Name _____

Address_____

ITB# 2-25/26
Sumter Theater Drive Parking Lot

City of Sumter
Sumter, South Carolina

Construction Specifications

Proposal For:

S. C. File Number:

Project Number: 1228

Set #

_____

Released for Bid
2025

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SECTION 01105 INVITATION FOR BIDS

PROJECT: Sumter Theater Drive Parking Lot– ITB# 2-25/26

OWNER: City of Sumter
PO Box 1449
21 N Main Street
Sumter, SC 29150

RECEIPT OF BIDS: Separate sealed bids for the construction of the above referenced project will be received by the Owner at their office, by **August 7, 2025 @ 2:00 p.m.**. local time, at place of bidding, City of Sumter, located at, 21 N. Main Street, Sumter, SC 29150, and at said location will be publicly opened and read aloud. No bid may be withdrawn within a period of ninety (90) days to allow time for Bid review, qualification of Bidder, and approval of award from funding agencies

PROJECT DESCRIPTION: The project consists of the demolition of existing asphalt parking lot and batting cage and installation of Asphalt Parking Lot, Sports Court, Concrete Trail, Landscaping, Irrigation and coordination with Duke Energy for Site lighting at the corner of Theater Drive and University Drive. Prior experience, qualifications and product certification will be required. This project will be funded by the City of Sumter.

PRE-BID MEETING: A **Mandatory Pre-bid** meeting will be held at the City of Sumter, located at, 21 N. Main Street, Sumter, SC 29150, on**, July 18, 2025 @ 10:00 a.m**. The purpose of such meeting will be to review this project and to answer any questions regarding the project. Any Contractor that does not attend the pre-bid will be disqualified.

QUESTIONS:
All questions regarding this Project should be submitted to:
Kimberly Brown, The LandPlan Group South, admin@landplansouth.com

Bid related questions will be accepted through **July 23, 2025 @ 5:00 p.m.**
The answers to all questions asked will be shared with all participants in the Bid process.

DOCUMENTS AVAILABLE: A non-refundable deposit of $100.00 will be required to obtain a copy of Contract Documents, which can be requested from The LandPlan Group South, 1206 Scott Street, Columbia, SC 29201. Phone (803) 256-0562.
Documents may be obtained in pdf format without cost. For a link to download, please email a request to admin@landplansouth.com

(End of Section 01105)

SECTION 01110 INFORMATION FOR BIDDERS

1. RECEIPT AND OPENING OF BIDS: Bids will be received at the time and place as specified in the Advertisement for Bids, and then at said office publicly opened and read aloud.

2. LICENSES:

2.1. The attention of Bidders is directed to the provisions of the acts for licensing of General Contractors for the State of South Carolina and all requirements of such acts which have bearing upon this work shall be deemed a part of the Specifications as if written therein in full. The showing by the Contractor of his license number shall be deemed as the Contractor's representation that he is legally qualified to enter into the prescribed Contract for any/or all portions of the work included in his Bid.

2.2. All Bidders submitting a Bid shall have a currently valid "Contractor's License" and a "Bidder's License" for the State of South Carolina. These license numbers shall be shown on the bid form immediately below the signature identification and on the face of the sealed envelope containing the submitted Bid.

2.3. The successful Bidder will be required to obtain a business license from the City of Sumter prior to beginning work, if said Bidder does not have a current license.

2.4. Subcontractors who will be engaged by the General Contractor shall also hold the required licenses.

3. BID SECURITY:

3.1. Each Bid must be accompanied by a certified check of the Bidder, or a Bid Bond duly executed by the Bidder as principal and having as surety thereon a surety company qualified to do business under the laws of the State of South Carolina and satisfactory to the Owner, in an amount not less than five (5) percent of the Bid.

3.2. Such check or Bid Bond will be returned to all except the three (3) lowest Bidders within three (3) days after the opening of Bids, and the remaining checks or Bid Bonds will be returned promptly after the Owner and the accepted Bidder have executed the Agreement, or, if no award has been made within ninety (90) calendar days after the date of the opening of Bids, upon demand of the Bidder at any time thereafter, so long as he has not been notified of the acceptance of his Bid.

4. GUARANTY BONDS:

4.1. The Bidder to whom the contract is awarded will be required to execute the Agreement and obtain the Performance Bond and Payment Bond, each in the sum of the full amount of the Contract Price, within ten (10) calendar days from the date when Notice of Award is delivered to the Bidder.

4.2. The Bonds must be duly executed and acknowledged by the Bidder as principal and by a corporate surety company qualified to do business under the laws of the State of South Carolina and satisfactory to the Owner as surety, for the faithful performance of the Contract and payment for labor and materials. The premiums for such Bonds shall be paid by the Contractor.

4.3. Each Bond must be valid for one year beyond the date of final acceptance of the project.

5. EXECUTION OF CONTRACT: The Owner, within ten (10) calendar days of receipt of acceptable Performance Bond, Payment Bond, and Agreement signed by the party to whom the Agreement was awarded, shall sign the Agreement and return to such party an executed duplicate of the Agreement. Should the Owner not execute the Agreement within such period, the Bidder may by written notice withdraw his signed Agreement. Such notice of withdrawal shall be effective upon receipt of the notice by the Owner.

6. POWER OF ATTORNEY FOR BONDS: Attorneys-in-fact who sign Bid Bonds or Performance Bonds or Payment Bonds must file with each Bond a certified and effective dated copy of their power of attorney.

7. LIQUIDATED DAMAGES FOR FAILURE TO ENTER INTO CONTRACT: The successful Bidder, upon his failure or refusal to execute and deliver the Contract and Bonds required within ten (10) calendar days after he has received notice of the acceptance of his Bid, shall forfeit to the Owner, as liquidated damages for such failure or refusal, the security deposited with his bid.

8. LAWS AND REGULATIONS: All applicable laws, ordinances, and the rules and regulations of all authorities having jurisdiction over construction of the project shall apply to the contract throughout, and they will be deemed to be included as though herein written out in full.

9. NON-RESIDENT CONTRACTORS:

9.1. A Bidder, who is a non-resident contractor, shall be aware of Section 12-9-310, Article 3, of the South Carolina Income Tax Act of 1926, as amended. This article requires the Owner entering into a contract with a non-resident taxpayer, where such contract exceeds ten thousand dollars ($10,000), to withhold two percent (2%) of each payment made to the non-resident.

9.2. The funds deducted from the payment made to the non-resident contractor are funds deemed to be held in trust for the State of South Carolina and will be reported by the Owner to the South Carolina Tax Commission. This Deduction is in addition to the retainage deductions specified in the General Conditions.

9.3. Modifications to the South Carolina Income Tax Act made January 1, 1993, allow a non-resident contractor to apply for an exemption or partial exemption from the two percent (2%) withholding rule. The non-resident contractor must complete a "Nonresident Taxpayer Request for Exemption Affidavit" (Form WH 303), "Nonresident Taxpayer Affidavit" (Form WH 302) and a subcontractors list. The South Carolina Tax Commission will make the determination and notify both contracting parties of the qualified exempt or partially exempt contracts.

9.4. All contracts for $ 10,000.00 or more with non-residents which do not qualify for exemption will require the withholding of two percent (2%) from each payment as described above. The non-resident contractor may elect to post a surety bond with the South Carolina Tax Commission to eliminate this withholding requirement. The non-resident must complete and submit the Bond (Form L-2074) and a "Nonresident Taxpayer Affidavit" (Form WH 302) to the South Carolina Tax Commission for review and approval. The Owner must receive verification from the South Carolina Tax Commission if this deduction is to be waived.

9.5. The above referenced forms may be obtained from the South Carolina Tax Commission located at 301 Gervais Street, Columbia, South Carolina (mailing address - P.O. Box 125, Columbia, South Carolina 29214).

10. EXAMINATION OF DRAWINGS AND SPECIFICATIONS: Each Bidder shall carefully examine Drawings and Specifications and all Addenda or other revisions thereto and thoroughly familiarize himself with the detailed requirements thereof prior to submitting a Bid. If any Bidder is in doubt as to the true meaning of any part of the Drawings, Specifications, or other Documents, or if any error, discrepancy, conflict, or omission is noted, the Bidder should immediately contact the Engineer in writing and request clarification. The Engineer will clarify the intent of the Documents and/or correct such error, discrepancy, conflict, or omission, and will notify all Bidders by Addendum in cases where the extent of work or the cost thereof will be appreciably affected. No allowance will be made after Bids are received for oversight by a Bidder.

11. EXAMINATION OF SITE: Each Bidder shall visit the site of proposed work and fully acquaint himself with conditions relating to construction and labor so he may fully understand facilities, difficulties, and restrictions attending execution of work under contract. By executing the Agreement, the Contractor represents that he has visited the site, familiarized himself with the local conditions under which the work is to be performed, and correlated his observations with the requirements of the Contract Documents.

12. SUBSURFACE CONDITIONS: Any holder of Construction Documents will be permitted to make test boring, test pits or soundings on the site of the work if he so desires, subject to approval by the owner. The responsibility of all risks and liabilities contingent thereto shall be assumed by the party or parties receiving such approval.

Any boring information which may have been obtained by the owner in the vicinity of the work site of the project is shown in the contract drawings or other contract documents. Such boring information if shown is available to bidder, contractors and other interested parties only as a convenience, and is made available without express or implied representation, assurance or guarantee that the information is adequate, complete or correct or that it represents a true complete picture of the subsurface conditions to be encountered.

It shall be the contractor’s obligation to satisfy himself as to the nature, character, quality and quantity of subsurface conditions likely to be encountered. The contractor agrees that he shall neither have nor assert against the owner or engineer, any claim for damages for extra work or relief from any obligation of this contract based upon the boring information made available or based upon the owner to furnish additional boring information.

13. INFORMATION NOT GUARANTEED:

13.1. All information given on the Drawings or in the Contract Documents relating to subsurface conditions, existing structures, location of utilities, sewer inverts, or other information on existing facilities, is from the best sources at present available to the Owner. All such information is furnished only for the information and convenience of the Bidders.

13.2. It is agreed and understood that the Owner does not warrant or guarantee that the conditions, pipes, or other structures encountered during construction will be the same as those indicated on the Drawings or in the Contract Documents. The Bidder must satisfy himself regarding the character, quantities, and conditions of the various materials and the work to be done.

13.3. It further is agreed and understood that the Bidder or the Contractor will not use any of the information made available to him or obtained in any examination made by him in any manner as a basis or ground of claim or demand of any nature, against the Owner or the Engineer, arising from or by reason of any variance which may exist between the information offered by the actual materials or structures encountered during the construction work, except as may otherwise be provided for in the Contract Documents.

13.4. If any work is performed by the Contractor, or any subcontractor, prior to adequate verification of applicable data, any resultant extra cost for adjustment of work necessary to conform to existing conditions, or damage to existing facilities, shall be assumed by the Contractor without reimbursement or compensation by the Owner.

14. COMPLETE WORK REQUIRED:

14.1. The Drawings, Specifications, and all supplementary documents are essential parts of the Contract, and requirements occurring in one are as binding as though occurring in all. They are intended to be cooperative, to describe and provide for a complete work. In case of discrepancy on the Drawings, figured dimensions shall govern. In case of omissions from the Specifications as to items of equipment and materials or quantities therefor, the Drawings shall govern.

14.2. It shall be the responsibility of the Bidder to call to the attention of the Engineer obvious omissions of such magnitude as to affect the strength, adequacy, function, completeness, or cost of any part of the work in ample time for amendment by Addendum prior to letting date.

15. ADDENDA AND INTERPRETATIONS:

15.1. No interpretation of the meaning of the Drawings, Specifications, or other Bid Documents will be made orally to any Bidder by the Engineers prior to award of the contract.

15.2. Every request for such interpretation should be in writing addressed to The LandPlan Group South, 1206 Scott Street, Columbia, SC 29201. To be given consideration, such request must be received at least seven (7) days prior to the date fixed for the opening of Bids. Any and all such interpretation and any supplemental instruction will be made in the form of written Addenda to the Specifications.

15.3. Addenda will be mailed or delivered to all who are known to have received a complete set of Bidding Documents.

15.4. Copies of Addenda will be made available for inspection wherever Bidding Documents are on file for that purpose.

15.5. Every attempt will be made to issue addenda no later than four (4) days prior to the date for receipt of Bids except an Addendum withdrawing the request for Bids or one which includes postponement of the date for receipt of Bids. Should Addenda be required closer to the bid date than the specified four (4) days, Bidders shall be notified via fax or telephone that an Addendum is being released. Bidders shall be responsible for making necessary arrangements to obtain late-issue Addenda. If an Addendum is technical in nature, no attempt shall be made to provide the changes verbally.

16. ABILITY AND EXPERIENCE OF BIDDER:

16.1. It is the purpose of the Owner not to award this Contract to any Bidder who does not furnish satisfactory evidence that he has the experience of successfully completing projects of this type and magnitude and that he has sufficient capital, equipment, plant, and personnel to enable him to prosecute the work successfully and to complete it in the time named.

16.2. The Owner may make such investigation as it deems necessary to determine the ability of the Bidder to perform the work, and the Bidder shall furnish to the Owner, under oath if so required, all such information and data for this purpose as the Owner may request.

16.3. The successful Bidder will be required to construct the work with his own directly employed personnel to an extent not less than fifty percent (50%) of the Contract Amount.

17. BIDS AND QUALIFICATIONS: Before a Bid is considered for award, the Bidder may be requested by the Engineer to submit a statement of facts in detail as to his previous experience in performing similar or comparable work, and of his business and technical organization and financial resources and plant available to be used in performing the contemplated work.

18. TIME FOR COMPLETION: The Bidder must agree to commence work within the time stipulated in the Agreement. The Bidder also must agree to fully complete the project within the time stipulated in the Agreement.

19. LIQUIDATED DAMAGES: The Bidder must agree to pay as liquidated damages the amount set forth in the Agreement for each consecutive calendar day that the work is incomplete after the date of completion.

20. MODIFICATION OF BIDS: Bids may be modified in writing, executed (in the manner that a bid must be executed) and delivered to the place where bids are to be submitted at any time prior to the opening of bids. Telegraphic modifications of the BID will not be allowed.

21. WITHDRAWAL OF BIDS:

21.1. Any Bidder may withdraw his Bid, either personally or by written request, at any time prior to the scheduled time for opening of Bids or authorized postponement thereof.

21.2. No Bidder may withdraw his Bid for a period of ninety (90) calendar days after the date set for the opening thereof, and all Bids shall be subject to acceptance by the Owner during this period.

22. IRREGULAR BIDS: A Bid will be considered irregular and may be rejected for any one of the following reasons:

22.1. If the Bid is on a form other than that furnished by the Owner; or if the form is altered or any part detached.

22.2. If there are unauthorized additions, conditional or alternate bids, or irregularities of any kind which may tend to make the Bid incomplete, indefinite, or ambiguous as to its meaning.

22.3. If the Bidder adds any provisions reserving the right to accept or reject an award, or to enter into a contract pursuant to an award.

22.4. If the Bid does not contain a price for each item listed.

22.5. If the Bid does not contain the aggregate of the Bid, obtained by adding the extended amounts of the various items, if applicable.

22.6. If the Bid contains obviously unbalanced bid prices.

22.7. If there is reason to believe that any Bidder is interested in more than one Bid on the same project or that there has been collusion among the Bidders.

23. DISQUALIFICATION OF BIDDERS: More than one Bid from an individual, a firm or partnership, a corporation or any association, under the same or different names, will not be considered. Reasonable grounds for believing that any Bidder is interested as a principal in more than one Bid for the work contemplated will cause the rejection of all Bids in which such Bidder is believed to be interested. Any or all Bids will be rejected if there is reason to believe that collusion exists among the Bidders. Contracts will be awarded only to responsible Bidders capable of performing the class of work contemplated within the time specified, and having sufficient resources and finances to carry on the work properly.

A contract (subcontract) will not be awarded to any contractor that is in violation of the Clean Air Act and/or the Federal Water Pollution Control Act or that utilizes any facility included in the EPA list of Violating Facilities (40 CFR part 15) 40 CFR Part 30.410-4. Responsiveness is defined by: The completeness and regularity and whether the bidder maintains permanent place of business, adequate equipment to accomplish work properly within time frame established, adequate financial status to meet obligations contingent to the work and whether technically qualified.

24. ACCEPTANCE OR REJECTION OF BIDS: The Owner reserves the right to reject any and all Bids when such rejection is in the interest of the Owner; to reject the Bid of a Bidder who has previously failed to perform properly or complete on time contracts of a similar nature; and to reject the Bid of a Bidder who is not, in the opinion of the Engineer, in a position to perform the Contract. The Owner also reserves the right to waive any informalities and technicalities in bidding. The Owner may also accept or reject any of the alternates that may be set forth on the Bid.

25. METHOD OF AWARD: Unless all Bids are rejected, the Contract will be awarded to the lowest responsive, responsible Bidder based on low bid or combination of low bid with alternates depending on which is in the best interest of the Owner. A responsive Bidder is defined as one whose Bid is complete and submitted in accordance with the Contract Documents without excisions, exceptions, special conditions or alternate bids (unless specifically requested in the bid form). A responsible Bidder is defined as one who is legally licensed to bid and perform work in the State of South Carolina, maintains a permanent place of business, has adequate plant equipment to complete the work properly and within the established time limit, has adequate financial status to meet his obligations contingent to the work, and is considered by the Owner and Engineer to be capable of performing the work in accordance with the Contract Documents.

26. NOTICE TO PROCEED: The Notice to Proceed will be issued within ten (10) calendar days of the execution of the Agreement by the Owner. Should there be reasons why the Notice to Proceed cannot be issued within such period; the time may be extended by mutual agreement between the Owner and Contractor. If the Notice to Proceed has not been issued within the ten (10) calendar day period or within the period mutually agreed upon, the Contractor may terminate the Agreement without further liability on the part of either party.

27. ESTIMATED QUANTITIES: Bidders must satisfy themselves of the accuracy of the estimated quantities in the Bid Schedule by examination of the site and a review of the Drawings and Specifications, including Addenda. After Bids have been submitted, the Bidder shall not assert that there was a misunderstanding concerning the quantities of work or of the nature of the work to be done.

28. COMPARISON OF BIDS: Bids will be compared on the basis of the prices stated in the Bid. In the event there is a discrepancy between the unit price and/or the computed total amount, the unit price shall govern.

29. EASEMENTS: The Owner has obtained, or will obtain, permanent easements and temporary construction easements through private property. The temporary construction easements entitle the Contractor to the occupancy and use of the designated area near or adjacent to the work for purposes related to the work. The Contractor will not encroach on any property unless it has been established that easements have been obtained. On all other land, the Contractor has no rights unless he obtains permission from the proper parties.

30. WORK IN STATE AND COUNTY RIGHTS-OF-WAY: The Owner will obtain the necessary easements and permits for construction across both County and State Highway rights-of-way. The Contractor shall abide by all rules, regulations, and requirements of these agencies in regard to construction under this contract, including the giving of notices, provisions for inspections, and employment of such methods of construction as may be required. Wherever these Specifications may be in conflict with the regulations or requirements of these agencies, such regulations shall govern and these Specifications shall be modified to such extent as necessary to conform to the said rules, regulations, and requirements. Wherever additional costs are incurred due to requirements of these agencies, such additional periods of maintenance, special features of construction, etc., all such costs shall be included in the prices bid. No additional compensation will be allowed for such costs after award of the Contract.

31. ITEMS AND INDETERMINATE ITEMS: The work to be done under this contract has been divided into items, and items having sub items to enable each Bidder to bid on the different portions of the work in accordance with his unit price estimate of their cost, and so that the actual quantity of work executed under each item, or sub item, may be paid for at the unit price bid for the particular item, or sub item, even though such quantity is greater or less than the estimated quantity stated in the Bid.

32. RIGHT TO INCREASE OR DECREASE THE AMOUNT OF WORK:

32.1. The work comprises approximately the quantities shown in the bid form which will be used as a basis for comparison of Bids and not for final estimate. The Owner does not, by expression or by implication, agree that the actual amount of work shall correspond with the estimated quantities.

32.2. The Owner reserves the right to increase or decrease the amount of work under the Contract to the extent of 25% of the work contemplated, at the unit prices quoted in the Bid.

33. SUBCONTRACTS: The Bidder is specifically advised that any person, firm or other party to whom it is proposed to award a subcontract under the contract:

32.1. Must be acceptable to the Owner and Federal Agencies concerned, and

32.2. Must submit Certification by Proposed Subcontractor regarding Compliance with Executive Order 11246. Approval of the proposed subcontract award cannot be given by the Owner unless and until the proposed subcontractor has submitted the Certification and/or evidence showing that it has fully complied with any reporting requirements to which it is or was subject.

Although the bidder is not required to attach such Certifications by proposed subcontractors to his bid, the bidder is hereby advised of this requirement so that appropriate action can be taken to prevent subsequent delay in subcontract awards.

34. FORM OF BID:

34.1. All Bids must be submitted on the blank bid form provided herein and must state the total price for which the Bidder will complete the work in accordance with the terms of the Contract Documents. All blank spaces must be filled in and there shall be no interlineations, alterations, or erasures.

34.2. The Bid must be signed manually by a principal or an officer duly authorized to make contracts. The Bidder's legal name must be fully stated and the name and title of the person signing must be typed below his signature.

35. SUBMITTING BIDS:

35.1. Each Bid must be submitted on the prescribed bid form. All blank spaces for bid prices must be filled in, in ink or typewritten, and the Bid must be fully completed and executed when submitted. Only one copy of the bid form is required.

35.2. Bidders are cautioned that it is the responsibility of each individual Bidder to assure that his Bid is in the possession of the responsible official or his designated alternate prior to the stated time and at the stated place of the bid opening. Owner is not responsible for Bids delayed by mail and/ or delivery services of any nature.

35.3. Each Bid must be submitted in an opaque sealed envelope, plainly marked on the outside, addressed and delivered as shown below. If forwarded by mail, the sealed envelope containing the Bid must be enclosed in another envelope addressed to the Owner at:

35.4.

Upper Left Hand Corner:

Bidder's Name

Bidder's Address

To: CITY OF SUMTER
303 E. Liberty Street
Sumter, SC 29150

Attention: Tripper Lee

Lower Left Hand Corner:

Bid for Construction of: ITB # 2-25/26
Sumter Theater Drive Parking Lot
Sumter, SC

South Carolina General Contractor's License No. _____

Classification _____

Expiration Date _____

(End of Section 01110)

CITY OF SUMTER PURCHASING ORDINANCE – LOCAL PREFERENCE

The City of Sumter Purchasing Director may allow the lowest local bidder (defined as a bidder maintaining a place of business physically located and operating within the limits of Sumter County), whose bid is within five percent (5%) of the lowest non-local bidder, to match the bid submitted by the non-local bidder and thereby be awarded the contract, if:

a. The total purchase price is $25,000 or more;

b. The local bidder has a valid business license issued by Sumter County or one of the municipalities within Sumter County, which business license was issued at least twelve months prior to bid opening date; and

c. For a period of twelve months or more the local bidder has maintained a physical business address (not including a Post Office Box) located within the limits of Sumter County;

Provided, however, that if the procurement is to be made pursuant to state or federal guidelines that prohibit or restrict local preference, then there shall be no local preference.

TO: CITY OF SUMTER (hereinafter called "Owner")

FROM:_____

_____

_____

Phone - _____

of the City of _____ County of _____

and State of_____, hereinafter called "Bidder".

PROJECT: **ITB #2 25/26**
Sumter Theater Drive Parking Lot
City of Sumter, SC

Gentlemen:

The Bidder, in compliance with your Advertisement for Bids for the construction of above-referenced project, having examined the Drawings and Specifications with related documents and the site of the proposed work, and being familiar with all of the conditions surrounding the construction of the proposed project, including the availability of materials and labor, hereby proposes to furnish all labor, materials, and supplies, and to construct the project in accordance with the Contract Documents, within the time set forth therein, and the prices stated below. These prices are to cover all expenses incurred in performing the work required under the Contract Documents, of which this proposal is a part.

The Bidder declares that he has carefully examined the site of the proposed Work and fully informed and satisfied himself as to the conditions there existing, the character and requirements of the proposed Work, and the difficulties attendant upon its execution, and that he has carefully read and examined the Drawings, the annexed proposed Agreement, and the Specifications and other Contract Documents therein referred to, and knows and understands the terms and provisions thereof.

Bidder understands that information relative to existing structures, apparent and latent conditions, and natural phenomena, as furnished to him on the Drawings, in the Contract Documents, or by the Owner or the Engineer, carries no guarantee expressed or implied as to its completeness or accuracy, and he has made due allowance, therefore.

He further understands that the quantities of work tabulated in the Bid are only approximate and are subject to increase or decrease as deemed necessary to the performance of the work by the Engineer; and that these quantities as shown will be used in arriving at the total Contract Price and determination of the lowest Bidder.

TIME FOR COMPLETION AND LIQUIDATED DAMAGES: Bidder hereby agrees to commence work under this contract within 15 days of receipt of the Notice to Proceed and to fully complete the project within 150 consecutive calendar days thereafter.

Bidder also agrees to pay $250/day as liquidated damages for each consecutive calendar day thereafter as hereinafter provided in the General Conditions.

ADDENDA: Bidder acknowledges receipt of the following Addenda:

Addendum No. _____ Date _____

Addendum No. _____ Date _____

Addendum No. _____ Date _____

Addendum No. _____ Date _____

Addendum No. _____ Date _____

Addendum No. _____ Date _____

SCHEDULE OF PRICES – Theater Drive Parking Lot ITB# 2-25/26

Item	Description	Quantity	Unit	Unit Price	Price
1	Mobilization	1	LS		
2	Traffic control	1	LS		
3	Demolition	1	LS		
4	Top Soil	100	CY		
5	Grading, Erosion Control & Inspections	1	LS		
6	Storm Drainage				
	a. 15” RCP	200	LF		
	b. Detention Pond	1	LS		
	c. Tie-In at Ex. Junction Box	1	EA		
	d. Conflict Box (if necessary)	1	EA		
7	Concrete Work				
	a. 4” thick Concrete Sidewalk	150	SY		
	b. 8’ Concrete Trail	500	SY		
	c. Standard Curb & Gutter	3,035	LF		
	d. Flush Curb	510	LF		
	e. Wheel Stops	9	EA		
	f. ADA Plates	3	EA		
8	Asphalt Work				
	a. Light Duty Pavement	6,900	SY		
	b. Heavy Duty Pavement	2,000	SY		
	c. SCDOT Asphalt Patch (if necessary)	35	SY		
9	Electrical Work				
	a. Coordination Duke Energy for lighting installation	1	LS		
10	Striping & Signage				
	a. Parking Lot Striping	1	LS		
	b. Street Striping and Crosswalks	1	LS		
	c. ADA Striping and Signage	7	EA		
	d. Stop Signs	3	EA		
11	Planting				
	a. Highrise Live oak	17	EA		
	b. Fruitless Sweetgum	8	EA		

Item	Description	Quantity	Unit	Unit Price	Price
	c. Chinese Pistache	11	EA		
	d. Shawnee Brave Bald Cypress	25	EA		
	e. Centennial Spirit Crape Myrtle	18	EA		
	f. Inkberry Holly	120	EA		
	g. Suzanne Loropetalum	112	EA		
	h. Cinnamon Girl Distylium	95	EA		
	i. White Muhly Grass	120	EA		
	j. Green Giant Arborvitae	3	EA		
	k. Centipede Sod	39,000	SF		
	l. Hydroseed	12,000	SF		
12	Irrigation	1	LS		

TOTAL, BASE BID ITEMS 1-12 Inclusive: $_____

Additions to work and deletions from work shall be paid in accordance with these unit prices.

The above unit prices shall include all labor, materials, de-watering, shoring, removal, overhead, profit, insurance, taxes, fees, etc., to cover the finished work of the several kinds called for.

Bidder understands that the Owner reserves the right to reject any or all bids and to waive any informality in the bidding. The Bidder agrees that this Bid shall be good and may not be withdrawn for a period of 90 calendar days after the scheduled closed time for receiving bids.

Upon receipt of written notice of the acceptance of this Bid, Bidder will execute the formal Agreement attached within 10 days and deliver Surety Bonds as required by the General Conditions. The bid security attached in the sum of:

_____($_____) is to become the property of the Owner in the event the Agreement and Bond are not executed within the time above set forth as liquidated damages for the delay and additional expense to the Owner caused thereby.

The undersigned declares that his firm is (delete those not applicable):
A corporation organized and existing under the laws of the State of _____.
A partnership consisting of _____.

The undersigned declares that the person or person signing this proposal is fully authorized to sign the proposal on behalf of the firm listed and to fully bind the firm listed to all the conditions and provisions thereof.
It is agreed that no person or persons or company other than the firm listed below or as otherwise indicated hereinafter has any interest whatsoever in this proposal or the contract that may be entered into as a result thereof, and that in all respects the proposal is legal and fair, submitted in good faith, without collusion or fraud.

Respectfully Submitted:

Contractor

(SEAL - if bid is by a Corporation)

By: _____

(Type/Print Name)

(Title)

(Street Address)

(City, State, Zip)

S.C. General Contractor's License No. _____

(End Section 01140)

SECTION 01142 BID BOND

KNOW ALL MEN BY THESE PRESENTS: that we, the undersigned _____ _____, as Principal, and _____, as Surety, are hereby held and firmly bound unto _____, as OWNER, in the penal sum of _____for the payment of which, well and truly to be made, we hereby jointly and severally bind ourselves, our heirs, executors, administrators, successors and assigns.

Signed this _____day of_____, 2023.

The Condition of the above obligation is such that whereas the Principal has submitted to _____a certain BID attached hereto and hereby made a part hereof, to enter into a contract in writing, for the construction of:

ITB# 2-25/56
Sumter Theater Drive Parking Lot
Sumter, SC

NOW, THEREFORE,

(a) If the said BID shall be rejected, or in the alternate,

(b) If said BID shall be accepted and the Principal shall execute and deliver a contract in the Form of Contract attached hereto (properly completed in accordance with said BID) and shall furnish a BOND for his faithful performance of said contract, and for the payment of all persons performing labor or furnishing materials in connection therewith, and shall in all other respects perform the agreement created by the acceptance of said BID,

then this obligation shall be void, otherwise the same shall remain in force and effect; it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall, in no event, exceed the penal amount of this obligation as herein stated. The Surety, for value received, hereby stipulates and agrees that the obligations of said Surety and its BOND shall be in no way impaired or affected by any extension of the time within which the OWNER may accept such BID; and said Surety does hereby waive notice of any such extension.

IN WITNESS WHEREOF, the Principal and the Surety have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, the day and year first set forth above.

_____(L.S.)
Principal

_____
Surety

By: _____

(SEAL)

IMPORTANT: Surety companies executing BONDS must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the State where the project is located.

(End of Section 01142)

SECTION 01210 AGREEMENT

THIS AGREEMENT, made this _____day of _____,2025,

by and between City of Sumter,

acting herein through its City Manager,
(Title of Authorized Official)

hereinafter called "OWNER" and _____,
(Name of Contractor)

doing business as _____
(an Individual), (a Partnership) or (a Corporation)

of the City of _____, County of _____, and

State of _____, hereinafter called "CONTRACTOR".

WITNESSETH: That for and in consideration of the payments and agreements hereinafter mentioned:

1. The CONTRACTOR hereby agrees with the OWNER to commence and complete the construction described as follows:

ITB# 2-25/26
Sumter Theater Drive Parking Lot
Sumter, SC

hereinafter called the PROJECT.

2. The CONTRACTOR will furnish all of the materials, supplies, tools, equipment, labor, and other services necessary for the construction and completion of the PROJECT described herein.

3. The CONTRACTOR will commence the work required by the CONTRACT DOCUMENTS within 10 calendar days after the date of the NOTICE TO PROCEED and will fully complete the PROJECT within 150 consecutive calendar days unless the period for completion is extended otherwise by the CONTRACT DOCUMENTS. The CONTRACTOR further agrees to pay, as liquidated damages, the sum of $250.00 for each consecutive calendar day thereafter as hereinafter provided in the GENERAL CONDITIONS.

4. The CONTRACTOR agrees to perform all of the WORK described in the CONTRACT DOCUMENTS and comply with the terms therein for the sum of $_____ ( ) or as shown in the Bid Schedule.

5. The term "CONTRACT DOCUMENTS" means and includes the following:

A. Advertisement for Bids
B. Information for Bidders
C. Bid
D. Bid Bond
E. Agreement
F. General Conditions
G. Supplemental Conditions
H. Performance Bond
I. Payment Bond
J. Notice of Award
K. Notice to Proceed
L. Change Orders
M. Drawings prepared by The LandPlan Group South, and listed in the Supplemental Conditions.
N. Specifications prepared by The LandPlan Group South.
O. Addenda

No._____ Dated _____

No._____ Dated _____

No._____ Dated _____

No._____ Dated _____

No._____ Dated _____

6. The OWNER agrees to pay the CONTRACTOR in the manner and at such times as set forth in the General Conditions such amounts as required by the CONTRACT DOCUMENTS.

7. This Agreement shall be binding on all parties hereto and their respective heirs, executors, administrators, successors and assigns.

IN WITNESS WHEREOF, the parties hereto have executed or caused to be executed by their duly authorized officials, this Agreement in four (4) counterparts, each of which shall be deemed an original, in the year and day first above written.

OWNER:

(SEAL) By: _____

Deron McCormick
(Type or Print Name)

ATTEST: City Manager
(Title of Authorized Official)

_____
(Secretary)

_____
(Witness)

CONTRACTOR:

(SEAL) By: _____

_____
(Type or Print Name)

_____
(Title)

_____
(Street Address)

_____
(City, State, Zip)

ATTEST:

_____
(Secretary)

_____
(Witness)

(End of Section 01210)

CERTIFICATE OF ACKNOWLEDGEMENT OF CONTRACTOR
IF A CORPORATION

FOR AGREEMENT

STATE OF South Carolina

COUNTY OF _____

ON THIS _____ day of _____, 2025, before me

personally came _____, to me known, who being

by me duly sworn, did depose and say as follows:

That he resides at _____

and is the _____ of _____,
(Title of Officer) (Name of Corporation)

the Corporation described in and which executed the foregoing instrument; that he knows the corporate seal of said Corporation; that the seal affixed to the foregoing instrument is such Corporate Seal and it was so affixed by order of the Board of Directors of said Corporation; and that by the like order he signed thereto his name and official designation.

By: _____

_____
(Name) (Title)

_____
(Notary Public) (Seal)

My commission expires: _____

SECTION 01212 PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS: that

_____
(Name of Contractor)

_____
(Address of Contractor)

_____, hereinafter called Principal and
(Corporation, Partnership or Individual)

_____
(Name of Surety)

_____
(Address of Surety)

hereinafter called Surety, are held and firmly bound unto _____

_____
(Name of Owner)

_____
(Address of Owner)

hereinafter called OWNER, in the penal sum of _____ in lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas the Principal entered into a certain contract with the OWNER, dated the _____ day of_____, 2025, a copy of which is hereto attached and made a part hereof for the construction of:

ITB# 2-25/26
Sumter Theater Drive Parking Lot
Sumter, SC

NOW, THEREFORE, if the Principal shall well, truly and faithfully perform its duties, all the undertakings, covenants, terms, conditions, and agreements of said contract during the original term thereof, and any extensions thereof which may be granted by the OWNER, with or without notice to the Surety and during the one year guaranty period, and if he shall satisfy all claims and demands incurred under such contract, and shall fully indemnify and save harmless the OWNER from all costs and damages which it may suffer by reason of failure to do so, and shall reimburse and repay the OWNER all outlay and expense which the OWNER may incur in making good any default, then this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED, FURTHER, that the said Surety for value received hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract or to the WORK to be performed thereunder or the SPECIFICATIONS accompanying the same shall in any wise affect its obligation on this BOND, and it does hereby waive notice of any such change, extension of time, alteration, or addition to the terms of the contract or to the WORK or to the SPECIFICATIONS. PROVIDED, FURTHER, that no final settlement between the OWNER and the CONTRACTOR shall abridge the right of any beneficiary hereunder whose claim may be unsatisfied.

IN WITNESS WHEREOF, this instrument is executed in four (4) counterparts, each one of which shall be deemed an original, in the year and day first above written.

ATTEST:

Principal

By: (S)

(Principal) Secretary

(Street Address)

(SEAL)

(City, State, Zip)

Witness as to Principal

(Street Address)

(City, State, Zip)

ATTEST:

Surety

(Surety) Secretary

Attorney-in-Fact

(SEAL)

(Street Address)

(City, State, Zip)

Witness as to Surety

(Street Address)

(City, State, Zip)

NOTE: Date of BOND must not be prior to date of Contract. If CONTRACTOR is a Partnership, all partners should execute BOND.

IMPORTANT: Surety companies executing BONDS must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the State where the PROJECT is located.

(End of Section 01212)

SECTION 01214 PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS: that

_____
(Name of Contractor)

_____
(Address of Contractor)

_____, hereinafter called
(an Individual, (a Partnership), or (a Corporation)

Principal, and _____
(Name of Surety)

_____
(Address of Surety)

hereinafter called Surety, are held and firmly bound unto _____

_____
(Name of Owner)

_____
(Address of Owner)

hereinafter called OWNER, in the penal sum of _____in lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas, the Principal entered into a certain contract with the Owner, dated the _____day of _____ 2025, copy of which is hereto attached and made a part hereof for the construction of:

ITB# 2-25/26
Sumter Theater Drive Parking Lot
Sumter, SC

NOW, THEREFORE, if the Principal shall promptly make payment to all persons, firms, SUBCONTRACTORS, and corporations furnishing materials for or performing labor in the prosecution of the WORK provided for in such contract, and any authorized extension or modification thereof, including all amounts due for materials, lubricants, oil, gasoline, coal and coke, repairs on machinery, equipment and tools, consumed or used in connection with the construction of such WORK, and all insurance premiums on said WORK, and for all labor, performed in such WORK whether by SUBCONTRACTOR or otherwise, then this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED, FURTHER, that the said Surety for value received hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract or to the WORK to be performed thereunder or the SPECIFICATIONS accompanying the same shall in any wise affect its obligation on this BOND, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract or to the WORK or to the SPECIFICATIONS.

PROVIDED, FURTHER, that no final settlement between the OWNER and the CONTRACTOR shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

IN WITNESS WHEREOF, this instrument is executed in four (4) counterparts, each one of which shall be deemed an original, in the year and day first above written.

ATTEST:

_____
Principal

_____
(Principal) Secretary

(SEAL) By: _____ (S)

_____
(Street Address)

_____ _____
Witness as to Principal (City, State, Zip)

_____
(Street Address)

_____
(City, State, Zip)

_____
ATTEST: Surety

_____ By: _____
(Surety) Secretary Attorney-in-Fact

_____
(SEAL) (Street Address)

_____
(City, State, Zip)

_____
Witness as to Surety

_____
(Street Address)

_____
(City, State, Zip)

NOTE: Date of BOND must not be prior to date of Contract. If CONTRACTOR is Partnership, all partners should execute BOND.

IMPORTANT: Surety companies executing BONDS must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the State where the PROJECT is located.

(End of Section 01214)

CERTIFICATE OF ACKNOWLEDGEMENT OF CONTRACTOR
IF A CORPORATION

FOR CONTRACT BONDS

STATE OF South Carolina

COUNTY OF _____

ON THIS _____ day of _____, 2025 before me

personally came _____, to me known, who

being by me duly sworn, did depose and say as follows:

That he resides at _____

and is the _____ of _____,
(Title of Officer) (Name of Corporation)

the Corporation described in and which executed the foregoing instrument; that he knows the corporate seal of said Corporation; that the seal affixed to the foregoing instrument is such Corporate Seal and it was so affixed by order of the Board of Directors of said Corporation; and that by the like order he signed thereto his name and official designation.

By: _____

_____
(Name) (Title)

_____
(Notary Public) (Seal)

My commission expires: _____

NOTICE OF AWARD

TO: _____
_____
_____

PROJECT DESCRIPTION: ITB# 2-25/26; Sumter Theater Drive Parking Lot

The OWNER has considered the BID submitted by you on _____, for the above described WORK in response to its Advertisement for Bids and Information for Bidders.

You are hereby notified that your BID has been accepted for items in the amount of $ _____.

You are required by the Information for Bidders to execute the Agreement and furnish the required CONTRACTOR'S Performance BOND, Payment BOND and certificates of insurance within ten (10) calendar days from the date of this Notice to you.

If you fail to execute said Agreement and to furnish said BONDS within ten (10) days from the date of this Notice, said OWNER will be entitled to consider all your rights arising out to the OWNER'S acceptance of your BID as abandoned and as forfeiture of your BID BOND. The OWNER will be entitled to such other rights as may be granted by law.

You are required to return an acknowledged copy of this NOTICE OF AWARD to the OWNER.

Dated this _____ day of _____,2025

City of Sumter
Owner

By:_____

_____
Title

ACCEPTANCE OF NOTICE

Receipt of the above NOTICE OF AWARD is hereby acknowledged by _____
This the _____ day of _____, 2025
By _____
Title _____

NOTICE TO PROCEED

TO: Date: _____

Project: **ITB# 2-25/26 Sumter Theater Drive Parking Lot**

You are hereby notified to commence WORK in accordance with the Agreement dated ____ _____,2025, on or before_____ 2025, and you are to complete the WORK within 150 consecutive calendar days thereafter.

The date of completion of all WORK is therefore_____, 20___.

Owner:_____

By: Deron McCormick_____

Title: City Manager_____

ACCEPTANCE OF NOTICE

Receipt of the above NOTICE TO PROCEED is hereby
acknowledged by _____
This the _____day of _____, 2025
By _____
Title _____

SECTION 01230 GENERAL CONDITIONS

1. GENERAL

1.1. THE CONTRACT DOCUMENTS: The Contract Documents consist of the Advertisement for Bids, Information for Bidders, Bid, Bid Bond, Agreement, Payment Bond, Performance Bond, Conditions of the Contract (General, Supplemental and Other Conditions), Drawings, Specifications, Addenda, Notice of Award, Notice to Proceed, and Change Orders.

1.2. CORRELATION AND INTENT OF DOCUMENTS:

1.2.1. The Contract Documents are complementary, and what is required by any one shall be as binding as if required by all.

1.2.2. The intent of the Drawings and Specifications is that the Contractor shall furnish all labor, supplies and materials, tools, machinery, equipment, transportation, supervision, temporary construction of any nature, and all other services, facilities and means necessary for the proper execution and completion of the Work in accordance with the Contract Documents and all incidental work necessary to complete the Project in an acceptable manner, and fully complete the work or improvement ready for use, occupancy and operation by the Owner.

1.2.3. Any mention in the Specifications or indication on the Drawings of articles, materials, methods or operations shall require the Contractor to furnish such item or service as if it was fully specified unless it is noted or specified as not in the contract. It is intended that all materials shall be new and best quality in every respect unless otherwise noted or specified. All workmanship, methods of assembly, and erection shall be first class in every respect.

1.3. CONFLICT OR INCONSISTENCY:

1.3.1. If there is any conflict or inconsistency between the provisions of the Supplemental Conditions and the provisions of the other Contract Documents, the provisions of the Supplemental Conditions shall prevail. If there is any conflict or inconsistency between the provisions of the General Conditions and the provisions of any of the Contract Documents other than the Supplemental Conditions, the provisions of the General Conditions shall prevail.

1.3.2. In case of conflict between the Drawings and Specifications, the Specifications shall govern. Figure dimensions on Drawings shall govern over scale dimensions, and detailed Drawings shall govern over general Drawings.

1.3.3. In case of difference between small-scale and large-scale drawings, the large scale drawings shall govern. Schedules on any contract drawing shall take precedence over conflicting information on that or any other contract drawing. On any of the drawings where a portion of the work is detailed or drawn out and the remainder is shown in outline, the parts detailed or drawn out shall apply also to all other like portions of the work. Where the word "similar" occurs on the drawings, it shall have a general meaning and not be interpreted as being identical, and all details shall be worked out in relation to their location and their connection with other parts of the work.

1.3.4. Any discrepancies found between the Drawings and Specifications and site conditions or any inconsistencies or ambiguities in the Drawings or Specifications shall be immediately reported to the Engineer, in writing, who shall promptly correct such inconsistencies or ambiguities in writing. Work done by the Contractor after his discovery of such discrepancies, inconsistencies or ambiguities shall be done at the Contractor's risk.

1.3.5. Should a conflict be discovered within the Contract Documents, the Contractor shall be deemed to have estimated the higher quality way of doing the Work unless he shall have asked for and obtained a decision in writing from the Engineer before entering into this Contract.

1.4. ADDITIONAL INSTRUCTIONS AND DETAIL DRAWINGS: The Contractor may be furnished additional instructions and detail drawings, by the Engineer, as necessary to carry out the Work required by the Contract Documents. The additional drawings and instructions thus supplied will become a part of the Contract Documents. The Contractor shall carry out the Work in accordance with the additional detail drawings and instructions.

1.5. SPECIFICATION HEADINGS:

1.5.1. For convenience of reference, these Specifications are divided into various Divisions, Sections, Subsections and Paragraphs. The titles of these headings shall not be taken as a correct or complete segregation of the various types of material and labor nor as an attempt to outline jurisdictional procedures. The headings shall not be deemed to limit or restrict the content, meaning or effect of such section, subsection, paragraph, provision or part.

1.5.2. The organization of the Specifications into the various headings, and the arrangement of Drawings shall not control the Contractor in dividing the Work among Subcontractors or in establishing the extent of Work to be performed by any trade. Each subcontract shall be dependent upon its own definite confines, regardless of Divisions of these Specifications. No responsibility, either direct or implied, is assumed by the Owner for omissions or duplications by the Contractor or by any of his subcontractors due to real or alleged errors in arrangement of matter in Contract Documents.

1.6. DRAWINGS AND SPECIFICATIONS FOR CONSTRUCTION PURPOSES: The Contractor will be furnished 6 complete sets of Drawings and Specifications to be used during the course of construction. If more than 6 sets are needed, the Contractor will be required to pay the actual cost of printing and handling.

1.7. DEFINITIONS: Wherever the words hereinafter defined or pronouns used in their stead occur in the Contract Documents, they shall have the following meanings:

1.7.1. ADDENDA: Written or graphic instruments issued prior to the execution of the Agreement which modify or interpret the Contract Document, Drawings and Specifications by additions, deletions, clarifications or corrections. Such addenda or addenda will take precedent over the position of the general drawings and specifications concerned and will be considered as part of the Contract Documents.

1.7.2. AGREEMENT: The Agreement represents the entire and integrated agreement between the parties hereto and supersedes all prior negotiations, representations or agreements,

either written or oral, including the bidding documents. The Agreement may be amended or modified by a Change Order.

1.7.3. BID: The written offer or proposal of the Bidder, submitted on the prescribed form, properly signed and guaranteed, to perform the work at the prices quoted by the Bidder.

1.7.4. BID BOND: The security furnished by the Bidder with his proposal for the Project is guaranty he will enter into a contract for the work if his proposal is accepted.

1.7.5. BIDDER: Any individual, firm or corporation or combination of same submitting a bid for the work contemplated, acting directly or through a duly authorized representative.

1.7.6. BONDS: Bid, Performance and Payment Bonds and other instruments of security furnished by the Contractor and his Surety in accordance with the Contract Documents.

1.7.7. CALENDAR DAY: Every day shown on the calendar, Sundays and holidays included.

1.7.8. CHANGE ORDER: A written order to the Contractor authorizing an addition, deletion or revision in the Work within the general scope of the Contract Documents, or authorizing an adjustment in the Contract Price or Contract Time.

1.7.9. CONTRACT: The Contract Documents form the Contract. The Contract represents the entire and integrated agreement between the parties hereto and supersedes all prior negotiations, representations or agreements, either written or oral, including the bidding documents. The Contract may be amended or modified by a Change Order.

1.7.10. CONTRACT DOCUMENTS: The Contract Documents consist of the Advertisement for Bids, Information for Bidders, Bid, Bid Bond, Agreement, Payment Bond, Performance Bond, the Conditions of the Contract (General, Supplemental, and other Conditions), the Drawings, the Specifications, Addenda issued prior to execution of the Contract, Notice of Award, Notice to Proceed and Change Orders.

1.7.11. CONTRACT PRICE: The total monies payable to the Contractor under the terms and conditions of the Contract Documents.

1.7.12. CONTRACTOR:

1.7.12.a. The individual, firm or corporation with whom the Owner has executed the Agreement by which the Contractor is obligated directly, or through Subcontractors, to perform work in connection with the Project.

1.7.12.b. The Contractor is the person or organization identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number and masculine in gender. The term Contractor means the Contractor or his authorized representative.

1.7.13. CONTRACT TIME: The number of calendar days stated in the Contract Documents for the completion of the Work.

1.7.14. DRAWINGS: The part of the Contract Documents which show the characteristics and scope of the Work to be performed and which have been prepared or approved by the Engineer.

1.7.15. EARTH: An excavated material or material to be excavated; all kinds of material other than rock.

1.7.16. ELEVATION: The figures given on the Drawings or in the other Contract Documents after the word "elevation" or abbreviation of it shall mean the distance in feet above the datum adopted by the Engineer.

1.7.17. ENGINEER: The person, firm or corporation named as such in the Contract Documents and duly appointed by the Owner to undertake the duties and powers herein assigned to the Engineer, acting either directly or through duly authorized representatives.

1.7.18. EQUIPMENT: All machinery, together with the necessary supplies for upkeep and maintenance, and all tools and apparatus necessary for the proper construction and acceptable completion of the work.

1.7.19. FIELD ORDER: A written order effecting a change in the Work not involving an adjustment in the Contract Price or an extension of the Contract Time, issued by the Engineer to the Contractor during construction.

1.7.20. FURNISH: Furnish and install complete, in place, and ready for use.

1.7.21. INFORMATION FOR BIDDERS: The Notice to Contractors containing all necessary information as to provisions, requirements, date, place, and time of submitting bids.

1.7.22. LATEST EDITION: The current printed document issued eight weeks or more prior to date of receipt of bids.

1.7.23. MATERIALS: Any substance specified for use in the construction of the Project and its appurtenances.

1.7.24. NET COST: The cost to the Contractor after application of all credits and discounts (excepting only cash discounts) and without the addition of any factor for burden, overhead or indirect cost or profit.

1.7.25. NOTICE OF AWARD: The written notice of the acceptance of the Bid from the Owner to the successful Bidder.

1.7.26. NOTICE TO PROCEED: Written communication issued by the Owner to the Contractor authorizing him to proceed with the Work and establishing the date of commencement of the Work.

1.7.27. OPTIMUM MOISTURE CONTENT FOR COMPACTION: The moisture content of a soil calculated on the basis of dry weight of soil at which the soil can be compacted to the approximate maximum density under a specified standard method of compaction.

1.7.28. OWNER: A public or quasi-public body or authority, corporation, association, partnership, or individual for whom the Work is to be performed.

1.7.29. PAYMENT BOND: The approved form of security furnished by the Contractor to guarantee the payment to all persons supplying labor and materials in the prosecution of the work in accordance with the terms of the Contract.

1.7.30. PERFORMANCE BOND: The approved form of security furnished by the Contractor to guarantee the completion of the work in accordance with the terms of the Contract.

1.7.31. PRE-CONSTRUCTION CONFERENCE: A conference following award and prior to start of construction to be attended by a duly authorized representative of the Engineer and by the responsible officials of the Contractor and other affected parties.

1.7.32. PROJECT: The undertaking to be performed as provided in the Contract Documents.

1.7.33. PROPOSAL: The written offer of the Bidder, submitted on the prescribed form, properly signed and guaranteed, to perform the work at the prices quoted by the Bidder.

1.7.34. PROPOSAL FORM: The approved form on which the Owner requires formal bids to be prepared and submitted for the work.

1.7.35. PROPOSAL GUARANTY: The security furnished by the Bidder with his proposal for a Project, as guaranty he will enter into a contract for the work if his proposal is accepted.

1.7.36. PROVIDE: Furnish and install complete, in place, and ready for use.

1.7.37. RESIDENT PROJECT REPRESENTATIVE: The authorized representative of the Owner who is assigned to the Project site or any part thereof.

1.7.38. ROCK: An excavated material or material to be excavated; only boulders and pieces of concrete or masonry exceeding 1/2 cu. yd. in volume, or solid ledge rock which, in the opinion of the Engineer, requires, for its removal, drilling and blasting, wedging, sledging, barring, or breaking up with a power-operated tool. No soft or disintegrated rock which can be removed with hand pick or power-operated excavator or shovel, no loose shaken, or previously blasted rock or broken stone in rock fillings or elsewhere, and no rock exterior to the maximum limits of measurement allowed, which may fall into the excavation will be classified as rock.

1.7.39. SHOP DRAWINGS: All drawings, diagrams, illustrations, brochures, schedules and other data which are prepared by the Contractor, a Subcontractor, manufacturer, Supplier or distributor, which illustrate how specific portions of the Work shall be fabricated or installed.

1.7.40. SPECIALIST: An individual or firm of established reputation which is regularly engaged in, and which maintains a regular force of workmen skilled in either manufacturing or fabricating items required by the contract, installing items required by the contract, or otherwise performing work required by the contract. Where the contract specifications require installation by a specialist, that term shall also be deemed to mean either the manufacturer of the item, an

individual or firm licensed by the manufacturer, or an individual or firm who will perform the work under the manufacturer's direct supervision.

1.7.41. SPECIFICATIONS: A part of the Contract Documents consisting of written descriptions of a technical nature of materials, equipment, construction systems, standards and workmanship.

1.7.42. STRUCTURES: Bridges, culverts, catch basins, drop inlets, manholes, retaining walls, cribbing, endwalls, buildings, sewers, service pipes, underdrains, foundation drains, and other miscellaneous items which may be encountered in the work, and which are not otherwise classified herein.

1.7.43. SUBBASE: The layer or layers of specified or selected material of designated thickness or rate of application placed on a subgrade to comprise a component of the pavement structure to support the base course, pavement or subsequent layer of the construction.

1.7.44. SUBCONTRACTOR: An individual, firm or corporation having a direct contract with the Contractor or with any other Subcontractor for the performance of a part of the Work at the site. The term Subcontractor is referred to throughout the Contract Documents as if singular in number and masculine in gender and means a Subcontractor or his authorized representative.

1.7.45. SUB-SUBCONTRACTOR: An individual, firm or corporation having a direct or indirect contract with a Subcontractor to perform any of the Work at the site. The term Sub-subcontractor is referred to throughout the Contract Documents as if singular in number and masculine in gender and means a Sub- subcontractor or an authorized representative thereof.

1.7.46. SUBGRADE: The top surface of a roadbed upon which the pavement structure and shoulders are constructed.

1.7.47. SUBSTANTIAL COMPLETION: That date as certified by the Engineer when the construction of the Project or a specified part thereof is sufficiently completed, in accordance with the Contract Documents, so that the Project or specified part can be utilized for the purposes for which it is intended.

1.7.48. SUPPLEMENTAL CONDITIONS: Conditions of the Contract other than the General Conditions.

1.7.49. SUPERINTENDENT: The Contractor's authorized representative in responsible charge of the work.

1.7.50. SUPPLIER: Any person or organization who supplies materials or equipment for the Work, including that fabricated to a special design, but who does not perform labor at the site.

1.7.51. SURETY: The corporation, partnership or individual bound with and for the Contractor for the full and complete performance of the contract, and for the payment of all debts pertaining to the work.

1.7.52. TITLES (OR HEADINGS): The titles or headings of the sections and subsections herein are intended for convenience of reference and shall not be considered as having any bearing on their interpretation.

1.7.53. WORK: All labor necessary to produce the construction required by the Contract Documents, and all materials and equipment incorporated or to be incorporated in the Project.

1.7.54. WRITTEN NOTICE: Any notice to any part of the Agreement relative to any part of this Agreement in writing and considered delivered and the service thereof completed, when posted by certified or registered mail to the said party at his last given address, or delivered in person to said party or his authorized representative on the Work.

1.7.55. ADDITIONAL DEFINITIONS:

1.7.55.a. Wherever in the Specifications or on the Drawings, the words "as designated", "as detailed", "as directed", "as ordered", "as permitted", "as prescribed", "as provided", "as requested", "as required", or words of like import are used, it shall be understood that the designation, detail, direction, order, permission, prescribed, provision, request or requirement of the Engineer is intended.

1.7.55.b. Similarly, the words "approved", "acceptable", "satisfactory", and words of like import shall mean approved by, acceptable to, or satisfactory to the Engineer.

1.8. ABBREVIATIONS: Where any other following abbreviations are used in the Specifications, they shall have the meaning set forth opposite each.

AA	Aluminum Association
AAMA	Architectural Aluminum Manufacturers Association
AAR	Association of American Railroads
AASHTO	American Association of State Highway and Transportation Officials
ACI	American Concrete Institute
ACPA	American Concrete Pipe Association
AED	American Equipment Dealers
AFI	American Filter Institute
AGA	American Gas Association
AGC	Associated General Contractors of America, Inc.
AHDGA	American Hot Dip Galvanizers Association
AIA	American Institute of Architects
AIEE	American Institute of Electrical Engineers
AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute
AMA	Acoustical Materials Association
AMCA	Air Moving and Conditioning Association
ANS	American Nuclear Society
ANSI	American National Standards Institute
APA	American Plywood Association
ARI	Air Conditioning and Refrigeration Institute
ASA	Acoustical Society of America

ASCE	American Society of Civil Engineers
ASHRAE	American Society of Heating, Refrigerating and Air Conditioning Engineers
ASLA	American Society of Landscape Architects
ASME	American Society of Mechanical Engineers
ASQC	American Society for Quality Control
ASSE	American Society of Sanitary Engineers
ASTM	American Society for Testing and Materials
AWI	Architectural Woodwork Institute
AWPA	American Wood Preservers' Association
AWPI	American Wood Preservers' Institute
AWS	American Welding Society
AWWA	American Water Works Association
BHMA	Builders Hardware Manufacturers Association
CGA	Compressed Gas Association
CRSI	Concrete Reinforcing Steel Institute
CS	Commercial Standards, U. S. Department of Commerce
CSI	Construction Specification Institute
EIA	Electronic Industries Association
FS	Federal Specification
FSPT	Federation of Societies for Paint Technology
FSS	Federal Specifications, General Services Administration
FHWA	Federal Highway Administration
GA	Gypsum Association
IBI	Insulation Board Institute
IBR	Institute of Boiler and Radiator Manufacturers
IEEE	Institute of Electric and Electronics Engineers
IES	Illuminating Engineering Society
ISA	Instrument Society of America
ISO	International Organization for Standardization
ITE	Institute of Traffic Engineers
LIA	Lead Industries Association
MBMA	Metal Building Manufacturers Association
MIA	Marble Institute of America
MPTA	Mechanical Power Transmission Association
MS	Military Specification
MSTD	Military Standard
NAAMM	National Association of Architectural Metal Manufacturers
NAFM	National Association of Fan Manufacturers
NBFU	National Board of Fire Underwriters
NBS	National Bureau of Standards
NCMA	National Concrete Masonry Association
NEC	National Electrical Code
NECA	National Electrical Contractors Association, Inc.
NEMA	National Electrical Manufacturers Association
NFC	National Fire Code
NFPA	National Fire Protection Association
NHLA	National Hardware Lumber Association

NLMA	National Lumber Manufacturers Association
NPC	National Plumbing Code
NRCA	National Roofing Contractors Association
NRMCA	National Ready Mixed Concrete Association
NSF	National Sanitation Foundation
NTMA	The National Terrazzo and Mosaic Association
NWMA	National Woodwork Manufacturers Association
OSHA	Occupational Safety and Health Act
PCA	Portland Cement Association
PCI	Prestressed Concrete Institute
PEI	Porcelain Enamel Institute
RTI	Resilient Tile Institute
RWMA	Resistance Welder Manufacturers Association
SBI	Steel Boiler Institute
SCDOT	South Carolina Department of Transportation
SCPI	Structural Clay Products Institute
SDI	Steel Deck Institute
SJI	Steel Joist Institute
SMA	Screen Manufacturers Association
SMACNA	Sheet Metal and Air Conditioning Contractors National Association
SSBC	Southern Standard Building Code
SSGC	Southern Standard Gas Code
SSPC	Steel Structures Painting Council
TAPPI	Technical Association of the Pulp and Paper Industry
TCA	Tile Council of America
TRB	Transportation Research Board
UL	Underwriters' Laboratories, Inc.

2. OWNER'S RIGHTS AND RESPONSIBILITIES

2.1. CHANGES IN THE WORK:

2.1.1. The Owner, without invalidating the Contract, may make changes in the Work and in the Drawings and Specifications therefor by making alterations therein, additions thereto, or omissions therefrom.

2.1.2. All work resulting from such changes shall be performed and furnished under and pursuant to the terms and conditions of the Contract. If such changes result in an increase or decrease in the work to be done hereunder, or increase or decrease the quantities thereof, adjustment in compensation shall be made therefor as provided in Subsection 7.12 entitled PAYMENT FOR EXTRA WORK.

2.1.3. Except in an emergency endangering life or property, no change shall be made unless in pursuance of a written order from the Engineer authorizing the change, and no claim for additional compensation shall be valid unless the change is so ordered.

2.1.4. The Contractor agrees that he shall neither have nor assert any claim for, or be entitled to, any additional compensation for damages or for loss of anticipated profits on work that is eliminated.

2.2. PROJECT ENGINEER: As Engineer for this project the Owner has retained:

The LandPlan Group South, Inc.
1206 Scott Street
Columbia, SC 29201

2.3. ENGINEER'S AUTHORITY:

2.3.1. The Engineer will be the Owner's representative during the construction period and he will observe the work in progress on behalf of the Owner. The Engineer will have the authority to act on behalf of the Owner in the following matters consistent with Owner's rights and obligations as set forth in these Contract Documents:

2.3.1.a. Interpretation of Contract Documents.
2.3.1.b. Approval of samples and shop drawings.
2.3.1.c. Preparation of supplementary details and instructions.
2.3.1.d. Inspection and approval of construction work.
2.3.1.e. Preliminary approval of progress payment applications.

2.3.2. Any instructions which the Engineer may issue the Contractor shall be adjudged an interpretation of the Contract requirements and not an act of supervision. The Engineer has no authority, nor accepts any responsibility, either direct or implied, to direct and superintend the construction operations.

2.3.3. The Contractor shall proceed without delay to perform the work as directed, instructed, determined, or decided by the Engineer and shall comply promptly with such directions, instructions, determinations, or decisions. If the Contractor has any objection thereto, he may require that any such direction, instruction, determination, or decision be put in writing and within 10 days after receipt of any such writing, he may file a written protest with the Owner stating clearly and in detail his objections, the reasons therefor, and the nature and amount of additional compensation, if any, to which he claims he will be entitled thereby. A copy of such protest shall be filed with the Engineer at the same time it is filed with the Owner. Unless the Contractor files such written protest with the Owner and Engineer within such 10 day period, he shall be deemed to have waived all grounds for protest of such direction, instruction, determination, or decision and all claims for additional compensation or damages occasioned thereby, and shall further be deemed to have accepted such direction, instructions, determination, or decision as being fair, reasonable, and finally determinative of his obligations and rights under the Contract.

2.4. LIABILITY OF OWNER: No person, firm or corporation, other than the Contractor, who signed this Contract as such, shall have any interest herein or right hereunder. No claim shall be made or be valid either against the Owner or any agent of the Owner and neither the Owner nor any agent of the Owner shall be liable for or be held to pay any money, except as herein provided. The acceptance by the Contractor of the payment as fixed in the final estimate

shall operate as and shall be a full and complete release of the Owner and of every agent of the Owner of and from any and all claims, demands, damages and liabilities of, by or to the Contractor for anything done or furnished for or arising out of or relating to or by reason of the work or for or on account of any act or neglect of the Owner or of any agent of the Owner or of any other person, arising out of, relating to or by reason of the work, except the claim against the Owner for the unpaid balance, if any there be, of the amounts retained as herein provided.

2.5. RIGHTS-OF-WAY AND SUSPENSION OF WORK: The Owner shall furnish all land and rights-of-way necessary for the carrying out of this contract and the completion of the Work herein contemplated and will use due diligence in acquiring said land and rights-of-way as speedily as possible. But it is possible that all lands and rights-of-way may not be obtained as herein contemplated before construction begins, in which event the Contractor shall begin his work upon such land and rights-of-way as the Owner may have previously acquired and no claim for damages whatsoever will be allowed by reason of the delay in obtaining the remaining lands and rights-of-way. Should the Owner be prevented or enjoined from proceeding with the work, or from authorizing its prosecution, either before or after the commencement, by reason of any litigation, or by reason of its inability to procure any lands or rights-of-way for the said work, the Contractor shall not be entitled to make or assert claim for damage by reason of said delay or to withdraw from the contract except by consent of the Owner; but time for completion of the work will be extended to such time as the Owner determines will compensate for the time lost by such delay, such determination to be set forth in writing.

2.6. SURVEYS, PERMITS AND REGULATIONS:

2.6.1. The Owner will furnish all boundary surveys and establish all base lines for locating the principal component parts of the Work together with a suitable number of bench marks adjacent to the Work as shown in the Contract Documents. From the information provided by the Owner, unless otherwise specified in the Contract Documents, the Contractor shall develop and make all detail surveys needed for construction such as slope stakes, batter boards, stakes for pile locations and other working points, lines, elevations and cut sheets.

2.6.2. The Contractor shall carefully preserve bench marks, reference points and stakes and, in case of willful or careless destruction, he shall be charged with the resulting expense and shall be responsible for any mistakes that may be caused by their unnecessary loss or disturbance.

2.6.3. Permits and licenses of a temporary nature necessary for the prosecution of the Work shall be secured and paid for by the Contractor unless otherwise stated in the Supplemental Conditions. Encroachment permits, easements for permanent structures and permits for permanent changes in existing facilities shall be secured and paid for by the Owner, unless otherwise specified. The Contractor shall give all notices and comply with all laws, ordinances, rules and regulations bearing on the conduct of the Work as drawn and specified. If the Contractor observes that the Contract Documents are at variance therewith, he shall promptly notify the Engineer in writing, and any necessary changes shall be adjusted as provided in Subsection 2.1 entitled CHANGES IN THE WORK.

2.7. LINES, GRADES AND MEASUREMENTS:

2.7.1. The Owner's Engineer will set sufficient base lines and elevations as shown on the Drawings for location of the Work. The Contractor shall employ a registered civil engineer, or land surveyor and shall require said Engineer to establish all lines, elevations, reference marks, batter boards, etc., needed by the Contractor during the progress of the work, and from time to time to verify such marks by instrument or other appropriate means.

2.7.2. The Owner's Engineer shall be permitted at all times to check the lines, elevations, reference marks, batter boards, etc., set by the Contractor, who shall correct any errors in lines, elevations, reference marks, batter boards, etc., disclosed by such check. Such check shall not be construed to be an approval of the Contractor's work and shall not relieve or diminish in any way the responsibility of the Contractor for the accurate and satisfactory construction and completion of the work.

2.7.3. The Contractor shall make, check and be responsible for all measurements and dimensions necessary for the proper construction of, and the prevention of misfittings in, the work.

2.8. OWNER'S RIGHT OF AUDIT: In case the Owner agrees that a Contractor perform work on a cost plus basis, the Owner is to have a full and complete right to audit and make copies of Contractor's or Subcontractor's records with respect to any payment to Owner may be requested to make, or may make, for any work done on a cost plus basis.

2.9. OWNER'S RIGHT TO SEPARATE CONTRACTS:

2.9.1. The Owner reserves the right to let other contracts in connection with the Work under similar General Conditions. The Contractor shall afford other contractors reasonable opportunity for the introduction and storage of their materials and the execution of their work, and shall properly connect and coordinate his work with theirs.

2.9.2. The Owner may perform additional Work related to the Project by himself, or he may let other contracts containing provisions similar to these. The Contractor will afford the other contractors who are parties to such Contracts (or the Owner, if he is performing the additional Work himself), reasonable opportunity for the introduction and storage of materials and equipment and the execution of Work and shall properly connect and coordinate his Work with theirs.

2.10. OWNER'S RIGHT TO DO WORK:

2.10.1. If the Contractor should neglect to prosecute the work properly or fail to perform any provision of this contract, the Owner, after three days' written notice to the Contractor may, without prejudice to any other remedy he may have, make good such deficiencies and may deduct the cost thereof from the payment then or thereafter due the Contractor. If such expense shall exceed the unpaid balance, the Contractor shall pay the difference to the Owner on demand.

2.10.2. The Engineer's certificate setting forth the fair and reasonable cost of repairing, replacing, rebuilding or restoring any damaged or defective work or equipment when performed by one other than the Contractor shall be binding and conclusive as to the amount thereof upon the Contractor.

2.11. OWNER'S RIGHT TO TERMINATE CONTRACT: If the Contractor should be adjudged a bankrupt, or if he should make a general assignment for the benefit of his creditors, or if a receiver or trustee should be appointed on account of his insolvency, or if he should persistently or repeatedly refuse or should fail, except in cases for which extension of time is provided, to supply enough properly skilled workmen or proper materials, or if he should fail to make prompt payment to Subcontractors or for material or labor, or persistently disregard laws, ordinances or the instructions of the Owner and his representatives, or otherwise be guilty of substantial violation of any provision of the Contract, then the Owner, may, without prejudice to any other right or remedy and after giving the Contractor, and his surety, if any, seven days' written notice, terminate the employment of the Contractor and take possession of the premises and of all materials, as it may deem expedient. In such case, the Contractor shall not be entitled to receive any further payment until the work is finished. If the unpaid balance of the contract price shall exceed the expense of finishing the work including compensation for additional engineering, managerial and administrative services, such excess shall be paid to the Contractor. If such expense shall exceed such unpaid balance, the Contractor shall pay the difference to the Owner.

2.12. SUSPENSION OF WORK, TERMINATION AND DELAY: The Owner may suspend the Work or any portion thereof for a period of not more than 90 days or such further time as agreed upon by the Contractor, by written notice to the Contractor and the Engineer, which notice shall fix the date on which Work shall be resumed. The Contractor will resume that Work on the date so fixed. The Contractor will be allowed an increase in the Contract Price or an extension of the Contract Time, or both, directly attributable to any suspension.

2.13. INSPECTIONS AND TESTING: If the Contract Documents, Owner's instructions, laws, ordinances or any public authority having jurisdiction require any work to be specially tested or approved, the Contractor shall give the Owner timely notice of its readiness for observation by the Owner or inspection by another authority, and if the inspection is by another authority rather than the Owner, of the date fixed for such inspection. The required certificates of such inspection shall be secured and paid for by the Contractor. All SCDOT inspections shall be paid for by the General Contractor. Observations by the Owner shall be promptly made, and where practicable, at the source of supply. If any work should be covered up without approval or consent of the Owner, it must, if required by the Owner, be uncovered for examination, at the Contractor's expense.

2.14. INSPECTION OF WORK AWAY FROM THE SITE: If the work to be done away from the construction site is to be inspected on behalf of the Owner during its fabrication, manufacture, or testing, or before shipment, the Contractor shall give notice to the Engineer of the place and time where such fabrication, manufacture, testing, or shipping is to be done. Such notice shall be in writing and delivered to the Engineer in ample time so that the necessary arrangements for the inspection can be made.

2.15. PIPE LOCATION: Exterior pipelines will be located substantially as indicated on the Drawings, but the right is reserved to the Owner acting through the Engineer, to make such modifications in location as may be found desirable to avoid interference with structures or for other reasons. Where fittings, etc., are noted on the Drawings such notation is for the Contractor's convenience and does not relieve him from laying and jointing different or additional items where required.

2.16. PRIOR USE OR OCCUPANCY: The Owner reserves the right to use or occupy the Work or portion thereof, and to use equipment installed under the Contract, prior to final acceptance. Such use or occupancy will not constitute acceptance of the Work or any part thereof. Despite such use or occupancy, guarantee periods will not begin until the completion of all work under the Contract, unless agreement to the contrary is made in writing between the parties.

2.17. WEATHER CONDITIONS: In the event of temporary suspension of work, or during inclement weather, or whenever the Engineer shall direct, the Contractor will, and will cause his subcontractors to, protect carefully his and their work and materials against damage or injury from the weather. If, in the opinion of the Engineer, any work or materials shall have been damaged or injured by reason of failure on the part of the Contractor or any of his subcontractors so to protect its work, such materials shall be removed and replaced at the expense of the Contractor.

2.18. OWNER'S RIGHT TO CLEAN UP: If a dispute arises between the separate contractors as to their responsibility for cleaning up, the Owner may clean up and charge the cost thereof to the Contractor as the Engineer shall determine to be just.

3. CONTRACTOR'S RIGHTS AND RESPONSIBILITIES

3.1. ACCESS TO WORK: The Owner, the Engineer, and their officers, agents, servants, and employees plus representatives of the various participating Federal or State agencies may at any and all times and for any and all purposes, enter upon the work and site thereof and the premises used by the Contractor, and the Contractor shall at all times provide safe and proper facilities therefor.

3.2. ACCIDENT PREVENTION: In the performance of the contract the Contractor shall comply with the applicable provisions of the regulations issued by the Secretary of Labor pursuant to section 107 of the Contract Work Hours and Safety Standards Act entitled "Safety and Health Regulations for Construction" (29 CFR 1518, renumbered as Part 1926). Occupational Safety and Health Standards (29 CFR Part 1910) issued by the Secretary of Labor pursuant to the Williams-Steiger Occupational Safety and Health Act of 1970 are applicable to work performed by the contractor subject to the provisions of the Act.

3.3. STATED ALLOWANCES: The Contractor shall include in the Contract Sum all allowances stated in the Contract Documents. These allowances shall cover the net cost of the materials and equipment delivered and unloaded at the site, and all applicable taxes. The Contractor's handling costs on the site, labor, installation costs, overhead, profit and other expenses contemplated for the original allowance shall be included in the Contract Sum and not in the allowance. If the cost, when determined, is more than or less than the allowance, the Contract Sum shall be adjusted accordingly by Change Order which will include additional handling costs on the site, labor, installation costs, overhead, profit and other expenses resulting to the Contractor from any increase over the original allowance.

3.4. ARCHAEOLOGICAL RIGHTS: There is a possibility that items of archaeological significance may be found during the excavation of the site. In such event, the Contractor shall

stop excavation in the vicinity of the find and notify the Engineer immediately; subsequent excavation work shall proceed as directed by the Engineer. All items found which are considered to have archaeological significance are the property of the Owner.

3.5. AS-BUILT DRAWINGS: The Contractor shall designate one set of Drawings for "As-Built Drawings". The Contractor shall indicate on these drawings all field changes affecting various mechanical, electrical, piping and other items as well as locations as actually installed. The "As-Built Drawings" shall be kept current by the Contractor. The "As-Built Drawings" shall be delivered to the Engineer upon completion and acceptance of the work. Final payment for the work will not be made until the "As-Built Drawings" have been completed and delivered as indicated above.

3.6. OBLIGATIONS OF CONTRACTOR:

3.6.1. The Contractor shall and will, in good workmanlike manner, do and perform all work and furnish all supplies and materials, tools, machinery, equipment, transportation, supervision, temporary construction of any nature, and all other services, means and facilities except as herein otherwise expressly specified, necessary or proper to perform and complete all work required by this Contract, within the time herein specified, in accordance with the provisions of this Contract and in accordance with the Drawings and Specifications and in accordance with the direction of the Engineer as given from time to time during the progress of the work. He shall furnish, erect, maintain and remove such construction plant and such temporary works as may be required.

3.6.2. The Contractor shall observe, comply with, and be subject to all terms, conditions, requirements, and limitations of the Contract and Specifications, and shall do, carry on, and complete the entire work to the satisfaction of the Engineer and the Owner.

3.6.3. The Contractor shall check all dimensions, elevations, quantities and instructions shown on the Drawings or given in the Specifications and shall notify the Engineer should any discrepancy of any kind be found in the Drawings, Specifications or conditions at the site. He will not be allowed to take advantage of any discrepancy, error or omission in the Contract Documents. If any discrepancy is discovered, the Engineer will issue full instructions pertaining thereto and the Contractor shall carry out these instructions as if originally specified.

3.7. CLAIMS FOR ADDITIONAL COST: If the Contractor wishes to make a claim for an increase in the Contract Sum, he shall give written notice thereof within ten days after the occurrence of the event giving rise to such claim. This notice shall be given by the Contractor before proceeding to execute the Work, except in an emergency endangering life or property, in which case the Contractor shall proceed in accordance with Subsection 3.27 entitled PROTECTION OF WORK, PROPERTY AND PERSONS IN AN EMERGENCY. No such claim shall be valid unless so made. If the Owner and the Contractor cannot agree on the amount of the adjustment in the Contract Sum, it shall be determined by the Engineer. Any change in the Contract Sum resulting from such claim shall be authorized by Change Order.

3.8. CLAIMS FOR DAMAGE:

3.8.1. If the Contractor makes claim for any damages alleged to have been sustained by breach of contract or otherwise, he shall, within 10 days after occurrence of the alleged breach or within

10 days after such damages are alleged to have been sustained, whichever date is the earlier, file with the Engineer a written, itemized statement in triplicate of the details of the alleged breach and the details and amount of the alleged damages. The Contractor agrees that unless such statement is made and filed as so required, his claim for damages shall be deemed waived, invalid and unenforceable, and that he shall not be entitled to any compensation for any such alleged damages. Within 10 days after the timely filing of such statement, the Engineer shall file with the Owner one copy of the statement together with his recommendations for action by the Owner.

3.8.2. The Contractor shall not be entitled to claim any additional compensation for damages by reason of any direction, instruction, determination or decision of the Engineer, nor shall any such claims be considered, unless the Contractor shall have complied in all respects with the last paragraph of Subsection 2.a entitled ENGINEER'S AUTHORITY, including, but not limited to, the filing of written protest in the manner and within the time therein provided.

3.9. CUTTING AND PATCHING:

3.9.1. The Contractor shall leave all chases or openings for the installation of his own or any other contractor's subcontractor's work, or shall cut the same in existing work, and shall see that all sleeves or forms are at the work and properly set in ample time to prevent delays. He shall see that all such chases, openings, and sleeves are located accurately and are of proper size and shape and shall consult with the Engineer and the contractors and subcontractors concerned in reference to this work.

3.9.2. In case of his failure to leave or cut all such openings or have all such sleeves provided and set in proper time, he shall cut them or set them afterwards at his own expense, but in so doing he shall confine the cutting to the smallest extent possible consistent with the work to be done. In no case shall piers or structural members be cut without the written consent and approval of the Engineer.

3.9.3. The Contractor shall carefully fit around, close up, repair, patch, and point around the work specified herein to the satisfaction of the Engineer.

3.9.4. All of this work shall be done by careful workmen competent to do such work and with the proper small hand tools. Power tools shall not be used except where, in the opinion of the Engineer, the type of tool proposed can be used without damage to any work or structure and without inconvenience or interference with the operation of any facility. The Engineer's approval of the type of tool shall not in any way relieve or diminish the responsibility of the Contractor for such damage, inconvenience or interference resulting from the use of such tools.

3.9.5. The Contractor shall not cut or alter the work of any subcontractor or any other contractor, nor permit any of his subcontractors to cut or alter the work of any other contractor or subcontractor except with the written consent of the contractor or subcontractor whose work is to be cut or altered or with the written consent of the Engineer. All cutting and patching or repairing made necessary by the negligence, carelessness, or incompetence of the Contractor or any of his subcontractors shall be done by or at the expense of the Contractor and shall be the responsibility of the Contractor.

3.10. CLEANING UP:

3.10.1. The Contractor at all times shall keep the site of the work free from rubbish and debris caused by his operation under the Contract. When the work has been completed, the Contractor shall remove from the site of the work all of his plant, machinery, tools, construction equipment, temporary work and surplus materials so as to leave the work and the site clean and ready for use.

3.10.2. All public streets adjacent to the site and all private ways at the site shall be kept clean of debris, spilled materials, and wet and dry earth at all times and shall be cleaned at the end of each working day. When wet earth is encountered, it shall be cleaned from the vehicles before they leave the site and enter streets and private ways.

3.11. NON-COMPLIANCE WITH CONTRACT REQUIREMENTS: In the event the Contractor, after receiving written notice from the Owner of non-compliance with any requirement of this Contract, fails to initiate promptly such action as may be appropriate to comply with the specified requirement within a reasonable period of time, the Owner shall have the right to order the Contractor to stop any or all work under the Contract until the Contractor has complied or has initiated such action as may be appropriate to comply within a reasonable period of time. The Contractor will not be entitled to any extension of contract time or payment for any costs incurred as a result of being ordered to stop work for such cause.

3.12. OVERALL PROJECT COORDINATION: The Contractor shall coordinate all Work of his Contract to produce the required finished Project in accordance with the Contract Documents. Special attention shall be given to the submission of shop drawings, samples, color charts, and requests for substitution within the specified time; furnishing the proper shop drawings to Subcontractors and material suppliers, whose work and equipment is affected by and related thereto; and the furnishing of all information concerning location, type, and size of built-in equipment and materials and equipment utilities. This coordination is in addition to all other coordination requirements called for in the technical sections of the Specifications.

3.13. COMMUNICATIONS: The Contractor shall forward all communications to the Owner through the Engineer.

3.14. NO DISCRIMINATION IN EMPLOYMENT: In connection with the performance of work under this Contract, the Contractor agrees not to discriminate against any employee or applicant for employment because of race, religion, color, or national origin. The aforesaid provision shall include, but not be limited to, the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship.

3.15. DRAWINGS AND SPECIFICATIONS AT THE SITE: The Contractor shall maintain at the site one complete set of all Drawings, Specifications, Addenda, approved Shop Drawings, Change Orders and other Modifications, in good and readable condition and marked to record all changes made during construction. These shall be available to the Engineer. The Drawings, marked to record all changes made during construction, shall be delivered to the Engineer for the Owner upon completion of the work.

3.16. EMPLOY COMPETENT PERSONS: The Contractor shall endeavor to employ only competent persons on the Work. Whenever the Engineer notifies the Contractor in writing that in his opinion any person on the Work is incompetent, unfaithful, disorderly, or otherwise unsatisfactory, or not employed in accordance with the provisions of the Contract, such person shall be discharged from the Work and shall not again be employed on it, except with the written consent of the Engineer. Provided, however, that the failure of the Owner or Engineer to object to an employee is not to be considered acknowledgment or approval of the employee's competence by the Engineer or Owner.

3.17. EMPLOY SUFFICIENT LABOR AND EQUIPMENT: If, in the judgement of the Engineer, the Contractor is not employing sufficient labor, plant, equipment or other means to complete the work within the time specified, the Engineer may, after giving written notice, require the Contractor to employ such additional labor, plant, equipment and other means as the Engineer may deem necessary to enable the work to progress properly.

3.18. EXISTING STRUCTURES: Where the dimensions and locations of existing structures are of importance in the installation or connection of any part of the Work, the Contractor shall verify such dimensions and locations in the field before the fabrication of any material or equipment which is dependent on the correctness of such information.

3.19. INDEMNIFICATION:

3.19.1. The Contractor will indemnify and hold harmless the Owner and the Engineer and their agents and employees from and against all claims, damages, losses and expenses, including attorneys' fees, arising out of or resulting from the performance of the Work, provided that any such claim, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property including the loss of use resulting therefrom; and is caused in whole or in part by any negligent or willful act or omission of the Contractor, any Subcontractor, anyone directly or indirectly employed by any of them, or anyone for whose acts any of them may be liable.

3.19.2. In any and all claims against the Owner or the Engineer, or any of their agents or employees, by any employee of the Contractor, any Subcontractor, 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 by an limitation on the amount or type of damages, compensation or benefits payable by or for the Contractor or any Subcontractor under workmen's compensation acts, disability benefit acts or other employee benefits acts.

3.20. INTOXICATING LIQUORS: The Contractor shall not sell and shall neither permit nor suffer the introduction or use of intoxicating liquors upon or about the work.

3.21. LEGAL ADDRESS OF CONTRACTOR: The Contractor's business address and his office at or near the site of the work are both hereby designated as places to which communications may be delivered. The depositing of any letter, notice, or other communication in a postpaid wrapper directed to the Contractor's business address in a post office box regularly maintained by the U. S. Postal Service or the delivery at either designated address of any letter, notice, or other communication by mail or otherwise shall be deemed sufficient service thereof upon the Contractor, and the date of such service shall be the date of receipt. The first-named

address may be changed at any time by an instrument in writing, executed and acknowledged by the Contractor and delivered to the Engineer. Service of any notice, letter or other communication upon the Contractor personally shall likewise be deemed sufficient service.

3.22. MUTUAL RESPONSIBILITY OF CONTRACTORS:

3.22.1. The Contractor shall afford other contractors reasonable opportunity for the introduction and storage of their materials and equipment and the execution of their work, and shall properly connect and coordinate his Work with theirs.

3.22.2. If any part of the Contractor's Work depends for proper execution or results upon the work of any other separate contractor, the Contractor shall inspect and promptly report to the Owner any apparent discrepancies or defects in such work that render it unsuitable for such proper execution and results. Failure of the Contractor so to inspect and report shall constitute an acceptance of the other contractor's work as fit and proper to receive his Work, except as to defects which may develop in the other separate contractor's work after the execution of the Contractor's Work. To ensure proper execution of the subsequent work, the Contractor shall measure work already in place and shall at once report to the Owner any discrepancy between the executed work and the Contract Documents.

3.22.3. Should the Contractor cause damage to any separate contractor on the work, the Contractor agrees, upon due notice, to settle with such contractor by agreement or arbitration, if he will so settle. If such separate contractor sues the Owner on account of any damage alleged to have been so sustained, the Owner shall notify the Contractor, who shall defend such proceedings at the Contractor's expense, and if any judgement against the Owner arises therefrom, the Contractor shall pay or satisfy it and pay all costs incurred by the Owner.

3.23. NIGHT AND SUNDAY WORK:

3.23.1. No work shall be done at night or on Sunday except:
3.23.1.a. Usual protective work, such as pumping and the tending of lights and fires;
3.23.1.b. Work done in case of emergency threatening injury to persons or property;
3.23.1.c. When provided for under Supplemental Conditions as herein specified;
3.23.1.d. If all of the conditions set forth in the next paragraph below are met.

3.23.2. No work other than that included in (3.23.1.a), (3.23.1.b), and (3.23.1.c) above, shall be done at night except when:

3.23.2.a. In the judgment of the Engineer, the work will be of advantage to the Owner and can be performed satisfactorily at night;
3.23.2.b. The work will be done by a crew organized for regular and continuous night work;
3.23.2.c. The Engineer has given written permission for such night work.

3.23.3. Any work necessary to be performed after regular hours, on Sundays, or Legal Holidays, shall be performed without additional expense to the Owner.

3.24. OCCUPYING PRIVATE LAND: The Contractor shall not (except after written consent from the proper parties) enter or occupy with men, tools, materials, or equipment, any land

outside the rights-of-way or property of the Owner. A copy of the written consent shall be given to the Engineer prior to occupation of private land.

3.25. PERMITS AND RESPONSIBILITIES: The Contractor shall, without additional expense to the Owner, be responsible for obtaining any necessary licenses and permits, and for complying with any applicable Federal, State and municipal laws, codes, and regulations, in connection with the prosecution of the work. He shall be similarly responsible for all damages to persons or property that occurs as a result of his fault or negligence. He shall also be responsible for all materials delivered and work performed until completion and acceptance of the entire construction work, except for any completed unit of construction thereof which theretofore may have been accepted.

3.26. PRECAUTIONS DURING ADVERSE WEATHER:

3.26.1. During adverse weather and against the possibility thereof, the Contractor shall take all necessary precautions so that the Work may be properly done and satisfactory in all respects. When required, protection shall be provided by use of tarpaulins, wood and building-paper shelters, or other approved means.

3.26.2. During cold weather, materials shall be preheated, if required, and the materials and adjacent structure into which they are to be incorporated shall be made and kept sufficiently warm so that a proper bond will take place and a proper curing, aging, or drying will result. Protected spaces shall be artificially heated by approved means which will result in a moist or a dry atmosphere according to the particular requirements of the work being protected. Ingredients for concrete and mortar shall be sufficiently heated so that the mixture will warm throughout when used.

3.26.3. The Engineer may suspend construction operations at any time when, in his judgement, the conditions are unsuitable or the proper precautions are not being taken, whatever the weather may be, in any season. The Contractor agrees that he shall not have or assert any claim for or be entitled to any additional compensation or damages on account of any such suspension.

3.27. PROTECTION OF WORK, PROPERTY AND PERSONS:

3.27.1. The Contractor will be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. He will take all necessary precautions for the safety of, and will provide the necessary protection to prevent damage, injury or loss to all employees on the Work and other persons who may be affected thereby, all the Work and all materials or equipment to be incorporated therein, whether in storage on or off the site, and other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction.

