REQUEST FOR COMMITTEE ACTION

HENDERSON COUNTY

TECHNICAL REVIEW COMMITEE

MEETING: TRC 5-7-24 & ZBA 5-29-24

SUBJECT: Special Use Permit SUP-24-01 and Variance V-24-01 – Duke Energy Laydown Yard

PRESENTER: Matt Champion

ATTACHMENTS:

- 1. Staff Report & Oblique Photos
- 2. Variance Application
- 3. Special Use Permit Application
- 4. Major Site Plan Application
- 5. Major Site Plan

SUMMARY OF REQUEST: Major Site Plan review for SR: 2.10 Outdoor Storage >5,000SQFT

SUGGESTED MOTION:

I move that the TRC approve the major site plan for Duke Energy Laydown Yard &

<u>I recommend forwarding the Special Use Permit and Variance to the Zoning Board of Adjustment</u>



Henderson County, North Carolina Code Enforcement Services

1. Committee Request

1.1. Applicant: Duke Energy Carolinas, LLC1.2. Request: Special Use Permit & Variance

1.3. **PIN:** 9690-86-88831.4. **Size:** 16.92 Acres

1.5. Location: 107 Laycock Rd, Hendersonville, NC 28792

1.6. Supplemental Requirements:

SR 2.10. Outdoor Storage greater than 5,000 square feet

(1) Locational Requirements. Storage areas shall not be placed in a *front yard*.

(2) Screening. Screen Class Three (3) or Four (4) shall be provided consistent with the requirements of §42-181 (Screen Classification).

County Context - Duke Energy Laydown Yard SUP-24-02 & VAR-24-01

IEREBURE

Subject Area

LAUREDWARE

LAUREDWARE

County Border

Major Roads

Map A: County Context Map

Property Owner: Duke Energy Carolinas, LLC Agent: Brian Blake, PE

Assessed Acreage: 16.92 Acres PIN: 9690-86-8883

Current Zoning: Residential Two Rural (R2R)



2. History & Characteristics:

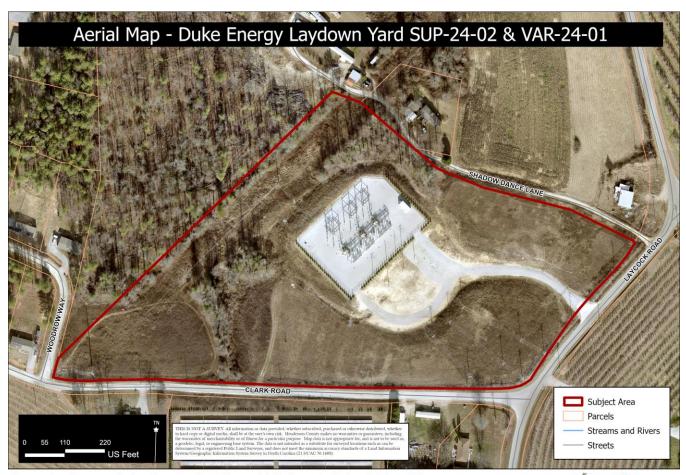
2.1. <u>Current Property Owners:</u> Duke Energy Carolinas, LLC originally acquired the subject area through a General Warranty Deed on September 19, 2018.

2.2. Natural Resources:

2.2.1. Streams: The subject area does contain some surface water sources.

2.2.2. Slopes: The subject area only contains slopes between 0% to 16%.

Map B: Aerial Map



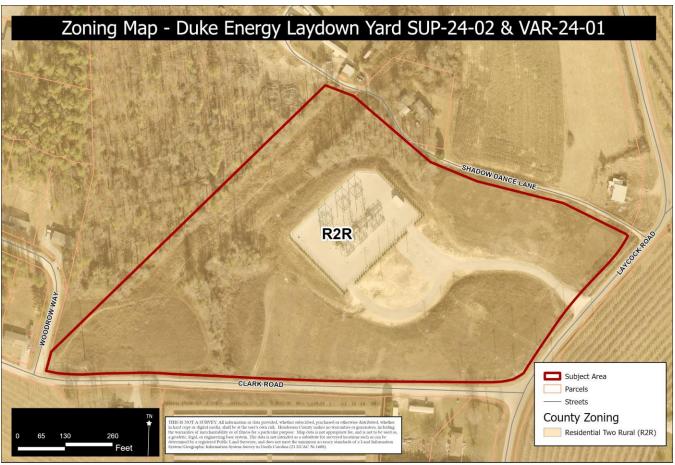
Property Owner: Duke Energy Carolinas, LLC Agent: Brian Blake, PE

Assessed Acreage: 16.92 Acres PIN: 9690-86-8883 Current Zoning: Residential Two Rural (R2R)

3. <u>Current Conditions</u>

- 3.1. **Current Use:** The subject area currently contains an existing utility substation that was approved by the Technical Review Committee on October 2, 2018. The utility station was constructed between 2020 and 2022 according to aerial photos. The rest of the subject area is vacant with minor improvements.
- 3.2. **Adjacent Area Uses:** The surrounding properties contain residential structures, agricultural land, vacant land, and a solar generation facility across Clark Rd.

Map C: Zoning Map



Property Owner: Duke Energy Carolinas, LLC Agent: Brian Blake, PE

Assessed Acreage: 16.92 Acres PIN: 9690-86-8883 Current Zoning: Residential Two Rural (R2R)



- **3. Zoning** The subject area is located within the Residential Two Rural (R2R) zoning district.
 - 3.1 **Residential Two Rural (R2R):** The purpose of Residential District Two Rural (R2R) is to foster orderly growth where the *principal use* of land is residential. The intent of this district is to allow for low to medium density *residential development* and rural commercial and light industrial development consistent with the recommendations of the *Comprehensive Plan*. This general *use district* is typically meant to be utilized outside areas designated as Utility Service Area (USA) in the *Comprehensive Plan*. (LDC §42-29)
 - 3.2 **Adjacent Zoning:** Residential Two Rural (R2R) is found in all directions of the subject area.

Map D: Public Utilities Map



Property Owner: Duke Energy Carolinas, LLC Agent: Brian Blake, PE

Assessed Acreage: 16.92 Acres PIN: 9690-86-8883

Current Zoning: Residential Two Rural (R2R)



- **4.** <u>Floodplain /Watershed Protection</u> The subject area is not encumbered by a Special Flood Hazard Area. The property is not in a Water Supply Watershed district. There is one known surface water found on the subject area according to the USGS.
- **5.** Water and Sewer This property will not be served by public or private water or sewer.

Public Water: N/A **Public Sewer:** N/A

Future Land Use Map - Duke Energy Laydown Yard SUP-24-02 & VAR-24-01

Support Area

Parcels

Streams and Rivers

Streets

Transitional Area
Agriculture/Rural

Map E: 2045 Future Land Use Map

Property Owner: Duke Energy Carolinas, LLC Agent: Brian Blake, PE

Assessed Acreage: 16.92 Acres PIN: 9690-86-8883 Current Zoning: Residential Two Rural (R2R)



- **6. 2045 Comprehensive Plan Compatibility** The 2045 Comprehensive Plan Future Land Use Map identifies the subject area as being in a Transitional Area character area (See Map E).
 - a. **Transitional Area:** From Part 2 page 44, "Transitional Area encompasses residential areas of limited density. Conservation subdivisions should be encouraged in these areas to provide and protect open space.
 - i. Where: Outside the core of the Utility Service Area and working agricultural lands
 - ii. **Density:** The maximum allowable density range is two to four units per acre (gross density)
 - iii. **Uses:** Single family residential, potentially some appropriately sized multifamily as part of planned developments, agricultural uses
- 7. Proposal The applicant is proposing to develop two portions of the subject area as a laydown yard/graveled parking area for ongoing utility work throughout Henderson County. The proposed outdoor storage areas will total approximately 3.7 acres that will be enclosed with an 8' tall security fence with landscaping. The outdoor storage areas will be covered by gravel and accessed through the existing utility substation driveway. The major site plan does show an additional driveway access off Clark Rd to the 2.2 acres outdoor storage area. Both access points leading to

the proposed outdoor storage area will be gated. The existing utility substation will remain unchanged.

- **8. Landscaping** The applicant will be required to install a Screen Class Three (3) or Screen Class Four (4) around the proposed outdoor storage area.
 - 8.1. A Screen Class Three (3) consists of a fence or wall constructed with a minimum height of six (6) feet, that is at least 75 percent *opaque*, where all spaces are evenly distributed, and with the finished side of the fence facing the adjacent property or *road*. Fences longer than 20 linear feet shall be landscaped with: a row of *shrubs* spaced a maximum of ten (10) feet apart, or a row of *evergreen trees* planted no more than 15 feet apart.
 - 8.2. A Screen Class Four (4) consists of a fence or wall constructed with a minimum height of eight (8) feet designed to facilitate the movement of maintenance and emergency response equipment to and from the proposed site. Gates should be secured at all times (unless for maintenance, inspection, or other unforeseen instances) following the completion of construction. Fencing may be in common with other *existing uses* on site. Fences longer than 20 linear feet shall be landscaped (excluding the gate area) with: a continuous hedge of *evergreen shrubs* planted in a five (5) foot strip spaced a maximum of eight (8) feet apart. The *Zoning Administrator* may require additional *screening* to minimize adverse impacts of ground level lighting (where installed)

9. Oblique Aerial Photos

View from East



01/05/2024

View from North



View from South



View from West



01/05/2024

	Application	No.	
RM			

HENDERSON COUNTY VARIANCE APPLICATION FORM

GENERAL INFORMATION		
Date of Application: 4/16/24		
Previously Submitted (Circle One): Yes	s (No)	
Date of Pre-Application Conference: 3/	11/242	
Site Plan Attached (Circle One):(Yes)	No	
PARCEL INFORMATION		
Property Address 107 Laycock Road		
PIN: 9690868883	_ Deed Book/Page: 3252/294 Acreage: 16.92	
	Edneyville Watershed: French Broad Floodplain: X	
Driving Directions: From Hendersonvil	le, travel east on US-64 for 7.3 miles. Turn right onto	
	site will be on the right side after 0.8 miles.	
	-	
	orage cannot be entirely located outside the "front yard"	
FRONT SETBACK (feet/foot) 20 ft		
SIDE SETBACK (feet/foot) 15 ft		
REAR SETBACK (feet/foot) 10 ft		
PROPERTY OWNER CONTACT INF	ORMATION:	
Name: Duke Energy Carolinas, LLC	Phone: (864) 209-9518	
Address: 555 Brevard Rd	City, State, and Zip: Asheville, NC 28806	
Applicant:		
Name: Darin Hill	Phone: (828) 243-0645	
Address: 557 Spartanburg Highway	City, State, and Zip: Hendersonville, NC 28792	
Agent:		
Name:	Phone:	
Address:	City, State, and Zip:	
Agent Form (Circle One): Yes No		
Plan Preparer:		
Name: S&ME - Brian Blake, PE	Phone: (828) 687-9080	
Address: 44 Buck Shoals Road, Suite C-3 City, State, and Zip: Arden, NC 28704		

SITE PLAN REQUIREMENTS

Site plan of property showing existing structures, natural features (i.e. streams, ponds, etc.) proposed building or addition and indicating distance from such to the edge of right-of-way (centerline for variance request in the R-40, WR, or SW districts) and to the side and rear lot lines, as applicable. It is required that the site be staked or flagged. The Zoning Administrator will take photos of the site and the staked or flagged area. Show placement of well & septic system and drain field if applicable and distances from structures.

NOTE: Site plan not to exceed 11 X 17 size. Anything submitted larger than 11 X 17, the applicant must provide 12 copies with the application form.

STANDARDS FOR REVIEW

The Zoning Board of Adjustment does not have unlimited discretion in deciding whether to grant a variance. Under the state enabling act, the Board is required to reach the following conclusions as a prerequisite to the issuance of a variance. State facts and argument in support of each of the following:

SECTIONS A & D MUST BE ANSWERED BY APPLICANT OR AGENT

- A. There are practical difficulties or unnecessary hardships in carrying out the strict letter of this Chapter, as demonstrated by:
 - The fact that, if the applicant complies with the literal terms of this Chapter, he/she cannot secure a reasonable return from, or make a reasonable use of, the property. (It is not sufficient that failure to grant the variance simply make the property less valuable.)
 Duke Energy wishes to store and stage materials to aid projects in the area at a property where there is an existing substation. The ordinance states that outdoor storage may not be placed in the front yard. Given the constraints of the site, the storage area must be located at least partly in the front of the property. The substation occupies approximately 3 of the 16 acres of the property but it cannot be used for non-utility uses given the existing substation.
 - 2. The hardship of which the applicant complains results from unique circumstances related to the applicant's land. (Note: Hardships suffered by the applicant common with his neighbors do not justify a variance. Unique personal or family hardships are irrelevant since a variance, if granted, runs with the land.)
 The subject property is fronted on three sides by road right-of-way and contains an existing electrical substation with multiple overhead electric wires. The rear portion of the property contains the stormwater and erosion control basin, steep grades, overhead power lines and established woods which make locating the storage entirely behind the substation unrealistic.
 - 3. The hardship is not the result of the applicants own action.

 The hardship is based primarily due to the fact that it has road frontage on three sides meaning a majority of the site could be considered "front yard" with the fourth side containing steeper grades, overhead electric lines, and wooded areas.
- B. The variance is in harmony with the general purpose and intent of the Land Development Code and will preserve its spirit. (State facts and arguments to show that the variance requested represents the least possible deviation from the letter of the ordinance that will allow a reasonable use of the land and that the use of the property, if the variance is granted, will not substantially detract from the character of the neighborhood.)
 - Outdoor storage is permitted with special use approval and the construction will comply with all other regulations, utilizing class four evergreen landscape screening surrounding the entire storage area. Adjancent land use varies but includes low density residential, undeveloped property, agriculture, and a solar farm.
- C. The variance will secure the public safety and welfare and will do substantial justice. (State facts and arguments to show that, on balance, if the variance is denied, the benefit to the public will be substantially outweighed by the harm suffered by the applicant.)
 - The storage area will aid in the construction and maintenance of utility projects in the surrounding areas. Operating the storage area at the subject property is the most efficient use of utility resources to improve and maintain existing and new electrical utilities in Henderson County.

SECTIONS A & D MUST BE ANSWERED BY APPLICANT OR AGENT D. The variance shall not be based on the existence of a nonconforming use of neighboring land or structures in the same district, or permitted nonconforming uses in other districts, and shall in no way constitute a reason for the requested variance. The need for a variance is not based on any nonconforming adjacent properties, it is based solely on the conditions of the subject property. I certify that the information shown above is true and accurate and is in conformance with the Land Development regulations of Henderson County. DARIN HILL Print Applicant (Owner or Agent) 04/16/2024 Date Signature Applicant (Owner or Agent) **County Use Only** Fee: \$_____Paid: Method: _____ Received by: ____ Permit#:____ **HENDERSON COUNTY** CODE ENFORCEMENT SERVICES APPOINTMENT OF AGENT FORM (OPTIONAL) owner of property located on (Name) (Street Address) recorded in and having a parcel identification number of (Deed Book/Page) (PIN) located in Henderson County, North Carolina, do hereby appoint (Agent's Name) , to represent me in an application to the Code Enforcement Services Department and authorize him/her to act as my agent in all matters, formal and informal except as stated herein, and authorize him/her to receive all official correspondence. I however understand that as the listed property owner, I must sign all affidavits and statements required by any applicable ordinance. (Property Owner)

(Date)

Application No.	

