Purchasing Department
113 Mable T. Willis Blvd.
Walterboro, SC 29488
843.782.0504

BID: CC-32
FLOYD BUCKNER BUILDING
DEMOLITION and DISPOSAL PROJECT

Due: Thursday, December 03, 2020 @ 11:00am

MAIL OR DELIVER RESPONSE TO:

Purchasing Department
Attn: Kaye B Syfrett
113 Mable T. Willis Blvd.
Walterboro, SC 29488

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A. OVERVIEW

Colleton County, South Carolina (the **"County"**) request bids from qualified, licensed contractors for the Floyd Buckner Building demolition and disposal project which consists of an approximate 15,497 SF, 3 story building, located at 213 N. Jefferies Blvd., Walterboro. The debris will be disposed of per the SC Department of Health and Environmental Control (DHEC) guidelines.

This project is being funded by the South Carolina Department of Commerce, Grants Administration, under the Community Development Block Grant Program (CDBG) and is administered by the Lowcountry Council of Governments. All bids and contracts shall meet the requirements enumerated in the specifications and contract documents.

All Contractors and Sub-contractors are required to be registered with the Federal Government website; System for Award Management (SAM) at www.sam.gov., and to comply with the President's Executive Order No. 11246 & Order No. 11375 which prohibits discrimination in employment regarding race, creed, color, sex, or national origin. Contractors must comply with Title VI of the Civil Rights Act of 1964, the Anti-Kickback Act, the Contract Work Hours and Safety Standards Act, and 40 CFR 33.240.

The County requests that all contractors respond with an actual bid or with a written "No Bid." These provision guards against receiving an insufficient response to the Advertisement of Bids.

To be considered responsive, responders must use the Bid Form included in the specifications. Subject to the terms, conditions, provisions, and the enclosed specifications, responses to this solicitation will be received at this office until the stated date and time. Responses received after the scheduled due date and time will be rejected. Bids must be submitted in a sealed package marked on the outside with the Contractor's name, address, the solicitation name, and number.

Any prospective contractor or sub-contractor who is aggrieved in connection with the solicitation of this contract may protest to Colleton County per Section 11-35-4210 of the SC Code of Laws, within 15 days of the date of issuance of the Notice of Intent to Award.

The facility will be open for self-guided tours on Tuesday, November 17, 2020, between 10:00am and 12:00pm. This is not a mandatory meeting.

Questions regarding this solicitation must be submitted via email to ***John Stieglitz, Capital Projects Director*** *at* ***jstieglitz@colletoncounty.org*** no later than **11:00AM on Monday, November 23, 2020**. Answers to all questions will be posted on the County website as an addendum to this bid.

B. SCOPE OF SERVICES

The Floyd Buckner Building demolition and disposal project which consists of an approximate 15,497 SF, 3 story building, located at 213 N. Jefferies Blvd., Walterboro SC. The property will be cleaned of all structures, utilities, walkways, debris, trash, and garbage. All debris will be taken to a certified landfill. Disposal weight tickets of general debris and all Asbestos debris disposal confirmation shall be submitted as outlined within these documents.

- The contractor must be licensed as a General Contractor in the State of South Carolina and will hold all Trade Contracts and the Building Permit on the project.
- It is the contactor's responsibility to walk the property.
- The total time allotted for the project is **90 days**. Demolition should be completed within 60 days of the "Notice to Proceed." Grassing should be in place and well established by the 90-day mark.

- Landfill Fees will not be waived.
- All permits are the requirements of the contractor and may include but not limited to; City of Walterboro building and licensing, SCDHEC, Federal (for asbestos)

Asbestos testing has been completed on the structure. Before demolition work commencing, the successful contractor will have to provide evidence that they are qualified to do asbestos removal or subcontract with a qualified company to perform all asbestos abatement as described in the asbestos reports and abatement plan as provided. Air monitoring services will be provided by ***S&ME Inc.*** under a separate contract between S&ME Inc. and the contractor. The County reserves the right to accept or reject any bid in whole or in part and to award a contract that is in the best interest of the County.

"Equal Employment Opportunity"

C. INSTRUCTIONS TO BIDDER

1. The submittal must include **one (1) original BID** response marked as original and **one (1) complete copy** of the BID response along with a completed **W-9 form**. Responses must be in a sealed envelope/package containing the solicitation name and number. The individual signing the response must be an Agent legally authorized to bind the company. To be considered responsive, responders must use the Bid Form included in the specifications.

2. All bids are due by **11:00am on Thursday, December 03, 2020**. Responses can be mailed or hand-delivered to Purchasing Department, Attn: Kaye B. Syfrett, 113 Mable T. Willis Blvd, Walterboro, SC 29488.

3. Show solicitation number on the outside of the mailing package. Colleton County assumes no responsibility for unmarked or improperly marked envelopes.

4. All bids must be accompanied by Bid Security made payable to Colleton County in the amount of five percent (5%) of the Bidder's maximum Bid price, in the form of a certified check, bank money order, or a Bid Bond issued by a surety.

   The Bid Security of the Successful Bidder will be retained until such Bidder has executed the Contract Documents, furnished the required contract security, and met the other conditions of the Notice of Award. If the Successful Bidder fails to execute and deliver the Contract Documents and furnish the required contract security days after the Notice of Award, the Owner may annul the Notice of Award and the Bid security of that Bidder will be forfeited. The Bid security of other Bidders Whom Owner believes to have a reasonable chance of receiving the award may be retained by Owner until the earlier of seven (7) days after the Effective Date of the Agreement or sixty (60) days after the Bid opening. Bidders not receiving a contract will be issued a copy of the Notice of Award to send to their issuing Surety so that the Bid Bond can be canceled. Bidders Bid Bond documents will not be returned. All Certified Checks will be returned to the Bidders

5. It is the contractor's sole responsibility to ensure that solicitation responses, amendments thereto, or withdrawal requests are submitted by the scheduled due date and time.

6. The contractor must mark as "Confidential" each part of their response, which they consider to be proprietary information that could be exempt from disclosure under Section 30-40(C) Code of Laws of South Carolina, 1976, Freedom of Information Act. Colleton County reserves the right to determine whether this information should be exempt from disclosure and legal action may not be brought against the County or its agents for its determination in this regard.

7. RESPONSE FORM: All responses shall be printed in ink or typewritten. If required, additional pages may be attached. Bids written in pencil will be disqualified.

8. Subject to the terms, conditions, provisions, and the enclosed specifications, responses to this solicitation will be received at this office until the stated date and time. Responses received after the scheduled due date and time will be rejected. Bids must be submitted in a sealed package marked on the outside with the Firm's name, address, and the solicitation name and number.

9. This solicitation does not commit Colleton County to award a contract, to pay any costs incurred in the preparation of BID submitted, or to procure or contract for the services. The County reserves the right to accept or reject or cancel in part, or its entirety offers received as a result of this request is deemed to be in the best interest of the County to do so.

A written "No Response" qualifies as a response; however, it is the responsibility of the Contractor to notify the Procurement Office if you receive solicitations that do not apply.

D. SELECTION CRITERIA

1. It is the intent of Colleton County to award one contract to the lowest responsive, responsible bidder based on the total bid submitted on the Bid Form with final approval by the County Council. Colleton County reserves the right to reject any or all bids and to award a contract most advantageous, and in the best interest of the County and its partners.

2. Upon an Intent of Notice to Award being issued along with final approval by SC Department of Commerce, and if needed, County Council, a contract will be executed for the requested services.

E. SPECIFIC TERMS AND CONDITIONS

1. COMPETITION: This solicitation is intended to promote full and open competition. If any language, specifications, terms, and conditions, or any combination thereof restricts or limits the requirements in this solicitation to a single source, it shall be the responsibility of the interested vendor to notify the Procurement Office in writing no later than five (5) business days before the scheduled due date and time.

2. RESPONDENTS QUALIFICATION: The County reserves the right to request satisfactory evidence of their ability to furnish services per the terms and conditions listed herein. The County further reserves the right to make the final determination as to the Firm's ability to provide said services.

3. RESPONSE WITHDRAWAL: Any responses may be withdrawn before the established closing date and time, but not thereafter with proper approval from the Procurement Manager.

4. REJECTION: Colleton County reserves the right to reject any or all bids, to cancel or withdraw this solicitation, and to waive any technicality if deemed to be in the best interest of the County.

5. WAIVER: The County reserves the right to waive any Instructions to Contractor, General or Special Provisions, General or Special Conditions, or specifications deviation if deemed to be in the best interest of the County.

6. RESPONSE PERIOD: All responses shall be good for a minimum period of 90 calendar days.

7. DEVIATIONS FROM SPECIFICATIONS: Any deviation from specifications indicated herein must be pointed out; otherwise, it will be considered that items offered are in strict compliance with these specifications, and the successful contractor will be held responsible, therefore. Deviations must be explained in detail on a separate attached sheet(s). The listing of deviations, if any, is required but will not be construed as waiving any requirements of the specifications. Unidentified deviations found during the evaluation of the response may be cause for rejection.

8. AMENDMENTS: All amendments to and interpretations of this solicitation shall be in writing and issued by the Procurement Manager of Colleton County.

9. DEBARMENT: By submitting a bid, the contractor is certifying that they are not currently debarred from responding to any request for bids by any agency or subdivision of the State of South Carolina or the United States Federal Government, nor are they an agent of any person or entity that is currently debarred from submitting bids on contracts by any agency or subdivision of the State of South Carolina or the United States Federal Government.

10. DEFAULT: In case of default by the Contractor, the County reserves the right to purchase any or all items in default in the open market, charging the Contractor with any excessive costs. Should such charge be assessed, no subsequent solicitation response of the defaulting Contractor will be considered in future BID's, until the assessed charge has been satisfied.

11. HOLD HARMLESS: All respondents to this BID shall indemnify and hold harmless Colleton County Government and any of their officers and employees from all suits and claims alleged to be a result of this request for bids. The issuance of this request of bids constitutes only an invitation to present a bid. Colleton County reserves the right to determine, at its sole discretion, whether any aspect of a respondent's submittal meets the criteria in this request for bids. Colleton County also reserves the right to seek clarifications, to negotiate with any firm submitting a response, to reject any or all responses with or without cause, and to modify the procurement process and schedule.

12. CANCELLATION: In the event, this request for bids is withdrawn or the project canceled for any reason, Colleton County shall have no liability to any respondent for any costs or expenses incurred in connection with this request for proposals or otherwise.

13. COLLETON COUNTY PURCHASING ORDINANCE: The Request of Bids is subject to the provisions of the Colleton County Purchasing Ordinance and any revisions thereto, which are hereby incorporated into this BID in their entirety except as amended or superseded within. This ordinance can be found at https://www.municode.com/library/sc/colletoncounty/codes/codeofordinances under Title 3 - Revenue and Finance.

14. FAILURE TO SUBMIT ALL MANDATORY FORMS: Failure to submit all the mandatory forms from this request of bids shall be just cause for rejection. However, Colleton County reserves the right to decide, on a case by case basis, in its sole discretion, whether or not to reject such a bid as non-responsive.

15. CONTRACT AWARD:

    a. This solicitation and submitted documents, when properly accepted by Colleton County shall constitute an agreement equally binding between the successful Contractor and the County. No oral statement of any person shall modify or otherwise change, or affect the terms, conditions, or specifications stated in the resulting agreement. The County shall

not be legally bound by any amendment or interpretation that is not fully executed by both parties in writing.

b. The successful contractor shall be required to execute a formal agreement with the County's Procurement Office within ten (10) business days after issuance of the Notice of Award.

16. CONTRACT ADMINISTRATION: Questions or problems arising after award of an agreement shall be directed to the Procurement Manager by calling (843) 782-0504. Copies of all correspondence concerning this solicitation or resulting agreement shall be sent to the Purchasing Department, 113 Mable T. Willis Blvd, Walterboro, SC 29488.

F. GENERAL CONTRACTUAL REQUIREMENTS

1. ABANDONMENT OR DELAY: If the work to be done under this contract shall be abandoned or delayed by the Contractor, or if at any time the County shall believe and shall so certify in writing that work has been abandoned or delayed by the Contractor, the County may annul the contract or any part thereof if the Contractor fails to resolve the matter within thirty (30) days of written notice.

2. CONTRACTOR'S COOPERATION: The Contractor shall maintain regular communications with the Project Manager and shall actively cooperate in all matters pertaining to this contract.

3. RESPONSIBILITY: The Contractor shall at all times observe and comply with all federal, state, local and municipal laws, ordinances, rules, and regulations in any manner affecting the contract.

4. NON-APPROPRIATION/SUBSTITUTION PERMITTED: If the Colleton County Council fails to appropriate or authorize the expenditure of sufficient funds to provide the continuation of this contract or if a lawful order issued in, or for any fiscal year during the term of the agreement, reduces the funds appropriated or authorized in such amounts as to preclude making the payments set out therein, the agreement shall terminate on the date said funds are no longer available without any termination charges or other liability incurring to County. Following any such non-appropriation, the master lease agreement shall contain no limitation on the County's ability to replace the equipment financed with any other equipment.

5. INDEMNIFICATION: Except for expenses or liabilities arising from the negligence of the County, the Contractor hereby expressly agrees to indemnify and hold the County harmless against any or all expenses and liabilities arising out of the performance or default of any resulting agreement or arising from or related to the Work as follows:

   The Contractor expressly agrees to the extent that there is a causal relationship between its negligence, action or inaction, or the negligence, action or inaction of any of its employees or any person, contractor, or corporation directly or indirectly employed by the Contractor, and any damage, liability, injury, loss or expense (whether in connection with bodily injury or death or property damage or loss) that is suffered by the County and its employees or by any member of the public, to indemnify and save the County and its employees harmless against any or all liabilities, penalties, demands, claims, lawsuits, losses, damages, costs, and expenses arising out of the performance or default of any resulting agreement or arising from or related to the equipment. Such costs are to include defense, settlement, and reasonable attorneys' fees incurred by the County and its employees. This promise to indemnify shall include bodily injuries or death occurring to Contractor's employees and any person, directly or indirectly employed by the Firm

(including without limitation any employee of any subcontractor), the County's employees, the employees of any other independent contractor, or occurring to any member of the public. When the County submits notice, the Firm shall promptly defend any aforementioned action.

The prescribed limits of insurance set forth herein shall not limit the extent of the Contractor's responsibility under this Section. The terms and conditions contained in this Section shall survive the termination of any resulting agreement or the suspension of the Work hereunder. Additionally, the County will not provide indemnity to the successful FIRM. Failure to comply with this section may result in your request for proposal to be deemed non-responsive.

6. FORCE MAJEURE: The Contractor shall not be liable for any excess costs if the failure to perform the resulting agreement arises out of causes beyond the control and without fault or negligence of the Contractor. Such causes may include, but are not restricted to acts of God or of the public enemy, acts of the Government in either its sovereign or contractual capacity, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, and unusually severe weather; but in every case, the failure to perform must be beyond the control and without the fault or negligence of the contractor. If the failure to perform is caused by default of a subcontractor, and if such default arises out of causes beyond the control of both the Contractor and subcontractor and without excess costs for failure to perform unless the supplies or services to be furnished by the subcontractor were obtainable from other sources in sufficient time to permit the contractor to meet the required delivery schedule.

7. ARBITRATION: Under no circumstances and with no exception will Colleton County act as arbitrator between the Contractor and any sub-contractor.

8. PUBLICITY RELEASES: The Firm agrees not to refer to the award of this contract in commercial advertising in such a manner as to state or imply that the products or services provided are endorsed or preferred by the County. The Contractor shall not have the right to include the County's name in its published list of customers without prior approval of the County Administrator. Concerning news releases, only the name of the County, type, and duration of any resulting agreement may be used and then only with prior approval of the County. The Contractor also agrees not to publish, or cite in any form, any comments or quotes from the County's staff unless it is a direct quote from the Procurement Manager.

9. GOVERNING LAWS: Any agreement arising from this solicitation shall be governed by the laws of the State of South Carolina and any or all disputes arising out of said agreement shall, if litigation is necessary, be litigated only in a Circuit Court for the Fourteenth Judicial Circuit sitting in Colleton County, South Carolina. The prevailing party shall be entitled to attorney's fees and all costs of said litigation.

10. ASSIGNMENT: The Contractor shall not assign in whole or in part any agreement resulting from this Request for Bids without the prior written consent of the County. The Contractor shall not assign any money due or to become due to him under the said agreement without the prior written consent of the County.

11. AFFIRMATIVE ACTION: The successful Contractor will take affirmative action in complying with all Federal and State requirements concerning fair employment and treatment of all employees, without regard or discrimination because of race, color, religion, sex, national origin, or physical handicap.

12. FAILURE TO DELIVER GOODS IN ACCORDANCE WITH TERMS & CONDITIONS: In case of failure to deliver goods in accordance with the contract terms and conditions, Colleton County, after due

oral or written notice, may procure substitute goods or services from other sources and hold the contractor responsible for any resulting additional purchasing and administrative costs. This remedy shall be in addition to any other remedies which Colleton County may have.

13. TERMINATION OF CONTRACT:

    1. Subject to the provisions below, the contract may be terminated by the Purchasing Department providing a thirty (30) days advance notice in writing is given to the Contractor.

        a. Termination for Convenience: If this contract is terminated or canceled upon request and for the convenience of the County without the required thirty (30) days advance written notice, then the County shall negotiate reasonable termination costs, if applicable.
        b. Termination for Cause: Termination by the County for cause, default, or negligence on the part of the Contractor shall be excluded from the foregoing provisions; termination costs, if any, shall not apply. The thirty (30) days advance notice requirement is waived and the default provision in this request for bids shall apply.
        c. The County shall be obligated to reimburse the Contractor only for those services rendered before the date of notice of termination, less any liquidation damages that may be assessed for non-performance.

    2. Non-Appropriations Clause: Notwithstanding any other provisions of the contract, if the funds anticipated for the continued fulfillment of this contract are at any time. Not forthcoming, through the failure of the County Government to appropriate funds, discontinuance or material alteration of the program under which funds were provided, the County shall have the right to terminate the contract without penalty by giving not less than thirty (30) days written notice documenting the lack of funding. Unless otherwise agreed to by the County and the Contractor, the contract shall become null and void on the last day of the fiscal year for which appropriations were received.

14. BONDS: A 100% Payment and Performance Bond is required for this BID.

15. OWNERSHIP OF MATERIAL: Ownership of all data, material, and documentation originated and prepared for the County according to this contract shall belong exclusively to the County.

16. INSURANCE: Colleton County will require the following remain in force at all times through the life of the contract:

    Professional Liability Insurance – Minimum $1,000,000.00 - Proof of in-force insurance must be provided in the response to the RFP

    Other insurances:
    Workers' Compensation - $100,000 – each accident
    Statutory Coverage and Employer's - $100,000 for each employee
    Liability - $500,000 – policy limit

    Comprehensive General Liability -$1,000,000 – bodily injury each occurrence
    $1,000,000 – bodily injury aggregate
    $1,000,000 – property damage each occurrence
    $1,000,000 – property damage aggregate
    Products – Completed Operations - $1,000,000 – aggregate
    Business Auto Liability – Same as Comprehensive General Liability
    Excess or Umbrella Liability - $1,000,000

Colleton County will be named as an "additional insured" party

17. PAYMENTS TO CONTRACTOR: Two (2) draws against the project shall be made. One (1) after the completion of the demo & disposal of debris and one (1) final payment at the time of acceptance by the owner. All payments are subject to owner acceptance of project progress.

18. RETAINAGE: Retainage from progress payments to the Contractor shall be ***ten percent*** (10%) of the payment for work completed. No reduction of retainage will be allowed at substation completion or completion. ***Retainage will be held by the owner for an additional 60 days from the date of acceptance of completion of the project as a warranty.***

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COLLETON COUNTY
SOUTH CAROLINA

BID: CC-32

FLOYD BUCKNER BUILDING DEMOLITION and DISPOSAL PROJECT

ADDENDA ACKNOWLEDGMENT

The contractor has examined and carefully studied the Request for Bid and the following Addenda, receipt of all of which is hereby acknowledged:

Addendum No. _____

Addendum No _____

Addendum No. _____

Addendum No. _____

_____ _____

Authorized Representative/Signature Date

_____

Authorized Representative/Title (Print)

The Contractor must acknowledge any issued addenda. Bids that fail to acknowledge the contractor's receipt of any addendum will result in the rejection of the offer if the addendum contained information that substantively changes the Owner's requirements or pricing.

THIS PAGE MUST BE COMPLETED AND SUBMITTED AS A PART OF YOUR BID

COLLETON COUNTY
SOUTH CAROLINA

BID: CC-32

FLOYD BUCKNER BUILDING DEMOLITION and DISPOSAL PROJECT

INDEMNIFICATION

The contractor will indemnify and hold harmless the Owner, Colleton County and their agents and employees from and against all claims, damages, losses, and expenses, including attorney's fees, arising out of or resulting from the performance of the Work provided that any such claims, damages, loss, or expense are attributable to bodily injury, sickness, disease or death, injury to or destruction of tangible property, including the loss of use resulting therefrom, and is caused by any negligent or willful act or omission of the Firm, and anyone directly or indirectly employed by him/her or anyone for whose acts any of them may be liable.

In any or all claims against the Owner, Colleton County or any of their agents and/or employees by an employee of the Contractor, and anyone directly or indirectly employed by any of them, or anyone for whose acts any of them may be liable, the indemnification obligation shall not be limited in any way to the amount or type of damages, compensation or benefits payable by or for the Contractor under the Worker's Compensation Acts, Disability Benefit Acts, or other employee benefit acts.

The obligation of the Firm under this paragraph shall not extend to the liability of Colleton County or its agents and/or employees arising out of the reports, surveys, Change Orders, designs, or Technical Specifications.

CONTRACTOR: _____

BY: _____

DATE: _____

TELEPHONE NO.: _____

THIS PAGE MUST BE COMPLETED AND SUBMITTED AS A PART OF YOUR BID

COLLETON COUNTY
SOUTH CAROLINA

BID: CC-32

FLOYD BUCKNER BUILDING DEMOLITION and DISPOSAL PROJECT

CERTIFICATE OF FAMILIARITY

The undersigned, having fully familiarized him/her with the information contained within this entire solicitation and applicable amendments, submits the attached response, and other applicable information to the County, which I verify to be true and correct to the best of my knowledge. I further certify that this response is made without prior understanding, agreement, or connection with any corporation, contractor, or person submitting a response for the same materials, supplies or equipment, and is in all respects, fair and without collusion or fraud. I agree to abide by all conditions outlined in this solicitation and certify that I have signature authority to bind the company listed herein.

MINORITY BUSINESS: Are you a minority business?

► ***Yes*** ____ (_____*Women-owner/* _____*Disadvantaged) if yes, please submit a copy of your certificate with your response.*

► ***No*** ____

_____ _____

Authorized Signature Date

_____

Authorized Representative/Title (Print)

THIS PAGE MUST BE COMPLETED AND SUBMITTED AS A PART OF YOUR BID

COLLETON COUNTY
SOUTH CAROLINA

BID: CC-32

FLOYD BUCKNER BUILDING DEMOLITION and DISPOSAL PROJECT

DEBARMENT

The Contractor is certifying that they are not currently debarred from responding to any request for bids by any agency or subdivision of the State of South Carolina or the United States Federal Government, nor are they an agent of any person or entity that is currently debarred from submitting bids on contracts by any agency or subdivision of the State of South Carolina or the United States Federal Government.

SAM's No. _____

Cage Code. _____

DUN's No. _____

_____ _____

Authorized Representative/Signature Date

_____

Authorized Representative/Title (Print)

THIS PAGE MUST BE COMPLETED AND SUBMITTED AS A PART OF YOUR BID

COLLETON COUNTY
FOUNDED 1682

SITE REMEDIATION PLANS

OF

FLOYD BUCKNER BUILDING DEMOLITION & REMEDIATION IMPROVEMENTS

COLLETON COUNTY, SC

PREPARED FOR:

COLLETON COUNTY CAPITAL PROJECTS
PO BOX 157
WALTERBORO, SC 29488

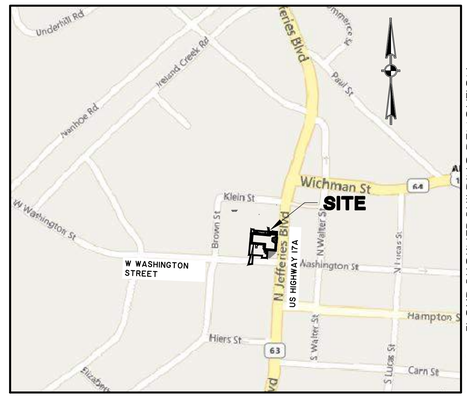
TM# 163-11-00-227

OCTOBER 19, 2020

J-28711.0000

PREPARED BY:

THOMAS & HUTTON



VICINITY MAP
SCALE: 1" = 500'

J-28711.0000 10/19/2020 FLOYD BUCKNER BUILDING DEMOLITION & REMEDIATION IMPROVEMENTS

Sheet List Table	
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D1.1	DEMO PLAN
EC0.1	EROSION CONTROL NOTES
EC1.1	EROSION CONTROL PLAN
EC0.2	EROSION CONTROL CHARTS
EC2.1	EROSION CONTROL DETAILS
C1.1	GRADING PLAN
C2.1	SITE DETAILS

REVISION HISTORY			
A	SCDOT COMMENTS	MCL	10/19/20
REV. NO.	REVISION	BY	DATE

SUBMITTAL HISTORY	
SCDHEC	10/14/20
SCDOT	10/14/20
SUBMITTED TO	DATE

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER No. 26573 MARCUS L. SIMMERSON 10/20/2020

SOUTH CAROLINA THOMAS & HUTTON ENGINEERING CO. No. C00285 CERTIFICATE OF AUTHORIZATION

811 Know what's below. Call before you dig.

THOMAS & HUTTON
1501 Main Street • Suite 760
Columbia, SC 29201
p.803.451.6789
www.thomasandhutton.com

ABBREVIATIONS

DBL	DOUBLE	FM	FORCE MAIN (SANITARY SEWER)	PC	POINT OF CURVE	TC	TOP OF CURB
BOT	BOTTOM	FP	FINISH PAD	PH	POST HYDRANT	TH	THROAT ELEVATION
CB	CATCH BASIN	FR	FRAME	PT	POINT OF TANGENT	TG	TOP OF GUTTER
CI	CURB INLET	GI	GRATE INLET	PVC	POLYVINYL CHLORIDE	TP	TOP OF PAVEMENT
CO	CLEAN OUT	GV	GATE VALVE	RCP	REINFORCED CONCRETE PIPE	TW	TOP OF WALK
CPP	CORRUGATED PLASTIC PIPE	HDPE	HIGH DENSITY POLYETHYLENE	RC	ROLL CURB INLET	TYP	TYPICAL
DBL	DOUBLE	HI	HOODED INLET	RCP	REINFORCED CONCRETE PIPE	VI	VALLEY INLET
DI	DITCH INLET	INV	INVERT ELEVATION	RI	ROOF INLET	W	WATER
DIP	DUCTILE IRON PIPE	JB	JUNCTION BOX	RJP	RESTRAINED JOINT PIPE	W/	WITH
EL	ELEVATION	LF	LINEAR FEET	R/W	RIGHT-OF-WAY	WV	WATER VALVE
ES	END SECTION	MAX	MAXIMUM	SD	STORM DRAINAGE	YI	YARD INLET
FES	FLARED END SECTION	MIN	MINIMUM	SDMH	STORM DRAINAGE MANHOLE	YI	YARD INLET
FG	FINISH GRADE	MH	MANHOLE	SF	SQUARE FEET		
FH	FIRE HYDRANT	OC	ON CENTER	SS	SANITARY SEWER		

DRAINAGE LEGEND

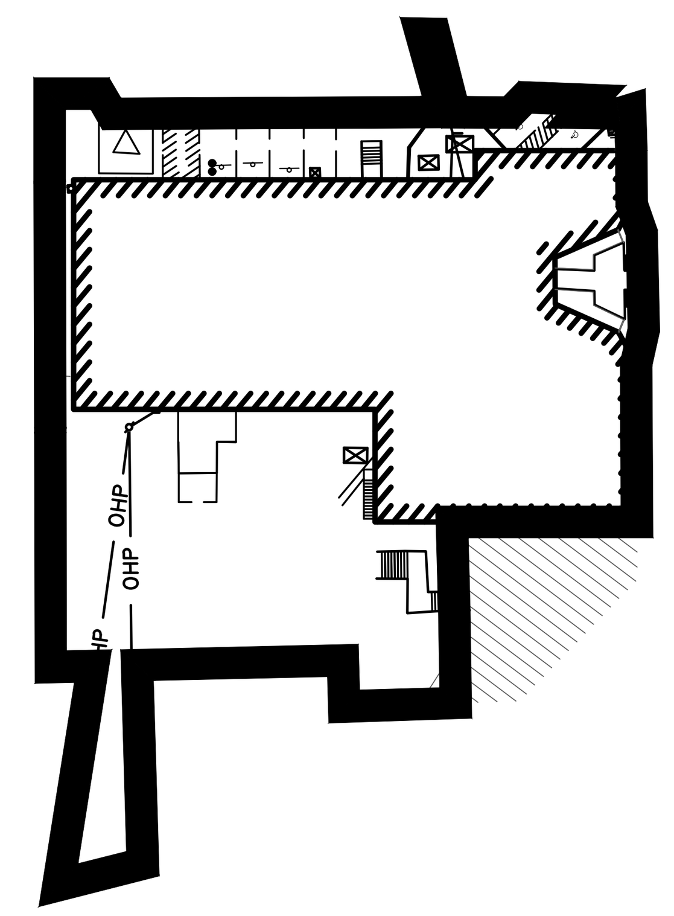
DESCRIPTION	EXISTING
PIPE	
DITCH	
CURB INLET (CI) CATCH BASIN (CB)	
CURB INLET - RIGHT (CI) OR CATCH BASIN - RIGHT (CB)	OR
CURB INLET - LEFT (CI) OR CATCH BASIN - LEFT (CB)	OR
CURB INLET - BOTH (CI) OR CATCH BASIN - LEFT (CB)	OR
CONTROL STRUCTURE (CS)	
DITCH INLET (DI)	
GRATE INLET (GI)	
HOODED INLET (HI)	OR
JUNCTION BOX (JB)	
MANHOLE (SDMH)	
ROLL CURB INLET (RC)	
ROOF INLET (RI)	
YARD INLET (YI)	
FLARED END SECTION (FES)	

WATER LEGEND

DESCRIPTION	EXISTING
WATER MAIN	10"W
SINGLE SERVICE LATERAL	
DOUBLE SERVICE LATERAL	
VALVE AND BOX	
FIRE HYDRANT W/VALVE & BOX	
POST HYDRANT	
REDUCER	
BACKFLOW PREVENTOR	
CROSS	
TEE	
90° BEND - HORIZONTAL	
45° BEND - HORIZONTAL	
22-½° BEND - HORIZONTAL	
11-¼° BEND - HORIZONTAL	
BEND - VERTICAL	
CAP	

SEWER LEGEND

DESCRIPTION	EXISTING
GRAVITY PIPE	SS
SINGLE SERVICE LATERAL	
DOUBLE SERVICE LATERAL	
MANHOLE	
CLEANOUT	
FORCEMAIN	10"FM 10"FM
VALVE AND BOX	
FLUSH HYDRANT	
REDUCER	
BACKFLOW PREVENTOR	
CROSS	
TEE	
90° BEND - HORIZONTAL	
45° BEND - HORIZONTAL	
22-½° BEND - HORIZONTAL	
11-¼° BEND - HORIZONTAL	
BEND - VERTICAL	
PLUG \ CAP	



INDEX

SCALE: 1" = 60'

OTHER UTILITIES LEGEND

DESCRIPTION	EXISTING
NATURAL GAS	UGG UGG
TELEPHONE	OHT OHT
UNDERGROUND TELEPHONE	UTL UTL
ELECTRICITY	OHP OHP
UNDERGROUND ELECTRICITY	UGP UGP

GENERAL NOTES

1. THE CONTRACTOR SHALL NOTIFY THE OWNER AND THE ENGINEER 48 HOURS IN ADVANCE OF ALL REQUIRED TESTS AND INSPECTIONS.
2. THE CONTRACTOR WILL NOTIFY THE ENGINEER IF UNSUITABLE MATERIAL IS DISCOVERED PRIOR TO BEGINNING ANY REMOVAL OPERATION..
3. SURVEYING AND BOUNDARY INFORMATION BY THOMAS AND HUTTON
4. ALL ELEVATIONS SHOWN ARE BASED ON NAVD88.
5. TOPOGRAPHIC SURVEY BY THOMAS AND HUTTON.
6. CONTRACTOR IS TO VERIFY ACCURACY OF ANY TEMPORARY BENCHMARKS SHOWN PRIOR TO UTILIZING THEM FOR CONSTRUCTION.
7. THE EXISTING UNDERGROUND UTILITIES SHOWN HEREON ARE BASED UPON AVAILABLE INFORMATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATION OF ALL UTILITIES OTHER THAN THOSE SHOWN ARE ENCOUNTERED DURING CONSTRUCTION , THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY AND TAKE STEPS TO PROTECT THE LINE(S) AND ENSURE CONTINUED SERVICE. DAMAGE CAUSED TO EXISTING UTILITIES BY THE CONTRACTOR SHALL BE REPAIRED BY THE CONTRACTOR. ADDITIONALLY, THE CONTRACTOR SHALL CONFIRM THE CONNECTION POINTS OF NEW UTILITIES TO EXISTING UTILITIES PRIOR TO BEGINNING NEW CONSTRUCTION.
8. IF WORK IS SUSPENDED OR DELAYED FOR 14 DAYS, THE CONTRACTOR SHALL TEMPORARILY STABILIZE THE DISTURBED AREA AT NO ADDITIONAL COST TO THE OWNER.
9. THE CONTRACTOR SHALL INSTALL ANY BARRICADES PRIOR TO BEGINNING CONSTRUCTION
10. ANY DAMAGE TO EXISTING PAVEMENT MUST BE REPAIRED AT CONTRACTORS EXPENSE AND TO THE SATISFACTION OF THE COUNTY ENGINEER AND THE PROJECT ENGINEER.
11. ALL RIGHT-OF-WAY AND DRAINAGE EASEMENT CONSTRUCTION SHALL MEET SCDOT STANDARD SPECIFICATIONS UNLESS SPECIFIED ELSEWHERE AND APPROVED IN WRITING BY THE COUNTY ENGINEER.
12. ALL LOTS WITHIN THE DEVELOPMENT SHALL BE FILLED AND HAVE POSITIVE DRAINAGE TO THE APPROPRIATE EASEMENT OR RIGHT-OF-WAY AS APPROVED ON THE PLANS PRIOR TO THE ISSUANCE OF ANY BUILDING PERMITS OR FINAL ACCEPTANCE OF THE RIGHT-OF-WAYS BY THE COUNTY
13. WHERE FIELD INSPECTIONS ARE REQUIRED BY THE COUNTY, THE CONTRACTOR SHALL NOTIFY THE ENGINEERING DIVISION A MINIMUM OF 48 HOURS IN ADVANCE TO SCHEDULE SUCH INSPECTIONS.
14. A COMPLETE SET OF APPROVED DRAWINGS AND SPECIFICATIONS MUST BE MAINTAINED ON SITE AT ALL TIMES THAT THE CONTRACTOR IS PERFORMING WORK. THESE DRAWINGS SHALL BE MADE AVAILABLE UPON REQUEST.
15. ANY REVISIONS DURING CONSTRUCTION WHICH ALTER THE ROAD LAYOUT, CONSTRUCTION METHODS, RIGHT-OF-WAY LOCATION OR DRAINAGE MUST BE SUBMITTED AND APPROVED IN WRITING BY THE COUNTY ENGINEER.
16. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL CONSTRUCTION PERMITS NECESSARY FROM OTHER RESPONSIBLE AGENCIES.
17. ALL TREES SHOWING DISTURBANCE WITHIN THE PROTECTED ROOT ZONE SHALL BE PRUNED AND FERTILIZED BY A CERTIFIED ARBORIST PRIOR TO RECEIVING FINAL PLAT APPROVAL
18. ALL ABOVE GROUND UTILITIES ARE TO BE OUTSIDE OF THE R/W AND ALL AT GRADE UTILITIES ARE TO BE OUT OF THE CURB LINE.
19. THE CONTRACTOR SHALL INSTALL ALL EROSION CONTROL AND PREVENTION STRUCTURES SHOWN ON THE PLANS. .
20. THE FOLLOWING NOTES ARE SPECIFIED BY THE SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL - OFFICE OF OCEAN AND COASTAL RESOURCES MANAGEMENT (SCDHEC-OCRM) AND ARE TO BE EXECUTED BY THE CONTRACTOR:

a. ALL SEDIMENT CONTROL MEASURES 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. ALL SEDIMENT CONTROL FEATURES SHALL BE MAINTAINED UNTIL FINAL STABILIZATION HAS BEEN OBTAINED.

b. STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED, UNLESS ACTIVITY IN THAT PORTION OF THE SITE WILL RESUME WITHIN 14 DAYS.

23. ALL EROSION AND SEDIMENT CONTROL DEVICES SHALL BE CONSTRUCTED SIMULTANEOUSLY WITH THE DISTURBANCE OF THE LAND AND SHALL REMAIN FUNCTIONAL UNTIL THE CONTRIBUTING DISTURBED AREAS ARE STABILIZED. SILT BARRIERS WILL BE INSTALLED AS NECESSARY TO PREVENT EXCESSIVE SEDIMENTATION OF DOWNSTREAM AREAS. DEVICES SHALL BE IN ACCORDANCE WITH THE SCDHEC REQUIREMENTS.
24. CONTRACTOR SHALL GRADE AREAS TO DRAIN FOR POSITIVE FLOW PRIOR TO FINAL APPROVAL.
25. ALL AREAS DISTURBED WILL BE GRASSED IMMEDIATELY AFTER THE INSTALLATION. GRASSING SHALL BE IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.
26. EACH EXISTING ROAD WILL BE CLEANED UP AND RESTORED DAILY.
27. THE DESIGN OF EARTHWORK MATERIALS, PROCEDURES AND METHODS SPECIFIED ARE BASED ON THE CRITERIA AND RECOMMENDATIONS ESTABLISHED IN THE GEOTECHNICAL INVESTIGATION REPORT PREPARED BY TERRACON CONSULTANTS, INC. DATED OCTOBER 16, 2020 AND SUBSEQUENT ADDENDUMS.

GENERAL INFORMATION

COUNTY: COLLETON COUNTY
TOWN: WALTERBORO
ZONING: CURRENT ZONING

OWNER:
COLLETON COUNTY CAPITAL PROJECTS
PO BOX 157
WALTERBORO, SC 29488
(843) 782-0508

ENGINEER:
THOMAS & HUTTON
1501 MAIN STREET
COLUMBIA, SC 29201
(803) 451-6789

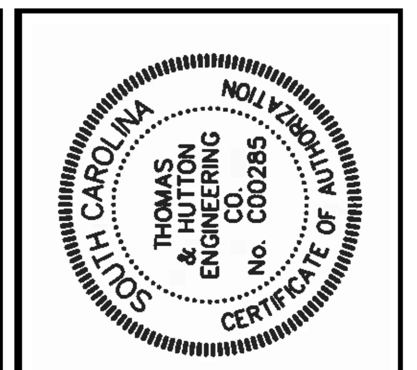
SURVEYOR:
THOMAS & HUTTON
682 JOHNNIE DODDS BLVD.
MT. PLEASANT, SC 29464
(843) 849-0200

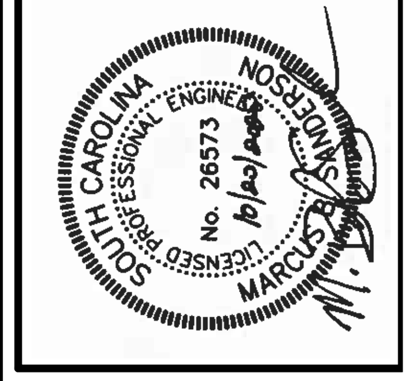
WATER & SEWER:
CITY OF WALTERBORO
242 HAMPTON STREET
WALTERBORO SC, 29488
(843) 782-1000

POWER:
DOMINION ENERGY
5705 COUNTY RD S-18-200
ST GEORGE, SC 29477
(843) 782-1000

TELECOMMUNICATIONS:
PALMETTO RURAL TELEPHONE COOPERATIVE
292 ROBERTSON BLVD
WALTERBORO, SC 29488
(843) 538-2020

PREPARED FOR:
COLLETON COUNTY CAPITAL PROJECTS
PO BOX 157
WALTERBORO, SC 29488
(843) 782-0508





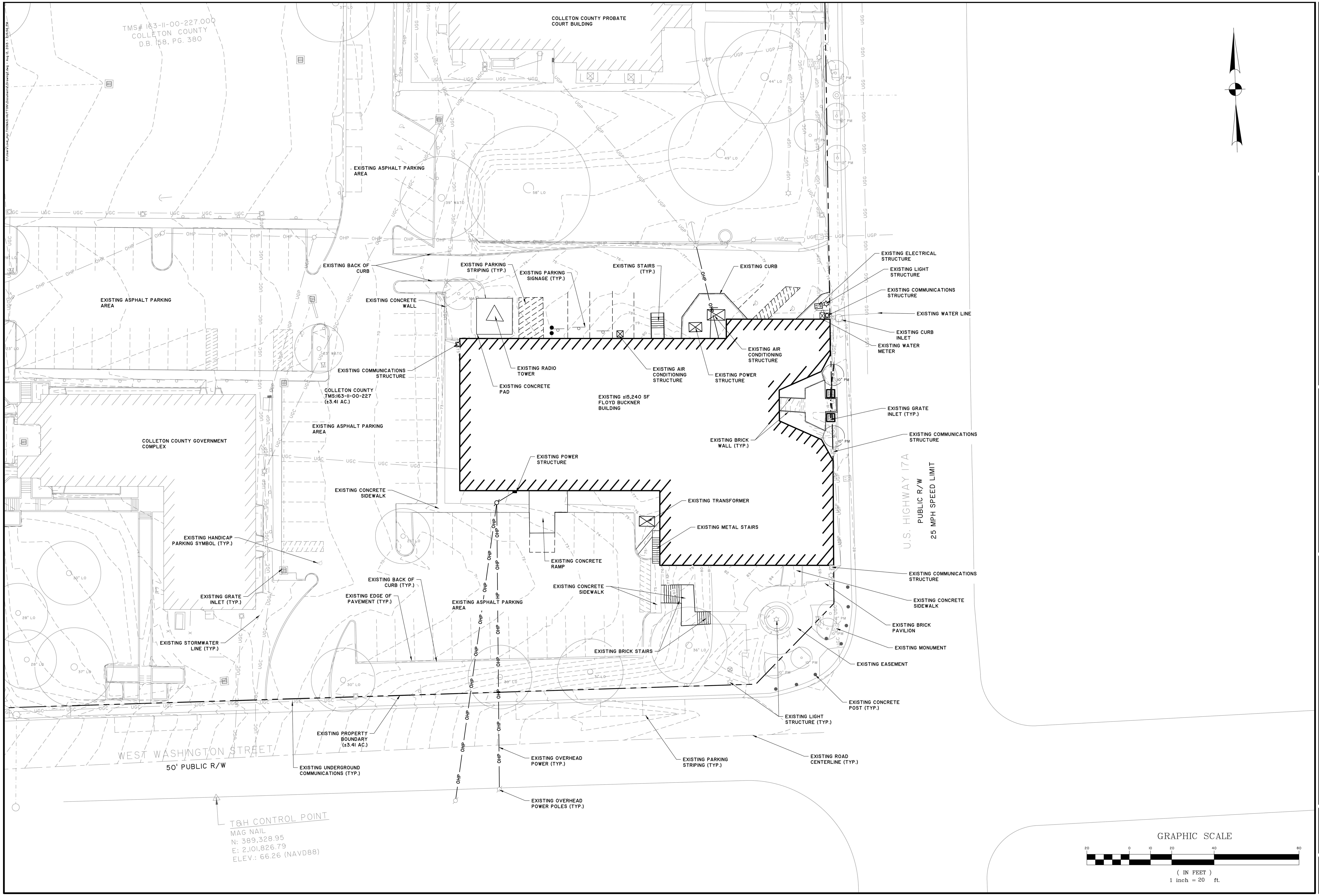
NO	REVISIONS	BY	DATE

THOMAS & HUTTON
1501 Main Street • Suite 760
Columbia, SC 29201 • 803.451.6789
www.thomasandhutton.com

COLLETON COUNTY CAPITAL PROJECTS
COLLETON COUNTY, SC
FLOYD BUCKNER BUILDING DEMOLITION & REMEDIATION IMPROVEMENTS
GENERAL NOTES AND INDEX

JOB NO:	J-28711.0000
DATE:	10/19/2020
DRAWN:	HRC
DESIGNED:	HRC
REVIEWED:	MBS
APPROVED:	MBS
SCALE:	NA

GN0.1



SOUTH CAROLINA
THOMAS & HUTTON ENGINEERING CO.
No. C00285
CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA
LICENSED PROFESSIONAL ENGINEER
No. 26573
MARCUS ... SHEPHERDSON

NO.	REVISIONS	BY	DATE

THOMAS & HUTTON
1501 Main Street • Suite 760
Columbia, SC 29201 • 803.451.6789
www.thomasandhutton.com

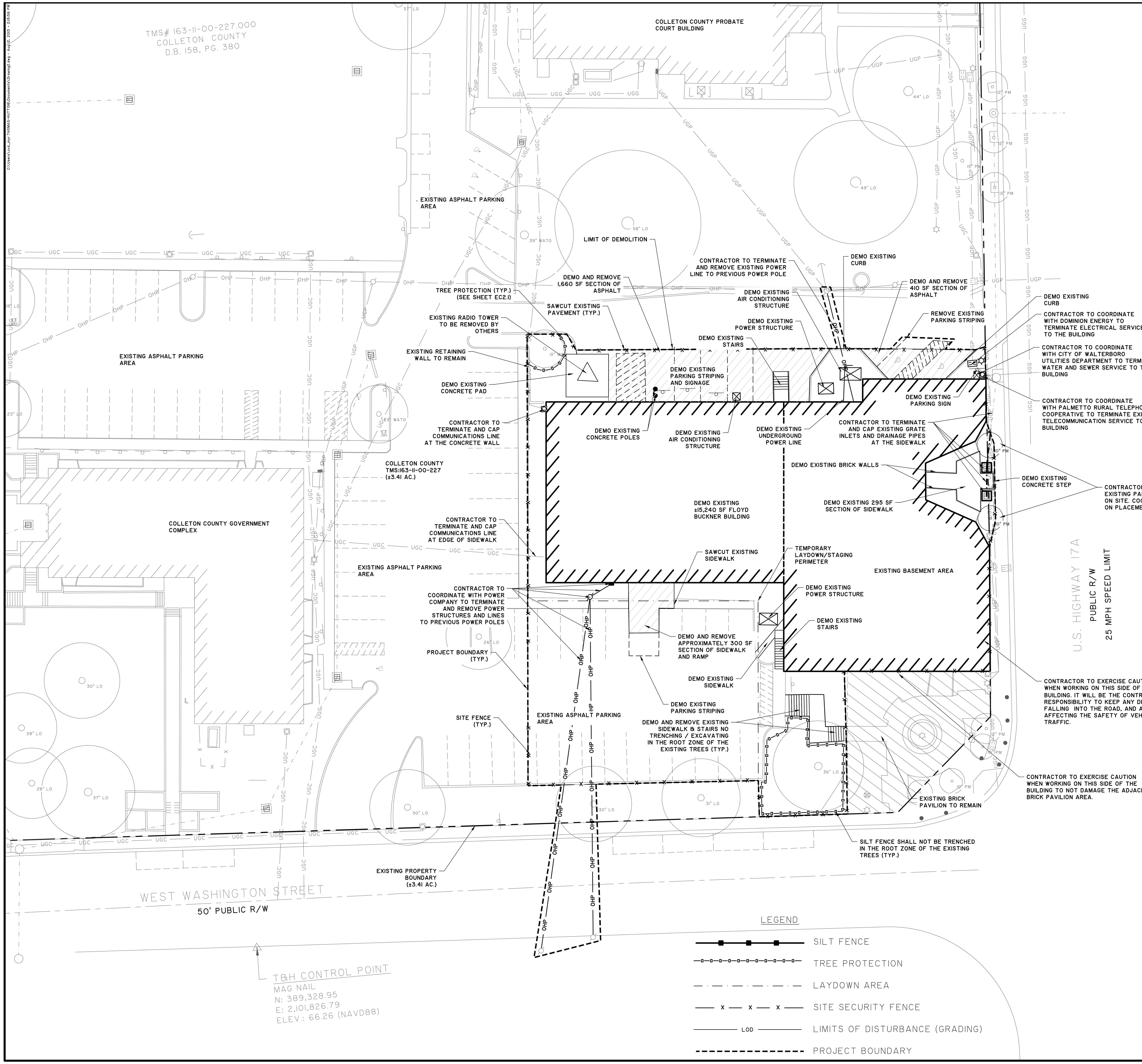
COLLETON COUNTY CAPITAL PROJECTS
COLLETON COUNTY, SC

FLOYD BUCKNER BUILDING DEMOLITION & REMEDIATION IMPROVEMENTS

EXISTING CONDITIONS PLAN

JOB NO:	J-28711.0000
DATE:	10/19/2020
DRAWN:	HRC
DESIGNED:	HRC
REVIEWED:	MBS
APPROVED:	MBS
SCALE:	1" = 20'

EX1.1



GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

DEMOLITION NOTES:

1. BEFORE BEGINNING DEMOLITION/CONSTRUCTION OPERATIONS, THERE WILL BE A MANDATORY PRECONSTRUCTION MEETING AT THE PROJECT SITE WITH SCDOT, COUNTY REPRESENTATIVE, SITE CONTRACTOR, AND PROJECT GEOTECHNICAL CONSULTANT.
2. CONTRACTOR SHALL COORDINATE DEMOLITION ACTIVITIES WITH GEOTECHNICAL CONSULTANT PER GEOTECHNICAL REPORT PREPARED BY TERRACON CONSULTANTS, INC. DATED OCTOBER 16, 2020
3. CONTRACTOR CAN THEN COMMENCE WITH THE REMAINING DEMOLITION ACTIVITIES PRIOR TO SITE GRADING OPERATIONS OUTLINED ON SHEET C1.1. TOP OF EXISTING BASEMENT WALL SHALL BE 2' BELOW FINISHED GRADE.
4. NO DEMOLITION OR WORK OPERATIONS SHALL TAKE PLACE IN THE SCDOT RIGHT-OF-WAY.
5. UTILITIES SHOWN ON THIS PLAN ARE APPROXIMATE AND MAY NOT REPRESENT ACTUAL, AND ALL LOCATIONS. SURVEY OF UTILITIES SHOWN ON THIS PLAN WERE COLLECTED FROM THOMAS AND HUTTON ENGINEERING CO. USING VISIBLE MARKING AND GROUND PENETRATING RADAR, IT IS THE CONTRACTORS RESPONSIBILITY TO OBTAIN AVAILABLE RECORD DRAWINGS AND COORDINATE WITH THE PROVIDER TO LOCATE ALL UTILITIES PRIOR TO DEMOLITION.
6. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO, OR CONCURRENT WITH, LAND DISTURBING ACTIVITIES.
7. THE CONTRACTOR IS RESPONSIBLE FOR THE DEMOLITION, REMOVAL, AND DISPOSAL OF ALL DEBRIS FROM THE SITE AND DISPOSING OF THE DEBRIS IN A LAWFUL MANNER. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS REQUIRED FOR DEMOLITION AND DISPOSAL.
8. UTILITIES NEEDING TO BE REMOVED OR RELOCATED SHALL BE COORDINATED WITH THE AFFECTED UTILITY COMPANY AND EXISTING TENANTS SO AS NOT TO AFFECT OPERATIONS. ADEQUATE TIME SHALL BE PROVIDED FOR RELOCATION, AND CLOSE COORDINATION WITH THE UTILITY COMPANY IS NECESSARY TO PROVIDE A SMOOTH TRANSITION IN UTILITY SERVICE. THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANY CONCERNING PORTIONS OF WORK WHICH MAY BE PERFORMED BY THE UTILITY COMPANY'S FORCES AND ANY FEES WHICH ARE TO BE PAID TO THE UTILITY COMPANY FOR THEIR SERVICES. THE CONTRACTOR IS RESPONSIBLE FOR PAYING ALL FEES AND CHARGES.
9. CONTRACTOR MUST PROTECT THE PUBLIC AT ALL TIMES WITH FENCING, BARRICADES, ENCLOSURES, ETC., TO THE BEST PRACTICES.
10. DAMAGE TO ALL EXISTING CONDITIONS TO REMAIN WILL BE REPLACED AT CONTRACTOR'S EXPENSE.
11. PRIOR TO COMMENCING DEMOLITION OF EXISTING SITE, CONTRACTOR SHALL IMPLEMENT PHASING OF EROSION & SEDIMENTATION CONTROL PRACTICES.
12. PRIOR TO BEGINNING DEMOLITION OF EXISTING SITE, CONTRACTOR SHALL NOTIFY OWNER, AND ENGINEER WITHIN 72 HOURS.
13. CONTRACTOR MAY LIMIT SAW-CUT & PAVEMENT REMOVAL TO ONLY THOSE AREAS WHERE IT IS REQUIRED AS SHOWN ON THESE CONSTRUCTION PLANS BUT IF ANY DAMAGE IS INCURRED ON ANY OF THE SURROUNDING PAVEMENT, ETC. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ITS REMOVAL AND REPAIR.
14. EXISTING DRAINAGE, WATER AND SANITARY SEWER UTILITIES AND ASSOCIATED APPURTENANCES SHALL BE PROTECTED DURING DEMOLITION AND CONSTRUCTION OPERATIONS.
15. ALL WATER AND SANITARY SEWER SERVICE LATERALS TO BE ABANDONED SHALL BE CAPPED AT THE MAINS; AND ALL WATER METERS NOT BEING USED SHALL BE RETURNED TO CITY OF WALTERBORO UTILITIES & ENGINEERING DEPARTMENT.
16. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING NECESSARY LOCAL AND STATE PERMITS FOR DEMOLITION OF STRUCTURES INCLUDING ANY NECESSARY ENVIRONMENTAL STUDIES WHICH MAY BE REQUIRED.
17. CONTRACTOR TO COORDINATE WITH DRY UTILITY PROVIDERS AS NECESSARY.
18. ABATEMENT TO BE CONDUCTED AS NECESSARY BY CONTRACTOR. SEE ASBESTOS AND LEAD PAINT ASSESSMENT REPORT BY S&ME DATED SEPTEMBER 28, 2020
19. CONTRACTOR TO EXCAVATE AROUND EXISTING STRUCTURES, REMOVE IDENTIFIED STRUCTURES WITHIN LIMITS OF DISTURBANCE AND ACCESS IF THERE IS ACTIVE FLOW. CONTACT ENGINEER TO CONFIRM WHICH PIPES ARE OFFLINE AND WHICH ARE STILL ACTIVELY DRAINING. STORM PIPES WHICH ARE TO BE ABANDONED IN PLACE WILL BE FILLED WITH FLOWABLE CONCRETE AND PLUGGED WITH BRICK AND MORTAR BULKHEAD. ACTIVE SANITARY SERVICE LINES TO BE EVALUATED WITH EOR IF ENCOUNTERED.
20. CONTRACTOR TO COORDINATE WITH OWNER REGARDING SALVAGE OF BUILDING MATERIALS.

NO.	REVISIONS	BY	DATE
A	SCDOT	MCL	10/19/20

THOMAS & HUTTON
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Columbia, SC 29201 • 803.451.6789
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COLLETON COUNTY CAPITAL PROJECTS
COLLETON COUNTY, SC
FLOYD BUCKNER BUILDING DEMOLITION & REMEDIATION IMPROVEMENTS
DEMO PLAN

JOB NO:	J-28711.0000
DATE:	10/19/2020
DRAWN:	HRC
DESIGNED:	HRC
REVIEWED:	MBS
APPROVED:	MBS
SCALE:	1" = 20'

D1.1

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STORMWATER POLLUTION PREVENTION PLAN

I. SITE DESCRIPTION

A. PROJECT DESCRIPTION

A.1.	PROJECT AREA	0.48 ACRES
A.2.	AREA DISTURBED	0.48 ACRES
A.3.	PERCENT IMPERVIOUS AREA BEFORE CONSTRUCTION	93.8 %
A.4.	RUNOFF COEFFICIENT BEFORE CONSTRUCTION	94 CN
A.5.	PERCENT IMPERVIOUS AREA AFTER CONSTRUCTION	0 %
A.6.	RUNOFF COEFFICIENT AFTER CONSTRUCTION	39 CN

B. DESCRIPTION OF CONSTRUCTION ACTIVITY

WORK CONSISTS OF DEMOLITION AND REMEDIATION IMPROVEMENTS OF EXISTING ±15,240 SF BUILDING.

C. RUNOFF DATA

C.1.	SOIL CLASSIFICATIONS:	(HSG) A
C.2.	LAND USE(S):	COMMERCIAL

D. RECEIVING WATERS

D.1.	CLOSEST RECEIVING WATERS:	IRELAND CREEK
D.2.	ULTIMATE RECEIVING WATERS:	ASHEPOO RIVER

E. FLOOD

E.1.	FEMA FLOOD ZONE(S):	X
E.2.	FEMA FLOOD INSURANCE MAP(S):	45029C0318G

II. CONTROL MEASURES

1. EROSION AND SEDIMENT CONTROLS

PRIOR TO START OF CONSTRUCTION, ALL EXTERIOR SILT FENCE WILL BE INSTALLED AS SHOWN ON THE PLANS.

1.1. CLEARING

1.1.1. AS CLEARING IS COMPLETED, ADDITIONAL SILT FENCE WILL BE INSTALLED WHERE NECESSARY, SUCH AS POINTS WHERE FLOWS BECOME CHANNELIZED, AND OTHER POINTS WHERE EXCESSIVE RUNOFF VELOCITIES MAY OCCUR.
1.1.2. INSTALL CONSTRUCTION ENTRANCES / EXITS BEFORE BEGINNING CLEARING
1.1.3. CONSTRUCTION DELAYS IN ANY ONE AREA GREATER THAN 14 DAYS PRIOR TO START OF ROUGH GRADING WILL MANDATE STABILIZATION PROCEDURES. ACCEPTABLE METHODS OF STABILIZATION INCLUDE MULCHING AND TEMPORARY SEEDING.
1.1.4. MAINTAIN EXISTING VEGETATION WHENEVER POSSIBLE AND MINIMIZE THE AREA OF DISTURBANCE. RETAIN AND PROTECT TREES TO ENHANCE FUTURE LANDSCAPING EFFORTS AND REDUCE RAINDROP IMPACT.
1.1.5. INSTALL ALL SEDIMENT CONTROL PRACTICES PRIOR TO ANY UP-SLOPE SOIL DISTURBING ACTIVITIES.
1.1.6. PHASE CONSTRUCTION ACTIVITIES TO MINIMIZE THE AREAS DISTURBED AT ONE TIME. THIS WILL ALSO ALLOW COMPLETED AREAS TO BE STABILIZED AND RE-VEGETATED BEFORE DISTURBING ADJACENT SITES. THE NEED FOR TEMPORARY EROSION CONTROL MEASURES MAY BE AVOIDED BY COMPLETING A PHASE AND INSTALLING PERMANENT EROSION CONTROL MEASURES WHEN THE FINAL GRADE IS ATTAINED.
1.1.7. MAINTAIN AND PROTECT ALL NATURAL WATERWAYS. RETAIN AT LEAST A 35-FOOT UNDISTURBED BUFFER OF NATURAL VEGETATION ALONG ALL WATERWAYS TO FILTER OUT SEDIMENT AND OTHER POLLUTANTS. MAINTAIN A 45-FOOT UNDISTURBED BUFFER AROUND SENSITIVE WATERS.
1.1.8. INSTALL SILT FENCE (OR BIO ROLLS/ROCK SOCK PRODUCTS) ON THE DOWN-SLOPE PERIMETER OF ALL DISTURBED AREAS PRIOR TO ANY SOIL DISTURBING ACTIVITIES (INCLUDING CLEARING AND GRUBBING). SILT FENCE CAN TREAT A MAXIMUM OF 100 SQUARE FEET PER LINEAL FOOT OF FENCE. INSTALL SILT FENCE IN SHORTER REACHES ON THE CONTOUR WITH EACH END TURNED UP-SLOPE . SWALES AND SHORELAND AREAS SHOULD ALSO BE PROTECTED WITH SILT FENCE, BIO ROLLS, OR ROCK SOCKS.
1.1.9. IN AREAS OF CONCENTRATED FLOW INSTALL STRAW BALE CHECKS, ROCK CHECK DAMS, TRIANGULAR DIKES, BIO ROLL BLANKETS, OR ROCK SOCKS TO SLOW RUNOFF AND TRAP SEDIMENT.

1.1.10. USE TEMPORARY SLOPE DRAINS OR ROCK CHUTES TO MOVE WATER DOWN STEEP SLOPES.

1.1.11. CONSTRUCT SEDIMENT BASINS FOR DRAINAGE AREAS GREATER THAN 10 ACRES

1.2. ROUGH GRADING

1.2.1. ALL EXISTING CONTROLS WILL BE MAINTAINED DURING ROUGH GRADING, DELAYS OF GREATER THAN 14 DAYS PRIOR TO START OF NEXT ACTIVITY WILL MANDATE STABILIZATION PROCEDURES. ACCEPTABLE METHODS OF STABILIZATION INCLUDE MULCHING AND TEMPORARY SEEDING.
1.2.2. ALL AREAS NOT SUBJECT TO FURTHER CONSTRUCTION (DRAINAGE, SANITARY SEWER, ROADS, WATER DISTRIBUTION SYSTEMS, OR STORM WATER FACILITIES) SHALL BE GRASSED WITH A PERMANENT COVER.
1.2.3. COVER ANY STOCK PILED TOPSOIL WITH PLASTIC (OR OTHER IMPERVIOUS COVERING) OR USE A TEMPORARY SEED MIX. USE STOCKPILED TOPSOIL AS EARTHEN BERMS TO SERVE AS TEMPORARY SEDIMENT BASINS.

