Invitation for Bids

for

Public Works Site-Grading Contract

Bid From: _____

General Information and Bid Submission Requirements:

- Submit bids to:
  Town of Benson
  C/O Kimberly Pickett, Assistant Town Manager
  303 E. Church St,
  Benson, NC 27504
- Submit all bids by **2:00pm** on **Wednesday, April 8, 2020**. At that time bids will be publicly opened within the Benson Room of Town Hall Conference Center.
- The contract will be awarded at the next Town of Benson Board of Commissioners meeting on April 14, 2020. The time for award may be extended for up to 30 additional days by mutual agreement between the Town and the apparent lowest responsive and responsible bidder.
- Questions concerning this invitation for bids must be submitted in writing to: **Kimberly Pickett, Assistant Town Manager, 303 E. Church St, Benson, NC 27504 before 5:00pm on Thursday, April 2, 2020**. Questions may be delivered, mailed, or faxed. Written responses will be mailed or faxed to all bidders on record as having picked up the Invitation for BID.
- If, at the time of the scheduled bid opening, the Town Hall is closed due to uncontrolled events such as fire, snow, ice, wind, or building evacuation, the bid opening will be postponed until 2:00pm on the next normal business day. Bids will be accepted until that date and time.
- Bid submission should be presented in a sealed envelope clearly marked **"Town of Benson Public Works Site-Grading Contract"**

Description of Work

- Clearing and grading of site for use as new public works facility. This includes removal of trees, concrete, existing structures and rough grading of site for future use at Benson Public Works Facility.
- Final grading is not required. Drainage and erosion control must be completed.

Mandatory Pre-Bid

- Attendance to Pre-Bid meeting is required in order for bid to be accepted. Meeting will be held on Wednesday April 1, 2020 on site at 575 N Market St, Benson, NC 27504 at 2:00pm.

Date of Availability

- Date of availability for this contract is **April 15, 2020**
- The completion date for this contract is **May 5, 2020**
- Liquidated Damages will be 50 dollars per day.

Work Times

- Unless otherwise approved by the Public Utilities Director, no work shall be performed on Saturdays, Sundays, and Legal State Holidays. Work shall be performed only during daylight hours.

Waste Disposal

- Vegetation can be disposed at Town of Benson Yard Waste Facility located at 100 E. Porter St.
- Concrete can be disposed on site.
- All other materials shall be recycled or disposed appropriately at a permitted landfill facility.

Erosion Control

- Planned measures shall be executed as well as any additional efforts to ensure settlement containment.

Equipment

- Contractor must provide appropriate equipment to perform work safely and in a timely manner.

Bonding and Retainage

- No bid bond, performance bond, or payment bond is required.

Locations

- The site is located at 575 N Market St, Benson, NC 27504

Certificate of Non-Collusion

The undersigned certifies under penalties of perjury that this bid o proposal has been made and submitted in good faith and without collusion or fraud with any other person. As used in this certification, the work "person" shall mean any natural person, business, partnership, corporation, union, committee, club, or other organization, entity, or group of individuals.

_____

Signature of individual submitting bid or proposal

_____

Name of business

List of References

Reference 1: Name & Contact Information

_____

Reference 2: Name & Contact Information

_____

Submittal Guidelines

To be considered for the project, please submit the entire proposal with the information requested below no later than **2:00pm on Wednesday, April 8, 2020**.

Item Number	Description	Estimated Quantity	Unit	Unit Price	Total Price
1	Mobilization	1	LS		
2	Erosion Control	1	LS		
3	Grading	1	LS		
4	Clearing	1	LS		
5	Demo	1	LS		
6	Temporary Seeding	1	LS		
7	15" RCP	82	LF		
8	18" RCP	60	LF		
9	15" FES	3	LF		
10	Silt Fence	600	LF		
11	18" FES	2	Ea		
12	15" Headwall	1	Ea		
13	Straw wattle	10	Ea		
14	#57 Stone	20	TN		
15	Class B Stone	20	TN		

Total Lump Sum Bid – Annual Amount: _____

Company Name: _____

Company Address: _____

_____

_____

Contact Person: _____

Telephone: _____

INSTRUCTIONS TO BIDDERS

AND

GENERAL CONDITIONS OF THE CONTRACT

STANDARD FORM FOR CONSTRUCTION PROJECTS
TOWN OF BENSON, NORTH CAROLINA

This document is intended for use on Town of Benson capital construction projects and shall not be used on any project that is not reviewed and approved by the Town of Benson Public Works Department and Town Attorney. Extensive modification to the General Conditions by means of "Supplementary General Conditions" is discouraged.

I. INSTRUCTIONS TO BIDDERS

For a proposal to be considered it must be in accordance with the following instructions:

1. PROPOSALS

Proposals must be made in strict accordance with the Form of Proposal provided therefore, and all blank spaces for bids, alternates, and unit prices applicable to bidder's work shall be properly filled in. When requested alternates are not bid, the proposer shall so indicate by the words "No Bid". Any blanks shall also be interpreted as "No Bid". The bidder agrees that bid on Form of Proposal detached from specifications will be considered and will have the same force and effect as if attached thereto. Photocopied or faxed proposals will not be considered. Numbers shall be stated both in writing and in figures for the base bids and alternates. If figures and writing differ, the written number will supersede the figures.

Any modifications to the Form of Proposal (including alternates and/or unit prices) will disqualify the bid and may cause the bid to be rejected.

The bidder shall fill in the Form of Proposal as follows:

a. If the documents are executed by a sole owner, that fact shall be evidenced by the word "Owner" appearing after the name of the person executing them.

b. If the documents are executed by a partnership, that fact shall be evidenced by the word "Co-Partner" appearing after the name of the partner executing them.

c. If the documents are executed on the part of a corporation, they shall be executed by either the president or the vice president and attested by the secretary or assistant secretary in either case, and the title of the office of such persons shall appear after their signatures. The seal of the corporation shall be impressed on each signature page of the documents.

d. If the proposal is made by a joint venture, it shall be executed by each member of the joint venture in the above form for sole owner, partnership or corporation, whichever form is applicable.

e. All signatures shall be properly witnessed and notarized.

f. If the contractor's license of a bidder is held by a person other than an owner, partner or officer of a firm, then the licensee shall also sign and be a party to the proposal. The title "Licensee" shall appear under his/her signature.

Proposals should be addressed as indicated in the Advertisement for Bids and be delivered, enclosed in an opaque sealed envelope, marked "Proposal" and bearing the title of the work, name of the bidder, and the contractor's license number of the bidder. Bidders should clearly mark on the outside of the bid envelope which contract(s) they are bidding.

Bidder shall identify on the bid, the minority businesses that will be utilized on the project with corresponding total dollar value of the bid and affidavit listing good faith efforts or an affidavit indicating work under contract will be self-performed, as required by G.S. 143-128.2(c) and G.S. 143-128.2(f). Failure to comply with these requirements is grounds for rejection of the bid.

For projects bid in the single-prime alternative, the names and license numbers of major subcontractors shall be listed on the proposal form.

It shall be the specific responsibility of the bidder to deliver his bid to the proper official at the selected place and prior to the announced time for the opening of bids. Later delivery of a bid for any reason, including delivery by any delivery service, shall disqualify the bid.

Unit prices quoted in the proposal shall include overhead and profit and shall be the full compensation for the contractor's cost involved in the work. See General Conditions, Article 19c-1.

2. EXAMINATION OF CONDITIONS

It is understood and mutually agreed that by submitting a bid the bidder acknowledges that he has carefully examined all documents pertaining to the work, the location, accessibility and general character of the site of the work and all existing buildings and structures within and adjacent to the site, and has satisfied himself as to the nature of the work, the condition of existing buildings and structures, the conformation of the ground, the character, quality and quantity of the material to be encountered, the character of the equipment, machinery, plant and any other facilities needed preliminary to and during prosecution of the work, the general and local conditions, the construction hazards, and all other matters, including, but not limited to, the labor situation which can in any way affect the work under the contract, and including all safety measures required by the Occupational Safety and Health Act of 1970 and all rules and regulations issued pursuant thereto. It is further mutually agreed that by submitting a proposal the bidder acknowledges that he has satisfied himself as to the feasibility and meaning of the plans, drawings, specifications and other contract documents for the construction of the work and that he accepts all the terms, conditions and stipulations contained therein; and that he is prepared to work in cooperation with other contractors performing work on the site.

Reference is made to contract documents for the identification of those surveys and investigation reports of subsurface or latent physical conditions at the site or otherwise affecting performance of the work, which have been relied upon by the designer in preparing the documents. The owner will make copies of all such surveys and reports available to the bidder upon request.

Each bidder may, at his own expense, make such additional surveys and investigations, as he may deem necessary to determine his bid price for the performance of the work. Any on-site investigation shall be done at the convenience of the owner. Any reasonable request for access to the site will be honored by the owner.

3. BULLETINS AND ADDENDA

Any addenda to specifications issued during the time of bidding are to be considered covered in the proposal and in closing a contract they will become a part thereof. It shall be the bidder's responsibility to ascertain prior to bid time the addenda issued and to see that his bid includes any changes thereby required.

Should the bidder find discrepancies in, or omission from, the drawings or documents or should he be in doubt as to their meaning, he shall at once notify the designer who will send written instructions in the form of addenda to all bidders. Notification should be no later than seven (7) days prior to the date set for receipt of bids. Neither the owner nor the designer will be responsible for any oral instructions.

All addenda should be acknowledged by the bidder(s) on the Form of Proposal. However, even if not acknowledged, by submitting a bid, the bidder has certified that he has reviewed all issued addenda and has included all costs associated within his bid.

4. BID SECURITY

Each proposal shall be accompanied by a cash deposit or a certified check drawn on some bank or trust company insured by the Federal Deposit Insurance Corporation, or a bid bond in an amount equal to not less than five percent (5%) of the proposal, said deposit to be retained by the owner as liquidated damages in event of failure of the successful bidder to execute the contract within ten (10) days after the award or to give satisfactory surety as required by law (G.S. 143-129).

Bid bond shall be conditioned that the surety will, upon demand, forthwith make payment to the obligee upon said bond if the bidder fails to execute the contract. The owner may retain bid securities of any bidder(s) who may have a reasonable chance of award of contract for the full duration of time stated in the Notice to Bidders. Other bid securities may be released sooner, at the discretion of the owner. All bid securities (cash or certified checks) shall be returned to the bidders promptly after award of contracts and no later than seven (7) days after expiration of the holding period stated in the Notice to Bidders. Standard Form of Bid Bond is included in these specifications and shall be used.

Cash security and/or bid bonds may be waived by the Owner on a case-by-case basis. Such waiver shall be in writing and fully executed by Owner to be effective.

5. RECEIPT OF BIDS

Bids shall be received in strict accordance with requirements of the General Statutes of North Carolina. Bid security shall be required as prescribed by statute. Prior to the closing of the bid, the bidder will be permitted to change or withdraw his bid. Guidelines for opening of public construction bids are available from the State Construction Office.

6. OPENING OF BIDS

Upon opening, all bids shall be read aloud. Once bidding is closed, there shall not be any withdrawal of bids by any bidder and no bids may be returned by the designer to any bidder. After the opening of bids, no bid may be withdrawn, except under the provisions of General Statute 143-129.1, for a period of thirty days unless otherwise specified. Should the successful bidder default and fail to execute a contract, the contract may be awarded to the next lowest and responsible bidder. The owner reserves the unqualified right to reject any and all bids. Reasons for rejection may include, but shall not be limited to, the following:

a. If the Form of Proposal furnished to the bidder is not used or is altered.

b. If the bidder fails to insert a price for all bid items, alternate and unit prices requested.

c. If the bidder adds any provisions reserving the right to accept or reject any award.

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

e. If the bidder fails to complete the proposal form where information is requested so the bid may be properly evaluated by the owner.

f. If the unit prices contained in the bid schedule are unacceptable to the Owner..

g. If the bidder fails to comply with other instructions stated herein.

7. BID EVALUATION

The award of the contract will be made to the lowest responsible bidder as soon as practical. The owner may award on the basis of the base bid and any alternates the owner chooses.

Before awarding a contract, the owner may require the apparent low bidder to qualify himself to be a responsible bidder by furnishing any or all of the following data:

a. The latest financial statement showing assets and liabilities of the company or other information satisfactory to the owner.

b. A listing of completed projects of similar size.

c. Permanent name and address of place of business.

d. The number of regular employees of the organization and length of time the organization has been in business under present name.

e. The name and home office address of the surety proposed and the name and address of the responsible local claim agent.

f. The names of members of the firms who hold appropriate trade licenses, together with license numbers.

g. If prequalified, contractor info will be reviewed and evaluated comparatively to submitted prequalification package.

Failure or refusal to furnish any of the above information, if requested, shall constitute a basis for disqualification of any bidder.

In determining the lowest responsible, responsive bidder, the owner shall take into consideration the bidder's compliance with the requirements of G.S. 143-128.2(c), the past performance of the bidder on construction contracts for the Town of Benson or and/or any other institution or unit of local government, with particular concern given to completion times, quality of work, cooperation with other contractors, and cooperation with the designer and owner. Failure of the low bidder to furnish affidavit and/or documentation as required by G.S. 143-128.2(c) shall constitute a basis for disqualification of the bid.

Should the owner adjudge that the apparent low bidder is not the lowest responsible, responsive bidder by virtue of the above information, said apparent low bidder will be so notified and his bid security shall be returned to him.

8. PERFORMANCE BOND

Unless waived by a written and fully executed waiver, the successful bidder, upon award of contract, shall furnish a performance bond in an amount equal to 100 percent of the contract price. See Article 35, General Conditions.

9. PAYMENT BOND

Unless waived by a written and fully executed waiver, the successful bidder, upon award of contract, shall furnish a payment bond in an amount equal to 100 percent of the contract price. See Article 35, General Conditions.

10. PAYMENTS

Payments to the successful bidders (contractors) will be made on the basis of monthly estimates, or as otherwise specified in the bid, notice of award, or other writing. See Article 31, General Conditions.

11. PRE-BID CONFERENCE

Prior to the date set for receiving bids, the Designer or the Town of Benson may arrange and conduct a Pre-Bid Conference for all prospective bidders. The purpose of this conference is to review project requirements and to respond to questions from prospective bidders and their subcontractors or material suppliers related to the intent of bid documents. Attendance by prospective bidders shall be as required by the "Notice to Bidders".

12. SUBSTITUTIONS

In accordance with the provisions of G.S. 133-3, material, product, or equipment substitutions proposed by the bidders to those specified herein can only be considered during the bidding phase until ten (10) days prior to the receipt of bids when submitted to the Designer with sufficient data to confirm material, product, or equipment equality. Proposed substitutions submitted after this time will be considered only as potential change order.

Submittals for proposed substitutions shall include the following information:

a. Name, address, and telephone number of manufacturer and supplier as appropriate.

b. Trade name, model or catalog designation.

c. Product data including performance and test data, reference standards, and technical descriptions of material, product, or equipment. Include color samples and samples of available finishes as appropriate.

d. Detailed comparison with specified products including performance capabilities, warranties, and test results.

e. Other pertinent data including data requested by the Designer to confirm product equality.

If a proposed material, product, or equipment substitution is deemed equal by the Designer to those specified, all bidders of record will be notified by Addendum.