HENDERSON COUNTY SPECIAL USE PERMIT APPLICATION FORM

GENERAL INFORMATION				
Date of Application: 4/16/24 Previously Submitted (Circle One): Yes No				
Site Plan Attached (Circle One): Yes No				
Traffic Impact Study Required (Circle One): Yes No				
SPECIAL USE PERMIT INFORMATION				
Type of use to be permitted: Outdoor storage SR #:				
Existing Structures or Uses on property: Existing electric utility substation				
Road System (Circle): Public Private				
Water System (Circle): Individual Community Public (Municipal or County) *N/A				
Sewer System (Circle): Individual Community Public (Municipal or County)*N/A				
SITE PLAN REQUIREMENTS				
 Dimensions of property. Location of existing and proposed structures (including accessory structures), and general use thereof. Setbacks of existing and proposed structures from property lines and edge of right-of-way for roads (from centerline of roads for uses located in the R-40, WR, or SW districts). Separation of existing and proposed structures from one another. Parking and off/on loading areas Location of signs (including sign dimensions, height, type of material, lighting). Location and dimensions of existing and proposed roads / driveways and their entrance/exits. Location of dumpsters. Location and general description of any fences, landscaping or other buffering (proposed or existing). Site plan not to exceed 11 X 17 size. Anything submitted larger than 11 X 17, the applicant must provide 12 copies with the application form. 				
PARCEL INFORMATION				
PIN: <u>9690868883</u> Deed Book/Page: <u>3252/294</u> Tract Size (Acres): <u>16.92</u>				
Zoning District: R2R Fire District: Edneyville Watershed: French Broad Floodplain: X				
Location of property to be developed: The property is located immediately northwest of the intersection of Laycock Road and Clark Road at 107 Laycock. The location of existing and proposed features on the property are shown on the site plan.				
CONTACT INFORMATION Property Owner: Name: Duke Energy Carolinas, LLC Phone: (864) 209-9518 Address: 555 Brevard Rd City, State, and Zip: Asheville, NC 28806 Applicant:				

Phone: <u>(828)</u> 243-0645

Name: Darin Hill

A 11	557 Occasional discharge		Application No	
	Address: 557 Spartanburg Highway		City, State, and Zip: Hendersonville, NC 28792	
Agent:				
			Phone:	
	S:		City, State, and Zip:	
· ·	Form (Circle One): Yes	No		
Plan Preparer				
Name:	S&ME - Brian Blake, PE		Phone: <u>(828)</u> 687-9080	
Addres	s: 44 Buck Shoals Road, Suit	te C-3	City, State, and Zip: Arden, NC 28704	
STANDARDS	S FOR REVIEW			
	<u> </u>		ng GENERAL REQUIREMENTS on the use requested by the	
		olicant s	hould explain, where applicable, how the proposed use satisfies	
these requirem				
	*		naterially endanger the public health, safety or welfare:	
	• • • • • • • • • • • • • • • • • • • •		n a property which already has a Duke Energy substation.	
			8' high security fencing with a locked gate when not in use	
	and screened by landscaping on all sides. The storage area will hold non-hazardous materials and equipment needed for utility projects and maintenance for nearby areas.			
		,0010 01	Ta mana isa isa isa isa isa isa isa isa isa is	
B. Genera area.	l Requirement #2. The use w	vill not s	substantially injure the value of property or improvements in the	
	xisting use of the property	is ener	rgy substation which will remain. The storage area will be	
			all sides and will only be operated during regular business	
hours.	. The storage area will faci	ilitate u	tility projects and improvements for nearby areas.	
C. Genera	l Requirement #3. The use v	vill be ir	n harmony with the surrounding area.	
			gle family residential (lots greater than 0.5 acres),	
			solar farm. The substation and storage areas will occupy	
<u>less th</u>	nan 50% of the property ar	<u>nd will p</u>	preserve wooded areas that currently exist.	
The Land Deve	elopment Code also imposes	the follo	owing SPECIFIC REQUIREMENTS on the use requested by the	
	T The state of the		6. Comment of the control of the	

The Land Development Code also imposes the following SPECIFIC REQUIREMENTS on the use requested by the applicant. The applicant should be prepared to demonstrate that satisfactory provisions have been made for the following, where applicable.

The proposed use shall be located and developed in such a manner as to:

- a. Comply with all applicable local, state and federal statutes, ordinance and regulations.

 In addition to Henderson County zoning, the following permits will be obtained prior to
 construction and operation: Henderson County stormwater, NCDOT Driveway encroachment,
 NC DEQ Erosion/Sediment Control. Duke Energy will maintain compliance during operation.
- b. Be in accordance with the Comprehensive Plan, Long Range Transportation Plans and Comprehensive Transportation Plans of the county and/or Long Range Transportation Plans and comprehensive Transportation Plans of nay municipality of the County.
 The property is designated as Transitional Area on the comprehensive plan future land use

map and is outside of the urban growth boundary but within the utility service area. Expansion of electric utilities will be necessary to realize planned development in the area.

	Application No
c.	Minimize the effects of noise, glare, dust, solar access and odor on those persons residing or working in the neighborhood of the proposed use.
	The surface of the storage area will be gravel which will minimize dust. Noise from operations
	will not be expected every day and will be limited to regular business hours. Landscaping will
	obscure the sight of stored items and no odor or other impacts are expected.
d.	Minimize the environmental impacts on the neighborhood including the following groundwater, surface
	water, wetlands, endangered/threatened species, archeological sites, historic preservation sites and unique
	natural areas.
	The uncompacted gravel will allow infiltration of stormwater and avoid any increase in runoff
	condition offsite. No waters of the state or sensitive resources will be impacted by the project.
Show th	nat satisfactory provision/arrangement has been made (where applicable or required) concerning:
a.	Ingress and egress to property and proposed structures thereon (with particular reference to
	automotive/pedestrian safety/convenience and traffic flow/control).
	The existing property entrance from Laycock Road will be maintained and a second access will
	be built from Clark Road. NC DOT approval is pending. The location of the ingress and egress
	are shown on the site plan.
b.	Off-street parking and loading areas.
	There will be no loading areas nor specifically designated parking. Workers will park either in
	the existing gravel area or within the proposed storage area while working on site. Items to be
	stored on site may include vehicles from time to time.
c.	Utilities (with particular reference to locations, availability and compatibility).
	The current use of the property is electrical distribution. The proposed storage area will operate
	without the need for additional utilities.
d.	Buffering and landscaping (with particular reference to type, location and dimensions).
	The storage area will be fenced in with an 8' security fence. The fencing will be screened by a
	class 4 landscape buffer which will have evergreens planted at 8' spacing around the entire
	storage area. Portions of the west side have an existing tree line to provide screening.
e.	Structures (with particular reference to location, size and use).
	No structures are proposed in this application. There is an existing energy substation on the
	property.
I certify the	at the information shown above is true and accurate and is in conformance with the Land Development
	of Henderson County.
	Rin Hill
Print Appli	cant (Owner or Agent)
(2)	an 1/16/2024
Signature A	Applicant (Owner or Agent) Date
Ü	
	County Use Only
Fac. ¢	
	Paid: Method: Received by:
Authority to	grant the requested permit is contained in the Land Development Code, Sections:
Community	Planning Area:
Community	Planning Area:

HENDERSON COUNTY MAJOR SITE PLAN REVIEW APPLICATION

CONTACT INFORMATION Property Owner:		
Name: Duke Energy Carolinas, LLC		Phone: <u>(864)</u> 209-9518
Complete Address: 957 Spartanburg H	wy Hendersonville, NC 2879	2
Applicant:		
Name: Darin Hill		Phone: <u>(828)</u> 243-0645
Complete Address: 557 Spartanburg H	ighway Hendersonville, NC 2	8792
Agent:		
Name:		Phone:
Complete Address:		
Agent Form (Circle One): Yes N	lo	
Plan Preparer:		
Name: S&ME - Brian Blake, PE		Phone: <u>(828)</u> 687-9080
Complete Address: 44 Buck Shoals Ro	ad, Suite C-3 Arden, NC 287	04
• •	Tract Size (Acres): 1 Fire District: Edney Watershed: French B Floodplain: X	road
Location / Property to be developed: The property is located immediately north at 107 Laycock Rd. The location of existing the same at 107 Laycock Rd. The location of existing the l	g and proposed features	s are shown on the site plan.
	County Use Only	
Fee: \$ Paid:	Method:	Received by:

ARRIVATION INFAITING ATION	N.O. DED A DELIGNE OF ED ANODODE A TION
Driveway D141-045-24- Date of 03/20/2024	N.C. DEPARTMENT OF TRANSPORTATION
Permit No. 00010 Date of 03/20/2024 Application	STREET AND DRIVEWAY ACCESS
County: Henderson	PERMIT APPLICATION
Development Name: Duke Energy Storage Area	
LOCATION OF PROP	ERTY:
Route/Road: SR 1724 Laycock Road and SR 1725 Clark Rd	
Exact Distance 690	
From the Intersection of Route No. 1724 and Route No.	Toward West of intersection
Property Will Be Used For: ☐ Residential /Subdivision ☐ Commercial ☐ Edu	ucational Facilities ☐ TND ☐ Emergency Services ☒ Other
	n R2R County City Zoning Area.
AGREEMENT	
• I, the undersigned property owner, request access and permission	to construct driveway(s) or street(s) on public right-
 of-way at the above location. I agree to construct and maintain driveway(s) or street entrance(s) Street and Driveway Access to North Carolina Highways" as adopted 	
Transportation.	·
• I agree that no signs or objects will be placed on or over the public	
 I agree that the driveway(s) or street(s) will be constructed as show I agree that that driveway(s) or street(s) as used in this agreement 	·
speed change lanes as deemed necessary.	melade any appreasin apere, eterage ianee er
I agree that if any future improvements to the roadway become necessary	
located on public right-of-way will be considered the property of the will not be entitled to reimbursement or have any claim for present	
I agree that this permit becomes void if construction of driveway(s)	
specified by the "Policy on Street and Driveway Access to North Ca	
I agree to pay a \$50 construction inspection fee. Make checks pay	able to NCDOT. This fee will be reimbursed if
application is denied.I agree to construct and maintain the driveway(s) or street(s) in a sa	afe manner so as not to interfere with or endanger
the public travel.	are marrier so as not to interiore with or endanger
 I agree to provide during and following construction proper signs, so the protection of traffic in conformance with the current "Manual on Highways" and Amendments or Supplements thereto. Information obtained from the District Engineer. 	Uniform Traffic Control Devices for Streets and
I agree to indemnify and save harmless the North Carolina Departn	nent of Transportation from all damages and claims
for damage that may arise by reason of this construction.	acuma na raananaihilitu far anu damagaa that mau
 I agree that the North Carolina Department of Transportation will as be caused to such facilities, within the highway right-of-way limits, i 	
I agree to provide a Performance and Indemnity Bond in the amour	• •
construction proposed on the State Highway system.	
 The granting of this permit is subject to the regulatory powers of the law and as set forth in the N.C. Policy on Driveways and shall not be 	
• I agree that the entire cost of constructing and maintaining an appro	oved private street or driveway access connection
and conditions of this permit will be borne by the property owner, the assignees.	ne applicant, and their grantees, successors, and
I AGREE TO NOTIFY THE DISTRICT ENGINEER WHEN THE PR COMPLETED.	OPOSED WORK BEGINS AND WHEN IT IS

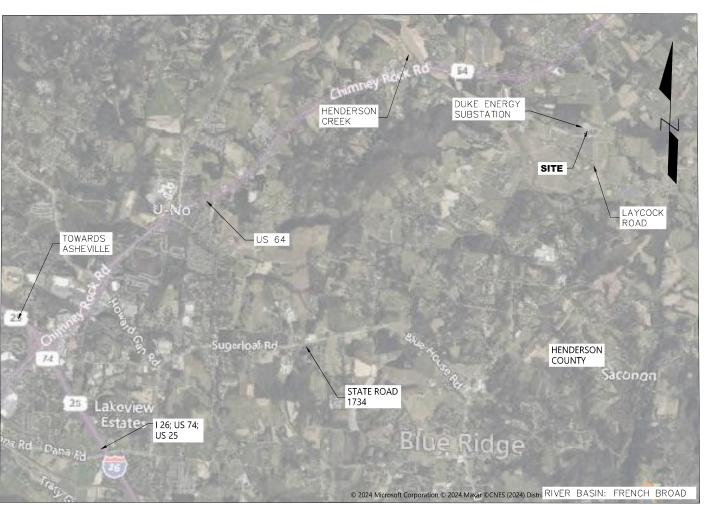
2004-07

SIGNATURES OF APPLICANT		
PROPERTY OWNER (APPLICANT) COMPANY SIGNATURE ADDRESS 957 portunt on Hwy Herdesonille NC Phone No. 864 209 9	NAME SIGNATURE ADDRESS	WITNESS
AUTHORIZED AGENT COMPANY SIGNATURE ADDRESS Phone No. APP	NAME SIGNATURE ADDRESS ROVALS	WITNESS
APPLICATION RECEIVED BY DISTRICT ENGINEER		
SIGNATURE		DATE
APPLICATION APPROVED BY LOCAL GOVERNMENTAL AUTHORITY (w	hen required)	
SIGNATURE	TITLE	DATE
APPLICATION APPROVED BY NCDOT		
SIGNATURE	TITLE	DATE
INSPECTION BY NCDOT		
SIGNATURE	TITLE	DATE
COMMENTS:		

EROSION & SEDIMENT CONTROL PLAN LAYCOCK ROAD PARKING/LAYDOWN AREA

HENDERSONVILLE, HENDERSON COUNTY, NORTH CAROLINA

PROJECT NUMBER 23600232



VICINITY MAP

1" = 2,000'