1.3. DRAINAGE

1.3.1. ALL EXISTING CONTROLS WILL BE MAINTAINED DURING DRAINAGE INSTALLATION.
1.3.2. CONSTRUCTION DRAINAGE WILL BE ROUTED THROUGH LAKES, WHICH WILL ACT AS SEDIMENT BASINS OR OTHER ACCEPTABLE SEDIMENT BASINS/TRAPS.
1.3.3. STORM DRAIN INLET PROTECTION AS SHOWN ON DETAIL SHEET SHALL BE INSTALLED ON ALL CURB INLETS, STORM DRAIN MANHOLES, JUNCTION BOXES, AND GRATE INLETS.
1.3.4. DELAYS OF GREATER THAN 14 DAYS PRIOR TO START OF THE NEXT CONSTRUCTION SEQUENCE WILL MANDATE STABILIZATION PROCEDURES. ACCEPTABLE METHODS OF STABILIZATION INCLUDE MULCHING AND TEMPORARY SEEDING.
1.3.5. ALL STORM LINES NOT IN STREETS OR OTHER PAVED AREAS ARE TO BE MULCHED AND SEEDED WITHIN 5 DAYS AFTER BACKFILL.

1.4. WASTE DISTRIBUTION SYSTEM INSTALLATION

1.4.1. ALL EXISTING CONTROLS WILL BE MAINTAINED DURING INSTALLATION OF THE WATER DISTRIBUTION SYSTEM.
1.4.2. DELAYS OF GREATER THAN 14 DAYS PRIOR TO START OF NEXT ACTIVITY WILL MANDATE STABILIZATION PROCEDURES. ACCEPTABLE METHODS OF STABILIZATION INCLUDE MULCHING AND TEMPORARY SEEDING.

1.5. WASTEWATER COLLECTION SYSTEM INSTALLATION

1.5.1. ALL EXISTING CONTROLS WILL BE MAINTAINED DURING INSTALLATION OF THE WASTEWATER SYSTEM.
1.5.2. DELAYS OF GREATER THAN 14 DAYS PRIOR TO START OF NEXT ACTIVITY WILL MANDATE STABILIZATION PROCEDURES. ACCEPTABLE METHODS OF STABILIZATION INCLUDE MULCHING AND TEMPORARY SEEDING.

1.6. CONSTRUCTION OF ROADS

1.6.1. ALL EXISTING CONTROLS WILL BE MAINTAINED DURING ROAD CONSTRUCTION.
1.6.2. DELAYS OF GREATER THAN 14 DAYS PRIOR TO START OF NEXT ACTIVITY WILL MANDATE STABILIZATION PROCEDURES. ACCEPTABLE METHODS OF STABILIZATION INCLUDE MULCHING AND TEMPORARY SEEDING.

1.7. GRASSING

1.7.1. ALL EXISTING CONTROLS WILL BE MAINTAINED UNTIL GRASSING IS ESTABLISHED
1.7.2. ANY AREAS THAT ERODE OR WHERE GRASS DOES NOT ESTABLISH ITSELF SHALL BE RE-GRADED AND RE-GRASSED.

2. STORM WATER MANAGEMENT

RUNOFF FROM THIS PROJECT WILL DISCHARGE INTO A STORM WATER MANAGEMENT SYSTEM. TREATMENT WILL OCCUR IN STORM WATER DETENTION PONDS.

3. OTHER CONTROLS

3.1. WASTE DISPOSAL

3.1.1. NO SOLID MATERIALS, INCLUDING BUILDING MATERIALS, SHALL BE DISCHARGED TO ANY RECEIVING WATERS.
3.1.2. OFFSITE VEHICLE TRACKING OF SEDIMENTS AND THE GENERATION OF DUST SHALL BE MINIMIZED.
3.1.3. THIS PLAN SHALL COMPLY WITH STATE AND/OR LOCAL WASTE DISPOSAL, SANITARY SEWER OR SEPTIC SYSTEM REGULATIONS.
3.1.4. DUST CONTROL ON DISTURBED AREAS - CONTROLLING SURFACE AND AIR MOVEMENT OF DUST ON CONSTRUCTION SITE AND HAUL ROUTES. THE PURPOSE OF THE MEASURE IS TO REDUCE THE PRESENCE OF AIRBORNE SUBSTANCES, WHICH MAY BE HARMFUL OR INJURIOUS TO HUMAN HEALTH, WELFARE OR SAFETY, OR TO ANIMALS OR PLANT LIFE.

III. MAINTENANCE

1. MAINTENANCE PROGRAM

1.1. THE SITE SUPERINTENDENT, OR HIS/HER REPRESENTATIVE, SHALL MAKE VISUAL INSPECTIONS OF ALL MECHANICAL CONTROLS AND NEWLY STABILIZED AREAS (I.E. SEEDED AND MULCHED AND/OR SODDED AREAS) ON A DAILY BASIS; ESPECIALLY AFTER HEAVY RAINFALL EVENT TO INSURE THAT ALL CONTROLS ARE MAINTAINED AND PROPERLY FUNCTIONING. ANY DAMAGED CONTROLS SHALL BE REPAIRED PRIOR TO THE END OF THE WORK DAY INCLUDING RE-SEEDING AND MULCHING OR RE-SODDING IF NECESSARY.

1.2. EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE. ALL DRAINAGE SWALES, POCKETS, DEPRESSION, LOW LINES, AND OUTLET DITCHES SHALL DRAIN EFFECTIVELY AT ALL TIMES. SETTLEMENT OR WASHING THAT MAY OCCUR SHALL BE REPAIRED BY THE CONTRACTOR. SEDIMENT WILL BE REMOVED FROM BEHIND THE SEDIMENT FENCE WHEN IT REACHES 1/3 THE HEIGHT OF THE FENCE. THE SEDIMENT FENCE WILL BE REPAIRED AS NECESSARY TO MAINTAIN AN EFFECTIVE BARRIER. MAINTAIN THE CONSTRUCTION EXIT IN A CONDITION TO PREVENT MUD OR SEDIMENT FROM LEAVING THE SITE. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE. IMMEDIATELY REMOVE ALL OBJECTIONABLE MATERIALS SPILLED, WASHED, OR TACKED ONTO PUBLIC ROADWAYS. RESEED AND MULCH AREA WHERE SEEDING EMERGENCE IS POOR, OR WHERE EROSION OCCURS. PROTECT FROM TRAFFIC AS MUCH AS POSSIBLE. INSPECT ALL MULCHES PERIODICALLY, AND AFTER RAINSTORMS TO CHECK FOR EROSION, DISLOCATION OR FAILURE. IF WASHOUT OCCURS, REPAIR THE SLOPE GRADE, RESEED AND REINSTALL MULCH. FOLLOW THE CONSTRUCTION SEQUENCE THROUGHOUT THE PROJECT DEVELOPMENT. WHEN CHANGES IN CONSTRUCTION ACTIVITIES ARE NEEDED, AMEND THE SEQUENCE SCHEDULE IN ADVANCE TO MAINTAIN MANAGEMENT CONTROL. IF MAJOR CHANGES ARE NECESSARY, SEND A COPY OF THE MODIFIED SCHEDULE TO THE ENGINEER, SEDIMENT AND EROSION CONTROL MEASURES WILL REMAIN IN PLACE AND BE MAINTAINED UNTIL THE DISTURBED AREAS ARE STABILIZED.

2. SILT FENCE

SILT FENCES WILL BE MONITORED DURING CONSTRUCTION. ANY SILT FENCE WHICH IS NOT FUNCTIONING PROPERLY WILL BE PROMPTLY REPAIRED. CLEAN OUT THE SILT FENCE WHEN IT REACHES 1/3 THE HEIGHT OF THE FENCE OR REPLACE WITH FUNCTIONAL SILT FENCE WITHIN 24 HOURS. USE OF HOSES AND WATER TO FLUSH THE SEDIMENT INTO THE STORM INLETS IS UNACCEPTABLE.

3. SEDIMENTATION BASINS

SEDIMENTATION BASINS WHICH ARE AT 50% USED CAPACITY OR APPROACHING SUCH CAPACITY SHALL BE RE-EXCAVATED TO ORIGINAL DIMENSIONS AND THE SILT PROPERLY DISPOSED OF.

4. SEDIMENT LOGS/ROLLS

SEDIMENT LOGS/ROLLS OR OTHER CONTROL MEASURES WHICH BEGIN TO DISINTEGRATE OR FUNCTION INEFFECTIVELY SHALL BE PROMPTLY REPLACED.

5. VEGETATION COVER

ANY VEGETATION COVER SERVING TO STABILIZE DISTURBED SOILS WHICH IS ITSELF DISTURBED SHALL IMMEDIATELY BE REPLACED.

6. CONSTRUCTION ENTRANCE

MAINTAIN ROCK CONSTRUCTION ENTRANCE AND CLEAN ADJACENT ROADS OF ANY MUD TRACKED ONTO THEM.

IV. INSPECTIONS

1. QUALIFIED PERSONNEL WILL INSPECT DISTURBED AREAS OF THE CONSTRUCTION SITE, AREAS USED FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION THAT HAVE NOT BEEN FINALLY STABILIZED, STRUCTURAL CONTROL MEASURES, AND LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE AT LEAST ONCE EVERY SEVEN CALENDAR DAYS. WHERE SITES HAVE BEEN FINALLY STABILIZED SUCH INSPECTIONS SHALL BE CONDUCTED AT LEAST ONCE EVERY MONTH DURING THE WARRANTY PERIOD.

2. DISTURBED AREAS AND AREAS USED FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION SHALL BE INSPECTED FOR EVIDENCE OF, OR THE POTENTIAL FOR, POLLUTANTS ENTERING THE DRAINAGE SYSTEM. EROSION AND SEDIMENT CONTROL MEASURES IDENTIFIED IN THE PLAN SHALL BE OBSERVED TO ENSURE THAT THEY ARE OPERATING CORRECTLY. WHERE DISCHARGE LOCATIONS OR POINTS ARE ACCESSIBLE, THEY SHALL BE INSPECTED TO ASCERTAIN WHETHER EROSION CONTROL MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT IMPACTS TO RECEIVING WATERS. LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE SHALL BE INSPECTED FOR EVIDENCE OF OFFSITE SEDIMENT TRACKING.

3. A WRITTEN REPORT SUMMARIZING THE SCOPE OF THE INSPECTION, NAME(S) AND QUALIFICATIONS OF PERSONNEL MAKING THE INSPECTION, THE DATE(S) OF THE INSPECTION, WEATHER INFORMATION FOR THE PERIOD SINCE THE LAST INSPECTION (OR SINCE COMMENCEMENT OF CONSTRUCTION ACTIVITY) INCLUDING A BEST ESTIMATE OF THE BEGINNING OF EACH STORM EVENT, DURATION OF EACH STORM EVENT, APPROXIMATE AMOUNT OF RAINFALL FOR EACH STORM EVENT (IN INCHES) AND WHETHER ANY DISCHARGES OCCURRED, LOCATION(S) OF DISCHARGES OF SEDIMENT OR OTHER POLLUTANTS FROM THE SITE, LOCATION(S) OF BMP'S THAT NEED MAINTENANCE, LOCATION(S) OF BMP'S THAT FAILED TO OPERATE AS DESIGNED OR PROVED INADEQUATE FOR A PARTICULAR LOCATION, LOCATION(S) WHERE ADDITIONAL BMP'S ARE NEEDED THAT DID NOT EXIST AT THE TIME OF INSPECTION AND ANY CORRECTIVE ACTION REQUIRED INCLUDING ANY CHANGES TO SWPPP NECESSARY AND IMPLEMENTATION DATES.

4. THE REPORT SHALL BE MAINTAINED AT LEAST THREE YEARS FROM THE DATE THE SITE IS FINALLY STABILIZED. THE REPORT MUST BE SIGNED AND SHALL CONTAIN A CERTIFICATION THAT THE FACILITY IS IN COMPLIANCE WITH THE STORM WATER POLLUTION PREVENTION PLAN AND THE NPDES PERMIT REFERENCED ABOVE. THE CONTRACTOR SHALL MAINTAIN THIS REPORT. THE REPORT SHALL BE SUBMITTED TO THE ENGINEER AND OWNER.

V. LONG TERM MAINTENANCE OF DRAINAGE AND STORM WATER MANAGEMENT SYSTEM

THE ROADS AND DRAINAGE SYSTEM WILL BE OWNED AND MAINTAINED BY COLLETON COUNTY CAPITAL PROJECTS AFTER CONSTRUCTION IS COMPLETE.

VI. SC DHEC STANDARD NOTES

1. IF NECESSARY, SLOPES WHICH EXCEED EIGHT (8) VERTICAL FEET SHOULD BE STABILIZED WITH SYNTHETIC OR VEGETATIVE MATS, IN ADDITION TO GRASSING / HYDROSEEDING. IT MAY BE NECESSARY TO INSTALL TEMPORARY SLOPE DRAINS DURING CONSTRUCTION. TEMPORARY BERMS MAY BE NEEDED UNTIL THE SLOPE IS BROUGHT TO GRADE.

2. STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN FOURTEEN (14) DAYS AFTER WORK HAS CEASED, EXCEPT AS STATED BELOW:

2.1. WHERE STABILIZATION BY THE 14TH DAY IS PRECLUDED BY SNOW COVER OR FROZEN GROUND CONDITIONS STABILIZATION MEASURES MUST BE INITIATED AS SOON AS PRACTICABLE.
2.2. WHERE CONSTRUCTION ACTIVITY ON A PORTION OF THE SITE IS TEMPORARILY CEASED, AND EARTH-DISTURBING ACTIVITIES WILL BE RESUMED WITHIN 14 DAYS, TEMPORARY STABILIZATION MEASURES DO NOT HAVE TO BE INITIATED ON THAT PORTION OF THE SITE.

3. ALL SEDIMENT AND EROSION CONTROL DEVICES SHALL BE INSPECTED ONCE EVERY CALENDAR WEEK. IF SITE INSPECTIONS IDENTIFY BMP'S THAT ARE DAMAGED OR ARE NOT OPERATING EFFECTIVELY, MAINTENANCE MUST BE PERFORMED AS SOON AS PRACTICAL OR AS REASONABLY POSSIBLE BEFORE THE NEXT STORM EVENT WHENEVER PRACTICAL.

4. PROVIDE SILT FENCE AND/OR OTHER CONTROL DEVICES, AS MAY BE REQUIRED, TO CONTROL SOIL EROSION DURING UTILITY CONSTRUCTION. ALL DISTURBED AREAS SHALL BE CLEANED, GRADED AND STABILIZED WITH GRASSING IMMEDIATELY AFTER THE UTILITY INSTALLATION. FILL, COVER, AND TEMPORARY SEEDING AT THE END OF EACH DAY ARE RECOMMENDED. IF WATER IS ENCOUNTERED WHILE TRENCHING, THE WATER SHOULD BE FILTERED TO REMOVE ANY SEDIMENTS BEFORE BEING PUMPED INTO ANY WATERS OF THE STATE.

5. ALL EROSION CONTROL DEVICES SHALL BE PROPERLY MAINTAINED DURING ALL PHASES OF CONSTRUCTION UNTIL THE COMPLETION OF ALL CONSTRUCTION ACTIVITIES AND ALL DISTURBED AREAS HAVE BEEN STABILIZED. ADDITIONAL CONTROL DEVICES MAY BE REQUIRED DURING CONSTRUCTION IN ORDER TO CONTROL EROSION AND/OR OFFSITE SEDIMENTATION. ALL TEMPORARY CONTROL DEVICES SHALL BE REMOVED ONCE CONSTRUCTION IS COMPLETE AND THE SITE IS STABILIZED.

6. THE CONTRACTOR MUST TAKE NECESSARY ACTION TO MINIMIZE THE TRACKING OF MUD ONTO THE PAVED ROADWAY FROM CONSTRUCTION AREAS AND THE GENERATION OF DUST. THE CONTRACTOR SHALL DAILY REMOVE MUD/SOIL FROM PAVEMENT AS MAY BE REQUIRED.

7. RESIDENTIAL SUBDIVISIONS REQUIRE EROSION CONTROL FEATURES FOR INFRASTRUCTURE AS WELL AS FOR INDIVIDUAL LOT CONSTRUCTION. INDIVIDUAL PROPERTY OWNERS SHALL FOLLOW THESE PLANS DURING CONSTRUCTION OR OBTAIN APPROVAL OF AN INDIVIDUAL PLAN IN ACCORDANCE WITH S.C. REG. 72-300 AND SCR100000.

8. TEMPORARY DIVERSION BERMS AND/OR DITCHES WILL BE PROVIDED AS NEEDED DURING CONSTRUCTION TO PROTECT WORK AREAS FROM UPSLOPE RUNOFF AND/OR TO DIVERT SEDIMENT LADEN WATER TO APPROPRIATE TRAPS OR STABLE OUTLETS.

9. ALL WATERS OF THE STATE (WOS), INCLUDING WETLANDS, ARE TO BE FLAGGED OR OTHERWISE CLEARLY MARKED IN THE FIELD. A DOUBLE ROW OF SILT FENCE IS TO BE INSTALLED IN ALL AREAS WHERE A 50-FOOT BUFFER CAN NOT BE MAINTAINED BETWEEN THE DISTURBED AREA AND ALL WOS. A 10-FOOT BUFFER SHOULD BE MAINTAINED BETWEEN THE LAST ROW OF SILT FENCE AND ALL WOS

10. LITTER, CONSTRUCTION DEBRIS, OILS, FUELS, AND BUILDING PRODUCTS WITH SIGNIFICANT POTENTIAL FOR IMPACT (SUCH AS STOCKPILES OF FRESHLY TREATED LUMBER) AND CONSTRUCTION CHEMICALS THAT COULD BE EXPOSED TO STORM WATER MUST BE PREVENTED FROM BECOMING A POLLUTANT SOURCE IN STORM WATER DISCHARGES.

11. A COPY OF THE SWPPP, INSPECTION RECORDS AND RAINFALL DATA MUST BE RETAINED AT THE CONSTRUCTION SITE OR A NEARBY LOCATION EASILY ACCESSIBLE DURING NORMAL BUSINESS HOURS, FROM THE DATE OF COMMENCEMENT OF CONSTRUCTION ACTIVITIES TO THE DATE THAT FINAL STABILIZATION IS REACHED.

12. INITIATE STABILIZATION MEASURES ON ANY EXPOSED STEEP SLOPE (3H:1V OR GREATER) WHERE LAND DISTURBING ACTIVITIES HAVE PERMANENTLY OR TEMPORARILY CEASED, AND WILL NOT RESUME FOR A PERIOD OF 7 CALENDAR DAYS.

13. MINIMIZE SOIL COMPACTION IN AREAS NOT UNDER PAVEMENTS AND /OR STRUCTURES AND, UNLESS INFEASIBLE, PRESERVE TOPSOIL.

14. MINIMIZE THE DISCHARGE OF POLLUTANTS FROM EQUIPMENT AND VEHICLE WASHING, WHEEL WASH WATER AND OTHER WASH WATERS. WASH WATERS MUST BE TREATED IN A SEDIMENT BASIN OR ALTERNATIVE CONTROL THAT PROVIDES EQUAL OR BETTER TREATMENT PRIOR TO DISCHARGE.

15. MINIMIZE THE DISCHARGE OF POLLUTANTS FROM DEWATERING OF TRENCHES AND EXCAVATED AREAS. THESE DISCHARGES ARE TO BE ROUTED THROUGH APPROPRIATE BMPS (SEDIMENT BASIN, FILTER BAG, ETC.).

16. THE FOLLOWING DISCHARGES ARE PROHIBITED:

16.1. WASTEWATER FROM WASHOUT OF CONCRETE, UNLESS MANAGED BY AN APPROPRIATE CONTROL;
16.2. WASTEWATER FROM WASHOUT AND CLEANOUT OF OF STUCCO, PAINT, FORM RELEASE OILS, CURING COMPOUNDS AND OTHER CONSTRUCTION MATERIALS;
16.3. FUELS, OILS OR OTHER POLLUTANTS USED IN VEHICLE AND EQUIPMENT OPERATION AND MAINTENANCE; AND
16.4. SOAPS OR SOLVENTS USED IN VEHICLE AND EQUIPMENT WASHING.

17. AFTER CONSTRUCTION ACTIVITIES BEGIN, INSPECTIONS MUST BE CONDUCTED AT A MINIMUM OF AT LEAST ONCE EVERY CALENDAR WEEK AND MUST BE CONDUCTED UNTIL FINAL STABILIZATION IS REACHED ON ALL AREAS OF THE CONSTRUCTION SITE.

18. IF EXISTING BMPS NEED TO BE MODIFIED OR IF ADDITIONAL BMPS ARE NECESSARY TO COMPLY WITH THE REQUIREMENTS OF PERMIT SCR100000 AND/OR SC'S WATER QUALITY STANDARDS, IMPLEMENTATION MUST BE COMPLETED BEFORE THE NEXT STORM EVENT WHENEVER PRACTICABLE. IF IMPLEMENTATION BEFORE THE NEXT STORM EVENT IS IMPRACTICABLE, THE SITUATION MUST BE DOCUMENTED IN THE SWPPP AND ALTERNATIVE BMPS MUST BE IMPLEMENTED AS SOON AS REASONABLY POSSIBLE.

19. A PRE-CONSTRUCTION CONFERENCE MUST BE HELD FOR EACH CONSTRUCTION SITE WITH AN APPROVED ON-SITE SWPPP PRIOR TO THE IMPLEMENTATION OF CONSTRUCTION ACTIVITIES. FOR NON-LINEAR PROJECTS THAT DISTURB 10 ACRES OR MORE, THIS CONFERENCE MUST BE HELD ON-SITE UNLESS THE DEPARTMENT HAS APPROVED OTHERWISE.

VII. EROSION, SEDIMENTATION & POLLUTION CONTROL NOTES

1. THE IMPLEMENTATION OF THESE EROSION SEDIMENT CONTROL (ESC) PLANS AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF THESE ESC FACILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR UNTIL ALL CONSTRUCTION IS COMPLETED AND APPROVED AND VEGETATION/LANDSCAPING IS ESTABLISHED.

2. THE ESC FACILITIES SHOWN ON THIS PLAN MUST BE CONSTRUCTED IN CONJUNCTION WITH ALL CLEARING AND GRADING ACTIVITIES, AND IN SUCH A MANNER AS TO INSURE THAT SEDIMENT AND SEDIMENT LADEN WATER DO NOT ENTER THE DRAINAGE SYSTEM, ROADWAYS, OR VIOLATE APPLICABLE WATER STANDARDS.

3. THE ESC FACILITIES SHOWN ON THIS PLAN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, THESE ESC FACILITIES SHALL BE UPGRADED AS NEEDED FOR UNEXPECTED STORM EVENTS AND TO ENSURE THAT SEDIMENT AND SEDIMENT LADEN WATER DO NOT LEAVE THE SITE.

4. THE ESC FACILITIES SHALL BE INSPECTED DAILY BY THE CONTRACTOR AND MAINTAINED AS NECESSARY TO ENSURE THEIR CONTINUED FUNCTIONING.

5. THE ESC FACILITIES ON INACTIVE SITES SHALL BE INSPECTED AND MAINTAINED A MINIMUM OF ONCE A MONTH OR WITHIN THE 24 HOURS FOLLOWING A MAJOR STORM EVENT.

6. AT NO TIME SHALL MORE THAN ONE FOOT OF SEDIMENT BE ALLOWED TO ACCUMULATE WITHIN A CATCH BASIN. ALL CATCH BASINS AND CONVEYANCE LINES SHALL BE CLEANED PRIOR TO PAVING AND PRIOR TO FINAL INSPECTION. THE CLEANING OPERATION SHALL NOT FLUSH SEDIMENT LADEN WATER INTO THE DOWNSTREAM SYSTEM.

7. STABILIZED CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES MAY BE REQUIRED TO INSURE THAT ALL PAVED AREAS ARE KEPT CLEAN FOR THE DURATION OF THE PROJECT.

8. BEFORE COMMENCING ANY LAND DISTURBING ACTIVITY, THE EXISTING STORM WATER INLET(S) THAT RECEIVING RUNOFF FROM THE PROPOSED WORK AREA SHALL BE PROTECTED. THE TEMPORARY INLET PROTECTION MUST REMAIN IN PLACE UNTIL THE CONSTRUCTION ACTIVITY IS COMPLETED, THE STREET HAS BEEN SWEPT AND ANY EXPOSED SOILS ARE STABILIZED. THE CONTRACTOR IS ALSO RESPONSIBLE FOR REMOVING ANY TEMPORARY INLET PROTECTION INSTALLED; AFTER ALL DISTURBED AREAS ARE STABILIZED. TEMPORARY PROTECTION OF THE INLETS MAY BE ACCOMPLISHED BY ONE OR MORE OF THE FOLLOWING:

8.1. USE OF GRAVEL BAGS TO FILTER THE SEDIMENT FROM ANY RUNOFF. TO MAKE A GRAVEL BAG, USE A BAG MADE OF GEOTEXTILE FABRIC (NOT BURLAP) AND FILL WITH EITHER 3/4 INCH ROCK OR 1/4 INCH PEA GRAVEL.
8.2. USE OF SEDIMENT LOGS TO FILTER THE SEDIMENT FROM ANY RUNOFF (AVAILABLE THROUGH LOCAL EROSION CONTROL SUPPLIERS).
8.3. USE OF ABOVE OR UNDER-GRATE FILTER BAGS OR DEVICES TO FILTER THE SEDIMENT FROM ANY RUNOFF (AVAILABLE THROUGH EROSION CONTROL SUPPLIERS).

9. WATER MAY NOT BE DISCHARGED IN A MANNER THAT CAUSES EROSION, SEDIMENTATION, OR FLOODING ON THE SITE, ON DOWNSTREAM PROPERTIES, IN THE RECEIVING CHANNELS, OR IN ANY STORM WATER INLET. WHEN SITE DEWATERING, WATER PUMPED FROM THE SITE, INCLUDING TRENCHES, SHALL BE TREATED BY ONE OF THE FOLLOWING:

9.1. TEMPORARY SEDIMENTATION BASINS
9.2. SEDIMENT FILTERING BAGS

10. THE CONTRACTOR SHALL VERIFY THE SIZE AND LOCATION OF ALL EXISTING UTILITIES. EXISTING UTILITIES ARE ALL UTILITIES THAT EXIST ON THE PROJECT IN AN ORIGINAL, RELOCATED OR NEWLY INSTALLED POSITION. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR THE COST OF REPAIRS TO DAMAGED UNDERGROUND OR OVERHEAD FACILITIES, EVEN IF THE UTILITY IS NOT SHOWN ON THE SITE DEVELOPMENT PLANS. THE CONTRACTOR SHALL CONTACT THE LOCAL UTILITIES PROTECTION CENTER TO COORDINATE THE MARKING OF EXISTING UTILITY LINES A MINIMUM OF 96 HOURS PRIOR TO COMMENCEMENT OF ANY WORK.

11. THE CONTRACTOR SHALL FLUSH ALL INLETS AND PIPE AT THE COMPLETION OF CONSTRUCTION TO REMOVE SILT AND DEBRIS. THE CLEANING AND FLUSHING OF INLETS AND PIPE (EXISTING AND PROPOSED) SHALL BE CONSIDERED PART OF THE COST FOR THE PROJECT.

12. EGRESS FROM THE SITE SHALL BE CONTROLLED SUCH THAT VEHICLES LEAVING THE SITE MUST TRAVERSE CONSTRUCTION EXITS TO REMOVE MUD FROM TIRES.

13. SCHEDULE CONSTRUCTION ACTIVITIES TO MINIMIZE THE EXPOSED AREA AND DURATION OF EXPOSURE. IN SCHEDULING, TAKE INTO ACCOUNT THE SEASON AND THE WEATHER FORECAST.

14. EROSION CONTROL MEASURES ARE THE MINIMUM REQUIRED. THE CONTRACTOR SHALL PROVIDE ADDITIONAL CONTROL MEASURES AS DICTATED BY ACTUAL FIELD CONDITIONS AT THE TIME OF CONSTRUCTION IN ORDER TO PREVENT EROSION AND CONTROL SEDIMENT. EROSION AND SEDIMENT CONTROL MEASURES WILL REMAIN IN PLACE AND BE MAINTAINED UNTIL THE ENTIRE PROJECT IS TERMINATED OR SUSPENDED FOR AND INDEFINITE LENGTH OF TIME, ALL DISTURBED AREAS SHALL BE PLANTED WITH PERMANENT VEGETATION.

15. THE DATA, TOGETHER WITH ALL OTHER INFORMATION SHOWN ON THESE PLANS, OR IN ANY WAY INDICATED THEREBY, WHETHER BY DRAWINGS OR NOTES, OR IN ANY OTHER MANNER, IS BASED UPON FIELD INVESTIGATIONS AND IS BELIEVED TO BE INDICATIVE OF ACTUAL CONDITIONS. HOWEVER, THE SAME IS SHOWN AS INFORMATION ONLY, IS NOT GUARANTEED AND DOES NOT BIND THOMAS & HUTTON, OR THE OWNER IN ANY WAY.

16. CONTRACTOR SHALL MAINTAIN SITE ON A DAILY BASIS TO PROVIDE FOR POSITIVE DRAINAGE. CONTRACTOR, AT HIS COST, SHALL GRADE SITE AND PROVIDE NECESSARY TEMPORARY DRAINAGE SWALES TO INSURE STORM WATER DOES NOT POND ON SITE.

17. SITE DRAINAGE SHALL BE ESTABLISHED TO PREVENT ANY PONDED WATER CONDITIONS WITHIN THE CONSTRUCTION AREA AND TO FACILITATE STORM WATER DISCHARGE.

18. THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO, OR CONCURRENT WITH, LAND DISTURBING ACTIVITIES.

19. LIME RATES AND ANALYSIS:
19.1. AGRICULTURAL LIME SHALL BE APPLIED AT THE RATE SHOWN IN THE SEEDING SECTION UNLESS SOIL TESTS INDICATE OTHERWISE. GRADED AREAS REQUIRE LIME APPLICATION. IF LIME IS APPLIED WITHIN SIX MONTHS OF PLANTING PERMANENT PERENNIAL VEGETATION, ADDITIONAL LIME IS NOT REQUIRED. AGRICULTURAL LIME APPLICATION SHALL BE WITHIN THE SPECIFICATIONS OF THE SOUTH CAROLINA DEPARTMENT OF AGRICULTURE.

20. MULCHING:

MULCHING IS REQUIRED FOR ALL PERMANENT VEGETATION APPLICATIONS. MULCH APPLIED TO SEEDED AREAS SHALL ACHIEVE 75% SOIL COVER. SELECT THE MULCHING MATERIAL FROM THE FOLLOWING AND APPLY AS INDICATED:

20.1. DRY STRAW OR DRY HAY OF GOOD QUALITY AND FREE OF WEED SEEDS CAN BE USED. DRY STRAW SHALL BE APPLIED AT THE RATE OF TWO TONS PER ACRE. DRY HAY SHALL BE APPLIED AT THE RATE OF 2 1/2 TONS PER ACRE.
20.2. WOOD CELLULOSE MULCH OR WOOD PULP FIBER SHALL BE USED WITH HYDRAULIC SEEDING. IT SHALL BE APPLIED AT A RATE OF 500 POUNDS PER ACRE. DRY STRAW OR DRY HAY SHALL BE APPLIED (AT THE RATE INDICATED ABOVE) AFTER HYDRAULIC SEEDING.
20.3. ONE THOUSAND POUNDS OF WOOD CELLULOSE OR WOOD PULP FIBER, WHICH INCLUDES A TACKIFIER, SHALL BE USED WITH HYDRAULIC SEEDING ON SLOPES 3/4:1 OR STEEPER.
20.4. SERICEA LESPEDEZA HAY CONTAINING MATURE SEED SHALL BE APPLIED AT A RATE OF 3 TONS PER ACRE.
20.5. PINE STRAW OR PINE BARK SHALL BE APPLIED AT A THICKNESS OF 3 INCHES FOR BEDDING PURPOSES. OTHER SUITABLE MATERIALS IN SUFFICIENT QUANTITY MAY BE USED WHERE ORNAMENTALS OR OTHER GROUND COVERS ARE PLANTED. THIS IS NOT APPROPRIATE FOR SEEDED AREAS.
20.6. WHEN USING TEMPORARY EROSION CONTROL BLANKETS OR BLACK SOD, MULCH IS NOT REQUIRED.
20.7. ON SLOPES GREATER THAN 10 FEET IN LENGTH AND 4:1 OR STEEPER, USE THE FOLLOWING EROSION CONTROL BLANKETS THAT HAVE BEEN PROPERLY ANCHORED TO THE SLOPE ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS:

- 2:1 SLOPES OR STEEPER: - STRAW/COCONUT BLANKET OR HIGH VELOCITY WOOD BLANKET
- 3:1 SLOPES OR STEEPER: - WOOD OR STRAW BLANKET WITH NET ON BOTH SIDES
- 4:1 SLOPES OR FLATTER: - WOOD OR STRAW MULCH BLANKET WITH NET ON ONE SIDE

VIII. HOUSEKEEPING

THESE PERFORMANCE STANDARDS APPLY TO ALL SITES.

1. PETROLEUM PRODUCTS: INCLUDING OIL, GASOLINE, LUBRICANTS AND ASPHALTIC SUBSTANCES.

1.1. HAVE EQUIPMENT TO CONTAIN AND CLEAN UP PETROLEUM SPILLS IN FUEL STORAGE AREAS OR ON MAINTENANCE AND FUELING VEHICLES
1.2. STORE IN COVERED AREAS PROTECTED WITH DIKES

2. SPILLS: PREVENTION AND RESPONSE.

2.1. STORE AND HANDLE MATERIALS TO PREVENT SPILLS
2.2. TIGHTLY SEALED CONTAINERS, NEAT AND SECURE STACKING, ETC.
2.3. REDUCE STORM WATER CONTACT IF SPILL OCCURS
2.3.1. CLEANUP PROCEDURES SHOULD BE CLEARLY POSTED.
2.3.2. CLEANUP MATERIALS SHOULD BE READILY AVAILABLE
2.3.3. STOP THE SOURCE
2.3.4. CONTAIN THE SPILL

3. NON-STORM WATER DISCHARGES

THE FOLLOWING NON-STORMWATER DISCHARGES MUST BE PROTECTED FROM CAUSING POLLUTION OR EROSION:

3.1. DISCHARGES FROM FIRE-FIGHTING ACTIVITIES
3.2. FIRE HYDRANT FLUSHINGS
3.3. WATERS USED TO WASH VEHICLES WHERE DETERGENTS ARE NOT USED
3.4. WATER USED TO CONTROL DUST
3.5. POTABLE WATER INCLUDING UNCONTAMINATED WATER LINE FLUSHINGS
3.6. ROUTINE EXTERNAL BUILDING WASH DOWN THAT DOES NOT USE DETERGENTS
3.7. PAVEMENT WASH WATERS WHERE SPILLS OR LEAKS OF TOXIC OR HAZARDOUS MATERIALS HAVE NOT OCCURRED (UNLESS ALL SPILLED MATERIAL HAS BEEN REMOVED) AND WHERE DETERGENTS ARE NOT USED
3.8. UNCONTAMINATED AIR CONDITIONING OR COMPRESSOR CONDENSATE
3.9. UNCONTAMINATED GROUND WATER OR SPRING WATER
3.10. FOUNDATION OR FOOTING DRAINS WHERE FLOWS ARE NOT CONTAMINATED WITH PROCESS MATERIALS SUCH AS SOLVENTS
3.11. UNCONTAMINATED EXCAVATION DEWATERING
3.12. LANDSCAPE IRRIGATION
3.13. DECHLORINATED SWIMMING POOL DISCHARGES.

4. CONSTRUCTION WASTES: DEMOLITION RUBBLE, PACKAGING MATERIALS, SCRAP BUILDING SUPPLIES, ETC.

4.1. SELECT A DESIGNATED WASTE COLLECTION AREA
4.2. PROVIDE LIDS FOR WASTE CONTAINERS
4.3. WHEN POSSIBLE LOCATE CONTAINERS IN COVERED AREA
4.4. MAINTAIN CONSISTENT REMOVAL SCHEDULE FOR WASTE

5. PESTICIDES: REDUCE THE AMOUNT OF PESTICIDES AVAILABLE FOR CONTACT WITH STORM WATER.

5.1. STORE IN A DRY COVERED AREA
5.2. INSTALL CURBS OR DIKES AROUND STORAGE AREA TO PROTECT AGAINST SPILLS
5.3. STRICTLY FOLLOW RECOMMENDED APPLICATION RATES

6. FERTILIZERS AND DETERGENTS: REDUCE THE AMOUNT OF FERTILIZERS AND DETERGENTS AVAILABLE FOR CONTACT WITH STORM WATER.

6.1. LIMIT APPLICATION OF FERTILIZERS TO THE MINIMUM NEEDED
6.2. APPLY MORE FREQUENTLY BUT AT LOWER APPLICATION RATES
6.3. LIMIT USE OF DETERGENTS ON-SITE
6.4. DO NOT DISCHARGE WASH WATER INTO STORM WATER SYSTEM
6.5. MAINTAIN STRUCTURAL AND VEGETATIVE BMP'S
6.6. APPLY ACCORDING TO SOIL TEST RECOMMENDATIONS PRIOR TO SEEDING.

IX. GRASSING NOTES

1. SOD:

ALL SOD SHALL BE NURSERY GROWN AS CLASSIFIED IN THE ASPS GSS. MACHINE CUT SOD AT A UNIFORM THICKENS OF 3/4" WITHIN A TOLERANCE OF 1/4", EXCLUDING TOP GROWTH AND THATCH. EACH INDIVIDUAL SOD PIECE SHALL BE STRONG ENOUGH TO SUPPORT ITS OWN WEIGHT WHEN LIFTED BY THE ENDS. BROKEN PODS, IRREGULARLY SHAPED PIECES, AND TORN OR UNEVEN ENDS WILL BE REJECTED. WOOD PEGS AND / OR WIRE STAPLES SHALL REPLACE SOD WITH AN EQUAL SOD COMPOSITION AS THAT WHICH IS EXISTING. IF NO SOD TYPE EXIST. THEN THE FOLLOWING SOD COMPOSITION SHALL BE USED.

2. SODDING SCHEDULE:

LAY SOD FROM MAY 1 TO SEPTEMBER 15 FOR SPRING PLANTING AND FROM SEPTEMBER 15 TO NOVEMBER 1 FOR FALL PLANTING.

3. SEED:

ALL SEED SHALL CONFORM TO ALL STATE LAWS AND TO ALL REQUIREMENTS AND REGULATIONS OF THE SOUTH CAROLINA DEPARTMENT OF AGRICULTURE. THE SEVERAL VARIETIES OF SEED SHALL BE INDIVIDUALLY PACKAGED OR BAGGED, AND TAGGED TO SHOW NAME OF SEED, NET WEIGHT, ORIGIN, GERMINATION, LOT NUMBER, AND OTHER INFORMATION REQUIRED BY THE DEPARTMENT OF AGRICULTURE.

3.1. PENNISETUM GLAUCIUM (BROWNTOP MILLET): TESTING 98 PERCENT PURITY AND 85 PERCENT GERMINATION.
3.2. BERMUDA COMMON: TESTING 98 PERCENT PURITY AND 85 PERCENT GERMINATION.
3.3. DOMESTIC ITALIAN RYE: TESTING 98 PERCENT PURITY AND 90 PERCENT GERMINATION.

4. MISCELLANEOUS:

4.1. PERMANENT SEEDING SHALL COVER ALL DISTURBED AREA NOT TO BE COVERED BY LANDSCAPE PLANTING BEDS, STRUCTURE, OR PAVEMENT.
4.2. SEED ALL DISTURBED AREAS WITHIN SEVEN DAYS OF FINAL GRADING AND TEMPORARY SEED/MULCH ALL AREAS THAT WILL BE LEFT INACTIVE FOR MORE THAN FOURTEEN (14) DAYS.
4.3. ALL PERMANENT GRASS PLANTINGS SHALL BE MULCHED
4.4. CENTIPEDE SOD CAN BE USED AS PERMANENT COVER ANYTIME EXCEPT JUNE THRU OCTOBER
4.5. IF GRASSING OCCURS DURING A MONTH REQUIRING TEMPORARY COVER, THE CONTRACTOR SHALL APPLY PERMANENT COVER (IN ADDITION TO THE TEMPORARY COVER) AT THE APPROPRIATE TIME AT NO NO ADDITIONAL COST. THE CONTRACTOR MUST ACHIEVE A STRAND OF PERMANENT GRASS WITH AT LEAST 95% COVER. BARE SPOTS CAN NOT BE MORE THAN 1 INCH SQUARE IN ANY 10 SF.

X. PERMANENT STABILIZATION

NEWLY SEEDED OR SODDED AREAS MUST BE PROTECTED FROM VEHICLE TRAFFIC,EXCESSIVE PEDESTRIAN TRAFFIC, AND CONCENTRATED RUNOFF UNTIL THE VEGETATION IS WELL ESTABLISHED. IF NECESSARY, AREAS MUST BE RE-WORKED AND RE-STABILIZED IF GERMINATION IS SPARSE, PLANT COVERAGE IS SPOTTY ,OR TOPSOIL EROSION IS EVIDENT. ONE OR MORE OF THE FOLLOWING MAY APPLY TO THE SITE.

4.1. SEEDED AREAS

FOR SEEDED AREAS, PERMANENT STABILIZATION MEANS A 90% COVER OF THE DISTURBED AREA WITH MATURE, HEALTHY PLANTS WITH NO EVIDENCE OF WASHING OR RILLING OF THE TOPSOIL.

4.2. SODDED AREAS

FOR SODDED AREAS, PERMANENT STABILIZATION MEANS THE COMPLETE BINDING OF THE SOD ROOTS INTO THE APPROVED MULCH MATERIAL.

4.3. PERMANENT MULCH

FOR MULCHED AREAS, PERMANENT MULCHING MEANS TOTAL COVERAGE OF THE EXPOSED AREA WITH AN APPROVED MULCH MATERIAL.

4.4. RIPRAP

FOR AREAS STABILIZED WITH RIPRAP, PERMANENT STABILIZATION MEANS THAT SLOPES STABILIZED WITH RIPRAP HAVE AN APPROPRIATE BACKING OF AN APPROVED GEOTEXTILE TO PREVENT SOIL MOVEMENT FROM BEHIND THE RIPRAP.

4.5. DITCHES, CHANNELS, AND SWALES

FOR OPEN CHANNELS, PERMANENT STABILIZATION MEANS THE CHANNEL IS STABILIZED WITH MATURE VEGETATION AT LEAST THREE INCHES IN HEIGHT, WITH WELL-GRADED RIPRAP LINING, OR WITH ANOTHER NON-EROSIVE LINING CAPABLE OF WITHSTANDING THE ANTICIPATED FLOW VELOCITIES AND FLOW DEPTHS WITHOUT RELIANCE ON CHECK DAMS TO SLOW FLOW. THERE MUST BE NO EVIDENCE OF SLUMPING OF THE LINING, UNDERCUTTING OF THE BANKS, OR DOWN CUTTING OF THE CHANNEL.

XI. FERTILIZER REQUIREMENTS

1. TEMPORARY SEEDING FERTILIZER

APPLY A MINIMUM OF 500 LBS PER ACRE OF A COMPLETE 10-10-10 FERTILIZER (11.5 POUNDS PER 1000 SQUARE FEET) OR EQUIVALENT DURING TEMPORARY SEEDING OF GRASSES UNLESS A SOIL TEST INDICATES A DIFFERENT REQUIREMENT. INCORPORATE FERTILIZER AND LIME (IF USED) INTO THE TOP 4-6 INCHES OF THE SOIL BY DISKING OR OTHER MEANS WHERE CONDITIONS ALLOW. LIME IS NOT REQUIRED FOR TEMPORARY SEEDING UNLESS A SOIL TEST SHOWS THAT THE SOIL PH IS BELOW 5.0. IT IS DESIRABLE TO APPLY LIME DURING THE TEMPORARY SEEDING OPERATION TO BENEFIT THE LONG-TERM PERMANENT SEEDING. APPLY A MINIMUM OF 1.5 TONS OF LIME / ACRE (70LBS. / 1000 SQ. FT.).

2. PERMANENT SEEDING FERTILIZER

APPLY A MINIMUM OF 1000 LBS PER ACRE OF A COMPLETE 10-10-10 FERTILIZER (23 POUNDS PER 1000 SQUARE FEET) OR EQUIVALENT DURING PERMANENT SEEDING OF GRADES UNLESS A SOIL TEST INDICATES A DIFFERENT REQUIREMENT. INCORPORATE FERTILIZER AND LIME (IF USED) INTO THE TOP 4-6 INCHES OF THE SOIL BY DISKING OR OTHER MEANS WHERE CONDITIONS ALLOW. DO NOT MIX THE LIME AND THE FERTILIZER PRIOR TO THE FIELD APPLICATION. UNLESS A SPECIFIC SOIL TEST INDICATES OTHERWISE, APPLY 1 & 1/2 TONS OF GROUND COARSE TEXTURED AGRICULTURAL LIMESTONE PER ACRE (70 LBS. / 1000 SQ.FT.).

XII. SWPP PREPARER CERTIFICATION

I HAVE PLACED MY SIGNATURE AND SEAL ON THE DESIGN DOCUMENTS SUBMITTED SIGNIFYING THAT I ACCEPT RESPONSIBILITY FOR THE DESIGN OF THE SYSTEM. FURTHER, I CERTIFY TO THE BEST OF MY KNOWLEDGE AND BELIEF THAT THE DESIGN IS CONSISTENT WITH THE REQUIREMENTS OF TITLE 48, CHAPTER 14 OF THE CODE OF LAWS OF SC, 1976 AS AMENDED, PURSUANT TO REGULATION 72-300 ET SEQ. (IF APPLICABLE), AND IN ACCORDANCE WITH THE TERMS AND CONDITIONS OF SCR100000.

SOUTH CAROLINA
THOMAS & HUTTON ENGINEERING CO.
No. C00285
CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA
LICENSED PROFESSIONAL ENGINEER
No. 26573
MARCUS B. SANDERSON
10/20/20

NO.	REVISIONS	BY	DATE

THOMAS & HUTTON
1501 Main Street • Suite 760
Columbia, SC 29201 • 803.451.6789
www.thomasandhutton.com

COLLETON COUNTY CAPITAL PROJECTS
COLLETON COUNTY, SC
FLOYD BUCKNER BUILDING DEMOLITION & REMEDIATION IMPROVEMENTS
EROSION CONTROL NOTES

JOB NO:	J-28711.0000
DATE:	10/19/2020
DRAWN:	HRC
DESIGNED:	HRC
REVIEWED:	MBS
APPROVED:	MBS
SCALE:	N/A

EC0.1

STORMWATER POLLUTION PREVENTION PLAN

TEMPORARY SEEDING - COASTAL

SPECIES	LBS/AC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
SANDY, DROUGHTY SITES													
BROWNTOP MILLET	40			X	X	X	X	X	X				
RYE, GRAIN	56	X	X	X						X	X	X	X
RYEGRASS	50	X	X	X	X					X	X	X	X
WELL DRAINED, CLAYEY/LOAMEY SITES													
BROWNTOP MILLET JAPANESE MILLET	40 40			X	X	X	X	X	X				
RYE, GRAIN OATS	56 75	X	X	X						X	X	X	X
RYEGRASS	50	X	X	X	X					X	X	X	X

PERMANENT SEEDING - COASTAL

SPECIES	LBS/AC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
SANDY, DROUGHTY SITES													
BROWNTOP MILLET BAHIAGRASS	10 40			X	X	X	X	X	X				
BROWNTOP MILLET BAHIAGRASS SERICEA LESPEDEZA	10 30 40			X	X	X	X	X	X				
BROWNTOP MILLET ATLANTIC COASTAL PANICGRASS	10 15 PLS			X	X	X	X						
BROWNTOP MILLET SWITCHGRASS (ALAMO) LITTLE BLUESTEM SERICEA LESPEDEZA	10 8 PLS 4 20			X	X	X	X						
BROWNTOP MILLET WEEPING LOVEGRASS	10 8			X	X	X	X						
WELL DRAINED, CLAYEY/LOAMEY SITES													
BROWNTOP MILLET BAHIAGRASS	10 40			X	X	X	X	X	X				
RYE, GRAIN BAHIAGRASS CLOVER, CRIMSON (ANNUAL)	10 40 5									X	X	X	
BROWNTOP MILLET BAHIAGRASS SERICEA LESPEDEZA	10 30 40			X	X	X	X	X	X				
BROWNTOP MILLET BERMUDA, COMMON SERICEA LESPEDEZA	10 10 40			X	X	X	X	X	X				
BROWNTOP MILLET BERMUDA, COMMON KOBE LESPEDEZA (ANNUAL)	10 12 10			X	X	X	X	X	X				
BROWNTOP MILLET BAHIAGRASS BERMUDA, COMMON SERICEA LESPEDEZA	10 20 6 40			X	X	X	X	X	X				
BROWNTOP MILLET SWITCHGRASS LITTLE BLUESTEM INDIANGRASS	10 8 PLS 3			X	X	X	X	X	X				

EROSION CONTROL LEGEND

DESCRIPTION	PLAN SYMBOL
SILT FENCE	
TEMPORARY DIVERSION	TD
TREE PROTECTION	
TEMPORARY SEEDING	TS
PERMANENT SEEDING	PS
EROSION CONTROL BLANKET OR TURF REINFORCEMENT MAT	
FLEXIBLE GROWTH MATRIX	FGM
RIPRAP	
OUTLET PROTECTION - RIP RAP	
DUST CONTROL	DC
ROCK CHECK DAM	OR
STABILIZED CONSTRUCTION ENTRANCE	
CONCRETE WASHOUT	
STORM DRAIN INLET PROTECTION - TYPE A FILTER FABRIC	I
STORM DRAIN INLET PROTECTION - TYPE E SURFACE COURSE CURB INLET FILTER	E

CONSTRUCTION SEQUENCE

CONSTRUCTION ACTIVITY	SCHEDULE CONSIDERATION
1 OBTAIN COPIES OF ALL PLAN APPROVALS AND OTHER APPLICABLE PERMITS. CONDUCT PRE CONSTRUCTION MEETING.	CONTRACTOR TO CONDUCT AN ON-SITE MEETING WITH ALL PARTIES. CONTRACTOR TO HAVE PLANS AND APPROVALS ONSITE AT ALL TIMES DURING CONSTRUCTION.
2 FLAG THE WORK LIMITS AND BARRICADE TREES AND MARK BUFFER AREAS FOR PROTECTION.	HAVE LOCAL REGULATORY AGENCY INSPECT TREE BARRICADES.
3 INSTALLATION OF SEDIMENT AND EROSION CONTROL PERIMETER CONTROLS.	APPLY TEMPORARY OR PERMANENT STABILIZATION MEASURES IMMEDIATELY ON ALL DISTURBED AREAS WHERE WORK IS DELAYED OR COMPLETE.
4 BUILDING DEMOLITION AND REMAINING SITE CLEARING AND GRUBBING.	INSTALL NECESSARY EROSION AND SEDIMENTATION CONTROL PRACTICES AS WORK TAKES PLACE.
5 SITE GRADING.	BEGIN MAJOR GRADING AFTER PRINCIPAL SEDIMENT AND KEY RUNOFF-CONTROL MEASURES ARE INSTALLED. INSTALL ADDITIONAL CONTROL MEASURES AS GRADING PROGRESSES.
6 FINE GRADING AND PERMANENT GRASSING FOR SURFACE STABILIZATION OF THE SITE.	LAST CONSTRUCTION PHASE--STABILIZE ALL OPEN AREAS, INCLUDING BORROW AND SPOIL AREAS. REMOVE AND STABILIZE ALL TEMPORARY CONTROL MEASURES.
7 CONTINUE MAINTENANCE OF SEDIMENT AND EROSION CONTROL MEASURES UNTIL THE SITE IS PERMANENTLY STABILIZED AND THE CONTROLS ARE REMOVED.	REMOVE SEDIMENT AND EROSION CONTROL BMPS ON A CASE BY CASE BASIS AND ONLY AFTER ALL UPSTREAM CONTRIBUTING AREA IS STABILIZED.
8 REMOVAL OF ALL PERIMETER CONTROLS.	

LIST OF ACRONYMS FOR SEDIMENT AND EROSION CONTROL

AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS
AMD	ACRYLAMIDE POLYMER
BFM	BONDED FIBER MATRIX
BMP(S)	BEST MANAGEMENT PRACTICE(S)
CFS	CUBIC FEET PER SECOND
CMP	CORRUGATED METAL PIPE
DHEC	DEPARTMENT OF HEATH AND ENVIRONMENTAL CONTROL
ECB	EROSION CONTROL BLANKET
EPA	UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
EPSC	EROSION PREVENTION AND SEDIMENTATION CONTROL
FDA	UNITED STATES FOOD AND DRUG ADMINISTRATION
FGM	FLEXIBLE GROWTH MATRIX
HDPE	HIGH DENSITY POLYETHYLENE
MS4	MUNICIPAL SEPARATE STORM SEWER SYSTEM
MSDS	MATERIAL SAFETY DATA SHEETS
NPDES	NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
PAM	POLYACRYLAMIDE OR POLYMER
RCP	REINFORCED CONCRETE PIPE
SCS	SOIL CONSERVATION SERVICE
SWPPP	STORMWATER POLLUTION PREVENTION PROGRAM
TRM	TURF REINFORCEMENT MAT
VFS	VEGETATED FILTER STRIP

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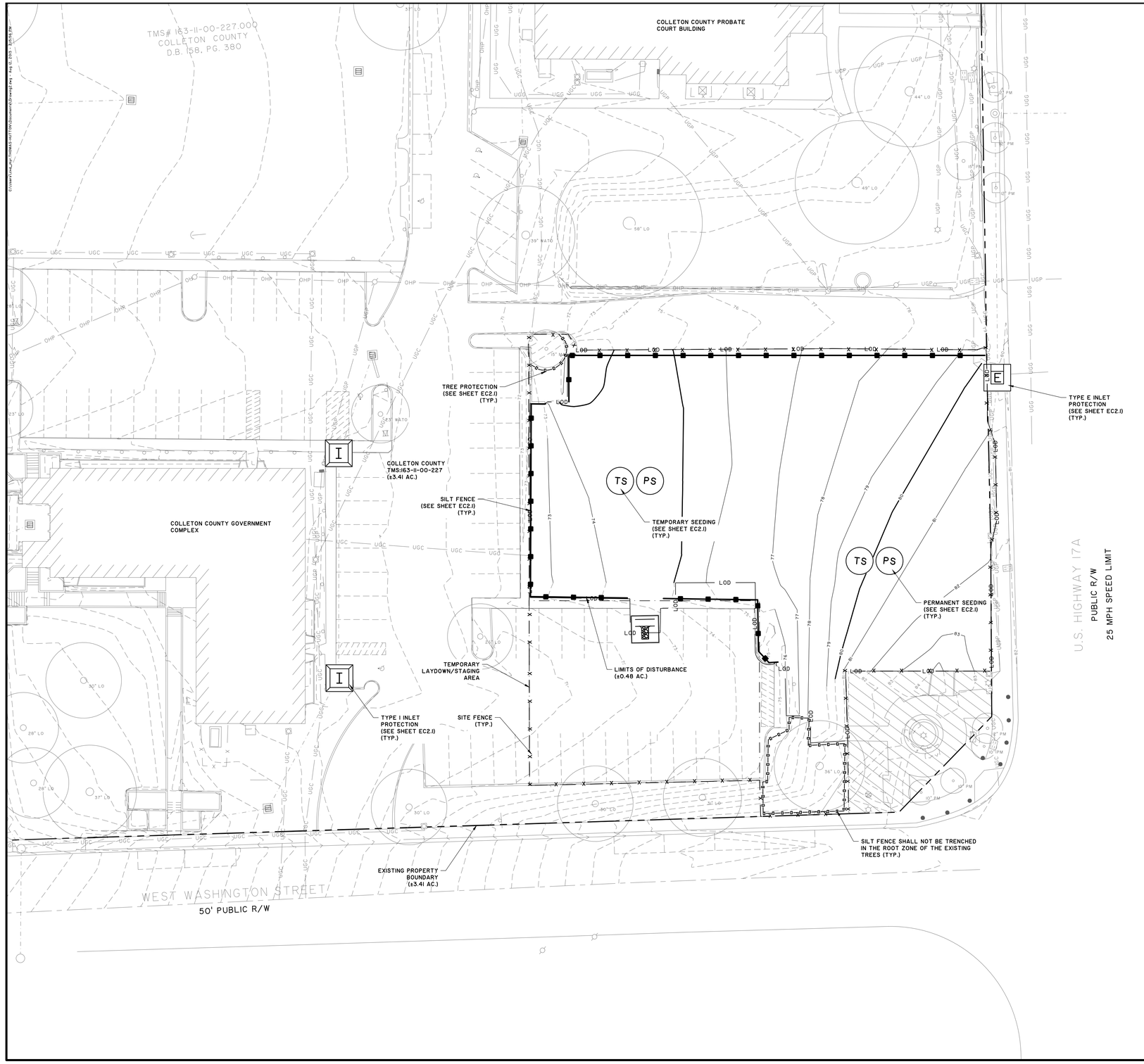
COLLETON COUNTY CAPITAL PROJECTS
COLLETON COUNTY, SC

FLOYD BUCKNER BUILDING DEMOLITION & REMEDIATION IMPROVEMENTS

EROSION CONTROL CHARTS

JOB NO:	J-28711.0000
DATE:	10/19/2020
DRAWN:	HRC
DESIGNED:	HRC
REVIEWED:	MBS
APPROVED:	MBS
SCALE:	N/A

EC0.2



SOUTH CAROLINA — THOMAS & HUTTON ENGINEERING — No. C00285 — CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA — LICENSED PROFESSIONAL ENGINEER — No. 28573 — MARCUS B. SIMPSON

NO.	REVISIONS	BY	DATE

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1501 Main Street • Suite 760
Columbia, SC 29201 • 803.451.6789
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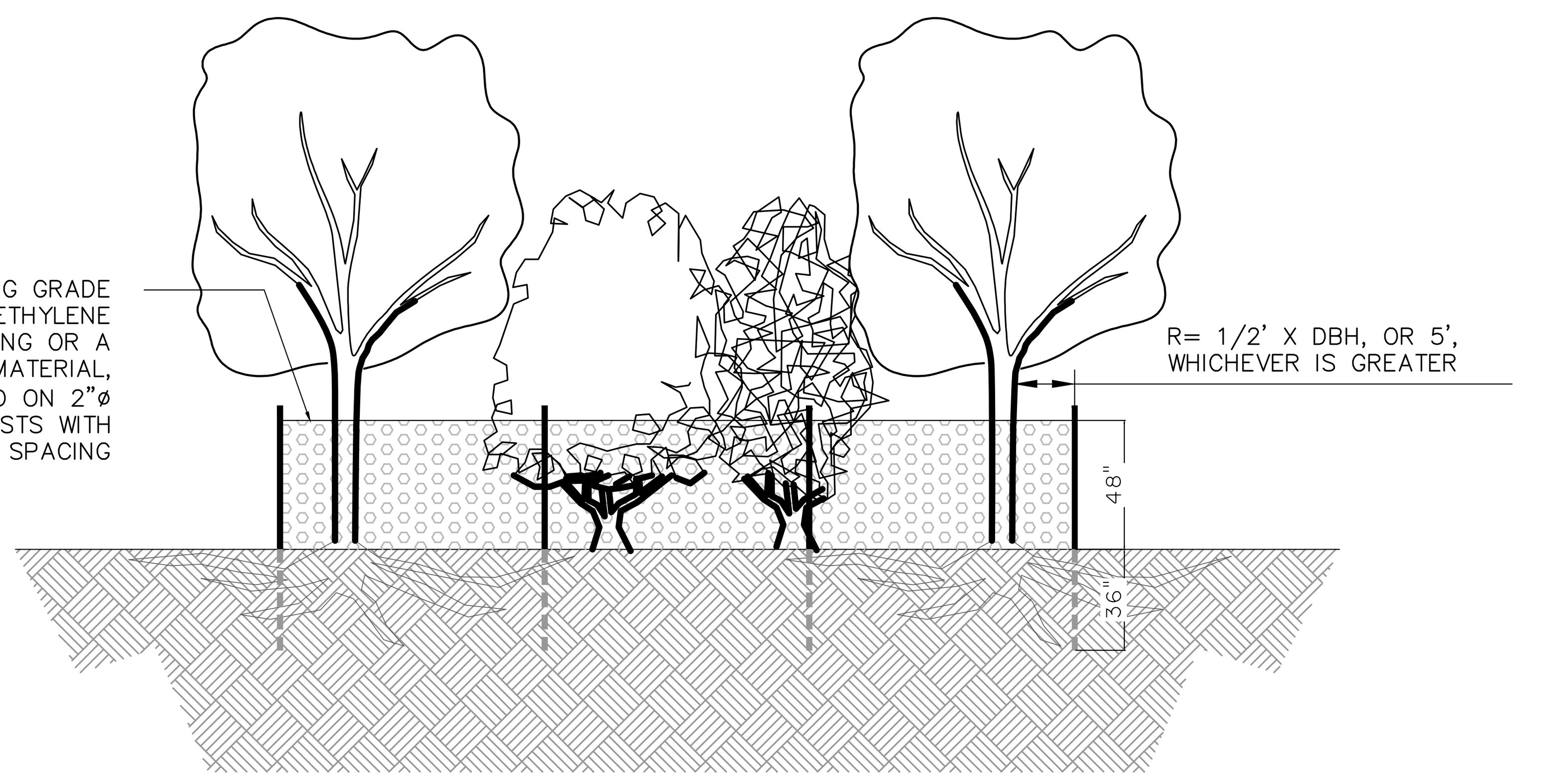
COLLETON COUNTY CAPITAL PROJECTS
COLLETON COUNTY, SC

FLOYD BUCKNER BUILDING DEMOLITION & REMEDIATION IMPROVEMENTS

EROSION CONTROL PLAN

JOB NO:	J-28711.0000
DATE:	10/19/2020
DRAWN:	HRC
DESIGNED:	HRC
REVIEWED:	MBS
APPROVED:	MBS
SCALE:	1" = 20'

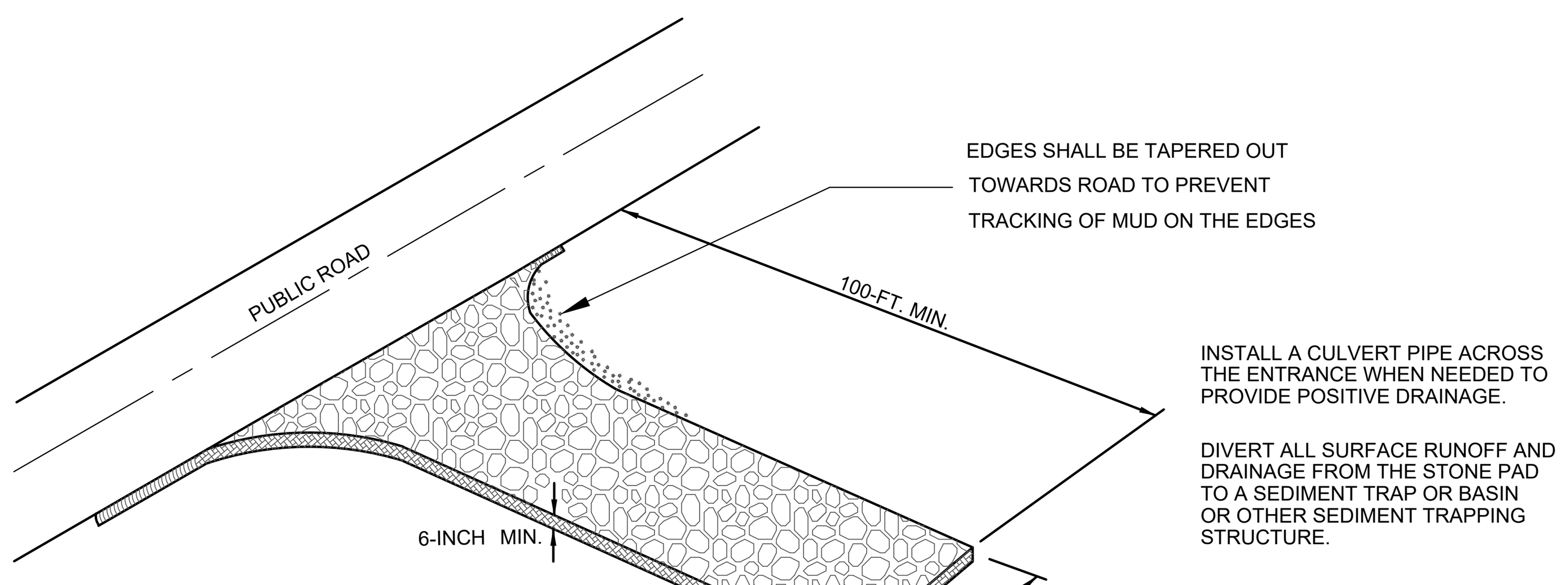
EC1.1



E7
OCT. 2008
THOMAS & HUTTON ENGINEERING CO.

