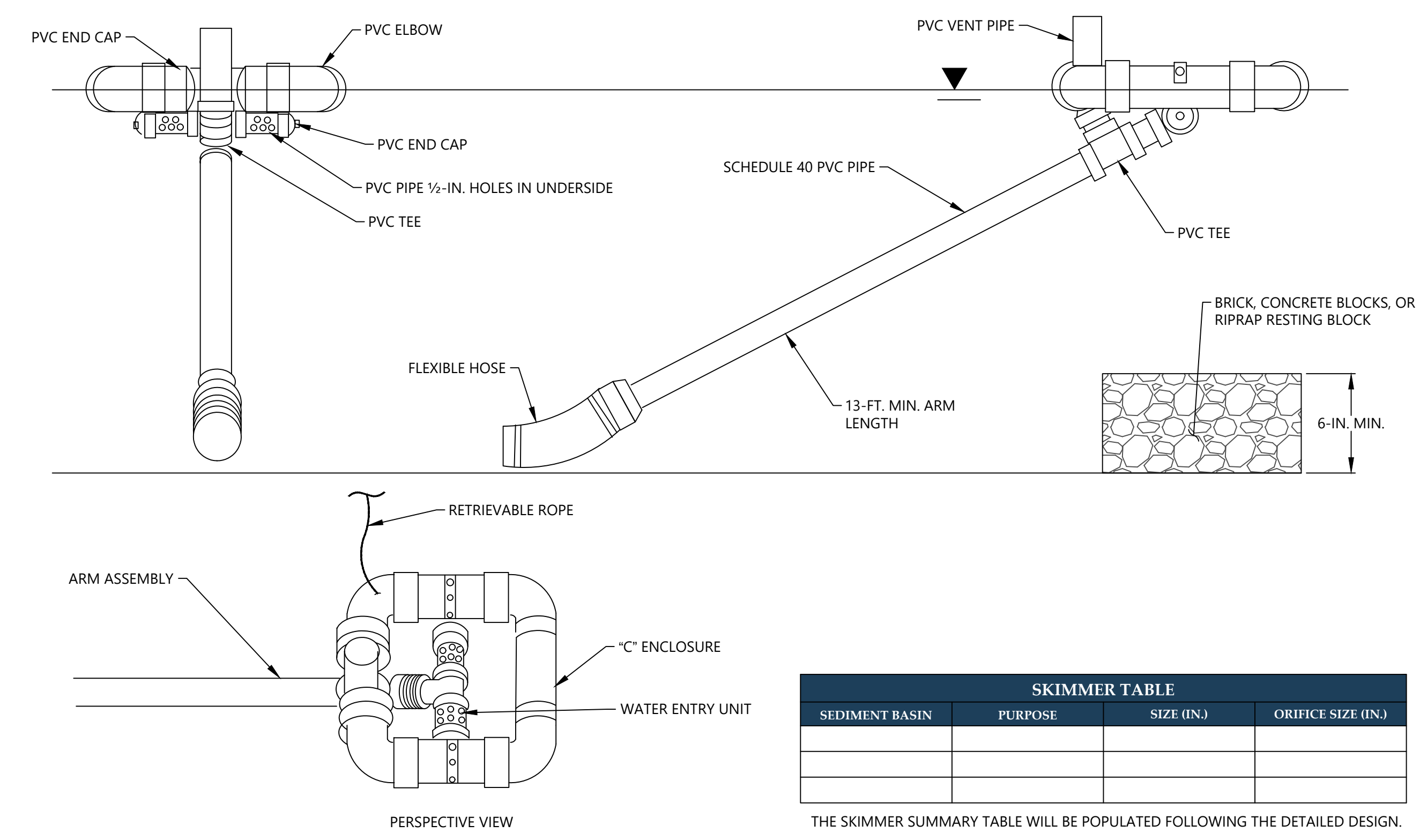


MAINTENANCE:
ALL SEDIMENT AND EROSION CONTROLS SHALL BE INSPECTED AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND AFTER ANY STORM EVENT OF GREATER THAN 0.5 INCHES OF PRECIPITATION DURING ANY 24-HOUR PERIOD. INSPECTIONS MUST BE CONDUCTED UNTIL FINAL STABILIZATION IS REACHED ON ALL AREAS OF THE CONSTRUCTION SITE. REMOVE SEDIMENT AND RESTORE TO ORIGINAL DIMENSIONS WHEN SEDIMENT ACCUMULATES TO ONE-HALF THE HEIGHT OF THE POOL. CHECK EMBANKMENT, LINING, AND OUTLET AREA FOR ANY DAMAGE AND REPAIR AS NECESSARY, AS SOON AS PRACTICAL.

ID	A	B	C	D	E	F	G	H

THE PLUNGE POOL SUMMARY TABLE WILL BE POPULATED FOLLOWING THE DETAILED DESIGN.

9 PLUNGE POOL
SCALE: N.T.S.



MAINTENANCE NOTES:

- ALL SEDIMENT AND EROSION CONTROLS SHALL BE INSPECTED AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND AFTER ANY STORM EVENT OF GREATER THAN 0.5 INCHES OF PRECIPITATION DURING ANY 24-HOUR PERIOD. INSPECTIONS MUST BE CONDUCTED UNTIL FINAL STABILIZATION IS REACHED ON ALL AREAS OF THE CONSTRUCTION SITE.

10 SKIMMER
SCALE: N.T.S.

2016 ARSLEY TOWN BLVD
SUITE 2-A
CHARLOTTE, NC 28273
(704) 523-4726
ENGINEERING FIRM
LICENSE NUMBER: E-0176

LUCK & STONE



NO.	DATE	ISSUED FOR CLIENT REVIEW	BY	CHK	C/S	APV

DETAILS (3 OF 6)

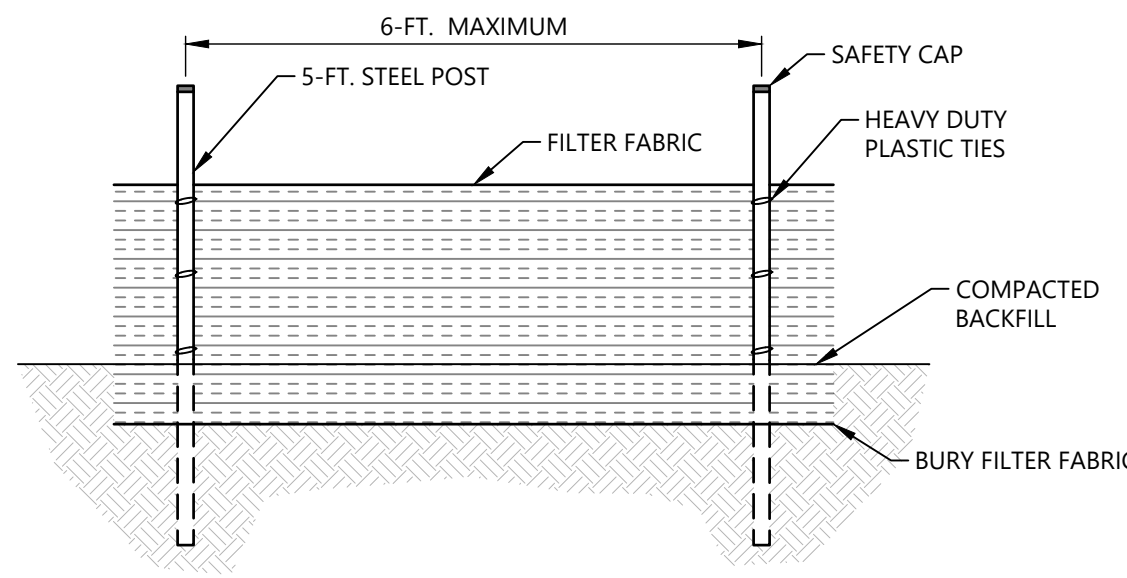
LUCK EDGEFIELD - CONCEPTUAL PLAN
LUCK STONE CORPORATION
EDGEFIELD COUNTY, SOUTH CAROLINA

PROJECT NUMBER
22350640

DRAWING NUMBER
5

8

DRAWING PATH: T:\Character\1350\Project\2023\2350640_Luck Co. Luck Stone Edgefield Mine Site\Wimaborn-SC\4 Energy\CAD\DWG\Mining SWPPP\DETAILS (SHEET 3 OF 9).dwg



PROFILE VIEW

GENERAL NOTES

- DO NOT PLACE SILT FENCE ACROSS CHANNELS OR IN OTHER AREAS SUBJECT TO CONCENTRATED FLOWS. SILT FENCE SHOULD NOT BE USED AS A VELOCITY CONTROL BMP. CONCENTRATED FLOWS ARE ANY FLOWS GREATER THAN 0.5 CFS.
- MAXIMUM SHEET OR OVERLAND FLOW PATH LENGTH TO THE SILT FENCE SHALL BE 100-FT.
- MAXIMUM SLOPE STEEPNESS (NORMAL [PERPENDICULAR] TO THE FENCE LINE) SHALL BE 2:1.
- SILT FENCE JOINTS, WHEN NECESSARY, SHALL BE COMPLETED BY ONE OF THE FOLLOWING OPTIONS:
 - WRAP EACH FABRIC TOGETHER AT A SUPPORT POST WITH BOTH ENDS FASTENED TO THE POST, WITH A 1-FOOT MINIMUM OVERLAP;
 - OVERLAP SILT FENCE BY INSTALLING 3-FT. PAST THE SUPPORT POST TO WHICH THE NEW SILT FENCE ROLL IS ATTACHED. ATTACH OLD ROLL TO NEW ROLL WITH HEAVY-DUTY PLASTIC TIES; OR,
 - OVERLAP ENTIRE WIDTH OF EACH SILT FENCE ROLL FROM ONE SUPPORT POST TO THE NEXT SUPPORT POST.
- ATTACH FILTER FABRIC TO THE STEEL POSTS USING HEAVY-DUTY PLASTIC TIES THAT ARE EVENLY SPACED WITHIN THE TOP 8-IN. OF THE FABRIC.
- INSTALL THE SILT FENCE PERPENDICULAR TO THE DIRECTION OF THE STORMWATER FLOW AND PLACE THE SILT FENCE THE PROPER DISTANCE FROM THE TOE OF STEEP SLOPES TO PROVIDE SEDIMENT STORAGE AND ACCESS FOR MAINTENANCE AND CLEANOUT.
- INSTALL SILT FENCE CHECKS (TIE-BACKS) EVERY 50-100-FT., DEPENDENT ON SLOPE, ALONG SILT FENCE THAT IS INSTALLED WITH SLOPE AND WHERE CONCENTRATED FLOWS ARE EXPECTED OR ARE DOCUMENTED ALONG THE PROPOSED/INSTALLED SILT FENCE.