CIVIL ENGINEER



44 BUCK SHOALS ROAD, UNIT C-3 ARDEN, NC 28704 (828) 687-9080



DRAWING LIST

DRAWING TITLE

EXISTING CONDITIONS

ZONING SITE PLAN

NC DOT SITE PLAN

COVER

E&SC PLAN

E&SC NOTES

E&SC DETAILS

E&SC DETAILS

E&SC DETAILS
SITE DETAILS

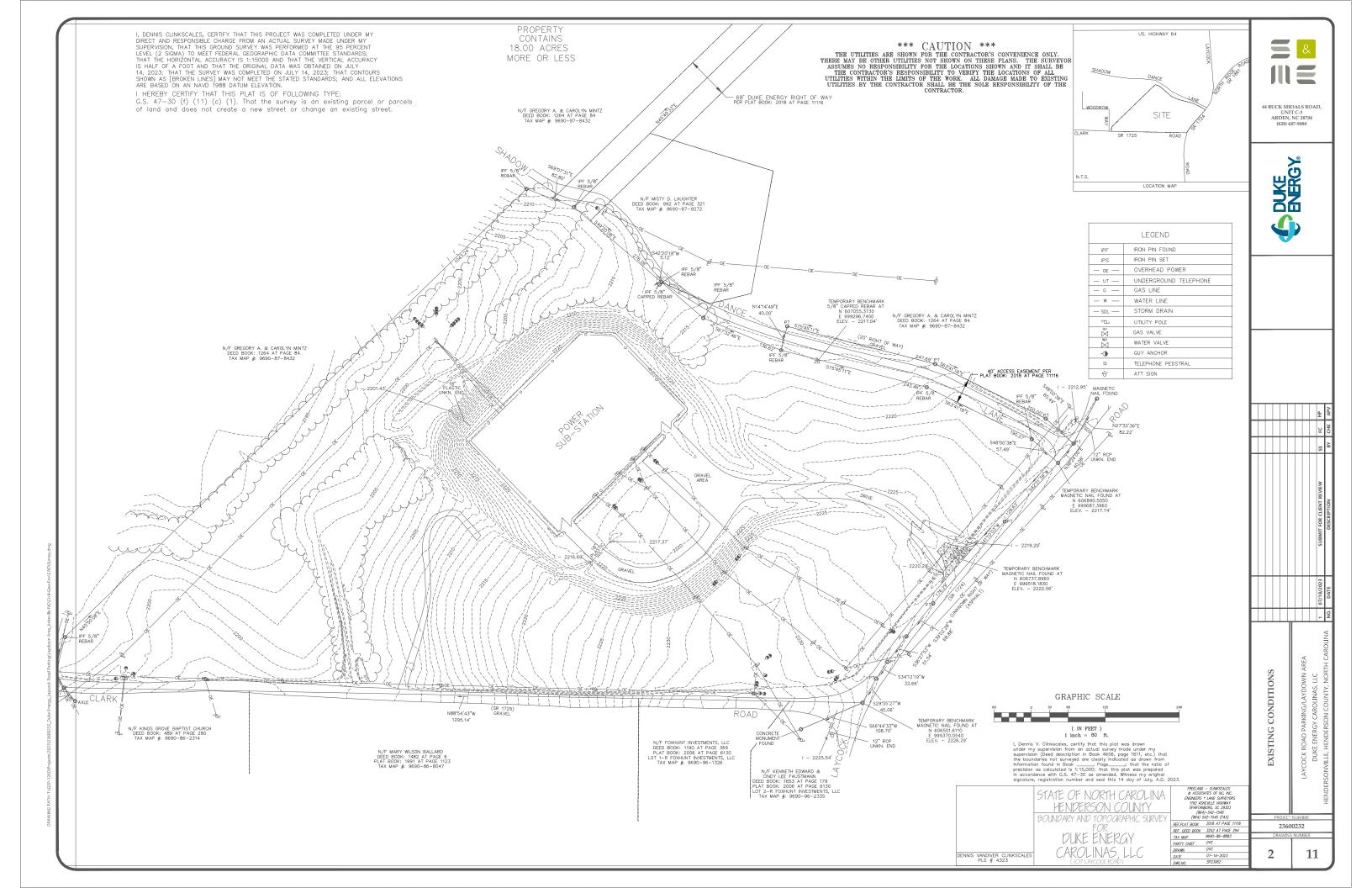
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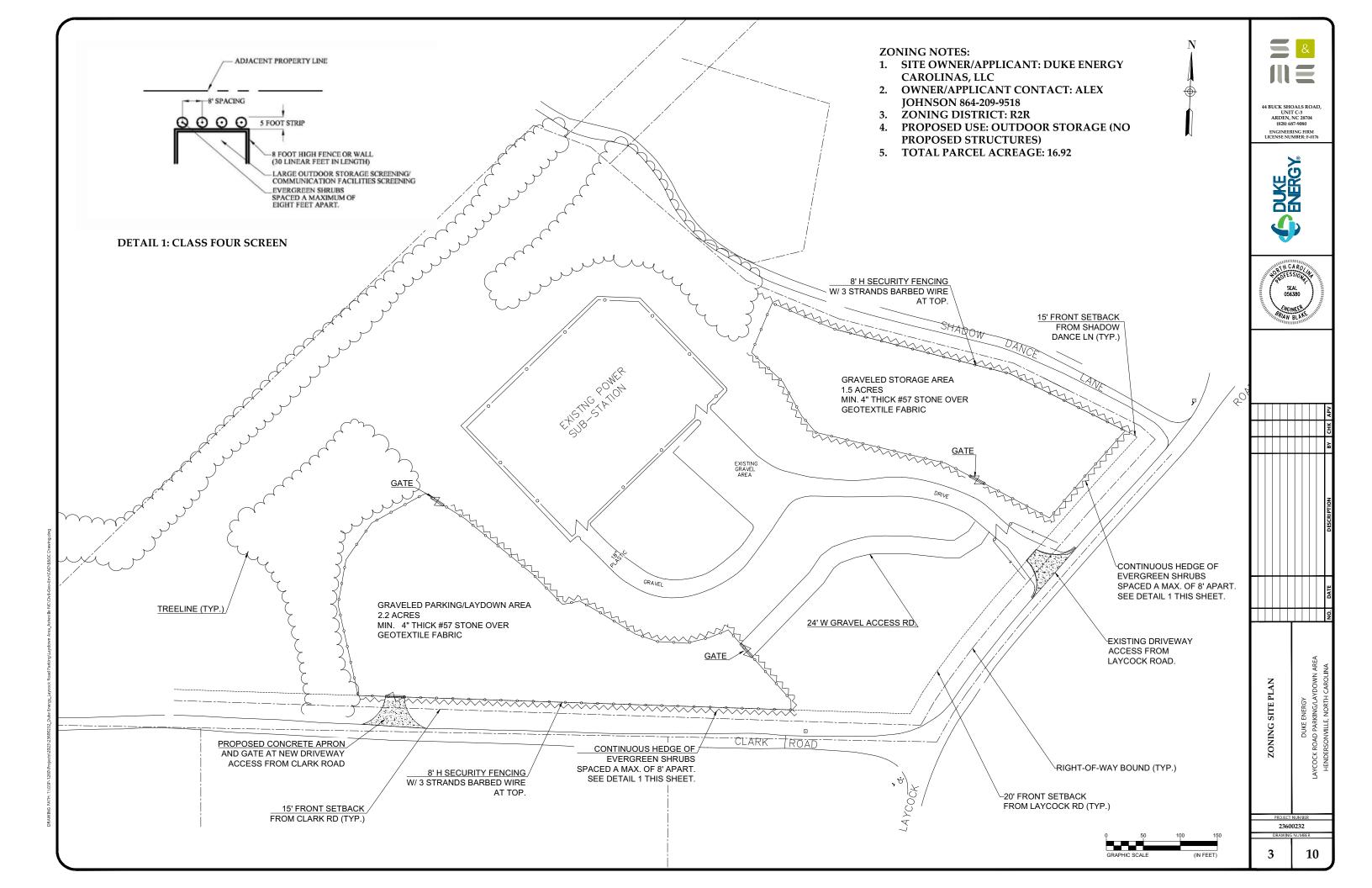
PREPARED FOR

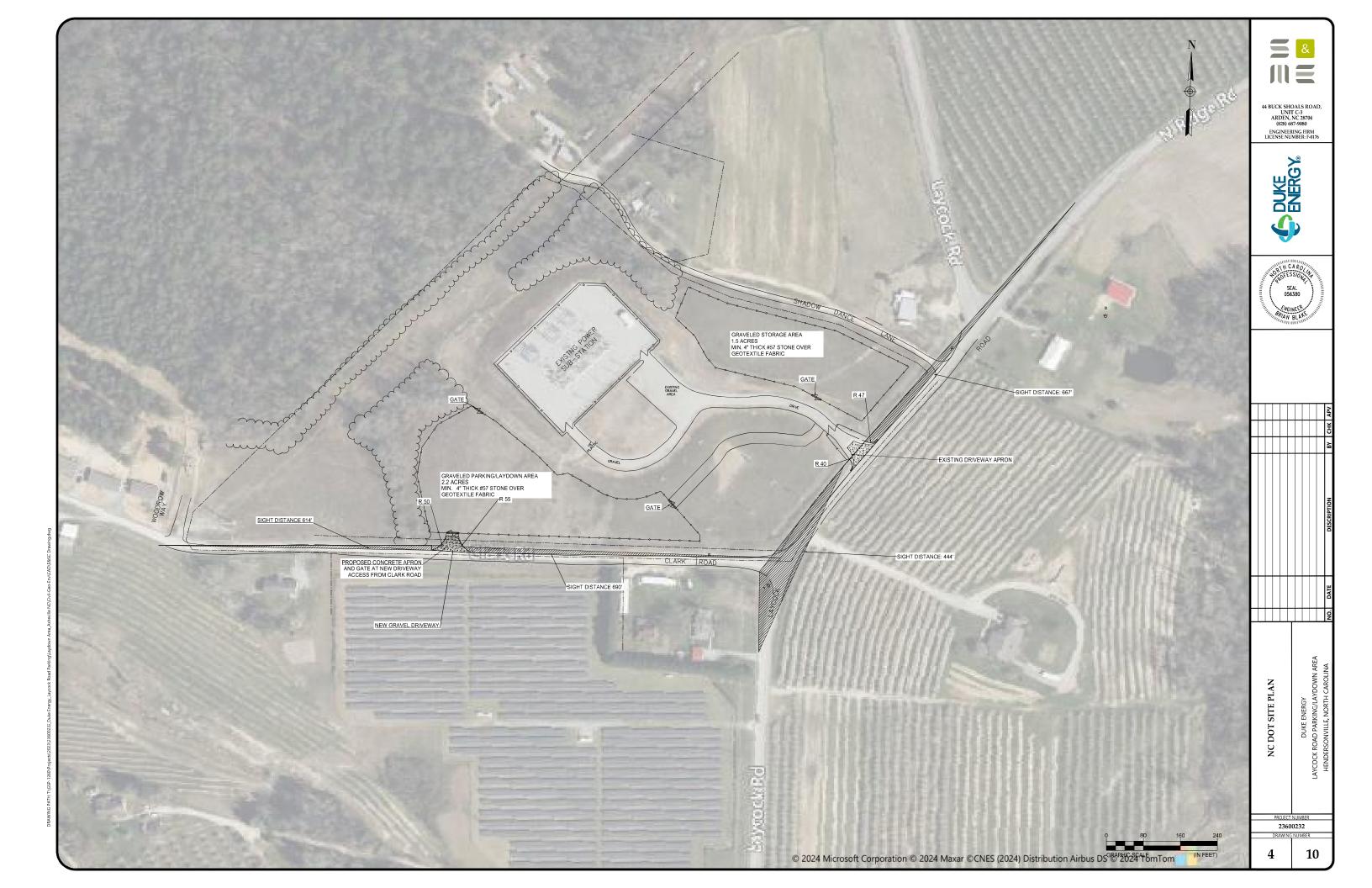


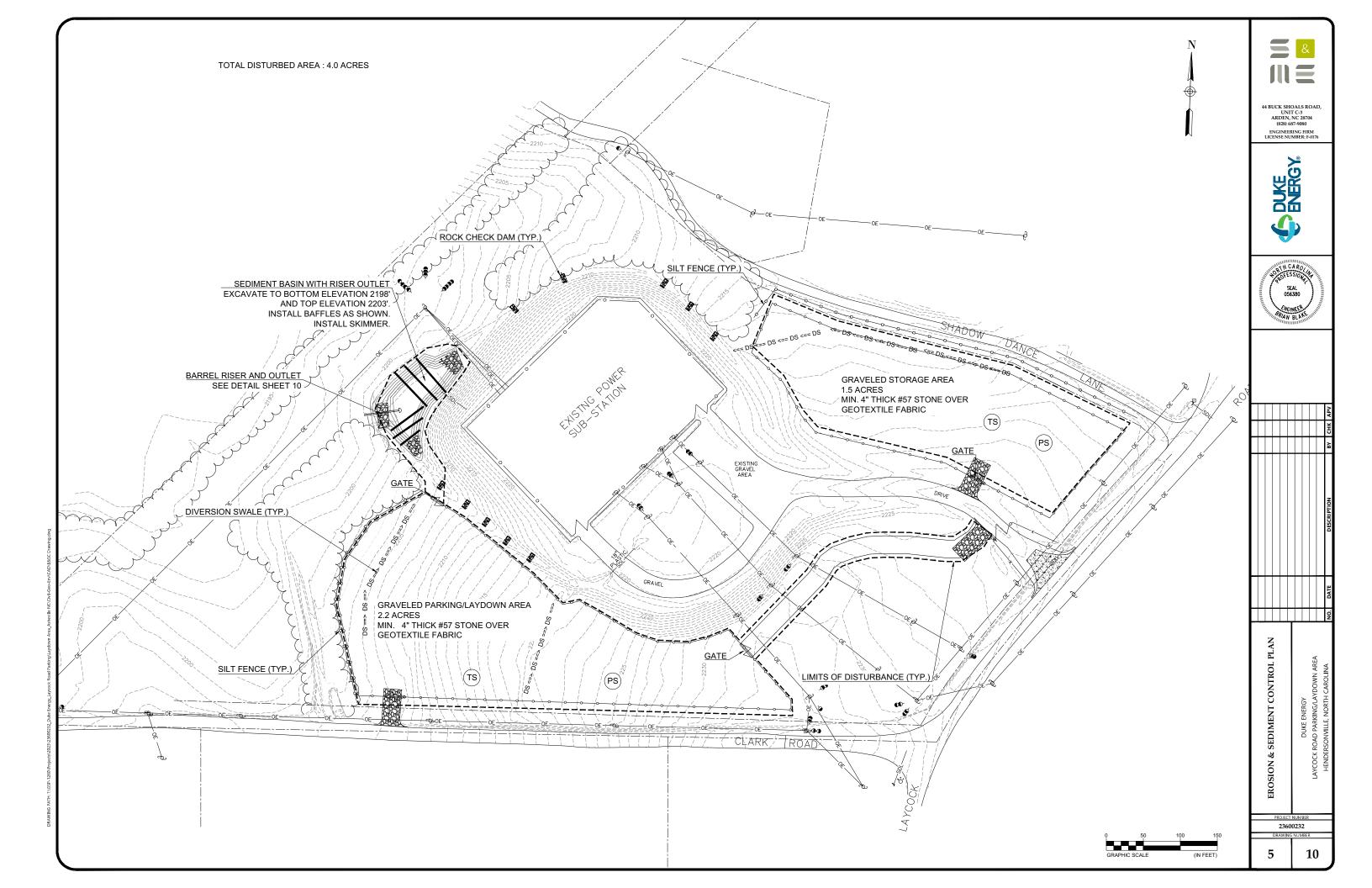
DUKE ENERGY CAROLINAS, LLC

957 SPARTANBURG HIGHWAY HENDERSONVILLE, NORTH CAROLINA 28792









GROUND STABILIZATION AND MATERIALS HANDLING PRACTICES FOR COMPLIANCE WITH THE NCG01 CONSTRUCTION GENERAL PERMIT

IMPLEMENTING THE DETAILS AND SPECIFICATIONS ON THIS PLAN SHEET WILL RESULT IN THE CONSTRUCTION ACTIVITY BEING CONSIDERED COMPLIANT WITH THE GROUND STABILIZATION AND MATERIALS HANDLING SECTIONS OF THE NCGO! CONSTRUCTION GENERAL PERMIT (SECTIONS E AND F RESPECTIVELY). THE PERMITTEE SHALL COMPLY WITH THE FEROSION AND SEDIMENT CONTROL PLAN APPROVED BY THE DELECATED AUTHORITY HAVING JURISDICTION, ALL DETAILS AND SPECIFICATIONS CHANNED THE CONTROL PLAN APPROVED BY THE DELECATED AUTHORITY HAVING JURISDICTION, ALL DETAILS AND SPECIFICATIONS SHOWN ON THIS SHEET MAY NOT APPLY DEPENDING ON SITE CONDITIONS AND THE DELEGATED AUTHORITY HAVING JURISDICTION.