TREE PROTECTION DETAIL

NOT TO SCALE



WHEN AND WHERE TO USE IT:
STABILIZED CONSTRUCTION ENTRANCES SHOULD BE USED AT ALL POINTS WHERE TRAFFIC WILL BE LEAVING A CONSTRUCTION SITE AND MOVING DIRECTLY ONTO A PUBLIC ROAD.

IMPORTANT CONSIDERATIONS:
IF WASHING IS USED, PROVISIONS MUST BE MADE TO INTERCEPT THE WASH WATER AND TRAP THE SEDIMENT BEFORE IT IS CARRIED OFFSITE. WASHDOWN FACILITIES SHALL BE REQUIRED AS DIRECTED BY SCDHEC AS NEEDED. WASHDOWN AREAS IN GENERAL MUST BE ESTABLISHED WITH CRUSHED GRAVEL AND DRAIN INTO A SEDIMENT TRAP OR SEDIMENT BASIN.

CONSTRUCTION ENTRANCES SHOULD BE USED IN CONJUNCTION WITH THE STABILIZATION OF CONSTRUCTION ROADS TO REDUCE THE AMOUNT OF MUD PICKED UP BY VEHICLES.

INSTALLATION:
REMOVE ALL VEGETATION AND ANY OBJECTIONABLE MATERIAL FROM THE FOUNDATION AREA.

DIVERT ALL SURFACE RUNOFF AND DRAINAGE FROM STONES TO A SEDIMENT TRAP OR BASIN.

INSTALL A NON-WOVEN GEOTEXTILE FABRIC PRIOR TO PLACING ANY STONE.

INSTALL A CULVERT PIPE ACROSS THE ENTRANCE WHEN NEEDED TO PROVIDE POSITIVE DRAINAGE.

THE ENTRANCE SHALL CONSIST OF 1-INCH TO 3-INCH D50 STONE PLACED AT A MINIMUM DEPTH OF 6-INCHES.

MINIMUM DIMENSIONS OF THE ENTRANCE SHALL BE 24-FEET WIDE BY 100-FEET LONG, AND MAY BE MODIFIED AS NECESSARY TO ACCOMMODATE SITE CONSTRAINTS.

THE EDGES OF THE ENTRANCE SHALL BE TAPERED OUT TOWARDS THE ROAD TO PREVENT TRACKING OF MUD AT THE EDGE OF THE ENTRANCE.

INSPECTION AND MAINTENANCE:
CHECK FOR MUD AND SEDIMENT BUILDUP AND PAD INTEGRITY. MAKE DAILY INSPECTIONS DURING PERIODS OF WET WEATHER. MAINTENANCE IS REQUIRED MORE FREQUENTLY IN WET WEATHER CONDITIONS. RESHAPE THE STONE PAD AS NEEDED FOR DRAINAGE AND RUNOFF CONTROL.

WASH OR REPLACE STONES AS NEEDED. THE STONE IN THE ENTRANCE SHOULD BE WASHED OR REPLACED WHENEVER THE ENTRANCE FAILS TO REDUCE MUD BEING CARRIED OFF-SITE BY VEHICLES.

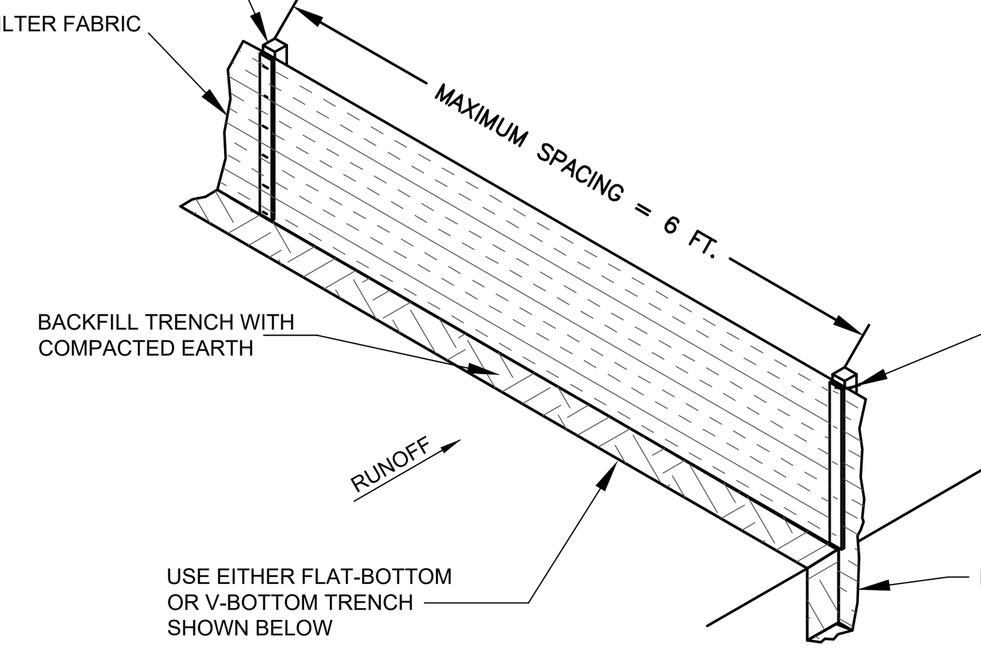
FREQUENT WASHING WILL EXTEND THE USEFUL LIFE OF STONE.

IMMEDIATELY REMOVE MUD AND SEDIMENT TRACKED OR WASHED ONTO PUBLIC ROADS BY BRUSHING OR SWEEPING. FLUSHING SHOULD ONLY BE USED WHEN THE WATER CAN BE DISCHARGED TO A SEDIMENT TRAP OR BASIN.

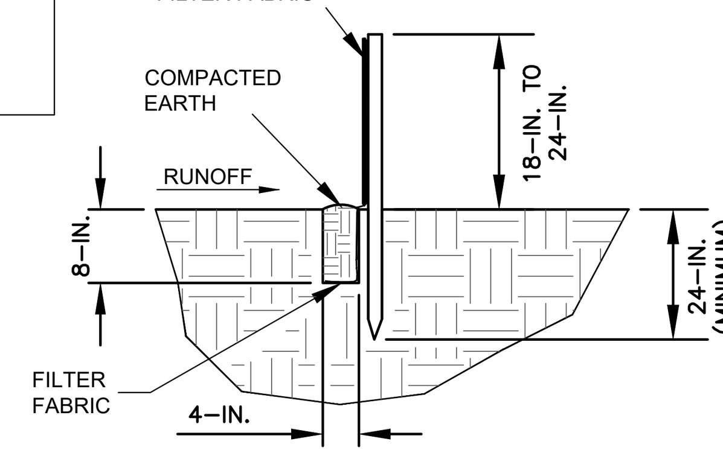
REPAIR ANY BROKEN PAVEMENT IMMEDIATELY.

STABILIZED CONSTRUCTION ENTRANCE

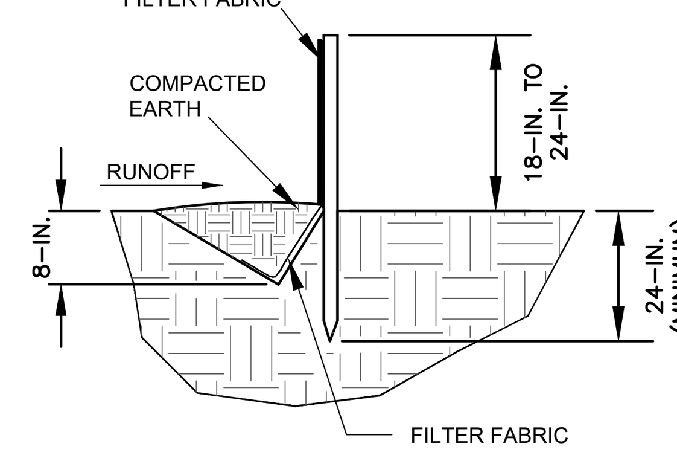
NOT TO SCALE



SILT FENCE INSTALLATION



FLAT-BOTTOM TRENCH DETAIL



V-SHAPED TRENCH DETAIL

WHEN AND WHERE TO USE IT:
SILT FENCE IS APPLICABLE IN AREAS:

WHERE THE MAXIMUM SHEET OR OVERLAND FLOW PATH LENGTH TO THE FENCE IS 100-FEET.
WHERE THE MAXIMUM SLOPE STEEPNESS (NORMAL [PERPENDICULAR] TO FENCE LINE) IS 2H:1V.
THAT DO NOT RECEIVE CONCENTRATED FLOWS GREATER THAN 0.5 CFS.

DO NOT PLACE SILT FENCE ACROSS CHANNELS OR USE IT AS A VELOCITY CONTROL BMP.

MATERIALS:
STEEL POSTS
USE 48-INCH LONG STEEL POSTS THAT MEET THE FOLLOWING MINIMUM PHYSICAL REQUIREMENTS:
COMPOSED OF HIGH STRENGTH STEEL WITH MINIMUM YIELD STRENGTH OF 50,000 PSI.
HAVE A STANDARD "T" SECTION WITH A NOMINAL FACE WIDTH OF 1.38-INCHES AND NOMINAL "T" LENGTH OF 1.48-INCHES.
WEIGH 1.25 POUNDS PER FOOT (± 8%).
HAVE A SOIL STABILIZATION PLATE WITH A MINIMUM CROSS SECTION AREA OF 17-SQUARE INCHES ATTACHED TO THE STEEL POSTS.
PAINTED WITH A WATER BASED BAKED ENAMEL PAINT.

USE STEEL POSTS WITH A MINIMUM LENGTH OF 4-FEET, WEIGHING 1.25 POUNDS PER LINEAR FOOT (± 8%) WITH PROJECTIONS TO AID IN FASTENING THE FABRIC. EXCEPT WHEN HEAVY CLAY SOILS ARE PRESENT ON SITE, STEEL POSTS WILL HAVE A METAL SOIL STABILIZATION PLATE WELDED NEAR THE BOTTOM SUCH THAT WHEN THE POST IS DRIVEN TO THE PROPER DEPTH, THE PLATE WILL BE BELOW THE GROUND LEVEL FOR ADDED STABILITY.
THE SOIL PLATES SHOULD HAVE THE FOLLOWING CHARACTERISTICS:
BE COMPOSED OF MINIMUM 15 GAUGE STEEL.
HAVE A MINIMUM CROSS SECTION AREA OF 17-SQUARE INCHES.

GEOTEXTILE FILTER FABRIC:
FILTER FABRIC IS:
COMPOSED OF FIBERS CONSISTING OF LONG CHAIN SYNTHETIC POLYMERS COMPOSED OF AT LEAST 85% BY WEIGHT OF POLYOLEFINS, POLYESTERS, OR POLYAMIDES.
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 DEFECTS OR FLAWS THAT SIGNIFICANTLY AFFECT ITS PHYSICAL AND/OR FILTERING PROPERTIES.
CUT TO A MINIMUM WIDTH OF 36 INCHES.

USE ONLY FABRIC APPEARING ON SCDOT APPROVAL SHEET #34 MEETING THE REQUIREMENTS OF THE MOST CURRENT EDITION OF THE SCDOT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.

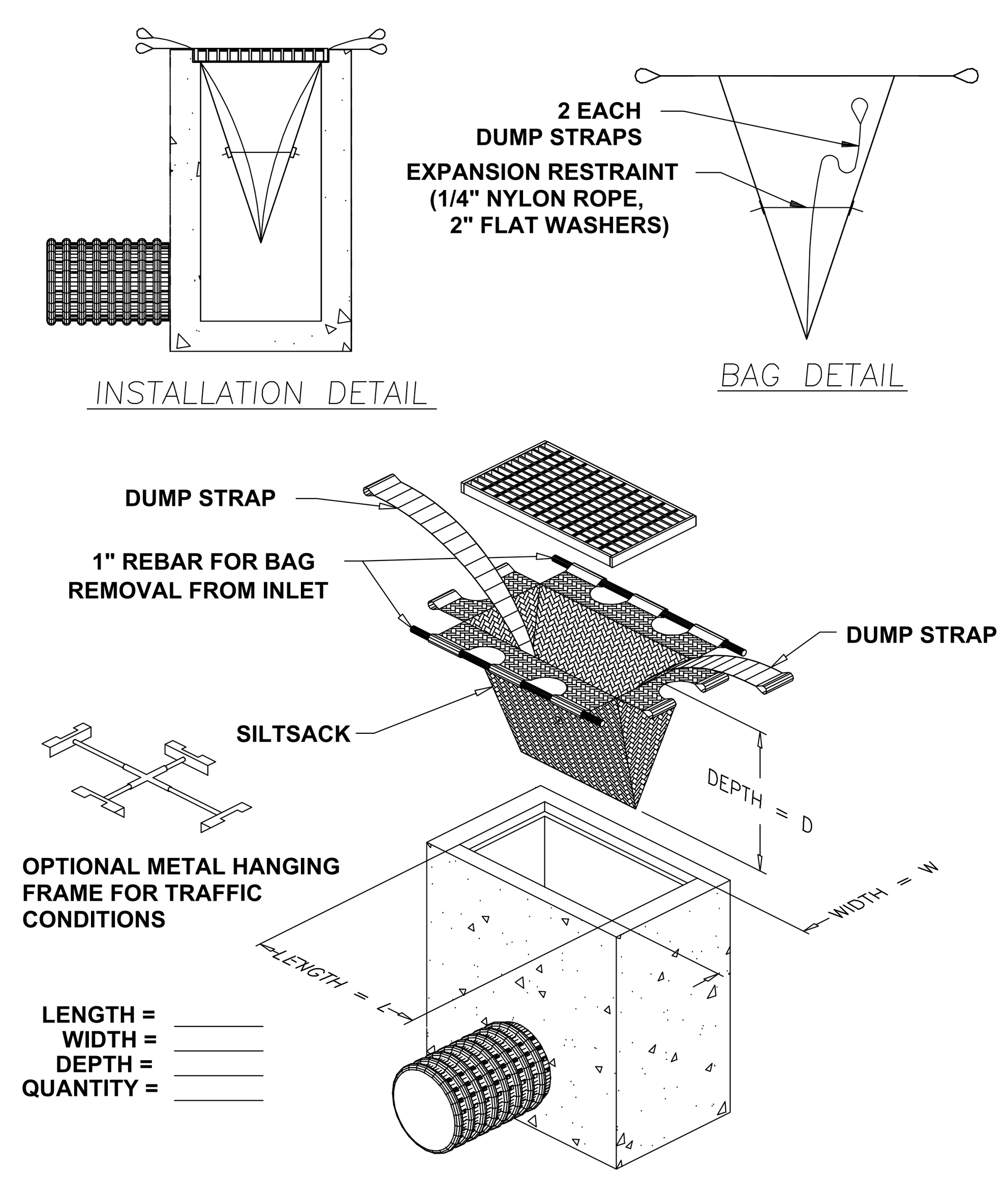
INSTALLATION:
EXCAVATE A TRENCH APPROXIMATELY 6-INCHES WIDE AND 6-INCHES DEEP WHEN PLACING FABRIC BY HAND. PLACE 12-INCHES OF GEOTEXTILE FABRIC INTO THE 6-INCH DEEP TRENCH, EXTENDING THE REMAINING 6-INCHES TOWARDS THE UPSLOPE SIDE OF THE TRENCH. BACKFILL THE TRENCH WITH SOIL OR GRAVEL AND COMPACT. BURY 12-INCHES OF FABRIC INTO THE GROUND WHEN PNEUMATICALLY INSTALLING SILT FENCE WITH A SLICING METHOD. PURCHASE FABRIC IN CONTINUOUS ROLLS AND CUT TO THE LENGTH OF THE BARRIER TO AVOID JOINTS. WHEN JOINTS ARE NECESSARY, WRAPPED THE FABRIC TOGETHER AT A SUPPORT POST WITH BOTH ENDS FASTENED TO THE POST, WITH A 6-INCH MINIMUM OVERLAP. INSTALL POSTS TO A MINIMUM DEPTH OF 24-INCHES. INSTALL POSTS A MINIMUM OF 1- TO 2- INCHES ABOVE THE FABRIC, WITH NO MORE THAN 3-FEET OF THE POST ABOVE THE GROUND. SPACE POSTS TO MAXIMUM 6-FEET CENTERS. ATTACH FABRIC TO WOOD POSTS USING STAPLES MADE OF HEAVY-DUTY WIRE AT LEAST 1-1/2-INCH LONG, SPACED A MAXIMUM OF 6-INCHES APART. STAPLE A 2-INCH WIDE LATHE OVER THE FILTER FABRIC TO SECURELY FASTEN IT TO THE UPSLOPE SIDE OF WOODEN POSTS. ATTACH FABRIC TO THE STEEL POSTS USING HEAVY-DUTY PLASTIC TIES THAT ARE EVENLY SPACED AND PLACED IN A MANNER TO PREVENT SAGGING OR TEARING OF THE FABRIC. IN CALL CASES, TIES SHOULD BE AFFIXED IN NO LESS THAN 4 PLACES. INSTALL THE FABRIC A MINIMUM OF 24-INCHES ABOVE THE GROUND. WHEN NECESSARY, THE HEIGHT OF THE FENCE ABOVE GROUND MAY BE GREATER THAN 24-INCHES. IN TIDAL AREAS, EXTRA SILT FENCE HEIGHT MAY BE REQUIRED. THE POST HEIGHT WILL BE TWICE THE EXPOSED POST HEIGHT. POST SPACING WILL REMAIN THE SAME AND EXTRA HEIGHT FABRIC WILL BE 4-, 5-, OR 6-FEET TALL. LOCATE SILT FENCE CHECKS EVERY 100 FEET MAXIMUM AND AT LOW POINTS. INSTALL THE FENCE PERPENDICULAR TO THE DIRECTION OF FLOW AND PLACE THE FENCE THE PROPER DISTANCE FROM THE TOE OF STEEP SLOPES TO PROVIDE SEDIMENT STORAGE AND ACCESS FOR MAINTENANCE AND CLEANOUT.

INSPECTION AND MAINTENANCE:
CHECK FOR SEDIMENT BUILDUP AND FENCE INTEGRITY. CHECK WHERE RUNOFF HAS ERODED A CHANNEL BENEATH THE FENCE, OR WHERE THE FENCE HAS SAGGED OR COLLAPSED BY FENCE OVERTOPPING. IF THE FENCE FABRIC TEARS, BEGINS TO DECOMPOSE, OR IN ANY WAY BECOMES INEFFECTIVE, REPLACE THE SECTION OF FENCE IMMEDIATELY. REMOVE SEDIMENT ACCUMULATED ALONG THE FENCE WHEN IT REACHES 1/3 THE HEIGHT OF THE FENCE, ESPECIALLY IF HEAVY RAINS ARE EXPECTED. REMOVE TRAPPED SEDIMENT FROM THE SITE OR STABILIZE IT ON SITE. REMOVE SILT FENCE WITHIN 30 DAYS AFTER FINAL STABILIZATION IS ACHIEVED OR

AFTER TEMPORARY BEST MANAGEMENT PRACTICES (BMPS) ARE NO LONGER NEEDED. PERMANENTLY STABILIZE DISTURBED AREAS RESULTING FROM FENCE REMOVAL.

SILT FENCE

NOT TO SCALE



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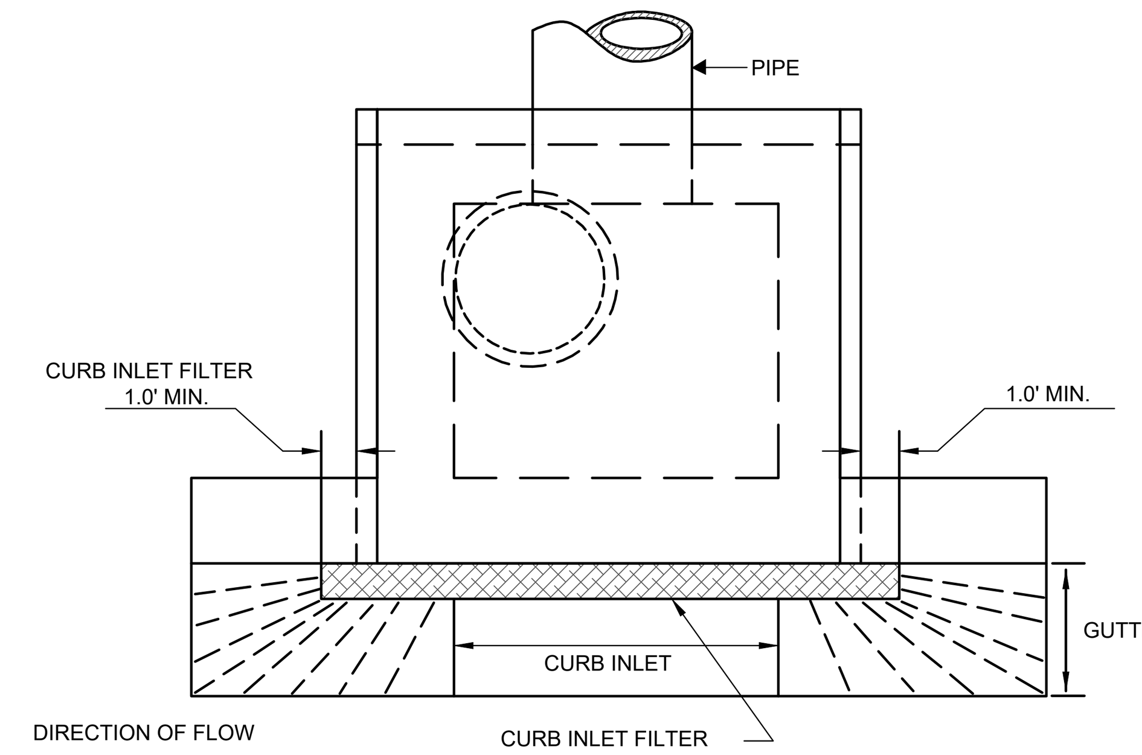
SILT SACK DETAIL

NOT TO SCALE



TOP VIEW

MATERIALS:
ONLY USE SURFACE COURSE INLET FILTERS THAT HAVE A MINIMUM HEIGHT OR DIAMETER OF 9-INCHES AND HAVE A MINIMUM LENGTH THAT IS 2-FEET LONGER THAN THE LENGTH OF THE CURB OPENING. SURFACE COURSE INLET FILTERS ARE NOT DESIGNED TO COMPLETELY BLOCK THE INLET OPENING.

SURFACE COURSE INLET FILTERS ARE CONSTRUCTED WITH A SYNTHETIC MATERIAL THAT WILL ALLOW STORM WATER TO FREELY FLOW THROUGH WHILE TRAPPING SEDIMENT AND DEBRIS. THE GEOTEXTILE IS NON-BIODEGRADABLE AND RESISTANT TO DEGRADATION BY ULTRAVIOLET EXPOSURE AND RESISTANT TO CONTAMINANTS COMMONLY ENCOUNTERED IN STORM WATER. STRAW, STRAW FIBER, STRAW BALES, PINE NEEDLES AND LEAF MULCH ARE NOT PERMISSIBLE FILTER MATERIALS.

SURFACE COURSE INLET FILTERS HAVE AGGREGATE COMPARTMENTS FOR STONE, SAND OR OTHER WEIGHTED MATERIALS OR MECHANISMS TO HOLD THE UNIT IN PLACE.

USE FILTER FABRIC THAT IS CAPABLE OF REDUCING EFFLUENT SEDIMENT CONCENTRATIONS BY NO LESS THAN 80% UNDER TYPICAL SEDIMENT MIGRATION CONDITIONS.

APPLICABLE TYPE E INLET FILTERS MAY BE SELECTED FROM THE SCDOT APPROVED PRODUCTS LIST.

INSTALLATION:
SURFACE COURSE INLET FILTERS ARE APPLICABLE FOR ROAD CATCH BASIN AFTER THE ROAD SURFACE COURSE IS PLACED. PLACE SURFACE COURSE INLET FILTERS WHERE SEDIMENT MAY SPILL OVER SIDEWALKS AND CURBS.

INSTALL SURFACE COURSE INLET FILTERS IN FRONT OF CURB INLET OPENINGS. THE FILTER SHALL HAVE A MINIMUM HEIGHT OR DIAMETER OF 9-INCHES AND HAVE A MINIMUM LENGTH THAT IS 2-FEET LONGER THAN THE LENGTH OF THE CURB OPENING. THIS WILL ALLOW SUFFICIENT LENGTH TO COVER THE INLET WITH AT LEAST 1-FOOT OF CLEARANCE BEYOND THE INLET ON BOTH ENDS.

DO NOT COMPLETELY BLOCK THE INLET OPENING WITH SURFACE COURSE INLET FILTERS. INSTALL SURFACE COURSE INLET FILTERS IN A MANNER TO ALLOW OVERFLOWS TO ENTER THE CATCH BASIN.

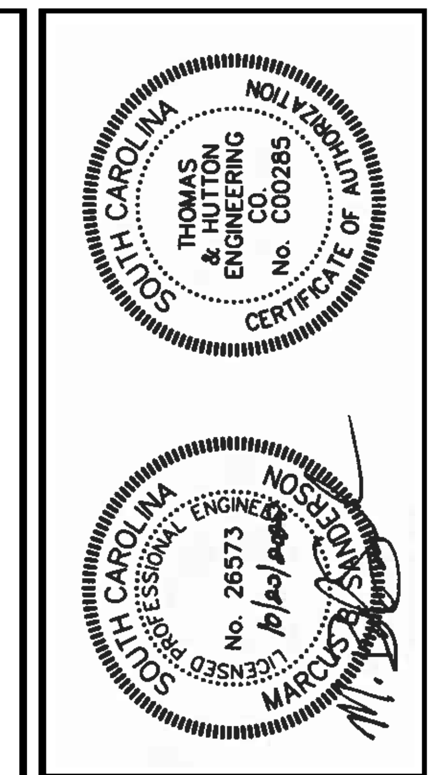
FILL THE AGGREGATE COMPARTMENT TO A LEVEL (AT LEAST 1/2 FULL) THAT WILL KEEP THE SURFACE COURSE INLET FILTER IN PLACE AND CREATE A SEAL BETWEEN THE SURFACE COURSE INLET FILTER AND THE ROAD SURFACE.

INSPECTION AND MAINTENANCE:
PONDING IS LIKELY IF SEDIMENT IS NOT REMOVED REGULARLY, THEREFORE ROUTINE MAINTENANCE MUST BE PROVIDED.
INSPECT SURFACE COURSE CURB INLET FILTERS ON A REGULAR BASIS AND IMMEDIATELY AFTER MAJOR RAIN EVENTS.
CLEAN THE SURFACE COURSE CURB INLET FILTER IF A VISUAL INSPECTION SHOWS SILT AND DEBRIS BUILD UP AROUND THE FILTER.

E

SURFACE COURSE CURB INLET FILTERS (TYPE E)

NOT TO SCALE



NO.	REVISIONS	BY	DATE

THOMAS & HUTTON
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COLLETON COUNTY CAPITAL PROJECTS

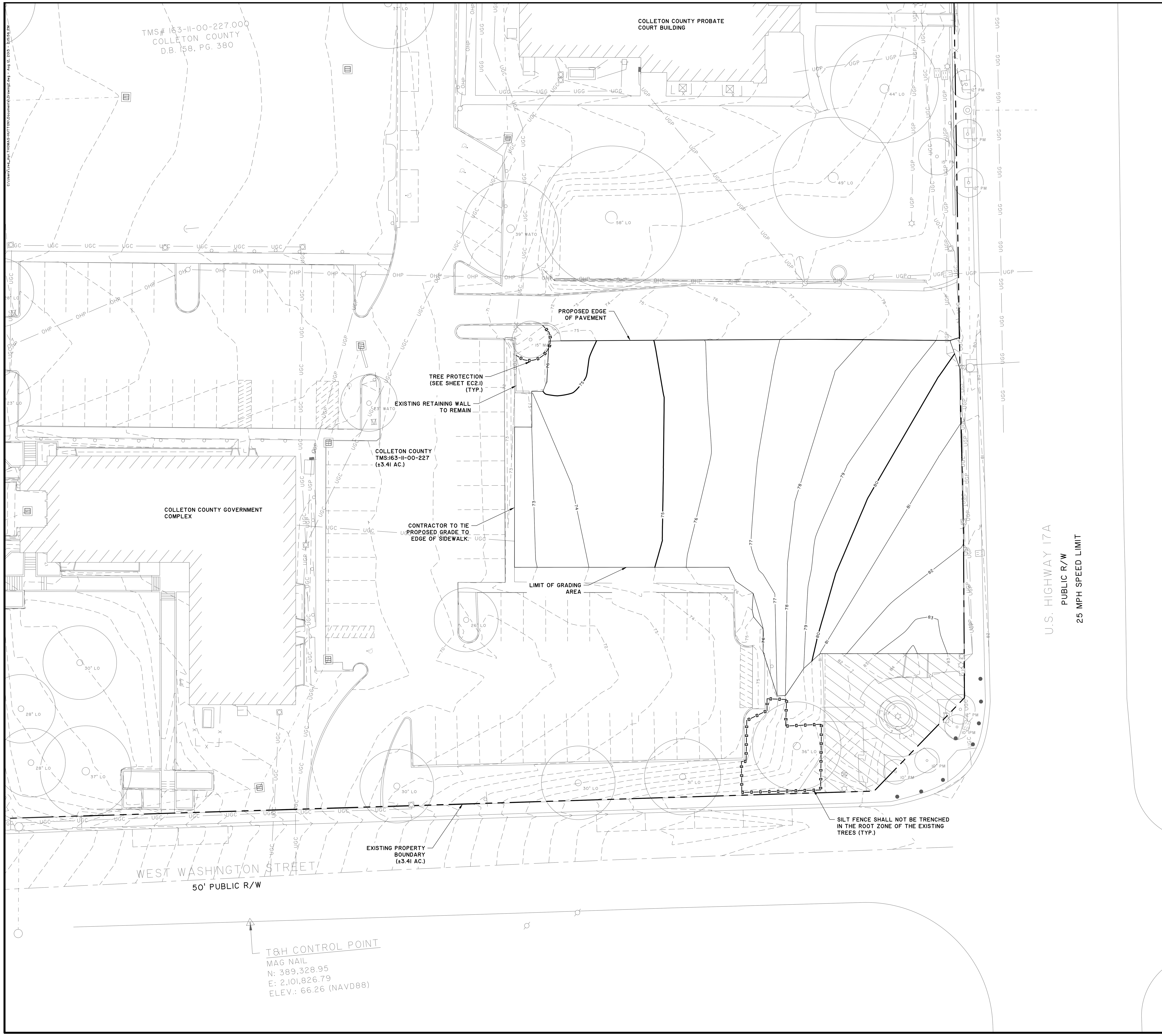
COLLETON COUNTY, SC

FLOYD BUCKNER BUILDING DEMOLITION & REMEDIATION IMPROVEMENTS

EROSION CONTROL DETAILS

JOB NO:	J-28711.0000
DATE:	10/19/2020
DRAWN:	HRC
DESIGNED:	HRC
REVIEWED:	MBS
APPROVED:	MBS
SCALE:	N/A

EC2.1



NOTE:

1. AFTER DEMOLITION AND REMOVAL OF DEBRIS, CONTRACTOR IS TO IMPORT FILL MATERIAL AND GRADE THE SITE AS OUTLINED ON THIS SHEET.

2. CONTRACTOR TO COMPACT ALL IMPORT FILL MATERIAL FOR THE SITE PER GEOTECHNICAL REPORT PREPARED BY TERRACON CONSULTANTS, INC. DATED OCTOBER 16, 2020.

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

NO.	REVISIONS	BY	DATE

THOMAS & HUTTON
1501 Main Street • Suite 760
Columbia, SC 29201 • 803.451.6789
www.thomasandhutton.com

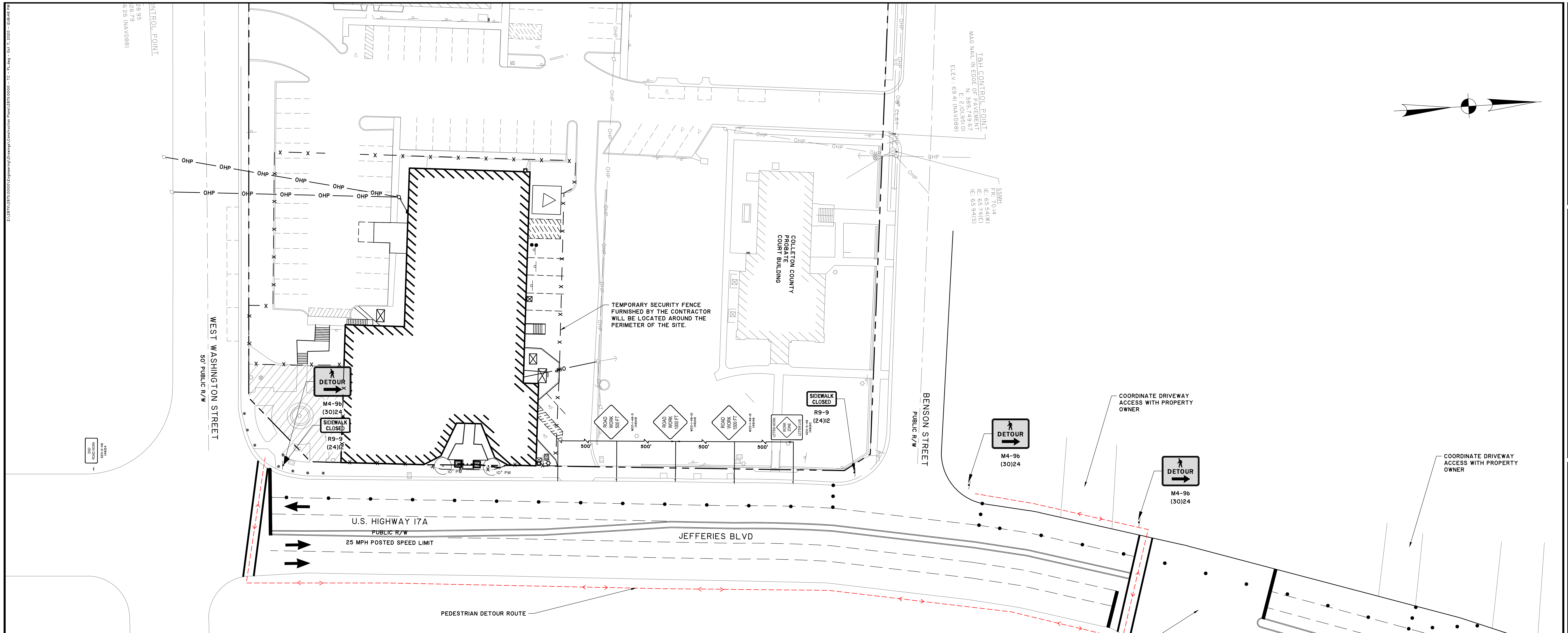
COLLETON COUNTY CAPITAL PROJECTS
COLLETON COUNTY, SC

FLOYD BUCKNER BUILDING DEMOLITION & REMEDIATION IMPROVEMENTS

GRADING PLAN

JOB NO:	J-28711.0000
DATE:	10/19/2020
DRAWN:	HRC
DESIGNED:	HRC
REVIEWED:	MBS
APPROVED:	MBS
SCALE:	1" = 20'

C1.1



GENERAL NOTES:

1. THE PURPOSE OF THE TRAFFIC CONTROL PLANS IS TO PROVIDE FOR A SEQUENCE OF CONSTRUCTION AND TRAFFIC CONTROL ALONG THE EXISTING ROADS TO BE IMPACTED BY THIS PROJECT AND/OR BETWEEN ROADS THAT CROSS THROUGH CERTAIN PORTIONS OF THIS PROJECT. THE CONTRACTOR SHALL REFER TO THESE TRAFFIC CONTROL PLANS AND SPECIAL PROVISIONS FOR MAINTENANCE AND CONTROL OF TRAFFIC, THE SCDOT 2007 STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION. THE CONTRACTOR SHALL ALSO USE THE LATEST EDITION OF THE FOLLOWING: SCDOT STANDARD DRAWINGS FOR ROAD CONSTRUCTION, SCDOT SUPPLEMENTAL SPECIFICATIONS AND SOUTH CAROLINA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS (MUTCD).
2. THE TRAFFIC CONTROL PLANS, SPECIAL PROVISIONS, SPECIFICATIONS, STANDARD DRAWINGS LATEST EDITION, AND MUTCD SHALL NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITIES OF THE CONTRACTOR STATED IN SECTION 1034 OF THE STANDARD SPECIFICATIONS.
3. AS AN ALTERNATIVE TO THE PROCEDURES DESCRIBED IN THE PLANS AND SPECIFICATIONS THE CONTRACTOR MAY SUBMIT A SEQUENCE OF CONSTRUCTION PLANS FOR THE DEPARTMENT'S APPROVAL. SUFFICIENT LEAD TIME FOR THE DEPARTMENT'S REVIEW SHALL BE GIVEN BEFORE THE PRECONSTRUCTION CONFERENCE. INSUFFICIENT LEAD TIME OR NO SUBMISSIONS BY THE CONTRACTOR SHALL BE CONSTRUED AS ACCEPTANCE OF THE PROCEDURES OUTLINES HEREIN AND THE CONTRACTORS WILLINGNESS TO EXCISE SAME.
4. THE CONTRACTOR SHALL FURNISH AND INSTALL APPROPRIATE TRAFFIC CONTROL DEVICES TO EFFECTIVELY AND SAFELY SEPARATE OPPOSING TRAFFIC FLOWS, TRANSITION TRAFFIC FLOWS FROM ONE ROADWAY TO ANOTHER, SEPARATE TRAFFIC FLOWS FROM CONSTRUCTION ACTIVITIES AND ZONES, ETC. IN ACCORDANCE WITH PART VI MANUAL OF TRAFFIC CONTROL DEVICES, LATEST EDITION, THE PLANS, SPECIFICATIONS, STANDARD DRAWINGS, AND THE ENGINEER. THE EXACT LOCATION OF ALL TRAFFIC CONTROL DEVICES MAY REQUIRE ADJUSTMENTS DUE TO HORIZONTAL AND/OR VERTICAL ALIGNMENTS AND/OR VARIOUS SIGHT RESTRICTIONS AND SHALL BE SUBJECT TO APPROVAL OF THE ENGINEER.
5. THE TRAFFIC CONTROL PLANS MAY CONSIST OF STAGES AND ASSOCIATED PHASES OF CONSTRUCTION. EACH STAGE AND PHASE INDICATES THE LOCATIONS OF EXISTING TRAVEL LANES OPEN TO TRAFFIC DURING THAT PERIOD AND THE CONSTRUCTION OF ROADWAYS, CROSSOVERS, MAJOR DRAINAGE SYSTEM, ETC. WHICH MUST BE COMPLETE BY THE END OF THAT STAGE AND PHASE SUFFICIENT TO RECEIVE TRAFFIC ON THE FOLLOWING PHASE OR STAGE.
6. THE CONTRACTOR MAY COMMENCE WORK ON ANY PROPOSED CONSTRUCTION ACTIVITY DURING AN EARLIER STAGE OR PHASE THAN INDICATED IN THE TRAFFIC CONTROL PLANS PROVIDED WORK DOES NOT INTERFERE WITH TRAFFIC SPECIFICATION, STANDARD DRAWINGS, OR MUTCD.
7. THE EXISTING TOPO AND PROPOSED CONSTRUCTION SHOWN IN THE TRAFFIC CONTROL PLANS IS NOT NECESSARILY COMPLETE. THE CONTRACTOR SHALL REFER TO THE ROADWAY CONSTRUCTION PLANS, GRADING AND DRAINAGE PLANS, UTILITY PLANS, OTHER MISCELLANEOUS CONSTRUCTION PLANS AND TO FIELD OBSERVATIONS REGARDING EXISTING TOPO AND PROPOSED CONSTRUCTION. IN ADDITION, IT IS THE CONTRACTOR'S RESPONSIBILITY TO BECOME FULLY AWARE OF THE EXISTING TOPO AND UTILITIES WITHIN THE PROJECT AND THEIR RELOCATION PRIOR TO COMMENCING ANY PORTION OF THE WORK.
8. ALL EARTHWORK OPERATIONS MUST INCLUDE THE CONSTRUCTION OF ALL PERMANENT AND ANY NECESSARY TEMPORARY DRAINAGE SYSTEMS WHETHER OR NOT SHOWN IN THE TRAFFIC CONTROL PLANS TO DRAIN THE PROJECT TO THE SAME EXTENT AS THE EXISTING DRAINAGE SYSTEM AND TO PROTECT ALL NEWLY CONSTRUCTED SUBGRADES. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PERFORM ALL DRAINAGE AND OTHER INCIDENTAL ITEMS OF CONSTRUCTION AS DEPICTED ON THE CONSTRUCTION DOCUMENTS AND AS APPLICABLE TO EACH STAGE AND PHASE OF CONSTRUCTION.
9. THE CONTRACTOR SHALL MAINTAIN A CLEAR DISTANCE BETWEEN THE EDGE OF TRAVEL WAY CURRENTLY BEING UTILIZED AND CONSTRUCTION ACTIVITIES AND EQUIPMENT AS PRESCRIBED IN THE 2007 STANDARD SPECIFICATION FOR HIGHWAY CONSTRUCTION SECTION 601.
10. SIGNS, BARRICADES, PLACEMENT MARKINGS, DRUMS, OTHER TRAFFIC CONTROL DEVICES, ETC. REQUIRED FOR A PARTICULAR STAGE AND PHASE OF CONSTRUCTION SHALL BE IN PLACE PRIOR TO BEGINNING THE APPLICABLE CONSTRUCTION. COVERING, REMOVAL OR RELOCATION OF EXISTING SIGNS FOR A PARTICULAR CONSTRUCTION STAGE OR PHASE SHALL BE ACCOMPLISHED PROMPTLY DURING TRANSITION TO THAT STAGE AND PHASE. TEMPORARY SIGNS SHALL BE PROMPTLY REMOVED WHEN NO LONGER APPLICABLE.
11. ADDITIONAL TEMPORARY TRAFFIC CONTROL SIGNS AND/OR MESSAGE SIGNS MAY BE NECESSARY TO PROVIDE CLEAR DIRECTIONS TO THE PUBLIC. THESE SIGNS SHALL BE USED IN ACCORDANCE WITH THE SCDOT STANDARD DRAWINGS, MUTCD, OR AT THE DISCRETION OF THE ENGINEER.
12. ALL TRAFFIC CONTROL DEVICES THAT ARE UTILIZED DURING NIGHT TIME HOURS WILL MEET ILLUMINATION AND REFLECTIVE STANDARDS OF THE DEPARTMENT OR AS DIRECTED BY THE ENGINEER.
13. ALL SIGNS PROVIDED BY THE CONTRACTOR SHALL BE FABRICATED FROM NEW MATERIALS SPECIFICALLY FOR THIS PROJECT. ALL FLAT SHEET SIGNS AND BARRICADES SHALL BE REFLECTORIZED WITH TYPE VIII OR IX HIGH INTENSITY PRISMATIC REFLECTORIZED SHEETING. ALL DRUMS SHALL BE REFLECTORIZED DRUMS WITH TYPE III MICROPRISMATIC RETROREFLECTIVE SHEETING.
14. TYPE III BARRICADES, SUPPLEMENTED WITH "ROAD CLOSED" SIGNS (R11-2 48), SHALL BE UTILIZED FOR ROAD CLOSURES. SCHEMES OF NO LESS THAN THREE BARRICADE ASSEMBLIES SHALL BE REQUIRED. ONLY ROLL UP FABRIC SIGNS ARE ACCEPTABLE FOR ATTACHMENT TO BARRICADES. ATTACHING RIGID SIGNS CONSTRUCTED FROM ALUMINUM SUBSTRATUM OR OTHER RIGID MATERIAL IS PROHIBITED.
15. IN THE TRAFFIC CONTRL IS NO MAINTAINED ACCORDING TO THE SPECIAL PROVISION, SUPPLEMENTAL SPECIFICATION AND THE PLANS, THE DEPARTMENT RESERVES THE RIGHT TO RESTRICT CONSTRUCTION OPERATIONS AND/OR WITHHOLD MONTHLY ESTIMATES.
16. CONSTRUCTION SIGNING SHALL BE PLACED ALONG S JEFFERIES BLVD (US-17) ACCORDING TO SCDOT STANDARD DRAWING #605-010-02, SCHEME C, IN BOTH DIRECTIONS.
17. ANY WORK REQUIRING A SHOULDER CLOSURE IS TO BE DONE USING SCDOT STANDARD DRAWING #610-205-00 FOR SHOULDER CLOSURE. ALL SHOULDER CLOSURE WORK IS TO BE DONE DURING DAYLIGHT HOURS BETWEEN 9:00 AM AND 4:00 PM.
18. ANY WORK REQUIRING A TRAFFIC DISRUPTION OR LANE CLOSURE ON S JEFFERIES BLVD (US-17) WILL BE PERFORMED DURING DAYTIME HOURS. WORK WILL BE BETWEEN THE HOURS OF 9:00 AM AND 4:00 PM WITH ALL TRAFFIC CONTROL REMOVED FROM THE ROADWAY AT THAT TIME. ANY CLOSURE WILL REQUIRE NOTIFYING ALL REQUIRED MEDIA OUTLETS, SCDOT, COLLETON MAINTENANCE OFFICE, AND EMERGENCY AGENCIES A MINIMUM OF ONE WEEK PRIOR TO THE IMPLEMENTATION OF THE CLOSURE. DURING A TRAFFIC DISRUPTION OR LANE CLOSURE ON S JEFFERIES BLVD (US-17), CONDUCT FLAGGING OPERATIONS ACCORDING TO SCDOT STANDARD DRAWING #610-005-00.
19. MAINTAIN 2-WAY TRAFFIC ON EXISTING ROAD-WAY.
20. INSTALL ALL STORMWATER POLLUTION PREVENTION ITEMS AS NOTED IN THE EROSION CONTROL PLANS AS WELL AS SILT FENCE.
21. TEMPORARY LANE CLOSURE WILL BE FROM 9:00 AM - 4:00 PM. TRAFFIC WILL BE OPEN FOR REMAINING HOURS OF THE DAY

LEGEND

- DIRECTION OF TRAVEL ON USEABLE PAVEMENT
- PORTABLE PLASTIC DRUMS

GRAPHIC SCALE

(IN FEET)
1 inch = 30 ft.

NO	REVISIONS	BY	DATE
A	SCDOT COMMENTS	MCL	10/19/20

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COLLETON COUNTY CAPITAL PROJECTS
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FLOYD BUCKNER BUILDING DEMOLITION & REMEDIATION IMPROVEMENTS

TRAFFIC CONTROL PLAN

JOB NO:	J-28711.0000
DATE:	10/19/2020
DRAWN:	HRC
DESIGNED:	HRC
REVIEWED:	MBS
APPROVED:	
SCALE:	1" = 30'

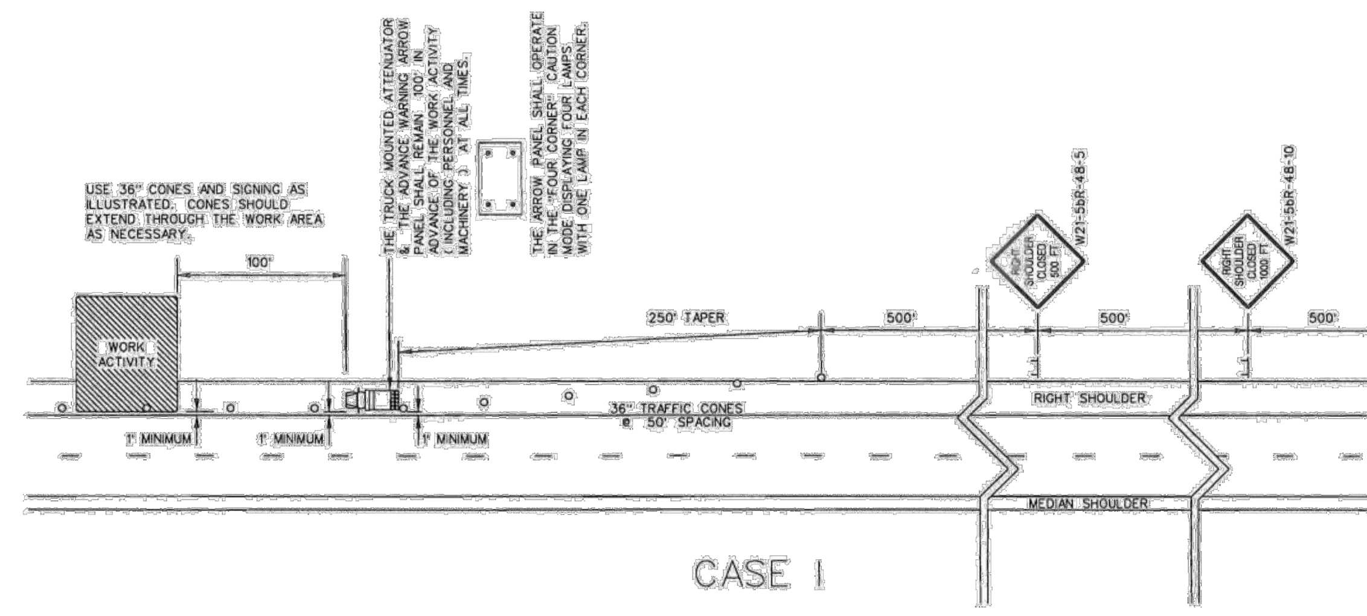
TC1.1

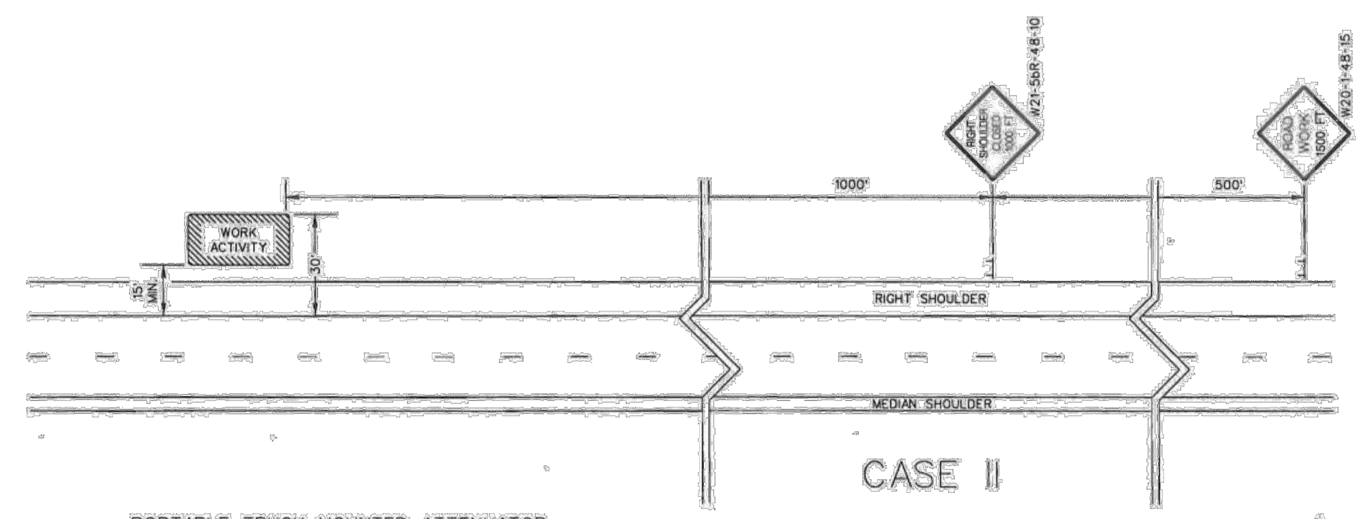
Z:\28711\28711.0000\Engineering\Drawings\Construction Plans\28711.0000 - ST - DT.dwg - Oct 19, 2020 - 2:15:43 PM

REFERENCES

GENERAL NOTES

1. ALL SIGN LOCATIONS ARE TO BE MEASURED FROM THE WORK AREA. WORK LIMITS FOR THE PROJECT WILL BE DETERMINED BY THE ENGINEER AND AS INDICATED IN THE CONTRACT.
2. INSTALL ADVANCE WARNING SIGNS MOUNTED ON PORTABLE SIGN SUPPORTS NO LESS THAN 4 FEET FROM THE NEAR EDGE OF THE SIGN TO THE NEAR EDGE OF AN ADJACENT TRAVEL LANE ON ROADWAYS WITH EARTH SHOULDERS AND NO LESS THAN 6 FEET FROM THE NEAR EDGE OF THE SIGN TO THE NEAR EDGE OF AN ADJACENT TRAVEL LANE ON ROADWAYS WITH PAVED SHOULDERS. WHEN CURB & GUTTER IS PRESENT, INSTALL THE SIGN NO LESS THAN 2 FEET FROM THE NEAR EDGE OF THE SIGN TO THE FACE OF THE CURB.
3. SPACINGS INDICATED ARE FOR NORMAL CONDITIONS: ADJUSTMENTS MAY BE REQUIRED DUE TO HORIZONTAL AND/OR VERTICAL ALIGNMENTS OR OTHER SIGHT DISTANCE RESTRICTIONS.
4. ALL SIGNS MOUNTED ON PORTABLE SIGN SUPPORTS SHALL HAVE A MINIMUM MOUNTING HEIGHT OF 5 FEET FROM THE GROUND TO THE BOTTOM OF THE SIGN. ALL SIGNS MOUNTED ON GROUND MOUNTED U-CHANNEL POSTS OR SQUARE STEEL TUBE POSTS SHALL HAVE A MINIMUM MOUNTING HEIGHT OF 7 FEET FROM THE GRADE ELEVATION OF THE NEAR EDGE OF THE ADJACENT TRAVEL LANE TO THE BOTTOM OF THE SIGN UNLESS OTHERWISE DIRECTED BY THE DEPARTMENT. MOUNT ALL SIGNS STRAIGHT AND LEVEL AND WITH THE FACE OF THE SIGNS PERPENDICULAR TO THE SURFACE OF THE ROADWAY.
5. REFLECTORIZE ORANGE ADVANCE WARNING SIGNS AND ANY ORANGE AREAS OF A MULTI-COLORED ADVANCE WARNING SIGN WITH A FLUORESCENT ORANGE COLORED PRISMATIC RETROREFLECTIVE SHEETING. REFLECTORIZE WHITE REGULATORY SIGNS AND ANY WHITE AREAS OF A MULTI-COLORED ADVANCE WARNING SIGN WITH A WHITE COLORED PRISMATIC RETROREFLECTIVE SHEETING.
6. ALL TRAFFIC CONTROL DEVICES SHALL COMPLY WITH ALL NCHRP REPORT 350 REQUIREMENTS AND SHALL REQUIRE APPROVAL BY THE DEPARTMENT. ONLY THOSE TRAFFIC CONTROL DEVICES INCLUDED ON THE "APPROVED PRODUCTS LIST FOR TRAFFIC CONTROL DEVICES IN WORK ZONES" ARE CONSIDERED ACCEPTABLE FOR USE. THIS LIST MAY BE ACCESSED ON THE DEPARTMENT'S WEB SITE AT: www.scdot.org .
7. THE CONTRACTOR SHALL PROVIDE AND UTILIZE ANY SPECIAL SIGN MOUNTING ASSEMBLIES AND HARDWARE THAT MAY BE NECESSARY FOR INSTALLING AND MOUNTING SIGNS IN AREAS OF CONCRETE MEDIAN BARRIER, BRIDGE PARAPET WALLS OR DOUBLEFACED GUARDRAIL.
8. THE PRIMARY TRAFFIC CONTROL DEVICES UTILIZED FOR DAYTIME SHOULDER CLOSURES ARE 36" CONES. THE PRIMARY TRAFFIC CONTROL DEVICES UTILIZED FOR NIGHTTIME SHOULDER CLOSURES ARE PORTABLE PLASTIC DRUMS. DURING DAYTIME SHOULDER CLOSURES, 42" OVERSIZED CONES MAY BE SUBSTITUTED FOR 36" CONES. DURING NIGHTTIME SHOULDER CLOSURES, 42" OVERSIZED CONES ARE PROHIBITED FOR USE. IF THIS TRAFFIC CONTROL SETUP EXTENDS INTO THE HOURS OF DARKNESS, REPLACE ALL CONES, 36" OR 42" OVERSIZED, WITH PORTABLE PLASTIC DRUMS.
9. THE 36" CONES UTILIZED DURING DAYLIGHT HOURS ARE NOT REQUIRED TO BE REFLECTORIZED. REFLECTORIZE ALL 42" OVERSIZED CONES UTILIZED DURING DAYTIME SHOULDER CLOSURES WITH TYPE III FLEXIBLE PRISMATIC RETROREFLECTIVE SHEETING UNLESS OTHERWISE DIRECTED BY THE DEPARTMENT. REFLECTORIZE ALL PORTABLE PLASTIC DRUMS WITH TYPE III FLEXIBLE PRISMATIC RETROREFLECTIVE SHEETING UNLESS OTHERWISE DIRECTED BY THE DEPARTMENT.
10. THE DEPARTMENT PROHIBITS CONDUCTING WORK ON PRIMARY AND SECONDARY ROUTES WITHIN 1' OF THE NEAR EDGE OF THE ADJACENT TRAVEL LANE UNDER A SHOULDER CLOSURE. ALL WORK THAT MAY REQUIRE THE PRESENCE OF EQUIPMENT, PERSONNEL, MATERIALS OR WORK VEHICLES WITHIN 1' OF THE NEAR EDGE OF THE ADJACENT TRAVEL LANE SHALL BE CONDUCTED UNDER A LANE CLOSURE.
    - CASE I: WHENEVER ANY PORTION OF THE SHOULDER AREA WITHIN 15' BUT NOT CLOSER THAN 1' OF THE NEAR EDGE OF THE ADJACENT TRAVEL LANE MUST BE OCCUPIED BY EQUIPMENT, PERSONNEL, MATERIALS OR WORK VEHICLES TO CONDUCT THE WORK, INSTALL AND MAINTAIN THE SIGNING AND TRAFFIC CONTROL DEVICES AS ILLUSTRATED.
    - CASE II: WHENEVER THE WORK IS CONDUCTED BEYOND 15' BUT WITHIN 30' OF THE NEAR EDGE OF THE ADJACENT TRAVEL LANE, INCLUDING THE PRESENCE OF EQUIPMENT, PERSONNEL, MATERIALS OR WORK VEHICLES, INSTALL AND MAINTAIN THE SIGNING AND TRAFFIC CONTROL AS ILLUSTRATED.
12. CONDUCT THE WORK IN SUCH A MANNER THAT WILL NOT REQUIRE ENCROACHMENT OF TRAFFIC CONTROL DEVICES, EQUIPMENT, PERSONNEL, MATERIALS OR ANY WORK RELATED VEHICLES WITHIN 1' OF THE NEAR EDGE OF THE ADJACENT TRAVEL LANE.
13. PLACE THE TRUCK MOUNTED ATTENUATOR AT A LOCATION 100' IN ADVANCE OF THE WORK ACTIVITY AND NO CLOSER THAN 1' FROM THE NEAR EDGE OF THE ADJACENT TRAVEL LANE.
14. FOR A CASE I SCENARIO IN THE RIGHT SHOULDER AREA, ADJUST THE TAPER AS NECESSARY TO FIT THE WIDTH OF THE SHOULDER WHILE MAINTAINING THE REQUIRED 250' TAPER LENGTH.
15. IF WORK IS BEING CONDUCTED SIMULTANEOUSLY AT TWO DIFFERENT LOCATIONS AT THE SAME TIME UNDER CASE I SHOULDER CLOSURES, SEPARATE THE TWO LOCATIONS BY NO LESS THAN 1 MILE FROM THE END OF THE FIRST CASE I CLOSURE THAT A MOTORIST WILL ENCOUNTER TO THE BEGINNING OF THE TAPER OF THE SECOND CASE I CLOSURE. A MINIMUM SEPARATION DISTANCE OF ONE-HALF MILE IS RECOMMENDED BETWEEN SHOULDER CLOSURES WHEN ONE OR BOTH SHOULDER CLOSURES IS A CASE II CLOSURE.
16. THE DEPARTMENT RESERVES THE RIGHT TO RESTRICT WORK OPERATIONS AND/OR WITHHOLD THE MONTHLY ESTIMATE IF THE TRAFFIC CONTROL IS NOT PROPERLY INSTALLED AND MAINTAINED AS DIRECTED BY THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, THE STANDARD DRAWINGS, THE PLANS AND/OR THE ENGINEER.
17. THIS TYPICAL TRAFFIC CONTROL SETUP APPLIES TO THE INSTALLATION OF SHOULDER CLOSURES IN THE RIGHT SHOULDER AREAS OF PRIMARY AND SECONDARY ROADWAYS.