GENERAL CONDITIONS OF THE CONTRACT

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ARTICLE 1 - DEFINITIONS

a. The **contract documents** consist of the Notice to Bidders; Instructions to Bidders; General Conditions of the Contract; special conditions if applicable; Supplementary General Conditions; the drawing and specifications, including all bulletins, addenda or other modifications of the drawings and specifications incorporated into the documents prior to their execution; the proposal; the contract; the performance bond; the payment bond; insurance certificates; the approval of the Town Attorney; and the certificate of approval of the Public Works Department. All of these items together form the contract.

b. The **owner** is the Town of Benson, a North Carolina Municipal Corporation.

c. The **designer(s)** are those referred to within this contract, or their authorized representatives. The Designer(s), as referred to herein, shall mean architect and/or engineer. They will be referred to hereinafter as if each were of the singular number, masculine gender. In the event a particular project owner does not utilize the services of an engineer, architect, or other design/project manager, then designer shall be construed as owner

d. The **contractor**, as referred to hereinafter, shall be deemed to be either of the several contracting parties called the "Party of the First Part" in either of the several contracts in connection with the total project. Where, in special instances hereinafter, a particular contractor is intended, an adjective precedes the word "contractor," as "general," "heating," etc. For the purposes of a single prime contract, the term Contractor shall be deemed to be the single contracting entity identified as the "Party of the First Part" in the single Construction Contract. Any references or adjectives that name or infer multiple prime contractors shall be interpreted to mean the single prime Contractor. Contractor is further defined, generally, as the party performing work for and at the direction of owner of and in the nature of construction of certain buildings, structures, facilities, similar items.

e. A **subcontractor**, as the term is used herein, shall be understood to be one who has entered into a direct contract with a contractor, and includes one who furnishes materials worked to a special design in accordance with plans and specifications covered by the contract, but does not include one who only sells or furnishes materials not requiring work so described or detailed.

f. **Written notice** shall be defined as notice in writing delivered in person to the contractor, or to a partner of the firm in the case of a partnership, or to a member of the contracting organization, or to an officer of the organization in the case of a corporation, or sent to the last known business address of the contracting organization by registered mail.

g. **Work**, as used herein as a noun, is intended to include materials, labor, and workmanship of the appropriate contractor.

h. The **project** is the total construction work to be performed under the contract documents by the several contractors.

i. **Project Expediter,** as used herein, is an entity stated in the contract documents, designated to effectively facilitate scheduling and coordination of work activities. See Article 14(f) for responsibilities of a Project Expediter. **For the purposes of a single prime contract, the single prime contractor shall be designated as the Project Expediter.**

j. **Change order**, as used herein, shall mean a written order to the contractor subsequent to the signing of the contract authorizing a change in the contract. The change order shall be approved and signed by (as applicable) the contractor, designer, the owner, and the Town of Benson Director of Public Works (hereinafter occasionally referred to simply as "Public Works Director"), in that order (Article 19).

k. **Field Order,** as used herein, shall mean a written approval for the contractor to proceed with the work requested by owner prior to issuance of a formal Change Order. The field order shall be approved and signed by the contractor, designer, owner, and Public Works Director.

l. **Time of completion**, as stated in the contract documents, is to be interpreted as consecutive calendar days measured from the date established in the written Notice to Proceed, or such other date as may be established herein (Article 23).

m. **Liquidated damages,** as stated in the contract documents, is an amount reasonably estimated in advance to cover the consequential damages associated with the Owner's economic loss in not being able to use the Project for its intended purposes at the end of the contract's completion date as amended by change order, if any, by reason of failure of the contractor(s) to complete the work within the time specified. Liquidated damages does not include the Owner's extended contract administration costs (including but not limited to additional fees for architectural and engineering services, testing services, inspection services, commissioning services, etc.), such other damages directly resulting from delays caused solely by the contractor, or consequential damages that the Owner identified in the bid documents that may be impacted by any delay caused solely by the Contractor (e.g., if a multi-phased project-subsequent phases, delays in start other projects that are dependent on the completion of this Project, extension of leases and/or maintenance agreements for other facilities).

n. **Surety**, as used herein, shall mean the bonding company or corporate body which is bound with and for the contractor, and which engages to be responsible for the contractor and his acceptable performance of the work.

o. **Routine written communications between the Designer and the Contractor** are any communication other than a "request for information" provided in letter, memo, or transmittal format, sent by mail, courier, electronic mail, or facsimile. Such communications cannot be identified as "request for information".

p. **Clarification or Request for information (RFI)** is a request from the Contractor seeking an interpretation or clarification by the Designer relative to the contract documents. The RFI, which shall be labeled (RFI), shall clearly and concisely set forth the issue or item requiring clarification or interpretation and why the response is needed. The RFI must set forth the Contractor's interpretation or understanding of the contract documents requirements in question, along with reasons for such an understanding.

q. **Approval** means written or imprinted acknowledgement that materials, equipment or methods of construction are acceptable for use in the work.

r. **Inspection** shall mean examination or observation of work completed or in progress to determine its compliance with contract documents.

s. **"Equal to" or "approved equal"** shall mean materials, products, equipment, assemblies, or installation methods considered equal by the bidder in all characteristics (physical, functional, and aesthetic) to those specified in the contract documents. Acceptance of equal is subject to approval of Designer and owner.

t. **"Substitution" or "substitute"** shall mean materials, products, equipment, assemblies, or installation methods deviating in at least one characteristic (physical, functional, or aesthetic) from those specified, but which in the opinion of the bidder would improve competition and/or enhance the finished installation. Acceptance of substitution is subject to the approval of the Designer and owner.

u. **Provide** shall mean furnish and install complete in place, new, clean, operational, and ready

for use.

v. **Indicated and shown** shall mean provide as detailed, or called for, and reasonably implied in the contract documents.

w. **Special inspector** is one who inspects materials, installation, fabrication, erection or placement of components and connections requiring special expertise to ensure compliance with the approved construction documents and referenced standards.

x. **Commissioning** is a quality assurance process that verifies and documents that building components and systems operate in accordance to the owner's project requirements and the project design documents.

y. **Designer Final Inspection** is the inspection performed by the design team to determine the completeness of the project in accordance with approved plans and specifications. This inspection occurs prior to SCO final inspection.

z. **Public Works Department Final Inspection** is the inspection performed by the Public Works Director or his designate to determine the completeness of the project in accordance with NC Building Codes, Town of Benson Unified Development Ordinance ("UDO") and Code of Ordinances ("COO"), and approved plans and specifications.

aa. **Beneficial Occupancy** is requested by the owner and is occupancy or partial occupancy of the building after all life safety items have been completed as determined by the Public Works Director. Life safety items include but not limited to fire alarm, sprinkler, egress and exit lighting, fire rated walls, egress paths and security.

bb. **Final Acceptance** is the date in which the Town of Benson accepts the construction as totally complete. This includes the Public Works Department Final Inspection and certification by the designer that all punch lists are completed.

ARTICLE 2 - INTENT AND EXECUTION OF DOCUMENTS

a. The drawings and specifications are complementary, one to the other, and that which is shown on the drawings or called for in the specifications shall be as binding as if it were both called for and shown. The intent of the drawings and specifications is to establish the scope of all labor, materials, transportation, equipment, and any and all other things necessary to provide a bid for a complete job. In case of discrepancy or disagreement in the contract documents, the order of precedence shall be: Contract, invitation for bids or other bid documents, specifications, large-scale detail drawings, small-scale drawings.

b. The wording of the specifications shall be interpreted in accordance with common usage of the language except that words having a commonly used technical or trade meaning shall be so interpreted in preference to other meanings.

c. The contractor shall execute each copy of the proposal, contract, performance bond and payment bond as follows:

1. If the documents are executed by a sole owner, that fact shall be evidenced by the word "Owner" appearing after the name of the person executing them.

2. If the documents are executed by a partnership, that fact shall be evidenced by the word "Co-Partner" appearing after the name of the partner executing them.

3. If the documents are executed on the part of a corporation, they shall be executed by either the president or the vice president and attested by the secretary or assistant secretary in either case, and the title of the office of such persons shall appear after their signatures. The seal of the corporation shall be impressed on each signature page of the documents.

4. If the documents are made by a joint venture, they shall be executed by each member of the joint venture in the above form for sole owner, partnership or corporation, whichever form is applicable to each particular member.

5. All signatures shall be properly witnessed and notarized if required by Owner or by law.

6. If the contractor's license is held by a person other than an owner, partner or officer of a firm, then the licensee shall also sign and be a party to the contract. The title "Licensee" shall appear under his/her signature.

7. The bonds shall be executed by an attorney-in-fact. There shall be attached to each copy of the bond a certified copy of power of attorney properly executed and dated.

8. Each copy of the bonds shall be countersigned by an authorized individual agent of the bonding company licensed to do business in North Carolina. The title "Licensed Resident Agent" shall appear after the signature.

9. The seal of the bonding company shall be impressed on each signature page of the bonds.

10. The contractor's signature on the performance bond and the payment bond shall correspond with that on the contract. The date of performance and payment bond shall not be prior to the date of the contract.

ARTICLE 3 - CLARIFICATIONS AND DETAIL DRAWINGS

a. In such cases where the nature of the work requires clarification by the designer, such clarification shall be furnished by the designer with reasonable promptness by means of written instructions or detail drawings, or both. Clarifications and drawings shall be consistent with the intent of contract documents, and shall become a part thereof.

b. The contractor(s) and the designer shall prepare, if deemed necessary, a schedule fixing dates upon which foreseeable clarifications will be required. The schedule will be subject to addition or change in accordance with progress of the work. The designer shall furnish drawings or clarifications in accordance with that schedule. The contractor shall not proceed with the work without such detail drawings and/or written clarifications.

ARTICLE 4 - COPIES OF DRAWINGS AND SPECIFICATIONS

The designer or Owner shall furnish free of charge to the contractors electronic copies of plans and specifications. If requested by the contractor, paper copies of plans and specifications shall be furnished free of charge as follows:

a. General contractor - Up to twelve (12) sets of general contractor drawings and specifications, up to six (6) sets of which shall include drawings and specifications of all other contracts, plus a clean set of black line prints on white paper of all appropriate drawings, upon which the contractor shall clearly and legibly record all work-in-place that is at variance with the contract documents.

b. Each other contractor - Up to six (6) sets of the appropriate drawings and specifications, up to three (3) sets of which shall include drawings and specifications of all other contracts, plus a clean set of black line prints on white paper of all appropriate drawings, upon which the contractor shall clearly and legibly record all work-in-place that is at variance with the contract documents.

c. Additional sets shall be furnished at cost, including mailing, to the contractor upon request by the contractor. This cost shall be stated in the bidding documents.

d. For the purposes of a single-prime contract, the contractor shall receive up to 30 sets of drawings and specifications, plus a clean set of black line prints on white paper of all appropriate drawings, upon which the contractor shall clearly and legibly record all work-in-place that is at variance with the contract documents.

ARTICLE 5 - SHOP DRAWINGS, SUBMITTALS, SAMPLES, DATA

a. Within 15 consecutive calendar days after the notice to proceed, each prime contractor shall submit a schedule for submission of all shop drawings, product data, samples, and similar submittals through the Project Expediter to the Designer. This schedule shall indicate the items, relevant specification sections, other related submittal, data, and the date when these items will be furnished to the designer.

b. The Contractor(s) shall review, approve and submit to the Designer all Shop Drawings, Coordination Drawings, Product Data, Samples, Color Charts, and similar submittal data required or reasonably implied by the Contract Documents. Required Submittals shall bear the Contractor's stamp of approval, any exceptions to the Contract Documents shall be noted on the submittals, and copies of all submittals shall be of sufficient quantity for the Designer to retain up to three (3) copies of each submittal for his own use plus additional copies as may be required by the Contractor. Submittals shall be presented to the Designer in accordance with the schedule submitted in paragraph (a), so as to cause no delay in the activities of the Owner or of separate Contractors.

c. The Designer shall review required submittals promptly, noting desired corrections if any, and retaining three (3) copies for his use. The remaining copies of each submittal shall be returned to the Contractor not later than twenty (20) days from the date of receipt by the Designer, for the Contractor's use or for corrections and resubmittal as noted by the Designer. When resubmittals are required, the submittal procedure shall be the same as for the original submittals.

d. Approval of shop drawings/submittals by the Designer shall not be construed as relieving the Contractor from responsibility for compliance with the design or terms of the contract documents nor from responsibility of errors of any sort in the shop drawings, unless such lack of compliance or errors first have been called in writing to the attention of the Designer by the Contractor.

ARTICLE 6 - WORKING DRAWINGS AND SPECIFICATIONS AT THE JOB SITE

a. The contractor shall maintain, in readable condition at his job office, one complete set of working drawings and specifications for his work including all shop drawings. Such drawings and specifications shall be available for use by the designer, his authorized representative, owner or Public Works Department.

b. The contractor shall maintain at the job office, a day-to-day record of work-in-place that is at variance with the contract documents. Such variations shall be fully noted on project drawings by the contractor and submitted to the designer upon project completion and no later than 30 days after final acceptance of the project.

c. The contractor shall maintain at the job office a record of all required tests that have been performed, clearly indicating the scope of work inspected and the date of approval or rejection.

ARTICLE 7 - OWNERSHIP OF DRAWINGS AND SPECIFICATIONS

All drawings and specifications are instruments of service and remain the property of the owner. The use of these instruments on work other than this contract without permission of the owner is prohibited. All copies of drawings and specifications other than contract copies shall be returned to the owner upon request after completion of the work.

ARTICLE 8 - MATERIALS, EQUIPMENT, EMPLOYEES

a. The contractor shall, unless otherwise specified, supply and pay for all labor, transportation, materials, tools, apparatus, lights, power, heat, sanitary facilities, water, scaffolding and incidentals necessary for the completion of his work, and shall install, maintain and remove all equipment of the construction, other utensils or things, and be responsible for the safe, proper and lawful construction, maintenance and use of same, and shall construct in the best and most workmanlike manner, a complete job and everything incidental thereto, as shown on the plans, stated in the specifications, or reasonably implied therefrom, all in accordance with the contract documents.

b. All materials shall be new and of quality specified, except where reclaimed material is authorized herein and approved for use. Workmanship shall at all times be of a grade accepted as the best practice of the particular trade involved, and as stipulated in written standards of recognized organizations or institutes of the respective trades except as exceeded or qualified by the specifications.

c. Upon notice, the contractor shall furnish evidence as to quality of materials.

d. Products are generally specified by ASTM or other reference standard and/or by manufacturer's name and model number or trade name. When specified only by reference standard, the Contractor may select any product meeting this standard, by any manufacturer. When several products or manufacturers are specified as being equally acceptable, the Contractor has the option of using any product and manufacturer combination listed. However, the contractor shall be aware that the cited examples are used only to denote the quality standard of product desired and that they do not restrict bidders to a specific brand, make, manufacturer or specific name; that they are used only to set forth and convey to bidders the general style, type, character and quality of product desired; and that equivalent products will be acceptable. Request for substitution of materials, items, or equipment shall be submitted to the designer for approval or disapproval; such approval or disapproval shall be made by the designer prior to the opening of bids. Alternate materials may be requested after the award if it can clearly be demonstrated that it is an added benefit to the owner and the designer and owner approves.

e. The designer is the judge of equality for proposed substitution of products, materials or equipment.

g. If at any time during the construction and completion of the work covered by these contract documents, the language, conduct, or attire of any workman of the various crafts be adjudged a nuisance to the owner or designer, or if any workman be considered detrimental to the work, the contractor shall order such parties removed immediately from grounds.

ARTICLE 9 - ROYALTIES, LICENSES AND PATENTS

It is the intention of the contract documents that the work covered herein will not constitute in any way infringement of any patent whatsoever unless the fact of such patent is clearly evidenced herein. The contractor shall protect and save harmless the owner against suit on account of alleged or actual infringement. The contractor shall pay all royalties and/or license fees required on account of patented articles or processes, whether the patent rights are evidenced hereinafter.

ARTICLE 10 - PERMITS, INSPECTIONS, FEES, REGULATIONS

a. The contractor shall give all notices and comply with all laws, ordinances, codes, rules and regulations bearing on the conduct of the work under this contract. If the contractor observes that the drawings and specifications are at variance therewith, he shall promptly notify the designer in writing. See Instructions to Bidders, Paragraph 3, Bulletins and Addenda. Any necessary changes required after contract award shall be made by change order in accordance with Article 19. If the contractor performs any work knowing it to be contrary to such laws, ordinances, codes, rules and regulations, and without such notice to the designer, he shall bear all cost arising therefrom. Additional requirements implemented after bidding will be subject to equitable negotiations.

b. All work under this contract shall conform to the North Carolina State Building Code and other State, local and national codes as are applicable. The cost of all required inspections and permits shall be the responsibility of the contractor and included within the bid proposal. All water taps, meter barrels, vaults and impact fees shall be paid by the contractor unless otherwise noted.

ARTICLE 11 - PROTECTION OF WORK, PROPERTY AND THE PUBLIC

a. The contractor(s), if more than one, shall be jointly and severally responsible for the entire site and the building or construction of the same and provide all the necessary protections, as required by the owner or designer, and by laws or ordinances governing such conditions. They shall be responsible for any damage to the owner's property, or of that of others on the job, by them, their personnel, or their subcontractors, and shall rectify, correct, and make good such damages. They shall be responsible for and pay for any damages caused to the owner or any third party. All contractors shall have access to the project at all times.

b. The contractor shall provide cover and protect all portions of the structure when the work is not in progress, provide and set all temporary roofs, covers for doorways, sash and windows, and all other materials necessary to protect all the work on the building, whether set by him, or any of the subcontractors. Any work damaged through the lack of proper protection or from any other cause, shall be repaired or replaced without extra cost to the owner.

c. No fires of any kind will be allowed inside or around the operations during the course of construction without special permission from the designer and owner.

d. The contractor shall protect all trees and shrubs designated to remain in the vicinity of the operations by building substantial boxes around same. He shall barricade all walks, roads, etc., as directed by the designer to keep the public away from the construction. All trenches, excavations or other hazards in the vicinity of the work shall be well barricaded and properly lighted at night.

e. The contractor shall provide all necessary safety measures for the protection of all persons on the job, including the requirements of the A.G.C. *Accident Prevention Manual in Construction*, as amended, and shall fully comply with all state laws or regulations and North Carolina State Building Code requirements to prevent accident or injury to persons on or about the location of the work. He shall clearly mark or post signs warning of hazards existing, and shall barricade excavations, elevator shafts, stairwells and similar hazards. He shall protect against damage or injury resulting from falling materials and he shall maintain all protective devices and signs throughout the progress of the work.

f. The contractor shall adhere to the rules, regulations and interpretations of the North Carolina Department of Labor relating to Occupational Safety and Health Standards for the Construction Industry (Title 29, Code of Federal Regulations, Part 1926, published in Volume 39, Number 122, Part II, June 24, 1974, *Federal Register*), and revisions thereto as adopted by General Statutes of North Carolina 95-126 through 155.

g. The contractor shall designate a responsible person of his organization as safety officer/inspector to inspect the project site for unsafe health and safety hazards, to report these hazards to the contractor for correction, and whose duties also include accident prevention on the project, and to provide other safety and health measures on the project site as required by the terms and conditions of the contract. The name of the safety inspector shall be made known to the designer and owner at the time of the preconstruction conference and in all cases prior to any work starting on the project.

h. In the event of emergency affecting the safety of life, the protection of work, or the safety of adjoining properties, the contractor is hereby authorized to act at his own discretion, without further authorization from anyone, to prevent such threatened injury or damage.