3.27.2. The Contractor will comply with all applicable laws, ordinances, rules, regulations and orders of any public body having jurisdiction. He will erect and maintain as required by the conditions and progress of the Work, all necessary safeguards for safety and protection. He will notify owners of adjacent utilities when prosecution of the Work may affect them. The Contractor will remedy all damage, injury or loss to any property caused, directly or indirectly,

in whole or in part, by the Contractor, any subcontractor, or anyone directly or indirectly employed by any of them or anyone for whose acts any of them be liable, except damage or loss attributable to the fault of the Contract Documents or to the acts or omissions of the Owner or the Engineer or anyone employed by either of them or anyone for whose acts either of them may be liable and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of the Contractor.

3.28. PROTECTION OF WORK, PROPERTY AND PERSONS IN AN EMERGENCY: In emergencies affecting the safety of persons or the Work or property at the site or adjacent thereto, the Contractor, without special instruction or authorization from the Engineer or Owner, shall act to prevent threatened damage, injury or loss. He will give the Engineer prompt Written Notice of any significant changes in the Work or deviations from the Contract Documents caused thereby, and a Change Order shall thereupon be issued covering the changes and deviations involved.

3.29. PROTECTION AGAINST WATER AND STORM: The Contractor shall take all precautions necessary to prevent damage to the Work by storms or by water entering the site of the Work directly or through the ground. In case of damage by storm or water, the Contractor shall at his own cost and expense make such repairs or replacements or rebuild such parts of the Work as the Engineer may require in order that the finished work may be completed as required by the Contractor.

3.30. PROTECTION OF EXISTING VEGETATION, STRUCTURES, UTILITIES AND IMPROVEMENTS:

3.30.1. The Contractor will preserve and protect all existing vegetation such as trees, shrubs, and grass on or adjacent to the site of the work which is not to be removed and which does not reasonably interfere with the construction work. Care shall be taken in removing trees authorized for removal to avoid damage to vegetation to remain in place. Any limbs or branches of trees broken during such operations or by the careless operation of equipment or by workmen, shall be trimmed with a clean cut and painted with an approved tree pruning compound as approved by the Engineer.

3.30.2. The Contractor will protect from damage all existing improvements or utilities at or near the site of the work, the location of which is made known to him, and will repair or restore any damage to such facilities resulting from failure to comply with the requirements of this Contract or the failure to exercise reasonable care in the performance of the Work. If the Contractor fails or refuses to repair any such damage promptly, the Owner may have the necessary work performed and charge the cost thereof to the Contractor.

3.30.3. The Contractor shall enclose the trunks of trees adjacent to his work and not to be cut, with substantial wooden boxes of such height as may be necessary to protect them from injury from piled material, from equipment, from his operation, or otherwise due to his work. Excavating machinery and cranes shall be of suitable type and shall be operated with care to prevent injury to trees not to be cut and particularly to overhanging branches and limbs.

3.30.4. On paved surfaces, the Contractor shall not use or operate tractors, bulldozers or other power-operated equipment, the treads or wheels of which are so shaped as to cut or otherwise injure such surfaces.

3.31. RESTORATION OF PROPERTY: All existing surfaces, including lawns, grassed and planted areas which have been injured by the Contractor's operations, shall be restored to a condition at least equal to that in which they were found immediately before work was begun. Suitable materials and methods shall be used for such restoration. All restored plantings shall be maintained by cutting, trimming, fertilizing, etc., until acceptance. The restoration of existing property or structures shall be done as promptly as practicable and shall not be left until the end of construction period.

3.32. INTERFERENCE WITH AND PROTECTION OF STREETS:

3.32.1. The Contractor shall not close or obstruct any portion of a street, road, or private way without obtaining permits therefor from the proper authorities. If any street, road or private way shall be rendered unsafe by the Contractor's operations, he shall make such repairs or provide such temporary ways or guards as shall be acceptable to the proper authorities.

3.32.2. Streets, roads, private ways, and walks not closed shall be maintained passable and safe by the Contractor, who shall assume and have full responsibility for the adequacy and safety of provisions made therefor.

3.32.3. The Contractor shall, at least 24 hours in advance, notify the highway, police and fire departments in writing, with a copy to the Engineer, if the closure of a street or road is necessary. He shall cooperate with the police department in the establishment of alternate routes and shall provide adequate detour signs, plainly marked and well lighted, in order to minimize confusion.

3.33. TRAFFIC CONTROL: Where control of traffic is required for public safety, the Contractor shall provide an adequate number of flagmen employed at his own expense.

3.34. CONSTRUCTION DRAINAGE:

3.34.1. The Contractor shall furnish all labor, materials and necessary equipment for the temporary control of surface water and seepage water during construction and keep all excavations, pits and trenches free from water at all times.

3.34.2. The Contractor shall furnish and operate pumps and other equipment required. Dikes and ditches shall be constructed around excavations and elsewhere as necessary to prevent surface water from flooding the excavations or standing in areas adjacent to excavations, in work areas or in material storage areas. The Contractor shall take all necessary precautions to protect adjacent areas and properties at points other than that which would be considered the natural flow, prior to construction, without the expressed consent of the Owner in writing with a copy to the Engineer. He shall take steps to prevent the erosion of soil, earth and other material and the conduction of the eroded materials onto adjacent properties and shall be responsible for the removal of such materials and the restoration of adjacent areas to their original condition.

3.35. RETURN OF DRAWINGS: All copies of Drawings, Specifications and other Documents furnished by the Owner or the Engineer to the Contractor may be used only in connection with the prosecution of the Work and shall be returned by the Contractor upon completion of the Work.

3.36. SITE INVESTIGATION: The Contractor acknowledges that he has investigated and satisfied himself as to the conditions affecting the Work, including but not restricted to those bearing upon transportation, disposal, handling and storage of materials, availability of labor, water, electric power, roads and uncertainties of weather, river stages, water table, tides or similar physical conditions at the site, the confirmation and conditions of the ground, the character of equipment and facilities needed preliminary to and during prosecution of the Work. The Contractor further acknowledges that he has satisfied himself as to character, quality and quantity of surface and subsurface materials or obstacles to be encountered insofar as this information is reasonably ascertainable from an inspection of the site, including all exploratory work done by the Owner, as well as from information presented by the Drawings and Specifications made a part of this Contract. Any failure by the Contractor to acquaint himself with the available information will not relieve him from responsibility for estimating properly the difficulty or cost of successfully performing the work. The Owner assumes no responsibility for any conclusions or interpretations made by the Contractor on the basis of the information made available by the Owner.

3.37. SOIL EROSION AND SEDIMENT CONTROL: The Contractors attention is directed to the fact that unless exposed earth areas are properly cared for during construction, they may result in substantial sedimentation damage downstream from the construction area. The Contractor shall be responsible for conducting his site grading and drainage operations in such manner as to prevent excessive soil erosion of the construction site work areas. He shall at all times provide satisfactory means to prevent the movement and washing of soil onto pavements or into adjacent ditches, swales, inlets, and drainage pipes, to avoid the possibility of these structures becoming clogged with soil. He shall promptly repair all areas which may become eroded and shall clear drainage ditches, swales, and structures of siltation. The Contractor will indemnify and save harmless the Owner and Engineer from and against any and all claims, demands, fines, or assessments, including attorneys' fees and cost of defense arising out of or caused by the Contractor's failure to provide soil erosion and sediment control.

3.38. SUBSURFACE CONDITIONS: The Contractor shall promptly, and before such conditions are disturbed, except in the event of an emergency, notify the Owner by Written Notice of:

3.38.1.a. Subsurface or latent physical conditions of the site differing materially from those indicated in the Contract Documents.

3.38.1.b. Unknown physical conditions at the site, of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents.

3.38.2. The Owner shall promptly investigate the conditions, and if he finds that such conditions do so materially differ and cause an increase or decrease in the cost of, or in the time required for, performance of the Work, an equitable adjustment shall be made and the Contract

Documents shall be modified by Change Order. Any claim of the Contractor for adjustment hereunder shall not be allowed unless he has given the required Written Notice; provided that the Owner may, if he determines the facts so justify, consider and adjust any such claims asserted before the date of final payment.

3.39. SUBCONTRACTING:

3.39.1. The Contractor may utilize the services of specialty Subcontractors on those parts of the Work which, under normal contracting practices, are performed by specialty Subcontractors. The Contractor shall, without additional expense to the Owner, utilize the services of specialty subcontractors on those parts of the work which are specified to be performed by specialty subcontractors.

3.39.2. The Contractor shall not award any work to any subcontractor without prior written approval of the Owner, which approval will not be given until the Contractor submits to the Owner a written statement concerning the proposed award to the subcontractor, which statement shall contain such information as the Owner may require. No request for payment will be approved before this list has been received and reviewed by the Owner.

3.39.3. The Contractor shall not award Work to Subcontractor(s), in excess of 50 percent of the Contract Price, without prior written approval of the Owner.

3.39.4. The Contractor shall be fully responsible to the Owner for the acts and omissions of his Subcontractors, and of persons either directly or indirectly employed by them, as he is for the acts or omissions of persons directly employed by him.

3.39.5. The Contractor shall cause appropriate provisions to be inserted in all subcontracts relative to the Work to bind Subcontractors to the Contractor by the terms of the Contract Documents insofar as applicable to the Work of Subcontractors and to give the Contractor the same power as regards terminating any subcontract that the Owner may exercise over the Contractor under any provisions of the Contract Documents.

3.39.6. If any other contractor or any subcontractor of any such other contractor shall suffer or claim to have suffered loss, damage or delay by reason of the acts or omissions of the Contractor or of any of his subcontractors, the Contractor agrees to assume the defense against any such claim and to reimburse such other contractor or subcontractor for such loss or damage. The Contractor agrees to and does hereby indemnify and save harmless the Owner from and against any and all claims by such other contractors or subcontractors alleging such loss, damage or delay and from and against any and all claims, demands, costs and expenses, including attorneys' fees, arising out of, relating to or resulting from such claims.

3.39.7. The Contractor shall be responsible for the coordination of the trades, subcontractors, and material men engaged upon his work. The Owner or Engineer will not undertake to settle any differences between the Contractor and his subcontractors or between subcontractors. If any Subcontractor on the project, in the opinion of the Engineer, proves to be incompetent or otherwise unsatisfactory, he shall be replaced if and when directed in writing.

3.40. SUPERVISION:

3.40.1. The Contractor shall keep on his work, during its progress, a competent superintendent and any necessary assistants, all satisfactory to the Owner. The superintendent shall not be changed except with the consent of the Owner, unless the superintendent proves to be unsatisfactory to the Contractor and ceases to be in his employ. The superintendent shall represent the Contractor in his absence and all directions given to him shall be as binding as if given to the Contractor. Important directions shall be confirmed in writing to the Contractor. Other directions shall be so confirmed on written request in each case. The Owner shall not be responsible for the acts or omissions of the superintendent or his assistants.

3.40.2. The Contractor shall give efficient supervision to the Work, using his best skill and attention. He shall carefully study and compare all Drawings, Specifications and other instructions and shall at once report to the Owner any error, inconsistency or omission which he may discover.

3.41. TAXES: The Contractor shall promptly pay federal, state and local taxes which may be assessed against him in connection with the work or his operations under the Agreement and/or the other Contract Documents, including, but not limited to, taxes attributable to the purchase of materials and equipment, to the performance of services, and the employment of persons in the prosecution of the work.

3.42. TEMPORARY HEAT:

3.42.1. The Contractor shall provide temporary heat whenever necessary to protect all Work and materials against injury from dampness and cold and to dry out moisture from the building. Fuel, equipment and method of heating shall be satisfactory to the Owner's Insurer and the Engineer.

3.42.2. Temporary heating apparatus shall be installed and operated in such a manner that finished work will not be damaged thereby.

3.43. SANITARY FACILITIES: The Contractor shall provide adequate sanitary facilities for the use of those employed on the Work. Such facilities shall be made available when the first employees arrive on the site of the Work, shall be properly secluded from public observations, and shall be constructed and maintained during the progress of the Work in suitable numbers and at such points and in such manner as may be required or approved. The Contractor shall maintain the sanitary facilities in a satisfactory and sanitary condition at all times and shall enforce their use. He shall rigorously prohibit the committing of nuisances on the site of the work, on the lands of the Owner, or on adjacent property. The Owner and the Engineer shall have the right to inspect such facilities at all times to determine whether or not they are being properly and adequately maintained.

3.44. TEMPORARY UTILITIES:

3.44.1. The Contractor shall make arrangements for and furnish as a part of the Contract, all electricity, water, lighting and other utilities needed to do the Work called for by the Contract. Any separate contractors having a contract with the Owner shall make arrangements for and

share the cost with the Contractor for the use of the required utilities on a pro rated schedule based on an agreed basis. All Electrical Work shall comply with the National Electrical Code.

3.44.2. The Contractor shall provide and pay for all temporary wiring, switches, connections and meters.

3.44.3. The Contractor shall provide sufficient electric lighting so that all work may be done in a workmanlike manner when there is not sufficient daylight.

3.45. UNCOVERING AND CORRECTION OF WORK:

3.45.1. The Engineer shall be furnished by the Contractor with every reasonable facility for examining and inspecting the work and for ascertaining that the work is being performed in accordance with the requirements and intent of the Contract, even to the extent of requiring the uncovering or taking down of portions of finished work by the Contractor.

3.45.2. Should the work thus uncovered or taken down prove satisfactory, the cost of uncovering or taking down and the replacement thereof shall be considered as extra work unless the original work was done in violation of the Contract in point of time or in the absence of the Engineer or his inspector and without his written authorization, in which case said cost shall be borne by the Contractor. Should the work uncovered or taken down prove unsatisfactory, said cost shall likewise be borne by the Contractor.

3.45.3. The inspection of the work shall not relieve the Contractor of any of his obligations to perform and complete the work as required by the Contract. Defective work shall be corrected and unsuitable materials, equipment, apparatus and other items shall be replaced by the Contractor, notwithstanding that such work, materials, equipment, apparatus and other items may have been previously overlooked or accepted or estimated for payment. If the work or any part thereof shall be found defective at any time before the final acceptance of the work, the Contractor shall forthwith make good such defect in a manner satisfactory to the Engineer; if any materials, equipment, apparatus or other items brought upon the site for use or incorporation in the work, or selected from the same, are condemned by the Engineer as unsuitable or not in conformity with the Specifications or any of the other Contract Documents, the Contractor shall forthwith remove such materials, equipment, apparatus and other items from the site of the work and shall at his own cost and expense make good and replace the same and any material furnished by the Owner which shall be damaged or rendered defective by the handling or improper installation by the Contractor, his agents, servants, employees or subcontractors.

3.45.4. If the Owner deems it inexpedient to correct work injured or done not in accordance with the Contract, an equitable deduction from the Contract Price shall be made therefor.

3.46. COOPERATION WITH UTILITIES:

3.46.1. The Owner will notify all utility companies, all pipe line owners, or other parties affected, and endeavor to have all necessary adjustments of the public or private utility fixtures, pipe lines, and other appurtenances within or adjacent to the limits of construction, made as soon as practicable.

3.46.2. Water lines, gas lines, wire lines, sewer lines, water and gas meter boxes, water and gas valve boxes, manholes, light standards, cableways, signals, and all other utility appurtenances within the limits of the proposed construction which are to be relocated or adjusted are to be moved by the Owners under separate agreement, except as otherwise provided for in the Supplemental Conditions or as noted on the Drawings.

3.46.3. The Drawings will show all known utilities located within the limits of the contract according to information obtained. The accuracy of the Drawings in this respect is not guaranteed by the Owner. The Contractor shall have considered in his bid all of the permanent and temporary utility appurtenances in their present or relocated position. No additional compensation will be allowed for any delays, inconveniences, or damages sustained by him due to any interference from the said utility appurtenances or the operation of moving them.

3.46.4. Unless otherwise provided, the cost of temporary rearrangement of utilities made only in order to facilitate the construction of the work will be borne by the Contractor.

3.47. VERIFICATION OF DIMENSIONS AND ELEVATIONS:

3.47.1. Dimensions and elevations indicated on the Drawings in reference to existing structures, location of utilities, sewer inverts, or other information on existing facilities, are the best available data obtainable but are not guaranteed by the Engineer. The Engineer will not be responsible for their accuracy. Before proceeding with any work dependent upon the data involved, the Contractor shall field check and verify all dimensions, grades, inverts, lines, elevations, or other conditions of limitations at the site of the work to avoid construction errors or damage to existing facilities. If any work is performed by the Contractor, or any subcontractors, prior to adequate verification of applicable data, any resultant extra cost for adjustment of work necessary to conform to existing facilities, shall be assumed by the Contractor without reimbursement or compensation by the Owner.

3.47.2. If the Contractor, in the course of the work, finds any discrepancy between the Drawings and the physical conditions of the locality, or any errors or omissions in the Drawings or in the layout as given by survey points and instructions, he shall immediately inform the Engineer, in writing. The Engineer will promptly investigate the reported conditions and issue such instructions as may be necessary for the proper execution of the work. Any work done after such discovery and prior to receipt of such instructions shall be at the risk of the Contractor.

4. MATERIALS, EQUIPMENT AND WORKMANSHIP

4.1. CHEMICAL USAGE: All chemicals used during project construction or furnished for project operation, whether herbicide, pesticide, disinfectant, polymer, reactant or of other classification, shall show approval of either EPA or U.S.D.A. The use of all such chemicals and disposal of residues shall be in strict conformance with manufacturer and U.S.D.A. instructions.

4.2. TITLE TO MATERIALS: No materials or supplies for the Work shall be purchased by the Contractor or by any subcontractor subject to any chattel mortgage or under a conditional sale contract or other agreement by which an interest is retained by the seller. The Contractor warrants that he has good title to all materials and supplies used by him, in the Work, free from all liens, claims or encumbrances.

4.3. CORRECTION OF WORK BEFORE COMPLETION:

4.3.1. The Contractor shall promptly remove from the premises all work condemned by the Owner as failing to conform to the Contract Documents, whether incorporated or not and the Contractor shall promptly replace and re- execute his own work in accordance with the Contract and without expense to the Owner and shall bear the expense of making good all work of other contractors destroyed or damaged by such removal or replacement. The fact that the Engineer may have previously overlooked such defective work shall not constitute an acceptance of any part of it.

4.3.2. If the Contractor does not remove such condemned work within a reasonable time, fixed by written notice, the Owner may remove it, and after storing it at the job site for 30 days, due written notice thereof being given the Contractor, the Owner may offer the material for sale and removal from the premises. Net proceeds from such sale shall be for the Contractor's credit against the "Owner's Right to Do Work". If the material has no sale value, the Owner may remove it from the premises and/or otherwise dispose of it. The costs of such disposition shall be deducted from payments to the Contractor as provided in Subsection 2.10 entitled OWNER'S RIGHT TO DO WORK.

4.4. CORRECTION OF WORK AFTER COMPLETION: The Contractor shall remedy any defects due to faulty materials or workmanship and pay for any damage to other work resulting therefrom which shall appear within a period of one year from the date of final acceptance of the work except where longer periods are specified and in accordance with the terms of any special guarantees provided in the Contract.

4.5. CORRECTIONS OF WORK AFTER GUARANTEE PERIOD: It shall be the responsibility of the Contractor to permanently correct all defective items called to his attention within the guarantee period, whether such correction be made within the guarantee period or not. The Contract shall not be fully performed until such permanent corrections are made.

4.6. GENERAL GUARANTY:

4.6.1. The Contractor warrants to the Owner that all materials and equipment furnished under this Contract will be new unless otherwise specified, and that all Work will be of good quality, free from faults and defects and in conformance with the Contract Documents. All Work not so conforming to these standards may be considered defective. If required by the Owner, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment.

4.6.2. Neither the final certificate of payment nor any provision in the Contract Documents nor partial or entire occupancy of the premises by the Owner shall constitute an acceptance of work not done in accordance with the Contract Documents or relieve the Contractor of liability in respect to any express warranties or responsibility for faulty materials or workmanship. The Contractor shall remedy any defects in the work and pay for any damage to other work resulting therefrom, which shall appear within a period of one year from the date of final acceptance of the work, except where longer periods are specified. If the Contractor shall fail to repair, replace, rebuild or restore such defective or damaged work or equipment promptly after receiving notice,

the Owner shall have the right to have the work done by others in the same manner as is provided for in Subsection 2.10, OWNER'S RIGHT TO DO WORK.

4.6.3. The Contractor shall further guarantee for a period of 24 months that any building or buildings, constructed under this Project, shall be watertight and leak proof at every point and in every area, except where leaks can be attributed to damage to the building by external forces other than storm or foundation settlement. He shall, immediately upon notification by the Owner of water penetration, determine the source of water penetration and, at his own expense, do any work necessary to make the building watertight. He shall also, at his own expense, repair re replace any other damaged material to return the building or buildings to the original accepted condition.

4.6.4. In addition to the foregoing stipulations, the Contractor shall comply with all other guarantees and warranties referred to in any portions of the Contract Documents, the more stringent requirement governing. Unless otherwise specifically stated elsewhere in these Specifications, the date of beginning of all guarantee or warranty periods shall be the date of acceptance of the project.

4.6.5. If for any reason, the Contractor cannot guarantee any part of his work using material or construction methods which have been specified, or shown, he shall notify the Engineer in writing before Contracts are signed, giving reasons together with the name of product and data on substitutions he can guarantee. Should the Contractor fail to so notify the Engineer prior to the signing of Contracts, he will be held to have agreed to guarantee all Work specified or shown.

4.7. HANDLING AND DISTRIBUTION:

4.7.1. The Contractor shall handle, haul and distribute all materials and all surplus materials on the different portions of the work as necessary or required; shall provide suitable and adequate storage room for materials and equipment during the progress of the work, and be responsible for the protection, loss of, or damage to materials and equipment furnished by him, until the final completion and acceptance of the work.

4.7.2. Storage and demurrage charges by transportation companies and vendors shall be borne by the Contractor.

4.8. MANUFACTURER'S DIRECTIONS:

4.8.1. All manufactured articles, material and equipment shall be applied, installed, connected, erected, used, cleaned and conditioned as directed by the manufacturers, unless herein specified to the contrary.

4.8.2. If the specifications or plans are contrary to the manufacturer's directions, the manufacturer shall be contacted by the Contractor before proceeding with the work and the Engineer advised if the manufacturer has any objections to the specified application.

4.9. MATERIALS, SERVICES AND FACILITIES:

4.9.1. It is understood that, except as otherwise specifically stated in the Contract Documents, the Contractor shall provide and pay for all labor, supplies and materials, tools, machinery, equipment, transportation, supervision, temporary construction of any nature, and all other services, means and facilities of any nature whatsoever necessary to execute, complete, and deliver the Work within the specified time.

4.9.2. Materials and equipment shall be so stored as to insure the preservation of their quality and fitness for the Work. Stored materials and equipment to be incorporated in the Work shall be located so as to facilitate prompt inspection.

4.9.3. Materials, supplies and equipment shall be in accordance with samples submitted by the Contractor and approved by the Engineer.

4.10. MISCELLANEOUS ITEMS:

4.10.1. The work to be done by the Contractor, specified and enumerated under this Contract, shall include any minor details of the Work not specifically mentioned in the Specifications or shown on the Drawings, but obviously necessary for the proper completion of the Work, which shall be considered incidental and as being a part of and included with the Work for which prices are given in the Bid. The Contractor will not be entitled to any additional compensation therefor.

4.10.2. Miscellaneous items and accessories which are not specifically mentioned, but which are essential to produce a complete and properly operating installation or usable structure or plant, providing the indicated function, shall be furnished and installed without change in the contract price. Such miscellaneous items and accessories shall be of the same quality standards, including material, style, finish, strength, class, weight and other applicable characteristics as specified for the major component of which the miscellaneous item or accessory is an essential part, and shall be approved by the Engineer before installation. The above requirement is not intended to include major components not covered by or inferable from the Drawings and Specifications.

4.10.3. MISTAKES OF CONTRACTOR: The Contractor shall promptly correct and make good any and all defects, damages, omissions, or mistakes, for which he and/or his agents, servants, employees or subcontractors are responsible, and he shall pay to the Owner all costs, expenses, losses, and damages resulting therefrom or by reason thereof as determined by the Engineer.

4.11. PROTECTION AGAINST ELECTROLYSIS: Where dissimilar metals are used in conjunction with each other, or against concrete surfaces, suitable insulation shall be provided between adjoining surfaces so as to eliminate direct contact and any resultant electrolysis. The insulation shall be bituminous impregnated felt, heavy bituminous coatings, nonmetallic separators or washers, or other approved materials.

4.12. RIGHT TO MATERIALS: Nothing in the Contract shall be construed as vesting in the Contractor any right of property in the materials, equipment, apparatus and other items furnished after they have been installed or incorporated in or attached or affixed to the work or the site, but all such materials, equipment, apparatus and other items shall, upon being so installed, incorporated, attached or affixed, become the property of the Owner.

4.13. ROYALTIES AND PATENTS: The Contractor shall pay all applicable royalties and license fees. He shall defend all suits or claims for infringement of any patent rights and shall save the Owner harmless from loss on account thereof, except that the Owner shall be responsible for all such loss when a particular process or the product of a particular manufacturer or manufacturers is specified, but if the Contractor has information that the process or article specified is an infringement of a patent, he shall be responsible for such loss unless he promptly gives such information to the Owner in writing.

4.14. SUBMITTAL SCHEDULE:

4.14.1. Within 20 days after execution and delivery of the Contract, the Contractor shall prepare and deliver to the Engineer a Submittal Schedule. This includes a list of all submittals required under the Contract. The list shall identify each major group of shop drawings, coordination drawings and schedules and each sample and the planned submission date for each.

4.14.2. After the Engineer's review of the list of submittals, the Engineer will meet with the Contractor for a joint review and correction and adjustment, as necessary, for agreement on the submittal. In addition, at the meeting the duration of the review period for each submittal will be established. The Contractor's planned submission date for each submittal shall allow no less than 15 working days for review and appropriate action before approval of the submittal becomes critical to the progress of the Contractor's work. Within five calendar days after the joint review, the Contractor shall make any necessary revisions to the list of submittals, including duration of the review periods, in accordance with the agreements reached during the joint review and submit two revised copies to the Engineer. No application for partial payment will be approved until the submitted schedule is approved.

4.15. SHOP DRAWINGS:

4.15.1. Shop Drawings are drawings, diagrams, illustrations, schedules, performance charts, brochures and other data which are prepared by the Contractor or any Subcontractor, manufacturer, supplier or distributor, and which illustrate some portion of the Work. It shall be the Contractor's responsibility to furnish Shop Drawings as required by the technical specifications or as requested by the Engineer. These submittals must be made no later than is required by the submittal schedule.

4.15.2. Shop Drawings shall show the principal dimensions, weight, structural and operating features, space required, clearances, type and/or brand of finish or shop coat, grease fittings, etc., depending on the subject of the drawing. When it is customary to do so, when the dimensions are of particular importance, or when so specified, the drawings shall be certified by the manufacturer or fabricator as correct for the contract.

4.15.3. When so specified or if considered by the Engineer to be acceptable, manufacturer's specifications, catalog data, descriptive manner, illustrations, etc., may be submitted for approval in place of shop and working drawings. In such case the requirements shall be as specified for shop and working drawings, insofar as applicable except that the submission shall be in quadruplicate.

4.15.4. The Contractor shall be responsible for the prompt and timely submittal of all shop and working drawings so that there shall be no delay to the work due to the absence of such drawings.

4.15.5. The Contractor shall check the Shop Drawings, shall coordinate them (by means of coordination drawings wherever required) with the work of all trades involved before submission and shall indicate thereon his approval. Drawings and schedules submitted without evidence of the Contractor's approval may be returned for resubmission.

4.15.6. By approving and submitting Shop Drawings, the Contractor thereby represents that he has determined and verified all field measurements, field construction criteria, materials, catalog numbers and similar data, or will do so, and that he has checked and coordinated each Shop Drawing with the requirements of the Work and of the Contract Documents.

4.15.7. If drawings or schedules show variations from the contract requirements because of standard shop practice or for other reasons, the Contractor shall describe such variations in his letter of transmittal. If acceptable, the Engineer may approve any or all such variations and issue an appropriate change order. If the Contractor fails to describe such variations he shall not be relieved of the responsibility for executing the work in accordance with the Contract, even though such drawings or schedules may have been approved.

4.15.8. Each Shop Drawing or Coordination Drawing shall have a blank area 5 by 5 inches located adjacent to the title block. The title block shall display the following:

(1) Number and Title of Drawing
(2) Date of Drawing
(3) Revision number and date (if applicable)
(4) Project Title
(5) Name of project building or facility
(6) Name of Contractor
(7) Name of Subcontractor (if applicable)
(8) Clear identity of contents and location of work

4.15.9. Prior to submitting drawings to the Engineer, the Contractor shall check thoroughly all such drawings to satisfy himself that the subject matter thereof conforms to the Drawings and Specifications in all respects. All drawings which are correct shall be marked with the date, checker's name, and indication of the Contractor's approval, and then shall be submitted to the Engineer; other drawings shall be returned for correction.

4.15.10. The Contractor shall stamp all drawings which are to be submitted to the Engineer for approval. The rubber stamp shall incorporate the following items:

PROJECT TITLE Sumter Theater Drive Parking Lot ITB# 2-25/26

CONTRACTOR'S NAME _____

APPROVED BY _____ DATE _____

SPECIFICATION SECTION _____TRANSMITTAL NO. _____

4.15.11. The review of Shop Drawings will be general only and shall not relieve or in any respect diminish the responsibility of the Contractor for details of design, dimensions, etc., necessary for proper fitting and construction of the work as required by the Contract and for achieving the result and performance specified thereunder.

4.15.12. Should the Contractor submit for approval equipment that requires modifications to the structures, piping, layout, etc., detailed on the Drawings, he shall also submit for approval details of the proposed modifications. If such equipment and modifications are approved, the Contractor, at no additional cost to the Owner, shall do all work necessary to make such modifications. Required structural changes shall be designed and detailed by an Engineer registered in the state in which the project will be constructed. Drawings shall be signed and show registration numbers or may have seal affixed.

4.15.13. Submission of Shop Drawings shall be accompanied by a copy of a transmittal letter containing Project name, Contractor's name, number of drawings, titles, specifications section, and other pertinent data. The submittal shall include four (4) legible copies of Shop Drawings or printed matter

4.15.14. The review of Shop Drawings will be performed by the Engineer as follows:

4.15.14.a.When the submittal conforms fully with the Contract Drawings and Specifications, the Engineer will approve it. The reproducible of each drawing or page of approved submittals will be stamped approved, signed, dated and returned to the Contractor. No changes shall be made to approved drawings by the Contractor. If the Contractor desires to make any change from approved drawings, or pages of approved submittals, he shall notify the Engineer in writing that the approved material has been withdrawn and shall submit the substitution set in accordance with the above procedure.

4.15.14.b.When the submittal clearly does not conform with the Contract Drawings and Specifications, the Engineer will disapprove it by stamping it "Rejected". Rejected submittals shall be corrected and resubmitted within 14 calendar days from the date of rejection. Submittals that are rejected shall not be released for any work.

4.15.14.c.When the submittal has only minor deviations from the Contract Drawings and Specifications, the Engineer will note the deviations and omissions as may be appropriate and approve the submittal subject to the notations by stamping it "Approved as Noted". Approved as Noted submittals may be released for fabrication of work at the Contractor's risk; in any event the submittal shall be corrected and resubmitted for approval within 14 calendar days from the date of approval as noted.

4.15.15. The Contractor shall be responsible for delays resulting from the rejection or approval as noted of incomplete, inadequate, incorrect or otherwise unacceptable submittals.

4.15.16. The Contractor shall assure that only drawings and pages of printed material bearing the Engineer's "Approved" stamp are allowed on the job site.

4.15.17. The Contractor shall submit, at the completion of the Project, one set of all reviewed and correct shop drawings, catalog cuts, and descriptive literature for all Work previously submitted. These sets shall be sent to the Engineer for the Owner before final Certificate of Payment is issued.

4.16. OPERATING AND MAINTENANCE MANUALS: One copy of each required Operating and Maintenance Manual must be submitted to the Engineer with the first submittal of shop drawings. Five additional copies of each required Operating and Maintenance Manual must be submitted to the Engineer within 14 days of the return of approved shop drawings to the Contractor. No payment will be approved on any equipment for received by the Engineer. These O&M manuals must be addressed specifically to the piece of equipment supplied and shall not be general in nature; each item must be clearly identified and located. Each page must be printed on 8-1/2" x 11" paper or folded to that size in a manner suitable for insertion in a 3-ring binder.

4.17. SAMPLES:

4.17.1. Samples are physical examples furnished by the Contractor to illustrate materials, equipment or workmanship, and to establish standards by which the Work will be judged. It shall be the Contractor's responsibility to furnish samples as required by the technical specifications or as required by the Engineer. These samples must be submitted no later than is required by the Submittal Schedule.

4.17.2. Each sample shall have a label indicating:
(1) Project Title
(2) Name of project building or facility
(3) Name of Contractor
(4) Name of Subcontractor (if applicable)
(5) Identification of material with specification section
(6) Name of producer and brand (if any)

4.17.3. Samples shall be submitted in duplicate unless otherwise noted in the technical specifications and shall be accompanied by a copy of a transmittal letter containing Project Name, Contractor's Name, number of samples, specification section and other pertinent data.

4.17.4. If the Engineer so requires, either prior to or after commencement of the work, the Contractor shall submit samples of materials for such special tests as the Engineer deems necessary to demonstrate that they conform to the Specifications. Such samples shall be furnished, taken, stored, packed and shipped by the Contractor as directed. Except as otherwise expressly specified, the Contractor shall make arrangements for, and pay for, the tests.

4.17.5. All samples shall be packed so as to reach their destination in good condition. To insure consideration of samples, the Contractor shall notify the Engineer by letter that the samples have been shipped and shall properly describe the samples in the letter. The letter of notification shall be sent separate from and should not be enclosed with the samples.

4.17.6. The Contractor shall submit data and samples, or place his orders, sufficiently early to provide ample time for consideration, inspection, testing, and approval before the materials and

equipment are needed for incorporation in the work. The consequences of his failure to do so shall be the Contractor's sole responsibility.

4.17.7. In order to demonstrate the proficiency of workmen, or to facilitate the choice among several textures, types, finishes, surfaces, etc., the Contractor shall provide such samples of workmanship of wall, floor, finish, etc., as may be required.

4.17.8. When required, the Contractor shall furnish to the Engineer triplicate sworn copies of manufacturer's shop or mill tests (or reports from independent testing laboratories) relative to materials, equipment performance ratings, and concrete data.

4.18. STORAGE OF MATERIALS AND EQUIPMENT: All excavated materials, construction equipment, and materials and equipment to be incorporated in the Work shall be placed so as not to injure any part of the Work or existing facilities and so that free access can be had at all times to all parts of the Work and to all public utility installations in the vicinity of the Work. Materials and equipment shall be kept neatly piled and compactly stored in such locations as will cause a minimum of inconvenience to public travel and adjoining owners, tenants and occupants.

4.19. INSPECTION AND TESTING:

4.19.1. All materials and equipment used in the construction of the Project shall be subject to adequate inspection and testing in accordance with generally accepted standards, as required and defined in the Contract Documents.

4.19.2. The General Contractor shall provide all inspection and testing services not required by the Contract Documents.

4.19.3. The Contractor shall provide at his expense the testing and inspection services required by the SCDOT and the Contract Documents.

4.19.4. If the Contract Documents, laws, ordinance, rules, regulations or orders of any public authority having jurisdiction require any Work to specifically be inspected, tested, or approved by someone other than the Contractor, the Contractor will give the Engineer timely notice of readiness. The Contractor will then furnish the Engineer the required certificates of inspection, testing or approval.

4.19.5. Inspections, tests, or approvals by the Engineer or others shall not relieve the Contractor from his obligations to perform the Work in accordance with the requirements of the Contract Documents.

4.19.6. The Engineer and his representatives will at all times have access to the Work. In addition, authorized representatives and agents of any participating Federal or State agency shall be permitted to inspect all work, materials, payrolls, records of personnel, invoices of materials, an other relevant data and records. The Contractor will provide proper facilities for such access and observation of the Work and also for any inspection or testing thereof.

4.19.7. If any Work is covered contrary to the written instructions of the Engineer it must, if requested by the Engineer, be uncovered for his observation and replaced at the Contractor's expense.

4.19.8. If the Engineer considers it necessary or advisable that covered Work be inspected or tested by others, the Contractor, at the Engineer's request, will uncover, expose or otherwise make available for observation, inspection or testing as the Engineer may require, that portion of the Work in question, furnishing all necessary labor, materials, tools, and equipment. If it is found that such Work is defective, the Contractor will bear all the expenses of such uncovering, exposure, observation, inspection and testing and of satisfactory reconstruction. If, however, such Work is not found to be defective, the Contractor will be allowed an increase in the Contract Price or an extension of the Contract Time, or both, directly attributable to such uncovering, exposure, observation, inspection, testing and reconstruction and an appropriate Change Order shall be issued.

4.20. SUBSTITUTIONS:

4.20.1. The Contractor may recommend the substitution of a material, article, or piece of equipment of equal function for those referred to in the Contract Documents by reference to brand name or catalogue number, and if, in the opinion of the Engineer, such material, article, or piece of equipment is of equal function to that specified, the Engineer may approve its substitution and use by the Contractor. Any cost differential shall be deductible from the Contract Price and the Contract Documents shall be appropriately modified by Change Order.

4.20.2. The Contractor warrants that if substitutes are approved, no major changes in the function or general design of the Project will result. Incidental changes or extra component parts required to accommodate the substitute will be made by the Contractor without a change in the Contract Price or Contract Time.

4.21. "OR EQUAL" CLAUSE:

4.21.1. The phrase "or equal" shall be construed to mean that material or equipment will be acceptable only when in the judgement of the Engineer they are composed of parts of equal quality, or equal workmanship and finish, designed and constructed to perform or accomplish the desired result as efficiently as the indicated brand, pattern, grade, class, make or model.

4.21.2. Whenever a material, article or piece of equipment is identified on the Drawings or in the Specifications by reference to manufacturers' or vendors' names, trade names, catalogue numbers, etc., it is intended merely to establish a standard of quality and function; and, any material, article, or equipment of other manufacturers and vendors which will perform adequately the duties imposed by the general design will be considered equally acceptable provided the material, article, or equipment so proposed, is, in the opinion of the Engineer, of equal substance and function. It shall not be purchased or installed by the Contractor without the Engineer's written approval.

4.22. WAGES AND OVERTIME COMPENSATION: The Contractor and each of his subcontractors shall comply with all applicable State and local laws or ordinances with respect to

the hours worked by laborers and mechanics engaged in work on the project and with respect to compensation for overtime.

4.23. NO WAIVER: Neither the inspection by the Owner or the Engineer, nor any order, measurement, approval, determination, decision or certificate by the Engineer, nor any order by the Owner for the payment of money, nor any payment for or use, occupancy, possession or acceptance of the whole or any part of the work by the Owner, nor the extension of time, nor any other act or omission of the Owner or of the Engineer shall constitute or be deemed to be an acceptance of any defective or improper work, materials, or equipment nor operate as a waiver of any requirement or provision of the Contract, or of any remedy, power or right of or herein reserved to the Owner, nor of any right to damages for breach of contract. Any and all rights and/or remedies provided for in the Contract are intended and shall be construed to be cumulative; and, in addition to each and every other right and remedy provided for herein or by law, the Owner shall be entitled as of right to a writ of injunction against any breach or threatened breach of the Contract by the Contractor, by his Subcontractors or by any other person or persons.

4.24. WORK TO CONFORM: During its progress and on its completion, the work shall conform truly to the lines, levels, and grades indicated on the Drawings or given by the Engineer and shall be built in a thoroughly substantial and workmanlike manner, in strict accordance with the Drawings, Specifications, and other Contract Documents and the directions given from time to time by the Engineer. All work done without instruction having been given therefor by the Engineer, without prior lines or levels, or performed during the absence of the Engineer, will not be estimated or paid for except when such work is authorized by the Engineer in writing. Work so done may be ordered uncovered or taken down, removed, and replaced at the Contractor's expense.

4.25. WORKING HOURS:

4.25.1. It is contemplated that all work will be performed during the customary working hours of the trades involved unless otherwise specified in this Contract. Work performed by the Contractor at his own volition outside such customary working hours shall be at no additional expense to the Owner.

4.25.2. Any requests received by the Contractor from occupants of existing buildings to change the hours of work shall be referred to the Owner for determination.

5. INSURANCE, LEGAL RESPONSIBILITY AND SAFETY

5.1. LITIGATION OF DISPUTES; JURISDICTION: The Owner and Contractor agree that this Contract shall be interpreted according to the Laws of the State of South Carolina, and that the appropriate forum and jurisdiction for resolving any disputes and claims shall be the South Carolina Court of Common Pleas for Sumter County.

5.2. ASSIGNMENTS: The Contractor shall not assign the whole or any part of this Contract or any monies due or to become due hereunder without written consent of the Owner. In case the Contractor assigns all or any part of any monies due or to become due under this Contract, the instrument of assignment shall contain a clause substantially to the effect that it is agreed that the

right of the assignee in and to any monies due or to become due to the Contractor shall be subject to prior claims of all persons, firms, and corporations for services rendered or materials supplied for the performance of the work called for in this contract.

5.3. PERFORMANCE BOND AND PAYMENT BOND: Unless otherwise noted in the Supplemental Conditions, a Performance Bond and a Payment Bond are required. The Contractor shall obtain a Performance Bond and Payment Bond, acceptable to the Owner in a surety company authorized to do business in the state in which the Project is constructed, each for the full amount of the Contract Sum. The bonds shall guarantee the Contractor's faithful performance of the Contract and the payment of all obligations arising thereunder. The bonds shall remain in force until:

5.3.1. The Project has been completed and accepted by the Owner.

5.3.2. The provisions of all guarantees required by these Contract Documents have been fulfilled or the time limitation for all guarantees has expired, or

5.3.3. The time for the filing of all mechanics' liens has expired, whichever is longer, after which it shall become void.

5.3.4. The Contractor shall pay all charges in connection with the bonds as a part of the Contract. One executed copy of the bonds shall be attached to each copy of the Contract before they are returned to the Engineer for the Owner's signature.

5.3.5. If the Contractor defaults, the Contractor or his Surety shall reimburse the Owner for any additional Engineering fees for additional services made necessary because of the Contractor's default.

5.4. ADDITIONAL OR SUBSTITUTE BOND: If at any time the Owner for justifiable cause, shall be or become dissatisfied with the surety or sureties for the Performance and/or Payment Bonds, the Contractor shall within 5 days after notice from the Owner to do so, substitute an acceptable bond (or bonds) in such form and sum and signed by such other surety or sureties as may be satisfactory to the Owner. The premiums on such bond shall be paid by the Contractor. No further payments shall be deemed due nor shall be made until the new surety or sureties shall have furnished such an acceptable bond to the Owner.

5.5. CHANGES NOT TO AFFECT BONDS: It is distinctly agreed and understood that any changes made in the Work or the Drawings or Specifications therefor (whether such changes increase or decrease the amount thereof or the time required for its performance) or any changes in the manner or time of payments made by the Owner to the Contractor, or any other modifications of the Contract, shall in no way annul, release, diminish or affect the liability of the Surety on the Contract Bonds given by the Contractor, it being the intent hereof that notwithstanding such changes the liability of the Surety on said bonds continue and remain in full force and effect.

5.6. COMPLIANCE WITH LAWS:

5.6.1. The law of the place where the Project is located shall govern the Contract. The Contractor shall abide by all local and State Laws or ordinances to the extent that such requirements do not conflict with Federal laws or regulations. The Contractor shall keep himself fully informed of all existing and future Federal, State and local laws, ordinances, rules and regulations affecting those engaged or employed on the work, the materials and equipment used in the work or the conduct of the work, and of all orders, decrees and other requirements of bodies or tribunals having any jurisdiction or authority over the same, including, but not limited to the U. S. Department of Labor and Bureau of Standards Safety and Health Regulations for Construction and its amendments as set up under the Williams-Steiger Occupational Safety and Health Act of 1970. If any discrepancy or inconsistency is discovered in the Drawings, Specifications or other Contract Documents in relation to any such law, ordinance, rule, regulation, order, decree or other requirement, the Contractor shall forthwith report the same to the Engineer in writing.

5.6.2. The Contractor shall at all times observe and comply with, and cause all his agents, servants, employees, and subcontractors to observe and comply with all such existing requirements, and he shall protect, indemnify and save harmless the Owner, its officers, agents, servants, and employees, from and against any and all claims, demands, suits, proceedings, liabilities, judgements, penalties, losses, damages, costs and expenses, including attorney's fees, arising from or based upon any violation or claimed violation of any such law, ordinance, rule, regulations, order, decree, or other requirement, whether committed by the Contractor or any of his agents, servants employees, or subcontractors.

5.7. REQUIRED PROVISIONS DEEMED INSERTED: Each and every provision of law and clause required by law to be inserted in this Contract shall be deemed to be inserted herein, and the Contract shall be read and enforced as though it were included herein. If through mistake or otherwise any such provision is not inserted, or is not correctly inserted, then upon the application of either party the Contract shall forthwith be physically amended to make such insertion or correction.

5.8. LIENS: If at any time any notice of liens are filed for labor performed or materials or equipment manufactured, furnished, or delivered to or for the Work, the Contractor shall, at its own cost and expense, promptly discharge, remove or otherwise dispose of the same, and until such discharge, removal or disposition, the Owner shall have the right to retain from any monies payable hereunder an amount which, in its sole judgement, it deems necessary to satisfy such liens and pay the costs and expenses, including attorney's fees, of defending any actions brought to enforce the same, or incurred in connection therewith or by reason thereof.

5.9. CLAIMS: If at any time there by any evidence of any claims for which the Contractor is or may be liable or responsible hereunder, the Contractor shall promptly settle or otherwise dispose of the same, and until such claims are settled or disposed of, the Owner may retain from any monies which would otherwise be payable hereunder so much thereof as, in its judgement, it may deem necessary to settle or otherwise dispose of such claims and to pay the costs and expenses, including attorneys' fees, of defending any actions brought to enforce such claims, or incurred in connection therewith or by reason thereof.

5.10. INSURANCE:

5.10.1. The Contractor shall not commence any work until he obtains, at his own expense, all required insurance. Such insurance must have the approval of the Owner as to limit, form, and amount. The Contractor will not permit any Subcontractor to commence work on this project until such Subcontractor has complied with the same insurance requirements.

5.10.2. The Contractor shall furnish the Owner with certificates showing the type, amount, class of operations covered, effective dates and dates of expiration of policies. Such certificates shall also contain substantially the following statement: "The insurance covered by this certificate will not be canceled or materially altered, except after 10 days notice in writing and delivered by registered mail to the Owner." Should any policy be canceled before final payment by the Owner to the Contractor and the Contractor fails immediately to procure other insurance as specified, the Owner reserves the right to procure such insurance and to deduct the cost thereof from any sum due the Contractor under this Contract.

5.10.3. Any insurance bearing on adequacy of performance shall be maintained after completion of the project for the full guaranty period. Should such insurance be canceled before the end of the guaranty period and the Contractor fails immediately to procure other insurance as specified, the Owner reserves the right to procure such insurance and to charge the cost thereof to the Contractor.

5.10.4. Nothing contained in these insurance requirements is to be construed as limiting the extent of the Contractor's responsibility for payment of damages resulting from his operations under this Contract.

5.10.5. The Contractor is required to obtain and maintain for the full period of the Contract the following types of insurance coverage with limits not less than stated below:

5.10.6. WORKMEN'S COMPENSATION INSURANCE

As required by applicable State or territorial law for all of his employees to be engaged in work at the site of the project under this Contract and, in case of any such work sublet, the Contractor shall require the subcontractor similarly to provide Workmen's Compensation Insurance for all of the latter's employees to be engaged in such work unless such employees are covered by the protection afforded by the Contractor's Workmen's Compensation Insurance. In case any class of employees engaged in hazardous work on the project under this Contract is not protected under the Workmen's Compensation Statute, the Contractor shall provide and shall cause each subcontractor to provide adequate employer's liability insurance for the protection of such of his employees as are not otherwise protected.

5.10.7 COMPREHENSIVE GENERAL LIABILITY

	Bodily Injury Per Person	Bodily Injury Per Accident	Property Damage
Premises and Operations	500,000	1,000,000	500,000
Elevator Liability	500,000	1,000,000	500,000
Products Liability, Including Completed			

Operations Coverage	500,000	1,000,000	500,000

5.10.8 COMPREHENSIVE AUTOMOBILE LIABILITY

All Owner Automobiles	500,000	1,000,000	500,000
Non-Owned Automobiles	500,000	1,000,000	500,000
Hired Car Coverage	500,000	1,000,000	500,000

5.10.9 SUBCONTRACTOR'S LIABILITY INSURANCE

Same limits as required of the General Contractor.

5.11. ORAL AGREEMENTS: No oral order, objection, claim or notice by any party to the others shall affect or modify any of the terms or obligations contained in any of the Contract Documents, and none of the provisions of the Contract Documents shall be held to be waived or modified by reason of any act whatsoever, other than by a definitely agreed waiver or modification thereof in writing, and no evidence shall be introduced in any proceeding of any other waiver or modification.

5.12. SAFETY: In accordance with generally accepted construction practices, the Contractor shall be solely and completely responsible for conditions of the job site, including safety of all persons and property affected directly or indirectly by his operations during the performance of the work. This requirement will apply continuously 24 hours per day until acceptance of the work by the Owner and shall not be limited to normal working hours.

5.13. The Contractor shall take all reasonable precautions for the safety of, and shall provide all reasonable protection to prevent damage, injury or loss to:

5.13.1. All employees on the Work and all other persons who may be affected thereby;

5.13.2. All the Work and all materials and equipment to be incorporated therein, whether in storage on or off the site, under the care, custody or control of the Contractor or any of Subcontractors or Sub-subcontractors; and

5.13.3. Other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction.

5.14. The Contractor shall comply with all applicable laws, ordinances, rules, regulations and lawful orders of any public authority having jurisdiction for the safety of persons or property or to protect them from damage, injury or loss. He shall erect and maintain, as required by existing conditions and progress of the Work, all reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards, promulgating safety regulations and notifying owners and users of adjacent utilities.

5.15. When the use or storage of explosives or other hazardous materials or equipment is necessary for the execution of the Work, the Contractor shall exercise the utmost care and shall

carry on such activities under the supervision of properly qualified personnel. The Contractor shall designate a responsible member of his organization at the site whose duty shall be the prevention of accidents. This person shall be the Contractor's superintendent unless otherwise designated in writing by the Contractor to the Owner and the Engineer.

5.16. The Contractor shall not load or permit any part of the Work to be loaded so as to endanger its safety.

6. PROGRESS AND COMPLETION OF WORK

6.1. NOTICE TO PROCEED: Following the execution of the Agreement by the Owner and the Contractor, written Notice to Proceed with the work shall be given by the Owner to the Contractor. The Contractor shall begin and shall prosecute the work regularly and uninterruptedly thereafter (except as provided for herein) with such force as to secure the completion of the work within the Contract Time.

6.2. CONTRACT TIME: The Contractor shall complete, in an acceptable manner, all of the work contracted for in the time stated in the Agreement. Computation of Contract Time shall commence the day to be specified in the Notice to Proceed and every calendar day following, except as herein provided, shall be counted as Contract Time.

6.3. SCHEDULE OF COMPLETION: The Contractor shall submit, at such times as may reasonably be requested by the Engineer, schedules showing the order in which the Contractor proposes to carry on the work, with dates at which the Contractor will start the various parts of the work, and estimated date of completion of each part.

6.4. WORK CHANGES: The Owner may, as the need arises, order changes in the work through additions, deletions, or modifications to the extent of 25 percent of the Contract Amount, without invalidating the Contract. Compensation and time of completion affected by the change shall be adjusted at the time of ordering such change.

6.5. EXTRA WORK: New and unforeseen items of work found to be necessary, and which cannot be covered by an item or combination of items for which there is a Contract Price, shall be classed as Extra Work. The Contractor shall do such Extra Work and furnish such materials as may be required for the proper completion or construction of the whole work contemplated, upon written order from the Owner as approved by the Engineer. In the absence of such written order, no claim for Extra Work shall be considered. Extra Work shall be performed in accordance with these Contract Documents where applicable and work not covered by such shall be done in accordance with the best construction practice and in a workmanlike manner. Extra Work required in an emergency to protect life and property shall be performed by the Contractor as required.

6.6. EXTENSION OF CONTRACT TIME:

6.6.1. A delay beyond the Contractor's control occasioned by an Act of God, by act or omission on the part of the Owner or by strikes, lockouts, fire, etc., may entitle the Contractor to an extension of time in which to complete the work as agreed by the Owner, provided, however, that the Contractor shall immediately give written notice to the Owner of the cause of such delay.

6.6.2. Act of God shall mean an earthquake, flood, cyclone or other cataclysmic phenomenon of nature. Rain, wind, flood, or other natural phenomenon of normal intensity for the locality shall not be construed as an Act of God and no reparation shall be made to the Contractor damages to the work resulting therefrom.

6.6.3. All claims for extension of time shall be made in writing to the Engineer no more than 20 days after the occurrence of the delay; otherwise they shall be waived. In the case of continuing cause of delay only one claim is necessary. Any claim should include complete justification for the extent of the delay claimed.

6.6.4. This Subsection does not exclude the recovery of damages for delay for either party under other provisions of the Contract Documents.

6.7. ENGINEER'S CERTIFICATE OF SUBSTANTIAL COMPLETION: When the work to be performed under this Contract is substantially completed in accordance with the Contract Documents, the Engineer shall prepare an Engineer's Certificate of Substantial Completion to be acknowledged and accepted by the Owner and the Contractor. The Certificate may list items to be completed or corrected but such Certificate shall not relieve the Contractor of his obligation to complete all work, whether listed or not, in accordance with the Contract Documents nor will it preclude any right the Owner may have for recourse in accordance with the Contract Documents.

6.8. TERMINATION OF CONTRACTOR'S RESPONSIBILITY: The Contract will be considered complete when all work has been finished, the final review made up by the Engineer, and the project accepted in writing by the Owner. The Contractor's responsibility shall then cease, except as set forth in his Performance Bond, as provided in Subsection 4.6 entitled GENERAL GUARANTY, and as provided in Subsection 6.9 entitled CORRECTION OF FAULTY WORK AFTER FINAL PAYMENT.

6.9. CORRECTION OF FAULTY WORK AFTER FINAL PAYMENT: The making of the final payment by the Owner to the Contractor shall not relieve the Contractor of responsibility for faulty materials or workmanship. The Contractor shall promptly replace any such defects discovered within one year, except where longer periods are specified, from the date of written acceptance of the work.

6.10. PROGRESS SCHEDULE:

6.10.1. Within 20 days after execution and delivery of the Agreement and not less than 10 days prior to making an application for partial payment, the Contractor shall prepare and deliver to the Engineer a Progress Schedule on forms approved by the Engineer.

6.10.2. The schedule shall be set up in a Critical Path format and shall show the proposed dates of commencement and completion of the various subdivisions of work required under the Contract Documents.

6.10.3. The schedule shall show the dates of commencement and completion of the various subdivisions of work required by the Contract Documents and all activities required to accomplish the work. No activity included in the schedule shall have a duration greater than fifteen (15) days. After approval of the Submit Schedule, the Contractor shall incorporate this schedule into the CPM schedule.

6.10.4. The schedule shall be updated monthly. No progress payments will be made unless application is accompanied by the updated schedule.

6.11. SCHEDULES, REPORTS AND RECORDS:

6.11.1. The Contractor shall submit to the Owner such schedules of quantities and costs, progress schedules, payrolls, reports, estimates, records and other data where applicable as are required by the Contract Documents for the Work to be performed.

6.11.2. The Contractor shall also submit, in a format as approved by the Engineer, a schedule of payments that he anticipates he will earn during the course of the Work.

6.12. ABANDONMENT OF WORK OR OTHER DEFAULT:

6.12.1. If the work shall be abandoned, or any part thereof shall be sublet without previous written consent of the Owner, or the Contract or any monies payable hereunder shall be assigned otherwise than as herein specified, or if at any time the Engineer shall be of the opinion, and shall so certify in writing, that the conditions herein specified as to rate of progress are not being complied with, or that the work or any part thereof is being unnecessarily or unreasonably delayed, or that the Contractor has violated or is in default under any of the provisions of the Contract, or if the Contractor becomes bankrupt or insolvent or goes or is put into liquidation or dissolution, either voluntarily or involuntarily, or petitions for an arrangement or reorganization under the Bankruptcy Act, or makes a general assignment for the benefit of creditors or otherwise acknowledges insolvency, the happening of any of which shall be and constitute a default under the Contract, the Owner may notify the Contractor in writing, with a copy of such notice mailed to the Surety, to discontinue such work or any part thereof; thereupon the Contractor shall discontinue such work or such part thereof as the Owner may designate; and the Owner may, upon giving notice, by contract or otherwise as it may determine, complete the work or such part thereof and charge the entire cost and expense of so completing the work or such part thereof to the Contractor. In addition to the said entire cost and expense of completing the work, the Owner shall be entitled to reimbursement from the Contractor and the Contractor agrees to pay the Owner any losses, damages, costs and expenses, including attorney's fees, sustained or incurred by the Owner by reasons of any of the foregoing causes. For the purposes of such completion the Owner may for itself or for any contractors employed by the Owner take possession of any and use or cause to be used any and all materials, equipment, plant, machinery, appliances, tools, supplies and such other items of every description that may be found or located at the site of the Work. No equipment or materials may be removed from the Work without the written consent of the Owner.

6.12.2. All costs, expenses, losses, damages, attorney's fees and any and all other charges incurred by the Owner under this Subsection shall be charged against the Contractor and deducted and/or paid by the Owner out of any monies due or payable or to become due or payable under the Contract to the Contractor; in computing the amounts chargeable to the Contractor, the Owner shall not be held to a basis of the lowest prices for which the completion of the work or any part thereof might have been accomplished, but all sums actually paid or obligated therefor to effect its prompt completion shall be charged to and against the account of the Contractor. In case the costs, expense, losses, damages, attorney's fees and other charges together with all payments theretofore made to or for the account of the Contractor are less than the sum which would have been payable under the Contract if the work had been properly performed and completed by the Contractor, the Contractor shall be entitled to receive the

difference and, in case such costs, expenses, losses, damages, attorney's fees and other charges, together with all payments theretofore made to or for the account of the Contractor, shall exceed the said sum, the Contractor shall pay the amount of the excess to the Owner.

7. PAYMENTS TO THE CONTRACTOR

7.1. PRICES FOR WORK: The Owner shall pay and the Contractor shall receive the prices stipulated in the Bid made a part hereof as full compensation for everything performed and furnished and for all risks and obligations undertaken by the Contractor under and as required by the Contract.

7.2. SCHEDULE OF VALUES: Except in cases where unit prices form the basis for payment under the Contract, the Contractor shall, within 20 days of the execution of the Contract and not less than 10 days prior to making an application for partial payment, submit to the Owner in a form approved by the Owner a schedule of values showing a breakdown of the Contract Sum itemized by trade and/or specification sections or as otherwise directed by the Owner and for each item shall show the total value including the Contractor's overhead and profit. Upon approval by the Owner, this schedule will be used in determining the value of the work done for the purpose of partial payments. The costs employed in making up any of these schedules will be used only for determining the basis of partial payments and will not be considered as fixing a basis for additions to or deductions from the Contract Price.

7.3. APPLICATIONS FOR PARTIAL PAYMENT:

7.3.1. Before the first day of each month, or as otherwise directed by the Owner, the Contractor shall make applications for the value of the work done and the materials installed and/or delivered to the site for installation in the project during the previous month. Such applications shall show the breakdown of the project into the same items as the schedule of values specified in Subsection 7.2 entitled SCHEDULE OF VALUES and showing for each item the total value, the value previously reported as complete, the value completed during the month, the cumulative value completed and the value remaining to be done. The application shall also show the value of materials delivered to the site which have not been incorporated into the work and whose value is not included in the amount shown for the work of which they are a part. The value of such materials shall be established by attaching copies of invoices covering the materials to the application. The application shall include a summary of value of the work performed during the previous month, plus the value of the material delivered to the job site but not incorporated in the work, and minus the amount of the retainage indicated in Subsection 7.4 entitled RETAINAGE.

7.3.2. The Engineer will, within 10 days after receipt of each partial payment estimate, either indicate in writing his approval of payment and present the partial payment estimate to the Owner, or return the partial payment estimate to the Contractor indicating in writing his reasons for refusing to approve payment. In the latter case, the Contractor may make the necessary corrections and resubmit the partial payment estimate.

7.4. RETAINAGE: The Owner shall retain 10 percent of the amount of each payment until final completion and acceptance of all work covered by the Contract Documents. The Owner at any time, however, after 50 percent of the work has been completed, if he finds that satisfactory

progress is being made, will make further partial payments in full on the current and remaining estimates, but amounts previously retained shall not be paid to the Contractor at 50 percent completion or any time thereafter when, in the opinion of the Engineer, the progress of the Work is not satisfactory, additional amounts may be retained but in no event shall the total retainage be more than 10 percent of the value of the work completed. Upon substantial completion of the work, any amount retained may be paid to the Contractor. When the Work has been substantially completed except for Work which cannot be completed because of weather conditions, lack of materials or other reasons which in the judgment of the Owner are valid reasons for non- completion, the Owner may make additional payments, retaining at all times an amount sufficient to cover the estimated cost of the Work still to be completed.

7.5. PAYMENTS WITHHELD:

7.5.1. The Owner may withhold payment or, on account of subsequently discovered evidence, nullify the whole or part of any application to the extent necessary to protect himself from loss on account of:

7.5.1.a. Defective work not remedied.

7.5.1.b. Claims filed or reasonable evidence indicating the probably filing of claims.

7.5.1.c. Failure of the Contractor to make payments to Subcontractors, material suppliers, or employees.

7.5.1.d. A reasonable doubt that the Contract work can be completed for the balance unpaid.

7.5.1.e. Damage to another Contractor.

7.5.2. When the above grounds are removed, payment will be made for the amounts withheld because of them.

7.6. PAYMENT OF APPLICATIONS FOR PARTIAL PAYMENT: Upon verification and approval of the application for partial payment made as specified, the Owner will make payment of the amount found properly due. No payment made to the Contractor nor partial or entire use or occupancy of the Work by the Owner shall be an acceptance of any work or materials not in accordance with this Contract.

7.7. FINAL INSPECTION: Upon receipt of written notice from the Contractor that the work has been completed and finished in accordance with the Contract, the Owner shall cause an inspection to be made of the work by his authorized representatives. A list shall be made of all deviations from the Contract requirements (commonly termed "punch list") and a copy of such list furnished to the Contractor. The Contractor shall with reasonable haste remedy all defects so noted and shall notify the Owner upon the completion of such work. When inspection by the Owner's authorized representatives shows the work to be complete in accordance with the Contract, application for final payment may be made.

7.8. RELEASE OF LIENS: Neither the final payment nor any part of the retained percentage shall become due until the Contractor shall deliver to the Owner a complete and notarized release

of all liens arising out of this Contract, or receipts in full in lieu thereof, and if required in either case, an affidavit that so far as he had knowledge of information the releases and receipts include all the labor and material for which a lien could be filed; but the Contractor may, if any Subcontractor refuses to furnish a release or receipt in full, furnish a bond satisfactory to the Owner, to indemnify him against any lien. If any lien remains unsatisfied after all payments are made, the Contractor shall refund to the Owner all monies that the latter may be compelled to pay in discharging such a lien, including all costs and a reasonable attorney's fee.

7.9. USE OR PARTIAL PAYMENT NOT ACCEPTANCE: It is agreed that this is an entire contract for one whole and complete work or result and that neither the Owner's entrance upon or use of the Work or any part thereof nor any partial payments by the Owner shall constitute an acceptance of the Work or any part thereof before its entire completion and final acceptance.

7.10. PAYMENT FOR UNCORRECTED WORK: Should the Owner direct the Contractor not to correct work that has been damaged or that was not performed in accordance with the Contract Documents, an equitable deduction from the Contract Amount shall be made to compensate the Owner for the Uncorrected Work.

7.11. PAYMENT FOR REMOVAL OF REJECTED WORK AND MATERIALS:

7.11.1. The removal of work and materials rejected in accordance with Subsection 4.3 entitled CORRECTION OF WORK BEFORE COMPLETION and the re-execution of acceptable work by the Contractor shall be at the expense of the Contractor, and he shall pay the cost of replacing the work of other contractors destroyed or damaged by the removal of the rejected work or materials and the subsequent replacement of acceptable work.

7.11.2. Removal of rejected work or materials and storage of materials by the Owner, in accordance with Subsection 4.3 entitled CORRECTION OF WORK BEFORE COMPLETION, shall be paid by the Contractor within 30 days after written notice to pay is given by the Owner. If the Contractor does not pay the expenses of such removal and after 10 days' written notice being given by the Owner of his intent to sell the materials, the Owner may sell the materials at auction or at private sale and will pay the Contractor the net proceeds therefrom after deducting all the costs and expense that should have been borne by the Contractor.

7.12. PAYMENT FOR EXTRA WORK: Written notice of claims for payment for Extra Work shall be given by the Contractor within ten days after receipt of instructions from the Owner to proceed with the Extra Work and also before any work is commenced, except in emergency endangering life or property. No claim shall be valid unless so made. In all cases, the Contractor's itemized estimate sheets showing all labor and material shall be submitted to the Owner. The Owner's order for Extra Work shall specify any extension of the Contract Time and one of the following methods of payment:

7.12.1. Unit price or combinations of unit prices which form the basis of the original Contract.

7.12.2. A lump sum based on the Contractor's estimate and accepted by the Owner.
7.12.3. Net cost plus a fixed fee. Net costs are defined as follows:

7.12.3.a. Labor costs, including time of foreman while engaged directly upon extra work at rates not greater than the scale of rates for each respective classification of labor customary in the area where the work is performed for each respective job classification.
Labor insurance taxes including amounts paid on a percent of such labor rates or on a cents per hour basis for Workmen's Compensation, Public Liability, Contractor's Contingent Liability and Contractual Liability Insurance and all Federal Old Age and Unemployment Taxes and any other taxes applicable as well as fringe benefits as may be approved by the Engineer.

7.12.3.b. Materials and supplies actually used on the work.

7.12.3.c. Rental charges for necessary equipment, as agreed upon by the Owner and Contractor. Rental charges shall not exceed those published in Rental Rates for Construction Equipment issued by the American Equipment Distributor. Equipment and tools having a value of $100.00 or less are considered to be "small tools" and, as such, are considered to be part of overhead.

7.13. To the cost under Subparagraph 7.12.3 there shall be added a fixed fee to be agreed upon but not to exceed fifteen (15) percent of the estimated cost of the work. The fee shall be compensation to cover the cost of supervision, overhead, bond, profit and any other general expenses. On work performed by subcontractors, the fixed fee shall not exceed ten (10) percent of the cost of the work.

7.14. PAYMENT FOR WORK SUSPENDED BY THE OWNER: If the work or any part thereof shall be suspended by the Owner and abandoned by the Contractor as provided in Subsection 2.12 entitled SUSPENSION OF WORK, TERMINATION AND DELAY, the Contractor will then be entitled to payment for all work done on the portions so abandoned, plus 15 percent of the value of the abandoned work to compensate for overhead, plant expense, and anticipated profit. This does not relate to under run in quantities.

7.15. PAYMENT FOR WORK BY THE OWNER: The cost of the work performed by the Owner, in accordance with Subsection 2.10 entitled OWNER'S RIGHT TO DO WORK, shall be paid by the Contractor.
7.16. PAYMENT FOR WORK BY THE OWNER FOLLOWING TERMINATION OF CONTRACT BY OWNER: Upon termination of the Contract by the Owner in accordance with Subsection 2.11 entitled OWNER'S RIGHT TO TERMINATE CONTRACT, no further payment shall be due the Contractor until the work is completed. If the unpaid balance of the Contract Amount shall exceed the cost of completing the work including all overhead costs, the excess shall be paid to the Contractor. If the cost of completing the work shall exceed the unpaid balance, the Contractor shall pay the difference to the Owner. The cost incurred by the Owner, as herein provided, and the damage incurred through the Contractor's default, shall be certified by the Owner.

7.17. PAYMENT FOR SAMPLES AND TESTING OF MATERIALS:

7.17.1. Samples furnished all SCDOT required materials and in accordance with Subsection 4.17 entitled SAMPLES, shall be furnished by the Contractor at his expense.

7.17.2. Testing of samples and materials required by SCDOT and furnished in accordance with Subsection 4.17 entitled SAMPLES, shall be arranged and paid for by the Contractor.

7.18. ACCEPTANCE AND FINAL PAYMENT:

7.18.1. When the Contractor shall have completed the work in accordance with the terms of the Contract Documents, he shall certify completion of the work to the Owner and submit a final Request for Payment, which shall be the Contract Amount plus all approved additions, less all approved deductions and less previous payments made. The Contractor shall furnish evidence that he has fully paid all debts for labor, materials, and equipment incurred in connection with the work, and, upon acceptance by the Owner, the Owner will release the Contractor except as to the conditions of the Performance Bond and the Payment Bond, any legal rights of the Owner, required guaranties, and Correction of Faulty Work after Final Payment, and will pay the Contractor's final Request for Payment. The Contractor shall allow sufficient time between the time of completion of the work and approval of the final Request for Payment for the Engineer to assemble and check the necessary data.

7.18.2. The Contractor shall deliver to the Owner a complete release of all liens arising out of this Contract before the retained percentage or before the final Request for Payment is paid.

7.19. ACCEPTANCE OF FINAL PAYMENT AS RELEASE: The acceptance by the Contractor of final payment shall be and shall operate as a release to the Owner of all claims and all liability to the Contractor other than claims in stated amounts as may be specifically excepted by the Contractor for all things done or furnished in connection with this Work and for every act and neglect of the Owner and others relating to or arising out of this Work. Any payment, however, final or otherwise, shall not release the Contractor or his sureties from any obligations under the Contract Documents or the Performance Bond and the Payment Bond.

7.20. DELAYS AND DAMAGES:

7.20.1. The date of beginning and the time for completion of the Work are essential conditions of the Contract Documents and the Work embraced shall be commenced on a date specified in the Notice to Proceed.

7.20.2. The Contractor will proceed with the Work at such rate of progress to insure full completion within the Contract Time. It is expressly understood and agreed by and between the Contractor and the Owner that the Contract Time for the completion of the Work described herein is a reasonable time, taking into consideration the average climatic and economic conditions and other factors prevailing in the locality of the Work. If the Contractor refuses or fails to prosecute the Work, or any separable part thereof, with such diligence as will insure its completion within the time specified in the Contract, or any extension thereof, or fails to complete said Work within such time, the Owner may, by written notice to the Contractor and his Surety, terminate his right to proceed with the Work or such part of the work as to which there has been delay. In such event the Owner may take over the Work and prosecute the same to completion, by contract or otherwise, and may take possession of and utilize in completing the work such materials, appliances, and plant as may be on the site of the work and necessary therefor. Whether or not the Contractor's right to proceed with the Work is terminated, he and his sureties shall be liable for any damage to the Owner resulting from his refusal or failure to complete the Work within the specified time.

7.20.3. If fixed and agreed liquidated damages are provided in the Contract and if the Owner so terminates the Contractor's right to proceed, the resulting damage will consist of such liquidated damages until such reasonable time as may be required for final completion of the Work together with any increased costs occasioned the Owner in completing the Work.

7.20.4. If fixed and agreed liquidated damages are provided in the Contract, and if the Owner does not so terminate the Contractor's right to proceed, the resulting damage will consist of such liquidated damages until the Work is completed or accepted.

7.20.5. The Contractor's right to proceed shall not be so terminated nor the Contractor charged with resulting damage if:

7.20.5.a. The delay in the completion of the Work arises from unforeseeable causes beyond the control and without the fault or negligence of the Contractor, including but not restricted to, Acts of God, acts of the public enemy, acts of the Government in either its sovereign or contractual capacity, acts of another contractor in the performance of a contract with the Owner, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, unusually severe weather, or delays of subcontractors or suppliers arising from unforeseeable causes beyond the control and without the fault or negligence of both the Contractor and such subcontractors or suppliers; and

7.20.5.b. The Contractor, within 10 days from the beginning of any such delay (unless the Owner grants a further period of time before the date of final payment under the Contract), notifies the Owner in writing of the causes of delay.

7.20.6. As used in subparagraph 1, above, the term "subcontractors or suppliers" means subcontractors or suppliers at any time.

7.20.7. The Engineer shall ascertain the facts and the extent of the delay and extend the time for completing the Work when, in his judgment, the findings of fact justify such an extension, and his findings of fact shall be final and conclusive on the parties, subject only to appeal as provided in these General Conditions. The rights and remedies of the Owner provided in this clause are in addition to any other rights and remedies provided by law or under this Contract. This does not relate to under run in quantities.

(End of Section 01230)

1. CONFLICT OR INCONSISTENCY: If there is any conflict or inconsistency between the provisions of the SUPPLEMENTAL CONDITIONS and the GENERAL CONDITIONS, the provisions of the SUPPLEMENTAL CONDITIONS shall prevail.

2. CONFLICT OF INTEREST: No official of the Owner who is authorized in such capacity and on behalf of the Owner to negotiate, make, accept or approve, or to take part in negotiation, making, accepting, or approving any architectural, engineering, inspecting, construction, or material supply contract, or any subcontract in connection with the construction of the project, shall become directly or indirectly interested personally in this Contract or in any part thereof. No officer, employee, architect, attorney, engineer, or inspector of or for the Owner who is authorized in such capacity and on behalf of the Owner who is in any legislative, executive, supervisory, or other similar functions in connection with the construction of the project, shall become directly or indirectly interested personally in this Contract or in any part thereof, any material supply contract, subcontract, insurance contract, or any other contract pertaining to the project.

3. CONTRACTOR'S FIELD OFFICE: The Contractor shall maintain a temporary field office near the work for his own use during the period of construction at which readily accessible copies of all Contract Documents shall be kept. The office shall be located where it will not interfere with the progress of the work. In charge of this office, there shall be a responsible and competent representative of the Contractor, duly authorized to receive orders and directions and to put them into effect.

4. CONTRACT MODIFICATION: All changes which affect the cost of the construction of and contract modifications must be approved by the Owner prior to becoming effective. The contract change order will include extra work, work for which quantities have been altered from those shown in the bidding schedule as well as decreases or increases in the quantities of installed units which are different from those shown in the bidding schedule because of final measurements. All changes the project must be authorized by means of a contract change order. All change orders should be recorded on a contract change order as they occur so that they may be included in the partial payment estimate.

5. WATER/SEWER LINE SEPARATION: The horizontal and vertical separation of sewer lines and water mains must be in accordance with Section R61-58.4D(12) of the State Primary Drinking Water Regulations.

5.1 Parallel installation - Water mains shall be laid at least ten (10) feet horizontally from any existing or proposed sewer. The distance shall be measured edge to edge. In cases where it is not practical to maintain a ten foot separation, the Department may allow deviation on a case-by-case basis, if supported by data from the design engineer. Such deviation may allow installation of the water main closer to a sewer, provided that the water main is laid in a separate trench or on an undisturbed earth shelf located on one side of the sewer at such an elevation that the bottom of the water main is at least eighteen (18) inches above the top of the sewer.

5.2 Crossings - Water mains crossing sewers shall be laid to provide a minimum vertical separation of eighteen (18) inches between the outside of the water main and the outside of the

sewer. This shall be the case whether the water main is either above or below the sewer line. Whenever possible, the water main shall be located above the sewer line. Where a new water main crosses a new sewer line, a full length of pipe shall be used for both the water main and sewer line and the crossing shall be arranged so that the joints of each line will be as far as possible from the point of crossing and each other. Where a new water main crosses an existing sewer line, one full length of water pipe shall be located so both joints will be as far from the sewer line as possible. Where a water main crosses under a sewer, adequate structural support shall be provided for the sewer line to prevent damage to the water main.

5.2.1 Special Conditions - When it is impossible to obtain the distances specified in R.61-58.4(D)(12)(a) and (b) the Department may allow an alternative design. Any alternative design shall:

5.2.1.1 maximize the distances between the water main and sewer line and the joints of each;

5.2.1.2 use materials which meet the requirements R.61-58.4(D)(1) for the sewer line; and,

5.2.1.3 allow enough distance to make repairs to one of the lines without damaging the other.

5.2.2 Force mains - There shall be at least a ten (10) foot horizontal separation between water mains and sanitary sewer force mains. There shall be an eighteen (18) inch vertical separation at crossing as required in R.61-58.4(D)(12)(a) and (b).

5.2.3 Sewer manholes - No water pipe shall pass through or come in contact with any part of a sewer manhole. Water lines may come in contact with storm sewers or catch basins if there is no other practical alternative, provided that ductile iron is used, no joints of the water line are within the storm sewer or catch basin and the joints are located as far as possible from the storm sewer or catch basin.

5.2.4 Drain-fields and Spray-fields - Potable water lines shall not be laid less than twenty-five (25) feet horizontally from any portion of a waste-water tile-field or spray-field, or shall be otherwise protected by an acceptable method approved by the Department.

6. COMPUTATION OF QUANTITIES:

6.1 For estimating quantities in which the computation of areas by geometric methods would be comparatively laborious, it is agreed that a digitizer shall be considered an instrument of precision adapted to the measurement of such areas.

6.2 It is further agreed that the computation of the volume of prismoids shall be by the method of average end areas.

7. LIMITS OF NORMAL EXCAVATION:

7.1 In determining the quantities of excavation to which unit prices shall apply, the limits of normal width and depth of excavation shall be as described below, unless other limits are indicated on the Drawings or specified.

7.2 For pipes in trenches, the normal width of the trench shall be measured between vertical planes which are a distance apart equal to the sum of 18 inches plus 1-1/3 times the nominal inside diameter of the pipe. If the width so computed is less than three feet, a width of three feet shall be taken as the normal width for payment. The normal depth shall be measured to a distance of 0.2 foot below the bottom of the pipe in earth and 0.7 foot in rock, unless there be a cradle underneath the pipe; in which case the normal depth shall be measured to the underside of the cradle. The width of trench for the cradle shall be assumed to be that specified above for pipes in trenches.

7.3 For concrete placed directly against undisturbed earth, the normal width and depth of the excavation for such concrete shall be measured to the neat lines of the concrete as indicated on the Drawings or as ordered.

7.4 For concrete placed against rock surfaces resulting from rock excavation, the normal width and depth of the excavation shall be measured to 0.4 foot outside the neat lines of the concrete as indicated on the Drawings or as ordered.

7.5 For other structures, except manholes as noted below, the normal width shall be measured between vertical planes one foot outside the neat lines of the several parts of the structure, except that the width at any elevation shall be measured as not less than the width at a lower elevation. The normal depth shall be measured to the underside of that part of the structure for which the excavation is made.

7.6 No additional width or depth of trenches excavated in earth or rock shall be allowed at standard circular manholes.

7.7 Wherever bell holes are required for jointing pipe, they shall be provided without additional compensation over and above that resulting from measurements as above described.

8. FEDERAL SAFE DRINKING WATER ACT: In accordance with Section 1417 of this Act, any pipe, solder, or flux used in the installation or repair of public water systems and plumbing used for drinking water, must be lead free. Lead free is defined as less than 0.2 percent lead in solder and flux and less than 8.0 percent lead in pipes and fittings. Leaded joints for the repair of cast iron pipes are not included. Lead shot and lead packers in well construction are no longer allowed.

9. WORK ON HIGHWAY RIGHT-OF-WAY: All work performed in roads and street crossings and all work performed on street or road rights-of-way shall be performed in accordance with "Policy for Accommodating Utilities on Highway Rights-of-Way", current issue, by the South Carolina Highway Department.

10. CONNECTIONS MADE TO EXISTING MAINS:

10.1 No existing main shall be cut, tapped, or otherwise disturbed without first obtaining permission in writing from the Owner to make that connection. At least 48 hours notice is required to obtain written approval.

10.2 Connections to mains shall be coordinated with the Office of the County Supervisor so that they are made during a period of low water demand and with a minimum of service interruption.

11. WATER SUPPLY:

11.1 Water supply for the purposes of flushing, disinfecting and pressure testing of the water line will be furnished by the Owner. It shall be the Contractor's responsibility to convey the water to any remote location that is required on the project.

11.2 The Contractor shall install a metering system that complies with AWWA C700 and shall pay the Owner for the water used

12. USE OF PREMISES: The Contractor shall confine his materials, equipment, and the operations of his employees, subcontractors, and suppliers to minimize interference with the Owner's normal operations being carried on in the existing plant and use of yards, roadways, trucking and parking areas. Where connection between new and existing work is necessary and requires shutting down of any existing facilities, services, or areas, these connections shall be made at such times and in such manner as the Owner may direct.

13. PERSONNEL FACILITIES: In order to minimize interference with the operations of the merchants, Contractor shall provide suitable facilities necessary for his personnel for use as lunch rooms, vending areas, first aid rooms, toilets, etc., and shall instruct and supervise his personnel to ensure that the facilities provided by the Owner for the use of its employees are not used by employees of the Contractor. All such personnel facilities provided by the Contractor shall be located adjacent to or within the area of the work.

14. PARKING AREAS: The Contractor shall secure suitable parking areas for his employees.

15. STATE AND LOCAL PERMITS, LICENSES, INSPECTIONS, CERTIFICATES: The Contractor shall obtain such required documents and pay the fees assessed for each division of work for which such permits, licenses, and inspections are required. The Contractor shall also obtain and pay the fees for general permits such as Building Permits and Certificate of Occupancy.

16. SIGNS:

16.1 The Owner reserves the right to all advertising privileges about the job and no signs shall be posted by the Contractor anywhere on the premises without approval by the Owner except those signs, posters, or bulletins required by Federal, State, or local authorities. Directional signs identifying offices and/or storage areas of the Contractor may be erected as required to facilitate work, provided:

16.1.1 The Contractor shall submit to the Owner for approval a scale drawing or sketch of the proposed sign showing size, type of material, painting, and proposed location. All submittal data shall be in triplicate.

16.1.2 The size of the individual sign shall be not greater than 24 inches wide by 12 inches high.

16.1.3 Signs shall be neatly painted on weather-resistant materials.

16.1.4 The signs will be removed upon completion of the job.

16.1.5 No sign shall be erected prior to approval by the Owner.

17. OWNER'S INSURANCE AUTHORITY: During all phases of construction, the Contractor will be required to perform his operations so as to comply expeditiously with the recommendations of the Owner's Insurance Authority.

18. BUILDERS RISK INSURANCE: The Contractor shall procure and maintain during the life of this Contract, Builders Risk Insurance on an all risk basis, on a 100 percent completed value basis on the insurable portion of the project. The Owner, the Contractor, and Subcontractor (as their interest may appear) shall be named as the Insured.

19. FLOOD INSURANCE:

19.1 The Contractor must acquire any flood insurance made available to it under the National Flood Insurance Act of 1968 as amended beginning with the period of construction and maintain such insurance for the entire useful life of the project, if the total value of insurable improvements is $10,000 or more.

19.2 The amount of insurance required is the total project cost, excluding facilities which are uninsurable under the National Flood Insurance Program such as bridges, dams, water and sewer lines, and underground structures, and excluding the cost of the land, or the maximum limit of coverage made available to the grantee under the National Flood Insurance Act, whichever is less.

20. PUBLICITY: All prime contractors and their subcontractors shall submit to the Owner for approval all publicity items, including photographs, relating to the work of this project. Owner shall approve any and all material prior to release for publication.

21. PROTECTION OF WORK: The Contractor shall at all times, until final acceptance of the work, provide protection of the work, either new or previously existing, from all hazards involved in his operations. All damage suffered by any item of work, including, but not limited to, drains, curbs, doors, equipment, and structures, shall be repaired or the item shall be replaced prior to final acceptance.

22. SPECIAL PRECAUTIONS: At all times during the construction of the project and its component parts, the Contractor shall provide, install, and maintain proper temporary supports, shoring, and bracing to prevent any damage to the work due to all causes. When openings are made in the roof and/or exterior walls, suitable temporary weathertight closures shall be installed and maintained at all times when work is not in progress at that location.

23. SMOKING AND FIRE PROTECTION:

23.1 Smoking is absolutely forbidden except in such areas as the Owner shall designate. The Contractor shall confer with the Owner to determine the areas in which smoking is permitted. It

is the responsibility of the Contractor to enforce "No Smoking" regulations in the restricted areas. The Owner will remove from the premises any person violating the smoking regulations.

23.2 Welding, flame cutting, or other operations involving the use of flame, arc, or sparking devices will not be allowed without adequate protection.

24. POWDER ACTUATED FASTENERS: Whether or not permitted by local code or ordinance, powder actuated fasteners may not be used except on specific approval of the Owner or the Engineer in writing.

25. COMPRESSED AIR: The Contractor shall furnish all compressed air and temporary piping required for the work. Where necessary to locate air compressors within the building, proper ventilation shall be supplied for the compressors. All costs of providing the compressed air shall be borne by the Contractor. No connection or use of the Owner's air supply will be permitted.

26. ELEVATION DATUM: The datum adopted by the Engineer is NGVD 29. All elevations shown on the Drawings or referred to in these specifications refer to this datum.

27. EASEMENTS:

27.1 The Owner has obtained, or will obtain, permanent easements and temporary construction easements through private property. The temporary construction easements entitle the Contractor to the occupancy and use of the designated area near or adjacent to the work for purposes related to the work.

27.2 The Contractor will not encroach on any property unless it has been established that easements have been obtained. On all other land, the Contractor has no rights unless he obtains permission from the proper parties.

28. OCCUPYING PRIVATE LAND: The Contractor shall not (except after written consent from the proper parties) enter or occupy with men, tools, or materials, any land outside the rights-of-way of property of the Owner. A copy of the written consent shall be given to the Engineer.

29. WORK IN STATE AND CITY RIGHTS-OF-WAY:

29.1 Attention is directed to the fact that work will be going on in both City and State highway rights-of-way. The Owner has obtained permission for the Contractor to encroach on these rights-of-way for work.

29.2 The Contractor will be required to conform to the requirements of the South Carolina Department of Transportation, (SCDOT) and the City of Sumter while working within the rights-of-way.

30. SCDHEC DISTRICT ENGINEER INSPECTION: All of the work constructed on this project is subject to the inspection and approval by the South Carolina Department of Health and Environmental Control District Engineer. This inspection and acceptance is in addition to inspection and acceptance of the Engineer.

31. WORK ADJACENT TO TELEPHONE, POWER AND GAS COMPANY STRUCTURES: Where work is being performed within the telephone company or electric and gas company rights-of-way, the Owner has acquired, or will acquire, permission from these agencies to construct facilities within their rights-of-way or easements. In all cases where work is being performed near telephone company or electric or gas company facilities, the Contractor will notify the respective companies of areas in which work is being performed.

32. WORK BEING PERFORMED NEAR WATER LINES: The Contractor will inform the Town as to the areas where work is being performed. It is required of a Contractor to obtain permission from the Department of Public Utilities where alterations to their system are required.

33. TRAFFIC CONTROL:

33.1 The Contractor will comply with the manual published by the South Carolina Department of Highways and Public Transportation entitled "Traffic Controls for Street and Highway Construction and Maintenance Operations, Part V, of the South Carolina Manual on Uniform Traffic Control Devices for Streets and Highways, 1994" or the latest version. Provide traffic control as required and approved by the South Carolina Department of Highways and Public Transportation.

33.2 Upon completion and acceptance of the work or as the need for temporary traffic control devices ceases, they shall be removed by the Contractor and shall remain the property of the Contractor.

33.3 Signs shall be used where warranted to maintain traffic or to call attention to conditions on, or adjacent to, the construction work. Such signs shall be removed when they are no longer required.

33.4 All traffic control and marking devices shall be in accordance with the provisions of the "State of South Carolina Uniform Manual on Traffic Control Devices". Upon completion and acceptance of the work or as the need for temporary traffic control devices ceases, they shall be removed by the Contractor and shall remain the property of the Contractor.

33.5 Signs shall be used where warranted to maintain traffic or to call attention to conditions on, or adjacent to, the construction work. Such signs shall be removed when they are no longer required.

34. LINES, GRADES AND MEASUREMENTS:

34.1 The Contractor shall employ, at his own expense, a competent civil engineer or land surveyor who shall be registered in South Carolina and who shall be thoroughly experienced in field layout work. Said Engineer shall establish all lines, elevations, reference marks, etc., needed by the Contractor during the progress of the work, and from time to time he shall verify such marks by instrument or by other appropriate means. The Owner's Engineer may waive the requirement for the Engineer to be registered in South Carolina upon a presentation of a resume which is satisfactory. The waiving of this requirement may be revoked at any time by the Owner's Engineer.