NCG01 - PART II, SECTION E: GROUND STABILIZATION

GROUND STABILIZATION TIMELINES:
GROUND STABILIZATION SHALL BE ACHIEVED ON ANY AREA OF A SITE WHERE LAND DISTURBING ACTIVITIES GROUND STABILIZATION SHALL BE ACHIEVED ON ANY AREA OF A SITE WHERE LAND DISTURBING ACTIVITIES HAVE CEASED WITHIN THE TIMEFRAMES LISTED ON THE TABLE BELOW. IT IS RECOMMENDED TO STABILIZE THE GROUND MORE QUICKLY IF PRACTICABLE. EXTENSIONS OF TIME MAY BE APPROVED BY THE EASC PLAN AUTHORITY BASED ON WEATHER OR OTHER SITE-SPECIFIC CONDITIONS THAT MAKE COMPLIANCE IMPRACTICABLE. PORTIONS OF A SITE THAT ARE LOWER IN ELEVATION AND NOT EXPECTED TO DISCHARGE DURING CONSTRUCTION MAY BE EXEMPT FROM THE TEMPORARY GROUND COVER REQUIREMENTS IF IDENTIFIED ON THE EASC PLAN AND APPROVED BY THE EASC PLAN AUTHORITY.

REQUIRED GROUND STABILIZATION TIMEFRAMES			
SITE AREA DESCRIPTION	STABILIZE WITHIN THIS MANY CALENDAR DAYS AFTER CEASING LAND DISTURBANCE	TIMEFRAME VARIATIONS	
(A) PERIMETER DIKES, SWALES, DITCHES, AND PERIMETER SLOPES	7	NONE	
(B) HIGH QUALITY WATER (HQW) ZONES	7	NONE	
(C) SLOPES STEEPER THAN 3:1	7	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED	
(D) SLOPES 3:1 TO 4:1	14	7 DAYS FOR SLOPES GREATER THAN 50 IN LENGTH AND WITH SLOPES STEEPER THAN 4:1 7 DAYS FOR PERIMETER DIKES, SWALES, DICHES, PERIMETER SLOPES AND HOW ZONES 10 DAYS FOR FALLS LAKE WATERSHED WATERSHED	
(E) AREAS WITH SLOPES FLATTER THAN 4:1	14	- 7 DAYS FOR PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES AND HQW ZONES - 10 DAYS FOR FALLS LAKE WATERSHED UNLESS THERE IS ZERO SLOPE	

NOTE: AFTER THE PERMANENT CESSATION OF CONSTRUCTION ACTIVITIES, ANY AREAS WITH TEMPORARY GROUND STABILIZATION SHALL BE CONVERTED TO PERMANENT GROUND STABILIZATION AS SOON AS PRACTICABLE BUT IN NO CASE LONGER THAN 90 CALENDAR DAYS AFFER THE LAST LAND DISTURBING ACTIVITY. TEMPORARY GROUND STABILIZATION SHALL BE MAINTAINED IN A MANNER TO RENDER THE SURFACE STABLE AGAINST ACCELERATED EROSION UNTIL PERMANENT GROUND STABILIZATION IS

GROUND STABILIZATION SPECIFICATION:

STABILIZE THE GROUND SUFFICIENTLY SO THAT RAIN WILL NOT DISLODGE THE SOIL. USE ONE OF THE TECHNIQUES IN THE TABLE BELOW:

TECHNIQUES IN THE TABLE BELOW.	
TEMPORARY STABILIZATION	PERMANENT STABILIZATION
TEMPORARY GRASS SEED COVERED WITH STRAW	PERMANENT GRASS SEED COVERED WITH STRAW
OR OTHER MULCHES AND TACKIFIERS	OR OTHER MULCHES AND TACKIFIERS
	GEOTEXTILE FABRICS SUCH AS PERMANENT SOIL
HYDROSEEDING	REINFORCEMENT MATTING
	HYDROSEEDING
ROLLED EROSION CONTROL PRODUCTS WITH OR	- SHRUBS OR OTHER PERMANENT PLANTING
WITHOUT TEMPORARY GRASS SEED	COVERED WITH MULCH
	UNIFORM AND EVENLY DISTRIBUTED GROUND
APPROPRIATELY APPLIED STRAW OR OTHER	COVER SUFFICIENT TO RESTRAIN EROSION
MULCH	 STRUCTURAL METHODS SUCH AS CONCRETE,
	ASPHALT OR RETAINING WALLS
PLASTIC SHEETING	ROLLED EROSION CONTROL PRODUCTS WITH
	GRASS SEED





NCG01 SECTION F: MATERIALS HANDLING

POLYACRYLAMIDES (PAMS) AND FLOCCULANTS:

- SELECT FLOCCULANTS THAT ARE APPROPRIATE FOR THE SOILS REING EXPOSED DURING
- CONSTRUCTION, SELECTING FROM THE NC DWR LIST OF APPROVED PAMS/FLOCCULANTS.

 APPLY FLOCCULANTS AT OR BEFORE THE INLETS TO EROSION AND SEDIMENT CONTROL MEASURES. 3. APPLY FLOCCULANTS AT THE CONCENTRATIONS SPECIFIED IN THE NC DWR LIST OF APPROVED
- PROVIDE PONDING AREA FOR CONTAINMENT OF TREATED STORMWATER BEFORE DISCHARGING
- STORE FLOCCULANTS IN LEAK-PROOF CONTAINERS THAT ARE KEPT UNDER STORM-RESISTANT COVER OR SURROUNDED BY SECONDARY CONTAINMENT STRUCTURES.

- EQUIPMENT AND VEHICLE MAINTENANCE:

 1. MAINTAIN VEHICLES AND EQUIPMENT TO PREVENT DISCHARGE OF FLUIDS.
- PROVIDE DRIP PANS LINDER ANY STORED FOLIPMENT
- IDENTIFY LEAKS AND REPAIR AS SOON AS FEASIBLE, OR REMOVE LEAKING EQUIPMENT FROM THE
- 4. COLLECT ALL SPENT FLUIDS, STORE IN SEPARATE CONTAINERS AND PROPERLY DISPOSE AS
- HAZARDOUS WASTE (RECYCLE WHEN POSSIBLE).

 5. REMOVE LEAKING VEHICLES AND CONSTRUCTION EQUIPMENT FROM SERVICE UNTIL THE PROBLEM HAS BEEN CORRECTED.
- 6. BRING USED FUELS, LUBRICANTS, COOLANTS, HYDRAULIC FLUIDS AND OTHER PETROLEUM PRODUCTS

- LITTER, BUILDING MATERIAL, AND LAND CLEARING WASTE:

 1. NEVER BURY OR BURN WASTE. PLACE LITTER AND DEBRIS IN APPROVED WASTE CONTAINERS.
- PROVIDE A SUFFICIENT NUMBER AND SIZE OF WASTE CONTAINERS (E.G DUMPSTER, TRASH RECEPTACLE) ON SITE TO CONTAIN CONSTRUCTION AND DOMESTIC WASTES.
- LOCATE WASTE CONTAINERS AT LEAST 50 FEET AWAY FROM STORM DRAIN INLETS AND SURFACE WATERS UNLESS NO OTHER ALTERNATIVES ARE REASONABLY AVAILABLE.
- 4. LOCATE WASTE CONTAINERS ON AREAS THAT DO NOT RECEIVE SUBSTANTIAL AMOUNTS OF RUNOFF
- 4. LOCATE WASTE CONTAINERS ON AREAS THAT DO NOT RECEIVE SUBSTANTIAL AMMOUNTS OF RUNOFF
 FROM UPAND AREAS AND DOES NOT DRAIN DIRECTLY TO A STORM DRAIN, STREAM OR WETLAND.

 5. COVER WASTE CONTAINERS AT THE END OF EACH WORKDAY AND BEFORE STORM EVENTS OR
 PROVIDE SECONDARY CONTAINMENT. REPAIR OR REPLACE DAMAGED WASTE CONTAINERS.
- 6. ANCHOR ALL LIGHTWEIGHT ITEMS IN WASTE CONTAINERS DURING TIMES OF HIGH WINDS.
- EMPTY WASTE CONTAINERS AS NEEDED TO PREVENT OVERFLOW. CLEAN UP IMMEDIATELY IF CONTAINERS OVERFLOW.
- 8. DISPOSE WASTE OFF-SITE AT AN APPROVED DISPOSAL FACILITY.
- ON BUSINESS DAYS, CLEAN UP AND DISPOSE OF WASTE IN DESIGNATED WASTE CONTAINERS.

- PAINT AND OTHER LIQUID WASTE:

 1. DO NOT DUMP PAINT AND OTHER LIQUID WASTE INTO STORM DRAINS, STREAMS OR WETLANDS. LOCATE PAINT WASHOUTS AT LEAST 50 FEET AWAY FROM STORM DRAIN INLETS AND SURFACE
- WATERS UNLESS NO OTHER ALTERNATIVES ARE REASONABLY AVAILABLE. CONTAIN LIQUID WASTES IN A CONTROLLED AREA.
- CONTAINMENT MUST BE LABELED. SIZED AND PLACED APPROPRIATELY FOR THE NEEDS OF SITE
- PREVENT THE DISCHARGE OF SOAPS, SOLVENTS, DETERGENTS AND OTHER LIQUID WASTES FROM CONSTRUCTION SITES.

- INSTALL PORTABLE TOILETS ON LEVEL GROUND, AT LEAST 50 FEET AWAY FROM STORM DRAINS, STREAMS OR WETLANDS UNLESS THERE IS NO ALTERNATIVE REASONABLY AVAILABLE. IF 50 FOOT OFFSET IS NOT ATTAINABLE, PROVIDE RELOCATION OF PORTABLE TOILET BEHIND SILT FENCE OR PLACE ON A GRAVEL PAD AND SURROUND WITH SAND BAGS.
- PROVIDE STAKING OR ANCHORING OF PORTABLE TOILETS DURING PERIODS OF HIGH WINDS OR IN HIGH FOOT TRAFFIC AREAS.
- 3 MONITOR PORTABLE TOILETS FOR LEAKING AND PROPERLY DISPOSE OF ANY LEAKED MATERIAL UTILIZE A LICENSED SANITARY WASTE HAULER TO REMOVE LEAKING PORTABLE TOILETS AND REPLACE WITH PROPERLY OPERATING UNIT.

EARTHEN STOCKPILE MANAGEMENT

- SHOW STOCKPILE MAINAGEMENT: SHOW STOCKPILE LOCATIONS ON PLANS. LOCATE EARTHEN-MATERIAL STOCKPILE AREAS AT LEAST 50 FEET AWAY FROM STORM DRAIN INLETS, SEDIMENT BASINS, PERIMETER SEDIMENT CONTROLS AND SURFACE WATERS UNLESS IT CAN BE SHOWN NO OTHER ALTERNATIVES ARE REASONABLY AVAILABLE.
- PROTECT STOCKPILE WITH SILT FENCE INSTALLED ALONG TOE OF SLOPE WITH A MINIMUM OFFSET OF
- FIVE FEET FROM THE TOE OF STOCKPILE.
 PROVIDE STABLE STONE ACCESS POINT WHEN FEASIBLE.
- 4 STABILIZE STOCKPILE WITHIN THE TIMEFRAMES PROVIDED ON THIS SHEET AND IN ACCORDANCE STABILIZE STOCKFILE WITHIN THE IMPERAMINE PROVIDED ON THIS STEEL AND IN ALCORDANCE WITH THE APPROVED PLAN AND ANY ADDITIONAL REQUIREMENTS. SOIL STABILIZATION IS DEFINED AS VEGETATIVE, PHYSICAL OR CHEMICAL COVERAGE TECHNIQUES THAT WILL RESTRAIN ACCELERATED EROSION ON DISTURBED SOILS FOR TEMPORARY OR PERMANENT CONTROL NEEDS.

- HERBICIDES, PESTICIDES, AND RODENTICIDES:

 1. STORE AND APPLY HERBICIDES, PESTICIDES AND RODENTICIDES IN ACCORDANCE WITH LABEL RESTRICTIONS.
- 2. STORE HERBICIDES, PESTICIDES AND RODENTICIDES IN THEIR ORIGINAL CONTAINERS WITH THE LABEL WHICH LISTS DIRECTIONS FOR USE, INGREDIENTS AND FIRST AID STEPS IN CASE OF ACCIDENTA
- 3. DO NOT STORE HERBICIDES, PESTICIDES AND RODENTICIDES IN AREAS WHERE FLOODING IS POSSIBLE OR WHERE THEY MAY SPILL OR LEAK INTO WELLS, STORMWATER DRAINS, GROUND WATER OR SURFACE WATER, IF A SPILL OCCURS, CLEAN AREA IMMEDIATELY.
- 4. DO NOT STOCKPILE THESE MATERIALS ONSITE.

- HAZARDOUS AND TOXIC WASTE:

 1. CREATE DESIGNATED HAZARDOUS WASTE COLLECTION AREAS ON-SITE.
- PLACE HAZARDOUS WASTE CONTAINERS UNDER COVER OR IN SECONDARY CONTAINMENT
- DO NOT STORE HAZARDOUS CHEMICALS, DRUMS OR BAGGED MATERIALS DIRECTLY ON THE

CONCRETE WASHOUTS:

1. WHEN APPLICABLE, CONCRETE WASHOUT DETAIL WITH NOTES INCLUDED ON DETAIL DRAWING.

NCDEQ GROUND STABILIZATION AND MATERIALS HANDLING SAMPLE SHEET (NCG01 DETAIL 3-29 19.DWG), EFFECTIVE 4/1/2019, REVISED 3/29/19.