Any compensation claimed by the contractor on account of such action shall be determined as provided for under Article 19(b).

i. Any and all costs associated with correcting damage caused to adjacent properties of the construction site or staging area shall be borne by the contractor. These costs shall include but not be limited to flooding, mud, sand, stone, debris, and discharging of waste products.

ARTICLE 12 - SEDIMENTATION POLLUTION CONTROL ACT OF 1973

a. Any land-disturbing activity performed by the contractor(s) in connection with the project shall comply with all erosion control measures set forth in the contract documents and any additional measures which may be required in order to ensure that the project is in full compliance with the Sedimentation Pollution Control Act of 1973, as implemented by Title 15, North Carolina Administrative Code, Chapter 4, Sedimentation Control, Subchapters 4A, 4B and 4C, as amended (15 N.C.A.C. 4A, 4B and 4C).

b. Upon receipt of notice that a land-disturbing activity is in violation of said act, the contractor(s) shall be responsible for ensuring that all steps or actions necessary to bring the project in compliance with said act are promptly taken.

c. The contractor(s) shall be responsible for defending any legal actions instituted pursuant to N.C.G.S. 113A-64 against any party or persons described in this article.

d. To the fullest extent permitted by law, the contractor(s) shall indemnify and hold harmless the owner, the designer and the agents, consultants and employees of the owner and designer, from and against all claims, damages, civil penalties, losses and expenses, including, but not limited to, attorneys' fees, arising out of or resulting from the performance of work or failure of performance of work, provided that any such claim, damage, civil penalty, loss or expense is attributable to a violation of the Sedimentation Pollution Control

Act. Such obligation shall not be construed to negate, abridge or otherwise reduced any other right or obligation of indemnity which would otherwise exist as to any party or persons described in this article.

ARTICLE 13 - INSPECTION OF THE WORK

a. It is a condition of this contract that the work shall be subject to inspection during normal working hours and during any time work is in preparation and progress by the designer, designated official representatives of the owner, State Construction Office and those persons required by state law to test special work for official approval. The contractor shall therefore provide safe access to the work at all times for such inspections.

b. All instructions to the contractor will be typically made by or through the designer or his designated project representative. Observations made by official representatives of the owner shall be conveyed to the designer for review and coordination prior to issuance to the contractor. In the event a project is does not involve a designer, owner shall make any and all inspections by and through the Public Works Department.

c. All work shall be inspected by designer, special inspector and/or Public Works Department prior to being covered by the contractor. Contractor shall give a minimum two weeks notice unless otherwise agreed to by all parties. If inspection fails, after the first reinspection all costs associated with additional re-inspections shall be borne by the contractor.

d. Where special inspection or testing is required by virtue of any state laws, instructions of the designer, specifications or codes, the contractor shall give adequate notice to the designer of the time set for such inspection or test, if the inspection or test will be conducted by a party other than the designer. Such special tests or inspections will be made in the presence of the designer, or his authorized representative, and it shall be the contractor's responsibility to serve ample notice of such tests.

e. All laboratory tests shall be paid by the owner unless provided otherwise in the contract documents except the general contractor shall pay for laboratory tests to establish design mix for concrete, and for additional tests to prove compliance with contract documents where materials have tested deficient except when the testing laboratory did not follow the appropriate ASTM testing procedures.

f. Should any work be covered up or concealed prior to inspection and approval by the designer, special inspector, and/or State Construction Office such work shall be uncovered or exposed for inspection, if so requested by the designer in writing. Inspection of the work will be made upon notice from the contractor. All cost involved in uncovering, repairing, replacing, recovering and restoring to design condition, the work that has been covered or concealed will be paid by the contractor involved.

ARTICLE 14 - CONSTRUCTION SUPERVISION AND SCHEDULE

a. Throughout the progress of the work, each contractor shall keep at the job site, a competent superintendent and supervisory staff satisfactory to the designer and the owner, unless such requirement is waived, in writing, by owner. The superintendent and supervisory staff shall not be changed without the consent of the designer and owner unless said superintendent ceases to be employed by the contractor or ceases to be competent as determined by the contractor, designer or owner. The superintendent and other staff designated by the contractor in writing shall have authority to act on behalf of the contractor, and instructions, directions or notices given to him shall be as binding as if given to the contractor. However, directions, instructions, and notices shall be confirmed in writing.

b. The contractor shall examine and study the drawings and specifications and fully understand

the project design, and shall provide constant and efficient supervision to the work. Should he discover any discrepancies of any sort in the drawings or specifications, he shall report them to the designer without delay.

c. All contractors, if more than one, shall be required to cooperate and consult with each other during the construction of this project. Prior to installation of work, all contractors shall jointly prepare coordination drawings, showing locations of various ductworks, piping, motors, pumps, and other mechanical or electrical equipment, in relation to the structure, walls and ceilings. These drawings shall be submitted to the designer through the Project Expediter for information only. Each contractor shall lay out and execute his work to cause the least delay to other contractors. Each contractor shall be financially responsible for any damage to other contractor's work and for undue delay caused to other contractors on the project.

d. The contractor is required to attend job site progress conferences as called by the designer. The contractor shall be represented at these job progress conferences by both home office and project personnel. These representatives shall have authority to act on behalf of the contractor. These meetings shall be open to subcontractors, material suppliers and any others who can contribute toward maintaining required job progress. It shall be the principal purpose of these meetings, or conferences, to effect coordination, cooperation and assistance in every practical way toward the end of maintaining progress of the project on schedule and to complete the project within the specified contract time. Each contractor shall be prepared to assess progress of the work as required in his particular contract and to recommend remedial measures for correction of progress as may be appropriate. The designer or his authorized representative shall be the coordinator of the conferences and shall preside as chairman. The contractor shall turn over a copy of his daily reports to the Designer and Owner at the job site progress conference. Owner will determine daily report format.

e. The contractor(s) shall, employ an engineer or a land surveyor licensed in the State of North Carolina to lay out the work and to establish a bench mark in a location where same will not be disturbed and where direct instruments sights may be taken.

f. The designer shall designate a Project Expediter on projects involving two or more prime contracts. The Project Expediter shall be designated in the Supplementary General Conditions. The Project Expediter shall have at a minimum the following responsibilities:

1. Prepare the project construction schedule and shall allow all prime contractors (multi-prime contract) and subcontractors (single-prime contract) performing general, plumbing, HVAC, and electrical work equal input into the preparation of the initial construction schedule.

2. Maintain a project progress schedule for all contractors.

3. Give adequate notice to all contractors to ensure efficient continuity of all phases of the work.

4. Notify the designer of any changes in the project schedule.

5. Recommend to the owner whether payment to a contractor shall be approved.

g. It shall be the responsibility of the Project Expediter to cooperate with and obtain from several prime contractors and subcontractors on the job, their respective work activities and integrate these activities into a project construction schedule in form of a detailed bar chart or Critical Path Method (CPM), schedule. Each prime contractor shall provide work activities within fourteen (14) days of request by the Project Expediter. A "work activity", for scheduling

purposes, shall be any component or contractual requirement of the project requiring at least one (1) day, but not more than fourteen (14) days, to complete or fulfill. The project construction schedule shall graphically show all salient features of the work required to construct the project from start to finish and within the allotted time established in the contract. The time (in days) between the contractor's early completion and contractual completion dates is part of the project total float time; and shall be used as such, unless amended by a change order. On a multi-prime project, each prime contractor shall review the proposed construction schedule and approve same in writing. The Project Expediter shall submit the proposed construction schedule to the designer for comments. The complete Project construction schedule shall be of the type set forth in the Supplementary General Condition or subparagraph (1) or (2) below, as appropriate:

1. For a project with total contracts of $500,000 or less, a bar chart schedule will satisfy the above requirement. The schedule shall indicate the estimated starting and completion dates for each major element of the work.

2. For a project with total contracts over $500,000, a Critical Path Method (CPM) schedule shall be utilized to control the planning and scheduling of the Work. The CPM schedule shall be the responsibility of the Project Expediter and shall be paid for by the Project Expediter.

Bar Chart Schedule: Where a bar chart schedule is required, it shall be time-scaled in weekly increments, shall indicate the estimated starting and completion dates for each major element of the work by trade and by area, level, or zone, and shall schedule dates for all salient features, including but not limited to the placing of orders for materials, submission of shop drawings and other Submittals for approval, approval of shop drawings by designers, the manufacture and delivery of material, the testing and the installation of materials, supplies and equipment, and all Work activities to be performed by the Contractor. The Contractor shall allow sufficient time in his schedule for all commissioning, required inspections and completion of final punch list(s). Each Work activity will be assigned a time estimate by the Contractor. One day shall be the smallest time unit used.

CPM Schedule: Where a CPM schedule is required, it shall be in time-scaled precedence format using the Project Expediter's logic and time estimates. The CPM schedule shall be drawn or plotted with activities grouped or zoned by Work area or subcontract as opposed to a random (or scattered) format. The CPM schedule shall be time-scaled on a weekly basis and shall be drawn or plotted at a level of detail and logic, which will schedule all salient features of the work to be performed by the Contractor. The Contractor shall allow sufficient time in his schedule for all commissioning, required inspections and completion of final punch list(s). Each Work activity will be assigned a time estimate by the Contractor. One day shall be the smallest time unit used.

The CPM schedule will identify and describe each activity, state the duration of each activity, the calendar dates for the early and late start and the early and late finish of each activity, and clearly highlight all activities on the critical path. "Total float" and "free float" shall be indicated for all activities. Float time shall not be considered for the exclusive use or benefit of either the Owner or the Contractor, but must be allocated in the best interest of completing the Work within the Contract time. Extensions to the Contract time, when granted by Change Order, will be granted only when equitable time adjustment exceeds the Total Float in the activity or path of activities affected by the change. On contracts with a

price over $2,500,000, the CPM schedule shall also show what part of the Contract Price is attributable to each activity on the schedule, the sum of which for all activities shall equal the total Contract Price.

Early Completion of Project: The Contractor may attempt to complete the project prior to the Contract Completion Date. However, such planned early completion shall be for the Contractor's convenience only and shall not create any additional rights of the Contractor or obligations of the Owner under this Contract, nor shall it change the Time for Completion or the Contract Completion Date. The Contractor shall not be required to pay liquidated damages to the Owner because of its failure to complete by its planned earlier date. Likewise, the Owner shall not pay the Contractor any additional compensation for early completion nor will the Owner owe the Contractor any compensation should the Owner, its officers, employees, or agents cause the Contractor not to complete earlier than the date required by the Contract Documents.

h. The proposed project construction schedule shall be presented to the designer no later than fifteen (15) days after written notice to proceed. No application for payment will be processed until this schedule is accepted by the designer and owner.

i. The approved project construction schedule shall be distributed to all contractors and displayed at the job site by the Project Expediter.

j. The several contractors shall be responsible for their work activities and shall notify the Project Expediter of any necessary changes or adjustments to their work. The Project Expediter shall maintain the project construction schedule, making biweekly adjustments, updates, corrections, etc., that are necessary to finish the project within the Contract time, keeping all contractors and the designer fully informed. Copy of a bar chart schedule annotated to show the current progress shall be submitted by the Contractor(s) to the designer, along with monthly request for payment. For project requiring CPM schedule, the Contractor shall submit a biweekly report of the status of all activities. The bar chart schedule or status report shall show the actual Work completed to date in comparison with the original Work scheduled for all activities. If any activities of the work of several contractors are behind schedule, the contractor must indicate in writing, what measures will be taken to bring each such activity back on schedule and to ensure that the Contract Completion Date is not exceeded. A plan of action and recovery schedule shall be developed and submitted to the designer by the Project Expediter, when:

(1) the contractor's report indicates delays, that are in the opinion of the designer or the owner, of sufficient magnitude that the contractor's ability to complete the work by the scheduled completion is brought into question; (2) the updated construction schedule is thirty (30) days behind the planned or baseline schedule and no legitimate time extensions, as determined by the Designer, are in process; and (3) the contractor desires to make changes in the logic (sequencing of work) or the planned duration of future activities of the CPM schedule which, in the opinion of the designer or the owner, are of a major nature. The plan of action, when required shall be submitted to the Owner for review within two (2) business days of the Contractor receiving the Owner's written demand. The recovery schedule, when required, shall be submitted to the Owner within five (5) calendar days of the Contractor's receiving the Owner's written demand. Failure to provide an updated construction schedule or a recovery schedule may be grounds for rejection of payment applications or withholding of funds as set forth in Article 33.

k. The Project Expediter shall notify each contractor of such events or periods that are critical to

the progress of the job. Such notice shall be timely and reasonable. Should the progress be delayed due to the work of any of the several contractors, it shall be the duty of the Project Expediter to immediately notify the contractor(s) responsible for such delay, the designer, the State Construction Office and other prime contractors. The designer shall determine the contractor(s) who caused the delays and notify the bonding company of the responsible contractor(s) of the delays; and shall make a recommendation to the owner regarding further action.

l. Designation as Project Expediter entails an additional project control responsibility and does not alter in any way the responsibility of the contractor so designated, nor the responsibility of the other contractors involved in the project. The project expeditor's Superintendent(s) shall be in attendance at the Project site at all times when work is in progress unless conditions are beyond the control of the Contractor or until termination of the Contract in accordance with the Contract Documents. It is understood that such Superintendent shall be acceptable to the Owner and Designer and shall be the one who will be continued in that capacity for the duration of the project unless he ceases to be on the Contractor's payroll or the Owner otherwise agrees. The Superintendent shall not be employed on any other project for or by the Contractor or by any other entity during the course of the Work. If the Superintendent is employed by the Contractor on another project without the Owner's approval, then the Owner may deduct from the Contractor's monthly general condition costs and amount representing the Superintendent's cost and shall deduct that amount for each month thereafter until the Contractor has the Superintendent back on the Owner's Project full-time.

ARTICLE 15 - SEPARATE CONTRACTS AND CONTRACTOR RELATIONSHIPS

a. Effective from January 1, 2002, Chapter 143, Article 8, was amended, to allow public contracts to be delivered by the following delivery methods: single-prime, dual (single-prime and separate-prime), construction manager at risk, and alternative contracting method as approved by the State Building Commission. The owner reserves the right to prepare separate specifications, receive separate bids, and award separate contracts for such other major items of work as may be in the best interest of the Town. For the purposes of a single prime contract, refer to Article 1 – Definitions.

b. All contractors shall cooperate with each other in the execution of their work, and shall plan their work in such manner as to avoid conflicting schedules or delay of the work. See Article 14, Construction Supervision.

c. If any part of contractor's work depends upon the work of another contractor, defects which may affect that work shall be reported to the designer in order that prompt inspection may be made and the defects corrected. Commencement of work by a contractor where such condition exists will constitute acceptance of the other contractor's work as being satisfactory in all respects to receive the work commenced, except as to defects which may later develop. The designer shall be the judge as to the quality of work and shall settle all disputes on the matter between contractors.

d. Any mechanical or electrical work such as sleeves, inserts, chases, openings, penetrations, etc., which is located in the work of the general contractor shall be built in by the general contractor. The respective mechanical and electrical contractors shall set all sleeves, inserts and other devices that are to be incorporated into the structure in cooperation and under the supervision of the general contractor. The responsibility for the exact location of such items shall be that of the mechanical and/or electrical contractor.

e. The designer and the owner shall have access to the work whenever it is in preparation and progress and during normal working hours. The contractor shall provide facilities for such access so the designer may perform his functions under the contract documents.

f. Should a contractor cause damage to the work or property of another contractor, he shall be directly responsible, and upon notice, shall promptly settle the claim or otherwise resolve

the dispute.