PORTABLE TRUCK MOUNTED ATTENUATOR

1. UTILIZE A TRUCK MOUNTED ATTENUATOR ATTACHED TO THE REAR OF A TRUCK WITH A MINIMUM GROSS VEHICULAR WEIGHT (GVM) OF 15,000 POUNDS (ACTUAL WEIGHT). IF THE ADDITION OF SUPPLEMENTAL WEIGHT TO THE VEHICLE AS BALLAST IS NECESSARY, CONTAIN THE MATERIAL WITHIN A STRUCTURE CONSTRUCTED OF STEEL. CONSTRUCT THIS STEEL STRUCTURE TO HAVE A MINIMUM OF FOUR SIDES AND A BOTTOM. A TOP IS OPTIONAL. BOLT THIS STRUCTURE TO THE FRAME OF THE TRUCK. UTILIZE A SUFFICIENT NUMBER OF FASTENERS FOR ATTACHMENT OF THE STEEL STRUCTURE TO THE FRAME OF THE TRUCK TO ENSURE THE STRUCTURE WILL NOT SEPARATE FROM THE FRAME OF THE TRUCK DURING AN IMPACT UPON THE ATTACHED TRUCK MOUNTED ATTENUATOR. UTILIZE EITHER DRY LOOSE SAND OR STEEL REINFORCED CONCRETE FOR BALLAST MATERIAL WITHIN THE STEEL STRUCTURE TO ACHIEVE THE NECESSARY WEIGHT. THE BALLAST MATERIAL SHALL REMAIN CONTAINED WITHIN THE CONFINES OF THE STEEL STRUCTURE AND SHALL NOT PROTRUDE FROM THE STEEL STRUCTURE IN ANY MANNER.
2. LOCATE THE TRUCK MOUNTED ATTENUATOR 100 FEET IN ADVANCE OF THE WORK AREA UNLESS OTHERWISE SPECIFIED.
3. PROVIDE, INSTALL AND MAINTAIN THE TRUCK MOUNTED ATTENUATOR AS SPECIFIED BY THE STANDARD SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER.

ADVANCE WARNING ARROW PANEL

ALL ADVANCE WARNING ARROW PANELS SHALL BE 48" x 96" WITH A MINIMUM LEGIBILITY DISTANCE OF 1 MILE. PLACEMENT OF AN ADVANCE WARNING ARROW PANEL MAY REQUIRE ADJUSTMENTS DUE TO HORIZONTAL AND/OR VERTICAL ALIGNMENT OR OTHER SIGHT DISTANCE RESTRICTIONS. THE PANEL FACE SHALL BE NONREFLECTIVE BLACK. ALL ADVANCE WARNING ARROW PANELS SHALL COMPLY WITH THE STANDARD SPECIFICATONS FOR HIGHWAY CONSTRUCTION, LATEST EDITION.

WHEN AN ADVANCE WARNING ARROW PANEL IS REQUIRED TO OPERATE IN THE CAUTION MODE, THE ADVANCE WARNING ARROW PANEL SHALL DISPLAY THE "FOUR CORNERS" CAUTION MODE, WITH ONE LAMP IN EACH CORNER. DISPLAY OF ANY OTHER TYPE OF CAUTION MODE OTHER THAN THE "FOUR CORNERS" CAUTION MODE SUCH AS THE "FLASHING BAR" OR THE "ALTERNATING DIAMOND" CAUTION MODES ARE UNACCEPTABLE AND PROHIBITED.

LEGEND
O 36" TRAFFIC CONES

WORK ZONE TRAFFIC CONTROL ENGINEER

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER NO. 24242 WILLIE E. McCONNELL, JR

SIGNATURE 8/2/12 DATE

#	DATE	CHK	DESCRIPTION
6			
5			
4			
3			
2			
1	8-12-11	JCS	GENERAL UPDATE
0	8-23-07	JCS	DRAWING NO. UPDATE

SCDOT

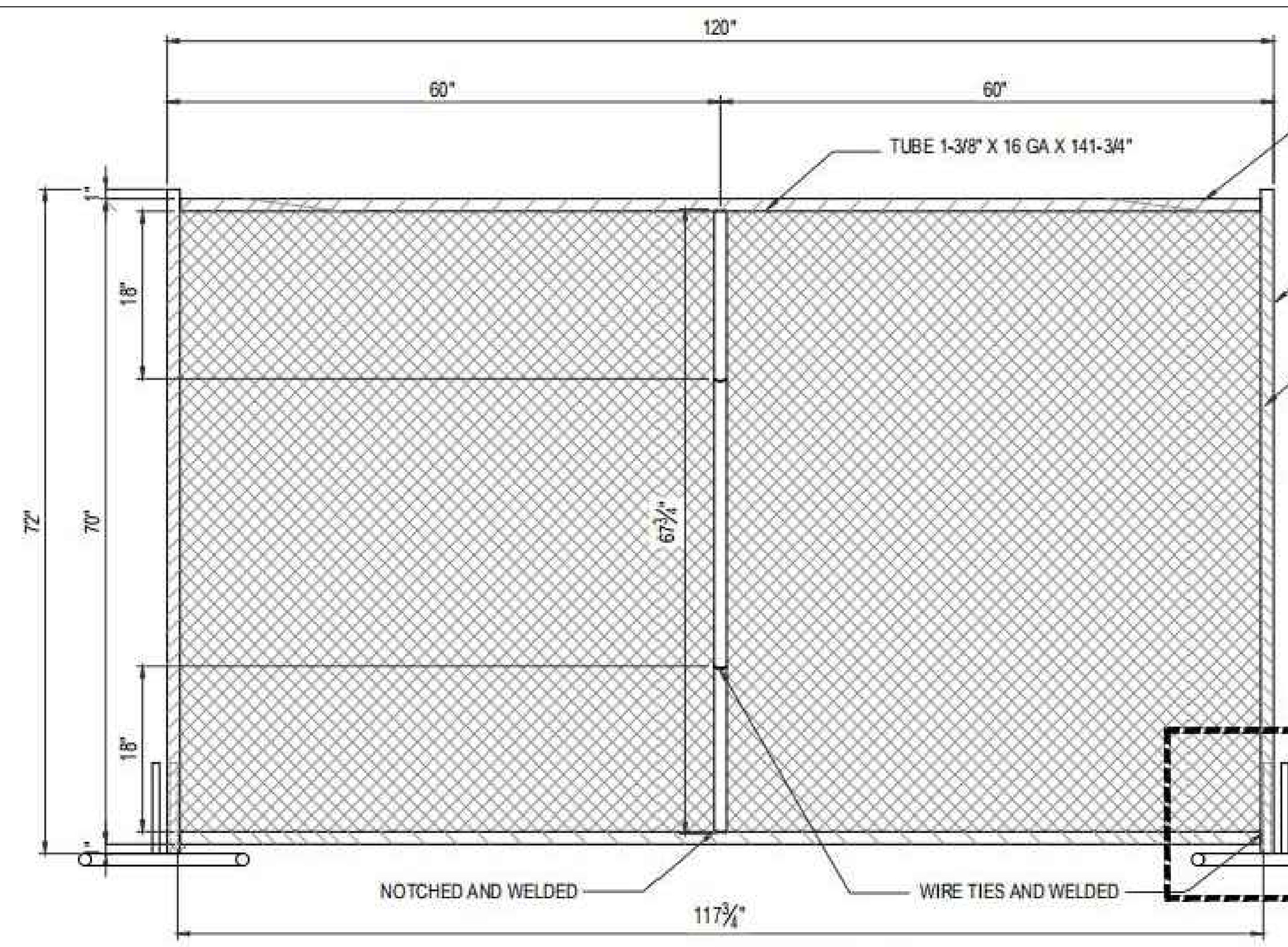
SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION
DESIGN STANDARDS OFFICE
955 PARK STREET
ROOM 405
COLUMBIA, SC 29201

STANDARD DRAWING

RIGHT SHOULDER CLOSURE (CASE I / CASE II) PRIMARY ROUTES

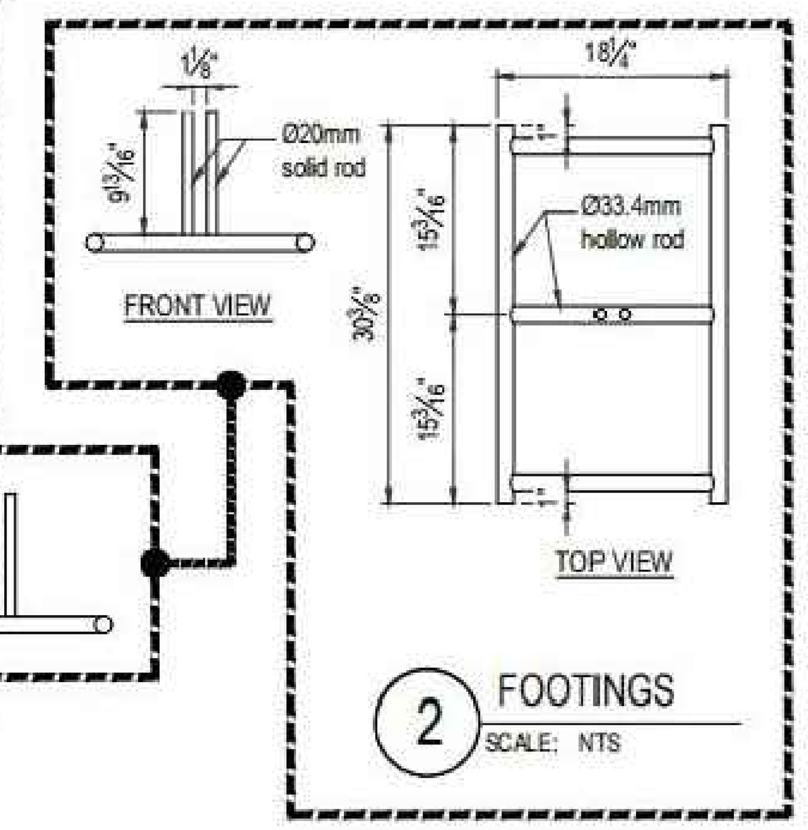
610-205-00

EFFECTIVE LETTING DATE JAN. 2013 THIS DRAWING IS NOT TO SCALE



1 TEMPORARY FENCE
SCALE: NTS

MATERIALS	QTY
TUBE 1-3/8" X 16 GA X 117-3/4"	2
TUBE 1-3/8" X 16 GA X 72	2
TUBE 1-3/8" X 16 GA X 67-3/4"	1



2 FOOTINGS
SCALE: NTS

REFERENCES

FLAGGING OPERATIONS GENERAL NOTES

(ALL NOTES, SPECIFICATIONS AND REQUIREMENTS ON THIS STANDARD DRAWING APPLY TO ALL SUBSEQUENT STANDARD DRAWINGS REGARDING FLAGGING OPERATIONS UNLESS OTHERWISE NOTED)

FLAGGING OPERATIONS -

1. KEY FEATURES RELEVANT TO FLAGGING OPERATIONS:
    - APPROACH TAPER - THIS IS A ONE-LANE TWO-WAY TAPER PLACED IN THE TRAVEL LANE WHERE THE WORK ACTIVITY TAKES PLACE. THIS TAPER PRECEDES THE BUFFER SPACE AND THE WORK ACTIVITY AREA. THE LENGTH OF THIS TAPER MAY VARY FROM 50 FEET TO 100 FEET. INSTALL AND MAINTAIN NO LESS THAN FIVE (5) TRAFFIC CONTROL DEVICES EQUALLY SPACED AT 10' TO 25' INTERVALS AS NECESSARY TO CORRESPOND WITH THE LENGTH OF THE TAPER.
    - DOWNSTREAM TAPER - THIS TAPER, PLACED IN THE TRAVEL LANE WHERE THE WORK ACTIVITY TAKES PLACE, FOLLOWS THE WORK ACTIVITY AREA AND SERVES AS THE TERMINATION AREA FOR THE CLOSURE OF THE TRAVEL LANE. THE LENGTH OF THIS TAPER MAY VARY FROM 50 FEET TO 100 FEET. INSTALL AND MAINTAIN NO LESS THAN FIVE (5) TRAFFIC CONTROL DEVICES IN THIS TAPER.
    - FLAGGER STATION - THIS IS THE SPECIFIC LOCATION OF THE FLAGGER.
    - CLOSED LANE FLAGGER - THIS FLAGGER IS STATIONED ADJACENT TO THE FIRST TRAFFIC CONTROL DEVICE IN THE APPROACH TAPER WHO CONTROLS THE TRAFFIC THAT REQUIRES RELOCATION FROM THE TRAVEL LANE BEING CLOSED TO TRAFFIC.
    - OPEN LANE FLAGGER - THIS FLAGGER IS STATIONED 100 FEET BEYOND THE LAST TRAFFIC CONTROL DEVICE IN THE DOWNSTREAM TAPER WHO CONTROLS THE TRAFFIC OPERATING IN THE TRAVEL LANE REMAINING OPEN TO TRAFFIC.
    - SIDE ROAD FLAGGER - THIS FLAGGER IS STATIONED ON AN INTERSECTING SIDE ROAD AND CONTROLS THE SIDE ROAD TRAFFIC ENTERING INTO THE ROADWAY WHERE THE WORK ACTIVITY AREA IS LOCATED.
    - BUFFER SPACE - THIS AREA IS LOCATED BETWEEN THE DOWNSTREAM END OF THE APPROACH TAPER AND THE NEAREST LIMITS OF THE WORK ACTIVITY AREA AND MAY PROVIDE SOME RECOVERY SPACE FOR AN ERRANT VEHICLE. THE PRESENCE OF PERSONNEL, TOOLS, MATERIALS, EQUIPMENT, WORK VEHICLES, ETC. WITHIN THE LIMITS OF THE BUFFER SPACE IS PROHIBITED. HOWEVER, WHEN THE MINIMUM DISTANCE REQUIREMENTS FOR THE BUFFER SPACE ARE UNAVAILABLE, A TRUCK MOUNTED ATTENUATOR MAY TEMPORARILY ENCROACH UPON THE BUFFER SPACE IN ACCORDANCE WITH THE REQUIREMENTS SPECIFIED IN THE SECTION BELOW ENTITLED, "BUFFER SPACE", WHEN APPROVED BY THE ENGINEER.
    - WORK ACTIVITY AREA - PERSONNEL, MATERIALS, EQUIPMENT, WORK VEHICLES, ETC. ARE PRESENT WITHIN THIS AREA TO CONDUCT THE WORK.
    - LIMITS of the WORK ACTIVITY AREA - THIS IS THE BOUNDARY OF THE WORK ACTIVITY AREA FIRST ENCOUNTERED, FROM EITHER DIRECTION, BY MOTORISTS PASSING BY THE WORK ACTIVITY AREA IN THE ADJACENT TRAVEL LANE OPEN TO TRAFFIC AND CONTROLLED BY THE FLAGGERS.
    - APPROACH LANE - TRAFFIC APPROACHES AN INTERSECTION OR A SPECIFIC LOCATION IN THIS TRAVEL LANE.
    - DEPARTURE LANE - TRAFFIC DEPARTS FROM AN INTERSECTION OR A SPECIFIC LOCATION IN THIS TRAVEL LANE.
    - MAINLINE APPROACH - THIS IS AN APPROACH TO THE WORK ACTIVITY AREA ON THE ROADWAY WHERE THE WORK ACTIVITY AREA IS LOCATED.
    - SIDE ROADS - THESE ROADS INTERSECT THE ROADWAY ON WHICH THE WORK ACTIVITY AREA IS LOCATED.
    - LIMITS of the INTERSECTION - THE LIMITS OF OR THE PHYSICAL AREA WITHIN AN INTERSECTION IS DEFINED BY THE LOCATION OF STOP BARS WHEN PRESENT. WHEN STOP BARS ARE ABSENT, THE LIMITS OF OR THE PHYSICAL AREA WITHIN AN INTERSECTION IS DEFINED BY THE LOCATION POINTS WHERE THE CORNER RADII BETWEEN ADJACENT ROADWAY APPROACHES TIE TO THE EDGE OF PAVEMENT OR THE EDGE OF TRAVEL LANE ADJACENT TO THE EDGE OF PAVEMENT OF EACH ROADWAY.
2. INSTALL, CONDUCT AND MAINTAIN FLAGGING OPERATIONS IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS, THE STANDARD DRAWINGS, THE MUTCD AND THE "SOUTH CAROLINA FLAGGER'S HANDBOOK" UNLESS OTHERWISE DIRECTED BY THE DEPARTMENT. INSTALL ALL SIGNS RELATIVE TO A FLAGGING OPERATION PRIOR TO INITIATION OF THE OPERATION AND REMOVE OR COVER ALL SIGNS IMMEDIATELY UPON TERMINATION OF THE OPERATION. EQUIP EACH FLAGGER WITH A 24" x 24" STOP/SLOW PADDLE MOUNTED ON A RIGID HANDLE WITH A MINIMUM LENGTH OF 7 FEET. THE DEPARTMENT PROHIBITS THE USE OF FLAGS EXCEPT DURING EMERGENCY SITUATIONS.
3. LANE CLOSURES FOR FLAGGING OPERATIONS ARE RESTRICTED TO A MAXIMUM DISTANCE OF 2 MILES UNLESS OTHERWISE APPROVED BY THE ENGINEER. THE WORK LIMITS WILL COMPLY WITH THE CONTRACT AND SHALL REQUIRE THE ENGINEER'S APPROVAL PRIOR TO BEGINNING THE WORK.
4. INSTALL AND MAINTAIN THE PROPER ARRAY OF ADVANCE WARNING SIGNS FOR EACH "MAINLINE APPROACH" WHEN A FLAGGING OPERATION IS IN PLACE AND ACTIVE. WHEN NECESSARY TO RELOCATE THE "FLAGGER STATION" WHILE ACTIVELY MAINTAINING THE FLAGGING OPERATION, INSTALL AN ADDITIONAL ARRAY OF ADVANCE WARNING SIGNS AT THE LOCATION RELATIVE TO THE NEW "FLAGGER STATION" AND REMOVE THE ORIGINAL ARRAY OF ADVANCE WARNING SIGNS IMMEDIATELY UPON COMPLETION OF THE RELOCATION OF THE FLAGGER TO THE NEW "FLAGGER STATION".
5. INSTALL ALL ADVANCE WARNING SIGNS IMMEDIATELY PRIOR TO INITIATING A FLAGGING OPERATION AND REMOVE OR COVER ALL SIGNS IMMEDIATELY UPON TERMINATION OF THE OPERATION.
6. MAINTAIN TWO-WAY RADIO COMMUNICATIONS BETWEEN ALL FLAGGERS.

NIGHTTIME FLAGGING OPERATIONS -

1. EACH FLAGGER SHALL WEAR SAFETY APPAREL IN COMPLIANCE WITH THE REQUIREMENTS OF ANSI/ ISEA 107 STANDARD PERFORMANCE FOR CLASS 3 RISK EXPOSURE, LATEST REVISION, WHEN CONDUCTING NIGHTTIME FLAGGING OPERATIONS.
2. ILLUMINATE EACH "FLAGGER STATION" WITH ANY COMBINATION OF PORTABLE LIGHTS, STANDARD ELECTRIC LIGHTS, EXISTING STREET LIGHTS, ETC. THAT WILL PROVIDE A MINIMUM ILLUMINATION LEVEL OF 108 Lx OR 10 fc WHEN CONDUCTING NIGHTTIME FLAGGING OPERATIONS.
3. SUPPLEMENT EACH ARRAY OF ADVANCE WARNING SIGNS ON EACH "MAINLINE APPROACH" WITH A TRAILER MOUNTED CHANGEABLE MESSAGE SIGN. THESE CHANGEABLE MESSAGE SIGNS ARE NOT REQUIRED ON THE "SIDE ROADS" INTERSECTING THE ROADWAY WHERE THE "WORK ACTIVITY AREA" IS LOCATED. ALSO, THESE CHANGEABLE MESSAGE SIGNS ARE NOT REQUIRED DURING DAYTIME FLAGGING OPERATIONS UNLESS OTHERWISE DIRECTED BY THE STANDARD DRAWINGS. INSTALL THE CHANGEABLE MESSAGE SIGNS IN ADVANCE OF THE ADVANCE WARNING SIGN ARRAYS. THE MESSAGES SHOULD BE "PREPARE TO STOP", "FLAGGER AHEAD". A TRUCK MOUNTED CHANGEABLE MESSAGE SIGN IS NOT AN ACCEPTABLE ALTERNATIVE TO A TRAILER MOUNTED CHANGEABLE MESSAGE SIGN DURING NIGHTTIME FLAGGING OPERATIONS.
4. UTILIZE PORTABLE PLASTIC DRUMS OR 42" OVERSIZED TRAFFIC CONES IN PLACE OF 36" STANDARD TRAFFIC CONES DURING NIGHTTIME FLAGGING OPERATIONS.

BUFFER SPACE -

1. THE MINIMUM DISTANCE REQUIREMENTS FOR THE "BUFFER SPACE" ARE BASED UPON THE LEGAL POSTED REGULATORY SPEED LIMIT OF THE ROADWAY PRIOR TO BEGINNING THE WORK.

SPEED LIMIT	DISTANCES
LOW SPEED ≤ 35 MPH	200 FEET
INTERMEDIATE SPEED 40 - 50 MPH	300 FEET
HIGH SPEED 55 MPH	400 FEET

2. THE PRESENCE OF PERSONNEL, TOOLS, MATERIALS, EQUIPMENT, WORK VEHICLES, ETC. WITHIN THE LIMITS OF THE "BUFFER SPACE" IS PROHIBITED. A TRUCK MOUNTED ATTENUATOR IS THE ONLY WORK VEHICLE THAT MAY TEMPORARILY ENCROACH UPON THE "BUFFER SPACE" IN ACCORDANCE WITH THE CONDITIONS SPECIFIED IN THE FOLLOWING NOTE WHEN APPROVED BY THE ENGINEER. SEE NOTE NO. 3.
3. WHEN THE MINIMUM DISTANCE REQUIREMENTS FOR THE "BUFFER SPACE" ARE UNAVAILABLE DUE TO FIELD CONDITIONS, IT MAY BE NECESSARY FOR A TRUCK MOUNTED ATTENUATOR TO TEMPORARILY ENCROACH UPON THE "BUFFER SPACE" WHEN APPROVED BY THE ENGINEER. A TRUCK MOUNTED ATTENUATOR IS THE ONLY VEHICLE PERMITTED TO TEMPORARILY ENCROACH UPON THE "BUFFER SPACE" AND THIS ENCROACHMENT IS ONLY PERMITTED WHEN ALL REASONABLE OPTIONS TO AVOID DOING SO HAVE BEEN EXHAUSTED. WHEN ENCROACHMENT UPON THE "BUFFER SPACE" IS APPROVED BY THE ENGINEER, MINIMIZE THE TIME DURATION OF THE ENCROACHMENT BY REMOVAL OF THE TRUCK MOUNTED ATTENUATOR FROM THE "BUFFER SPACE" AT THE FIRST OPPORTUNITY THE MINIMUM DISTANCE REQUIREMENTS FOR THE "BUFFER SPACE" BECOME AVAILABLE.

SIGNS AND TRAFFIC CONTROL DEVICES -

1. MEASURE THE ADVANCE WARNING SIGN LOCATIONS FOR EACH APPROACH FROM THE "FLAGGER STATION" LOCATED ON THAT APPROACH.
2. INSTALL THE ADVANCE WARNING SIGNS AS SPACING INTERVALS BASED UPON THE POSTED REGULATORY SPEED LIMIT OF THE ROADWAY PRIOR TO BEGINNING ANY WORK. THE ADVANCE WARNING SIGN SPACING INTERVALS INDICATED ARE FOR NORMAL CONDITIONS. ADJUSTMENTS TO THESE DISTANCES MAY BE NECESSARY DUE TO EXISTING SIGNS, INTERSECTING ROADWAYS, HORIZONTAL AND/OR VERTICAL ALIGNMENTS OR OTHER SIGHT DISTANCE RESTRICTIONS. SEE TABLE A.
3. INSTALL ADVANCE WARNING SIGNS MOUNTED ON PORTABLE SIGN SUPPORTS NO LESS THAN 4 FEET FROM THE NEAR EDGE OF THE SIGN TO THE NEAR EDGE OF AN ADJACENT TRAVEL LANE ON ROADWAYS WITH EARTH SHOULDERS AND NO LESS THAN 6 FEET FROM THE NEAR EDGE OF THE SIGN TO THE NEAR EDGE OF AN ADJACENT TRAVEL LANE ON ROADWAYS WITH PAVED SHOULDERS. WHEN CURB & CUTTER IS PRESENT, INSTALL THE SIGN NO LESS THAN 2 FEET FROM THE NEAR EDGE OF THE SIGN TO THE FACE OF THE CURB.
4. ALL SIGNS MOUNTED ON PORTABLE SIGN SUPPORTS SHALL HAVE A MINIMUM MOUNTING HEIGHT OF 5 FEET FROM THE GROUND TO THE BOTTOM OF THE SIGN. ALL SIGNS MOUNTED ON GROUND MOUNTED U-CHANNEL OR SQUARE STEEL TUBE POSTS SHALL HAVE A MINIMUM MOUNTING HEIGHT OF 7 FEET FROM THE GRADE ELEVATION OF THE NEAR EDGE OF THE ADJACENT TRAVEL LANE TO THE BOTTOM OF THE SIGN UNLESS OTHERWISE DIRECTED BY THE DEPARTMENT. MOUNT ALL SIGNS STRAIGHT AND LEVEL AND WITH THE FACE OF THE SIGNS PERPENDICULAR TO THE SURFACE OF THE ROADWAY.
5. REFLECTORIZE ORANGE ADVANCE WARNING SIGNS AND ANY ORANGE AREAS OF A MULTI-COLORED ADVANCE WARNING SIGN WITH A FLUORESCENT ORANGE COLORED PRISMATIC RETROREFLECTIVE SHEETING. REFLECTORIZE WHITE REGULATORY SIGNS AND ANY WHITE AREAS OF A MULTI-COLORED ADVANCE WARNING SIGN WITH A WHITE COLORED PRISMATIC RETROREFLECTIVE SHEETING.
6. ALL TRAFFIC CONTROL DEVICES SHALL COMPLY WITH THE REQUIREMENTS OF NCHRP REPORT 350 OR THE AASHTO MANUAL FOR ASSESSING SAFETY HARDWARE (MASH) AND SHALL REQUIRE APPROVAL BY THE DEPARTMENT. ONLY THOSE TRAFFIC CONTROL DEVICES INCLUDED ON THE "APPROVED PRODUCTS LIST FOR TRAFFIC CONTROL DEVICES IN WORK ZONES" ARE CONSIDERED ACCEPTABLE FOR USE. THIS LIST MAY BE ACCESSED ON THE DEPARTMENT'S WEB SITE AT: www.scdot.org .
7. REFLECTORIZATION OF 36" TRAFFIC CONES USED DURING DAYLIGHT HOURS IS NOT REQUIRED. IN THE EVENT A DAYTIME FLAGGING OPERATION EXTENDS INTO THE NIGHTTIME HOURS, REPLACE ALL 36" TRAFFIC CONES WITH EITHER PORTABLE PLASTIC DRUMS OR 42" OVERSIZED TRAFFIC CONES. REFLECTORIZE ALL PORTABLE PLASTIC DRUMS AND 42" OVERSIZED TRAFFIC CONES WITH TYPE III OR GREATER FLEXIBLE MICROPRISMATIC RETROREFLECTIVE SHEETING UNLESS OTHERWISE DIRECTED BY THE DEPARTMENT.
8. DELINEATE THE TANGENT AREA OF THE LANE CLOSURE WITH THE NECESSARY TRAFFIC CONTROL DEVICES TO MINIMIZE ENCROACHMENT BY MOTORISTS INTO THE CLOSED TRAVEL LANE UNLESS OTHERWISE DIRECTED BY THE ENGINEER. ON ROADWAYS WITH POSTED REGULATORY SPEED LIMITS OF 35 MPH OR LESS, INSTALL THE TRAFFIC CONTROL DEVICES AT SPACING INTERVALS OF 25 FEET. ON ROADWAYS WITH POSTED REGULATORY SPEED LIMITS OF 40 MPH OR GREATER, INSTALL THE TRAFFIC CONTROL DEVICES AT SPACING INTERVALS OF 50 FEET. SEE TABLE B.

ADVANCE WARNING ARROW PANEL -

1. DURING FLAGGING OPERATIONS, AN ADVANCE WARNING ARROW PANEL SHALL OPERATE IN THE "FOUR CORNERS" CAUTION MODE WHEN LOCATED WITHIN OR IN BETWEEN THE LIMITS OF THE ADVANCE WARNING SIGN ARRAYS SPECIFIC TO A FLAGGING OPERATION. OPERATION OF AN ADVANCE WARNING ARROW PANEL IN AN ARROW, CHEVRON OR ANY OTHER TYPE OF CAUTION MODE OTHER THAN THE "FOUR CORNERS" CAUTION MODE WHEN LOCATED WITHIN OR IN BETWEEN THE LIMITS OF THE ADVANCE WARNING SIGN ARRAYS AS SPECIFIED HEREINBEFORE IS PROHIBITED.
2. ALL ADVANCE WARNING ARROW PANELS SHALL COMPLY WITH THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, LATEST EDITION. THE SPECIFIC LOCATION OF AN ADVANCE WARNING ARROW PANEL MAY REQUIRE ADJUSTMENTS DUE TO HORIZONTAL AND/OR VERTICAL ALIGNMENT OR OTHER SIGHT DISTANCE RESTRICTIONS.

TRUCK MOUNTED ATTENUATOR -

1. A TRUCK MOUNTED ATTENUATOR IS OPTIONAL. UTILIZATION OF A TRUCK MOUNTED ATTENUATOR SHOULD BE CONSIDERED WHEN THE MINIMUM DISTANCE REQUIREMENTS FOR THE "BUFFER SPACE" ARE UNAVAILABLE DUE TO FIELD CONDITIONS. HOWEVER, A TRAILER MOUNTED ADVANCE WARNING ARROW PANEL MAY BE UTILIZED IN PLACE OF A TRUCK MOUNTED ATTENUATOR DURING TRAFFIC CONTROL SETUPS FOR WORK ACTIVITIES SUCH AS ASPHALT CONCRETE PLACEMENT OPERATIONS WHEN APPROVED BY THE ENGINEER.
2. WHEN UTILIZING A TRUCK MOUNTED ATTENUATOR, ENSURE THE TRUCK HAS THE CORRECT GROSS VEHICULAR WEIGHT (GVM) REQUIRED FOR THE TYPE OF TRUCK MOUNTED ATTENUATOR BEING UTILIZED. A DIRECT TRUCK MOUNTED TRUCK MOUNTED ATTENUATOR, A UNIT MOUNTED AND ATTACHED TO BRACKETS OR SIMILAR DEVICES CONNECTED TO THE FRAME OF THE TRUCK, REQUIRES A TRUCK WITH A MINIMUM GVM OF 15,000 POUNDS (ACTUAL WEIGHT) UNLESS OTHERWISE DIRECTED BY THE DEPARTMENT. A TRAILER TOWED TRUCK MOUNTED ATTENUATOR, A TRAILER TYPE UNIT TOWED FROM BEHIND AND ATTACHED TO THE FRAME OF THE TRUCK VIA A PINTLE HOOK / HITCH, REQUIRES A TRUCK WITH A MINIMUM GVM OF 10,000 POUNDS (ACTUAL WEIGHT) UNLESS OTHERWISE DIRECTED BY THE DEPARTMENT. IF THE ADDITION OF SUPPLEMENTAL WEIGHT TO THE VEHICLE AS BALLAST IS NECESSARY, CONTAIN THE MATERIAL WITHIN A STRUCTURE CONSTRUCTED OF STEEL. CONSTRUCT THIS STEEL STRUCTURE TO HAVE A MINIMUM OF FOUR (4) SIDES AND A BOTTOM. A TOP IS OPTIONAL. BOLT THIS STRUCTURE TO THE FRAME OF THE TRUCK. UTILIZE A SUFFICIENT NUMBER OF FASTENERS FOR ATTACHMENT OF THE STEEL STRUCTURE TO THE FRAME OF THE TRUCK TO ENSURE THE STRUCTURE WILL NOT SEPARATE FROM THE FRAME OF THE TRUCK DURING AN IMPACT UPON THE TRUCK MOUNTED ATTENUATOR. UTILIZE EITHER DRY LOOSE SAND OR STEEL REINFORCED CONCRETE FOR BALLAST MATERIAL WITHIN THE STEEL STRUCTURE TO ACHIEVE THE NECESSARY WEIGHT. THE BALLAST MATERIAL SHALL REMAIN CONTAINED WITHIN THE CONFINES OF THE STEEL STRUCTURE IN ITS ENTIRETY AND SHALL NOT PROTRUDE FROM THE STEEL STRUCTURE IN ANY MANNER.
3. LOCATE THE TRUCK MOUNTED ATTENUATOR APPROXIMATELY 100 FEET IN ADVANCE OF THE "WORK ACTIVITY AREA" UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
4. PROVIDE, INSTALL AND MAINTAIN THE TRUCK MOUNTED ATTENUATOR AS SPECIFIED BY THE STANDARD SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER.

GENERAL -

1. CONDUCT THE WORK IN SUCH A MANNER SO AS NOT TO ENCROACH ONTO THE ADJACENT TRAVEL LANE OPEN TO TRAFFIC. INSTALL, MAINTAIN AND ADJUST THE TRAFFIC CONTROL DEVICES AS NECESSARY TO ENSURE PROPER DELINEATION OF THE WORK AREA.
2. IF WORK IS BEING CONDUCTED AT TWO DIFFERENT LOCATIONS AT THE SAME TIME, SEPARATE THE TWO LOCATIONS BY NO LESS THAN 2 MILES FROM THE LAST TRAFFIC CONTROL DEVICE IN THE "DOWNSTREAM TAPER" OF THE FIRST LANE CLOSURE TO THE FIRST TRAFFIC CONTROL DEVICE IN THE "APPROACH TAPER" OF THE SECOND LANE CLOSURE ENCOUNTERED BY A MOTORIST UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
3. THE DEPARTMENT RESERVES THE RIGHT TO RESTRICT WORK OPERATIONS AND/OR WITHHOLD THE MONTHLY ESTIMATE IF THE TRAFFIC CONTROL IS NOT PROPERLY INSTALLED AND MAINTAINED AS DIRECTED BY THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, THE STANDARD DRAWINGS, THE PLANS AND/OR THE ENGINEER.

TABLE A

SIGN PLACEMENT INTERVALS	
SPEED LIMIT	✳
\# ≤ 35 MPH LOW SPEED	200
\# 40 - 50 MPH INTERMEDIATE SPEED	350
\# 55 MPH HIGH SPEED	500

\# REGULATORY POSTED SPEED LIMIT PRIOR TO BEGINNING WORK

TABLE B

TRAFFIC CONTROL DEVICE SPACING INTERVALS WORK ACTIVITY / BUFFER SPACE AREAS	
SPEED LIMIT	SPACING INTERVALS
≤ 35 MPH	25 FEET
40 - 55 MPH	50 FEET

WORK ZONE TRAFFIC CONTROL ENGINEER

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER NO. 24242 WILLIE E. McCONNELL, JR

SIGNATURE 6/1/2018 DATE

#	DATE	CHK	DESCRIPTION
5			
4			
3			
2			
1	4-27-18	WEM	REVISED FLAGGING OPERATIONS NOTE 1
0	1-14-15	JCS	NEW DRAWING

SCDOT

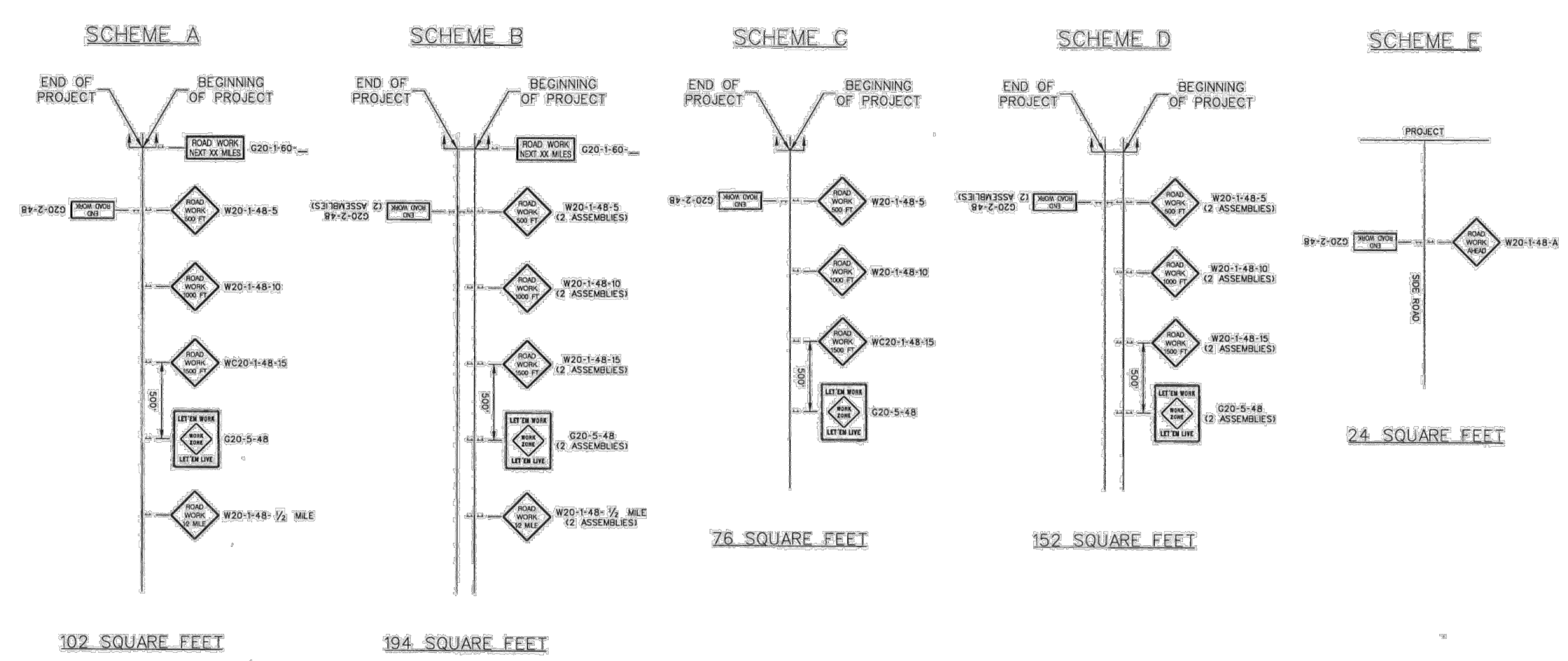
SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION
DESIGN STANDARDS OFFICE
955 PARK STREET
ROOM 405
COLUMBIA, SC 29201

STANDARD DRAWING

FLAGGING OPERATIONS TWO-LANE TWO-WAY PRIMARY & SECONDARY ROUTES

610-005-00

EFFECTIVE LETTING DATE JAN 2019 THIS DRAWING IS NOT TO SCALE



GENERAL NOTES

1. ALL SIGN LOCATIONS ARE TO BE MEASURED FROM THE WORK AREA. THE WORK LIMITS FOR THE PROJECT WILL BE DETERMINED BY THE ENGINEER AND AS INDICATED IN THE CONTRACT.
2. INSTALL ALL PERMANENT CONSTRUCTION SIGNS ON APPROVED GROUND MOUNTED SIGN POSTS UNLESS OTHERWISE DIRECTED BY THE DEPARTMENT. UTILIZE EITHER 3 PPF U-CHANNEL OR SQUARE STEEL TUBE POSTS FOR THESE INSTALLATIONS. INSTALL EACH PERMANENT CONSTRUCTION SIGN ASSEMBLY NO LESS THAN 2 FEET FROM THE NEAR EDGE OF A PAVED SHOULDER OR THE FACE OF A CURB OR 6-12 FEET FROM THE NEAR EDGE OF AN ADJACENT TRAVEL LANE WITHOUT THE PRESENCE OF A PAVED SHOULDER OR A CURB & GUTTER TO THE NEAREST EDGE OF THE SIGN ASSEMBLY. ALSO, MOUNT EACH PERMANENT CONSTRUCTION SIGN ASSEMBLY TO PROVIDE A MOUNTING HEIGHT OF NO LESS THAN 7 FEET OR NO GREATER THAN 8 FEET FROM THE BOTTOM EDGE OF THE PRIMARY SIGN TO THE GRADE ELEVATION OF THE NEAR EDGE OF THE ADJACENT TRAVEL LANE. HOWEVER, IF A SECONDARY SIGN IS MOUNTED BELOW THE PRIMARY SIGN, MOUNT THE SIGN ASSEMBLY TO PROVIDE A MOUNTING HEIGHT OF NO LESS THAN 6 FEET FROM THE BOTTOM EDGE OF THE SECONDARY SIGN TO THE GRADE ELEVATION OF THE NEAR EDGE OF THE ADJACENT TRAVEL LANE. PROVIDE AND UTILIZE SPECIAL SIGN MOUNTING DEVICES AND HARDWARE AS NECESSARY FOR INSTALLING PERMANENT CONSTRUCTION SIGN ASSEMBLIES IN AREAS WHERE CONCRETE MEDIAN BARRIER WALLS, BRIDGE PARAPET WALLS OR DOUBLEFACED GUARDRAIL ARE PRESENT.
3. MOUNT ALL FLAT SHEET PERMANENT CONSTRUCTION SIGNS STRAIGHT AND LEVEL AND WITH THE FACE OF THE SIGNS PERPENDICULAR TO THE SURFACE OF THE ROADWAY.
4. REFLECTORIZE ALL ORANGE PERMANENT CONSTRUCTION SIGNS AND ANY ORANGE AREAS OF MULTICOLORED PERMANENT CONSTRUCTION SIGNS WITH A FLUORESCENT ORANGE COLORED PRISMATIC RETROREFLECTIVE SHEETING. REFLECTORIZE ALL WHITE PERMANENT CONSTRUCTION SIGNS AND ANY WHITE AREAS OF MULTICOLORED PERMANENT CONSTRUCTION SIGNS WITH A WHITE COLORED PRISMATIC RETROREFLECTIVE SHEETING.
5. SPACINGS INDICATED ARE FOR NORMAL CONDITIONS: ADJUSTMENTS MAY BE REQUIRED DUE TO HORIZONTAL AND/OR VERTICAL ALIGNMENTS OR OTHER SIGHT DISTANCE RESTRICTIONS.
6. ALL TRAFFIC CONTROL DEVICES SHALL COMPLY WITH ALL NCHRP REPORT 350 REQUIREMENTS AND SHALL REQUIRE APPROVAL BY THE DEPARTMENT. ONLY THOSE TRAFFIC CONTROL DEVICES INCLUDED ON THE "APPROVED PRODUCTS LIST FOR TRAFFIC CONTROL DEVICES IN WORK ZONES" ARE CONSIDERED ACCEPTABLE FOR USE. THIS LIST MAY BE ACCESSED ON THE DEPARTMENT'S WEB SITE AT: www.scdot.org .
7. THE DEPARTMENT RESERVES THE RIGHT TO RESTRICT WORK OPERATIONS AND/OR WITHHOLD THE MONTHLY ESTIMATE IF THE TRAFFIC CONTROL IS NOT PROPERLY INSTALLED AND MAINTAINED AS DIRECTED BY THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, THE STANDARD DRAWINGS, THE PLANS AND/OR THE ENGINEER.

THIS DRAWING IS NOT TO SCALE

REFERENCES

WORK ZONE TRAFFIC CONTROL ENGINEER

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER NO. 24242 WILLIE E. McCONNELL, JR

SIGNATURE 8/2/12 DATE

#	DATE	CHK	DESCRIPTION
6			
5			
4			
3			
2			
1	1-9-12	JCS	GENERAL UPDATE
0	8-13-07	JCS	DRAWING NO. UPDATE

SCDOT

SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION
DESIGN STANDARDS OFFICE
955 PARK STREET
ROOM 405
COLUMBIA, SC 29201

STANDARD DRAWING

CONSTRUCTION SIGNING PERMANENT PRIMARY ROUTES

605-010-02

EFFECTIVE LETTING DATE JAN. 2013

SOUTH CAROLINA THOMAS & HUTTON ENGINEERING CO. No. C00285 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER No. 26573 MARCUS B. SANDERSON

NO.	REVISIONS	BY	DATE

THOMAS & HUTTON
1501 Main Street • Suite 760
Columbia, SC 29201 • 803.451.6789
www.thomasandhutton.com

COLLETON COUNTY CAPITAL PROJECTS

COLLETON COUNTY, SC

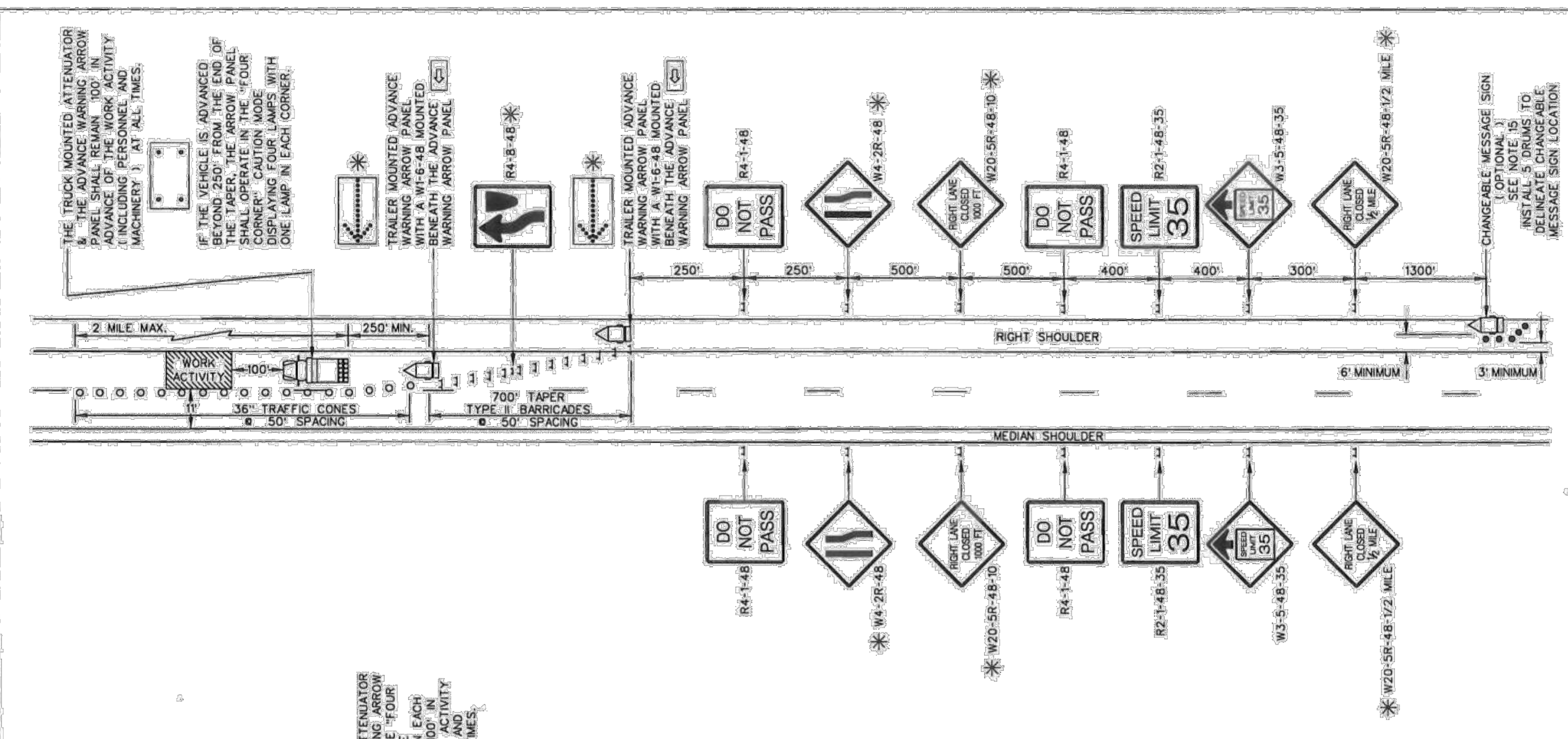
FLOYD BUCKNER BUILDING DEMOLITION & REMEDIATION IMPROVEMENTS

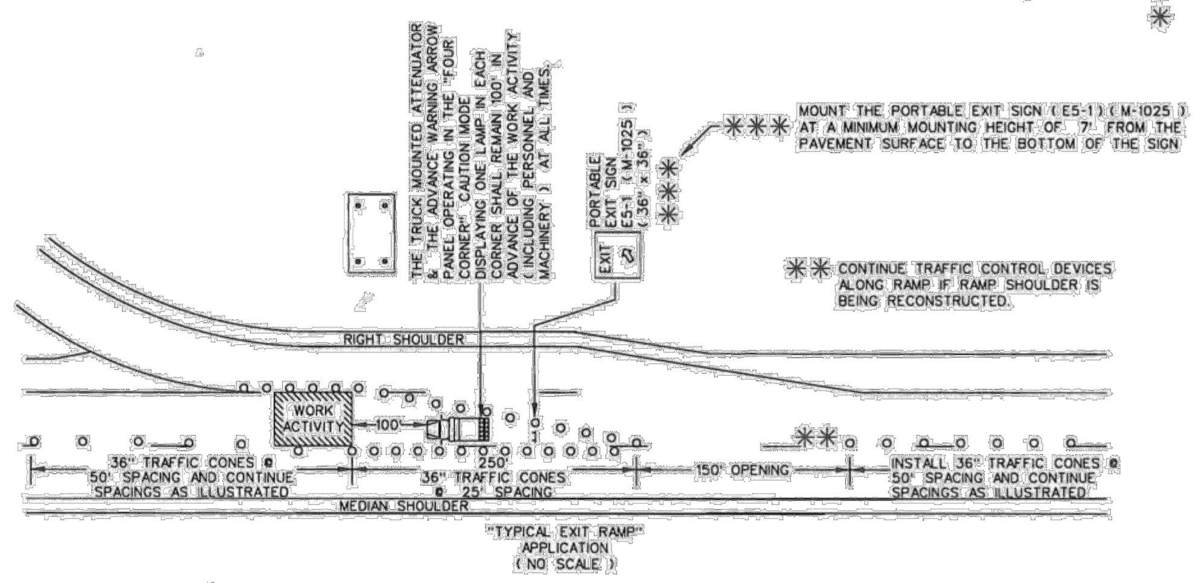
SITE DETAILS

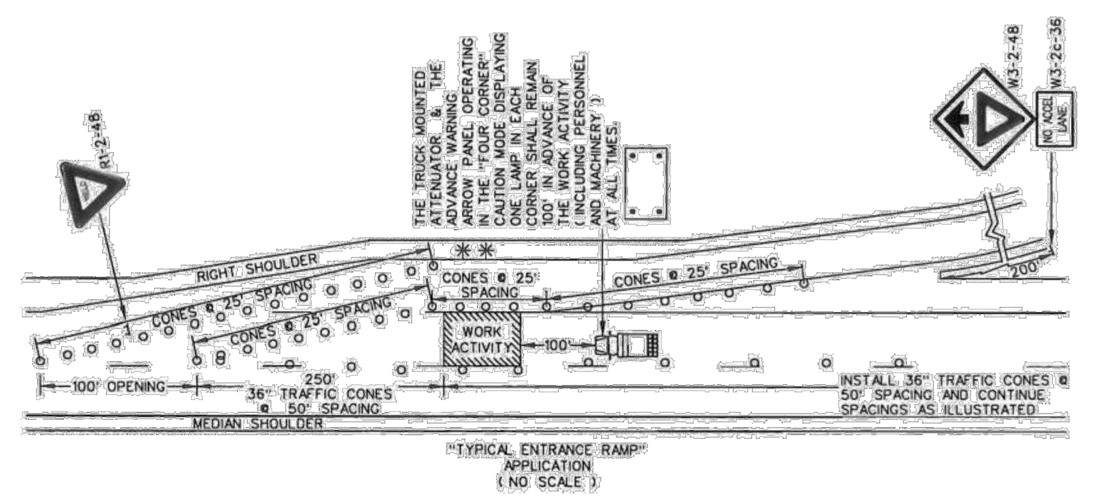
JOB NO:	J-28711.0000
DATE:	10/19/2020
DRAWN:	HRC
DESIGNED:	HRC
REVIEWED:	MBS
APPROVED:	MBS
SCALE:	N/A

C2.1

REFERENCES







GENERAL NOTES

1. ALL SIGN LOCATIONS ARE TO BE MEASURED FROM THE WORK AREA. WORK LIMITS FOR THE PROJECT WILL BE DETERMINED BY THE ENGINEER AND AS INDICATED IN THE CONTRACT.
2. INSTALL ADVANCE WARNING SIGNS MOUNTED ON PORTABLE SIGN SUPPORTS NO LESS THAN 4 FEET FROM THE NEAR EDGE OF THE SIGN TO THE NEAR EDGE OF AN ADJACENT TRAVEL LANE ON ROADWAYS WITH EARTH SHOULDERS AND NO LESS THAN 6 FEET FROM THE NEAR EDGE OF THE SIGN TO THE NEAR EDGE OF AN ADJACENT TRAVEL LANE ON ROADWAYS WITH PAVED SHOULDERS. WHEN CURB & GUTTER IS PRESENT, INSTALL THE SIGN NO LESS THAN 2 FEET FROM THE NEAR EDGE OF THE SIGN TO THE FACE OF THE CURB.
3. SPACINGS INDICATED ARE FOR NORMAL CONDITIONS; ADJUSTMENTS MAY BE REQUIRED DUE TO HORIZONTAL AND/OR VERTICAL ALIGNMENTS OR OTHER SIGHT DISTANCE RESTRICTIONS.
4. ALL SIGNS MOUNTED ON PORTABLE SIGN SUPPORTS SHALL HAVE A MINIMUM MOUNTING HEIGHT OF 5 FEET FROM THE GROUND TO THE BOTTOM OF THE SIGN. ALL SIGNS MOUNTED ON GROUND MOUNTED U-CHANNEL POSTS OR SQUARE STEEL TUBE POSTS SHALL HAVE A MINIMUM MOUNTING HEIGHT OF 7 FEET FROM THE GRADE ELEVATION OF THE NEAR EDGE OF THE ADJACENT TRAVEL LANE TO THE BOTTOM OF THE SIGN UNLESS OTHERWISE DIRECTED BY THE DEPARTMENT. MOUNT ALL SIGNS STRAIGHT AND LEVEL AND WITH THE FACE OF THE SIGNS PERPENDICULAR TO THE SURFACE OF THE ROADWAY.
5. REFLECTORIZE ORANGE ADVANCE WARNING SIGNS AND ANY ORANGE AREAS OF A MULTI-COLORED ADVANCE WARNING SIGN WITH A FLUORESCENT ORANGE COLORED PRISMATIC RETROREFLECTIVE SHEETING. REFLECTORIZE WHITE REGULATORY SIGNS AND ANY WHITE AREAS OF A MULTI-COLORED ADVANCE WARNING SIGN WITH A WHITE COLORED PRISMATIC RETROREFLECTIVE SHEETING.
6. ALL TRAFFIC CONTROL DEVICES SHALL COMPLY WITH ALL NCHRP REPORT 350 REQUIREMENTS AND SHALL REQUIRE APPROVAL BY THE DEPARTMENT. ONLY THOSE TRAFFIC CONTROL DEVICES INCLUDED ON THE "APPROVED PRODUCTS LIST FOR TRAFFIC CONTROL DEVICES IN WORK ZONES" ARE CONSIDERED ACCEPTABLE FOR USE. THIS LIST MAY BE ACCESSED ON THE DEPARTMENT'S WEB SITE AT: www.scdot.org .
7. THE CONTRACTOR SHALL PROVIDE AND UTILIZE ANY SPECIAL SIGN MOUNTING ASSEMBLIES AND HARDWARE THAT MAY BE NECESSARY FOR INSTALLING AND MOUNTING SIGNS IN AREAS OF CONCRETE MEDIAN BARRIER, BRIDGE PARAPET WALLS OR DOUBLEFACED GUARDRAIL.
8. REFLECTORIZATION OF 36" TRAFFIC CONES USED DURING DAYLIGHT HOURS IS NOT REQUIRED. IF THIS TRAFFIC CONTROL SETUP EXTENDS INTO THE NIGHTTIME HOURS, REPLACE ALL 36" TRAFFIC CONES WITH EITHER PORTABLE PLASTIC DRUMS OR 42" OVERSIZED TRAFFIC CONES. REFLECTORIZE ALL PORTABLE PLASTIC DRUMS AND 42" OVERSIZED TRAFFIC CONES WITH TYPE III FLEXIBLE PRISMATIC RETROREFLECTIVE SHEETING UNLESS OTHERWISE DIRECTED BY THE DEPARTMENT.
9. REFLECTORIZE ALL BARRICADES WITH A TYPE VIII OR IX PRISMATIC RETROREFLECTIVE SHEETING ON ALL PROJECTS LET TO CONTRACT AFTER MAY 1, 2012 UNLESS OTHERWISE DIRECTED BY THE DEPARTMENT.
10. TYPE II BARRICADES SHALL HAVE A MINIMUM WIDTH OF 3 FEET UNLESS OTHERWISE DIRECTED BY THE DEPARTMENT.
11. CONDUCT THE WORK IN SUCH A MANNER THAT WILL MINIMIZE ENCROACHMENT OF TRAFFIC CONTROL DEVICES, EQUIPMENT, PERSONNEL, MATERIALS OR ANY WORK RELATED VEHICLES ONTO AN ADJACENT TRAVEL LANE OPEN TO TRAFFIC. INSTALL, MAINTAIN AND ADJUST THE TRAFFIC CONTROL DEVICES AS NECESSARY TO ENSURE PROPER DELINEATION OF THE WORK AREA.
12. LANE CLOSURES ARE RESTRICTED TO MAXIMUM LENGTHS OF 2 MILES UNLESS OTHERWISE DIRECTED BY THE SPECIAL PROVISIONS AND/OR THE DEPARTMENT.
13. IF WORK IS BEING CONDUCTED SIMULTANEOUSLY AT TWO DIFFERENT LOCATIONS WITHIN THE SAME TRAVEL LANE UNDER TWO SEPARATE LANE CLOSURES ON A PRIMARY ROADWAY WITH A POSTED REGULATORY SPEED LIMIT OF 40 MPH OR GREATER, SEPARATE THE TWO LANE CLOSURES BY NO LESS THAN 2 MILES FROM THE END OF THE FIRST CLOSURE THAT A MOTORIST WILL ENCOUNTER TO THE BEGINNING OF THE TAPER OF THE SECOND CLOSURE.
14. IF WORK IS BEING CONDUCTED SIMULTANEOUSLY AT TWO DIFFERENT LOCATIONS IN THE SAME DIRECTION BUT WITHIN DIFFERENT TRAVEL LANES UNDER TWO SEPARATE LANE CLOSURES ON A PRIMARY ROADWAY WITH A POSTED REGULATORY SPEED LIMIT OF 40 MPH OR GREATER, SEPARATE THE TWO LANE CLOSURES BY NO LESS THAN 4 MILES FROM THE END OF THE FIRST CLOSURE THAT A MOTORIST WILL ENCOUNTER TO THE BEGINNING OF THE TAPER OF THE SECOND CLOSURE.
15. UTILIZATION OF A CHANGEABLE MESSAGE SIGN IS OPTIONAL WITH THIS TRAFFIC CONTROL SETUP. HOWEVER, WHEN A CHANGEABLE MESSAGE SIGN IS UTILIZED, INSTALL THE SIGN AS ILLUSTRATED ON THIS STANDARD DRAWING UNLESS OTHERWISE DIRECTED BY THE SPECIAL PROVISIONS, THE PLANS AND/OR THE ENGINEER. INSTALL THE CHANGEABLE MESSAGE SIGN NO LESS THAN 6 FEET FROM THE NEAR EDGE OF THE ADJACENT TRAVEL LANE AND SUPPLEMENT THE SIGN LOCATION WITH NO LESS THAN 5 PORTABLE PLASTIC DRUMS FOR DELINEATION AS ILLUSTRATED. 36" STANDARD TRAFFIC CONES OR 42" OVERSIZED TRAFFIC CONES ARE PROHIBITED AS SUBSTITUTES FOR THE PORTABLE PLASTIC DRUMS IN THIS APPLICATION. DURING A RIGHT LANE CLOSURE, THE SIGN SHOULD FLASH ALTERNATELY TO READ "RIGHT LANE CLOSED", "MERGE LEFT" AT A RATE THAT WILL PERMIT MOTORISTS TO READ BOTH MESSAGES AT LEAST ONCE.
16. THE DEPARTMENT RESERVES THE RIGHT TO RESTRICT WORK OPERATIONS AND/OR WITHHOLD THE MONTHLY ESTIMATE IF THE TRAFFIC CONTROL IS NOT PROPERLY INSTALLED AND MAINTAINED AS DIRECTED BY THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, THE STANDARD DRAWINGS, THE PLANS AND/OR THE ENGINEER.
17. THIS TYPICAL TRAFFIC CONTROL SETUP APPLIES TO THE INSTALLATION OF A LANE CLOSURE ON A PRIMARY ROADWAY WITH A POSTED REGULATORY SPEED LIMIT OF 40 MPH OR GREATER.