SELF-INSPECTION, RECORDKEEPING AND REPORTING FOR COMPLIANCE WITH THE NCG01 CONSTRUCTION GENERAL PERMIT

NCG01 - PART II, SECTION G: OPERATIONS AND MAINTENANCE

ITEM (4) DRAW DOWN OF SEDIMENT BASINS FOR MAINTENANCE OR CLOSE OUT SEDIMENT BASINS AND TRAPS THAT RECEIVE RUNGEF FROM DRAINAGE AREAS OF ONE ACRE OR MORE SHALL

SEDIMENT BASINS AND TRAPS THAT RECEIVE KNOPF PROM DRAINAGE AREAS OF ONE ACRE OR MORE SHALL USE OUTLET STRUCTURES THAT WITHDRAW WATER FROM THE SURFACE WHEN THESE DEVICES NEED TO BE DRAWN DOWN FOR MAINTENANCE OR CLOSE OUT UNLESS THIS IS INFEASIBLE. THE CIRCUMSTANCES IN WHICH IT IS NOT FEASIBLE TO WITHDRAW WATER FROM THE SURFACE SHALL BE RARE (FOR EXAMPLE, TIMES WITH EXTENDED COLD WEATHER). NON-SURFACE WITHDRAWALS FROM SEDIMENT BASINS SHALL BE ALLOWED ONLY WHEN ALL OF THE FOLLOWING CRITERIA HAVE BEEN MET:

- THE E&SC PLAN AUTHORITY HAS BEEN PROVIDED WITH DOCUMENTATION OF THE NON-SURFACE WITHDRAWAL AND THE SPECIFIC TIME PERIODS OR CONDITIONS IN WHICH IT WILL OCCUR. THE NON-SURFACE WITHDRAWAL SHALL NOT COMMENCE UNTIL THE E&SC PLAN AUTHORITY HAS APPROVED THE OFFICE OF THE NON-SURFACE WITHDRAWAL SHALL NOT COMMENCE UNTIL THE E&SC PLAN AUTHORITY HAS APPROVED
- THE NON-SURFACE WITHDRAWAL HAS BEEN REPORTED AS AN ANTICIPATED BYPASS IN ACCORDANCE
- WITH PART III, SECTION C, (TEM (2)(C) AND (0) OF THIS PERMIT,

 DEWATERING DISCHARGES ARE TREATED WITH CONTROLS TO MINIMIZE DISCHARGES OF POLLUTANTS
 FROM STORMWATER THAT IS REMOVED FROM THE SEDIMENT BASIN. EXAMPLES OF APPROPRIATE

 CONTROLS INCLUDE PROPERLY SITED, DESIGNED AND MAINTAINED DEWATERING TANKS, WEIR TANKS,
- VEGETATED, UPLAND AREAS OF THE SITES OR A PROPERLY DESIGNED STONE PAD IS USED TO THE EXTENT FEASIBLE AT THE OUTLET OF THE DEWATERING TREATMENT DEVICES DESCRIBED IN ITEM (C)
- VELOCITY DISSIPATION DEVICES SUCH AS CHECK DAMS, SEDIMENT TRAPS, AND RIPRAP ARE PROVIDED AT THE DISCHARGE POINTS OF ALL DEWATERING DEVICES, AND
- SEDIMENT REMOVED FROM THE DEWATERING TREATMENT DEVICES DESCRIBED IN ITEM (C) ABOVE IS DISPOSED OF IN A MANNER THAT DOES NOT CAUSE DEPOSITION OF SEDIMENT INTO WATERS OF THE

NCG01 - PART III, SELF-INSPECTION, RECORD KEEPING AND REPORTING

ECTION A: SELF-INSPECTION:

SELF-INSPECTIONS ARE REQUIRED DURING NORMAL BUSINESS HOURS IN ACCORDANCE WITH THE TABLE BELOW. WHEN ADVERSE WEATHER OR SITE CONDITIONS WOULD CAUSE THE SAFETY OF THE INSPECTION PERSONNEL TO BE IN JEOPARDY, THE INSPECTION MAY BE DELAYED UNTIL THE NEXT BUSINESS DAY ON WHICH IT IS SAFE TO PERFORM THE INSPECTION. IN ADDITION, WHEN A STORM EVENT OF EQUAL TO OR GREATER THAN 1.0 INCH OCCURS OUTSIDE OF NORMAL BUSINESS HOURS. THE SELF-INSPECTION SHALL BE PERFORMED UPON THE COMMENCEMENT OF THE NEXT BUSINESS DAY, ANY TIME WHEN INSPECTIONS WERE DELAYED SHALL BE NOTED IN THE INSPECTION RECORD.

INSPECT	FREQUENCY (DURING NORMAL BUSINESS HOURS)	INSPECTION RECORDS MUST INCLUDE:
(1) RAIN GAUGE MAINTAINED IN GOOD WORKING ORDER	DAILY	DAILY RAINFALL AMOUNTS. IF NO DAILY RAIN GAUGE OBSERVATIONS ARE MADE DURING WEEKEND OR HOLIDAY PERIODS, AND NO INDIVIDUAL-DAY RAINFALL INFORMATION IS AVAILABLE, RECORD THE CUMULATIVE RAIN MEASUREMENT FOR THOSE UN-ATTENDED DAYS (AND THIS WILL DETERMINE IF A SITE INSPECTION IS NEEDED). DAYS ON WHICH NO RAINFALL OCCURRED SHALL BE RECORDED AS "ZERO." THE PERMITTEE MAY USE ANOTHER RAIN-MONITORING DEVICE APPROVED BY THE DIVISION.
(2) E&SC MEASURES	AT LEAST ONCE PER 7 CALENDAR DAYS AND WITHIN 24 HOURS OF A RAIN EVENT > 1.0 INCH IN 24 HOURS	DENTIFICATION OF THE MEASURES INSPECTED, DATE AND TIME OF THE INSPECTION, NAME OF THE PERSON PERFORMING THE INSPECTION, INDICATION OF WHETHER THE MEASURES WERE OPERATING PROPERLY, DESCRIPTION OF MAINTENANCE NEEDS FOR THE MEASURE, DESCRIPTION, EVIDENCE, AND DATE OF CORRECTIVE ACTIONS TAKEN.
(3) STORMWATER DISCHARGE OUTFALLS (SDC'S)	AT LEAST ONCE PER 7 CALENDAR DAYS AND WITHIN 24 HOURS OF A RAIN EVENT > 1.0 INCH IN 24 HOURS	1. IDENTIFICATION OF THE DISCHARGE OUTFALLS INSPECTED, 10. DATE AND TIME OF THE INSPECTION, 3. NAME OF THE PERSON PERFORMING THE INSPECTION, 4. EVIDENCE OF INDICATORS OF STORMWATER POLLUTION SUCH AS OIL SHEEN, FLOATING OR SUSPENDED SOLIDS OR DISCOLORATION, 5. INDICATION OF VISIBLE SEDIMENT LEAVING THE SITE 6. DESCRIPTION, EVIDENCE, AND DATE OF CORRECTIVE ACTIONS TAKEN.
(4) PERIMETER OF SITE	AT LEAST ONCE PER 7 CALENDAR DAYS AND WITHIN 24 HOURS OF A RAIN EVENT > 1.0 INCH IN 24 HOURS	IF VISIBLE SEDIMENTATION IS FOUND OUTSIDE SITE LIMITS, THEN A RECORD OF THE FOLLOWING SHALL BE MADE: 1. ACTIONS TAKEN TO CLEAN UP OR STABILIZE THE SEDIMENT THAT HAS LEFT THE SITE LIMITS, 2. DESCRIPTION, EVIDENCE, AND DATE OF CORRECTIVE ACTIONS TAKEN, AND 3. AN EXPLANATION AS TO THE ACTIONS TAKEN TO CONTROL FUTURE RELEASES.
(5) STREAMS OR WETLANDS ONSITE OR OFFSITE (WHERE ACCESSIBLE)	AT LEAST ONCE PER 7 CALENDAR DAYS AND WITHIN 24 HOURS OF A RAIN EVENT > 1.0 INCH IN 24 HOURS	IF THE STREAM OR WETLAND HAS INCREASED VISIBLE SEDIMENTATION OR A STREAM HAS VISIBLE INCREASED TURBIDITY FROM THE CONSTRUCTION ACTIVITY, THEN A RECORD OF THE FOLLOWING SHALL BE MADE: 1. DESCRIPTION, EVIDENCE AND DATE OF CORRECTIVE ACTIONS TAKEN, AND 2. RECORDS OF THE REQUIRED REPORTS TO THE APPROPRIATE DIVISION REGIONAL OFFICE PER PART III, SECTION C, ITEM (2)(A) OF THIS PERMIT.
(6) GROUND STABILIZATION MEASURES	AFTER EACH PHASE OF GRADING	THE PHASE OF GRADING (INSTALLATION OF PERIMETER E&SC MEASURES, CLEARING AND GRUBBING, INSTALLATION OF STORM DRAINAGE FACILITIES, COMPLETION OF ALL LAND-DISTURBING ACTIVITY, CONSTRUCTION OR REDEVELOPMENT, PERMANENT GROUND COVER). DOCUMENTATION THAT THE REQUIRED GROUND STABILIZATION MEASURES HAVE BEEN PROVIDED WITHIN THE REQUIRED TIMEFRAME OR AN ASSURANCE THAT THEY WILL BE PROVIDED AS SOON AS POSSIBLE. OF CALENDAR DAY INSPECTION REQUIREMENT.

NCDEQ INSPECTION, RECORDKEEPING AND REPORTING SAMPLE SHEET (NCG01-SELF-INSPECTION-SHEET-REVISED-5-17-19.DWG), EFFECTIVE 4/1/2019, REVISED 5/17/19.

NCG01 - PART III, SELF-INSPECTION, RECORDKEEPING AND REPORTING

E&SC PLAN DOCUMENTATION

THE APPROVED E&SC PLAN AS WELL AS ANY APPROVED DEVIATION SHALL BE KEPT ON THE SITE. THE APPROVED E&SC PLAN MUST BE KEPT UP-TO-DATE THROUGHOUT THE COVERAGE UNDER THIS PERMIT. THE FOLLOWING ITEMS PERTAINING TO THE EASC PLAN SHALL BE KEPT ON SITE AND AVAILABLE FOR INSPECTION AT ALL TIMES DURING NORMAL BUSINESS HOURS.

ITEM TO DOCUMENT	DOCUMENTATION REQUIREMENTS
(A) EACH E&SC MEASURE HAS BEEN INSTALLED AND DOES NOT T SIGNIFICANTLY DEVIATE FROM THE LOCATIONS, DIMENSIONS AND RELATIVE ELEVATIONS SHOWN ON THE APPROVED E&SC PLAN.	INITIAL AND DATE EACH E&SC MEASURE ON A COPY OF THE APPROVED ESSC PLAN OR COMPLETE, DATE AND SIGN AN INSPECTION REPORT THAT LISTS EACH E&SC MEASURE SHOWN ON THE APPROVED EASC, PLAN, THEIS DOCUMENTATION IS REQUIRED UPON THE INITIAL INSTALLATION OF THE E&SC MEASURES OR IF THE E&SC MEASURES OR IF THE EASC MEASURES THE RIVITAL INSTALLATION.
(B) A PHASE OF GRADING HAS BEEN COMPLETED.	INITIAL AND DATE A COPY OF THE APPROVED E&SC PLAN OR COMPLETE, DATE AND SIGN AN INSPECTION REPORT TO INDICATE COMPLETION OF THE CONSTRUCTION PHASE.
(C) GROUND COVER IS LOCATED AND INSTALLED IN ACCORDANCE WITH THE APPROVED E&SC PLAN.	INITIAL AND DATE A COPY OF THE APPROVED E&SC PLAN OR COMPLETE, DATE AND SIGN AN INSPECTION REPORT TO INDICATE COMPLIANCE WITH APPROVED GROUND COVER SPECIFICATIONS.
(D) THE MAINTENANCE AND REPAIR REQUIREMENTS FOR ALL E&SC MEASURES HAVE BEEN PERFORMED.	COMPLETE, DATE AND SIGN AN INSPECTION REPORT.
(E) CORRECTIVE ACTIONS HAVE BEEN TAKEN TO E&SC MEASURES.	INITIAL AND DATE A COPY OF THE APPROVED E&SC PLAN OR COMPLETE, DATE AND SIGN AN INSPECTION REPORT TO INDICATE THE COMPLETION OF THE CORRECTIVE ACTION.

ADDITIONAL DOCUMENTATION TO BE KEPT ON SITE
IN ADDITION TO THE E&SC PLAN DOCUMENTS ABOVE, THE FOLLOWING ITEMS SHALL BE KEPT ON THI SITE AND AVAILABLE FOR INSPECTORS AT ALL TIMES DURING NORMAL BUSINESS HOURS, UNLESS THE DIVISION PROVIDES A SITE-SPECIFIC EXEMPTION BASED ON UNIQUE SITE CONDITIONS THAT MAKE THIS REQUIREMENT NOT PRACTICAL

- (a) THIS GENERAL PERMIT AS WELL AS THE CERTIFICATE OF COVERAGE, AFTER IT IS RECEIVED.
- (b) RECORDS OF INSPECTIONS MADE DURING THE PREVIOUS TWELVE MONTHS. THE PERMITTEE SHALL RECORD THE REQUIRED OBSERVATIONS ON THE INSPECTION RECORD FORM PROVIDED BY THE DIVISION OR A SIMILAR INSPECTION FORM THAT INCLUDES ALL THE REQUIRED ELEMENTS. USE OF ELECTRONICALLY-AVAILABLE RECORDS IN LIEU OF THE REQUIRED PAPER COPIES WILL BE ALLOWED IF SHOWN TO PROVIDE EQUAL ACCESS AND UTILITY AS THE HARD-COPY RECORDS.

3. DOCUMENTATION TO BE RETAINED FOR THREE YEARS

ALL DATA USED TO COMPLETE THE E-NOI AND ALL INSPECTION RECORDS SHALL BE MAINTAINED FOR A PERIOD OF THREE YEARS AFTER PROJECT COMPLETION AND MADE AVAILABLE UPON REQUEST. (40

NCG01 PART III SELF-INSPECTION, RECORD KEEPING AND REPORTING

SECTION C: REPORTING

OCCURRENCES THAT MUST BE REPORTED

PERMITTEES SHALL REPORT THE FOLLOWING OCCURRENCES:

- (a. VISIBLE SEDIMENT DEPOSITION IN A STREAM OR WETLAND
- - THEY ARE 25 GALLONS OR MORE.
 - THEY ARE LESS THAN 25 GALLONS BUT CANNOT BE CLEANED UP WITHIN 24 HOURS,
- THEY CAUSE SHEEN ON SURFACE WATERS (REGARDLESS OF VOLUME), OR
- THEY ARE WITHIN 100 FEET OF SURFACE WATERS (REGARDLESS OF VOLUME).
- (c. RELEASES OF HAZARDOUS SUBSTANCES IN EXCESS OF REPORTABLE QUANTITIES UNDER SECTION 311 OF THE CLEAN WATER ACT (REF: 40 CFR 110.3 AND 40 CFR 117.3) OR SECTION 102 OF CERCLA (REF: 40 CFR 2024.) OR GS. 143-215.85.
- (d. ANTICIPATED BYPASSES AND UNANTICIPATED BYPASSES.
- (e. NONCOMPLIANCE WITH THE CONDITIONS OF THIS PERMIT THAT MAY ENDANGER HEALTH OR

2. REPORTING TIMEFRAMES AND OTHER REQUIREMENTS

AFTER A PERMITTEE BECOMES AWARE OF AN OCCURRENCE THAT MUST BE REPORTED. HE SHALL CONTACT THE APPROPRIATE DIVISION REGIONAL OFFICE WITHIN THE TIMEFRAMES AND IN ACCORDANCE WITH THE OTHER REQUIREMENTS LISTED BELOW OCCURRENCES OUTSIDE NORMAL BUSINESS HOURS MAY ALSO BE REPORTED TO THE DEPARTMENT'S ENVIRONMENTAL EMERGENCY