ARTICLE 16 - SUBCONTRACTS AND SUBCONTRACTORS

Within thirty (30) days after award of the contract, the contractor shall submit to the designer, owner, and to the Public Works Department a list giving the names and addresses of subcontractors and equipment and material suppliers he proposes to use, together with the scope of their respective parts of the work. Should any subcontractor be disapproved by the designer or owner, the contractor shall submit a substitute for approval. The designer and owner shall act promptly in the approval of subcontractors, and when approval of the list is given, no changes of subcontractors will be permitted except for cause or reason considered justifiable by the designer or owner.

a. The designer will furnish to any subcontractor, upon request, evidence regarding amounts of money paid to the contractor on account of the subcontractor's work.

b. The contractor is and remains fully responsible for his own acts or omissions as well as those of any subcontractor or of any employee of either. The contractor agrees that no contractual relationship exists between the subcontractor and the owner in regard to the contract, and that the subcontractor acts on this work as an agent or employee of the contractor.

c. The owner reserves the right to limit the amount of portions of work to be subcontracted as hereinafter specified.

d. Notwithstanding any contrary provision herein contained, owner reserves the right to disqualify any subcontractor at any time.

ARTICLE 17 - CONTRACTOR AND SUBCONTRACTOR RELATIONSHIPS

The contractor agrees that the terms of these contract documents shall apply equally to each subcontractor as to the contractor, and the contractor agrees to take such action as may be necessary to bind each subcontractor to these terms. The contractor further agrees to conform to the Code of Ethical Conduct as adopted by the Associated General Contractors of America, Inc., with respect to contractor-subcontractor relationships, and that payments to subcontractors shall be made in accordance with the provisions of G.S. 143-134.1 titled Interest on final payments due to prime contractors: payments to subcontractors.

a. On all public construction contracts which are let by a board or governing body of the state government or any political subdivision thereof, except contracts let by the Department of Transportation pursuant to G.S. 136-28.1, the balance due prime contractors shall be paid in full within 45 days after respective prime contracts of the project have been accepted by the owner, certified by the architect, engineer or designer to be completed in accordance with terms of the plans and specifications, or occupied by the owner and used for the purpose for which the project was constructed, whichever occurs first. Provided, however, that whenever the architect or consulting engineer in charge of the project determines that delay in completion of the project in accordance with terms of the plans and specifications is the fault of the contractor, the project may be occupied and used for the purposes for which it was constructed without payment of any interest on amounts withheld past the 45 day limit. No payment shall be delayed because of the failure of another prime contractor on such project to complete his contract. Should final payment to any prime contractor beyond the date such contracts have been certified to be completed by the designer or architect, accepted by the owner, or occupied by the owner and used for the purposes for which the project was constructed, be delayed by more than 45 days, said prime contractor shall be paid interest, beginning on the 46th day, at the rate of one percent (1%) per month or fraction thereof unless a lower rate is agreed upon on such unpaid balance as may be due. In addition to the above final payment provisions, periodic payments due a prime contractor during construction shall be paid in accordance with the payment provisions of the contract documents or

said prime contractor shall be paid interest on any such unpaid amount at the rate stipulated above for delayed final payments. Such interest shall begin on the date the payment is due and continue until the date on which payment is made. Such due date may be established by the terms of the contract. Funds for payment of such interest on state-owned projects shall be obtained from the current budget of the owning department, institution or agency. Where a conditional acceptance of a contract exists, and where the owner is retaining a reasonable sum pending correction of such conditions, interest on such reasonable sum shall not apply.

b. Within seven days of receipt by the prime contractor of each periodic or final payment, the prime contractor shall pay the subcontractor based on work completed or service provided under the subcontract. Should any periodic or final payment to the subcontractor be delayed by more than seven days after receipt of periodic or final payment by the prime contractor, the prime contractor shall pay the subcontractor interest, beginning on the eighth day, at the rate of one percent (1%) per month or fraction thereof on such unpaid balance as may be due.

c. The percentage of retainage on payments made by the prime contractor to the subcontractor shall not exceed the percentage of retainage on payments made by the owner to the prime contractor. Any percentage of retainage on payments made by the prime contractor to the subcontractor that exceeds the percentage of retainage on payments made by the owner to the prime contractor shall be subject to interest to be paid by the prime contractor to the subcontractor at the rate of one percent (1%) per month or fraction thereof.

d. Nothing in this section shall prevent the prime contractor at the time of application and certification to the owner from withholding application and certification to the owner for payment to the subcontractor for unsatisfactory job progress; defective construction not remedied; disputed work; third-party claims filed or reasonable evidence that claim will be filed; failure of subcontractor to make timely payments for labor, equipment and materials; damage to prime contractor or another subcontractor; reasonable evidence that subcontract cannot be completed for the unpaid balance of the subcontract sum; or a reasonable amount for retainage not to exceed the initial percentage retained by owner.

ARTICLE 18 - DESIGNER'S STATUS

a. The designer shall provide general administration of the performance of construction contracts, including liaison and necessary inspection of the work to ensure compliance with plans and specifications. He is the agent of the owner only for the purpose of constructing this work and to the extent stipulated in the contract documents. He has authority to direct work to be performed, to stop work, to order work removed, or to order corrections of faulty work, where any such action by the designer may be necessary to assure successful completion of the work.

b. The designer is the impartial interpreter of the contract documents, and, as such, he shall exercise his powers under the contract to enforce faithful performance by both the owner and the contractor, taking sides with neither.

c. Should the designer cease to be employed on the work for any reason whatsoever, then the owner shall employ a competent replacement who shall assume the status of the former designer.

d. The designer and his consultants will make inspections of the project. He will inspect the progress, the quality and the quantity of the work.

e. The designer and the owner shall have access to the work whenever it is in preparation and progress during normal working hours. The contractor shall provide facilities for such access so the designer and owner may perform their functions under the contract documents.

f. Based on the designer's inspections and evaluations of the project, the designer shall issue interpretations, directives and decisions as may be necessary to administer the project. His decisions relating to artistic effect and technical matters shall be final, provided such decisions are within the limitations of the contract.

ARTICLE 19 - CHANGES IN THE WORK

a. The owner may have changes made in the work covered by the contract. These changes will not invalidate and will not relieve or release the contractor from any guarantee given by him pertinent to the contract provisions. These changes will not affect the validity of the guarantee bond and will not relieve the surety or sureties of said bond. All extra work shall be executed under conditions of the original contract.

b. Except in an emergency endangering life or property, no change shall be made by the contractor except upon receipt of approved change order or written field order from the designer, countersigned by the owner and the state construction office authorizing such change. No claim for adjustments of the contract price shall be valid unless this procedure is followed.

   A field order, transmitted by fax, electronically, or hand delivered, may be used where the change involved impacts the critical path of the work. A formal change order shall be issued as expeditiously as possible.

   In the event of emergency endangering life or property, the contractor may be directed to proceed on a time and material basis whereupon the contractor shall proceed and keep accurately on such form as specified by the designer or owner, a correct account of costs together with all proper invoices, payrolls and supporting data. Upon completion of the work the change order will be prepared as outlined under either Method "c(1)" or Method "c(2)" or both.

c. In determining the values of changes, either additive or deductive, contractors are restricted to the use of the following methods:

   1. Where the extra work involved is covered by unit prices quoted in the proposal, or subsequently agreed to by the Contractor, Designer, Owner and State Construction Office the value of the change shall be computed by application of unit prices based on quantities, estimated or actual as agreed of the items involved, except is such cases where a quantity exceeds the estimated quantity allowance in the contract by one hundred percent (100%) or more. In such cases, either party may elect to proceed under subparagraph c2 herein. If neither party elects to proceed under c2, then unit prices shall apply.

   2. The contracting parties shall negotiate and agree upon the equitable value of the change prior to issuance of the change order, and the change order shall stipulate the corresponding lump sum adjustment to the contract price.

d. Under Paragraph “b” and Methods "c(2)" above, the allowances for overhead and profit combined shall be as follows: all contractors (the single contracting entity (prime), his subcontractors(1st tier subs), or their sub-subcontractors (2nd tier subs, 3rd tier subs, etc.) shall be allowed a maximum of 10% on work they each self-perform; the prime contractor shall be allowed a maximum of 5% on contracted work of his 1st tier sub; 1st tier, 2nd tier, 3rd tier, etc. contractors shall be allowed a maximum of 2.5% on the contracted work of their subs. ; Under Method "c(1)", no additional allowances shall be made for overhead and profit. In the case of deductible change orders, under Method "c(2)" and Paragraph (b) above, the contractor shall include no less than five percent (5%) profit, but no allowances for overhead.

e. The term "net cost" as used herein shall mean the difference between all proper cost additions and deductions. The "cost" as used herein shall be limited to the following:

1. The actual costs of materials and supplies incorporated or consumed as part of the work;

2. The actual costs of labor expended on the project site; labor expended in coordination, change order negotiation, record document maintenance, shop drawing revision or other tasks necessary to the administration of the project are considered overhead whether they take place in an office or on the project site.

3. The actual costs of labor burden, limited to the costs of social security (FICA) and Medicare/Medicaid taxes; unemployment insurance costs; health/dental/vision insurance premiums; paid employee leave for holidays, vacation, sick leave, and/or petty leave, not to exceed a total of 30 days per year; retirement contributions; worker’s compensation insurance premiums; and the costs of general liability insurance when premiums are computed based on payroll amounts; the total of which shall not exceed thirty percent (30%) of the actual costs of labor;

4. The actual costs of rental for tools, excluding hand tools; equipment; machinery; and temporary facilities required for the work;

5. The actual costs of premiums for bonds, insurance, permit fees, and sales or use taxes related to the work.

Overtime and extra pay for holidays and weekends may be a cost item only to the extent approved by the owner.

f. Should concealed conditions be encountered in the performance of the work below grade, or should concealed or unknown conditions in an existing structure be at variance with the conditions indicated by the contract documents, the contract sum and time for completion may be equitably adjusted by change order upon claim by either party made within thirty (30) days after the condition has been identified. The cost of such change shall be arrived at by one of the foregoing methods. All change orders shall be supported by a unit cost breakdown showing method of arriving at net cost as defined above.

g. In all change orders, the procedure will be for the designer to request proposals for the change order work in writing. The contractor will provide such proposal and supporting data in suitable format. The designer shall verify correctness. Delay in the processing of the change order due to lack of proper submittal by the contractor of all required supporting data shall not constitute grounds for a time extension or basis of a claim. Within fourteen (14) days after receipt of the contractor’s accepted proposal including all supporting documentation required by the designer, the designer shall prepare the change order and forward to the contractor for his signature or otherwise respond, in writing, to

the contractor's proposal. Within seven (7) days after receipt of the change order executed by the contractor, the designer shall, certify the change order by his signature, and forward the change order and all supporting data to the owner for the owner's signature. The owner shall execute the change order and forward to the State Construction Office for final approval, within seven (7) days of receipt. The State Construction Office shall act on the change order within seven (7) days. In case of emergency or extenuating circumstances, approval of changes may be obtained verbally by telephone or field orders approved by all parties, then shall be substantiated in writing as outlined under normal procedure.

h. At the time of signing a change order, the contractor shall be required to certify as follows:

"I certify that my bonding company will be notified forthwith that my contract has been changed by the amount of this change order, and that a copy of the approved change order will be mailed upon receipt by me to my surety."

i. A change order, when issued, shall be full compensation, or credit, for the work included, omitted or substituted. It shall show on its face the adjustment in time for completion of the project as a result of the change in the work.

j. If, during the progress of the work, the owner requests a change order and the contractor's terms are unacceptable, the owner may require the contractor to perform such work on a time and material basis whereupon the contractor shall proceed and keep accurately on such form as specified by the Designer or owner, a correct account of cost together with all proper invoices, payrolls and supporting data. Upon completion of the work a change order will be prepared with allowances for overhead and profit per paragraph d. above and "net cost" and "cost" per paragraph e. above. Without prejudice, nothing in this paragraph shall preclude the owner from performing or to have performed that portion of the work requested in the change order.

ARTICLE 20 - CLAIMS FOR EXTRA COST

a. Should the contractor consider that as a result of instructions given by the designer, he is entitled to extra cost above that stated in the contract, he shall give written notice thereof to the designer within seven (7) days without delay. The written notice shall clearly state that a claim for extra cost is being made and shall provide a detailed justification for the extra cost. The contractor shall not proceed with the work affected until further advised, except in emergency involving the safety of life or property, which condition is covered in Article 19(b) and Article 11(h). No claims for extra compensation shall be considered unless the claim is so made. The designer shall render a written decision within seven (7) days of receipt of claim.

b. The contractor shall not act on instructions received by him from persons other than the designer, and any claims for extra compensation or extension of time on account of such instruction will not be honored. The designer shall not be responsible for misunderstandings claimed by the contractor of verbal instructions which have not been confirmed in writing, and in no case shall instructions be interpreted as permitting a departure from the contract documents unless such instruction is confirmed in writing and supported by a properly authorized change order.

c. Should a claim for extra compensation that complies with the requirements of (a) above by the contractor and is denied by the designer or owner the contractor may request a mediation as provided in GS 143-128(f1) in the dispute resolution rules adopted by the State Building Commission (1 N.C.A.C. 30H .0101 through .1001). If the contractor is unable to resolve its claim as a result of mediation, the contractor may pursue the claim in accordance with the provisions of G.S. 143-135.3 and the following:

1. A contractor who has not completed a contract with a board for construction or repair work and who has not received the amount he claims is due under the contract may submit a verified written claim to the Benson Town Attorney for the amount the contractor claims is due. The Town Attorney may deny, allow or compromise the claim, in whole or in part. A claim under this subsection is not a contested case under Chapter 150B of the General Statutes.

2. (a) A contractor who has completed a contract with a board for construction or repair work and who has not received the amount he claims is due under the contract may submit a verified written claim to the Office of the Town Attorney for the amount the contractor claims is due. The claim shall be submitted within sixty (60) days after the contractor receives a final statement of the Owner's disposition of his claim and shall state the factual basis for the claim.

(b) The Town Attorney shall investigate a submitted claim within ninety (90) days of receiving the claim, or within any longer time period upon which the director and the contractor agree. The contractor may meet with the Attorney, either in person or through counsel, to present facts and arguments in support of his claim. The Town Attorney may allow, deny or compromise the claim, in whole or in part. The Town Attorney shall give the contractor a written statement of the Town Attorney's decision on the contractor's claim.

(c) A contractor who is dissatisfied with the Town Attorney's decision on a claim submitted under this subsection may commence a contested case on the claim under Chapter 150B of the General Statutes. The contested case shall be commenced within sixty (60) days of receiving the Town Attorney's written statement of the decision.

(d) As to any portion of a claim that is denied by the Town Attorney, the contractor may, in lieu of the procedures set forth in the preceding subsection of this section, within six (6) months of receipt of the Town Attorney's final decision, institute a civil action for the sum he claims to be entitled to under the contract by filing a verified complaint and the issuance of a summons in the Superior Court of Johnston County. The procedure shall be the same as in all civil actions except that all issues shall be tried by the judge, without a jury.

ARTICLE 21 - MINOR CHANGES IN THE WORK

The designer will have the authority to order minor changes in the work not involving an adjustment in the contract sum or time for completion, and not inconsistent with the intent of the contract documents. Such changes shall be effected by written order, copied to the Public Works Department, and shall be binding on the owner and the contractor.

ARTICLE 22 - UNCORRECTED FAULTY WORK

Should the correction of faulty or damaged work be considered inadvisable or inexpedient by the owner and the designer, the owner shall be reimbursed by the contractor. A change order will be issued to reflect a reduction in the contract sum.