✳ LEFT LANE CLOSURE

1. SIGNS ILLUSTRATED ARE FOR A RIGHT LANE CLOSURE.
2. WHEN CLOSING THE LEFT TRAVEL LANE, USE THE FOLLOWING:
   2 = W20-5L-48-10 2 = W20-5L-48-1/2 MILE
   2 = W4-2L-48 1 = R4-7-48
3. THE STRIPES ON THE BARRICADES TO THE LEFT OF TRAFFIC SHALL SLOPE DOWNWARD FROM THE UPPER LEFT TO THE LOWER RIGHT.
4. THE FLASHING ARROW AND THE "LARGE ARROW" SIGN (W1-6-48) SHALL POINT TO THE RIGHT.
5. THE CHANGEABLE MESSAGE SIGN SHALL FLASH ALTERNATELY TO READ "LEFT LANE CLOSED", "MERGE RIGHT".

PORTABLE TRUCK MOUNTED ATTENUATOR

1. UTILIZE A TRUCK MOUNTED ATTENUATOR ATTACHED TO THE REAR OF A TRUCK WITH A MINIMUM GROSS VEHICULAR WEIGHT (GVM) OF 15,000 POUNDS (ACTUAL WEIGHT). IF THE ADDITION OF SUPPLEMENTAL WEIGHT TO THE VEHICLE AS BALLAST IS NECESSARY, CONTAIN THE MATERIAL WITHIN A STRUCTURE CONSTRUCTED OF STEEL. CONSTRUCT THIS STEEL STRUCTURE TO HAVE A MINIMUM OF FOUR SIDES AND A BOTTOM. A TOP IS OPTIONAL. BOLT THIS STRUCTURE TO THE FRAME OF THE TRUCK. UTILIZE A SUFFICIENT NUMBER OF FASTENERS FOR ATTACHMENT OF THE STEEL STRUCTURE TO THE FRAME OF THE TRUCK TO ENSURE THE STRUCTURE WILL NOT SEPARATE FROM THE FRAME OF THE TRUCK DURING AN IMPACT UPON THE ATTACHED TRUCK MOUNTED ATTENUATOR. UTILIZE EITHER DRY LOOSE SAND OR STEEL REINFORCED CONCRETE FOR BALLAST MATERIAL WITHIN THE STEEL STRUCTURE TO ACHIEVE THE NECESSARY WEIGHT. THE BALLAST MATERIAL SHALL REMAIN CONTAINED WITHIN THE CONFINES OF THE STEEL STRUCTURE AND SHALL NOT PROTRUDE FROM THE STEEL STRUCTURE IN ANY MANNER.
2. LOCATE THE TRUCK MOUNTED ATTENUATOR 100 FEET IN ADVANCE OF THE WORK AREA UNLESS OTHERWISE SPECIFIED.
3. PROVIDE, INSTALL AND MAINTAIN THE TRUCK MOUNTED ATTENUATOR AS SPECIFIED BY THE STANDARD SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER.
4. DUE TO THE WEIGHT OF A TRUCK MOUNTED ATTENUATOR, THE TRUCK MOUNTED ATTENUATOR SUPPLEMENTED WITH AN ADVANCE WARNING ARROW PANEL MAY BE REPLACED WITH A TRAILER MOUNTED ADVANCE WARNING ARROW PANEL WHEN THIS TRAFFIC CONTROL SETUP IS UTILIZED FOR ASPHALT CONCRETE PAVEMENT OPERATIONS. REPLACEMENT WITH A TRAILER MOUNTED ADVANCE WARNING ARROW PANEL SHALL REQUIRE THE ENGINEER'S APPROVAL.

ADVANCE WARNING ARROW PANEL

ALL ADVANCE WARNING ARROW PANELS SHALL BE 48" x 96" WITH A MINIMUM LEGIBILITY DISTANCE OF 1 MILE. PLACEMENT OF AN ADVANCE WARNING ARROW PANEL MAY REQUIRE ADJUSTMENTS DUE TO HORIZONTAL AND/OR VERTICAL ALIGNMENT OR OTHER SIGHT DISTANCE RESTRICTIONS. THE PANEL FACE SHALL BE NONREFLECTIVE BLACK. ALL ADVANCE WARNING ARROW PANELS SHALL COMPLY WITH THE STANDARD SPECIFICATONS FOR HIGHWAY CONSTRUCTION, LATEST EDITION.

WHEN AN ADVANCE WARNING ARROW PANEL IS REQUIRED TO OPERATE IN THE CAUTION MODE, THE ADVANCE WARNING ARROW PANEL SHALL DISPLAY THE "FOUR CORNERS" CAUTION MODE, WITH ONE LAMP IN EACH CORNER. DISPLAY OF ANY OTHER TYPE OF CAUTION MODE OTHER THAN THE "FOUR CORNERS" CAUTION MODE SUCH AS THE "FLASHING BAR" OR THE "ALTERNATING DIAMOND" CAUTION MODES ARE UNACCEPTABLE AND PROHIBITED.

LEGEND

○ 36" TRAFFIC CONES

WORK ZONE TRAFFIC CONTROL ENGINEER

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER NO. 24242 WILLIE E. McCONNELL, JR

SIGNATURE

8/2/12

DATE

#	DATE	CHK	DESCRIPTION
5			
4			
3			
2			
1	2-15-11	JCS	GENERAL UPDATE
0	3-22-07	JCS	DRAWING NO. UPDATE

SCDOT

SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION

DESIGN STANDARDS OFFICE
955 PARK STREET
ROOM 405
COLUMBIA, SC 29201

STANDARD DRAWING

LANE CLOSURE
DAYTIME
MULTILANE
PRIMARY ROUTES

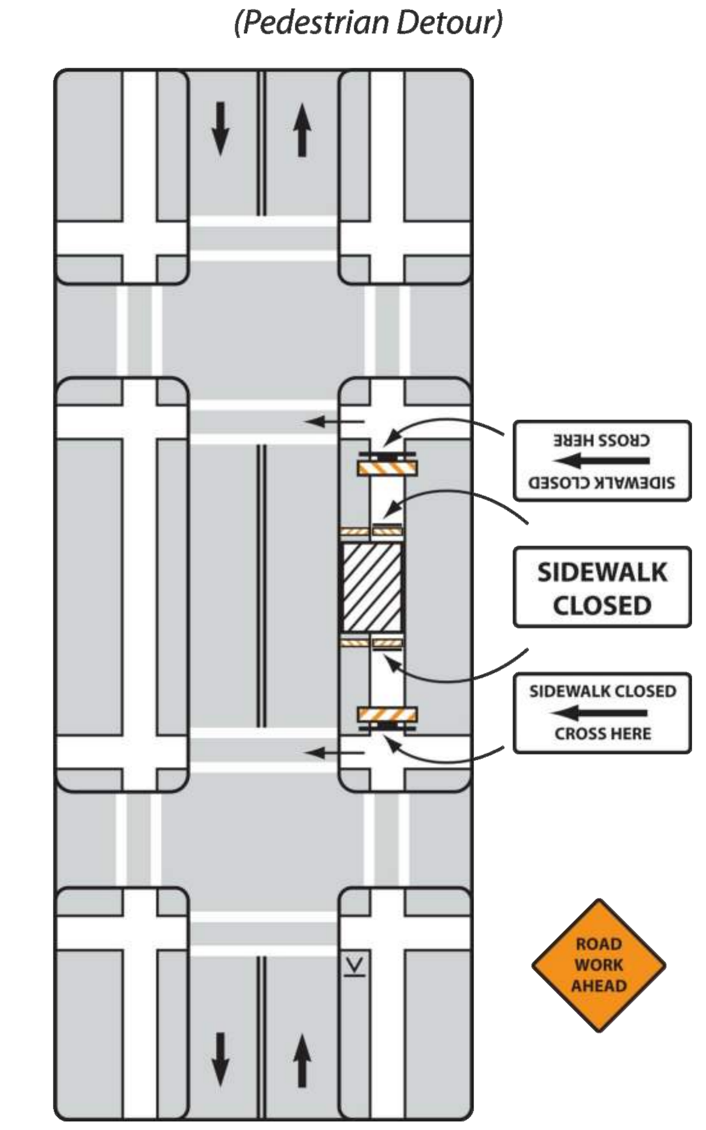
610-025-00

EFFECTIVE LETTING DATE JAN. 2013

THIS DRAWING IS NOT TO SCALE

Sidewalk Closure

(Pedestrian Detour)



Notes:

1. Where sidewalks exist, make provisions for persons with disabilities.
2. Only the traffic control devices controlling pedestrian flows are shown. Other devices may be needed to control traffic on the streets. Use lane closure signing as needed.
3. For nighttime closures, Type A flashing warning lights may be used on barricades that close walkways. Temporary street lighting may also be considered.

48

SOUTH CAROLINA THOMAS & HUTTON ENGINEERING CO. No. C00285 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER No. 26573 MARCUS LONNIE SANCHEZ 10/20/2020

NO	REVISIONS	BY	DATE
A	SCDOT COMMENTS	MCL	10/19/20

THOMAS & HUTTON

1501 Main Street • Suite 760
Columbia, SC 29201 • 803.451.6789
www.thomasandhutton.com

COLLETON COUNTY CAPITAL PROJECTS

COLLETON COUNTY, SC

FLOYD BUCKNER BUILDING DEMOLITION & REMEDIATION IMPROVEMENTS

SITE DETAILS

JOB NO:	J-28711.0000
DATE:	10/19/2020
DRAWN:	HRC
DESIGNED:	HRC
REVIEWED:	MBS
APPROVED:	MBS
SCALE:	N/A

C2.2

TECHNICAL SPECIFICATIONS

FOR
FLOYD BUCKNER BUILDING
DEMOLITION &
REMEDIATION IMPROVEMENTS
COLLETON COUNTY, SC

PREPARED FOR

COLLETON COUNTY
SOUTH CAROLINA

OCTOBER 2020
J –28711.0000

Prepared by:

THOMAS & HUTTON

www.thomasandhutton.com

TABLE OF CONTENTS

SECTION 01012

SOIL INVESTIGATION DATA FOR BIDDERS

SECTION 01012

SOIL INVESTIGATION DATA FOR BIDDERS

PART 1 – GENERAL

1.1 DESCRIPTION

A. This section includes subsurface data logs for information only.

1.2 SOIL INVESTIGATION DATA

A. Subsurface data logs are available for information only. Actual conditions may vary. If bidders are not satisfied with accuracy and completeness of all available data, they are at liberty to make borings or perform soil investigation work for their own use at its expense. If Contractor chooses to perform their own investigation, work shall be coordinated with the Engineer. Any results from Contractor's investigation shall be shared promptly with the Engineer. Owner reserves the right to share Contractor's investigation data with other potential bidders if information could affect bidding process.

B. The boring logs and test results are for information of the Contractor. Owner and Engineer assume no responsibility for the information.

PART 2 – PRODUCTS

See attached report.

PART 3 – EXECUTION

None this Section.

END OF SECTION

Terracon GeoReport

Buckner Building Demolition
Walterboro, South Carolina

October 16, 2020

Terracon Project No. EN205142

Prepared for:

Thomas and Hutton

Columbia, South Carolina

Prepared by:

Terracon Consultants, Inc.

North Charleston, South Carolina

October 16, 2020

Thomas and Hutton
1501 Main Street, Suite 760
Columbia, South Carolina 29461

Attn: Mr. Brad Sanderson, P.E.
P: 843-761-8000 ext. 4731
E: Sanderson.b@thomasandhutton.com

Re: Geotechnical Engineering Report
Buckner Building Demolition
213 N. Jefferies Boulevard
Walterboro, South Carolina
Terracon Project No. EN205142

Dear Mr. Sanderson:

Terracon Consultants, Inc. (Terracon) has completed the geotechnical engineering services for the above referenced project. This study was performed in general accordance with our proposal number PEN205142 dated August 25, 2020. This report presents the findings of the subsurface exploration and provides geotechnical recommendations concerning earthwork and construction for the proposed project.

We appreciate the opportunity to be of service to you on this project and look forward to providing additional Geotechnical Engineering and Construction Materials Testing services in the future. If you have any questions concerning this report, or if we may be of further service, please contact us.

Sincerely,
Terracon Consultants, Inc.

Will J. Botts, P.E.
Geotechnical Project Engineer
SC Registration No. 35805

SOUTH CAROLINA
TERRACON CONSULTANTS, INC. No. 2220
CERTIFICATE OF AUTHORIZATION

Thomas C. Smoak, III, P.E.
Geotechnical Department Manager

REPORT TOPICS

ATTACHMENTS

GEOTECHNICAL OVERVIEW

This report presents the results of our geotechnical investigation performed for the Buckner Building Demolition project in Walterboro, South Carolina. Our geotechnical scope of work for this project included conducting geotechnical fieldwork, associated engineering analysis, and this geotechnical engineering report.

This report provides recommendations for seismic considerations, site preparation, earthwork, and the other geotechnical related conditions that might affect the proposed construction. The following geotechnical considerations were identified during our investigation:

- We understand the existing Buckner Building was damaged by a tornado in April of 2020 and that the building will be demolished to allow the site to be redeveloped. A portion of the building has a basement which is located close to N. Jefferies Boulevard, so there is concern that demolition of the existing basement could cause stability issues of N. Jefferies Boulevard. Once the basement is demolished, the intent is to backfill the basement to allow for redevelopment.

- We understand that demolition and backfilling activities will occur up to approximately 5 feet away from the nearest edge of the N. Jefferies Boulevard roadway. With the roadway being in such close proximity to the existing wall and placed fill, there is concern the roadway may be affected.

- We initially assumed a sheet pile wall would need to be installed between the existing basement wall and N. Jefferies Boulevard to shore the roadway and allow for demolition of the building and basement wall. We have provided static and seismic soil parameters and lateral earth pressures in our **Lateral Earth Pressures** section for the sheet pile wall design.

- After some collaborative discussion with Thomas & Hutton regarding impacts to the SCDOT right-of-way, we understand that it is now desired to leave the existing basement wall in place and backfill in front of it, as this option would minimize impacts to the SCDOT right-of-way. Since the structural condition of the existing basement wall is unknown at this time, it is unclear how much demolition can take place before the structural integrity of the wall is compromised. If the floor framing above the basement is providing lateral support to the top of the basement wall, then demolishing the floor framing could cause the basement wall to fail. To overcome this issue, we recommend backfilling the area in front of the wall prior to demolishing the building. The **Demolition and Backfilling Considerations** section provides a discussion of this procedure.

- Alternatively, the basement wall can be shored or structurally braced from inside the basement area prior to demolition of the super structure. This could be accomplished using a combination of plates, whalers, diagonal bracing and poured in place concrete deadmen.

A structural engineer should evaluate the feasibility of this option and can used the soil parameters provided in the **Lateral Earth Pressures** section for design of the shoring system. Once demolition of the superstructure is completed, the basement area can be backfilled as described in this report.

- We recommend consideration be given to "wall and/or roadway monitoring" consisting of horizontal and vertical deflection measurements for the existing wall and N. Jefferies Boulevard to determine what impact, if any, demolition and fill placement may cause.

- The seismic design requirements for buildings and other structures are based on Seismic Design Category. Site Classification is required to determine the Seismic Design Category for a structure. The Site Classification is based on the upper 100 feet of the site profile defined by a weighted average value of either shear wave velocity, standard penetration resistance, or undrained shear strength in accordance with Section 20.4 of ASCE 7-16. Based on the results of our site characterization program, we conclude that Site Class F is appropriate for the subject site due to the presence of liquefiable soil.

- The seismic evaluation indicates that 1 ½ to 3 inches of liquefaction settlement is possible from liquefiable layers located at depths between 12 and 30 feet below existing grade. It should be noted that temporary structures are not typically designed for seismic loading conditions.

The recommendations presented herein have been developed on the basis of the subsurface conditions encountered during field investigation and our understanding of the proposed construction. Should changes in the project criteria occur, a review must be made by Terracon to determine if modifications to our recommendations will be required.

GEOTECHNICAL ENGINEERING REPORT
BUCKNER BUILDING DEMOLITION
WALTERBORO, SOUTH CAROLINA

Terracon Project No. EN205142
October 16, 2020

INTRODUCTION

This report presents the results of our subsurface exploration and geotechnical engineering services performed for the proposed Buckner Building Demolition project located in Walterboro, South Carolina. The purpose of these services is to provide information and geotechnical engineering recommendations relative to:

- subsurface soil conditions
- groundwater conditions
- earthwork and site preparation
- seismic evaluation per 2018 IBC
- soil design parameters
- other geotechnical design parameters

The geotechnical engineering scope of work for this project included the advancement of one Seismic Cone Penetration Test (SCPT) sounding to a depth of approximately 59 feet below the existing ground surface and one Cone Penetration Test (CPT) sounding to a depth of approximately 48 feet below existing grade. Adjacent to each sounding, a Hand Auger Boring (HAB) was performed to a depth of 4 feet below the existing ground surface. At CPT-2, near the southern most corner of the building and in the basement, we performed a Dynamic Cone Penetrometer (DCP) test within a hand auger boring to a depth of 4 feet below existing grades.

Maps showing the site and testing locations are shown in the **Site Location** and **Exploration Plan** sections, respectively, and logs of the borings are included in the **Exploration Results** section. These sections are included as attachments to this report.

PROJECT DESCRIPTION

Our initial understanding of the project was provided in our **Project Understanding** section in the Project Planning stage. During the period of collaboration that has transpired since the project was initiated, our understanding of the project conditions has been modified to reflect the following:

Item	Description
Information provided	Emails from Brad Sanderson and Karl Beker with Thomas & Hutton provided project information. Photographs of the existing damaged building were also provided.
Project Description	Based on the information provided, we understand the existing Buckner Building was damaged by a tornado in April of 2020. We understand that the building will be demolished to allow the site to be redeveloped. A portion of the building has a basement which is located close to N. Jefferies Boulevard, so there is concern that demolition of the existing basement could cause stability issues of N. Jefferies Boulevard. Once the basement is demolished, the intent is to backfill the basement to allow for redevelopment. It should be noted that the purpose of this investigation is not for the future development, but to evaluate the existing soil conditions at the site and to provide recommendations to improve the stability of the basement during demolition so that N. Jefferies Boulevard is not impacted by the work. The structural integrity of the existing wall is not known at this time, and this investigation did not investigate the structural integrity of the wall.
Grading/Slopes	Grading plans were not provided. We assume that up to 6 feet of fill will be placed as backfill in front of the existing basement wall.

SITE CONDITIONS

The following description of site conditions is based on our site visit in association with the field exploration.

Item	Description
Site Location	The project is located at 213 N. Jefferies Boulevard in Walterboro, South Carolina. ■ Approximate Latitude: 32.90336° ■ Approximate Longitude: -80.66751°
Existing topography	Based on visual observation, the western side of the building is approximately 6 feet lower in grade than the eastern side of the building closest to N. Jefferies Boulevard.
Current ground cover	The property is currently developed with an existing building, pavers, asphalt pavements and sidewalks. The basement floor is exposed earth.

GEOTECHNICAL MODEL

Subsurface Profile

Based on the results of the field exploration, the subsurface conditions on the project site, can be generalized as follows:

Description	Approx. Depth to Bottom of Stratum	Material Encountered[1]
Surface	4 to 12 inches	Topsoil
Stratum 1	27 feet	Loose to medium dense sand to silty sand
Stratum 2	38 feet	Medium stiff to stiff clay mixtures
Stratum 3	44 feet	Medium stiff to stiff silt mixtures
Stratum 4	59 feet[2]	Stiff to very stiff silty sand to sandy silt (Cooper Marl Formation[3])

1. Material descriptions are based on visual classification from HAB samples and correlations with in situ data.
2. Termination depth of deepest sounding.
3. The Cooper Marl Formation is a well-studied and uniform soil stratum consisting of silty sand to sandy silt approximately 100 to 200 feet thick in the greater Charleston area. This soil stratum is a typical bearing layer for deep foundations as well as the basis for earthquake modeling in the Charleston area.

Conditions encountered at each test location are indicated on the individual test records. Stratification boundaries on the test records represent the approximate location of changes in soil types. The transition between materials may be gradual. Details for each of the tests can be found in **Exploration Results**.

Groundwater Conditions

At the time of our exploration, groundwater was estimated at a depth of approximately 12 feet below the existing ground surface. The water levels observed during the field exploration are summarized in the following table and noted on the attached in-situ and HAB logs, in **Exploration Results**.

Test	Depth to Groundwater within Voids left from CPT Testing	Estimated Depth to Groundwater based on CPT Pore Pressure Data	Depth to Groundwater in Adjacent Hand Auger Boring / DCP
CPT-1	NE[1]	12.0 ft.	NE[1]
CPT-2	NE[1] – Cave in at 26.7’	12.0 ft.	NE[1]
DCP-3	NE[1]	NA[2]	NA[2]
DCP-4	NE[1]	NA[2]	NA[2]

1. NE – Not Encountered
2. NA – Not Applicable

Groundwater level fluctuations occur due to seasonal variations in the amount of rainfall, runoff and other factors not evident at the time the borings were performed. At this site, groundwater for the force main will also be influenced by fluctuations of the water level at the wetland crossing. Therefore, groundwater levels during construction or at other times in the life of the structure may be higher or lower than the levels indicated on the logs. The possibility of groundwater level fluctuations should be considered when developing the design and construction plans for the project. The groundwater surface should be checked prior to construction to assess its effect on site work and other construction activities.

Groundwater levels were measured using the following criteria:

- Physical observation within hand auger borings (HAB) voids.
- Where not physically encountered in HABs, groundwater levels are measured using a groundwater probe within the voids left by cone penetration (CPT) tests.
- Where not encountered within CPT voids, groundwater levels are estimated using the hydrostatic line (height of water below the ground surface) on the CPT porewater pressure (U) graph shown on the CPT logs.
- Unless otherwise specified on the logs or in the report, all groundwater measurements are collected during or immediately after drilling.

SEISMIC CONSIDERATIONS

The seismic design requirements for buildings and other structures are based on Seismic Design Category. Site Classification is required to determine the Seismic Design Category for a structure. The Site Classification is based on the upper 100 feet of the site profile defined by a weighted average value of either shear wave velocity, standard penetration resistance, or undrained shear strength in accordance with Section 20.4 of ASCE 7-16. Based on the results of our site characterization program, we conclude that Site Class F is appropriate for the subject site due to the presence of liquefiable soils.

Seismic Evaluation

According to the International Building Code 2018 edition (IBC 2018), structures are required to avoid collapse during a design earthquake event. The design earthquake has a 50-year exposure period with a 2% probability of exceedance (i.e. a 2500-year design earthquake) with a Moment Magnitude (Mw) of 7.3. The seismic evaluation of the site identified potentially liquefiable soils. According to the IBC (2018) and ASCE 7-16, this potential for liquefaction classifies the site as Site Class F.

ASCE 7-16 (Section 20.3.1) provides an exception to the Site Class recommendation for structure(s) with a fundamental period equal to or less than 0.5 seconds. This exception states that seismic design parameters can be determined using Site Class D in Tables 11.4-1 and 11.4-2 in

ASCE 7-16 to determine spectral accelerations for structural design. The structural engineer should verify this exception. If the proposed structures meet the requirements of the exception, then the following seismic design parameters can be used for the site:

Code Used	Site Classification
2018 International Building Code (IBC)[1]	F[2]
Seismic Design Parameter	**Value**
F_a[3]	1.182
F_v[3]	2.122
F_{PGA}	1.115
S_{DS}	0.626 g
S_{D1}	0.338 g
PGA_M[4]	0.541 g

1. In general accordance with the 2018 International Building Code and ASCE 7-16 Table 20.3-1.
2. Based upon the presence of liquefiable soils.
3. Determined using Site Class D in Tables 11.4-1 and 11.4-2 of ASCE 7-16. This assumes that the building meets the fundamental period exception outlined in section 20.3.1 of ASCE 7-16.
4. Based on procedures outlined in ASCE 7-16 for geotechnical hazards.

Liquefaction Potential

Due to the high seismicity of coastal South Carolina, we performed a liquefaction potential analysis for the site to evaluate the stability of the subgrade soils. Ground shaking at the foundation of structures and liquefaction of the soil under the foundation are the principal seismic hazards to be considered in design of earthquake-resistant structures. Liquefaction occurs when a rapid buildup in water pressure, caused by the ground motion, pushes sand particles apart, resulting in a loss of strength and later densification as the water pressure dissipates. This loss of strength can cause bearing capacity failure while the densification can cause excessive settlement. Potential earthquake damage can be mitigated by structural and/or geotechnical measures or procedures common to earthquake resistant design.

While the amount of settlement is dependent on the magnitude and distance from a seismic event, our data indicates the potential for liquefaction settlements to range from **1 ½ to 3 inches** under the design earthquake. Differential settlement may range from 50 to 100% of the total settlement depending on depth and amount of liquefaction, and location relative to a seismic event epicenter. While the structural engineer should review our estimates, liquefaction induced settlements of this magnitude do not typically require mitigation to support structures. It should be noted that temporary structures are not typically designed for seismic loading conditions.

EARTHWORK

We understand the existing Buckner Building was damaged by a tornado in April of 2020 and that the building will be demolished to allow the site to be redeveloped. A portion of the building has a basement which is located close to N. Jefferies Boulevard, so there is concern that demolition of the existing basement could cause stability issues of N. Jefferies Boulevard. Once the basement is demolished, the intent is to backfill the basement to allow for redevelopment.

We understand that demolition and backfilling activities will occur up to approximately 5 feet away from the nearest edge of the N. Jefferies Boulevard roadway. With the roadway being in such close proximity to the existing wall and placed fill, there is concern the roadway may be affected.

We initially assumed a sheet pile wall would need to be installed between the existing basement wall and N. Jefferies Boulevard to shore the roadway and allow for demolition of the building and basement wall. This is a feasible option, and we have provided static and seismic soil parameters and lateral earth pressures in our **Lateral Earth Pressures** section for the sheet pile wall design.

After some collaborative discussion with Thomas & Hutton regarding impacts to the SCDOT right-of-way, we understand that it is now desired to leave the existing basement wall in place and backfill in front of it, as this option would minimize impacts to the SCDOT right-of-way. Since the structural condition of the existing basement wall is unknown at this time, it is unclear how much demolition can take place before the structural integrity of the wall is compromised. If the floor framing above the basement is providing lateral support to the top of the basement wall, then demolishing the floor framing could cause the basement wall to fail. To overcome this issue, we recommend backfilling the area in front of the wall prior to demolishing the building. Backfilling considerations are provided in the following section. Once demolition of the superstructure is completed and the basement area is accessible to typical excavation and compaction equipment, the basement can be backfilled the rest of the way.

Demolition and Backfilling Considerations

As demolition of the existing building nears N. Jefferies Boulevard, we recommend demolition activities pause so that fill material can be placed against the existing basement wall to support the wall. The material can be sloped at 2:1 against the wall. The height of the sloped fill against the wall should be at least ¾ of the basement wall height. The backfill should be properly compacted Controlled Fill as outlined in the Compaction Requirements section. Once the wall is backfilled sufficiently at the height and slope specified above, demolition activities of the superstructure can resume.

Alternatively, the basement wall can be shored or structurally braced from inside the basement area prior to demolition of the super structure. This could be accomplished using a combination of plates, whalers, diagonal bracing and poured in place concrete deadmen. A structural engineer

should evaluate the feasibility of this option and can used the soil parameters provided in the **Lateral Earth Pressures** section for design of the shoring system.

Once demolition of the superstructure is completed, the basement area should be stripped of any remaining foundations, utilities, organics, and deleterious materials. Once stripping is completed, we recommend proofrolling the area with a loaded tandem axle dump truck or other similar approved construction equipment. A geotechnical engineer should monitor proofrolling operations. Areas that pump or rut excessively should be undercut and reworked or replaced with Controlled Fill. Once subgrade stability is verified by the geotechnical engineer, the remaining Controlled Fill can be placed as described in this report.

Drainage/Erosion Control Plan

A drainage plan should be established and implemented prior to beginning earthwork and backfilling operations to ensure surficial runoff and groundwater is adequately controlled and the construction areas remain free from standing water. During periods of heavy rainfall, this condition can result in a significant inflow of water (from both surface and groundwater sources) into the low-lying areas of the site, either at the time of construction or during the operation life of the various structures. This would result in the deterioration of subgrade soils and resulting increase in construction costs and/or time delays.

Additionally, provisions for temporary drainage (i.e. drainage ditches, etc.) during construction should be planned prior to the start of earthwork operations will also aid in mitigating effects of water inflow. These provisions can be integrated into the permanent planned drainage system (as needed).

Fill Material Types

The grading contractor should provide samples of proposed fill soils prior to placement. Controlled Fill should meet the following soil property requirements:

Controlled Fill Type[1]	USCS Classification	Acceptable Location for Placement
Imported Fill [2]	SP, SP-SM, SP-SW, SW, SM (Passing #200<12%)	All locations.
Onsite Soils	SP, SP-SM, SM, SC (Passing #200<25%)	All locations.

1. Controlled Fill should consist of approved materials that are free of organic matter and other deleterious debris.
2. It may be necessary to install an underdrain system to mitigate ponding of water within the imported granular fill material.

Fill Compaction Requirements

Controlled Fill should meet the following compaction requirements:

ITEM	DESCRIPTION
Fill Lift Thickness	10 inches or less in loose thickness when heavy, self-propelled compaction equipment is used.
	4 inches or less in loose thickness when hand-guided equipment such as a jumping jack or plate compactor is used.
Compaction Requirements[1]	95% of the material's maximum Modified Proctor dry density (ASTM D1557).
Moisture Content – Controlled Fill or Onsite Soils[2]	Fill materials should be placed near the optimal moisture content (typically between ±2 percent) as determined by laboratory testing. Actual range of acceptable moisture contents will be highly dependent on the type of soil used. Soils with a higher fine-grained component typically have a tighter range of acceptable moisture contents as compared with coarse grained soils.

1. Fill should be tested for moisture content and compaction during placement. If the results of the in-place density tests indicate the specified moisture or compaction limits have not been met, the area represented by the test should be reworked and retested as required until the specified moisture and compaction requirements are achieved.
2. Specifically, moisture levels should be maintained low enough to allow for satisfactory compaction to be achieved without the Controlled Fill material pumping when proofrolled.

Fill Monitoring

It is important that fill be uniformly well blended and compacted. Accordingly, fill placement should be monitored by a qualified Special Inspector (SI) working under the direction of the Geotechnical Engineer. In addition to this visual evaluation, the SI should perform in-place field density tests typically conducted at a rate of one (1) per 5,000 square feet (sf) per lift of fill or as otherwise indicated by the Geotechnical Engineer or project documents. Monitoring of fill placement should at a minimum include the following:

- Soil type
- Lift thickness
- Moisture content
- Density
- Compaction Equipment

Earthwork Construction Considerations

Upon completion of filling and grading, care should be taken to maintain the subgrade moisture content. Construction traffic over the completed subgrade should be avoided to the extent practical. The site should also be graded to prevent ponding of surface water on the prepared

subgrades or in excavations. If the subgrade should become desiccated, saturated, or disturbed, the affected material should be removed, or these materials should be scarified, moisture conditioned, and recompacted prior to floor slab construction and observed by Terracon.

Surface water should not be allowed to pond on the site and soak into the soil during construction. Construction staging should provide drainage of surface water and precipitation away from the building areas. Any water that collects over or adjacent to construction areas should be promptly removed, along with any softened or disturbed soils. Surface water control in the form of sloping surfaces, drainage ditches and trenches, and sump pits and pumps will be important to avoid ponding and associated delays due to precipitation and seepage.

Terracon should be retained during the construction phase of the project to observe earthwork and to perform necessary tests and observations during subgrade preparation; proofrolling; placement and compaction of controlled compacted fills and backfilling of excavations to the completed subgrade elevation.

LATERAL EARTH PRESSURES

Design Parameters

Walls and/or temporary sheeting with unbalanced backfill levels on opposite sides should be designed for earth pressures at least equal to those indicated in the following table. Earth pressures will be influenced by structural design of the walls, conditions of wall restraint, methods of construction and/or compaction and the strength of the materials being restrained. Appropriate earth pressures should be used for wall restraint conditions. Active pressure can be used when the top of wall can move 0.002H to 0.004H. At rest earth pressure is used when there is no wall movement. The recommended design lateral earth pressures do not include a factor of safety and do not provide for possible hydrostatic pressure on the walls.

Estimated Soil Parameters and Lateral Earth Pressure Coefficients

Stratum	Depth (ft)	Estimated Soil Properties					
		Total/Effective Unit Weight (pcf)	Friction Angle (f)	Cohesion (psf)	Earth Pressure Coeff.		
					K_a	K_o	K_p
Off-site Fill	n/a	120/57.6	30	N/A	0.33	0.50	3.00
1	0 to 27	115/57.6	32	n/a	0.31	0.47	3.25
2	27 to 38	105/42.6	n/a	1,600	1	1	1
3	38 to 44	105/42.6	n/a	2,200	1	1	1
4	44+	115/57.6	n/a	2,600	1	1	1

Depending on the section modulus of sheeting selected, final loading, etc. the sheeting system may require supplemental bracing to maintain stability. If surface area is available, ground control may be accomplished with a combined slope/shoring configuration. If side slopes or open cut excavations are considered, a slope stability analysis will be necessary. The slope stability analysis should account for the potential for groundwater inflow, including steady state conditions and storm events.

The ground support system (with or without slopes) should conform to OSHA Standard 29 CFR 1926.652 – Requirements for Protective Systems. The design of the shielding system should be based on the soils within the study area and parameters provided in the previous table. The shielding and dewatering systems should be designed concurrently by an engineer registered in the State of South Carolina, employed by the contractor, and is familiar with this type of operation.

Sheet Pile Wall Design Considerations

Depending on the section modulus of sheeting selected, final loading, etc. the sheeting system may require supplemental bracing to maintain stability. The design of the sheet pile wall system should be based on the soils within the study area and parameters provided in the previous tables. The sheet pile wall system should be designed by an engineer registered in the State of South Carolina.

To control hydrostatic pressure behind the sheet pile wall we recommend that a drain be installed at the base of the Controlled Fill with a collection pipe leading to a reliable discharge. If this is not possible, then combined hydrostatic and lateral earth pressures should be calculated for granular backfill.

WALL AND ROADWAY MONITORING

We understand approximately 6 feet of fill will be placed along the existing wall structure to provide lateral support of the wall until the basement area is backfilled. We understand that it is desired for the existing basement wall to remain in place, but if this is determined to be unfeasible, alternatively, a sheet pile wall may be installed to support the existing roadway during demolition and backfilling activities.

As mentioned previously, demolition and earthwork activities will occur approximately 5 feet away from the nearest edge of N. Jefferies Blvd. With the roadway being in such close proximity to these activities, there is potential for the road to be impacted.

We recommend consideration be given to monitoring the roadway and/or existing basement wall. This monitoring would consist of horizontal and vertical deflection measurements to determine what impact if any the demolition and fill placement may cause. We recommend the follow for a monitoring program:

1) Monitoring shall commence prior to demolition.
2) Monitoring shall continue through completion of demolition, placement of fill and extend for a time after final fill is placed.
3) It will be the responsibility of the structural engineer to determine the threshold requirements for vertical and horizontal movements.
4) Monitoring shall be continuous, as described in the following section, and recorded in a field logbook dedicated for this purpose.

Settlement Measurement Recommendations

The surveyor should locate local survey control points at least 100 feet away from the sheet pile wall and fill to avoid influence of possible ground subsidence. The survey precision should satisfy the State of South Carolina Class E, Urban Control for Closure or the less than the threshold value whichever is finer. Accuracy should be less than 1/100 ft in both horizontal and vertical closure. Accuracy can be improved by estimating thermal expansion of iron monuments by measuring the ambient and monument temperatures.

The personnel performing the survey should be trained by a current South Carolina licensed land surveyor in how to perform the survey. The survey equipment calibration should be current or purchased new (and still within the factory warranty period) and appropriate for the tolerance of work being performed.

During the pre-construction phase, the survey monuments' position should be measured and recorded twice daily (at the beginning and end of each workday) for at least 3 days before

operations begin. The measurements are to be used to develop a baseline by which to compare the construction measurements. Baseline values to which the construction values are compared should be determined by the surveyor. Construction phase measurements should continue at the same frequency as the baseline measurements for each day of demolition operations. Field data records for each trip should be collected in an electronic data logger and data which is not recorded by the data logger should be recorded in the survey party chief's field log book. The field data collected for each trip should include as a minimum:

- Record date, time start and finish,
- Ambient and roadway temperatures (rounded to the nearest degree) on site during the survey,
- Control points in state plane coordinates and elevation
- Uniquely identified measurement point names,
- Elevation and horizontal position in relation to control elevation datums,
- Documentation of inaccuracies,
- Equipment used, and
- Names of personnel conducting the survey.

The survey party chief should transmit field data to the licensed surveyor daily. The contractor should receive the checked field data from the licensed surveyor at the end of each workday. If the measurements exceed the threshold or shutdown values, the results will be communicated by the contractor to the structural engineer immediately.

GENERAL COMMENTS

Our analysis and opinions are based upon our understanding of the project, the geotechnical conditions in the area, and the data obtained from our site exploration. Natural variations will occur between exploration point locations or due to the modifying effects of construction or weather. The nature and extent of such variations may not become evident until during or after construction. Terracon should be retained as the Geotechnical Engineer, where noted in this report, to provide observation and testing services during pertinent construction phases. If variations appear, we can provide further evaluation and supplemental recommendations. If variations are noted in the absence of our observation and testing services on-site, we should be immediately notified so that we can provide evaluation and supplemental recommendations.

Our Scope of Services does not include either specifically or by implication any environmental or biological (e.g., mold, fungi, bacteria) assessment of the site or identification or prevention of pollutants, hazardous materials or conditions. If the owner is concerned about the potential for such contamination or pollution, other studies should be undertaken.

Our services and any correspondence or collaboration through this system are intended for the sole benefit and exclusive use of our client for specific application to the project discussed and are accomplished in accordance with generally accepted geotechnical engineering practices with no third-party beneficiaries intended. Any third-party access to services or correspondence is solely for information purposes to support the services provided by Terracon to our client. Reliance upon the services and any work product is limited to our client and is not intended for third parties. Any use or reliance of the provided information by third parties is done solely at their own risk. No warranties, either express or implied, are intended or made.

Site characteristics as provided are for design purposes and not to estimate excavation cost. Any use of our report in that regard is done at the sole risk of the excavating cost estimator as there may be variations on the site that are not apparent in the data that could significantly impact excavation cost. Any parties charged with estimating excavation costs should seek their own site characterization for specific purposes to obtain the specific level of detail necessary for costing. Site safety, and cost estimating including, excavation support, and dewatering requirements/design are the responsibility of others. If changes in the nature, design, or location of the project are planned, our conclusions and recommendations shall not be considered valid unless we review the changes and either verify or modify our conclusions in writing.

ATTACHMENTS

EXPLORATION AND TESTING PROCEDURES

Field Exploration

Our field exploration services were performed in general accordance with the information provided in our proposal.

Type of Test	Test Location	Number of Tests	Test Depth[1]
Seismic Cone Penetration Test (SCPT)	Exterior Corner of Buckner Building	1	59 feet
Cone Penetration Test (CPT)	Exterior Corner of Buckner Building	1	48 feet
Hand Auger Boring (HAB)	Adjacent to SCPT	1	4 feet
Dynamic Cone Penetrometer with Hand Auger Boring (DCP)	Adjacent to CPT, Exterior corner of building, and in basement.	3	4 feet

1. Below ground surface

Boring Layout and Elevations: The approximate location of each test is indicated in the Exploration Results. The test locations were determined by Terracon and located in the field by Terracon personnel utilizing a commercially available handheld Global Position System (GPS) unit which are typically considered accurate to within ±10 feet. The locations should be considered accurate only to the degree implied by the means and methods used to define them.

Subsurface Exploration Procedures: The soundings were performed with the appropriate ASTM Standards. The field exploration was performed on September 22, 2020. The in-situ tests were advanced with a track mounted Pagani TG73-200 rig. The field logs and recovered samples were compiled and reviewed by the geotechnical engineer. Final in-situ and Hand Auger Boring logs and details for each of the tests can be found in **Exploration Results**.

SITE LOCATION AND EXPLORATION PLANS

Contents:

SITE LOCATION

Buckner Building Demolition ■ Walterboro, SC
October 13, 2020 ■ Terracon Project No. EN205142

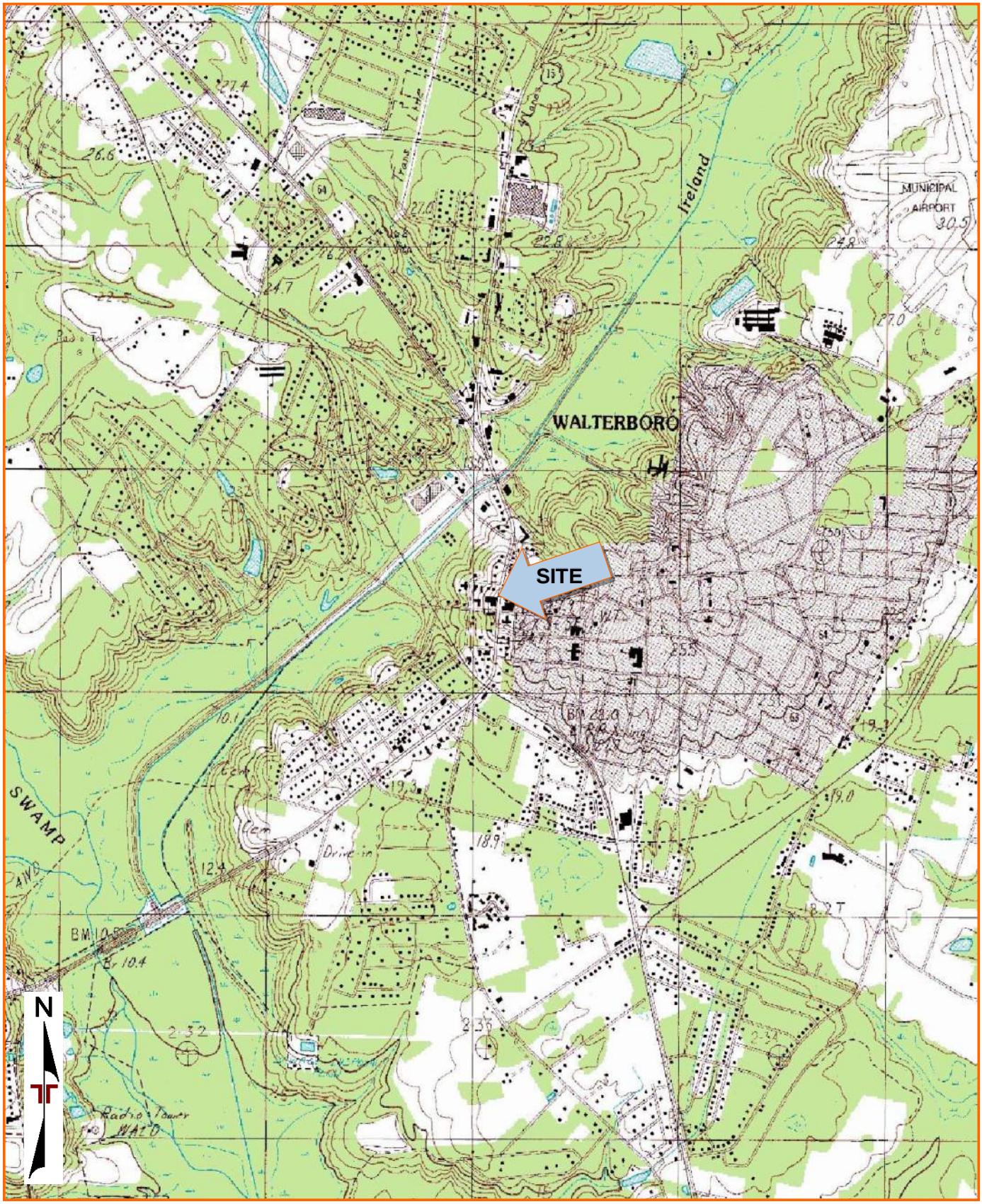


DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

TOPOGRAPHIC MAP IMAGE COURTESY OF THE U.S. GEOLOGICAL SURVEY
QUADRANGLES INCLUDE: WALTERBORO, SC (1/1/1988).

EXPLORATION PLAN

Buckner Building Demolition ■ Walterboro, SC
October 13, 2020 ■ Terracon Project No. EN205142

DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

AERIAL PHOTOGRAPHY PROVIDED BY MICROSOFT BING MAPS

EXPLORATION RESULTS

Contents:

CPT LOG NO. SCPT-1

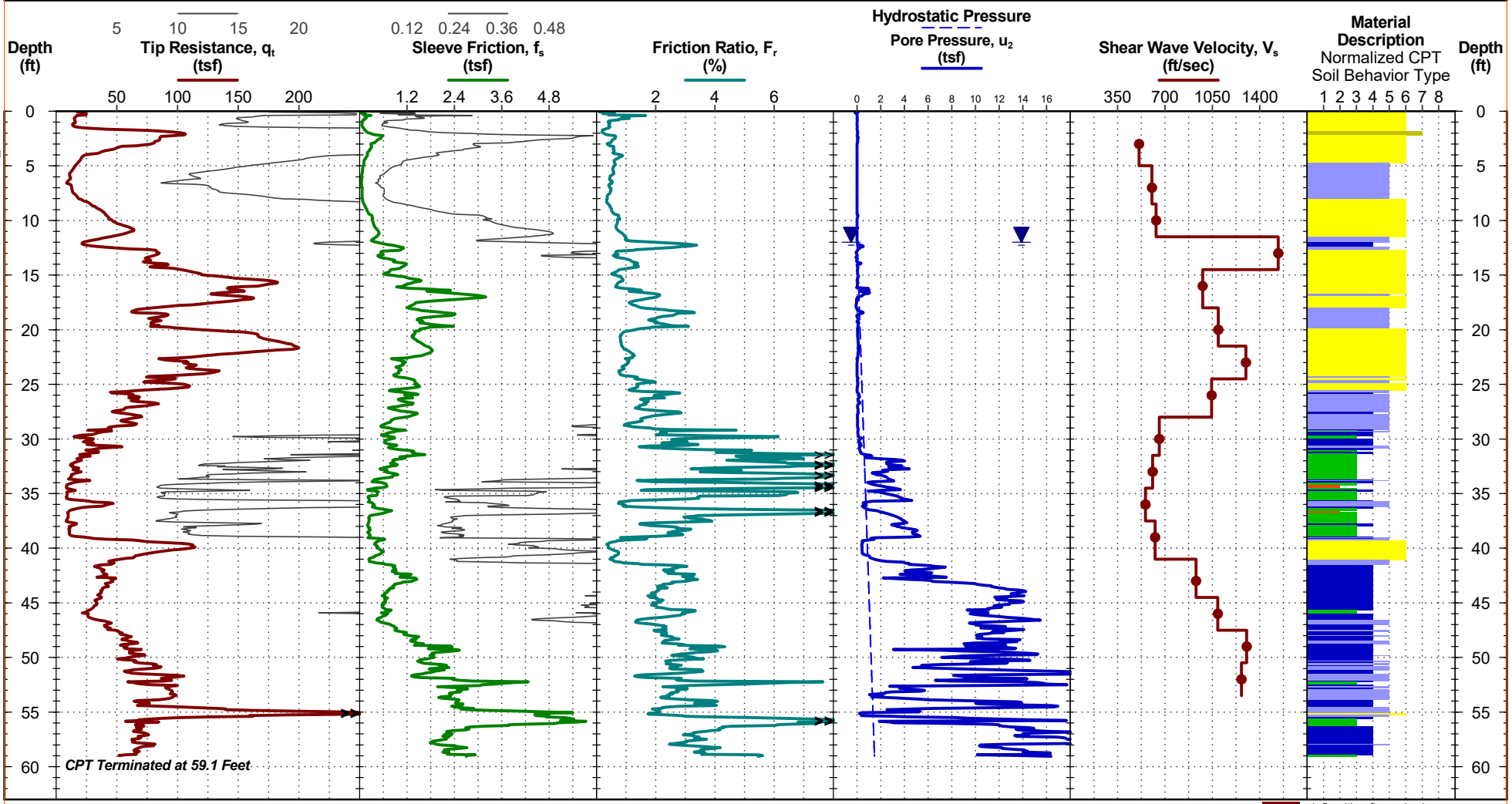
PROJECT: Buckner Building Demolition

CLIENT: Thomas & Hutton Engineering Co
Columbia, SC

TEST LOCATION: See Exploration Plan

SITE: 213 N. Jefferies Boulevard
Walterboro, SC

Latitude: 32.903073°
Longitude: -80.667341°



See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

Dead weight of rig used as reaction force.
CPT sensor calibration reports available upon request.

WATER LEVEL OBSERVATION

▼ 12 ft estimated water depth
(used in normalizations and correlations; See Supporting Information)

Probe no. 5311 with net area ratio of .874
U2 pore pressure transducer location
Manufactured by Geotech A.B.; calibrated 1/7/2020
Tip and sleeve areas of 10 cm^2 and 150 cm^2
Ring friction reducer with O.D. of 1.875 in

Terracon
1450 Fifth St W
North Charleston, SC

CPT Started: 9/22/2020
CPT Completed: 9/22/2020
Rig: Pagani TG73-200
Operator: RF
Project No.: EN205142

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. CPT REPORT EN205142 BUCKNER BUILDING .GPJ TERRACON_DATATEMPLATE.GDT 10/13/20

CPT LOG NO. CPT-2

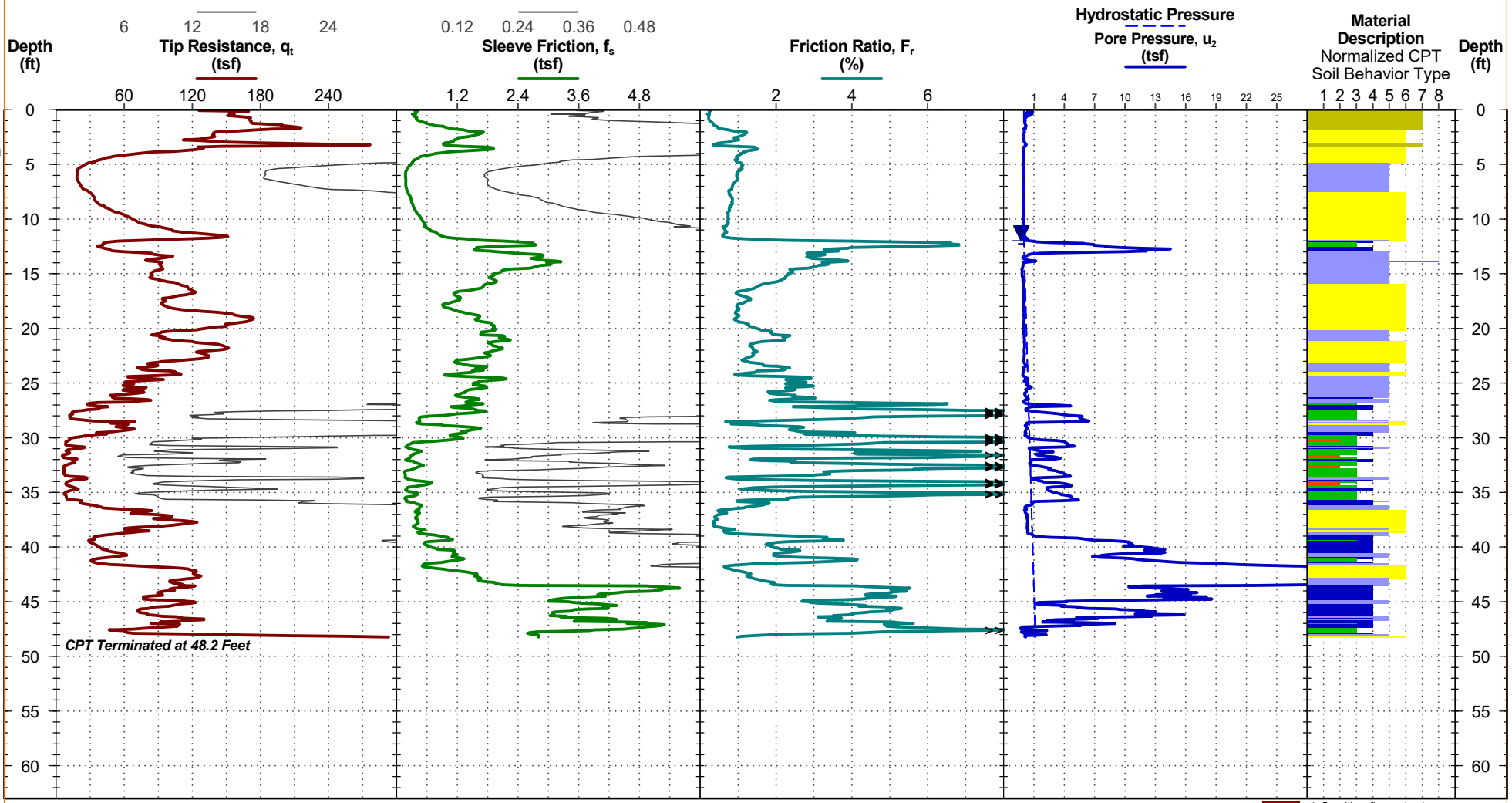
PROJECT: Buckner Building Demolition

CLIENT: Thomas & Hutton Engineering Co
Columbia, SC

TEST LOCATION: See Exploration Plan

SITE: 213 N. Jefferies Boulevard
Walterboro, SC

Latitude: 32.903485°
Longitude: -80.667261°



See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

Dead weight of rig used as reaction force.
CPT sensor calibration reports available upon request.

1 Sensitive, fine grained
2 Organic soils - clay
3 Clay - silty clay to clay
4 Silt mixtures - clayey silt to silty clay
5 Sand mixtures - silty sand to sandy silt
6 Sands - clean sand to silty sand
7 Gravelly sand to dense sand
8 Very stiff sand to clayey sand
9 Very stiff fine grained

WATER LEVEL OBSERVATION

▼ 12 ft estimated water depth
(used in normalizations and correlations; See Supporting Information)

Probe no. 5311 with net area ratio of .874
U2 pore pressure transducer location
Manufactured by Geotech A.B.; calibrated 1/7/2020
Tip and sleeve areas of 10 cm^2 and 150 cm^2
Ring friction reducer with O.D. of 1.875 in

Terracon
1450 Fifth St W
North Charleston, SC

CPT Started: 9/22/2020
CPT Completed: 9/22/2020
Rig: Pagani TG73-200
Operator: RF
Project No.: EN205142

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. CPT REPORT EN205142 BUCKNER BUILDING .GPJ TERRACON_DATATEMPLATE.GDT 10/8/20

BORING LOG NO. HAB at SCPT-1

PROJECT: Buckner Building Demolition

CLIENT: Thomas & Hutton Engineering Co
Columbia, SC

SITE: 213 N. Jefferies Boulevard
Walterboro, SC

LOCATION See Exploration Plan

Latitude: 32.9031° Longitude: -80.6673°

GRAPHIC LOG	DEPTH		DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS
		TOPSOIL, dark brown to brown				
	1.0					
		SILTY SAND (SM), fine to medium grained, light brown to brown, moist				
	4.0					
		Boring Terminated at 4 Feet				

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: NA

Advancement Method:
Manual Hand Auger

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered

Terracon
1450 Fifth St W
North Charleston, SC

Boring Started: 09-22-2020 | Boring Completed: 09-22-2020

Drill Rig: NA | Driller: RF

Project No.: EN205142

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL EN205142 BUCKNER BUILDING .GPJ TERRACON_DATATEMPLATE.GDT 10/8/20

BORING LOG NO. DCP at CPT-2

PROJECT: Buckner Building Demolition

CLIENT: Thomas & Hutton Engineering Co
Columbia, SC

SITE: 213 N. Jefferies Boulevard
Walterboro, SC

LOCATION See Exploration Plan

Latitude: 32.9035° Longitude: -80.6673°

DEPTH		DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	Dynamic Cone Pentrometer FIELD TEST RESULTS
	TOPSOIL, dark brown to brown				1
0.3					1
	SILTY SAND (SM), fine to medium grained, light brown to brown, moist				2
					2
					2
					2
					3
					5
1.5					7
	CLAYEY SAND (SC), fine to medium grained, light brown to brown, moist				7
					5
					5
					3
					2
					2
					2
					3
3.0					9
	SILTY SAND (SM), fine to medium grained, light brown to brown, moist				7
					4
					3
					4
					8
4.0					16
	Boring Terminated at 4 Feet				

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: NA

Advancement Method:
Manual Hand Auger

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered

Terracon
1450 Fifth St W
North Charleston, SC

Boring Started: 09-22-2020 | Boring Completed: 09-22-2020

Drill Rig: NA | Driller: RF

Project No.: EN205142

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL EN205142 BUCKNER BUILDING .GPJ TERRACON_DATATEMPLATE.GDT 10/8/20

BORING LOG NO. DCP-3

PROJECT: Buckner Building Demolition

CLIENT: Thomas & Hutton Engineering Co
Columbia, SC

SITE: 213 N. Jefferies Boulevard
Walterboro, SC

LOCATION See Exploration Plan

Latitude: 32.9032° Longitude: -80.6673°

GRAPHIC LOG	DEPTH		DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	Dynamic Cone Pentrometer FIELD TEST RESULTS
		TOPSOIL, dark brown to brown				1
						1
						2
						2
						1
	1.0					2
		SILTY SAND (SM), fine to medium grained, light brown to brown, moist				3
						2
						2
						2
						1
						1
						1
						1
						1
						1
						1
						1
						2
						2
						1
						4
	4.0					3
		Boring Terminated at 4 Feet				

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: NA

Advancement Method:
Manual Hand Auger

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered

Terracon
1450 Fifth St W
North Charleston, SC

Boring Started: 09-22-2020 | Boring Completed: 09-22-2020

Drill Rig: NA | Driller: RF

Project No.: EN205142

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL EN205142 BUCKNER BUILDING .GPJ TERRACON_DATATEMPLATE.GDT 10/8/20

BORING LOG NO. DCP-4

PROJECT: Buckner Building Demolition

CLIENT: Thomas & Hutton Engineering Co
Columbia, SC

SITE: 213 N. Jefferies Boulevard
Walterboro, SC

LOCATION See Exploration Plan

Latitude: 32.9031° Longitude: -80.6672°

GRAPHIC LOG	DEPTH	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	Dynamic Cone Pentrometer FIELD TEST RESULTS
	FILL - SILTY SAND (SM), fine to medium grained, white to light gray				2
					2
					2
					2
					3
					2
					3
					3
					3
					2
					2
					3
					4
					4
					4
					5
					5
					8
					10
					11
					10
					9
					9
	4.0				8
	Boring Terminated at 4 Feet				

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: NA

Advancement Method:
Manual Hand Auger

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered

Terracon
1450 Fifth St W
North Charleston, SC

Boring Started: 09-22-2020 | Boring Completed: 09-22-2020

Drill Rig: NA | Driller: RF

Project No.: EN205142

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL EN205142 BUCKNER BUILDING .GPJ TERRACON_DATATEMPLATE.GDT 10/8/20

SUPPORTING INFORMATION

Contents:

CPT GENERAL NOTES

DESCRIPTION OF MEASUREMENTS AND CALIBRATIONS

To be reported per ASTM D5778:

Uncorrected Tip Resistance, q_c
Measured force acting on the cone divided by the cone's projected area

Corrected Tip Resistance, q_t
Cone resistance corrected for porewater and net area ratio effects
$q_t = q_c + U2(1 - a)$
Where a is the net area ratio, a lab calibration of the cone typically between 0.70 and 0.85

Pore Pressure, U1/U2
Pore pressure generated during penetration
U1 - sensor on the face of the cone
U2 - sensor on the shoulder (more common)

Sleeve Friction, fs
Frictional force acting on the sleeve divided by its surface area

Normalized Friction Ratio, FR
The ratio as a percentage of fs to q_t, accounting for overburden pressure

To be reported per ASTM D7400, if collected:

Shear Wave Velocity, Vs
Measured in a Seismic CPT and provides direct measure of soil stiffness

DESCRIPTION OF GEOTECHNICAL CORRELATIONS

Normalized Tip Resistance, Q_t
$Q_t = (q_t - \sigma_{v0})/\sigma'_{v0}$

Over Consolidation Ratio, OCR
$OCR\ (1) = 0.25(Q_t)^{1.25}$
$OCR\ (2) = 0.33(Q_t)$

Undrained Shear Strength, Su
$Su = Q_t \times \sigma'_{v0}/N_{kt}$
N_{kt} is a geographical factor (shown on Su plot)

Sensitivy, St
$St = (q_t - \sigma_{v0}/N_{kt}) \times (1/fs)$

Effective Friction Angle, ϕ'
$\phi'\ (1) = \tan^{-1}(0.373[\log(q_t/\sigma'_{v0}) + 0.29])$
$\phi'\ (2) = 17.6 + 11[\log(Q_t)]$

Unit Weight
$UW = (0.27[\log(FR)]+0.36[\log(q_t/atm)]+1.236) \times UW_{water}$
σ_{v0} is taken as the incremental sum of the unit weights

Small Strain Shear Modulus, G_0
$G_0\ (1) = \rho Vs^2$
$G_0\ (2) = 0.015 \times 10^{(0.55Ic + 1.68)}(q_t - \sigma_{v0})$

Soil Behavior Type Index, Ic
$Ic = [(3.47 - \log(Q_t))^2 + (\log(FR) + 1.22)^2]^{0.5}$

SPT N_{60}
$N_{60} = (q_t/atm) / 10^{(1.1268 - 0.2817Ic)}$

Elastic Modulus, Es (assumes $q/q_{ultimate} \sim 0.3$, i.e. FS = 3)
$Es\ (1) = 2.6\Psi G_0$ where $\Psi = 0.56 - 0.33\log Q_{t,clean\ sand}$
$Es\ (2) = G_0$
$Es\ (3) = 0.015 \times 10^{(0.55Ic + 1.68)}(q_t - \sigma_{v0})$
$Es\ (4) = 2.5q_t$

Constrained Modulus, M
$M = \alpha_M(q_t - \sigma_{v0})$
For Ic > 2.2 (fine-grained soils)
$\alpha_M = Q_t$ with maximum of 14
For Ic < 2.2 (coarse-grained soils)
$\alpha_M = 0.0188 \times 10^{(0.55Ic + 1.68)}$

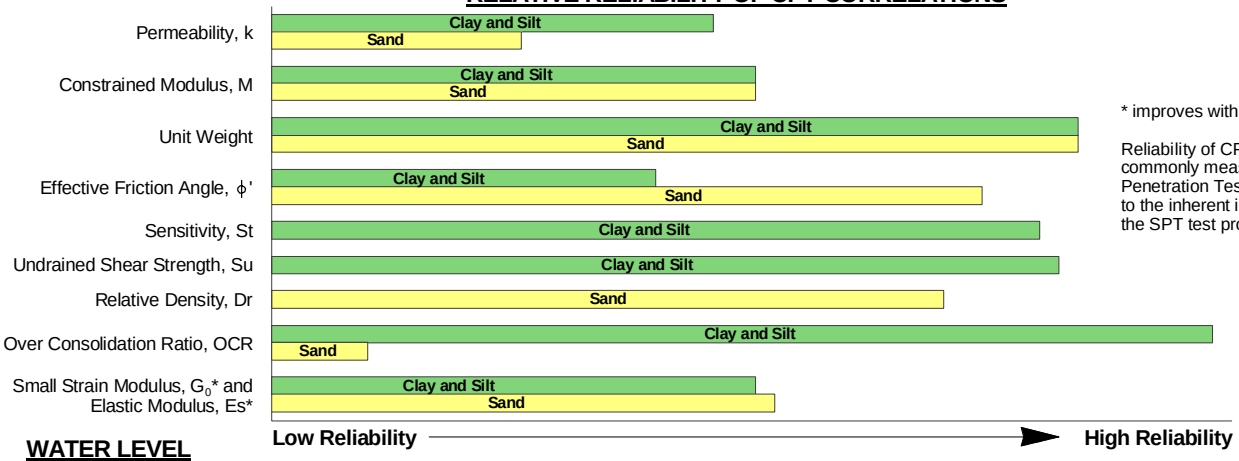
Hydraulic Conductivity, k
For $1.0 < Ic < 3.27$ $k = 10^{(0.952 - 3.04Ic)}$
For $3.27 < Ic < 4.0$ $k = 10^{(-4.52 - 1.37Ic)}$

Relative Density, Dr
$Dr = (Q_t / 350)^{0.5} \times 100$

REPORTED PARAMETERS

CPT logs as provided, at a minimum, report the data as required by ASTM D5778 and ASTM D7400 (if applicable). This minimum data include tip resistance, sleeve resistance, and porewater pressure. Other correlated parameters may also be provided. These other correlated parameters are interpretations of the measured data based upon published and reliable references, but they do not necessarily represent the actual values that would be derived from direct testing to determine the various parameters. The following chart illustrates estimates of reliability associated with correlated parameters based upon the literature referenced below.