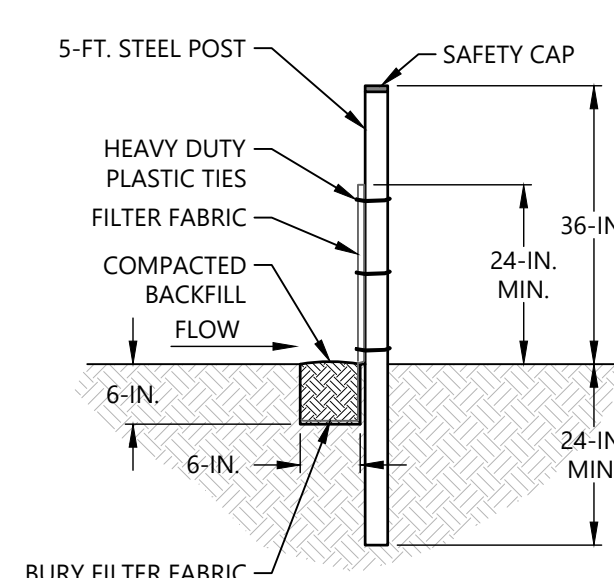
POST REQUIREMENTS

- SILT FENCE POSTS MUST BE 5-FT. LONG STEEL POSTS THAT MEET, AT A MINIMUM, THE FOLLOWING PHYSICAL CHARACTERISTICS:
 - COMPOSED OF A HIGH STRENGTH STEEL WITH A MINIMUM YIELD STRENGTH OF 50,000 PSI.
 - INCLUDE A STANDARD "T" SECTION WITH A NOMINAL FACE WIDTH OF 1.38-IN. AND A NOMINAL "T" LENGTH OF 1.48-IN.
 - WEIGH 1.25 POUNDS PER FOOT (+ 8%)
- POSTS SHALL BE EQUIPPED WITH PROJECTIONS TO AID IN FASTENING OF FILTER FABRIC.
- EACH POST TO BE EQUIPPED WITH SAFETY CAP.
- STEEL POSTS MAY NEED TO HAVE A METAL SOIL STABILIZATION PLATE WELDED NEAR THE BOTTOM WHEN INSTALLED ALONG STEEP SLOPES OR INSTALLED IN LOOSE SOILS. THE PLATE SHOULD HAVE A MINIMUM CROSS SECTION OF 17-SQUARE IN. AND BE COMPOSED OF 15 GAUGE STEEL, AT A MINIMUM. THE METAL SOIL STABILIZATION PLATE SHOULD BE COMPLETELY BURIED.
- INSTALL POSTS TO A MINIMUM DEPTH OF 24-IN. A MINIMUM HEIGHT OF 1-IN. TO 2-IN. ABOVE THE FABRIC SHALL BE MAINTAINED, AND A MAXIMUM HEIGHT OF 3-FT. SHALL BE MAINTAINED ABOVE THE GROUND.
- POST SPACING SHALL BE AT A MAXIMUM OF 6-FT. ON CENTER.
- WOODEN POSTS ARE ALLOWED WHEN CROSSING UTILITIES. OWNER'S DESIGNATED ENVIRONMENTAL REPRESENTATIVE SHALL APPROVE LOCATIONS WHERE WOODEN POST ARE TO BE USED PRIOR TO INSTALLATION.

FABRIC REQUIREMENTS

- SILT FENCE MUST BE COMPOSED OF WOVEN GEOTEXTILE FILTER FABRIC THAT CONSISTS OF THE FOLLOWING REQUIREMENTS:
 - COMPOSED OF FIBERS CONSISTING OF LONG CHAIN SYNTHETIC POLYMERS OF AT LEAST 85% BY WEIGHT OF POLYOLEFINS, POLYESTERS, OR POLYAMIDES THAT ARE FORMED INTO A NETWORK SUCH THAT THE FILAMENTS OR YARNS RETAIN DIMENSIONAL STABILITY RELATIVE TO EACH OTHER;
 - FREE OF ANY TREATMENT OR COATING WHICH MIGHT ADVERSELY ALTER ITS PHYSICAL PROPERTIES AFTER INSTALLATION;
 - FREE OF ANY DEFECTS OR FLAWS THAT SIGNIFICANTLY AFFECT ITS PHYSICAL AND/OR FILTERING PROPERTIES; AND
 - HAVE A MINIMUM WIDTH OF 36-IN.
- USE ONLY FABRIC APPEARING ON SC DOT'S QUALIFIED PRODUCTS LISTING (QPL), APPROVAL SHEET #34, MEETING THE REQUIREMENTS OF THE MOST CURRENT EDITION OF THE SC DOT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.
- 12-IN. OF THE FABRIC SHOULD BE PLACED WITHIN EXCAVATED TRENCH AND SECURED WHEN THE TRENCH IS BACKFILLED.
- FILTER FABRIC SHALL BE PURCHASED IN CONTINUOUS ROLLS AND CUT TO THE LENGTH OF THE BARRIER TO AVOID JOINTS.
- FILTER FABRIC SHALL BE INSTALLED AT A MINIMUM OF 24-IN. ABOVE THE GROUND.

11
6 SILT FENCE
SCALE: N.T.S.



SECTION VIEW

INSPECTION & MAINTENANCE

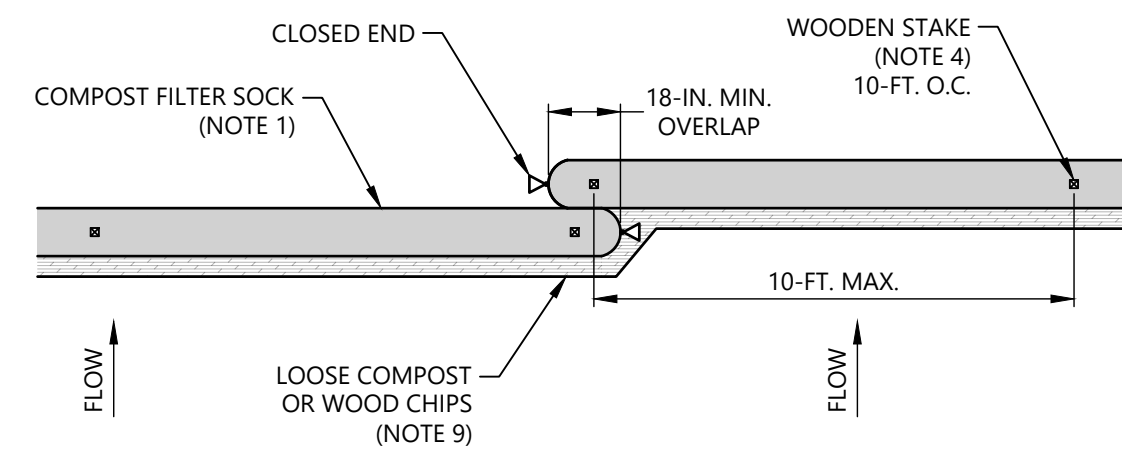
- THE KEY TO FUNCTIONAL SILT FENCE IS WEEKLY INSPECTIONS, ROUTINE MAINTENANCE, AND REGULAR SEDIMENT REMOVAL.
- ALL SEDIMENT AND EROSION CONTROLS SHALL BE INSPECTED AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND AFTER ANY STORM EVENT OF GREATER THAN 0.5 INCHES OF PRECIPITATION DURING ANY 24-HOUR PERIOD. INSPECTIONS MUST BE CONDUCTED UNTIL FINAL STABILIZATION IS REACHED ON ALL AREAS OF THE CONSTRUCTION SITE.
- ATTENTION TO SEDIMENT ACCUMULATIONS ALONG THE SILT FENCE IS EXTREMELY IMPORTANT. ACCUMULATED SEDIMENT SHOULD BE CONTINUALLY MONITORED AND REMOVED WHEN NECESSARY.
- REMOVED ACCUMULATED SEDIMENT WHEN IT REACHES 1/3 THE HEIGHT OF THE SILT FENCE.
- REMOVED SEDIMENT SHALL BE PLACED IN STOCKPILE STORAGE AREAS OR SPREAD THINLY ACROSS DISTURBED AREA. STABILIZE THE REMOVED SEDIMENT AFTER IT IS RELOCATED.
- CHECK FOR AREAS WHERE STORMWATER RUNOFF HAS ERODED A CHANNEL BENEATH THE SILT FENCE, OR WHERE THE FENCE HAS SAGGED OR COLLAPSED DUE TO RUNOFF OVERTOPPING THE SILT FENCE. INSTALL CHECKS/TIE-BACKS AND/OR REINSTALL SILT FENCE, AS NECESSARY.
- CHECK FOR TEARS WITHIN THE SILT FENCE. AREAS WHERE SILT FENCE HAS BEGUN TO DECOMPOSE, AND FOR ANY OTHER CIRCUMSTANCE THAT MAY RENDER THE SILT FENCE INEFFECTIVE. REMOVE DAMAGED SILT FENCE AND REINSTALL IMMEDIATELY.
- SILT FENCE SHOULD BE REMOVED WITHIN 30 DAYS AFTER FINAL STABILIZATION IS ACHIEVED AND ONCE IT IS REMOVED, THE RESULTING DISTURBED AREA SHALL BE PERMANENTLY STABILIZED.

REFERENCE: DETAIL BASED ON SCDHEC STORM WATER MANAGEMENT BMP HANDBOOK DATED JULY 31, 2005, REVISED MARCH 2014.