ARTICLE 23 - TIME OF COMPLETION, DELAYS, EXTENSION OF TIME

a. The time of completion is stated in the Supplementary General Conditions, in the Form of Construction Contract, and/or in other project contract documents. The Project Expediter, upon notice of award of contract, shall prepare a construction schedule to complete the project within the time of completion as required by Article 14.

b. The contractors shall commence work to be performed under this agreement on a date to be specified in a written Notice to Proceed from the designer and shall fully complete all work hereunder within the time of completion stated. Time is of the essence and the contractor acknowledges the Owner will likely suffer financial damage for failure to complete the work within the time of completion. For each day in excess of the above number of days, the contractor(s) shall pay the owner the sum stated as liquidated damages reasonably estimated in advance to cover the losses to be incurred by the owner by reason of failure of said contractor(s) to complete the work within the time specified, such time being in the essence of this contract and a material consideration thereof.

c. In the event of multiple prime contractors, the designer shall be the judge as to the division of responsibility between the contractor(s), based on the construction schedule, weekly reports and job records, and shall apportion the amount of liquidated damages to be paid by each of them, according to delay caused by any or all of them; or, if there be no designer for a particular project, the owner shall judge such matters in its sole discretion.

d. If the contractor is delayed at any time in the progress of his work solely by any act or negligence of the owner, the designer, or by any employee of either; by any separate contractor employed by the owner; by changes ordered in the work; by labor disputes at the project site; by abnormal weather conditions not reasonably anticipated for the locality where the work is performed; by unavoidable casualties; by any causes beyond the contractor's control; or by any other causes which the designer and owner determine may justify the delay, then the contract time may be extended by change order only for the time which the designer and owner may determine is reasonable.

e. Time extensions will not be granted for rain, wind, snow or other natural phenomena of normal intensity for the locality where work is performed. For purpose of determining extent of delay attributable to unusual weather phenomena, a determination shall be made by comparing the weather for the contract period involved with the average of the preceding five (5) year climatic range during the same time interval based on the National Oceanic and Atmospheric Administration National Weather Service statistics for the locality where work is performed and on daily weather logs kept on the job site by the contractor reflecting the effect of the weather on progress of the work and initialed by the designer's representative. No weather delays shall be considered after the building is dried in unless work claimed to be delayed is on the critical path of the baseline schedule or approved updated schedule. Time extensions for weather delays, acts of God, labor disputes, fire, delays in transportation, unavoidable casualties or other delays which are beyond the control of the Owner do not entitle the Contractor to compensable damages for delays. Any contractor claim for compensable damages for delays is limited to delays caused solely by the owner or its agents. Contractor caused delays shall be accounted for before owner or designer caused delays in the case of concurrent delays.

f. Request for extension of time shall be made in writing to the designer, copies to the owner and Public Works Director, within twenty (20) days following cause of delay. In case of continuing cause for delay, the Contractor shall notify the Designer to the designer, copies to the owner and Public Works Director, of the delay within 20 days of the beginning of the delay and only one claim is necessary.

g. The contractor shall notify his surety in writing of extension of time granted.

h. No claim for time extension shall be allowed on account of failure of the designer to furnish drawings or instructions until twenty (20) days after demand for such drawings and/or instructions. See Article 5c. Demand must be in written form clearly stating the potential for delay unless the drawings or instructions are provided. Any delay granted will begin after the twenty (20) day demand period is concluded.

ARTICLE 24 - PARTIAL UTILIZATION/BENEFICIAL OCCUPANCY

a. The owner may desire to occupy or utilize all or a portion of the project prior to the completion of the project.

b. Should the owner request a utilization of a building or portion thereof, the designer shall perform a designer final inspection of area after being notified by the contractor that the area is ready for such. After the contractor has completed designer final inspection punch list and the designer has verified, then the designer shall schedule a beneficial occupancy inspection at a time and date acceptable to the owner, contractor(s) and State Construction Office. If beneficial occupancy is granted by the State Construction Office, in such areas the following will be established:

   1. The beginning of guarantees and warranties period for the equipment necessary to support. in the area.

   2. The owner assumes all responsibilities for utility costs for entire building.

   2. Contractor will obtain consent of surety.

   3. Contractor will obtain endorsement from insurance company permitting beneficial occupancy.

c. The owner shall have the right to exclude the contractor from any part of the project which the designer has so certified to be substantially complete, but the owner will allow the contractor reasonable access to complete or correct work to bring it into compliance with the contract.

d. Occupancy by the owner under this article will in no way relieve the contractor from his contractual requirement to complete the project within the specified time. The contractor will not be relieved of liquidated damages because of beneficial occupancy. The designer may prorate liquidated damages based on the percentage of project occupied.

ARTICLE 25 - FINAL INSPECTION, ACCEPTANCE, AND PROJECT CLOSEOUT

a. Upon notification from the contractor(s) that the project is complete and ready for inspection, the designer shall make a Designer final inspection to verify that the project is complete and ready for Public Works Department final inspection. Prior to Public Works Department final inspection, the contractor(s) shall complete all items requiring corrective measures noted at the Designer final inspection. The designer shall schedule a Public Works Department final inspection at a time and date acceptable to the owner, contractor(s) and Public Works Director. If there be no designer for a particular project, the Public Works Director shall undertake to arrange all inspections required or permitted hereunder.

b. At the Public Works Department final inspection, the designer and his consultants shall, if job conditions warrant, record a list of items that are found to be incomplete or not in accordance with the contract documents. At the conclusion of the Public Works Department final inspection, the designer and the Public Works Director or his designated representative shall make one of the following determinations:

   1. That the project is completed and accepted.

   2. That the project will be accepted subject to the correction of the list of discrepancies (punch list). All punch list items must be completed within thirty (30) days of Public Works Department final inspection or the owner may invoke Article 28, Owner's Right to Do Work.

4. That the project is not complete and another date for a Public Work Department final inspection will be established.

c. Within fourteen (14) days of final acceptance per Paragraph b1 or within fourteen (14) days after completion of punch list per Paragraph b2 above, the designer shall certify the work and issue applicable certificate(s) of compliance.

d. Any discrepancies listed or discovered after the date of Public Works Department final inspection and acceptance under Paragraphs b1 or b2 above shall be handled in accordance with Article 42, Guarantee.

f. The final acceptance date will establish the following:

1. The beginning of guarantees and warranties period.

2. The date on which the contractor's insurance coverage for public liability, property damage and builder's risk may be terminated.

3. That no liquidated damages (if applicable) shall be assessed after this date.

4. The termination date of utility cost to the contractor.

g. **Prior to issuance of final acceptance date, the contractor shall have his authorized representatives visit the project and give full instructions to the designated personnel regarding operating, maintenance, care, and adjustment of allequipment and special construction elements. In addition, the contractor shall provide to the owner a complete instructional video (media format acceptable to the owner) on the operation, maintenance, care and adjustment of all equipment and special construction elements.**

ARTICLE 26 - CORRECTION OF WORK BEFORE FINAL PAYMENT

a. Any work, materials, fabricated items or other parts of the work which have been condemned or declared not in accordance with the contract by the designer or owner shall be promptly removed from the work site by the contractor, and shall be immediately replaced by new work in accordance with the contract at no additional cost to the owner. Work or property of other contractors, the owner, or any third party property owner damaged, harmed, trespassed, or destroyed by virtue of such faulty work, shall be repaired, corrected, or otherwise made good at the expense of the contractor whose work is faulty.

b. Correction of condemned work described above shall commence within twenty-four (24) hours after receipt of notice from the designer or owner, and shall make satisfactory progress, as determined by the designer or owner, until completed.

c. Should the contractor fail to proceed with the required corrections, then the owner may complete the work in accordance with the provisions of Article 28.

ARTICLE 27 - CORRECTION OF WORK AFTER FINAL PAYMENT

See Article 35, Performance Bond and Payment Bond, and Article 42, Guarantee. Neither the final certificate, final payment, occupancy of the premises by the owner, nor any provision of the contract, nor any other act or instrument of the owner, nor the designer, shall relieve the contractor from responsibility for negligence, faulty material or workmanship, or failure to comply with the drawings and specifications. Contractor shall correct or make good any defects due thereto and repair any damage resulting therefrom, which may appear during the guarantee period following final acceptance of the work except as stated otherwise under Article 42, Guarantee. The owner will report any defects as they may appear to the contractor and establish

a time limit for completion of corrections by the contractor. The owner will be the judge as to the responsibility for correction of defects.

ARTICLE 28 - OWNER'S RIGHT TO DO WORK

If, during the progress of the work or during the period of guarantee, the contractor fails to prosecute the work properly or to perform any provision of the contract, the owner, after seven (7) days' written notice sent by certified mail, return receipt requested, to the contractor from the designer or owner, may perform or have performed that portion of the work. The cost of the work may be deducted from any amounts due or to become due to the contractor, such action and cost of same having been first approved by the designer. Should the cost of such action of the owner exceed the amount due or to become due the contractor, then the contractor or his surety, or both, shall be liable for and shall pay to the owner the amount of said excess.

ARTICLE 29 - ANNULMENT OF CONTRACT

If the contractor fails to begin the work under the contract within the time specified, or the progress of the work is not maintained on schedule, or the work is not completed within the time above specified, or fails to perform the work with sufficient workmen and equipment or with sufficient materials to ensure the prompt completion of said work, or shall perform the work unsuitably or shall discontinue the prosecution of the work, or if the contractor shall become insolvent or be declared bankrupt or commit any act of bankruptcy or insolvency, or allow any final judgment to stand against him unsatisfied for a period of forty-eight (48) hours, or shall make an assignment for the benefit of creditors, or for any other cause whatsoever shall not carry on the work in an acceptable manner, the owner may give notice in writing, sent by certified mail, return receipt requested, to the contractor and his surety of such delay, neglect or default, specifying the same, and if the contractor within a period of seven (7) days after such notice shall not proceed in accordance therewith, then the owner shall, declare this contract in default, and, thereupon, the surety shall promptly take over the work and complete the performance of this contract in the manner and within the time frame specified. In the event the surety shall fail to take over the work to be done under this contract within seven (7) days after being so notified and notify the owner in writing, sent by certified mail, return receipt requested, that he is taking the same over and stating that he will diligently pursue and complete the same, the owner shall have full power and authority, without violating the contract, to take the prosecution of the work out of the hands of said contractor, to appropriate or use any or all contract materials and equipment on the grounds as may be suitable and acceptable and may enter into an agreement, either by public letting or negotiation, for the completion of said contract according to the terms and provisions thereof or use such other methods as in his opinion shall be required for the completion of said contract in an acceptable manner. All costs and charges incurred by the owner, together with the costs of completing the work under contract, shall be deducted from any monies due or which may become due said contractor and surety. In case the expense so incurred by the owner shall be less than the sum which would have been payable under the contract, if it had been completed by said contractor, then the said contractor and surety shall be entitled to receive the difference, but in case such expense shall exceed the sum which would have been payable under the contract, then the contractor and the surety shall be liable and shall pay to the owner the amount of said excess.

ARTICLE 30 - CONTRACTOR'S RIGHT TO STOP WORK OR TERMINATE THE CONTRACT

a Should the work be stopped by order of a court having jurisdiction, or by order of any other public authority for a period of three months, due to cause beyond the fault or control of the contractor, or if the owner should fail or refuse to make payment on account of a certificate issued by the designer within forty-five (45) days after receipt of same, then the contractor, after fifteen (15) days' written notice sent by certified mail, return receipt requested, to the owner and the designer, may suspend operations on the work or terminate the contract.

b. The owner shall be liable to the contractor for the cost of all materials delivered and work performed on this contract plus 10 percent overhead and profit and shall make such payment. The designer shall be the judge as to the correctness of such payment.

ARTICLE 31 - REQUEST FOR PAYMENT

a. Not later than the fifth day of the month, the contractor shall submit to the designer or owner, of there be no designer on a particular project, a request for payment for work done during the previous month. The request shall be in the form agreed upon between the contractor and the designer, but shall show substantially the value of work done and materials delivered to the site during the period since the last payment, and shall sum up the financial status of the contract with the following information:

   1. Total of contract including change orders.

   2. Value of work completed to date.

   3. Less ten percent (10%) retainage, provided however, that after fifty percent (50%) of the contractor's work has been satisfactorily completed on schedule, with approval of the owner and the Public Works Director and written consent of the surety, further requirements for retainage will be waived only so long as work continues to be completed satisfactorily and on schedule.

   4. Less previous payments.

   5. Current amount due.

b. The contractor, upon request of the designer, shall substantiate the request with invoices of vouchers or payrolls or other evidence.

c. Prior to submitting the first request, the contractor shall prepare for the designer a schedule showing a breakdown of the contract price into values of the various parts of the work, so arranged as to facilitate payments to subcontractors in accordance with Article 17, Contractor and Subcontractor Relationships. The contractor(s) shall list the value of each subcontractor and supplier, identifying each minority business subcontractor and supplier as listed in Affidavit C, if applicable.

d. When payment is made on account of stored materials and equipment, such materials must be stored on the owner's property, and the requests for payments shall be accompanied by invoices or bills of sale or other evidence to establish the owner's title to such materials and equipment. Such payments will be made only for materials that have been customized or fabricated specifically for this project. Raw materials or commodity products including but not limited to piping, conduit, CMU, metal studs and gypsum board may not be submitted. Responsibility for such stored materials and equipment shall remain with the contractor regardless of ownership title. Such stored materials and equipment shall not be removed from the owner's property. Should the space for storage on-site be limited, the contractor, at his option, shall be permitted to store such materials and/or equipment in a suitable space off-site. Should the contractor desire to include any such materials or equipment in his application for payment, they must be stored in the name of the owner in an independent, licensed, bonded warehouse approved by the designer, owner and the Public Works Director and located as close to the site as possible. The warehouse selected must be approved by the contractor's bonding and insurance companies; the material to be paid for shall be assigned to the owner and shall be inspected by the designer. Upon approval by the designer, owner and Public Works Department inspection of the storage facilities and materials and equipment, payment therefore will be certified. Responsibility for such stored materials and equipment shall remain with the contractor. Such stored materials and

equipment shall not be moved except for transportation to the project site. Under certain conditions, the designer or owner may approve storage of materials at the point of manufacture, which conditions shall be approved by the designer, the owner and the Public Works Director prior to approval for the storage and shall include an agreement by the storing party which unconditionally gives the Town of Benson absolute right to possession of the materials at anytime. Bond, security and insurance protection shall continue to be the responsibility of the contractor(s).

e. In the event of beneficial occupancy, retainage of funds due the contractor(s) may be reduced with the approval of the Public Works Director to an equitable amount to cover the list of items to be completed or corrected. Retainage may not be reduced to less than two and one-half (2 1/2) times the estimated value of the work to be completed or corrected. Reduction of retainage must be with the consent and approval of the contractor's bonding company.

ARTICLE 32 - CERTIFICATES OF PAYMENT AND FINAL PAYMENT

a. Within five (5) days from receipt of request for payment from the contractor, the designer shall issue and forward to the owner a certificate for payment. This certificate shall indicate the amount requested or as approved by the designer. If the certificate is not approved by the designer, he shall state in writing to the contractor and the owner his reasons for withholding payment.

b. No certificate issued or payment made shall constitute an acceptance of the work or any part thereof. The making and acceptance of final payment shall constitute a waiver of all claims by the owner except:

1. Claims arising from unsettled liens or claims against the contractor.
2. Faulty work or materials appearing after final payment.
3. Failure of the contractor to perform the work in accordance with drawings and specifications, such failure appearing after payment.
4. As conditioned in the performance bond and payment bond.

c. The making and acceptance of final payment shall constitute a waiver of all claims by the contractor except those claims previously made and remaining unsettled (Article 20(c)).

d. Prior to submitting request for final payment to the designer for approval, the contractor shall fully comply with all requirements specified in the "project closeout" section of the specifications. These requirements include but not limited to the following:

1. Submittal of Product and Operating Manuals, Warranties and Bonds, Guarantees, Maintenance Agreements, As-Built Drawings, Certificates of Inspection or Approval from agencies having jurisdiction. (The designer must approve the Manuals prior to delivery to the owner).
2. Transfer of Required attic stock material and all keys in an organized manner.
3. Record of Owner's training.
4. Resolution of any final inspection discrepancies.
5. Granting access to Contractor's records, if Owner's internal auditors have made a request for such access pursuant to Article 52.

e. The contractor shall forward to the designer or owner, the final application for payment along with the following documents:

1. List of minority business subcontractors and material suppliers showing breakdown of contract amounts and total actual payments to subs and material suppliers.

2. Affidavit of Release of Liens.

3. Affidavit of contractors of payment to material suppliers and subcontractors. (See Article 36).

4. Consent of Surety to Final Payment.

5. Certificates of state agencies required by state law.

f. The designer will not authorize final payment until the work under contract has been certified by designer, certificates of compliance issued, and the contractor has complied with the closeout requirements. The designer shall forward the contractor's final application for payment to the owner along with respective certificate(s) of compliance required by law.

ARTICLE 33 - PAYMENTS WITHHELD

a. The designer or owner with the approval of the Public Works Director may withhold payment for the following reasons:

1. Faulty work not corrected.

2. The unpaid balance on the contract is insufficient to complete the work in the judgment of the designer or owner.

3. To provide for sufficient contract balance to cover liquidated damages that will be assessed.

b. The Benson Town Attorney may authorize the withholding of payment for the following reasons:

1. Claims filed against the contractor or evidence that a claim will be filed.

2. Evidence that subcontractors have not been paid.

c. The Owner may withhold all or a portion of Contractor's general conditions costs set forth in the approved schedule of values, if Contractor has failed to comply with: (1) a request to access its records by Owner's internal auditors pursuant to Article 52; (2) a request for a plan of action and/or recovery schedule under Article 14.j or provide The Owner: (3) a request to provide an electronic copies of Contractor's baseline schedule, updates with all logic used to create the schedules in the original format of the scheduling software; and (4) Contractor's failure to have its Superintendent on the Project full-time;

d. When grounds for withholding payments have been removed, payment will be released. Delay of payment due the contractor without cause will make owner liable for payment of interest to the contractor in accordance with G.S. 143-134.1. As provided in G.S.143- 134.1(e) the owner shall not be liable for interest on payments withheld by the owner for unsatisfactory job progress, defective construction not

remedied, disputed work, or third- party claims filed against the owner or reasonable evidence that a third-party claim will be filed.