RELATIVE RELIABILITY OF CPT CORRELATIONS



* improves with seismic Vs measurements

Reliability of CPT-predicted N_{60} values as commonly measured by the Standard Penetration Test (SPT) is not provided due to the inherent inaccuracy associated with the SPT test procedure.

WATER LEVEL

The groundwater level at the CPT location is used to normalize the measurements for vertical overburden pressures and as a result influences the normalized soil behavior type classification and correlated soil parameters. The water level may either be "measured" or "estimated:"

Measured - Depth to water directly measured in the field

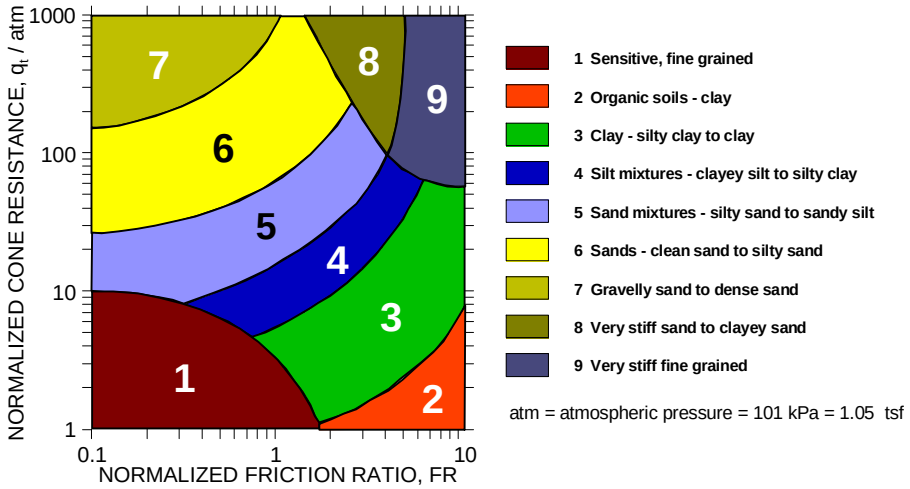
Estimated - Depth to water interpolated by the practitioner using pore pressure measurements in coarse grained soils and known site conditions

While groundwater levels displayed as "measured" more accurately represent site conditions at the time of testing than those "estimated," in either case the groundwater should be further defined prior to construction as groundwater level variations will occur over time.

CONE PENETRATION SOIL BEHAVIOR TYPE

The estimated stratigraphic profiles included in the CPT logs are based on relationships between corrected tip resistance (q_t), friction resistance (fs), and porewater pressure (U2). The normalized friction ratio (FR) is used to classify the soil behavior type.

Typically, silts and clays have high FR values and generate large excess penetration porewater pressures; sands have lower FRs and do not generate excess penetration porewater pressures. Negative pore pressure measurements are indicative of fissured fine-grained material. The adjacent graph (Robertson et al.) presents the soil behavior type correlation used for the logs. This normalized SBT chart, generally considered the most reliable, does not use pore pressure to determine SBT due to its lack of repeatability in onshore CPTs.



atm = atmospheric pressure = 101 kPa = 1.05 tsf

REFERENCES

Kulhawy, F.H., Mayne, P.W., (1997). "Manual on Estimating Soil Properties for Foundation Design," Electric Power Research Institute, Palo Alto, CA.

Mayne, P.W., (2013). "Geotechnical Site Exploration in the Year 2013," Georgia Institue of Technology, Atlanta, GA.

Robertson, P.K., Cabal, K.L. (2012). "Guide to Cone Penetration Testing for Geotechnical Engineering," Signal Hill, CA.

Schmertmann, J.H., (1970). "Static Cone to Compute Static Settlement over Sand," *Journal of the Soil Mechanics and Foundations Division*, 96(SM3), 1011-1043.

Terracon

UNIFIED SOIL CLASSIFICATION SYSTEM

Criteria for Assigning Group Symbols and Group Names Using Laboratory Tests [A]					Soil Classification	
					Group Symbol	Group Name [B]
Coarse-Grained Soils: More than 50% retained on No. 200 sieve	**Gravels:** More than 50% of coarse fraction retained on No. 4 sieve	**Clean Gravels:** Less than 5% fines [C]	$Cu \geq 4$ and $1 \leq Cc \leq 3$ [E]		GW	Well-graded gravel [F]
			$Cu < 4$ and/or [$Cc<1$ or $Cc>3.0$] [E]		GP	Poorly graded gravel [F]
		Gravels with Fines: More than 12% fines [C]	Fines classify as ML or MH		GM	Silty gravel [F, G, H]
			Fines classify as CL or CH		GC	Clayey gravel [F, G, H]
	Sands: 50% or more of coarse fraction passes No. 4 sieve	**Clean Sands:** Less than 5% fines [D]	$Cu \geq 6$ and $1 \leq Cc \leq 3$ [E]		SW	Well-graded sand [I]
			$Cu < 6$ and/or [$Cc<1$ or $Cc>3.0$] [E]		SP	Poorly graded sand [I]
		Sands with Fines: More than 12% fines [D]	Fines classify as ML or MH		SM	Silty sand [G, H, I]
			Fines classify as CL or CH		SC	Clayey sand [G, H, I]
Fine-Grained Soils: 50% or more passes the No. 200 sieve	**Silts and Clays:** Liquid limit less than 50	**Inorganic:**	PI > 7 and plots on or above "A"		CL	Lean clay [K, L, M]
			PI < 4 or plots below "A" line [J]		ML	Silt [K, L, M]
		Organic:	Liquid limit - oven dried	< 0.75	OL	Organic clay [K, L, M, N]
			Liquid limit - not dried			Organic silt [K, L, M, O]
	Silts and Clays: Liquid limit 50 or more	**Inorganic:**	PI plots on or above "A" line		CH	Fat clay [K, L, M]
			PI plots below "A" line		MH	Elastic Silt [K, L, M]
		Organic:	Liquid limit - oven dried	< 0.75	OH	Organic clay [K, L, M, P]
			Liquid limit - not dried			Organic silt [K, L, M, Q]
Highly organic soils:	Primarily organic matter, dark in color, and organic odor				PT	Peat

[A] Based on the material passing the 3-inch (75-mm) sieve.

[B] If field sample contained cobbles or boulders, or both, add "with cobbles or boulders, or both" to group name.

[C] Gravels with 5 to 12% fines require dual symbols: GW-GM well-graded gravel with silt, GW-GC well-graded gravel with clay, GP-GM poorly graded gravel with silt, GP-GC poorly graded gravel with clay.

[D] Sands with 5 to 12% fines require dual symbols: SW-SM well-graded sand with silt, SW-SC well-graded sand with clay, SP-SM poorly graded sand with silt, SP-SC poorly graded sand with clay.

[E] $Cu = D_{60}/D_{10}$ $\quad Cc = \dfrac{(D_{30})^2}{D_{10} \times D_{60}}$

[F] If soil contains ≥ 15% sand, add "with sand" to group name.

[G] If fines classify as CL-ML, use dual symbol GC-GM, or SC-SM.

[H] If fines are organic, add "with organic fines" to group name.

[I] If soil contains ≥ 15% gravel, add "with gravel" to group name.

[J] If Atterberg limits plot in shaded area, soil is a CL-ML, silty clay.

[K] If soil contains 15 to 29% plus No. 200, add "with sand" or "with gravel," whichever is predominant.

[L] If soil contains ≥ 30% plus No. 200 predominantly sand, add "sandy" to group name.

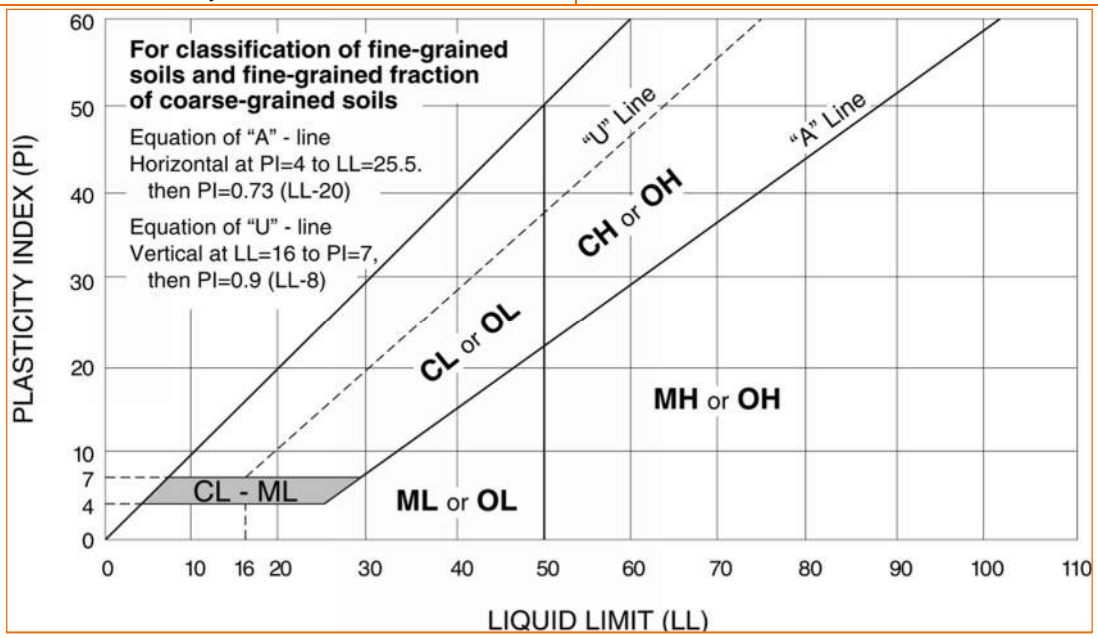
[M] If soil contains ≥ 30% plus No. 200, predominantly gravel, add "gravelly" to group name.

[N] PI ≥ 4 and plots on or above "A" line.

[O] PI < 4 or plots below "A" line.

[P] PI plots on or above "A" line.

[Q] PI plots below "A" line.



SECTION 01400

QUALITY CONTROL

PART 1 – GENERAL

1.01 SECTION INCLUDES

A. Quality assurance – control of installation.

B. Tolerances

C. References and standards.

D. Testing Laboratory Services

E. Manufacturer's field services.

1.02 RELATED SECTIONS

A. Manufacturer's instructions and certificates.

B. Asbestos and Lead-Based Paint Assessment Report Floyd Buckner Building, prepared by S&ME, dated September 28, 2020.

1.03 QUALITY ASSURANCE – CONTROL OF INSTALLATION

A. Monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce Work of specified quality.

B. Comply with manufacturer's instructions, including each step-in sequence.

C. Should manufacturer's instructions conflict with Contract Documents, request clarification from Engineer before proceeding.

D. Comply with specified standards as minimum quality for the Work except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.

E. Perform Work by persons qualified to produce required and specified quality.

F. Verify field measurements are as indicated on shop drawings or as instructed by the manufacturer.

G. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, or disfigurement.

1.04 TOLERANCES

A. Monitor fabrication and installation tolerance control of products to produce acceptable Work. Do not permit tolerances to accumulate.

B. Comply with manufacturer's tolerances. Should manufacturer's tolerances conflict with Contract Documents, request clarification from Architect/Engineer before proceeding.

C. Adjust products to appropriate dimensions and position before securing in place.

D. Accessible routes shall not exceed maximum ADA allowable slopes.

1.05 REFERENCES AND STANDARDS

A. For products or workmanship specified by association, trade, or other consensus standards, complies with requirements of the standard, except when more rigid requirements are specified or are required by applicable codes.

B. Conform to reference standard by date of issue current with date specified in the individual specification sections, except where a specific date is established by code.

C. Obtain copies of standards where required by product specification sections.

D. Neither the contractual relationships, duties, nor responsibilities of the parties in Contract or those of the Architect/Engineer shall be altered from the Contract Documents by mention or inference otherwise in any reference document.

1.06 TESTING SERVICES

A. Air monitoring services will be provided by S&ME and will be paid for by the Contractor.

B. Contractor will be required to meet compaction requirements from SCDOT for project area adjacent to Jeffries Boulevard. Compaction testing will be paid for by the contractor.

C. Employment of testing agency or laboratory in no way relieves Contractor of obligation to perform Work in accordance with requirements of Contract Documents.

D. The independent firms will perform tests and other services specified in individual specification sections and as required by the Owner.

1.07 MANUFACTURER'S FIELD SERVICES

A. When specified in individual specification sections, require material or product suppliers or manufacturers to provide qualified staff personnel to observe site conditions, conditions of surfaces and installation, quality of workmanship, and to initiate instructions when necessary.

B. Submit qualifications of observer to Architect/Engineer thirty (30) days in advance of required observations. Observer subject to approval of Engineer and Owner.

C. Report observations and site decisions or instructions given to applicators or installers supplemental or contrary to manufacturer's written instructions.

D. Submit report in duplicate within fifteen (15) days of observation to Engineer and Owner for information.

PART 2 – PRODUCTS

Not Used

PART 3 – EXECUTION

3.01 EXAMINATION

A. Verify existing site conditions and substrate surfaces are acceptable for subsequent Work. Beginning new Work means acceptance of existing conditions.

B. Verify existing substrate is capable of structural support or attachment of new Work being applied or attached.

C. Examine and verify specific conditions described in individual specification sections.

D. Verify utility services are available, of the correct characteristics, and in the correct locations.

3.02 PREPARATION

A. Clean substrate surfaces prior to applying next material or substance.

B. Seal cracks or openings of substrate prior to applying next material or substance.

C. Apply manufacturer required or recommended substrate primer, sealer, or conditioner prior to applying any new material or substance in contact or bond.

END OF SECTION

INDEX TO

SECTION 01410 - TESTING SERVICES

SECTION 01410

TESTING SERVICES

PART 1 – GENERAL

1.1 SECTION INCLUDES

A. Selection and payment.

B. Contractor submittals.

C. Testing agency responsibilities.

D. Testing agency reports.

E. Limits on testing authority.

F. Contractor responsibilities.

G. Schedule of tests.

1.2 RELATED SECTIONS

A. Testing and approvals required by public authorities.

B. Section 01300 – Submittals: Manufacturer's certificates.

C. Section 01400 – Quality Control: Manufacturers' field services and reports.

D. Section 01740 – Warranties: Contract warranties, closeout submittals.

E. Asbestos and Lead-Based Paint Assessment Report Floyd Buckner Building, prepared by S&ME, dated September 28, 2020.

1.3 REFERENCES (LATEST REVISION)

A. ASTM C 802 – Practice for Conducting an Interlaboratory Test Program to Determine the Precision of Test Methods for Construction Materials.

B. ASTM C 1077 – Practice for Laboratories Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Laboratory Evaluation.

C. ASTM C 1093 – Practice for Accreditation of Testing Agencies for Masonry.

D. ASTM D 3740 – Practice for Minimum Requirements for Agencies Engaged in Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction.

E. ASTM D 4561 – Practice for Quality Control Systems for Organizations Producing and Applying Bituminous Paving Materials.

F. ASTM E 329 – Specification for Agencies Engaged in Construction Inspection and/or Testing.

G. ASTM E 543 – Practice for Agencies Performing Nondestructive Testing.

H. ASTM E 548 – Guide for General Criteria Used for Evaluating Laboratory Competence.

I. ASTM E 699 – Practice for Evaluation of Agencies Involved in Testing, Quality Assurance, and Evaluating of Building Components.

1.4 SELECTION AND PAYMENT

A. Air monitoring services will be provided by S&ME and will be paid for by the Contractor.

B. Contractor will be required to meet compaction requirements from SCDOT for project area adjacent to Jeffries Boulevard. Compaction testing will be paid for by the contractor.

C. Employment of testing agency or laboratory in no way relieves Contractor of obligation to perform Work in accordance with requirements of Contract Documents.

D. The independent firms will perform tests and other services specified in individual specification sections and as required by the Owner.

1.5 QUALITY ASSURANCE

A. Comply with requirements of practices listed in paragraph 1.3.

B. Laboratory: Authorized to operate in State in which project is located.

C. Laboratory Staff: Maintain a full-time registered Engineer on staff to review services.

D. Testing Equipment: Calibrated at reasonable intervals with devices of an accuracy traceable to either National Bureau of Standards or accepted values of natural physical constants.

1.6 CONTRACTOR SUBMITTALS

A. Prior to start of Work, submit testing laboratory name, address, and telephone number, and names of full-time registered Engineer and responsible officer.

B. Submit copy of report of laboratory facilities inspection made by Materials Reference Laboratory of National Bureau of Standards during most recent inspection, with memorandum of remedies of any deficiencies reported by the inspection.

1.7 TESTING AGENCY RESPONSIBILITIES

A. Test samples of mixes submitted by Contractor.

B. Provide qualified personnel at site. Cooperate with Engineer and Contractor in performance of services.

C. Perform specified sampling and testing of products in accordance with specified standards.

D. Ascertain compliance of materials and mixes with requirements of Contract Documents.

E. Promptly notify Engineer and Contractor of observed irregularities or non-conformance of Work or products.

F. Perform additional tests required by Engineer.

G. Attend preconstruction meetings and progress meetings.

1.8 TESTING AGENCY REPORTS

A. After each test, promptly submit two (2) copies of report to Engineer and to Contractor.

B. Include:

1. Date issued.
2. Project title and number.
3. Name of inspector.
4. Date and time of sampling or inspection.
5. Identification of product and specifications section.
6. Location in the Project.
7. Type of inspection or test.
8. Date of test.
9. Results of tests.
10. Conformance with Contract Documents.

C. When requested by Engineer, provide interpretation of test results.

1.9 LIMITS ON TESTING AUTHORITY

A. Agency or laboratory may not release, revoke, alter, or enlarge on requirements of Contract Documents.

B. Agency or laboratory may not approve or accept any portion of the Work.

C. Agency or laboratory may not assume any duties of Contractor.

D. Agency or laboratory has no authority to stop the Work.

1.10 CONTRACTOR RESPONSIBILITIES

A. Deliver to agency or laboratory at designated location, adequate samples of materials proposed to be used requiring testing, along with proposed mix designs.

B. Cooperate with laboratory personnel and provide access to the Work and to manufacturer's facilities.

C. Provide incidental labor and facilities:

1. To provide access to Work to be tested.
2. To obtain and handle samples at the site or at source of products to be tested.
3. To facilitate tests.
4. To provide storage and curing of test samples.

D. Notify Engineer and laboratory 48 hours prior to expected time for operations requiring testing services.

1.11 SCHEDULE OF TESTS

A. Compaction testing will be performed in accordance with SCDOT standards, and the specifications.

B. Air testing will be performed in accordance with State and Federal standards.

PART 2 – PRODUCTS

Not Used.

PART 3 – EXECUTION

Not Used.

END OF SECTION

INDEX TO

SECTION 01800 – BUILDING DEMOLITION

SECTION 01800

BUILDING DEMOLITION

PART 1 – GENERAL

1.1 SCOPE OF WORK

A. Perform all work in accordance with the Contract Documents, and applicable codes, standards and specifications of governing authorities having jurisdiction over the work.

B. The Scope of Work consists of the demolition and removal of debris, including asbestos and lead-based paint, of the Floyd Buckner Building located at 213 North Jeffries Boulevard, Walterboro, SC 29488, Colleton County, SC. The Contractor is to perform all work, complete in every respect, including but not limited to, the following:

1. Before beginning demolition/construction operations, there will be a mandatory preconstruction meeting at the project site with SCDOT, county representative, site contractor, and project geotechnical consultant.
2. The building has an existing basement that is located immediately adjacent to Jefferies Boulevard. before full demolition of the building commences, in order to maintain the stability of the adjacent sidewalk and roadway, the contractor shall remove enough of the ground floor flooring to expose the full basement area, and place controlled import fill in 10" or less lifts, when heavy, self-propelled compaction equipment used, or 4" or less lifts when hand guided compaction equipment is used, and compact to 95% maximum modified proctor dry density per ASTM D1557, as outlined. in the specifications.
3. Contractor can then commence with the remaining demolition activities prior to site grading operations as outlined in the construction plans.
4. No demolition or work operations shall take place in the SCDOT right-of-way.
5. Contractor is to adhere to the traffic control plan as outlined in the construction plans.
6. All utilities are to be terminated and sealed at the street right-of-way, for a 100% complete job. All materials from the sites shall be disposed of properly in accordance with all DHEC and applicable regulations.
7. Since the building is located immediately adjacent to Jeffries Boulevard. It will be the Contractor's responsibility to keep any debris from falling into the road, and adversely affecting the safety of vehicular traffic.
8. See Appendix A – Asbestos and Lead-Based Paint Assessment Report, prepared by S&ME, dated September 28,2020

1.2 PROJECT CONDITIONS

A. The building to be demolished is located 213 North Jeffries Boulevard, Walterboro, SC 29488, Colleton County, SC and is supported by brick foundation and timber framing.

A. It will be the Contractor's responsibility to coordinate shutdown of all power and utility service to the building.

B. The building has an existing basement that is located immediately adjacent to Jeffries Boulevard.

C. Asbestos Testing Asbestos testing has been completed on the building (see Appendix A – Asbestos and Lead-Based Paint Assessment Report, prepared by S&ME, dated September 28,2020).

1.3 MEASUREMENT AND PAYMENT

A. Measurement and payment for building demolition will be made at the lump sum contract price for the project. Work includes demolition, hauling, lawful disposal of the debris, including asbestos and lead-based paint, erosion and sediment control, and termination and sealing of all utilities at the property line.

PART 2 – PRODUCTS

None in This Section

PART 3 – EXECUTION

3.1 PREPARATION

A. Contractor shall verify all existing conditions at the site, and examine adjoining property and structures that will, in any way, affect the completion of this Work.

B. Contractor shall report in writing to the Engineer any condition that will prevent the proper completion of the Work.

C. No waiver of responsibility for defective adjoining work will be considered unless notice has been filed by the Contractor and agreed to in writing by the Engineer prior to the Contractor commencing any part of this Work.

D. Contractor shall verify all power and utility service to the building has been turned off.

3.2 CONTRACTOR RESPONSIBILITIES

A. Unless otherwise provided in the Contract Documents, provide and pay for all items, permits, facilities, and services necessary for the proper execution of the Work, whether temporary or permanent.

B. The contractor will have to provide evidence that they are qualified to do asbestos removal or subcontract with a qualified company to perform all asbestos abatement as described in the asbestos reports and abatement plan as provided.

C. The building is located immediately adjacent to Jeffries Boulevard. It will be the Contractor's responsibility to keep any debris from falling into the road, and adversely affecting the safety of vehicular traffic.

D. It will be the Contractor's responsibility to coordinate shutdown of all power and utility service to the building.

E. The building also has an existing basement that is located immediately adjacent to Jefferies Boulevard. The Contractor will be responsible for maintaining the stability of the existing sidewalk and roadway.

F. Air monitoring services will be provided by S&ME and will be paid for by the Contractor.

G. Contractor will be required to meet compaction requirements from SCDOT for project area adjacent to Jeffries Boulevard. Compaction testing will be paid for by the contractor.

H. Execute all work in accordance with the Contract Documents.

3.3 PROTECTION OF ADJACENT PROPERTY AND UTILITIES

A. Contractor will be required to work only within the project limits as outlined in the construction plans.

B. Work to protect existing structures and adjacent property against damages from any cause.

C. Take precautions to guard against movement or settlement of existing structures.

D. Be responsible for safety and support of existing structures; be liable for any movement or settlement.

E. If, at any time, safety of existing structures appears endangered, cease operations and notify Engineer.

F. Take precautions to support structures and do not resume operations until permission is granted by Engineer.

G. Repair any damage to structures and property by reason of required safety measures.

H. Make permanent shut-down of all building utility services and terminate and seal at the street right-of-way.

3.4 WORK SEQUENCE

A. Sequence all activities to complete work within time limits set forth in the Contract Documents.

B. Sequence of activities may be adjusted by the Contractor as needed to complete the work as economically as possible provided the completion dates established in the Contract Documents are met.

3.5 CONTRACT TIME

A. Commence Work within seven days of receipt of Contract.

B. Owner will not issue the Contract until the required Performance Bond, Payment Bond and Certificates of Insurance have been received and approved. Within seven days of receipt of such documents, the Owner will either issue the Contract or notify the Contractor of reasons for not issuing the Contract.

C. Contractor will not be permitted access to the site until required Bonds and Insurance Certificates are received and approved.

3.6 AVAILABILITY OF SITE

A. The site will be available for Work under this Contract immediately after award of the Contract and issuance of a Notice to Proceed.

3.7 SALVAGEABLE MATERIALS

A. The Owner will coordinate with the Contractor regarding salvageable materials that the County wants to retain.

B. All remaining materials to be removed shall become the property of the Contractor.

C. Dispose of all material and debris off-site in a lawful manner.

D. Do not drop material or debris into wetlands, canals, or waterways.

E. Do not permit material and debris to accumulate on site.

3.8 CONTRACTOR'S USE OF PREMISES

A. Confine all operations, including access and temporary storage of equipment to the Work limits directed by the Owner.

B. Park equipment and vehicles owned by the Contractor and its employees as directed by the Owner.

C. Contractor shall perform work in a manner to cause least interference with the Owner's and adjacent tenant's operations.

3.9 ENVIRONMENTAL PROTECTION

A. Protect wetlands, canals, and waterways from chemical and physical damage.

B. Do not dispose of debris in wetlands, canals, and waterways.

C. Remove debris as rapidly as it accumulates.

D. Keep debris damp enough to keep down dust.

E. Provide for off-site disposal of debris.

F. Protect existing trees from damage during the Work.

END OF SECTION

INDEX TO

SECTION 02070 - SELECTIVE DEMOLITION

SECTION 02070

SELECTIVE DEMOLITION

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of Contract, including General and Supplementary Conditions apply to work of this section.

1.2 DESCRIPTION OF WORK

A. Extent of selective demolition work is as indicated on drawings.

1.3 SUBMITTALS

A. Schedule: Submit schedule indicating proposed methods and sequence of operations for selective demolition work to Owner's representative for review prior to commencement of work. Include coordination for shut-off, capping, and continuation of utility services as required, together with details for dust and noise control protection. Include schedule and location for return of items identified on plans to be delivered to Owner of property.

1.4 JOB CONDITIONS

A. Condition of Structures: Owner assumes no responsibility for actual condition of items to be demolished.

B. Partial Demolition and Removal: Items indicated to be removed but of value to Contractor may be removed as work progresses. Transport salvaged items from site as they are removed.

Storage or sale of removed items on site will not be permitted.

C. Protections: Provide temporary barricades and other forms of protection as required to protect Owner's personnel and general public from injury due to selective demolition work.

Protect from damage existing finish work to remain in place and becomes exposed during demolition operations. Remove protections at completion of work.

1.5 DAMAGES

A. Promptly repair damages caused to adjacent facilities by demolition work at no cost to Owner.

1.6 TRAFFIC

A. Conduct selective demolition operations and debris removal in a manner to ensure minimum interference with roads, streets, walks, and other adjacent occupied or used facilities.

Do not close, block or otherwise obstruct streets, walks, or other occupied or used facilities without written permission from authorities having jurisdiction. Provide alternate routes around closed or obstructed traffic ways.

1.7 EXPLOSIVES

A. Use of explosives will not be permitted.

1.8 UTILITY SERVICES

A. Make permanent shut-down of all building utility services and terminate and seal at the street right-of-way.

1.9 ENVIRONMENTAL CONTROLS

A. Use water sprinkling, temporary enclosures, and other suitable methods to limit dust and dirt rising and scattering in air to lowest practical level. Comply with governing regulations pertaining to environmental protection.

Do not use water when it may create hazardous or objectionable conditions such as ice, flooding, and pollution.

1.10 MEASUREMENT AND PAYMENT

A. Measurement and payment for selective demolition will be made at the contract lump sum price for the project. Payment will include equipment, labor, materials, protection, clean-up, disposal, and all work necessary to complete the selective demolition shown on the construction drawings.

PART 2 – PRODUCTS

None in this section

PART 3 – EXECUTION

3.1 PREPARATION

A. Prior to commencement of selective demolition work, check areas in which work will be performed. Photograph or video existing conditions of surfaces, equipment, or surrounding properties that could be misconstrued as damage resulting from selective demolition work. File with Owner's representative prior to starting work.

B. Cover and protect equipment and fixtures to remain from soiling or damage when demolition work is performed in areas from which such items have not been removed.

3.2 DEMOLITION

A. Perform selective demolition work in a systematic manner. Use such methods as required to complete work indicated on drawings in accordance with demolition schedule and governing regulations.

Demolish concrete in small sections. Cut concrete at junctures with construction to remain using power-driven masonry saw or hand tools. Do not use power-driven impact tools.

Completely fill below-grade areas and voids resulting from demolition work. Provide fill consisting of approved earth, gravel and sand, free of trash and debris, stones over 2" diameter, roots or other organic matter.

If unanticipated mechanical, electrical, or structural elements, which conflict with intended function or design, are encountered, investigate and measure both nature and extent of the conflict. Submit report to Owner's representative in written, accurate detail. Pending receipt of directive from Owner's representative, rearrange selective demolition schedule as necessary to continue overall job progress without delay.

3.3 SALVAGE MATERIALS

A. Owner assumes no responsibility for loss or damage to materials or structures on site, salvage value of which Contractor may have reflected in his bid.

B. Any articles of historic significance will remain the property of the Owner. Notify Owner's representative if such items are encountered and obtain acceptance regarding method of removal and salvage for Owner.

3.4 DISPOSAL OF DEMOLISHED MATERIALS

A. Remove debris, rubbish and other materials resulting from demolition operations from site. Transport and legally dispose of materials off site.

If hazardous materials are encountered during demolition operations, comply with applicable regulations, laws, and ordinances concerning removal, handling, and protection against exposure or environmental pollution.

Burning of removed materials is not permitted on project site.

3.5 CLEAN-UP AND REPAIR

A. Upon completion of demolition work, remove tools, equipment and demolished materials from site. Remove protections and leave site clean.

Repair demolition performed in excess of required work. Return structures and surfaces to remain to the condition existing prior to commencement of selective demolition work. Repair adjacent construction or surfaces soiled or damaged by selective demolition work.

Fill in all voids created by selective demolition and grade site to drain. Grass all disturbed areas for erosion control.

END OF SECTION

SECTION 02110

SITE CLEARING

PART 1 – GENERAL

1.01 SECTION INCLUDES

A. Removal of surface debris.

B. Removal of trees, shrubs, other plant life, and grubbing stumps and roots.

1.02 RELATED SECTIONS

A. Section 02210 – Soil Erosion Control.

1.03 MEASUREMENT AND PAYMENT

A. Measurement and payment for site clearing and grubbing shall be made at the contract lump sum price for the project. Work includes clearing site, removing stumps, loading and removing waste materials from site.

1.04 REGULATORY REQUIREMENTS

A. Conform to applicable codes for environmental requirements, disposal of debris, use of herbicides, and demolition as required.

B. Coordinate clearing Work with utility companies.

C. There will be no burning allowed.

PART 2 – PRODUCTS

2.01 MATERIALS

A. None.

PART 3 – EXECUTION

3.01 PREPARATION

A. Verify existing plant life designated to remain is tagged or identified.

B. Identify a temporary waste area for placing removed materials. All waste materials are to be removed from the site.

3.02 PROTECTION

A. Protect benchmarks, survey control points, and existing structures that are not to be demolished from damage or displacement.

B. Protect all remaining utilities.

C. Clearing operations shall be conducted to prevent damage by falling trees to trees left standing, to existing structures and installations, and to those under construction, and to provide for the safety of employees and others.

3.03 CLEARING

A. Clear areas required for access to site and execution of work. Clearing shall consist of felling and cutting trees into sections, and satisfactory disposal of trees and other vegetation designated for removal, including downed timber, snags, brush, and rubbish occurring within area to be cleared. Trees, stumps, roots, brush, and other vegetation in areas to be cleared shall be removed completely from the site.

3.04 REMOVAL

A. Remove debris, and other extracted plant life from site.

3.05 DISPOSAL

A. Disposal of trees, branches, snags, brush, stumps, etc., resulting from clearing and grubbing shall be the Contractor's responsibility and shall be disposed of by removal from site. All costs in connection with disposing of materials will be at the Contractor's expense.

B. Disposal by burning is not permitted.

3.06 GRUBBING

A. Grubbing shall consist of removal and disposal of stumps, roots larger than 1-inch in diameter, and matted roots from designated grubbing areas. This material, together with logs and other organic or metallic debris shall be excavated and removed to a depth of not less than 18-inches below original surface level of the ground. Depressions made by grubbing shall be filled with suitable material and compacted to make the surface conform to original adjacent ground.

END OF SECTION

INDEX TO

SECTION 02111 – SITE PREPARATION

SECTION 02111

SITE PREPARATION

Paragraph

PART 1 – GENERAL

1.1 SUMMARY

A. Section Includes:

1. Protection or removal of trees and other vegetation.
2. Topsoil stripping.
3. Clearing and grubbing.
4. Erosion control.

1.2 RELATED REQUIREMENTS

A. Construction Drawings

B. Section 02110 – Site Clearing

C. Section 02210 – Soil Erosion Control

1.3 PROTECTIONS

A. Provide protection necessary to prevent damage to existing improvements, trees, or vegetation indicated on the Contract Documents to remain.

B. Protect improvements on adjoining properties and on Owner's property.

C. Restore damaged improvements to original condition as acceptable to parties having jurisdiction.

D. Conduct operations to ensure minimum interference with roads, streets, walks, and other adjacent occupied or used facilities. Do not close or obstruct streets, walks, or other occupied or used facilities without permission from authorities having jurisdiction and from Owner. Streets and roadways shall be thoroughly cleaned and/or swept on a daily basis or more frequently as required by the governing authority.

E. Provide traffic control as required, in accordance with the U.S. Department of Transportation "Manual of Uniform Traffic Control Devices" and the state highway department requirements.

F. Provide necessary erosion control measures to prevent siltation of existing pavement or storm drainage facilities to remain.

PART 2 – PRODUCTS

Not Used

PART 3 – EXECUTION

3.1 CLEARING AND REMOVAL OF TREES AND OTHER VEGETATION

A. Unless otherwise indicated on the drawings, remove trees, shrubs, grass, other vegetation, improvements, or obstructions interfering with installation of new construction within the limits of work. Removal includes digging out stumps and roots. Do not remove items elsewhere on site or premises unless specifically indicated.

B. Strip topsoil to whatever depths encountered to prevent intermingling with underlying subsoil or other objectionable material. Cut heavy growths of grass from areas before stripping. Topsoil shall consist of sandy clay surficial soil. Satisfactory topsoil is reasonably free of subsoil, clay lumps, stones and other objects over 2-inches in diameter, weeds, roots, and other objectionable material.

C. Stockpile topsoil in storage piles in areas shown or where directed. Construct storage piles to freely drain surface water. Cover storage piles if required to prevent windblown dust. Dispose of unsuitable or excess topsoil same as specified for waste material, unless otherwise specified by Owner.

D. Completely remove stumps, roots, and other debris below proposed subgrade elevation. Fill depressions caused by clearing and grubbing operations with satisfactory soil material, unless further excavation or earthwork is required. Place fill material in horizontal layers not exceeding 8-inches loose depth, and thoroughly compacted per fill requirements of this section.

E. Remove existing above grade and below grade improvements and abandoned underground piping or conduit necessary to permit construction and other work.

END OF SECTION

INDEX TO

SECTION 02204 – EARTHWORK

SECTION 02204

EARTHWORK

PART 1 – GENERAL

1.1 SECTION INCLUDES

A. Grading

B. Excavation

C. Backfilling

D. Compaction

E. Remove and Replace Topsoil

F. Dressing of Shoulders and Banks

G. Stone Drainage Filter

H. Water Control

I. Testing

1.2 RELATED SECTIONS

A. Section 01012 – Soil Investigation Data for Bidders

B. Section 01400 – Quality Control

C. Section 01410 – Testing Services

D. Section 02110 – Site Clearing

E. Section 02210 – Soil Erosion Control

1.3 MEASUREMENT AND PAYMENT

A. Measurement and payment for earthwork will be made at the lump sum contract price for the project. Work includes grading to subgrades, disturbed areas, removing and replacing topsoil, excavating, backfilling and compacting with suitable material to required elevations, testing, staking, and construction supervision shall be included in the contract lump sum price for "Earthwork."

B. Unsuitable Material – All material encountered on-site is considered as unclassified. Thus, there will be no measurement made for the removal and replacement of unsuitable material with suitable material, including rock

excavation and removal. Payment for all earthwork material shall be included in the lump sum contract price for "Earthwork."

C. Borrow – There will be no measurement made for borrow. Payment for borrow shall be included in the lump sum contract price for "Earthwork."

D. Dewatering - No direct payment shall be made for dewatering. Dewatering shall be included in the lump sum contract price for "Earthwork."

E. Proof Rolling - No direct payment shall be made for proof rolling. Payment shall be included in the lump sum contract price for "Earthwork."

1.4 REFERENCES (LATEST REVISION)

A. ASTM D 448 – Sizes of Aggregate for Road and Bridge Construction.

B. ASTM D 1557 – Laboratory Compaction Characteristics of Soil Using Modified Effort.

C. ASTM D 2487 – Classification of Soils for Engineering Purposes (Unified Soil Classification System).

D. ASTM D 6938 – In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth).

E. ASTM D 3740 – Minimum Requirements for Agencies Engaged in Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction.

F. ASTM E 329 – Agencies Engaged in Construction Inspection and/or Testing.

1.5 SUBMITTALS

A. Section 01300 - Submittals: Procedures for submittals.

B. Materials Source: Submit gradation analysis, proctor results, and soil classification for all borrow material.

1.6 QUALITY ASSURANCE

A. Perform work in accordance with Federal, State of South Carolina, and County of Colleton standards.

1.7 TESTING

A. Laboratory tests for moisture density relationship for fill materials shall be in accordance with ASTM D 1557, (Modified Proctor).

B. In place density tests in accordance with ASTM D 6938.

C. Testing laboratory shall operate in accordance with ASTM D 3740 and E 329 and be acceptable to the Engineer.

D. The testing laboratory and Project Engineer/Project Representative shall be given a minimum of 48 hours notice prior to taking any of the tests.

E. Testing shall be Contractor's responsibility and performed at Contractor's expense by a commercial testing laboratory operating in accordance with subparagraph C above.

F. Test results shall be furnished to the Engineer prior to continuing with associated or subsequent work.

PART 2 – PRODUCTS

2.1 MATERIALS

A. Borrow shall consist of sand or sand-clay soils capable of being readily shaped and compacted to the required densities, and shall be reasonably free of roots, trash, rock larger than 2 inches, and other deleterious material.

B. All soils used for structural fills shall meet the following soil property requirements: Imported fill: SP, SP-SM, SP-SW, SW, SM, and shall have no more than 12% passing #200 sieve. Onsite soils: SP, SP-SM, SM, SC, and shall have no more than 25% passing #200 sieve.

C. Contractor shall furnish all borrow material.

D. Contractor shall be responsible for and bear all expenses in developing borrow sources including securing necessary permits, drying the material, haul roads, clearing, grubbing, excavating the pits, placing, compaction and restoration of pits and haul roads to a condition satisfactory to property owners and in compliance with applicable federal, state, and local laws and regulations.

2.2 SOURCE QUALITY CONTROL

A. If tests indicate materials do not meet specified requirements, change material and retest.

B. Provide materials of each type from same source throughout the Work.

PART 3 – EXECUTION

3.1 TOPSOIL

A. Contractor shall strip topsoil and stockpile on site at a location determined by the Owner at the Contractor's expense.

B. Topsoil shall be placed to a depth of 4 inches over all disturbed or proposed landscaped areas.

C. Topsoil shall be provided at Contractor's expense if it is not available from site.

D. Any remaining topsoil will be hauled off site at the Contractors expense.

E. Do not excavate wet topsoil.

3.2 EXCAVATION

A. Suitable excavation material shall be transported to and placed in fill areas within limits of the work.

B. Unsuitable material encountered in areas, shall be excavated 2 feet below final grade and replaced with suitable material from site or borrow excavations. Contractor shall notify Engineer if more than 2 feet of excavation is needed to replace unsuitable material.

C. Unsuitable and surplus excavation material not required for fill shall be disposed of off site.

D. Proper drainage, including sediment and erosion control, shall be maintained at all times. Methods shall be in accordance with the National Pollutant Discharge Elimination System standards and other local, state, and federal regulations.

E. Unsuitable materials as stated herein are defined as highly plastic clay soils, of the CH and MH designation, border line soils of the SC-CH description, and organic soils of the OL and OH description based on the Unified Soils Classification System. Further, any soils for the top two feet of pavement subbase shall have no more than 15% passing the # 200 sieve.

3.3 GROUND SURFACE PREPARATION FOR FILL

A. All vegetation, roots, brush, heavy sods, heavy growth of grass, decayed vegetable matter, rubbish, and other unsuitable material within the areas to be filled shall be stripped and removed prior to beginning the fill operation.

B. Sloped ground surfaces steeper than 1 vertical to 4 horizontal, on which fill is to be placed shall be plowed, stepped, or benched, or broken up as directed, in such a manner where fill material will bond with the existing surface.

C. Surfaces on which fill is to be placed and compacted shall be wetted or dried as may be required to obtain the specified compaction.

3.4 FILL

A. Per geotechnical report, fill shall be placed in successive horizontal layers in 10" or less lifts, when heavy, self-propelled compaction equipment used, or 4" or less lifts when hand guided compaction equipment is used, for the full width of the cross-section and compacted as required.

3.5 FINISHED GRADING

A. All areas covered by the project including excavated and filled sections and adjacent transition areas shall be smooth graded and free from irregular surface changes.

B. Degree of finish shall be that ordinarily obtainable from either blade-grader or scraper operations, supplemented with hand raking and finishing, except as otherwise specified.

C. Unpaved areas to within 0.1 feet of elevations shown on the drawings provided such deviation does not create low spots that do not drain.

D. All graded areas shall be dressed and seeded within 14 calendar days of work to reduce erosion and permit adequate drainage.

3.6 DISPOSAL OF WASTE MATERIAL

A. All vegetation, roots, brush, sod, broken pavements, curb and gutter, rubbish, and other unsuitable or surplus material stripped or removed from the project site and shall be disposed of lawfully by the Contractor.

3.7 PROTECTION

A. Graded areas shall be protected from traffic, erosion, settlement, or any washing away occurring from any cause prior to acceptance.

B. Contractor shall be responsible for protection of below grade utilities shown on the drawings or indicated by the Owner at all times during earthwork operations.

C. Repair or re-establishment of graded areas prior to final acceptance shall be at the Contractors expense.

D. Site drainage shall be provided and maintained by Contractor during construction until final acceptance of the project. Drainage may be by supplemental ditching, or pumping if necessary, prior to completion of permanent site drainage.

3.8 DRAINAGE

A. Contractor shall be responsible for providing surface drainage away from all construction areas. This shall include maintenance of any existing ditches or those constructed in the immediate vicinity of the work. Contractor shall provide proper and effective measures to prevent siltation of wetlands, streams, and ditches on both the Owner's property, and those properties downstream.

3.9 FIELD QUALITY CONTROL

A. Compaction testing shall be performed in accordance with ASTM D 6938. Where tests indicate the backfill does not meet specified requirements, the backfill shall be reworked or removed and replaced, and then retested at the Contractor's expense.

B. For the fill material to be placed in the basement portion of the building, and the portion of the project site that's directly adjacent to Jeffries Boulevard, compaction requirements shall be 95% of the materials maximum Modified Proctor dry density (ASTM D1557).

C. For the remaining portion of the site, contractor is to place fill material in thin lifts, and compacted to the required plan elevations.

D. Rolling and compaction equipment and methods shall be subject to acceptance by the Engineer. Acceptance in no way relieves Contractor of the responsibility to perform in correct and timely means.

3.10 PROOF ROLLING

A. Shall be required on the portion of the project site that's adjacent to Jeffries Boulevard. The operation shall consist of rolling the compacted fill in the basement area with a fully loaded 10 wheeled dump truck. A full load shall consist of 10 to 12 cubic yards of soil or rock. The dump truck shall be capable of traveling at a speed of two to five miles per hour and be in sound mechanical shape with no exhaust leaks or smoking from burning oil. Areas that pump or rut excessively should be undercut and reworked or replaced with Controlled Fill. The Engineer shall determine number of passes and areas rolled.

END OF SECTION

SECTION 02210

SOIL EROSION CONTROL

PART 1 – GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Special Conditions apply to this section.

1.02 DESCRIPTION OF WORK

A. Extent of soil erosion control work includes all measures necessary to meet the requirements of this section.

B. Erosion and sediment control measures shall be installed prior to any construction activity.

C. Soil erosion and sediment control measures shall include all temporary and permanent means of protection and trapping soils of the construction site during land disturbing activity. Activity covered in this contract shall meet standards of NPDES General Permit for the state where work is performed and shall be in accordance with the approved construction plans.

1.03 PURPOSES

A. Contractor is to achieve the following goals:

1. Minimize soil exposure by proper timing of grading and construction.
2. Retain existing vegetation whenever feasible.
3. Vegetate and mulch denuded areas as soon as possible.
4. Divert runoff away from denuded areas.
5. Minimize length and steepness of slopes when it is practical.
6. Reduce runoff velocities with sediment barriers or by increasing roughness with stone.
7. Trap sediment on site.
8. Inspect and maintain erosion control measures.

1.04 QUALITY ASSURANCE

A. Manufacturer's Qualifications: Firms regularly engaged in the manufacture of soil erosion control systems products of types and sizes required, whose materials have been in satisfactory use for not less than 5-years.

B. Codes and Standards: Comply with all applicable Local, State and Federal Standards pertaining to soil erosion control.

1.05 SUBMITTALS

A. Product Data: Submit manufacturer's technical product data and installation instruction for soil erosion control materials and products.

1.06 MEASUREMENT AND PAYMENT

A. Measurement and payment for will be paid for at the contract lump sum price for the project, for all erosion control management items as indicated in the contract documents and installed in accordance with the Plans and Specifications. The cost of soil erosion control shall include all equipment, labor and materials necessary to comply with the State of South Carolina Erosion and Sediment Control Program; maintenance and removal upon site stabilization.

PART 2 – PRODUCTS

2.01 GRASSING MATERIALS

A. Refer to Section 02902 - Grassing.

1. General: All grass seed shall be free from noxious weeds, grade A recent crop, recleaned and treated with appropriate fungicide at time of mixture. Deliver to site in original sealed containers with dealer's guarantee as to year grown, percentage of purity, percentage of germination and date of the test by which percentages of purity and germination were determined. All seed sown shall have a date of test within six months of the date of sowing.
2. Type of Seed: As outlined in Section 02902 - Grassing; and the construction plans.
3. Mulch: Straw.
4. Fertilizer: Commercial balanced 4-12-12 fertilizer.

2.02 HAY BALES

OMITTED

2.03 SILT FENCE

A. Silt fence shall be a woven geotextile fabric sheet. Fabric shall be a synthetic polymer composed of at least 85% by weight propylene, ethylene, amide, ester, or vinylidene chloride, and shall contain stabilizer and/or inhibitors added to the base plastic to make filaments resistant to deterioration due to ultra-violet and/or heat exposure. Fabric should be finished so the filaments will retain their relative position with respect to each other. Fabric shall be free of defects, rips, holes, or flaws.

Fabric shall meet the following requirements:

Woven Fabrics	
Grab Strength	90 lbs.
Burst Strength	175 PSI
UV Resistance	80%

2.04 CHEMICALS FOR DUST CONTROL

A. Calcium Chloride, Anionic Asphalt Emulsion, latex Emulsion or Resin-in-Water Emulsion may be used for dust control.

2.05 RIP-RAP

OMITTED

2.06 SILT FENCE ROCK OUTLET

OMITTED

2.07 EROSION CONTROL BLANKET

OMITTED

2.08 TEMPORARY FLOATING SKIMMER

OMITTED

2.09 SEDIMENT TRAP

OMITTED

2.10 PRODUCT REVIEW

A. Contractor shall provide the Engineer with a complete description of all products before ordering. Engineer will review all products before they are ordered.

PART 3 – EXECUTION

3.01 GENERAL

A. All disturbed soil areas except those to support paving shall be graded and protected from erosion by grassing. Disturbed areas must be grassed within 14-days of work ending unless work is to begin again before 21-days. Storm water conveyance systems shall have sediment barriers installed at all entrances, intersections, change in direction and discharge points.

3.02 GRASSING

A. Refer to Section 02902 - Grassing.

3.03 SEDIMENT BARRIERS

OMITTED

3.05 SILT FENCE

A. Silt fence shall be placed at approximate location shown and installed in accordance with the detail on the construction drawings. Contractor shall maintain silt fence as required by state regulations.

3.06 DUST CONTROL

A. Dust raised from vehicular traffic will be controlled by wetting down access road with water or by using a deliquescent chemical, such as calcium chloride, if relative humidity is over 30%. Chemicals shall be applied in accordance with manufacturer's recommendations.

B. Contractor shall use all means necessary to control dust on and near the work, or off-site borrow areas when dust is caused by operations during performance of work or if resulting from the condition in which any subcontractor leaves the site. Contractor shall thoroughly treat all surfaces required to prevent dust from being a nuisance to the public, neighbors, and concurrent performance of work on site.

3.07 SEDIMENT TRAP

OMITTED

3.08 RIP-RAP

OMITTED

3.09 SILT FENCE ROCK OUTLET

OMITTED

3.10 CONSTRUCTION EXIT

A. Construct exit at the location shown per detail on the construction drawings. Contractor shall maintain construction exit as required by state regulations.

3.11 INLET PROTECTION

OMITTED

3.12 EROSION CONTROL BLANKETS

OMITTED

3.13 TEMPORARY SKIMMER

OMITTED

END OF SECTION

SECTION 02275

RIP-RAP

PART 1 – GENERAL

1.01 SECTION INCLUDES

A. Material placed as bank protection and erosion control.

1.02 RELATED SECTIONS

A. Section 02210 - Soil Erosion Control.

1.03 ALLOWABLE TOLERANCES

A. Depth of rip-rap blanket as shown on the drawings and in these specifications, is a minimum depth.

1.04 MEASUREMENT AND PAYMENT

A. Measurement and payment for Rip-Rap shall be made at the contract lump sum price.

1.05 REFERENCES (LATEST REVISION)

A. ASTM D 6825-14 – Standard Guide for Placement of Rip-Rap.

PART 2 – PRODUCTS

2.01 MATERIALS

A. Stone Rip-Rap: Shall be hard quarry or field stone of such quality the pieces will not disintegrate on exposure to water, sunlight or weather. Stone shall be solid and non-friable and range in weight from a minimum of 25-pounds to a maximum of 150-pounds. At least 50-percent of the stone pieces shall weigh more than 60-pounds. The stone pieces shall have a minimum dimension of 12-inches. Documents indicating stone analysis, source and other pertinent data (i.e. - filter fabric) shall be submitted for review by the Engineer prior to delivery.

B. Filter Fabric: Shall be a woven fabric of monofilament and multifilament yarn equivalent to Mirafi FW700. Fabric shall be finished so the filaments will retain their relative position with respect to each other. Fabric shall contain stabilizers and/or inhibitors added to make filaments resistant to deterioration due to ultraviolet and/or heat exposure. Fabric shall be free of flaws, rips, holes or defects.

2.02 PRODUCT REVIEW

A. Contractor shall provide the Engineer with a complete description of all products before ordering. Engineer will review all products before they are ordered.

PART 3 – EXECUTION

3.01 PREPARATION

A. The surface to receive rip-rap shall be prepared to a relatively smooth condition free of obstruction, depressions, debris, rises, and soft or low-density pockets of material. Contours and elevations on construction drawings are to the surface of rip-rap material.

3.02 PLACEMENT

A. Filter fabric shall be placed with the long dimension running up slope. The strips shall be placed to provide a minimum width of one foot of overlap for each joint. Fabric shall be anchored in place with securing pins of the type recommended by fabric manufacturer. Pins shall be placed on or within 3-inches of the over-lap. Place fabric so upstream strip will overlap the downstream strip. Fabric shall be placed loosely to give and avoid stretching and tearing during placement of the stones.

B. Minimum depth or thickness of stone blanket shall be 12-inches with no under tolerance. Stones shall be dropped no more than three feet during construction. Placing shall begin at bottom of slope. Provide a toe trench if required as detailed on the construction drawings. Entire mass of stone shall be placed to conform with lines, grades, and thickness shown on the plans. Rip-rap shall be placed to its full course thickness at one operation and in such a manner as to avoid displacing the underlying material. Placing of rip-rap in layers, or by dumping into chutes, or by similar methods likely to cause segregation, will not be permitted.

C. Larger stones shall be well distributed, and the entire mass of stone shall conform to gradation specified. All material used in rip-rap protection shall be placed and distributed so there will be no large accumulations of either the larger or smaller sizes of stone.

D. It is the intent of these specifications to produce a compact rip-rap protection in which all sizes of material are placed in their proper proportions. Hand placing or rearranging of individual stones by mechanical equipment may be required to secure the results specified.

END OF SECTION

INDEX TO

SECTION 02570 – TRAFFIC CONTROL

SECTION 02570

TRAFFIC CONTROL

PART 1 – GENERAL

1.1 DESCRIPTION

A. This section covers furnishing, installation, and maintenance of all traffic control devices, portable signal equipment, warning signs, and temporary traffic lanes used during construction of the project.

1.2 RELATED WORK

A. Section 01800 – Building Demolition

B. Section 02070 – Selective Demolition

C. Section 02110 – Site Clearing

D. Section 02210 – Soil Erosion Control

1.3 RESPONSIBILITY

A. The Contractor shall furnish, install, and maintain all necessary automated signals, barricades, concrete traffic barriers, warning signs, traffic barriers, traffic lanes, and other protective devices, as outlined in the approved SCDOT Encroachment Permit. Ownership of these temporary warning devices shall remain with the Contractor provided devices are removed promptly after completion and acceptance of work to which devices pertain. If such warning devices are left in place for more than 30 days after specified time for removal, Owner shall have the right to remove such devices and to claim possession thereof.

1.4 MEASUREMENT AND PAYMENT

A. Measurement and payment for Traffic Control shall be included in the contract lump sum price for the project.

PART 2 – PRODUCTS

2.1 MATERIALS

A. All barricades signs, and traffic control signal devices shall conform to requirements of the current Manual on Uniform Traffic Control Devices except as may be modified in these project specifications.

B. Portable traffic control signal devices, barricades, signs and other Control Devices shall be either new or in acceptable condition when first erected on Project and shall remain in acceptable condition throughout the construction period.

C. All signs shall have a black legend and border on an orange reflectorized background and will be a minimum of engineering grade reflective.

PART 3 – EXECUTION

3.1 ERECTION

A. Prior to commencement of any actual construction on the project, Contractor shall erect appropriate advance warning signs and place concrete traffic barriers where necessary. Subsequently, as construction progresses and shifts from one side of road to the other, temporary lanes must be installed to provide continuous two-way traffic and bike thoroughfare. All appropriate signs and traffic control devices pertinent to the work shall be erected ahead of construction site to advise and warn travelling public of activity and any necessary detours.

3.2 DELAYS TO TRAFFIC

A. Temporary lane closure on Jefferies Boulevard, in the vicinity of the project, shall be from 9:00 AM to 4:00 PM. Traffic will be open for the remaining hours of the day.

B. When traffic is halted temporarily due to transition procedures including the ingress and egress of construction vehicles, Contractor shall provide necessary flagging personnel with proper equipment and clothing to hold such traffic.

C. If Contractor's proposed traffic control plan involves more than occasional disruption to alternating one-way traffic through the work, then temporary, signalized control equipment will be required.

3.3 TEMPORARY TRAFFIC LANES

A. Two–lane traffic shall be maintained at all times unless prior written permission has been given and all necessary flagging personnel and/or signage has been installed. Temporary lane line stripes shall be applied to the detour paving, as agreed to by Engineer and Owner's representative. The no–passing double center–line stripes shall be yellow. Such stripes shall be a temporary, degradable, reflectorized tape strip. All temporary striping shall be maintained throughout the period traffic control is needed.

B. Contractor is responsible for installation and removal of all temporary roads and trails throughout the construction process. These detour roads are to be in accordance with the Pavement Specifications herein.

3.4 SIGNS AND BARRICADES

A. Contractor shall provide a detailed map showing location and verbiage of all traffic control signs and methods for the project. All critical warning signs for the project will be a minimum of engineering grade reflective material and include appropriate flashing lights.

B. Appropriate Safety Barricades shall be installed between bicycle trails, sidewalks, and the temporary traffic lanes. These barricades shall be impact resistant for passenger vehicles with a travelling speed of 40 mph.

1. Advance warning signs: These signs shall be placed approximately 500-feet in advance of the construction site and detour on each approach to the construction area with subsequent warning signs every 250-feet, until construction site is met.

2. Barricades: While detour is open to traffic, a line of concrete traffic barricades shall be placed across the closed roadway to channelize traffic onto detour. They shall be spaced across the blocked roadway end to end so no vehicle will be able to pass between any two adjacent barricades.

3. Barriers: Shall be wooden having a minimum of 3 horizontal 6-inch rails spaced 20-inches on center. Markings for barrier rails shall be 6-inches wide alternate orange and white reflectorized stripes sloping downward at 45-degrees in the direction traffic is to pass.

4. During hours of darkness, the Contractor shall place and maintain flashing warning lights on tops of all barriers.

5. Direction Arrow Signs: At each change in traffic direction along the detour, Contractor shall install a sign with an arrow indicating change in traffic direction. This sign is to be located across the pavement from and facing on-coming traffic.

6. End Construction Sign: This sign shall be 60-inches x 24-inches and erected approximately 200-feet beyond end of construction area on the right-hand side.

END OF SECTION

SECTION 02902
GRASSING

PART 1 – GENERAL

1.01 SECTION INCLUDES

A. Seeding, planting grass, and fertilizing all areas of land disturbance.

B. Seed protection.

C. Maintaining seeded areas until final acceptance.

1.02 RELATED WORK

A. Civil plans and specifications.

B. Section 02210 – Soil Erosion Control.

1.03 DELIVERY, STORAGE, AND HANDLING

A. Deliver grass seed in original containers showing analysis of seed mixture, percentage of pure seed, year of production, net weight, date of packaging, and location of packaging. Damaged packages are not acceptable. Store in cool, dry locations away from contaminants.

B. Deliver fertilizer in waterproof bags showing weight, chemical analysis, and name of manufacturer. Damaged bags are not acceptable. Store in cool, dry locations away from contaminants.

C. Deliver sod on pallets.

D. All material shall be acceptable to Engineer prior to use.

1.04 PLANTING DATES

A. This specification provides for establishment of a permanent grass cover between the dates of March 1 and September 30. If finished earth grades are not completed in time to permit planting and establishment of permanent grass during the favorable season between dates specified above unless otherwise accepted, Contractor will be required to plant a temporary cover to protect new graded areas from erosion and to keep windborne dust to a minimum. The temporary cover shall be planted between October 1 and February 28 unless otherwise permitted.

1.05 MEASUREMENT AND PAYMENT

A. Measurement and payment for grassing shall be included in the contract lump sum price for the project.

PART 2 – PRODUCTS

A. Contractor shall submit source and species certification documents to Engineer and Owner's Representative for review prior to installation. Supply complete information on all analysis/test methodologies and results; laboratory certifications, manufacturer's specifications, and agency approvals to the Landscape Architect/Project Engineer prior to placement of soil mixtures. In addition, provide the Landscape Architect/Project Engineer with thoroughly mixed sample of soil mixes for acceptance prior to placement. Landscape Contractor shall make modifications and improvements to soil mixes deemed necessary by the soil analysis to meet requirements specified here in before, and to ensure proper growing medium for plant material.