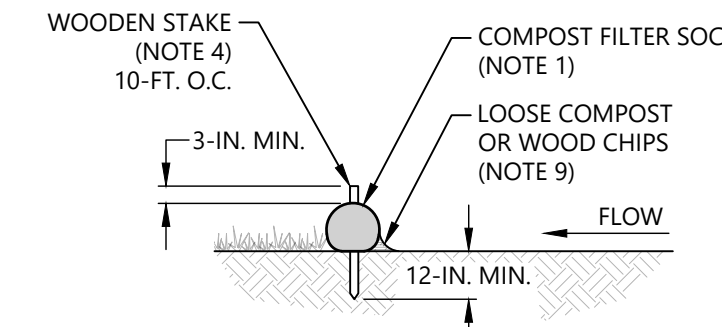
Approved by the
S.C. Dept. of Environmental Services
Division of Mining & Solid Waste Management

By *Jeremy E. Eddy*
Map Name **6ED-2424-SV1**
Date Approved **October 04, 2024**
Permit # **I-002424**

12
6 COMPOST FILTER SOCK - SINGLE
SCALE: N.T.S.



SINGLE SOCK PLAN VIEW



SINGLE SOCK SECTION VIEW

GENERAL NOTES

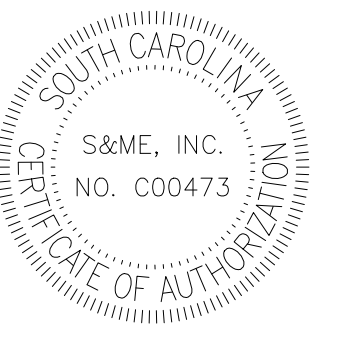
- USE FILTREX® SILTSOXX™ ORIGINAL OR ENGINEER APPROVED ALTERNATIVE. COMPOST FILTER SOCK DIAMETER VARIES, REFER TO PLAN VIEW DRAWINGS FOR DIAMETER.
- COMPOST FILTER SOCKS SHOULD BE LOCATED AS SHOWN ON PLANS AND AS DIRECTED BY THE OWNER'S DESIGNATED ENVIRONMENTAL REPRESENTATIVE.
- PRIOR TO INSTALLATION, CLEAR ALL OBSTRUCTIONS INCLUDING ROCKS, CLODS, AND OTHER DEBRIS GREATER THAN 1-IN. THAT MAY INTERFERE WITH PROPER FUNCTION OF THE COMPOST FILTER SOCK.
- OAK OR OTHER DURABLE HARDWOOD STAKES 2-IN. BY 2-IN. IN CROSS SECTION SHOULD BE DRIVEN VERTICALLY PLUMB, THROUGH THE CENTER OF THE COMPOST FILTER SOCK. STAKES SHOULD BE PLACED AT A MAXIMUM INTERVAL OF 10-FT. O.C. STAKES SHOULD BE DRIVEN TO A MINIMUM DEPTH OF 12-IN., WITH A MINIMUM OF 3-IN. PROTRUDING ABOVE THE COMPOST FILTER SOCK.
- WHERE APPLICABLE PLASTIC OR WIRE TIES SHALL HAVE MINIMUM 50-LB. TENSILE STRENGTH.
- IN THE EVENT STAKING IS NOT POSSIBLE (HIGHLY COMPACTED SOILS OR IMPERVIOUS SURFACES) SAND BAGS OR HEAVY CONCRETE BLOCKS MAY BE USED BEHIND THE SOCK TO HOLD IT IN PLACE DURING RUNOFF EVENTS.
- STRAIGHTEN OR POSITION THE COMPOST FILTER SOCK AS NEEDED ON THE GROUND, ENSURING THERE IS GOOD GROUND CONTACT AND NO VOID SPACES UNDER THE COMPOST FILTER SOCK.
- DO NOT DRAG COMPOST FILTER SOCK ACROSS ROUGH SURFACES. IF DRAGGING ACROSS A ROUGH SURFACE IS NECESSARY, PLACE A BARRIER SUCH AS PLASTIC OR A TARP UNDER COMPOST FILTER SOCK TO PREVENT TEARING.
- BACKFILL LOOSE COMPOST OR FINE WOOD CHIPS TO 1/2 THE HEIGHT OF THE COMPOST FILTER SOCK ALONG THE UPSLOPE SIDE, FILLING THE SEAM BETWEEN THE SOIL SURFACE AND THE COMPOST FILTER SOCK.
- IF THE COMPOST FILTER SOCK IS TO BE LEFT AS PART OF THE NATURAL LANDSCAPE, IT MAY BE SEEDED WITH THE PERMANENT SEED MIX AT TIME OF INSTALLATION.
- FOLLOW MANUFACTURERS SPECIFICATIONS IF THERE IS A DISCREPANCY IN NOTES OR IF ENGINEER APPROVED ALTERNATIVE IS USED.

MAINTENANCE NOTES

- ALL SEDIMENT AND EROSION CONTROLS SHALL BE INSPECTED AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND AFTER ANY STORM EVENT OF GREATER THAN 0.5 INCHES OF PRECIPITATION DURING ANY 24-HOUR PERIOD. INSPECTIONS MUST BE CONDUCTED UNTIL FINAL STABILIZATION IS REACHED ON ALL AREAS OF THE CONSTRUCTION SITE.
- MAKE ANY NECESSARY REPAIRS IMMEDIATELY.
- THE MAXIMUM ALLOWABLE ACCUMULATED SEDIMENT IS 1/3 THE HEIGHT OF THE COMPOST FILTER SOCK. HOWEVER, ACCUMULATED SEDIMENT SHOULD BE REMOVED MORE FREQUENTLY. ALTERNATIVELY, A NEW COMPOST FILTER SOCK CAN BE PLACED ON TOP OF AND SLIGHTLY BEHIND THE ORIGINAL ONE CREATING MORE SEDIMENT STORAGE CAPACITY WITHOUT SOIL DISTURBANCE.
- REMOVE ACCUMULATED SEDIMENT TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN. TAKE CARE TO AVOID UNDERMINING THE COMPOST FILTER SOCK DURING CLEANOUT.
- THE COMPOST SOCK MUST BE REPLACED IF CLOGGED OR TORN.
- IF PONDING BECOMES EXCESSIVE, THE COMPOST FILTER SOCK MAY NEED TO BE REPLACED WITH ONE OF A LARGER DIAMETER OR A DIFFERENT MEASURE.
- THE COMPOST FILTER SOCK NEEDS TO BE REINSTALLED IF UNDERMINED OR DISLOGGED.
- THE COMPOST FILTER SOCK SHALL BE MAINTAINED UNTIL DISTURBED AREA ABOVE THE DEVICE HAS BEEN PERMANENTLY STABILIZED AND CONSTRUCTION ACTIVITY HAS CEASED.



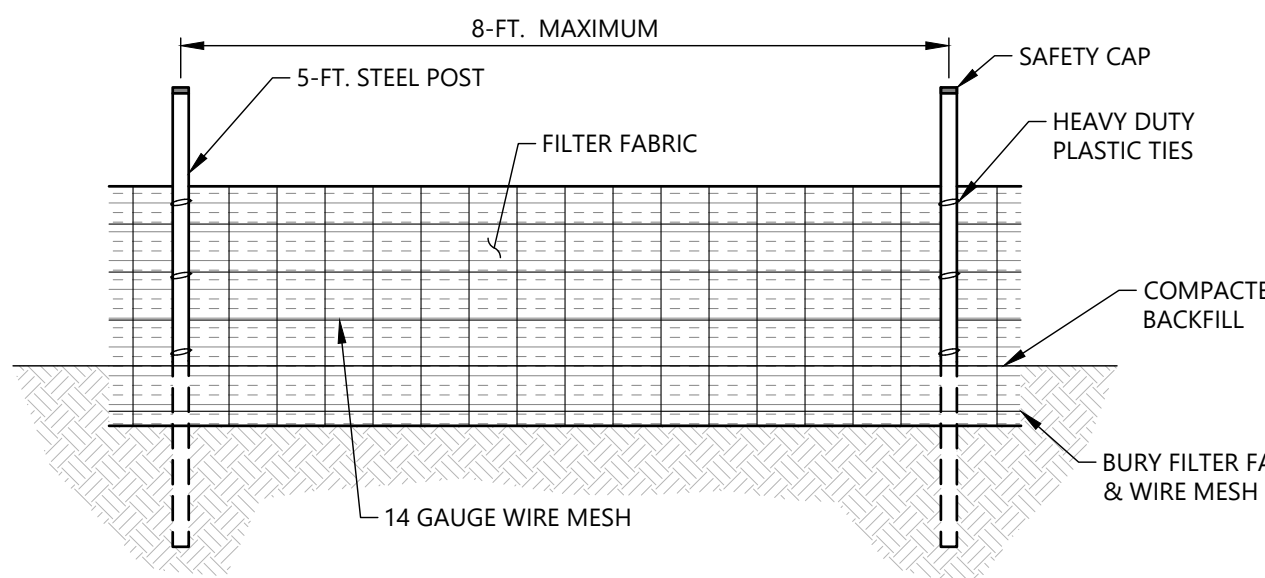
2016 AYRSLEY TOWN BLVD.
SUITE 2-A
CHARLOTTE, NC 28273
(704) 523-4726
ENGINEERING FIRM
LICENSE NUMBER: E-0176



DETAILS (4 OF 6)
LUCK EDGEFIELD - CONCEPTUAL PLAN
LUCK STONE CORPORATION
EDGEFIELD COUNTY, SOUTH CAROLINA

PROJECT NUMBER
22350640
DRAWING NUMBER

13
6 REINFORCED SILT FENCE
SCALE: N.T.S.