34.2 Alignment and grade of all pipe, tunnels, and borings shall be continuously controlled by use of lasers established through the pipe or casing, not transferred from another medium. The Contractor shall furnish lasers and accessories as required and approved by the Engineer. The Contractor's Engineer will set and check each laser each day that work is in progress or more often as required to assure continuous accurate control.

34.3 The Contractor's Engineer responsible for lines and grades shall verify to the Owner in writing that work has been constructed to lines and grades as shown on the Drawings. This certification shall accompany each request for payment.

34.4 The Owner's Engineer shall be permitted at any time to check the lines, elevations, reference marks, lasers, etc., set by the Engineer employed by the Contractor, and the Contractor shall correct any errors in lines, elevations, reference marks, lasers, etc., disclosed by such check. Such a check shall not be construed to be an approval of the Contractor's work and shall not relieve the Contractor of the responsibility for the accurate construction of the entire work.

34.5 The Contractor shall make all measurements and check all dimensions necessary for the proper construction of the work called for by the Drawings and Specifications. During the prosecution of the work, he shall make all necessary measurements to prevent misfitting in said work, and he shall be responsible therefore, and for the accurate construction of the entire work.

34.6 The Owner's Engineer shall have access to all field notes. Field notes will be recorded in bound field books, and carbon copies given the Owner's Inspector at the close of each shift.

35. CITY BUSINESS LICENSE: The successful Bidder and all subcontractors will be required to obtain a business license from the City of Sumter prior to beginning work, if said Bidder does not have a current license.

36. UTILITY LOCATIONS: Prior to beginning any excavation, the Contractor shall notify all public utility companies and have their lines located and marked. The following is a list of utility companies and persons to be contacted for utility locations.

UTILITY SERVICE OR FACILITY	PERSON TO CONTACT (NAME, TITLE, & PHONE NO.)
Electric, Gas, Telephone	**For all utilities**, call: **Palmetto Utility Protection Service** **8-1-1** **or, 1-888-721-7877**
Cable TV	
Sewer	City of Sumter Department of Public Services 803-436-2558
Water	

37. DANGER SIGNALS AND SAFETY DEVICES: The Contractor shall make all necessary precautions to guard against damages to property and injury to persons. He shall put up and maintain in good condition, sufficient red or warning lights at night, suitable barricades and other devices necessary to protect the public. In case the Contractor fails or neglects to take such precautions, the Owner may have such lights and barricades installed and charged the cost of this work to the Contractor. Such action by the Owner does not relieve the Contractor of any liability incurred under this Specifications or contract.

38. PAVEMENT GUARANTEE: The Contractor warrants to the Owner that all materials and workmanship furnished on state roadways are guaranteed in accordance with the terms of the General Conditions, Section 4, General Guaranty, for a period of two years. The Contractor will remedy any settlements or deficiencies of the pavement surface within this period.

39. CLEAN-UP FOLLOWING PAVEMENT INSTALLATION; PUBLIC AND PRIVATE RIGHT-OF-WAYS:

39.1 All work within state, county and city highway right-of-ways is to be conducted in accordance with the contract drawings and specifications, the general and special provisions of the encroachment permit, and the traffic control requirements of the Supplemental Conditions. The work is subject to inspections by highway representatives and their directions regarding activities in right-of-ways.

39.2 Clean-up is a major issue with regards to work in public right-of-ways. Initial clean-up shall be performed daily as it affects roadway safety and drainage. Soils are to be removed from roadways, sidewalks, and drainage ditches and culverts restored. Impediments to drainage and safety such as excess dirt piles, stored materials, lax or incomplete traffic control will not be tolerated.

39.3 To the maximum extent possible, private roadways, drives, offsite drainage ditches and structures shall be restored immediately after the installation of sidewalk and roadway pavements. The restoration or replacement of public or private property shall be scheduled as a top priority work item in the execution of this project.

39.4 Final clean-up, including grassing, shall also be expedited to the maximum extent possible. The Owner reserves the option to direct this work to be performed expeditiously for the protection of the environment and the welfare of the public.

40. PRE-CONSTRUCTION CONFERENCE: Prior to construction, a pre-construction conference will be held with representatives of the Owner, Contractor, the Engineer, and other parties that are stakeholders in the project.

41. SPECIFICATIONS AND DRAWINGS: The following Drawings and Specifications form a part of this Contract as set forth in Paragraph 1.1, Section 01230, GENERAL CONDITIONS. The Drawings bear the general designation:

42. A. THE DRAWINGS ARE LISTED AS FOLLOWS

Sheet No.	Title
C000	Cover Sheet
C050	Notes
C100A,B	Existing Conditions and Demolition Plans
C200A,B	Layout Plan
C201	Site Details
C300A,B	Grading and Drainage Plans
C301	Stormwater Detention Pond Details
C401A,B	SWPPP Phase 1
C402A,b	SWPPP Phase 2
C403A,B	SWPPP Phase 3
C404-405	SWPPP Details
L1.0-1.1	Landscape Plans
L2.0	Landscape Details
------	Sumter Planting Details
------	Irrigation Plan
------	Duke Energy Lighting Plan

B. THE SPECIFICATIONS ARE LISTED AS FOLLOWS:

Section No.	Title
01105	Invitation for Bids
01110	Information for Bidders
-------	City of Sumter Local Preference
01140	Bid
01142	Bid Bond
01210	Agreement
01212	Performance Bond
01214	Payment Bond
01219	Certificate of Owner's Attorney
-------	Notice of Award
-------	Notice to Proceed
01230	General Conditions
01232	Supplemental Conditions
01250	Measurement and Payment
02050	Demolition and Removal
02110	Clearing and Grubbing
02210	Unclassified Excavation and Grading
02222	Excavating, Backfilling & Compacting for Utilities
02231	Subgrade
02235	Macadam Base Course
02270	Erosion Control
02277	Silt Fence
02441	Underground Irrigation System

02511	Bituminous Pavements
02515	Exterior Concrete Work
02523	Concrete Sidewalk & Driveway
02527	Concrete Curb, Curb & Gutter, and Gutter
02575	Paving Repair & Resurfacing
02616	Pavement Removal and Replacement
02721	Structures & Inlets
02722	Drainage Pipe & Culverts
02820	Grassing
02830	Planting
02933	Seeding and Mulching
02995	Clean Up
03100	Concrete Form Work
03200	Concrete Reinforcement
03300	Cast In Place Concrete
-------	DHEC Permit
-------	Geo Tech Report

(End of Section 01232)

SECTION 01250 MEASUREMENT AND PAYMENT

GENERAL: The following paragraph establishes the basis for Measurement and payment for the Work to be performed under the respective Bid items listed in the BID, Section 01140.

The Bid Price shall constitute full compensation for doing each item of work including all activities and incidentals required for the installation and completion of each item and accordance with the Contract Drawings, Specifications and requirements.

The Bid Price for each item shall be full compensation for the following activities: Furnishing and installing all materials and equipment, including excavation, disposal of surplus excavated or material, backfill, compaction, all necessary sheeting and bracing, dewatering, handling water flows, removing and replacing base and pavement outside the limits of demolition, property corners, signs, fences, shrubs, lawns, water lines, gas lines, storm drain lines and storm drainage structures, maintenance of drives and streets and protection of power and communication lines. The price shall also constitute full compensation for all barricades, lighting and flagmen as required for the protection of the public and public property.

Each price stated in the BID shall constitute full compensation for each completed item of work.

ITEM NO. 1 MOBILIZATION

The Lump Sum Bid for mobilization shall include:

1) The establishment of all temporary offices, buildings, fencing, staging areas, haul routes, and other facilities necessary for the work on the project.
2) Surveying and construction staking.
3) Performance bond, labor, and materials bond.
4) General Liability Insurance; and
5) All other work and operations which must be performed, or costs incurred prior to beginning work on the various items on the project site.

The mobilization cost will be paid with the first pay request and shall be limited to **9%** of the total contract amount.

Payment, at the amount stated, will be full compensation for the work satisfactorily completed.

ITEM NO. 2 TRAFFIC CONTROL

The Lump Sum Bid for traffic control shall include all costs for material, labor, coordination with the city to provide traffic control throughout the life of the project in accordance with SCDOT standards.

The traffic control cost shall be pro-rated equally, by month, over the length of the project.

Payment, at the pro-rated amount, will be full compensation for the work satisfactorily completed.

ITEM NO. 3 DEMOLITION

The Lump Sum Bid for demolition shall include, but not be limited to), all costs for furnishing labor and equipment for the complete removal, salvage, and disposal of existing material necessary for the installation of asphalt parking lot, Fit court, drainage work, landscaping and Irrigation. Demolition work includes removal and disposal of asphalt parking lot, batting cages driveway, fencing, landscaping, lighting and incidental items necessary to install new work. All lighting shall be removed in good working condition and delivered to the USC Sumter. Demolition work shall be performed in accordance with Specification Section 02219, DEMOLITION AND REMOVAL. This item does not cover (minor demolition) preparing areas that are currently grassed or planted that will eventually have pavement. Preparing these areas should be included in the Unit Price for the finished surfaces.

Measurement will be on a Lump Sum basis of the demolition work and lighting delivered accomplished on site.

Payment, at the Unit Price Bid, will be full compensation for the work satisfactorily completed.

ITEM NO. 4 TOP SOIL

The Unit Price Bid shall be full compensation for the cost of off-site borrow and hauling to stockpiles on-site to supplement topsoil stockpiled during stripping. Sub-grade preparation, placing and rolling of topsoil as required by the plans and specifications in all landscape areas shall be included in Lump Sum Bid Item No. 4.

Topsoil borrow measurement shall be made by the cubic yard, truckload volume, of topsoil delivered to the site.

Payment, at the Unit Price Bid, will be full compensation for the work satisfactorily completed.

ITEMS NO. 5 GRADING, EROSION CONTROL AND INSPECTIONS

The Unit Price Bid for grading, erosion control and inspections shall include all costs for furnishing all materials, labor, and equipment to grade the existing site to install the work shown at the location shown on the drawings, provide erosion control and inspections as required by the SCDHEC. The Bid Price shall also include all earthwork associated with the detention components (including temporary grassing) and preparation costs, including but not necessarily limited to compaction, and disposal of any excess materials.

Measurement will be on a competed graded site, erosion control installed, and inspection completed.

Payment at the lump sum Bid will be full compensation for the work satisfactorily completed.

ITEMS NO. 6a. STORM DRAINAGE PIPE

The Unit Price Bid for installing drain pipes indicated on the drawings shall include the costs for furnishing and installing the drain pipe lines, installing stone base as well as the costs of trench excavation, disposal of excess excavated material off-site, sheeting and bracing, dewatering, removal and disposal of existing storm drainage pipes indicated in the drawing, locating, avoiding, and working around existing utilities. The Contractor shall also include the cost for coordination of relocating utilities with utility owners and other associated administrative expenses. Hauling of fill materials, filling of ditches as shown in the Details, backfilling, compaction, grading, drain line tie-in to existing structures, and all other work associated with the requirements for the pipe installation shall also be included.

Measurement for drainpipe lines shall be in linear feet along the center line of the pipe as measured horizontally from the inside face of the outlet drainage structure to the inside face of the inlet drainage structure. This will reflect the actual length of pipe installed. Drain pipe lines without drainage structure inlet or outlet shall be measured to the end of the pipe.

Measurement of drainage pipes shall be for each pipe installed and accepted.

Payment, at the Unit Price Bid, will be full compensation for the work satisfactorily completed.

ITEMS NO. 6b. DETENTION POND

The Unit Price Bid for drainage structures (Detention Pond) shall include furnishing the materials, labor and equipment, as well as the cost, including but not necessarily limited to, for excavation, installation of Outlet Structure, Rip Rap Berm, Rip Rap Aprons, skimmer and all ancillary items at the locations specified on the drawings and in accordance with Specification Section 02454, STRUCTURES and SCDOT standards.

The method of measurement will be the detention pond items installed and accepted.

Payment, at the Unit Price Bid, will be full compensation for each item of work satisfactorily completed.

ITEMS NO. 6c STORM DRAINAGE PIPE TIE-IN

The Unit Price Bid for tying in the new drain pipe to existing an existing drainage structure indicated on the drawings shall include the costs for furnishing and installing the tying in the new drain line, modifying the ex. drainage structures, installing stone base as well as the costs of trench excavation, disposal of excess excavated material off-site, sheeting and bracing, dewatering, removal and disposal of excess material as indicated in the drawing, locating, avoiding, and working around existing utilities. The Contractor shall also include the cost for coordination of relocating utilities with utility owners and other associated administrative expenses. Hauling of fill materials, filling of ditches as shown in the Details, backfilling, compaction, grading, drain line tie-in to existing structures, and all other work associated with the requirements for the pipe installation shall also be included.

Measurement for drain pipe tied in shall be an each new storm drain line tied into existing drain box.

Measurement of drainage pipe tied in shall be for drain pipe tied/ installed and accepted.

Payment, at the Unit Price Bid, will be full compensation for the work satisfactorily completed

ITEM NO. 6d. - CONFLICT BOX (if necessary)

The Unit Price Bid for conflict box shall include furnishing the materials, labor and equipment, as well as the cost, including but not necessarily limited to, for excavation, removal of existing curb inlet, if necessary, shoring, dewatering, backfilling, compaction, and disposal of any excess material, in the installation of new conflict box if necessary at locations where underground utilities conflict with storm drains and in accordance with Specification Section 02454, STRUCTURES and SCDOT standards. Frames and covers are to be included in the Unit Bid price.

The method of measurement will be the number of conflict boxes installed.

Payment, at the Unit Price Bid, will be full compensation for each item of work satisfactorily completed.

ITEM NO. 7a-b. 4" CONCRETE SIDEWALK AND TRAIL

The Unit Price Bid for concrete sidewalk: 4" thick in the parking lot and 8'wide walking trail area shall include all costs for furnishing all materials, labor, and equipment to install concrete sidewalk, trail and ada ramps at the locations on the drawings and in CAST-IN-PLACE CONCRETE. The Bid Price shall also include all preparation costs, including but not necessarily limited to, excavation, grading, forming, brush and detail, reinforcing, compaction, and disposal of any excess materials.

Measurement will be on a square yard basis of the completed concrete sidewalk surface.

Payment at the Unit Price Bid will be full compensation for the work satisfactorily completed.

ITEM NO. 7c & d. STANDARD CURB & GUTTER AND FLUSH CURB & GUTTER

The Unit Price Bid for concrete curb and flush curb shall include (but not be limited to), all costs for furnishing all material, labor, and equipment required to construct concrete curb and flush curb at the locations indicated on the plans and as specified herein.

Measurement will be in linear feet of new concrete curb and flush curb in place and accepted. Length of curb will be measured; drop inlets and type 16 curb inlets will not be included. Flush Curb and Gutter will be measured at all handicap and driveways.

Payment will be made at the Unit Price Bid for concrete curb and gutter, measured as specified above and constitute full compensation for the work satisfactorily completed.

ITEMS NO. 7e, CONCRETE WHEEL STOPS

The Unit Price Bid for concrete wheel stops shall include all costs for furnishing all materials, labor, and equipment to install concrete wheel stops at the location on the drawings and in CAST-IN-PLACE CONCRETE. The Bid Price shall also include all preparation costs, including but not necessarily limited to, excavation, grading, forming, reinforcing, compaction, and disposal of any excess materials.

Measurement will be on an each basis for each concrete wheel stops installed and accepted.

Payment at the Unit Price Bid will be full compensation for the work satisfactorily completed.

ITEMS NO. 7f, ADA PLATES

The Unit Price Bid for ADA plates on concrete base shall include all costs for furnishing all materials, labor, and equipment to install ADA Plates (non-ada parking) on concrete base at the location on the drawings and in CAST-IN-PLACE CONCRETE. The Bid Price shall also include all preparation costs, including but not necessarily limited to, excavation, grading, forming, reinforcing, compaction, and disposal of any excess materials.

Measurement will be on an each basis for each ADA plates (non-ada parking) on concrete base installed and accepted.

Payment at the Unit Price Bid will be full compensation for the work satisfactorily completed.

ITEMS NO. 8a-b. LIGHT AND HEAVY-DUTY ASPHALT PAVEMENT

The Unit Price Bid for Light Duty and Heavy Duty Asphalt Pavement shall include (but not be limited to) all costs associated with installation of the new asphalt paving as required by the engineer, disposal of the waste materials, cleaning the construction area, and furnishing all stone base course, asphaltic concrete pavement, bituminous prime coat, material, labor, and equipment required to install new asphalt within the limits shown and all additional labor and equipment necessary to complete the work as described in the drawings and in accordance with specifications. Dispose of waste material in a manner consistent with local, State and Federal regulations.

Measurement will be on a square yard basis of the work completed.

Payment at the Unit Price Bid will be full compensation for work satisfactorily completed.

ITEM NO. 8c ASPHALT PATCH (if necessary)

The Unit Price Bid for asphalt paving patch shall include all costs for furnishing labor, equipment, and materials for saw cutting, excavating, grading, preparing the subsurface, installing new stabilized aggregate base material, prime coat, asphaltic concrete binder, tack coat, and asphaltic concrete surface course to meet SCDOT Standards as indicated on the drawings and in accordance with the specifications.

The asphalt paving will be paid based on the Lump Sum bid basis of the work completed.

Payment at the Unit Price Bid for asphalt patch will be full compensation for work satisfactorily completed.

ITEM NO. 9. ELECTRICAL COORDINTION

The Lump Sum Price for this item shall include costs for coordinating the electrical work by Duke Energy for installation of the proposed parking lot lights and relocation of a power pole and guy wires.

The amount to be paid under this item shall be compensation for furnishing the coordination, with Duke Energy.

Payment at the Unit Price Bid will be full compensation for satisfactory coordination and completed.

ITEM NO. 10a.-b. PARKING LOT AND STREET STRIPING

The Lump Sum Price for this item shall include costs for pavement striping and marking, to include but is not limited to parking lines, crosswalks, roadway striping, directional arrows and stop bars, lines center lines on the new and existing pavement as shown and as directed by SCDOT and the Owner.

The amount to be paid under this item shall be compensation for furnishing the paint materials, signage and installation.

Payment at the Unit Price Bid will be full compensation for completed and accepted striping and signage installed.

ITEM NO. 10c. ADA PARKING SPACE STRIPING & SIGNAGE

The Lump Sum Price for this item shall include costs for ADA Parking space pavement striping, markings, decorative signage and detectible warning plates, to include but is not limited to parking lines, ADA hatch, and symbol the new pavement as shown and as directed by SCDOT and the Owner.

The amount to be paid under this item shall be compensation for furnishing the paint materials, signage and plates installed and accepted.

Payment at the Unit Price Bid will be full compensation for completed and accepted striping and signage and plates installed.

ITEM NO. 11a-l PLANTING

The Unit Price bid for planting shall include costs for furnishing all labor, equipment and materials including planting mixtures and mulch for providing and installing the plant material at the locations shown on the drawings and in accordance with the specifications. The Contractor also shall include topsoil, planting mix, weed fabric (not in groundcover beds), and double hammered hardwood mulch in the bid price. Topsoil and mulch shall be added to areas shown and labeled as mulch.

Measurement will be on an each basis for plant material installed and accepted.

Payment, at the Unit Price Bid, will be full compensation for the work satisfactorily completed.

ITEM NO. 12 IRRIGATION

The Lump Sum bid for items under irrigation shall include costs for all labor, equipment, and material for installing the individual items at the locations on the Drawings and in accordance with the details and specifications. The price shall also include tying to the main line of the existing irrigation system and controller. Contractor shall redesign system as necessary based on flow and water pressure achieved on existing system.

Payment, at the Lump Sum Bid, will be full compensation for all work satisfactorily completed.

(End Section 01250)

PART ONE - GENERAL:

1.1 Scope

This work includes the demolition and removal of all items necessary for the completion of the work as shown on the contract documents, including but not limited to, asphalt base and surfacing, concrete paving, and designated vegetation.

1.2 Quality Assurance

1.2.1 Referenced Standards

Unless otherwise indicated, all referenced standards shall be the latest edition available at the time of bidding. Any requirements of these specifications shall in no way invalidate the minimum requirements of the referenced standards. South Carolina Highway Department Standard Specifications for Highway Construction, 2007 Edition.

PART TWO - PRODUCTS: (This section not applicable).

PART THREE - EXECUTION:

3.1 Requirements

The work includes demolition or removal of all existing materials indicated, specified or required. All materials resulting from demolition work, except as indicated or specified otherwise, shall become the property of the contractor and shall be removed from the limits of the owner's property. Remove all rubbish and debris from the site daily, unless otherwise directed.

3.1.1 Dust Control

Take appropriate action to check the spread of dust to avoid the creation of a nuisance in the surrounding area. Comply with all dust regulations imposed by local air pollution agencies.

3.1.2 Personnel

Where pedestrian and driver safety is endangered in the area of removal work, use traffic barricades with flashing lights to meet the SCDOT standard for traffic control.

3.2 – Existing Facilities to be Removed

3.2.1 Asphalt

Remove asphalt concrete, concrete and base materials completely where indicated within the limits as specified for the new work. Exercise extreme care in the demolition procedures to avoid damage to private and public property. The existing roadway materials are indicated on the drawings. This information is not presented as a guarantee of the material to be encountered. Contractors are to make their own determinations as to the work involved.

3.2.2 Miscellaneous Removals

Remove completely all lawn and gravel within the limits specified for the new work. Exercise extreme care in the removal procedures to avoid damage to private and public property.

3.2.3 Concrete

Where concrete work to be removed abuts concrete to remain, saw concrete along straight lines to a depth of not less than two inches (2"). The remainder of the concrete shall be broken out, provided that the broken area is concealed in the finished work, and the remaining is sound. At locations where the broken face cannot be concealed, it shall be ground smooth or the saw cut shall be made entirely through the concrete.

3.2.4 Salvaged Materials

Items to be salvaged and delivered to the City include, any and all asphalt millings, chain link and ornamental fencing, and signage in the construction limits.

3.3 – Clean Up

Remove and transport all debris and rubbish in a manner that will prevent spillage on streets or adjacent areas. Clean up spillage from streets and adjacent areas.

3.4 - Regulations

Comply with all Federal, State and local hauling and disposal regulations.

(End of Section 02050)

SECTION 02110 CLEARING AND GRUBBING

PART ONE – DESCRIPTION:

1.1 The clearing work covered by this section consists of cutting, removing and properly disposing of vegetation and debris. Trees specifically identified on the plans to be preserved shall be adequately delineated and flagged by the CONTRACTOR, such that the balance of the work may be performed in a safe and harmless manner in the vicinity of preserved trees. Such tree preservation will be considered part of the work and shall be in conformance with applicable local codes and regulations. Clearing and grubbing shall be performed in areas as called for on the plans, the limits of which shall coincide with the construction limits and in general shall extend five (5) feet beyond top of cut and toe of fill, not to exceed the limits of the Owner's property.

1.2 Related Work

Any reference to standard specifications refers to the most current published date of the following specification unless otherwise noted.

1.2.1 Reference the following specifications for related work:
02210 Unclassified Excavation and Grading

1.2.2 Clearing and grubbing activities shall conform to Section 201 of the "Standard Specifications for Highway Construction" dated 2007, published by the South Carolina Department of Transportation, except that grubbing shall be performed on all cleared excavation and embankment areas and shall include the complete removal of all stumps, roots and embedded debris.

1.3 The grubbing work covered by this section consists of removing and properly disposing of all surface vegetation and debris. Where the material being removed is high in organic matter content, such as root mat and other vegetative matter, it shall be considered vegetation and removed as part of the work of grubbing. Where material being removed consists predominantly of soils, such removal will be considered part of the work covered by Section 02210 of these specifications, entitled Unclassified Excavation and Grading.

1.4 The work of clearing and grubbing shall also include the removal and satisfactory disposal of crops, weeds and other annual growth, fences, steps, walls, chimneys, column footings, other footings, foundation slabs, basements, other foundation components, signs, junked vehicles, and other rubble and debris, and the filling of holes and depressions. This work shall also be performed in all non-wooded areas within the construction limits, shown on the project plans upon which seeding and mulching, sprigging or sodding is to be performed.

As a part of the work of clearing and grubbing, the CONTRACTOR will be required to cut off and plug at the right of way or construction limits, as directed by the ENGINEER, any private water or sewer line intercepted during the construction of the project, as well as cut off and remove from the construction area any septic tank or portion thereof during the construction of the project.

1.5 Clearing and grubbing operations shall be completed sufficiently in advance of grading operations as may be necessary to prevent any of the debris from the clearing and grubbing operations from interfering with the excavation or embankment operations.

1.6 The CONTRACTOR shall obtain, at his own expense, all necessary permits pertaining to clearing and grubbing work not already secured by the ENGINEER. The CONTRACTOR shall then provide a copy of any and all required permits to the ENGINEER.

PART TWO – MATERIALS:

Topsoil shall be considered to mean original surface soil, typical of the area, which is capable of supporting native plant growth, and shall be free of large stones, roots, brush, waste construction debris and other undesirable material.

PART THREE – INSTALLATION:

3.1 Clearing and grubbing shall be performed in areas as called for on the plans, the limits of which shall coincide with the construction limits and in general shall extend 5 feet beyond top of cut or toe of fill, not to exceed the limits of the OWNER's property. Clearing and grubbing activities shall conform to the "Standard Specifications for Highway Construction" dated 2007, published by the South Carolina Department of Transportation, except that grubbing shall be performed on all cleared excavation and embankment areas and shall include the complete removal of all stumps, roots and embedded debris.

3.2 The CONTRACTOR shall perform all clearing and grubbing operations before construction operations begin.

3.2.1 Where adjacent areas within the site but outside the limits of construction are disturbed as a result of clearing and grubbing activities, the CONTRACTOR shall remove all debris and restore to the original grades and equal or better condition.

3.2.2 The CONTRACTOR shall exercise caution to protect and maintain all existing utilities and underground works which are to remain. Any existing utilities or underground works which are to remain that are disturbed during construction shall be repaired or replaced at the CONTRACTOR's expense.

3.2.3 The CONTRACTOR must comply with all local, state and federal laws, ordinances and regulations in the removal and disposal of clearing and grubbing of all vegetation, timber, waste and all surface debris that must be hauled from the Project Site. No burning of materials will be allowed on site. The CONTRACTOR shall properly dispose of all cleared materials at his expense, in conformance with all applicable local and state laws and ordinances with the exception of any materials to be reused or recycled as directed elsewhere in this contract.

3.3 Stripping and Storage of Topsoil

All topsoil suitable for reuse, in the opinion of the ENGINEER, shall be stripped to its full depth, all topsoil to be moved shall be free of large stone, roots, brush, waste construction materials and other undesirable matter.

3.3.1 Topsoil stripping shall be accomplished from all topsoiled areas to be disturbed.

3.3.2 Existing lawn sods may be left to decompose with the topsoil. Heavier stands of weeds and grasses shall be removed as directed by the ENGINEER prior to the stripping operations.

3.3.3 The topsoil shall be kept separate from other excavated materials and stored in stockpiles, the location of which shall be as directed by the ENGINEER. Topsoil shall be stockpiled so that it shall not be subject to abnormal erosion and loss, and so that it does not impede the flow of drainage runoff. The directed locations of topsoil stockpiles will, when construction sequence permits, be located in areas that have previously been graded to design rough grade.

3.3.4 Any excess topsoil shall be hauled off the OWNER's property by the CONTRACTOR at CONTRACTOR expense.

(End of Section 02110)

SECTION 02210 UNCLASSIFIED EXCAVATION AND GRADING

PART ONE – DESCRIPTION:

This portion of the project includes the excavation, undercut excavating, grading, earthwork and compaction required as shown on the plans and all other associated miscellaneous items of earthwork construction, as shown on the plans. The CONTRACTOR shall furnish all materials, labor, equipment and incidental items necessary to complete this portion of the work as detailed on the plans and as called for in these Specifications.

1.1. Any reference to standard specifications refers to the most current published date published of the following specification or regulation unless otherwise noted.

All unclassified excavation shall be in accordance the latest version of the "Standard Specifications for Highway Construction", published by the South Carolina Department of Transportation, unless otherwise directed herein.

1.2. Any reference to standard specifications refers to the most current published date of the following specification unless otherwise noted:

Reference the following specifications for related work:

02110 Clearing and Grubbing
02933 Seeding and Mulching
ASTM D698C
State Highway Specifications referred to in Section 1.1

1.3. Definitions

Trench Rock: That rock within the trenching limits that must be removed for utility construction.

Mass Rock: That rock which must be removed by blasting to permit reaching one foot below the design finish grade.

Geotechnical Engineer, also known as the “Project Geotechnical Engineer”: Professional soils engineer hired by the CONTRACTOR and approved by the ENGINEER for this project.

Surveyor: Licensed surveyor hired by the CONTRACTOR and approved by the ENGINEER for this project.

PART TWO – MATERIALS:

2.1. Topsoil shall be considered to mean original surface soil, typical of the area, which is capable of supporting native plant growth, and shall be free of large stones, roots, brush, waste, construction debris and other undesirable material or contamination.

2.2. All fill used for site grading operations should consist of a clean (free of organics and debris) low plasticity soil (plasticity index less than 30).

PART THREE – INSTALLATION:

3.1. General Requirements

3.1.1. In the event a subsurface investigation report has been prepared for this project, all excavation, filling and grading shall be performed in accordance with the recommendations of the subsurface report, and under the direction of the project geotechnical ENGINEER.

3.1.2. Construction stakeout will be by a licensed survey firm provided by the CONTRACTOR. Exact locations and grade points are to be staked or fixed by the surveying firm before construction. The CONTRACTOR shall not disturb any benchmarks, reference stakes or property line monuments. In the event it becomes necessary to remove any benchmark, reference stake or property line monument in the performance of the work, the CONTRACTOR shall reference such points in preparation for replacement. If any such points are disturbed or damaged, they shall be replaced by a Registered Land Surveyor in the state where the work is located at the expense of the CONTRACTOR.

3.1.3. Existing utility lines (either overhead or underground), sidewalks, fencing, pavement or other structures shown on the drawings, shown to the CONTRACTOR or mentioned in the plans and specifications shall be kept free of damage by the CONTRACTOR's operations. It shall be the responsibility of the CONTRACTOR to verify the existence and location of all underground utilities within the Project Site. The omission from or the inclusion of utility locations on the plans is not to be considered as the non-existence of or a definite location of existing underground utilities. Any existing construction damaged by the CONTRACTOR shall be restored to an equal condition as that existing at the time prior to damage, at the CONTRACTOR's expense. If any existing utility is inadvertently damaged during construction, the CONTRACTOR shall notify the utility, the ENGINEER and the OWNER of said damaged utility at once so that emergency repairs may be made at the CONTRACTOR's expense and to the satisfaction of the party having jurisdiction of the utility.

3.2. Unclassified Excavation

3.2.1. Upon completion of the stripping operations, and after all excavation of the site has been completed to the lines and grades shown on the drawings, the exposed subgrade in cut areas should be proofrolled as specified herein for areas to receive fill. Any areas which deflect, rut or pump excessively during the proof rolling or fail to "tighten up" after successive passes should be undercut to suitable soils and replaced with compacted fill.

3.2.2. All site excavation shall be unclassified regardless of the nature of the materials encountered with the exception of rock excavation. Only that material which in the opinion of the ENGINEER cannot be removed with a caterpillar D-9 or equal, equipped with a properly fitted single tooth ripper, or removed by a caterpillar 225 backhoe or equal, equipped with rock teeth, will be regarded as rock. The ENGINEER should be notified immediately if rock is encountered. All excavation materials which are not required for fills shall be considered as waste and shall be disposed of off the OWNER's property unless directed otherwise by the OWNER in writing.

3.2.3. All site excavation of previously stockpiled or buried construction, clearing or demolition debris or any other refuge shall be properly disposed of offsite at the CONTRACTOR's expense. The CONTRACTOR shall obtain all necessary Federal, State or Local permits for transporting and disposing of such material, at his expense.

3.2.4. Rock in the bottom of roadway cuts shall be excavated to a depth of 1 foot below the roadbed and ditches. Rock in building pad areas shall be excavated to a depth of 1 foot below finished grade or as indicated on the grading plans.

3.2.5. The CONTRACTOR shall provide all sheeting, shoring, underpinning and bracing required to hold the sides of the excavation and for the protection of all adjacent structures. The CONTRACTOR shall be held responsible for any damage to any part of the work by failure of excavated sides or bottoms.

3.3. Blasting

3.3.1. Any and all blasting operations shall be conducted in strict accordance with existing ordinances and regulations relative to storage and use of explosives. Blasting shall be done only by experienced men and extreme caution and care shall be exercised to prevent injury to persons or damage to any pipe, mains, wires, drains, buildings, railroad tracks or other property above or below the surface of the ground. The CONTRACTOR shall use safety nets or other equivalent measures as approved by the ENGINEER to reduce the possibility of flying rock as a result of blasting operations. The CONTRACTOR shall be held strictly responsible for any injury to persons or damage to public or private property.

3.3.2. The CONTRACTOR shall submit blasting plans to the ENGINEER for review and shall not proceed with blasting operations until approval has been granted. As directed by the ENGINEER, blasting operations shall be monitored to insure that vibration levels produced by blasting are within tolerable limits.

3.3.3. The CONTRACTOR shall obtain at his expense, all Federal, State and Local permits required to perform blasting operations.

3.4. Dewatering

3.4.1. The CONTRACTOR shall control the grading in all areas so that the surface of the ground will be properly sloped, diked or ditched to prevent water from entering into excavated areas. The CONTRACTOR shall maintain sufficient personnel and equipment to promptly and continuously remove all water, from any source, entering or accumulating in the excavation or other parts of the work. All water pumped or drained from these areas shall be disposed of in a suitable manner without damaging adjacent property or other work under construction.

3.5. Embankments, Fills and Backfills

3.5.1. Upon completion of the stripping operations, the exposed subgrade in areas to receive fill should be proofrolled with a loaded dumptruck or similar pneumatic-tired vehicle with a

minimum loaded weight of 25 tons, under the supervision of the geotechnical ENGINEER. The proof rolling procedure should consist of four complete passes of the exposed areas with two of the passes being in a direction perpendicular to the preceding ones. Any areas that deflect, rut or pump excessively during the proofrolling or fail to "tighten up" after successive passes should be undercut to suitable soils and replaced with compacted fill.

3.5.2. Embankments and fills shall be constructed at the locations and to the lines and grades indicated on the drawings. Material shall be placed in horizontal layers not to exceed 8 inches in loose depth and thoroughly compacted prior to placing each following layer. All fill material shall be free from roots or other organic material, trash, and from all stones having any one dimension greater than 6 inches. Stones larger than 4 inches, maximum dimension, shall not be permitted in the upper 6 inches of fill or embankment. Fill areas shall be kept level with graders or other approved devices.

3.5.3. Embankment and fill compaction shall be accomplished by thoroughly compacting each layer with sheep foot rollers, pneumatic rollers, and mechanical tampers in places inaccessible to rollers, or other equipment. When material has too much moisture, grading operations shall be limited to drying soil by spreading and turning for drying by the sun and aeration. When material is dry, moisture shall be added by sprinkling by approved means.

3.5.4. All embankments and fills shall be compacted to the following percentages of the maximum dry density as determined by the Standard Proctor Density Test, ASTM D-698, Method C.

3.5.5. The following table shall be used unless otherwise specified:

TABLE OF COMPACTION

Type Fill or Embankment	Zone	Minimum Density %
Structure	All Depths	98
Roadway & Sidewalks	Top l2 Inches	98
Other Areas	Remainder	95

Embankment types are defined as follows:

Structure - beneath concrete slabs of buildings, floors, foundations, etc.
Roadway and Parking - beneath all roads, streets, truck operations, and automobile parking lots

3.5.6. Where backfilling is required after the completion of drainage structures, all forms, trash, and construction debris shall be removed from excavation before backfilling begins. Backfill shall be placed in horizontal layers of 6 inches in loose depth. Compaction shall conform to requirements in the above table. Heavy rollers, crawler equipment, trucks or other heavy equipment shall not be used for compacting backfill within 5 feet of structure walls or other facilities which may be damaged by their weight or operation. No backfilling shall begin until concrete and masonry walls are properly cured.

3.5.7. The CONTRACTOR shall carry the top of embankments, fills, or backfills to the surrounding grade so that upon compaction and subsequent settlement, the grade will be at proper elevation. Should settlement occur during the guarantee period of the contract, the CONTRACTOR shall provide sufficient fill to bring area up to finished grade and shall reseed as required.

3.6. Proof rolling Schedule

3.6.1. Proof rolling under the observation of the geotechnical ENGINEER will be performed using a loaded dumptruck or similar pneumatic-tired vehicle with a minimum loaded weight of 25 tons as specified herein and as follows.

3.6.2. Immediately following stripping, all areas to receive fill shall be proofrolled as specified herein.

3.6.3. Immediately following the completion of excavation to proposed grades in cut areas, proof rolling shall be performed as specified herein.

3.6.4. Immediately prior to stone base course placement in pavement areas and following final floor slab preparation, all subgrade areas will be proofrolled. Any local areas that deflect, rut or pump under the roller shall be undercut and replaced with compacted fill material as specified herein.

3.7. Soil Inspection and Tests

3.7.1. All excavated and fill material shall be removed, selected, placed and compacted under supervision of a representative of a commercial soils testing laboratory which will be selected by the CONTRACTOR and approved by the ENGINEER. A commercial soil testing laboratory shall be any firm properly equipped to perform such compaction tests and who has in their employment a Professional ENGINEER experienced in testing and soil mechanics. The laboratory representative shall have the authority to approve or disapprove the condition of the subgrade on which fill is to be placed, filled material, placement methods, compaction methods, and shall make compaction density tests as necessary to determine that the specified density is obtained. The CONTRACTOR shall notify the laboratory at least three (3) days prior to starting fill operations in order that suitability of material for compaction may be checked and no material shall be used that has not been previously checked and approved by the laboratory. The laboratory shall be notified before any cut is made or fill is placed in order that the laboratory representative may be present during all grading operations. The CONTRACTOR shall remove, replace, recompact and retest all fills failing to meet the density requirements at his own expense.

3.7.2. A soil testing laboratory shall be retained by the CONTRACTOR and approved by the ENGINEER to supervise fill placement and compaction. Extra time and trips caused by excessive delay, failure of the CONTRACTOR to properly coordinate with the laboratory, or failure of the CONTRACTOR to properly compact fill material shall be the responsibility of the CONTRACTOR.

3.7.3. Field density tests shall be performed by the OWNER's testing agency for each one foot of fill material placed at the following frequency: once per day.

3.7.4. A minimum of one field density test shall be made for each 5,000 square feet of fill placement in building areas.

3.7.5. A minimum of one field density test shall be made for each 10,000 square feet of fill placement in all other areas where pavement is to be placed.

3.7.6. Prior to final acceptance, the Soils ENGINEER and Surveyor shall submit certification specifying that the project compaction criteria and subgrading elevations have been satisfactorily obtained. The CONTRACTOR is responsible for the certification statement from the Surveyor. This certification should be in the form of a letter accompanied by a stamped as-built drawing showing spot elevations.

3.8. Borrow and Waste Materials

3.8.1. Borrow

In the event borrow material is required, the borrow material shall be checked for suitability for compaction and approved by the soils testing laboratory. The CONTRACTOR shall notify the laboratory at least three (3) days in advance of beginning borrow operations. Borrow excavation shall be performed in accordance with referenced State Highway construction Specification in which state the project is located except where modified herein.

3.8.2. Waste

Excavated materials not suited for backfill and excavated material in excess of that needed to complete the work shall be wasted on the project site where directed by the ENGINEER or hauled off the OWNER's property at the CONTRACTOR's expense. Waste areas shall be left in a graded and sloped condition to allow natural drainage of surrounding area.

3.9. Residual Soil Areas

If proof rolling indicates that on-site virgin soils supporting any roadway, parking, building or other structural areas are not adequate as determined by the Soils ENGINEER, then these unsuitable areas shall be repaired by the CONTRACTOR. The necessary repair procedure shall be determined by the Soils ENGINEER and may include scarifying, drying and recompaction procedures or undercutting and replacement procedures.

3.10. Final Grading

3.10.1. On completion of all grading, all graded areas (except building pads and pavement areas in rough grading contracts and all cut slopes steeper than 4:1 slope) shall be provided with 4 inches of topsoil and brought to the finished grades shown on the drawings. Areas disturbed by operations of the CONTRACTOR shall be properly returned to their original condition with a topsoil covering of 4 inches.

3.10.2. After the entire graded area has been brought to the finished grades shown on drawings, all areas shall be left smooth and free from erosion, ridges, ditches and evidence of ponding. Final grades shall be free from all roots, debris, rock and soil lumps and left in readiness for seeding.

3.10.3. Prior to acceptance of the entire project, the CONTRACTOR shall correct all embankments and graded areas of all damages due to washes, settlement, erosion, equipment ruts or any other cause at his expense.

3.10.4. Prior to final acceptance, the CONTRACTOR shall provide certification as specified in paragraph 3.7.6 that all grades are + .1 foot of the finished grades shown on project drawings.

3.10.5. The CONTRACTOR shall stabilize all disturbed areas, unless otherwise directed, by seeding and mulching per section 02933 of these specifications or other means of stabilization called for by the contract drawings.

3.11. Clean-Up

Upon completion or termination of the work, and before final payment is made, the CONTRACTOR shall remove from site all equipment, waste materials and rubbish resulting from his operations. In the event of his failure to do so, the same may be done by the OWNER at the expense of the CONTRACTOR.

(End of Section 02210)

SECTION 02222 EXCAVATING, BACKFILLING & COMPACTING FOR UTILITIES

PART 1 DESCRIPTION

The CONTRACTOR shall furnish all labor, material, equipment, and supplies, and shall perform all earthwork including excavation and backfill, pavement removal, sheathing, bracing, shoring, pumping or bailing, dewatering, restoration and cleanup, all as indicated, specified and/or necessary to complete the work.

1.1 Any reference to standard specifications refers to the most current published date of the following specification unless otherwise noted.

1.2 RELATED WORK

Reference the following Specifications Sections for related work:

02270	Erosion and Sediment Control
02933	Seeding and Mulching
03300	Cast-in-Place Concrete

Reference the following National Specifications for related work:

D-2487	ASTM Uniform Soil Classification System, 1991 (US Army Corp of Engineers Standard as revised by the US ACE and the Bureau of Reclamation in 1952)
D-698	ASTM Compaction Testing
P-1926	OSHA Regulations

1.2. REFERENCES

1.2.1 Any reference to Standard National or State Specifications and/or Regulations refers to the most current published date of the specification or regulation unless otherwise noted.

The design, manufacture, and installation of these materials shall meet or exceed the applicable provisions and recommendations of the noted National Specifications and/or Regulations or meet the requirements of the latest revision of these specifications or regulations.

1.2.2. Any reference to SCDOT standard specifications was obtained from the "Standard Specifications for Highway Construction" latest edition, published by the South Carolina Department of Transportation.

PART TWO – MATERIALS:

2.1 Fill Material shall be classified as ML-low plasticity silt or better by the Unified Soil Classification System and tabulated below:

Unified Class	Description

Class I		1/4" - 1-1/2" well graded stone including coral, slag, cinders, crushed stone and crushed shells
Class II	GM	Coarse gravel well graded
	GP	Coarse gravel poorly graded
	SW	Coarse sands well graded
	SP	Coarse sands poorly graded
Class III	GM	Silty-sandy gravel
	GC	Clayey-sandy gravel
	SM	Silty-sands
	SC	Clayey-sands
Class IV	ML	Inorganic silts and fine sands

Fill material shall exhibit a plasticity index of less than 20 and Standard Proctor maximum density at optimum moisture greater than 90 pounds per cubic foot.

The following materials are unacceptable

	Unified Class	Description
Class IV	CL	Inorganic clays - low plasticity
	MH	Inorganic elastic silts
	CH	Inorganic clays - high plasticity
Class V	OL	Organic silts
	OH	Organic clays
	PT	Highly organic soil

2.2 WASHED STONE

Stone material where indicated shall be crushed stone or gravel of strong, durable nature and shall conform to standard size No. 57 stone in SCDOT Appendix 6:

1 ½”	100%
1”	95-100%
½”	25-60%
#4	0-10%
#8	0-5%

2.3 CLASS C CONCRETE

Minimum 28-day compressive strength of 2000 psi.

PART 3 CONSTRUCTION

3.1 EXISTING FACILITIES

3.1.1 Existing Utilities Shown on the Drawings

It shall be the CONTRACTOR's responsibility to conduct the work in such a manner as to avoid damage to or interference with any utilities services shown on the drawings. If such damage, interference, or interruption of service shall occur as a result of his work, then it shall be the CONTRACTOR's responsibility to promptly notify the ENGINEER of the occurrence and to repair or correct it immediately, at his own expense, and to the satisfaction of the ENGINEER and the OWNER of the Utility.

3.1.2 Existing Utilities Not Shown on the Drawings

It shall be the CONTRACTOR's responsibility to exercise all reasonable precaution in the performance of the work to avoid damage to or interference with any utilities services, even though not shown on the drawings. If such damage, interference, or interruption of service shall occur as the result of this work, then the CONTRACTOR's responsibility will be the same as stipulated in Paragraph 3.1.1 above.

3.2 EXCAVATION AND BACKFILL - General Requirements

3.2.1 Pavement, gutters, sidewalks, aprons and curbs which will be disturbed by excavation shall be removed and disposed of as a part of ordinary excavation. That which is to be removed shall be cut or sawn along clean straight lines from that which is to remain. Remove enough such that a minimum of twelve inches of undisturbed earth remain between the excavation and that which is to remain.

3.2.2 Where required, and as approved by the ENGINEER, sheeting and bracing shall be used to prevent injury to persons, caving of trench walls and to conform with all governing laws and ordinances. Sheeting and bracing shall be left in place until the trench is refilled to a safe limit. The top portion may then be removed, but the lower portion shall remain undisturbed.

3.2.3 It is the responsibility of the CONTRACTOR to provide an adequate dewatering system where required. The system shall be capable of removing any water that accumulates in the excavation and maintaining the excavation in a dry condition while construction is in progress. The surface of the ground shall be sloped away from the excavation or piping provided to prevent surface water from entering the excavation. Disposal of water resulting from the dewatering operation shall be done in a manner that does not interfere with normal drainage, and does not cause damage to any portion of the work or adjacent property. All drains, culverts, storm sewers and inlets subject to the dewatering operation shall be kept clean and open for normal surface drainage. The dewatering system shall be maintained until backfilling is completed or as otherwise directed by the ENGINEER. All damage resulting from the dewatering operation shall be repaired by the CONTRACTOR to the satisfaction of the ENGINEER and at no cost to the OWNER.

3.3 The CONTRACTOR shall erect, maintain, and safeguard temporary bridges, walkways, or crossings where it is necessary to maintain traffic. Where trenches are open in the vicinity of pedestrian or vehicular travel lanes, suitable carriers will be constructed and maintained and the work will be further protected from sunset to sunrise with a sufficient number of lights or flares to fully protect the public from accidents on account of construction.

3.4 If the specified depth for foundations proves insufficient to reach firm ground, the ENGINEER shall be notified and will furnish instructions for proceeding with the work.

3.5 ROCK, wherever used as a name for excavation material, shall mean boulders exceeding one-half cubic yard in volume or solid ledge rock, which in the opinion of the ENGINEER, requires for its removal drilling and blasting, or wedging or sledging and barring. Where rock excavation is necessary, the CONTRACTOR shall excavate the same as near the neat lines of the trench as practicable and he shall take all due precautions in the pursuance of the work. He will be held strictly responsible for all injury to life and to public and private property.

3.5.1 Rock shall be removed from the excavation to the following limits:

3.5.1.1 Trenches - The diameter of the pipe plus 8-inches on each side, extending six inches below the pipe wall and bell.

3.5.1.2 Structures - 12-inches beyond the vertical plane of the structure on all sides and on the bottom only to the depth necessary for proper installation.

3.6 BLASTING

Prior to commencing any blasting operations the CONTRACTOR shall notify the ENGINEER and either the Local Fire Department - Fire Prevention Section or the County Fire Administrator (as applicable) and obtain blasting permits as required. Blasting must be done by a licensed blaster. Blasting and magazine permits must be obtained from the South Carolina Department of Labor, Licensing, and Regulation. The CONTRACTOR must furnish proof (certification) of insurance specifically covering any and all obligations assumed pursuant to the use of explosives.

All blasting operations shall be conducted in strict accordance with any and all decrees, rules, regulations, ordinances, laws as may be imposed by any regulatory body and/or agency having jurisdiction over the work relative to handling, transporting, use and storage of explosives. Blasting shall be done only by competent and experienced men whose activities shall be conducted in a workmanlike manner. Satisfactory information must be provided to the ENGINEER, that the blaster meets or exceeds the qualifications enumerated in OSHA Regulations Part 1926, Subpart U, Section 1926.901 - Blaster Qualifications.

The CONTRACTOR shall protect all structures from the effects of the blast and repair any resulting damage. If the CONTRACTOR repeatedly uses excessive blasting charges or blasts in an unsafe or improper manner, the ENGINEER may direct the CONTRACTOR to employ an independent blasting consultant to supervise the preparation for each blast and approve the quantity of each charge.

3.6.1 Overburden

Undisturbed overburden may be deemed adequate in lieu of matting but only after the actual depth of the undisturbed overburden has been determined and adjudged sufficient by the ENGINEER. Under no circumstances will loose or fill overburden be adequate without the use of weighted mats.

3.6.2 Permission to Blast

The CONTRACTOR shall not be allowed to blast before 9 a.m. or after 3 p.m. without approval of the ENGINEER and OWNER. Blasting will not occur within any rights-of-way maintained by any agency (D.O.T., R.R., Gas, OWNER, etc.) without specific approval of the controlling agency and only in accordance with their respective requirements (as exceeded herein). The CONTRACTOR shall be held responsible for any and all injury to persons or damage to public or private property.

3.6.3 The CONTRACTOR shall not use excavated rock as backfill material. Dispose of rock which is surplus or not suitable for use as rip rap.

3.6.4 Monitoring

The CONTRACTOR shall notify the ENGINEER prior to any blasting. Additionally, the CONTRACTOR shall notify the ENGINEER before any charge is set. Following review by the ENGINEER regarding the proximity of permanent structures to the blasting site, the ENGINEER may direct the CONTRACTOR to employ an independent, qualified specialty Sub-Contractor, approved by the ENGINEER, to monitor the blasting by use of seismograph, identify the areas where light charges must be used, conduct pre-blast and post-blast inspections of structures, including photographs or videos, and maintain a detailed written log.

3.7. **STRUCTURE EXCAVATION AND BACKFILL**

3.7.1 Structure Excavation shall be made at the locations shown on the plans and to the exact subgrade required. Bottom of excavations shall be level and in firm, solid material, with soft material or voids treated as specified. Excavated areas shall be kept free of water during the construction period. Where earth will stand, footing trenches may be cut to the exact size of the footings; otherwise, forms shall be used. Where necessary, sides of excavations shall be shored and sheathed, or cofferdams built, as required for protection of the work and personnel.

3.7.1.1 Wherever excavation for a foundation extends below the water table or where specifically indicated on the plans, washed stone shall be placed to a minimum thickness of 12 inches, unless otherwise shown, prior to placing the foundation. The washed stone shall be compacted to 90% of maximum as determined by the Standard Proctor test (ASTM D698).

3.7.1.2 If the specified depth for foundations proves insufficient to reach firm ground, the ENGINEER shall be notified for furnishing instructions and proceeding with the work.

3.7.1.3 An adequate dewatering system shall be provided at all structure excavations and elsewhere as directed by the ENGINEER. If a well-point system is used, the CONTRACTOR shall submit plans to the ENGINEER for approval. The system shall be capable of removing any water that accumulates in the excavation and maintaining the excavation in a dry condition while construction is in progress. The surface of the ground shall be sloped away from the excavation or piping provided to prevent surface water from entering the excavation. Disposal of water resulting from the dewatering operation shall be done in a manner that does not interfere with normal drainage, and does not cause damage to any portion of the work or adjacent property. All drains, culverts, storm sewers and inlets subject to the dewatering operation shall be kept clean and open for normal surface drainage. The dewatering system shall be maintained until backfilling is complete or as otherwise directed by the ENGINEER. All damage resulting from the dewatering operation shall be repaired by the CONTRACTOR to the satisfaction of the ENGINEER and at no cost to the OWNER.

3.8. Structure Backfill shall be done with material free from large clods, frozen earth, organic material or any foreign matter, and shall evenly and carefully be placed and tamped in horizontal layers. Compaction equipment specifically designed for these purposes must be present and operational at the job site and shall be utilized throughout to obtain uniform compaction. The degree of compaction and the density shall be determined by the Standard Proctor Test (ASTM D698), with compaction requirements as follows:

Percent of Maximum Density at Optimum Moisture	Location
100	Top 12" of fill for pavement or surfacing
95	Full depth beneath all roads (paved or unpaved), driveways, sidewalks, undercut backfill for structure excavation, and lots
95	All other areas not defined above

3.8.1 No backfill shall be placed against a structural wall until all connecting structural members are in place. It shall be the CONTRACTOR's responsibility to provide compaction to such a degree that subsidence after placing shall not be detrimental to the stability or appearance of the structure, adjacent ground, or paved areas. The CONTRACTOR shall provide adequate protection to all structures during backfilling and shall use every precaution to avoid damaging or defacing them in any way. CONTRACTOR shall be responsible for the protection of all structures from damage or flotation prior to backfill being placed.

3.8.2 Unless otherwise approved by the ENGINEER, liquid-retaining structures shall not be backfilled until tested for leakage.

3.9. **UNSTABLE SUBGRADE**

Should unstable soil, organic soil, or soil types classified as fine-grained soils (silts and clays) by ASTM D-2487 be encountered in the bottom of pipe trenches or structure excavations, such soils shall be removed to a depth and width determined by the ENGINEER, properly disposed of and shall be backfilled with crushed stone conforming to the Department of Transportation Specifications, Size 57. Placement shall not exceed 12-inches loose and compacted to 90% of the dry density determined by the Standard Proctor Test ASTM D698 (Class C concrete may be substituted in place of #57 stone at the CONTRACTOR's option. A 24-hour cure must be given before proceeding with the work).

3.10. **SITE GRADING**

Site grading shall conform to the grades indicated by the finish contours on the plans. Where topsoil, pavement, gravel or crushed stone surfacing and other items are shown, rough grade shall be finished to such depth below finish grade as necessary to accommodate these items. All areas where structures are to be built on fill shall be stripped to such depth as necessary to remove turf, roots, organic matter and other objectionable materials.

3.10.1 Excavation shall be made to the exact elevations, slopes and limits shown on the plans. Material excavated may be used as fill material as long as it meets the material requirements established herein. Acceptable material must be stockpiled neatly onsite and clear of all unsuitable materials to be removed from the site.

3.10.2 Fill shall incorporate only acceptable materials defined herein. It shall not contain organic material, roots, debris or rock larger than 6 inches in diameter.

3.10.2.1 Where fill is to be placed, all existing vegetation, roots and other organic matter down to 12 inches below grade shall be stripped and disposed of as directed.

3.10.2.2 After clearing existing vegetation, at the ENGINEER's discretion, the site may require proof rolling to insure that all unstable material has been removed. Proof rolling shall be done in the ENGINEER's presence, utilizing a loaded dump truck or similar pneumatic-tired vehicle with a minimum loaded weight of 25 tons.

3.10.2.3 Fill shall be placed in successive compacted layers not to exceed 6 inches compacted thickness. Each layer shall be spread evenly and compacted as specified below before the next layer is placed.

3.10.2.4 Rock shall not be incorporated in fill sections supporting pavement or structures.

3.10.2.5 Where natural slopes exceed 3:1, horizontal benches shall be cut to receive fill material. Slopes of less than 3:1 and other areas shall be scarified prior to placing fill material.

3.10.2.6 Borrow material, as required, shall be provided by the CONTRACTOR at his own expense. Borrow material on site may be utilized provided it complies with these specifications.

3.11. COMPACTION

Unless otherwise noted, each layer of fill and backfill and the top 12 inches of existing subgrade material in cuts shall be compacted by approved equipment as specified below. The degree of compaction and the density shall be determined by the Standard Proctor Test (ASTM D698).

	Percent of Max. Dry Density at Optimum Moisture Content
Top 12 inches of fill under pavement or surface	95%
Fill under roads and structures	95%
Fill and backfill in other areas	95%

Material too dry for proper compaction shall be moistened by suitable watering devices, turned and harrowed to distribute moisture, and then properly compacted. When material is too wet for proper compaction, operations shall cease until such material has sufficiently dried.

3.12. COMPACTION TESTS

The OWNER shall provide compaction tests by an independent testing agency selected by the OWNER and approved by the ENGINEER. CONTRACTOR to coordinate with independent testing agency for tests. The compaction tests shall be taken at appropriate locations and frequency to demonstrate that the backfill (or fill) has been placed to meet the minimum compaction density required. The testing agency shall submit written test records to the ENGINEER for all compaction tests performed. Minimum testing shall be one test per 500 CY of material placed at the ENGINEER's option and one test per 10,000 square feet of fill placed for every foot of fill thickness.

In the event that the soil compaction is not in compliance with these specifications, then the CONTRACTOR shall take corrective action, at no cost to the OWNER, to compact the soils within the limits of the specifications. The ENGINEER shall be notified within 24 hours of any failing compaction tests. Any retesting of failed areas shall be performed only after corrective measures have been made by the CONTRACTOR to bring the compacted soils into compliance. All retesting shall be performed with the ENGINEER present.

3.13. SITE RESTORATION

3.13.1 General

All surfaces disturbed by the CONTRACTOR in the work shall be restored to a condition equal to or better than that which existed prior to commencement of the work, except as otherwise specified herein.

3.13.2 Pipe drains, headwalls, catch basins, curbs and gutters, and all incidental drainage structures shall be restored using like materials and details at no additional cost to the OWNER. The CONTRACTOR shall maintain drainage during construction.

3.13.3 All cuts, fills and slopes shall be neatly dressed off to the required grade or subgrade, as indicated on the plans.

3.13.4 Grassed areas shall be restored at no additional cost to the OWNER. Disturbed areas shall be covered with two (2) inches of topsoil, furnished by the CONTRACTOR from an approved source and of approved quality, then shall be fertilized, and seeded to match existing adjoining areas. All ditches shall be restored to their existing grade, line and cross section.

(End of Section 02222)

PART 1 DESCRIPTION:

The work covered by this section consists of the preparation, shaping and compaction of either an un-stabilized or stabilized subgrade, suitable for placement of base course, pavement and shoulders or for the placement of structures as called for on the plans. The CONTRACTOR shall furnish all equipment, tools, labor and materials necessary to complete the work in accordance with the plans and specifications.

1.1 RELATED WORK

Any reference to standard specifications refers to the most current published date published of the following specification unless otherwise noted.

1.1.1. Reference the following specifications for related work:

Section 02200	Earthwork
ASTM C977	
AASHTO T26	
AASHTO T-99	

Subgrade work shall conform to the "Standard Specifications for Roads and Structures" latest edition, published by the South Carolina Department of Transportation.

PART 2 MATERIALS

2.1. WATER

Water shall be clean and free from oil, salt, acid, alkali, organic matter or other substances detrimental to the finished product. Water shall not contain more than 100-PPM chlorides or more than 500 PPM dissolved solids, and shall have a pH in the range of 4.5 to 8.5.

2.1.1. Water from a city water supply may be accepted without being tested. Water from other sources shall be tested in accordance with AASHTO T26, unless the requirement for testing is waived by the ENGINEER. The cost of testing water shall be paid by the CONTRACTOR.

2.2. LIME

Quicklime and Hydrated Lime for soil stabilization shall meet the requirements of ASTM C977 except that it shall contain a minimum of 90 percent available calcium oxide (CaO) on an LOI-free basis.

2.2.1. Hydrated Lime shall have a minimum of 85 percent passing a No. 200 sieve.

2.2.2. Quicklime shall meet one of the following gradation requirements.

"A" Gradation (% Passing)	"B" Gradation (% Passing)
3/4 in. Sieve - 100%	No. 6 Sieve 100%
1/8 in. Sieve - 0% to 5%	

2.2.3. The CONTRACTOR shall furnish material certifications with each shipment of lime attesting that the lime meets the requirements of the specifications; however, the material shall be subject to inspection, test or rejection by the ENGINEER at any time.

2.3. STABILIZER AGGREGATE

Stabilizer Aggregate shall consist of crushed stone or gravel or other similar material having hard, strong, durable particles free of adherent coatings.

STABILIZER AGGREGATE
GRADATION ACCEPTANCE CRITERIA

Column A Sieve Size	Column B % Passing
1½"	98 - 100
1"	60 - 100
½"	36 - 84
No. 4	21 - 61
No. 10	10 - 50
No. 40	0 - 34
No. 200	0 - 13
Material Passing No. 40 Sieve	
L.L.	0 - 30
P.I.	0 - 6

PART 3 INSTALLATION

3.1 GENERAL REQUIREMENTS

All subgrade preparation shall be in conformance with local and state Department of Transportation requirements.

3.1.1 The subgrade for roadways and structures shall be shaped to conform to the lines, grades and typical sections shown on the plans or established by the ENGINEER. All vegetation, organic matter or other deleterious material shall be removed and properly disposed of by the CONTRACTOR. Nor shall the soil contain stone or gravel larger than 2 inches for the full depth of the specified subgrade thickness. In areas where the subgrade is to be stabilized with aggregate, the subgrade surface may be left uniformly below grade to provide for the addition of the stabilizer aggregate.

3.1.2 All material to a depth of 12 inches below the finished surface of the subgrade shall be compacted to at least 98% of the soil's Standard Proctor maximum dry unit weight.

3.1.3 A tolerance of plus or minus 0.1+ foot from the established grade will be permitted after the subgrade has been graded and compacted to a uniform surface.

3.2 PROOF ROLLING

The subgrade for roads, parking areas and other locations designated on the plans or by the ENGINEER shall be proof rolled in accordance with local and state Department of

Transportation requirements, to test for stability and uniformity of compaction. The subgrade shall be proof rolled in the presence of the ENGINEER, the OWNER'S independent testing agency or his designee using a loaded dump truck or similar pneumatic-tired vehicle with a minimum loaded weight of 25 tons. Any area of the subgrade which pumps or ruts excessively shall be considered unsatisfactory and shall be windrowed and dried or shall receive lime or aggregate stabilization as directed by the ENGINEER. The subgrade shall then be recompacted and proof rolled at no additional cost to the OWNER, repeating the above-outlined process until a stable, unyielding and uniformly compacted subgrade is provided.

3.3 LIME STABILIZED SUBGRADE

Where the existing soil is incapable of providing adequate foundation for roadways or structures or where called for on the plans, the subgrade may be stabilized using lime. The treatment of subgrade soils with lime shall be in conformance with local and state Department of Transportation requirements.

3.4 AGGREGATE STABILIZED SUBGRADE

Where the existing soil is incapable of providing adequate foundation for roadways or structures or where called for on the plans, the subgrade may be stabilized using aggregate. The treatment of subgrade soils with aggregate shall be in conformance with local and state Department of Transportation requirements.

(End of Section 02231)

PART 1 DESCRIPTION:

The work covered by this section consists of the construction of a base composed of an approved aggregate material delivered, placed, compacted and shaped to conform to the lines, grades, depths and typical sections shown on the plans or established by the ENGINEER.

1.1. RELATED WORK

Any reference to standard specifications refers to the most current published date of the following specification unless otherwise noted.

1.1.1. Reference the following specifications for related work:

Section 02231	Subgrade
AASHTO T-180	COMPACTION

1.1.2. Aggregate Base Course work shall conform to the "Standard Specifications for Highway Construction" latest edition, published by the South Carolina Department of Transportation.

PART 2 MATERIALS

2.1 General Requirements

Aggregate base course material shall consist of crushed stone, crushed or uncrushed gravel or other similar material having hard, strong, durable, particle free of adherent coatings.

PART 3 INSTALLATION:

3.1 GENERAL REQUIREMENTS

The subgrade shall be prepared as called for on the plans in accordance with Section 32 1216.1 of these specifications prior to placement of the base material.

3.1.1 The aggregate material shall be placed on the subgrade with a mechanical spreader capable of placing the material to a uniform loose depth without segregation except that for areas inaccessible to a mechanical spreader, the aggregate material may be placed by other methods approved by the ENGINEER.

3.1.2 Where the required compacted thickness of base is 8 inches or less, the base material may be spread and compacted in one layer. Where the required compacted thickness is more than 8 inches, the base material shall be spread and compacted in 2 or more approximately equal layers. The minimum compacted thickness of any one layer shall be approximately 4 inches.

3.1.3 Each layer of material shall have been sampled, tested, compacted and approved prior to placing succeeding layers of base material or pavement.

3.1.4 No base material shall be placed on frozen subgrade or base.

3.1.5 Base course which is in place on November 15 shall have been covered with a subsequent layer of pavement structure or with a sand seal. Base course which has been placed between November 16 and March 15, inclusive, shall be covered within 7 calendar days with a subsequent layer of pavement structure or with a sand seal.

3.1.6 Failure of the CONTRACTOR to cover the base course as required above will result in the ENGINEER notifying the CONTRACTOR in writing to cover the base course with a sand seal and to suspend the operations of placing aggregate base course until such cover has been placed. This work shall be performed by the CONTRACTOR at no cost to the OWNER. In the event that the CONTRACTOR fails to apply the sand seal within 72 hours after receipt of such notice, the ENGINEER may proceed to have such work performed with other forces and equipment. The cost of such work performed by the other forces will be deducted from monies due or to become due the CONTRACTOR. The application of the sand seal by the CONTRACTOR or by others will in no way relieve the CONTRACTOR of the responsibility to maintain or repair the damaged base or subgrade, no matter what the cause of damage, at no cost to the OWNER.

3.1.7 No traffic shall be allowed on the completed base course other than necessary local traffic and that developing from the operation of essential construction equipment as may be authorized by the ENGINEER. Any defects that develop in the completed base or any damage caused by local or construction traffic shall be acceptably repaired at no cost to the OWNER.

3.1.8 The CONTRACTOR shall utilize methods of handling, hauling and placing which will minimize segregation and contamination. If segregation occurs, the ENGINEER may require that changes be made in the CONTRACTOR's methods to minimize segregation, and may also require mixing on the road which may be necessary to correct any segregation. No additional compensation will be allowed for the work of road mixing as may be required under this provision. Aggregate which is contaminated with foreign materials to the extent that the base course will not adequately serve its intended use will be removed and replaced by the CONTRACTOR at no additional cost to the OWNER.

3.2 SHAPING AND COMPACTING

Within 48 hours after beginning the placing of a layer of the base, the CONTRACTOR shall begin machining and compacting of the layer. Each layer shall be maintained to the required cross section during compaction and each layer be compacted to the required density prior to placing the next layer. Testing by OWNER’s independent testing agency.

3.2.1 Each layer of the base shall be compacted to at least 100% of the Modified Proctor maximum, dry unit-weight of that obtained by compacting a sample of the material.

3.2.2 The base material shall be compacted at a moisture content which is approximately that required to produce a maximum density indicated by the above test method. The CONTRACTOR shall dry or add moisture to the material when required to provide a uniformly compacted and acceptable base.

3.2.3 The final layer of base material shall be shaped to conform to the lines, grades and typical sections shown on the plans or established by the ENGINEER. When completed, the base

course shall be smooth, hard, dense, unyielding and well bonded. A broom drag may be used in connection with the final finishing and conditioning of the surface of the base course.

3.2.4 After final shaping and compacting of the base, the ENGINEER will check the surface of the base for conformance to the grade and typical section and determine the base thickness.

3.2.5 The thickness of the base shall be within a tolerance of plus or minus 0.1 feet of the base thickness required by the plans. The maximum differential between the established grade and the base within any 100 foot section shall be 0.1 feet.

3.2.6 Where the base material is placed in a trench section, the CONTRACTOR shall provide adequate drainage through the shoulders to protect the subgrade and base until such time as the shoulders are completed.

3.2.7 The CONTRACTOR shall maintain the surface of the base by watering, machining, and rolling or dragging when necessary to prevent damage to the base by weather or traffic.

3.2.8 Where the base or subgrade is damaged, the CONTRACTOR shall repair the damaged area; reshape the base to required lines, grades and typical sections, and re-compact the base to the required density at no cost to the OWNER.

(End of Section 02235)

PART 1 DESCRIPTION

1.1. Erosion and sedimentation control shall be provided by the CONTRACTOR for all areas of the site denuded or otherwise disturbed during construction. The CONTRACTOR shall be responsible for all installation, materials, labor, and maintenance of erosion and sediment control devices, as well as removal of temporary erosion and sediment control devices shown on the plans or required to protect all downstream properties, natural waterways, streams, lakes, ponds, catch basins, drainage ditches, roads, gutters, natural buffer zones, and man-made structures.

1.2. Erosion and sediment control procedures and facilities shall conform to all legally regulated procedures for the control of erosion and sedimentation.

1.3. RELATED WORK

See the following sections for related work.

02271	Engineering Fabrics
02275	Stone for Erosion Control
02277	Temporary Silt Fence
02933	Seeding and Mulching

1.4 REFERENCES

Any reference to standard National or State Specifications and/or Regulations refers to the most current published date of the specification or regulation unless noted otherwise.

The design, manufacture, and installation of these materials shall meet or exceed the applicable provisions and recommendations of the noted National Specifications and/or Regulations or meet the requirements of the latest revision of these specifications or regulations.

1.5 SPECIAL REFERENCES

Erosion and sediment control procedures and facilities shall conform to the "Standard Specifications for Highway Construction" latest edition, published by the South Carolina Department of Transportation and South Carolina Stormwater Management and Sediment Control Handbook as published by EQC, Bureau of Water, SC Department of Health and Environmental Control.

PART 2 MATERIALS

2.1. Washed stone to be used in temporary sediment basins shall be of strong, durable nature, resistant to weathering and shall be graded to conform to local and state Department of Transportation requirements.

2.2. Refer to other sections within these specifications as listed in Item 1.3 above for other material specification required in the installation of erosion and sediment control facilities.

PART 3 INSTALLATION

3.1 GENERAL REQUIREMENTS

3.1.1 The CONTRACTOR shall follow the erosion control construction sequence schedule as shown on the contract drawings, except that should circumstances dictate that extra precaution be taken to prohibit erosion and sedimentation on the project, the CONTRACTOR will, at his own expense, take preventative measures as needed.

3.1.2 The CONTRACTOR is required to maintain all erosion and sediment control facilities to insure proper performance throughout the construction phase and until such time all disturbed areas are permanently stabilized.

3.1.3 Upon completion of construction or successful permanent stabilization of all areas which were disturbed before or during construction operations or as indicated on the construction drawings, whichever occurs last, the CONTRACTOR shall remove all temporary erosion and sediment control devices and facilities from the project site. The CONTRACTOR shall retain these items for future use or properly dispose of these items offsite.

3.1.4 The CONTRACTOR shall provide temporary or permanent ground cover as called for on the construction plans within thirty (30) working days after disturbance of any areas on the site.

(End of Section 02270)

PART ONE – GENERAL:

The work covered by this Section consists of the furnishing, installing, maintaining, replacing as needed, and removing of temporary silt fence. The CONTRACTOR shall furnish all equipment, tools, labor and materials necessary to complete the work in accordance with the plans and specifications. All materials and procedures shall conform to the latest version of local and state Department of Transportation requirements.

1.1. Related Work

Any reference to standard specifications refers to the most current published date published of the following specifications unless otherwise noted.

1.1.1. Reference the following specifications for related work:

02270 Erosion Control

All applicable local design manuals, codes and/or ordinances for Erosion and Sedimentation Control. (Where these design manuals, local codes and ordinances are more stringent then the State Department of Transportation, these codes and/or ordinances will control the erosion and sedimentation control procedures to be followed.)

The temporary silt fence shall conform to the "Standard Specifications for Highway Construction" latest edition, published by the South Carolina Department of Transportation.

PART TWO – MATERIALS:

2.1. General Requirements

Temporary silt fence shall be a water permeable filter type fence for the purposes of removing suspended particles from the water passing through it.

2.2. Posts

Steel posts must be used. Steel posts shall be at least 5 feet in length, approximately 1-3/8 inches wide measured parallel to the fence, and have a minimum weight of 1.25 lb/ft of length. The post shall be equipped with an anchor plate having a minimum area of 14.0 square inches, and shall have a means of retaining wire and fabric in the desired position without displacement.

2.3. Woven Wire Fence

Wire fence fabric shall be at least 32 inches high but no more than 36" high, and shall have at least 6 horizontal wires. Vertical wires shall be spaced 12 inches apart. The top and bottom wires shall be at least 10 gage. All other wires shall be at least 12-1/2 gage.

2.4. Silt Fence Filter Fabric

The filter fabric shall conform to the "Standard Specifications for Highway Construction", latest edition, published by the South Carolina Department of Transportation and the South Carolina Stormwater Management and Sediment Control Handbook as published by EQC, Water Bureau, South Carolina Department of Health and Environmental control.

Silt fence which incorporates filter fabric meeting the requirements of these State Specifications, but which fail to perform in an acceptable manner shall be replaced with silt fences which are capable of acceptable performance. All silt fences shall meet the local governmental requirements as well as the State's requirements.

PART THREE – INSTALLATION:

3.1. General Requirements

3.1.1. The CONTRACTOR shall install temporary silt fence as shown on the plans or as required by field conditions. The silt fence shall be constructed at the locations shown on the plans and at all other locations necessary to prevent sediment transport, as directed by the ENGINEER.

3.1.2. Class A synthetic filter fabric may be used only in conjunction with woven wire fence fabric backing. Filter fabric shall be attached to the wire fence fabric by wire or other acceptable means.

3.1.3. Class B synthetic filter fabric may be used without the woven wire fence fabric backing, subject to the following conditions:

- Post spacing is reduced to a maximum of 6 feet.
- The proposed fabric has been approved by the ENGINEER as being suitable for use without the woven wire fence fabric backing.
- Fence posts shall be inclined toward the runoff source at an angle of not more than 20° from vertical.
- Posts shall be installed so that no more than 3 feet of the post shall protrude above the ground. Where possible, the filter fabric from a continuous roll cut to the length of the barrier shall be used to avoid joints. When joints are necessary, securely fasten the filter cloth only at a support post with overlap to the next post. At the time of installation, the fabric will be rejected if it has defects, rips, holes, flaws, deterioration, or damage incurred during manufacture, transportation, or storage.

3.2. Maintenance and Removal

3.2.1. The CONTRACTOR shall inspect temporary silt fences at least once a week and after each rainfall and shall make any required repairs and remove and dispose of silt accumulation immediately. Should the fabric of the silt fence collapse, tear, decompose or become ineffective, the CONTRACTOR will replace it promptly at his own expense. The CONTRACTOR shall remove sediment deposits as necessary to provide adequate storage volume for the next rain and to reduce pressure on the fence.

3.2.2 The CONTRACTOR shall remove all temporary silt fence and associated appurtenances once all disturbed areas upland of the fence is properly and satisfactorily stabilized as called for on the plans.

(End of Section 02277)

PART ONE - GENERAL:

1.01 - SCOPE

This section covers the furnishing, installation, testing and adjustment based on field conditions of an underground sprinkler system. The irrigation system shall be installed by a CONTRACTOR who specializes in irrigation installation. The CONTRACTOR shall furnish a unit price for each type of head, fitting, pipe, etc. furnished, installed, guaranteed, etc. for the purpose of increasing or decreasing quantities.

1.02 - LINES AND GRADES

The CONTRACTOR shall provide his own lines and grades for this work, and he shall have someone on the site during installation that is familiar with all aspects of irrigation systems.

1.03 - SAFETY CODES AND STANDARDS

Perform excavation work in compliance with applicable requirements of governing authorities having jurisdiction. No water from the irrigation system shall cover or land on any walkway, hardscape surface or roadway.

1.04 - EXISTING UTILITIES

Locate existing underground utilities by careful hand excavation. Utilities are to remain in place; provide protection from damage during ditching operations. Should uncharted or incorrectly charted piping or other utilities be encountered during excavation, consult the OWNER immediately for direction as how to proceed. Cooperate with the utility company in keeping respective service and facilities in operation. Repair damaged facilities to the satisfaction of the utility company.

1.05 - PROTECTION OF PERSONS AND PROPERTY

Barricade open excavation and post with warning lights for safety of persons. Operate warning lights during hours from dusk to dawn each day. Protect structures, utilities, driveways, pavements, and other facilities immediately adjacent to excavation from damage caused by settlement, lateral movement, undermining, washout or other hazards. Take precautions and provide necessary bracing and shoring to guard against movement or settlement of existing improvements. The CONTRACTOR is entirely responsible for the strength and adequacy of bracing and shoring and for the safety and support of construction from damage or injury caused by the lack thereof or by movement or settlement.

1.06 - MATERIALS STORAGE

Stockpile materials where directed. Locate and retain materials away from edge of excavations, even though such excavations may be sheeted and braced, to prevent such material from falling or sliding into excavation to prevent cave-ins.

PART TWO - PRODUCTS:

2.01 - MATERIALS STORAGE

This section covers the furnishings and installation of heads, fittings, pipes, backflow preventers and all other materials shown on the plans or their equivalent. All material shall be new and free of defects.

2.02 - SURPLUS MATERIALS

Remove and dispose of surplus materials from the site at no additional cost to the OWNER.

PART THREE - EXECUTION:

3.01 - COORDINATION

Coordinate work with the OWNER and any other trades on the project to avoid possible conflicts. Before installation is started, the ground shall be within approximately two inches, plus or minus, (2"±) of finished grade.

3.02 - LAYOUT

The arrangement of the system shall be designed by the CONTRACTOR and submitted to the OWNER for approval before proceeding with installation.

3.03 - INSTALLATION OF PIPE

Install pipe in straight runs, without sags and graded for drainage according to applicable code. Cut pipe ends straight, cleanse of dirt before assembly. Lay pipes in trenches, bottoms tamped hard without soft spots.

3.04 - TEST AND INSPECTIONS

Upon completion of tests and inspections, backfill with materials free of rocks and debris; trenches backfilled in six-inch (6") layers with each layer tamped firmly. Remove excess earth from the site.

(End of Section 02441)

PART 1 DESCRIPTION:

1.1 The work covered by this Section consists of the production, delivery, placement and compaction of various types of bituminous pavements for roadway and parking facilities. All bituminous pavement materials and installation shall conform to the "Standard Specifications for Highway Construction" latest edition, published by the South Carolina Department of Transportation (SCDOT).

1.2 The CONTRACTOR shall furnish all equipment, tools, labor and materials necessary to complete the work in accordance with the plans and specifications.

1.3 REFERENCES
Any reference to standard National or State Specifications and/or Regulations refers to the most current published date of the specifications or regulation unless noted otherwise.

The design, manufacture, and installation of these materials shall meet or exceed the applicable provisions and recommendations of the noted National Specifications or meet the requirements of the latest revision of these specifications.

PART 2 MATERIALS:

2.1 PRIME COAT: Cut-back asphalt used as prime coat shall conform to the "Standard Specifications for Highway Construction" latest edition, published by the SCDOT.

2.2 BITUMINOUS TACK COAT: Bituminous tack coat shall conform to the "Standard Specifications for Highway Construction" published by the SCDOT, latest edition.

2.3 NON-STRIP ADDITIVE FOR PLANT MIX: Non-strip additive for plant mix shall conform to the "Standard Specifications for Highway Construction" published by the SCDOT, latest edition.

2.4 BITUMINOUS CONCRETE BASE COURSE: Bituminous concrete base course, shall conform to the "Standard Specifications for Highway Construction" published by the SCDOT, latest edition.

2.5 BITUMINOUS CONCRETE BINDER COURSE: Bituminous concrete binder course shall conform to the "Standard Specifications for Highway Construction" published by the SCDOT, latest edition.

2.6 BITUMINOUS CONCRETE SURFACE COURSE: Bituminous concrete surface course shall conform to the "Standard Specifications for Highway Construction" published by the SCDOT, latest edition.

PART 3 INSTALLATION:

3.1 PRIME COAT: Prime Coat shall be applied to non-bituminous base course except beneath bituminous plant mixed pavements unless otherwise required by the plans. Prime shall be applied only when the surface to be treated is sufficiently dry and the atmospheric temperature in the shade away from artificial heat is 40°F or above for plant mix and 50°F or above for bituminous surface treatment. Prime coat shall not be applied when the weather is foggy or rainy. The base shall be cleaned of objectionable dust, dirt, clay and other deleterious matter prior to placing prime coat.

3.1.1 When directed by the ENGINEER, the CONTRACTOR shall dampen the surface of the base prior to application of the prime coat. Prime coat consisting of asphalt, Grade MC-30 or Grade RC-30 shall be applied at a rate of 0.18 to 0.45 gallons per square yards at an application temperature between 90°F and 130°F.

3.2 TACK COAT:

3.2.1 Tack coat shall be applied beneath each layer of bituminous plant mix base or pavement to be placed except where a prime coat or a newly placed bituminous surface treatment mat coat has been applied, unless otherwise directed by the ENGINEER. The tack coat material shall not be diluted or mixed with water, solvents, or other materials prior to application.

3.2.2 Tack coat shall be applied only when the surface to be treated is sufficiently dry and when the atmospheric temperature is 35°F or above in the shade away from artificial heat. Tack coat shall not be applied when the weather is foggy or rainy.

3.2.3 The existing bituminous or concrete surface to which tack coat is to be applied shall be cleaned of all dust and foreign material prior to placing the tack coat.

3.2.4 Tack coat shall be uniformly applied at a rate from 0.02 to 0.05 gallons per square yard. The exact rate of application will be established by the ENGINEER. The temperature of the tack coat material at the time of application shall be within the ranges shown below:

Bituminous Material	Temperature Range
Asphalt Cement, Grade AC-20	375° F - 500° F
Asphalt, Grade RS-1H	90° F - 150° F
Asphalt, Grade CRS - 1	90° F - 150° F
Asphalt, Grade CRS - 1H	90° F - 150° F
Asphalt, Grade HFMS - 1	90° F - 160° F
Asphalt, Grade CRS - 2	125° F - 185° F

3.2.5 No more tack coat material shall be applied than can be covered with base, binder, or surface course material during the next day's operation.

3.2.6 Tack coat material shall be applied with a distributor spray bar which can be adjusted to uniformly coat the entire surface at the directed rate. A hand hose shall be used for irregular areas. Application of tack coat shall only be done in the presence of the ENGINEER or

ENGINEER's representative. No base or surface mixture shall be deposited thereon until the tack coat has sufficiently cured.

3.2.7 Contact surfaces of headers, curbs, gutters, manholes, vertical faces of pavements, and all exposed traverse and longitudinal edges of each course shall be painted or sprayed with tack coat before mixture is placed adjacent to such surfaces.

3.2.8 After tack coat has been applied it shall be protected until it has cured for a sufficient length of time to prevent it from being picked up by traffic.

3.3 NON-STRIP ADDITIVE FOR PLANT MIX:
The non-strip additive shall be introduced and mixed into the asphalt cement in the presence of the ENGINEER unless it is added at the supplier's terminal and the rate, brand and grade are so noted on the asphalt cement ticket. The non-strip additive and asphalt cement shall be thoroughly mixed before being incorporated into the bituminous plant mix.

3.4 BITUMINOUS CONCRETE BASE COURSE:

3.4.1 The bituminous plant mix shall be compacted to a density of at least 90% of the maximum theoretical density.

3.4.2 No plant mix base course shall be placed that will not be covered with binder course or surface course during the same calendar year or within 15 days of placement if the plant mix is placed in January or February.

3.4.3 Should the CONTRACTOR fail to cover the plant mix as required, it will result in the ENGINEER notifying the CONTRACTOR in writing to cover the plant mix with sand seal. The application of the sand seal shall be done by the CONTRACTOR at no cost to the OWNER.

3.5 BITUMINOUS CONCRETE BINDER COURSE:

3.5.1 The bituminous plant mix shall be compacted to a density of at least 94% of the laboratory density as determined by the Marshall method of test.

3.5.2 No plant mix base course shall be placed that will not be covered with binder course or surface course during the same calendar year or within 15 days of placement if the plant mix is placed in January or February.

3.5.3 Should the CONTRACTOR fail to cover the plant mix as required, it will result in the ENGINEER notifying the CONTRACTOR in writing to cover the plant mix with sand seal. The application of the sand seal shall be done by the CONTRACTOR at no cost to the OWNER.

3.6 BITUMINOUS CONCRETE SURFACE COURSE
The bituminous plant mix shall be compacted to a density of at least 95% of the laboratory density as determined by the Marshall method of test.

3.7 OPEN GRADED ASPHALT FRICTION COURSE

3.7.1 The existing surface shall be cleaned in an acceptable manner prior to placement of any bituminous material.

3.7.2 Any part of finished friction course which shows non-uniform distribution of asphalt cement shall be removed and replaced at no cost to the OWNER.

3.8 ASPHALT DRAINAGE COURSE

A prime coat or tack coat will not be required. The mix shall be compacted to a degree acceptable to the ENGINEER.

PART 4 TESTING:

All testing requested by the ENGINEER shall be done by the CONTRACTOR in accordance with the "Standard Specifications for Highway Construction" published by the SCDOT, latest edition.

(End of Section 02511)

SECTION 02515 EXTERIOR CONCRETE WORK

PART ONE - GENERAL:

1.01 - SCOPE

This section covers Portland cement curbs complete, including such excavation, fine grading, backfilling and shaping adjacent surfaces as required.

1.02 - STANDARDS AND SPECIFICATIONS

Except as indicated or specified otherwise, materials and methods shall conform to the South Carolina State Highway Department Standard Specifications for Highway Construction, latest Edition and latest Sections.

PART TWO - PRODUCTS:

2.01 - CONCRETE

Concrete shall be not less than 3,500 psi at twenty-eight (28) days in accordance with the applicable requirements of the referenced specifications.

PART THREE - EXECUTION:

3.01 – CURBS

Construct in accordance with location, line, grade and details shown on the drawings and in accordance with the applicable requirements of the South Carolina State Highway Department Standard Specifications for Highway Construction, latest Edition. See details.

(End of Section 02515)

PART ONE - GENERAL

1.1 Summary

1.1.1 Concrete sidewalk shall be constructed of Portland cement concrete, at the locations and to the dimensions, lines, grades and cross section indicated on the Drawings or as directed by the ENGINEER and in conformity with the provisions and requirements set out in these Specifications.

1.1.2 Concrete driveways shall be constructed of Portland Cement concrete, at the locations and to the dimensions, lines, grades and cross section indicated on the Drawings or as directed by the ENGINEER, and in conformity with the provisions and requirements set out in these Specifications.

1.1.3 Concrete sidewalk and driveway shall include all the necessary excavation, unless otherwise indicated, subgrade and subbase preparation, backfilling, final CLEANING up and completing all incidentals thereto, as indicated on the Drawings or as directed by the ENGINEER.

1.2 Related Work Specified Elsewhere:

Excavation and Backfill	Section 02220
Cast-In-Place Concrete	Section 03300
Concrete Sidewalks and Brick Foundation	Section 03310

PART TWO - PRODUCTS

2.1 Materials

2.1.1 Materials used in the construction of sidewalks and driveways, in addition to the general requirements of these Specifications, shall conform, unless otherwise stipulated, to the following:

2.1.1.1 Concrete shall be manufactured of the materials meeting the requirements of and in accordance with the provisions and requirements for Class “A” concrete as set out in Section 03300 of these Specifications.

2.1.1.2 Crushed stone for base shall meet the gradation requirements for Size 7 or 8 as specified in ASTM D 448 or AASHTO M43.

2.2 Form Material

2.2.1 Forms may be constructed of wood or metal.

2.2.2 The lumber to be used in the construction of wood forms shall be free of bulge or warp, of uniform width, not less than 2-inches (commercial) in thickness, except that 1-inch thickness may be used on curves and shall be sound and free from loose knots. Stakes shall be not less than 2 x 4-inch lumber of sufficient length that, when driven they will hold the forms rigidly in place.

2.2.3 Metal forms shall be approved sections and shall have a flat surface on top. They shall present a smooth surface of the desired contour, sufficiently thick and braced to withstand the weight of the concrete without bulging or becoming displaced.

PART THREE - EXECUTION

3.1 Labor

3.1.1 For finishing, competent and skilled finishers shall be provided.

3.2 Equipment

3.2.1 All equipment necessary and required for the construction of concrete sidewalks, curb and gutter, must be on the Project, proven to be in first class working condition and approved by the ENGINEER, before construction will be permitted to begin.

3.2.2 A one bag mixer will be permitted when the total output of concrete, per 10-hour day does not exceed 25 cubic yards.

3.2.3 Satisfactory floats, edgers, spades and tamps shall be furnished. Tamps of not over 8-inch diameter and weighing not less than 25 pounds shall be provided for tamping subgrade. A 10-foot longitudinal float of the inverted T-type with plough handles attached for manipulation, and a rigid float not less than 18-inches longer than the width of the walk being constructed, shall be provided.