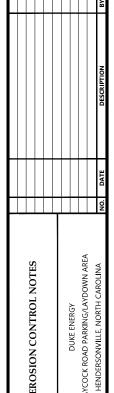
OCCURRENCE	REPORTING TIME FRAMES (AFTER DISCOVERY) AND OTHER REQUIREMENTS
(A) VISIBLE SEDIMENT DEPOSITION IN A STREAM OR WETLAND	WITHIN 24 HOURS, AN ORAL OR ELECTRONIC NOTIFICATION. WITHIN 72 CALENDAR DAYS, A REPORT THAT CONTIANS A DESCRIPTION OF THE SEDIMENT AND ACTIONS TAKEN TO ADDRESS THE CAUSE OF THE DEPOSITION, DIVISION STAFF MAY WAVE THE REQUIREMENT FOR A WRITTEN REPORT ON A CASE-SEY-CASE BASIS. IF THE STREAM IS NAMED ON THE OR 303(D) LIST AS IMPAIRED FOR SEDIMENT-RELATED CAUSES, THE PERMITTEE MAY BE REQUIRED TO PERFORM ADDITIONAL MONITORING, INSPECTIONS OR APPLY MORE STRINGENT PRACTICES IF STAFF DETERMINE THAT ADDITIONAL REQUIREMENTS ARE NEEDED TO ASSURE COMPULANCE WITH THE FEDERAL OR STATE IMPAIRED WATERS CONDITIONS
(B) OIL SPILLS AND RELEASE OF HAZARDOUS SUBSTANCES PER ITEM 1(B)-(C) ABOVE	WITHIN 24 HOURS, AN ORAL OR ELECTRONIC NOTIFICATION. THE NOTIFICATION SHALL INCLUDE INFORMATION ABOUT THE DATE, TIME, NATURE, VOLUME AND LOCATION OF THE SPILL OR RELEASE.
(C) ANTICIPATED BYPASSES [40 CFR 122.41(M)(3)]	A REPORT AT LEAST TEN DAYS BEFORE THE DATE OF THE BYPASS, IF POSSIBLE. THE REPORT SHALL INCLUDE AN EVALUATION OF THE ANTICIPATED QUALITY AND EFFECT OF THE BYPASS.
(D) UNANTICIPATED BYPASSES [40 CFR 122.41(M)(3)]	WITHIN 24 HOURS, AN ORAL OR ELECTRONIC NOTIFICATION. WITHIN 7 CALENDAR DAYS, A REPORT THAT INCLUDES AN EVALUATION OF THE QUALITY AND EFFECT OF THE BYPASS.
(E) NONCOMPLIANCE WITH THE CONDITIONS OF THIS PERMIT THAT MAY ENDANGER HEALTH OR THE ENVIRONMENT[40 CFR 122.41(L)[7)]	■ WITHIN 24 HOURS, AN ORAL OR ELECTRONIC NOTIFICATION. ■ WITHIN 7 CALENDAR DAYS, A REPORT THAT CONTAINS A DESCRIPTION OF THE NONCOMPLIANCE, AND ITS CAUSES; THE PERIOD OF NONCOMPLIANCE, INCLUDING EXACT DATES AND TIMES, AND IF THE NONCOMPLIANCE HAS NOT BEEN CORRECTED, THE ANTICIPATED TIME NONCOMPLIANCE IS SEPECTED TO CONTINUE; AND STEPS TAKEN OR PLANNED TO REDUCE, ELIMINATE, AND PREVENT REOCCURRENCE OF THIN NONCOMPLIANCE. (40 CFR 122.41(L)(6). ■ DIVISION STAFF MAY WAIVE THE REQUIREMENT FOR A WRITTEN REPORT ON A CASE-BY-CASE BASIS.



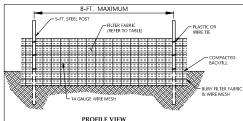
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- WHEN JOINTS ARE NECESSARY, SECURELY FASTEN THE FILTER FABRIC ONLY AT A SUPPORT POST WITH 4 FEET MINIMUM OVERLAP TO THE NEXT POST.
- ATTACH FILTER FABRIC TO THE STEEL POSTS USING PLASTIC OR WIRE TIE (MIN. 50-LB. TENSILE STRENGTH) THAT ARE EVENLY SPACED WITHIN THE TOP 8-IN. OF THE FABRIC.
- THE FAMILY.

 INSTALL THE SLIT TENCE PERPENDIQULAR TO THE DIRECTION OF THE STORWARDER FLOW AND PLACE THE SLIT FERSON PROMISES THE SLIT FRANCE FROM THE TO OF STEEP SLOPES TO PROMISE SDIMMENT STORWAGE AND ACCESS FOR MANIPHENENCE AND CLIENTER SLOPES SLOPES TO PROMISE SDIMMENT STORWAGE AND ACCESS FOR MANIPHENENCE AND CLIENTER SLOPES S

14 GAUGE WIRE MESH FILTER FABRIC REFER TO TABLE)

SECTION VIEW

FABRIC & WIRE MESH REQUIREMENT

- 0451;
 SYNTHETIC FILTER FABRIC SHOULD CONTAIN
 ULTRAVIOLET RAY INHIBITORS AND STABILIZERS TO
 PROVIDE A MINIMUM OF 6 MONTHS OF EXPECTED
 USABLE CONSTRUCTION LIFE AT A TEMPERATURE OF
 0 TO 120° F;
- FREE OF ANY DEFECTS OR FLAWS THAT SIGNIFICANTLY AFFECT ITS PHYSICAL AF FILTERING PROPERTIES; AND, 1.5. HAVE A MINIMUM WIDTH OF 36-IN.
- UTILITY LOCATES SHOULD BE COMPLETED PRIOR TO SILT FENCE INSTALLATION.

 - FILTER FABRIC SHALL BE INSTALLED AT A MINIMUM OF 24-IN. ABOVE THE GROUND. 14 GAUGE WIRE MESH WITH MAXIMUM 6-IN. X 6-IN.
 OPENING SPACING.

TABLE: STANDARD STRENGTH

WOVENTIETERTABLE				
TEST	VALUE			
ASTM D4632	90-LBS, MARV			
ASTM D4632	90-LBS. MARV			
ASTM D4491	0.05 (SEC-1) MARV			
ASTM D4751	US SIEVE #30			
ASTM D4355	70% TYPICAL			
	TEST ASTM D4632 ASTM D4632 ASTM D4632 ASTM D4491 ASTM D4751 ASTM			

- I. INSPECT AT LEAST ONCE PER SEVEN (7) CALENDAR DA AND MITHIN 24 HOURS OF A RAIN PENET REAFER THAN 08 EQUAL TO 1.0-N. IN 24 HOURS. A TENTEN OF TO SEDIMENT ACCUMULATIONS ALONG THE SLIT FENCE IS EXTERNED IN MORITARY ACCUMULATED SEDIMENT SHOULD BE CONTINUALLY MOVITORED AND REMOVED WHEN NECESSARY.
- MONITORED AND REMOVED WHEN NECESSARY.

 4. REMOVE ACCUMILATED SEMENT WHEN IT REACHES

 1/2 THE HEIGHT OF THE SILT FENCE.

 5. REMOVED SEDIMENT SHALL BE PLACED IN STOCKPILE

 STÖRAGE AREAS OR SPREAD THINLY ACROSS

 DISTURBED AREA, STABILIZE THE REMOVED SEDIMENT

 AFTER IT IS RELOCATED.
- AFTER IT IS RELOCATED.

 6. CHECK FOR AREAS WHERE STORMWATER RUNOFF HAS ENODED 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 MICEOSCIO.
- WHERE SILT FENCE HAS BEGUN TO DECOMPOSE, AND FOR ANY OTHER CIRCUMSTANCE THAT MAY RENDER THE SILT FENCE INFECTIVE. REMOVE DAMAGED SILT FENCE AND REINSTALL NEW SILT FENCE IMMEDIATELY
- COPENING SPACING.

 6. EXTEND THE WIRE MESH SUPPORT TO THE BOTTOM OF THE TRENCH.

 THE TRENCH.

REINFORCED SILT FENCE

SO I REQUIREMENTS
SILITENCE POSTS MUST BE 5-FT. LONG STEEL POSTS
THAT MEET, AT A MINIMUM, THE FOLLOWING PHYSICAL
CHARACTERISTICS.
1.1. WEIGH 1.25 POUNDS PER FOOT
1.2. 1-3/8-IN. WIDE MEASURED PARALLEL TO THE FENCE

1-1938-19 WIDE MEASURED PARACILE. TO THE HANCE OSTS SHALL BE EXPERIENCED FOR THE TO ADD FASTENING OF FILTER FABRIC. THERE POSTS MAY THERE TO HAVE A METAL SOIL TABRILZATION PLATE WELDED NEAR THE BOTTOM WHEN INSTALLED ALONS STEPS SLOSE OR RESTALLED WENN INSTALLED ALONS STEPS SLOSE OR RESTALLED WENN STALLED AND STEPS SLOSE OR RESTALLED WENN STALLED AND STEPS SLOSE OR STALLED WENN STALLED AND STEPS SHOULD HAVE A MINIMUM TABRILZATION PLATE SHOULD BE COMPRETELY SUBJECT.

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.

WOODEN POSTS ARE ALLOWED WHEN CROSSING UTILITIES. OWNER'S DESIGNATED ENVIRONMENTAL REPRESENTATIVE SHALL APPROVE LOCATIONS WHER! WOODEN POST ARE TO BE USED PRIOR TO

(B')

PLAN VIEW

CROSS-SECTION A-A'

CROSS-SECTION B-B

GENERAL NOTES DUE TO SITE CONSTRAINTS CONDITIONS IN THE FIELD

NINTS THE WIDTH AND LENGTH MAY BE ADJUSTED BASED ON

- CONDITIONS IN THE FIELD.

 2. APPROPRIATE SIGNAGE WILL SE POSTED ALONG THE ROAD TO INFORM THE GENERAL PUBLIC OF POTENTIAL CONSTRUCTION TRAFFIC PER REQUIREMENTS.

 3. STOCKHE TOPSOL FROM CONSTRUCTION TRAFFIC PER REQUIREMENTS.

 3. STOCKHE TOPSOL FROM CONSTRUCTION ENTRANCE INSTALLATION USE TOPSOL FOR ACCHIL ATTER REMOVAL OF CONSTRUCTION INSTRUCTION DEINFORMAN CLEANING.

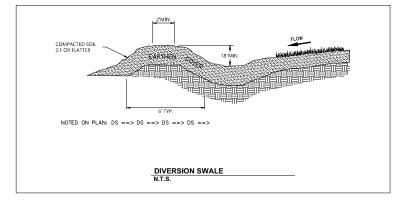
 4. THE NEAREST UPSTERMA AND DOWNSTREAM CLUVEST DAMETERS) WILL SE DISSERVING A TEMPORATION ACCOUNTED INSTRUCTION DEINFORMAN CLEANING. ARE OBSERVED AS A STANDARD AND CONTROL OF THE STANDARD WILL SET HAVE A TO SET THE PROPERTY OF THE PROPERTY OF THE STANDARD WILL SET THE LAGGE FOR THE PROPERTY OF THE PRO
- CULVERT TO PREVENT CLOGGING.
 THE CONSTRUCTION ENTRANCE AND CULVERT (IF PRESENT), WILL BE REMOVED WHE
 CONSTRUCTION ACTIVITIES CEASE ON THE PROJECT. THE REMOVED STONE AND
 SEDIMENT FROM THE ENTRANCE WILL BE HAULED OFF-SITE AND DISPOSED OF PROP
- UPON REMOVAL OF THE CONSTRUCTION ENTRANCE, THE CONTRACTOR SHALL BRING THE READ TO ORIGINAL GRADE AND STRAIGHT. IF A TEMPORARY CULVEST WAS THE READ TO CONTRACTION THE THE CONSTRUCTION NITRANCE, THE CONTRACTOR SHALL INSTALL EROSON CONTRACT BRANCE AND THEN, DIA. COMPOST FILTER SOCK CHECK DAMS WITHIN ROADSIDE SWALEDITCH.
- CREASE ANAMAS WITHIN NOUNDING WMALFUTURE.

 REDSIGNO CONTROL BLANKETS SHALL BE NORTH AMERICAN GREEN OR ENGINEER APPROVED ALTERNATIVE REFER TO PLAN VIEW DRAWNINGS FOR NORTH AMERICAN GREEN'S PRODUCT NAME FOR SPECIFIC GRADE OF EROSION CONTROL BLANKET FOR EACH ROADSIDE SWALEDITION.

MAINTENANCE NOTES

- INSPECT AT LEAST ONCE PER SEVEN (7) CALENDAR DAYS AND WITHIN 24 HOURS OF A RAIN EVENT GREATER THAN OR EQUAL TO 1.0-IN. IN 24 HOURS.
- THE ENTRANCE WILL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING O FLOWING OF SEDIMENT ONTO EXISTING ROADWAYS. SEDIMENT TRACKED, SPILLED, DROPPED OR OTHERWISE DEPOSITED ONTO ROADWAYS WILL BE SWEPT UP AS SOON AS PRACTICAL AND PLACED BACK WITHIN THE APPROVED DISTURBED AREA.
- FEXCESS SEDIMENT HAS CLOGGED THE STONE, THE ENTRANCE WILL BE TOPDRESSED WITH NEW STONE AS NEEDED. REPLACEMENT OF THE STONE MAY BECOME NECESSAL WHEN THE STONE BECOMES ENTIRELY FILLED WITH SEDIMENT AND MUD.

CONSTRUCTION ENTRANCE



CONTACT PERSON RESPONSIBLE FOR MAINTENANCE

ALEX JOHNSON; (864) 209-9518 ALEX JOHNSON@DUKE-ENERGY.COM

GENERAL NOTES:

- 1. MATERIALS THAT ARE TO BE TEMPORARILY STAGED OR STORED ONSITE SHALL BE WITHIN THE
- APPROVED LIMITS OF DISTURBANCE.
 2. EQUIPMENT PARKED OVERNIGHT SHALL UTILIZE SECONDARY CONTAINMENT AS SHOWN ON THE DAILY FOUIPMENT PARKING SECONDARY CONTAINMENT DETAIL
- SECONDARY CONTAINMENT SHALL BE USED FOR PROPOSED HDD ENTRY LOCATIONS.

 1. UTILIZE THE HDD PAD (UPLAND) SECONDARY CONTAINMENT DETAIL CONFIGURATION FOR PROPOSED HDD ENTRY LOCATIONS 100-FT. OR GREATER FROM A STREAM, SURFACE WATER, OR
- UTILIZE THE HDD PAD (WETLAND) SECONDARY CONTAINMENT DETAIL CONFIGURATION FOR PROPOSED HDD ENTRY LOCATIONS IN WETLANDS OR WITHIN 100-FT. OF A STREAM, SURFACE WATER OR WETLAND BOUNDARY.
- 4. NO REFUELING PRACTICES SHALL OCCUR WITHIN 100-FT. OF A STREAM, SURFACE WATER OR WETLAND
- BOUNDARY.