PROFILE VIEW

GENERAL NOTES

- DO NOT PLACE SILT FENCE ACROSS CHANNELS OR IN OTHER AREAS SUBJECT TO CONCENTRATED FLOWS. SILT FENCE SHOULD NOT BE USED AS A VELOCITY CONTROL BMP. CONCENTRATED FLOWS ARE ANY FLOWS GREATER THAN 0.5 CFS.
- MAXIMUM SHEET OR OVERLAND FLOW PATH LENGTH TO THE SILT FENCE SHALL BE 100-FT.
- MAXIMUM SLOPE STEEPNESS (NORMAL [PERPENDICULAR] TO THE FENCE LINE) SHALL BE 2:1.
- SILT FENCE JOINTS, WHEN NECESSARY, SHALL BE COMPLETED BY ONE OF THE FOLLOWING OPTIONS:
 - WRAP EACH FABRIC TOGETHER AT A SUPPORT POST WITH BOTH ENDS FASTENED TO THE POST, WITH A 1-FOOT MINIMUM OVERLAP;
 - OVERLAP SILT FENCE BY INSTALLING 3-FT. PAST THE SUPPORT POST TO WHICH THE NEW SILT FENCE ROLL IS ATTACHED. ATTACH OLD ROLL TO NEW ROLL WITH HEAVY-DUTY PLASTIC TIES; OR,
 - OVERLAP ENTIRE WIDTH OF EACH SILT FENCE ROLL FROM ONE SUPPORT POST TO THE NEXT SUPPORT POST.
- ATTACH FILTER FABRIC TO THE STEEL POSTS USING HEAVY-DUTY PLASTIC TIES THAT ARE EVENLY SPACED WITHIN THE TOP 8-INCHES OF THE FABRIC.
- INSTALL THE SILT FENCE PERPENDICULAR TO THE DIRECTION OF THE STORMWATER FLOW AND PLACE THE SILT FENCE THE PROPER DISTANCE FROM THE TOE OF STEEP SLOPES TO PROVIDE SEDIMENT STORAGE AND ACCESS FOR MAINTENANCE AND CLEANOUT.
- INSTALL SILT FENCE CHECKS (TIE-BACKS) EVERY 50-100-FT., DEPENDENT ON SLOPE, ALONG SILT FENCE THAT IS INSTALLED WITH SLOPE AND WHERE CONCENTRATED FLOWS ARE EXPECTED OR ARE DOCUMENTED ALONG THE PROPOSED/INSTALLED SILT FENCE.

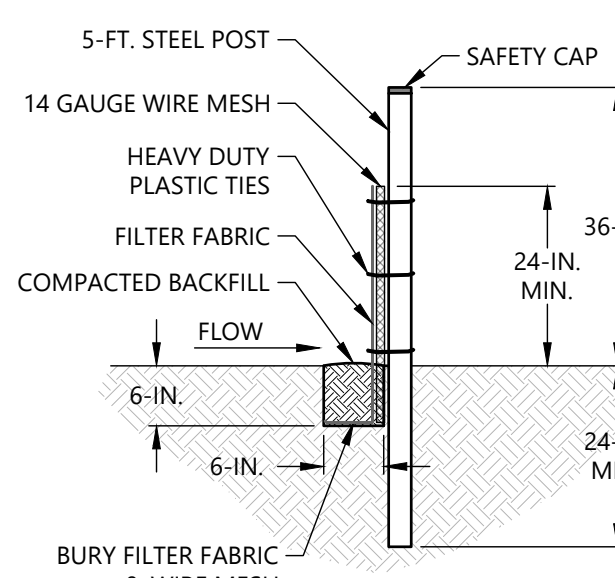
POST REQUIREMENTS

- SILT FENCE POSTS MUST BE 5-FT. LONG STEEL POSTS THAT MEET, AT A MINIMUM, THE FOLLOWING PHYSICAL CHARACTERISTICS:
 - COMPOSED OF A HIGH STRENGTH STEEL WITH A MINIMUM YIELD STRENGTH OF 50,000 PSI.
 - INCLUDE A STANDARD "T" SECTION WITH A NOMINAL FACE WIDTH OF 1.38-IN. AND A NOMINAL "T" LENGTH OF 1.48-IN.
 - WEIGH 1.25 POUNDS PER FOOT (+ 8%)
- POSTS SHALL BE EQUIPPED WITH PROJECTIONS TO AID IN FASTENING OF FILTER FABRIC.
- EACH POST TO BE EQUIPPED WITH SAFETY CAP.
- STEEL POSTS MAY NEED TO HAVE A METAL SOIL STABILIZATION PLATE WELDED NEAR THE BOTTOM WHEN INSTALLED ALONG STEEP SLOPES OR INSTALLED IN LOOSE SOILS. THE PLATE SHOULD HAVE A MINIMUM CROSS SECTION OF 17-SQUARE INCHES AND BE COMPOSED OF 15 GAUGE STEEL, AT A MINIMUM. THE METAL SOIL STABILIZATION PLATE SHOULD BE COMPLETELY BURIED.
- INSTALL POSTS TO A MINIMUM DEPTH OF 24-IN. A MINIMUM HEIGHT OF 1-IN. TO 2-IN. ABOVE THE FABRIC SHALL BE MAINTAINED, AND A MAXIMUM HEIGHT OF 3-FT. SHALL BE MAINTAINED ABOVE THE GROUND.
- POST SPACING SHALL BE AT A MAXIMUM OF 8-FT. ON CENTER.
- WOODEN POSTS ARE ALLOWED WHEN CROSSING UTILITIES. OWNER'S DESIGNATED ENVIRONMENTAL REPRESENTATIVE SHALL APPROVE LOCATIONS WHERE WOODEN POST ARE TO BE USED PRIOR TO INSTALLATION.

FABRIC REQUIREMENTS

- SILT FENCE MUST BE COMPOSED OF WOVEN GEOTEXTILE FILTER FABRIC THAT CONSISTS OF THE FOLLOWING REQUIREMENTS:
 - COMPOSED OF FIBERS CONSISTING OF LONG CHAIN SYNTHETIC POLYMERS OF AT LEAST 85% BY WEIGHT OF POLYOLEFINS, POLYESTERS, OR POLYAMIDES THAT ARE FORMED INTO A NETWORK SUCH THAT THE FILAMENTS OR YARNS RETAIN DIMENSIONAL STABILITY RELATIVE TO EACH OTHER;
 - FREE OF ANY TREATMENT OR COATING WHICH MIGHT ADVERSELY ALTER ITS PHYSICAL PROPERTIES AFTER INSTALLATION;
 - FREE OF ANY DEFECTS OR FLAWS THAT SIGNIFICANTLY AFFECT ITS PHYSICAL AND/OR FILTERING PROPERTIES; AND
 - HAVE A MINIMUM WIDTH OF 36-IN.
- USE ONLY FABRIC APPEARING ON SC DOT'S QUALIFIED PRODUCTS LISTING (QPL), APPROVAL SHEET #34, MEETING THE REQUIREMENTS OF THE MOST CURRENT EDITION OF THE SC DOT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.
- 12-IN. OF THE FABRIC SHOULD BE PLACED WITHIN EXCAVATED TRENCH AND SECURED WHEN THE TRENCH IS BACKFILLED.
- FILTER FABRIC SHALL BE PURCHASED IN CONTINUOUS ROLLS AND CUT TO THE LENGTH OF THE BARRIER TO AVOID JOINTS.
- FILTER FABRIC SHALL BE INSTALLED AT A MINIMUM OF 24-IN. ABOVE THE GROUND.
- USE 14 GAUGE WIRE MESH WITH A MAXIMUM OPENING SPACING OF 6-IN. X 6-IN.

13
6 REINFORCED SILT FENCE
SCALE: N.T.S.