3.3 Removal of Structures and Obstructions

3.3.1 Remove existing curbs, gutters, sidewalks, driveways and other structures shown on the drawings to be removed.

3.3.2 Cut existing concrete neatly, load and haul debris to an SCDHEC approved disposal areas.

3.4 Road and Drainage Excavation

3.4.1 Road and drainage excavation, as indicated on the Drawings or as directed by ENGINEER, shall be performed in accordance with the requirements of Section 02200 of these Specifications.

3.5 Embankment Construction

3.5.1 Embankment construction, as indicated on the Drawings or as directed by the ENGINEER, shall be performed in accordance with the provisions of Section 02200 of these Specifications.

3.6 Subgrade Preparation

3.6.1 The subgrade for sidewalks and driveways shall be formed by excavation to a depth equal to the thickness of the concrete plus 2-inches.

3.6.2 All subgrade shall be of such width as to permit the proper installation and bracing of the forms.

3.6.3 Yielding, or unsuitable material shall be removed and backfilled with satisfactory material. Place 6-inches of graded aggregate base under commercial/industrial driveways, compacted thoroughly and finished to a smooth, unyielding surface and proper line, grade and cross section of the proposed construction.

3.7 Forms

3.7.1 All forms shall be set upon the prepared subgrade, true to lines and grade, and held rigidly in place so as to not to be disturbed or displaced during the placing of the concrete. The top of the form shall be set to exact grade and the height shall be equal to not less than the thickness of the proposed concrete.

3.7.2 All forms shall be so constructed as to form the cross section, contour, etc., of the proposed construction.

3.7.3 Immediately before placing the concrete, the forms shall be given a coat of light oil and where being removed and used again, the forms shall be thoroughly cleaned and oiled each time.

3.7.4 Forms shall be removed within 24 hours after placing concrete and no pressure shall be exerted upon the concrete in removing forms.

3.7.5 When the sidewalk is to be joined to an existing sidewalk, the existing sidewalk, if not in proper condition for the junction, shall be cut to a neat line perpendicular to both the centerline and the surface, or as indicated by the ENGINEER.

3.8 Expansion Joints

3.8.1 Unless otherwise indicated on the Drawings or as directed by the ENGINEER, premoulded expansion joint filler, ½" in thickness, shall be placed at the locations and in line with expansion joints in the adjoining pavement, gutter, and not otherwise indicated on the Drawings, a ½" premoulded expansion joint filler shall be placed at intervals of not over 50 feet apart. All premoulded expansion joint filler must be cut to full width or length of the proposed construction and shall extend to within 1-inch of the top or finished surface. All longitudinal expansion joints shall be placed as indicated on the Drawings or as directed by the ENGINEER.

3.8.2 All expansion joints shall be true, even and present a satisfactory appearance.

3.8.3 All expansion joint material protruding after the concrete has been finished shall be trimmed as directed by the ENGINEER.

3.9 Manufacturing and Placing Concrete

3.9.1 Immediately before placing concrete, the depth of the proposed concrete shall be checked by means of a template cut true to the cross section of the proposed construction and any irregularities shall be corrected.

3.9.2 Immediately before placing concrete, all subgrade shall be thoroughly sprinkled or wetted.

3.9.3 Concrete shall not be placed upon a frozen subgrade or subbase.

3.9.4 Construction joints will be permitted only at grooves or at expansion joints, unless otherwise approved by the ENGINEER.

3.9.5 The concrete shall be manufactured and placed in accordance with the requirements of Section 03300 of these Specifications.

3.9.6 The concrete shall be placed immediately after mixing, the edges, sides, etc., shall be thoroughly spaded and the surfaces tamped sufficiently to thoroughly compact the concrete and bring the mortar to the surface. The concrete shall be deposited and compacted in a single layer.

3.10 Finishing

3.10.1 The concrete shall be stuck-off with a transverse template resting upon the side forms and then shall be floated with a 10 foot longitudinal float working the float transversely across the concrete with a sawing motion, always maintaining it parallel to the edges of the sidewalk, or driveway, where practicable, and in such a manner that all surplus water, laitance and inert material shall be removed from the surface. This operation shall be continued until the surface of the concrete shows no variation from 10-foot straightedge. If necessary, additional concrete shall be added to fill depressions, and the longitudinal float used again. The longitudinal float shall not be moved ahead more than one-half its length at any time.

3.10.2 When the surface of the concrete is free from water and just before the concrete obtains its initial set, it shall be gone over and finished with a wooden float so as to produce a sandy texture. The longitudinal surface variations shall be not more than 1/4-inch under a 12-foot straightedge, nor more than 1/8-inch on a five foot transverse section. The surface of the concrete must be finished so as to drain completely at all times.

3.10.3 The edges of the sidewalks or driveways shall be carefully finished and rounded with an edging tool having a radius of ½".

3.10.4 The surface of sidewalks shall be divided into blocks by use of a grooving tool. Grooves shall be placed so as to cause contraction joints to be placed at a groove line, where practical. The grooves shall be spaced approximately five feel apart and the blocks shall be rectangular unless otherwise ordered by the ENGINEER. The grooves shall be cut to a depth of not less than 1-inch. The edges of the grooves shall be edged with an edging tool having a radius of 1/4-inch, and any marks caused by edging or otherwise shall be removed with a wetted brush or wooden float so as to give the surface a uniform texture and finish.

3.10.5 The edges of the concrete at contraction joints shall be rounded with an edging tool having a radius of 1/4-inch. The top and ends, where practicable, of expansion joint material shall be cleaned of all concrete and the expansion joint material shall be trimmed so as to be slightly below the surface of the concrete. All marks caused by edging shall be removed with a wetted brush or wooden float.

3.11 Protection and Curing

3.11.1 Immediately after finishing the concrete, it shall be covered and cured in accordance with the requirements of Section 03300 of these Specifications. If the temperature falls to below freezing, satisfactory heating devices shall be placed under suitable covers to keep the temperature around the concrete at above 45 degrees F.

3.11.2 Pedestrians will not be allowed upon concrete sidewalks or driveways until 12 hours after finishing concrete, and no vehicles or loads shall be permitted upon any sidewalk or driveway until the concrete has attained sufficient strength for such traffic.

3.11.3 The CONTRACTOR shall construct such barricades and protection devices as are necessary to keep pedestrians and traffic off the sidewalks or driveways.

3.11.4 If any sidewalk or driveway is damaged at any time previous to final acceptance of the project, it shall be repaired by removing all concrete within the limits of the grooves, and be replaced, at the CONTRACTOR's expense, with concrete of the type, kind and finish in the original construction.

3.12 Backfilling

3.12.1 Immediately after the concrete has set sufficiently, the spaces along the sides or edges of the sidewalk or driveway shall be refilled with suitable material, this material shall be in compacted layer of not over 4-inches each, until firm and solid.

3.13 Cleaning

3.13.1 All excess or unsuitable material shall be removed and disposed of in accordance with requirements of Section 02200 and 02220 of these Specifications.

3.13.2 Final clean-up shall be performed in accordance with the requirement of Section 02995 of these Specifications.

3.13.3 All material becoming the property of the OWNER shall be stored in a manner and at locations near or on the Project as directed by the ENGINEER.

(End of Section 02523)

SECTION 02527 CONCRETE CURB, CURB AND GUTTER, AND GUTTER

PART 1 DESCRIPTION

The work covered by this Section consists of the construction of Portland cement concrete curb, curb and gutter, concrete noses and concrete gutter necessary to complete the project. The CONTRACTOR shall furnish all equipment, tools, labor and materials necessary to complete the project in conformance with the plans and specifications.

1.1. RELATED WORK

Any reference to standard specifications refers to the most current published date of the following specification unless otherwise noted.

1.2. Reference the following specifications sections for related work:

02231 Subgrade

References to National Specifications for related work:

ASTM C150 - Type T Portland Cement

ASTM Material Specifications as listed Concrete Products (Section 02513 Part 2)

ASTM Testing Requirements - As listed under testing in Section 02513.3.4.2

AASHTO Material Requirements - As listed under Concrete Products (Section 02513 Part 2)

AASHTO Testing Requirements - As listed under Concrete Products (Section 02513 Part 2)

1.3. REFERENCES

The design, manufacture, and installation of these materials shall meet or exceed the applicable provisions and recommendations of the noted National Specifications or meet the requirements of the latest revision of these specifications.

1.3.1 All concrete curb, curb and gutter, and gutter installation shall conform to the "Standard Specifications for Highway Construction" latest edition, published by the South Carolina Department of Transportation.

1.4. The CONTRACTOR shall furnish all equipment, tools, labor, and materials necessary to complete the work in accordance with the plans and specifications.

PART 2 MATERIALS

All materials shall meet the requirements of Section 03300, Cast In Place Concrete, of these specifications.

PART 3 INSTALLATION

3.1. GENERAL

All concrete curb, curb and gutter, and gutter installation shall conform to the "Standard Specifications for Roads and Structures" latest edition, published by the South Carolina Department of Transportation.

3.2 CONCRETE

Class B concrete shall be used. Prior to placing forms the base or subgrade shall have been compacted to the degree required by the applicable section of these specifications.

3.3 FORMS

Forms shall be of such section and design that they will adequately support the concrete and any construction equipment used to construct the work. Straight forms shall be within a tolerance of 1/8 inch in 10 feet from a true line horizontally and vertically. Form pins shall be metal and shall be capable of holding the forms rigidly in place during construction operations. The form sections shall be connected by a locking joint that shall keep the forms free from vertical and horizontal movement.

3.4 FINISHING

The concrete shall be given a light broom finish with the brush marks parallel to the curb line or gutter line.

3.5 JOINTS

3.5.1 Joints shall be located as shown on the plans except as otherwise provided herein. Joint spacing shall not be less than 10 feet. Where concrete is placed adjacent to Portland cement concrete pavement, the joints shall be located so as to line up with the joints in the concrete pavement.

3.5.2 Grooved contraction joints shall be formed by the use of templates or by other approved methods. Where such joints are not formed by templates, the move shall be of the depth shown on the plans.

3.5.3 Grooved butt joints shall be placed between the work and adjacent pavement except where expansion joints are required by the plans.

3.5.4 All joints shall be sealed except for joints in curb sections not having an integral gutter. In curb and gutter the joint sealer shall not be poured above the top surface of the gutter. Joints in gutter shall be filled with joint sealer to the top surface of the gutter. Joints shall be sealed before backfilling or other adjacent operations are performed.

(End of Section 02527)

PART ONE – DESCRIPTION:

This section covers cutting and replacing pavement for the installation of utilities as shown on the plans and as specified herein. Any reference to sections of state specifications shall be in conformance with the state specifications referred to in the Section 1.2.1 Related Work.

1.1.
Any reference to standard specifications refers to the most current published date of the following specification unless otherwise noted.

1.1.1 Related Work
See the following sections for related specifications:

02222	Excavating, Backfilling & Compacting for Utilities
03300	Cast-in-Place Concrete:

1.3 References
Any reference to standard National or State Specifications and/or Regulations refers to the most current published date of the specification or regulation unless noted otherwise.

The design, manufacture, and installation of these materials shall meet or exceed the applicable provisions and recommendations of the noted National Specifications and/or Regulations or meet the requirements of the latest revision of these specifications or regulations.

1.3.1 See the following References to Nation Specifications for related work:

MP 1	AASHTO
M81	AASHTO
M82	AASHTO
T96	AASHTO
T176	AASHTO

PART TWO – MATERIALS:

2.1 Aggregate Base Course shall be in accordance with the SCDOT Section 305. Aggregate base course material shall consist of crushed stone, crushed stone, crushed or uncrushed gravel and other similar materials displaying hard, strong durable particles free from adherent coatings. All aggregate shall be from and approved sources in accordance with SCDOT Section 305.

2.2 Bituminous Paving

2.2.1 Bituminous Prime Coat: Cut-back asphalt used as prime coat shall conform to SCDOT Section 401.

2.2.2 Bituminous Base Course: Shall conform to SCDOT Section 401and 402.

2.2.3 Bituminous Tack Coat: Shall conform to SCDOT Section 401.

2.2.4 Bituminous Surface Coat: Shall conform to SCDOT Section 403.

2.3. Portland Cement Course

Shall be composed of Portland cement, coarse aggregate, fine aggregate and air entraining agent in accordance with Section 03300. Other admixtures may be added with the ENGINEER's approval. All concrete shall be Class A concrete with a minimum of 3500 psi compressive strength at 28 days. The concrete shall be air entrained to provide an air content of 4.5 percent plus or minus 1.5 percent.

PART THREE – CONSTRUCTION:

3.1 Pavement Cutting: Where the existing pavement is to be cut for installation of pipe or other utilities, the CONTRACTOR shall cut the pavement neatly in advance of trenching. All pavement shall be cut to a straight edge with the method of cutting subject to approval of the ENGINEER. Pavement shall be cut 12 inches wider on each side of the excavated area. Ragged or irregular edges will be redone. Concrete pavement shall be cut with a suitable concrete saw cutting equipment.

3.2 Trench Backfilling: Shall be in accordance to plans or as specified elsewhere herein.

3.3 Aggregate Base Course shall be placed and compacted in accordance with SCDOT Section 305.9 and 305.11. The base course shall be placed at the same time with the trench backfilling.

3.3.1 If the base course is designed to be used as a temporary travel surface, the additional thickness shall be placed, compacted and maintained until the permanent surface is placed. When preparing the base course for the final surface course, the base course material shall be undercut to the thickness to accommodate the surface course(s) and removed from the site, unless otherwise directed by the ENGINEER. The final thickness of the base shall be within a tolerance of plus or minus 1/2 inch of the base thickness required on the plans.

3.3.2 Backfilling with soil above an elevation to accommodate the final base thickness, to be cut-out and replaced with base material at a later date, will not be allowed.

3.4 Prime Coat

Shall be applied to non-bituminous base course beneath bituminous plant mixed pavements unless otherwise shown in the plans. The prime coat shall be applied only when the surface to be treated is dry and the atmosphere temperature in the shade is 40° F or above. Prime coat shall not be applied when the weather is foggy or rainy. The base shall be clear of debris, dirt, clay or other deleterious material prior to placing the prime coat.

3.4.1 Application of the prime coat shall consist of asphalt grade AASHTO 81 for Grade RC-70 except kinematic viscosity at 140° F, centistokes shall be a minimum of 30 and a maximum of 60; the distillate, percentage of volume of total distillate to 680°F, shall be as follows:

To 374°F	15 minimum
To 437°F	55 minimum
To 500°F	75 minimum

To 600°F 90 minimum

and the residue from the distillate to 680°F volume percentage of sample difference shall be a minimum of 50 or of shall be of asphalt grade AASHTO 82. The prime coat shall be applied at a rate of 0.18 to 0.45 gallons per square yard at an application temperature of 90° to 130°F.

3.5 Bituminous Concrete Surface Course, Type I-2

The surface course shall conform to SCDOT using Section 403 Type 1C Asphalt. **Pavement shall be replaced within the same week that it is cut.** If inclement weather delays pavement replacement, the CONTRACTOR shall not cut additional pavement until he has notified the ENGINEER and received specific permission and instructions. Any deviation from this schedule could subject the CONTRACTOR to immediate shut-down or non-payment of additional work performed until pavement repair is complete.

3.5.1 The bituminous plant mix placement and compaction shall conform to SCDOT" Section 401. If directed by the ENGINEER, density control and determination shall be in Accordance to SCDOT" Section 401.

3.6 Portland Cement Concrete shall be placed over a compacted sub-base of CABC stone with the surface damp at time of placement. The concrete patch shall equal the thickness of the surrounding pavement, but shall not be less than 4 inches thick. The concrete shall be handled to prevent segregation and kept free from mud, soil or other foreign matter.

3.6.1 Concrete placement shall not be undertaken or shall be discontinued when any of the following conditions exist:

3.6.1.1. When the descending air temperature in the shade and away from artificial heat reaches 40°F.

3.6.1.2. When the subgrade or base course is frozen.

3.6.1.3. When the temperature of the concrete mix exceeds 90°F.

3.6.1.4. When the time after batching exceeds 90 minutes.

3.6.2 Concrete finishing shall consist of screeding and floating to assist consolidation. The surface texture shall closely resemble the texture of the surrounding pavement. A uniform surface texture shall be applied by burlap dragging or other method acceptable to the ENGINEER. The use of excessive water during finishing will not be permitted.

3.6.3 Concrete curing shall be accomplished with spray compounds, polyethylene film or other methods acceptable to the ENGINEER. In no instance shall the method of curing be allowed to damage the finished surface. Any concrete with excessive surface damage will be considered defective work and removed and replaced at the CONTRACTOR's expense.

3.6.4 Concrete shall be protected from cold for a minimum of 72 hours through thermal blankets or other means acceptable to the ENGINEER. Thermal protection will be required whenever the air temperature is expected to fall below 40°F. Concrete damaged as the result of freezing shall be removed and replaced at the CONTRACTOR's expense.

(End of Section 02575)

SECTION 02614 BRICK WORK

PART ONE - GENERAL

1.1 Related Documents

1.1.1 Requirements of the General Provisions apply to all Work in this Section. Provide all labor, materials, equipment and services indicated on the Drawings, or specified herein, or reasonably necessary for or incidental to a complete job.

1.2 Description of Work

1.2.1 The Work includes furnishing all labor, equipment, and materials and performing all the operations required for the installation of all brick pavers in roadways, sidewalks, driveways, borders, and row-lock paving on a prepared subgrade and concrete base as indicated on the Drawings. Work also includes providing the brick columns as indicated. All brick work shall be constructed to the lines, grades and cross-sections indicated on the Drawings.

1.3 Related Work Specified Elsewhere

Excavation and Backfill	Section 02220
Cast-In-Place Concrete	Section 03300

1.4 Quality Assurance

1.4.1 Installer: The CONTRACTOR or Subcontractor performing the masonry paving work must have at least 5 years of successful experience in the required 'types of paving application.

1.4.2 Product Handling: Protect brick paving and column materials during storage and construction against wetting by rain, snow or ground water and against soilage or intermixture with earth or other types of materials.

1.4.2.1 Protect grout and mortar materials from deterioration by moisture and temperature. Store in a dry location or in waterproof container.

1.4.3 Hot Weather Requirements: Protect brick work in hot weather to prevent excessive evaporation of setting beds and grout. Provide artificial shade, wind breaks and use cooled materials, as required.

1.5 Submittals

1.5.1 Brick: For a brick to be considered as an approved equivalent to the shade specified, the CONTRATOR shall submit a sample panel showing consistent brick color to the following address no later than 5:00 PM, two weeks prior to bid opening.

The LandPlan Group South, Inc.
1206 Scott Street
Columbia, SC 29201
ATTN: Charles Howell

1.5.2. Sample Panels: The CONTRACTOR shall construct a sample with full range of brick and mortar colors for the pavement prior to the start of any paving. The work will be inspected by the OWNER and ENGINEER. If the original sample panel is not acceptable, the CONTRACTOR shall provide additional samples at no cost to the OWNER. Accepted sample shall become the standards for the entire job, and shall remain undisturbed until completion of all paving and walk work. All work must have full range of previous colors approved in sample.

1.5.3 The following sample panel shall be constructed separate and distinct from the final paving. Panel size indicated will be the minimum size accepted

1.5.3.1 A 4’ x 4’ panel of brick paving with the single brick curb border and brick column in accordance with the drawing details for the work.

PART TWO - PRODUCTS

2.1 Brick Columns and Signage: Supply a brick that matches existing columns that is 3-5/8””x 7-5/8”" x 2-1/4" in size. The paver shall be Old Marlborough Modular or approved equal. The brick/paver must conform to meet ASTM C902, Class SX, Type 1 for traffic.

2.2 All brick shall be supplied by the same manufacturer. The brick shall conform to ASTM 216 and/or ASTM C902, as applicable.

2.3 Mortar: Mortar shall conform to the South Carolina Highway Department Standard Specifications and shall be buff in color.

2.4 Joint Filler: Preformed expansion joint fillers shall be non-extruding resilient, non-bituminous type, conforming to AASHTO M153, Type II, and South Carolina State Highway Department Standards.

2.4.1 Unless otherwise indicated on the Drawings, joint filler shall be 1/2inch.

2.5 Sand: Sand shall be a clean aggregate with less that 10% fines.

PART THREE - EXECUTION

3.1 Brick Border

3.1.1 The CONTRACTOR shall install the concrete foundation for the brick border in accordance with the details and Section 03300. The CONTRACTOR shall then spread a damp/sand cement bed on the foundation. The brick is to have the 4”x8” surface exposed. The mortar joint for the brick border course shall be nominal 3/8-inch, with no joint smaller than ¼” and no joints greater than 5/8”. For brick border in a curved pattern that does not conform to this joint maximum and minimum shall be sawn as required.

3.2 Brick Column Cap

3.2.1 The brick column cap is to have the 4”x8” solid surface exposed. The mortar joint for the row-lock shall be nominal 3/8-inch, with no joint smaller than ¼” and no joints greater than 5/8”.

3.3 Repair, Pointing and Cleaning

3.3.1 Removal of Units: Remove masonry units which are loose, chipped, broken, stained, or otherwise damaged, or if units do not match adjoining units and install in fresh mortar, pointed to eliminate evidence of replacement.

3.3.2 Pointing: During the tooling of joints, enlarge any voids or holes, except weep holes, and completely fill with mortar. Point-up all joints at corners, openings, and adjacent work to provide a neat, uniform appearance, properly prepared for application of sealant compounds.

3.3.2.1 At completion of masonry work, point holes in exposed masonry, and cut out defective joints and tuck point solidly with mortar which has been retempered one or two hours after original mixing.

3.3.3 Cleaning: During construction, keep the exposed faces clean of mortar and other stains. When mortar joints reach thumbprint hardness and are tooled, brush the exposed work with a soft fiber brush to remove adhering mortar, and use a wood paddle to remove more tenacious material. Protect bases of walls from splash stains by covering the adjacent ground with sand, sawdust, or polyethylene.

3.3.3.1 Clean exposed brick masonry surfaces as recommended by BIA Technical Note 20 "Cleaning Clay Products Masonry".

3.3.4 Protection: Advise the ENGINEER of proper procedures required to protect the masonry work from deterioration, discoloration or damage during subsequent construction operations.

3.3.5 Sand-and-Swept Joints: After placement of brick paving, coarse, clean sand shall be swept into the joints for the full depth of the bricks. The CONTRACTOR shall be responsible for reapplication as necessary to achieve the full depth of sand.

(End of Section 02614)

PART ONE - GENERAL

1.1 Related Documents

1.1.1 Requirements of the General and Supplemental Conditions apply to all Work in this Section. Provide all labor, material, equipment, and services indicated on the Drawings or specified herein or reasonably necessary for and incidental to a complete job.

1.2 Description of Work

1.2.1 This work includes the removal of pavement and later reconstruction of base and surface courses affected or damaged by the CONTRACTOR's operations whether inside or outside the normal trench limits as indicated on the Drawings and herein specified.

1.3 Quality Assurance

1.3.1 Referenced Standards: Unless otherwise indicated, all referenced standards shall the latest edition available at the time of bidding. Any requirements of these Specifications shall in no way invalidate the minimum requirements of the referenced standards.

SCDOT	South Carolina State Highway Department Standard Specification for Highway Construction, Latest Edition

1.3.2 Qualifications of Workmen: For actual finishing of asphaltic concrete surfaces and operation of the required equipment, use only personnel thoroughly trained and experienced in the skills required.

1.4 Product Delivery

1.4.1 General: Transport asphalt cement mixtures from the mixing plant to the project site in trucks having tight, clean compartments. Provide covers over asphalt cement mixture when delivering to protect the mixture from weather and to prevent loss of heat. During period of cool weather or for long-distance deliveries, provide insulation around entire truck bed surfaces.

PART TWO - PRODUCTS

2.1 Surface Course

2.1.1 Asphaltic Concrete: Comply with the requirements of SCDOT Specifications, Section 403, HOT LAID ASPHALTIC CONCRETE SURFACE COURSE.

2.1.2 Composition of Mixture: Comply with the requirements of SCDOT Specifications subsection 403.03, Composition of Mixture, Type 2. Furnish samples if requested by the ENIGEER.

2.2 Base Course

2.2.1 Stabilized Aggregate Base Course: Comply with the requirements of SCDOT Specifications, Section 306, STABILIZED AGGREGATE BASE COURSE, Type I or II gradation, without priming.

PART THREE - EXECUTION

3.1 Inspection

3.1.1 Examine the areas and conditions under which pavement will be removed and replaced and notify the ENGINEER in writing of conditions detrimental to the proper and timely completion of the work. Do not proceed with the work until unsatisfactory conditions have been corrected in an acceptable manner.

3.2 Base Course

3.2.1 Preparation of Surfacing: After the back filled trenches have had adequate time to consolidate or have been thoroughly compacted by tamping or rolling, remove the material used for backfilling to a depth required for the base and surface courses. Remove all loose and damaged material in existing paving and trim back the existing surface to ensure a satisfactory bond between it and the new paving.

3.2.2 Gravel Base Course: Construct the stabilize aggregate base course to comply with the applicable sections of SCDOT Specifications, Section 306, STABILIZED AGGREGATE BASE COURSE. Unless otherwise directed by the ENGINEER, construct the base course to the following thickness:

Transverse Cuts: 12 inches

Longitudinal Cuts: 6 inches

3.3 Hot Laid Asphaltic Concrete Surface Course

3.3.1 General: Do not feather the edges between the new and existing pavement. Ragged edges will not be allowed between the new and existing pavements. The existing pavement must be cut back for sufficient width to provide straight edges as shown on the Drawings. Unless otherwise shown on the Drawings, the surface course thickness is 2 inches.

3.3.2 Installation Requirements: Comply with the requirements of SCDOT Specifications, subsection 403.05, Equipment Requirements, and subsection 403.06, Construction Requirements.

3.3.3 Tying to Existing Bituminous Pavement: Where new pavement ties to existing pavement, cut the existing pavement to a straight line and completely remove all materials on the new pavement side of the cut and replace with new materials. Coat the cut line with a tack coat to furnish

a bond between the existing surface course and the new surface course. Do not allow the new work to overlap the existing work.

3.3.4 Maintaining Permanently Placed Surfaces Under This Contract: Until the expiration of the guarantee period, maintain surfaces placed under this Contract. Should an area settle that the CONTRACTOR has paved, he will remove the entire pavement in the area; feathering of edges will not be permitted. Add necessary sub-base material as specified herein before to the depth of the applicable surface course. Replace the surface course as herein before specified, all without additional cost to the OWNER.

3.3.5 Clean-Up: Upon completion of paving, remove all surplus materials, dunnage, cartons, and other debris resultant from work of this Section. Leave entire work in satisfactory, acceptable, broom-clean condition.

(End of Section 02616)

PART 1 DESCRIPTION:

The work covered by this section consists of the construction of cast-in-place or precast concrete, brick masonry or block masonry, catch basins, inlets, junction boxes, spring boxes, manholes or other minor drainage structures, excluding endwalls together with all necessary metal grates, covers, frames, steps and other hardware. The CONTRACTOR shall furnish all equipment, tools, labor, and materials necessary to complete the work in accordance with the plans and specifications.

1.1. RELATED WORK

Any reference to standard specifications refers to the most current published date of the following specifications unless otherwise noted.

1.1.1. Reference the following specifications for related work:

- AASHTO – T99 Foundation Compaction
- ASTM A48 Grey iron Casting

All drainage structures and inlets shall conform to the "Standard Specifications for Highway Construction" latest edition, published by the South Carolina Department of Transportation.

PART 2 MATERIALS

2.1. The CONTRACTOR may, at his option, use either cast-in-place concrete, brick masonry, block masonry, or precast concrete construction, provided that the type of construction he wishes to use is permitted by the plans, and is constructed in conformance with the local and state Department of Transportation requirements.

2.2. Shop drawings consisting of catalog cuts or fabricator drawings showing the structure, reinforcing alignment of all wall penetrations and frames, grates, or covers shall be submitted by the CONTRACTOR to the ENGINEER for approval.

2.3 . IRON CASTINGS

2.3.1. Iron castings shall be boldly filleted at angles, and the arises shall be sharp and perfect. No sharp, unfilleted angles or corners will be permitted. They shall be true to pattern in form and dimensions, free from pouring faults, sponginess, cracks, blow holes, and other defects affecting their strength and value for the service intended. All castings shall be sand blasted or otherwise effectively cleaned of scale and sand so as to present a smooth, clean, and uniform surface.

2.3.2. Gray iron castings shall meet the requirements of ASTM A48 for Class 30 iron.

2.3.3. Steps for minor drainage structures shall be fabricated from deformed reinforcing bars, or shall be gray iron castings or shall be of composite plastic-steel construction as shown on the plans, or as referenced above.

2.4. PRECAST DRAINAGE STRUCTURES

2.4.1. Precast drainage structures shall have no more than 4 holes cast or drilled in each unit for the purpose of handling or placing unless otherwise approved by the ENGINEER. All lift holes and handling devices shall be located in accordance with plan and design requirements. Units damaged while being handled or transported will be rejected or shall be repaired in a manner approved by the ENGINEER.

2.4.2. Precast units shall not be transported away from the casting yard until the concrete has reached the minimum required 28-day compressive strength and a period of at least 5 days has elapsed since casting, unless otherwise permitted by the ENGINEER.

2.4.3. Steps for precast drainage structures shall meet the requirements of AASHTO Ml99 for design, materials, and dimensions. Steps shall be incorporated in all drainage structures over 3'-6" in height. The lowest step shall be no more than 16" from the bottom.

2.4.4. The following information shall be clearly shown on each precast member.

- Date of manufacture
- Name of manufacturer

PART 3 INSTALLATION

3.1. The CONTRACTOR shall take the necessary precautions to insure that all excavations for drainage structures are maintained in a dry condition to allow proper compaction beneath the structure and backfill once the structure has been completed.

3.2. Where the foundation material is found to be of poor supporting value or of rock, the ENGINEER may make minor adjustment in the location of the structure to provide a more suitable foundation. Where this is not practical, the foundation shall be conditioned by removing the existing foundation material by undercutting to the depth as directed by the ENGINEER and backfilling with either a suitable local material secured from unclassified excavation or borrow excavation at the nearest accessible location along the project, or foundation conditioning material consisting of crushed stone or gravel or a combination of sand and crushed stone or gravel approved by the ENGINEER as being suitable for the purpose intended. The selection of the type of backfill material to be used for foundation conditioning will be made by the ENGINEER.

3.3. The CONTRACTOR shall install poured concrete foundations or precast concrete bases for all drainage structures.

3.4. Where **PRECAST FOUNDATION** slabs are used, the slab shall be set to within plus or minus ½inch of grade on a bed of size 57 crushed stone measuring 6 inches in thickness minimum after being compacted to 98% maximum density in accordance with AASHTO T99.

3.5. PRECAST STRUCTURES

Joints on precast concrete sections shall be completely filled with bituminous mastic jointing compound or joints shall be made with cement mortar with inside pointing and outside rubber wrap.

3.6. MASONRY STRUCTURES

3.6.1. No masonry drainage structure shall be placed until the foundation has been approved by the ENGINEER.

3.6.2. Brick shall be wet when laid. Lay brick or concrete masonry units in mortar so as to form full bed, with end and side joints in one operation, with joints not more than 3/8" wide except when bricks or concrete masonry units are laid radially, in which case narrowest part of joint shall not exceed ¼". Lay in true line and whenever practical joints shall be carefully struck and pointed on inside.

3.6.3. Protect fresh masonry work from freezing, from drying effects of sun and wind, and for such time as directed by ENGINEER. In freezing weather, heat materials sufficiently to remove ice and frost.

3.6.4. The outside surfaces of brick or concrete masonry portion of drainage structures shall be plastered and troweled smooth with ½" layers of cement mortar.

3.7. BACKFILLING around all drainage structures and inlets shall be done in such a manner so as not to damage either the structure or pipes connecting to the structure. Compaction of backfilled material shall be accomplished in 6-inch lifts (loose) per section 31 2000.1 Earthwork.

(End of Section 02721)

SECTION 02722 DRAINAGE PIPE AND CULVERTS

PART ONE – DESCRIPTION:

The work covered by this section consists of all excavation, bedding, laying pipe, jointing and coupling pipe sections, and backfilling necessary to install the various types of pipes, pipe culverts and fittings required to complete the project. The CONTRACTOR shall furnish all equipment, tools, labor and materials necessary to complete the work in accordance with the plans and specifications.

1.1 **RELATED WORK**

Any reference to standard specifications refers to the most current published date of the following specification unless otherwise noted.

1.2. Reference the following specifications for related work:
ASTM C76 Concrete Pipe
ASTM C507 Reinforced Concrete Elliptical Pipe

1.2.1. All drainage structures and inlets shall conform to, and installed in conformance with, the "Standard Specifications for Highway Construction" latest edition, published by the South Carolina Department of Transportation.

1.3. The CONTRACTOR shall furnish all equipment, tools, labor, and materials necessary to complete the work in accordance with the plans and specifications.

PART TWO – MATERIALS:

2.1. Drainage pipe and culverts shall conform to local and state Department of Transportation requirements.

2.2. Shop drawings consisting of catalog cuts and related data shall be submitted by the CONTRACTOR to the ENGINEER for approval.

2.3. All reinforced concrete pipe, flared end sections, tees and elbows shall be clearly marked showing the pipe class, type of wall and date of manufacture.

2.4. Reinforced concrete drainage pipe shall conform to ASTM C76, Class III, wall thickness B. Joints shall be tongue and groove.

2.5. Concrete flared end sections shall be reinforced. Concrete used in flared end sections shall attain a compressive strength of 3500 psi at 28 days.

2.6. Reinforced concrete elliptical drainage pipe shall conform to ASTM C507, Class HE-ll. Joints shall be tongue and groove.

PART THREE – INSTALLATION:

3.1. GENERAL REQUIREMENTS

3.1.1. Drainage pipes and culverts of the type and quantity and in the locations as called for on the plans or as directed by the ENGINEER shall be installed in conformance with local and state Department of Transportation requirements.

3.1.2. Where proposed culverts are to be installed under existing roadways, the construction shall be performed in such a way that half the roadway will be maintained and available to traffic or as directed by the governing agency.

3.2. Unloading and Handling

All pipes shall be unloaded and handled with reasonable care. When any joint or section of pipe is damaged during unloading or handling, the undamaged portions of the joint or section may be used where partial lengths are needed or, if damaged sufficiently, the ENGINEER will reject the joint or section as being unfit for installation and the CONTRACTOR shall remove such rejected pipe from the project, at no cost to the OWNER.

3.3. PREPARATION OF PIPE FOUNDATION

3.3.1. The pipe foundation shall be prepared in accordance with the applicable method shown on the plans and shall be true to line and grade and uniformly firm. Bedding material shall be placed and shaped beneath the pipe. The pipe foundation shall be shaped to fit the outside of the pipe for at least 10% of its outside diameter under all pipe culverts. Where bell and spigot type pipe is used, recesses shall be excavated to receive the pipe bells.

3.3.2. Where the foundation material is found to be of poor supporting value or of rock, the ENGINEER may make minor adjustment in the location of the pipe to provide a more suitable foundation. Where this is not practical, the foundation shall be conditioned by removing the existing foundation material by undercutting to the depth as directed by the ENGINEER, within the limits established on the plans, and backfilling with either a suitable local material secured from unclassified excavation or borrow excavation at the nearest accessible location within the project, or foundation conditioning material consisting of crushed stone or gravel or a combination of sand and crushed stone or gravel approved by the ENGINEER as being suitable for the purpose intended. The selection of the type of backfill material to be used for foundation conditioning will be made by the ENGINEER.

3.3.3. When necessary, the CONTRACTOR shall provide for the temporary diversion of water or dewatering in order to maintain the pipe foundation in a dry condition, and shall continue to maintain the trench in a dry condition until backfill and compaction activities are complete.

3.4. LAYING PIPE

3.4.1. Rigid pipe shall be carefully laid on the prepared foundation, bell or groove end upgrade with the spigot or tongue fully inserted and each joint check for alignment and grade as the work proceeds. Flexible plastic joint material shall be used. Joint material of other type or design may

be used when designated on the plans, by special provisions, or when permitted in writing by the ENGINEER.

3.4.2. Flexible pipe (except structural plate pipe) shall be carefully placed on the prepared foundation starting at the downstream end with the inside circumferential laps pointing downstream and with the longitudinal laps at the side or quarter points.

3.5. BACKFILLING

3.5.1. The fill around the pipe shall be placed in accordance with the applicable method shown on the plans, and shall be placed in layers not to exceed 6 inches loose unless otherwise approved by the ENGINEER and compacted to the density required. Select backfill material shall be used when called for on the plans.

3.5.2. Care shall be taken during backfill and compaction operations to maintain alignment and prevent damage to the joints. The backfill shall be kept free from stones, frozen lumps, chunks of highly plastic clay, or other objectionable material.

3.5.3. All pipe backfill areas shall be graded and maintained in such a condition that erosion or saturation will not damage the pipe bed or backfill.

3.5.4. Heavy equipment shall not be operated over any pipe until it has been properly backfilled and has a minimum cover as required by the plans. Where any part of the required cover is above the proposed finish grade, the CONTRACTOR shall place, maintain, and finally remove such material at no cost to the OWNER. Pipe which becomes misaligned, shows excessive settlement, or has been otherwise damaged by the CONTRACTOR's operations shall be removed and replaced by the CONTRACTOR at no cost to the OWNER.

3.6. MAINTENANCE

3.6.1. The CONTRACTOR shall maintain all pipe installations in a condition such that they will function continuously from the time the pipe is installed until the project is accepted.

3.6.2. The ENGINEER may require the CONTRACTOR to thoroughly clean out and maintain all existing pipe and drainage structures at his own expense when necessary erosion control measures not taken by the CONTRACTOR resulted in fouling existing drainage systems.

3.7. REINFORCED CONCRETE PIPE

3.7.1. Reinforced concrete drainage pipe shall be installed so as to prevent damage to the pipe. Joints shall be mortar or packing type, and shall be close fitting and generally watertight. Elliptical pipe shall be installed with the major axis horizontal.

3.8. CORRUGATED STEEL PIPE

3.8.1. Bituminous coated corrugated steel pipe and paved invert pipe shall be handled with special care to avoid damage to coatings. Paved invert pipe shall be installed with the paved invert centered on the bottom.

3.8.2. The pipe sections shall be joined with coupling bands, fully bolted and properly sealed. Coupling bands for annular and helical corrugated metal pipe shall provide circumferential and longitudinal strength sufficient to preserve the alignment, prevent separation of the sections, and prevent infiltration of backfill material.

3.8.3. All pipe 72 inches or larger in diameter shall be wire braced at the place of fabrication to retain its shape while being handled, installed, and backfilled. Wire bracing shall be removed by the CONTRACTOR when no longer needed.

3.9. CORRUGATED ALUMINUM PIPE

3.9.1. The pipe sections shall be joined with coupling aluminum bands, fully bolted and properly sealed. Coupling bands for annular and helical corrugated aluminum pipe shall provide circumferential and longitudinal strength sufficient to preserve the alignment, prevent separation of the sections, and prevent infiltration of backfill material.

3.9.2. All pipe 72 inches or larger in diameter shall be wire braced at the place of fabrication to retain its shape while being handled, installed, and backfilled. Wire bracing shall be removed by the CONTRACTOR when no longer needed.

3.10. CORRUGATED STEEL AND CORRUGATED ALUMINUM ALLOY, STRUCTURAL PLATE PIPE AND PIPE ARCH

3.10.1. Erection shall be in accordance with the manufacturer's assembly diagrams and instruction sheets. All erection procedures and methods shall meet with the approval of the ENGINEER. All structural plate shall be handled with reasonable care. The plate shall not be dragged or skidded. If the spelter coating has been broken during handling or backfilling operations, the plate or the assembled pipe or pipe arch will be rejected, or shall be repaired as directed by the ENGINEER.

3.10.2. The entire pipe line shall be completely assembled before any backfill is placed, unless otherwise permitted by the ENGINEER. Elongated pipe shall be erected with the long diameter in a vertical position. Should spiraling occur during erection, the bolts shall be loosened and the pipe assembly adjusted to the correct position.

3.10.3. All bolting shall be done in a careful and workmanlike manner in accordance with the procedure specified by the manufacturer and approved by the ENGINEER before backfill is placed. All nuts shall be tightened to a minimum of 100 foot-pounds and a maximum of 200 foot-pounds of torque. Nut tightness shall be checked with a properly calibrated torque wrench before, during, and after backfill is placed.

3.10.4. Where necessary, the invert grade shall be cambered by an amount sufficient to prevent the development of sag or back slope in the flow line. The amount of camber used will be determined by the ENGINEER.

3.10.5. First class workmanship shall be used in installing the pipe and pipe arch. Evidence of defective workmanship shall include but not be limited to the following.

- Uneven laps
- Improper shaping
- Variation from a straight center line
- Ragged edges
- Loose, unevenly lined or spaced bolts
- Illegible identification stamp on any plate
- Bruised, scaled or broken spelter coating
- Dents or bends in the metal itself

3.10.6. Defective workmanship may constitute sufficient cause for rejection of the completed or partially completed work, or of any materials proposed for use in the work.

(End of Section 02722)

PART ONE - GENERAL

1.1 – Limits of Work

All areas disturbed by grading and construction operations except as covered by surface construction or where noted on the plans, including the areas where surplus material is stockpiled, shall be put into perennial vegetation by seeding for temporary grassing and sodding as directed on the plans. If not directly noted on the plans then revegetation shall be by sodding.

1.2 - Scope

The type of work required includes the following: Fine grading and preparation of grass areas, seeding, and sodding.

1.3 – Lines and Grades

The CONTRACTOR shall provide his own lines and grades for the work required.

1.4 – Standards and Specifications

Generally, materials and methods shall conform to the South Carolina State Highway Department Standard Specifications for Highway Construction, latest edition and as specified herein.

1.5 - Submittals

Submit five (5) copies of type written instructions recommending procedures to be followed by the OWNER for proper maintenance and care of grasses. Submit proof that all materials meet the requirements of this section. Bag tag figures will be evidence of purity and germination of seed. No seed will be accepted with a date of test of more than nine (9) months prior to date of use. Where fertilizer is furnished from bulk storage, the CONTRACTOR shall furnish a supplier's certification of weight and analysis.

PART TWO - PRODUCTS

2.1 – Grass Seed

Provide fresh, clean, new crop seed complying with the tolerance for purity and germination established by the Official Seed Analysis of North America and certified by the Seed Certification Department of Clemson University, as follows:

A. PENNISETUM GLAUCUM (Browntop Millet)

Testing ninety-eight percent (98%) purity and eighty-five percent (85%) germination.

B. CYNODON DACTYLON (Bermudagrass) / or EREMOCHLOA OPHIUOIDES (Centipede) – see plans

Testing ninety-eight percent (98%) purity and eighty-five percent (85%) germination.

C. LOLIUM MULTIFLORUM (Domestic Italian Rye)

Testing ninety-eight percent (98%) purity and ninety percent (90%) germination.

2. 2 – Other Planting Materials

Provide the following materials, all meeting or exceeding regulations of the South Carolina State Department of Agriculture, as follows:

A. Fertilizer: 15-15-15 (50% organic) with trace elements.

B. Basic Slag: Standard Grade.

C. Agricultural Sulfur: Standard Grade.

2.3 – Special Requirements

Where construction activities are stopped in an area for over fourteen (14) days, the entire area must be vegetated temporarily or permanently. This shall be in accordance with the requirements as outlined in the "NPDES General Permit for Stormwater Discharge from Construction Activities that are Classified as Associates with Industrial Activity" by EPA Regulations Permit No. SCR100000. This is in addition to the requirements for a permanent grass cover and shall be at no additional cost to the OWNER
. The CONTRACTOR shall make every effort to complete permanent grassing operations at the earliest practical date in order to complete a grass cover sufficient to protect the site from wind and water erosion.

PART THREE - EXECUTION

3.1 – Planting Seasons

Summer dates are:

3/15 to 9/1 for hulled Bermuda and unhulled Bermuda
5/15 to 9/1 for Browntop Millet

Winter dates are:

9/1 to 3/15 for unhulled Bermuda.
9/1 to 5/15 for Common Rye.

3.2 – General Requirements

A. Equipment

Equipment required for proper execution of these operations shall be present on the job site and in good working order.

B. Maintain Grades

Maintain grades in a true and even condition, including necessary repairs to previous grades and topsoiled areas.

3.3 – Soil Preparation

Limit preparation to areas which will be planted in the near future.

A. Fine Grading

Fine grade all areas to receive grassing. Care shall be taken not to disturb existing trees. Perform this work only during period of favorable weather.

B. After Fine Grading

After fine grading, clean surface of all stones and other objects larger than one inch (1") in any direction. Also, remove roots, sticks, grade stakes and other extraneous matter.

C. Aerate and Disc

Aerate and disc to a depth of three inches (3") to four inches (4") to promote acceptance and germination of seeds.

3.4 - pH Reading

Test pH reading. If reading is below 6.0, adjust to that level with an application of slag; if reading is above 6.5, adjust to that level with an application of sulfur. The testing laboratory shall be by Clemson University Soil Testing Laboratory or a laboratory approved by the Extension Service.

3.5 - Initial Application of Fertilizer

A. Flat Areas

Apply at rate of eight pounds (8lbs.) per 1,000 square feet. Distribute fertilizer and slag or sulfur uniformly over areas incorporating into soil to a depth of two inches (2") by means of hand raking, harrowing, or other approved method. At the CONTRACTOR's option, this operation may be combined with topsoil spreading specified above. NOTE: No pure nitrogen shall be applied.

B. Slopes and Swales

Combine with grassing operations as specified below. Correct any surface irregularities resulting from this operation by hand raking if necessary, and perform any other required "clean up" work before planting is begun.

3.6 - Planting

A. Temporary Lawn Seed (per 1,000 square feet)

Eight pounds (8 lbs.) of fertilizer, 15-15-15; five pounds (5 lbs.) rye grass seed; nine ounces (9 oz.) unhulled bermudagrass seed, thirty-five pounds (35 lbs) of wood fiber, one-gallon (1 gal.) tac material mixed with water.

B. Sodding

Sod shall be viable, weed free and recently harvested. Sod shall be placed on the prepared topsoil. The surface on which sod is to be laid shall be firm and free of footprints. Begin by placing sod along a straight edge and work outward. Sod of the next course shall be matched against the edge of the first line in such a way that the joints between the individual sod pieces do not coincide. Successive courses are matched against the last line laid, in the same manner. The joints shall be closely laid, filled with topsoil and rolled lightly. Surface sod shall be smooth and free of depressions.

C. Establish Lawns

It is the responsibility of the CONTRACTOR to establish a complete vegetative cover with viable healthy plants.

D. Seeding for Temporary Erosion Control Only (per 1,000 square feet)

August 1 to April 1: Three pounds (3lbs.) of rye grass seed and four pounds (4lbs.) of fertilizer.

April 1 to August 1: One-half pound (1/2lb.) browntop millet seed and four pounds (4lbs.) of fertilizer.

3.7 - Maintenance

A. Begin maintenance immediately after any lawn area is planted and continue until the completion of the project.

B. Maintain Lawns

Maintain lawns by weeding, cultivating, mowing at least twice, trimming, hydroseeding, seeding, or re-sodding and other operations such as re-grading and re-planting as required to establish an acceptable stand of grass.

C. Provide Adequate Protection

Provide adequate protection at all times for all grass areas. Lay or place planks over grass for the movement of heavy materials or equipment.

D. Repair or Replace

Repair or replace, at no additional cost to the OWNER, any portion of grassed areas not in good viable condition if so determined by the OWNER before or on the date of completion for work done prior to that time.

3.8 - Acceptance

Lawns will be acceptable provided all requirements, including maintenance, have been complied with, and a healthy, uniform stand of specified grass is established, free of weeds, bare spots and surface irregularities. A full stand of grass is not required where irrigation has not been installed.

(End of Section 02820)

PART ONE - GENERAL:

1.01 - SCOPE

This section includes furnishing all materials, equipment, and labor necessary for the installation of trees and shrubs; protection, maintenance, guarantee and replacement of plants; and all related items required to complete the work shown on the drawings and as specified. The contractor shall furnish a unit price for each type of plant specified for the purpose of adding or deleting plants. The price shall be the same for adding or deleting plants. The price shall include the total cost for furnishing each plant and installation, complete to include mulch. The unit price shall be the same for additions and deletions in bid quantities.

Existing plant material that is to remain shall be thinned, pruned, and all weeds, vines, trash, etc., removed. These plants shall be fertilized the same as for new plantings.

PART TWO - PRODUCTS:

2.01 - TOPSOIL

Topsoil shall be tested for the pH and corrected, if necessary, before planting operations are started. Test results shall be submitted to the Owner/Landscape Architect prior to beginning planting operations.

2.02 - TOPSOIL TO BE FURNISHED

The contractor shall furnish, at his expense, additional topsoil to properly install all work as specified and as shown on the drawings. The contractor shall provide a soil analysis and report for any area which topsoil is to be stripped and used for this project. Topsoil shall have a "high" rating in each of the basic nutrients tested and a pH ranging from 6.0 to 6.5. Necessary additives shall be incorporated in a proper quantity as recommended in the soil analysis or as necessary to bring the soil supplied up to standards specified. Topsoil shall be from naturally well drained areas. It shall be classified as a loam, silt loam, clay loam or a combination thereof, as determined from the Bureau of Plant Industry, Soils and Agricultural Engineering, USDA triangular soil texture chart. Topsoil shall be without admixture of subsoil and shall be clean.

2.03 - BASIC SLAG AND AGRICULTURE SULPHUR

Basic slag and agricultural sulfur (for correcting soil pH) shall be standard grade.

2.04 - COW MANURE OR SLUDGE

Cow manure shall be heat treated, weed seed free, and commercially bagged.

2.05 - COMMERCIAL FERTILIZER

Commercial fertilizer shall be 15-15-15 (50% organic) formula with trace elements and shall conform to the applicable State Fertilizer Laws. It shall be uniform in composition, dry and free flowing and shall be delivered to the site in the original, unopened containers, each bearing the manufacturer's guaranteed analysis. Any fertilizer which becomes caked or otherwise damaged, making it unsuitable for use, will not be accepted.

2.06 - PEAT

Peat shall be a domestic product consisting of partially decomposed vegetable matter of natural occurrence. It shall be brown, clean, low in content of mineral and woody material, mildly acidic and granulated or shredded.

2.07 - MULCH

Pine straw mulch mix shall be used. Mulch shall be a minimum of 3" depth.

2.08 - WATER

The contractor may use the owner's water if it is available. The contractor shall insure that an adequate supply of water is available for the planting. The contractor shall furnish all necessary hoses, equipment, attachments and accessories for the adequate irrigation of planted areas.

2.09 - PLANT MATERIALS

A. Plants

Plants are shown on the drawings with sizes and spacing.

B. Nomenclature

The names of plants required under this contract conform to those given in Standard Plant Names, latest edition, prepared by American Joint Committee on Horticultural Nomenclature. Names of varieties not included therein conform generally with names accepted in the nursery trade.

C. Quantities

Quantities are shown for information only. The contractor is responsible for calculating his own quantities. If there is a conflict between quantities and spacing, spacing shall prevail.

D. Quality and Size

Plants shall have a habit of growth that is normal for the species and shall be sound,

healthy and free from insect pests, plant diseases and injuries. All plants shall equal or exceed the measurements specified in the plant list, which are minimum acceptable sizes. They shall be measured before pruning, with branches in normal position. Any necessary pruning shall be done at time of planting; however, no plants supplied under this contract shall be pruned back to such extent that it no longer meets specifications. Requirements for the measurement, branching, grading, quality, balling and burlapping of plants in the plant list generally follow the code of standard currently recommended by the American Association of Nurserymen, Inc., in the latest edition of the American Standard for Nursery Stock.

E. Substitution

Substitution will be permitted only upon submission of proof that any plant is not obtainable within four hundred (500) miles of the site and authorized by the owner of a changed order providing the use of the nearest equivalent obtainable size or variety of plant having the same essential characteristics with an equitable adjustment of contract price.

2.10 - TYPE OF PROTECTION TO ROOTS

A. Balled and Burlapped Plants

Plants designated "B & B" in the plant list shall be balled and burlapped. They shall be dug with firm, natural balls of earth of sufficient diameter and depth to encompass the fibrous and feeding root system necessary over all be firmly wrapped with burlap or similar material and bound with twine, cord or wire mesh. Where necessary to prevent breaking or cracking of the ball during the process of planting, the ball may be secured to a platform.

The balls of "B & B" plants which cannot be planted immediately on delivery, shall be covered with moist soil or mulch, or other protection from drying winds and sun.

B. Container Plants

Container grown plants in cans or pots or equal quality as balled and burlapped plants may be substituted in lieu thereof. The plants in the containers shall be delivered to the site and remain in the containers until planted. Plants in containers that are severely root bound shall not be acceptable. All plants shall be carefully removed from their containers in such a manner not to injure the roots.

2.11 - SAMPLES, TESTS AND INSPECTIONS

A. Notice of Sources

Within ten (10) days following acceptance of the bid, the owner shall be notified of the sources of the materials required or desired to be inspected or tested.

B. Topsoil to be Furnished:

The owner reserves the right to inspect the topsoil to be furnished, to determine whether or not it meets the requirements specified, and approve the depth to which it may be stripped. At the time of inspection, the contractor shall be required to take representative soil samples from several locations in the area under consideration. Tests shall be conducted by a State or Commercial Soil Testing Laboratory using methods approved by the Association of Official Agricultural Chemists or the State Agricultural Experimental Station. Delivery of topsoil may begin after approval of the sample. Soil test results shall be submitted to the Owner/Landscape Architect prior to beginning planting operations.

C. Plants

The contractor shall be responsible for all certificates of inspection of plant materials that may be required by Federal, State or other authorities to accompany shipments of plants. Inspection of plants to be balled and burlapped may be made at the place of growth. All plants must be inspected and approved before they are planted. Inspection and approval by the owner of plants at the place of growth or upon delivery shall be for quality, size and variety only and shall not in any way impair the right of rejection for failure to meet other requirements during progress of this work.

PART THREE - EXECUTION:

3.01 - TIME OF PLANTING

It is the responsibility of the contractor to coordinate all phases of the planting. Planting operations shall be conducted under favorable weather conditions during the next season or seasons which are normal for such work. At the option and on the full responsibility of the contractor, planting operations may be conducted under unseasonable conditions without additional compensation.

3.02 - SPRAYING

Plant material shall be sprayed, as may be necessary to control diseases and insects and to prevent their spread to other plantings. Materials and methods employed shall be as are commonly used to control the diseases and pests found present and shall not be injurious to person or structures.

3.03 - PRUNING AND REPAIR

Upon completion of the work under this contract, all trees and shrubs shall be pruned and any injuries repaired. The amount of pruning shall be limited to the minimum necessary to remove dead or injured twigs and branches and to compensate for the loss of roots as a result of transplanting operations. Pruning shall be done in such a manner as not to change the natural habit or shape of the plant, however, no plants applied under this contract shall be pruned back to such extent that it no longer meets specifications. All cuts shall be made

flush, leaving no stubs. On all cuts over three-fourths inch (3/4") in diameter and bruises or scars on the bark, the injured cambium shall be traced back to living tissue and removed; wounds shall be smoothed and shaped so as not to retain water and the treated area shall be coated with an acceptable tree wound paint.

3.04 - OBSTRUCTION BELOW GROUND OR OVERHEAD

A. It is not contemplated that planting shall be done where the depth of soil over underground construction and obstructions is insufficient to accommodate the roots or where pockets of impervious soil will require drainage. Where such conditions are encountered in excavation of planted areas and where the obstruction cannot be removed by hand methods in the course of digging plant pits of the usual size, and where trees to be planted are found to be under overhead wires, other locations for plant material may be designated by the owner.

B. Removal of underground obstructions, relocation of construction and provision of drainage for planting areas shall be done only as directed by the owner.

C. If changes in the location of the work, or if the removal of obstructions involves additional work, the contractor shall not proceed until authorized in writing by the owner.

3.05 - NEW PLANTING

A. Layout

New plantings shall be located where shown on the plans except where obstructions below ground or overhead are encountered or where changes have been made in the construction. If adjustments are necessary they shall be made only after approval by the Owner or Landscape Architect. No planting shall be placed closer than one foot (1') to pavements or structures except where indicated.

B. Planting Pits

Reasonable care shall be exercised to have pits dug and soil prepared prior to moving plants to their respective locations for planting to insure that they will not be unnecessarily exposed to drying elements or physical damage. Circular pits with vertical sides shall be excavated for all plants, except for hedge and plants specifically designated on the plans to be planted in beds. Diameter of pits for plant material, trees, and shrubs shall be at least twice the width of the diameter of the ball or spread roots. The depth of pits for trees and shrubs shall be enough to accommodate the ball or roots when the plant is set to finished grade allowing for compacted, prepared soil in the bottom of the pit.

C. Percolation Tests

Subsurface drains have not been included as part of the project, therefore, the contractor shall make such percolation tests as may be necessary to determine if

subsurface drainage conditions in landscape areas are so poor as to support moisture conditions potentially fatal to plantings. The following procedure is recommended:

1. Wait at least twenty-four (24) hours after rain and dig test pit twelve inches (12") square or twelve and one-half inches (12-1/2") in diameter to depth of bottom of plant trench or pit; remove all loose soil (if standing water is visible, notify the owner).

2. Quickly fill bottom with six inches (6"), approximately three and one-fourth gallons (3-1/4 gal.) of water.

3. Record length of time from filling until disappearance of water and divide number of minutes by six (6) to give average time of one inch (1") fall.

4. Compare one inch (1") fall time with the following table:

    a. One inch (1") in zero to three (0 - 3) minutes indicates rapid absorption.

    b. One inch (1") in three to five (3 - 5) minutes indicates medium absorption.

    c. One inch (1") in five to thirty (5 - 30) minutes indicates slow absorption.

    d. One inch (1") in over sixty (60) minutes indicates impervious soil.

5. If test indicates soil to be semi-impervious or impervious, or if water is initially found in test pit, notify the owner in writing before proceeding further.

6. If the contractor does not make tests at representative locations and file records or results with the owner, or if he plants in areas shown to have poor drainage without a written release from the owner, he shall be liable for any further guaranteed replacements due to subsurface water damage.

7. If the contractor makes proper tests and files complete records indicating semi-impervious soil or worse conditions, he will not be held responsible for future subsurface water damage to work of this contract. The owner may observe the testing at any time, and shall be informed in advance of the time and place of testing.

D. Planting Mixture

Soil used in planting shall be topsoil, as herein before specified, or suitable existing soil, either of which shall be thoroughly mixed with one (1) part peat and one (1) part manure to five (5) parts soil. Very poor soils, grave, hardpan or other soil injurious to plants shall not be used. Except for ericaceous plants, very acidic or sour soil

(having a pH of less than six {6}) shall be thoroughly mixed with sufficient slag to produce a slightly acid reaction (a pH of 6.0 to 6.5). Soil used in planting shall be thoroughly mixed with five pounds (5 lbs.) of 16-4-12 (50% organic) formula commercial fertilizer per cubic yard.

E. Excess Soil

Excess excavated soil from planting operations shall be disposed off the site or as directed by the owner.

F. Setting Plants

Unless otherwise specified, all plants shall be planted in pits, centered, and set on compacted planting mixture to such a depth that the finished grade level at the plant after settlement will be the same as that at which the plant was grown. They shall be planted upright and faced to give the best appearance or relationship to adjacent structures. No burlap shall be pulled from under the balls. Platform wire and surplus binding from top and sides of the balls shall be removed. Roots shall be spread in their normal position. All broken or frayed roots shall be cut off evenly. Planting mixture shall be placed and compacted carefully to avoid injury to roots and to fill all voids. When the hole is nearly filled, add water as necessary and allow it to soak away. Fill the holes to finished grade and form a shallow saucer around each plant by placing settles, additional soil shall be filled in to the level of the finished grade.

G. Mulching

All plants shall be mulched with a three inch (3") layer of pine straw within two (2) days after planting. This mulch shall entirely cover the area of the planting pit, bed, or saucer around each plant.

3.06 - MAINTENANCE

Maintenance shall begin immediately following the last operation of installation for each plant and shall continue in accordance with the following requirements: New planting shall be protected and maintained until installation of all planting is completed plus a minimum of ninety (90) days. Maintenance shall include watering, weeding, cultivating, mulching, removal of dead material, re-inserting plants to proper grades or upright position and restoration of the planting saucer, re-staking or additional staking and other necessary operations. If planting is done after lawn preparation, proper protection to lawn areas shall be provided and any damage resulting from planting operations repaired promptly.

3.07 - INSPECTION FOR ACCEPTANCE

A. Substantial Completion
Substantial completion is determined when installed material is alive and in a healthy condition.

B. Inspection

Inspection of the work of planting to determine completion of contract work will be made by the owner at the conclusion of the maintenance period upon written notice requesting such inspection submitted to the owner at least ten (10) days prior to the anticipated date.

C. Acceptance

After inspection, the contractor will be notified by the owner of acceptance of all work of this section, or, if there are any deficiencies, of the requirements for completion of the work. Maintenance or other work remaining to be done shall be subject to re-inspection before acceptance. Maintenance of all work will be required by the contractor until the entire plantings have been accepted by the owner.

D. Acceptance In Part

The work of planting may be accepted in part by the owner upon written acceptance by the owner clearly stating the portion accepted and the conditions of the acceptance. This in no way voids the replacement on plants under "Plant Guarantee and Replacement".

3.08 - PLANT GUARANTEE AND REPLACEMENT

A. Guarantee

Ten percent (10%) of the Contract Price shall be withheld for a period of twelve (12) months from acceptance to ensure replacement of plant material not meeting the guarantee. Provided that plants are maintained in accordance with the contractor's maintenance schedule, plants shall be guaranteed for one (1) year and shall be alive and in satisfactory growth at the end of the guarantee period.

B. The contractor shall provide the owner with a written detailed outline for maintenance for the first year. This shall cover all plant requirements needed to assure healthy material at the conclusion of the guarantee period.

C. Replacement

At the end of the guarantee period, inspection will be made by the owner upon written notice requesting such inspection submitted by the contractor at least ten (10) days before the requested date. Any plant required under this contract that is dead or not in satisfactory growth, as determined by the owner, shall be removed from the site; these and any plants missing due to the contractor's negligence, shall be replaced as soon as conditions permit, but during the normal planting season. At the successful completion of this work the ten percent (10%) retention shall be released.

D. Materials and Operations

All replacements shall be plants of the same kind and size as specified in the plant

list. They shall be furnished and planted as specified under "New Planting". The cost of such replacements shall be borne by the contractor.

E. The contractor shall visit the site on his own schedule during the one (1) year guarantee period to determine if proper maintenance is being conducted. If the contractor determines that the owner is not performing proper maintenance, then he shall outline in writing, in detail, his concerns.

3.09 - SUBMITTALS

The contractor shall submit results of pH tests and his plans for correcting the pH to the owner and the results of the percolation tests prior to beginning planting operations.

(End of Section 02830)

PART ONE – DESCRIPTION:

The work covered by this section consists of furnishing all labor, materials, and equipment to perform all necessary operations to topsoil, fine grade, fertilize, mulch and maintain temporary and permanent seeding of all graded, cleared, or disturbed areas during construction. The work covered by this section shall be in conformance with the latest version of local and state Department of Transportation requirements.

1.1. Related Work

See following sections for related work.

02110	Clearing and Grubbing
02210	Unclassified Excavation and Grading
02270	Erosion and Sediment Control
SS-A617A	FS Liquid Mulch Binder

1.2 References

Any reference to standard National or State Specifications and/or Regulations refers to the most current published date of the specification or regulation unless otherwise noted.

The work covered by this section shall be in conformance with Section 810 of the "Standard Specifications for Highway Construction" dated 2007, published by the South Carolina Department of Transportation and the Sediment Control handbook as published by EQC, Bureau of Water, SC Department of Health and Environmental Control.

PART TWO – MATERIALS:

2.1. Topsoil

Topsoil shall be from stockpiles created from stripping and required excavation. Should additional topsoil be required in excess of that obtained from stripping and excavation, the contractor shall obtain material from other sources on the site where authorized by the OWNER, or from approved sources off the site. The topsoil shall be natural, friable soil, possessing characteristics of representative soils in the vicinity which produce heavy growths of crops of grass. It shall be obtained from naturally well-drained areas, shall be reasonably free from subsoil, brush, objectionable weeds, and other litter and shall be free from toxic substances, clay lumps, stones, roots and other objects larger than 1 inch in diameter, or any other material which might be harmful to plant growth or be a hindrance to grading, planting, and maintenance operations.

2.2. Fertilizer

Fertilizer shall be the product of an approved commercial fertilizer manufacturer and shall be 5-10-5 grade, uniform in composition, free-flowing material suitable for application with approved standard equipment. The fertilizer shall conform to the applicable State fertilizer laws and shall be delivered to the site in bags or other convenient containers each fully labeled and bearing the name, trademark, and warranty of the producer.

2.3. Lime

Lime shall be ground limestone containing not less than 85% of total carbonates and shall be ground to such fineness that at least 50% will pass through a 100-mesh sieve and at least 90% will pass through a 20-mesh sieve. Coarser materials will be acceptable provided the specified rates of application are increased proportionately on the basis of quantities passing the 100-mesh sieve, but no additional payment will be made for the increased quantity.

2.4. Mulch

Mulch shall be straw from wheat or oats. Materials for securing mulch may be one of the following.

- Mulch Netting: Lightweight plastic, cotton, jute, wire orpaper nets shall be used.
- Peg and Twine: Bailing twine and soft wood pegs 1/2" x 1" x 12".
- Liquid Mulch Binder: RC-2 cut back asphalt conforming to the requirements of Federal Specifications SS-A67lA, and asphalt emulsion shall conform to the requirements of Federal Specification SS-A-674, Type V.
- Seed: Seed used shall conform to all state laws and regulations of the SCDA. Seed that has become wet, moldy, or otherwise damaged in transit or storage will not be acceptable. The seed used shall be that shown in seeding schedule specified herein or on the plans.

PART THREE – INSTALLATION:

3.1. Seedbed Preparation

3.1.1. Clearing

Prior to or during grading and tillage operations, the ground surface shall be well drained, cleared of all brush, roots, stones larger than 2 inches in diameter, or any other material which may hinder proper grading, tillage, or subsequent maintenance operations.

3.1.2. Fine Grading

Areas to be seeded shall be graded as shown on the drawings or as directed and all surfaces shall be left in an even and properly compacted condition so as to prevent the formation of depressions where water will stand. Areas to be topsoiled shall be graded to a smooth surface and to a grade that will allow topsoiling to finished grade.

3.1.3. Topsoiling

Immediately prior to placing topsoil, the subgrade, where excessively compacted by traffic or other causes, shall be loosened by scarifying to a depth of at least 2 inches to permit bonding of the topsoil to the subgrade. Topsoil shall be uniformly spread by approved equipment in sufficient quantity to provide a compacted layer of 4 inches in thickness over the designated areas and in such manner that planting can proceed with little additional soil preparation or tillage. Topsoil shall not be placed when the subgrade is frozen, excessively wet, extremely dry, or in a condition otherwise detrimental to the proposed planting or to proper grading. Topsoil shall be graded to the lines indicated or as directed and any irregularities in the surface resulting from topsoiling or other operations shall be corrected to prevent formations of depressions where water will stand.

3.1.4. Tillage

After topsoiled areas required to be seeded have been brought to the grades shown on the plans and as specified, they shall be thoroughly tilled to a depth of 3 inches by approved methods, until the condition of the soil is acceptable to the ENGINEER. Any objectionable undulations or irregularities in the surface resulting from tillage or other operations shall be removed before planting operations are begun. The work shall be performed only during periods when satisfactory results are likely to be obtained. When conditions are such, by reason of drought, excessive moisture or other factors, that results are not likely to be satisfactory, the ENGINEER will stop the work and it shall be resumed only when, in his opinion, the desired results are likely to be obtained.

3.2. Limestone, Fertilizer and Seed

3.2.1. General

Seasonal limitations for seeding operations, the kinds and grades of fertilizers, the kinds of seed, and the rates of application of limestone, fertilizer, and seed shall be as shown in the seeding schedule.

3.2.2. Equipment to be used for the application, covering, or compaction of limestone, fertilizer, and seed shall have been approved by the ENGINEER before being used on the project. Approval may be revoked at any time if equipment is not maintained in satisfactory working condition, or if the equipment operation damages the seed.

3.2.3. Limestone, fertilizer, and seed shall be applied within 24 hours after completion of seedbed preparation unless otherwise permitted by the ENGINEER, but no limestone or fertilizer shall be distributed and no seed shall be sown when the ENGINEER determines that weather and soil conditions are unfavorable for such operations.

3.2.4. During the application of fertilizer, adequate precautions shall be taken to prevent damage to structures or any other appurtenances. The CONTRACTOR shall either provide adequate covering or change methods of application as required to avoid such damage. When such damage occurs, the CONTRACTOR shall repair it, including any cleaning that may be necessary.

3.3. Limestone and Fertilizer

Limestone may be applied as a part of the seedbed preparation, provided it is immediately worked into the soil. If not so applied, limestone and fertilizer shall be distributed uniformly over the prepared seedbed at a specified rate of application and then harrowed, raked, or otherwise thoroughly worked or mixed into the seedbed.

3.3.1. If liquid fertilizer is used, storage containers for the liquid fertilizer shall be located on the project and shall be equipped for agitation of the liquid prior to its use. The storage containers shall be equipped with approved measuring or metering devices which will enable the ENGINEER to record at any time the amount of liquid that has been removed from the container. Application equipment for liquid fertilizer, other than a hydraulic seeder, shall be calibrated to insure that the required rate of fertilizer is applied uniformly.

3.4. Seeding

Seed shall be distributed uniformly over the seedbed at the rate indicated in the seeding schedule, and immediately harrowed, dragged, raked, or otherwise worked so as to cover the seed with a layer of soil. The depth of covering shall be as directed by the ENGINEER. If two kinds of seed are to be used which require different depths of covering, they shall be sown separately.

3.4.1. When a combination seed and fertilizer drill is used, fertilizer may be drilled in with the seed after limestone has been applied and worked into the soil. If two kinds of seed are being used which require different depths of covering, the seed requiring the lighter covering may be sown broadcast or with a special attachment to the drill, or drilled lightly following the initial drilling operation.

3.4.2. When a hydraulic seeder is used for application of seed and fertilizer, the seed shall not remain in water containing fertilizer for more than 30 minutes prior to application unless otherwise permitted by the ENGINEER.

3.4.3. Immediately after seed has been properly covered, the seedbed shall be compacted in the manner and degree approved by the ENGINEER.

3.5. Modifications

When adverse seeding conditions are encountered due to steepness of slope, height of slope, or soil conditions, the ENGINEER may direct or permit that modifications be made in the above requirements which pertain to incorporating limestone into the seedbed; covering limestone, seed, and fertilizer; and compaction of the seedbed.

3.5.1. Such modifications may include but not be limited to the following.

3.5.1.1. The incorporation of limestone into the seedbed may be omitted on (a) cut slopes steeper than 2:1 (b) on 2:1 cut slopes when a seedbed has been prepared during the excavation of the cut and is still in an acceptable condition; or (c) on areas of slopes where the surface of the area is too rocky to permit the incorporation of the limestone.

3.5.1.2. The rates of application of limestone, fertilizer, and seed on slopes 2:l or steeper or on rocky surfaces may be reduced or eliminated.

3.5.1.3. Compaction after seeding may be reduced or eliminated on slopes 2:1 or steeper, on rocky surfaces, or on other areas where soil conditions would make compaction undesirable.

3.6. Mulch

3.6.1. General

All seeded areas shall be mulched unless otherwise indicated on the plans or directed by the ENGINEER. Application rate of mulch shall be indicated in seeding schedule.

3.6.2. Mulching

Mulch shall be applied within 36 hours after the completion of seeding unless otherwise permitted by the ENGINEER. Care shall be exercised to prevent displacement of soil or seed or other damage to the seeded area during the mulching operations.

3.6.3. Mulch shall be uniformly spread by hand or by approved mechanical spreaders or blowers that will provide an acceptable application. An acceptable application will be that which will allow some sunlight to penetrate and air to circulate but also partially shade the ground, reduce erosion, and conserve soil moisture.

3.6.4. Mulch Binding

Mulch shall be held in place using devices approved by the ENGINEER as per manufacturers recommendations. During application, the CONTRACTOR shall take adequate precautions to prevent damage to structures or appurtenances.

3.7. Maintenance

3.7.1. General

The CONTRACTOR shall be responsible for the proper care and maintenance of the seeded areas until the work under the entire contract has been completed and accepted by the ENGINEER. Maintenance shall consist of repair and replacement of eroded areas, watering, refertilizing, reliming, reseeding, and remulching as necessary to provide an even, fixed growth of grass. In addition, the CONTRACTOR shall provide protection against traffic and shall erect the necessary barricades and warning signs immediately after planting is completed.

3.7.2. Mowing

The seeded areas shall be mowed with approved mowing equipment as per seeding schedule. If weeds or other undesirable vegetation threaten to smother the planted species, such vegetation shall be removed at no cost to the OWNER.

3.8 Inspection and Testing

3.8.1 Fertilizer and Lime

The ENGINEER shall be furnished with duplicate copies of invoices for all fertilizer and lime used on the project. Invoices for fertilizer shall show the grade furnished. Invoices for lime shall show total minimum carbonates and minimum percentages of the material furnished that pass 100-mesh and 20-mesh sieve. Upon completion of the project, a final check of the total quantities of fertilizer and lime used will be made against the total area topsoiled and seeded, and if the minimum rates of application have not been met, the ENGINEER may require the distribution of additional quantities of these materials to make up the minimum application specified at no additional cost to the OWNER.

3.8.2 Seed

The ENGINEER shall be furnished duplicate signed copies of a statement from the Vendor, certifying that each container of seed delivered is fully labeled and in full accordance with the specifications in this section and the seeding schedule.

(End of Section 02933)

PART ONE – GENERAL:

1.01 – RELATED DOCUMENTS

Provide all labor, materials, equipment and services indicated on the drawings, or specified herein, or reasonably necessary for, or incidental to a complete job.

PART TWO – PRODUCTS: (This section not applicable.)

PART THREE – EXECUTION:

3.1– Clean Up

3.1.1 During the progress of the work, keep the site and affected adjacent areas in a neat and clean condition at all times. Remove all rubbish, surplus materials, and un-needed construction equipment from the site. Repair all damages so that the public and property owners will be inconvenienced as little as possible.

3.1.2 Where materials or debris has washed or flowed into, or has been placed in, existing water-courses, ditches, gutters, drains, pipes, and/or structures by work performed under this contract, or elsewhere during the course of the contractor's operations, remove and satisfactorily dispose of such material or debris during the progress of the work. Upon completion of the work, leave all ditches, channels, drains, pipes, and/or structures and work, etc., in a clean and neat condition.

3.1.3 On or before completion of the work, unless otherwise directed or permitted in writing, tear down all temporary buildings and structures built by the contractor for his own use. Remove all temporary works, tools, and machinery or other construction equipment furnished by the contractor. Remove all rubbish from any grounds which have been occupied by the contractor; leave all roads and all parts of the premises and adjacent property affected by the contractor's operations in a neat and satisfactory condition.

3.1.4 Remove, acceptably disinfect and cover all organic matter and materials containing organic matter in, under, and around all privies, houses, and other buildings used.

3.1.5 Restore or replace, when and as directed, any public or private property damaged by contractor's work, equipment or employees to a condition at least equal to that existing immediately prior to the beginning of the operations. Perform, as required, all necessary highway or driveway reshaping of shoulders and ditches, walks and landscaping work. Use suitable materials, equipment and methods for such restoration. The contractor shall be responsible for obtaining releases from the various property owners, stating that all restoration work is satisfactory.

(End of Section 02995)

PART ONE - GENERAL:

1.1 - Description

1.1.1 Form cast-in-place concrete indicated on drawings and subsequently remove such forms except earth forms.

1.1.2 Related Work Described Elsewhere

1.1.2.1 Concrete Reinforcement, Section 03200
1.1.2.2 Cast-In-Place Concrete, Section 03300

1.2 – Quality Assurance

1.2.1 Qualifications of Workmen

Provide superintendent or foreman who will be present during this portion of work, who shall be thoroughly familiar with materials being installed, referenced standards and requirements of this work, and who shall direct work performed under this section.

1.2.2 Codes and Standards

1.2.2.1 In addition to complying with pertinent codes and regulations, comply with pertinent recommendations contained in publication ACI 347 of the American Concrete Institute, "Recommended Practice for Concrete Formwork".

1.2.2.2 Where provisions of pertinent codes and standards conflict with this specification, the more stringent provisions shall govern.

1.3 - Submittals

1.3.1 Manufacturer's Data

Submit two (2) copies manufacturer's data and installation instructions for proprietary materials, including form coatings, manufactured form systems, ties and accessories to the owner for approval.

1.4 – Product Handling

1.4.1 Protection

Use means necessary to protect formwork materials before, during and after installation and to protect installed work and materials of other trades.

1.4.2 Replacements

In the event of damage, immediately make repairs and replacements necessary at no additional cost to the owner.

PART TWO - PRODUCTS:

2.1 - Materials

2.1.2 Forms for Smooth Finished Exposed Concrete

Plywood, metal, metal-framed plywood faced, or other acceptable panel type materials providing continuous, straight surfaces.

2.1.2.1 Plywood shall comply with U.S. Product Standard PS-1, "B-B High Density Overlaid Concrete Form", Class I.

2.1.2.2 Furnish in largest practicable sizes to minimize joints.

2.1.2.3 Furnish in thickness sufficient to withstand pressure of newly placed concrete without bow or deflection.

2.1.3 Forms for Other Unexposed Concrete

Plywood, lumber, metal or other material acceptable to the owner; lumber shall be dressed on at least two (2) edges and one (1) side for tight fit.

2.2 – Accessories

2.2.1 Form Ties

2.2.1.1 Factory fabricated, adjustable length, removable or snap off metal ties, designed to prevent deflection and to prevent spilling upon removal.

2.2.1.2 Do not use form ties fabricated on job site or wire ties.

2.2.2 Form Coatings

Commercially formulated compounds that will not bond with, stain or adversely affect concrete surfaces, and will not impede wetting of surfaces to be cured with water or curing compounds.

2.3 - Formwork Design

2.3.1 Safety

Design, erect, support, brace and maintain formwork to safely support vertical and lateral loads until such loads can be supported by structure.

2.3.1.1 Construct formwork so that concrete members and structures are of correct size, shape, alignment, elevation and position.

2.3.2 Removable

Design formwork to be readily removable without impact, shock or damage to cast-in-place concrete or adjacent materials.

2.3.3 Tighten

Tighten formwork to prevent leakage of wet concrete. Solidly butt joints and provide backup material at joints to prevent leakage and fins.

2.3.4 Side Forms

Side forms of footings may be omitted and concrete placed directly against excavation.

PART THREE - EXECUTION:

3.1 – Surface Conditions

3.1.1 Inspection

3.1.1.1. Before work of this section, inspect installed work of other trades and verify that such work is complete to the point where this installation may properly begin.

3.1.1.2 Verify that forms may be constructed in accordance with pertinent codes and regulations, referenced standards and original design.

3.1.2 Discrepancies

3.1.2.1 In the event of discrepancy, immediately notify the owner.

3.1.2.2 Do not proceed with installation in areas of discrepancy until such discrepancies have been fully resolved.

3.2 - Form Construction

3.2.1 General

3.2.1.1 Construct to dimensions shown, level, plumb and alignment.

3.2.1.2 Fabricate for easy removal without hammering or prying against concrete surfaces.

3.2.1.3 Examine drawings and specifications and consult with other trades relative to provision for openings.

3.2.1.4 Set required time to be embedded in concrete.

3.2.1.5 Keep form sufficiently wetted to prevent joints opening before concrete placement.

3.2.1.6 Brace and tie forms so as to maintain position and shape. Space forms apart and securely tie together, using metal spreader ties that give positive tying and accurate spreading.

3.2.1.7 Exercise care in form layout to avoid necessity for cutting in-place concrete.

3.2.2 Footing Forms

Footing side forms may be of earth, provided soil will stand without caving and sides are made with neat cuts to minimum dimensions shown on drawings. Make necessary provisions to prevent cave-ins during concrete placement.

3.2.3 Forms for Exposed Construction

Provide sharp, clean corners ar intersecting planes, without visible edges or offsets.

3.2.4 Form Coatings

Coat form surfaces before reinforcement is placed. Do not allow excess coating material to accumulate in forms or to come into contact with surfaces to be bonded to fresh concrete.

3.3 – Form Removal

3.3.1 General

Do not remove forms until concrete is twenty-four (24) hours old.

3.3.2 Non-Supporting Formwork

3.3.2.1 Formwork not supporting concrete, such as walls and similar parts of the work, may be removed after cumulatively curing at not less than fifty degrees fahrenheit (50 F) for twenty-four (24) hours after concrete placement, provided that:

3.3.2.1.1 Concrete is sufficiently hard to not be damaged by removal.

3.3.2.1.2 Curing and protection operations are maintained.

3.4 – Form Re-Use

3.4.1 Form re-use shall be subject to advance approval by the owner.

3.4.2 Unless specifically approved in advance by the owner, form re-use shall in no way delay or change schedule for concrete placement from schedule obtainable if all forms were new.

(End of Section 03100)

SECTION 03200 CONCRETE REINFORCEMENT

PART ONE – GENERAL:

1.1 Description

1.1.1 Work Included

Concrete reinforcement and associated items required for this work as shown on the drawings.

1.1.2 Related Work Described Elsewhere

1.1.2.1. Placement of other embedded items

Concrete Formwork, Section 03100
Cast-In-Place Concrete, Section 03300

1.2 – Quality Assurance

1.2.1 Qualifications of Workmen

Provide the superintendent or foreman who will be present during this portion of the work, who shall be thoroughly familiar with materials being installed and the best methods for installation and who shall direct work performed under this section.

1.2.2 Codes and Standards

1.2.2.1 In addition to complying with pertinent codes and regulations, comply with pertinent recommendations contained in publication ACI 315 of the American Concrete Institute, "Manual of Standard Practice for Detailing Reinforcing Concrete Structures" and ACI 318 (latest edition) "Building Code Requirements for Reinforced Concrete".

1.2.2.2 Where provisions of pertinent codes and standards conflict with this specification, the more stringent provisions shall govern.

1.3 – Submittals

1.3.1 Shop Drawings

1.3.1.1 Submit shop drawings to the owner for review.

1.3.1.2 Do not deliver concrete reinforcement to job site until receipt of reviewed shop drawings from the owner.

1.4 – Product Handling

1.4.1 Protection

1.4.1.1 Use means necessary to protect concrete reinforcement before, during, and after installation and to protect installed work and materials of other trades.

1.4.1.2 Store in a manner to prevent excessive rusting and fouling with dirt, grease, and other bond breaking coatings.

1.4.1.3 Use necessary precautions to maintain to maintain identification after bundles are broken.

1.4.2 Replacements

In the event of damage, immediately make repairs and replacements necessary, at no additional cost to the owner.

PART TWO – PRODUCTS:

2.1 – Concrete Reinforcement

Concrete reinforcement materials shall be new, free from loose rust and scale and complying with the following referenced standards:

2.1.1 Reinforcement Bars

ASTM A-615, Grade 60. All reinforcing bars, except No. 2 shall be deformed in accordance with ASTM A-305, latest edition.

2.1.2 Welded Wire Fabric

Welded wire fabric shall conform to ASTM A-185, latest edition.

2.2 – Other Materials

Other materials not specifically described, but required for complete and proper installation of concrete reinforcement, shall be selected by the contractor and subject to approval by the owner.

PART THREE – EXECUTION:

3.1 – Surface Conditions

3.1.1 Inspection

3.1.1.1 Before installation of work of this section, inspect installed work of other trades and verify that such work is complete to the point where this installation may properly begin.

3.1.1.2 Verify that concrete reinforcement may be installed in strict accordance with pertinent codes and regulations, shop drawings and original design.

3.1.2 Discrepancies

3.1.2.1 In the event of discrepancy, immediately notify the owner.

3.1.2.2 Do not start installation until discrepancies and unsatisfactory conditions are corrected.

3.2 – Bending

3.2.1 General

3.2.1.1 Fabricate reinforcement in accordance with shop drawing.

3.2.1.2 Do not use bars with kinks or bends not shown on drawing or shop drawing.

3.2.1.3 Do not bend or straighten steel in a manner that will damage material.

3.2.2 Design

3.2.2.1 Bend all bars cold unless approved by the owner.

3.2.2.2 Make bends for ties around pins having diameter not less that two (2) times minimum bar thickness.

3.2.2.3 Make bends for other bars, including hooks, around pins having diameter not less than six (6) times minimum bar thickness.

3.3 – PLACEMENT

3.3.1 General

Before start of concrete placement, accurately place concrete reinforcement, positively securing and supporting by metal chairs or spacers, or by metal hangers.

3.3.2 Inspection

Prior to placement of concrete, the owner shall be notified in ample time to inspect placement of reinforcement. Inspection of reinforcement will be made only after the placement of each section to be poured. The owner shall always be notified of pouring schedule well in advance.

3.3.3 Clearance

3.3.3.1 Preserve clear space between bars of not less than the normal diameter of round bars.

3.3.3.2 In no case allow clear distance of less than three-quarter inch (3/4”) or less than one and one-third (1-1/3) times maximum aggregate size.

3.3.3.3 Minimum clearance for reinforcing shall be two and one-half inches (2-1/2”) when in contact with the ground, two inches (2”) in concrete walls and three-quarters inch (3/4”) in concrete not exposed to weather or in contact with the ground.

3.3.4 Dowels

Place required steel dowels securely anchored into position before concrete is placed.

3.3.5 Obstructions

In the event conduits, piping, inserts, sleeves or other items interfere with placing reinforcement as indicated on drawings or as otherwise required, immediately consult the owner and obtain approval of new procedures before placing concrete.

3.3.6 Splicing

3.3.6.1 Splices shall conform to ACI 238, Chapter 12. Splices shall be Class C unless otherwise indicated.

3.3.6.2 Welded wire fabric shall lap one (1) full mesh and shall be securely wired at each end and side.

3.4 – Cleaning Reinforcement

Concrete reinforcement, at the time concrete is placed, shall be free from rust scale, loose mill scale, oil paint and other coatings which will destroy or reduce bond between steel and concrete.

(End of Section 03200)

SECTION 03300 CAST-IN-PLACE CONCRETE

PART ONE - GENERAL:

1.1 - Scope

1.1.1 Work Included

Cast-In-Place concrete required for this work as indicated on drawings and includes, but is not necessarily limited to:

1.1.1.1 Footings and Foundations
1.1.1.2 Portland Cement Concrete Paving
1.1.1.3 Curbs and Gutters

1.1.2 Related Work Described Elsewhere:

1.1.2.1 Concrete Formwork, Section 03100

1.2 – Standards and Specifications

1.2.1 Qualifications

1.2.1.1 Provide superintendent or foreman who will be present at all times during execution of this portion of work, who shall be thoroughly trained and experienced in placing types of concrete specified and who shall direct work performed under this section.

1.2.1.2 For finishing exposed concrete surfaces, use thoroughly trained and experienced journeymen concrete finishers.

1.2.2 Codes and Standards

1.2.2.1 In addition to complying with pertinent codes and regulations, comply with pertinent recommendations of publication ACI 301 of the American Concrete Institute, "Structural Concrete for Buildings".

1.2.2.2 Where provisions of pertinent codes and standards conflict with this specification, the more stringent provisions shall govern.

1.3 - Submittals

1.3.1 Materials List

Within ten (10) days after contract award and before any concrete is delivered to job site, submit to the owner a complete list of materials proposed to be provided under this portion of the work, showing manufacturer's name and catalog number of all items such as admixtures, curing compounds and chemical floor hardener, and names and addresses of

transit-mix concrete supplier.

1.3.2 Transit-Mix Delivery Slips

1.3.2.1 Keep record at job site showing time and place of each concrete placement together with transit-mix delivery slip certifying contents of delivery.

1.3.2.2. Make record available to the owner upon request.

1.3.3.3. Upon completion of this portion of work, deliver record and delivery slips to the owner.

1.4 – Product Handling

1.4.1 Protection

Use means necessary to protect cast-in-place concrete materials before, during and after installation and to protect installed work of other trades.

1.4.2 Replacements

In the event of damage, immediately make repairs and replacements necessary at no additional cost to the owner.

PART TWO - PRODUCTS:

2.1 - Concrete

2.1.1 General

2.1.1.1 Concrete shall be transit-mixed in accordance with ASTM C-94, unless otherwise specifically permitted by the owner.