ARTICLE 34 - MINIMUM INSURANCE REQUIREMENTS

The work under this contract shall not commence until the contractor has obtained all required insurance and verifying certificates of insurance have been approved in writing by the owner. These certificates shall document that coverages afforded under the policies will not be cancelled, reduced in amount or coverages eliminated until at least thirty (30) days after mailing written notice, by certified mail, return receipt requested, to the insured and the owner of such alteration or cancellation. If endorsements are needed to comply with the notification or other requirements of this article copies of the endorsements shall be submitted with the certificates.

a. Worker's Compensation and Employer's Liability

The contractor shall provide and maintain, until final acceptance, workmen's compensation insurance, as required by law, as well as employer's liability coverage with minimum limits of $100,000.

b. Public Liability and Property Damage

The contractor shall provide and maintain, until final acceptance, comprehensive general liability insurance, including coverage for premises operations, independent contractors, completed operations, products and contractual exposures, as shall protect such contractors from claims arising out of any bodily injury, including accidental death, as well as from claims for property damages which may arise from operations under this contract, whether such operations be by the contractor or by any subcontractor, or by anyone directly or indirectly employed by either of them and the minimum limits of such insurance shall be as follows:

Bodily Injury:	$500,000 per occurrence
Property Damage:	$100,000 per occurrence / $300,000 aggregate

In lieu of limits listed above, a $500,000 combined single limit shall satisfy both conditions.

Such coverage for completed operations must be maintained for at least two (2) years following final acceptance of the work performed under the contract.

c. Property Insurance (Builder's Risk/Installation Floater)

The contractor shall purchase and maintain property insurance until final acceptance, upon the entire work at the site to the full insurable value thereof. This insurance shall include the interests of the owner, the contractor, the subcontractors and sub- subcontractors in the work and shall insure against the perils of fire, wind, rain, flood, extended coverage, and vandalism and malicious mischief. If the owner is damaged by failure of the contractor to purchase or maintain such insurance, then the contractor shall bear all reasonable costs properly attributable thereto; the contractor shall effect and maintain similar property insurance on portions of the work stored off the site when request for payment per articles so includes such portions.

d. Deductible

Any deductible, if applicable to loss covered by insurance provided, is to be borne by the contractor.

e. Other Insurance

The contractor shall obtain such additional insurance as may be required by the owner or by the General Statutes of North Carolina including motor vehicle insurance, in amounts not less than the statutory limits.

f. Proof of Carriage

The contractor shall furnish the owner with satisfactory proof of carriage of the insurance required before written approval is granted by the owner.

ARTICLE 35 - PERFORMANCE BOND AND PAYMENT BOND

a. Each contractor shall furnish a performance bond and payment bond executed by a surety company authorized to do business in North Carolina. The bonds shall be in the full contract amount. Bonds shall be executed in the form bound with these specifications.

b. All bonds shall be countersigned by an authorized agent of the bonding company who is licensed to do business in North Carolina.

c. The performance and/or payment bonds may be waived by Owner if such waiver is in writing and signed by Owner.

ARTICLE 36 - CONTRACTOR'S AFFIDAVIT

The final payment of retained amount due the contractor on account of the contract shall not become due until the contractor has furnished to the owner through the designer an affidavit signed, sworn and notarized to the effect that all payments for materials, services or subcontracted work in connection with his contract have been satisfied, and that no claims or liens exist against the contractor in connection with this contract. In the event that the contractor cannot obtain similar affidavits from subcontractors to protect the contractor and the owner from possible liens or claims against the subcontractor, the contractor shall state in his affidavit that no claims or liens exist against any subcontractor to the best of his (the contractor's) knowledge, and if any appear afterward, the contractor shall save the owner harmless.

ARTICLE 37 - ASSIGNMENTS

The contractor shall not assign any portion of this contract nor subcontract in its entirety. Except as may be required under terms of the performance bond or payment bond, no funds or sums of money due or become due the contractor under the contract may be assigned.

ARTICLE 38 - USE OF PREMISES

a. The contractor(s) shall confine his apparatus, the storage of materials and the operations of his workmen to limits indicated by law, ordinances, permits or directions of the designer and owner and shall not exceed those established limits in his operations.

b. The contractor(s) shall not load or permit any part of the structure to be loaded with a weight that will endanger its safety.

c. The contractor(s) shall enforce the designer's and owner's instructions regarding signs, advertisements, fires and smoking.

d. No firearms, any type of alcoholic beverages, or drugs (other than those prescribed by a physician) will be permitted at the job site.

ARTICLE 39 - CUTTING, PATCHING AND DIGGING

a. The contractor shall do all cutting, fitting or patching of his work that may be required to

make its several parts come together properly and fit it to receive or be received by work of other contractors shown upon or reasonably implied by the drawings and specifications for the completed structure, as the designer or owner may direct.

b. Any cost brought about by defective or ill-timed work shall be borne by the party responsible therefor.

c. No contractor shall endanger any work of another contractor by cutting, digging or other means. No contractor shall cut or alter the work of any other contractor without the consent of the designer and the affected contractor(s).

ARTICLE 40 - UTILITIES, STRUCTURES, SIGNS

a. The contractor shall provide necessary and adequate facilities for water, electricity, gas, oil, sewer and other utility services which may be necessary and required for completion of the project including all utilities required for testing, cleaning, balancing, and sterilization of designated plumbing, mechanical and electrical systems. Any permanent meters installed shall be listed in the contractor's name until work has a final acceptance. The contractor will be solely responsible for all utility costs prior to final acceptance. Contractor shall contact all affected utility companies prior to bid to determine their requirements to provide temporary and permanent service and include all costs associated with providing those services in their bid. Coordination of the work of the utility companies during construction is the sole responsibility of the contractor.

b. Meters shall be relisted in the owner's name on the day following final acceptance of the Project Expediter's work, and the owner shall pay for services used after that date.

c. The owner shall be reimbursed for all metered utility charges after the meter is relisted in the owner's name and prior to completion and acceptance of the work of **all** contractors. Reimbursement shall be made by the contractor whose work has not been completed and accepted. If the work of two or more contractors has not been completed and accepted, reimbursement to the owner shall be paid by the contractors involved on the basis of assessments by the designer.

d. Prior to the operation of permanent systems, the Project Expediter will provide temporary power, lighting, water, and heat to maintain space temperature above freezing, as required for construction operations.

e. All contractors shall have the permanent building systems in sufficient readiness for furnishing temporary climatic control at the time a building is enclosed and secured. The HVAC systems shall maintain climatic control throughout the enclosed portion of the building sufficient to allow completion of the interior finishes of the building. A building shall be considered enclosed and secured when windows, doorways (exterior, mechanical, and electrical equipment rooms), and hardware are installed; and other openings have protection which will provide reasonable climatic control. The appropriate time to start the mechanical systems and climatic condition shall be jointly determined by the contractor(s), the designer and owner. Use of the equipment in this manner shall be subject to the approval of the Designer and owner and shall in no way affect the warranty requirements of the contractor(s).

f. The electrical contractor shall have the building's permanent power wiring distribution system in sufficient readiness to provide power as required by the HVAC contractor for temporary climatic control.

g. The electrical contractor shall have the building's permanent lighting system ready at the time the general contractor begins interior painting and shall provide adequate lighting in those areas where interior painting and finishing is being performed.

h. Each prime contractor shall be responsible for his permanently fixed service facilities and systems in use during progress of the work. The following procedures shall be strictly adhered to:

1. Prior to final acceptance of work by the Owner, each contractor shall remove and replace any parts of the permanent building systems damaged through use during construction.

2. Temporary filters as recommended by the equipment manufacturer in order to keep the equipment and ductwork clean and free of dust and debris shall be installed in each of the heating and air conditioning units and at each return grille during construction. New filters shall be installed in each unit prior to the owner's acceptance of the work.

3. Extra effort shall be maintained to keep the building and the site adjacent to the building clean and under no circumstances shall air systems be operated if finishing and site work operations are creating dust in excess of what would be considered normal if the building were occupied.

4. It shall be understood that any warranty on equipment presented to the owner shall extend from the day of final acceptance by the owner. The cost of warranting the equipment during operation in the finishing stages of construction shall be borne by the contractor whose system is utilized.

5. The electrical contractor shall have all lamps in proper working condition at the time of final project acceptance.

i. The Project Expediter or contractor shall provide, if required and where directed, a shed for toilet facilities and shall furnish and install in this shed all water closets required for a complete and adequate sanitary arrangement. These facilities will be available to other contractors on the job and shall be kept in a neat and sanitary condition at all times. Chemical toilets are acceptable.

j. The Project Expediter shall, if required by the Supplementary General Conditions and where directed, erect a temporary field office, complete with lights, telephone, heat and air conditioning. A portion of this office shall be partitioned off, of sufficient size, for the use of a resident inspector, should the designer so direct.

k. On multi-story construction projects, the Project Expediter shall provide temporary elevators, lifts, or other special equipment for the general use of all contractors. The cost for such elevators, lifts or other special equipment and the operation thereof shall be included in the Project Expediter's bid.

l. The Project Expediter will erect one sign on the project if required. The sign shall be of sound construction, and shall be neatly lettered with black letters on white background. The sign shall bear the name of the project, and the names of prime contractors on the project, and the name of the designer and consultants. Directional signs may be erected on the owner's property subject to approval of the owner with respect to size, style and location of such directional signs. Such signs may bear the name of the contractor and a directional symbol. No other signs will be permitted except by permission of the owner.

ARTICLE 41 - CLEANING UP

a. The contractors shall keep the building and surrounding area reasonably free from rubbish at all times, and shall remove debris from the site on a timely basis or when directed to do so by the designer, owner, or Project Expediter. The Project Expediter or contractor shall provide an on-site refuse container(s) for the use of all contractors. Each contractor shall remove their rubbish and debris from the building on a daily basis. The Project Expediter

shall broom clean the building as required to minimize dust and dirt accumulation.

b. The Project Expediter or contractor shall provide and maintain suitable all-weather access to the building.

c. Before final inspection and acceptance of the building, structure, or work (as the case may be), each contractor shall clean his portion of the work, including glass, hardware, fixtures, masonry, tile and marble (using no acid), clean and wax all floors as specified, and completely prepare the building for use by the owner, with no cleaning required by the owner.

ARTICLE 42 - GUARANTEE

a. The contractor shall unconditionally guarantee materials and workmanship against patent defects arising from faulty materials, faulty workmanship or negligence for a period of twelve (12) months following the date of final acceptance of the work or beneficial occupancy and shall replace such defective materials or workmanship without cost to the owner.

b. Where items of equipment or material carry a manufacturer's warranty for any period in excess of twelve (12) months, then the manufacturer's warranty shall apply for that particular piece of equipment or material. The contractor shall replace such defective equipment or materials, without cost to the owner, within the manufacturer's warranty period.

c. Additionally, the owner may bring an action for latent defects caused by the negligence of the contractor which is hidden or not readily apparent to the owner at the time of beneficial occupancy or final acceptance, whichever occurred first, in accordance with applicable law.

d. Guarantees for roof, equipment, materials, and supplies shall be stipulated in the specifications sections governing such roof, equipment, materials, or supplies.

ARTICLE 43 - CODES AND STANDARDS

Wherever reference is given to codes, standard specifications or other data published by regulating agencies including, but not limited to, national electrical codes, North Carolina state building codes, federal specifications, ASTM specifications, various institute specifications, etc., it shall be understood that such reference is to the latest edition including addenda published prior to the date of the contract documents.

ARTICLE 44 - INDEMNIFICATION

To the fullest extent permitted by law, the contractor shall indemnify and hold harmless the owner, the designer and the agents, consultants and employees of the owner and designer, from and against all claims, damages, losses and expenses, including, but not limited to, attorneys' fees, arising out of or resulting from the performance or failure of performance of the work, provided that any such claim, damage, loss or expense (1) is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the work itself) including the loss of use resulting there from, and (2) is caused in whole or in part by any negligent act or omission of the contractor, the contractor's subcontractor, or the agents of either the contractor or the contractor's subcontractor. Such obligation shall not be construed to negate, abridge or otherwise reduce any other right or obligation of indemnity which would otherwise exist as to any party or person described in this article.

ARTICLE 45 – TAXES

a. Contactor shall be responsible for any taxes assessed, whether state, federal, or otherwise.

b. North Carolina sales tax and use tax, as required by law, do apply to materials entering into state work and such costs shall be included in the bid proposal and contract sum.

c. Local option sales and use taxes, as required by law, do apply to materials entering into state work as applicable and such costs shall be included in the bid proposal and contract sum.

ARTICLE 46 - EQUAL OPPORTUNITY CLAUSE

The non-discrimination clause contained in Section 202 (Federal) Executive Order 11246, as amended by Executive Order 11375, relative to equal employment opportunity for all persons without regard to race, color, religion, sex or national origin, and the implementing rules and regulations prescribed by the secretary of Labor, are incorporated herein.

ARTICLE 47 - EMPLOYMENT OF INDIVIDUALS WITH DISABILITIES

The contractor(s) agree not to discriminate against any employee or applicant for employment because of physical or mental disabilities in regard to any position for which the employee or applicant is qualified. The contractor agrees to take affirmative action to employ, advance in employment and otherwise treat qualified individuals with such disabilities without discrimination based upon their physical or mental disability in all employment practices.

ARTICLE 48 - ASBESTOS-CONTAINING MATERIALS (ACM)

The Town of Benson has attempted to address all asbestos-containing materials that are to be disturbed in the project. However, there may be other asbestos-containing materials in the work areas that are not to be disturbed and do not create an exposure hazard. Contractors are reminded of the requirements of instructions under Instructions to Bidders and General Conditions of the Contract, titled Examination of Conditions. Statute 130A, Article 19, amended August 3, 1989, established the Asbestos Hazard Management Program that controls asbestos abatement in North Carolina. The latest edition of *Guideline Criteria for Asbestos Abatement* from the State Construction Office is to be incorporated in all asbestos abatement projects for the Capital Improvement Program.

ARTICLE 49 - MINORITY BUSINESS PARTICIPATION

GS 143-128.2 establishes a ten percent (10%) goal for participation by minority businesses in total value of work for each State building project. The document, *Guidelines for Recruitment and Selection of Minority Businesses for Participation in State Construction Contracts* including Affidavits and Appendix E are hereby incorporated into and made a part of this contract.

ARTICLE 50 – CONTRACTOR EVALUATION

The contractor's overall work performance on the project shall be fairly evaluated by the Town for determining qualifications to bid on future State capital improvement projects. In addition to final evaluation, interim evaluation may be prepared during the progress of project.

ARTICLE 51 – GIFTS

Pursuant to N.C. Gen. Stat. § 133-32, it is unlawful for any vendor or contractor (i.e. architect, bidder, contractor, construction manager, design professional, engineer, subcontractor, supplier, vendor, etc.), to make gifts or to give favors to any local government employee. This prohibition covers those vendors and contractors who: (1) have a contract with a governmental agency; or (2) have performed under such a contract within the past year; or (3) anticipate bidding on such

a contract in the future. For additional information regarding the specific requirements and exemptions, vendors and contractors are encouraged to review G.S. Sec. 133-32.

During the construction of the Project, the Contractor is prohibited from making gifts to any of the Owner's employees, Owner's project representatives (architect, engineers, construction manager and their employees), and/or any other Town of Benson employee that may have any involvement, influence, responsibilities, oversight, management and/or duties that pertain to and/or relate to the contract administration, financial administration and/or disposition of claims arising from and/or relating to the Contract and/or Project.

ARTICLE 52 – AUDITING-ACCESS TO PERSONS AND RECORDS

The Town of Benson Finance Director and/or any other duly empowered state agency shall have access to Contractor's officers, employees, agents and/or other persons in control of and/or responsible for the Contractor's records that relate to this Contracts for purposes of conducting audits. The Owner's internal auditors shall also have the right to access and copy the Contractor's records relating to the Contract and Project during the term of the Contract and within two years following the completion of the Project/close-out of the Contract to verify accounts, accuracy, information, calculations and/or data affecting and/or relating to Contractor's requests for payment, requests for change orders, change orders, claims for extra work, requests for time extensions and related claims for delay/extended general conditions costs, claims for lost productivity, claims for loss efficiency, claims for idle equipment or labor, claims for price/cost escalation, pass-through claims of subcontractors and/or suppliers, and/or any other type of claim for payment or damages from Owner and/or its project representatives.