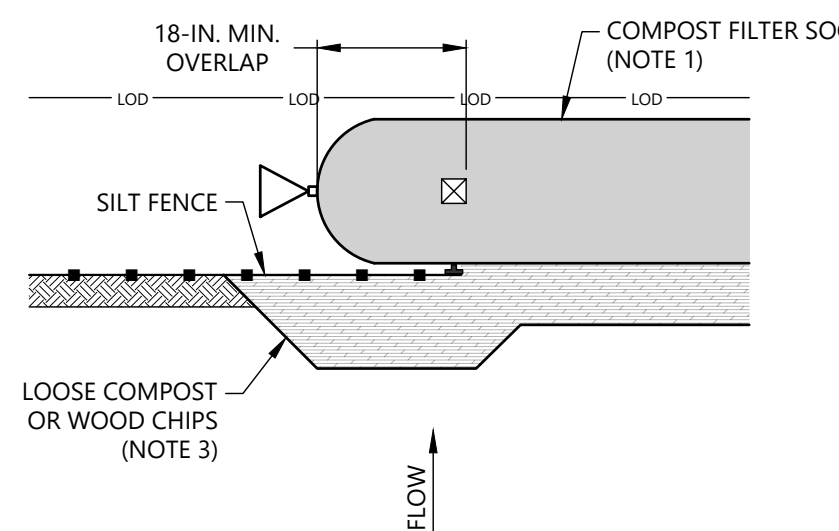


SECTION VIEW

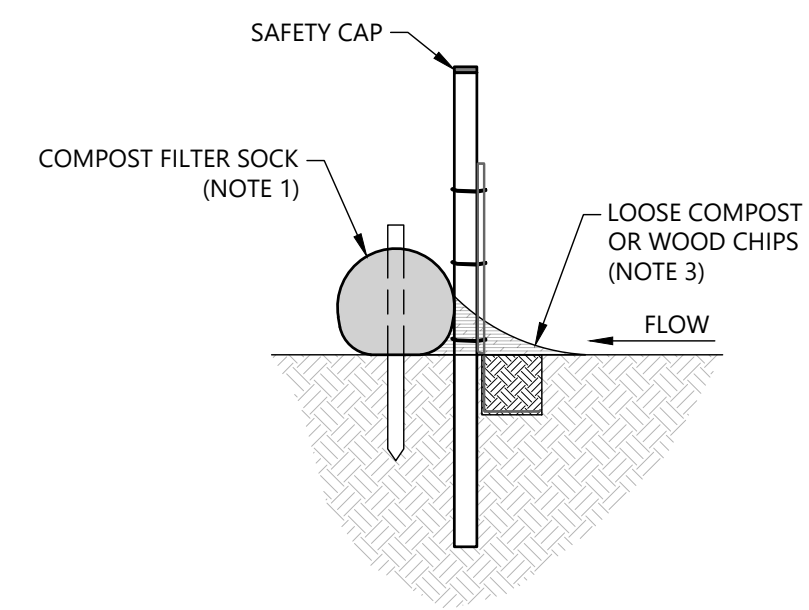
INSPECTION & MAINTENANCE

- THE KEY TO FUNCTIONAL SILT FENCE IS WEEKLY INSPECTIONS, ROUTINE MAINTENANCE, AND REGULAR SEDIMENT REMOVAL.
- ALL SEDIMENT AND EROSION CONTROLS SHALL BE INSPECTED AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND AFTER ANY STORM EVENT OF GREATER THAN 0.5 INCHES OF PRECIPITATION DURING ANY 24-HOUR PERIOD. INSPECTIONS MUST BE CONDUCTED UNTIL FINAL STABILIZATION IS REACHED ON ALL AREAS OF THE CONSTRUCTION SITE.
- ATTENTION TO SEDIMENT ACCUMULATIONS ALONG THE SILT FENCE IS EXTREMELY IMPORTANT. ACCUMULATED SEDIMENT SHOULD BE CONTINUALLY MONITORED AND REMOVED WHEN NECESSARY.
- REMOVED ACCUMULATED SEDIMENT WHEN IT REACHES 1/3 THE HEIGHT OF THE SILT FENCE.
- REMOVED SEDIMENT SHALL BE PLACED IN STOCKPILE STORAGE AREAS OR SPREAD THINLY ACROSS DISTURBED AREA. STABILIZE THE REMOVED SEDIMENT AFTER IT IS RELOCATED.
- CHECK FOR AREAS WHERE STORMWATER RUNOFF HAS ERODED A CHANNEL BENEATH THE SILT FENCE, OR WHERE THE FENCE HAS SAGGED OR COLLAPSED DUE TO RUNOFF OVERTOPPING THE SILT FENCE. INSTALL CHECKS/TIE-BACKS AND/OR REINSTALL SILT FENCE, AS NECESSARY.
- CHECK FOR TEARS WITHIN THE SILT FENCE. AREAS WHERE SILT FENCE HAS BEGUN TO DECOMPOSE, AND FOR ANY OTHER CIRCUMSTANCE THAT MAY RENDER THE SILT FENCE INEFFECTIVE. REMOVE DAMAGED SILT FENCE AND REINSTALL IMMEDIATELY.
- SILT FENCE SHOULD BE REMOVED WITHIN 30 DAYS AFTER FINAL STABILIZATION IS ACHIEVED AND ONCE IT IS REMOVED, THE RESULTING DISTURBED AREA SHALL BE PERMANENTLY STABILIZED.

REFERENCE: DETAIL BASED ON SCDHEC STORM WATER MANAGEMENT BMP HANDBOOK DATED JULY 31, 2005, REVISED MARCH 2014 AND NCDCEQ EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL, CHAPTERS 6 AND 8 REVISED, MAY 2013.



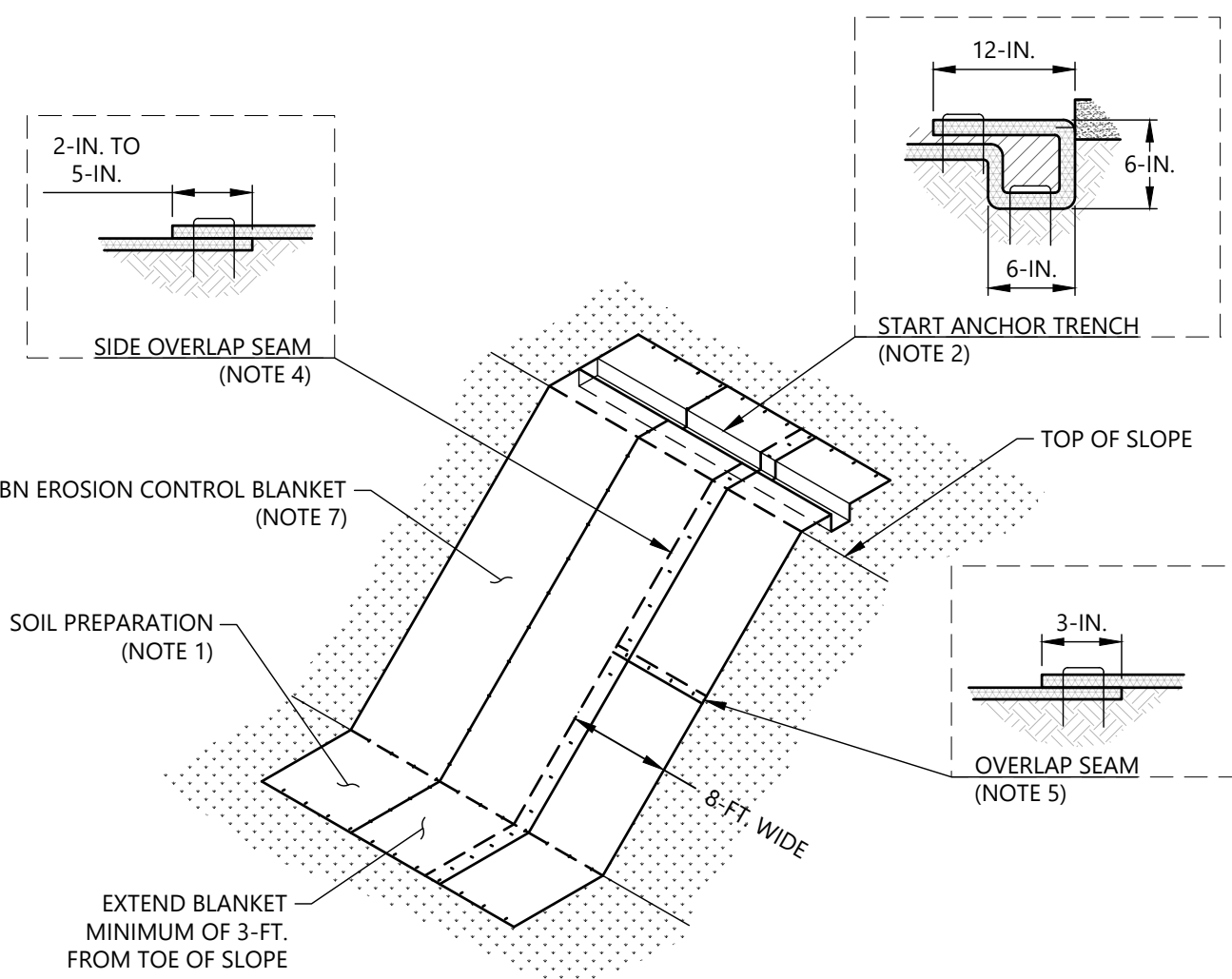
SINGLE SOCK / SILT FENCE OVERLAP - PLAN VIEW



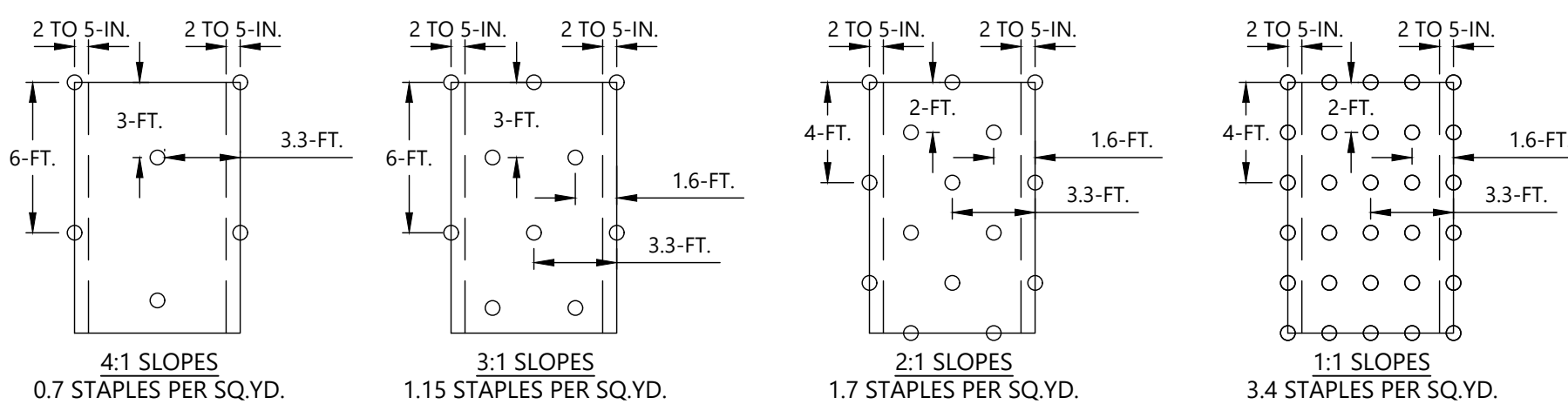
SINGLE SOCK / SILT FENCE OVERLAP - SECTION VIEW

14
6 PERIMETER CONTROL OVERLAP
SCALE: N.T.S.