2.1.1.2 Control of concrete production shall be under supervision of an independent laboratory who shall design mixes, train contractor's technician to make concrete cylinder and test concrete cylinders for compression strength. The testing agency shall furnish the owner with certified copies of test results. Cost of all testing shall be borne by the contractor.

2.1.1.2.1 Strength Test: One (1) test consisting of four (4) specimens (cylinders) shall be made for each seventy-five cubic yards (75 c.y.) of each type concrete placed, but not less than one (1) test shall be made for each type concrete for each days work. Procedure for obtaining samples of fresh concrete for preparing test specimens shall be in accordance with ASTM C-172. Specimens for strength tests shall be made and cured in accordance with ASTM C-31. Strength tests of concrete specimens shall be made in accordance with ASTM C-39. One (1) specimen of each set shall be reported by the following day to the owner.

2.1.2 Quality

2.1.2.1 Concrete shall have the following minimum compressive strengths at twenty-eight (28) days and proportioned within the following limits:

Concrete Maximum Location	Compressive Strengths	Maximum Size Aggregate	Minimum Cement/ Cubic Yard	Slump
Footings and Retaining Walls	3,000	1-1/2"	5.25 Sacks	4"
Exterior Slabs, Walks and Curbs & Gutters	3,000	3/4"	5.75 Sacks	4"
All Other Work Not Indicated On Details	5,000	1"	5.25 Sacks	3"

2.1.2.2 Concrete shall have water-cement ratio not exceeding six gallons (6 gal.) per sack.

2.1.2.3 Air-entraining admixture complying with ASTM C-260 shall be added at manufacturer's prescribed rate to result in concrete at point of placement having maximum air content as follows:

2.1.2.3.1 4% for maximum 1-1/2" aggregate.

2.1.2.3.2 6% for maximum 3/4" aggregate.

2.1.3 Portland Cement
ASTM C-150, Type I, unless otherwise indicated.

2.1.4 Aggregates
ASTM C-33, unless otherwise indicated.

2.1.5 Water
Potable

2.1.6 Admixtures

2.1.6.1 Air-entraining admixture - ASTM C-260.
2.1.6.2 Calcium Chloride - Do not use calcium chloride.
2.1.6.3 Other - As specifically authorized in writing by the owner.

2.2 - Accessories

2.2.1 Vapor Barrier Under Slab On-Grade

Minimum eight (8) mil thick polyethylene sheet, decay resistant when tested in accordance with ASTM E-154.

2.2.2 Expansion Joint Material

Self expanding cork, ASTM D-1752, Type III, W.R. Grace/Servicised "4324". W.R. Meadows "Sealtight", or other product specifically approved by the owner.

2.2.3 Curing Compounds

Membrane forming type complying with ASTM C-309, Type I, unless otherwise approved by the owner.

2.2.4 Other Materials

Other materials not specifically described, but required for proper completion of the work of this section, shall be selected by the contractor and subject to the owner's approval.

PART THREE - EXECUTION:

3.1 – Surface Conditions

3.1.1 Inspection

3.1.1.1 Before work of this section, inspect installed work of other trades and verify that such work is complete to the point where this installation may properly begin.

3.1.1.2 Verify the items to be embedded in concrete are in place.

3.1.1.3 Verify that concrete may be placed to lines and elevations indicated on drawings or details, with required clearances for reinforcement.

3.1.2 Discrepancies

In the event of discrepancy, immediately notify the owner. Do not proceed with installation in areas of discrepancy until such discrepancies have been fully resolved.

3.2 - Preparation

3.2.1 General

3.2.1.1 Preparation for placement shall be in accordance with ACI 318 and as specified herein. Concrete shall not be placed until reinforcement, anchor bolts, pipes, conduits or other set-in items have been inspected and approved by the owner. Concrete shall not be placed on soft or water-soaked ground, in water, on frozen ground or on surfaces covered with frost. Wood forms shall be thoroughly wetted or oiled before concrete is placed.

3.2.1.2 Remove debris from areas in which concrete will be placed.
3.2.1.3 Thoroughly clean areas to ensure proper placement and bonding of concrete.
3.2.1.4 Thoroughly clean transporting and handling equipment.
3.2.1.5 Notify the owner at least forty-eight (48) hours before placing concrete.

3.2.2 Joints

Locate construction joints in slabs where indicated on plans.

3.2.3 Vapor Barrier

Install vapor barrier under slab in continuous sheets, lapping joints six inches (6") minimum. Cut around penetrations to provide as close fit as possible.

3.3 - Testing

3.3.1 General

3.3.1.1 Test concrete as follows:

3.3.1.1.1 Three (3) concrete cylinders for each concrete quality for each days pour.
3.3.1.1.2 Make and cure cylinders in accordance with ASTM C-31.
3.3.1.1.3 Test for compression in accordance with ASTM C-39 and C-192.
3.3.1.1.4 Test for compression in accordance with ASTM C-143 when directed by the owner.

3.3.2 Have available on the job at all times, four (4) six inch by twelve inch (6" x 12") steel cardboard test cylinders and one (1) standard slump cone.

3.3.3 Payment for testing of concrete shall be made by the contractor.

3.4 – Placing Concrete

3.4.1 Method

3.4.1.1 Convey concrete from mixer to place of deposit by methods that will prevent separation and loss of material. Method of conveying concrete shall be reviewed with the owner prior to placement of concrete.
3.4.1.2 For chuting, pumping and pneumatically conveying concrete, use equipment of size and design as to ensure a practically continuous concrete flow at delivery end without loss or separation of materials.
3.4.1.3 Deposit concrete as nearly as possible in its final position to avoid segregation due to handling and flowing.
3.4.1.4 Place concrete as dry as possible consistent with good workmanship, never exceeding maximum specified slump.
3.4.1.5 Place concrete continuously or in layers on ss that no c be placed on cured concrete which has hardened sufficiently to cause formation of seams or planes of weakness. If a section cannot be placed continuously, provide construction joint as herein specified.

3.4.1.6 Concrete shall be placed and protected as specified for temperature conditions:

3.4.1.6.1 Cold weather in accordance with ACI 604.
3.4.1.6.2 Hot weather in accordance with ACI 605.

3.4.2 Rate of Placement

3.4.2.1 Place concrete at such a rate that concrete is at all times plastic and flows readily between bare reinforcing bars. Concrete shall be poured in a continuous operation until placement of section is complete.

3.4.2.2 Do not place a greater area at one (1) time than can be properly finished, particularly during hot or dry weather.

3.4.2.3 Do not in any case place a slab or any other member greater than forty feet (40') in length without expansion joints as shown on the drawings.

3.4.2.4 Place concrete in form in horizontal layers not deeper than twenty-four inches (24") and in a manner to avoid inclined construction joints. Where placement consists of several layers, place each layer while preceding layer is still plastic to avoid cold joints.

3.4.2.5 Arrangement of construction joint bulkheads shall allow for concrete between construction joints to be placed in a continuous operation, with not more than one (1) hour of elapsed time between pours or not more than two (2) hours when retarders are used. Before placing new concrete on or against hardened concrete, forms shall be re-tightened, hardened surfaces roughened and cleaned of foreign matter and latency and moistened with water. Hardened concrete shall be given a brush coat of neat cement grout, broomed into the surface immediately before placing new concrete.

3.4.3 Consolidation

3.4.3.1 Thoroughly consolidate concrete in accordance with recommended practices of ACI 309 to suit concrete type and project conditions.

3.4.3.2 Consolidate concrete placed in forms by mechanical vibrating equipment supplemented by hand-spading, rodding or tamping.

3.4.3.2.1 Do not use vibrators to transport concrete within forms.

3.4.3.2.2 Do not vibrate forms or reinforcing.

3.4.3.3 Place vibrators to rapidly penetrate concrete layer and at least six inches (6") into preceding layer; do not vibrate lower layers that have begun to set.

3.4.3.4 Limit vibration to the time necessary to consolidate concrete and complete embedment of reinforcement and other embedded items without causing segregation of mix.

3.4.4 Curbs and Gutters

Construct in accordance with locations, line, grade and details shown on the drawings in accordance with the applicable requirements of the South Carolina State Highway Department Standard Specifications for Highway Construction, 2000 Edition, Sections 701, 702 and 721. Match except no extruded curb and gutter will be allowed.

3.5 – Finishing Concrete

3.5.1 Formed Surfaces

3.5.1.1 Provide as-cast rough form finish where concealed in finish work, unless otherwise specified.

3.5.1.2 Smooth-finished exposed concrete shall have forms stripped as soon as possible; after any necessary repairs are made, wet surface thoroughly and rub with No. 16 grift carborundum stone to remove fins and roughness. Spread past resulting from rubbing uniformly over surface and allow to set; moisten and rub with No. 30 stone until smooth and uniform.

3.5.2 Slabs

3.5.2.1 See section 03310

3.6 - Curing

3.6.1 General

3.6.1.1 Protect fresh concentrate from premature drying and excessive cold or hot temperatures, mechanical injury or injury from rain or flowing water.

3.6.1.2 Maintain concrete without drying at relatively constant temperature for period of time necessary for cement hydration and proper concrete hardening.

3.6.1.3 Start initial curing as soon as free water has disappeared from surface after finishing. Keep continuously moist for not less than seventy-two (72) hours.

3.6.1.4 Start final curing procedures immediately following initial curing before concrete has dried. Continue final curing for at least seven (7) days in accordance with ACI 301, ACI 604 procedures. Avoid rapid drying at end of final curing period.

3.6.2 Formed Surfaces

Wet forms at least twice daily for at least ten (10) days after concrete placement.

3.6.3 Unformed surfaces

Initially cure unformed surfaces, such as slabs, by moisture curing as specified hereinafter, wherever possible.

3.6.4 Curing Methods

3.6.4.1 Moisture curing shall consist of any of the following methods:

3.6.4.1.1 Keeping concrete surface continuously wet by covering with water.
3.6.4.1.2 Continuous water-fog spray.
3.6.4.1.3 Cover concrete surface with waterproof paper, polyethylene film or white burlap-polyethylene sheet, thoroughly saturating and keeping continuously wet. Place cover over entire surface and around edges with four inch (4") laps over adjacent covers. Immediately repair holes or tears during curing period.

3.6.4.1.4 Apply curing compound to horizontal surfaces when concrete is dry to the touch using power spray in two (2) coat continuous operation in accordance with manufacturer's directions.

3.6.4.1.5 Maintain concrete temperature between fifty and sixty degrees fahrenheit (50 F to 60 F).

3.6.4.1.6 When atmospheric temperature is at eighty degrees fahrenheit (80 F) or above, or during other climatic conditions which would cause rapid drying, make arrangements before concrete placement for installation of wind breaks or shading, and for fog spraying, wet sprinkling or moisture retaining covering, and provide other hot weather protection to complying with ACI 306.

3.6.4.1.7 During curing period, maintain concrete temperature as uniform as possible and protect from rapid atmospheric temperature changes. Avoid concrete temperature changes exceeding five degrees fahrenheit (5 F) in any one (1) hour or twenty degrees fahrenheit (20 F) in a twenty-four (24) hour period.

3.7 – Defective Work

3.7.1 Inspection

Immediately after forms and curing membranes are removed, inspect concrete surfaces and patch voids, rock pockets, form tie holes and other imperfections.

3.7.2 Patching

3.7.2.1 Minor Defective Areas

3.7.2.1.1 Chip away to about one inch (1") leaving edges perpendicular to surface; wet area to be patched and at least six inches (6") adjacent to prevent water absorption.
3.7.2.1.2 Patching compound shall be L&M Construction Chemicals, Inc. "Everbond", or other product approved by the owner; mixed and applied according to manufacturer. Apply patching mortar immediately.
3.7.2.1.3 Patching mortar shall be of as dry consistency as possible within handling and placing requirements; thoroughly compact mortar by ramming into place.
3.7.2.1.4 Screed off to leave patch slightly higher than surrounding surfaces; leave

undisturbed for one to two (1-2) hours to permit initial shrinkage, then perform final finishing.

3.7.2.1.5 Finish patch to match adjacent surfaces and keep wet for at least seven (7) days; provide required protective covering.

3.7.2.2 Major Defective Areas

If defects are serious or affect strength of structure or if patching does not satisfactorily restore quality and appearance of surface, the owner may require that concrete be removed and replaced in accordance with provisions of this section at no additional cost to the owner.

(End of Section 03300)

SC DEPARTMENT *of*
ENVIRONMENTAL SERVICES

Nefertria Corner
Bureau of Water
2600 Bull Street
Columbia, SC 29201

April 3, 2025

Miachael Geddings
City of Sumter
303 E Liberty Street
Sumter, SC 29150

RE: Theatre Drive Parking Lot, Sumter County
NPDES Coverage Number: SCR10ZHB0

Dear Miachael Geddings:

The South Carolina Department of Environmental Services (Department or SCDES) has received approval of and the Notice of Intent for the above-referenced project from **THE CITY OF SUMTER**. Based on your submission of this documentation and in accordance with the NPDES General Permit for Stormwater Discharges from Construction Activities SCR100000 (CGP), this project has been granted coverage under the CGP on **April 3, 2025**. This project's general permit coverage number is **SCR10ZHB0**. The total disturbed area for this site is **3.4 acres**.

An as-built survey(s), signed and sealed by a S.C. Licensed Land Surveyor or Professional Engineer, should be submitted to **THE CITY OF SUMTER** for all detention structure(s) on this site. The survey(s) should show grades, contours, and depths for all structure(s) and should include the elevations and dimensions of all outlet structures, including but not limited to pipes, orifices, risers, weirs, and emergency spillways. A statement signed by the project's S.C. Registered Engineer indicating that the structure(s) was installed and is operating as shown on approved plans and in approved calculations is required. If the elevations or dimensions of the structures listed above do not match those used in the approved plans, provide a certification statement signed by the project's S.C. Registered Engineer indicating that the structure, as built, will function as shown in approved calculations. A new analysis of the structure (routing) may be necessary. The as-built survey and/ or analysis must be accepted by **THE CITY OF SUMTER** before a Notice of Termination (NOT) can be submitted to the Department.

The CGP can be downloaded at the following website:
https://des.sc.gov/sites/des/files/media/document/BOW_NPDESStormwaterDischargesGP_01292021_0.pdfor you may request a copy from us via email (stormwatercgp@des.sc.gov). You are responsible for ensuring your contractor(s) complies with the approved SWPPP and the minimum requirements of the CGP. Also, you are responsible for overall compliance with the Storm Water Management and Sediment Reduction Act of 1991 (1991 Act), SC Pollution Control Act, and the Federal Clean Water Act (CWA). Failure to comply with the approved SWPPP or applicable statutes and regulations may result in enforcement actions.

You must notify this SCDES Regional Office prior to starting any land-disturbing activity. The address and telephone number of the office are as follows:

Pee Dee EA Sumter
105 N. Magnolia Street
Sumter, SC 29150

803-778-6548

Inspections of this site must be performed by qualified personnel as described in Section 4.2.E of the CGP.

You should be aware that this approval is only applicable for the Stormwater Pollution Prevention Plan (SWPPP) that was submitted for this project. Any additional construction or land disturbing activity beyond the scope of the approved plans is not authorized. Any future work for this project not shown on the stamped, approved plans will require that you submit another site plan for review and approval. All major modifications require review and approval by **THE CITY OF SUMTER**; the Department must be notified in writing by **THE CITY OF SUMTER** of the approval of major modifications if the disturbed area changes. Minor modifications to the approved SWPPP may be made by the SWPPP preparer and do not require review and approval by the Department; these changes should be signed and dated by the SWPPP preparer. If you have a question about whether a modification is major or minor, contact the Stormwater Permitting Section at (843) 953-4300.

A copy of the stamped, approved SWPPP (including a copy the CGP, contractor certifications, inspection records, rainfall data, etc), NOI, and CGP coverage letter from SCDES must be retained and available at the construction site (or accessible within 30 minutes during normal business hours) from the date of commencement of construction activities to the date of final stabilization. If an on-site location is unavailable to store the SWPPP when no personnel are present, notice of the plan's location must be posted near the main entrance at the construction site.

All contractors who will conduct land-disturbing activities at the site must complete a Contractor Certification Form. You are also responsible for listing all contractors in the SWPPP and for holding a pre-construction conference with each contractor before they can conduct land-disturbing activity at the site.

The Department may conduct periodic inspections of your site. Any violations found during these inspections may result in enforcement action.

This NPDES coverage should be terminated by the permittee when one of the conditions listed in Section 5.1 of the CGP has been met. You must submit a Notice of Termination (NOT) to cancel your NPDES coverage under the CGP. Please see section 5.1 of the CGP for additional information required to be submitted with the NOT.

You are responsible for obtaining any other federal, state, or local permit that may be required for this project. In particular, any permits through the U.S. Army Corps of Engineers for the placement of fill material in Waters of the United States. Please note we have not sent a copy of this letter to any county or city building official. You must send a copy of this letter to these agencies, if necessary.

If material excavated during construction activities leaves the site, a mine operating permit may be needed. You are responsible for contacting the Mining and Reclamation Section to determine if a mining permit is required for the site. The Mining and Reclamation Section can be reached at (803)898-1362 or via e-mail at :AskMines@des.sc.gov.

S.C. Code Ann. § 48-6-30(D)(2) provides, "Within thirty calendar days after the mailing of a decision [pursuant to S.C. Code Ann.§ 48-6-30(D)(1)], an applicant, permittee, licensee, certificate holder, or affected person desiring to contest the department decision may request a contested case hearing before the Administrative Law Court, in accordance with the Administrative Procedures Act."

If you have any questions or cannot access the referenced websites, please call me at 803-898-1291.

Sincerely,

Nefertris Corner
Stormwater Permitting Section

CC: Wade` Sweat
Pee Dee EA Sumter

SC DEPARTMENT of ENVIRONMENTAL SERVICES

NOTICE OF INTENT (NOI)
For Coverage(s) of Primary Permittees Under South Carolina NPDES General Permit For Stormwater Discharges From Construction Activities SCR100000
(Maintain As Part of On-Site SWPPP)

RECEIVED MAR 1[illegible] 2025 STORMWATER & DAMS PERMIT[illegible]

For Official Use Only
File Number:
Permit Number: SCR10
Submittal Package Complete:

Submission of this Notice of Intent constitutes notice that the Applicant identified in Section II intends to be authorized as a Primary Permittee in the state of South Carolina under NPDES General Permit SCR1000000. Fees required for review and NPDES coverage of each application type are as listed on page 2 of the instructions.

SOUTH CAROLINA
DEPARTMENT OF ENVIRONMENTAL SERVICES
DAM SAFETY AND STORMWATER PERMITTING DIVISION
CONSTRUCTION STORMWATER PERMITTING
APPROVED - FOR CONSTRUCTION ONLY

DES PERMIT #: SCR10ZHB0
DATE ISSUED: 03 April 2025
BY: Nifertria Corner

Date: 12/31/2024 **Check if project is receiving SCIIP Funding** ☐ **Grant #:**
Project/Site Name: Theatre Drive Parking Lot **County:** Sumter
(Modification or Change of Information Only) **Prior Approved NPDES Permit or File Number:**

Do you want this project to be considered for the Expedited Review Program (ERP)? ☐ **Yes** or ☐ **No (See Instructions)**

I. Notice of Intent (NOI) Application Type(s)

A. **Project (Application/Review) Type(s)** (Select ALL that apply):
☑ New Project (Initial Notification) Ongoing Project: ☐ Permitted or ☐ Un-Permitted
☐ Late Notification ☐ Low Impact Development (LID) or Project Design Above Regulatory Requirements
☐ New Owner/Operator or Company Name Change **(see instructions, attach Form A (Transfer of Ownership))**
☐ Major Modification: **(see instructions, attach Form B (Major Modifications))**
☐ Bureau of Coastal Management (BCM) Review
☐ Change of Information/Other (Specify):
☐

B. If Applicable, identify the entity designated as **MS4 Reviewer and MS4 Operator** (i.e., Lexington County, City of Greer, etc.): **MS4 Reviewer** City of Sumter **MS4 Operator** City of Sumter

II. Primary Permittee Information

☐ Change of Information

☐ Person or ☑ Company | If a Company, are you a ☐ Lending Institution or ☑ Government Entity?
Company EIN (If applicable): EIN: 57-6000246

A. **Primary Permittee Name:** City of Sumter
Mailing Address: 303 E. Liberty St. City: Sumter State: SC Zip: 29150
Phone: 803-436-2598 Fax: Email Address: maeddings@sumter-sc.com

B. **Contact /ODSA Name** (if different from above OR if owner is a company): Michael Geddings
Mailing Address: City: State: Zip:
Phone: 803-795-9840 Fax: Email Address:

C. **Property Owner Name** (if different from above): Sumter County Commission for Higher Education
Mailing Address: 13 E. Canal St. City: Sumter State: SC Zip: 29150
Phone: Fax: Email Address:

III. Comprehensive Stormwater Pollution Prevention Plan (C-SWPPP) Preparer Information ☐ Change of Information

A. **C-SWPPP Preparer Name:** Wade Sweat
B. **Registered Professional** ☑ Engineer ☐ Landscape Architect ☐ Tier B Land Surveyor **S. C. Registration #:** 20979
C. **Company/Firm Name:** The Landplan Group South **S. C. COA #:** 153
Mailing Address: 1206 Scott St. City: Columbia State: SC Zip: 29201
Phone: Fax: Email Address: WSweat@landplansouth.com

IV. Project/Site Information

☐ Change of Information

A. **Type of Construction Activity(ies)** (Select ALL that apply):
☐ Commercial ☐ Industrial ☑ Institutional ☐ Mass Grading ☐ Linear ☐ Utility/Infrastructure
☐ Residential: Single-family ☐ Residential: Multi-family ☐ Multi-use (Commercial & Residential)
☐ Site Preparation (No New Impervious Area) ☐ Other (Specify)

B. **Site Address/Location** (street address, nearest intersection, etc.) 200 Miller Rd (parcel) - Near Int. of Theatre Dr & University Dr
City/Town (If in limits): Sumter Zip Code: 29150
Latitude: 33 ° 56 ' 8 " N Longitude: - 80 ° 22 ' 37 " W (Source): ☐ GPS ☑ Web Site: latlong.net
Tax Map Number (s) (List all): 204-13-01-006

C. Is this site located on Indian Land? ☐Yes ☑No

D. Proposed Start Date: 03/01/2025 Proposed Completion Date: 03/01/2026

E. Disturbed Area (nearest tenth of an acre): 3.4 Total Area (acres): 29.12

F. Modification Only:(nearest tenth of an acre): Disturbed Area: Current (Approved) Area: _____
Disturbed Area Change (Increase Only): _____ Total Disturbed Area (After Change): _____

G. Is this project part of a Larger Common Plan for Development or Sale (LCP)? ☑ Yes ☐ No
LCP/ Overall Development Name: _____ Check here if this is the First Phase. ☐

Previous State Permit/File Number: _____ Previous NPDES Coverage Number: SCR10

H. Any Flooding Problems exist downstream of or adjacent to this site? ☐Yes☑No (If yes, provide detailed description of flooding problems and applicable floodway/flood zone information in the C-SWPPP).

I. Active SCDES Warning Notice, Notice to Comply or Notice of Violation for this site or LCP? ☐Yes ☑No

J. List Relevant State and Federal Environmental Permits or Approvals applied for or obtained for this site (e.g., RCRA, USACOE, Nationwide, etc.). If None, list None.
None

K. Any Waiver(s)/Variances/Exceptions Requested for this Project? (If yes identify below and include Waiver Request and Justifications in the C-SWPPP for each proposed request).

1. Small Construction Activity Waiver(s) From NPDES permitting (Section 1.4 & Appendix B)? ☐ Yes ☑ No If yes, identify requested waiver: ☐ Rainfall Erosivity Waiver ☐ TMDL Waiver ☐ Equivalent Analysis Waiver
2. Detention Waiver (72-302(B)? ☐ Yes ☑ No 3. Other (Specify):

V. Waterbody Information (Attach additional sheet(s) as needed) ☐ Change of Information

A. Receiving Waterbody(s) (RWB) Information (List the nearest and next nearest receiving waterbodies to which the sites stormwater discharges will drain. If stormwater discharges drain to multiple waterbodies, list all such waterbodies).

1. Name of Receiving Waterbodies (RWB)	2. Distance to RWB (feet)	3. Classification of RWB
a. Nearest: Unnamed trib to Green Swamp	2100	FW
b. Next Nearest: Unnamed Trib to Green Swamp	4200	FW
c. Coastal Zone ONLY: Coastal Receiving Water (CRW):		Not Applicable
d. Other Waterbodies:		

B. Waters of the U.S. / State Information (Attach additional sheet(s) as needed)

Waters of the U.S./ State	1. On the site?	2. Delineated/ Identified?	3. Impacts?	4. Amount of impacts
a. Jurisdictional wetlands	☐Yes ☑No	☐Yes ☐No	☐Yes ☐No	Ac
b. Non-jurisdictional wetlands	☐Yes ☑No	☐Yes ☐No	☐Yes ☐No	Ac
c. Other Water(s): _____	☐Yes ☑No	☐Yes ☐No	☐Yes ☐No	Ac Feet
d. Coastal Zone ONLY: Direct Critical Area	☐Yes ☐No	☐Yes ☐No	☐Yes ☐No	Ac Feet

5. If yes for impacts in B.3, describe each impact and activity, and list all permits (e.g., USACOE Nationwide Permit, SCDES General Permit) and certifications that have been applied for or obtained for each impact:

C. S.C. Navigable Waters (SCNW) Information (Section 2.6.5) The Department will address any issues related to State Navigable Waters' Program under SC Regulation 19-450 during the review of the C-SWPPP for activities that will NOT require a 404 permit or a 401 certification. (Attach additional sheet(s) as needed).

1. Are S. C. Navigable Waters (SCNW) on the site: ☐Yes ☑ No
   a. If no, do not complete this question. Proceed to Section D (Impaired Waterbodies).
   b. If yes, provide the name of S.C. Navigable Waters (SCNW) on the site:

2. If yes for C.1, will construction activities cross over or occur in, under, or thru the SCNW? ☐Yes ☐ No
   If yes, describe SCNW activities (e.g., road crossing, sub-aqueous utility line, temporary or permanent structures, etc.) and proceed to Section C.3:

3. Identify permits providing coverage of SCNW activities proposed for your site. If NONE, list none.

Permits/Certifications	Permit or Certification No.	Corresponding Covered SCNW Activity(ies)
a. SCDES General/ Other SCDES Permit	None	
b. USACOE 404 Permit or 401 Certification	None	
c. SCNW Permit If applied for or issued, identify Date applied for or issued:	None	☐ All Activities or ☐ Some Activities (Describe):

d. If a SCNW Permit has NOT been applied for provide an additional plan sheet that shows plan and profile views (drawn to scale) of the SCNW and associated activities. Include a description of all proposed activities on this plan.

D. Impaired Waterbodies Information (Attach additional sheet(s) as needed)

1. 303(d) Listed Impaired Waterbodies

a. Name of Nearest SCDES Water Quality Monitoring Stations (WQMS)(s) that receives stormwater from your construction site and/or thru an MS4 and the Name of the Corresponding Waterbody?		b. Is this WQMS(s) listed on the most current 303(d) list? If No, proceed to Section 2 of this table. If Yes, complete items c thru f.	c. List the pollutant(s) identified as "CAUSES" of the impairment	d. Will any pollutants causing the impairment be present in your site's construction stormwater discharges?	e. If yes for d, list the "USE SUPPORT" impairment(s) affected by the pollutant(s) identified in c.
Nearest SCDES WQMS(s)	Corresponding Waterbody				
PD-039	Green Swamp	☑ Yes ☐ No	DO	☑ Yes ☐ No	AL
PD-091	Pocotaligo River	☑ Yes ☐ No	DO	☑ Yes ☐ No	AL
		☐ Yes ☐ No		☐ Yes ☐ No	

f. If yes for d above, will use of the BMPs proposed for your project ensure the site's discharges will NOT contribute to or cause further WQS violations for the impairment(s) listed in c? ☑ Yes ☐ No
(NOTE: If no for f, this site is NOT eligible for coverage under the CGP). See Instructions.

2. TMDL Impaired Waterbodies

a. Name of Nearest SCDES Water Quality Monitoring Stations (WQMS)(s) that receives stormwater from your construction site and/or thru an MS4?	b. Has a TMDL(s) been developed for this WQMS(s)? If No, identify as such below and proceed to Section VI. If Yes, complete items c thru f of this table.	c. If yes for b, what pollutants are listed as "CAUSES" or causing the impairment?	d. If yes for b, has the standard been "ATTAINED" or "Fully Supported" for the impairment(s)?	e. If no for d (Not Attained), will any pollutants causing the impairment be present in your site's construction stormwater discharges?
PD-091	☑ Yes ☐ No	ECOLI	☐ Yes ☑ No	☐ Yes ☑ No
	☐ Yes ☐ No		☐ Yes ☐ No	☐ Yes ☐ No
	☐ Yes ☐ No		☐ Yes ☐ No	☐ Yes ☐ No

f. If yes for e above, are your discharges consistent with the assumptions and requirements of the TMDL(s)? ☐ Yes ☐ No
(NOTE: If no for f, this site is NOT eligible for coverage under the CGP). See Instructions.

VI. Signatures and Certifications DO NOT SIGN IN BLACK INK! Read the Certifications below (in entirety). Provide date, printed name, and signatures below. If you are a New Owner/Operator, as Primary Permittee you must also sign and date the applicable Comprehensive SWPPP Acceptance & Compliance Agreement below.

C-SWPPP PREPARER: "One copy of the C-SWPPP, all specifications and supporting calculations, forms, and reports are herewith submitted and made a part of this application. 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 Re . (if applicable), and in accordance with the terms and conditions of SCR100000." **(This shoul ed in Section III).**

Wade Sweat — **Printed Name of C-SWPPP Preparer** — **Sig arer** — 20979 — **S. C. Registration #**

PRIMARY PERMITTEE: "I or I (on behalf of my company and its contractors and agents), as the case may be, certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I understand that SCDES enforcement actions may be taken if the terms and conditions of the C-SWPPP are not met and I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

"I or I (on behalf of my company and its contractors and agents), as the case may be, also hereby certify that all land-disturbing construction and associated activity pertaining to this site shall be accomplished pursuant to and in keeping with the terms and conditions of the approved plans and SCR100000. I also certify that a responsible person will be assigned to the project for day-to-day control. I hereby grant authorization to the to S. C. Department of Environmental Services (SCDES) and/or the local implementing agency the right of access to the site at all times for the purpose of on site inspections during the course of construction and to perform maintenance inspections following the completion of the land-disturbing activity." **(See Section 122.22 of S.C. Reg. 61-9 for signatory authority information.)** Having understood the above information, I am signing this certification as Primary Permittee to the aforementioned NPDES general permit."

Michael Geddings — **Printed Name of Primary Permittee**

City of Sumter - Director of Public Services — **Title/Position**

Signature of Primary Permittee

1/6/25 — **Date Signed**

NPDES CGP FEE SCHEDULE A

(All Counties EXCEPT Beaufort, Berkeley, Charleston, Colleton, Dorchester, Georgetown, Horry, and Jasper)

The schedule should be attached to SCDES Form 2617. Do not send payment in window envelope. DO NOT MAIL CASH SCDES will notify the Project Owner/ Operator if the submitted check or credit card payment cannot be processed. The review clock will start when acceptable payment is received.

1. Identify (√) the Project Review Type(s) **Enter NPDES Coverage Fee of $125 in the right-hand column if any of the following project/review types apply to this application.** Proceed to Item 2.	**(√)**	**NPDES Coverage Fee**
a. Project or LCP (Item IV.G) that will ultimately disturb one (1) acre or more Note: If your project will ultimately disturb less than one (1) acre AND is NOT a part of a Larger Common Plan, coverage under SCR100000 is not required; see https://des.sc.gov/sites/des/files/Library/D-2628.pdf (Notification Form for Sites Disturbing Less Than 1-Acre Not Part of a Larger Common Plan, Non-Coastal County"	☑	$ 125 .00
b. New Owner/Operator (Transfer of Ownership)/Company Name Change ($125 NPDES Coverage fee is required by the Department for Transfers of Ownership and Company Name Changes)	☐	
c. Unpermitted Ongoing Project or Late Notification	☐	
d. MS4 Project Review (Item I.A and I.B) ($125 payable to Department thru MS4 Reviewer)	☑	
e. Other (Specify): _____	☐	

2. Determine the Project Review Fees (Review fees cannot exceed $2000 for a project)		
PROJECT OR LCP THAT WILL ULTIMATELY DISTRUB ONE (1) ACRE OR MORE	**(√)**	**Review Fees**
a. Enter the disturbed area (Item IV.E) for this project. Proceed to Items 2.b and 2.c.	_____ (Nearest tenth of an acre)	
b. Will this project or LCP (Item IV.G) ultimately disturb more than 1.0 acres	☐Yes ☐No	
c. Is this project exempt from S. C. Reg. 72-300 et seq.?	☐Yes ☐No	
1. If this project will not ultimately disturb more than 1.0 acre, and is not part of an LCP, your project is automatically covered under this permit and the NPDES coverage fee and review fee are not required. See the BOW-SPWS for "Less Than 1-Acre of Land Disturbance – Non-Coastal Counties". 2. If this project will ultimately disturb more than 1.0 acre, proceed to Item 2.d.		
d. Enter the project review fees (based on $100/disturbed area) in the right-hand column. (Multiply the disturbed area (Item 2.a) by $100/disturbed area). If the disturbed area for this project (Item 2.a.) totals 20.0 acres or more, enter $2000 in the right-hand column. Review fees cannot exceed $2000 for a project.		$ _____ .00

3. Total Required Fees **Add the values in the right-hand columns of Items 1 and 2.d.** Proceed to Item 4. (The Department will not review this project until all required fees are received).	$ 125 .000

4. Identify the Method of Payment:

☐ **Payment by Check:**
Attach a **signed and dated check payable to SCDES** to the **front** of this Fee Schedule.
Please note that all checks must be **less than 30 days old** and must be for the **entire required fees.**

☑ **Payment by Credit Card:** **(Check here if you wish to pay via credit card using the on-line payment system).**
The Department will contact you to provide instructions and the invoice number necessary for online payment.
Please provide an e-mail address where the invoice number may be sent: telliot@sumtersc.gov

For official use only: **Invoice Number** _____

March 10, 2025

City of Sumter
Attn: Michael Geddings
PO Box 1449
Sumter, SC 29151

RE: **Theatre Drive Parking Lot**
Stormwater Permit Number: 01-25-003

Dear Mr. Geddings:

Upon review, the stormwater plan for the above referenced project, located at intersection of Theatre Drive and University Drive, Sumter County tax map parcel 204-13-01-006, has been approved; however, construction may not begin until all necessary permits have been issued from the Sumter City-County Planning Commission, such as a land disturbance permit or a building permit. If you have not received site plan approval for this site from the Sumter Planning Department, please contact their office at 803-774-1660. If any revisions to the site plan are required to meet Planning Department requirements, you are required to submit revised stormwater plans to this office for approval.

A copy of the NOI and this approval has been forwarded to SCDHEC for NPDES coverage. **Land disturbing activity cannot begin until coverage under the NPDES General Permit for Stormwater Discharges from Large and Small Construction Activities has been issued by SCDES.** This permit will allow storm water discharges associated with construction activity to waters of the State of S.C. in accordance with provisions of the S.C. Pollution Control Act. Permits from other federal, state or local agencies may be required to comply with NPDES and other applicable laws. Please check with your consultant to ensure that you have all necessary permits for this project.

You should be aware that this approval is only applicable for the plans that were submitted for this project. Any changes or additional construction or grading beyond the scope of these plans is not authorized. Any future work on this project beyond the scope of these plans will require that you submit another site plan for approval. A preconstruction meeting is required with this office prior to start of land disturbing activities.

3 sets of the final plans will be stamped approved for the project. The contractor's set of stamped plans and the C_SWPPP document must be available on-site during all phases of construction.

you have any questions or concerns, please contact me at (803) 436-2644 or email at telliot@sumtersc.gov.

Sincerely,

Teige Elliott
Stormwater Manager

CC . : Jeff Dewort, ***Sumter City-County Planning Commission***
S.C. DES- Stormwater Permitting Section
Wade Sweat, PE

REPORT OF SUBSURFACE EXPLORATION AND ENGINEERING EVALUATION

UNIVERSITY DRIVE PARKING LOT

UNIVERSITY DRIVE & THEATRE DRIVE
SUMTER, SOUTH CAROLINA

UES PROJECT NO. A24119.00312.000

Prepared For:

Mr. Charles W. Howell Jr. ASLA RLA
The Landplan Group South, Inc.
1206 Scott Street
Columbia, South Carolina 29201

Prepared By:

UES Professional Solutions 29, Inc.
3820 Faber Place Drive, Suite 700
North Charleston, South Carolina 29405

December 2, 2024

December 2, 2024

The Landplan Group South, Inc
1206 Scott Street
Columbia, SC 29201

Attention: Mr. Charles W. Howell Jr. ASLA RLA

Reference: **Report of Subsurface Exploration**
University Drive Parking Lot
University Drive & Theatre Drive
Sumter, South Carolina
UES Report No. A24119.00312.000

Dear Mr. Howell:

UES Professional Solutions 29, Inc. (UES), has completed a subsurface exploration for the proposed parking lot on University Drive at the intersection with Theatre Drive in Sumter, South Carolina. This exploration was performed in general accordance with UES Proposal A24119.00312.000, dated August 29, 2024, and generally accepted soil and foundation engineering practices. No other warranty, express or implied, is made.

The following report presents the results of our field exploration with a geotechnical engineering interpretation of those results with respect to the project characteristics as provided to us. We have included geotechnical recommendations for foundation design, pavement design, site preparation and stormwater pond design.

We appreciate the opportunity to have worked with you on this project and look forward to a continued association. Please do not hesitate to contact us if you should have any questions, or if we may further assist you as your plans proceed.

Respectfully Submitted,
UES PROFESSIONAL SOLUTIONS 29, INC.
SC Certificate of Authorization F-1998

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER No. 14327 RANDOLPH

SOUTH CAROLINA UNIVERSAL ENGINEERING SCIENCES No. 1998 CERTIFICATE OF AUTHORIZATION

Ross Deaver, P.E.
SC Regional Manager

John W. Colagrande, Jr., P.E.
Senior Project Manager

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Test Location Map
APPENDIX II
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Hand Auger Logs
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1.0 PROJECT DESCRIPTION

1.1 PROJECT DESCRIPTION

The proposed project will consist of a new 240 space asphalt parking lot with alternate bus parking off of University Drive at the intersection with Theatre Drive in Sumter, South Carolina. The property is currently occupied by an existing paved parking area and athletic training area, which will be demolished, and a grass field. The new parking lot will include both light and heavy duty asphalt.

No grading information was available at the time of this report. Our geotechnical exploration program and the corresponding termination depths of the proposed soundings is based on the assumption that the proposed improvements will be constructed at or above existing grades. We have assumed up to 2 feet of fill will be required to achieve final site grades for this project. If the grading plan changes and/or more than 2 feet of fill are anticipated within these areas, please contact us so that we may revise our report accordingly.

Should any of the above information or assumptions made by UES be inconsistent with the planned development and construction, we request that you contact us immediately to allow us the opportunity to review the new information in conjunction with our report and revise or modify our engineering recommendations accordingly, as needed.

No site or project facilities/improvements, other than those described herein, should be designed using the soil information presented in this report. Moreover, UES will not be responsible for the performance of any site improvement so designed and constructed.

1.2 SITE DESCRIPTION

The subject site is located on University Drive at the intersection with Theatre Drive in Sumter, South Carolina as shown on the attached Figure A-1. The site is further identified on the Sumter County, South Carolina GIS map as a portion of parcel number 204-12-01-006. The site is currently developed with an athletic training area, an asphalt parking area and a grass area. A site location map is included in Appendix I.

1.3 PURPOSE OF STUDY

The purpose of this report is to summarize findings from our subsurface exploration and provide site preparation, general construction, and foundation recommendations with respect to the proposed development. The following services were provided in order to achieve the preceding objectives:

- Execute a program of subsurface exploration consisting of two (2) hand auger borings with Dynamic Cone Penetrometer (DCP) tests, and two (2) infiltration tests.
- Visually classify and stratify the soils samples using the Unified Soil Classification System (USCS). Visual field classifications were performed in general accordance with ASTM D-2488, "Description and Visual Evaluation of Soils";
- Measure the existing site groundwater level at the hand auger locations.
- Assessed the existing soil conditions with respect to the proposed construction.
- Prepared a report documenting the results of our exploration and analysis with geotechnical engineering recommendations.

This report presents an evaluation of site conditions on the basis of geotechnical procedures for site characterization. The recovered samples were not examined, either visually or analytically, for chemical composition or environmental hazards.

Our exploration was not designed to specifically address the potential for surface expression of deep geological conditions. This evaluation requires a more extensive range of field services than those performed in this study.

2.0 FIELD EVALUATION PROCEDURES

Our exploration included a site reconnaissance by a geotechnical engineer and the performance of two (2) hand auger borings (HA-1 to HA-2) with DCPs to depths of 5 feet below grade, and two (2) infiltration tests.

Horizontal and vertical survey control was not provided for the test locations prior to our field exploration program. UES located the test locations by using the provided site sketch, measuring from existing on-site landmarks shown on an aerial photograph, and by using handheld GPS devices. The indicated test locations should be considered accurate to the degree of the methodologies used. The approximate locations are shown on the Test Location Plan in Appendix I. If more exact test locations are required, we recommend engaging the services of a professional surveyor licensed in the state of South Carolina to survey the test locations.

The near-surface soils were further evaluated with hand-auger borings by manually turning a steel auger into the ground, and the soils were visually classified in the field using the Unified Soil Classification System (USCS).

Soil samples recovered on this project will be stored at UES's office for a period of ninety days. After ninety days, the samples will be discarded unless prior notification is provided to us in writing.

3.0 AREA GEOLOGY AND SUBSURFACE CONDITIONS

3.1 PHYSIOGRAPHY AND AREA GEOLOGY

According to the Generalized Geologic Map of South Carolina (1997), the project site is located within the lower Atlantic Coastal Plain Physiographic Province of South Carolina. This province is characterized by sedimentary deposits of varying age and thickness. Generally, the deposits in this province consist of interceded mixtures of sands, silts, and clays. These materials were laid down in layers during successive advances and retreats of the ocean and generally dip gently toward the sea at a rate of a few feet per mile. However, during previous periods of low ocean levels, they were partially eroded by streams.

3.2 GENERAL SUBSURFACE STRATIGRAPHY

The results of our field exploration and laboratory analysis, together with pertinent information obtained from the soundings such as soil profiles, penetration resistance and groundwater levels are shown on the logs included in Appendix II. The soil profiles were prepared from field logs after the recovered soil samples were examined by a Geotechnical Engineer. The stratification lines shown on the sounding logs represent the approximate boundaries between soil types and may not depict exact subsurface soil conditions. The actual soil boundaries may be more transitional than depicted. A generalized sub-surface profile of the soils encountered at our test locations is presented below. For detailed soil profiles, please refer to the attached logs.

The surficial soils generally consisted of grass roots and topsoil, approximately 2 inches in thickness around the site, except in the area of HA-1 which was advanced in the existing parking area and was covered by +/- 1-1/4 inches of asphalt placed over a sandy sub-base. In general, beneath the surficial soils to a depth of approximately 5 feet below grade, the encountered soils consisted of medium dense silty sand with some isolated areas of clayey sand.

It should also be noted that variation in surface soil thickness can occur due to the drilling equipment traversing and disturbing the test locations, previous site utilization and/or topographic variations. Topsoil is generally considered to be a dark colored surficial material with a high organic content and is generally unsuitable for structural and pavement support. The topsoil thickness will vary around the site and will typically be deeper in heavily vegetated and wooded areas. UES has not performed any organic content tests on these soils nor evaluated their agricultural and/or horticultural properties.

3.3 EXISTING GROUNDWATER LEVEL

Groundwater was not encountered in the hand auger borings at the time of drilling. However, groundwater may be encountered in any deeper utility excavations.

Fluctuations in groundwater levels should be anticipated throughout the year, primarily due to seasonal variations in rainfall, surface runoff, and other factors that may vary from the time the soundings were conducted. It should be noted that variations in groundwater levels may be due to water tables not stabilizing by the end of drilling operations and the topographic profile of the site. Longer term groundwater measurements were not made.

3.4 INFILTRATION

A total of two (2) infiltration tests (IT-1 to IT-2) were performed on November 21, 2024. Hand auger borings were performed to a depth of 3 feet below grade at each location, at which depth the infiltration tests were conducted. The testing locations were established in the field by UES personnel using a hand-held GPS unit. The indicated testing locations should therefore be considered approximate.

The infiltration tests were performed by the Modified Taft Method of testing, in which a PVC pipe is used to confine the infiltration to only the vertical (downward) movement of the water. Percolation testing and infiltration testing are essentially the same types of tests, both measuring the movement or infiltration of water in a boring, test pit or at the bottom of a basin. In order to replicate infiltration testing, such as is performed with the Double Ring Infiltration test, the PVC pipe was used as described above to limit the infiltration of the water to the vertical movement of the water at the bottom of the test location. The tests were conducted at a depth of approximately 3 feet below the existing grade.

Below is a summary of the infiltration test results:

Location	Depth (in.)	Infiltration Rate (Inches/Hour)
IT-1	36	4.5
IT-2	36	8.0

Infiltration rates may vary within the proposed site due to changes in elevation and subsurface conditions. The value provided is a field measured value and does not include a factor of safety. Please note that the infiltration rate may vary due to the potential variability of the fill material around the site.

4.0 CONCLUSIONS AND RECOMMENDATIONS

4.1 GENERAL

Our recommendations are based on the project information outlined previously, our past experience on similar type projects, and on the data obtained from the field-testing program. Determination of an appropriate foundation system for a given structure is dependent on the proposed structural loads, soil conditions, and construction constraints such as proximity to other structures, etc. The subsurface exploration aids the geotechnical engineer in determining the soil stratum appropriate for structural support. This determination includes considerations with regard to both allowable bearing capacity and compressibility of the soil strata. In addition, since the method of construction greatly affects the soils intended for structural support, consideration must be given to the implementation of suitable methods of site preparation, fill compaction, and other aspects of construction. If the structural loading, geometry, or proposed building and driveway locations are changed or significantly differ from those outlined, or if subsurface conditions encountered during construction vary greatly from the soil test boring information, UES requests the opportunity to review our recommendations based on the new information and make the necessary changes in writing.

The field exploration performed by UES was conducted in order to log and characterize subsurface materials, the presence of groundwater, and to identify potential conditions that could affect the feasibility of the proposed construction.

4.2 SITE PREPARATION

Prior to any excavation activities, the contractor must contact South Carolina-811 for a utility mark out. The contractor may elect to retain a private utility mark out service to further identify any utilities that fall outside the jurisdiction of SC 811.

Site preparation should begin with the removal of unsuitable surface materials. This should include removing existing asphalt, clearing vegetation, stripping organic-laden topsoil, grubbing roots, and undercutting unsuitable surface soils to a minimum of 10 feet outside the structural limits. Stumps, taproots, and out of service abandoned utilities should be completely removed from building and pavement areas, and voids created should be cleaned and backfilled with well-compacted structural fill. The topsoil thickness was around 2 inches in the test locations; however, the thickness will vary in unexplored areas of the site. There is a possibility that some areas or pockets of organics or roots will be encountered beneath the topsoil during site grading and will need to be removed.

The site preparation process may disturb subgrade soil. The disturbed subgrade should be densified to a more uniform consistency by making several perpendicular passes with a large roller. Following densification, we recommend that all areas to receive engineered fill or foundations be proof rolled with a loaded tandem axle dump truck or other similar heavy construction equipment to confirm the stability of the subgrade soils and detect the presence of soft or unstable areas. Our geotechnical engineer or his representative should observe the proof-rolling operations. If proof-rolling reveals unstable conditions, the method of repair should be as directed by the project geotechnical engineer,

but will likely consist of several options, such as undercutting the unsuitable soils and replacement with adequately compacted structural fill, scarifying and reconditioning, chemical treatment or the use of geotextiles or geogrids for ground stabilization. Based on the results of the hand auger borings, it appears that the site should perform fairly well during proofrolling. There is a possibility that some isolated areas of soft soils may be encountered in unexplored areas of the site.

During grading operations hidden features in the substratum may be encountered within the proposed construction area. Details regarding removal of deleterious material must be determined on a case-by-case basis, and, therefore, contract documents should include a contingency cost for the removal of subsurface features. Excavated areas should be backfilled in general accordance with the compacted fill recommendations presented herein. Site preparation monitoring by UES personnel is recommended.

We also recommend that site grading be performed during the period from late spring to early fall when groundwater levels are typically at their lowest levels. In addition, drying of any wet near-surface soils will be much easier to perform. Proof rolling the soil during the wetter winter months when the soil is typically wet may cause pumping or rutting and unsuitable soil conditions that will likely require over-excavation and replacement. Additionally, every effort should be made to maintain adequate drainage away from construction areas to reduce saturation of subsoils.

4.2.1 Cut and Fill Recommendations

The granular onsite material can be used for mass grading operations; however, the moisture content of the soil must be monitored, especially during wetter/colder periods of the year. Mechanical assistance of the soils for drying may involve scarifying the soils with a dozer or discs to facilitate drainage and evaporation of water. Typically, during the period from mid-April through October, moisture contents can be reduced by as much as 3% to 5% in one day when proper drying techniques as described above are properly implemented. If available, the use of reclaimers, pans and/or motor-graders may be appropriate to speed up the mechanical assistance process and create a uniform soil mass prior to compaction. *Adequate time should be allotted in the construction schedule for the drying operation.*

Although final grades have not been established, the site will likely consist of the placement of minimal fill (up to 2 feet) in the area of the proposed parking lot. Once the site is stripped and cleared, it is possible that some undercut and/or stabilization will potentially be required on the subgrade soils on portions of the site in the paved areas. The subgrade for the paved areas can be proof rolled, and if portions of the subgrade are stable, then the soils will not need to be undercut. Depending on the depth of fill, in some areas it may be possible to "bridge" over the soft subgrade soils with the use of a select granular fill and potentially geofabrics. The bridging option will be dependent on the depth of fill to be placed and the observed condition of the subgrade soils.

If any excess topsoil or surficial organic soils are present on the site, they can potentially be placed in proposed landscape areas. If acceptable soils are found to be present in non-structural areas of the site, it may be possible to excavate the acceptable soils for use as fill and then place the topsoil and surficial organic soils in the resultant excavation. Trees, stumps or root balls should be removed from the site and not buried on site.

4.3 STRUCTURAL FILL MATERIAL

Soils imported from an off-site borrow source may be used as structural fill, provided they meet the following criteria:

- Soil should be free of deleterious and organic material.
- Have low plasticity, containing no more than 20% fines (material passing the No. 200 sieve) by weight.
- Should have particle sizes of less than two (2) inches in diameter and should not have a maximum dry density of less than 90 pounds per cubic foot as determined by a laboratory standard Proctor compaction test (ASTM D-698).

The silty sand and clayey sand that were identified in the hand auger borings should be suitable for use as structural fill depending on the fines contents of the soils. Any wet soil will need to be dried back prior to their use as structural fill. Any soils that are predominantly clay can be difficult to work with and should typically not be used as structural fill due to the difficulty of drying back the soils if wet. We recommend that any excavated soils be evaluated by UES prior to use as structural fill. Samples of structural fill material should be tested by UES for compliance with the above criteria prior to placement. Soils that do not meet the structural fill requirements in addition to any undercut surficial organic soil may be used in non-structural or landscaped areas.

Although the requirements for structural fill typically specify less than 20% fines, soils with between 20% and approximately 35% to 40% fines can potentially be used, however, these soils will be more difficult to work with. If any soils that are predominately CLAY are encountered in any proposed cut areas, we do not recommend using these soils for structural fill in the pavement areas. This soil may be used in non-structural or landscaped areas. If the clayey soils are used in landscaped areas behind curbs, then the use of underdrains may want to be considered behind the curbs to prevent water infiltration beneath the pavements.

Following the above site preparation recommendations, all structural fill and backfill material should be placed in approximate eight to ten (8-10) inch thick loose lifts and compacted to at least 95 percent of the standard Proctor maximum dry density and to within (+/-) 3 percent of the fill's optimum moisture content as determined by ASTM D-698. In the upper 12 inches, the soil should be compacted to 98 percent of the standard Proctor maximum dry density and to within (+/-) 3 percent of the fill's optimum moisture content.

Some moisture conditioning of the soils (such as wetting and drying) will likely be required during the filling operation to obtain the required degree of compaction. Field density tests should be performed by UES on each lift of structural fill placed and at a frequency determined by the Geotechnical Engineer to verify compliance with project compaction specifications.

The contractor should exercise care after these soils have been compacted. If water is allowed to stand on the surface, these soils may become saturated. Therefore, the fill surface should be sloped to achieve positive drainage and to minimize water from ponding on the surface. If the surface becomes excessively wet, fill operations should be halted, and our geotechnical engineer consulted for guidance. Testing of the fill material and compaction monitoring by our engineering technician is recommended during fill placement operations.

4.4 PAVEMENT CONSIDERATIONS

Pavement sections should be underlain by stabilized on-site soils or a minimum of 18 inches of well-compacted structural fill. If on-site soils are used as backfill for the pavement sections, underdrains should be considered along the roadway sections to prevent water infiltration below the pavement sections. We recommend that all paved areas be proof rolled with a loaded tandem axle dump truck or other similar heavy construction equipment to confirm the stability of the subgrade soils and detect the presence of soft or unstable areas. Our geotechnical engineer or his representative should observe the proof-rolling operations. If soft or loose near surface soils are encountered, they may need to be undercut or stabilized. Depending on the depth of fill, in some areas it may be possible to "bridge" over any soft subgrade soils with the use of a select granular fill and potentially geofabrics. The bridging option will be dependent on the depth of fill to be placed.

We have evaluated new flexible (asphalt) and rigid (concrete) pavements using the South Carolina Department of Transportation Pavements Design Guide and associated literature. Traffic loading data was not provided. Based on our experience with similar projects, we assume light-duty pavement will be subjected primarily to cars and light truck traffic and heavy-duty pavements will be subjected to heavy truck traffic. A rigid pavement section is recommended in areas subjected to repeated lateral loading (turning, stopping, and starting movements), such as a dumpster pad, and for truck turn around areas.

Based on our experience, properly prepared site soils and well-compacted controlled fill for this area will provide a CBR of at least 6. The CBR values should be confirmed during grading by engineering evaluation and field and laboratory testing. The following table presents our recommendations for minimum pavement sections.

Material	Flexible		Rigid
	Heavy Duty	Light Duty	Heavy Duty
Flexible Asphalt Pavement (inches) Asphaltic Concrete Surface Course	1.5	2.0	--
Flexible Asphalt Pavement (inches) Asphaltic Concrete Binder Course	1.5	--	--
Rigid Concrete Pavement (inches) 28-day Compressive Strength 4,000 psi w/ steel reinforcement	--	--	6.0
Aggregate Base Course Graded Aggregate Base Course (GABC)	8.0	6.0	4.0
Compacted Subgrade (98% of standard Proctor)	12.0	12.0	12.0

Our analyses indicate the light duty flexible pavement section has an allowable traffic volume of about 40,000 ESALs and the allowable traffic volume for the heavy duty flexible pavement section is approximately 80,000 ESALs. Based on our experience, this should be adequate for the assumed traffic and a typical 15-year pavement life. Construction traffic loads have not been provided, and construction traffic should be restricted from prepared subgrades and new pavements. If pavements must support construction traffic, staged construction or a thicker asphalt section will be required.

Once the final subgrade elevations can be provided and the subgrade soils in the pavement areas are identified, a laboratory soaked CBR test can be performed to verify the CBR values and determine if the pavement section can be modified. If the pavement loadings are different than the estimates, then a revised pavement design should be performed.

All pavements should be constructed on properly prepared, proof-rolled and stable soil subgrades approved by UES's geotechnical personnel. The base course should be compacted to at least 100% of the maximum dry density as determined by the modified Proctor compaction test (ASTM D 1557). In-place field density tests should be performed, and the area should be proof-rolled to confirm that the base course has been uniformly compacted. The thickness should not be deficient in any area by more than ½ inch. The asphalt pavement thickness should not be deficient by more than ¼ inch in any area. The average thickness of each pavement component should not be less than the specified thickness.

The majority of pavement sections incur their heaviest loads during the construction process. The construction loads are generally in excess of the design traffic loads. For this reason, we recommend that construction be staged to allow final preparation of the base course and paving to be performed near the end of the project when heavy construction equipment is not present.

All materials and workmanship should be in accordance with the South Carolina Department of Transportation's Standard Specifications for Highway Construction, 2007 Edition. Concrete pavement construction should be in accordance with applicable American Concrete Institute (ACI) guidelines.

The long-term performance of any pavement section is directly related to drainage of the base and subgrade. We emphasize that good base course and subgrade drainage is essential for successful pavement performance. Water buildup in the base course will result in premature pavement failures. The subgrade and pavement should be graded to provide rapid runoff to either the outer limits of the paved area or to catch basins so that standing water will not accumulate on the subgrade or pavement surfaces. Any areas that allow water or groundwater to enter the pavement system will require sub drains (i.e. French drains) installed to prevent water entry into the pavement base and subgrades.

4.5 DEWATERING AND DRAINAGE CONSIDERATIONS

Subsurface water for the purposes of this report is defined as water encountered below the existing ground surface. Groundwater was not encountered in the hand auger borings at the time of drilling. Based on the information from our hand augers, we do not anticipate that subsurface water will be encountered during site grading and utility excavations. It is possible that subsurface water may be encountered in deeper utility excavations depending on the depth of the excavation. If subsurface water is encountered during construction, possible methods of handling would be by pumping from sumps to lower the water level in localized areas, or by the excavation of gravity-draining ditches to remove the water from the site.

An important aspect to consider during development of this site is surface water control. During the construction, we recommend that steps be taken to enhance surface flow away from any excavations and promote rapid clearing of rainfall and runoff water following rain events. It should be incumbent on the contractor to maintain favorable site drainage during construction to reduce deterioration of otherwise stable subgrades.

It should be noted that fluctuations in subsurface water levels and soil moisture can be anticipated with changes in precipitation, runoff, season, and construction activities. The contractor should be prepared to dewater should water levels vary from those encountered during the drilling program. Construction during wet seasonal conditions (typically November through April) with heavy precipitation may result in a perched groundwater table or softening of the soils at the surface. These conditions could greatly influence the results of the proof roll, which may require that some stabilization of the subgrade would be necessary prior to the placement of structural fill. This could result in encountering subsurface water levels at elevations higher than those observed during our exploration.

4.6 GENERAL CONSTRUCTION CONSIDERATIONS

Excavations should be sloped as necessary to prevent slope failure and to allow backfilling. As a minimum, temporary excavations below 4-foot depth should be sloped in accordance with the latest OSHA regulations. Where lateral confinement will not permit slopes to be laid back, the excavation should be shored in accordance with OSHA requirements. During excavation, excavated material should not be stockpiled at the top of the slope within a horizontal distance equal to the excavation depth.

The Contractor is solely responsible for designing and constructing stable, temporary excavations and should shore, slope, or bench the sides of the excavations as required to maintain stability of both the excavation sides and bottom. The Contractor's "responsible person", as defined in 29 CFR Part 1926, should evaluate the soil exposed in the excavations as part of the Contractor's safety procedures. In no case should slope height, slope inclination, or excavation depth, including utility trench excavation depth, exceed those specified in all local, state, and federal safety regulations. Provisions for maintaining workman safety within excavations is the sole responsibility of the contractor.

Our scope of services did not include an analysis of slope stability for any temporary or permanent conditions. However, based on our experience with soils similar to those encountered at the site, well-constructed permanent slopes graded to 2H:1V (Horizontal:Vertical) or flatter are typically stable. All proposed slopes that are to be steeper than 2H:1V should be specifically analyzed for slope stability once final plans are available. This analysis should include laboratory testing (triaxial shear test, Atterberg limits, gradation, and moisture content) to determine the engineering strength parameters of the proposed embankment soil.

Fill slopes should be free of organic or other deleterious material and should be constructed using compacted structural fill. Topsoil or unsuitable soils should not be utilized to construct slopes or be "wasted" in or below fill slopes. All slope areas should be proof-rolled and evaluated prior to any fill placement. Additionally, we recommend fill slopes be slightly over-built, then cut back to firm, well-compacted soils prior to applying a vegetative cover. We also caution not to dress slopes with low permeability clayey soils, as this may inhibit free draining of the slopes and cause instability.

Slopes should also be constructed in a manner that minimizes surface flow of water over the crest and down the slope face. Typical slope construction incorporates a swale along the slope crest for this purpose. It will also be important that the slopes be protected from erosion by placement of erosion control blankets and seeded to establish a vegetative cover immediately after slope construction. In areas where vegetation cannot be established, the ground cover can include ground surface stabilization treatments, such as open-graded gravel, riprap, jute netting, geotextile or a combination of these items. We do not advise that mulch be used on slopes.

We recommend a minimum building set-back (horizontal distance from slope crest) equal to the height of the slope or 10 feet, whichever is greater. Parking lots and driveways should not be constructed within five feet of slope crests.

5.0 CONTINUATION OF SERVICES

We recommend that we be given the opportunity to review the grading plan and project specifications when construction documents approach completion. This review provides UES with the opportunity to evaluate whether the recommendations and comments provided herein have been understood and properly implemented. We also recommend that UES be retained for professional and construction materials testing services during construction. Our continued involvement on the project helps provide continuity for proper implementation of the recommendations discussed herein.

The Geotechnical Engineer of Record should be retained to monitor and test earthwork activities, and subgrade preparations for foundations and excavations. It should be noted that the actual soil conditions at the various subgrade levels and footing bearing grades may vary across the site and thus the presence of the Geotechnical Engineer and/or his representative during construction will serve to validate the subsurface conditions and recommendations presented in this report. We recommend that UES be employed to monitor the earthwork and foundation construction, and to report that the recommendations contained in this report are completed in a satisfactory manner. Our involvement on the project will aid in the proper implementation of the recommendations discussed herein. The following is a recommended scope of services:

- Review of project plans and construction specifications to verify that the recommendations presented in this report have been properly interpreted and implemented.
- Observe and perform testing during earthwork to document that subsurface conditions encountered during construction are consistent with those anticipated in this report.
- Observe subgrade preparation including any proof-rolling operations, undercutting of soft/loose unsuitable soils, installation of drainage materials, geotextiles and fill placement.
- Observe the placement and compaction of any engineered fill soils and perform laboratory and field compaction testing of the fill soils.

6.0 QUALIFICATIONS OF REPORT

This report has been prepared for the exclusive use by ***The Landplan Group South, Inc.*** and the designated members of their design/construction team associated with the proposed construction for the specific project discussed in this report. No other site or project facilities should be designed using the soil information contained in this report. As such, UES will not be responsible for the performance of any other site improvement designed using the data in this report.

This report should not be relied upon for final design recommendations or professional opinions by unauthorized third parties without the expressed written consent of UES. Unauthorized third parties that rely upon the information contained herein without the expressed written consent of UES assume all risk and liability for such reliance.

The recommendations submitted in this report are based upon the data obtained from the soil borings performed at the locations indicated on the Boring Location Plan and from other information as referenced. This report does not reflect any variations which may occur between the boring locations. The nature and extent of such variations may not become evident until the course of construction. If variations become evident, it will then be necessary for a re-evaluation of the recommendations of this report after performing on-site observations during the construction period and noting the characteristics of the variations.

Borings for a typical geotechnical report are widely spaced and generally not sufficient for reliably detecting the presence of isolated, anomalous surface or subsurface conditions, or reliably estimating unsuitable or suitable material quantities. Accordingly, UES does not recommend relying on our boring information for estimation of material quantities unless our contracted services ***specifically*** include sufficient exploration for such purpose(s) and within the report we so state that the level of exploration provided should be sufficient to detect anomalous conditions or estimate such quantities. Therefore, UES will not be responsible for any extrapolation or use of our data by others beyond the purpose(s) for which it is applicable or intended.

All users of this report are cautioned that there was no requirement for UES to attempt to locate any man-made buried objects or identify any other potentially hazardous conditions that may exist at the site during the course of this exploration. Therefore, no attempt was made by UES to locate or identify such concerns. UES cannot be responsible for any buried man-made objects or environmental hazards which may be subsequently encountered during construction that are not discussed within the text of this report. We can provide this service if requested.

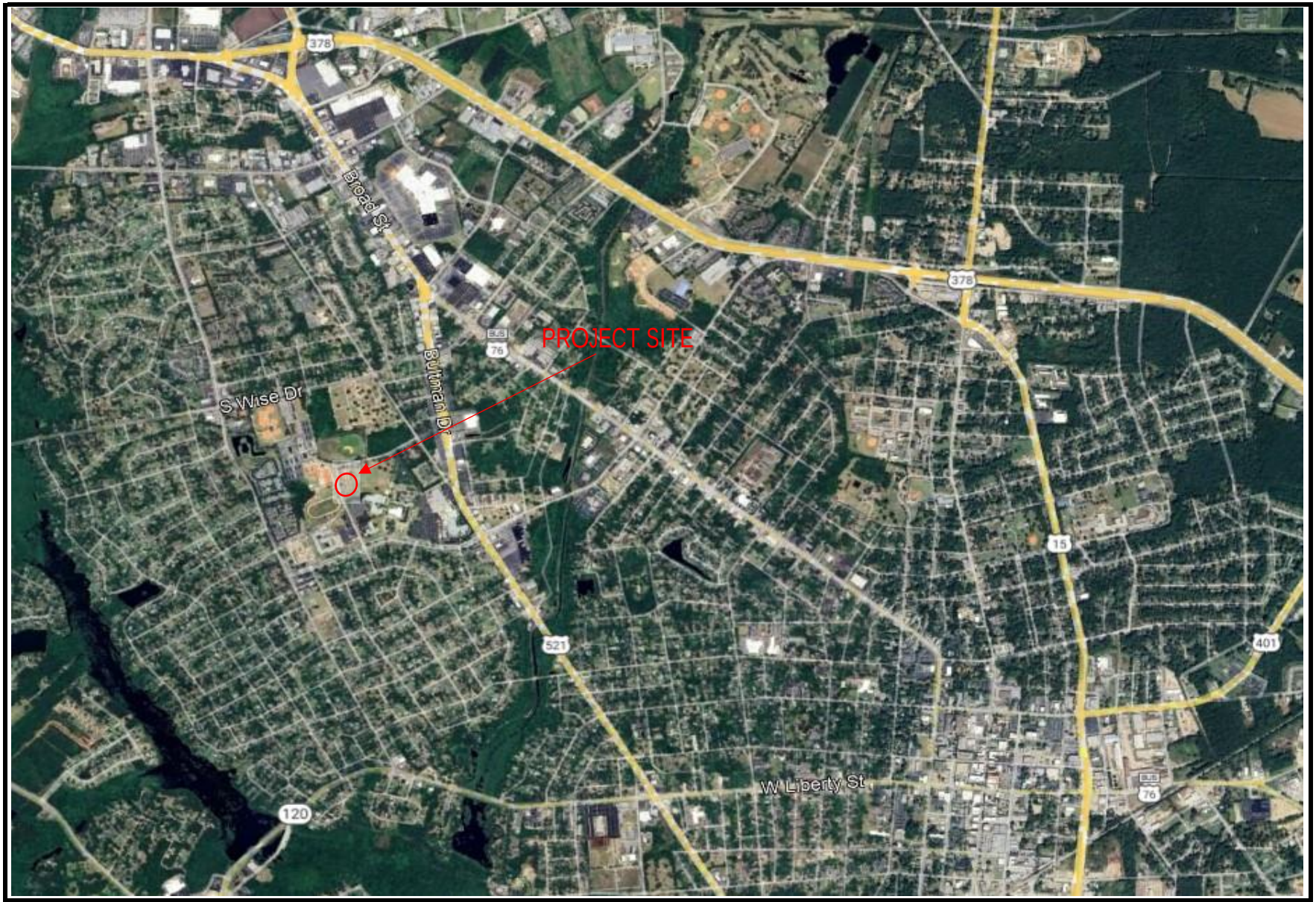
During the early stages of most construction projects, geotechnical issues not addressed in this report may arise. Because of the natural limitations inherent in working with the subsurface, it is not possible for a geotechnical engineer to predict and address all possible problems. A Geotechnical Business Council (GBC) publication, "Important Information About This Geotechnical Engineering Report" appears in Appendix III and will help explain the nature of geotechnical issues.

Further, we present documents in Appendix III: Constraints and Restrictions, to bring to your attention the potential concerns and the basic limitations of a typical geotechnical report.

* * * * * * * * *

APPENDIX I

Site Vicinity Map (Figure 1)
Test Location Plan (Figure 2)



UES™

3820 Faber Place Drive, Suite 700, Charleston, South Carolina

UNIVERSITY DRIVE PARKING LOT

University Drive & Theatre Drive
Sumter, South Carolina

UES Report No.
A24119.00312.000

Figure A-1
Site Location Map



⊕ Approximate Location of Hand Auger/DCP ⊕ Approximate Location of Hand Auger/Infiltration

UES™

3820 Faber Place Drive, Suite 700, Charleston, South Carolina

UNIVERSITY DRIVE PARKING LOT

University Drive & Theatre Drive
Sumter, South Carolina

UES Report No.
A24119.00312.000

Figure B-1

Test Location Map

APPENDIX II

USCS Soil Classification Chart
Hand Auger Logs

Unified Soil Classification System

MAJOR DIVISIONS			GROUP SYMBOLS*	TYPICAL NAMES
COARSE GRAINED SOILS More than half of material is larger than No. 200 (+) sieve size (75 μm).	GRAVEL & GRAVELLY SOILS More than half of coarse fraction is larger than No. 4 sieve size (4.75 mm).	CLEAN GRAVEL (Little or no fines)	**GW**	Well-graded gravels, gravel-sand mixtures, little or no fines.
			GP	Poorly graded gravels, gravel-sand mixtures, little or no fines.
		GRAVELS WITH FINES (Appreciable amount of fines)	**GM**	Silty gravels, gravel-sand-silt mixtures.
			GC	Clayey gravels, gravel-sand-clay mixtures
	SAND AND SANDY SOILS More than half of coarse fraction is smaller than No. 4 sieve size (4.75 mm).	CLEAN SAND (Little or no fines)	**SW**	Well graded sands, gravelly sands, little or no fines.
			SP	Poorly graded sands, gravelly sands, little or no fines.
		SANDS WITH FINES (Appreciable amount of fines)	**SM**	Silty sands, sand-silt mixtures.
			SC	Clayey sands, sand-clay mixtures.
FINE GRAINED SOILS More than half of material is smaller than the No. 200 sieve size (75 μm).	SILTS AND CLAYS Liquid Limit Less than 50		**ML**	Inorganic silts & very fine sands, rock flour, silty or clayey fine sands or clayey silts w. slight plasticity.
			CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays.
			OL	Organic silts and organic clays of low plasticity.
	SILTS AND CLAYS Liquid Limit Greater than 50		**MH**	Inorganic silts, micaceous or diatomaceous fine sand or sitly soils.
			CH	Inorganic clays of high plasticity, fat clays.
			OH	Organic clays of medium to high plasticity, organic silts.
HIGHLY ORGANIC SOILS			**PT**	Peat, humus swamp soils with highly organic contents.

Note: All sieve sizes on this chart are based the U.S. Standard.

* Dual group symbol classification may be required for soil possessing characteristics of two soil groups.

Reference: After U.S. Army Engineers Waterways Experiment Station (1967) and Das (1985).

UES™	PROJECT NAME: University Drive Parking Lot		PROJECT NO.: A24119.00312.000
	SITE ADDRESS: University Drive and Theatre Drive, Sumter, SC		HAND AUGER NO.: HA-1
	PREPARED BY: CF	DATE: 11/15/2024	SURFACE ELEVATION:
	LATITUDE:		LONGITUDE:

HAND AUGER LOG

DEPTH (FT)	WATER LEVELS	DESCRIPTION OF MATERIAL	SAMPLE NUMBER		DCP # Blows Per 1-3/4"
		Surface Material and Thickness: Asphalt - +/- 1-1/4 inches - No sub-base			
1		Greyish Brown Silty Sand, SM	S-1		
					15
		Brown Clayey Sand, SC	S-2		15
2					15
					9
		Brown Silty Sand, SM	S-3		10
3					12
					8
		Lt Brown Silty Sand, SM	S-4		7
4					9
					11
		Lt Brown Silty Sand, SM	S-5		14
5					15
		EOB 5'-0"			15
					15
6					15
7					
8					
9					

COMMENTS: Groundwater not encountered

UES™	PROJECT NAME: University Drive Parking Lot		PROJECT NO.: A24119.00312.000
	SITE ADDRESS: University Drive and Theatre Drive, Sumter, SC		HAND AUGER NO.: HA-2
	PREPARED BY: CF	DATE: 11/15/2024	SURFACE ELEVATION:
	LATITUDE:		LONGITUDE:

HAND AUGER LOG

DEPTH (FT)	WATER LEVELS	DESCRIPTION OF MATERIAL	SAMPLE NUMBER		DCP # Blows Per 1-3/4"
		Surface Material and Thickness: Grass/Roots/Topsoil +/- 2 inches			
1		Greyish Brown Silty Sand, SM	S-1		
					8
		Greyish Brown Silty Sand, SM	S-2		8
2					9
					7
		Brown Silty Sand, SM	S-3		7
3					8
					6
		Lt Brown Silty Sand, SM	S-4		6
4					7
		Lt Brown Silty Sand, SM			7
			S-5		7
5					7
		EOB 5'-0"			12
					13
6					15
7					
8					
9					

COMMENTS: Groundwater not encountered

UES™	PROJECT NAME: University Drive Parking Lot		PROJECT NO.: A24119.00312.000
	SITE ADDRESS: University Drive and Theatre Drive, Sumter, SC		HAND AUGER NO.: IT-1
	PREPARED BY: CF	DATE: 11/15/2024	SURFACE ELEVATION:
	LATITUDE:		LONGITUDE:

HAND AUGER LOG

DEPTH (FT)	WATER LEVELS	DESCRIPTION OF MATERIAL	SAMPLE NUMBER		
		Surface Material and Thickness: Grass/Roots/Topsoil +/- 2 inches			
1		Greyish Brown Silty Sand/Sandy Silt, SM	S-1		
2		Brown Clayey Sand, SC	S-2		
3		Brown Silty Sand, SM	S-3		
4		EOB 3'-0"			
5					
6					
7					
8					
9					

COMMENTS: Groundwater not encountered

UES™	PROJECT NAME: University Drive Parking Lot	PROJECT NO.: A24119.00312.000
	SITE ADDRESS: University Drive and Theatre Drive, Sumter, SC	HAND AUGER NO.: IT-2
	PREPARED BY: CF / DATE: 11/15/2024	SURFACE ELEVATION:
	LATITUDE:	LONGITUDE:

HAND AUGER LOG

DEPTH (FT)	WATER LEVELS	DESCRIPTION OF MATERIAL	SAMPLE NUMBER		
		Surface Material and Thickness: Grass/Roots/Topsoil +/- 2 inches			
1		Greyish Brown Silty Sand, SM	S-1		
2		Brown Clayey Sand, SC	S-2		
3		LT Brown Silty Sand, SM	S-3		
4		EOB 3'-0"			
5					
6					
7					
8					
9					

COMMENTS: Groundwater not encountered

APPENDIX III

GBC Document

Constraints and Restrictions

Important Information about This

Geotechnical-Engineering Report

Subsurface problems are a principal cause of construction delays, cost overruns, claims, and disputes.

While you cannot eliminate all such risks, you can manage them. The following information is provided to help.

Geotechnical Services Are Performed for Specific Purposes, Persons, and Projects

Geotechnical engineers structure their services to meet the specific needs of their clients. A geotechnical-engineering study conducted for a civil engineer may not fulfill the needs of a constructor — a construction contractor — or even another civil engineer. Because each geotechnical- engineering study is unique, each geotechnical-engineering report is unique, prepared *solely* for the client. No one except you should rely on this geotechnical-engineering report without first conferring with the geotechnical engineer who prepared it. *And no one — not even you* — should apply this report for any purpose or project except the one originally contemplated.

Read the Full Report

Serious problems have occurred because those relying on a geotechnical-engineering report did not read it all. Do not rely on an executive summary. Do not read selected elements only.

Geotechnical Engineers Base Each Report on a Unique Set of Project-Specific Factors

Geotechnical engineers consider many unique, project-specific factors when establishing the scope of a study. Typical factors include: the client's goals, objectives, and risk-management preferences; the general nature of the structure involved, its size, and configuration; the location of the structure on the site; and other planned or existing site improvements, such as access roads, parking lots, and underground utilities. Unless the geotechnical engineer who conducted the study specifically indicates otherwise, do not rely on a geotechnical-engineering report that was:

- not prepared for you;
- not prepared for your project;
- not prepared for the specific site explored; or
- completed before important project changes were made.

Typical changes that can erode the reliability of an existing geotechnical-engineering report include those that affect:

- the function of the proposed structure, as when it's changed from a parking garage to an office building, or from a light-industrial plant to a refrigerated warehouse;
- the elevation, configuration, location, orientation, or weight of the proposed structure;
- the composition of the design team; or
- project ownership.

As a general rule, *always* inform your geotechnical engineer of project changes—even minor ones—and request an assessment of their impact. *Geotechnical engineers cannot accept responsibility or liability for problems that occur because their reports do not consider developments of which they were not informed.*

Subsurface Conditions Can Change

A geotechnical-engineering report is based on conditions that existed at the time the geotechnical engineer performed the study. *Do not rely on a geotechnical-engineering report whose adequacy may have been affected by*: the passage of time; man-made events, such as construction on or adjacent to the site; or natural events, such as floods, droughts, earthquakes, or groundwater fluctuations. *Contact the geotechnical engineer before applying this report to determine if it is still reliable.* A minor amount of additional testing or analysis could prevent major problems.

Most Geotechnical Findings Are Professional Opinions

Site exploration identifies subsurface conditions only at those points where subsurface tests are conducted or samples are taken. Geotechnical engineers review field and laboratory data and then apply their professional judgment to render an opinion about subsurface conditions throughout the site. Actual subsurface conditions may differ — sometimes significantly — from those indicated in your report. Retaining the geotechnical engineer who developed your report to provide geotechnical-construction observation is the most effective method of managing the risks associated with unanticipated conditions.

A Report's Recommendations Are Not Final

Do not overrely on the confirmation-dependent recommendations included in your report. *Confirmation-dependent recommendations are not final,* because geotechnical engineers develop them principally from judgment and opinion. Geotechnical engineers can finalize their recommendations *only* by observing actual subsurface conditions revealed during construction. *The geotechnical engineer who developed your report cannot assume responsibility or liability for the report's confirmation-dependent recommendations if that engineer does not perform the geotechnical-construction observation required to confirm the recommendations' applicability.*

A Geotechnical-Engineering Report Is Subject to Misinterpretation

Other design-team members' misinterpretation of geotechnical-engineering reports has resulted in costly

problems. Confront that risk by having your geotechnical engineer confer with appropriate members of the design team after submitting the report. Also retain your geotechnical engineer to review pertinent elements of the design team's plans and specifications. Constructors can also misinterpret a geotechnical-engineering report. Confront that risk by having your geotechnical engineer participate in prebid and preconstruction conferences, and by providing geotechnical construction observation.

Do Not Redraw the Engineer's Logs

Geotechnical engineers prepare final boring and testing logs based upon their interpretation of field logs and laboratory data. To prevent errors or omissions, the logs included in a geotechnical-engineering report should *never* be redrawn for inclusion in architectural or other design drawings. Only photographic or electronic reproduction is acceptable, *but recognize that separating logs from the report can elevate risk.*

Give Constructors a Complete Report and Guidance

Some owners and design professionals mistakenly believe they can make constructors liable for unanticipated subsurface conditions by limiting what they provide for bid preparation. To help prevent costly problems, give constructors the complete geotechnical-engineering report, *but* preface it with a clearly written letter of transmittal. In that letter, advise constructors that the report was not prepared for purposes of bid development and that the report's accuracy is limited; encourage them to confer with the geotechnical engineer who prepared the report (a modest fee may be required) and/or to conduct additional study to obtain the specific types of information they need or prefer. A prebid conference can also be valuable. *Be sure constructors have sufficient time* to perform additional study. Only then might you be in a position to give constructors the best information available to you, while requiring them to at least share some of the financial responsibilities stemming from unanticipated conditions.

Read Responsibility Provisions Closely

Some clients, design professionals, and constructors fail to recognize that geotechnical engineering is far less exact than other engineering disciplines. This lack of understanding has created unrealistic expectations that have led to disappointments, claims, and disputes. To help reduce the risk of such outcomes, geotechnical engineers commonly include a variety of explanatory provisions in their reports. Sometimes labeled "limitations," many of these provisions indicate where geotechnical engineers' responsibilities begin and end, to help others recognize their own responsibilities and risks. *Read these provisions closely.* Ask questions. Your geotechnical engineer should respond fully and frankly.

Environmental Concerns Are Not Covered

The equipment, techniques, and personnel used to perform an *environmental* study differ significantly from those used to perform a *geotechnical* study. For that reason, a geotechnical-engineering report does not usually relate any environmental findings, conclusions, or recommendations; e.g., about the likelihood of encountering underground storage tanks or regulated contaminants. *Unanticipated environmental problems have led to numerous project failures.* If you have not yet obtained your own environmental information, ask your geotechnical consultant for risk-management guidance. *Do not rely on an environmental report prepared for someone else.*

Obtain Professional Assistance To Deal with Mold

Diverse strategies can be applied during building design, construction, operation, and maintenance to prevent significant amounts of mold from growing on indoor surfaces. To be effective, all such strategies should be devised for the *express purpose* of mold prevention, integrated into a comprehensive plan, and executed with diligent oversight by a professional mold-prevention consultant. Because just a small amount of water or moisture can lead to the development of severe mold infestations, many mold- prevention strategies focus on keeping building surfaces dry. While groundwater, water infiltration, and similar issues may have been addressed as part of the geotechnical- engineering study whose findings are conveyed in this report, the geotechnical engineer in charge of this project is not a mold prevention consultant; *none of the services performed in connection with the geotechnical engineer's study were designed or conducted for the purpose of mold prevention. Proper implementation of the recommendations conveyed in this report will not of itself be sufficient to prevent mold from growing in or on the structure involved.*

Rely, on Your GBC-Member Geotechnical Engineer for Additional Assistance

Membership in the Geotechnical Business Council of the Geoprofessional Business Association exposes geotechnical engineers to a wide array of risk-confrontation techniques that can be of genuine benefit for everyone involved with a construction project. Confer with you GBC-Member geotechnical engineer for more information.

GEOTECHNICAL BUSINESS COUNCIL
of the Geoprofessional Business Association

8811 Colesville Road/Suite G106, Silver Spring, MD 20910
Telephone: 301/565-2733 Facsimile: 301/589-2017
e-mail: info@geoprofessional.org www.geoprofessional.org

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CONSTRAINTS & RESTRICTIONS

The intent of this document is to bring to your attention the potential concerns and the basic limitations of a typical geotechnical report.

WARRANTY

Universal Engineering Sciences has prepared this report for our client for his exclusive use, in accordance with generally accepted soil and foundation engineering practices, and makes no other warranty either expressed or implied as to the professional advice provided in the report.

UNANTICIPATED SOIL CONDITIONS

The analysis and recommendations submitted in this report are based upon the data obtained from soil borings performed at the locations indicated on the Boring Location Plan. This report does not reflect any variations which may occur between these borings.

The nature and extent of variations between borings may not become known until excavation begins. If variations appear, we may have to re-evaluate our recommendations after performing on-site observations and noting the characteristics of any variations.

CHANGED CONDITIONS

We recommend that the specifications for the project require that the contractor immediately notify Universal Engineering Sciences, as well as the owner, when subsurface conditions are encountered that are different from those present in this report.

No claim by the contractor for any conditions differing from those anticipated in the plans, specifications, and those found in this report, should be allowed unless the contractor notifies the owner and Universal Engineering Sciences of such changed conditions. Further, we recommend that all foundation work and site improvements be observed by a representative of Universal Engineering Sciences to monitor field conditions and changes, to verify design assumptions and to evaluate and recommend any appropriate modifications to this report.

MISINTERPRETATION OF SOIL ENGINEERING REPORT

Universal Engineering Sciences is responsible for the conclusions and opinions contained within this report based upon the data relating only to the specific project and location discussed herein. If the conclusions or recommendations based upon the data presented are made by others, those conclusions or recommendations are not the responsibility of Universal Engineering Sciences.

CHANGED STRUCTURE OR LOCATION

This report was prepared in order to aid in the evaluation of this project and to assist the architect or engineer in the design of this project. If any changes in the design or location of the structure as outlined in this report are planned, or if any structures are included or added that are not discussed in the report, the conclusions and recommendations contained in this report shall not be considered valid unless the changes are reviewed and the conclusions modified or approved by Universal Engineering Sciences.

USE OF REPORT BY BIDDERS

Bidders who are examining the report prior to submission of a bid are cautioned that this report was prepared as an aid to the designers of the project and it may affect actual construction operations.

Bidders are urged to make their own soil borings, test pits, test caissons or other investigations to determine those conditions that may affect construction operations. Universal Engineering Sciences cannot be responsible for any interpretations made from this report or the attached boring logs with regard to their adequacy in reflecting subsurface conditions which will affect construction operations.

STRATA CHANGES

Strata changes are indicated by a definite line on the boring logs which accompany this report. However, the actual change in the ground may be more gradual. Where changes occur between soil samples, the location of the change must necessarily be estimated using all available information and may not be shown at the exact depth.

OBSERVATIONS DURING DRILLING

Attempts are made to detect and/or identify occurrences during drilling and sampling, such as: water level, boulders, zones of lost circulation, relative ease or resistance to drilling progress, unusual sample recovery, variation of driving resistance, obstructions, etc.; however, lack of mention does not preclude their presence.

WATER LEVELS

Water level readings have been made in the drill holes during drilling and they indicate normally occurring conditions. Water levels may not have been stabilized at the last reading. This data has been reviewed and interpretations made in this report. However, it must be noted that fluctuations in the level of the groundwater may occur due to variations in rainfall, temperature, tides, and other factors not evident at the time measurements were made and reported. Since the probability of such variations is anticipated, design drawings and specifications should accommodate such possibilities and construction planning should be based upon such assumptions of variations.

LOCATION OF BURIED OBJECTS

All users of this report are cautioned that there was no requirement for Universal Engineering Sciences to attempt to locate any man-made buried objects during the course of this exploration and that no attempt was made by Universal Engineering Sciences to locate any such buried objects. Universal Engineering Sciences cannot be responsible for any buried man-made objects which are subsequently encountered during construction that are not discussed within the text of this report.

TIME

This report reflects the soil conditions at the time of exploration. If the report is not used in a reasonable amount of time, significant changes to the site may occur and additional reviews may be required.

UES™

Sumter City-County
Planning Department

DERON L. MCCORMICK
CITY MANAGER

HELEN M. ROODMAN
PLANNING DIRECTOR

GARY M. MIXON
COUNTY ADMINISTRATOR

February 10, 2025

Charles Howell (sent via email: chowell@landplansouth.com)
LandPlan Group South
1206 Scott St
Columbia, SC 29201

RE: Minor Site Plan Approval
MSP-25-02 – 100 Theatre Dr. (City)
Theatre Drive Parking Lot
TMS # 204-13-01-006

Dear Mr. Howell,

The Planning Department has reviewed your application submission for Minor Site Plan approval concerning the Theatre Drive Parking Lot at 100 Theatre Dr. (the "Property") and represented by Tax Map # **204-13-01-006**. The site plan application has been reviewed and **approved** based upon the following submitted plans:

- Site plan set titled *"Site Development Construction Drawings, Theatre Drive Parking Lot"* prepared by LandPlan Group South, dated January 28, 2025.

Approval is Subject to the following conditions:

- Prior to Issuance of Land Disturbance and/or Building Permits
  - One physical copy of the final approved civil engineered site plan must be provided to the Sumter City-County Planning Department prior to issuance of land disturbance and building permits.
  - Submission and approval of a Land Disturbance Permit and any necessary building permits.
  - City of Sumter Stormwater approval must be obtained

- Prior to Final Zoning Inspection
  - All site improvements must be completed prior to zoning final inspection and occupancy approval.

Note: This letter does not approve for construction to commence.

Please note that this approval is for Minor Site Plan only. All applicable land disturbance/construction permits must be issued prior to commencing site work and/or building construction activities. Please contact the Sumter Building Inspections Department at 803-774-1600 to obtain required permits.

Also note that it is the responsibility of the applicant and/or site owner to ensure that the contractor or person's otherwise responsible for completing this project do so in accordance with the site plans approved by the Sumter City-County Planning Department.