ARTICLE 53 – TERMINATION FOR CONVENIENCE

Owner may at any time and for any reason terminate Contractor's services and work at Owner's convenience. Upon receipt of such notice, Contractor shall, unless the notice directs otherwise, immediately discontinue the work and placing of orders for materials, facilities and supplies in connection with the performance of this Agreement.

Upon such termination, Contractor shall be entitled to payment only as follows: (1) the actual cost of the work completed in conformity with this Agreement; plus, (2) such other costs actually incurred by Contractor as are permitted by the prime contract and approved by Owner; (3) plus ten percent (10%) of the cost of the work referred to in subparagraph (1) above for overhead and profit. There shall be deducted from such sums as provided in this subparagraph the amount of any payments made to Contractor prior to the date of the termination of this Agreement. Contractor shall not be entitled to any claim or claim of lien against Owner for any additional compensation or damages in the event of such termination and payment.

ARTICLE 54 – ADDENDA INCORPORATED BY REFERENCE

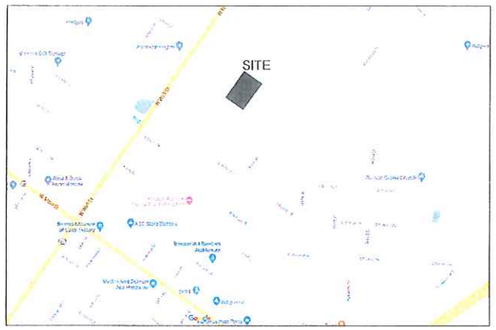
The following addenda are hereby incorporated herein by reference:

1. E-verify Affidavit;
2. IRS form W-9 – to be completed by contractor
3. Other addenda as noted below:

PUBLIC WORKS FACILITY EXPANSION

TOWN OF BENSON
JOHNSTON COUNTY, NORTH CAROLINA

CLIENT REVIEW SET ISSUED: MAY 29, 2019
ISSUED FOR CONSTRUCTION: AUGUST 7, 2019



LOCATION MAP

SCALE: NTS

LEGEND

WATER

- W — EXISTING WATER LINE
- W — WATERLINE
- EX. VALVE
- PROPOSED WATER VALVE
- POST INDICATOR VALVE (PIV)
- EX. WATER METER
- WATER METER
- EX. FIRE HYDRANT
- FIRE HYDRANT
- REDUCER FITTING
- PLUG FITTING
- WATERLINE TEE
- WATERLINE CROSS
- FIRE DEPARTMENT CONNECTION (FDC)
- WATERLINE BLOWOFF
- EX. WELL CASING

SANITARY SEWER

- SS — EXISTING SANITARY SEWER
- SAN — SANITARY SEWER MAIN
- EX. SEWER MANHOLE
- SEWER MANHOLE
- CLEANOUT
- EXISTING CLEANOUT

NATURAL GAS

- G — EX. GAS LINE
- G — GAS LINE
- EX. GAS VALVE
- EX. GAS METER

SITE DEVELOPMENT

- EX. STORM SEWER PIPE
- PROPOSED STORM SEWER
- EX. STORM STRUCTURE
- CATCH BASIN
- DROP INLET
- EX. STORM SEWER MANHOLE
- STORM SEWER MANHOLE
- RD — EX. ROOF DRAIN LEADER
- RD — ROOF DRAIN LEADER
- EX. ROOF DRAIN DOWNSPOUT
- ROOF DRAIN DOWNSPOUT
- EX. CURB AND GUTTER
- CURB AND GUTTER
- EXISTING PROPERTY LINE
- PROPERTY LINE
- BENCHMARK AND/OR SURVEY CONTROL MARKER
- B-8 SOIL BORING LOCATION
- LIMITS OF DISTURBANCE
- EX. TREE
- EX. SHRUB
- EX. FENCE
- PROPOSED FENCE
- EX. TOPOGRAPHIC CONTOUR
- PROPOSED TOPOGRAPHIC CONTOUR
- FG XXX PROPOSED SPOT ELEVATION
- EX. SIGN
- SIGN

MISCELLANEOUS UTILITIES

- EX. LIGHT POLE
- EX. LIGHT (WALL PACK)
- PROPOSED LIGHT POLE
- EX. UTILITY POLE
- UTILITY POLE
- EX. GUY WIRE
- EX. ELECTRICAL METER
- OHP — EX. OVERHEAD ELECTRIC LINE
- OHP — PROPOSED OVERHEAD ELECTRIC LINE
- UGP — EX. UNDERGROUND ELECTRIC LINE
- UGP — PROPOSED UNDERGROUND ELECTRIC LINE
- EX. TELEPHONE PEDESTAL
- TELEPHONE PEDESTAL
- EX. TELEPHONE MANHOLE
- OHT — EX. OVERHEAD TELEPHONE LINE
- OHT — OVERHEAD TELEPHONE LINE
- OFO — EX. OVERHEAD FIBER LINE
- OFO — OVERHEAD FIBER LINE
- EX. CABLE PEDESTAL
- OHC — EX. OVERHEAD COMMUNICATIONS LINE
- OHC — OVERHEAD COMMUNICATIONS LINE
- UGC — EX. UNDERGROUND COMMUNICATIONS LINE
- UGC — UNDERGROUND COMMUNICATIONS LINE
- OHU — EX. OVERHEAD UTILITY LINE-MULTIPLE UTILITIES
- BOLLARD
- PROPERTY MARKER/IRON PIPE
- EX. SURVEY MONUMENT

CIVIL DRAWING INDEX:

COVER SHEET	C-00
EXISTING CONDITIONS SURVEY & DEMOLITION PLAN	C-01
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EROSION & SEDIMENT CONTROL PLAN-INITIAL PHASE	C-05
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NOTES & DETAILS	D-02
NOTES & DETAILS	D-03
NOTES & DETAILS	D-04
TOTAL NUMBER OF DRAWINGS	11

CIVIL SERIES DRAWING ABBREVIATIONS:

@/-AT	DS-DOWNSPOUT	MECH-MECHANICAL	R/W-RIGHT OF WAY
AC-ACRE	EA-EACH	MH-MANHOLE	REQD-REQUIRED
AFG- ABOVE FINISHED GRADE	EIP-EXISTING IRON PIPE	MIN-MINIMUM	RCP-REINFORCED CONCRETE PIPE
APPR-APPROXIMATE	ELEC-ELECTRICAL	MJ-MECHANICAL JOINT	SAN-SANITARY SEWER
ASSY-ASSEMBLY	E/P-EDGE OF PAVEMENT	NIC-NOT IN CONTRACT	SDWK-SIDEWALK
B/C-BOTTOM OF CURB	EX-EXISTING	OHE-OVERHEAD ELECTRIC	SF-SQUARE FOOT
BOC-BACK OF CURB	F/C-FACE OF CURB	OHP-OVERHEAD POWER	SPT-SPOT GRADE
B/L-BASE LINE	FDC-FIRE DEPARTMENT CONNECTION	OHT-OVERHEAD TELEPHONE	SS-SANITARY SEWER
BM-BOOK OF MAPS	FFE-FINISHED FLOOR ELEVATION	PB-PLAT BOOK	STA-STATION
BMP-BEST MANAGEMENT PRACTICE	FG-FINISHED GRADE	PC-POINT OF CURVATURE	STD-STANDARD
BW-BOTTOM OF WALL	FH-FIRE HYDRANT	PED-PEDESTRIAN	STM-STORM
CB-CATCH BASIN	FL-FLOW LINE	PG-PAGE	STMH-STORM SEWER MANHOLE
C&G-CURB AND GUTTER	FM-FORCE MAIN	PH-PHASE	SWM-STORMWATER MANAGEMENT
C/L-CENTERLINE	FT-FOOT	PI-POINT OF INTERSECTION	T-TELEPHONE
CL-CLASS	G-GAS	PIV-POST INDICATOR VALVE	T/C-TOP OF CURB
CMP-CORRUGATED METAL PIPE	GND-GROUND	PKG-PARKING	TCM-TELEPHONE MANHOLE
CO-CLEANOUT	GV-GATE VALVE	P/L-PROPERTY LINE	TS&V-TAPPING SLEEVE AND VALVE
COMM-COMMUNICATIONS	HDPE-HIGH DENSITY POLYETHYLENE	PS-PUMP STATION	UGE-UNDERGROUND ELECTRIC
CONC-CONCRETE	HORIZ-HORIZONTAL	PT-POINT OF TANGENCY	UNK-UNKNOWN
CONN-CONNECTION	IN-INCHES	PP-POWER POLE	UP-UTILITY POLE
CY-CUBIC YARD	INV-INVERT	PVC-POLYVINYL CHLORIDE	VAR-VARIABLE
DB-DEED BOOK	IP-IRON PIPE	PVMT-PAVEMENT	VERT-VERTICAL
DCV-DOUBLE CHECK VALVE	IPS-IRON PIPE SET	PWR-POWER	W-WITH
DDCV-DOUBLE DECTECTOR CHECK VALVE	L-LENGTH	R-RADIUS	WM-WATER METER
DI-DROP INLET	LF-LINEAR FOOT	RD-ROOF DRAIN	W/O-WITHOUT
DIP-DUCTILE IRON PIPE	LP-LIGHT POLE	RJ-RESTRAINTED JOINT	WL-WATERLINE
DR-DRIVEWAY	LS-LIFT STATION	RPZ-REDUCED PRESSURE ZONE	WSEL-WATER SERVICE ELEVATION
			VW-WATER VALVE

Civil Engineer

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NC License # P-1963
137 Middlegreen Place
Holly Springs, NC 27540
919.900.0006
Contact: Zak Shipman, PE

Land Surveyor

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Benson, NC 27504
919.894.3575
Contact: W.R. Lambert, PLS

Architect

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1118 Norris Street
Raleigh, NC 27604
919.413.0136
Contact: Mr. Jeremy Hauch, RA
jeremy@hauchdesign.com

Owner

Town of Benson
303 E. Church Street
Benson, NC 27504
919.894.3553
Contact: Mr. Tim Robbins
trobbins@townofbenson.com

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

NORTH CAROLINA PROFESSIONAL SEAL 035027 ENGINEER WILLIAM Z. SHIPMAN 2/6/19

REVISIONS | SYMBOL | DATE

SHIPMAN ENGINEERING
SHIPMAN ENGINEERING, PLLC
137 MIDDLEGREEN PLACE
HOLLY SPRINGS, NC 27540
919.900.0006

DESIGNED BY: WZS
DRAWN BY: WZS
CHECKED BY: WZS
DRAWING DATE: 08-06-19
SE PROJECT #: 2019-018

PUBLIC WORKS FACILITY
TOWN OF BENSON
JOHNSTON COUNTY, NORTH CAROLINA

COVER SHEET

SHEET NUMBER:

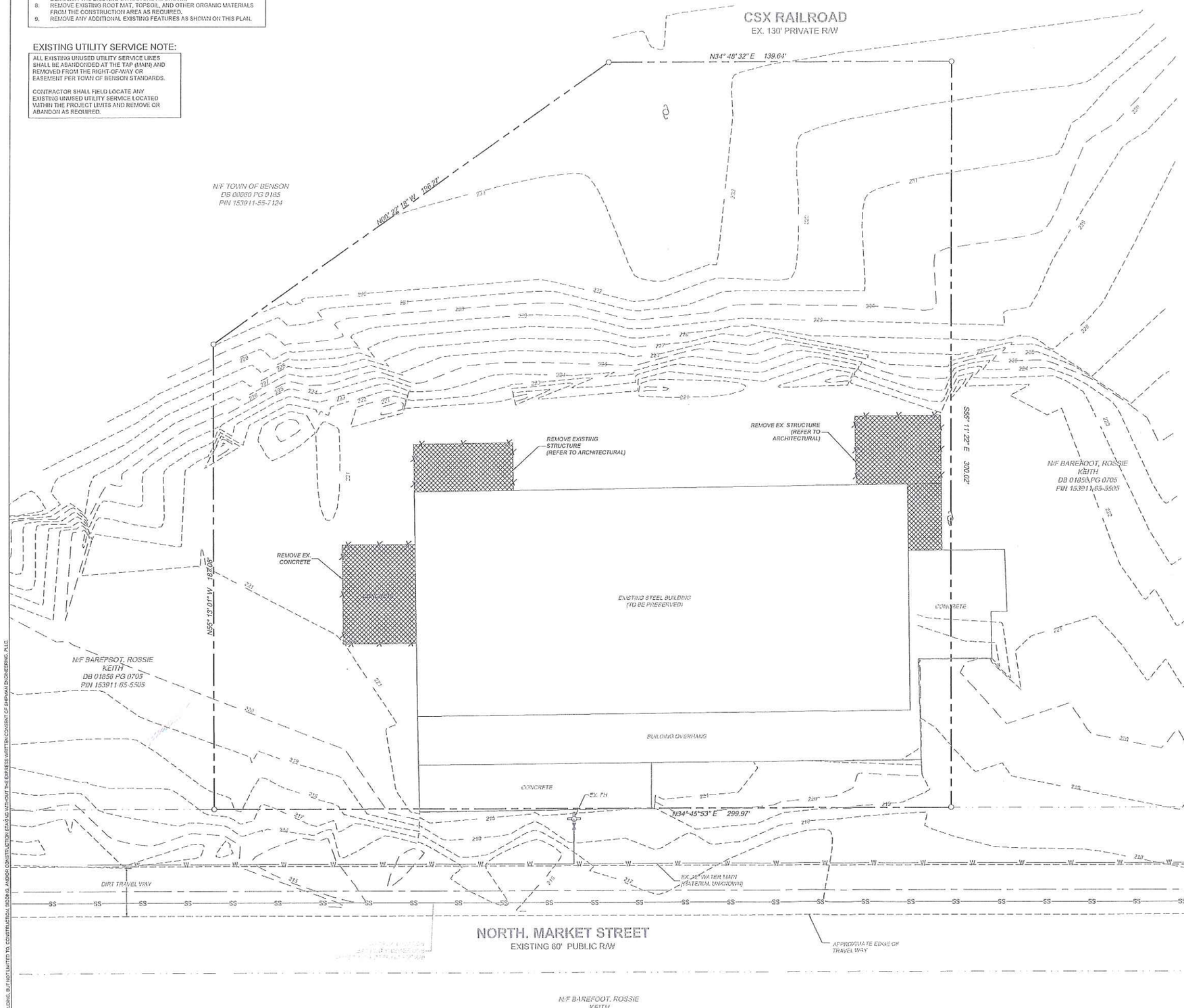
THIS DRAWING IS THE PROPERTY OF SHIPMAN ENGINEERING, PLLC. ANY REPRODUCTION, INCLUDING, BUT NOT LIMITED TO, CONSTRUCTION, BIDDING, AND/OR CONSTRUCTION STAKING WITHOUT THE EXPRESS WRITTEN CONSENT OF SHIPMAN ENGINEERING, PLLC.

1. INSTALL TREE PROTECTION FENCING AS SHOWN TO PROTECT TREES THAT WILL REMAIN IN PLACE.
2. INSTALL THE NECESSARY EROSION AND SEDIMENT CONTROL MEASURES AS SHOWN ON THE APPROVED EROSION AND SEDIMENT CONTROL PLAN.
3. REMOVE AND/OR DEMOLISH EXISTING STRUCTURES, OVERHEAD POWER AND OTHER UTILITIES AS SHOWN ON THE PLAN. COORDINATE WITH DUKE ENERGY/PROGRESS AND OTHER APPLICABLE UTILITIES PRIOR TO REMOVAL.
4. REMOVE EXISTING TREES THAT ARE APPROVED FOR REMOVAL.
5. REMOVE CONCRETE SIDEWALK, ASPHALT, FEATURES AS SHOWN. DEMOLISH THE EXISTING STRUCTURE AS SHOWN.
8. REMOVE EXISTING ROOT MAT, TOPSOIL AND OTHER ORGANIC MATERIALS FROM THE CONSTRUCTION AREA AS REQUIRED.
9. REMOVE ANY ADDITIONAL EXISTING FEATURES AS SHOWN ON THIS PLAN.

EXISTING UTILITY SERVICE NOTE:

ALL EXISTING UNUSED UTILITY SERVICE LINES SHALL BE ABANDONDED AT THE TAP (MAIN) AND REMOVED FROM THE RIGHT-OF-WAY OR EASEMENT PER TOWN OF BENSON STANDARDS.

CONTRACTOR SHALL FIELD LOCATE ANY EXISTING UNUSED UTILITY SERVICE LOCATED WITHIN THE PROJECT LIMITS AND REMOVE OR ABANDON AS REQUIRED.



FIELD SURVEY OF THE PROPERTY BY LAMBERT SURVEYING, INC. AND IS NOT THE RESULT OF A FIELD SURVEY BY SHIPMAN ENGINEERING, PLLC. ADDITIONAL EXISTING CONDITIONS DATA PROVIDED BY SUPPLEMENTAL DATA INCLUDING AERIAL PHOTOGRAPHY, JOHNSTON COUNTY GIS DATA, AND OTHER DATA SOURCES AS REQUIRED.