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ISOMETRIC VIEW



STAPLE PATTERNS

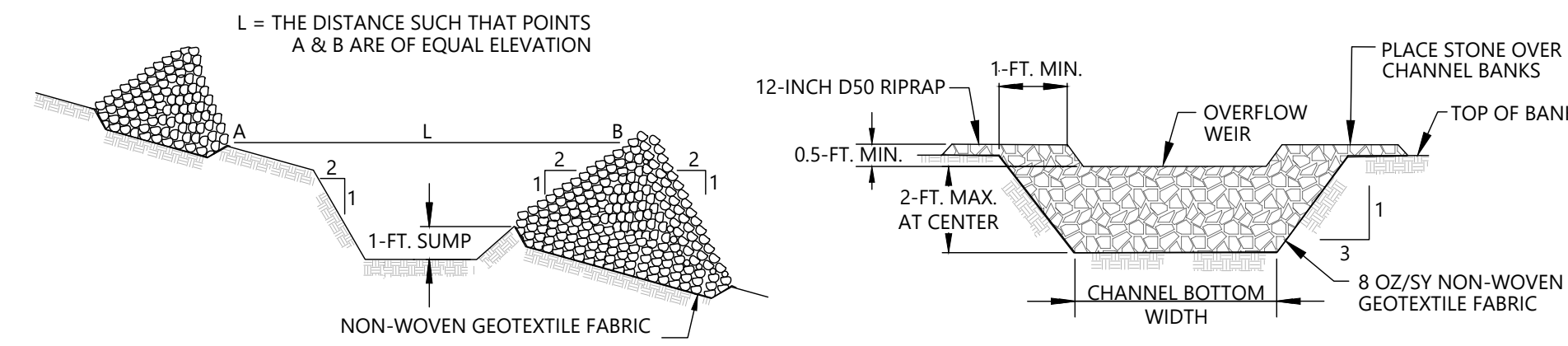
GENERAL NOTES

- PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECPs), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
- BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE RECPs IN A 6-IN. DEEP X 6-IN. WIDE TRENCH WITH APPROXIMATELY 12-IN. OF RECPs EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE RECPs WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12-IN. APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO THE COMPACTED SOIL AND FOLD THE REMAINING 12-IN. PORTION OF RECPs BACK OVER THE SEED AND COMPACTED SOIL. SECURE RECPs OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12-IN. APART ACROSS THE WIDTH OF THE RECPs. ROLL THE RECPs DOWN OR HORIZONTALLY ACROSS THE SLOPE BASED ON ENVIRONMENT INSPECTOR. RECPs WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL RECPs MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE.
- THE EDGES OF PARALLEL RECPs MUST BE STAPLED WITH APPROXIMATELY 2 TO 5-IN. OVERLAP DEPENDING ON THE RECPs TYPE.
- CONSECUTIVE RECPs SPICED DOWN THE SLOPE MUST BE END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3-IN. OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12-IN. APART ACROSS ENTIRE RECPs WIDTH.
- IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6-IN. MAY BE NECESSARY TO PROPERLY SECURE THE RECPs.
- EROSION CONTROL BLANKET SHALL BE NORTH AMERICAN GREEN BIONET SC150BN OR ENGINEER APPROVED EQUIVALENT.
- FOLLOW MANUFACTURERS SPECIFICATIONS IF THERE IS A DISCREPANCY IN NOTES OR IF ENGINEER APPROVED ALTERNATIVE IS USED.

MAINTENANCE NOTES

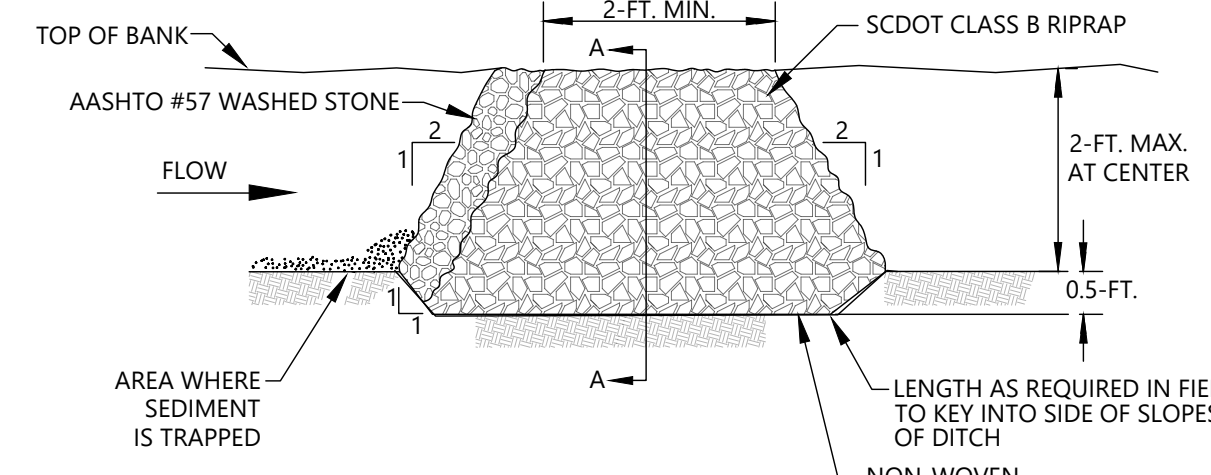
- ALL SEDIMENT AND EROSION CONTROLS SHALL BE INSPECTED AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND AFTER ANY STORM EVENT OF GREATER THAN 0.5 INCHES OF PRECIPITATION DURING ANY 24-HOUR PERIOD. INSPECTIONS MUST BE CONDUCTED UNTIL FINAL STABILIZATION IS REACHED ON ALL AREAS OF THE CONSTRUCTION SITE.
 - MAKE ANY NECESSARY REPAIRS IMMEDIATELY.
 - GOOD CONTACT WITH THE GROUND MUST BE MAINTAINED, AND EROSION MUST NOT OCCUR BENEATH THE RECP.
 - ANY AREAS OF THE RECP THAT ARE DAMAGED OR NOT IN CLOSE CONTACT WITH THE GROUND SHALL BE REPAIRED AND STAPLED.
 - IF EROSION OCCURS DUE TO POORLY CONTROLLED DRAINAGE, THE PROBLEM SHALL BE FIXED AND THE ERODED AREA PROTECTED.
 - MONITOR AND REPAIR THE RECP AS NECESSARY UNTIL GROUND COVER IS ESTABLISHED.
- REFERENCE: DETAIL BASED ON SCDHEC STORM WATER MANAGEMENT BMP HANDBOOK DATED JULY 31, 2015 (PORTIONS REVISED MAY 2014), NORTH AMERICAN GREEN INSTALLATION GUIDE, AND AMERICAN EXCELSIOR CURLEX SLOPE DETAIL ISOMETRIC VIEW.

15 EROSION CONTROL BLANKET - SLOPE
SCALE: N.T.S.



SPACING BETWEEN ROCK CHECK DAMS

CROSS SECTION A-A THRU ROCK CHECK DAM



TYPICAL ROCK CHECK DAM SECTION

MAINTENANCE NOTES

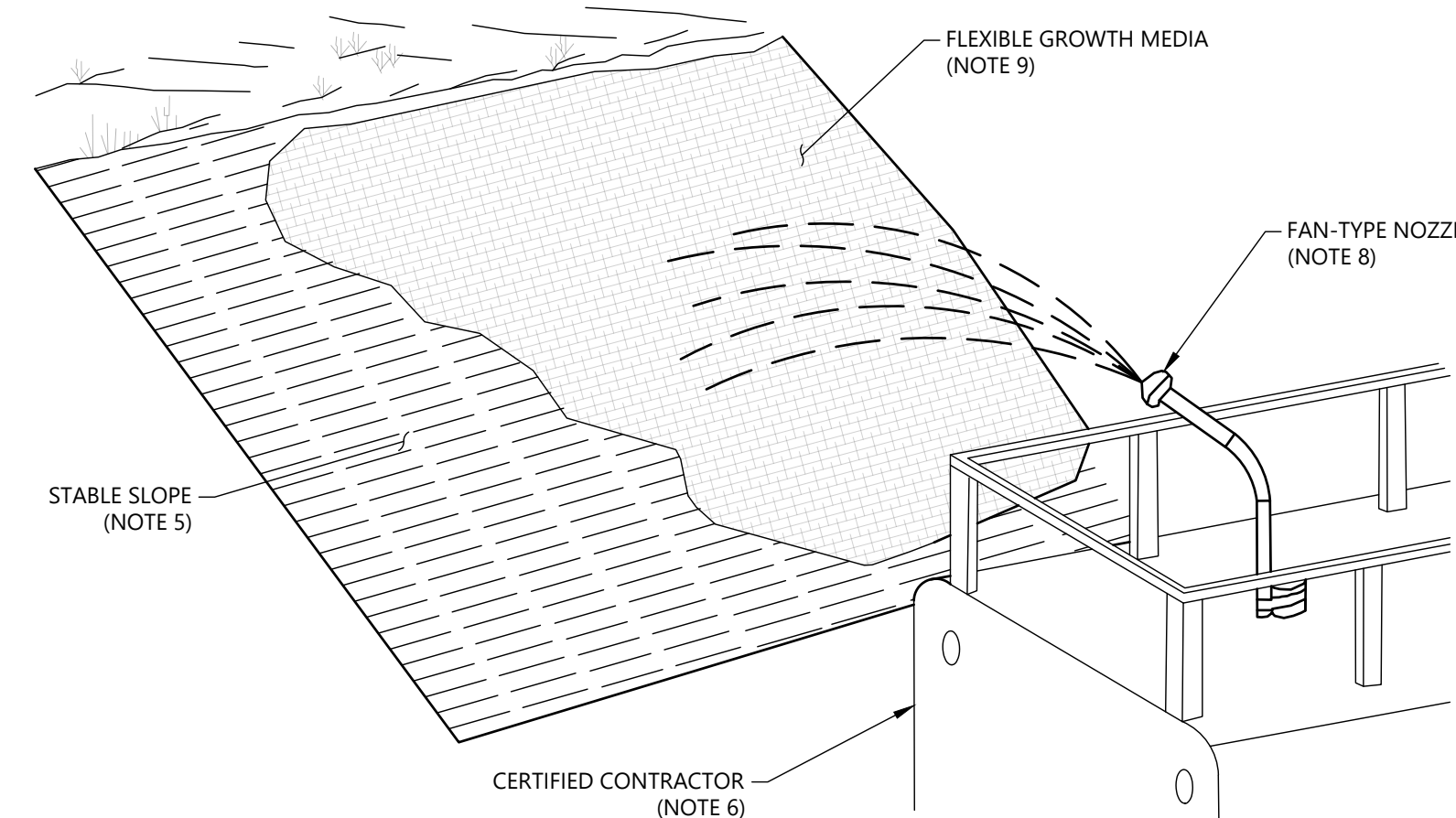
- THE KEY TO FUNCTIONAL ROCK CHECK DAMS IS WEEKLY INSPECTIONS, ROUTINE MAINTENANCE, AND REGULAR SEDIMENT REMOVAL.
- ALL SEDIMENT AND EROSION CONTROLS SHALL BE INSPECTED AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND AFTER ANY STORM EVENT OF GREATER THAN 0.5 INCHES OF PRECIPITATION DURING ANY 24-HOUR PERIOD. INSPECTIONS MUST BE CONDUCTED UNTIL FINAL STABILIZATION IS REACHED ON ALL AREAS OF THE CONSTRUCTION SITE.
- ATTENTION TO SEDIMENT ACCUMULATIONS IN FRONT OF THE ROCK CHECK DAM IS EXTREMELY IMPORTANT. ACCUMULATED SEDIMENT SHOULD BE CONTINUALLY MONITORED AND REMOVED WHEN NECESSARY.
- REMOVE ACCUMULATED SEDIMENT WHEN IT REACHES 1/3 THE HEIGHT OF THE ROCK CHECK DAM.
- REMOVED SEDIMENT SHALL BE PLACED IN STOCKPILE STORAGE AREAS OR SPREAD THINLY ACROSS DISTURBED AREA. STABILIZE THE REMOVED SEDIMENT AFTER IT IS RELOCATED.
- INSPECT ROCK CHECK DAMS' EDGES FOR EROSION AND EVIDENCE OF RUNOFF BYPASSING THE INSTALLED CHECK. IF EVIDENT REPAIR PROMPTLY AS NECESSARY TO PREVENT EROSION AND BYPASSING.
- IN THE CASE OF GRASS-LINED DITCHES, CHANNELS, AND SWALES, ROCK CHECK DAMS SHOULD BE REMOVED WHEN THE GRASS HAS MATURED SUFFICIENTLY TO PROTECT THE DITCH OR SWALE UNLESS THE SLOPE OF THE SWALE IS GREATER THAN 4%.
- AFTER CONSTRUCTION IS COMPLETED AND FINAL STABILIZATION IS REACHED, THE ENTIRETY OF THE ROCK CHECK DAM SHOULD BE REMOVED IF VEGETATION WILL BE USED FOR PERMANENT EROSION CONTROL MEASURES. THE AREA BENEATH THE REMOVED ROCK CHECK DAMS MUST BE ADDRESSED WITH PERMANENT STABILIZATION MEASURES.