 5. SPILLS OF HAZARDOUS MATERIAL(S) SHALL BE REPORTED IMMEDIATELY TO THE OWNER'S DESIGNATED ENVIRONMENTAL REPRESENTATIVE
- BORROW OR WASTE MATERIAL REQUIRED OR GENERATED DURING GRADING OPERATIONS WILL REQUIRE AN APPROVED EROSION SEDIMENT CONTROL PERMIT FOR THE BORROW OR WASTE MATERIAL SITE PRIOR TO INITIATION OF ANY LAND DISTURBING ACTIVITY.

GENERAL FROSION AND SEDIMENT CONTROL MAINTENANCE NOTES:

THE FOLLOWING MAINTENANCE NOTES SHALL BE FOLLOWED UNTIL THE SITE IS STABILIZED AFTER CONSTRUCTION. DURING CONSTRUCTION, THE OWNER'S CONTRACTOR SHALL BE RESPONSIBLE FOR NSPECTION AND MAINTENANCE OF E&SC MEASURES:

- THE RAIN GAUGE SHALL BE INSPECTED DAILY. E&SC MEASURES, STORMWATER DISCHARGE OUTFALLS (SDC'S), PERIMETER OF SITE, STREAMS OR WETLANDS ONSITE OR OFFSITE (WHERE ACCESSIBLE) SHALL BE INSPECTED AT LEAST ONCE PER SEVEN (7) CALENDAR DAYS AND WITHIN 24 HOURS OF A RAIN EVENT GREATER THAN OR EQUAL TO 1.0-IN. IN 24 HOURS. GROUND STABILIZATION MEASURES SHALL BE INSPECTED AFTER EACH PHASE OF GRADING. REFER TO NCG01 NOTES PART III FOR ADDITIONAL INFORMATION.
- THE OWNER'S CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATION AND MAINTENANCE OF E&SC MEASURES.
- E&SC MEASURES SHALL BE MAINTAINED UNTIL THE DISTURBED AREA ABOVE THE MEASURE HAS BEEN PERMANENTLY STABILIZED AND CONSTRUCTION ACTIVITY HAS CEASED.
- 4. DAMAGED OR INEFFECTIVE E&SC MEASURES SHALL BE REPAIRED OR REPLACED. AS NECESSARY.
- 5. TEMPORARY E&SC MEASURES MAY BE REMOVED WHEN THE DISTURBED AREA ABOVE THE MEASURE HAS BEEN PERMANENTLY STABILIZED, CONSTRUCTION ACTIVITY HAS CEASED, AND THE OWNER'S DESIGNATED ENVIRONMENTAL REPRESENTATIVE HAS AUTHORIZED THEIR REMOVAL
- THE CONTRACTOR MUST TAKE NECESSARY ACTION TO MINIMIZE THE TRACKING OF MUD ONTO PAVED ROADWAY FROM CONSTRUCTION AREAS. THE CONTRACTOR SHALL REMOVE MUD/SOIL FROM PAVEMENT DAILY, BY DRY SWEEPING METHODS ONLY.
- DEWATERING OPERATIONS SHALL BE DISCHARGED THROUGH FILTER BAGS.
- SEEDED AREAS SHALL BE FERTILIZED, RESEEDED AS NECESSARY, AND MULCHED ACCORDING TO THE SEEDING SPECIFICATIONS TO MAINTAIN A VIGOROUS, DENSE VEGETATIVE COVER.
- 9 SEEDED AREAS SHALL RE INSPECTED AT LEAST ONCE PER SEVEN (7) CALENDAR DAYS AND WITHIN 24 HOURS OF A RAIN EVENT GREATER THAN OR EQUAL TO 1.0-IN. IN 24 HOURS BY OWNER'S DESIGNATED ENVIRONMENTAL REPRESENTATIVE UNTIL FINAL GROUND COVER HAS BEEN ESTABLISHED. THE CONTRACTOR IS RESPONSIBLE FOR RESTORING VEGETATION TO ITS ORIGINAL CONDITION, OR BETTER,

SECTION VIEW LOOKING UPSTREAM

SECTION A - A CENTER OF DAM

POINT 'A'

'L' = THE DISTANCE SUCH THAT POINTS A & B ARE OF EQUAL ELEVATIONS 'L'

SPACING BETWEEN CHECK DAMS

N T S

12" OF #57 WAS STONE

CONSTRUCTION SEQUENCE

INITIAL PROJECT SETUP

- 1. OBTAIN APPROVAL OF E&SC PLAN FROM NCDEQ, ASHEVILLE REGIONAL OFFICE (ARO), DIVISION OF ENERGY, MINERAL, AND LAND RESOURCES (DEMLR).
- 2. SUBMIT ELECTRONIC NOTIFICATION OF INTENT (ENOI) FORM AT DEQ.NC.GOV/NCG01. MAIL
- ORIGINAL SIGNED NCG01 NOTICE OF INTENT (NOI) CERTIFICATION FORM TO: DIVISION OF ENERGY, MINERAL & LAND RESOURCES STORMWATER PROGRAM

ATTN: ANNETTE LUCAS

512 N. SALISBURY STREET, 6TH FLOOR

1612 MAIL SERVICE CENTER RALEIGH, NC 27699-1612

3. OBTAIN E&SC PERMIT AND CERTIFICATE OF COVERAGE.

- 4. INSTALL ONE (1) JOB BOX AT PROJECT SITE. JOB BOX TO BE INSTALLED IN AREA SO THAT CONTENTS ARE AVAILABLE FOR INSPECTION BY NCDEQ AT ALL TIMES DURING NORMAL
- 5. JOB BOX SHALL DISPLAY OR CONTAIN THE NCG01 GENERAL PERMIT, E&SC PLAN APPROVAL LETTER, APPROVED E&SC PLANS, CERTIFICATE OF PLAN APPROVAL, AND PREVIOUS 30 DAYS OF SELF-INSPECTION RECORDS. USE OF ELECTRONICALLY AVAILABLE RECORDS IN LIEU OF REQUIRED PAPER COPIES IS ALLOWED IF SHOWN TO PROVIDE EQUAL ACCESS AND UTILITY AS THE HARD-COPY RECORDS. REFER TO NCG01 NOTES PART III FOR ADDITIONAL INFORMATION.
- 6. CONTACT THE APPROPRIATE NCDEQ, ARO, DEMLR E&SC INSPECTOR (828-296-4500) REGARDING THE SCHEDULING OF A PRE-CONSTRUCTION MEETING.
- 7. HOLD PRE-CONSTRUCTION MEETING.

EROSION AND SEDIMENT CONTROL:

- 8. NO MAJOR GRADING ACTIVITIES OR BASIN CONSTRUCTION IS TO TAKE PLACE DURING WET WEATHER OR PERIODS OF PREDICTED WET WEATHER. CONSTRUCT SEDIMENT BASIN BEFORE CONSTRUCTING DIVERSION SWALES AND CONVEYANCES. ENSURE THAT SITE IS STORM READY BEFORE EXTENDED BREAKS IN CONSTRUCTION ACTIVITIES, INCLUDING WEEKENDS.
- 9. INSTALL PERIMETER E&SC MEASURES FOR PROJECT. INSTALL THE FOLLOWING PER PLANS AND
- CONSTRUCTION ENTRANCE;
- REINFORCED SILT FENCE;
- ROCK CHECK DAMS;
- 9. CONSTRUCT SEDIMENT TRAP
- 10. REMOVE & STOCKPILE TOPSOIL AND GRADE PARKING/LAYDOWN AREA.
- 11. STABILIZE PARKING/LAYDOWN AREA GEOTEXTILE FABRIC AND STONE.
- 12. CONSTRUCT FENCING.

CLOSE OUT:

NOTES:

1. KEY STONE INTO THE DITCH BANKS AND EXTEND IT BEYOND THE ABUTMENTS A MINIMUM OF 18" TO PREVENT OVER FLOW AROUND DAM.

2. DRAINAGE AREA IS LIMITED TO 1/2 ACRE.

3. MAX HEIGHT AT CENTER OF DAM — 24"

4. CENTER OF DAM 9" BELOW NATURAL GROUND AT OUTER EDGES. OUTER EDGES TO BE PLACED OVER THE CHANNEL BANKS TO KEEP WATER FROM THE CHANNEL BANKS TO KEEP WATER FROM THE CHANNEL BANKS TO MEEP WATER FROM THE CHANNEL SO THAT THE CREST OF DOWNSTREAM DAM IS AT ELEVATION OF THE TOE OF UPSTREAM DAM.

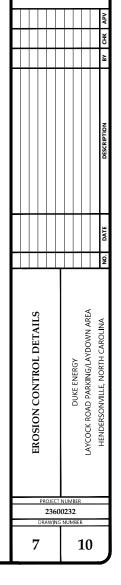
- 13. ESTABLISH PERMANENT VEGETATION IN DISTURBED AREAS.
- 14. REMOVE E&SC MEASURES.
- 15. CONTACT THE APPROPRIATE NCDEO, ARO, DEMLR E&SC INSPECTOR (828-296-4500) REGARDING THE SCHEDULING OF FINAL INSPECTION FOR CLOSE OUT.
- 16. RECEIVE PROJECT CLOSE OUT CONFIRMATION, VIA NCDEQ INSPECTION REPORT.
- 17. SUBMIT ELECTRONIC NOTIFICATION OF TERMINATION (E-NOT) FORM AT DEO.NC.GOV/NCG01, A \$100 ANNUAL GENERALPERMIT FEE WILL BE CHARGED UNTIL THE



44 BUCK SHOALS ROAD, UNIT C-3 ARDEN, NC 28704 (828) 687-9080







DEFINITIONPLANTING RAPID-GROWING ANNUAL GRASSES, SMALL GRAINS, OR LEGUMES TO PROVIDE INITIAL, TEMPORARY COVER FOR EROSION CONTROL ON DISTURBED AREAS.

PURPOSE
GROUND STABILIZATION SHALL BE ACHIEVED ON ANY AREA OF A SITE WHERE
LAND DISTURBING ACTIVITIES HAVE CEASED WITHIN SEVEN (7) TO FOURTEEN (14)
DAYS AS LISTED ON THE NGG01 REQUIRED GROUND STABILIZATION TIME FRAMES
TABLE. TEMPORARY SEEDING CONTROLS RUNOFF AND EROSION UNIL
PERMANENT VEGETATION OR OTHER EROSION CONTROL MEASURES CAN BE
ESTABLISHED, IN ADDITION, IF PROVIDES RESIDUE FOR SOIL PROTECTION AND
SEEDBED PREPARATION, AND REDUCES PROBLEMS OF MUD AND DUST
PRODUCTION FROM BARE SOIL SURFACES DURING CONSTRUCTION.

SEEDBED REQUIREMENTS
ESTABLISHMENT OF VEGETATION SHOULD NOT BE ATTEMPTED ON SITES THAT ARE
UNSUITABLE DUE TO EXCESSIVE SOIL COMPACTION, INAPPROPRIATE SOIL TEXTURE,
POOR DRAINAGE, CONCENTRATE OVERLAND FLOW, OR STEEPNESS OF SLOPE
UNTIL MEASURES HAVE BEEN TAKEN TO CORRECT THESE PROBLEMS.

UNITE MEASURES HAVE BEEN TAKEN TO CORRECT THESE PROBLEMS.

TO MAINTAIN A GOOD STAND OF VEGSTATION. THE SOLI MUST MEET CERTAIN MINIMUM REQUIREMENTS AS A GROWTH MEDIUM. THE EXISTING SOIL SHOULD HAVE THESE CRITERIA.

ENOUGH FINE-GRAINED (SILT AND CLAY) MATERIAL TO MAINTAIN ADEQUATE MOISTURE AND NUTRENT SUPPLY (WAVILABLE WATER CAPACITY OF AT LEAST .0.5 INCHES WATER TO I INCH OF SOIL).

SUPFICIENT PORE SPACE TO PERMIT ROOT PENETRATION.

SUPFICIENT PORE SPACE TO PERMIT ROOT PENETRATION.

SUPFICIENT PORE SPACE TO PERMIT ROOT PENETRATION.

SUPFICIENT PORC SPACE TO PENMIT ROOT PENETRATION.

SUPFICIENT FOR SUPPLIED PENETRATION.

SUPFICIENT PORC SPACE SPACE PENETRATION.

SUPPLIED PORT OF DECENTION OF PENETRATION.

SUPPLIED PORT OF DECENT PENETRATION.

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SUPPLIED PORT OF PENETRATION OF PENETRATION.

THE STANDARD PENETRATION OF PENETRATION OF PENETRATION.

FREE FROM LARGE ROOTS. BRANCHES, STONES, LARGE CLODS OF EARTH, OR TRASH OF ANY KIND. CLOOS AND STONES MAY BE LEFT ON SLOPES STEEPER THAN 3:1 IF THEY ARE TO BE HYDRO SEEDED.

IF ANY OF THESE CRITERIA ARE NOT MET – I.E., IF EXISTING SOIL IS TOO COARSE, DENSE, SHALLOW OR ACIDIC TO FOSTER VEGETATION – SPECIAL AMENOMENTS ARE REQUIRED. THE SOIL CONDITIONERS DESCRIBED BELOW MAY BE BENEFICIAL OR, PREFERABLY, TOPSOIL MAY BE APPLIED.

SEEDBED PREPARATION
INSTALL NECESSARY MECHANICAL EROSION AND SEDIMENTATION CONTROL
PRACTICES BEFORE SEEDING, AND COMPLETE GRADING ACCORDING TO THE
APPROVED PLAN.

LIME AND FERTILIZER NEEDS SHOULD BE DETERMINED BY SOIL TESTS. DIRECTIONS, SAMPLE CARTONS, AND INFORMATION SHEETS ARE AVAILABLE THROUGH COUNTY AGRICULTURAL EXTENSION OFFICES. TESTING IS ALSO DONE BY COMMERCIAL LABORATORIES.

WHEN SOIL TESTS RESULTS ARE NOT AVAILABLE, FOLLOW RATES SUGGESTED IN THE SEEDING SPECIFICATIONS TABLES.

APPLY LIME AND FERTILIZER EVENLY AND INCORPORATE INTO THE TOP 4-6 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS. OPERATE MACHINERY ON THE CONTOUR. WHEN USING A HYDRO SEEDER, APPLY LIME AND FERTILIZER TO A ROUGH, LOOSE SURFACE.

ROUGHEN SURFACES PRIOR TO SEEDING.

COMPLETE SEEDBED PREPARATION BY BREAKING UP LARGE CLODS AND RAKING INTO A SMOOTH, UNIFORM SURFACE (SLOPES LESS THAN 3:1). FILL IN OR LEVEL DEPRESSIONS THAT CAN COLLECT WATER. BROADCAST SEED INTO A FRESHLY LOOSENED SEEDBED THAT HAS NOT BEEN SEALED BY RAINFALL.

SEEDING SEEDING DATES GIVEN IN THE SEEDING MIXTURE SPECIFICATIONS ARE CONSIDERED TO BE "BEST" OR "POSSIBLE". SEEDINGS PROPERTY CARRIED OUT WITHIN THE DATE RANGES (BVEN HAVE A HIGH PROBABILITY OF SUCCESS. IT IS ALSO POSSIBLE TO HAVE SATISFACTORY ESTABLISHMENT WHEN SEEDING OUTSIDE THESE DATES. HOWEVER, AS YOU DEVIATE FROM THEM, THE PROBABILITY OF FAILURE INCREASES RAPIDLY. SEEDING ON THE LAST DATE SHOWN MAY REDUCE CHANCES OF SUCCESS BY 30–50%. ALWAYS TAKE THIS INTO ACCOUNT IN SCHEDULING LAND-DISTURBING ACTIVITIES.