If you have any questions or concerns please contact me at (803) 774-1612 or via e-mail at KKelly@sumtersc.gov.

Sincerely,



Kyle Kelly, AICP
Senior Planner

cc: Jeff Derwort, Planning Manager/Zoning Administrator
Teige Eliott, City of Sumter Stormwater Manager
Cathryn Poplin, City of Sumter Capital Improvements Manager
Jason Stoddard, Project Manager

National Fitness Campaign LP | PO Box 2367, San Francisco CA 94126 | info@nfchq.com

To Whom it May Concern,

National Fitness Campaign LP (NFC) is a wellness consulting firm that cooperates with public and private organizations to build healthy communitie across America. The NFC initiative provides:

- A trademarked outdoor infrastructure product, the Fitness Court®
- Site Design and Strategic Planning services
- An integrated digital ecosystem, including the Fitness Court® Mobile App and Digital Training Library
- A certified ambassador training program to local volunteer trainers

Municipalities, schools, and community organizations with public land may apply to join the National Fitness Campaign wellness initiative and bring the program to their approved site locations. This program is unique, and NFC is the only organization in the world that delivers these elements either individually, or as part of an integrated program. For the reasons listed in this document, the trademarked ownership of the system and healthy infrastructure, and the integrated nature of the initiative, including its services, products, tools and grant funding, it is commonly approved as a sole source across the United States.

Analysis has been conducted by hundreds of cities and institutions across the country, who have concluded that the products and services have no equal, and determined their selected method of procurement is a Sole Source procurement, in accordance with local policies and requirements. This group includes cities like Sacramento California and Las Vegas Nevada, and institutions such as The University of Colorado at Boulder, where the Fitness Court® and associated tools and services were procured via sole source procurement, evidenced by public documentation and approvals. Further, the Fitness Court® is trademarked and owned by National Fitness Campaign.

The integrated nature of the products and services is frequently grounds for sole source by many, but not all local requirements. Some agencies do require bids for procurement.

There are three primary differentiators that commonly validate the sole source justification of the Fitness Court® and national campaign resources, which are described below. In addition to the descriptions of these three primary items, an appendix is provided as an attachment to this document that provides graphic aids and further detailed information regarding the differentiation of this program and its associated products and services.

1 - Trademarked Fitness Court® System

A. The Fitness Court® is trademarked and owned by National Fitness Campaign LP.
    a. As such, this product cannot be procured from any other organization. Any organization seeking to fund and install a Fitness Court® must do so through National Fitness Campaign LP.
        i. See Appendix for Trademark Document from the United States Patent and Trademark Office
B. The Fitness Court® and each element is manufactured only by National Fitness Campaign LP. It is impossible to not only procure the elements as a system, but individually. Every aspect of the Fitness Court®, including the functional design of all equipment, structural engineering, elements are the property of National Fitness Campaign LP. The individual elements are each named and registered with a unique design and serial number. Because the design of the elements is owned by National Fitness

Campaign LP and not licensed to any other organization or distributor, it is not possible to procure them anywhere else.

C. The Fitness Court® is available only in a single configuration, shown in the appendix material. The system includes over 118 unique elements, which acts as a full body training center, teaching people of all ages and fitness levels about how to stay fit and healthy in just 7 minutes a day. There is no variation in the layout of the elements. Elements can not be added or removed. Spacing cannot be altered. Like many integrated products, Individual elements can not be procured separately.

D. The Fitness Court® has a specialized training envelope that accommodates more users per square foot than any other known system in the world. The Fitness Court® is a comprehensive outdoor circuit training system, laid out in 32'x32' of space, for a total of 1024 sq ft of training area. NFC's patented design is able to support 28 simultaneous users on 30 integrated bodyweight training components, derived from the previously stated 118 elements. This configuration is impossible to re-create in only 1024 square feet without NFC's proprietary design and components.

E. The Fitness Court Studio is an optional addition to the Fitness Court which incorporates an additional 32'x32' outdoor studio. The Fitness Court Studio can only be procured in collaboration with the Fitness Court and provides 1024 Sq ft of additional rubberized floor space for versatile group-based activities such as dance, yoga, cardio fitness classes, PE classes and acts as a community hub for wellness-related activities such as art and meditation events. The Fitness Court and Fitness Court Studio combine to form a completely unique community wellness space that can fit up to 60 users simultaneously. When combined the Fitness Court and Fitness Court Studio are impossible to recreate due to NFC's proprietary design and components.

F. Public Art Mural and Digital Engagement Wall
    a. Each Fitness Court® is designed as a one-of-a-kind work of art that includes a 32'x5.5' public art mural. The mural is an integral component of the Fitness Court design, and makes each Fitness Court® a one-of-a-kind public art installation.
    b. This artwork is produced specifically for the Fitness Court®, and to comply with manufacturing requirements of the Fitness Court® presentation surfaces.
    c. This artwork is unavailable through any other vendor, and is impossible to recreate to conform to important national standards and manufacturing requirements stated above in item b.
    d. Additionally, digital integration, safety information, and other details are provided as part of this artwork.
    e. All artwork is approved by NFC's Grant Committee and partners.
    f. Further, the mural can be periodically re-designed and introduced, to create a rotating gallery of outdoor art to inspire people to engage in regular wellness activities.
        i. NFC provides integrated consulting and design services to assist in this process.
    g. Digital Engagement Wall
        i. The feature wall of the Fitness Court includes a custom digital engagement wall.
            1. This wall provides digital QR codes and embedded, proprietary information regarding the use of the Fitness Court® and Fitness Court App.
            2. This workout library is unavailable from any other organization because it is the IP of National Fitness Campaign LP.
            3. Tracking Fitness Court® usage wouldn't be possible without the built in GPS tracking features available on the Fitness Court® digital engagement wall.

h. NFC is unaware of any other outdoor fitness element that provides an integrated art mural of any kind.
i. Further, NFC has an in-house art studio that designs, produces, and creates the art and custom graphics that are integrated into each Fitness Court. Fitness Court Compatible Graphics are only available from National Fitness Campaign LP.

2 - Fitness Court® App and Digital Tracking System

Each Fitness Court® is supported by a mobile app called the Fitness Court® App. All IP, including the app itself are owned by National Fitness Campaign LP. The training resources, world-class workout programs, challenges and data analytics features are only available for Fitness Court® users and site partners. No other outdoor fitness equipment provides a mobile app with the following four primary features:

A. Mark Lauren Training Series
    a. Mark Lauren is a US Special Operations Trainer and Bestselling Author. Mark Lauren has developed 18 proprietary workout programs specifically for the Fitness Court® system. They are only available on the Fitness Court® App. Mark Lauren has no other programs for outdoor fitness equipment available.
B. Fitness Court® App Check-In Feature
    a. This is a proprietary feature that allows a user to check-in to their local Fitness Court, and build healthy habits.
C. Annual Data Analytics Reporting
    a. Each site partner who builds a Fitness Court® is eligible to receive an annual data report tracking statistics of their Fitness Court®.
    b. To NFC's knowledge, no other manufacturer of any type of outdoor exercise component provides a regular, annual report of key usage metrics using digital, GPS based systems.
        i. The Report is provided by NFC, and includes annual demographic data, user age ranges, Fitness Court app downloads and other important information.
        ii. This information is generated by NFC's proprietary GPS based data analytics services for each Fitness Court® in America.
D. See appendix for additional information regarding the Fitness Court® App.

3 - National Grant Funding

National Fitness Campaign LP builds and maintains a multi-million dollar annual Grant Fund, supported each year by sponsors and partners of the campaign. This funding takes tremendous effort to build, and it is provided by the National Fitness Campaign and partners and sponsors to support the mission of making wellness infrastructure free and accessible across America in partnership with leading cities, schools and organizations. Funding varies from state to state and year to year.

Some of the Campaign Sponsors and programs include:

- NFC Public Art Campaign
- National Certified Installer Network

Dozens of State and Regional Sponsors, including, but not limited to:

- Blue Cross and Blue Shield of Illinois
- Blue Cross and Blue Shield of Kansas

- Priority Health
- MVP Health Care
- Renown Health
- Blue Cross and Blue Shield of New Mexico
- Blue Cross and Blue Shield of Texas
- Blue Cross and Blue Shield of Alabama
- Community Health Options
- Blue Cross and Blue Shield of Massachusetts
- Blue Cross and Blue Shield of Oklahoma

To procure a Fitness Court® and participate in the campaign, an organization must complete a formal application and be approved for funding and participation. Each partner organization that succeeds in submitting a successful application is eligible to receive a variable Grant Award based on application merit which is deducted from the funds required for the NFC program from sponsors of the National Fitness Campaign.

This funding is administered in the preferred method of receipt for each partner organization. Methods include a credit on final invoices for remaining funding, and direct grant disbursements provided by National Fitness Campaign.

This funding is available for a limited number of partners in each state on an annual basis, and is awarded based on merit of application from a qualified site partner, including the requirement for the Fitness Court to build in a publicly accessible location that is highly visible,active, accessible to the community, and connected to pedestrian infrastructure.

For more information, refer to the “NFC Organization Overview and Grant Funding Summary, and see: https://nationalfitnesscampaign.com/grants

No other vendor, distributor or organization makes these materials available for procurement by any city, school, or organization. They must be acquired from National Fitness Campaign LP. If you have further questions regarding this sole source letter or require additional information, please contact us per the information provided on this letterhead.

Sincerely,



Mitch Menaged, Founder and Director
National Fitness Campaign LP

United States of America
United States Patent and Trademark Office

THE FITNESS COURT

Reg. No. 4,307,958

Registered Mar. 26, 2013

Int. Cl.: 41

SERVICE MARK

PRINCIPAL REGISTER

MITCH MENAGED (UNITED STATES INDIVIDUAL)
1740 KEARNY STREET
SAN FRANCISCO, CA 94133

FOR: PROVIDING OUTDOOR FACILITIES FOR RECREATION ACTIVITIES AND BODY BUILDING, IN CLASS 41 (U.S. CLS. 100, 101 AND 107).

FIRST USE 0-0-1979; IN COMMERCE 0-0-1979.

THE MARK CONSISTS OF STANDARD CHARACTERS WITHOUT CLAIM TO ANY PARTICULAR FONT, STYLE, SIZE, OR COLOR.

SEC. 2(F).

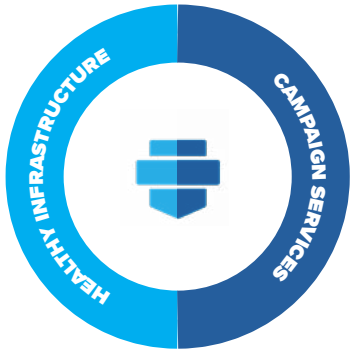
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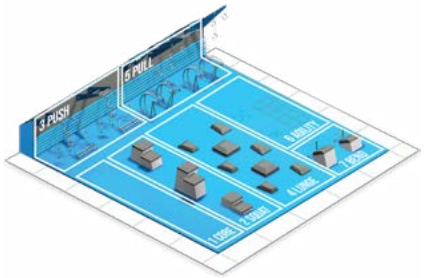
KIMBERLY FRYE, EXAMINING ATTORNEY

Acting Director of the United States Patent and Trademark Office

NFC : COMPREHENSIVE PROGRAM

CAMPAIGN SUMMARY





FITNESS COURT

21st Century Healthy Infrastructure

National Fitness Campaign's Fitness Court is the centerpiece to its holistic health and wellness initiative. The Fitness Court is an outdoor bodyweight circuit training center with functional fitness DNA. The best-in-class system provides a full-body workout to adults of all ability levels. With 7 functional fitness zones, the Fitness Court can be used in thousands of ways. The Fitness Court is the world's best outdoor gym!



7 Minutes 7 Movements



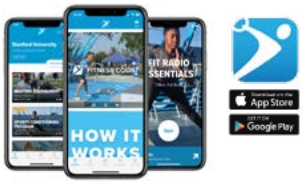
Strategic Planning Studies

Strategic Planning & Feasibility Study, Site Design Consulting



Campaign Funding Support

Sponsor Strategy, Best Practices, National Installation Team Support



Fitness Court App

Free digital App Delivering Programing, Workouts & Content



Ambassador Training

NFC Fitness Court Ambassador Training ACE Certified *(America Council of Exercise)*



Launch & Public Relations

Featured Stories Highlighted through Press and Local Media

FITNESS SEASON

Annual Fitness Season

Spring/Summer/Fall national & local training, classes & challenges series



SPRING

WORLD-CLASS TRAINING

World-class training videos will available on the Fitness Court App.



SUMMER

WORLD-CLASS TRAINING

World-class training videos will available on the Fitness Court App.



FALL

CHALLENGE SERIES

The Fitness Season culminates with local, regional and national challenges for residents.

WORLD CLASS MATERIALS & SYSTEM

FITNESS COURT

Made & Manufactured in the USA

Designed by NFC in California.



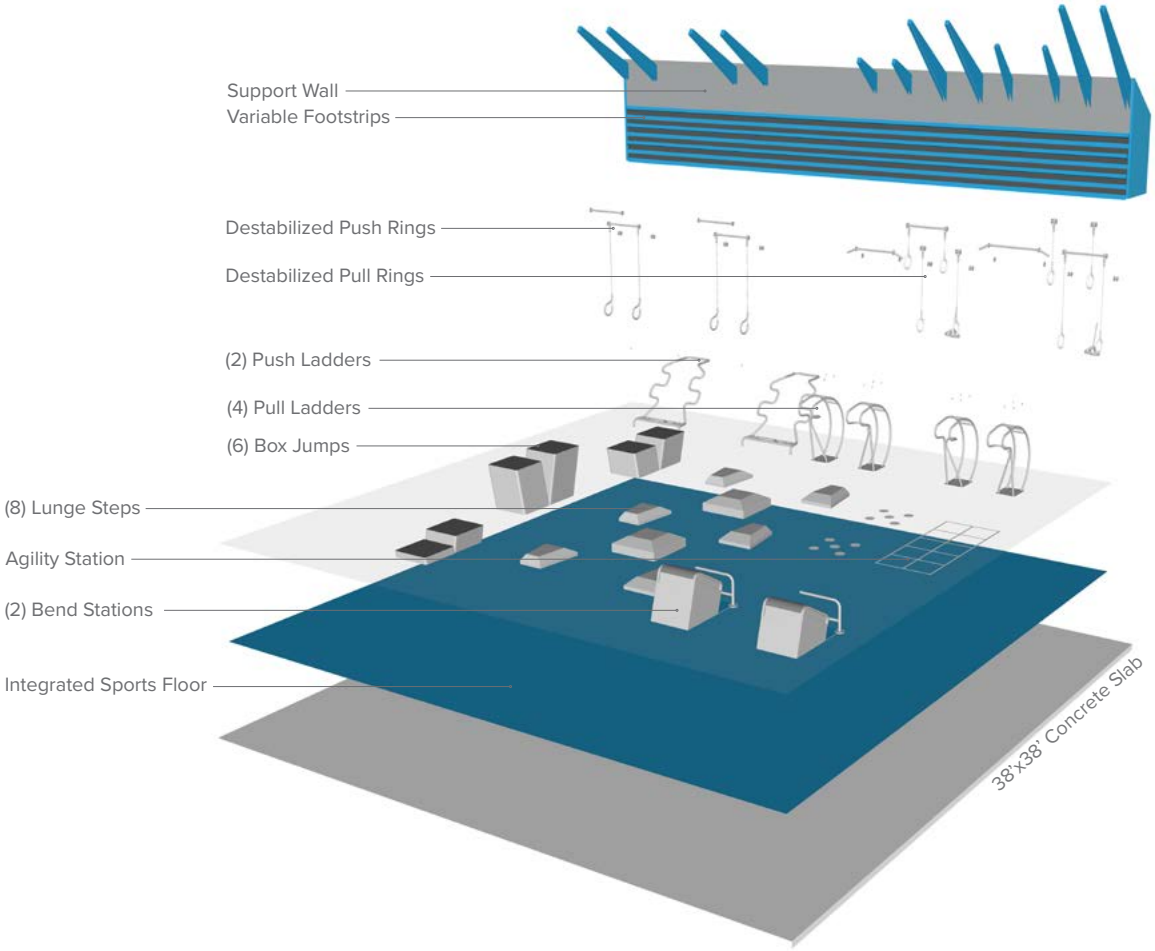
High Quality
Dual-layer powder-coating carbon steel



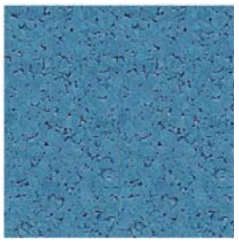
Durable Materials
Tamper-resistant, galvanized & stainless steel bolts and fittings.

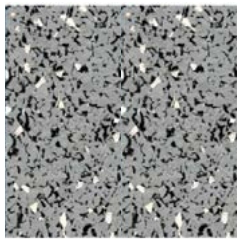


Best In Class
Anti-graffiti laminate vinyl decals



Each Fitness Court® includes an integrated sports floor made from durable 2'x2' tiles which adhere directly to the concrete slab. Available in our standard NFC Blue or Gray to match any custom design.


Top (Blue Option)


Top (Grey Option)


Bottom


Reducer with Tile


Reducer

NFC CAMPAIGN SPECIFICATIONS

PROGRAM SUMMARY

PROGRAM SUMMARY: ***All items and services below are delivered to approved partners as part of the Campaign.***

HEALTHY INFRASTRUCTURE

FITNESS COURT®

Fitness Court® Description:
32'x35' outdoor bodyweight circuit training system with the following components:
- Seven station circuit training system providing full-body workout modules
- Fitness Court® body-weight training wall - 32'W x 2'D x 6' H with custom graphics
- Thirty pieces of body-weight fitness elements for simultaneous use by 28 users at one time. Fitness Elements anchored and grouped within seven stations.

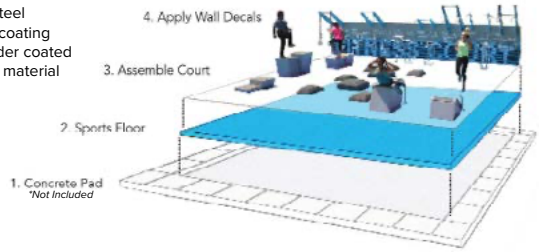
- Bolts, attachments and anchors required for installation

Fitness Court Surface - Tile Surface Specifications
- Outdoor Sports Floor Size: 1,024 SF (32'x32')
- Color: NFC Blue
- Thickness: 1" Tiles
- ADA Border Included

Fitness Court Specifications:
- All structural components are made from high-grade carbon steel
- Structural components receive high-grade duel layer powder coating
- All cladding (skins) made from high-grade aluminum and powder coated
- Graphics and signage printed with anti-graffiti over-lamination material
- Manufactured in the United States
- Resilient to heavy, repeated daily use
- Over 30 individual pieces of equipment
- Powder-Coated Structural Components
- Galvanized fittings and bolts - *included*
- Stainless steel cables
- Full installation guide provided
- Warranty through NFC

Warranty + Maintenance
- Made for all climates
- Almost no moving parts (only cables)
- Equipment is anchor bolted into concrete
- Replacement parts available through NFC
- No requirement for disassembly in winter
- Maintenance guide, including touch-up paint & necessary tooling included

See Official Warranty for Full Coverage Detail



HEALTHY INFRASTRUCTURE DESIGN SERVICES

Strategic Planning & Feasibility Study
- City-wide impact analysis and master plan integration plan
- Site Design and Visibility Analysis

Custom Fitness Court Design Services & Construction & Installation Support
- Customized Fitness Court powder-coating and decal design - no two Fitness Courts are the same!
- Stamped and certified design plans, concrete slab drawings, and contractor management are provided by the NFC Activation Team. With all ready-to-build plans included, most installations require less than 90 days to complete from ground-breaking to launch.
- NFC National Installation Partner Access (contracted separately)

GRANT FUNDING, CONSENSUS BUILDING, SPONSOR SUPPORT

NFC Grant Funding Qualification
- Access to qualify for NFC's Grant Funding through NFC's national partners to support seeding the program.

Consensus Building Consulting
- NFC has industry experts in project management, and from conception through execution, they will collaborate on an average of 2 intensive monthly planning calls to drive success.

Sponsor Strategy Consulting Support
- Custom renderings can be provided by NFC Design Team to support outreach to local sponsors and partners. Slide presentations can be provided for in-person meetings and internal stakeholder consensus-building.

CAMPAIGN SERVICES

FITNESS COURT® APP

The Fitness Court App
Free mobile app for iOS / Android teaches proper use, routines and challenges to all users

- **Learn the Moves**: Discover the Fitness Court®'s 7 Movements — Core, Squat, Push, Lunge, Pull, Agility and Bend — to challenge and strengthen your body. Beginner, intermediate and advanced training videos demonstrate how users of any age or ability can use the Fitness Court®.
- **Health Kit**: Track personal health stats directly on the Fitness Court app. Statistics include: steps taken, average heart rate, time spent on the Fitness Court® and total calories burned.
- **Find Your Fitness Court®:** Search for your local Fitness Court® with the new Fitness Court® interactive map.
- **Train:** Take curated classes from one of our professional coaches. Classes are for adults of all levels and abilities.

CERTIFIED AMBASSADOR TRAINING

Programming and Training Tools
Fitness Court® Ambassadors build and sustain a healthy culture around The Fitness Court® ecosystem

- **Learn:** education modules provided by the NFC Training Team offered remotely, and provide a range of class templates, coaching tips and more to qualified Ambassadors.
- **Train:** classes, clinics and challenges led by Ambassadors, that engage all ages and fitness levels. These guided workout options expand the user community and increase long-term usage and adoption.
- **Share:** continuous online and print storytelling, engagement and social connection further build out a healthy culture on each Fitness Court®.

MEDIA, PRESS, & PROMOTIONS

Promotions and Marketing Package
Media support and community engagement materials excite users and strengthen program adoption

- **Grant Announcement Kit:** promote the development of the program in your community with NFC support through traditional and social media channels - including a custom Press Release and outreach planning tools.
- **Launch Event Promotions Toolkit:** announce the launch of the Fitness Court® on traditional media channels with a separate customized press release, outreach support and uniquely branded assets for social media.
- **NFC Website Feature Story:** NFC-hosted custom storytelling showcases the partnership and program development in your community.
- **Fitness Court® Gear:** gear and giveaways nurture Ambassador relationships, honor stakeholders and excite event attendees, to amplify launch activities.
- **Opening Day Launch Support:** NFC provides event management templates, guidance for launch event planning, and custom promotional materials (flyers, media assets).

FITNESS COURT™

SCHEMATIC DESIGN SET



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NATIONAL FITNESS CAMPAIGN

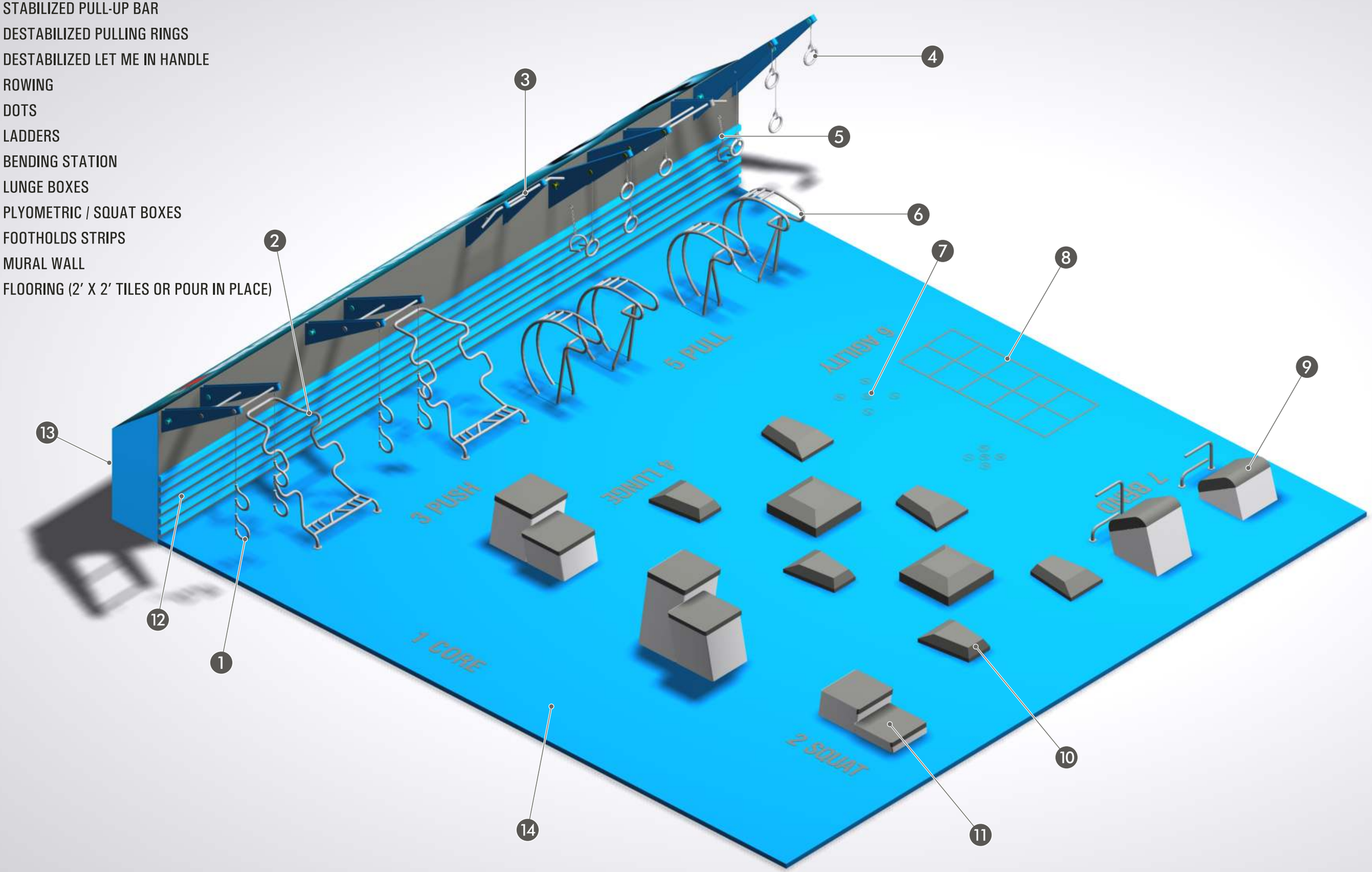
DATE

DESIGN NUMBER
565382

ARCHIVE NUMBER

SHEET
FC 01

1. DESTABILIZED PUSHING RINGS
2. STABILIZED FREEFORM PUSHING BARS
3. STABILIZED PULL-UP BAR
4. DESTABILIZED PULLING RINGS
5. DESTABILIZED LET ME IN HANDLE
6. ROWING
7. DOTS
8. LADDERS
9. BENDING STATION
10. LUNGE BOXES
11. PLYOMETRIC / SQUAT BOXES
12. FOOTHOLDS STRIPS
13. MURAL WALL
14. FLOORING (2' X 2' TILES OR POUR IN PLACE)

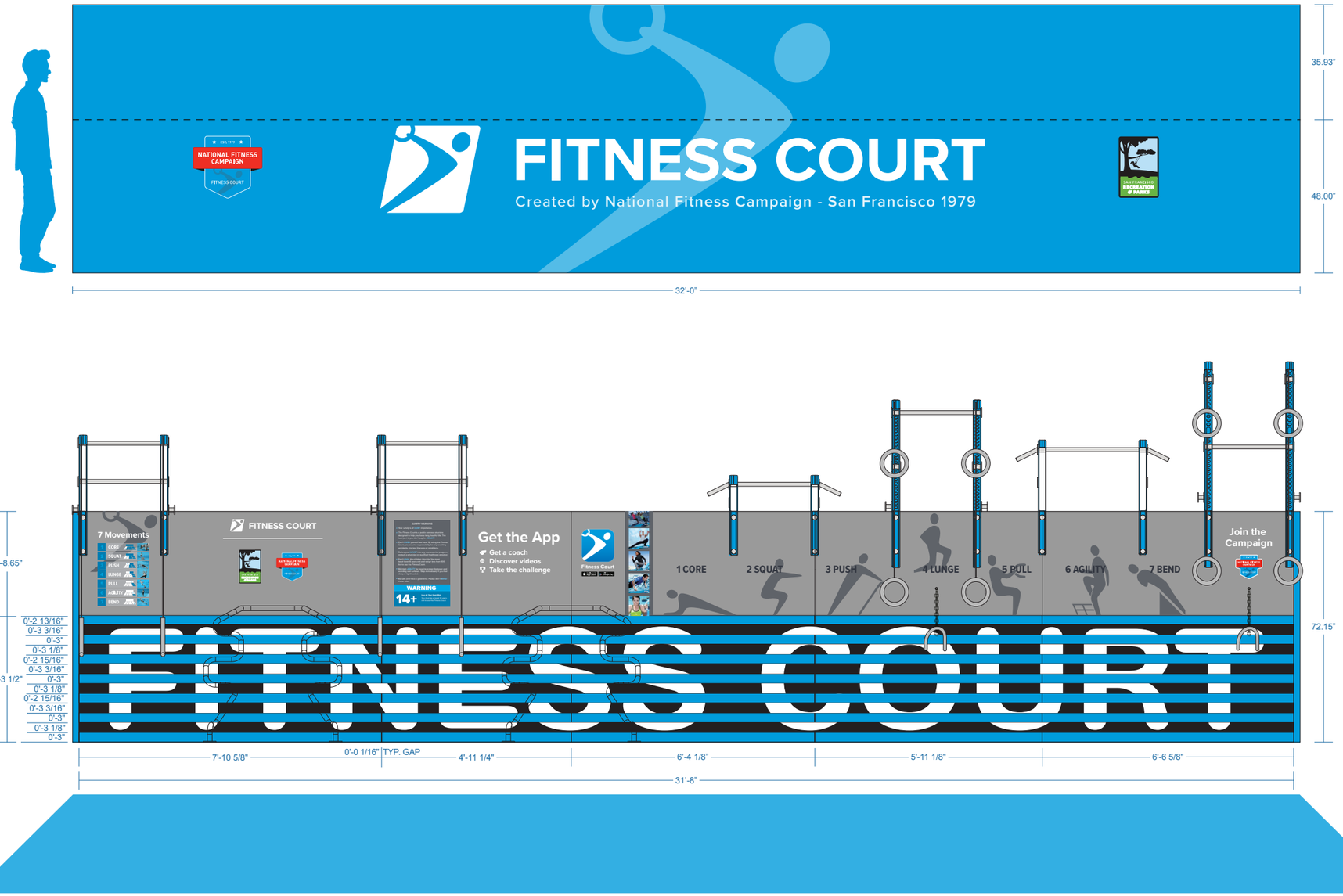


Body Weight Fitness

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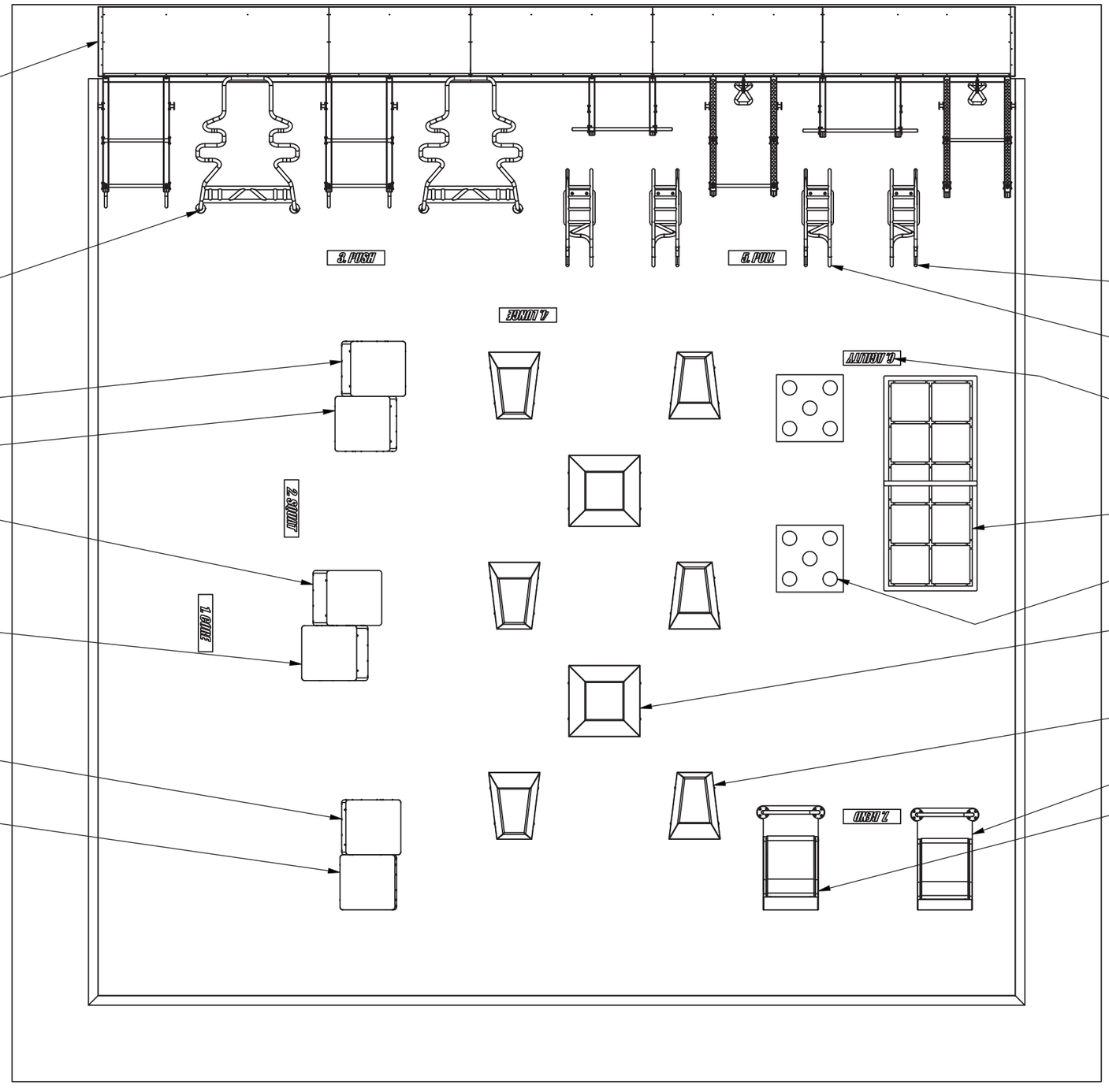
NFC FITNESS COURT SCHEMATIC ELEVATIONS

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DATE	06.30.17
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ARCHIVE NUMBER	
SHEET	FC 03

EQUIPMENT AND FLOOR MARKING LAYOUT



WALL WITH ATTACHED WALL BRACKETS AND PULL CHAINS

PUSH STATION QTY 2

PLYO BOX 1

PLYO BOX 2

PLYO BOX 3 (TALLEST)

PLYO BOX 4

PLYO BOX 5

PLYO BOX 6 (SHORTEST)

PULL STATION RIGHT QTY 2

PULL STATION LEFT QTY 2

STATION NAME TEXT QTY 7 STATION NAMES (FLOOR MARKING)

LADDER PATTERN (FLOOR MARKING)

DOTS PATTERN QTY 2 (FLOOR MARKING)

LUNGE STATION 1 QTY 2

LUNGE STATION 2 QTY 8

BEND STATION SHORT

BEND STATION TALL

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DATE
06.30.17

DESIGN NUMBER
565382

ARCHIVE NUMBER

SHEET
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NATIONAL FITNESS CAMPAIGN

SAN FRANCISCO, USA
NATIONALFITNESSCAMPAIGN.COM
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(415) 702-4919

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SITE DEVELOPMENT CONSTRUCTION DRAWINGS

THEATRE DRIVE PARKING LOT

CITY OF Sumter SOUTH CAROLINA

ITB# 2-25/26

AT THE INTERSECTION OF THEATRE DR. & UNIVERSITY DR. SUMTER, SC

TMS# 204-13-01-006

ISSUED FOR BID JULY 2025

SUMTER GENERAL INFORMATION

PROPERTY OWNER:
SUMTER COUNTY COMMISSION FOR HIGHER EDUCATION
13 E. CANAL STREET, SUMTER SC 29150

PROJECT:
THEATRE DRIVE PARKING LOT

PROPERTY ADDRESS:
200 MILLER ROAD

TAX MAP NUMBER:
204-13-01-006

ZONING DISTRICT:
R15

PROJECT IS WITHIN THE CITY OF SUMTER

YARD AND BUILDING SET BACK REQUIREMENTS:
FRONT- 35' (LOCAL COLLECTOR), 45' (ARTERIAL)
SIDE- 50' (NON-RESIDENTIAL USE)
REAR- 50' (NON-RESIDENTIAL USE)

PARCEL SIZE:
29,12 ACRES

DISTURBED AREA:
3.4 ACRES

PERCENTAGE OF OPEN SPACE ON SITE:
±80% OPEN SPACE

PARKING PROVIDED:
205 PARKING SPACES
(INCLUDES 7 ADA SPACES)

FEMA FLOOD INFORMATION:
FIRM:45085C0292E
ZONE:X
EFFECTIVE DATE: 10-27-22

WE ACKNOWLEDGE THE PRESENCE OF THE SUMTER OVERLAY ZONE, IF APPLICABLE

PROJECT OWNER

CITY OF Sumter SOUTH CAROLINA

CITY OF SUMTER
303 E. LIBERTY ST.
SUMTER, SC 29150
803.436-2598 (MICHAEL GEDDINGS)

CIVIL ENGINEER/LANDSCAPE ARCHITECT

THE LANDPLAN GROUP SOUTH
Landscape Architecture | Engineering | Planning

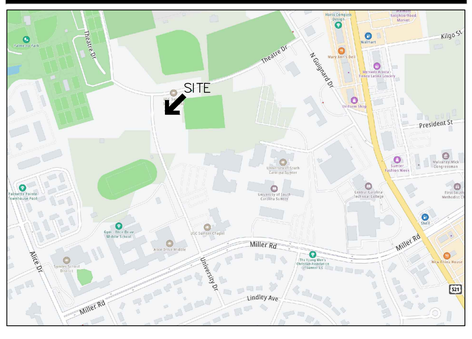
THE LANDPLAN GROUP SOUTH, INC.
1206 SCOTT STREET
COLUMBIA, SC 29201
PHONE: 803.256.0562
WWW.LANDPLANSOUTH.COM

SUMTER UTILITES LOCATE
803.436.2558

SHEET INDEX

C000	COVER AND INDEX SHEET
C050	NOTES
C100A,B	EXISTING CONDITIONS & DEMOLITION PLAN
C200A,B	SITE PLAN
C201	SITE DETAILS
C300A,B	GRADING & DRAINAGE PLAN
C301	STORMWATER DETENTION POND DETAILS
C401A,B	SWPPP PHASE 1 - INITIAL PHASE
C402A,B	SWPPP PHASE 2 - CONSTRUCTION PHASE
C403A,B	SWPPP PHASE 3 - STABILIZATION PHASE
C404-405	SWPPP DETAILS
L1.0-1.1	LANDSCAPE PLAN
L2.0	LANDSCAPE DETAILS
---	SUMTER LANDSCAPE STANDARDS (2 SHEETS)
---	IRRIGATION LAYOUT (1 SHEET)
---	DUKE ENERGY SITE LIGHTING PLAN (1 SHEET)

VICINITY MAP NTS



FIT COURT CONTACT

NATIONAL FITNESS CAMPAIGN

McKenzie Coltrin | Partnership Development Manager

(208) 866-4469 | mckenzie@nfchq.com

CALL 811 BEFORE YOU DIG — SAFE DIGGING PARTNER

THE LANDPLAN GROUP SOUTH
Landscape Architecture | Engineering | Planning
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COLUMBIA, SC 29201
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NO.	REVISIONS	BY.	APPD.	DATE:
1	REVISED PER SCDOT COMMENTS	WS	CH	3/25/25

SOUTH CAROLINA — The Landplan Group South Inc. No. 153 — CERTIFICATE OF AUTHORIZATION

CAROLINA — PROFESSIONAL ENGINEER — No. 20979 — 08/15/2025 — SOUTH — STATE OF WADE SHELLEY

THEATRE DRIVE PARKING LOT
AT THE INTERSECTION OF THEATRE DR & UNIVERSITY DR
SUMTER, SC
COVER AND INDEX SHEET

JOB NO:	1228
DRAWN:	WES
DESIGNED:	WES
APPROVED:	CH
DATE:	1/28/2025
SCALE:	SEE GRAPHIC SCALE

C000

S:\Drawings\2025\1228-Sumter Theater Drive Parking Lot\Drawings\THEATRE COM.dwg

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GENERAL NOTES:

1. THIS DRAWING IS BASED ON A SURVEY DONE BY: HUNSINGER LONG ASSOCIATES. 126 PINE POINT DRIVE, LEXINGTON SC 290172. NLONG@HUNSINGERLONG.COM 803.243.9921. NOTE, SOME DATA USE ASSUMED ELEVATIONS AND SOME USE STATE PLANE COORDINATES. PLEASE REFERENCE BENCH MARKS ON PLANS AND CONTACT SURVEYOR WITH ANY QUESTIONS.
2. THE CONTRACTOR SHALL PROVIDE HIS OWN LINE AND GRADE.
3. THE CONTRACTOR SHALL COORDINATE BI-MONTHLY MEETINGS BETWEEN THE CONTRACTOR AND PARK STAFF. THE CONTRACTOR SHALL BE PREPARED TO DISCUSS PROGRESS AND SCHEDULE AT THESE MEETINGS.
4. THE CONTRACTOR SHALL SCHEDULE THE WORK OF THE PROJECT TO FACILITATE ACTIVITY IN THE PARK AREA. THE PREFERRED SEQUENCE OF WORK IN THIS PROJECT AND CONSTRUCTION PARAMETERS SHALL BE APPROVED BY OWNER.
5. THE CONTRACTOR IS RESPONSIBLE FOR FIELD STAKING ALL CONSTRUCTION ELEMENTS AND REVIEWING THIS LAYOUT WITH THE OWNER PRIOR TO BEGINNING ANY CONSTRUCTION.
6. THE CONTRACTOR IS ADVISED THAT THE LOCATION OF THE WORK SHOWN ON THE DRAWINGS IS SUBJECT TO SLIGHT ADJUSTMENT IN THE FIELD TO AVOID NEW AND EXISTING UTILITIES AND AS FIELD CONDITIONS DICTATE. ALL CHANGES SHALL BE AUTHORIZED BY THE ENGINEER AND OWNER. THERE WILL BE NO ADDITIONAL COMPENSATION FOR MAKING THESE ADJUSTMENTS UNLESS THE ADJUSTMENT CHANGES THE SCOPE OF THE WORK AS STATED IN THE GENERAL CONDITIONS.
7. THE CONTRACTOR SHALL MAINTAIN TRAFFIC IN ALL DIRECTIONS AT ALL TIMES. ANY TRAFFIC REROUTING SHALL BE SUBMITTED TO THE SCDOT AT 803-778-5466 AND THE CITY OF SUMTER AT 803-436-2558 FOR APPROVAL PRIOR TO ANY LANE CLOSURES OR REROUTING OF TRAFFIC. IN ADDITION THE CONTRACTOR SHALL NOTIFY THE OWNER, FIRE DEPARTMENT, POLICE DEPARTMENT, AND ANY OTHER EMERGENCY AGENCIES OF OF ANY CLOSURE AND TRAFFIC ROUTINGS AT LEAST 24 HOURS PRIOR TO ANY CLOSURES.
8. THE CONTRACTOR SHALL PROVIDE SHOP DRAWINGS AND SAMPLES FOR ALL MATERIALS AND EQUIPMENT TO BE INSTALLED PRIOR TO ORDERING.
9. WHERE NEW CONSTRUCTION IS TO TAKE PLACE, THE CONTRACTOR IS RESPONSIBLE FOR RELOCATING ANY MATERIAL, I.E. SIGNAGE, LIGHT POLE, ETC., AT HIS OR HER OWN COST.
10. ALL UNDERGROUND CONSTRUCTION SHALL BE COMPLETED AND ACCEPTED PRIOR TO NEW SURFACE CONSTRUCTION.
11. ALL STRUCTURES ADJACENT TO BRICK AND CONCRETE PAVEMENT SHALL HAVE EXPANSION MATERIAL BETWEEN THE STRUCTURE AND THE NEW OR EXISTING PAVEMENT.
12. FOR IRRIGATION MODIFICATION NOTES, SEE LANDSCAPE DRAWINGS.
13. FOR PLANTING NOTES AND SCHEDULE SEE LANDSCAPE PLAN AND DETAILS.
14. ALL WORK SHALL MEET OR EXCEED SCDOT SPECIFICATIONS.
15. THE CONTRACTOR SHALL BE AWARE THAT THE CITY OF SUMTER PUBLIC WORKS AT 803-436-2558 MAY BE REPLACING WATER AND SEWER SERVICE LINES FROM THE WATER AND SEWER MAINS TO THE BUILDING AS WELL AS THE METER BOXES AND FIRE HYDRANTS. THIS WORK WOULD BE DONE AFTER DEMOLITION BUT BEFORE INSTALLATION OF THE NEW WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH THE CITY AND ALLOW UP TO FOUR (4) HOURS FOR EACH SERVICE AND METER BOX ONE (1) DAY FOR EACH FIRE HYDRANT. THIS WORK IF ANY WOULD BE COVERED UNDER MOBILIZATION.
16.
17. ALL SIGNAGE AFFECTED BY PROJECT MUST BE PLACED IN ORIGINAL LOCATION AT END OF PROJECT.

DEMOLITION AND SITTE PREPARATION

1. CONSTRUCTION LIMITS OF PROJECT ARE PROPERTY LINES AND RIGHT-OF-WAY LINES AND THE EXTENT OF WORK SHOWN ON THE PLANS, WHICHEVER IS LARGEST IN SCOPE. THE CONTRACTOR WILL BE RESPONSIBLE FOR DAMAGE TO EXISTING BUILDINGS AND STRUCTURES CAUSED BY THE DEMOLITION AND/OR CONSTRUCTION PROCESS. THE DEMOLITION LINE AT THE PROJECT LIMITS SHALL BE A CLEAN, SAW CUT LINE WITHOUT IRREGULARITIES. THE CITY AND/OR ENGINEER SHALL APPROVE THIS LINE PRIOR TO COMMENCEMENT OF DEMOLITION.
2. THE LIMIT OF DEMOLITION AND SITE PREPARATION IS AS SHOWN ON THE DRAWINGS AND HAS BEEN LOCATED TO PROVIDE SUFFICIENT AREA FOR INSTALLING THE NEW WORK.ANY DEMOLITION THAT OCCURS OUTSIDE OF THESE LIMITS WILL BE AT THE CONTRACTORS EXPENSE UNLESS APPROVAL HAS BEEN GRANTED BY THE OWNER.
3. CONTRACTOR TO COORDINATE WITH SCDOT AND CITY OF SUMTER FOR DEMOLITION OF EXISTING SIDEWALK AND WATER AND SEWER FACILITIES, THROUGHOUT THE PROJECT.
4. ALL EXISTING ITEMS DESIGNATED TO BE REMOVED AND SALVAGED, SUCH AS SIGNS, DRAINAGE, GRATES, WHEEL STOPS, ETC., SHALL BE DELIVERED TO THE CITY OF SUMTER'S DESIGNATED STORAGE YARD FACILITY, AT NO ADDITIONAL COST TO THE OWNER.
5. THE CONTRACTOR SHALL CONTACT THE UNDERGROUND UTILITIES LOCATING SERVICE AT 1-888-721-7877 AND THE CITY OF SUMTER AT 803-436-2558 BEFORE EXCAVATING AS REQUIRED BY THE SUPPLEMENTAL CONDITIONS AND SOUTH CAROLINA LAW.
6. DISPOSAL OF MATERIALS OFF-SITE AND HAULING OF FILL MATERIAL THAT IS REQUIRED FOR CONSTRUCTION SHALL BE FULL RESPONSIBILTY OF THE CONTRACTOR.
7. ANY AREAS DISTURBED BY CONSTRUCTION NOT COVERED BY NEW WORK SHALL BE PLACED IN PERMANENT GRASS SOD AT NO ADDITIONAL COST TO THE OWNER.
8. CONTRACTOR SHALL COMPLETELY DEMOLISH, REMOVE, AND DISPOSE OF PAVEMENT (MILLINGS SHALL BE DELIVEREED TO THE CITY), FOUNDATIONS, CURB AND SIDEWALK (OUTSIDE THE SCDOT DEMOLITION AREA) AS NECESSARY TO INSTALL THE NEW WORK. THIS LIMIT SHALL BE AT THE CONTRACTORS EXPENSE UNLESS SPECIFICALLY APPROVED BY THE OWNER OR ENGINEER. THE LIMIT SHOWN ON THE DEMOLITION INDICATES THE SCOPE TO BE PAID BY UNIT PRICE IN THE CONTRACT. DEMOLITION AND REPLACEMENT BEYOND

   PAYMENT FOR DEMOLITION IS FOR REMOVAL OF CONCRETE, TREES AND SHRUBS OR OTHER HARD SURFACES. THE CONTRACTOR WILL NOT BE PAID FOR GRASS OR EARTH AREAS TO BE GRADED AND/OR REPLACED.
10. SIDEWALK AND CURB & GUTTER TO BE REMOVED AND REPALCED FROM JOINT TO JOINT.
11. CONTRACTOR TO SAWCUT EXISTING ASPHALT FOR SMOOTH JOINT NOT ALIGNED WITH WHEEL PATH.

STORMWATER LINES, STRUCTURES & ELECTRICAL UTILITIES

1. EXISTING OVERHEAD & UNDERGROUND UTILITIES ARE SHOWN ON THE DRAWINGS BASED ON THE BEST AVAILABLE INFORMATION PROVIDED BY THE SURVEYOR. IT IS THE CONTRACTORS RESPONSIBILITY TO CORRDINATE WITH THE UTILITY COMPANIES PRIOR TO ANY EXCAVATION TO VERIFY ACTUAL FIELD LOCATION, PROTECTION AND/OR RELOCATION OF EXISTING UTILITY LINES IN CONFLICT OR ADJACENT TO THE PROPOSED WORK.

LAYOUT NOTES

1. ALL DIMENSIONS ARE TAKEN FROM FACE OF CURB OR WALL UNLESS OTHERWISE NOTED.
2. LAYOUT PLANS AND THE DETAILS SHEETS SHOW THE LAYOUT FOR THE WORK TO BE DONE. IF IT IS DISCOVERED THAT THERE IS A DIFFERENCE BETWEEN SCALED DIMENSIONS AND LAYOUT, THE CONTRACTOR SHALL NOTIFY THE ENGINEER FOR CLARIFICATION.
3. THE CONTRACTOR SHALL LAYOUT ENTIRE JOB TO BE REVIEWED BY THE OWNER OR OWNER'S REPRESENATIVE PRIOR TO BEGINNING ANY CONSTRUCTION.

SIDEWALK, PAVING AND GRADING

1. THE NEW SIDEWALKS, ROADS, LANDSCAPED ISLANDS AND CROSSWALKS SHALL BE GRADED IN ACCORDANCE WITH THE PROPOSED ELEVATIONS SHOWN IN THE GRADING AND DRAINAGE PLANS. IN CASES WHERE THE GRADES ARE NOT SHOWN, THE PROPOSED GRADE WILL BE INTERPOLATED BETWEEN SPOT ELEVATIONS. GENERALLY, THE FINISHED SURFACES ARE GRADED FOR PROPER CONVEYANCE OF STORMWATER RUNOFF TO NEW AND EXISTING DRAINAGE INLETS. NO SIDEWALK WITHIN THE SCDOT RIGHT OF WAY WILL HAVE A CROSS SLOPE GREATER THAN 2%.
2. THE CONTRACTOR SHALL ADJUST, AS NECESSARY, THE EXISTING MANHOLE COVERS, DRAINAGE GRATES, VENT GRATES, VALVE COVERS, ETC. TO MATCH GRADE OF NEW ASPHALT PAVEMENT OR CONCRETE SIDEWALK SURFACES AT NO ADDITIONAL COST TO THE OWNER. ALL WATER METER ADJUSTMENTS (IF APPLICABLE) SHALL BE PERFORMED BY THE CITY OF SUMTER AND COORDINATED WITH THE CONTRACTOR. METER BOXES TO BE TRAFFIC RATED.
3. SIDEWALK SHALL HAVE A MINIMUM ONE-PERCENT (1%) CROSS SLOPE TO ASSURE POSITIVE DRAINAGE TOWARDS THE ROAD. IF POSITIVE DRAINAGE IS NOT ACHIEVED BASED ON ELEVATIONS SHOWN, INFORM THE ENGINEER IMMEDIATELY. MAXIMUM CROSS SLOPE SHALL BE TWO PERCENT (2%) UNLESS WHERE SPECIFICALLY SHOWN.
4. THE CONTRACTOR SHALL CONSTRUCT A SAMPLE PANEL OF THE CONCRETE COURT SURFACING AND CONCRETE SIDEWALK. THESE PANELS SHALL BE APPROVED BEFORE ANY SIDEWALK OR BRICK WORK IS PERFORMED AND WILL BE USED AS A BASIS FOR THE QUALITY WORKMANSHIP OF CONCRETE FINISH AND WORK FOR THE REMAINDER OF THE PROJECT.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPACTION IN ACCORDANCE WITH THE SPECIFICATIONS. THERE IS NO SEPARATE PAY ITEM FOR THIS WORK.
6. THE CONTRACTOR SHALL VERIFY POSITIVE DRAINAGE IS ACHIEVED FROM ALL AREAS TO NEW AND/OR EXISTING STORM DRAIN INLETS.
7. ANY DRAINAGE STRUCTURES WITHIN SCDOT RIGHT OF WAYS SHALL BE SCDOT STANDARD.
8. ALL MARKINGS WITH THE SCDOT RIGHT OF WAY SHALL BE APPROVED PERMANENT PAVEMENT MARKINGS PER SECTIONS 625, 626, OR 627 WITHIN THE SCDOT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.
9. ANY PROPOSED SIDEWALK WITHIN THE R.O.W. (OF PROJECT BOUNDARY) SHALL NOT EXCEED 2% CROSS SLOPE PER ADA GUIDELINES. ALL RAMPS SHALL NOT EXCEED 8.33% FOR EVERY SCENARIO. IN PRESENCE OF SIDEWALK OR OTHER ADA PATHWAY, ACCESS(ES) TO PROVIDE A MINIMUM OF 3' PEDESTRIAN PATH NO GREATER CROSS SLOPE THAN 2% ACROSS THROAT OF DRIVEWAY.

LANDSCAPING NOTES

1. ALL NEW TREES IN THE PROXIMITY OF INTERSECTIONS AND DRIVEWAYS SHALL BE DE-LIMBED TO SEVEN (7) FEET TO ENSURE APPROPRIATE SITE DISTANCE. ALL SHRUBS SHALL NOT EXCEED 30" IN HEIGHT.
2. ALL NEW PLANTINGS SHALL MEET THE CITY OF SUMTER LANDSCAPE AND NURSERY CARE SHEETS INCLUDED IN THIS DRAWING SET.

LIGHTING NOTES

1. CONTRACTOR SHALL COORDINATE WITH DUKE ENERGY FOR PLACEMENT OF PROPOSED LIGHT POLES AND FIXTURES. CONTRACTOR SHALL COORDINATE WITH DUKE ENERGY FOR THEIR INSTALLATION OF DUKE LIGHTING.

THE LANDPLAN GROUP SOUTH
Landscape Architecture | Engineering | Planning
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COLUMBIA, SC 29201
803.256.0562
WWW.LANDPLANGROUP.COM

NO.	REVISIONS	BY.	APPD.	DATE:
1	REVISED PER SCDOT COMMENTS	WS	CH	3/25/25

SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION The Landplan Group South Inc. No. 153

SOUTH CAROLINA REGISTERED LANDSCAPE ARCHITECT No. 20979 WADE S. NEAL 3/20/2025

THEATRE DRIVE PARKING LOT

AT THE INTERSECTION OF THEATRE DR & UNIVERSITY DR
SUMTER, SC

NOTES

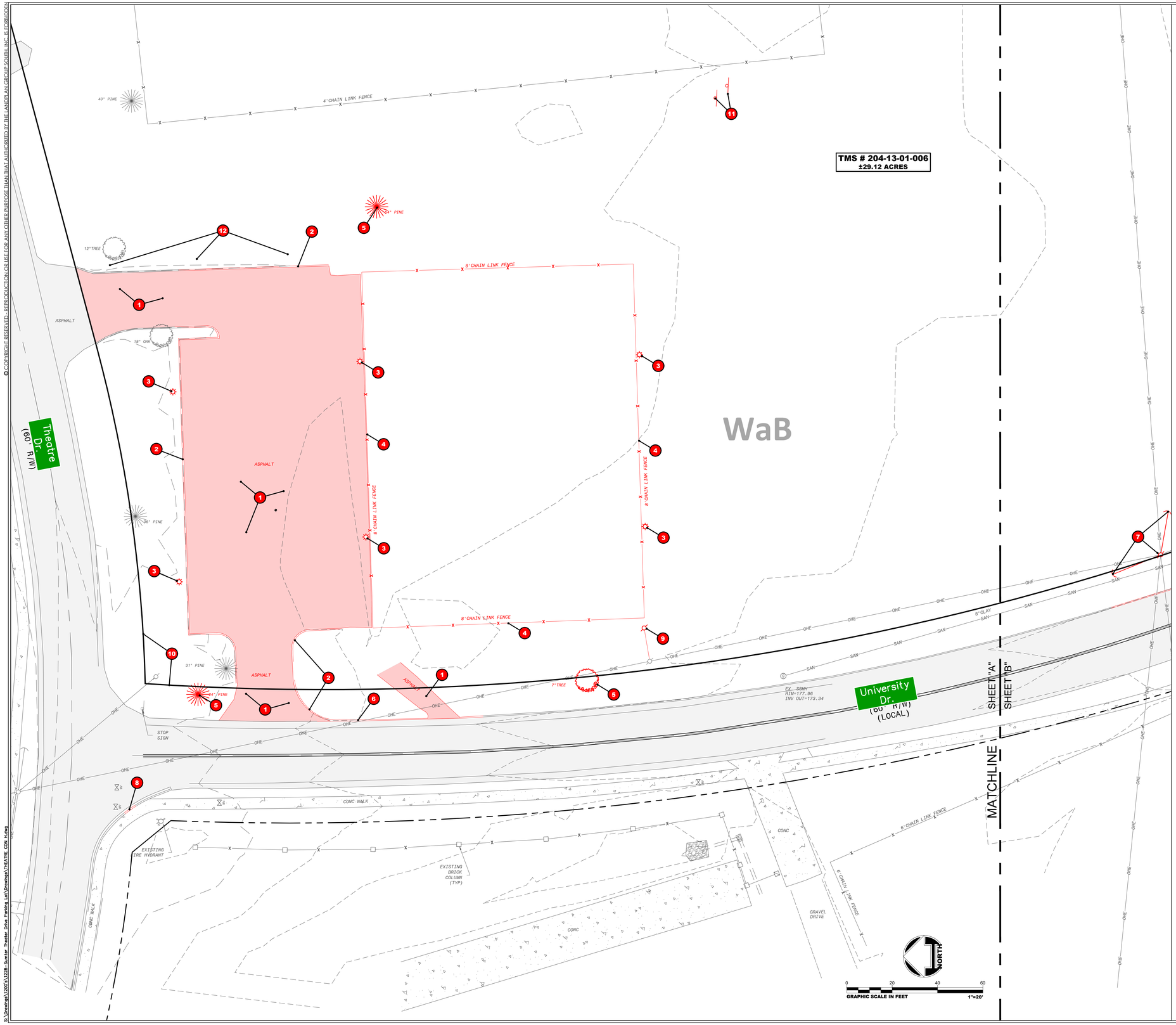
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JOB NO:	1228
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DESIGNED:	WES
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SCALE:	SEE GRAPHIC SCALE

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LEGEND

EXISTING INTERMEDIATE CONTOUR

EXISTING INDEX CONTOUR

ON-SITE SOIL TYPE

WaB — WAGRAM-NORFOLK-LUCKNOW COMPLEX

CODED DEMOLITION NOTES

DENOTED ON PLAN AS (#)

1. PORTION OF EXISTING ASPHALT TO BE DEMOLISHED. SEE SITE PLAN FOR LIMITS
2. PORTION OF EXISTING CURB & GUTTER TO BE REMOVED. SEE SITE PLAN FOR LIMITS OF WORK
3. EXISTING SITE LIGHTING POLE TO BE REMOVED/RELOCATED. COORDINATE WITH OWNER FOR SALVAGE.
4. EXISTING FENCE TO BE REMOVED.
5. EXISTING TREE TO BE REMOVED.
6. PORTION OF EXISTING CURB & GUTTER ALONG UNIVERSITY DRIVE TO BE REMOVED TO FACILITATE CONSTRUCTION OF NEW DRIVEWAY. SEE SITE PLAN FOR LIMITS OF WORK.
7. EXISTING UTILITY POLE TO BE RELOCATED. COORDINATE WITH UTILITY PROVIDER FOR NEW LOCATION.
8. PORTION OF EXISTING CURB TO BE REMOVED TO FACILITATE CONSTRUCTION OF NEW ADA RAMP.
9. EXISTING UTILITY SERVICE POLE TO BE REMOVED.
10. PROPERTY LINE/RIGHT OF WAY LINE
11. EXISTING SIGNS TO BE RELOCATED. COORDINATE WITH OWNER.
12. EXISTING BOLLARDS IN THIS AREA TO BE RELOCATED. COORDINATE WITH OWNER.

CLEARING AND DEMOLITION NOTES

1. THE CONTRACTOR SHALL FIELD VERIFY ALL ITEMS TO BE DEMOLISHED AND REMOVED FROM THE SITE. THE VERIFICATION PROCESS SHALL INCLUDE VISITING AND WALKING THE SITE. ALL ITEMS REQUIRING DEMOLITION/REMOVAL, WHETHER SHOWN ON THIS PLAN OR NOT, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
2. THE PROJECT SITE SHALL BE CLEARED AND GRUBBED BY THE CONTRACTOR AS REQUIRED TO COMPLETE THE CONSTRUCTION AS SHOWN ON THE ACCOMPANYING PLANS. HOWEVER, EXISTING TREES OUTSIDE THE GRADING LIMITS SHALL BE PROTECTED BY THE CONTRACTOR AND SHALL NOT BE REMOVED UNLESS SPECIFICALLY INSTRUCTED BY THE OWNER. SEE SEDIMENT AND EROSION CONTROL PLAN (SWPPP) AND LANDSCAPE PLANS FOR MORE INFORMATION.
3. THERE SHALL BE NO BURNING ON SITE UNLESS APPROVED BY BOTH THE OWNER AND LOCAL AUTHORITIES HAVING JURSIDICTIONS.
4. ALL EXISTING STRUCTURES AND RELATED FOOTINGS, FOUNDATIONS, STEPS, ETC. (IF ANY) SHOWN TO BE REMOVED FROM THE SITE BY THE CONTRACTOR AND DISPOSED OF ACCORDING TO APPLICABLE REGULATIONS.
5. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE REMOVAL AND OR RELOCATION OF ALL UTILITIES (ABOVE AND BELOW GROUND LEVEL) AS NECESSARY TO ACCOMMODATE THE IMPROVEMENTS SHOWN ON THESE PLANS AND AS REQUIRED TO FACILITATE CONSTRUCTION. COORDINATE WITH UTILITY PROVIDERS AS REQ'D.
6. ALL EXISTING UTILITY SERVICES SHOWN TO BE REMOVED FROM THE PROJECT SITE (IF ANY) AND SHALL BE PLUGGED AT THE PROPERTY LINE UNLESS OTHERWISE NOTED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL SERVICES WHICH ARE INDICATED TO BE EXTENDED OR OTHERWISE REUSED.
7. EXISTING SEPTIC TANKS AND/OR GREASE TRAPS, IF ENCOUNTERED, ARE TO BE REMOVED FROM THE PROJECT SITE AND DISPOSED OF ACCORDING TO APPLICABLE CODES. THE LOCATION OF THE TANK(S) SHALL BE RECORDED BY THE CONTRACTOR AND THE GEOTECHNICAL ENGINEER SHALL BE NOTIFIED AT ONCE.
8. WELLS, IF ENCOUNTERED, SHALL BE ACCURATELY LOCATED BY THE CONTRACTOR AND THE SURROUNDING AREA SHALL BE BARRICADED AND GRADES SHALL BE MAINTAINED IN THE AREA SUCH THAT SURFACE RUNOFF CANNOT ENTER THE WELL OPENING. THE CONTRACTOR SHALL NOTIFY THE GEOTECHNICAL ENGINEER AT ONCE.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL MONITORING WELLS (IF ANY).
10. THE CONTRACTOR SHALL CONSULT THE OWNER REGARDING SALVAGE. ANY ITEMS NOT RETAINED BY THE OWNER SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DEMOLISH AND/OR LEGALLY DISPOSE OF.
11. SEDIMENT AND EROSION CONTROL DEVICES MUST BE IN PLACE PRIOR TO DEMOLITION. SEE APPROVED SWPPP FOR MORE INFORMATION.
12. IF ANY HAZARDOUS MATERIAL(S) ARE ENCOUNTERED DURING DEMOLITION, THE CONTRACTOR SHALL COORDINATE WITH THE OWNER AND APPROPRIATE AGENCIES FOR PROPER REMOVAL AND DISPOSAL.
13. DEMOLITION SHALL MEET ALL APPLICABLE STATE, LOCAL AND FEDERAL REGULATIONS. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ANY APPLICABLE PERMITS AS REQ'D.

THE LANDPLAN GROUP SOUTH
Landscape Architecture | Engineering | Planning
1206 SCOTT STREET
COLUMBIA, SC 29201
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SOUTH CAROLINA PROFESSIONAL ENGINEER No. 20979 WADE SHELLEY, JR. 3/25/2025

THEATRE DRIVE PARKING LOT

AT THE INTERSECTION OF THEATRE DR & UNIVERSITY DR
SUMTER, SC

EXISTING CONDITIONS & DEMOLITION PLAN

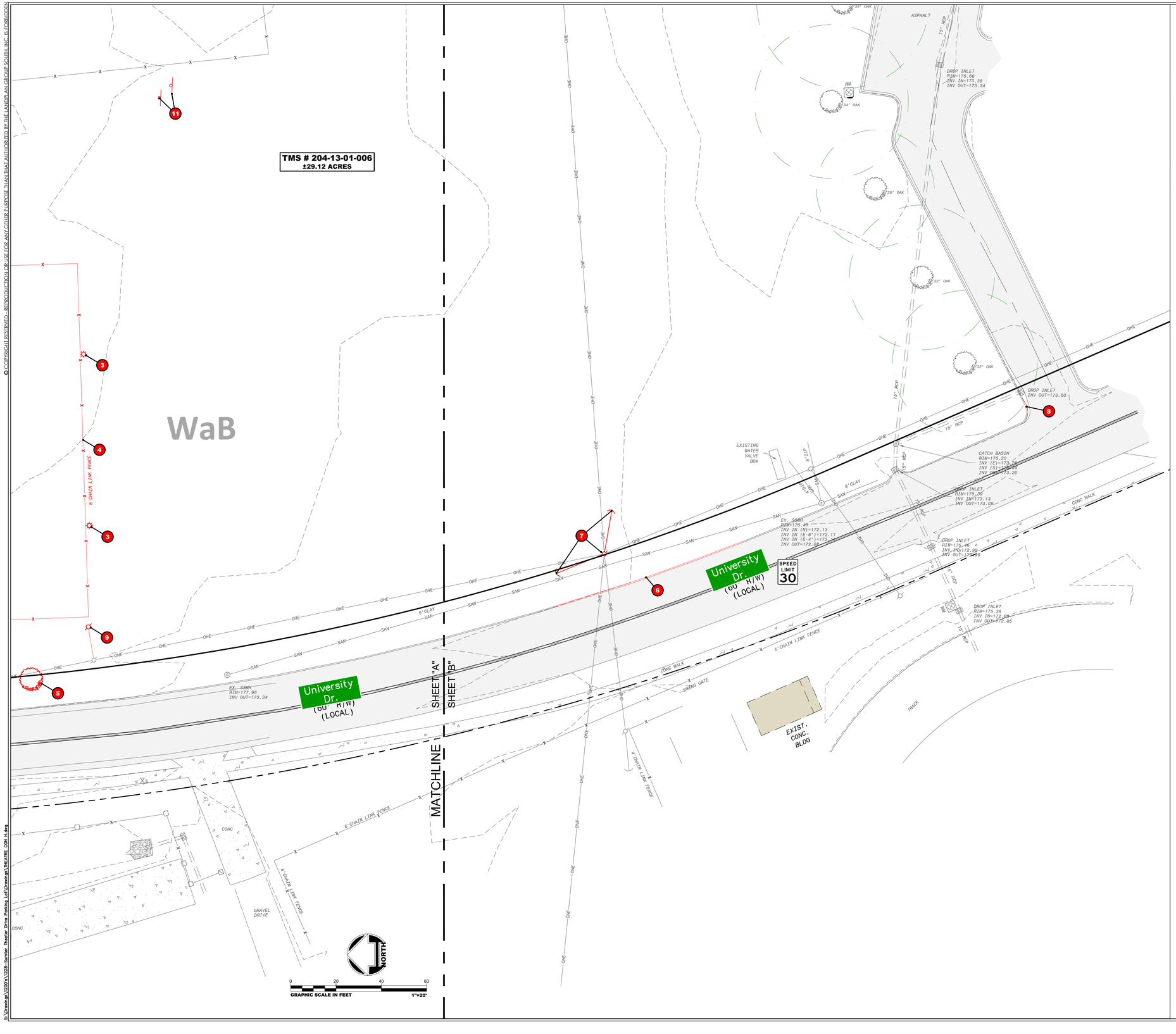
JOB NO:	1228
DRAWN:	WES
DESIGNED:	WES
APPROVED:	CH
DATE:	1/28/2025
SCALE:	SEE GRAPHIC SCALE

C100A

CALL 811 BEFORE YOU DIG — 811 — SAFE DIGGING PARTNER

S:\Drawings\1200\A\1228-Sumter Theater Drive Parking Lot\Drawings\THEATRE_CON_H.dwg

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LEGEND

- EXISTING INTERMEDIATE CONTOUR (174)
- EXISTING INDEX CONTOUR (175)

ON-SITE SOIL TYPE

WaB — WAGRAM-NORFOLK-LUCKNOW COMPLEX

CODED DEMOLITION NOTES

DENOTED ON PLAN AS (#)

1. PORTION OF EXISTING ASPHALT TO BE DEMOLISHED. SEE SITE PLAN FOR LIMITS
2. PORTION OF EXISTING CURB & GUTTER TO BE REMOVED. SEE SITE PLAN FOR LIMITS OF WORK
3. EXISTING SITE LIGHTING POLE TO BE REMOVED/RELOCATED. COORDINATE WITH OWNER FOR SALVAGE.
4. EXISTING FENCE TO BE REMOVED.
5. EXISTING TREE TO BE REMOVED.
6. PORTION OF EXISTING CURB & GUTTER ALONG UNIVERSITY DRIVE TO BE REMOVED TO FACILITATE CONSTRUCTION OF NEW DRIVEWAY. SEE SITE PLAN FOR LIMITS OF WORK.
7. EXISTING UTILITY POLE TO BE RELOCATED. COORDINATE WITH UTILITY PROVIDER FOR NEW LOCATION.
8. PORTION OF EXISTING CURB TO BE REMOVED TO FACILITATE CONSTRUCTION OF NEW ADA RAMP.
9. EXISTING UTILITY SERVICE POLE TO BE REMOVED.
10. PROPERTY LINE/RIGHT OF WAY LINE
11. EXISTING SIGNS TO BE RELOCATED. COORDINATE WITH OWNER.
12. EXISTING BOLLARDS IN THIS AREA TO BE RELOCATED. COORDINATE WITH OWNER.

CLEARING AND DEMOLITION NOTES

1. THE CONTRACTOR SHALL FIELD VERIFY ALL ITEMS TO BE DEMOLISHED AND REMOVED FROM THE SITE. THE VERIFICATION PROCESS SHALL INCLUDE VISITING AND WALKING THE SITE. ALL ITEMS REQUIRING DEMOLITION/REMOVAL, WHETHER SHOWN ON THIS PLAN OR NOT, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
2. THE PROJECT SITE SHALL BE CLEARED AND GRUBBED BY THE CONTRACTOR AS REQUIRED TO COMPLETE THE CONSTRUCTION AS SHOWN ON THE ACCOMPANYING PLANS. HOWEVER, EXISTING TREES OUTSIDE THE GRADING LIMITS SHALL BE PROTECTED BY THE CONTRACTOR AND SHALL NOT BE REMOVED UNLESS SPECIFICALLY INSTRUCTED BY THE OWNER. SEE SEDIMENT AND EROSION CONTROL PLAN (SWPPP) AND LANDSCAPE PLANS FOR MORE INFORMATION.
3. THERE SHALL BE NO BURNING ON SITE UNLESS APPROVED BY BOTH THE OWNER AND LOCAL AUTHORITIES HAVING JURSIDICTIONS.
4. ALL EXISTING STRUCTURES AND RELATED FOOTINGS, FOUNDATIONS, STEPS, ETC. (IF ANY) SHOWN TO BE REMOVED FROM THE SITE BY THE CONTRACTOR AND DISPOSED OF ACCORDING TO APPLICABLE REGULATIONS.
5. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE REMOVAL AND OR RELOCATION OF ALL UTILITIES (ABOVE AND BELOW GROUND LEVEL) AS NECESSARY TO ACCOMMODATE THE IMPROVEMENTS SHOWN ON THESE PLANS AND AS REQUIRED TO FACILITATE CONSTRUCTION. COORDINATE WITH UTILITY PROVIDERS AS REQ'D.
6. ALL EXISTING UTILITY SERVICES SHOWN TO BE REMOVED FROM THE PROJECT SITE (IF ANY) AND SHALL BE PLUGGED AT THE PROPERTY LINE UNLESS OTHERWISE NOTED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL SERVICES WHICH ARE INDICATED TO BE EXTENDED OR OTHERWISE REUSED.
7. EXISTING SEPTIC TANKS AND/OR GREASE TRAPS, IF ENCOUNTERED, ARE TO BE REMOVED FROM THE PROJECT SITE AND DISPOSED OF ACCORDING TO APPLICABLE CODES. THE LOCATION OF THE TANK(S) SHALL BE RECORDED BY THE CONTRACTOR AND THE GEOTECHNICAL ENGINEER SHALL BE NOTIFIED AT ONCE.
8. WELLS, IF ENCOUNTERED, SHALL BE ACCURATELY LOCATED BY THE CONTRACTOR AND THE SURROUNDING AREA SHALL BE BARRICADED AND GRADES SHALL BE MAINTAINED IN THE AREA SUCH THAT SURFACE RUNOFF CANNOT ENTER THE WELL OPENING. THE CONTRACTOR SHALL NOTIFY THE GEOTECHNICAL ENGINEER AT ONCE.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL MONITORING WELLS (IF ANY).
10. THE CONTRACTOR SHALL CONSULT THE OWNER REGARDING SALVAGE. ANY ITEMS NOT RETAINED BY THE OWNER SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DEMOLISH AND/OR LEGALLY DISPOSE OF.
11. SEDIMENT AND EROSION CONTROL DEVICES MUST BE IN PLACE PRIOR TO DEMOLITION. SEE APPROVED SWPPP FOR MORE INFORMATION.
12. IF ANY HAZARDOUS MATERIAL(S) ARE ENCOUNTERED DURING DEMOLITION, THE CONTRACTOR SHALL COORDINATE WITH THE OWNER AND APPROPRIATE AGENCIES FOR PROPER REMOVAL AND DISPOSAL.
13. DEMOLITION SHALL MEET ALL APPLICABLE STATE, LOCAL AND FEDERAL REGULATIONS. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ANY APPLICABLE PERMITS AS REQ'D.

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SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION
The Landplan Group South Inc.
No. 153

SOUTH CAROLINA PROFESSIONAL ENGINEER
No. 20979
WES INNES
STAMP DOES NOT INCLUDE UNDERGROUND UTILITIES OR SYSTEMS DESIGN

THEATRE DRIVE PARKING LOT

AT THE INTERSECTION OF THEATRE DR & UNIVERSITY DR
SUMTER, SC

EXISTING CONDITIONS & DEMOLITION PLAN

JOB NO:	1228
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SCALE:	SEE GRAPHIC SCALE

C100B

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CODED SITE NOTES

DENOTED ON PLAN AS (#)

1. NEW FITNESS COURT. PLEASE REFER TO NATIONAL FITNESS CAMPAIGN'S SLAB DRAWINGS FOR STANDARD CONCRETE SLAB DIMENSIONS AND DETAILS. REACH OUT TO INFO@NFCHQ.COM FOR MORE DETAILS.
2. FUTURE FIT COURT.
3. NEW HEAVY DUTY ASPHALT PAVEMENT (SEE DETAIL)
4. NEW STD. DUTY ASPHALT PAVEMENT (SEE DETAIL).
5. PAINTED ACCESSIBLE SYMBOL (SEE DETAIL). (TYPICAL @ ALL ACCESSIBLE PARKING SPACES) (PROVIDE SPACES DENOTED AS VAN ACCESSIBLE WHERE SHOWN)
6. ACCESSIBLE SIGNAGE (SEE DETAILS.)
7. MAKE NEW PAVEMENT FLUSH WITH EXIST. FOR SMOOTH TRANSITION
8. 4" WIDE PAINTED WHITE PARKING LOT STRIPING (TYP).
9. CONCRETE WHEEL STOP 30" FROM EDGE OF PAVEMENT (SEE DETAIL)
10. 4" THICK CONC. SIDEWALK
11. 4" WIDE PAINTED BLUE ACCESSIBLE STRIPING @ 45°, 2' O.C. (SEE STRIPING NOTES).
12. NEW IN-LINE ADA RAMP. SEE DETAILS.
13. NEW ADA "DOMES" AS REQ'D
14. CONSTRUCT NEW ADA RAMP IN EXISTING SIDEWALK PER SCDOT STDS. ALL WORK WITHIN R/W SHALL BE IN ACCORDANCE WITH APPROVED ENCROACHMENT PERMIT.
15. INSTALL 36" STOP SIGN (R1-1-36) AS REQ'D
16. NEW 18" CURB & GUTTER
17. CURB AND GUTTER STARTS/ENDS HERE. FEATHER CURB PER DETAIL.
18. CONCRETE SIDEWALK FLUSH WITH ASPHALT
19. NEW STORMWATER DETENTION POND. SEE GRADING AND DRAINAGE PLAN
20. WHITE PAINTED 24" STOP BAR
21. NEW THERMOPLASTIC WHITE 24" STOP BAR PER SCDOT STDS.
22. NEW WHITE CROSSWALK PER SCDOT STDS. SEE DETAILS
23. PAINTED WHITE TRAFFIC DIRECTIONAL ARROWS. (TYP)
24. PROPERTY LINE/RIGHT-OF-WAY LINE
25. NEW 4' WIDE W/ 2' RADII CONCRETE STORMWATER CURB BREAK INTO DETENTION POND
26. 4" WIDE PAINTED WHITE STRIPING @ 45°, 2' O.C. (SEE STRIPING NOTES).
27. NEW 2' WIDE CURB BREAK FOR STORMWATER FLOW
28. THIS STRIPED AREA DEDICATED FOR BUS PARKING.
29. MILL AND OVERLAY EXISTING PAVEMENT IN THIS AREA TO CREATE SMOOTH TRANSITION.
30. BLEND NEW CURB AND GUTTER WITH EXISTING AS REQ'D FOR SMOOTH TRANSITION.
31. 12" WIDE FLUSH "RIBBON CURB"
32. FEATHER CURB TO FLUSH
33. PAVEMENT INSIDE SCDOT R/W SHALL BE PER DETAIL ON SHEET SC1
34. PAINT 4" WIDE DOUBLE YELLOW LANE STRIPING AS REQ'D.
35. FLUSH CURB THRU SIDEWALK SECTION
36. TRANSITION FULL CURB AND GUTTER TO MATCH EXISTING BARRIER CURB AS REQ'D.
37. BARRIER CURB. SEE SCDOT STD DETAILS.
38. PROPOSED SITE LIGHT (TYPICAL). SEE PHOTOMETRIC AND SITE LIGHTING PLANS BY OTHERS

PARKING LOT SIGNAGE NOTES

1. THE CONTRACTOR SHALL FURNISH AND INSTALL "HANDICAPPED PARKING" SIGNS WITH IDENTIFYING HANDICAPPED SYMBOL AT ALL HANDICAPPED PARKING SPACES. SIGNS SHALL CONFORM TO FEDERAL HIGHWAY ADMINISTRATION AND/OR SCDOT SPECS.
2. THE CONTRACTOR SHALL FURNISH AND INSTALL "STOP" SIGNS IN THE LOCATIONS INDICATED. "STOP" SIGNS SHALL BE 30"x30", WITH RED REFLECTORIZED BACKGROUND AND WHITE REFLECTORIZED LEGEND AND BORDER CONFORMING TO SCDOT SPECIFICATIONS.

PAVEMENT MARKING NOTES

1. ALL PARKING LOT STRIPING SHOWN SHALL BE PERFORMED BY THE CONTRACTOR USING WHITE TRAFFIC MARKING PAINT UNLESS NOTED OTHERWISE BELOW. PAINT SHALL BE SHERWIN-WILLIAMS "PRO-MAR" TRAFFIC MARKING PAINT OR GLIDDEN TRAFFIC PAINT AND SHALL BE APPLIED IN TWO COATS AND IN STRICT ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.
2. ITEMS TO BE PAINTED YELLOW INCLUDE: ALL SITE WORK PROTECTIVE GUARD POSTS; STEEL PIPE BASE OF HANDICAP PARKING SIGNS; ANY STRIPING/PAVEMENT MARKING OVER CONCRETE, AND UNLOADING AREAS (IF PROVIDED)
3. ITEMS TO BE PAINTED WHITE INCLUDE: PARKING STALLS; STRIPED ISLANDS; RAISED DIVIDERS AND/OR MEDIANS; STOP BARS AND DIRECTIONAL ARROW OF SIZE AND LOCATION INDICATED, AND. PEDESTRIAN CROSSINGS.
4. ITEMS REQUIRING BLUE PAINT INCLUDE HANDICAP PARKING STALLS AND SYMBOLS & ALL STRIPED ISLANDS ADJACENT TO HANDICAP PARKING SPACES

PARKING SUMMARY

PROVIDED:
REGULAR PUBLIC PARKING SPACES PROVIDED = 197
ADA PARKING SPACES PROVIDED = 7 TOTAL (3 MARKED VAN ACCESSIBLE)

TOTAL PARKING SPACES PROVIDED ON SITE THIS PROJECT = 204

MISCELLANEOUS SITE PLAN NOTES

1. ALL SIGNAGE TO BE PERMITTED SEPARATELY
2. CONTACT PALMETTO UTILITY PROTECTION SERVICE (PUPS) @ 811 OR 888-721-7877 A MINIMUM OF 72 HOURS BEFORE DIGGING.

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SOUTH CAROLINA — The Landplan Group South Inc. No. 153 — CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA — PROFESSIONAL ENGINEER — No. 20979 — WILLIAM SWEATT — REGISTERED

THEATRE DRIVE PARKING LOT

AT THE INTERSECTION OF THEATRE DR & UNIVERSITY DR
SUMTER, SC
SITE PLAN

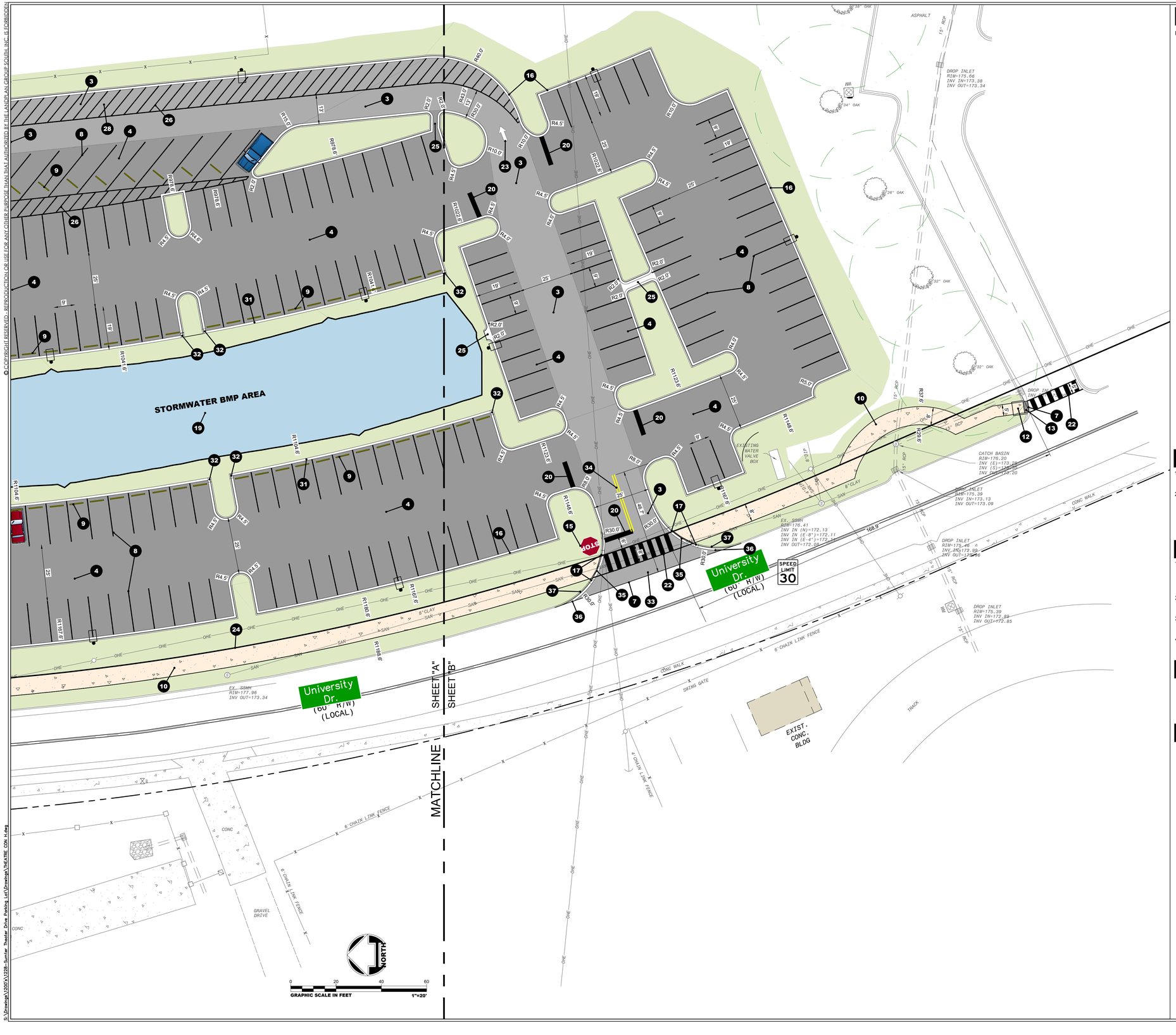
JOB NO:	1228
DRAWN:	WES
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APPROVED:	CH
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SCALE:	SEE GRAPHIC SCALE

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No. 20979 — REGISTERED LANDSCAPE ARCHITECT — WADE SWEET, PLA — SOUTH CAROLINA

THEATRE DRIVE PARKING LOT

AT THE INTERSECTION OF THEATRE DR & UNIVERSITY DR
SUMTER, SC
SITE PLAN

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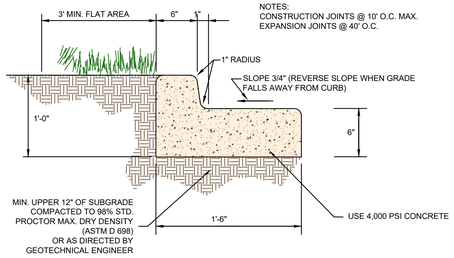
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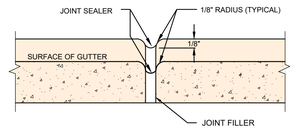
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18" CONCRETE CURB AND GUTTER DETAIL NTS

VERIFY WITH GEOTECHNICAL ENGINEER



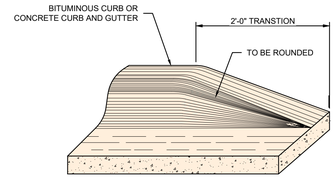
NOTES:
CONSTRUCTION JOINTS @ 10' O.C. MAX.
EXPANSION JOINTS @ 40' O.C.