2.01 SEED

A. All seed shall conform to State Laws and requirements and regulations of the State Department of Agriculture.

B. The varieties of seed, as specified in Section 2.2, shall be individually packaged or bagged, and tagged to show name of seed, net weight, origin, germination, lot number, and other information required by the State Department of Agriculture.

C. Engineer reserves the right to test, reject, or accept all seed before seeding.

2.02 SEEDING SCHEDULE – TEMPORARY & PERMANENT SEEDING

A. See construction plans for seeding schedule.

2.03 FERTILIZER

A. Commercial fertilizer of accepted type, conforming to State fertilizer laws at the rate as recommended by soils test.

2.04 LIME

A. Agricultural grade, ground limestone at the rate as recommended by soils test.

2.05 SPRIG

OMMITED

2.06 SPRIGGING SCHEDULE

OMMITED

2.07 SOD

OMMITED

2.08 ACCESSORIES

A. Wood cellulose fiber shall be made from wood chip particles manufactured particularly for discharging uniformly on the ground surface when dispersed by a hydraulic water sprayer. It shall remain in uniform suspension in water under agitation and blend with grass seed and fertilizer to form a homogenous slurry. Mulch fibers shall intertwine physically to form a strong moisture holding mat on the ground surface and allow rainfall to percolate into underlying soil. The mulch shall be heat processed to contain no germination or growth-inhibiting factors. It shall be dyed (non-toxic) an appropriate color to facilitate metering of material.

2.09 PRODUCT REVIEW

A. Contractor shall provide the Engineer with a complete description of all products before ordering. The Engineer will review all products before they are ordered.

PART 3 – EXECUTION

3.01 PREPARATION

A. Areas to be seeded shall be made smooth and uniform and shall conform to the finished grade indicated on plans.

B. Remove foreign materials, plants, roots, stones, and debris from surfaces to be seeded.

C. Grassing areas, if not loose, shall be loosened to a minimum depth of 3-inches before fertilizer, seed or sod is applied.

D. Amendments to soils shall be incorporated into loosened 3-inch topsoil layer as recommended by soils tests.

E. Contractor shall provide Topsoil Analysis Tests performed by a State Agricultural Experiment Station, Soil and Water Conservation District, State University, or other qualified private testing laboratory, as acceptable to Landscape Architect/Project Engineer. Soils test shall identify existing pH and nutrient levels, as well as recommended adjustments based on the type of grass to be installed.

3.02 STAND OF GRASS

A. Before acceptance of seeding, sodding, or sprigging is performed for the establishment of permanent vegetation, Contractor will be required to produce a satisfactory stand of perennial grass whose root system shall be developed sufficiently to survive dry periods and winter weather and be capable of re-establishment in spring.

B. Before acceptance of seeding is performed for the establishment of temporary vegetation, Contractor will be required to produce a stand of grass sufficient to control erosion for a given area and length of time before the next phase of construction or establishment of permanent vegetation is to commence.

3.03 SEEDING DATES

A. Seeding shall be performed during periods and at rates specified in their respective schedules. Seeding work may, at discretion of Contractor, be performed throughout the year using schedule prescribed for given period. Seeding work shall not be conducted when the ground is frozen or excessively wet. Contractor will be required to produce a satisfactory stand of grass regardless of the period of year work is performed.

3.04 APPLYING LIME AND FERTILIZER

A. Following advance preparation and placing selected material for shoulders and slopes, lime and fertilizer, if called for based on soil tests, shall be spread uniformly over the designated areas, and shall be thoroughly mixed with the soil to a depth of approximately 2-inches. Fertilizer and lime shall be applied at the rate recommended by required soils test. Unless otherwise provided, lime will not be applied for temporary seeding. In all cases where practicable, acceptable mechanical spreaders shall be used for spreading fertilizer. On steep slopes subject to slides and inaccessible to power equipment, the slopes shall be adequately scarified. Fertilizer may be applied on steep slopes by hydraulic methods as a mixture of fertilizer and seed. When fertilizer is applied with combination seed and fertilizer drills, no further incorporation will be necessary. The fertilizer and seed shall be applied together when Wood Cellulose Fiber Mulch is used. Any stones larger than 2-1/2-inches in any dimension, larger clods, roots, or other debris brought to the surface shall be removed.

3.05 SEEDING

A. Seed shall be sown within 24-hours following application of fertilizer and lime and preparation of the seedbed as specified in Section 3.04. Seed shall be uniformly sown at rate specified using acceptable mechanical seed drills. Rotary hand seeders, power sprayers or other satisfactory equipment may be used on steep slopes or on other areas inaccessible to seed drills.

B. Seeds shall be covered and lightly compacted by means of cultipacker or light roller if the drill does not perform this operation. On slopes inaccessible to compaction equipment, the seed shall be covered by dragging spiked chains, by light harrowing or by other satisfactory methods.

C. Apply water with fine spray immediately after each area has been sown.

D. Do not sow seed when ground is too dry, during windy periods or immediately following a rain.

E. If permitted by the special provisions, wood cellulose fiber mulch may be used.

3.06 SEED PROTECTION (STRAW MULCH)

A. All seeded areas seeded with permanent grasses shall be uniformly mulched in a continuous blanket immediately following seeding and compacting operations, using at least 2-tons of straw per acre.

3.07 SEED PROTECTION (EXCELSIOR MULCH)

A. Seed shall be sown as specified in Section 3.5. Within 24-hours after covering of seed, excelsior mulch shall be uniformly applied at the rate of 2-tons per acre. The mulch may be applied hydraulically or by other acceptable methods. Should the mulch be placed in a dry condition, it shall be thoroughly wetted immediately after placing. Engineer may require light rolling of the mulch to form a tight mat.

3.08 SEED PROTECTION (WOOD CELLULOSE FIBER MULCH)

A. After the lime has been applied and ground prepared as specified in Section 3.4, wood cellulose fiber mulch shall be applied at a rate of 1,500-pounds per acre in a mixture of seed and fertilizer. Hydraulic equipment shall be used for application of fertilizer, seed, and slurry of the prepared wood pulp. This equipment shall have a built-in agitation system with an operating capacity sufficient to agitate, suspend, and homogeneously mix a slurry of the specified amount of fiber, fertilizer, seed, and water. The slurry distribution lines shall be large enough to prevent stoppage. The discharge line shall be equipped with a set of hydraulic spray nozzles which will provide an even distribution of slurry on various areas to be seeded. The slurry tank shall have a minimum capacity of 1,000-gallons.

B. Seed, fertilizer, wood pulp mulch, and water shall all be combined into the slurry tank for distribution of all ingredients in one operation by hydraulic seeding method specified herein. Materials shall be combined in a manner recommended by the manufacturer. The slurry mixture shall be regulated so amounts and rates of application shall result in a uniform application of all materials at rates not less than amount specified. Using the color of wood pulp as a guide, equipment operator shall spray prepared seedbed with a uniform visible coat. The slurry shall be applied in a sweeping motion, in an arched stream to fall like rain, allowing wood fibers to build upon each other until an even coat is achieved.

3.09 SPRIGGING

OMMITED

3.10 SODDING

OMMITED

PART 4 – MAINTENANCE, WARRANTY AND ACCEPTANCE

4.01 MAINTENANCE

A. Maintain grassed surfaces until final acceptance.

B. Maintenance shall consist of providing protection against traffic, watering to ensure uniform seed germination and to keep surface of soil damp, and repairing any areas damaged because of construction operations or erosion.

Maintenance shall also include, but is not limited to, watering, weeding, cultivating, removal of dead material, lawn mowing, fertilizing, and other necessary operations.

C. The Contractor shall maintain all proposed plantings until the date of substantial completion issued by the Owner.

4.02 WARRANTY

A. All grassed areas shall be guaranteed by Contractor to be alive and healthy for a one (1) year period from date of substantial completion issued by the Owner. A final walk through with the Owner shall be conducted at end of warranty period to determine if any areas require replanting. At end of warranty period, sod shall show evidence of rooting to underlying soil and shall have no competitive weed growth from either the sod or from between sod joints.

B. Any grassed area which is dead or not showing satisfactory growth shall be replaced at Contractor's expense at the end of warranty period. All replacement shall be of original quality. Replacement required because of vandalism, excessive use, or other causes beyond the control of Contractor are not part of this contract.

4.03 ACCEPTANCE

A. Before acceptance of seeding performed for the establishment of permanent vegetation, Contractor will be required to produce a satisfactory stand of perennial grass whose root system shall be developed sufficiently to survive dry periods and winter weather and be capable of reestablishment in spring.

B. A minimum coverage of 70% density over 100% of the disturbed area is required for seeded areas before project acceptance. Sprig and sod areas shall have 95% coverage over 100% of the disturbed area prior project acceptance.

END OF SECTION

APPENDIX A

September 28, 2020

Colleton County
PO Box 157
Walterboro, South Carolina 29488

Attention: Mr. John Stieglitz III, Capital Projects
jstieglitz@colletoncounty.org

Reference: **Asbestos and Lead-Based Paint Assessment Report**
Floyd Buckner Building
213 North Jefferies Boulevard
Walterboro, South Carolina
S&ME Project No. 4213-20-213

Dear Mr. Stieglitz:

S&ME, Inc. (S&ME) is pleased to provide this report detailing the asbestos and lead-based paint assessment of Floyd Buckner Building located at the referenced site. This report presents the findings of S&ME's assessment conducted on September 1 and 11, 2020. The assessment was performed in general accordance with S&ME Proposal 42-2000416 dated April 27, 2020. The report includes the executive summary, project background, assessment procedures, findings and results, and conclusions and recommendations for the proper treatment of asbestos containing materials and lead-based paint.

This report is provided for the sole use of Colleton County. Use of this report by any other parties will be at such party's sole risk and S&ME, Inc. disclaims liability for any such use or reliance by third parties. The results presented in this report are indicative of conditions only during the time of the assessment and of the specific area referenced. The information provided in this assessment report should not be used as a bidding document, and field conditions should be verified.

We appreciate the opportunity to provide you with our industrial hygiene services. If you have any questions concerning this report, please call us at (843) 884-0005.

Sincerely,

S&ME, Inc.

James L. McMillan
Staff Industrial Hygienist

Terry W. Richburg
Environmental Group Leader

Attachment: Asbestos and Lead-Based Paint Assessment Report

Asbestos and Lead-Based Paint Assessment Report
Floyd Buckner Building – 213 North Jefferies Boulevard
Walterboro, South Carolina
S&ME Project No. 4213-19-213

Assessment Performed by:

09-22-2020

William R. Seaborn (SCDHEC Accreditation #BI-01317) Date

Report Prepared by:

09-22-2020

James L. McMillan (SCDHEC Accreditation #BI-01643) Date

PREPARED FOR:

Colleton County
PO Box 157
Walterboro, SC 29488

PREPARED BY:

S&ME, Inc.
620 Wando Park Boulevard
Mt Pleasant, SC 29464

September 28, 2020

Table of Contents

Appendices

Executive Summary

An asbestos and lead-based paint assessment was conducted at the Floyd Buckner Building on September 1 and 11, 2020, located at 213 North Jefferies Boulevard in Walterboro, South Carolina. The purpose of the assessment was to identify the presence of asbestos containing materials (ACMs) and lead-based paint and materials to support demolition and disposal of the structure. The assessment also complies with federal, state, and local asbestos requirements regarding identification of ACMs that may be disturbed due to renovation or demolition.

The subject structure is one-story, approximately 15,000 square feet in size, and situated on a below-grade basement. The building is comprised of a basement and main level, which are comprised of office areas and a bay area with offices. Interior finishes consist of concrete masonry unit (CMU), drywall, wood, and plaster walls, drywall and suspended ceiling systems with acoustical tile, and vinyl and carpet floor coverings. Exterior finishes consist of brick-veneer walls and a low-slope, built-up roof. The structure was severely damaged by a tornado in early 2020 and was vacant on the day of our assessment.

Asbestos Assessment

The asbestos assessment included the bulk sampling and analysis of drywall and associated joint compound, acoustical ceiling tiles, mastics associated with rubber cove base, mastics and caulking associated with heating, ventilating, and air conditioning (HVAC) ducts, vinyl sheet floorings and associated mastics, vinyl floor tiles and associated mastics, vinyl plank flooring, window glazing, plaster and associated skim coat, spray-applied ceiling texture, and built-up roofing materials. Of the representative materials sampled and analyzed as part of the asbestos assessment, the following ACMs were identified as summarized in the Table (Table 1) below:

Table I: Summary of Confirmed ACMs:

Material	HA	Location	Asbestos Type	Percent	Condition	Potential for Disturbance	*Approx. Quantity
Mastic (black) associated with HVAC Ducts	DM1	Various Office Areas (See Fig. 2)	Chrysotile	4-5	G, NF	PSD	1,500 SF
Vinyl Sheet Flooring (beige/green, tight pattern)	SF1	Rooms 6, 9, 13, 37	Chrysotile	25	G, NF	PSD	530 SF
Vinyl Sheet Flooring (beige/green, loose pattern)	SF2	Rooms 24, 30 (Closet), 32, covered by carpet in 38	Chrysotile	2	G, NF	PSD	280 SF

Table I: Summary of Confirmed ACMs *(continued)*

Material	HA	Location	Asbestos Type	Percent	Condition	Potential for Disturbance	*Approx. Quantity
Mastic (tan) associated with Vinyl Sheet Flooring (SF1 & SF2)	SFM	Rooms 6, 9, 13, 24, 30 (Closet), 32, 37, 38	Chrysotile	2	G, NF	PSD	810 SF
Window Glazing	WG	Exterior – Windows	Chrysotile	2	G, F	PSD	90 LF
Built-up Roof (In place) --- Roofing Debris	RC	Exterior – Roof --- Debris (See Fig 2)	Chrysotile	1.3 – 10	G, NF --- SD, NF	PSD	12,800 SF --- 2,200 SF

*The quantities are estimated and should be field verified for bidding purposes.

Abbreviations:

HA = homogeneous area
D = damaged
LPD = low potential for disturbance
SF = square feet
SD = significantly damaged
PD = potential for disturbance
LF = linear foot
NF = non-friable
PSD = potential for sig. disturbance
G = good
F = friable

The identified window glazing is classified as a friable ACM, in good condition, with a potential for significant disturbance due to the planned demolition activities. The identified mastic associated with HVAC ducts, and vinyl sheet floorings and associated mastics are classified as Category I non-friable ACMs, in good condition, also with a potential for significant disturbance. The identified asbestos containing built-up roofing material is classified as a Category I non-friable ACM, of which approximately 2,200 square feet was in significantly damaged condition, and the remaining roofing was in good (intact) condition. It should also be noted that the identified asbestos containing vinyl sheet flooring will become friable upon removal, therefore requiring friable abatement methods and controls.

The Environmental Protection Agency (EPA), South Carolina Department of Health and Environmental Control (SCDHEC) and Occupational Safety and Health Administration (OSHA) defines a material an ACM if an asbestos content >1% is detected in a representative sample.

Two of the eight joint compound samples collected exhibited an asbestos content of two percent (2%) via Polarized Light Microscopy (PLM). The two referenced samples were subsequently reanalyzed using the PLM Point Count Method, which revealed 0.75% asbestos in each sample. The EPA and SCDHEC does not classify a material an ACM when point count analyses do not exhibit >1% asbestos content, therefore the joint compound and associated drywall is not defined as an ACM by the SCDHEC and EPA, however it is regulated by the OSHA.

Additionally, asbestos was detected at levels less than one percent (<1%) in the mastic (tan) associated with rubber cove base. A material with an asbestos content <1% is not classified as an ACM applicable to the EPA and SCDHEC, however trace levels of asbestos (<1%) in a material are applicable to the OSHA regulatory requirements,

to include but not limited to, worker protection, using wet methods, proper clean-up, use of proper tools/equipment, engineering controls, etc.

Due to the planned demolition activities, we recommend proper removal and disposal of the identified ACMs by a SCDHEC licensed asbestos abatement contractor prior to any disturbance, as required by the EPA and SCDHEC. Onsite asbestos air monitoring must be performed by a SCDHEC licensed Air Sampler, prior to, during, and following the completion of friable abatement activities or activities rendering non-friable ACMs friable, and totaling 160 square feet or greater. If additional suspect ACMs not addressed in this report are discovered during the planned destructive activities, bulk samples must be collected by a SCDHEC licensed inspector and analyzed for asbestos content prior to disturbance or disposal of the suspect material(s). A copy of this report should also be provided to the contractor(s) working in the subject area to assist with compliance with applicable state and federal regulations.

Lead-Based Paint Assessment

A lead-based paint assessment was performed concurrently with the asbestos assessment, of representative paint and components associated with the interior and exterior of the subject structure. The paint and components were analyzed using direct measurement X-Ray Fluorescence (XRF) technology using a Heuresis Pb200i (serial #1852). For the purpose of this assessment, painted and glazed surfaces with lead concentrations meeting the SCDHEC disposal limit (0.7 mg/cm^2) are considered lead-based paint or lead containing glazing.

Of the representative suspect paint and materials tested, the following components exhibited a lead concentration meeting the SCDHEC disposal limit of 0.7 mg/cm^2:

- Glazing on interior porcelain sinks (white) – non-deteriorated condition

The identified components containing lead glazing were in non-deteriorated (intact) condition at the time of assessment. Low levels of lead were also detected which may be applicable to the standards of the OSHA 29 CFR 1926.62 (Lead in Construction), dependent upon the tasks impacting those surfaces.

Lead-based paint and lead containing glazing, as defined by the SCDHEC, require proper handling and disposal in a Class II or Class III landfill. Accumulations of paint waste (sludge, chips, dust, or flakes) and lead contaminated products must be tested by the Toxicity Characteristic Leachate Procedure (TCLP) to determine if the waste is classified as hazardous, which requires disposal in a Subtitle C (hazardous waste) landfill. Lead waste, at a minimum, must be disposed in a Class II or III landfill.

Destructive actions to paint containing detectable levels of lead (e.g. component removal, demolition, sanding, grinding, burning, paint preparation, etc.) will require the contractor comply with the standards of the OSHA regulation 29 CFR 1926.62 (Lead in Construction), including but not limited to training, initial exposure monitoring, the use of personal protective equipment, and medical surveillance.

Paint coatings may be present that contain low levels of lead that cannot be detected by X-ray fluorescence, and may be applicable to OSHA regulations 29 CFR 1926.62. The quantities reported by XRF may be useful in determining the relative risk associated with various demolition tasks, for example disturbances to paints with low lead levels may be less likely to result in airborne lead exposures in excess of the OSHA Action Level.

This summary is for convenience of the reader and should not be completely relied upon without reviewing the full contents of this report, including appended materials.

1.0 Background

S&ME, Inc. (S&ME) was contracted by the Colleton County to perform an asbestos and lead-based paint assessment of the Floyd Buckner Building located at 213 North Jefferies Boulevard in Walterboro, South Carolina. The assessment was subsequently conducted September 1 and 11, 2020 by John McEathron and Bill Seaborn, both with S&ME. The assessment was requested to identify the presence of asbestos containing materials (ACMs) and lead-based paint and materials associated with the interior and exterior of the referenced structure to support planned demolition and disposal. The assessment also complies with federal, state, and local asbestos requirements regarding identification of ACMs that may be disturbed due to renovation or demolition.

The asbestos assessment was conducted to assess, sample, and identify ACMs in accordance with regulatory requirements. The identification of ACMs will aid in the prevention of occupational exposures and/or environmental releases of airborne asbestos. Identification of ACMs also complies with Title 40 Code of the Federal Regulations, part 61, and State regulation 61-86.1 enforced by the South Carolina Department of Health and Environmental Control (SCDHEC), along with Title 29 Code of Federal Regulations, part 1926 enforced by the Occupational Safety and Health Administration (OSHA). The following sections describe the assessment procedures used, results of the suspect ACMs sampled and analyzed, and conclusions and recommendations related to ACMs.

The purpose of the lead-based paint testing was to assess and identify lead-based paint coatings and glazing that will be impacted by the planned destructive activities. The identification of these materials will aid in the compliance of occupational exposure (OSHA) and/or environmental releases of airborne lead dust in accordance with OSHA 29 CFR 1926.62 (Lead in Construction) and provide information to determine proper disposal of lead-based paint coated components and debris in accordance with the SCDHEC and the Environmental Protection Agency (EPA).

2.0 Site and Project Description

2.1 Purpose

The purpose of the assessment was to identify the presence of ACMs and lead-based paint prior to demolition and disposal of the referenced structure. An assessment strategy appropriate for this purpose was presented in our proposal and is described in this report. The report should be interpreted only with regard to the specific locations and materials referenced.

2.2 Site Description

The subject structure is one-story, approximately 15,000 square feet in size, and situated on a below-grade basement. The building is comprised of a basement and main level, which are comprised of office areas and a bay area with offices. Interior finishes consist of concrete masonry unit (CMU), drywall, wood, and plaster walls, drywall and suspended ceiling systems with acoustical tile, and vinyl and carpet floor coverings. Exterior finishes consist of brick-veneer walls and a low-slope, built-up roof. The structure was severely damaged by a tornado in early 2020 and was vacant on the day of our assessment.

3.0 Assessment Procedures

3.1 Asbestos

The assessment was performed by observing and sampling suspect ACMs associated with the interior and exterior of the referenced structure. The possibility exists that suspect materials were undetected in inaccessible areas such as wall voids, pipe chases, and flooring overlays. If additional suspect ACMs not identified in this report are discovered during destructive activities, bulk samples must be collected by a SCDHEC licensed inspector and analyzed for asbestos content prior to disturbance or disposal of the suspect materials.

The suspect ACMs were quantified and subject to a physical condition assessment. A sampling strategy was then developed to provide representative samples in accordance with the SCDHEC and EPA. Suspect ACMs observed were classified based on their condition (good, damaged, or significantly damaged) and potential for disturbance. Bulk samples of suspect ACMs were collected by a SCDHEC licensed inspector. The bulk samples were then extracted from suspect ACMs and recorded on a chain of custody record and submitted to our in-house Polarized Light Microscopy (PLM) laboratory. The samples were subsequently analyzed by PLM, and confirmation analysis was performed by Transmission Electron Microscopy (TEM) by *EMSL Analytical*, for non-friable organically bound materials reported negative by PLM. The laboratories are located in Charlotte, North Carolina and are accredited by the National Voluntary Laboratory Accreditation Program (NVLAP), which is administered by the National Institute of Standards and Technology.

Polarized Light Microscopy (PLM)

The suspect materials were analyzed by trained microscopists using PLM techniques coupled with dispersion staining in accordance with EPA Test Method Title 40 Code of Federal Regulations, Chapter I (1-1-87 edition), Part 763, Subpart F-APPENDIX A. This method identifies asbestos mineral fibers based on six optical characteristics: morphology, birefringence, refractive index, extinction angle, sign of elongation and dispersion staining colors. The laboratory analysis reports the specific type of asbestos identified (there are six asbestos minerals) and the percentage of asbestos present.

Transmission Electron Microscopy (TEM)

One representative sample from each suspect non-friable organically bound homogeneous material, which exhibited negative results via PLM analysis, was analyzed by trained microscopists via TEM, in accordance with ASTM E2356 per SCDHEC requirements.

Identified ACMs were categorized based on the EPA's NESHAP regulation categories. A friable ACM is classified as an ACM that can be crumbled to a powder by moderate hand pressure. A non-friable ACM is classified as either Category I or Category II non-friable ACM. Category I and Category II non-friable ACMs are distinguished from each other by their fiber release potential when damaged. Generally, Category I non-friable ACM, which by definition includes intact asbestos-containing roofing materials, gaskets, packing, and resilient floor coverings, is less likely to become friable and release fibers in a damaged state. Category II non-friable ACM include all other non-friable ACMs excluding Category I that have a high probability of being rendered friable during removal activities or demolition. All friable ACM, Category I non-friable ACM that has become friable, Category I non-

friable ACM that will be or has been subjected to sanding, grinding, cutting or abrading, or Category II non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of demolition or renovation operations are considered to be a Regulated Asbestos-Containing Material (RACM).

3.2 Lead

Lead testing was performed on representative painted and glazed components associated with the referenced structure. The components were tested using a Heuresis Pb200i (serial #1852) XRF Lead Analyzer. The suspect painted and glazed finishes were selected based on the color of the topcoat and the underlying paint layers and/or the substrate on which it was applied. The possibility exists that lead-based paint and glazed finishes are present in inaccessible areas. The SCDHEC defines a lead-based paint as any paint or glazing containing lead at concentrations equaling 0.7 mg/cm^2 or greater by XRF testing. For the purpose of the assessment, paint or glazing containing 0.7 mg/cm^2 or greater was considered lead-based paint or lead containing glazing due to the planned renovation activities.

The OSHA does not recognize a threshold level of lead for definition purposes, only the airborne concentration of lead a worker is exposed. The current OSHA regulations recognize an airborne action level of 30 micrograms per cubic meter (µg/m^3) during an eight-hour day and a permissible exposure limit of 50 µg/m^3.

4.0 Findings and Results

4.1 Asbestos

The suspect ACMs sampled and analyzed as part of the limited assessment performed on September 1 and 11, 2020 consist of drywall and associated joint compound, acoustical ceiling tiles, mastics associated with rubber cove base, mastics and caulking associated with heating, ventilating, and air conditioning (HVAC) ducts, vinyl sheet floorings and associated mastics, vinyl floor tiles and associated mastics, vinyl plank flooring, window glazing, plaster and associated skim coat, spray-applied ceiling texture, and built-up roofing materials. Of the representative materials sampled and analyzed as part of this assessment, the following ACMs were identified, as summarized in the table (Table 2) on the following page.

Table I: Summary of Confirmed ACMs:

Material	HA	Location	Asbestos Type	Percent	Condition	Potential for Disturbance	*Approx. Quantity
Mastic (black) associated with HVAC Ducts	DM1	Various Office Areas (See Fig. 2)	Chrysotile	4-5	G, NF	PSD	1,500 SF
Vinyl Sheet Flooring (beige/green, tight pattern)	SF1	Rooms 6, 9, 13, 37	Chrysotile	25	G, NF	PSD	530 SF
Vinyl Sheet Flooring (beige/green, loose pattern)	SF2	Rooms 24, 30 (Closet), 32, covered by carpet in 38	Chrysotile	2	G, NF	PSD	280 SF
Mastic (tan) associated with Vinyl Sheet Flooring (SF1 & SF2)	SFM	Rooms 6, 9, 13, 24, 30 (Closet), 32, 37, 38	Chrysotile	2	G, NF	PSD	810 SF
Window Glazing	WG	Exterior – Windows	Chrysotile	2	G, F	PSD	90 LF
Built-up Roof (In place) --- Roofing Debris	RC	Exterior – Roof --- Debris (See Fig 2)	Chrysotile	1.3 – 10	G, NF --- SD, NF	PSD	12,800 SF - 2,200 SF

*The quantities are estimated and should be field verified for bidding purposes.

Abbreviations:

HA = homogeneous area
SF = square feet
LF = linear foot
G = good
D = damaged
SD = significantly damaged
NF = non-friable
F = friable
LPD = low potential for disturbance
PD = potential for disturbance
PSD = potential for sig. disturbance

The identified window glazing is classified as a friable ACM, in good condition, with a potential for significant disturbance due to the planned demolition activities. The identified mastic associated with HVAC ducts, and vinyl sheet floorings and associated mastics are classified as Category I non-friable ACMs, in good condition, also with a potential for significant disturbance. The identified built-up roofing material is classified as a Category I non-friable ACM, of which approximately 2,200 square feet was in significantly damaged condition (debris), and remaining roofing was in good (intact) condition. It should also be noted that the identified asbestos containing vinyl sheet flooring will become friable upon removal, therefore requiring friable abatement methods and controls.

The EPA, SCDHEC and OSHA defines a material an ACM if an asbestos content >1% is detected in a representative sample.

Two of the eight joint compound samples collected exhibited an asbestos content of two percent (2%) via Polarized Light Microscopy (PLM). The two referenced samples were subsequently reanalyzed using the PLM Point Count Method, which revealed 0.75% asbestos in each sample. The EPA and SCDHEC does not classify a material an ACM when point count analyses do not exhibit >1% asbestos content, therefore the joint compound and associated drywall is not defined as an ACM by the SCDHEC and EPA, however it is regulated by the OSHA. Additionally, asbestos was detected at levels less than one percent (<1%) in the mastic (tan) associated with rubber cove base.

A material with an asbestos content <1% is not classified as an ACM applicable to the EPA and SCDHEC, however trace levels of asbestos (<1%) in a material are applicable to the OSHA regulatory requirements, to include but not limited to, worker protection, using wet methods, proper clean-up, use of proper tools/equipment, engineering controls, etc.

A summary of asbestos results is provided in Appendix I, and exhibits the sample number, location, type of material tested, approximate quantity of the material sampled, condition of the material, and corresponding result for each sample. Diagrams of bulk sample locations and confirmed ACMs are provided in Appendix II, and a copy of the inspectors' SCDHEC licenses are provided in Appendix III. The laboratory analyses and chain-of-custody records are also provided in Appendix IV.

4.2 Lead

The assessment and testing performed on September 1, 2020 of the paint and materials associated with the referenced structure identified the presence of lead glazing in non-deteriorated (intact) condition. The following components exhibited lead concentrations meeting the SCDHEC limit of 0.7 mg/cm^2 and are considered lead glazing:

- Glazing on interior porcelain sinks (white) – non-deteriorated condition

Low levels of lead were also detected which may be applicable to the standards of the OSHA 29 CFR 1926.62 (Lead in Construction) dependent upon the tasks impacting those surfaces.

The summary of XRF lead readings is provided in Appendix V and should be reviewed in full.

5.0 Conclusions and Recommendations

The asbestos and lead-based paint assessment performed on September 1 and 11, 2020 of the Floyd Buckner Building located at 213 North Jefferies Boulevard in Walterboro, South Carolina identified the presence of a friable ACM in good condition, and Category I non-friable ACMs in good and significantly damaged conditions. ACMs exhibiting <1% asbestos content, which are only applicable to the OSHA regulations found in 29 CFR 1926.1101, were also identified. Lead glazing ($\geq$0.7 mg/cm^2), applicable to the SCDHEC and EPA disposal standards, was identified in addition to low levels of lead that may be applicable to the standards of the OSHA regulations found in 29 CFR 1926.62. This report should be provided to the contractor(s) to assist with compliance with applicable State and Federal regulations.

5.1 Asbestos Recommendations

Due to the planned demolition activities, we recommend proper removal and disposal of the identified ACMs by a SCDHEC licensed asbestos abatement contractor prior to any disturbance, as required by the EPA and SCDHEC. Onsite asbestos air monitoring must be performed by a SCDHEC licensed Air Sampler, prior to, during, and following the completion of friable abatement activities or activities rendering non-friable ACMs friable, and totaling 160 square feet or greater. If additional suspect ACMs not addressed in this report are discovered during the planned destructive activities, bulk samples must be collected by a SCDHEC licensed inspector and analyzed for asbestos content prior to disturbance or disposal of the suspect material(s).

5.2 Lead Recommendations

Lead containing glazing, as defined by the SCDHEC, requires proper handling and disposal in a Class II or Class III landfill. Accumulations of paint waste (sludge, chips, dust, or flakes) and lead contaminated products must be tested by the Toxicity Characteristic Leachate Procedure (TCLP) to determine if the waste is classified as hazardous, which requires disposal in a Subtitle C (hazardous waste) landfill. Lead waste, at a minimum, must be disposed in a Class II or III landfill.

Destructive actions to paint containing detectable levels of lead (e.g. component removal, demolition, sanding, grinding, burning, paint preparation, etc.) will require the contractor comply with the standards of the OSHA regulation 29 CFR 1926.62 (Lead in Construction), including but not limited to training, initial exposure monitoring, the use of personal protective equipment, and medical surveillance.

Paint coatings may be present that contain low levels of lead that cannot be detected by X-ray fluorescence, and may be applicable to OSHA regulations 29 CFR 1926.62. The quantities reported by XRF may be useful in determining the relative risk associated with various demolition tasks, for example disturbances to paints with low lead levels may be less likely to result in airborne lead exposures in excess of the OSHA Action Level.

6.0 Assumptions and Limitations

This report is provided for the sole use of the Colleton County. Use of this report by any other parties will be at such party's sole risk, and S&ME disclaims liability for any such use or reliance by third parties. The results presented in this report are indicative of conditions only during the time of the sampling period and of the specific areas referenced. Under no circumstances is this report to be used as a bidding document, or as a project design or specification.

S&ME performed the services in accordance with generally accepted practices of reputable environmental consultants undertaking similar studies at the same time and in the same geographical area. S&ME has endeavored to meet this standard of care. No other warranty, expressed or implied, is intended or made with respect to this report or S&ME's services. Users of this report should consider the scope and limitations related to these services when developing opinions as to risks associated with the site.

The findings of the asbestos assessment were based largely on visual observations within the amount of time available. The findings do not warrant that all ACMs have been identified; suspect ACMs may be present in areas

not readily-accessible to observation. In addition, the actual locations and quantities of materials may vary from those herein. Apparent homogeneous sampling areas may vary in actual asbestos content due to previous renovations, maintenance or related operations. The possibility exists that suspect materials were undetected in inaccessible or concealed areas such as plumbing and walls voids, and flooring overlays. If additional suspect materials are discovered during the planned destructive activities, samples must be collected and analyzed by qualified entities.

The findings of the lead-based paint assessment were based largely on visual observations within the amount of time available, and the specific number of areas analyzed. The findings do not warrant that all painted surfaces containing lead have been identified; different underlying painted surfaces which contain lead could exist under similar top layers. Also, apparent similarly painted surfaces may vary in actual lead content.

Appendices

Appendix I – Summary of Asbestos Results

Table I: Summary of Asbestos Results

HA	Material Description	Material Location	[2]Approx. Quantity	Cat. (F/I/II)	Type	Condition/ Potential for Disturbance	Sample Number	Sample Location	[1]Type and Percent Asbestos
DW	Drywall	Throughout	27,000 SF	F	Misc	G, PSD	213-DW-01	Room 1	ND
							213-DW-02	Room 40	ND
							213-DW-03	Room 56	ND
JC	Joint Compound				Sur		213-JC-01	Rm 1 (Basement) - PLM	Chrysotile 2
								Point Count Analysis	*Chrysotile 0.75*
							213-JC-02	Room 40	ND
							213-JC-03	Room 56	ND
							213-JC-04	Room 20	ND
							213-JC-05	Room 16	ND
							213-JC-06	Room 36	ND
							213-JC-07	Room 18	ND
							213-JC-08	Room 30 - PLM	Chrysotile 2
								Point Count Analysis	*Chrysotile 0.75*
CT1	Ceiling Tile (2' x 2') (worm track)	North Office Area	2,300 SF	F	Misc	NA	213-CT1-01	Room 18	ND
							213-CT1-02	Room 21	ND
							213-CT1-03	Room 36	ND
CT2	Ceiling Tile (2' x 4') (birdshot)	South & North Office Area	3,600 SF	F	Misc	NA	213-CT2-01	Room 8	ND
							213-CT2-02	Room 33	ND
							213-CT2-03	Room 28	ND
CT3	Ceiling Tile (2' x 4') (pinhole)	North Office Area	700 SF	F	Misc	NA	213-CT3-01	Room 46	ND
							213-CT3-02	Room 25	ND
							213-CT3-03	Room 46	ND

Table I: Summary of Asbestos Results

HA	Material Description	Material Location	[2]Approx. Quantity	Cat. (F/I/II)	Type	Condition/ Potential for Disturbance	Sample Number	Sample Location	[1]Type and Percent Asbestos
CT4	Ceiling Tile (2' x 2') (birdshot)	North Office Area	600 SF	F	Misc	NA	213-CT4-01	Room 30	ND
							213-CT4-02	Room 29	ND
							213-CT4-03	Room 29	ND
CB1	Mastic (cream) associated with Rubber Cove Base	South Office Area	610 LF	NF Cat I	Misc	NA	213-CB1-01	Room 8	ND
							213-CB1-02	Room 12	ND
							[3]213-CB1-03	Room 18	ND
CB2	Mastic (tan) associated with Rubber Cove Base	North Office Area	300 LF	NF Cat I	Misc	PSD	213-CB2-01	Room 30	ND
							213-CB2-02	Room 29	ND
							[3]213-CB2-03	Room 31	Chrysotile 0.62
CB3	Mastic (white) associated with Rubber Cove Base	Room 1	45 LF	NF Cat I	Misc	NA	213-CB3-01	Room 1	ND
							213-CB3-02	Room 1	ND
							[3]213-CB3-03	Room 1	ND
CB4	Mastic (white) associated with Rubber Cove Base	Room 2 and 3	100 LF	NF Cat I	Misc	NA	213-CB4-01	Room 2	ND
							213-CB4-02	Room 2	ND
							[3]213-CB4-03	Room 3	ND
DM1	Mastic (black) associated with HVAC ducts	Various Office Areas (See Figure 2)	1,500 SF	NF Cat I	Misc	PSD	213-DM1-01	Room 32	**Chrysotile 4**
							213-DM1-02	Room 36	**Chrysotile 5**
							213-DM1-03	Room 58	*Not Analyzed*
DM2	Mastic (grey) associated with HVAC ducts	East Office Area	850 SF	NF Cat I	Misc	NA	213-DM1-01	Room 20	ND
							213-DM1-02	Room 17	ND
							[3]213-DM1-03	Room 26	ND

Table I: Summary of Asbestos Results

HA	Material Description	Material Location	[2]Approx. Quantity	Cat. (F/I/II)	Type	Condition/ Potential for Disturbance	Sample Number	Sample Location	[1]Type and Percent Asbestos
SF1	Vinyl Sheet Floor (beige/green, tight pattern)	Rooms 6, 9, 13 and 37	530 SF	NF Cat I	Misc	NA	213-SF1-01	Room 6	**Chrysotile 25**
							213-SF1-02	Room 9	**Chrysotile 25**
							213-SF1-03	Room 37	*Not Analyzed*
SF2	Vinyl Sheet Floor (beige/green, loose pattern)	Rooms 24, 30 (Closet), 32, 38 (Under Carpet)	280 SF	NF Cat I	Misc	NA	213-SF2-01	Room 24	**Chrysotile 2**
							213-SF2-02	Room 32	**Chrysotile 2**
							213-SF2-03	Room 30	*Not Analyzed*
SFM	Vinyl Sheet Floor Mastic (tan)	Rooms 6, 9, 13, 24, 30 (Closet), 32, 37, 38	810 SF	NF Cat I	Misc	NA	213-SFM-01	Room 13	**Chrysotile 2**
							213-SFM-02	Room 32	**Chrysotile 2**
							213-SFM-03	Room 37	*Not Analyzed*
FT1	Vinyl Floor Tile (12" blue) Mastic (tan)	Room 1, 2 and 3	240 SF	NF Cat I	Misc	NA	213-FT3-01	Room 1	ND ND
							213-FT3-02	Room 2	ND ND
							[3]213-FT3-03	Room 3	ND ND
FT2	Vinyl Floor Tile (12" white) Mastic (tan)	Room 21, 22 and 36	850 SF	NF Cat I	Misc	NA	213-FT2-01	Room 22	ND ND
							213-FT2-02	Room 21	ND ND
							[3]213-FT2-03	Room 36	ND ND

Table I: Summary of Asbestos Results

HA	Material Description	Material Location	[2]Approx. Quantity	Cat. (F/I/II)	Type	Condition/ Potential for Disturbance	Sample Number	Sample Location	[1]Type and Percent Asbestos
FT3	Vinyl Floor Tile (12" pink) Mastic (tan)	Room 39	125 SF	NF Cat I	Misc	NA	213-FT3-01	Room 39	ND ND
							213-FT3-02	Room 39	ND ND
							[3]213-FT3-03	Room 39	ND ND
FT4	Vinyl Floor Tile (12" beige) Mastic (grey)	Room 56	365 SF	NF Cat I	Misc	NA	213-FT4-01	Room 56	ND ND
							213-FT4-02	Room 56	ND ND
							[3]213-FT4-03	Room 56	ND ND
WG	Window Glazing	Exterior Windows	90 LF	F	Misc	NA	213-WG-01	Room 1	**Chrysotile 2**
							213-WG-02	Room 12	**Chrysotile 2**
							213-WG-03	Room 35	**Chrysotile 2**
DC	Caulking associated with HVAC ducts	Exterior HVAC Unit	8 LF	NF Cat I	Misc	NA	213-DC-01	Room	ND
							213-DC-02	Room	ND
							[3]213-DC-03	Room	ND
VP1	Vinyl Plank Flooring (woodgrain)	Room 16	260 SF	NF Cat I	Misc	NA	213-VP1-01	Room	ND
							213-VP1-02	Room	ND
							[3]213-VP1-03	Room	ND

Table I: Summary of Asbestos Results

HA	Material Description	Material Location	[2]Approx. Quantity	Cat. (F/I/II)	Type	Condition/ Potential for Disturbance	Sample Number	Sample Location	[1]Type and Percent Asbestos
VP2	Vinyl Plank Flooring (woodgrain)	Room 23 and 25	320 SF	NF Cat I	Misc	NA	213-VP2-01	Room	ND
							213-VP2-02	Room	ND
							[3]213-VP2-03	Room	ND
P	Plaster and Skim coat	Outside Wall in Office Area	5,500 SF	F	Sur	NA	213-P-01	Room	ND ND
							213-P-02	Room	ND ND
							213-P-03	Room	ND ND
							213-P-04	Room	ND ND
							213-P-05	Room	ND ND
							213-P-06	Room	ND ND
							213-P-07	Room	ND ND
TC	Spray-applied Ceiling Texture	Room 49, 53 and 56	1,100 SF	F	Sur	NA	213-TC-01	Room	ND
							213-TC-02	Room	ND
							213-TC-03	Room	ND
							213-TC-04	Room	ND
							213-TC-05	Room	ND

Table I: Summary of Asbestos Results

HA	Material Description	Material Location	[2]Approx. Quantity	Cat. (F/I/II)	Type	Condition/ Potential for Disturbance	Sample Number	Sample Location	[1]Type and Percent Asbestos
RC	Membrane Roof 1 Roof 2	Existing Roof (In-Place) - Debris	15,000 SF	NF Cat I	Misc	G, PSD (12,800 SF) - SD, PSD (2,200 SF)	213-RC-01	Debris Pile - NE Corner	ND ND **Chrysotile 10**
							213-RC-02	Debris Pile - NE Corner	ND ND **Chrysotile 10**
							[3]213-RC-03	Debris Pile - NE Corner	ND **Chrysotile 1.3** *Not Analyzed*

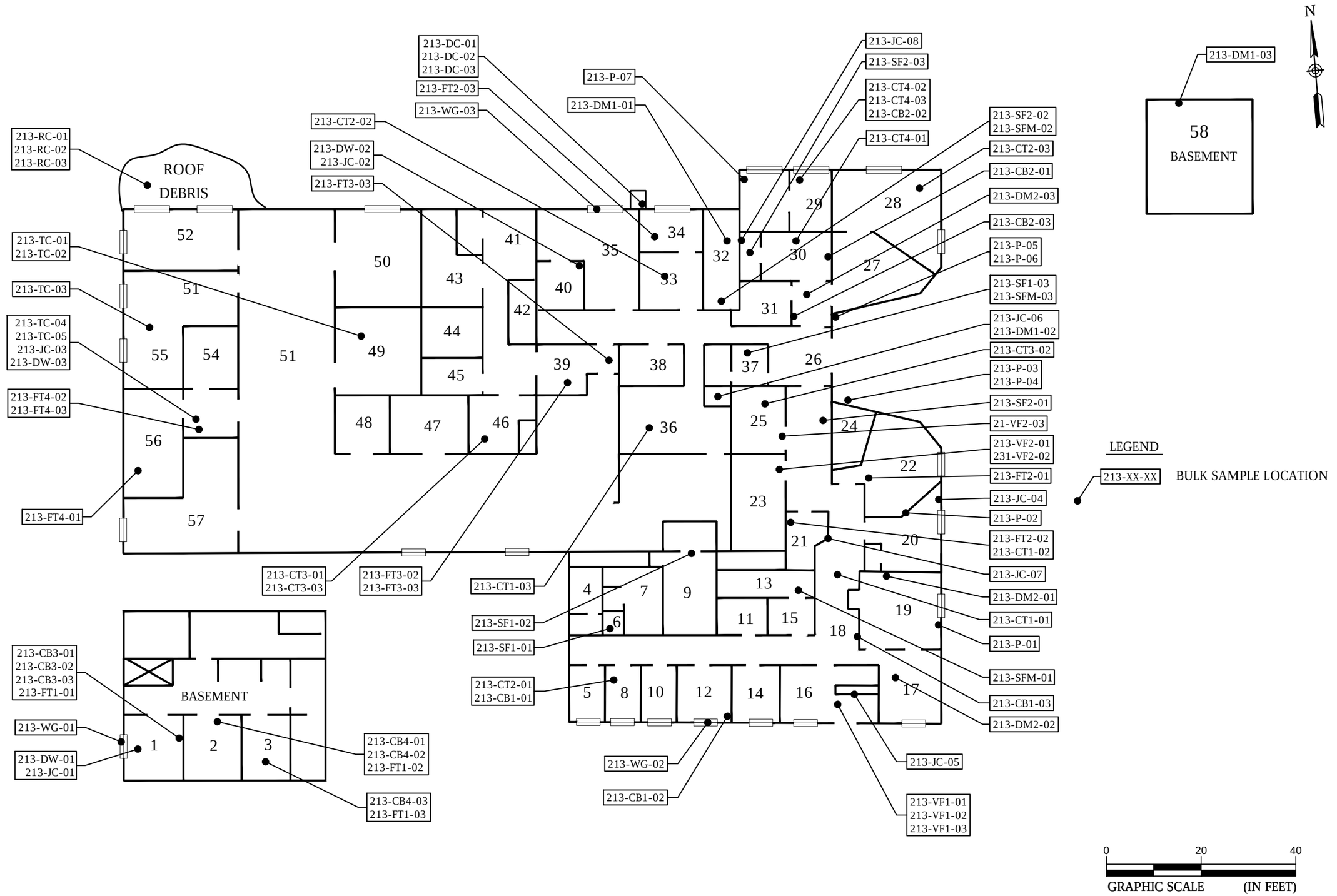
LF = linear feet	Sur = Surfacing	Misc = Miscellaneous	EA = each
F= friable	TSI = Thermal System Insulation	PD = potential for disturbance	**Bold** = >1% asbestos
NF = non-friable	G = good	PSD = potential for significant disturbance	
Cat I = Category I	D = damaged	ND = No Asbestos Detected	
Cat II = Category II	SD = significantly damaged	NA = Not Applicable	

[1]EPA, SCDHEC and OSHA defines a material as asbestos containing if an asbestos content greater than one percent (>1%) is detected in a representative sample

[2]Quantities are estimated, and should not be used for bidding purposes, as field conditions should be verified

[3]Samples analyzed by TEM to confirm negative results reported by PLM analysis

Appendix II – Diagrams of Bulk Sample Locations, Confirmed ACMs, and Lead Paint/Materials



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ASBESTOS AND LEAD-BASED PAINT ASSESSMENT

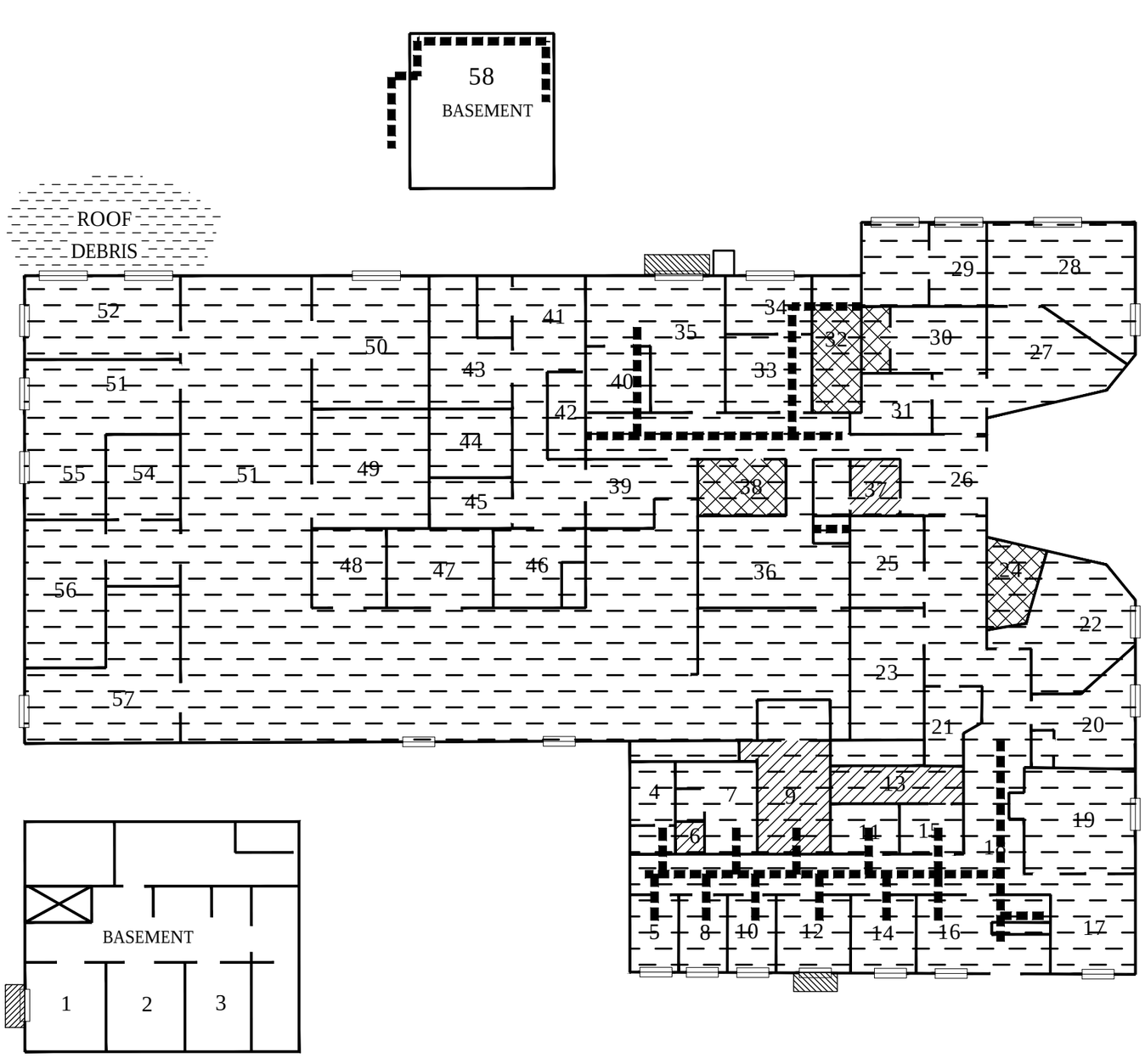
COLLETON COUNTY - FLOYD BUCKNER BUILDING
2130 NORTH JEFFRIES BOULEVARD
WALTERBORO, SOUTH CAROLINA

SCALE:
NTS

DATE:
9-22-2020

PROJECT NUMBER
4213-20-213

FIGURE NO.
1



N

ASBESTOS CONTAINING MATERIAL

SHEET FLOORING (YELLOW/GREEN, UNDER CARPET IN ROOM 2) AND ASSOCIATED, MASTIC (BLACK OR YELLOW)
APPROXIMATELY 530 SQUARE FEET

SHEET FLOORING (YELLOW, LIGHT GREEN) AND ASSOCIATED MASTIC (YELLOW)
APPROXIMATELY 280 SQUARE FEET

MASTIC (BLACK) ASSOCIATED WITH HVAC DUCTWORK
APPROXIMATELY 1,500 SQUARE FEET

BUILT-UP ROOFING MATERIAL
APPROXIMATELY 2,200 SQUARE FEET SIGNIFICANTLY DAMAGED MATERIAL (DEBRIS)
APPROXIMATELY 12,800 SQUARE FEET INTACT MATERIAL

EXTERIOR WINDOW GLAZING
APPROXIMATELY 90 LINEAR FEET (THREE WINDOWS)

LEAD CONTAINING MATERIAL (>0.7 mg/cm²)

- GLAZING ON INTERIOR PORCELAIN SINKS (WHITE) - NON-DETERIORATED CONDITION

NOTE: THE JOINT COMPOUND AND ASSOCIATED DRYWALL AND MASTIC (TAN) ASSOCIATED WITH RUBBER COVE BASE EXHIBITED ASBESTOS CONTENT LESS THAN ONE PERCENT AND ARE APPLICABLE TO THE OSHA REGULATIONS FOUND IN 29 CFR 1926.1101.

THE IDENTIFIED ASBESTOS CONTAINING MASTIC (BLACK) ASSOCIATED WITH HVAC DUCTS MAY BE PRESENT IN INACCESSIBLE WALL AND CEILING VOIDS.

THE ASBESTOS-CONTAINING ROOFING DEBRIS ARE IN SIGNIFICANTLY DAMAGED CONDITION, AND MUST BE TREATED AS REGULATED ASBESTOS CONTAINING MATERIAL (RACM).

0 20 40
GRAPHIC SCALE (IN FEET)

CONFIRMED ASBESTOS AND LEAD CONTAINING MATERIALS

COLLETON COUNTY - FLOYD BUCKNER BUILDING
213 NORTH JEFFRIES BOULEVARD
WALTERBORO, SOUTH CAROLINA

SCALE: NTS

DATE: 9-22-2020

PROJECT NUMBER 4213-20-213

FIGURE NO. 2

T:\Projects\2020\ENV\4213-20-213_Colleton County_Floyd Buckner Bldg_Walterboro\CAD\Construction\4213-20

Appendix III – Copy of Inspectors' SCDHEC Licenses

South Carolina
Department of Health and Environmental Control

Asbestos License

Bill Seaborn

Air Sampler AS-00416
Building Inspector BI-01317

South Carolina
Department of Health and Environmental Control

Asbestos License

John McEathron

Building Inspector BI-00794
Air Sampler AS-00235

Appendix IV - Laboratory Analysis Sheets and Chain of Custody Records

9751 Southern Pine Boulevard
Charlotte, NC 28273
704-940-1830 Fax 704-565-4929
NVLAP Lab Code 102075-0

POLARIZED LIGHT MICROSCOPY
Performed by EPA 600/R-93/116 Method

Asbestos Analysis Summary

Client Name Charleston Office
Client Job Colleton Co Floyd Buckner Bldg

620 Wando Park Blvd.
Mt. Pleasant SC 29464

Date Received 9/3/2020
Date Analyzed 9/4/2020

Job Number 4213-20-213

Lab ID:	Sample #:	Appearance	Comments	Asbestos %/Type	Non-Asbestos Fibrous %/Type	Non-Fibrous %/Type
20-10833	213-DW-01	TAN/BEIGE FIBROUS		ND	2 GLASS 1 CELLULOSE	97 GYPSUM
20-10834	213-DW-02	TAN/BEIGE FIBROUS		ND	5 CELLULOSE	95 GYPSUM
20-10835	213-DW-03	BEIGE FIBROUS		ND	1 CELLULOSE	99 GYPSUM
20-10836	213-JC-01	BEIGE NONFIBROUS		2 CHRYSOTILE		98 OTHER

Analyzed by: Jane Wasilewski
Additional Comments: Issued 9/4/20

Jane Wasilewski
Laboratory Manager

For heterogeneous samples easily separated into subsamples, and for layered samples, each component is analyzed separately. ND = None Detected (Asbestos Not Present In Representative Sample). RCF= (Refractory Ceramic Fiber) The results relate only to the items tested.
The sample may not be fully representative of the larger material in question. This report shall not be reproduced except in full with permission from SME, Inc. This report may not be used to claim product endorsement by NVLAP or any agency of the U.S. Government. Although Polarized Light Microscopy (PLM/Dispersion Staining) (Method EPA 600/R-93/116) is the specified method for analysis of bulk material samples for asbestos under the EPA Asbestos Hazard Emergency Response Act, there have been reports that this method may not identify asbestos when fiber sizes are extremely small or if they are bound in a resinous material. Such materials include floor tile, mastic and asphaltic roofing. Currently, reanalysis by Transmission Electron Microscopy (TEM) to verify results of <1% or "None Detected" for these materials is recommended.