USE CERTIFIED SEED FOR PERMANENT SEEDING.

LABELING OF NON-CERTIFIED SEED IS ALSO REQUIRED BY LAW. LABELS CONTAIN IMPORTANT INFORMATION ON SEED PURITY, GERMINATION, AND PRESENCE OF WOOD SEEDS. SEEDS MUST MEET STATE STANDARDS FOR CONTENT OF NOXIOUS WEEDS. DO NOT ACCEPT SEED CONTAINING "PROHIBITED" NOXIOUS WEED SEED.

WHEN USING A DRILL OR CULTIPACKER SEEDER, DAN'S MALL GRAINS NO MORE THAN 1 INCH DEEP, GRASSES AND LEGUMES NO MORE THAN 1/2 INCH. EQUIPMENT SHOULD BE CAUBRATED IN THE FIELD FOR THE DESIRED SEEDING RATE.

WHEN USING BROADCAST-SEEDING METHODS, SUBDIVIDE THE AREA INTO WORKABLE SECTIONS AND DETERMINE THE AMOUNT OF SEED NEEDED FOR EACH SECTION, APPLY ONE-HALF THE SEED WHILE MOVING BACK AND FORTH ACROSS THE AREA MAKING A UNIFORM PATTERN. THEN APPLY THE SECOND HALF IN THE SAME WAY, BUT MOVING AT RIGHT ANGLES TO THE FIRST PASS.

MULCH ALL PLANTINGS IMMEDIATELY AFTER SEEDING.

HYDRO SEEDING
SURFACE ROUGHENING IS PARTICULARLY IMPORTANT WHEN HYDRO SEEDING, AS A ROUGHENDED SLOPE WILL PROVIDE SOME NATURAL COVERAGE FOR LIME, FERTILLIZER, AND SEED THE SURFACE SHOULD NOT BE COMPACTED OR SMOOTH. FINE SEEDBED PREPARATION IS NOT NECESSARY FOR HYDRO SEEDING OPERATIONS. LARGE CLODS, STONES, AND IRREGULARITIES PROVIDE CAVITIES IN WHICH SEEDS CAN LODGE.

RATE OF WOOD FIBER (CELLULOSE) APPLICATION SHOULD BE AT LEAST 4,000 LB/ACRE.

IF A MACHINERY BREAKDOWN OF 1/2 TO 2 HOURS OCCURS, ADD 50% MORE SEED TO THE TANK, BASED ON THE PROPORTION OF THE SLURRY REMAINING, THIS SHOULD COMPENSATE FOR DAMAGE TO SEED. BEYOND 2 HOURS, A FULL RATE OF NEW SEED MAY 8E NECESSION.

LIME IS NOT NORMALLY APPLIED WITH A HYDRAULIC SEEDER BECAUSE IT IS ABRASIVE. IT CAN BE BLOWN ONTO STEEP SLOPES IN DRY FORM.

MAINTENANCE
GENERALLY, A STAND OF VEGETATION CANNOT BE DETERMINED TO BE FULLY
ESTABLISHED UNTIL SOIL COVER HAS BEEN MAINTAINED FOR ONE FULL YEAR
FROM PLANTING, INSPECT ESEEDD AREAS FOR FAILURE AND MAKE NECESSARY
REPAIRS AND RESEEDINGS WITHIN THE SAME SEASON, IF POSSIBLE.

RESEEDING: IF A STAND HAS INADEQUATE COVER, RE-EVALUATE CHOICE OF PLANT MATERIALS AND QUANTITIES OF LIME AND FERTILIZER. RE-ESTABLISH THE STAND AFTER SEEDED PREPARATION OR OVER. SEED THE STAND. CONSIDER SEEDING TEMPORARY, ANNUAL SPECIES IF THE TIME OF YEAR IS NOT APPROPRIATE FOR PERMANENT SEEDING.

IF VEGETATION FAILS TO GROW, SOIL MUST BE TESTED TO DETERMINE IF ACIDITY OR NUTRIENT IMBALANCE IS RESPONSIBLE.

FERTILIZATION: ON THE TYPICAL DISTURBED SITE, FULL ESTABLISHMENT USUALLY REQUIRES RE-FERTILIZATION IN THE SECOND GROWING SEASON, FINE TURF REQUIRES ANNUAL MAINTENANCE FERTILIZATION. USE SOIL TESTS IF POSSIBLE OR FOLLOW THE GUIDELINES GIVEN FOR THE SPECIFIC SEEDING MIXTURE.

TEMPORARY MOUNTAINS UPLAND SEEDING & STABILIZATION SPECIFICATIONS

SEEDING DATES	FEBRUARY 15 TO MAY 15 (ELEV. ABOVE 2500 FEET)			
SEEDING DATES	FEBRUARY 1 TO MAY 1 (ELEV. BELOW 2500 FEET)			
SEEDING MIXTURE - AMENDMENTS - MULCH APPLICATION (LBS/ACRE				
COMMON NAME	RYE GRAIN (SECALE CEREALE)	120		
(SCIENTIFIC NAME)	KOBE LESPEDEZA (KUMMEROWIA STRIATA V. KOBE)	50		
SOIL AMENDMENTS	10-10-10 FERTILIZER	750		
(REFER TO SEEDBED PREPARATION NOTES)		2,000		
MULCH (REFER TO SEEDING NOTES)	GRAIN STRAW	4,000		

(KELEK TO SEEDING NOTES)					
SEEDING DATES - MAY 15 TO AUGUST 15					
SEEDING MIXTURE - AMENDMENTS - MULCH (LBS/ACRE)					
COMMON NAME (SCIENTIFIC NAME)	GERMAN MILLET (SETARIA ITALICA)	40			
SOIL AMENDMENTS (REFER TO SEEDBED	10-10-10 FERTILIZER	750			
PREPARATION NOTES)	LIMESTONE	2,000			
MULCH (REFER TO SEEDING NOTES)	GRAIN STRAW	4,000			
CEEDING DATES AUGUST 15 TO DECEMBED 15					

SEEDING DATES - AUGUST 15 TO DECEMBER 15							
SEEDING MIXTURE -	APPLICATION RATE (LBS/ACRE)						
COMMON NAME (SCIENTIFIC NAME)	RYE GRAIN (SECALE CEREALE)	120					
SOIL AMENDMENTS (REFER TO SEEDBED	10-10-10 FERTILIZER	1,000					
PREPARATION NOTES)	LIMESTONE	2,000					
MULCH (REFER TO SEEDING NOTES)	GRAIN STRAW	4,000					
REFERENCES: EROSION AND S	EDIMENT CONTROL PLANNING AND	REFERENCES: EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL CHAPTER 6					

(LAST REVISED MAY 2013), NCDEQ.



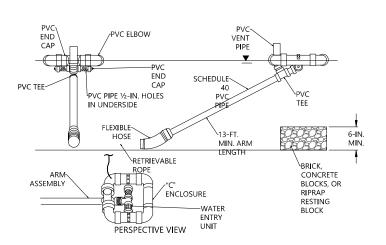
PERMANENT MOUNTAINS UPLAND SEEDING & STABILIZATION SPECIFICATIONS

SEEDING DATES - AUGUST 1 TO IUNE 1* APPLICATION RATE SEEDING MIXTURE - AMENDMENTS - MULCH (LBS/ACRE) KENTUCKY BLUEGRASS COMMON NAME HARD FESCUE (FESTUCA BREVIPII A OR 75 (SCIENTIFIC NAME) FESTUCA LONGIFOLIA RYE GRAIN 25 (SECALE CEREALE) 10-20-20 FERTILIZER 500 SOIL AMENDMENTS (REFER TO SEEDBED PREPARATION NOTES) 4,000 m MULCH GRAIN STRAW 4.000

(KEPEK TO SEEDING NOTES)		
SEEDIN	G DATES - MAY 1 TO SEPTE	MBER 1*
SEEDING MIXTURE -	AMENDMENTS - MULCH	APPLICATION RATE (LBS/ACRE)
	KENTUCKY BLUEGRASS (POA PRATENSIS)	20
COMMON NAME (SCIENTIFIC NAME)	HARD FESCUE (FESTUCA BREVIPILA OR FESTUCA LONGIFOLIA)	75
	GERMAN OR BROWNTOP MILLET (SETARIA ITALICA OR UROCHLOA RAMOSA)	10
SOIL AMENDMENTS	10-20-20 FERTILIZER	500
(REFER TO SEEDBED PREPARATION NOTES)	LIMESTONE	4,000
MULCH (REFER TO SEEDING NOTES)	GRAIN STRAW	4,000
+ONLY ONE CEED A 41/THE	CHALL BE CELECTED DUDING DEDICE	OF OVERLAPPING DATES

*ONLY ONE SEED MIXTURE SHALL BE SELECTED DURING PERIODS OF OVERLAPPING DATES. REFERENCES: NCDOT STANDARD SEEDING SPECIFICATIONS (LAST REVISED APRIL 2019), EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL, CHAPTER 6 (LAST REVISED MAY 2013), NCDEO,





USE 2" SKIMMER WITH 2" ORIFICE

SKIMMER OUTLET

"HOG WIRE" ATTACHED TO POSTS WITH LENGTHS OF HORIZONTAL METAL POST WIRED SECURELY TO VERTICAL POSTS BAFFLE INSTALLATION - STEP 1 TOP OF BAFFLE SHOULD BE 6" HIGHER THAN WERE NIVERT. MESH OR SIMILAR BAFFLE INSTALLATION - STEP 2	BAFFLE (TVP.)	IOTES: 1. STEEL POST SHALL BE EMBEDDED AT LEAST 24" INTO THE OROUND WITH SUFFICIENT HEIGHT TO ALLOW BAFFLER FABRIC TO EXTEND 6" HIGHER THAN WER NIVERT. 2. STEEL POSTS SHALL BE 1.33 LB, JLIN. FT. STEEL. 3. USE STAPLES 1" APART HORIZONTALLY AND VERTICALLY TO ATTACH THE FABRIC TO THE "HOC WIRE". FENCE AND FABRIC TO THE "HOC WIRE". 4"XS" TRENCH, BACKFILLED AND COMPACTED
	SEDIMENT BASIN BAFFLES N.T.S.	

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EROSION CONTROL DETAILS

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ENGINEERING FIRM LICENSE NUMBER: F-0176

DUKE ENERGY,

TH CARO

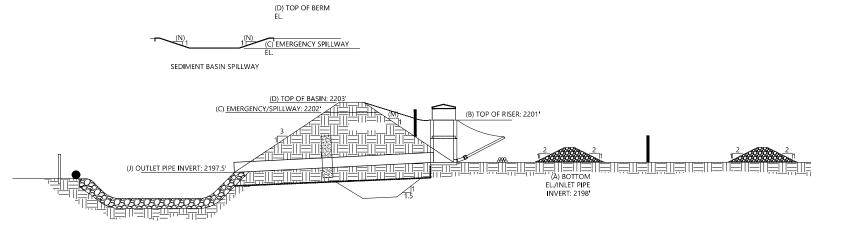
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PAN BLAK

- 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-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 FROM FIRM CONTACT WITH ITS FOUNDATION EQUIPMENT OR CONSTRUCTION
- 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 TOLERANCE 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 MUST 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 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. INSPECT THE SEDIMENTATION BASIN AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (ONE-INCH OR GREATER) RAINFALL EVENT AND REPAIR IMMEDIATELY. REMOVE SEDIMENT AND RESTORE THE BASIN TO ITS ORIGINAL DIMENSIONS WHEN SEDIMENT ACCUMULATES TO ONE-HALF THE HEIGHT OF THE FIRST BAFFLE. PULL THE SKIMMER TO ONE SIDE TO ACCESS SEDIMENT BELOW FOR REMOVAL EXCAVATE THE SEDIMENT FROM THE ENTIRE BASIN, NOT LIMITED TO THE SKIMMER OR RESTRICTS ITS ABILITY
- 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 AND FLUSH 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 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



METAL/PLASTIC RISER SECTION, (B)~ HEIGHT VARIES (36-IN. DIA.) 18" DIA HDPF (ADS N12)-OUTLET PIPE -SEE GENERAL DESIGN NOTES AND ADDITIONAL DESIGN REQUIREMENTS FOR RISER (A) BOTTOM EL./ORIFICE ÎNVERT: 2298 ANTI-FLOATATION BLOCK-ENGINEER SHALL EVALUATE BEARING SOILS FOR RISER STRUCTURE. (MIN. 1,500 PSF BEARING PRESSURE). UNDERCUT EXISTING SOFT SOIL AS FRONT VIEW RECOMMENDED BY ENGINEER AND REPLACE WITH LEAN 2,000 PSI CONCRETE AS REQUIRED.

- 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

N.T.S.

SEDIMENT BASIN CONSTRUCTION SPECIFICATIONS:

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
- 4. STABILIZE THE BASIN AND ANY AREAS DISTURBED DURING EROSION AND SEDIMENT CONTROL DEVICE AND SEDIMENT REMOVAL

OUTLET PIPE OPENINGS (AS REQUIRED) ORIFICE OPENING: (C) SIZ ORIFICE OPENING-VARIFS VARIES 40" O.D. FLOOR 40" O D TYP. RISER SECTION FOR SINGLE SKIMMER SETUP TYP. RISER SECTION FOR DOUBLE SKIMMER SETUP

SEDIMENT BASIN WITH RISER OUTLET

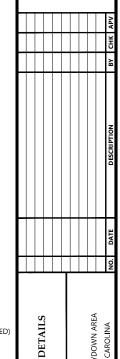
OUTLET PIPE OPENINGS (AS REQUIRED)-



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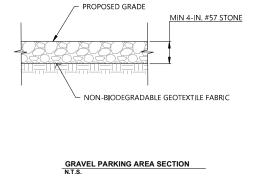


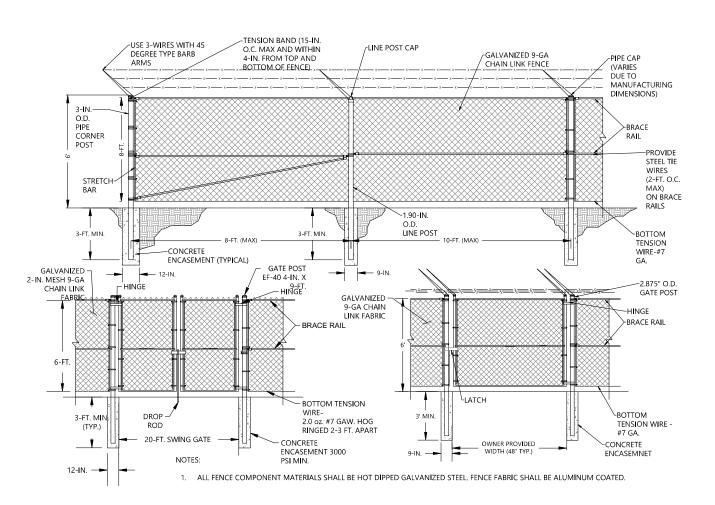


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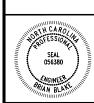




SECURITY FENCING
N.T.S.

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