REFERENCE: DETAIL BASED ON SCDHEC STORM WATER MANAGEMENT BMP HANDBOOK DATED JULY 31, 2005, REVISED MARCH 2014.

16 ROCK CHECK DAM
SCALE: N.T.S.

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

By: Jeremy E. Eddy
Map Name: SED-2424-BV1
Date Approved: October 04, 2024
Permit #: I-002424



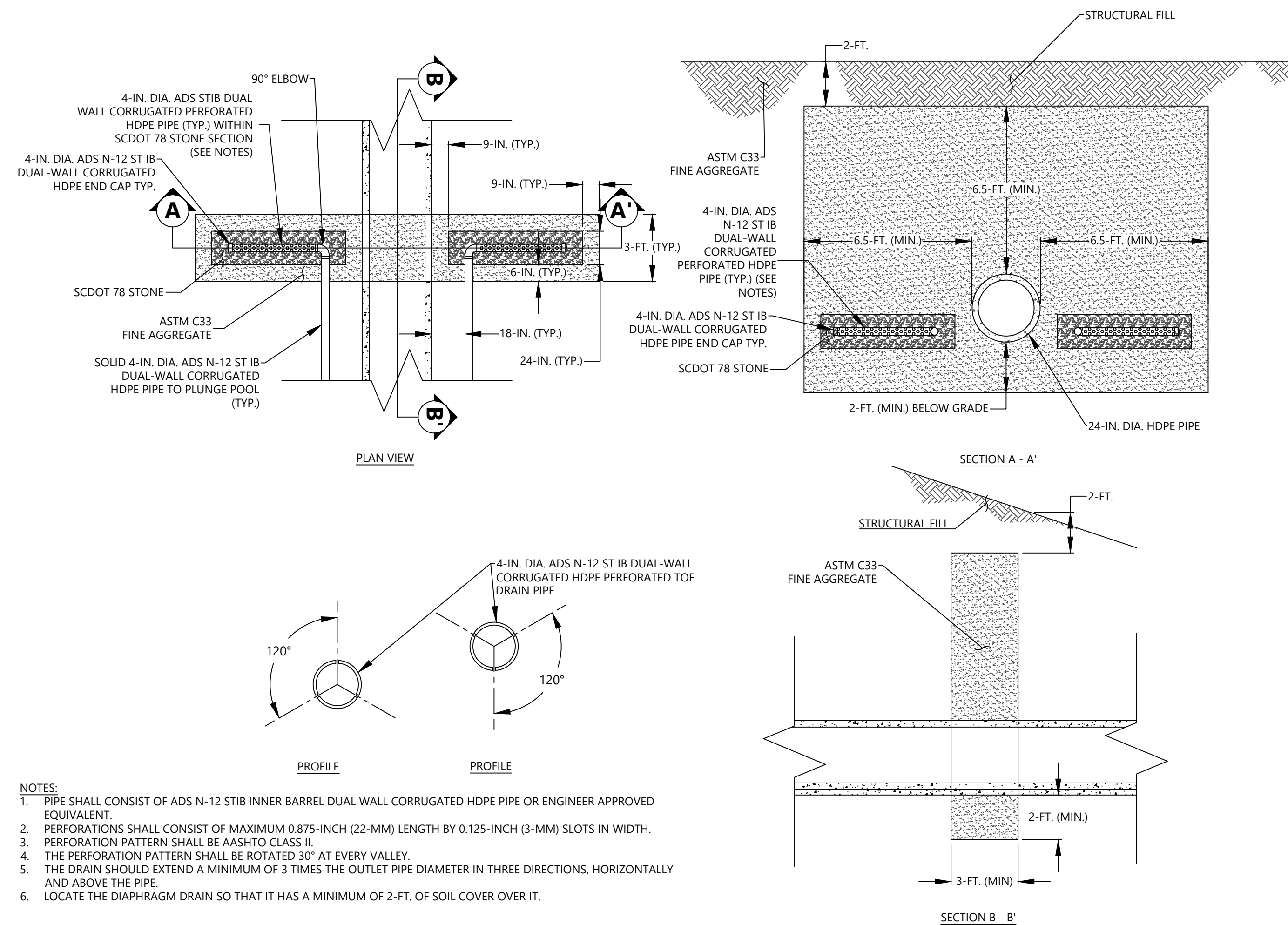
MAINTENANCE NOTES

- ALL SEDIMENT AND EROSION CONTROLS SHALL BE INSPECTED AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND AFTER ANY STORM EVENT OF GREATER THAN 0.5 INCHES OF PRECIPITATION DURING ANY 24-HOUR PERIOD. INSPECTIONS MUST BE CONDUCTED UNTIL FINAL STABILIZATION IS REACHED ON ALL AREAS OF THE CONSTRUCTION SITE.
- REAPPLY FGM TO DISTURBED AREAS THAT REQUIRE CONTINUED EROSION CONTROL.
- MAINTAIN EQUIPMENT TO PROVIDE UNIFORM APPLICATION RATES. RINSE ALL MIXING AND APPLICATION EQUIPMENT THOROUGHLY WITH WATER TO AVOID FORMATION OF RESIDUES AND DISCHARGE RINSE WATER APPROPRIATELY.
- DEGRADATION OF FGM IS EXPECTED TO OCCUR AS A RESULT OF MECHANICAL DEGRADATION, CHEMICAL AND BIOLOGICAL HYDROLYSIS, SUNLIGHT, SALT AND TEMPERATURE. REAPPLICATION IS NOT REQUIRED UNLESS FGM TREATED SOILS ARE DISTURBED OR TURBIDITY OR WATER QUALITY SHOWS THE NEED FOR AN ADDITIONAL APPLICATION.

GENERAL NOTES

- A FLEXIBLE GROWTH MEDIA (FGM) COMBINES BOTH CHEMICAL AND MECHANICAL BONDING TECHNIQUES TO LOCK THE MATRIX IN PLACE. FGM IS COMPOSED OF CRIMPED, MANMADE FIBERS, ORGANIC FIBERS, AND PERFORMANCE ENHANCING ADDITIVES THAT FORM A LOFTY, INTERLOCKING MATRIX. FGM HAS AIR SPACES AND WATER-ABSORBING CAVITIES THAT IMPROVE SEED GERMINATION, REDUCE THE IMPACT OF RAINDROP ENERGY, AND MINIMIZE SOIL LOSS. WATER INSOLUBLE TACKIFIERS AND FLOCCULANTS CHEMICALLY BOND THE MATRIX TO THE SOIL SURFACE.
- FGM IS APPLICABLE FOR THE FOLLOWING SITUATIONS:
 - AS A TYPE A TEMPORARY EROSION CONTROL BLANKET;
 - SLOPES UP TO 2H:1V;
 - AS AN INFILL FOR TURF REINFORCEMENT MATS (TRMS) ON SLOPES GREATER THAN 2H:1V;
 - ENVIRONMENTALLY SENSITIVE AREAS NOT COMPATIBLE FOR NETTING;
 - WHEN THE REQUIRED LONGEVITY OF SOIL PROTECTION IS UP TO 1 YEAR;
 - WHEN THE SITE REQUIRES IMMEDIATE EROSION PROTECTION AND THERE IS A RISK OF IMPENDING WEATHER;
 - WHEN FAST VEGETATION ESTABLISHMENT IS REQUIRED; AND
 - WHEN A HIGH FACTOR OF DESIGN SAFETY IS REQUIRED.
- FGM IS NOT APPLICABLE AS A CHANNEL LINER OR FOR AREAS RECEIVING CONCENTRATED FLOW. APPLICABLE FGM MAY BE SELECTED FROM THE SCDOT APPROVED PRODUCTS LIST. FLEXIBLE GROWTH MEDIA (FGM) COMPONENTS ARE PRE-PACKAGED BY THE MANUFACTURER TO ASSURE MATERIAL PERFORMANCE. UNDER NO CIRCUMSTANCES IS FIELD MIXING OF MATERIALS, ADDITIVES OR COMPONENTS ACCEPTED. EXAMINE SUBSTRATES AND CONDITIONS WHERE MATERIALS WILL BE APPLIED.
- APPLY FGM TO GEOTECHNICALLY STABLE SLOPES THAT HAVE BEEN DESIGNED AND CONSTRUCTED TO DIVERT RUNOFF AWAY FROM THE FACE OF THE SLOPE. DO NOT PROCEED WITH INSTALLATION UNTIL SATISFACTORY CONDITIONS ARE ESTABLISHED.
- INSTALL FGM WITH A CONTRACTOR WHO IS CERTIFIED AND TRAINED BY THE MANUFACTURER IN THE PROPER PROCEDURES FOR MIXING AND APPLYING THE FGM.
- STRICTLY COMPLY WITH THE MANUFACTURER'S MIXING RECOMMENDATIONS AND INSTALLATION INSTRUCTIONS.
- USE APPROVED HYDRAULIC SEEDING/MULCHING MACHINES WITH FAN-TYPE NOZZLE (50-DEGREE TIP) FOR FGM APPLICATIONS.
- APPLY FGM FROM OPPOSING DIRECTIONS TO THE SOIL SURFACE IN SUCCESSIVE LAYERS, REDUCING THE "SHADOW EFFECT" TO ACHIEVE MAXIMUM COVERAGE OF ALL EXPOSED SOIL.
- FGM DOES NOT REQUIRE A CURE TIME AND IS EFFECTIVE IMMEDIATELY SUCH THAT FGM MAY BE APPLIED IMMEDIATELY BEFORE, DURING OR AFTER A RAINFALL EVENT.
- INSTALL FGM MATERIALS ACCORDING TO THE MANUFACTURER'S APPLICATION RATES.