Job Number 4213-20-213

Lab ID:	*Sample #:*	*Appearance*	*Comments*	*Asbestos %/Type*	*Non-Asbestos Fibrous %/Type*	*Non-Fibrous %/Type*
20-10837	213-JC-02	WHITE NONFIBROUS		ND		100 OTHER
20-10838	213-JC-03	WHITE NONFIBROUS		ND		100 OTHER
20-10839	213-JC-04	WHITE NONFIBROUS		ND		100 OTHER
20-10840	213-JC-05	WHITE NONFIBROUS		ND		100 OTHER
20-10841	213-JC-06	WHITE NONFIBROUS		ND		100 OTHER
20-10842	213-JC-07	WHITE NONFIBROUS		ND		100 OTHER

Analyzed by: Jane Wasilewski

Additional Comments: Issued 9/4/20

Jane Wasilewski
Laboratory Manager

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Job Number 4213-20-213

Lab ID:	*Sample #:*	*Appearance*	*Comments*	*Asbestos %/Type*	*Non-Asbestos Fibrous %/Type*	*Non-Fibrous %/Type*
20-10843	213-CT1-01	GREY FIBROUS		ND	45 MINERAL WOOL 30 CELLULOSE	25 PERLITE
20-10844	213-CT1-02	GREY FIBROUS		ND	45 MINERAL WOOL 30 CELLULOSE	25 PERLITE
20-10845	213-CT1-03	GREY FIBROUS		ND	45 MINERAL WOOL 30 CELLULOSE	25 PERLITE
20-10846	213-CT2-01	GREY FIBROUS		ND	65 MINERAL WOOL 30 CELLULOSE	5 PERLITE
20-10847	213-CT2-02	GREY FIBROUS		ND	65 MINERAL WOOL 30 CELLULOSE	5 PERLITE
20-10848	213-CT2-03	GREY FIBROUS		ND	65 MINERAL WOOL 30 CELLULOSE	5 PERLITE

Analyzed by: Jane Wasilewski

Additional Comments: Issued 9/4/20

Jane Wasilewski
Laboratory Manager

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Job Number 4213-20-213

Lab ID:	*Sample #:*	*Appearance*	*Comments*	*Asbestos %/Type*	*Non-Asbestos Fibrous %/Type*	*Non-Fibrous %/Type*
20-10849	213-CT3-01	GREY FIBROUS		ND	55 CELLULOSE 10 MINERAL WOOL	35 PERLITE
20-10850	213-CT3-02	GREY FIBROUS		ND	55 CELLULOSE 10 MINERAL WOOL	35 PERLITE
20-10851	213-CT3-03	GREY FIBROUS		ND	55 CELLULOSE 10 MINERAL WOOL	35 PERLITE
20-10852	213-CT4-01	GREY FIBROUS		ND	75 MINERAL WOOL 20 CELLULOSE	5 PERLITE
20-10853	213-CT4-02	GREY FIBROUS		ND	75 MINERAL WOOL 20 CELLULOSE	5 PERLITE
20-10854	213-CT4-03	GREY FIBROUS		ND	75 MINERAL WOOL 20 CELLULOSE	5 PERLITE

Analyzed by: Jane Wasilewski
Additional Comments: Issued 9/4/20

Jane Wasilewski
Laboratory Manager

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Job Number 4213-20-213

Lab ID:	*Sample #:*	*Appearance*	*Comments*	*Asbestos %/Type*	*Non-Asbestos Fibrous %/Type*	*Non-Fibrous %/Type*
20-10855	213-CB1-01	BEIGE NONFIBROUS		ND		100 OTHER
20-10856	213-CB1-02	YELLOW NONFIBROUS		ND		100 OTHER
20-10858	213-CB2-01	YELLOW NONFIBROUS		ND		100 OTHER
20-10859	213-CB2-02	YELLOW NONFIBROUS		ND		100 OTHER
20-10861	213-CB3-01	YELLOW NONFIBROUS		ND		100 OTHER
20-10862	213-CB3-02	YELLOW NONFIBROUS		ND		100 OTHER

Analyzed by: Jane Wasilewski
Additional Comments: Issued 9/4/20

Jane Wasilewski
Laboratory Manager

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Job Number 4213-20-213

Lab ID:	*Sample #:*	*Appearance*	*Comments*	*Asbestos %/Type*	*Non-Asbestos Fibrous %/Type*	*Non-Fibrous %/Type*
20-10864	213-CB4-01	GREY NONFIBROUS		ND		100 OTHER
20-10865	213-CB4-02	GREY NONFIBROUS		ND		100 OTHER
20-10867A	213-FT1-01	BLUE NONFIBROUS	TILE	ND		100 OTHER
20-10867B	213-FT1-01	YELLOW NONFIBROUS	MASTIC	ND		100 OTHER
20-10868A	213-FT1-02	BLUE NONFIBROUS	TILE	ND		100 OTHER
20-10868B	213-FT1-02	YELLOW NONFIBROUS	MASTIC	ND		100 OTHER

Analyzed by: Jane Wasilewski
Additional Comments: Issued 9/4/20

Jane Wasilewski
Laboratory Manager

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Job Number 4213-20-213

Lab ID:	*Sample #:*	*Appearance*	*Comments*	*Asbestos %/Type*	*Non-Asbestos Fibrous %/Type*	*Non-Fibrous %/Type*
20-10870A	213-FT2-01	BEIGE NONFIBROUS	TILE	ND		100 OTHER
20-10870B	213-FT2-01	GOLD NONFIBROUS	MASTIC	ND		100 OTHER
20-10871A	213-FT2-02	BEIGE NONFIBROUS	TILE	ND		100 OTHER
20-10871B	213-FT2-02	GOLD NONFIBROUS	MASTIC	ND		100 OTHER
20-10873A	213-FT3-01	PINK NONFIBROUS	TILE	ND		100 OTHER
20-10873B	213-FT3-01	GOLD NONFIBROUS	MASTIC	ND		100 OTHER

Analyzed by: Jane Wasilewski
Additional Comments: Issued 9/4/20

Jane Wasilewski
Laboratory Manager

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Job Number 4213-20-213

Lab ID:	*Sample #:*	*Appearance*	*Comments*	*Asbestos %/Type*	*Non-Asbestos Fibrous %/Type*	*Non-Fibrous %/Type*
20-10874A	213-FT3-02	PINK NONFIBROUS	TILE	ND		100 OTHER
20-10874B	213-FT3-02	GOLD NONFIBROUS	MASTIC	ND		100 OTHER
20-10876A	213-FT4-01	GREY NONFIBROUS	TILE	ND		100 OTHER
20-10876B	213-FT4-01	CREAM NONFIBROUS	MASTIC	ND		100 OTHER
20-10877A	213-FT4-02	GREY NONFIBROUS	TILE	ND		100 OTHER
20-10877B	213-FT4-02	CREAM NONFIBROUS	MASTIC	ND		100 OTHER

Analyzed by: Jane Wasilewski
Additional Comments: Issued 9/4/20

Jane Wasilewski
Laboratory Manager

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Job Number 4213-20-213

Lab ID:	*Sample #:*	*Appearance*	*Comments*	*Asbestos %/Type*	*Non-Asbestos Fibrous %/Type*	*Non-Fibrous %/Type*
20-10879A	213-P-01	WHITE NONFIBROUS	SKIM COAT	ND		100 OTHER
20-10879B	213-P-01	GREY GRANULAR	PLASTER	ND	<1 CELLULOSE	100 OTHER
20-10880A	213-P-02	WHITE NONFIBROUS	SKIM COAT	ND		100 OTHER
20-10880B	213-P-02	GREY GRANULAR	PLASTER	ND		100 OTHER
20-10881A	213-P-03	WHITE NONFIBROUS	SKIM COAT	ND		100 OTHER
20-10881B	213-P-03	GREY GRANULAR	PLASTER	ND		100 OTHER

Analyzed by: Jane Wasilewski
Additional Comments: Issued 9/4/20

Jane Wasilewski
Laboratory Manager

For heterogeneous samples easily separated into subsamples, and for layered samples, each component is analyzed separately. ND = None Detected (Asbestos Not Present In Representative Sample). RCF= (Refractory Ceramic Fiber) The results relate only to the items tested.
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Job Number 4213-20-213

Lab ID:	*Sample #:*	*Appearance*	*Comments*	*Asbestos %/Type*	*Non-Asbestos Fibrous %/Type*	*Non-Fibrous %/Type*
20-10882A	213-P-04	WHITE NONFIBROUS	SKIM COAT	ND		100 OTHER
20-10882B	213-P-04	GREY GRANULAR	PLASTER	ND		100 OTHER
20-10883A	213-P-05	WHITE NONFIBROUS	SKIM COAT	ND		100 OTHER
20-10883B	213-P-05	GREY GRANULAR	PLASTER	ND		100 OTHER
20-10884A	213-P-06	WHITE NONFIBROUS	SKIM COAT	ND		100 OTHER
20-10884B	213-P-06	GREY GRANULAR	PLASTER	ND		100 OTHER

Analyzed by: Jane Wasilewski
Additional Comments: Issued 9/4/20

Jane Wasilewski
Laboratory Manager

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Job Number 4213-20-213

Lab ID:	*Sample #:*	*Appearance*	*Comments*	*Asbestos %/Type*	*Non-Asbestos Fibrous %/Type*	*Non-Fibrous %/Type*
20-10885A	213-P-07	WHITE NONFIBROUS	SKIM COAT	ND		100 OTHER
20-10885B	213-P-07	GREY GRANULAR	PLASTER	ND		100 OTHER
20-10886	213-WG-01	GREY NONFIBROUS		2 CHRYSOTILE		98 OTHER
20-10887	213-WG-02	GREY NONFIBROUS		2 CHRYSOTILE		98 OTHER
20-10888	213-WG-03	GREY NONFIBROUS		2 CHRYSOTILE		98 OTHER
20-10889	213-TC-01	BEIGE NONFIBROUS		ND		100 OTHER

Analyzed by: Jane Wasilewski

Additional Comments: Issued 9/4/20

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Job Number 4213-20-213

Lab ID:	*Sample #:*	*Appearance*	*Comments*	*Asbestos %/Type*	*Non-Asbestos Fibrous %/Type*	*Non-Fibrous %/Type*
20-10890	213-TC-02	BEIGE NONFIBROUS		ND		<1 VERMICULITE 100 OTHER
20-10891	213-TC-03	BEIGE NONFIBROUS		ND		100 OTHER
20-10892	213-TC-04	BEIGE NONFIBROUS		ND		100 OTHER
20-10893	213-TC-05	BEIGE NONFIBROUS		ND		100 OTHER
20-10894	213-DM1-01	BLACK FIBROUS		4 CHRYSOTILE		96 OTHER
20-10895	213-DM1-02	BLACK FIBROUS		5 CHRYSOTILE		95 OTHER

Analyzed by: Jane Wasilewski

Additional Comments: Issued 9/4/20

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Laboratory Manager

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Job Number 4213-20-213

Lab ID:	*Sample #:*	*Appearance*	*Comments*	*Asbestos %/Type*	*Non-Asbestos Fibrous %/Type*	*Non-Fibrous %/Type*
20-10897	213-DM2-01	BEIGE PLIABLE		ND	2 CELLULOSE	98 OTHER
20-10898	213-DM2-02	BEIGE PLIABLE		ND	2 CELLULOSE	98 OTHER
20-10900	213-SF1-01	GREEN/YW FIBROUS		25 CHRYSOTILE	2 CELLULOSE	73 OTHER
20-10901	213-SF1-02	GREEN/YW FIBROUS		25 CHRYSOTILE	2 CELLULOSE	73 OTHER
20-10903	213-SF2-01	GREEN FIBROUS		2 CHRYSOTILE	1 CELLULOSE	97 OTHER
20-10904	213-SF2-02	GREEN FIBROUS		2 CHRYSOTILE	1 CELLULOSE	97 OTHER

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Additional Comments: Issued 9/4/20

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Job Number 4213-20-213

Lab ID:	*Sample #:*	*Appearance*	*Comments*	*Asbestos %/Type*	*Non-Asbestos Fibrous %/Type*	*Non-Fibrous %/Type*
20-10906	213-SFM-01	YELLOW/BEIGE FIBROUS		2 CHRYSOTILE		98 OTHER
20-10907	213-SFM-02	YELLOW/BEIGE FIBROUS		2 CHRYSOTILE		98 OTHER
20-10909A	213-RC-01	WHITE FIBROUS	MEMBRANE	ND	30 SYNTHETIC	70 OTHER
20-10909B	213-RC-01	BLACK FIBROUS	ROOF 1	ND	20 GLASS	80 OTHER
20-10909C	213-RC-01	BLACK FIBROUS	ROOF 2	10 CHRYSOTILE	10 CELLULOSE	80 OTHER
20-10910A	213-RC-02	WHITE FIBROUS	MEMBRANE	ND	30 SYNTHETIC	70 OTHER

Analyzed by: Jane Wasilewski

Additional Comments: Issued 9/4/20

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Job Number 4213-20-213

Lab ID:	*Sample #:*	*Appearance*	*Comments*	*Asbestos %/Type*	*Non-Asbestos Fibrous %/Type*	*Non-Fibrous %/Type*
20-10910B	213-RC-02	BLACK FIBROUS	ROOF 1	ND	20 GLASS	80 OTHER
20-10910C	213-RC-02	BLACK FIBROUS	ROOF 2	10 CHRYSOTILE	10 CELLULOSE	80 OTHER
20-10912	213-VP1-01	BROWN NONFIBROUS		ND		100 OTHER
20-10913	213-VP1-02	BROWN NONFIBROUS		ND		100 OTHER
20-10915	213-VP2-01	BROWN NONFIBROUS		ND		100 OTHER
20-10916	213-VP2-02	BROWN NONFIBROUS		ND		100 OTHER

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Job Number 4213-20-213

Lab ID:	*Sample #:*	*Appearance*	*Comments*	*Asbestos %/Type*	*Non-Asbestos Fibrous %/Type*	*Non-Fibrous %/Type*
20-10918	213-DC-01	GREY RUBBERY		ND		100 OTHER
20-10920	213-DC-02	GREY RUBBERY		ND		100 OTHER

Analyzed by: Jane Wasilewski

Additional Comments: Issued 9/4/20

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BULK SAMPLE
CHAIN OF CUSTODY RECORD

PROJECT NO.	PROJECT NAME	RELINQUISHED BY:	DATE	TIME	RECEIVED BY:
4213-20-213 ph 472	Colleton County	[signature]	9-2-20	1730	[signature] 9/3/20 11:10 AM
FACILITY Floyd Buckner Bldg.		RELINQUISHED BY:	DATE	TIME	RECEIVED BY:
SAMPLER(S) B. Seaborn, J. McEathron	**DATE TAKEN** 9-1-20	RELINQUISHED BY:	DATE	TIME	RECEIVED BY:

SAMPLE #	HOMOGENEOUS AREA	MATERIAL TYPE	LAB NUMBER	DATE ANALYZED	ANALYSTS INITIALS	ASBESTOS +	ASBESTOS N/D	ARCHIVE NUMBER	DATE ARCH	ARCHIVERS INITIALS	SPECIAL INSTRUCTIONS
213-DW-01	DW	Drywall	20-10833								PLM
213-DW-02	DW	Only	34								PLM
213-DW-03	DW	"	35								PLM
213-JC-01	JC	Joint Comp	36								PLM
213-JC-02	JC	Only	37								PLM
213-JC-03	JC	"	38								PLM
213-JC-04	JC	"	39								PLM
213-JC-05	JC	"	40								PLM
213-JC-06	JC	"	41								PLM
213-JC-07	JC	"	42								PLM
213-CT1-01	CT1	Ceiling Tile	43								PLM
213-CT1-02	CT1	"	44								PLM
213-CT1-03	CT1	"	10845								PLM

ALL SAMPLES WILL BE DISPOSED OF NINETY DAYS AFTER ANALYSIS UNLESS OTHERWISE REQUESTED

MATERIAL TYPES

Other

PLM TAT - 5 (Days) Hours Same Day

TEM TAT - 3 (Days) Hours Same Day

Do not run TEM if both PLMs are positive

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BULK SAMPLE
CHAIN OF CUSTODY RECORD

PROJECT NO.	PROJECT NAME	RELINQUISHED BY:	DATE	TIME	RECEIVED BY:
4213-20-213 ph 472	Colleton County	[signature]	9-2-20	1730	[signature] 9/3/20
FACILITY Floyd Buckner Bldg.		RELINQUISHED BY:	DATE	TIME	RECEIVED BY:
SAMPLER(S) B. Seaborn, J. McEathron	**DATE TAKEN** 9-1-20	RELINQUISHED BY:	DATE	TIME	RECEIVED BY:

SAMPLE #	HOMOGENEOUS AREA	MATERIAL TYPE	LAB NUMBER	DATE ANALYZED	ANALYSTS INITIALS	ASBESTOS +	ASBESTOS I	ASBESTOS N/D	ARCHIVE NUMBER	DATE ARCH	ARCHIVERS INITIALS	SPECIAL INSTRUCTIONS
213-CT2-01	CT2	Ceiling Tile	20-10846									PLM
213-CT2-02	CT2	"	47									PLM
213-CT2-03	CT2	"	48									PLM
213-CT3-01	CT3	Ceiling Tile	49									PLM
213-CT3-02	CT3	"	50									PLM
213-CT3-03	CT3	"	51									PLM
213-CT4-01	CT4	Ceiling Tile	52									PLM
213-CT4-02	CT4	"	53									PLM
213-CT4-03	CT4	"	54									PLM
213-CB1-01	CB1	Cove Base	55									PLM
213-CB1-02	CB1	Mastic	56									PLM
213-CB1-03	CB1	Only	57									TEM
213-CB2-01	CB2	"	58									PLM
213-CB2-02	CB2	"	59									PLM
213-CB2-03	CB2	"	10860									TEM

ALL SAMPLES WILL BE DISPOSED OF NINETY DAYS AFTER ANALYSIS UNLESS OTHERWISE REQUESTED

MATERIAL TYPES

A – <4" Pipe Fitting
B – 4-8" Pipe Fitting
C – 9-14" Pipe Fitting
D – >14" Pipe Fitting
E – <4" Pipe
F – 4-8" Pipe
G – 9-14" Pipe
H – >14" Pipe
I – Spray On/Trowel
J – Floor Tile
K – Tanks, Boiler
L – A.H.U./ Insul.
M – A.H.U. Exp. Jt.
N – Ceiling/Wall Tile
O – Fiberboard
P – Other (See notes-Front or back)

PLM TAT - 5 Days (circled) Hours Same Day

TEM TAT - 3 Days (circled) Hours Same Day

Do not run TEM if both PLMs are positive

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BULK SAMPLE
CHAIN OF CUSTODY RECORD

PROJECT NO.	PROJECT NAME	RELINQUISHED BY:	DATE	TIME	RECEIVED BY:
4213-20-213 ph 472	Colleton County	[signature]	9-2-20	1730	[signature] 9/3/20
FACILITY Floyd Buckner Bldg.		RELINQUISHED BY:	DATE	TIME	RECEIVED BY:
SAMPLER(S) B. Seaborn, J. McEathron	**DATE TAKEN** 9-1-20	RELINQUISHED BY:	DATE	TIME	RECEIVED BY:

SAMPLE #	HOMOGENEOUS AREA	MATERIAL TYPE	LAB NUMBER	DATE ANALYZED	ANALYSTS INITIALS	ASBESTOS +	ASBESTOS I	ASBESTOS N/D	ARCHIVE NUMBER	DATE ARCH	ARCHIVERS INITIALS	SPECIAL INSTRUCTIONS
213-CB3-01	CB3	Cove Base	20-10861									PLM
213-CB3-02	CB3	Mastic	62									PLM
213-CB3-03	CB3	Only	63									TEM
213-CB4-01	CB4	"	64									PLM
213-CB4-02	CB4	"	65									PLM
213-CB4-03	CB4	"	66									TEM
213-FT1-01	FT1	Floor Tile	67									PLM
213-FT1-02	FT1	& Mastic	68									PLM
213-FT1-03	FT1	"	69									TEM
213-FT2-01	FT2	"	70									PLM
213-FT2-02	FT2	"	71									PLM
213-FT2-03	FT2	"	72									TEM
213-FT3-01	FT3	"	73									PLM
213-FT3-02	FT3	"	74									PLM
213-FT3-03	FT3	"	10875									TEM

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MATERIAL TYPES

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B – 4-8" Pipe Fitting
C – 9-14" Pipe Fitting
D – >14" Pipe Fitting
E – <4" Pipe
F – 4-8" Pipe
G – 9-14" Pipe
H – >14" Pipe
I – Spray-On [illegible]
J – Floor Tile
K – Tank/Boiler
L – A+B+C+[illegible]
M – A+[illegible]
N – Ceiling/Wall Tile
O – Fiberboard
P – Other (see note [illegible] on back)

PLM TAT - 5 Days Hours Same Day
TEM TAT - 3 Days Hours Same Day
Do not run TEM if both PLMs are positive

S&ME [illegible] REV 5/95 This document was prepared pursuant to a specific agreement to address the unique requirements of an S&ME client. Prior to further use, an S&ME professional should be contacted for a complete explanation of its preparation and contents.

BULK SAMPLE
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4213-20-213 ph 472	Colleton County	[signature]	9-2-20	1730	[signature] 9/3/20

FACILITY	RELINQUISHED BY:	DATE	TIME	RECEIVED BY:
Floyd Buckner Bldg.				

SAMPLER(S)	DATE TAKEN	RELINQUISHED BY:	DATE	TIME	RECEIVED BY:
B. Seaborn, J. McEathron	9-1-20				

SAMPLE #	HOMOGENEOUS AREA	MATERIAL TYPE	LAB NUMBER	DATE ANALYZED	ANALYSTS INITIALS	ASBESTOS +	ASBESTOS N/D	ARCHIVE NUMBER	DATE ARCH	ARCHIVERS INITIALS	SPECIAL INSTRUCTIONS
213-FT4-01	FT4	Floor Tile	20-10876								PLM
213-FT4-02	FT4	& Mastic	77								PLM
213-FT4-03	FT4	"	78								TEM
213-P-01	P	Plaster &	79								PLM
213-P-02	P	Skimcoat	80								PLM
213-P-03	P	"	81								PLM
213-P-04	P	"	82								PLM
213-P-05	P	"	83								PLM
213-P-06	P	"	84								PLM
213-P-07	P	"	85								PLM
213-WG-01	WG	Window	86								PLM
213-WG-02	WG	Glazing	87								PLM
213-WG-03	WG	"	10888								PLM
								"			

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MATERIAL TYPES

A – [illegible] Pipe Fitting
B – 4-2" Pipe Fitting
C – 9-14" Pipe Fitting
D – >14 Pipe Fitting
E – <4 Pipe
F – 4-8 Pipe
G – 9-14" Pipe
H – >14" Pipe
I – Spray On/Trowel
J – Floor Tile
K – Tanks/Boiler
L – [illegible]
M – A+H U. Exp. Jt.
N – Ceiling/Wall Tile
O – Fiberboard
P – Other (See notes front or back)

PLM TAT - 5 Days Hours Same Day
TEM TAT - 3 Days Hours Same Day
Do not run TEM if both PLMs are positive

S&ME [illegible] (REV. 5/93) This document was prepared pursuant to a specific agreement to address the unique requirements of an S&ME client. Prior to further use, an S&ME professional should be contacted for a complete explanation of its preparation and contents

BULK SAMPLE
CHAIN OF CUSTODY RECORD

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4213-20-213 ph 472	Colleton County	[signature]	9-2-20	1730	[signature] 9/3/20
FACILITY Floyd Buckner Bldg.		RELINQUISHED BY:	DATE	TIME	RECEIVED BY:
SAMPLER(S) B. Seaborn, J. McEathron	DATE TAKEN 9-1-20	RELINQUISHED BY:	DATE	TIME	RECEIVED BY:

SAMPLE #	HOMOGENEOUS AREA	MATERIAL TYPE	LAB NUMBER	DATE ANALYZED	ANALYSTS INITIALS	ASBESTOS +	ASBESTOS N/D	ARCHIVE NUMBER	DATE ARCH	ARCHIVERS INITIALS	SPECIAL INSTRUCTIONS
213-TC-01	TC	Ceiling	20-10889								PLM
213-TC-02	TC	Texture	90								PLM
213-TC-03	TC	"	91								PLM
213-TC-04	TC	"	92								PLM
213-TC-05	TC	"	93								PLM
213-DM1-01	DM1	Duct Mastic	94								PLM
213-DM1-02	DM1	Only	95								PLM
213-DM1-03	DM1	"	96								TEM
213-DM2-01	DM2	"	97								PLM
213-DM2-02	DM2	"	98								PLM
213-DM2-03	DM2	"	10899								TEM
213-SF1-01	SF1	Sheet Floor	10900								PLM
213-SF1-02	SF1	& Mastic	01								PLM
213-SF1-03	SF1	"	10902								TEM
								"			

ALL SAMPLES WILL BE DISPOSED OF NINETY DAYS AFTER ANALYSIS UNLESS OTHERWISE REQUESTED

MATERIAL TYPES

[illegible]
M – A.H.U. Exp. Jt.
N – Ceiling/Wall Tile
O – Fiberboard
P – Other
(See notes Front or back)

PLM TAT - 5 Days Hours Same Day
TEM TAT - 3 Days Hours Same Day
Do not run TEM if both PLMs are positive

[illegible]

BULK SAMPLE
CHAIN OF CUSTODY RECORD

PROJECT NO.	PROJECT NAME	RELINQUISHED BY:	DATE	TIME	RECEIVED BY:
4213-20-213 ph 472	Colleton County	[signature]	9-2-20	1730	[signature] 9/3/20
FACILITY Floyd Buckner Bldg.		RELINQUISHED BY:	DATE	TIME	RECEIVED BY:
SAMPLER(S) B. Seaborn, J. McEathron	**DATE TAKEN** 9-1-20	RELINQUISHED BY:	DATE	TIME	RECEIVED BY:

SAMPLE #	HOMOGENEOUS AREA	MATERIAL TYPE	LAB NUMBER	DATE ANALYZED	ANALYSTS INITIALS	ASBESTOS +	ASBESTOS I	ASBESTOS N/D	ARCHIVE NUMBER	DATE ARCH	ARCHIVERS INITIALS	SPECIAL INSTRUCTIONS
213-SF2-01	SF2	Sheet Floor	20-10903									PLM
213-SF2-02	SF2	& Mastic	04									PLM
213-SF2-03	SF2	Only	05									TEM
213-SFM-01	SFM	Sheet Floor	06									PLM
213-SFM-02	SFM	Mastic	07									PLM
213-SFM-03	SFM	Only	08									TEM
213-RC-01	RC	Roof Core	09									PLM
213-RC-02	RC	"	10									PLM
213-RC-03	RC	"	11									TEM
213-VP1-01	VF1	Vinyl	12									PLM
213-VP1-02	VF1	Flooring	13									PLM
213-VP1-03	VF1	Only	14									TEM
213-VP2-01	VF2	Vinyl	15									PLM
213-VP2-02	VF2	Flooring	16									PLM
213-VP2-03	VF2	Only	10917									TEM

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MATERIAL TYPES

A - <4" Pipe Fitting
B - 4-8" Pipe Fitting
C - 9-14" Pipe Fitting
D - >14" Pipe Fitting
E - <4" Pipe
F - 4-8" Pipe
G - 9-14" Pipe
H - >14" Pipe
I - Spray On/Trowel
J - Floor Tile
K - Tank/Boiler
L - A>H>U> Insul
M - A.H.U. Exp. Jt.
N - Ceiling/Wall Tile
O - Fiberboard
P - Other (See notes, Front or Back)

PLM TAT - 5 Days Hours Same Day
TEM TAT - 3 Days Hours Same Day
Do not run TEM if both PLMs are positive

S&ME SF-062 (REV. 5.93) This document was prepared pursuant to a specific agreement to address the unique requirements of an S&ME client. Prior to further use, an S&ME professional should be contacted for a complete explanation of its preparation and contents

BULK SAMPLE
CHAIN OF CUSTODY RECORD

PROJECT NO.	PROJECT NAME	RELINQUISHED BY:	DATE	TIME	RECEIVED BY:
4213-20-213 ph 472	Colleton County	[signature]	9-2-20	1730	[signature] 9/3/20
FACILITY		RELINQUISHED BY:	DATE	TIME	RECEIVED BY:
Floyd Buckner Bldg.					
SAMPLER(S)	**DATE TAKEN**	RELINQUISHED BY:	DATE	TIME	RECEIVED BY:
B. Seaborn, J. McEathron	9-1-20				

SAMPLE #	HOMOGENEOUS AREA	MATERIAL TYPE	LAB NUMBER	DATE ANALYZED	ANALYSTS INITIALS	ASBESTOS +	ASBESTOS I N/D	ARCHIVE NUMBER	DATE ARCH	ARCHIVERS INITIALS	SPECIAL INSTRUCTIONS
213-DC-01	DC	Duct Caulk	20-10918								PLM
213-DC-02	DC	"	19								PLM
213-DC-03	DC	"	10920								TEM

ALL SAMPLES WILL BE DISPOSED OF NINETY DAYS AFTER ANALYSIS UNLESS OTHERWISE REQUESTED

MATERIAL TYPES

A – 1/4" Pipe Fitting
B – 3/8" Pipe Fitting
C – 9/16" Pipe Fitting
D – 1/2" Pipe Fitting
E – 1/4" Pipe
F – 3/8" Pipe
G – 9-14" Pipe
H – 1/2" Pipe
I – Spray-On Fireproof
J – Floor Tile
K – Tanks, Boiler
L – Asbestos Ceiling
M – A.H.U. Exp. Jt.
N – Ceiling/Wall Tile
O – Fiberboard
P – Other (See notes Front or Back)

PLM TAT - 5 Days Hours Same Day

TEM TAT - 3 Days Hours Same Day

Do not run TEM if both PLMs are positive

S&ME SH-002 (REV. 5 95) This document was prepared pursuant to a specific agreement to address the unique requirements of an S&ME client. Prior to further use, an S&ME professional should be contacted for a complete explanation of its preparation and contents

9751 Southern Pine Boulevard
Charlotte, NC 28273
704-940-1830 Fax 704-565-4929
NVLAP Lab Code 102075-0

POLARIZED LIGHT MICROSCOPY
Performed by EPA 600/R-93/116 Method

Asbestos Analysis Summary

Client Name Charleston Office
Client Job Colleton Co Floyd Buckner Bldg

620 Wando Park Blvd.
Mt. Pleasant SC 29464

Date Received 9/15/2020
Date Analyzed 9/15/2020

Job Number 4213-20-213

Lab ID:	Sample #:	Appearance	Comments	Asbestos %/Type	Non-Asbestos Fibrous %/Type	Non-Fibrous %/Type
20-11525	213-JC-08	WHITE NONFIBROUS		2 CHRYSOTILE		98 OTHER

Analyzed by: Jane Wasilewski
Additional Comments:Issued 9/15/20

Jane Wasilewski
Laboratory Manager

For heterogeneous samples easily separated into subsamples, and for layered samples, each component is analyzed separately. ND = None Detected (Asbestos Not Present In Representative Sample). RCF= (Refractory Ceramic Fiber) The results relate only to the items tested.
The sample may not be fully representative of the larger material in question. This report shall not be reproduced except in full with permission from SME, Inc. This report may not be used to claim product endorsement by NVLAP or any agency of the U.S. Government. Although Polarized Light Microscopy (PLM/Dispersion Staining) (Method EPA 600/R-93/116) is the specified method for analysis of bulk material samples for asbestos under the EPA Asbestos Hazard Emergency Response Act, there have been reports that this method may not identify asbestos when fiber sizes are extremely small or if they are bound in a resinous material. Such materials include floor tile, mastic and asphaltic roofing. Currently, reanalysis by Transmission Electron Microscopy (TEM) to verify results of <1% or "None Detected" for these materials is recommended.

BULK SAMPLE
CHAIN OF CUSTODY RECORD

PROJECT NO.	PROJECT NAME	RELINQUISHED BY:	DATE	TIME	RECEIVED BY:
4213-20-213 ph 472	Colleton County		9-11-20	1730	10:25a 9/15/20
FACILITY Floyd Buckner Bldg.		RELINQUISHED BY:	DATE	TIME	RECEIVED BY:
SAMPLER(S) B. Seaborn	**DATE TAKEN** 9-11-20	RELINQUISHED BY:	DATE	TIME	RECEIVED BY:

SAMPLE #	HOMOGENEOUS AREA	MATERIAL TYPE	LAB NUMBER	DATE ANALYZED	ANALYSTS INITIALS	ASBESTOS +	ASBESTOS I N/D	ARCHIVE NUMBER	DATE ARCH	ARCHIVERS INITIALS	SPECIAL INSTRUCTIONS
213-JC-08	JC	Joint	20-11525								PLM
		Compound									

ALL SAMPLES WILL BE DISPOSED OF NINETY DAYS AFTER ANALYSIS UNLESS OTHERWISE REQUESTED

MATERIAL TYPES

A - <4" Pipe Fitting
B - 4-8" Pipe Fitting
C - 9-14" Pipe Fitting
D - >14" Pipe Fitting
E - <4" Pipe
F - 4-8" Pipe
G - 9-14" Pipe
H - >14" Pipe
I - Spray-On/Trowel
J - Floor Tile
K - Tanks/Boiler
L - A+H+U+Insul
M - A+H+U Exp. It
N - Ceiling/Wall Tile
O - Fiberboard
P - Other (See notes Front or Back)

PLM TAT - ____ Days Hours (Same Day)

~~TEM TAT - ____ Days Hours Same Day~~

~~Do not run TEM if both PLMs are positive~~

S&ME SFR-002 (REV. 5/95) This document was prepared pursuant to a specific agreement to address the unique requirements of an S&ME client. Prior to further use, an S&ME professional should be contacted for a complete explanation of its preparation and contents.

Charleston Office
620 Wando Park Blvd.
Mt. Pleasant, SC 29464

Analysis Date: 9/16/20

Polarized Light Microscopy (PLM) Point Count Results

National Laboratory Voluntary Accreditation Program NVLAP Lab Code 102075-0

Colleton Co. Floyd Buckner Bldg
4213-20-213

Sample No.	Lab ID#	Gross Sample Description	Total # Non-Empty Points Counted	Total # Asbestos Points Counted	% Asbestos Based On Point Count
213-JC-01	20-10836	BEIGE NONFIBROUS	400	3	0.75%
213-JC-08	20-11525	BEIGE NONFIBROUS	400	3	0.75%

Jane Wasilewski
Analyst

Laboratory Manager

The analysis followed the procedure found in "Method for the Determination of Asbestos in Bulk Building Materials," (EPA/600/R-93/116).

Notes:
The results pertain only to the sample identification above.
The sample may not be fully representative of the larger material in question.
Samples found to contain less than 1% asbestos are considered positive until point counted to disprove sample content of greater than 1%.
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This report may not be used to claim product endorsement by NVLAP or any agency of the U.S. Government.

S&ME, Inc. 9751 Southern Pine Blvd. Charlotte, NC 28273 704-940-1830 FAX 704-565-4929

EMSL Analytical, Inc.
10801 Southern Loop Blvd Pineville, NC 28134
Tel/Fax: (704) 525-2205 / (704) 525-2382
http://www.EMSL.com / charlottelab@emsl.com

EMSL Order: 412007595
Customer ID: SMEI54
Customer PO: 4213-20-213
Project ID:

Attention: Jane Wasilewski
S&ME, Inc.
9771D Southern Pine Blvd.
Charlotte, NC 28273

Phone: (704) 940-1830
Fax: (704) 565-4929
Received Date: 09/08/2020 11:00 AM
Analysis Date: 09/09/2020
Collected Date:

Project: 4213-20-213 (Phase 472)

Test Report: Asbestos Analysis of Non-Friable Organically Bound Materials by TEM via EPA/600/R-93/116 Section 2.5.5.1

Sample ID	Description	Appearance	% Matrix Material	% Non-Asbestos Fibers	Asbestos Types
213-CB1-03 *412007595-0001*	Mastic Only	Beige Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
213-CB2-03 *412007595-0002*	Mastic Only	Tan Non-Fibrous Homogeneous	99.38 Other	None	0.62% Chrysotile
213-CB3-03 *412007595-0003*	Mastic	Tan Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
213-CB4-03 *412007595-0004*	Mastic	Gray Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
213-FT1-03 *412007595-0005*	Tile	Blue Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
213-FT1-03 *412007595-0006*	Mastic	Tan Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
213-FT2-03 *412007595-0007*	Tile	White Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
213-FT2-03 *412007595-0008*	Mastic	Tan Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
213-FT3-03 *412007595-0009*	Tile	Pink Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
213-FT3-03 *412007595-0010*	Mastic	Tan Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
213-FT4-03 *412007595-0011*	Tile	Gray Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
213-FT4-03 *412007595-0012*	Mastic	Gray Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. EMSL recommends that samples reported as none detected or <1% undergo additional analysis via PLM to avoid the possibility of false negatives.

Samples analyzed by EMSL Analytical, Inc. Pineville, NC

Initial report from: 09/10/2020 08:33:06

EMSL Analytical, Inc.
10801 Southern Loop Blvd Pineville, NC 28134
Tel/Fax: (704) 525-2205 / (704) 525-2382
http://www.EMSL.com / charlottelab@emsl.com

EMSL Order: 412007595
Customer ID: SMEI54
Customer PO: 4213-20-213
Project ID:

Attention: Jane Wasilewski
S&ME, Inc.
9771D Southern Pine Blvd.
Charlotte, NC 28273

Project: 4213-20-213 (Phase 472)

Phone: (704) 940-1830
Fax: (704) 565-4929
Received Date: 09/08/2020 11:00 AM
Analysis Date: 09/09/2020
Collected Date:

Test Report: Asbestos Analysis of Non-Friable Organically Bound Materials by TEM via EPA/600/R-93/116 Section 2.5.5.1

Sample ID	Description	Appearance	% Matrix Material	% Non-Asbestos Fibers	Asbestos Types
213-DM2-03 *412007595-0013*	Mastic Only	Gray Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
213-RC-03 *412007595-0014*	Membrane	White Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
213-RC-03 *412007595-0015*	Roof 1 (Under Membrane)	Black Fibrous Homogeneous	98.7 Other	None	1.3% Chrysotile
213-VP1-03 *412007595-0016*	Vinyl Floor	Brown Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
213-VP2-03 *412007595-0017*	Vinyl Floor Only	Brown Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
213-DC-03 *412007595-0018*	Caulk	Gray Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected

Analyst(s)

Derrick Young (18)

Lee Plumley, Laboratory Manager
or other approved signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. EMSL recommends that samples reported as none detected or <1% undergo additional analysis via PLM to avoid the possibility of false negatives.

Samples analyzed by EMSL Analytical, Inc. Pineville, NC

Initial report from: 09/10/2020 08:33:06

OrderID: 412007595

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Asbestos Chain of Custody

EMSL Order Number (*Lab Use Only*): 412007595

EMSL ANALYTICAL, INC.
10801 SOUTHERN LOOP BLVD
PINEVILLE, NC 28134
PHONE: 704-525-2205
FAX: 704-525-2382

Company : S&ME Inc.	**EMSL-Bill to:** ☐ Same ☒ Different If Bill to is Different note instructions in Comments**
Street: 9771D Southern Pine Blvd.	*Third Party Billing requires written authorization from third party*
City: Charlotte / **State/Province: NC**	**Zip/Postal Code: 28273** / **Country:**
Report To (Name): Jane Wasilewski	**Telephone #: 704-940-1830**
Email Address: jwasilewski@smeinc.com	**Fax #:** / **Purchase Order:**
Project Name/Number:	**Please Provide Results:** ☐ Fax ☒ Email
U.S. State Samples Taken:	**CT Samples:** ☐ Commercial/Taxable ☐ Residential/Tax Exempt

Turnaround Time (TAT) Options* – Please Check

☐ 3 Hour | ☐ 6 Hour | ☐ 24 Hour | ☐ 48 Hour | ☑ 72 Hour | ☐ 96 Hour | ☐ 1 Week | ☐ 2 Week

**For TEM Air 3 hr through 6 hr, please call ahead to schedule.*There is a premium charge for 3 Hour TEM AHERA or EPA Level II TAT. You will be asked to sign an authorization form for this service. Analysis completed in accordance with EMSL's Terms and Conditions located in the Analytical Price Guide.*

PCM - Air ☐ Check if samples are from NY
- ☐ NIOSH 7400
- ☐ w/ OSHA 8hr. TWA

PLM - Bulk (reporting limit)
- ☐ PLM EPA 600/R-93/116 (<1%)
- ☐ PLM EPA NOB (<1%)

Point Count
- ☐ 400 (<0.25%) ☐ 1000 (<0.1%)

Point Count w/Gravimetric
- ☐ 400 (<0.25%) ☐ 1000 (<0.1%)
- ☐ NYS 198.1 (friable in NY)
- ☐ NYS 198.6 NOB (non-friable-NY)
- ☐ NIOSH 9002 (<1%)

TEM – Air ☐ **4-4.5hr TAT** (AHERA only)
- ☐ AHERA 40 CFR, Part 763
- ☐ NIOSH 7402
- ☐ EPA Level II
- ☐ ISO 10312

TEM - Bulk
- ☒ TEM EPA NOB
- ☐ NYS NOB 198.4 (non-friable-NY)
- ☐ Chatfield SOP
- ☐ TEM Mass Analysis-EPA 600 sec. 2.5

TEM – Water: EPA 100.2
- Fibers >10µm ☐ Waste ☐ Drinking
- All Fiber Sizes ☐ Waste ☐ Drinking

TEM- Dust
- ☐ Microvac - ASTM D 5755
- ☐ Wipe - ASTM D6480
- ☐ Carpet Sonication (EPA 600/J-93/167)

Soil/Rock/Vermiculite
- ☐ PLM CARB 435 - A (0.25% sensitivity)
- ☐ PLM CARB 435 - B (0.1% sensitivity)
- ☐ TEM CARB 435 - B (0.1% sensitivity)
- ☐ TEM CARB 435 - C (0.01% sensitivity)
- ☐ TEM Qual. via Filtration Technique
- ☐ TEM Qual. via Drop-Mount Technique

Other:
- ☐

☐ **Check For Positive Stop – Clearly Identify Homogenous Group** | **Filter Pore Size (Air Samples):** ☐ 0.8µm ☐ 0.45µm

Samplers Name: | **Samplers Signature:**

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
213-CB1-03	Mastic only		
213-CB2-03	Mastic only		
213-CB3-03	Mastic		
213-CB4-03	Mastic		
213-FT1-03	Tile		
↓	Mastic		
213-FT2-03	Tile		
↓	Mastic		

Client Sample # (s): - **Total # of Samples:** 8

Relinquished (Client): [signature] **Date:** 9/8/20 **Time:**

Received (Lab): KN **Date:** 9/8/20 **Time:** 11 AM DB

Comments/Special Instructions: Bill to S&ME, Inc., 9751 Southern Pine Blvd., Charlotte NC 28273
****EMAIL INVOICE TO JANE WASILEWSKI****

4-2-13-20-213 (Phase 472)

OrderID: 412007595

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Asbestos Chain of Custody

EMSL Order Number (*Lab Use Only*):

7595

EMSL ANALYTICAL, INC
10801 SOUTHERN LOOP BLVD
PINEVILLE NC, 28134
PHONE: 704-525-2205
FAX: 704-525-2382

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
213-FT3-03	Tile		
↓	Mastic		
213-FT4-03	Tile		
↓	Mastic		
213-DM2-03	Mastic only		
213-RC-03	Membrane		
↓	Roof 1 (under membrane)		
213-VP1-03	Vinyl Floor		
213-VP2-03	Vinyl Floor only		
213-DC-03	Caulk		

***Comments/Special Instructions:**

Page 2 of 2 pages

Appendix V – Summary of XRF Lead Analyzer Readings

Summary of XRF Spectrum Lead Analyzer Readings
Floyd Buckner Building
213 North Jefferies Boulevard
Walterboro, South Carolina

S&ME Project No. 4213-20-213
Date of Testing: September 1, 2020

XLN No.	Site	Floor	Side	Room	Structure	Component	Substrate	Color	Condition	Results	Action Level	Lead	Units
1									Device Calibration			1.1	mg/cm^2
2									Device Calibration			1	mg/cm^2
3									Device Calibration			1	mg/cm^2
4	Buckner Building	1	C	Exterior	Wall		Brick	White	Non-deteriorated	NEG	0.7	0	mg/cm^2
5	Buckner Building	1	C	Exterior	Door		Wood	Blue	Non-deteriorated	NEG	0.7	-0.2	mg/cm^2
6	Buckner Building	1	C	Exterior	Door	Jamb	Metal	Red	Non-deteriorated	NEG	0.7	0.3	mg/cm^2
7	Buckner Building	1	C	Exterior	Stair	Handrail	Metal	Red	Non-deteriorated	NEG	0.7	0.1	mg/cm^2
8	Buckner Building	1	C	Exterior	Stair	Baluster	Metal	Red	Non-deteriorated	NEG	0.7	0.1	mg/cm^2
9	Buckner Building	1	C	Exterior	Stair	Riser	Metal	Red	Non-deteriorated	NEG	0.7	0.1	mg/cm^2
10	Buckner Building	1	C	Exterior	Downspout		Metal	White	Non-deteriorated	NEG	0.7	0	mg/cm^2
11	Buckner Building	1	D	Exterior	Door	Frame	Concrete	White	Non-deteriorated	NEG	0.7	0	mg/cm^2
12	Buckner Building	1	D	Exterior	Door	Casing	Wood	White	Deteriorated	NEG	0.7	-0.1	mg/cm^2
13	Buckner Building	1	D	Exterior	Misc.		Metal	White	Non-deteriorated	NEG	0.7	0	mg/cm^2
14	Buckner Building	1	D	Exterior	Misc.		Metal	White	Non-deteriorated	NEG	0.7	0.1	mg/cm^2
15	Buckner Building	1	D	Exterior	Wall		Brick	White	Non-deteriorated	NEG	0.7	0.2	mg/cm^2
16	Buckner Building	1	D	Exterior	Downspout		Metal	White	Non-deteriorated	NEG	0.7	0.1	mg/cm^2
17	Buckner Building	1	D	Exterior	Handrail		Metal	Red	Non-deteriorated	NEG	0.7	0.1	mg/cm^2
18	Buckner Building	1	D	Exterior	Door		Metal	Red	Non-deteriorated	NEG	0.7	0.1	mg/cm^2
19	Buckner Building	1	D	Exterior	Door		Wood	Red	Non-deteriorated	NEG	0.7	0.1	mg/cm^2
20	Buckner Building	1	D	Exterior	Door	Jamb	Metal	Red	Non-deteriorated	NEG	0.7	0.3	mg/cm^2
21	Buckner Building	B	D	Exterior	Window	Casing	Wood	Red	Non-deteriorated	NEG	0.7	0.1	mg/cm^2
22	Buckner Building	B	D	Exterior	Window	Casing	Wood	White	Non-deteriorated	NEG	0.7	0.2	mg/cm^2
23	Buckner Building	B	B	Corridor	Wall		CMU	White	Non-deteriorated	NEG	0.7	0	mg/cm^2
24	Buckner Building	B	B	Office	Wall		CMU	White	Non-deteriorated	NEG	0.7	0.1	mg/cm^2

Summary of XRF Spectrum Lead Analyzer Readings
Floyd Buckner Building
213 North Jefferies Boulevard
Walterboro, South Carolina

S&ME Project No. 4213-20-213
Date of Testing: September 1, 2020

XLN No.	Site	Floor	Side	Room	Structure	Component	Substrate	Color	Condition	Results	Action Level	Lead	Units
25	Buckner Building	B	B	Office	Ceiling		Drywall	White	Non-deteriorated	NEG	0.7	0	mg/cm^2
26	Buckner Building	B	B	Corridor	Ceiling		Drywall	White	Non-deteriorated	NEG	0.7	0	mg/cm^2
27	Buckner Building	B	B	Corridor	Misc.	Pipe	Metal	White	Non-deteriorated	NEG	0.7	-0.1	mg/cm^2
28	**Buckner Building**	***B***	***B***	***Corridor***	***Sink***		***Porcelain***	***White***	***Non-deteriorated***	***POS***	***0.7***	***10.5***	***mg/cm^2***
29	Buckner Building	B	B	Corridor	Floor		Concrete	Grey	Non-deteriorated	NEG	0.7	0.1	mg/cm^2
30	Buckner Building	B	B	Corridor	Floor		Concrete	Grey	Non-deteriorated	NEG	0.7	0.2	mg/cm^2
31	Buckner Building	B	A	Office	Wall		CMU	Blue	Non-deteriorated	NEG	0.7	0.2	mg/cm^2
32	Buckner Building	B	B	Office	Wall		Brick	White	Non-deteriorated	NEG	0.7	0.1	mg/cm^2
33	Buckner Building	B	B	Office	Wall		Brick	Grey	Non-deteriorated	NEG	0.7	0.2	mg/cm^2
34	Buckner Building	B	B	Office	Wall		Wood	Grey	Non-deteriorated	NEG	0.7	0	mg/cm^2
35	Buckner Building	B	B	Office	Wall		Wood	White	Non-deteriorated	NEG	0.7	0.1	mg/cm^2
36	Buckner Building	B	B	Office	Door	Frame	Wood	Blue	Non-deteriorated	NEG	0.7	-0.1	mg/cm^2
37	Buckner Building	2	B	Corridor	Wall		Drywall	White	Non-deteriorated	NEG	0.7	0.1	mg/cm^2
38	Buckner Building	2	B	Corridor	Wall		Ceramic	White	Non-deteriorated	NEG	0.7	0	mg/cm^2
39	Buckner Building	2	B	Bathroom	Wall		Drywall	Beige	Non-deteriorated	NEG	0.7	0	mg/cm^2
40	Buckner Building	2	B	Bathroom	Floor		Ceramic	Beige	Non-deteriorated	NEG	0.7	-0.1	mg/cm^2
41	Buckner Building	2	B	Bathroom	Door		Wood	Tan	Non-deteriorated	NEG	0.7	0	mg/cm^2
42	Buckner Building	2	B	Bathroom	Door	Casing	Wood	Tan	Non-deteriorated	NEG	0.7	0.1	mg/cm^2
43	Buckner Building	2	B	Office	Door	Casing	Wood	Tan	Non-deteriorated	NEG	0.7	0	mg/cm^2
44	Buckner Building	2	B	Office	Wall		Drywall	Tan	Non-deteriorated	NEG	0.7	0	mg/cm^2
45	Buckner Building	2	B	Corridor	Door	Frame	Wood	Red	Non-deteriorated	NEG	0.7	0	mg/cm^2
46	Buckner Building	2	B	Corridor	Door	Frame	Wood	Red	Non-deteriorated	NEG	0.7	-0.1	mg/cm^2
47	Buckner Building	2	B	Corridor	Window	Frame	Wood	Red	Non-deteriorated	NEG	0.7	0	mg/cm^2
48	Buckner Building	2	D	Foyer	Wall		Drywall	Blue	Non-deteriorated	NEG	0.7	0.1	mg/cm^2

Summary of XRF Spectrum Lead Analyzer Readings
Floyd Buckner Building
213 North Jefferies Boulevard
Walterboro, South Carolina

S&ME Project No. 4213-20-213
Date of Testing: September 1, 2020

XLN No.	Site	Floor	Side	Room	Structure	Component	Substrate	Color	Condition	Results	Action Level	Lead	Units
49	Buckner Building	2	A	Foyer	Wall		Drywall	Blue	Non-deteriorated	NEG	0.7	0.1	mg/cm^2
50	Buckner Building	2	D	Foyer	Window	Sill	Wood	Red	Non-deteriorated	NEG	0.7	-0.2	mg/cm^2
51	Buckner Building	2	D	Office	Wall		Drywall	Grey	Non-deteriorated	NEG	0.7	0	mg/cm^2
52	Buckner Building	2	D	Office	Wall		Wood	Red	Non-deteriorated	NEG	0.7	-0.1	mg/cm^2
53	Buckner Building	2	A	Workroom	Window	Sill	Wood	Tan	Non-deteriorated	NEG	0.7	-0.1	mg/cm^2
54	Buckner Building	2	D	Workroom	Wall		Wood	Beige	Non-deteriorated	NEG	0.7	0	mg/cm^2
55	Buckner Building	2	D	Copy Room	Wall		Drywall	White	Non-deteriorated	NEG	0.7	0.1	mg/cm^2
56	Buckner Building	2	D	Copy Room	Window	Sill	Wood	White	Non-deteriorated	NEG	0.7	0.1	mg/cm^2
57	Buckner Building	2	D	I.T. Room	Misc.	Shelf	Wood	Grey	Non-deteriorated	NEG	0.7	-0.1	mg/cm^2
58	Buckner Building	2	D	I.T. Room	Misc.	Shelf	Wood	Grey	Non-deteriorated	NEG	0.7	0	mg/cm^2
59	Buckner Building	2	D	Office	Baseboard		Wood	White	Non-deteriorated	NEG	0.7	-0.1	mg/cm^2
60	Buckner Building	2	A	Office	Baseboard		Wood	White	Non-deteriorated	NEG	0.7	-0.1	mg/cm^2
61	Buckner Building	2	A	Office	Baseboard		Wood	Grey	Non-deteriorated	NEG	0.7	-0.2	mg/cm^2
62	Buckner Building	2	D	Office	Baseboard		Wood	Grey	Non-deteriorated	NEG	0.7	0	mg/cm^2
63	Buckner Building	2	D	Bay	Wall		Brick	White	Non-deteriorated	NEG	0.7	0.1	mg/cm^2
64	Buckner Building	2	A	Bay	Wall		CMU	White	Non-deteriorated	NEG	0.7	0.1	mg/cm^2
65	Buckner Building	2	B	Bay	Wall		Wood	White	Non-deteriorated	NEG	0.7	0	mg/cm^2
66	Buckner Building	2	B	Bay	Door		Metal	White	Non-deteriorated	NEG	0.7	0	mg/cm^2
67	Buckner Building	2	B	Bay	Door	Frame	Wood	White	Non-deteriorated	NEG	0.7	-0.2	mg/cm^2
68	Buckner Building	2	B	Bay	Floor		Concrete	Grey	Non-deteriorated	NEG	0.7	0.5	mg/cm^2
69	Buckner Building	2	B	Bay	Door		Wood	White	Non-deteriorated	NEG	0.7	-0.1	mg/cm^2
70	**Buckner Building**	***2***	***B***	***Corridor***	***Sink***		***Porcelain***	***White***	***Non-deteriorated***	***POS***	***0.7***	***19.7***	***mg/cm^2***
71	Buckner Building	2	B	Corridor	Misc.	Fountain	Porcelain	White	Non-deteriorated	NEG	0.7	-0.1	mg/cm^2
72	Buckner Building	2	B	Corridor	Misc.	Fountain	Porcelain	White	Non-deteriorated	NEG	0.7	-0.1	mg/cm^2

Summary of XRF Spectrum Lead Analyzer Readings
Floyd Buckner Building
213 North Jefferies Boulevard
Walterboro, South Carolina

S&ME Project No. 4213-20-213
Date of Testing: September 1, 2020

XLN No.	Site	Floor	Side	Room	Structure	Component	Substrate	Color	Condition	Results	Action Level	Lead	Units
73	Buckner Building	2	B	Corridor	Sink		Porcelain	White	Non-deteriorated	NEG	0.7	-0.2	mg/cm^2
74	Buckner Building	2	B	Kitchen	Wall		Drywall	White	Non-deteriorated	NEG	0.7	0	mg/cm^2
75	Buckner Building	2	B	Kitchen	Cabinet		Wood	White	Non-deteriorated	NEG	0.7	0	mg/cm^2
76	Buckner Building	2	B	Kitchen	Sink		Porcelain	White	Non-deteriorated	NEG	0.7	-0.1	mg/cm^2
77									Device Calibration			1.1	mg/cm^2
78									Device Calibration			1	mg/cm^2
79									Device Calibration			1.1	mg/cm^2

The SCDHEC requires special disposal for paint containing lead ≥0.7 mg/cm^2

The OSHA does not recognize a concentration of lead for definition purposes, only the airborne concentration a worker is exposed.

Bold = Lead results meeting or exceeding SCDHEC disposal level of 0.7 mg/cm^2

SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION
Encroachment Permit

Permit No : 238579
Permit Decision Date : 10/21/2020
Expiration Date : 10/21/2021

Type Permit : OTHER

Location:

District	Work County	Type	Route	Aux	Begin MP	End MP
6	Colleton, SC	US	17	ALT	18.687	18.612

Contact Information

Applicant: ColletonCounty Phone:
Contact: John Stieglitz
Address: P.O. Box 157,
City: Walterboro State: SC Zip: 29488

Comments

At the intersection of W Washington Street and N Jefferies Blvd.(see attached exhibits)

Special Provisions:

0004 - SCDOT SHALL BE NOTIFIED WHEN WORK DEFINED IN THE PERMIT STARTS AS WELL AS WHEN THE WORK IS COMPLETED. REFERENCE SHALL BE MADE BY PERMIT NUMBER.

0005 - APPLICANT SHALL PROVIDE TO THE DEPARTMENT THE OPPORTUNITY OF ATTENDING ANY PRE-CONSTRUCTION MEETING PRIOR TO THE BEGINNING OF WORK.

0305 - FLASHING ARROW BOARDS SHALL BE USED FOR ALL LANE CLOSURES ON PRIMARY ROUTES AND/OR ROADS WITH HIGH TRAFFIC VOLUMES.

0306 - TRAFFIC CONTROL, LIGHTS, SIGNS AND FLAG-MEN WILL BE FURNISHED BY APPLICANT AND WILL CONFORM TO PART VI OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

0318 - THE APPLICANT SHALL BE RESPONSIBLE FOR IMMEDIATE REMOVAL OF SUCH TRAFFIC HAZARDS AS MUD, DEBRIS, LOOSE STONE, AND TRASH AS MAY BE WASHED OR SPILLED ON THE TRAVELED ROADWAY AS A RESULT OF THE PROPOSED WORK.

9999 - See Attached for Additional Special Provisions

20086485

Application for Encroachment Permit

S.C. Department of Transportation

Form 637 (Rev 09/2015)

Contact Information

Applicant: Colleton County

Street: PO BOX 157

City: Walterboro

State: SC **Zip Code:** 29488

Phone: (843)782-0508 **Fax:**

Email: jstieglitz@colletoncounty.org

Contact: John Stieglitz

Project Location

Primary County: Colleton

County	Road Name
Colleton	N Jefferies Blvd (US 17)

1. Type of Encroachment: OTHER

Temporary sidewalk and lane closure for demolition of existing building.

2. Description of Location:

At the intersection of W Washington Street and N Jefferies Blvd.

(Attach sketch indicating roadway features such as: pavement width, shoulder width, sidewalk and curb and gutter location, significant drainage structure, north arrow, right of way width, and location of the proposed encroachment with respect to the roadway centerline and the nearest intersecting road on the State system.)

Encroach Agreement

3. **The undersigned applicant hereby requests the SCDOT to permit encroachment on the SCDOT right of way as described herein. It is expressly understood that the encroachment, if and when constructed, shall be installed in accordance with the sketch attached hereto and made a part hereof. The applicant agrees to comply with and be bound by the SCDOT's "A Policy for Accommodating Utilities on Highways Rights of way", "Standard Specifications for Highway Construction", the "General Provisions" and "Special Provisions", attached hereto or made a part hereof by reference, during the installation, operation and maintenance of said encroachment within the SCDOT's Right of Way. DISCHARGES OF STORM WATER AND NON-STORM WATER: Work within State Highway right-of-way shall be conducted in compliance with all applicable requirements of the National Pollutant Discharge Elimination System (NPDES) permit(s) issued to the Department of Transportation (Department), to govern the discharge of storm water and non-storm water from its properties. Work shall also be in compliance with all other applicable Federal, State and Local laws and regulations, and with the Department's Encroachment Permits Manual and encroachment permit. The encroachment permit will not be issued until the applicant has received an NPDES construction permit from SC Department of Health and Environmental Control.**

The applicant agrees to comply with all current SCDOT Standards Specifications for Highway Construction including all Supplemental Technical Specifications. The applicant hereby further agrees, and binds his/her/its heirs, personal representatives, successors, assigns, to assume any and all liability for accidents or injuries to persons, or damage to property, including the highway, that may be caused by the construction, maintenance, use, moving or removing of the physical appurtenances contemplated herein, and the applicant agrees to indemnify and hold SCDOT harmless from and against any and all claims for personal injury and/or property damage which may be sustained by reason of the construction, maintenance or existence of said encroachment on the SCDOT's right of way.

Applicant's Name: John Stieglitz **Date:** 10/14/2020
(Please print or type)

Applicant's Sig: _____ **Title:** Capital Projects Director

Per Online Email

For Office Use Only

In accordance with your request and subject to all the provisions, terms, conditions, and restrictions stated in the application and the general and special provisions attached hereto, the SCDOT hereby approves your application for an encroachment permit. This permit shall become null and void unless the work contemplated herein shall have been completed prior to:

See Attached Special Provision and/or Permit Requirements

NPDES Permit Nbr:

10/21/2020 (SCDOT Approval) 10/21/2020
(Date received by res. Maint. Engr.) (Date)

General Provisions

Application for Encroachment Permit
General Provisions

1. **DEFINITIONS: The word "Permittee" used herein shall mean the name of the person, firm, or corporation to whom this permit is addressed, his, her, its, heirs, personal representatives, successors and assigns. The word "DEPARTMENT" shall mean the South Carolina Department of Transportation.**
2. **NOTICE PRIOR TO STARTING WORK: Before starting the work contemplated herein within the limits of the highway right of way, the Department's Resident Maintenance Engineer in the county in which the proposed work is located shall be notified 24 hours in advance so that he may be present while the work is under way.**
3. **PERMIT SUBJECT TO INSPECTION: This permit shall be kept at the site of the work at all times while said work is under way and must be shown to any representative of the Department or law enforcement officer on demand.**
4. **PROTECTION OF HIGHWAY TRAFFIC: The applicant shall be responsible for the protection of the highway traffic at all times during the construction, maintenance, removing or moving of the encroachment permitted herein. Detours, barricades, warning signs and flagmen, as necessary,**
   shall be provided by and at the expense of the Permittee and shall be in accordance with the "Manual on Uniform Traffic Control Devices" (MUTCD). The work shall be planned and carried out so that there will be the least possible inconvenience to the motoring public. The Permittee agrees to observe all rules and regulations of the Department while carrying on the work contemplated herein and take all other precautions that circumstances warrant.
5. **STANDARDS OF CONSTRUCTION: All work shall conform to the Department's standards of construction and shall be performed in a workman-like manner. The applicant shall make adequate provisions for maintaining the proper drainage of the highway as it may be affected by the encroachment permitted herein. All work shall be subject to the supervision and satisfaction of the Department.**
6. **FUTURE MOVING OF PHYSICAL APPURTENANCES: If, in the opinion of the State Highway Engineer, it should ever become necessary to move or remove the physical appurtenances, or any part thereof contemplated herein, on account of change in location of the highway, widening of the highway, or for any other sufficient reason, such moving shall be done on demand of the Department at the expense of the Permittee.**
7. **RESTORATION OF HIGHWAY FACILITIES UPON MOVING OR REMOVING OF PHYSICAL APPURTENANCES: If, and when, the physical appurtenances contemplated herein shall be moved or removed, either on the demand of the Department or at the option of the Permittee, the highway and facilities shall immediately be restored to their original condition at the expense of the Permittee.**
8. **COSTS: All work in connection with the construction, maintenance, moving or removing of the physical appurtenances contemplated herein shall be done by and at the expense of the Permittee.**
9. **ADDITIONAL PERMISSIONS:**
   (a) It is distinctly understood that this permit does not in any way grant or release any rights lawfully possessed by the abutting property owners. The Permittee shall secure any such rights, as necessary, from said abutting property owners.
   (b) The Permittee shall be responsible for obtaining all other approvals or permits necessary for installation of the encroachment from other government entities.

(c) There shall be no excavation of soil nearer than two feet to any public utility line or appurtenant facility except with the consent of the owner thereof, or except upon special permission of this Department after an opportunity to be heard is given the owner of such line or appurtenant facility.

10. ADDITIONAL WORK PERFORMANCE:

(a) All crossings over the highway shall be constructed in accordance with "Specifications for Overhead Crossings of Light and Power Transmission Lines and Telegraph Lines over each other and over Highway Rights of Way in South Carolina," as approved by the Public Service Commission of South Carolina and effective as of date of this permit.

(b) All tunneling, boring, or jacking shall be done in such a way as not to disturb the highway surfacing.

(c) No pavement shall be cut unless specifically authorized herein.

(d) No excavation shall be nearer than three feet to the edge of pavement unless specifically authorized herein.

(e) Underground facilities will be located at minimum depths as defined in the "Utility Accommodations Manual" for the transmittant, generally as follows: 4 feet minimum for hazardous or dangerous transmittant, 3 feet minimum for other lines. The Department may approve shallower depths if adequate protection is provided. Such approval must be obtained in writing.

(f) Service and other small diameter pipes shall be jacked, driven, or otherwise forced underneath the pavements on any surfaced road without disturbing the pavement. The section under the highway pavement and within a distance of three (3) feet on either side shall be continuous without joints.

11. ACCESS:

(a) Permittee is responsible for maintaining reasonable access to private driveways during construction.

(b) It is expressly provided that, with respect to any limited access highway, the Permittee shall not have or gain access from the main traveled way of the highway, or the on or off ramps to such facility, except upon approval by the Department.

12. DRIVEWAYS:

(a) The existing crown of the highway shall be continued to the outside shoulder line of the highway.

(b) If the driveway or approach is concrete pavement, the pavement shall be constructed at least 6 inches thick and with a minimum of class 2500 concrete. There shall be a bituminous expansion joint, not less than 3/4 inches in thickness, placed between the highway paving and the paving of the approach for the full width of the approach.

13. BEAUTIFICATION:

(a) All trees, plants, flowers, etc. shall be placed in accordance with the provisions specifically stipulated herein.

(b) All trees, plants, flowers, etc. shall be maintained by, and at the expense of, the Permittee and the provisions of this permit shall become null and void, if and when said Permittee ceases to maintain aid trees, plants, flowers, etc.

14. AS-BUILT PLANS:

(a) The applicant shall provide the Department with survey-quality as-built plans in accordance with the requirements set forth in the Department's "A Policy for Accommodating Utilities on Highway Rights of Way".

COLLETON COUNTY
SOUTH CAROLINA

CC-32 Floyd Buckner Building Demolition and Disposal Project

Bid Form

Note: The County will accept the lowest responsible Base Bid based on budgetary constraints. The unit costs that are requested are to be used only for the purpose of establishing cost reasonableness in the event that a change order becomes necessary.

Company Name: _____

Contact Person: _____

Address: _____

City/State/Zip: _____

Phone Number: _____

Cell Phone Number: _____

E-mail Address: _____

Signature: _____

Contractor's License No: _____

Property Address: 213 N. Jefferies Blvd. Walterboro SC TMS #: 163-11-00-227							
Item		***Description***	***Services***	***Unit Price***	***Units***		***Total Price***
1	Floyd Buckner Building	concrete, brick & wood roof truss office and storage facility	Asbestos Removal	*XXXXXXXXXXX*	1	LS	$ -
			Asbestos Material Disposal	*XXXXXXXXXXX*	1	LS	$ -
			Demolition	*XXXXXXXXXXX*	1	LS	$ -
			Demolition Material Disposal			CY	$ -
			Compactable Fill dirt to include delivery, compaction and grading			CY	$ -
			Tree protection	*XXXXXXXXXXX*	1	LS	$ -
			Silt fencing			LF	$ -
			Grassing			SF	$ -
			Utility Removal/Abandoment	*XXXXXXXXXXX*	1	LS	$ -
2	DOT Requirements	DOT Requirements found in permit	Lane closure and signage	*XXXXXXXXXXX*	1	LS	$ -
3	Mobilization	Site Mobilization	Site Mobilization	*XXXXXXXXXXX*	1	LS	$ -
4	Demobilization	Removal of silt fencing tempory offices, restrooms and trash bins	Demobilization	*XXXXXXXXXXX*	1	LS	$ -
5	Contractor Engineering	Engineering of foundation wall/compaction/shoring for demolition means and methods.	Engineering	*XXXXXXXXXXX*	1	LS	$ -
6	Permitting	All agencies	Total Permit Fees	*XXXXXXXXXXX*	1	LS	$ -
						BASE BID	**$ -**