TRANSVERSE EXPANSION JOINT

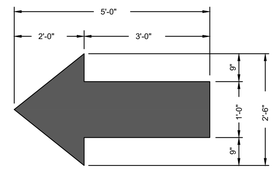
CONTRACTION JOINTS SHALL BE SPACED AT 10-FOOT INTERVALS. FOR VALLEY GUTTER, A 10-FOOT SPACING MAY BE USED WHEN A MACHINE IS USED. JOINT SPACING MAY BE ALTERED BY THE ENGINEER TO PREVENT UNCONTROLLED CRACKING. CONTRACTION JOINTS MAY BE INSTALLED BY THE USE OF TEMPLATES OR FORMED BY OTHER APPROVED METHODS. WHERE SUCH JOINTS ARE NOT FORMED BY TEMPLATES, A MINIMUM DEPTH OF 1 1/2" SHALL BE OBTAINED. ALL EXPANSION JOINTS SHALL BE SPACED AT 90-FOOT INTERVALS, AND ADJACENT TO ALL RIGID OBJECTS. JOINTS SHALL MATCH LOCATIONS WITH JOINTS IN ABUTTING SIDEWALK. CONCRETE COMPRESSIVE STRENGTH SHALL BE 3600 P.S.I. IN 28 DAYS. CURB SHALL BE DEPRESSED AT INTERSECTIONS TO PROVIDE FOR FUTURE ACCESSIBLE RAMPS. TOP 6" OF SUBGRADE BENEATH THE CURB AND GUTTER SHALL BE COMPACTED TO 100% STANDARD PROCTOR DENSITY.

CURB AND GUTTER FEATHERING DETAIL NTS



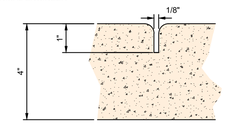
PAINTED DIRECTIONAL ARROW DETAIL NTS

NOTES:
1. PAINT PER NOTES ON SITE PLAN

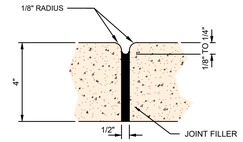


SIDEWALK JOINT DETAILS NTS

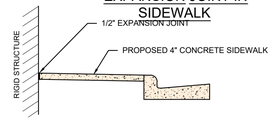
VERIFY WITH GEOTECHNICAL ENGINEER



GROOVE JOINT IN SIDEWALK



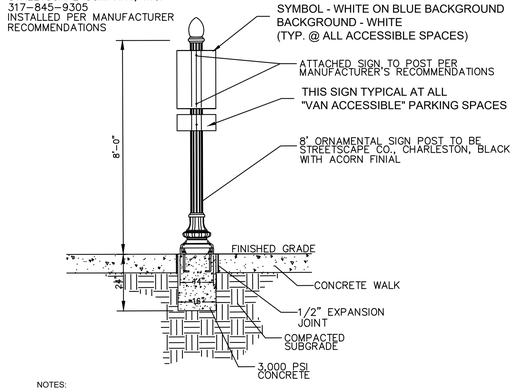
TRANSVERSE EXPANSION JOINT IN SIDEWALK



DETAILS SHOWING EXPANSION JOINTS IN CONCRETE SIDEWALK

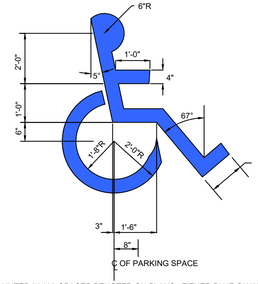
NOTES:
1. A GROOVE JOINT 1" DEEP WITH 1/8" RADII SHALL BE REQUIRED IN THE CONCRETE SIDEWALK AT 5' INTERVALS. ONE 1/2" EXPANSION JOINT WILL BE REQUIRED AT 45' INTERVALS NOT TO EXCEED 50' AND MATCHING EXPANSIOMP-CONSTRUCTION JOINT IN ADJACENT CURB. A SEALED 1/2" EXPANSION JOINT WILL BE REQUIRED WHERE THE SIDEWALK JOINS ANY RIGID STRUCTURE.
2. SIDEWALK AT DRIVEWAY ENTRANCES TO BE 6" THICK.
3. CONCRETE COMPRESSIVE STRENGTH SHALL BE 3600 PSI. IN 28 DAYS.

ACCESSIBLE PARKING SIGN DETAIL NTS



NOTES:
1. ONE REQUIRED AT EACH ACCESSIBLE PARKING SPACE. WHERE ACCESSIBLE SPACES FACE EACH OTHER WITHOUT A WALKWAY, THERE SHALL BE ONE POST WITH SIGNS MOUNTED ON BOTH SIDES.
2. WHERE CONDITIONS WARRANT AND WITH APPROVAL OF ARCHITECT AND/OR OWNER, SIGNS MAY BE WALL MOUNTED

INT'L ACCESSIBLE SYMBOL DETAIL NTS



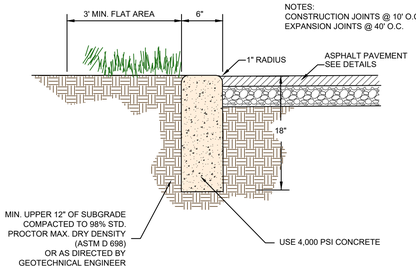
NOTES:
1. SYMBOL TO THE PAINTED IN ALL SPACES DENOTED ON PLANS. EITHER BLUE ON WHITE BACKGROUND OR WHILE ON A BLUE BACKGROUND.

GENERAL NOTES

1. A COMPLETE SET OF APPROVED DRAWINGS MUST BE MAINTAINED ON SITE AT ALL TIMES THAT THE CONTRACTOR IS PERFORMING WORK.
2. WITHIN ALL NOTES, THE TERM CONTRACTOR SHALL MEAN THE GENERAL CONTRACTOR AND ANY SUBCONTRACTOR OR VENDOR PERFORMING CONSTRUCTION ON THE SITE.
3. SHOULD THE CONTRACTOR FIND ANY DISCREPANCIES ON THE DRAWINGS, OR IN THE FIELD PRIOR TO BEGINNING WORK OR DURING CONSTRUCTION, THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY.
4. BOUNDARY AND TOPOGRAPHIC SURVEY PROVIDED BY OTHERS AND HAS NOT BEEN FIELD VERIFIED BY THE ENGINEER. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY EXISTING FIELD CONDITIONS AND REPORT ANY DISCREPANCIES OR CONFLICTS TO THE ENGINEER PRIOR TO CONSTRUCTION.
5. INFORMATION SHOWN ON THESE PLANS PERTAINING TO UNDERGROUND UTILITIES (PRESENCE, LOCATION, SIZES, MATERIALS, ETC.) AND/OR OTHER UNDERGROUND STRUCTURES WAS PROVIDED BY OTHERS AND/OR MAY HAVE BEEN OBTAINED FROM SOURCES SUCH AND UTILITY PROVIDERS AND/OR RECORD DRAWINGS. THE ENGINEER SHALL NOT BE HELD RESPONSIBLE OR LIABLE AS TO THE ACCURACY OR COMPLETENESS OF ANY OF THIS DATA OR (LACK THEREOF). EXISTING UNDERGROUND UTILITIES OR OTHER SUBSURFACE STRUCTURES NOT SHOWN ON THESE PLANS MAY BE ENCOUNTERED BY THE CONTRACTOR AND ARE THE RESPONSIBILITY OF THE CONTRACTOR SOLELY. IF ANY UNKNOWN UTILITIES OR OTHER UNDERGROUND STRUCTURES ARE ENCOUNTERED DURING THE CONSTRUCTION PROCESS, THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY.
6. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING AND VERIFYING ALL UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION AND IS RESPONSIBLE FOR ANY DAMAGE TO THEM DURING CONSTRUCTION. CONTRACTOR SHALL CONTACT THE STATE'S LOCATION SERVICE (811) AT LEAST 72 HOURS PRIOR TO BEGINNING CONSTRUCTION.
7. THE CONTRACTOR SHALL COMPLY WITH ALL RULES AND REGULATIONS OF FEDERAL, STATE, COUNTY AND LOCAL MUNICIPALITIES AS APPLICABLE TO THIS PROJECT.
8. ALL MATERIALS, METHODS AND DETAILS OF CONSTRUCTION SHALL CONFORM TO THE STANDARD SPECIFICATIONS OF THE LOCAL MUNICIPALITY AND/OR THE APPROPRIATE UTILITY COMPANY, WHICHEVER TAKES PRECEDENCE.
9. ALL RIGHT-OF-WAY CONSTRUCTION SHALL MEET LOCAL AND STATE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, LATEST EDITION. ANY WORK IN DOT RIGHT OF WAY SHALL BE IN COMPLIANCE THE THE APPROVED ENCROACHMENT PERMITS.
10. THE CONTRACTOR IS REQUIRED TO MEET ALL APPLICABLE FEDERAL, OSHA, STATE, & LOCAL REGULATIONS CONCERNING PROJECT SAFETY AND ASSUMES FULL RESPONSIBILITY FOR SAFETY ON THE PROJECT. THE ENGINEER IS NOT RESPONSIBLE FOR JOB-SITE SAFETY.
11. GENERAL CONTRACTOR SHALL VERIFY THAT ALL NECESSARY PERMITS FOR CONSTRUCTION HAVE BEEN OBTAINED PRIOR TO THE START OF THE PROJECT.
12. ANY CONSTRUCTION TRAILERS USED ON-SITE SHALL BE PERMITTED THROUGH LOCAL GOVERNING AGENCY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ACQUIRE ALL NECESSARY PERMITS.
13. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGES TO EXISTING INFRASTRUCTURE WITHIN THE SITE OR ADJOINING PROPERTIES (i.e. PAVEMENT, CURB, SIDEWALK, UTILITIES, LANDSCAPED AREAS etc.). CONTRACTOR SHALL REPAIR/REPLACE ALL DAMAGED ITEMS IMMEDIATELY, IF NECESSARY, OR PRIOR TO THE END OF THE JOB AND AT NO COST TO THE OWNER IN ACCORDANCE WITH LOCAL REGULATOR REQUIREMENTS.
14. SITE WORK CONTRACTOR IS RESPONSIBLE FOR PROVIDING TO THE ENGINEER OF RECORD ANY REQUIRED AS-BUILT RECORD DRAWINGS THAT ARE TO BE PREPARED BY A SOUTH CAROLINA REGISTERED LAND SURVEYOR. UTILITY AS-BUILTS (WATER DISTRIBUTION AND/OR SANITARY SEWER CONVEYANCE SYSTEMS) SHALL MEET THE REQUIREMENTS OF THE UTILITY PROVIDER. AS-BUILTS OF STORM DRAINAGE SYSTEM COMPONENTS SHALL MEET THE REQUIREMENTS OF SCDHEC/OCRM AND/OR THE NPDES MS4 REVIEW AUTHORITY. THESE AS-BUILTS MAY INCLUDE STORMWATER BMP TOPOGRAPHY, OUTLET STRUCTURE DIMENSIONS AND ELEVATIONS, PIPING PROFILES, EASEMENT PLATS, ETC. THE CONTRACTOR IS FURTHER RESPONSIBLE FOR PROVIDING TO THE ENGINEER AND/OR ASSOCIATED REVIEW AUTHORITIES ANY OTHER REQUIRED CLOSE-OUT DOCUMENTATION AS NECESSARY TO OBTAIN FINAL CERTIFICATIONS.
15. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR COORDINATING INSTALLATION OF ALL UTILITIES BY THE APPROPRIATE UTILITY COMPANY AND SUBCONTRACTORS PERFORMING WORK TO AVOID CONFLICTS. GENERAL CONTRACTOR IS ALSO RESPONSIBLE FOR SCHEDULING INSTALLATION OF ALL UTILITIES IN A TIMELY, ORGANIZED, AND SYSTEMATIC MANNER.
16. IN THE EVENT OF A CONFLICT WITH WATER, SEWER, DRAINAGE OR OTHER UTILITY LINES, THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER PRIOR TO MAKING FIELD ADJUSTMENTS.
17. THE CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL AND DISPOSAL OF ALL RUBBISH, TRASH, DEBRIS, AND ORGANIC MATERIAL IN A LEGAL MANNER.
18. THERE SHALL BE NO BURNING ALLOWED ON SITE UNLESS APPROVAL IS PROVIDED BY BOTH THE OWNER AND LOCAL AUTHORITIES HAVING JURISDICTION.
19. THE CONTRACTOR SHALL REFERENCE THE GEOTECHNICAL REPORT AVAILABLE FROM THE OWNER AND COMPLY WITH ALL REPORT RECOMMENDATIONS. IF A CONFLICT ARISES BETWEEN CIVIL DOCUMENTS AND THE GEOTECHNICAL REPORT, THE MORE STRINGENT SHALL GOVERN.
20. SEE ARCHITECTURAL PLANS FOR EXACT BUILDING DIMENSIONS.

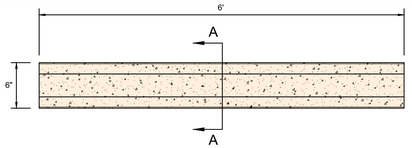
FLUSH CONCRETE CURB DETAIL NTS

VERIFY WITH GEOTECHNICAL ENGINEER

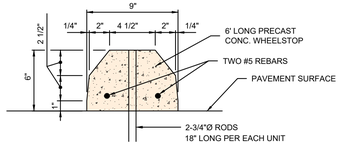


NOTES:
CONSTRUCTION JOINTS @ 10' O.C. MAX.
EXPANSION JOINTS @ 40' O.C.

PRECAST CONCRETE WHEELSTOP DETAIL NTS

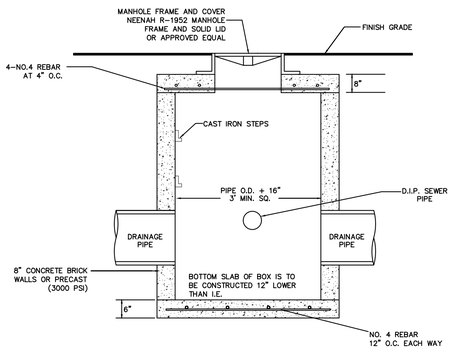


PLAN VIEW

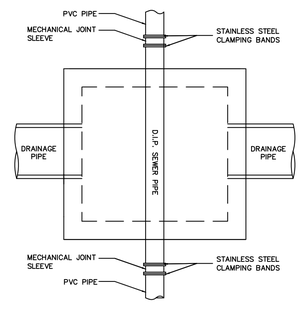


SECTION A-A

CONFLICT BOX DETAIL (IF REQ'D) NTS



SECTION VIEW

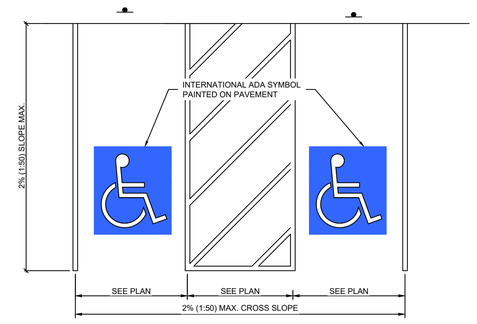


TOP VIEW

NOTES:.

1. FOR SEWER SERVICES THAT CONFLICT WITH STORM DRAINAGE AND CANNOT BE LOWERED SHALL BE ADDRESSED WITH A CONFLICT BOX AS DETAILED AND WILL BE PAID FOR BY UNIT PRICE.
2. THE CONTRACTOR SHALL RECEIVE ENGINEER/OWNER APPROVAL PRIOR TO INSTALLATION OF CONFLICT BOX.
3. NO JOINT SHALL BE IN BOX

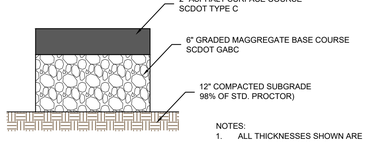
ACCESSIBLE PARKING DETAIL NTS



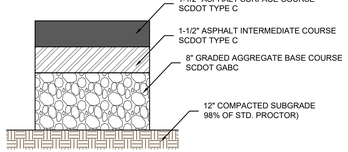
ASPHALT PAVEMENT DETAILS NTS

BASED ON GEOTECHNICAL REPORT DATED DEC. 2, 2024 BY UES (SEE SPECIFICATIONS)
FOR PAVEMENT SECTIONS INSIDE THE SCDOT R/W, SEE DETAIL ON SHEET SC1

STANDARD DUTY SECTION



HEAVY DUTY SECTION



NOTES:
1. ALL THICKNESSES SHOWN ARE MINIMUM COMPACTED.
2. PAVEMENT SECTIONS ARE TO BE VERIFIED W/ OWNER AND GEOTECHNICAL ENGINEER BEFORE CONSTRUCTION.

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COLUMBIA, SC 29201
803.256.0562
WWW.LANDPLANGROUP.COM

NO.	REVISIONS	BY.	APPD.	DATE:
1	REVISED PER SCDOT COMMENTS	WS	CH	3/25/25

The Landplan Group South Inc. No. 153 — SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA PROFESSIONAL ENGINEER — No. 20979 — WADE S. NEELY — 3/25/2025

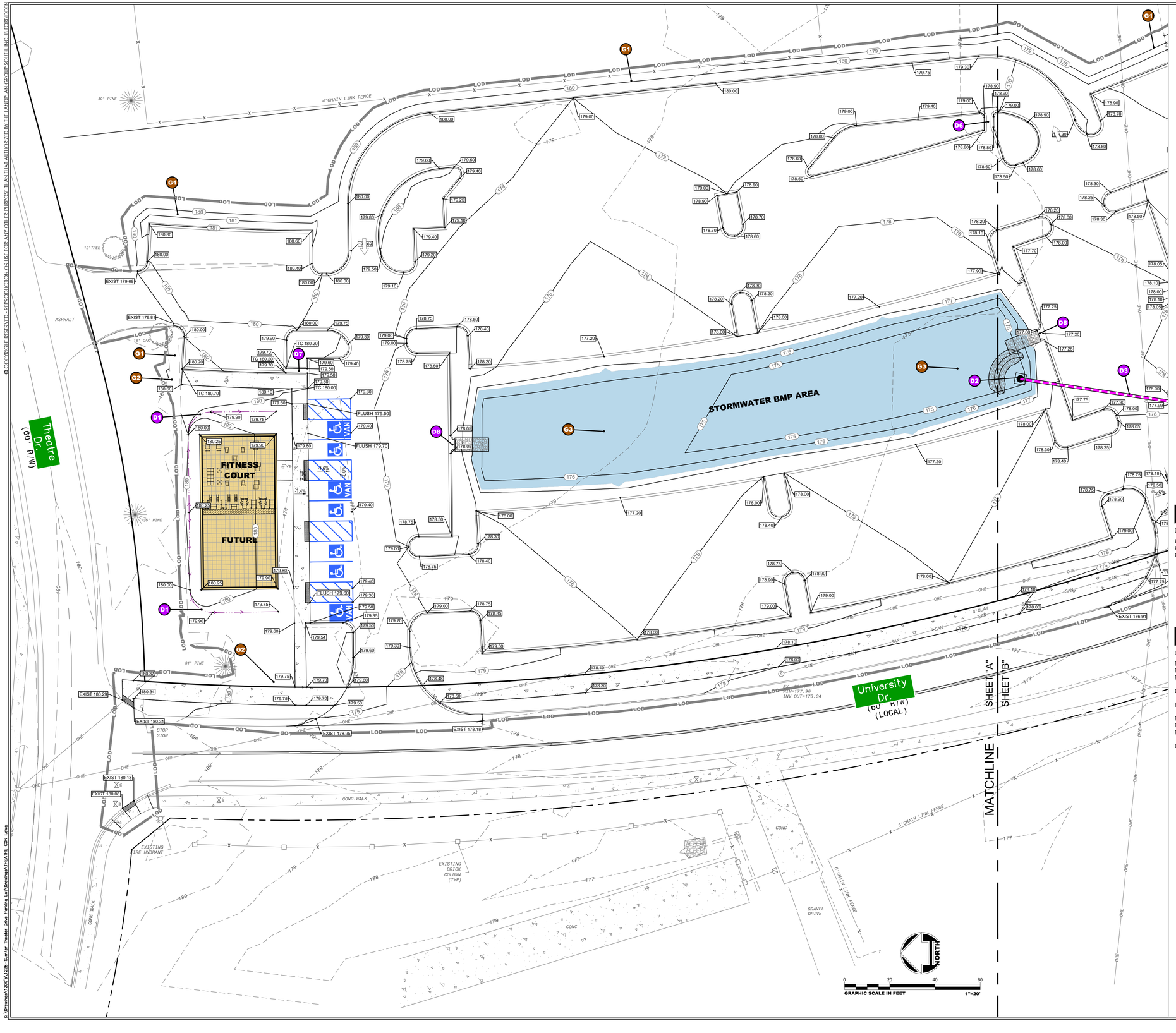
THEATRE DRIVE
PARKING LOT
AT THE INTERSECTION OF THEATRE DR & UNIVERSITY DR
SUMTER, SC
SITE DETAILS

JOB NO:	1228
DRAWN:	WES
DESIGNED:	WES
APPROVED:	CH
DATE:	1/28/2025
SCALE:	SEE GRAPHIC SCALE

C201

S:\Drawings\1200's\1228-Sumter Theater Drive Parking Lot\Drawings\THEATRE_CON 1.dwg

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TOPOGRAPHIC LEGEND

- 174.50 — NEW SPOT SHOT ELEVATION. (ALL SPOT SHOTS ARE FINISHED GRADE ELEVATIONS UNLESS NOTED OTHERWISE.)
- 171 — NEW INTERMEDIATE CONTOUR
- 170 — NEW INDEX CONTOUR
- 171 — EXISTING INTERMEDIATE CONTOUR
- 170 — EXISTING INDEX CONTOUR
- LOD — LIMITS OF DISTURBANCE

GRADING & DRAINAGE NOTES

A. ALL STORM DRAINAGE PIPE TO BE CLASS 3 REINFORCED CONCRETE UNLESS OTHERWISE NOTED. PIPE LENGTHS ON PROFILE ARE APPROXIMATE ONLY.

B. PIPE INVERT ELEVATIONS SHALL HAVE PRECENDENCE OVER SLOPES. HOWEVER, SLOPES SHALL NOT BE DECREASED FROM THOSE SHOWN ON THE PROFILES WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

C. SEE STORM DRAINAGE PROFILES AND DETAILS FOR ADDITIONAL INFORMATION.

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F. ALL STORM DRAINAGE COLLECTION SYSTEM ITEMS OUTSIDE OF ROAD RIGHT-OF-WAY TO BE PRIVATE

G. "ALL MATERIALS, CONSTRUCTION, AND PLANS ARE TO COMPLY WITH CURRENT SCDOT STANDARD SPECIFICATIONS AND DETAILS."

H. "CONTRACTOR SHALL PROVIDE VERIFICATION TO THE DESIGN ENGINEER THAT ALL SEDIMENT BASIN AND/OR POST CONSTRUCTION STORMWATER MITIGATION FACILITY CONFIGURATION, INCLUDING OUTLET STRUCTURE ELEVATIONS, DAM ELEVATIONS, SPILLWAY ELEVATIONS AND BASIN VOLUMES ARE IN ACCORDANCE WITH APPROVED DESIGN.

I. STORMWATER MITIGATION MEASURES WILL BE CERTIFIED BY THE DESIGN ENGINEER. CONTRACTOR SHALL PROVIDE SURVEY DATA TO INCLUDE AS-BUILT TOPOGRAPHY AND OUTLET STRUCTURE ELEVATION AND CONSTRUCTION DETAILS TO THE ENGINEER OF RECORD FOR "AS-BUILT" VERIFICATION REGARDING CONFORMANCE WITH THE ENGINEER'S DESIGN INTENT AND COMPLIANCE WITH JURISDICTIONAL REQUIREMENTS.

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DENOTED ON PLAN AS G#

G1. 3:1 SLOPE (TYPICAL). INSTALL MATTING AS REQ'D
G2. 6:1 SLOPE
G3. GRADE BOTTOM OF POND TO SLOPE TOWARDS OUTLET STRUCTURE @ 0.5% MIN. SLOPE

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DENOTED ON PLAN AS D#

D1. GRADE SWALE FOR POSITIVE DRAINAGE @ 0.5% MIN. SLOPE
D2. INSTALL STORMWATER OUTLET STRUCTURE OS1. SEE DETAILS
D3. INSTALL 200 L.F. OF 15" RCP @ 0.5% MIN. SLOPE
INV UP=174.25
D4. CONNECT NEW POND DISCHARGE 15" RCP TO EXISTING STRUCTURE AS REQ'D. INV=±173.10
D5. DOWNSTREAM PIPED SYSTEM CROSSES UNIVERSITY DRIVE AND CONTINUES WEST
D6. CONSTRUCT 4' WIDE CURB BREAK FOR PASSAGE OF SURFACE FLOW.
D7. CONSTRUCT 2' WIDE CONCRETE CURB BREAK FOR PASSAGE OF SURFACE FLOW
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CAROLINA SOUTH — The Landplan Group South Inc. — No. 153 — CERTIFICATE OF AUTHORIZATION

CAROLINA — SOUTH — No. 20979 — REGISTERED LANDSCAPE ARCHITECT — WILLIAM E. SMITH

THEATRE DRIVE PARKING LOT

AT THE INTERSECTION OF THEATRE DR & UNIVERSITY DR
SUMTER, SC

GRADING AND DRAINAGE PLAN

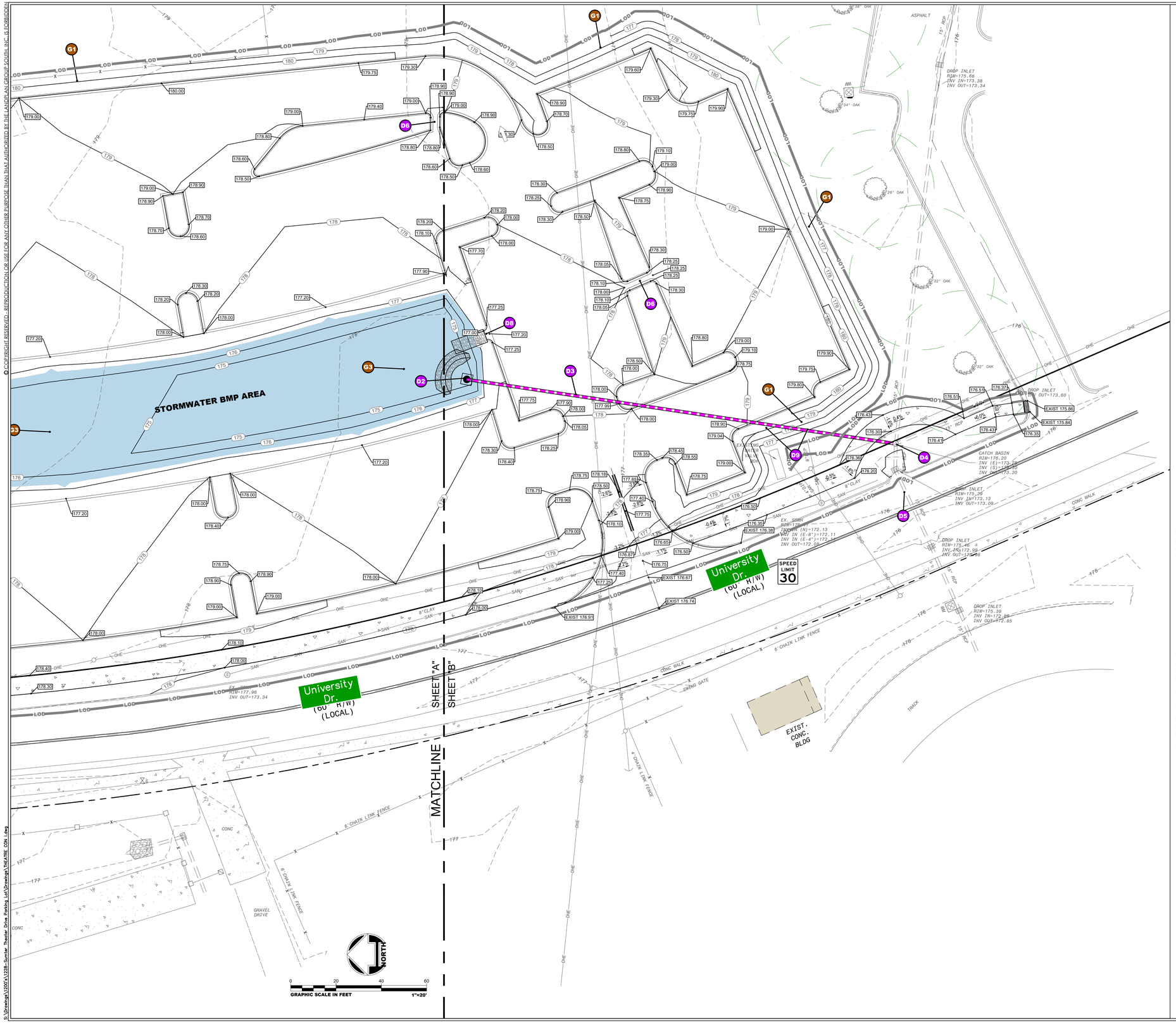
JOB NO:	1228
DRAWN:	WES
DESIGNED:	WES
APPROVED:	CH
DATE:	1/28/2025
SCALE:	SEE GRAPHIC SCALE

C300A

CALL 811 BEFORE YOU DIG — SAFE DIGGING PARTNER

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CAROLINA — No. 20979 — STATE OF SOUTH — WADE WILEY SWEATMAN — REGISTERED LANDSCAPE ARCHITECT

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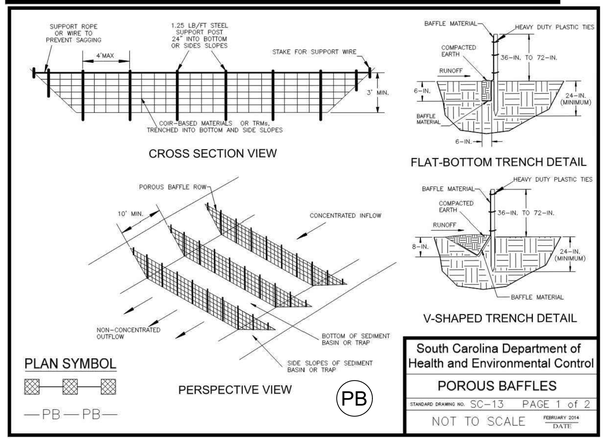
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POROUS BAFFLES DETAIL* NTS



South Carolina Department of Health and Environmental Control

POROUS BAFFLES

STANDARD DRAWING NO. SC-13 PAGE 1 of 2

NOT TO SCALE FEBRUARY 2014 DATE

BAFFLES – POST REQUIREMENTS

1. Porous baffle posts must be 60-inch to 96-inch long steel posts that meet, at a minimum, the following physical characteristics;
   - Composed of a high strength steel with a minimum yield strength of 50,000 psi;
   - Include a standard "T" section with a nominal face width of 1.38-inches and a nominal "T" length of 1.48-inches.
   - Weigh 1.25 pounds per foot (± 8%)
2. Posts shall be equipped with projections to aid in fastening of baffle material.
3. Install posts to a minimum of 24-inches. A minimum height of 1- to 2-inches above the fabric shall be maintained, and a maximum height of 3 feet shall be maintained above the ground.
4. Post spacing shall be at a maximum of 4-feet on center.

BAFFLES – MATERIAL REQUIREMENTS

1. Baffle material must be composed of coir-based materials or Turf Reinforcement Matting (TRM) that consists of the following requirements:
   - Have a light penetration (% openings) between 10-35%;
   - Free of loose straw material;
   - Have a minimum tensile strength of 145 lb/ft; and,
   - Have a minimum width of 48-inches.
2. 12-inches of the fabric should be placed within excavated trench and toed in when the trench is backfilled or baffle material may be stapled into ground by using 12-inch staples with a maximum spacing of 12-inches.
3. Baffle material shall be purchased in continuous rolls and cut to the width of the sediment basin or trap to avoid joints.

BAFFLES – GENERAL NOTES

1. Attach baffle to the steel posts using heavy-duty plastic ties that are evenly spaced along the above ground portion of each post.
2. Install the baffle rows perpendicular to the direction of the stormwater flow and place each baffle the proper distance from inlet and outlets to allow access for maintenance and clean-out.

BAFFLES – INSPECTION & MAINTENANCE

1. The key to functional porous baffles is weekly inspection, routine maintenance, and regular sediment removal.
2. Regular inspections of porous baffles shall be conducted once every calendar week and, as recommended, within 24-hours after each rainfall even that produces 1/2-inch or more of precipitation.
3. Attention to sediment accumulations along each row of baffles is extremely important. Accumulated sediment should be continually monitored and removed when necessary.
4. Remove accumulated sediment when it reaches 1/3 the height of the baffle row or when it reaches the clean-out height of the sediment basin or trap, whichever is reached first.
5. Removed sediment shall be placed in stockpile storage areas or spread thinly across disturbed area. Stabilize the removed sediment after it is relocated.
6. Check for tears/rips within the baffles, areas where the baffle has begun to decompose, and for any other circumstance that may render the baffle ineffective. Removed damaged baffles and reinstall new baffles immediately.
7. Porous baffles should be removed within 30 days after final stabilization is achieved and once it is removed, the resulting disturbed area shall be permanently stabilized.

South Carolina Department of Health and Environmental Control

POROUS BAFFLES

STANDARD DRAWING NO. SC-13 PAGE 2 of 2

GENERAL NOTES FEBRUARY 2014 DATE

DETENTION POND MAINTENANCE PLAN

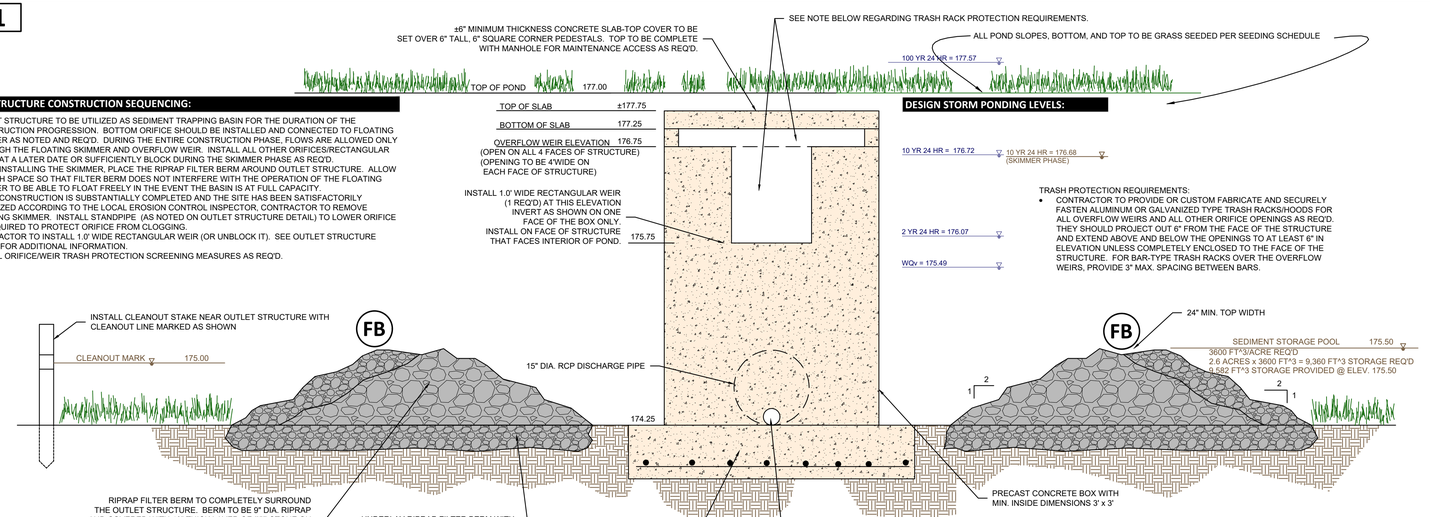
The owner should maintain complete up-to-date "As-built" plan and design specifications for the detention pond. Written records of maintenance and observations should be kept. The owner should make visual inspections at least twice a year, once in the summer after mowing, and once in the winter when the vegetative cover is dormant. Inspections are also to be made after extreme rainfall events. The owner is also encouraged to have an inspection by a registered professional engineer at least once every 5 years.

The owner shall do the following maintenance:

1. Vegetation and grass mowing. Proper vegetation is required on earth dams. Mowing is necessary to control the establishment of woody growth and to maintain the vegetative cover. The embankment and the area upstream and downstream of embankment need to be mowed. Mowing shall be done at least three times per year.
2. Trees and brush removal. Trees and shrubs will not be allowed on the embankment. Trees that have grown on the embankment shall be removed. Stumps and all woody materials must be removed to about 30 inches below the ground surfaces.
3. Trash Removal. Trash rack units should be checked periodically, and especially after storm events. Accumulated debris should be removed and maintenance performed if necessary. An annual inspection of the pond perimeters should be done. Potentially damaging fallen trees, debris and sediment should be removed. Periodic removal of floating debris to prevent clogging of the spillway should be done.
4. Erosion and Slope Protection. The rate of erosion is directly related to the lack of vegetation. Prompt repairs of eroded areas are required. Vegetation should be inspected in the early spring and late summer and any bare or eroded areas repaired and re-seeded.
5. Crest of Dams. Crest of dams should be graded to direct all surface drainage into the impoundment. Also the pond bottom should be re-graded to provide proper drainage towards the outlet structure.
6. Conduits. All conduits should be inspected thoroughly once a year. Inspect for improper alignment (sagging), elongation and displacement at joints, cracks, leaks, surface wear, loss of protective coatings, corrosion and blockage.
7. Outlet structures. Surfaces should be inspected for cracking, splaying, displacement or movement, and deterioration by cracking, slab or wall movement. Large areas of exposed reinforcing steel and severe undermining require professional advice for repair.
8. Outlets. Erosion the spillway outlets is a common maintenance problem. Severe undermining, displacement of pipes and dam failure can occur. Often the outlet is adequate for normal flow but not for extreme storm flows. Periodically, and especially after storm events, the stilling basin, plunge pool, or riprap should be inspected and repaired if any damage.
9. Seepage. Seepage must be controlled in quantity and velocity to minimize damage to the dam. Regular monitoring to detect wet areas "spring" "Flow", "piping" and "boils" on the downstream embankment should be done. Excessive seepage pressure can threaten the downstream slope stability. Seepage flow, which is muddied by soil, is evidence of "piping" and "boils". When this occurs, complete failure may happen within hours and professional advice should be obtained immediately. Typical methods used to control the quantity of seepage are installation of an upstream blanket, or the installation of upstream drains.

STORMWATER DETENTION POND/SEDIMENT BASIN OUTLET STRUCTURE DETAIL NTS

OS1



OUTLET STRUCTURE CONSTRUCTION SEQUENCING:

1. OUTLET STRUCTURE TO BE UTILIZED AS SEDIMENT TRAPPING BASIN FOR THE DURATION OF THE CONSTRUCTION PROGRESSION. BOTTOM ORIFICE SHOULD BE INSTALLED AND CONNECTED TO FLOATING SKIMMER AS NOTED AND REQ'D. DURING THE ENTIRE CONSTRUCTION PHASE, FLOWS ARE ALLOWED ONLY THROUGH THE FLOATING SKIMMER AND OVERFLOW WEIR. INSTALL ALL OTHER ORIFICES/RECTANGULAR WEIRS AT A LATER DATE OR SUFFICIENTLY BLOCK DURING THE SKIMMER PHASE AS REQ'D.
2. AFTER INSTALLING THE SKIMMER, PLACE THE RIPRAP FILTER BERM AROUND OUTLET STRUCTURE. ALLOW ENOUGH SPACE SO THAT FILTER BERM DOES NOT INTERFERE WITH THE OPERATION OF THE FLOATING SKIMMER TO BE ABLE TO FLOAT FREELY IN THE EVENT THE BASIN IS AT FULL CAPACITY.
3. AFTER CONSTRUCTION IS SUBSTANTIALLY COMPLETED AND THE SITE HAS BEEN SATISFACTORILY STABILIZED ACCORDING TO THE LOCAL EROSION CONTROL INSPECTOR, CONTRACTOR TO REMOVE FLOATING SKIMMER. INSTALL STANDPIPE (AS NOTED ON OUTLET STRUCTURE DETAIL) TO LOWER ORIFICE AS REQUIRED TO PROTECT ORIFICE FROM CLOGGING.
4. CONTRACTOR TO INSTALL 1.0' WIDE RECTANGULAR WEIR (OR UNBLOCK IT). SEE OUTLET STRUCTURE DETAIL FOR ADDITIONAL INFORMATION.
5. INSTALL ORIFICE/WEIR TRASH PROTECTION SCREENING MEASURES AS REQ'D.

DESIGN STORM PONDING LEVELS:

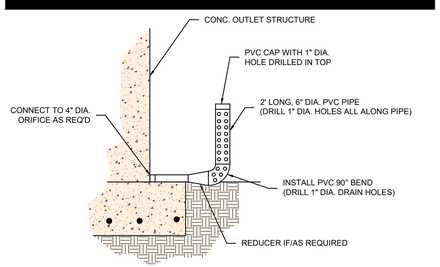
TRASH PROTECTION REQUIREMENTS:

- CONTRACTOR TO PROVIDE OR CUSTOM FABRICATE AND SECURELY FASTEN ALUMINUM OR GALVANIZED TYPE TRASH RACKS/HOODS FOR ALL OVERFLOW WEIRS AND ALL OTHER ORIFICE OPENINGS AS REQ'D. THEY SHOULD PROJECT OUT 6" FROM THE FACE OF THE STRUCTURE AND EXTEND ABOVE AND BELOW THE OPENINGS TO AT LEAST 6" IN ELEVATION UNLESS COMPLETELY ENCLOSED TO THE FACE OF THE STRUCTURE. FOR BAR-TYPE TRASH RACKS OVER THE OVERFLOW WEIRS, PROVIDE 3" MAX. SPACING BETWEEN BARS.

NOTE:

- THIS PROJECT REQUIRES A 4" FLOATING SKIMMER. SEE DETAIL BELOW

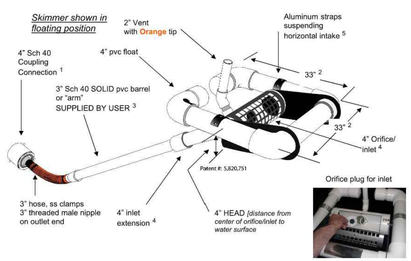
STANDPIPE DETAIL NTS



FLOATING SKIMMER CUT SHEET

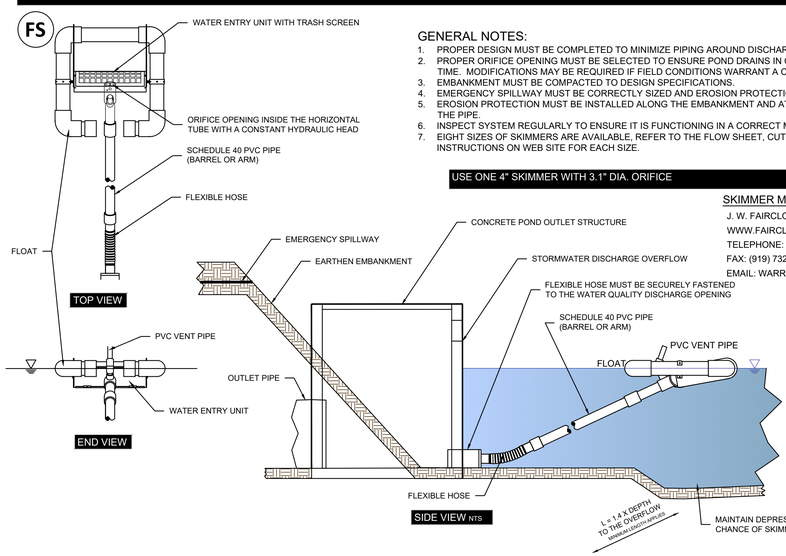
4" Faircloth Skimmer® Cut Sheet

www.FairclothSkimmer.com



1. Skimmer can be attached to a straight 4" sch 40 pipe but the pipe may need to be anchored to the bottom at the connection so it is secure. Coupling can be removed and hose attached to outlet using the threaded 3" nipple.
2. Dimensions are approximate, not intended as plans for construction.
3. Barrel (solid, not foam core pipe) should be 1.4 times the depth of water with a minimum length of 8' so the inlet can be pulled to the side for maintenance. If more than 10' long, weight may have to be added to inlet to counter the increased buoyancy.
4. Orifice/inlet tapers down from 4" maximum inlet to a 3" barrel and hose. Barrel is smaller to reduce buoyancy and tendency to lift inlet but is sufficient for flow through inlet because of slope. The orifice/inlet can be reduced using the plug and cutter provided to control the outflow rate – see #6.
5. Horizontal intake is 8" pipe between the straps with slots cut in the inlet and aluminum screen door (smaller than shown in illustration) for access to the 4" inlet and orifice inside.
6. **Capacity:** 20,109 cubic feet per day maximum with 4" inlet and 4" head. Inlet can be reduced by installing a smaller orifice using the plug and cutter provided to adjust flow rate for the particular drawdown time required. Please use the sizing template at www.faircloth skimmer.com .
7. Ships assembled. User glues inlet extension and barrel, installs vent, cuts orifice in plug and attaches to outlet pipe or structure. Includes float, flexible hose, rope, orifice plug and cutter. Does **NOT** include 3" Sch 40 SOLID pvc barrel or "arm" SUPPLIED BY USER.

FLOATING SKIMMER DETAIL NTS



GENERAL NOTES:

1. PROPER DESIGN MUST BE COMPLETED TO MINIMIZE PIPING AROUND DISCHARGE PIPE.
2. PROPER ORIFICE OPENING MUST BE SELECTED TO ENSURE POND DRAINS IN CORRECT AMOUNT OF TIME. MODIFICATIONS MAY BE REQUIRED IF FIELD CONDITIONS WARRANT A CHANGE.
3. EMBANKMENT MUST BE COMPACTED TO DESIGN SPECIFICATIONS.
4. EMERGENCY SPILLWAY MUST BE CORRECTLY SIZED AND EROSION PROTECTION INSTALLED.
5. EROSION PROTECTION MUST BE INSTALLED ALONG THE EMBANKMENT AND AT THE DISCHARGE END OF THE PIPE.
6. INSPECT SYSTEM REGULARLY TO ENSURE IT IS FUNCTIONING IN A CORRECT MANNER.
7. EIGHT SIZES OF SKIMMERS ARE AVAILABLE, REFER TO THE FLOW SHEET, CUT SHEET, AND INSTRUCTIONS ON WEB SITE FOR EACH SIZE.

USE ONE 4" SKIMMER WITH 3.1" DIA. ORIFICE

SKIMMER MAY BE ORDERED FROM:

J. W. FAIRCLOTH & SON INC.
WWW.FAIRCLOTHSKIMMER.COM
TELEPHONE: (919) 732-1244
FAX: (919) 732-1266
EMAIL: WARREN@FAIRCLOTHSKIMMER.COM

CALL 811 BEFORE YOU DIG — SAFE DIGGING PARTNER

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CAROLINA SOUTH — The Landplan Group South Inc. No. 153 — CERTIFICATE OF AUTHORIZATION

CAROLINA PROFESSIONAL ENGINEER No. 20979 — WILLIAM E. SHEALY — SOUTH

THEATRE DRIVE PARKING LOT

AT THE INTERSECTION OF THEATRE DR & UNIVERSITY DR
SUMTER, SC

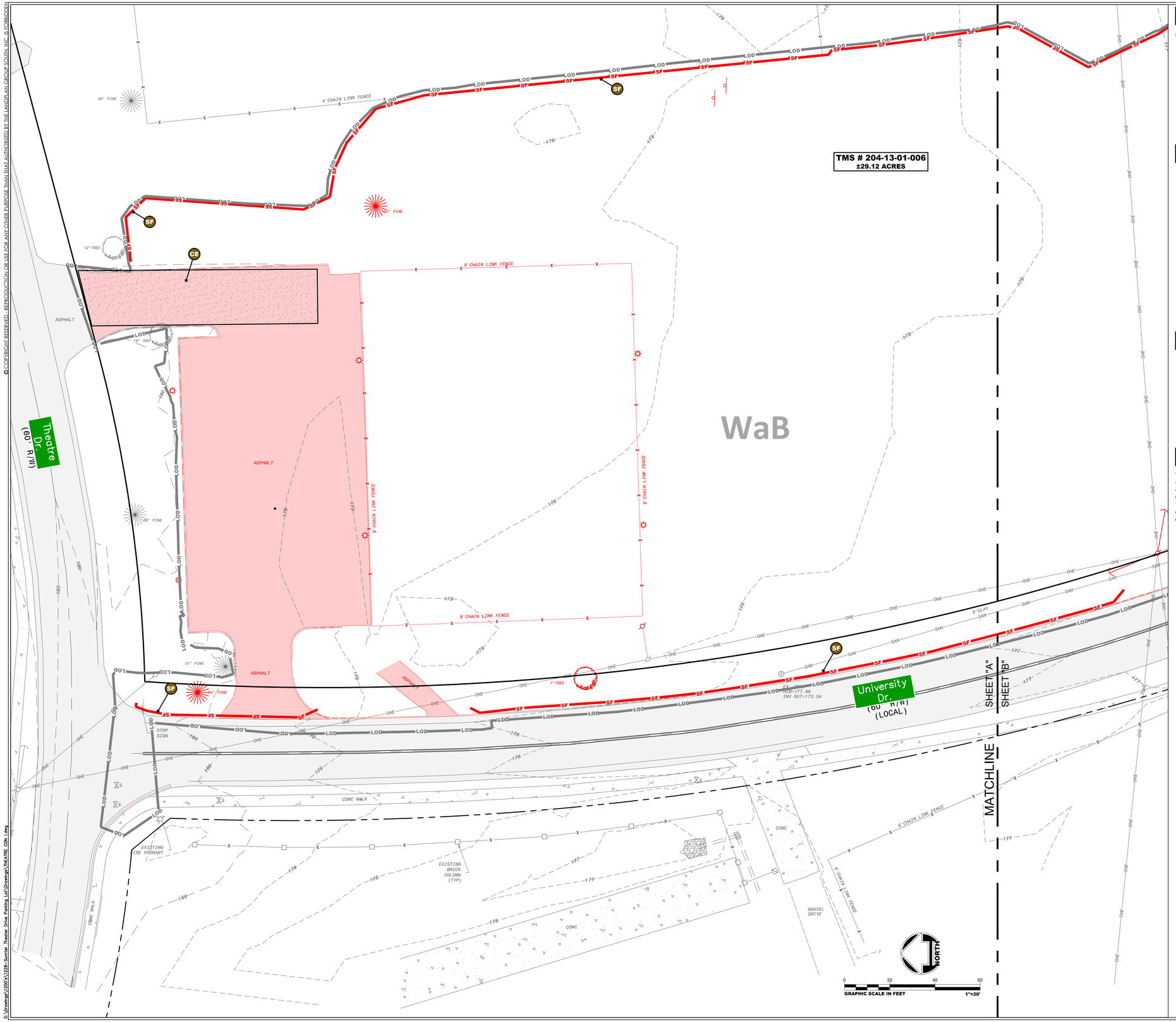
STORMWATER DETENTION POND DETAILS

JOB NO:	1228
DRAWN:	WES
DESIGNED:	WES
APPROVED:	CH
DATE:	1/28/2025
SCALE:	SEE GRAPHIC SCALE

C301

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SWPPP BMP LEGEND

SEE DETAILS FOR MORE INFORMATION ON EACH BMP

LIMITS OF DISTURBANCE — LOD — LOD — 3.4 ACRES

SF — SILT FENCE (TO BE WIRE BACKED AS REQ'D)

CE — TEMPORARY CONSTRUCTION ENTRANCE

CONSTRUCTION SEQUENCE - PHASE 1

1. RECEIVE PLAN APPROVALS FROM CITY OF SUMTER AND NPDES COVERAGE FROM SCDES
2. SCHEDULE AND CONDUCT A PRE-CONSTRUCTION MEETING AS REQ'D.
3. NOTIFY CITY OF SUMTER/SCDES EQC REGIONAL OFFICE 48 HOURS PRIOR TO BEGINNING LAND-DISTURBANCE ACTIVITIES
4. BEGIN INSTALLATION OF INITIAL CONTROLS.
5. INSTALL STABILIZED CONSTRUCTION ENTRANCE.
6. DEMARK ANY SENSITIVE AREAS SLATED FOR PROTECTION SUCH AS TREES, WETLANDS, STREAMS, ETC.
7. CONTRACTOR SHALL CONTINUE TO INSTALL INITIAL LAND DISTURBANCE TEMPORARY BMPS, SUCH AS CONSTRUCTION ENTRANCE(S), PERIMETER SILT FENCING, ETC AS SHOWN ON INITIAL PHASE SWPPP. CLEAR AND GRUB ONLY AS NECESSARY TO FACILITATE INSTALLATION OF THESE INITIAL CONTROLS. CONTRACTOR SHALL NOT BEGIN MASS GRADING OR ANY DISTURBANCE BEYOND WHAT IS NECESSARY FOR INSTALLATION OF INITIAL BMPS.
8. AFTER INSPECTION OF INITIAL BMPS IS APPROVED BY LOCAL AUTHORITIES AND THIRD PARTY INSPECTOR, PROCEED TO CONSTRUCTION PHASE SWPPP BMPS.

GENERAL SWPPP NOTES

A. CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES HAVING UNDERGROUND UTILITIES ON SITE OR IN RIGHT-OF-WAY PRIOR TO EXCAVATION. CONTRACTOR SHALL CONTACT UTILITY LOCATING COMPANY AND LOCATE ALL UTILITIES PRIOR TO GRADING START."CONTACT PALMETTO UTILITY PROTECTION SERVICE (PUPS) @ 811 OR 888-721-7877, A MINIMUM OF 72 HOURS BEFORE DIGGING."

B. CONTRACTOR SHALL PROVIDE AS-BUILT SURVEY INFORMATION TO THE DESIGN ENGINEER TO DETERMINE THAT ALL SEDIMENT BASINS AND/OR POST CONSTRUCTION STORMWATER MITIGATION FACILITIES CONFIGURATION, INCLUDING OUTLET STRUCTURE ELEVATIONS, DAM ELEVATIONS, SPILLWAY ELEVATIONS AND BASIN VOLUMES ARE IN ACCORDANCE WITH APPROVED DESIGN.

ENGINEER'S 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."

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SOUTH CAROLINA — CERTIFICATE OF AUTHORIZATION — The Landplan Group South Inc. No. 153

SOUTH CAROLINA — REGISTERED PROFESSIONAL ENGINEER — No. 20979 — WADE SWEET — 3/25/2025

THEATRE DRIVE PARKING LOT

AT THE INTERSECTION OF THEATRE DR & UNIVERSITY DR
SUMTER, SC

SWPPP PHASE 1 - INITIAL PHASE

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JOB NO:	1228
DRAWN:	WES
DESIGNED:	WES
APPROVED:	CH
DATE:	1/28/2025
SCALE:	SEE GRAPHIC SCALE

C401A

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TMS # 204-13-01-006
±29.12 ACRES

WaB

University Dr. (60' R/W) (LOCAL)

SPEED LIMIT 30

MATCHLINE SHEET "A" SHEET "B"

EXISTING WATER VALVE BOX

DROP INLET RIM=175.66 INV IN=173.38 INV OUT=173.34

DROP INLET INV OUT=173.60

CATCH BASIN RIM=176.20 INV (E)=173.30 INV (S)=173.30 INV (W)=173.20

DROP INLET RIM=175.35 INV IN=173.13 INV OUT=173.00

DROP INLET RIM=175.46 INV IN=172.99 INV OUT=172.86

DROP INLET RIM=175.39 INV IN=172.98 INV OUT=172.85

DROP INLET RIM=177.96 INV OUT=173.34

JUNCTION BOX (N)=172.13 INV IN (E-8')=172.11 INV IN (E-4')=172.14 INV OUT=172.00

EXIST. CONC. BLDG

ASPHALT

CONC WALK

SWING GATE

TRACK

GRAVEL DRIVE

6' CHAIN LINK FENCE

8' CHAIN LINK FENCE

4' CHAIN LINK FENCE

8" CLAY

15" RCP

18" RCP

24" OAK

26" OAK

32" OAK

38" OAK

GRAPHIC SCALE IN FEET 0 20 40 60 1"=20'

NORTH

SWPPP BMP LEGEND

SEE DETAILS FOR MORE INFORMATION ON EACH BMP

LIMITS OF DISTURBANCE — LOD — LOD — 3.4 ACRES

SF SILT FENCE — SF — SF — (TO BE WIRE BACKED AS REQ'D)

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CAROLINA — The Landplan Group South Inc. — No. 153 — CERTIFICATE OF AUTHORIZATION — SOUTH

SOUTH CAROLINA — PROFESSIONAL ENGINEER — No. 20979 — REGISTERED — WADE S. NIEPLA — STATE OF SOUTH

THEATRE DRIVE PARKING LOT

AT THE INTERSECTION OF THEATRE DR & UNIVERSITY DR
SUMTER, SC

SWPPP PHASE 1 - INITIAL PHASE

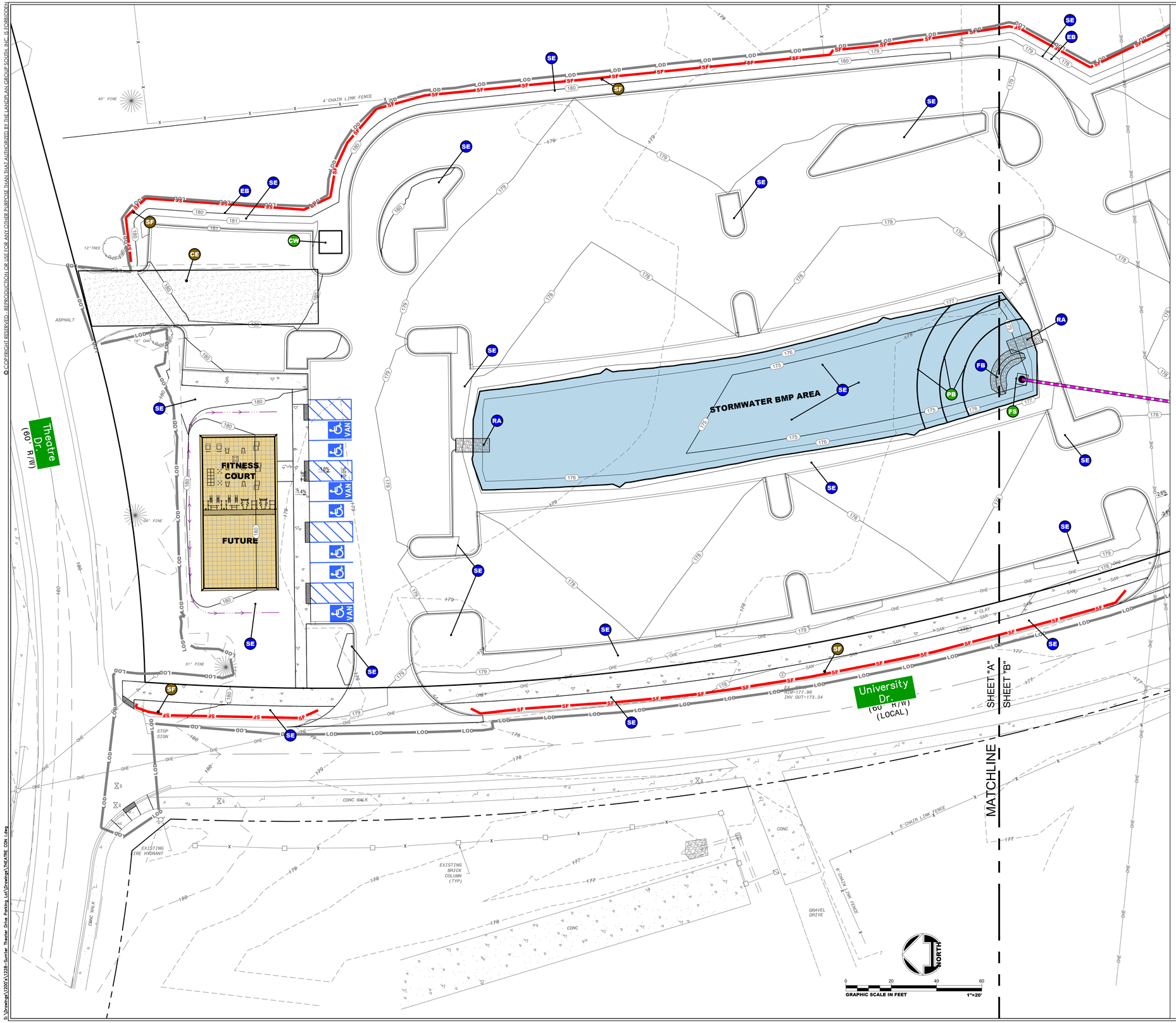
JOB NO:	1228
DRAWN:	WES
DESIGNED:	WES
APPROVED:	CH
DATE:	1/28/2025
SCALE:	SEE GRAPHIC SCALE

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SWPPP BMP LEGEND

SEE DETAILS FOR MORE INFORMATION ON EACH BMP

- LIMITS OF DISTURBANCE — LOD — LOD
- SF — SILT FENCE (TO BE WIRE BACKED AS REQ'D) — SF — SF
- CE — TEMPORARY CONSTRUCTION ENTRANCE
- CW — CONCRETE WASHOUT
- EB — EROSION CONTROL BLANKET (USE AS-NEEDED ACCORDING TO SITE CONDITIONS)
- SE — SEEDING
- TS — TEMPORARY STOCKPILE
- FS — FLOATING SKIMMER
- RA — RIPRAP APRON OUTLET PROTECTION (INSTALL 6" DIA RIPRAP, 12' DEEP OVER GEOTEXTILE. APRON TO BE 6' MIN. WIDTH AND EXTEND TO BOTTOM OF POND AS REQ'D)
- FB — FILTER BERM
- PB — POUROUS BAFFLES

CONSTRUCTION SEQUENCE - PHASE 2

1. CONTRACTOR MAY PROCEED WITH MASS GRADING, IN ACCORDANCE WITH APPROVED INITIAL PHASE SEDIMENT/EROSION CONTROL PLANS (SWPPP)
2. INITIAL FOCUS OF GRADING OPERATIONS SHOULD BE THE CONSTRUCTION OF THE POND AREA TO BE UTILIZED AS A SEDIMENT BASIN DURING THE DURATION OF CONSTRUCTION UNTIL FINAL SITE STABILIZATION HAS BEEN ACHIEVED. INSTALL OUTLET STRUCTURE AND ALL POND BMPS SUCH AS THE FLOATING SKIMMER, POROUS BAFFLES, ETC. AS SOON AS FEASIBLE. INSTALL DIVERSION BERMS, TEMPORARY SWALES AS REQUIRED TO DIRECT SEDIMENT LADEN RUNOFF TO BASIN AS FIELD CONDITIONS DICTATE.
3. CONTRACTOR SHALL ESTABLISH AREA FOR TOP SOIL STOCK PILE. TOP SOIL SHALL BE SALVAGED AND STOCKPILED AS REQ'D. IF EXISTING CONDITIONS DO NOT YIELD ADEQUATE TOP SOIL, THE CONTRACTOR SHALL BE RESPONSIBLE FOR SECURING TOP SOIL FOR FINAL GRADES IN NON-PAVED AREAS AS REQ'D.
4. START GRADING, CLEARING, AND GRUBBING ACTIVITY. CONTRACTOR SHALL EXCAVATE TOP SOIL, WHERE NECESSARY, AND STORE IN DESIGNATED STOCK PILE ZONE.
5. PROVIDE GROUND COVER FOR ALL AREAS WHICH WILL NOT BE DISTURBED BY CONSTRUCTION WITHIN 14 DAYS.
6. ESTABLISH FINAL GRADES FOR BLDG PAD, TRUCK COURT, AND OTHER PAVED/GRAVELED AREAS, ETC. (CONTACT SWPPP ENGR AND EROSION CONTROL INSPECTOR IF EXISTING CONDITIONS PRESENT COMPLICATIONS WITH MEETING THE INTENT OF APPROVED SWPPP)
7. MAINTAIN REGULAR MAINTENANCE OF EROSION/SEDIMENT CONTROL BMPS
8. CONTRACTOR SHALL STABILIZE ANY GRADES THAT HAVE BEEN COMPLETED WITH TEMPORARY OR PERMANENT STABILIZATION. FOR EXAMPLE, IF A PORTION OF SITE IS BROUGHT TO GRADE AT AN EARLY PHASE AND MAY NOT BE SUBJECT TO FURTHER DISTURBANCE, THE FINAL STABILIZATION SHOULD BE COMPLETED FOR THIS AREA.
9. PROCEED WITH FINAL RESTORATION OF TOP SOIL IN NON-PAVED AREAS AND FINE GRADING.

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SOUTH CAROLINA PROFESSIONAL ENGINEER — No. 20979 — WES HAYNES

THEATRE DRIVE PARKING LOT

AT THE INTERSECTION OF THEATRE DR & UNIVERSITY DR
SUMTER, SC

SWPPP PHASE 2 - CONSTRUCTION PHASE

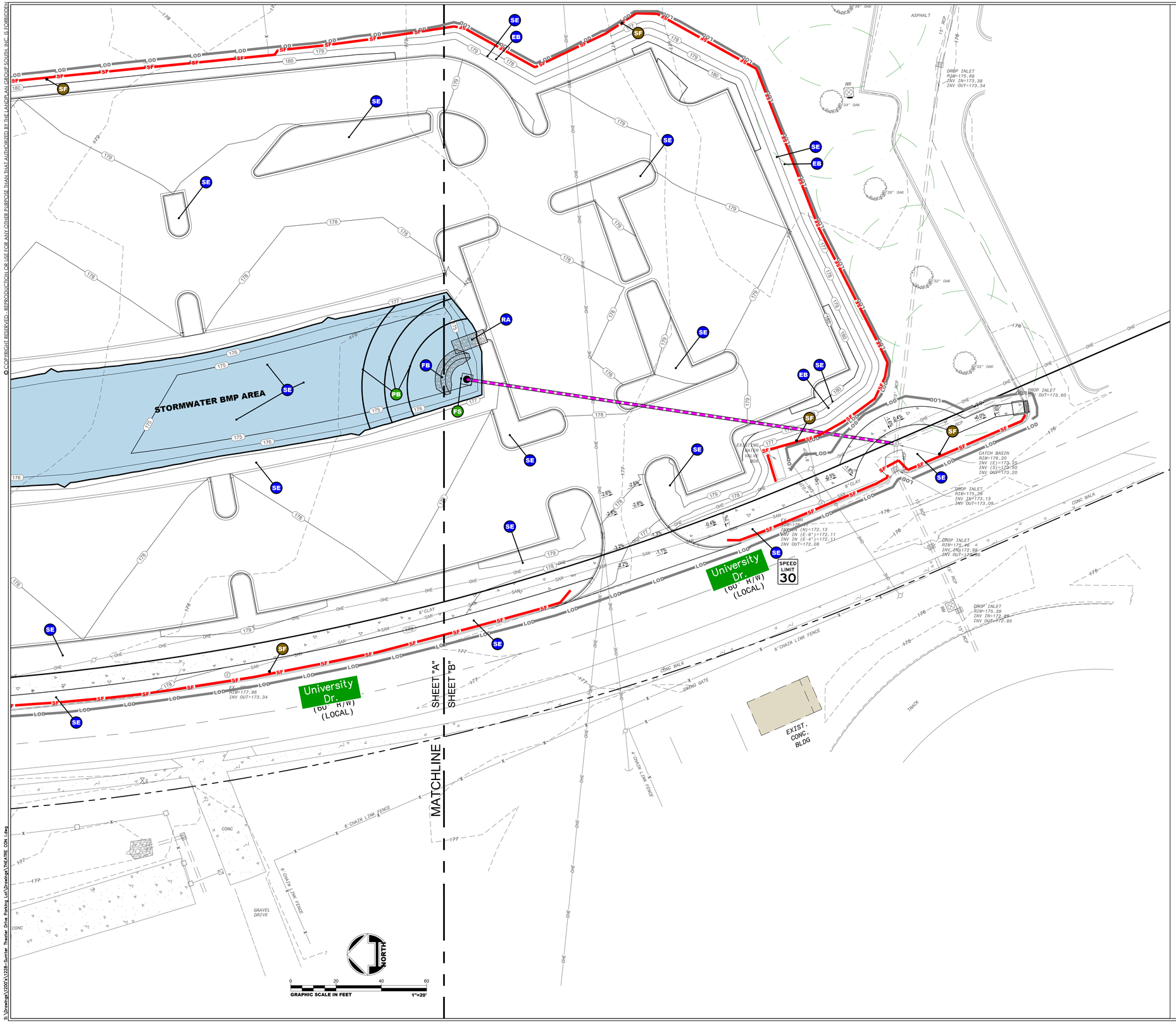
JOB NO:	1228
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APPROVED:	CH
DATE:	1/28/2025
SCALE:	SEE GRAPHIC SCALE

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SWPPP BMP LEGEND

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- (CW) **CONCRETE WASHOUT**
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- (SE) **SEEDING**
- (TS) **TEMPORARY STOCKPILE**
- (FS) **FLOATING SKIMMER**
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- (FB) **FILTER BERM**
- (PB) **POUROUS BAFFLES**

CONSTRUCTION SEQUENCE - PHASE 2

1. CONTRACTOR MAY PROCEED WITH MASS GRADING, IN ACCORDANCE WITH APPROVED INITIAL PHASE SEDIMENT/EROSION CONTROL PLANS (SWPPP)
2. INITIAL FOCUS OF GRADING OPERATIONS SHOULD BE THE CONSTRUCTION OF THE POND AREA TO BE UTILIZED AS A SEDIMENT BASIN DURING THE DURATION OF CONSTRUCTION UNTIL FINAL SITE STABILIZATION HAS BEEN ACHIEVED. INSTALL OUTLET STRUCTURE AND ALL POND BMPS SUCH AS THE FLOATING SKIMMER, POROUS BAFFLES, ETC. AS SOON AS FEASIBLE. INSTALL DIVERSION BERMS, TEMPORARY SWALES AS REQUIRED TO DIRECT SEDIMENT LADEN RUNOFF TO BASIN AS FIELD CONDITIONS DICTATE.
3. CONTRACTOR SHALL ESTABLISH AREA FOR TOP SOIL STOCK PILE. TOP SOIL SHALL BE SALVAGED AND STOCKPILED AS REQ'D. IF EXISTING CONDITIONS DO NOT YIELD ADEQUATE TOP SOIL, THE CONTRACTOR SHALL BE RESPONSIBLE FOR SECURING TOP SOIL FOR FINAL GRADES IN NON-PAVED AREAS AS REQ'D.
4. START GRADING, CLEARING, AND GRUBBING ACTIVITY. CONTRACTOR SHALL EXCAVATE TOP SOIL, WHERE NECESSARY, AND STORE IN DESIGNATED STOCK PILE ZONE.
5. PROVIDE GROUND COVER FOR ALL AREAS WHICH WILL NOT BE DISTURBED BY CONSTRUCTION WITHIN 14 DAYS.
6. ESTABLISH FINAL GRADES FOR BLDG PAD, TRUCK COURT, AND OTHER PAVED/GRAVELED AREAS, ETC. (CONTACT SWPPP ENGR AND EROSION CONTROL INSPECTOR IF EXISTING CONDITIONS PRESENT COMPLICATIONS WITH MEETING THE INTENT OF APPROVED SWPPP)
7. MAINTAIN REGULAR MAINTENANCE OF EROSION/SEDIMENT CONTROL BMPS
8. CONTRACTOR SHALL STABILIZE ANY GRADES THAT HAVE BEEN COMPLETED WITH TEMPORARY OR PERMANENT STABILIZATION. FOR EXAMPLE, IF A PORTION OF SITE IS BROUGHT TO GRADE AT AN EARLY PHASE AND MAY NOT BE SUBJECT TO FURTHER DISTURBANCE, THE FINAL STABILIZATION SHOULD BE COMPLETED FOR THIS AREA.
9. PROCEED WITH FINAL RESTORATION OF TOP SOIL IN NON-PAVED AREAS AND FINE GRADING.

GENERAL SWPPP NOTES

A. CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES HAVING UNDERGROUND UTILITIES ON SITE OR IN RIGHT-OF-WAY PRIOR TO EXCAVATION. CONTRACTOR SHALL CONTACT UTILITY LOCATING COMPANY AND LOCATE ALL UTILITIES PRIOR TO GRADING START."CONTACT PALMETTO UTILITY PROTECTION SERVICE (PUPS) @ 811 OR 888-721-7877, A MINIMUM OF 72 HOURS BEFORE DIGGING."

B. CONTRACTOR SHALL PROVIDE AS-BUILT SURVEY INFORMATION TO THE DESIGN ENGINEER TO DETERMINE THAT ALL SEDIMENT BASINS AND/OR POST CONSTRUCTION STORMWATER MITIGATION FACILITIES CONFIGURATION, INCLUDING OUTLET STRUCTURE ELEVATIONS, DAM ELEVATIONS, SPILLWAY ELEVATIONS AND BASIN VOLUMES ARE IN ACCORDANCE WITH APPROVED DESIGN.

ENGINEER'S 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."

THE LANDPLAN GROUP SOUTH
Landscape Architecture | Engineering | Planning
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COLUMBIA, SC 29201
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WWW.LANDPLANGROUP.COM

NO.	REVISIONS	BY.	APPD.	DATE:
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SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION
The Landplan Group South Inc.
No. 153

SOUTH CAROLINA PROFESSIONAL ENGINEER
No. 20979
CHRISTOPHER M. HOWE
2023151038

THEATRE DRIVE PARKING LOT

AT THE INTERSECTION OF THEATRE DR & UNIVERSITY DR
SUMTER, SC

SWPPP PHASE 2 - CONSTRUCTION PHASE

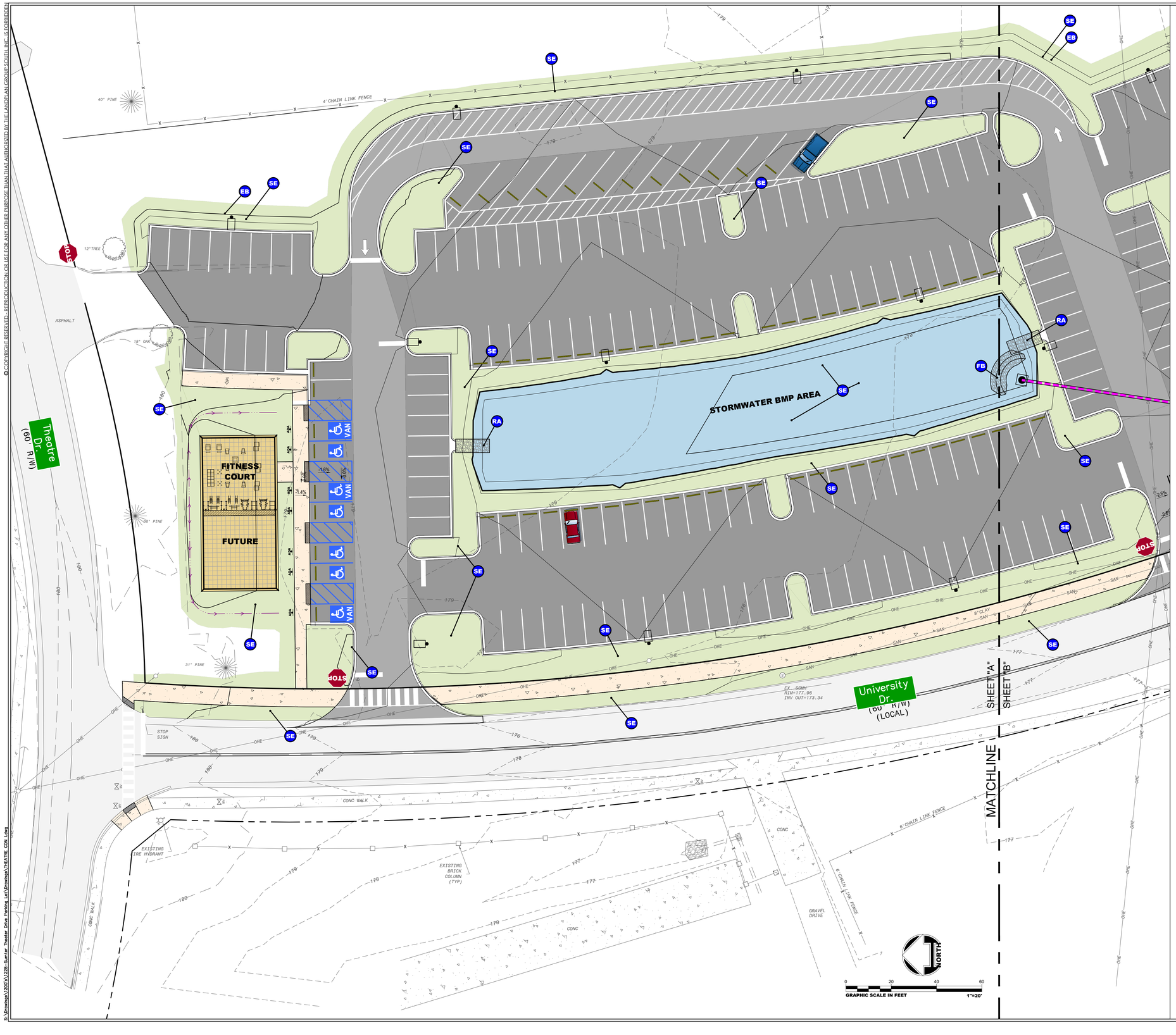
JOB NO:	1228
DRAWN:	WES
DESIGNED:	WES
APPROVED:	CH
DATE:	1/28/2025
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SWPPP BMP LEGEND

SEE DETAILS FOR MORE INFORMATION ON EACH BMP

- SE — SEEDING
- RA — RIPRAP APRON OUTLET PROTECTION
- FB — FILTER BERM

CONSTRUCTION SEQUENCE - PHASE 3

1. COMPLETE FINAL MEASURES FOR STABILIZATION OF PROJECT SITE, SEED, MULCH, ETC.
2. WITH PERMISSION OF EROSION CONTROL INSPECTOR, REMOVE TEMPORARY SEDIMENTATION DEVICES AND REMOVE ACCUMULATED SEDIMENT, SPREAD, AND SEED.
3. INSTALL OR CONVERT ANY APPLICABLE TEMPORARY BMPS TO POST-CONSTRUCTION CONFIGURATION, SUCH AS: DETENTION BASINS AND DETENTION POND OUTLET STRUCTURES, RESTORATION OF DETENTION BASINS POND BOTTOMS (SEDIMENT DEPOSITION REMOVAL, FINAL STABILIZATION, ETC. CONTACT LOCAL INSPECTOR FOR PERMISSION TO CONVERT SEDIMENT PONDS TO FINAL DETENTION POND CONFIGURATIONS.
4. SUBMIT APPROPRIATE AS-BUILT SURVEYS TO ENGINEER FOR REVIEW AND APPROVAL OF THE PERFORMED CONSTRUCTION. CONSTRUCTION SHALL BE IN GENERAL ACCORDANCE WITH THE DESIGN INTENT AND CONSTRUCTION DOCUMENTS. IF ANY DEFICIENCIES ARE NOTED, THE CONTRACTOR WILL BE NOTIFIED AND REQUIRED TO REMEDY ANY ISSUES IN A TIMELY MANNER. IT IS ADVISED THAT THE CONTRACTOR SUBMIT TO THE ENGINEER ANY AS-BUILT SURVEY INFORMATION AS SOON AS PRACTICALLY POSSIBLE TO AVOID PROJECT DELIVERY SCHEDULE DELAYS.
5. AWAIT APPROVAL FROM SCDES OF AS-BUILT SUBMITTAL BY ENGINEER.
6. CONTACT ENGINEER FOR PERMISSION TO FILE NOTICE OF TERMINATION (N.O.T.) WITH SCDES.
7. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED DEPENDING ON FIELD CONDITIONS.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CORRECTING ANY EROSION THAT MAY OCCUR OVER THE DURATION OF CONSTRUCTION AND UNTIL N.O.T. IS FILED WITH SCDES.

GENERAL SWPPP NOTES

A. CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES HAVING UNDERGROUND UTILITIES ON SITE OR IN RIGHT-OF-WAY PRIOR TO EXCAVATION. CONTRACTOR SHALL CONTACT UTILITY LOCATING COMPANY AND LOCATE ALL UTILITIES PRIOR TO GRADING START."CONTACT PALMETTO UTILITY PROTECTION SERVICE (PUPS) @ 811 OR 888-721-7877, A MINIMUM OF 72 HOURS BEFORE DIGGING."

B. CONTRACTOR SHALL PROVIDE AS-BUILT SURVEY INFORMATION TO THE DESIGN ENGINEER TO DETERMINE THAT ALL SEDIMENT BASINS AND/OR POST CONSTRUCTION STORMWATER MITIGATION FACILITIES CONFIGURATION, INCLUDING OUTLET STRUCTURE ELEVATIONS, DAM ELEVATIONS, SPILLWAY ELEVATIONS AND BASIN VOLUMES ARE IN ACCORDANCE WITH APPROVED DESIGN.

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SOUTH CAROLINA — The Landplan Group South Inc. — No. 153 — CERTIFICATE OF AUTHORIZATION

CAROLINA — CHRISTOPHER WILLIAM HOLT — No. 20979 — REGISTERED PROFESSIONAL LANDSCAPE ARCHITECT — SOUTH

THEATRE DRIVE PARKING LOT

AT THE INTERSECTION OF THEATRE DR & UNIVERSITY DR
SUMTER, SC

SWPPP PHASE 3 - STABILIZATION PHASE

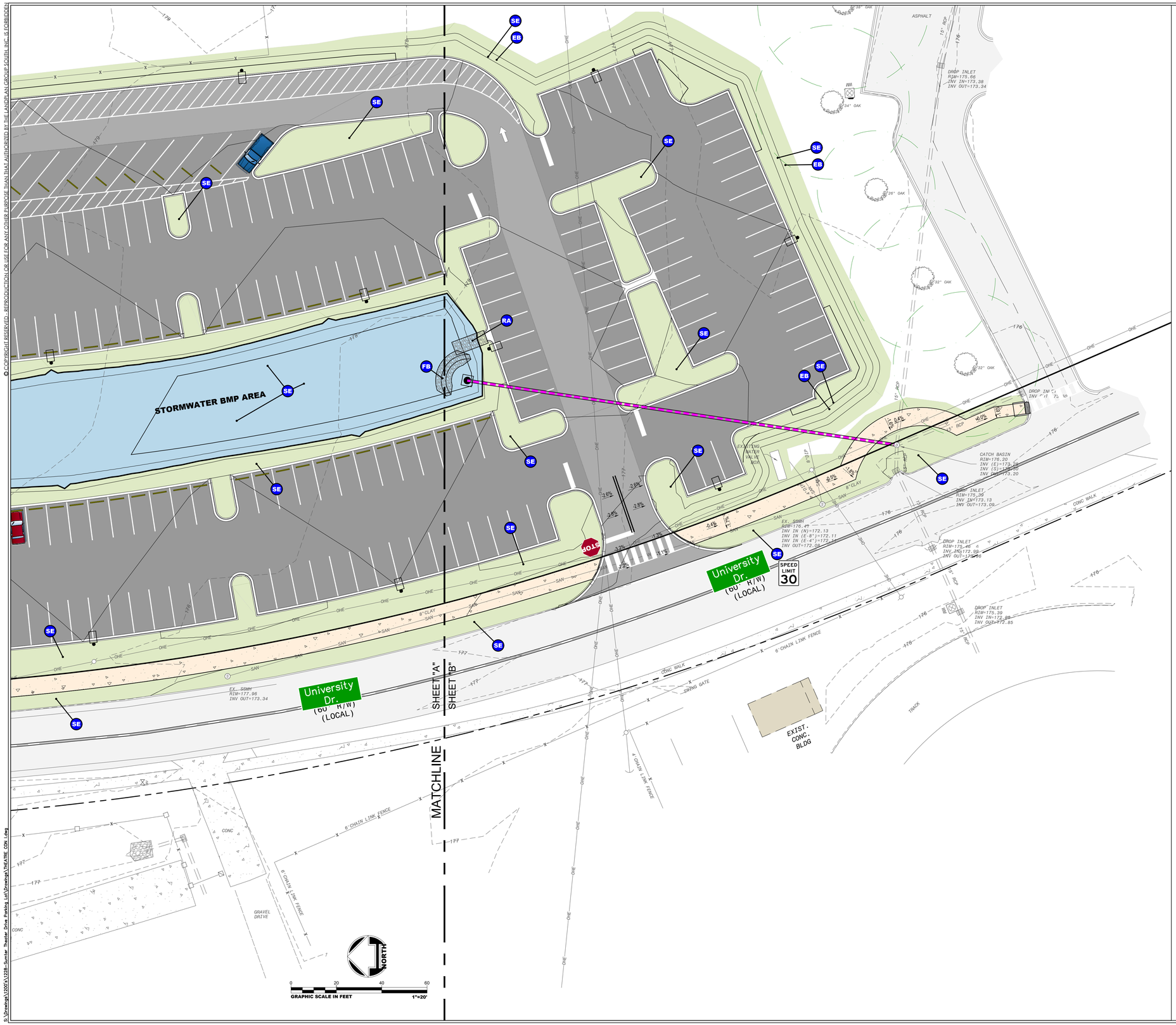
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SWPPP BMP LEGEND

SEE DETAILS FOR MORE INFORMATION ON EACH BMP

- **SE** — **SEEDING**
- **RA** — **RIPRAP APRON OUTLET PROTECTION**
- **FB** — **FILTER BERM**

CONSTRUCTION SEQUENCE - PHASE 3

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SOUTH CAROLINA — PROFESSIONAL ENGINEER — No. 20979 — WILLIAM E. SHELLEY — 03/31/2026 — REGISTERED

THEATRE DRIVE PARKING LOT

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SWPPP PHASE 3 - STABILIZATION PHASE

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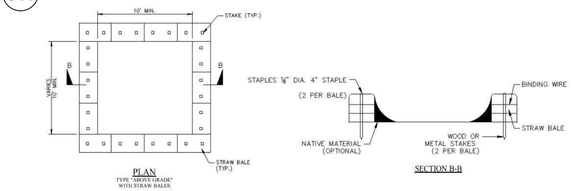
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CONCRETE WASHOUT DETAIL

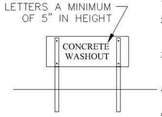
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STRAW BALE BARRIER CONCRETE WASHOUT



NOTES:

1. ACTUAL LAYOUT DETERMINED IN FIELD.
2. INSTALL CONCRETE WASHOUT SIGN (24"X24", MINIMUM) WITHIN 30' OF THE TEMPORARY CONCRETE WASHOUT FACILITY.
3. TEMPORARY WASHOUT AREA MUST BE AT LEAST 50' FROM A STORM DRAIN, CREEK BANK OR PERIMETER CONTROL.
4. CLEAN OUT CONCRETE WASHOUT AREA WHEN 50% FULL.
5. THE KEY TO FUNCTIONAL CONCRETE WASHOUTS IS WEEKLY INSPECTIONS, ROUTINE MAINTENANCE, AND REGULAR CLEAN OUT.
6. SILT FENCE SHALL BE INSTALLED AROUND PERIMETER OF CONCRETE WASHOUT AREA EXCEPT FOR THE SIDE UTILIZED FOR ACCESSING THE WASHOUT.
7. A ROCK CONSTRUCTION ENTRANCE MAY BE NECESSARY ALONG ONE SIDE OF THE WASHOUT TO PROVIDE VEHICLE ACCESS.