17 FLEXIBLE GROWTH MEDIA
SCALE: N.T.S.



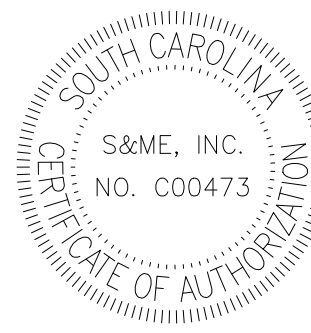
NOTES:

- PIPE SHALL CONSIST OF ADS N-12 STIB INNER BARREL DUAL WALL CORRUGATED HDPE PIPE OR ENGINEER APPROVED EQUIVALENT.
- PERFORATIONS SHALL CONSIST OF MAXIMUM 0.875-INCH (22-MM) LENGTH BY 0.125-INCH (3-MM) SLOTS IN WIDTH.
- PERFORATION PATTERN SHALL BE AASHTO CLASS II.
- THE PERFORATION PATTERN SHALL BE ROTATED 30° AT EVERY VALLEY.
- THE DRAIN SHOULD EXTEND A MINIMUM OF 3 TIMES THE OUTLET PIPE DIAMETER IN THREE DIRECTIONS, HORIZONTALLY AND ABOVE THE PIPE.
- LOCATE THE DIAPHRAGM DRAIN SO THAT IT HAS A MINIMUM OF 2-FT. OF SOIL COVER OVER IT.

18 SEEPAGE DIAPHRAGM DRAIN
SCALE: N.T.S.



2016 ARSLEY TOWN BLVD
SUITE 2-A
CHARLOTTE, NC 28273
(704) 523-4726
ENGINEERING FIRM
LICENSE NUMBER: E-0176



NO.	DATE	ISSUED FOR CLIENT REVIEW	BY	CHK	APV
1	02/15/2024		MJH	AW	CHR

DETAILS (5 OF 6)

LUCK EDGEFIELD - CONCEPTUAL PLAN
LUCK STONE CORPORATION
EDGEFIELD COUNTY, SOUTH CAROLINA

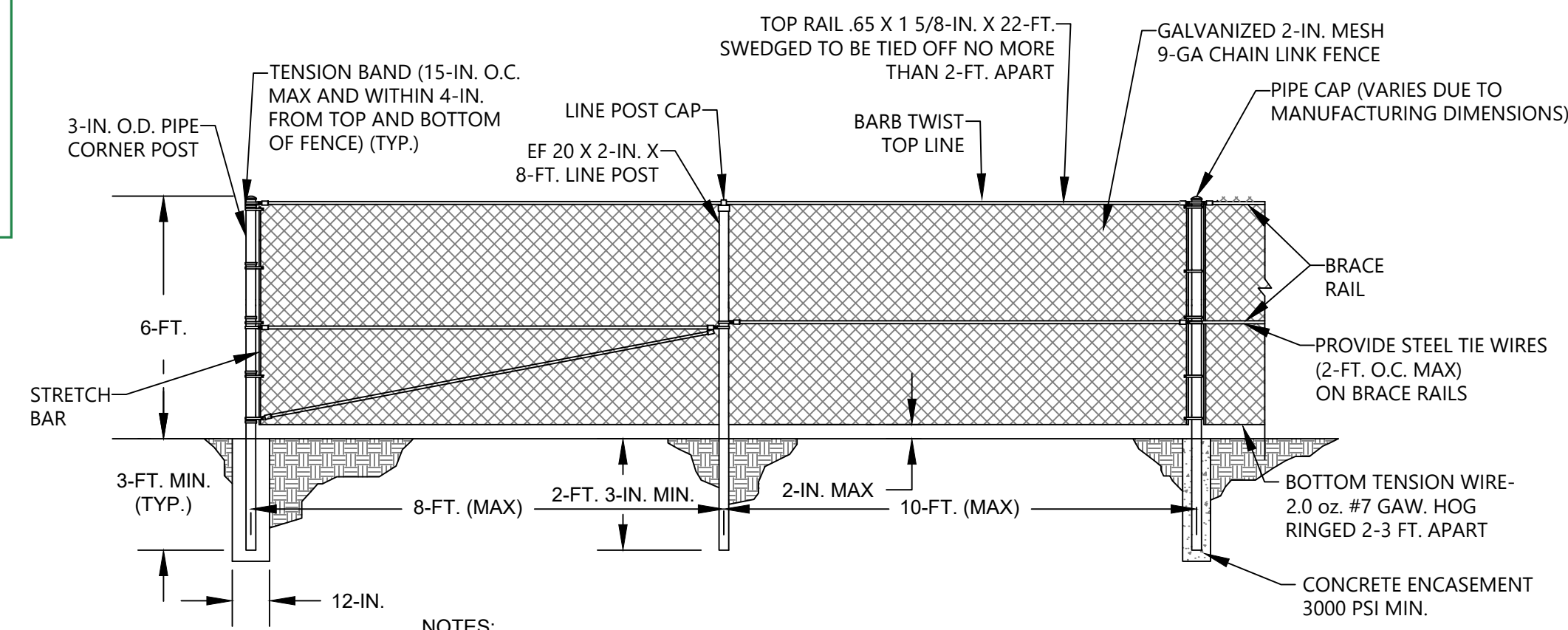
PROJECT NUMBER
22350640
DRAWING NUMBER

7

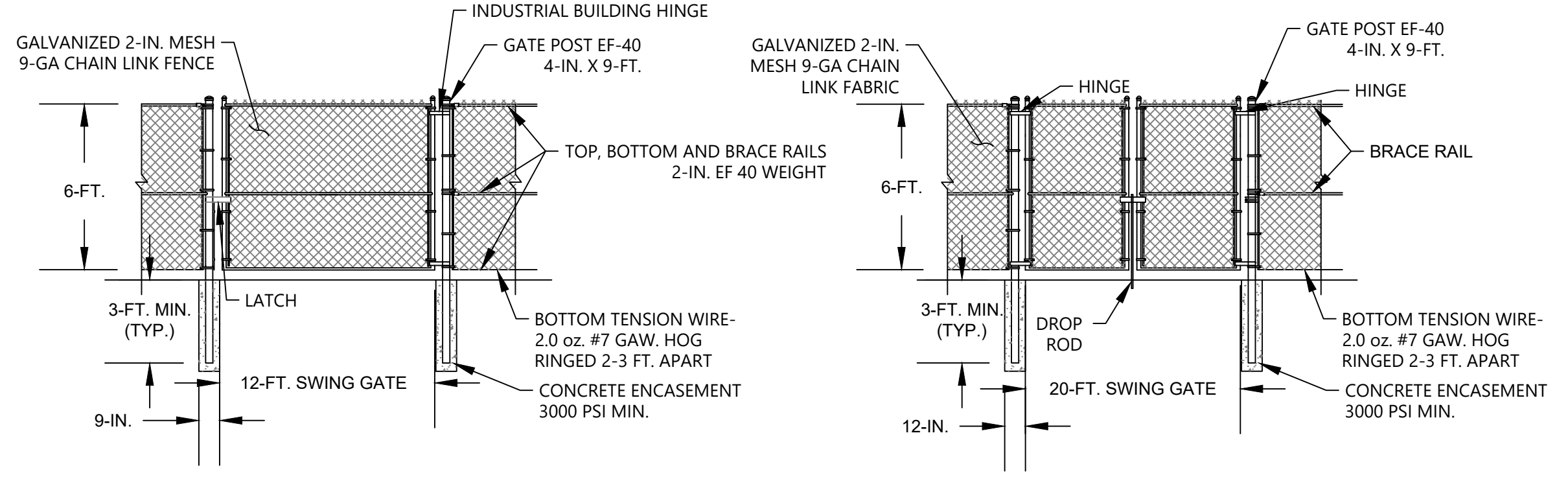
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Approved by the
S.C. Dept. of Environmental Services
Division of Mining & Solid Waste Management

By Jeremy E. Eddy
Map Name ED-2424-9V1
Date Approved October 04, 2024
Permit # I-002424



- NOTES:
1. ALL FENCE COMPONENT MATERIALS SHALL BE HOT DIPPED GALVANIZED STEEL. FENCE MESH SHOULD BE 2.0 OZ. GAW.
 2. BOTTOM SELLIAGE SHALL BE KNUCKLED
 3. ALL LINE POSTS TO BE DRIVEN. ALL TERMINAL POSTS SUCH AS END, CORNER, CURVE, AND GATE POSTS TO BE PLACED IN CONCRETE.



19 CHAIN LINK FENCE
8 SCALE: N.T.S.



2016 ARSLEY TOWN BLVD
SUITE 2-A
CHARLOTTE, NC 28273
(704) 523-4726
ENGINEERING FIRM
LICENSE NUMBER: E-0176



NO.	DATE	DESCRIPTION	BY	CHK	APV
1	02/15/2024	ISSUED FOR CLIENT REVIEW	AEW	CHR	CIS

DETAILS (6 OF 6)
LUCK EDGEFIELD - CONCEPTUAL PLAN
LUCK STONE CORPORATION
EDGEFIELD COUNTY, SOUTH CAROLINA

PROJECT NUMBER
22350640
DRAWING NUMBER

8 8

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