CONCRETE WASHOUT SIGN DETAIL

South Carolina Department of Health and Environmental Control

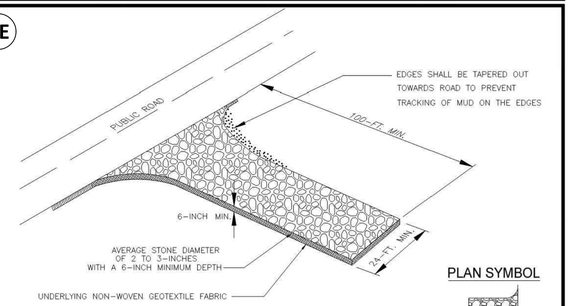
CONCRETE WASHOUT
STRAW BALES OR ABOVE GROUND

STANDARD DRAWING NO. RC-07 PAGE 1 of 1

NOT TO SCALE — FEBRUARY 2014 DATE

TEMPORARY CONSTRUCTION ENTRANCE DETAIL

CE



PLAN SYMBOL

SPECIFICATION	SIZE
ROCK PAD THICKNESS	6 INCHES
ROCK PAD WIDTH	24 FEET
ROCK PAD LENGTH	100 FEET
ROCK PAD STONE SIZE	D = 2-3 INCHES

South Carolina Department of Health and Environmental Control

CONSTRUCTION ENTRANCE

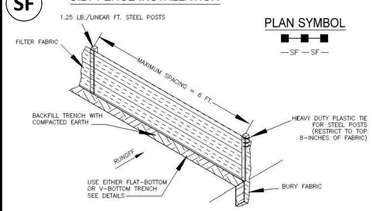
STANDARD DRAWING NO. SC-06 PAGE 1 of 2

NOT TO SCALE — FEBRUARY 2014 DATE

SILT FENCE DETAIL

SF

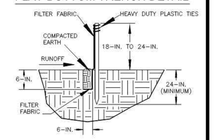
SILT FENCE INSTALLATION



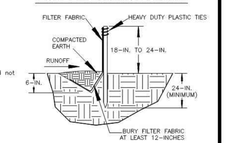
PLAN SYMBOL

— SF — SF —

FLAT-BOTTOM TRENCH DETAIL



V-SHAPED TRENCH DETAIL



SILT FENCE – GENERAL NOTES

1. Do not place silt fence across channels or in other areas subject to concentrated flows. Silt fence should not be used as a velocity control BMP. Concentrated flows are any flows greater than 0.5 cfs.
2. Maximum sheet or overland flow path length to the silt fence shall be 100–feet.
3. Maximum slope steepness (normal [perpendicular] to the fence line) shall be 2:1.
4. Silt fence joints, when necessary, shall be completed by one of the following options:
   - Wrap each fabric together at a support post with both ends fastened to the post, with a 1–foot minimum overlap;
   - Overlap silt fence by installing 3–feet passed the support post to which the new silt fence roll is attached. Attach old roll to new roll with heavy–duty plastic ties; or,
   - Overlap entire width of each silt fence roll from one support post to the next support post.
5. Attach filter fabric to the steel posts using heavy–duty plastic ties that are evenly spaced within the top 8–inches of the fabric.
6. Install the silt fence perpendicular to the direction of the stormwater flow and place the silt fence the proper distance from the toe of steep slopes to provide sediment storage and access for maintenance and cleanout.
7. Install Silt Fence Checks (Tie–Backs) every 50–100 feet, dependent on slope, along silt fence that is installed with slope and where concentrated flows are expected or are documented along the proposed/installed silt fence.

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SILT FENCE

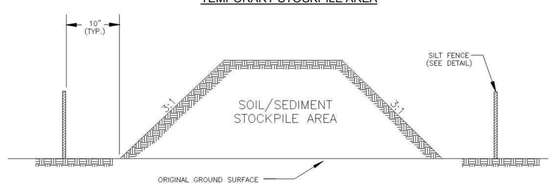
STANDARD DRAWING NO. SC-03 Page 1 of 2

NOT TO SCALE — FEBRUARY 2014 DATE

TEMPORARY STOCKPILE DETAIL

TS

TEMPORARY STOCKPILE AREA



NOTES:

1. SILT FENCE TO EXTEND AROUND ENTIRE PERIMETER OF STOCKPILE, OR IF STOCKPILE AREA IS LOCATED ON/NEAR A SLOP THE SILT FENCE IS TO EXTEND ALONG CONTOURS OF THE DOWN–GRADIENT AREA.
2. IF STOCKPILE IS TO REMAIN FOR MORE THAN 14 DAYS, TEMPORARY STABILIZATION MEASURES MUST BE IMPLEMENTED.
3. SILT FENCE SHALL BE MAINTAINED UNTIL STOCKPILE AREA HAS EITHER BEEN REMOVED OR PERMANENTLY STABILIZED.
4. THE KEY TO FUNCTIONAL TEMPORARY STOCKPILE AREAS IS WEEKLY INSPECTIONS, ROUTINE MAINTENANCE, AND REGULAR SEDIMENT REMOVAL.

South Carolina Department of Health and Environmental Control

TEMPORARY STOCKPILE

STANDARD DRAWING NO. SC-15 PAGE 1 of 1

NOT TO SCALE — FEBRUARY 2014 DATE

CONSTRUCTION ENTRANCE – GENERAL NOTES

1. Stabilized construction entrances should be used at all points where traffic will egress/ingress a construction site onto a public road or any impervious surfaces, such as parking lots.
2. Install a non–woven geotextile fabric prior to placing any stone.
3. Install a culvert pipe across the entrance when needed to provide positive drainage.
4. The entrance shall consist of 2–inch to 3–inch D50 stone placed at a minimum depth of 6–inches.
5. Minimum dimensions of the entrance shall be 24–feet wide by 100–feet long, and may be modified as necessary to accommodate site constraints.
6. The edges of the entrance shall be tapered out towards the road to prevent tracking at the edge of the entrance.
7. Divert all surface runoff and drainage from the stone pad to a sediment trap or basin or other sediment trapping structure.
8. Limestone may not be used for the stone pad.

CONSTR. ENTRANCE – INSPECTION & MAINTENANCE

1. The key to functional construction entrances is weekly inspections, routine maintenance, and regular sediment removal.
2. Regular inspections of construction entrances shall be conducted once every calendar week and, as recommended, within 24–hours after each rainfall even that produces 1/2–inch or more of precipitation.
3. During regular inspections, check for mud and sediment buildup and pad integrity. Inspection frequencies may need to be more frequent during long periods of wet weather.
4. Reshape the stone pad as necessary for drainage and runoff control.
5. Wash or replace stones as needed and as directed by site inspector. The stone in the entrance should be washed or replaced whenever the entrance fails to reduce the amount of mud being carried off–site by vehicles. Frequent washing will extend the useful life of stone pad.
6. Immediately remove mud and sediment tracked or washed onto adjacent impervious surfaces by brushing or sweeping. Flushing should only be used when the water can be discharged to a sediment trap or basin.
7. During maintenance activities, any broken pavement should be repaired immediately.
8. Construction entrances should be removed after the site has reached final stabilization. Permanent vegetation should replace areas from which construction entrances have been removed, unless area will be converted to an impervious surface to serve post–construction.

South Carolina Department of Health and Environmental Control

CONSTRUCTION ENTRANCE

STANDARD DRAWING NO. SC-06 PAGE 2 of 2

GENERAL NOTES — FEBRUARY 2014 DATE

SILT FENCE – POST REQUIREMENTS

1. Silt Fence posts must be 48–inch long steel posts that meet, at a minimum, the following physical characteristics:
   - Composed of a high strength steel with a minimum yield strength of 50,000 psi.
   - Include a standard "T" section with a nominal face width of 1.38–inches and a nominal "T" length of 1.48–inches.
   - Weigh 1.25 pounds per foot (± 8%)
2. Posts shall be equipped with projections to aid in fastening of filter fabric.
3. Steel posts may need to have a metal soil stabilization plate welded near the bottom when installed along steep slopes or installed in loose soils. The plate should have a minimum cross section of 17–square inches and be composed of 15 gauge steel, at a minimum. The metal soil stabilization plate should be completely buried.
4. Install posts to a minimum of 24–inches. A minimum height of 1– to 2–inches above the fabric shall be maintained, and a maximum height of 3 feet shall be maintained above the ground.
5. Post spacing shall be at a maximum of 6–feet on center.

SILT FENCE – FABRIC REQUIREMENTS

1. Silt fence must be composed of woven geotextile filter fabric that consists of the following requirements:
   - Composed of fibers consisting of long chain synthetic polymers of at least 85% by weight of polyolefins, polyesters, or polyamides that are formed into a network such that the filaments or yarns retain dimensional stability relative to each other;
   - Free of any treatment or coating which might adversely alter its physical properties after installation;
   - Free of any defects or flaws that significantly affect its physical and/or filtering properties; and,
   - Have a minimum width of 36–inches.
2. Use only fabric appearing on SC DOT's Qualified Products Listing (QPL), Approval Sheet #34, meeting the requirements of the most current edition of the SC DOT Standard Specifications for Highway Construction.
3. 12–inches of the fabric should be placed within excavated trench and toed in when the trench is backfilled.
4. Filter Fabric shall be purchased in continuous rolls and cut to the length of the barrier to avoid joints.
5. Filter Fabric shall be installed at a minimum of 24–inches above the ground.

SILT FENCE – INSPECTION & MAINTENANCE

1. The key to functional silt fence is weekly inspections, routine maintenance, and regular sediment removal.
2. Regular inspections of silt fence shall be conducted once every calendar week and, as recommended, within 24–hours after each rainfall even that produces 1/2–inch or more of precipitation,
3. Attention to sediment accumulations along the silt fence is extremely important. Accumulated sediment should be continually monitored and removed when necessary.
4. Remove accumulated sediment when it reaches 1/3 the height of the silt fence.
5. Removed sediment shall be placed in stockpile storage areas or spread thinly across disturbed area. Stabilize the removed sediment after it is relocated.
6. Check for areas where stormwater runoff has eroded a channel beneath the silt fence, or where the fence has sagged or collapsed due to runoff overtopping the silt fence. Install checks/tie–backs and/or reinstall silt fence, as necessary.
7. Check for tears within the silt fence, areas where silt fence has begun to decompose, and for any other circumstance that may render the silt fence ineffective. Removed damaged silt fence and reinstall new silt fence immediately.
8. Silt fence should be removed within 30 days after final stabilization is achieved and once it is removed, the resulting disturbed area shall be permanently stabilized.

South Carolina Department of Health and Environmental Control

SILT FENCE

STANDARD DRAWING NO. SC-03 PAGE 2 of 2

GENERAL NOTES — FEBRUARY 2014 DATE

TEMPORARY AND PERMANENT SEEDING RATES

SE

Temporary Seeding - Upstate

Species	lbs./ac	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Browntop Millet (Alone)	40												
Browntop Millet (Mix)	10												
Rye Grain (Alone)	56												
Rye Grain (Mix)	10												
Rye Grass (Alone)	50												
Rye Grass (Mix)	8												
For Steep Slopes/Cut Slopes													
Weeping Lovegrass (Alone)	4												
Weeping Lovegrass (Mix)	2												

Permanent Seeding - Upstate

Species	Lbs/Ac	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Bahia Grass (Alone)	40												
Bahia Grass (Mix)	30												
Bermuda Grass (hulled) (Alone)	8-12												
Bermuda Grass (hulled) (Mix)	4-6												
Fescue, Tall (KY31) Alone	40												
Fescue, Tall (KY31) mix	20												
Sericea Lespedeza (Scarified) Alone or Mix (inoculate with EL Innoculant	40												
Ladino Clover (mix only) Innoculate with AB Innoculant	2												
For Steep Slopes/Cut Slopes													
Weeping Lovegrass (Alone)	4												
Weeping Lovegrass (Mix)	2												
Crownvetch (Mix) (Inoculate with Type M Innoculant	8-10												

SCDHEC STANDARD NOTES

Standard Notes

1. If necessary, slopes, which exceed eight (8) vertical feet should be stabilized with synthetic or vegetative mats. In addition to 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.
   - Where stabilization by the 14th day is precluded by snow cover or frozen ground conditions stabilization measures must be initiated as soon as practicable.
   - 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 periodic inspection or other information indicates that a BMP has been inappropriately, or incorrectly, the Permittee must address the necessary replacement or modification required to correct the BMP within 48 hours of identification.
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 sediment before being pumped back 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 paved roadway(s) 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 et seq. 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't 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, inspections 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 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 equivalent 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 from sites are prohibited:
    - Wastewater from washout of concrete, unless managed by an appropriate control;
    - Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds and other construction materials;
    - Fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance; and
    - 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 this permit 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.

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SOUTH CAROLINA — The Landplan Group South Inc. No. 153 — CERTIFICATE OF AUTHORIZATION

CAROLINA PROFESSIONAL ENGINEER — No. 20979 — 02/28/2025 — SOUTH CAROLINA

THEATRE DRIVE PARKING LOT

AT THE INTERSECTION OF THEATRE DR & UNIVERSITY DR
SUMTER, SC

SWPPP DETAILS

JOB NO:	1228
DRAWN:	WES
DESIGNED:	WES
APPROVED:	CH
DATE:	1/28/2025
SCALE:	SEE GRAPHIC SCALE

C404

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EROSION CONTROL BLANKET DETAIL

EB

American Excelsior Company®
Earth Science Division

Proud Participant in NTPEP and Proud Member of:

PRODUCT DATA SHEET
CURLEX® I

DESCRIPTION
Curlex I erosion control blanket (ECB) consists of a specific cut of naturally seed free Great Lakes Aspen curled wood excelsior with 80% six-inch fibers or greater fiber length. It is of consistent thickness with fibers evenly distributed throughout the entire area of the blanket. The top of each blanket is covered with degradable polypropylene netting. Curlex I is also available as QuickGRASS® (green pigment). Curlex I shall be manufactured in the U.S.A.

Curlex I has a design soil loss ratio (event-based RUSLE C factor) of 018 and is typically suitable for slopes up to 2H:1V. Curlex I is rated for channel flows up to 7.0 ft/s (2.1 m/s) and 1.75 lb/ft^2 (84 Pa) shear stress.

PHYSICAL PROPERTIES
Curlex I measurements at time of manufacturing:

Width	4.0 ft (1.2 m)	8.0 ft (2.4 m)	16.0 ft (4.9 m)
Length	112.5 ft (34.29 m)	112.5 ft (34.29 m)	112.5 ft (34.29 m)
Area	50.0 yd^2 (41.8 m^2)	100.0 yd^2 (83.6 m^2)	200.0 yd^2 (167.2 m^2)
Weight*	36.5 lb (16.6 kg)	73.0 lb (33.1 kg)	146.0 lb (66.2 kg)
Fiber Count	≈7,000 per yd^2 (≈8,400 per m^2)	≈7,000 per yd^2 (≈8,400 per m^2)	≈7,000 per yd^2 (≈8,400 per m^2)
Fiber Length (80% min.)	≥6.0 in (≥15.2 cm)	≥6.0 in (≥15.2 cm)	≥6.0 in (≥15.2 cm)
Mass per Unit Area (± 10%)	0.73 lb/yd^2 (0.40 kg/m^2)	0.73 lb/yd^2 (0.40 kg/m^2)	0.73 lb/yd^2 (0.40 kg/m^2)
Net Openings	1.0 in x 2.0 in (25.4 mm x 50.8 mm)	1.0 in x 2.0 in (25.4 mm x 50.8 mm)	1.0 in x 2.0 in (25.4 mm x 50.8 mm)

TYPICAL INDEX VALUES

Index Property	Test Method	Value
Thickness	ASTM D 6525	0.411" in (10.44 mm)
Light Penetration	ASTM D 6567	20.5%
Resiliency	ASTM D 1777/ECTC	59%
Mass per Unit Area	ASTM D 6475	0.37 lb/yd^2 (0.209 kg/m^2)
MD-Tensile Strength Max.	ASTM D 6818	37.2 lb/ft (1.14 kN/m)
TD-Tensile Strength Max.	ASTM D 6818	37.2 lb/ft (0.54 kN/m)
MD-Elongation	ASTM D 6818	20.3%
TD-Elongation	ASTM D 6818	14.3%
Swell	ECTC Procedure	49%
Water Absorption	ASTM D 1117/ECTC	253%
Bench-Scale Rain Splash	ASTM D 7101	SLR = 4.12 @ 2 in/hr [1st]
Bench-Scale Rain Splash	ASTM D 7101	SLR = 4.43 @ 4 in/hr [1st]
Bench-Scale Rain Splash	ASTM D 7101	SLR = 4.79 @ 6 in/hr [1st]
Bench-Scale Shear	ASTM D 7207	2.32 lb/ft^2 @ 0.5 in soil loss [2]
Germination Improvement	ASTM D 7322	572%

* Weight is based on a dry fiber weight basis at time of manufacture. Deadline moisture content of Great Lakes Aspen excelsior is 22%.

[1] SLR is the Soil Loss Ratio, as reported by NTPEP/AASHTO. [2] Bench-scale index values should not be used for design purposes.

Made in the U.S.A.

850 Avenue H East | Arlington, Texas 76011
Phone 1-800-777-SOIL | Fax 817-385-5585 | www.Curlex.com

W1116R1217

GENERAL SPILL PREVENTION AND HAZARDOUS MATERIALS NOTES

SC DEPARTMENT of ENVIRONMENTAL SERVICES

SCDHEC 24 HOUR EMERGENCY RESPONSE

888-481-0125

HAZARDOUS MATERIALS

DESCRIPTION:
THE BMP'S DESCRIBED BELOW SHOULD BE IMPLEMENTED TO PREVENT AND CONTROL SPILLS IN A MANNER THAT MINIMIZES OR PREVENTS THE DISCHARGE OF SPILLED MATERIAL TO THE DRAINAGE SYSTEM OR WATERCOURSES. THEY APPLY TO ALL CONSTRUCTION PROJECTS AND SHOULD BE UTILIZED AWYTIME CHEMICALS AND/OR HAZARDOUS SUBSTANCES ARE STORED ON SITE. SUBSTANCES MAY INCLUDE, BUT ARE NOT LIMITED TO: SOIL STABILIZERS/BINDERS, DUST PALLIATIVES, HERBICIDES, GROWTH INHIBITORS, FERTILIZERS, DEICING/ANTI-ICING CHEMICALS, FUELS, LUBRICANTS, AND OTHER PETROLEUM DISTILLATES.

TO THE EXTENT THAT THE WORK CAN BE ACCOMPLISHED SAFELY, SPILLS OF OIL, PETROLEUM PRODUCTS, SUBSTANCES LISTED UNDER 40 CFR PARTS 110, 117, AND 302, AND SANITARY AND SEPTIC WASTES SHOULD BE CONTAINED AND CLEANED UP IMMEDIATELY.

DEVELOP AND IMPLEMENT A SPCC PLAN AS PART OF THE SWPPP IF APPROPRIATE FOR THE CONSTRUCTION SITE INVOLVED. THE SPCC PLAN WILL IDENTIFY PERSONS RESPONSIBLE FOR IMPLEMENTING THE PLAN IF A SPILL OF A DANGEROUS OR HAZARDOUS WASTE SHOULD OCURR.

IF A SPILL, REGARDLESS OR SIZE, OF A HAZARDOUS SUBSTANCE COULD REACH SURFACE WATERS, DHEC MUST BE NOTIFIED. WHEN REPORTING A SPILL, THE FOLLOWING INFORMATION MUST BE PROVIDED: REPORTING PARTY, MATERIAL RELEASED, CONCENTRATION OF MATERIAL, CONTACT PHONE NUMBER(S), RESOURCE DAMAGES (E.G., DEAD FISH), LOCATION, RESPONSIBLE PARTY, QUANTITY OF SPILL, AND CLEANUP STATUS.

PROCEDURES AND PRACTICES IN THIS BMP ARE GENERAL. THE SITE CONTRACTOR SHOULD IDENTIFY APPROPRIATE PRACTICES FOR THE SPECIFIC MATERIALS USED OR STORED ON-SITE.

BMP'S

EDUCATION:

1) EDUCATE EMPLOYEES AND SUBCONTRACTORS ON WHAT A "SIGNIFICANT SPILL" IS FOR EACH MATERIAL THEY USE, AND WHAT IS APPROPRIATE RESPONSE FOR "SIGNIFICANT" AND "INSIGNIFICANT" SPILLS.

2) EDUCATE EMPLOYEES AND SUBCONTRACTORS ON POTENTIAL DANGERS TO HUMANS AND THE ENVIRONMENT FROM SPILLS AND LEAKS.

3) HOLD REGULAR MEETINGS TO DISCUSS AND REINFORCE APPROPRIATE DISPOSAL PROCEDURES (INCORPORATE INTO REGULAR SAFETY MEETINGS).

4) PROVIDE SPECIFIC CLEANUP INSTRUCTIONS FOR DIFFERENT PRODUCTS HANDLED ON-SITE.

5) ASSIGN A PERSON TO BE IN CHARGE OF CLEANUP ASSISTANCE.

6) PREPARE A SPILL CONTAINMENT AND CLEANUP LISTS THAT ARE EASY TO FIND AND USE.

7) POST A SUMMARY OF THE CLEANUP PLAN AT APPROPRIATE LOCATIONS.

CLEANUP AND STORAGE PROCEDURECS:

1) IF A SPILL OCCURS, DEMOBILIZE IT AS SOON AS POSSIBLE.

2) IF THERE IS A CHANCE THAT THE SPILL COULD ENTER A STORM DRAIN OR SEWER, PLUG THE INLET AND TURN OFF OR DIVERT ANY INCOMING WATER.

3) COVER THE SPILL WITH ABSORBENT MATERIAL SUCH AS KITTY LITTER OR SAWDUST. DO NOT USE STRAW. DISPOSE OF THE USED ABSORBENT PER MANUFACTURER'S INSTRUCTIONS. IF THE SPILL IS FLAMMABLE, DISPOSE OF AS DIRECTED BY THE LOCAL FIRE MARSHAL.

4) KEEP THE AREA WELL VENTILATED.

5) MINOR SPILLS - MINOR SPILLS TYPICALLY INVOLVE SMALL QUANTITIES OF OIL, GASOLINE, PAINT, ETC., WHICH CAN BE CONTROLLED BY THE FIRST RESPONDER AT THE DISCOVERY OF THE SPILL. USE ABSORBENT MATERIALS ON SMALL SPILLS RATHER THAN HOSING DOWN OR BURYING THE SPILL.

6) SEMI-SEGNIFICANT SPILLS - SEMI-SIGNIFICANT SPILLS STILL CAN BE CONTROLLED BY THE FIRST RESPONDER ALONG WITH THE AID OF OTHER SPERSONNEL SUCH AS LABORERS AND THE FOREMAN, ETC. THIS RESPONSE MAY REQUIRE THE CESSATION OF ALL OTHER ACTIVITIES.

7) CONTAIN SPILLS IMMEDIATELY:
IF THE SPILL OCCURS ON PAVED OR IMPERMEABLE SURFACES, CLEAN UP USING "DRY" METHODS (ABSORBENT MATERIALS, CAT LITTER AND/OR RAGS). CONTAIN THE SPILL BY ENCIRCLING WITH ABSORBENT MATERIALS AND DO NOT LET THE SPILL SPREAD WIDELY.

IF THE SPILL OCCURS IN DIRT AREAS, IMMEDIATELY CONTAIN THE SPILL BY CONSTRUCTING AN EARTHEN DIKE.

IF THE SPILL OCCURS DURING RAIN, TO THE EXTENT THAT IT DOES NOT COMPROMISE CLEAN UP ACTIVITIES, COVER THE SPILL WITH TARPS OR OTHER MATERIAL TO PREVENT CONTAMINATING RUNOFF.

8) SIGNIFICANT/HAZARDOUS SPILLS- FOR SIGNIFICANT OR HAZARDOUS SPILLS THAT CANNOT BE CONTROLLED BY PERSONNEL IN THE IMMEDIATE VICINTY, THE SERVICES OF A SPILLS CONTRACTOR OR A HAZ-MAT TEAM SHOULD BE OBTAINED IMMEDIATELY. CONSTRUCTION PERSONNEL SHOULD NOT ATTEMPT TO CLEAN UP THE SPILL UNTIL THE APPROPRIATE AND QUALIFIED STAFF HAS ARRIVED AT THE JOB SITE.

9) SPILLS SHOULD NOT BE BURIED OR WASHED WITH WATER.

10) USED CLEAN UP MATERIALS, CONTAMINATED MATERIALS, AND RECOVERED SPILL MATERIAL THAT ARE NO LONGER SUITABLE FOR THE INTENDED PURPOSE SHOULD BE STORED AND DISPOSED OF PROPERLY.

11) WATER USED FOR CLEANING AND DECONTAMINATION SHOULD NOT BE ALLOWED TO ENTER STORM DRAINS OR WATERCOURSES AND SHOULD BE COLLECTED AND DISPOSED OF AS DESCRIBED IN LIQUID WASTE MANAGEMENT.

12) PROPER STORAGE, CLEAN-UP AND SPILL REPORTING INSTRUCTIONS FOR HAZARDOUS MATERIALS STORED OR USED ON THE PROJECT SITE SHOULD BE POSTED AT ALL TIMES IN AN OPEN, CONSPICUOUS AND ACCESSIBLE LOCATION.

13) WASTE STORAGE AREAS SHOULD BE KEPT CLEAN, WELL-ORGANIZED AND EQUIPPED WITH AMBLE CLEAN-UP SUPPLIES AS APPROPRIATE FOR THE MATERIALS BEING STORED. PERIMETER CONTROLS, CONTAINMENT STRUCTURES, COVERS AND LINERS SHOULD BE REPAIRED OR REPLACED AS NEEDED TO MAINTAIN PROPER FUNCTION.

INSPECTION AND MAINTENANCE

1) VERIFY WEEKLY, THAT SPILL CONTROL CLEAN-UP MATERIALS ARE LOCATED NEAR MATERIAL STORAGE, UNLOADING AND USE AREAS.

2) UPDATE SPCC PLANS AND STOCK APPROPRIATE CLEAN-UP MATERIALS WHENEVER CHANGES OCCUR IN THE TYPES OF CHEMICALS USED OR STORED ONSITE.

STORM DRAINAGE SYSTEM INSPECTION AND CLEANING

1. INSPECT AND CLEAN AS NEEDED, ALL INLETS, CATCH BASINS AT LEAST ONCE A YEAR.
2. INSPECT AND CLEAN AS NEEDED, ALL INLETS, CATCH BASINS IN KNOWN PROBLEM AREAS MORE THAN ONCE A YEAR.
3. INSPECT AND CLEAN AS NEEDED ALL STORM DRAINAGE LINES IN KNOW PROBLEM AREAS MORE THAN ONCE A YEAR.
4. INSPECT AND CLEAN AS NEEDED AND DRAINAGE DITCHES AS NEEDED.
5. CLEANING ACTIVITIES MAY OCCUR ON A YEAR ROUND BASIS; HOWEVER, KNOWN PROBLEM AREAS SHALL BE TARGETED PRIOR TO THE RAINY SEASON.
6. INSPECT AND CLEAN AS NEEDED, ALL STORM DRAINAGE FACILITIES THAT HAVE BEEN AFFECTED BY EMERGENCY RESPONSE ACTIVITIES. THE MOST ECONOMICAL AND EFFICIENT METHOD OF CLEANING MAY BE THE USE OF A JETVAC.

PESTICIDE USE AROUND STORMWATER FACILITIES

THE USE OF HERBICIDES, INSECTICIDES, AND RODENTICIDES IS A MATTER OF ENVIRONMENTAL CONCERN. THE PESTICIDES HAVE THE POTENTIAL TO END UP IN DRINKING WATER AND IN OTHER AQUATIC SYSTEMS IF NOT MANAGED PROPERLY.

THE FOLLOWING GUIDELINES HAVE BEEN DEVELOPED TO MINIMIZE EXPOSURE TO PUBLIC HEALTH, AND SHOULD BE APPLIED WHEN APPROPRIATE. THE GUIDELINES FOLLOW INTEGRATED PEST MANAGEMENT (IPM) PRICINCIPLES OF EMPLOYING NATURAL AND PHYSICAL CONTROLS, AND WHEN NECESSARY, USING THE LEAST TOXIC CHEMICALS.

1. INCLEMENT WEATHER:
   WEATHER CONDITIONS CAN ADVERSELY AFFECT THE EFFICAQY OF CHEMICAL TREATMENTS DURING THE APPLICATION OF PESTICIDES. THE WIND VELOCITY SHOULD BE LESS THAN 5 MILES PER HOUR TO AVOID UNNECESSARY DRIFT ONTO NON-TARGET SITES. IF IT IS RAINING OR ABOUT TO RAIN, PESTICIDE APPLICATIONS SHOULD BE RE-SCHEDULED TO AVOID UNNECESSARY RUNOFF. AND IMPORTANTLY, DURING APPLICATION, CHEMICALS SHOULD NEVER BE APPLIED TO THE POINT OF RUNOFF.
2. RUNOFF CONTROL:
   STORM DRAINS IN THE IMMEDIATE VICINITY OF PESTICUDE APPLICATION AREAS OR DRAINS THAT COULD POTENTIALLY BE IMPACTED BY RUNOFF, MUST BE LOCATED AND COVERED DURING THE TREATMENT TO PREVENT THE RELEASE OF PESTICIDES TO NEARBY WATER BODIES.
3. DRIFT CONTROL:
   THE USE OF POWER SPRAYS TO REACH THE UPPER CANOPY OF TREES SHOULD BE MINIMIZED TO PREVENT PESTICIDE DRIFT INTO BUILDINGS AND WATER BODIES.
4. PREVENTATIVE APPLICATIONS:
   THE WIDESPREAD USE OF DORMANT OILS, AND HERBICIDES ON SHRUBS AND TREES SHOULD BE JUSTIFIED BY THE EXISTENCE OF POTENTIAL PEST OUTBREAKS. PREVENTATIVE APPLICATIONS SHOULD BE SCALED BACK TO REDUCE THE UNNECESSARY TREATMENTS SINCE A HEALTH LAWN IS THE BEST CONTROL FOR PESTS.
5. APPLICATION OF RODENTICIDES:
   ANTICOAGULANTS, TRACKING POWDERS, AND OTHER MAMMALIAN TOXICANTS MUST BE PLACED IN LOCATIONS THAT WILL NOT RESULT IN THEIR TRANSLOCATIONS TO AQUATIC HABITATS. IF RODENT BURROWS ARE TREATED, THEY SHOULD NOT BE LOCATED ALONG THE BANKS OF RIVERS AND STREAMS.

ALLOWABLE NON-STORMWATER DISCHARGES

Per South Carolina General Permit for Stormwater Discharges from Large and Small Construction Activities; Permit No. SCR100000 and Being Effective Sept. 1, 2006. The Following Non-Storm Water Discharges are Authorized, Provided the Non-Storm Water Component of the Discharge is in Compliance with Subpart 3.5 (Non-Storm Water Discharge Management):

1. Discharges from fire-fighting activities;
2. Fire hydrant flushings;
3. Waters used to wash vehicles where detergents are not used;
4. Water used to control dust in accordance with Subpart 3.4.J;
5. Potable water including uncontaminated water line flushings;
6. Routine external building wash down that does not use detergents;
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;
8. Uncontaminated air conditioning or compressor condensate;
9. Uncontaminated ground water or spring water;
10. Foundation or footing drains where flows are not contaminated with process materials such as solvents;
11. Uncontaminated excavation dewatering;
12. Landscape irrigation.

DUMPSTERS AND COMPACTORS

POTENTIAL STORMWATER POLLUTION PROBLEMS:

1. LEAKS FROM LIQUID WASTES OR RAINWATER IN THE DUMPSTERS, AND HYDRAULIC FLUIDS FROM COMPACTORS THAT FLOW UNTO STORMWATER COLLECTION SYSTEM OR CREEKS;
2. LITTER, WASTER, AND GARBAGE LEFT ON THE GROUND CAN WASH AWAY WITH RAINWATER TO THE STORMWATER COLLECTION SYSTEM OR CREEKS;

BEST MANAGEMENT PRACTICES:

1. KEEP DUMPSTER LIDS CLOSED TO KEEP OUT RAINWATER;
2. ROUTE LEAKS AND OTHER WASTERWATERS FROM DUMPSTERS AND COMPACTORS TO THE SANITARY SEWER SYSTEM.
3. CONTROL LITTER. MAKE SURE WASTER IS CONTAINED IN DUMPSTERS AND COMPACTORS. SWEEP DUMPSTER AND COMPACTOR AREAS REGULARLY.
4. INSPECT DUMSTERS AND COMPACTORS REGULARLY FOR LEAKS OR STAINS (AT LEAST ONCE A MONTH). INPSECT DUMPSTERS AND COMPACTORS FOR LITTER REGULARLY (AT LEAST ONCE PER WEEK).
5. IMMEDIATELY REPLACE LEAKING DUMPSTERS AND COMPACTORS.

SPILL CONTROL

POTENTIAL STORMWATER POLLUTION PROBLEMS:

1. WASTE FOODS AND GARBAGE DUMPED, WASHED OR ALLOWED TO FLOW TO THE STORMWATER COLLECTION SYSTEM OR CREEKS;
2. SPILLAGE FROM GREASE BINS ALLOWED TO FLOW OR WASH AWAY WITH RAINWATER TO THE STORMWATER COLLECTION SYSTEM OR CREEKS;

BEST MANAGEMENT PRACTICES:

1. DISPOSE OF WASTER FOOD OR GARBAGE IN THE DUMPSTERS OR COMPACTORS. BE PREPARED FOR SPILLS.
2. DEVELOP SPILL CONTROL PROCEDURES FOR DIFFERENT TYPES OF SPILLS (IE. GARBAGE, LIQUID FOOD WASTES, ETC.)
3. TRAIN ALL EMPLOYEESS ON CLEANUP PROCEDURES.
4. KEEP CLEANUP KITS IN WELL-MARKED, EASILY ACCESSIBLE AREAS.
5. IF YOU HAVE A SPILL, DISPOSE OF MOP/WASTEWATER APPROPRIATELY IN INDOOR SINKS FOR DISCHARGE TO THE SANITARY SEWER SYSTEM.

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NOTICE OF CERTIFICATION — SOUTH CAROLINA — The Landplan Group South Inc. — No. 153

REGISTERED PROFESSIONAL ENGINEER — No. 20979 — SOUTH CAROLINA — STATE OF

THEATRE DRIVE PARKING LOT

AT THE INTERSECTION OF THEATRE DR & UNIVERSITY DR
SUMTER, SC

SWPPP DETAILS

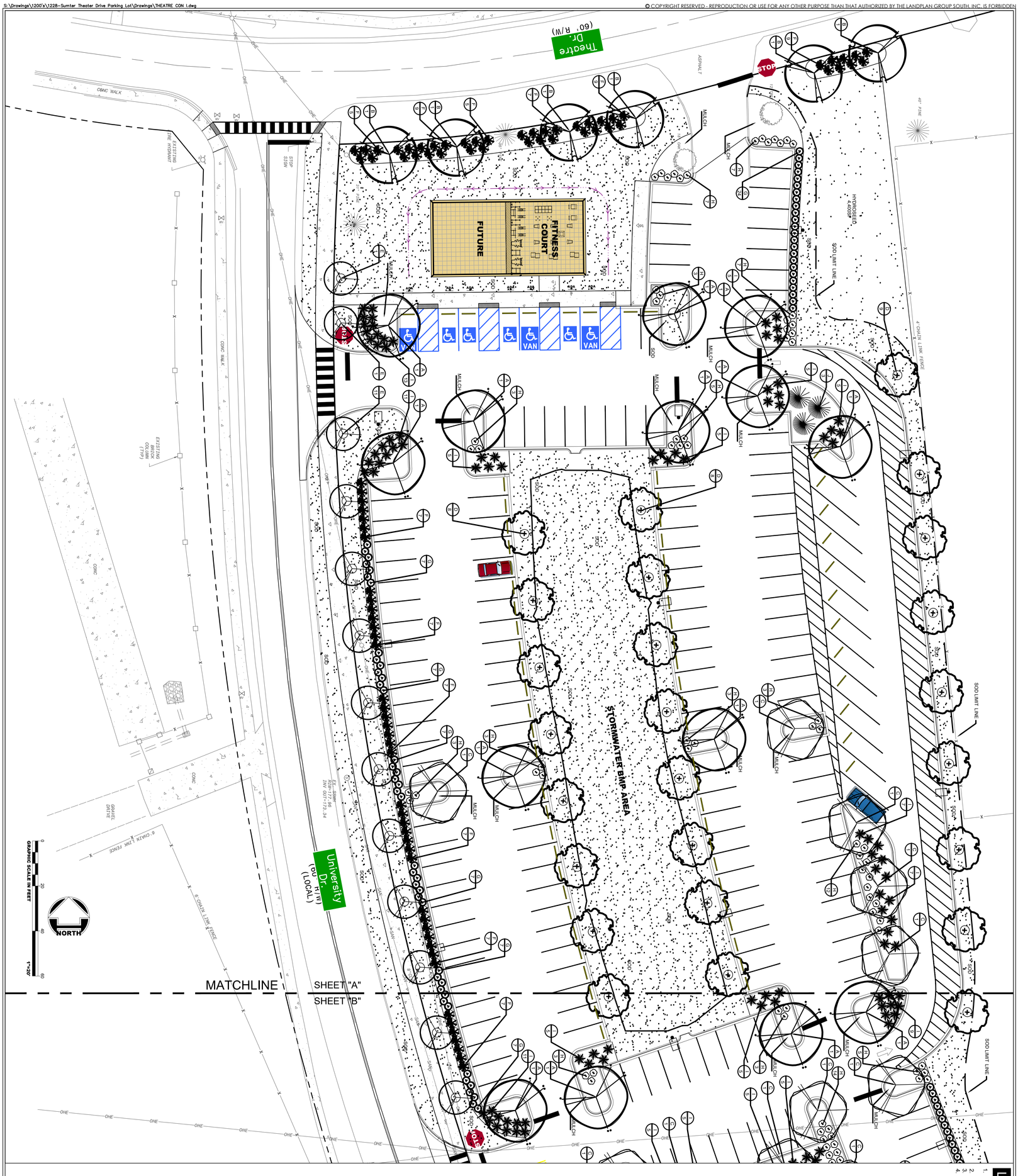
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SCALE:	SEE GRAPHIC SCALE

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LANDSCAPE NOTES

1. STREET UNDERSTORY TREES SUBSTITUTED AT A 2:1 RATION WHERE OVERHEAD UTILITIES ARE LOCATED.
2. NO SIGNIFICANT TREE SPECIES REMOVED.
3. SEVEN (7) HEAVY TREES REMOVED.
4. 54" LOBLOLLY PINE REMOVED MITIGATED THROUGH PLANTING OF MINIMUM (2) LONG LEAF PINE TREES.

811 SHE GROUND WORK? CALL 811 BEFORE YOU DIG

THEATRE DRIVE PARKING LOT

AT THE INTERSECTION OF THEATRE DR & UNIVERSITY DR
SUMTER, SC

LANDSCAPE PLAN

L1.0

JOB NO:	1228
DRAWN:	WES
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APPROVED:	CH
DATE:	1/28/2025
SCALE:	SEE GRAPHIC SCALE

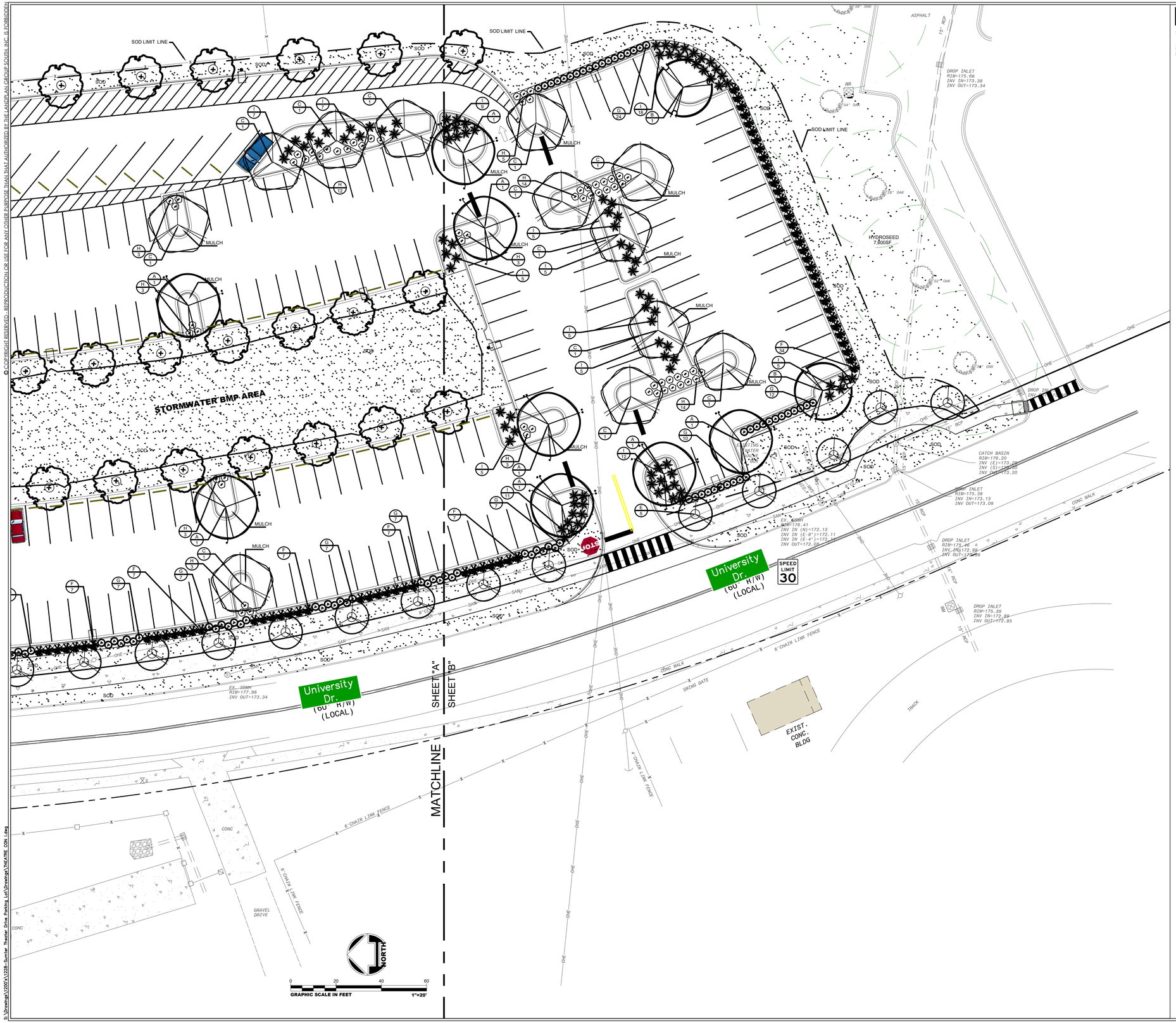
SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER
No. 20979
WADE BWEAT
5/20/2025

SOUTH CAROLINA
The Landplan Group South Inc.
No. 153
CERTIFICATE OF AUTHORIZATION

NO.	REVISIONS	BY.	APPD.	DATE:
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LANDSCAPE NOTES

1. STREET UNDERSTORY TREES SUBSTITUTED AT A 2:1 RATION WHERE OVERHEAD UTILITIES ARE LOCATED.
2. NO SIGNIFICANT TREE SPECIES REMOVED.
3. SEE CIVIL PLANS FOR TREES REMOVED.

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NO.	REVISIONS	BY.	APPD.	DATE:
1	REVISED PER SCDOT COMMENTS	WS	CH	3/25/25

SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION
The Landplan Group South Inc.
No. 153

REGISTERED PROFESSIONAL ENGINEER
No. 20979
WADE S. INNES
STATE OF SOUTH CAROLINA
5/20/2025

THEATRE DRIVE PARKING LOT

AT THE INTERSECTION OF THEATRE DR & UNIVERSITY DR
SUMTER, SC

LANDSCAPE PLAN

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811
SAFE DIGGING PARTNER

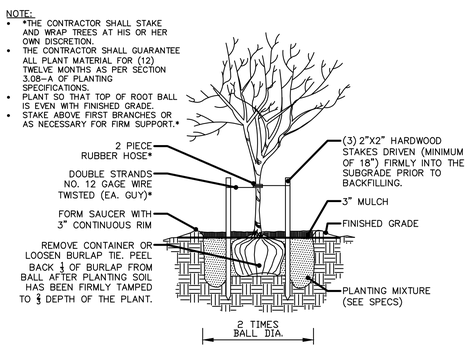
JOB NO:	1228
DRAWN:	WES
DESIGNED:	WES
APPROVED:	CH
DATE:	1/28/2025
SCALE:	SEE GRAPHIC SCALE

L1.1

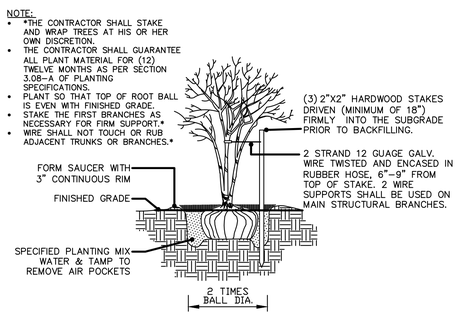
S:\Drawings\2025\1228-Sumter Theater Drive Parking Lot\Drawings\THEATRE CON_1.dwg

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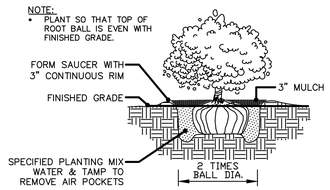
LANDSCAPE PLANTING DETAILS NTS



LARGE TREE PLANTING & STAKING DETAIL
not to scale



SMALL & MULTI-TRUNK TREE PLANTING & STAKING DETAIL
not to scale



SHRUB PLANTING DETAIL
not to scale

LANDSCAPE GENERAL NOTES

GENERAL NOTES:

- QUANTITIES ARE SHOWN FOR INFORMATION ONLY. THE CONTRACTOR IS RESPONSIBLE FOR HIS OR HER OWN QUANTITIES. IF THERE IS A CONFLICT BETWEEN QUANTITIES AND SPACING, SPACING SHALL PREVAIL.
- ALL AREAS NOT COVERED BY CONSTRUCTION OR PLANT BED AREAS, SHALL BE PLACED IN TURF. ALL R.O.W. AREAS BETWEEN PLANT BEDS AND EDGE OF PAVEMENT SHALL BE PLACED IN TURF.
- THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND LICENSEES FROM THE PROPER AUTHORITIES BEFORE BEGINNING ANY WORK WITHIN THE R.O.W. OR OFF SITE.
- ALL NEW PLANTINGS ARE TO BE MECHANICALLY IRRIGATED.

PLANT KEY
QUANTITY

3 DAYS BEFORE DIGGING IN SOUTH CAROLINA
CALL 1-800-922-0983
UNDERGROUND LOCATORS.
CONTRACTOR SHALL CONTACT THE UNDERGROUND LOCATORS EVERY 10 DAYS FOR AN UPDATE TO UTILITY LOCATIONS.

1-888-721-7877 • WWW.SCUPS.ORG
PUPS 811
Know what's below. Call before you dig.

LANDSCAPE SCHEDULE

PLANT SCHEDULE

KEY	BOTANICAL NAME	COMMON NAME	QUANTITY	SIZE	SPACING
A	QUERCUS VIRGINIANA 'HIGH RISE'	HIGH RISE LIVE OAK (LIMB TO 7')	17	2" CAL.	AS SHOWN
B	PISTACIA CHINENSIS	CHINESE PISTACHE	8	2" CAL.	AS SHOWN
C	LIQUIDAMBAR STYRACIFLUA 'ROTUNDILOBA'	FRUITLESS SWEETGUM	11	2" CAL.	AS SHOWN
D	TAXODIUM DISTICHUM 'MICKELSON'	SHAWNEE BRAVE BALD CYPRESS	25	2" CAL.	AS SHOWN
E	LAGERSTROEMIA INDICA 'CENTENNIAL SPIRIT'	CENTENNIAL SPIRIT CRAPE MYRTLE	18	2" CAL.	AS SHOWN
F	ILEX GLABRA	INKBERRY HOLLY	120	3 GAL.	AS SHOWN
G	LOROPETALUM CHINENSE 'SUZANNE'	SUZANNE LOROPETALUM	112	3 GAL.	AS SHOWN
H	DISTYLIUM 'PIIDIST-V' PP27631	CINNAMON GIRL DISTYLIUM	95	3 GAL.	AS SHOWN
I	MUHLENBERGIA CAPILLARIS 'WHITE CLOUD'	WHITE CLOUD MUHLY GRASS	120	3 GAL.	AS SHOWN
J	THUJA OCCIDENTALIS 'GREEN GIANT''	GREEN GIANT ARBORVITAE	3	6' HT. MIN.	AS SHOWN
	CENTIPEDE SOD	CENTIPEDE SOD	39,000 S.F.		
	CENTIPEDE HYDROSEED	CENTIPEDE HYDROSEED	12,000 S.F.		
	DOUBLE HAMMERED HARDWOOD MULCH	DOUBLE HAMMERED HARDWOOD MULCH			

CALL 811 BEFORE YOU DIG
811
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THE LANDPLAN GROUP SOUTH
Landscape Architecture | Engineering | Planning
1206 SCOTT STREET
COLUMBIA, SC 29201
803.256.0562
WWW.LANDPLANGROUP.COM

NO.	REVISIONS	BY.	APPD.	DATE:
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SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION
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No. 153

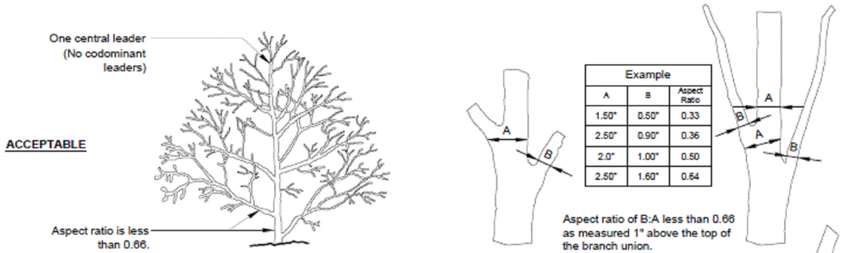
SOUTH CAROLINA PROFESSIONAL ENGINEER
No. 20979
WADE SWEATT
STATE OF SOUTH CAROLINA

THEATRE DRIVE
PARKING LOT
AT THE INTERSECTION OF THEATRE DR & UNIVERSITY DR
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LANDSCAPE DETAILS

JOB NO:	1228
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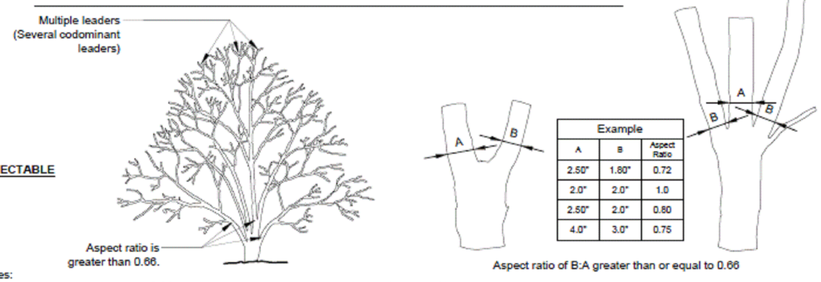
L2.0

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Example		
A	B	Aspect Ratio
1.50"	0.50"	0.33
2.50"	0.90"	0.36
2.0"	1.00"	0.50
2.50"	1.60"	0.64

Aspect ratio of B:A less than 0.66 as measured 1" above the top of the branch union.



Example		
A	B	Aspect Ratio
2.50"	1.80"	0.72
2.0"	2.0"	1.0
2.50"	2.0"	0.80
4.0"	3.0"	0.75

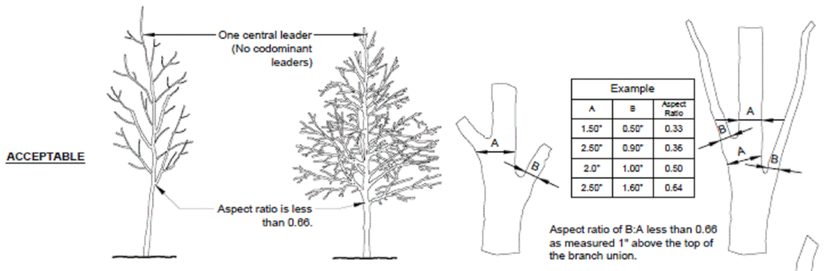
Aspect ratio of B:A greater than or equal to 0.66

Notes:
1- Aspect ratio shall be less than 0.66 on all branch unions. Aspect ratio is the diameter of branch (B) divided by the diameter of the trunk (A) as measured 1" above the top of the branch union.

2- Any tree not meeting the crown observations detail may be rejected.

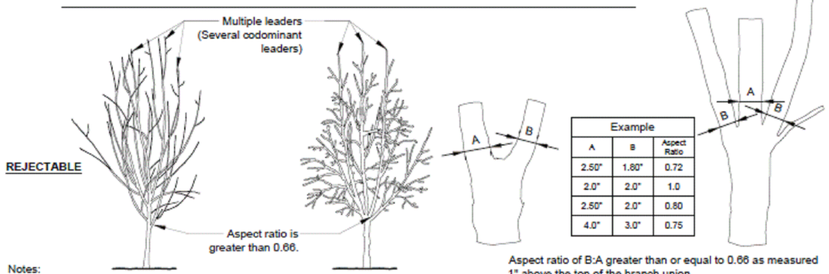
P-X CROWN OBSERVATIONS - LOW BRANCHED

URBAN TREE FOUNDATION © 2014
OPEN SOURCE FREE TO USE



Example		
A	B	Aspect Ratio
1.50"	0.50"	0.33
2.50"	0.90"	0.36
2.0"	1.00"	0.50
2.50"	1.60"	0.64

Aspect ratio of B:A less than 0.66 as measured 1" above the top of the branch union.



Example		
A	B	Aspect Ratio
2.50"	1.80"	0.72
2.0"	2.0"	1.0
2.50"	2.0"	0.80
4.0"	3.0"	0.75

Aspect ratio of B:A greater than or equal to 0.66 as measured 1" above the top of the branch union.

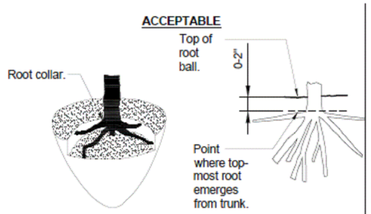
Notes:
1- Aspect ratio shall be less than 0.66 on all branch unions. Aspect ratio is the diameter of branch (B) divided by the diameter of the trunk (A) as measured 1" above the top of the branch union.

2- Any tree not meeting the crown observations detail may be rejected.

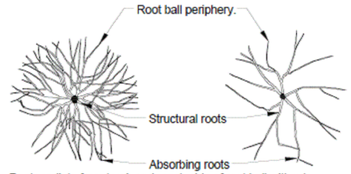
P-X CROWN OBSERVATIONS - HIGH BRANCHED

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ACCEPTABLE



The point where top-most root(s) emerges from the trunk (root collar) should be within the top 2" of substrate. The root collar and the root ball interior should be free of defects including circling, kinked, ascending, and stem girdling roots. Structural roots shall reach the periphery near the top of the root ball.

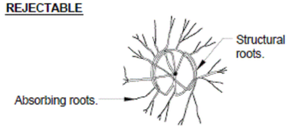


Roots radiate from trunk and reach side of root ball without defecting down or around.

REJECTABLE



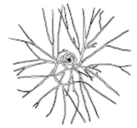
Structural roots circle interior of root ball. No structural roots are horizontal and reach the root ball periphery near the top of the root ball.



Only absorbing roots reach the periphery near the top of the root ball. Structural roots mostly wrap or are deflected on the root ball interior.



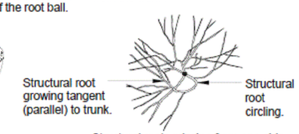
Structural roots descend into root ball interior. No structural roots are horizontal and reach the root ball periphery near the top of the root ball.



Structural roots circle and do not radiate from the trunk.



Structural roots primarily grow to one side.



Structural roots missing from one side, and/or grow tangent to trunk.

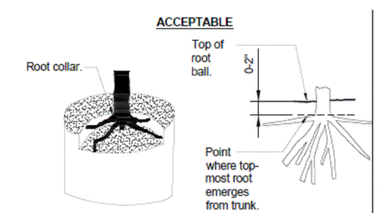
Notes:
1- Observations of roots shall occur prior to acceptance. Roots and soil may be removed during the observation process; substrate/soil shall be replaced after the observations have been completed.

2- See specifications for observation process and requirements.

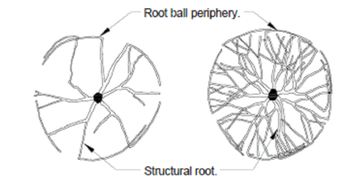
P-X ROOT OBSERVATIONS DETAIL - BALLED AND BURLAPPED

URBAN TREE FOUNDATION © 2014
OPEN SOURCE FREE TO USE

ACCEPTABLE



The point where top-most root(s) emerges from the trunk (root collar) should be within the top 2" of substrate. The root collar and the root ball interior should be free of defects including circling, kinked, ascending, and stem girdling roots. Structural roots shall reach the periphery near the top of the root ball.

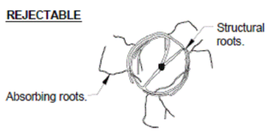


Roots radiate from trunk and reach side of root ball without deflecting down or around.

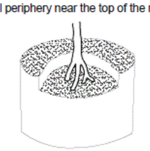
REJECTABLE



Structural roots circle interior of root ball. No structural roots are horizontal and reach the root ball periphery near the top of the root ball.



Only absorbing roots reach the periphery near the top of the root ball. Structural roots mostly wrap or are deflected on the root ball interior.



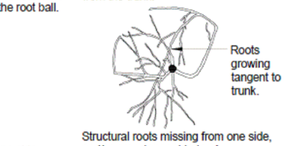
Structural roots descend into root ball interior. No structural roots are horizontal and reach the root ball periphery near the top of the root ball.



Structural roots circle and do not radiate from the trunk.



Structural roots primarily grow to one side.



Structural roots missing from one side, and/or grow tangent to trunk.

Notes:
1- Observations of roots shall occur prior to acceptance. Roots and substrate may be removed during the observation process; substrate/soil shall be replaced after observation has been completed.
2- Small roots (½" or less) that grow around, up, or down the root ball periphery are considered a normal condition in container production and are acceptable however they should be eliminated at the time of planting. Roots on the periperhy can be removed at the time of planting. (See root ball shaving container detail).
3- See specifications for observation process and requirements.

P-X ROOT OBSERVATIONS DETAIL - CONTAINER

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General Notes

CITY OF Sumter
UNCOMMON PATRIOTISM

No.	Revision/Issue	Date

Firm Name and Address

CITY OF SUMTER
PARKS & GARDENS

Project Name and Address

Project	Sheet
Date	1 OF 2
Scale	



Before planting, tree has three codominant stems. The two that compete with the one in the center should be pruned to supress their growth.

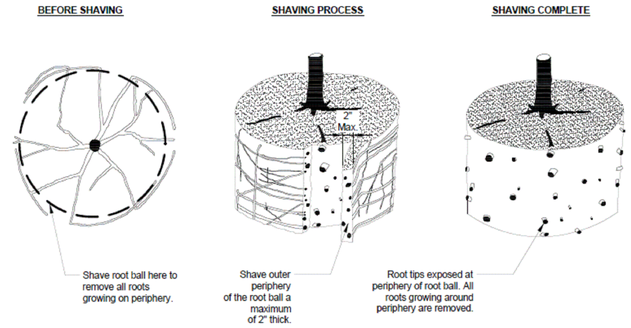
Two competing stems were reduced substantially, in this case removing about 70% of their foliage using reduction cuts.

After pruning, tree has only one dominant stem.

Notes:
1- All trees shown are rejectable unless they undergo recommended treatment.
2- Tree shall meet crown observation detail following correction.

S-X CROWN CORRECTION DETAIL

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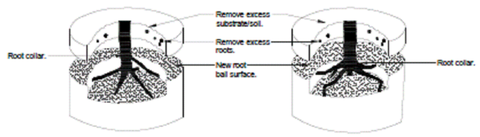
Notes:
1- Shaving to be conducted using a sharp blade or hand saw eliminating no more than needed to remove all roots on the periphery of root ball.

2- Shaving can be performed just prior to planting or after placing in the hole.

P-X ROOT BALL SHAVING CONTAINER DETAIL

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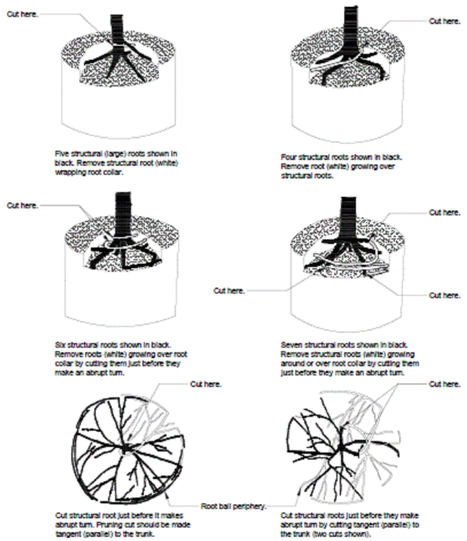
Step 1 - Remove substrate over root collar.



Tree planted too deeply in root ball. Remove excess substrate and roots to meet root inspection detail.

Tree planted too deeply in root ball. Remove excess substrate and roots to meet root inspection detail.

Step 2 - Remove defects.



Five structural (large) roots shown in black. Remove structural root (white) wrapping root collar.

Four structural roots shown in black. Remove root (white) growing over structural roots.

Six structural roots shown in black. Remove roots (white) growing over root collar by cutting them just before they make an abrupt turn.

Seven structural roots shown in black. Remove structural roots (white) growing around or over root collar by cutting them just before they make an abrupt turn.

Cut structural root just before it makes abrupt turn. Pruning cut should be made tangent (parallel) to the trunk.

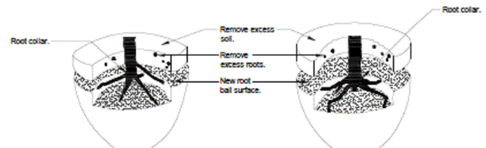
Cut structural roots just before they make abrupt turn by cutting tangent (parallel) to the trunk (two cuts shown).

Notes:
1- All trees shown are rejectable unless they undergo recommended correction.
2- First Step 1, then Step 2. Roots and soil may be removed during the correction process; substrate/soil shall be replaced after correction has been completed.
3- Trees shall meet root observations detail following correction.
4- Small roots (1/4" or less) on the periphery of the root ball are common with container plant production. These small roots are not defined as "defects" and can be addressed at the time of installation (See root ball shaving container detail).

P-X ROOT CORRECTION DETAIL - CONTAINER

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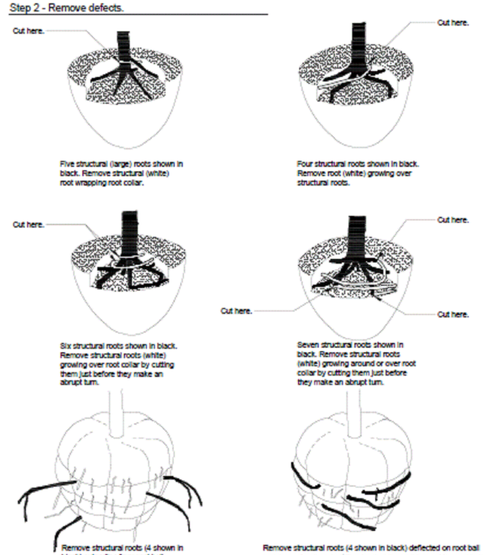
Step 1 - Remove soil and roots over the root collar.



Tree planted too deeply in root ball. Remove excess soil and roots to meet root inspection detail.

Tree planted too deeply in root ball. Remove excess soil and roots to meet root inspection detail.

Step 2 - Remove defects.



Five structural (large) roots shown in black. Remove structural (white) root wrapping root collar.

Four structural roots shown in black. Remove root (white) growing over structural roots.

Six structural roots shown in black. Remove structural roots (white) growing over root collar by cutting them just before they make an abrupt turn.

Seven structural roots shown in black. Remove structural roots (white) growing around or over root collar by cutting them just before they make an abrupt turn.

Remove structural roots (4 shown in black) extending from root ball.

Remove structural roots (4 shown in black) deflected on root ball periphery. Small roots (½" or less) at the periphery of the root ball are not defined as defects and do not need to be removed.

Notes:
1- All trees shown are rejectable unless they undergo recommended correction.
2- First step 1, then step 2. Adjust hole depth to allow for the removal of excess soil and roots over the root collar.
3- Roots and soil may be removed during the correction process; substrate/soil shall be replaced after the correction has been completed.
4- Trees shall pass root observations detail following correction.

P-X ROOT CORRECTION DETAIL - BALLED AND BURLAPPED

URBAN TREE FOUNDATION© 2014
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General Notes

CITY OF Sumter
UNCOMMON PATRIOTISM

STATE OF SOUTH CAROLINA
REGISTERED LANDSCAPE ARCHITECT
1236
BROCK A. MCDANIEL

No.	Revision/Issue	Date

Firm Name and Address

CITY OF SUMTER
PARKS & GARDENS

Project Name and Address

Project	Sheet
Date	2 OF 2
Scale	

IRRIGATION NOTES & LEGENDS

HEADS

– HUNTER PRO SPRAY SERIES POP UP – 6" POP UP SPRINKLER HEAD FITTED WITH HUNTER MP ROTATOR SERIES NOZZLE PATTERN (5'x 30' RECTANGULAR SIDE MOUNT STRIP).
– HUNTER PRO SPRAY SERIES POP UP – 6" POP UP SPRINKLER HEAD FITTED WITH HUNTER MP ROTATOR SERIES NOZZLE PATTERN (5'x 15' RECTANGULAR END MOUNT STRIP).
– HUNTER PRO SPRAY SERIES POP UP SPRINKLER WITH 6" POP–UP STROKE AND FITTED WITH HUNTER MP–1000 SERIES 10' NOZZLE (8'– 15' RADIUS).
– HUNTER PRO SPRAY SERIES POP UP SPRINKLER WITH 6" POP–UP STROKE AND FITTED WITH HUNTER MP–1000 SERIES 12' NOZZLE (8'– 15' RADIUS).
– HUNTER PRO SPRAY SERIES POP UP SPRINKLER WITH 6" POP–UP STROKE AND FITTED WITH HUNTER MP–1000 SERIES 15' NOZZLE (8'– 15' RADIUS).
– HUNTER PRO SPRAY SERIES POP UP – 12" POP UP SPRINKLER HEAD FITTED WITH HUNTER MP ROTATOR SERIES NOZZLE PATTERN (5'X 30' RECTANGULAR SIDE MOUNT STRIP).
– HUNTER PRO SPRAY SERIES POP UP – 12" POP UP SPRINKLER HEAD FITTED WITH HUNTER MP ROTATOR SERIES NOZZLE PATTERN (5'X 15' RECTANGULAR END MOUNT STRIP).
– HUNTER PRO SPRAY SERIES POP UP SPRINKLER WITH 12" POP–UP STROKE AND FITTED WITH HUNTER MP–1000 SERIES 10' NOZZLE (8'– 15' RADIUS).
– HUNTER PRO SPRAY SERIES POP UP SPRINKLER WITH 12" POP–UP STROKE AND FITTED WITH HUNTER MP–1000 SERIES 12' NOZZLE (8'– 15' RADIUS).
– HUNTER PRO SPRAY SERIES POP UP SPRINKLER WITH 12" POP–UP STROKE AND FITTED WITH HUNTER MP–1000 SERIES 15' NOZZLE (8'– 15' RADIUS).
– HUNTER PRO SPRAY SERIES POP UP SPRINKLER WITH 6" POP–UP STROKE AND FITTED WITH HUNTER MP–2000 SERIES 20' NOZZLE (13'– 21' RADIUS).
– HUNTER PRO SPRAY SERIES POP UP SPRINKLER WITH 6" POP–UP STROKE AND FITTED WITH HUNTER MP–3000 SERIES 30' NOZZLE (22'– 30' RADIUS).
– HUNTER PRO SPRAY SERIES POP UP SPRINKLER WITH 6" POP–UP STROKE AND FITTED WITH HUNTER MP–3500 SERIES 35' NOZZLE (31'– 35' RADIUS).
– HUNTER PRO SPRAY SERIES POP UP SPRINKLER WITH 12" POP–UP STROKE AND FITTED WITH HUNTER MP–2000 SERIES 20' NOZZLE (13'– 21' RADIUS).
– HUNTER PRO SPRAY SERIES POP UP SPRINKLER WITH 12" POP–UP STROKE AND FITTED WITH HUNTER MP–3000 SERIES 30' NOZZLE (22'– 30' RADIUS).

– ALL POP–UP IRRIGATION HEADS DESIGNED ADJACENT TO CURBS OR PAVEMENT SHALL BE INSTALLED WITH A CLEARANCE OF 1 1/2" FROM THE EDGES OF ALL PAVED AREAS TO PROVIDE FOR EDGING AND MAINTENANCE OPERATIONS. HEADS INSTALLED ON SHRUB RISERS OR WITH THE TOP OF THE HEAD MORE THAN 1/2" ABOVE GRADE SHALL BE INSTALLED WITH A MINIMUM 6" CLEARANCE FROM PAVED AREAS.
– ALL THREADED PIPE CONNECTIONS SHALL BE ASSEMBLED USING TEFLON THREAD SEALING TAPE.
– ALL HEADS MOUNTED IN THE LAWN AREAS SHALL BE MOUNTED ON POLYETHYLENE PIPE FLEX SWING JOINTS COMPOSED OF 3/8" I.D. POLY PIPE FITTED WITH (3/8" INSERT BY 1/2" M.P.T.) AND/OR (3/8" INSERT BY 3/4" M.P.T.) ELBOWS.

DRIP IRRIGATION

– LOCATION OF NETAFIM TECHLINE 1/2" P.E. TUBING, 18" EMITTER SPACING INTERVALS AT 1 GPH EMITTERS INLINE. NETAFIM (MODEL# TLCV9–18025) TECHLINE TO BE INSTALLED UNDER MULCH IN LANDSCAPE AREAS AS SHOWN ON THE IRRIGATION PLANS.
– LOCATION OF DRIP VALVE ASSEMBLY WHICH INCLUDES RAINBIRD 100DV SERIES REMOTE CONTROL VALVE WITH PRESSURE–REGULATING DRIP KIT AND FILTER. ALL VALVES SHALL BE INSTALLED IN NDS VALVE BOXES WITH LIDS MOUNTED AT GRADE LEVEL.

PIPE

– DENOTES ROUTE OF PR200 PVC LATERAL PIPING. SIZE OF LATERAL PIPING SHALL BE AS NOTED BELOW. MINIMUM DEPTH OF COVER OVER LATERAL PIPING TO BE 12".

LATERAL PIPING SIZING SCHEDULE

SUMMATION OF GALLONAGE DEMAND ON THE PARTICULAR BRANCHES OF PIPE WITHIN A CONTROL SECTION SHALL BE DETERMINED BY USING THE GPM FOR A NOZZLE BASED ON A 50 PSI BASE OF HEAD PRESSURE AND FULL RADIUS AT THAT PRESSURE AS REPORTED IN THE MOST CURRENT IRRIGATION PRODUCTS CATALOG. PIPE SIZES FOR THE LATERALS SHALL BE AS FOLLOWS:

ZERO TO FIFTEEN GPM ACCUMULATED FLOW USE 1" PR200 PVC PIPE

GREATER THAN FIFTEEN UP TO THIRTY–FIVE GPM USE 1–1/2" PR200 PVC PIPE

GREATER THAN THIRTY–FIVE UP TO FIFTY–FIVE GPM USE 2" PR200 PVC PIPE

FRICTION LOSS ALLOWANCES FOR THIS PROJECT HAVE BEEN DETERMINED USING THE ABOVE FLOW RANGES AND DEMANDS.
– DENOTES ROUTE OF PR200 MAIN LINE PIPING. SIZE OF PIPE TO BE 1–1/2". MINIMUM DEPTH OF COVER OVER MAINLINE PIPING TO BE 18".
– PIPING SHALL BE PR200 SOLVENT WELD PVC PIPE WITH SCHEDULE 40 PVC SOLVENT WELD FITTINGS UNLESS OTHERWISE NOTED.
– ALL PIPING RUNS SHALL BE "SNAKED" IN THE TRENCH DURING INSTALLATION TO PREVENT EXCESSIVE STRAIN DUE TO THERMAL EXPANSION OR CONTRACTION.
– THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO AVOID DAMAGING PLANTINGS (INCLUDING ROOTS) DURING INSTALLATION OF THE IRRIGATION SYSTEM AND SHALL COORDINATE HIS EFFORTS WITH THE LANDSCAPER AND LANDSCAPE ARCHITECT SO AS TO OPTIMIZE THE EFFICIENCY AND THE AESTHETIC QUALITY OF THE INSTALLATION.

HEAD RADII

– THE IRRIGATION CONTRACTOR SHALL ADJUST THE RADIUS AND THROW OF EACH SPRINKLER HEAD TO PROVIDE OPTIMUM COVERAGE WHILE MINIMIZING OVERSPRAY ONTO HARDSCAPES OR BUILDINGS. ADJUST HEADS TO ELIMINATE DRY SPOTS.
– APPROXIMATE ARC AND RADIUS OF INDIVIDUAL SPRINKLER HEAD COVERAGE SHALL BE AS ILLUSTRATED. INDIVIDUAL HEAD OR NOZZLE MODEL NUMBERS MAY BE DEPENDENT UPON THESE SPECIFIC CHARACTERISTICS.

VALVES

– LOCATION OF ELECTRIC 24 V.A.C. REMOTE CONTROL VALVE WITH FLOW CONTROL FEATURE (MODEL # HUNTER 1x0PGV). SIZE OF ZONE CONTROL VALVES TO BE AS NOTED ON THE IRRIGATION PLANS.
– ALL IN–LINE REMOTE CONTROL VALVES SHALL BE INSTALLED IN NDS VALVE BOXES WITH LIDS MOUNTED AT GRADE LEVEL.
– DENOTES LOCATION OF MAINLINE ISOLATION GATE VALVE. THE ISOLATION VALVES SHALL BE LINE SIZE AND SHALL BE INSTALLED WITH A VALVE BOX ASSEMBLY.

24 VAC CONTROL WIRING

– ALL 24 V.A.C. WIRING SHALL BE DOUBLED #14 AWG SINGLE STRAND COPPER WIRE WITH POLYETHYLENE PE DIRECT BURIAL INSULATION RATED FOR 300 V.A.C. THE DECODER CABLE SHALL BE CONNECTED TO HUNTER EZ–1 DECODERS AT EACH REMOTE CONTROL VALVE LOCATION. VALVE WIRING SHALL FOLLOW MAINLINE PIPING WHERE FEASIBLE AND SHALL BE LAID IN A COMMON TRENCHLINE WITH THE MAINLINE PIPING AND IN THE BOTTOM OF THE TRENCH. WIRING SHALL BE "BUNDLED" AND TAPED AT INTERVALS OF APPROXIMATELY TEN FEET. ALL WIRING SHALL BE INSTALLED IN ACCORDANCE WITH LOCAL CODE REQUIREMENTS.
– WIRE SPLICES SHALL BE KEPT TO AN ABSOLUTE MINIMUM. WHERE MAJOR CONCENTRATIONS OF SPLICES ARE NECESSARY SAID SPLICES SHALL BE PLACED IN A NDS VALVE BOX, WITH AN NDS COVER INSTALLED AT GRADE LEVEL. SPLICES AT VALVE LOCATIONS SHALL BE MADE INSIDE OF THE VALVE BOX. ALL SPLICE LOCATIONS SHALL BE NOTED ON THE 'AS BUILT' PLAN.
– WIRE RUNS SHALL BE INSTALLED WITH ENOUGH SLACK AND/OR OCCASIONAL EXPANSION LOOPS TO PREVENT EXCESSIVE STRAIN DUE TO THERMAL CONTRACTION.
– ALL WIRE SPLICES SHALL BE MADE USING UL APPROVED DIRECT BURIAL CONNECTORS AND WATERPROOFING MATERIALS. ALL ELECTRICAL WORK SHALL BE INSTALLED ACCORDING TO CODE.

CONTROLLER

– LOCATION OF THE IRRIGATION CONTROLLER. THE CONTROLLER SHALL BE HUNTER ICC2 HYBRID SOLID STATE UNIT WHICH SHALL BE OF THE WALL MOUNT STYLE. THE CONTROLLER SHALL INCLUDE AN EZ–DM DECODER MODULE. THE CONTROLLER SHALL INCORPORATE 24 V.A.C. ELECTRIC REMOTE CONTROL VALVE OPERATION. THE CONTROLLER SHALL BE MOUNTED IN THE APPROXIMATE LOCATION SHOWN ON THE PLAN.

– LOCATION OF THE RAIN SENSOR.

– ALL ELECTRICAL CONNECTIONS AND INSTALLATIONS SHALL BE PERFORMED IN ACCORDANCE WITH LOCAL CODE REQUIREMENTS.
– ALL 120 VAC WIRING SHALL BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE ELECTRICAL CODE REQUIREMENTS.

NOTE: THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A 120 VAC POWER CIRCUIT AT THE CONTROLLER LOCATION. THE POWER SOURCE SHALL BE CAPABLE OF SUPPORTING A 10 AMPERE LOAD AT 120 VAC.

BACKFLOW PREVENTION

– DENOTES THE LOCATION OF REDUCED PRESSURE BACKFLOW PREVENTER ASSEMBLY. THE BACKFLOW SHALL BE THE CONTRACTOR'S RESPONSIBILITY. THE BACKFLOW SHALL BE 1" IN SIZE. THE BACKFLOW ASSEMBLY SHALL BE INSTALLED DOWNSTREAM OF THE IRRIGATION METER AS SHOWN ON THE LAYOUT. THE UNIT MUST BE INSTALLED IN ACCORDANCE WITH ALL LOCAL AND STATE CODE REQUIREMENTS AND SHALL HAVE APPROVED COVER.

WATER SUPPLY

– DENOTES THE PROPOSED LOCATION OF THE IRRIGATION METER. THE METER SHALL BE THE GENERAL CONTRACTOR'S RESPONSIBILITY. THE METER SHALL BE 1" IN SIZE. SINCE THE WATER SUPPLY FOR THE SYSTEM SHALL BE POTABLE WATER, THE CONTRACTOR WILL BE REQUIRED TO INSTALL BACKFLOW PREVENTION DEVICE WHICH WILL BE LOCATED DOWNSTREAM OF THE IRRIGATION METER AS NOTED ON PLAN.

– THE IRRIGATION SYSTEM SHALL BE CAPABLE OF DELIVERING 30 GPM MAXIMUM WITH ONE STATION OPERATING WITH 50 PSI AT THE BASE OF THE HEAD FOR OPTIMUM PERFORMANCE OF THE IRRIGATION SYSTEM AS DESIGNED AND SPECIFIED.

* NOTE * – IF THE WATER SUPPLY IS NOT CAPABLE OF THE DESIGNED CAPACITY (FLOW AND/OR PRESSURE), THE IRRIGATION SYSTEM WILL NEED TO BE REDESIGNED, WHICH MAY ALTER THE IRRIGATION MATERIAL ESTIMATE.

SLEEVING

– DENOTES LOCATION OF 2" PVC SLEEVES
– DENOTES LOCATION OF 4" PVC SLEEVES

– WHERE IRRIGATION PIPING CROSSES SIDEWALKS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PLACING A SLEEVE 2 SIZES LARGER THAN THE PIPE THAT IS CROSSING.

– THE IRRIGATION CONTRACTOR SHALL COORDINATE THE INSTALLATION OF THE IRRIGATION SYSTEM WITH THE LANDSCAPE CONTRACTOR TO INSURE PROPER INSTALLATION OF BOTH THE IRRIGATION SYSTEM WITH THE LANDSCAPE AND HARDSCAPE.

NOTE: THE IRRIGATION SYSTEM IS DISPLAYED SCHEMATIC IN NATURE. THE IRRIGATION CONTRACTOR MAY BE REQUIRED TO MAKE MINOR ADJUSTMENTS IN THE FIELD. THESE MINOR ADJUSTMENTS SHALL BE MADE AT NO ADDITIONAL COST TO THE OWNER BUT SHALL BE MADE ONLY AFTER NOTIFICATION IS MADE TO THE OWNER OR HIS REPRESENTATIVE.

– THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH THE SITE SO THAT HE IS AWARE OF ANY SPECIAL CONDITIONS WHICH EXIST THAT MAY AFFECT HIS BID PROPOSAL AND SHALL THEREAFTER BE RESPONSIBLE FOR ALL COST INCURRED IN RELATION TO THE INSTALLATION.

– THIS DESIGN IS BASED ON THE SITE INFORMATION AND/OR DRAWINGS SUPPLIED BY THE CLIENT OF RECORD WITH DESIGN CRITERIA BEING SET BY THE CLIENT AND/OR PROJECT OWNER (I.E. AREA TO BE IRRIGATED, MANUFACTURER'S EQUIPMENT TO BE EMPLOYED, WATER SOURCE (LOCATION, FLOW & PRESSURE) CAPACITIES, ELECTRICAL POWER AVAILABILITY FOR IRRIGATION SYSTEM USE, ETC.). SMITH TURF & IRRIGATION BEARS NO RESPONSIBILITY OR LIABILITY FOR ANY ERRORS IN DESIGN OR APPLICATION WHICH MIGHT ARISE DUE TO INACCURACIES IN THE ABOVE REFERENCED INFORMATION SUPPLIED TO SMITH TURF & IRRIGATION IN RELATION TO THIS SPECIFIC PROJECT UNLESS OTHERWISE NOTED.

NOTE MAINLINE SHOWN ON PLAN IS DIAGRAMMATIC FOR CLARITY. ALL MAINLINE AND VALVES SHALL BE FIELD LOCATED OUTSIDE OF HARDSCAPE AND FENCES.

NOTE WHERE IRRIGATION MAINLINE/LATERAL LINE CROSSES HARDSCAPE THERE SHALL BE A SLEEVE 2 SIZES BIGGER. NOT ALL SLEEVES ARE SHOWN FOR CLARITY REASONS.



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0 20 40

NO.	REVISION	BY	DATE

DRAWN: RJK
APPROVED:
FILENAME: IR–2.DWG
DATE: 02/17/25

DRAWINGS FOR:
SUMTER THEATER DRIVE PARKING
SUMTER, S.C.

IRRIGATION LAYOUT

SCALE: 1" = 20'
SHEET: 1 OF 1
PROJECT NO.: 021225–04

Schedule

Symbol	Label	Image	QTY	Manufacturer	Catalog	Description	Number Lamps	Lamp Output	LLF	Input Power	Polar Plot
	A		13	EATON - STREETWORKS (FORMER COOPER LIGHTING)	GAN-AF-04-LED-U-T4W	GALLEON AREA AND ROADWAY LUMINAIRE (4) 70 CRI, 4000K, 1050mA LIGHTSQUARES WITH 15 LEDS EACH AND TYPE IV WIDE OPTICS	64	381	0.85	225	

Statistics

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Entire Parking Area	+	1.9 fc	4.0 fc	0.5 fc	8.0:1	3.8:1

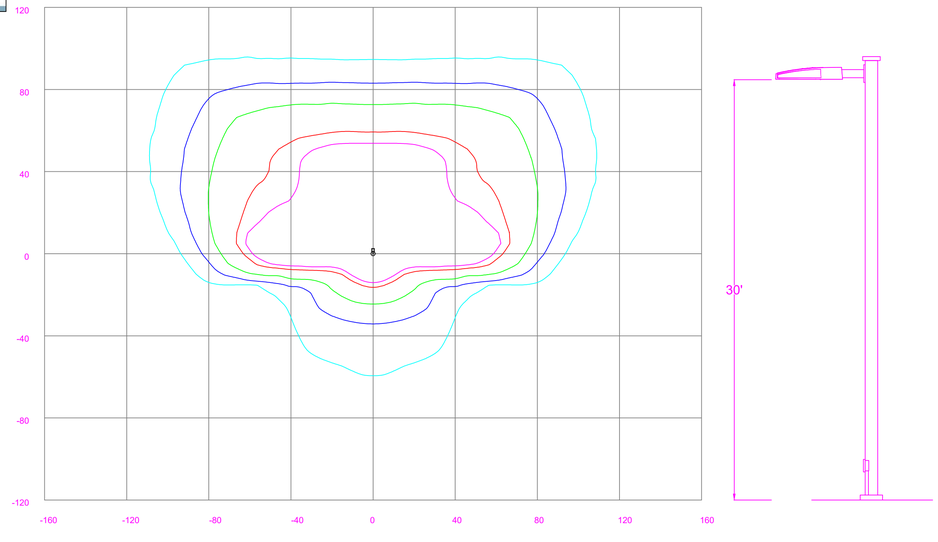


ISOFOOTCANDLE CURVES

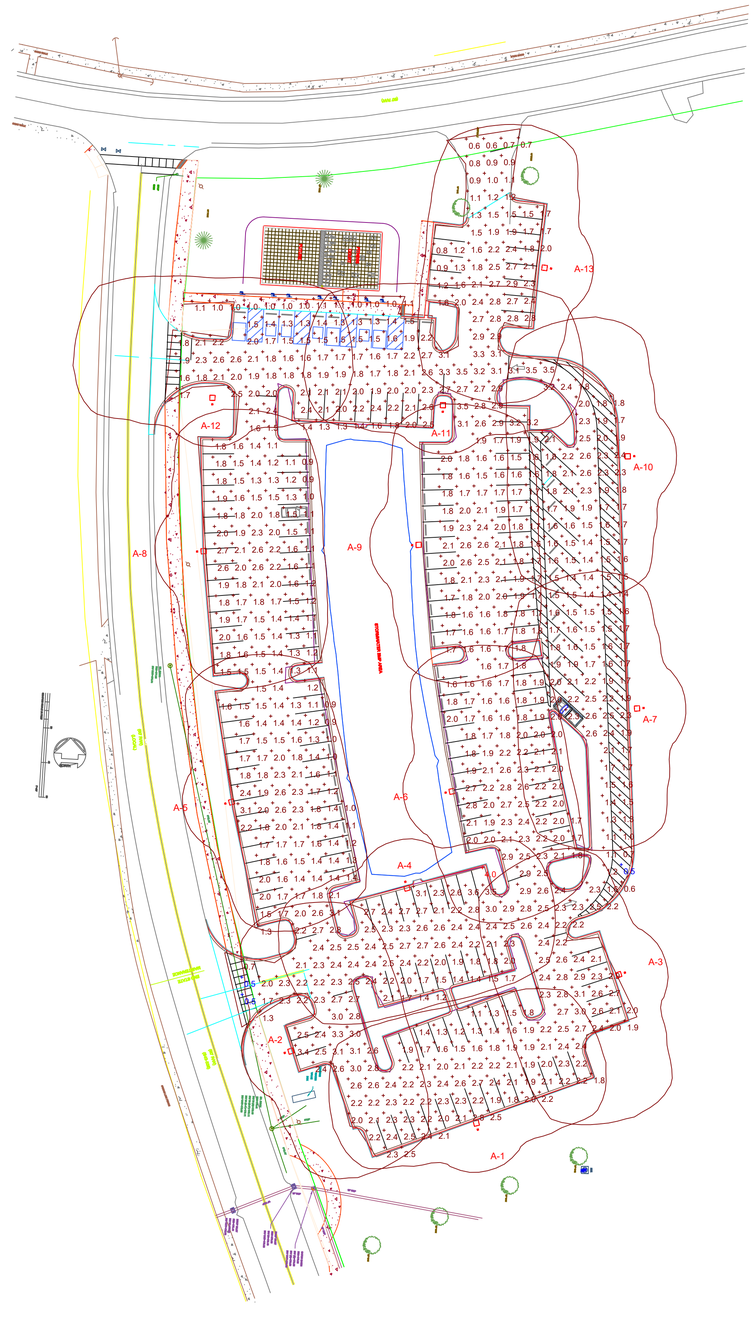
FIXTURE: 205, GALLEON
MOUNTING HEIGHT: 30 FT
LIGHT SOURCE: LED'S, 4000K, 70 CRI
LUMENS - 24391
PATTERN: TYPE IV, B3-U0-G4 (zero light at or above 90 degrees)

ASSY# LFIX-SBX-LED-205-BLK-IV-MULTIV-___-P (BLACK)
POLE ASSY# LPOLE-AB-STL-30FT-BLK-SQ-___-P (BLACK)
BRACKET ASSY# LBKT-SIDE-12IN-BLK-UNV-STL-___-P (BLACK)

NOTE: THE FOOTCANDLE READINGS BELOW ARE MAINTAINED AND HAVE BEEN DEPRECIATED FOR LED LUMEN DEPRECIATION AND LUMINAIRE DIRT DEPRECIATION. FOR INITIAL FOOTCANDLES, DIVIDE THE READINGS BELOW BY .85.



LEGEND (OUTER to INNER): 0.10 , 0.25 , 0.50 , 1.00 , 1.25



Plan View
Scale - 1" = 40ft

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Signature
Date
Lighting Design Tolerance
The calculated foot candle light levels in this lighting design are predicted and based on predicted and based on specific information provided to Duke Energy Progress. Any inaccuracies in the supplied information, difference in luminaire information, lighted area geometry, including elevation differences, reflective properties of surrounding surfaces, obstructions (foliage or otherwise) in the lighted area, or lighting from sources other than listed in this design may produce different results from predicted values. Normal tolerance of voltage, lamp output, and ballast and luminaire will also affect results.

DUKE ENERGY. PROGRESS

USC Sumter, SC
Theater Dr

Designer
Thomas Bland, CEM
Date
05/11/2025
Scale
1"=40'
Drawing No.

Summary