2. REFER TO EROSION AND SEDIMENT CONTROL PLAN AND CONSTRUCTION SEQUENCE BEFORE PERFORMING ANY CLEARING, GRUBBING, OR DEMOLITION OPERATIONS.

3. NO TITLE OPINION ON THIS PROPERTY HAS BEEN FURNISHED.

4. AREAS COMPUTED BY THE COORDINATE METHOD.

5. THE PROPERTY SHOWN HEREON IS SUBJECT TO ALL RIGHTS-OF-WAY, EASEMENTS, COVENANTS, AND RESTRICTIONS OF RECORD.

6. ALL DISTANCES SHOWN ON THE SURVEY ARE HORIZONTAL GROUND DISTANCES.

7. THE PROPERTY SHOWN IS LOCATED OUTSIDE OF ANY FLOOD HAZARD AREAS AS SHOWN ON FEMA FIRM 3720152000K DATED OCTOBER 3, 2006.

8. REFER TO SEALED TOPOGRAPHICAL SURVEY BY LAMBERT SURVEYING, INC. FOR HORIZONTAL AND VERTICAL DATUM INFORMATION AND OTHER SURVEY CONTROL DATA.

9. NO INVESTIGATION HAS BEEN PERFORMED AS TO THE PRESENCE OF WETLANDS, STREAMS, SURFACE WATERS, RIPARIAN BUFFERS, OR OTHER ENVIRONMENTALLY SENSITIVE AREAS.

DEMOLITION NOTES:

1. REMOVE/DEMOLISH/ABANDON EXISTING FEATURES AFTER EROSION AND SEDIMENT CONTROL MEASURES ARE IN PLACE AND AFTER THE APPROVAL OF THE ENGINEER.
2. DO NOT INTERRUPT EXISTING UTILITY SERVICES FOR FACILITIES OCCUPIED BY THE OWNER OR OTHERS EXCEPT WHEN PERMITTED UNDER THE FOLLOWING CONDITIONS AND THEN ONLY AFTER ARRANGING TO PROVIDE ACCEPTABLE TEMPORARY UTILITY SERVICES.
   a. NOTIFY ENGINEER NOT LESS THAN 72 HOURS IN ADVANCE OF PROPOSED UTILITY SERVICE INTERRUPTIONS.
   b. DO NOT PROCEED WITH UTILITY INTERRUPTIONS WITHOUT RECEIVING WRITTEN PERMISSION FROM THE DESIGN ENGINEER.
3. CONTRACTOR SHALL IMMEDIATELY NOTIFY OWNER IN THE EVENT THAT UNANTICIPATED HAZARDOUS MATERIALS ARE ENCOUNTERED. CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS AND REGULATIONS REGARDING THE HANDLING AND DISPOSAL OF HAZARDOUS MATERIALS.
4. SUBSURFACE UTILITIES AND FEATURES DENOTED ON THIS PLAN SHOULD BE CONSIDERED APPROXIMATE IN NATURE AND HAVE BEEN LOCATED TO THE EXTENT POSSIBLE VIA LEVEL "B" SUE METHODS ALONG THE PUBLIC RIGHT-OF-WAYS OF WEST STREET ONLY. CONTRACTOR IS RESPONSIBLE FOR SUBSURFACE UTILITY EXPLORATION, INCLUDING UTILITY "POTHOLING" OR BY THE EXCAVATION OF TEST PITS AS NECESSARY TO DETERMINE THE UTILITY LOCATION, DEPTHS, AND MATERIALS.
5. VERIFY LOCATIONS AND SIZES OF ALL EXISTING FEATURES PRIOR TO COMMENCEMENT OF CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR DOCUMENTATION OF EXISTING FEATURES THROUGH THE USE OF PHOTOGRAPHY, VIDEO, OR OTHER RECORDS PRIOR TO DISTURBANCE ON SITE.
6. LOCATE EXISTING UTILITIES PRIOR TO CONSTRUCTION, AND REPAIR ANY DAMAGES TO EXISTING UTILITIES RESULTING FROM CONSTRUCTION.
7. REMOVE ALL EXISTING ON-SITE TRASH AND DEBRIS. TRASH SHALL BE REMOVED AND DISPOSED OF IN A LEGAL MANNER. NOTIFY OWNER AND ENGINEER IF ANY HAZARDOUS MATERIALS (ASBESTOS, LEAD PAINT, ETC.) ARE ENCOUNTERED.
8. REMOVE SIDEWALK, CURB AND GUTTER, AND OTHER CONCRETE SECTIONS BY SAWCUTTING THE NEAREST CONTROL JOINT AWAY FROM THE AREA DESIGNATED TO BE REMOVED ON THE DEMOLITION PLAN.
9. SAWCUT PAVEMENT IN ALL LOCATIONS WHERE ABUTTING SIDEWALK OR NEW PAVEMENT IS EXISTING.
10. NOTIFY AND COORDINATE ANY REQUIRED RELOCATION AND/OR REMOVAL OF EXISTING UNDERGROUND UTILITIES, POLES, METERS, OR OTHER ABOVE GROUND APPURTENANCES WITH THE APPROPRIATE UTILITY PROVIDER (I.E. POWER, TELEPHONE, CABLE, AND NATURAL GAS/PROPANE) PRIOR TO THE START OF SELECTIVE DEMOLITION WORK.
11. ARRANGE SELECTIVE DEMOLITION SCHEDULE SO AS NOT TO INTERVENE WITH OWNER'S USE OF THE PROPERTY.
12. SHOULD UNCHARTED OR INCORRECTLY CHARTED EXISTING UTILITIES BE IDENTIFIED, CONTACT THE ENGINEER IMMEDIATELY FOR INSTRUCTIONS. PROVIDE A SCALED DRAWING OF THE UNCHARTED OR INCORRECTLY CHARTED UTILITY FOR USE BY THE ENGINEER IN PREPARING ADDITIONAL DIRECTIONS.
13. CONTRACTOR SHALL MAINTAIN A CLEAN WORK SITE, FREE OF DEBRIS, TRASH, OR OTHER CONSTRUCTION MATERIALS. AREAS SUBJECT TO SITE CONSTRUCTION ADJACENT TO THE PUBLIC RIGHT OF WAY AND PEDESTRIAN SIDEWALKS SHALL BE LEFT "BROOM CLEAN" AT THE END OF EACH WORK DAY.
14. REMOVE ALL ITEMS SHOWN ON EXISTING CONDITIONS PLAN AS NEEDED FOR THE INSTALLATION OF NEW WORK AND/OR INFRASTRUCTURE.
15. NO EQUIPMENT IS ALLOWED ON THE SITE UNTIL ALL THE TREE PROTECTION AND SILT FENCING HAS BEEN INSTALLED AND APPROVED.

DEMOLITION LEGEND

- X — ITEM TO BE DEMOLISHED OR REMOVED
- AREA TO BE DEMOLISHED
- DEMOLITION LIMITS

EXISTING CONDITIONS LEGEND

- LIGHT POLE
- EX. SPOT GRADE
- UTILITY POLE
- CO — SANITARY SEWER CLEANOUT
- SANITARY SEWER MANHOLE
- WM — WATER METER
- SIGN
- PROPERTY LINE
- SETBACK LINE
- EASEMENT LINE
- FENCE LINE
- SS — SANITARY SEWER LINE
- W — WATER MAIN
- G — NATURAL GAS MAIN
- T — TELEPHONE LINE
- U — MARKED UTILITY LINE
- MINOR TOPOGRAPHICAL CONTOUR
- MAJOR TOPOGRAPHICAL CONTOUR

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

SCALE: 1 IN = 20 FT
20' 10' 0 20' 40'

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 035027 WILLIAM Z. SHIPMAN
8/6/19

SYMBOL	DATE	REVISIONS

SHIPMAN ENGINEERING, PLLC
137 MIDDLEGREEN PLACE
HOLLY SPRINGS, NC 27540

DESIGNED BY: WZS
DRAWN BY: WZS
CHECKED BY: WZS
DRAWING DATE: 08-06-19
SE PROJECT #: 2019-018

PUBLIC WORKS FACILITY
TOWN OF BENSON
JOHNSTON COUNTY, NORTH CAROLINA

EXISTING CONDITIONS & DEMO PLAN

SHEET NUMBER:

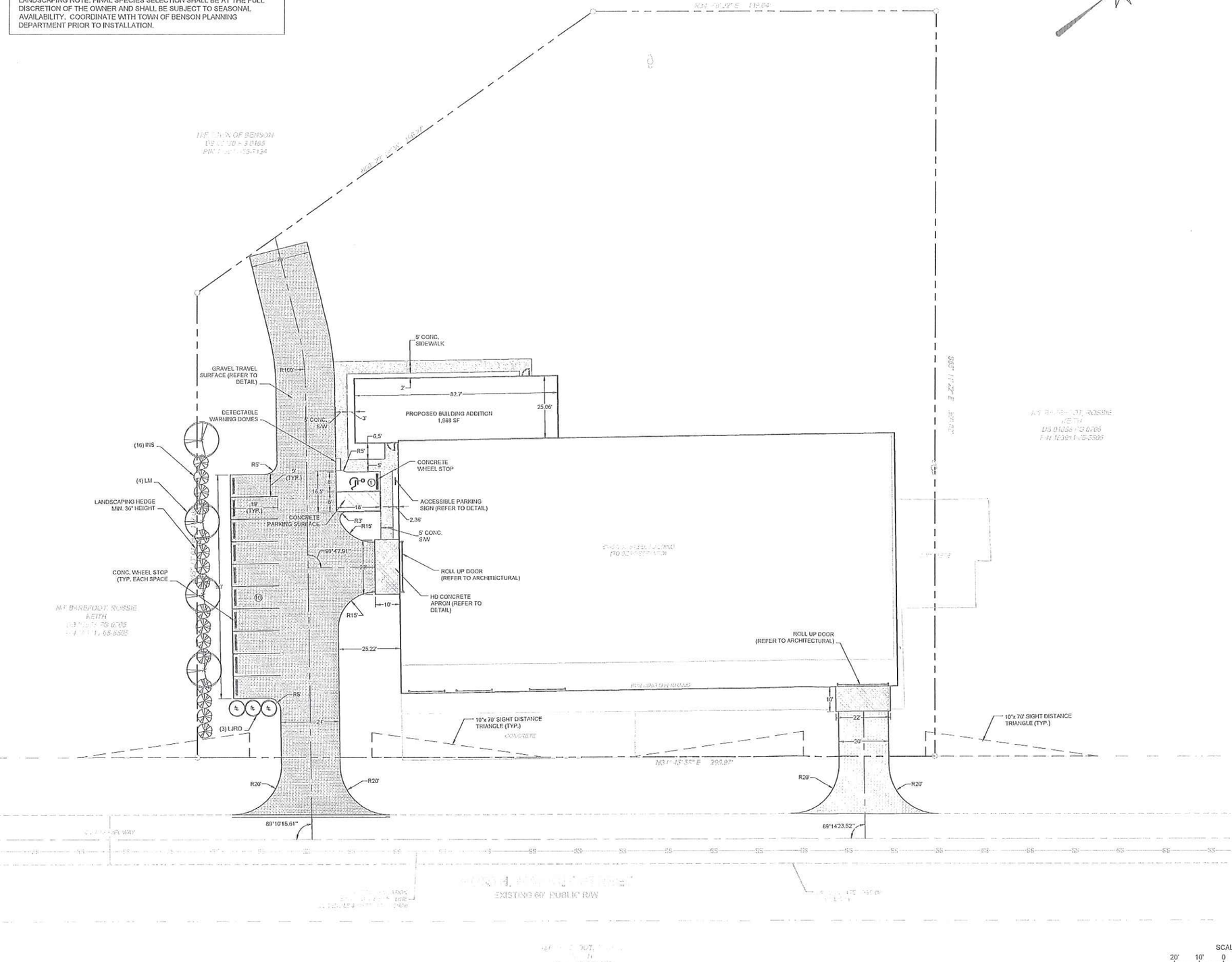
© SHIPMAN ENGINEERING, PLLC, 2019. ALL RIGHTS RESERVED. THIS DRAWING AND ALL ITS CONTENTS, INCLUDING, BUT NOT LIMITED TO, CONSTRUCTION DRAWINGS AND/OR CONSTRUCTION DRAWINGS WITHOUT THE EXPRESS WRITTEN CONSENT OF SHIPMAN ENGINEERING, PLLC.

TYPE	QUANT.	KEY	BOTANICAL NAME	COMMON NAME	PLANTING SIZE	COMMENTS
SMALL MATURING TREES						
SMT	1	LM	LAGERSTROEMIA INDICA X 'MUSKOGEE'	MUSKOGEE CRAPE MYRTLE	1" CAL.; 5' HEIGHT	B&B
SHRUBS						
SMT	7	INS	ILEX x 'NELLIE R. STEVENS'	NELLIE STEVEN'S HOLLY	4' HEIGHT	B&B
ES	4	LJRO	LIGUSTRUM JAPONICUM 'ROTUNDIFOLIUM'	CURLY LEAF LIGUSTRUM	36" HEIGHT MIN.	CONTAINER

LANDSCAPING NOTE: FINAL SPECIES SELECTION SHALL BE AT THE FULL DISCRETION OF THE OWNER AND SHALL BE SUBJECT TO SEASONAL AVAILABILITY. COORDINATE WITH TOWN OF BENSON PLANNING DEPARTMENT PRIOR TO INSTALLATION.

OF BENSON STANDARDS AND SPECIFICATIONS.

ON THAT DAY, NO OBSTRUCTION BETWEEN TWO (2) AND EIGHT (8) FEET IN HEIGHT ABOVE THE CURB LINE ELEVATION OR THE NEAREST TRAVELED WAY, IF NO CURBING EXISTS.



SURVEY NOTES:

1. SURVEY DERIVED FROM DEEDS AND PLATS OF RECORD AS SHOWN HEREON. THIS SURVEY OF THE PROPERTY BY LAMBERT SURVEYING, INC. (DATED APRIL 5, 2019) AND IS NOT THE RESULT OF A FIELD SURVEY BY SHIPMAN ENGINEERING, PLLC. ADDITIONAL EXISTING CONDITIONS DATA PROVIDED BY SUPPLEMENTAL DATA INCLUDING AERIAL PHOTOGRAPHY, JOHNSTON COUNTY GIS DATA, AND OTHER DATA SOURCES AS REQUIRED.
2. REFER TO EROSION AND SEDIMENT CONTROL PLAN AND CONSTRUCTION SEQUENCE BEFORE PERFORMING ANY CLEARING, GRUBBING, OR DEMOLITION OPERATIONS.
3. NO TITLE OPINION ON THIS PROPERTY HAS BEEN FURNISHED.
4. AREAS COMPUTED BY THE COORDINATE METHOD.
5. THE PROPERTY SHOWN HEREON IS SUBJECT TO ALL RIGHTS-OF-WAY, EASEMENTS, COVENANTS, AND RESTRICTIONS OF RECORD.
6. ALL DISTANCES SHOWN ON THE SURVEY ARE HORIZONTAL GROUND DISTANCES.
7. THE PROPERTY SHOWN IS LOCATED OUTSIDE OF ANY FLOOD HAZARD AREAS AS SHOWN ON FEMA FIRM 3720152600K DATED OCTOBER 3, 2006.
8. REFER TO SEALED TOPOGRAPHICAL SURVEY BY LAMBERT SURVEYING, INC. FOR HORIZONTAL AND VERTICAL DATUM INFORMATION AND OTHER SURVEY CONTROL DATA.
9. ALL DIMENSIONS SHOWN ARE TO THE FACE OF CURB, UNLESS NOTED OTHERWISE.
10. COORDINATE POWER, TELEPHONE, CABLE, AND OTHER UNDERGROUND UTILITY INSTALLATION WITH THE APPROPRIATE UTILITY PROVIDER AND THE TOWN OF BENSON.
11. ALL PROPOSED SIGNAGE WILL COMPLY WITH THE TOWN OF BENSON SIGN ORDINANCE.
12. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL GRADES PRIOR TO THE START OF CONSTRUCTION.
13. MAXIMUM SIDEWALK CROSS SLOPE IS 2% (1/4 INCH PER FOOT).
14. NO INVESTIGATION HAS BEEN PERFORMED AS TO THE PRESENCE OF WETLANDS, STREAMS, SURFACE WATERS, RIPARIAN BUFFERS, OR OTHER ENVIRONMENTALLY SENSITIVE AREAS.

PAVEMENT LEGEND

- HEAVY DUTY GRAVEL PAVEMENT SECTION
- MEDIUM DUTY ASPHALT PAVEMENT SECTION (ACCESSIBLE PARKING FIELD)
- HEAVY DUTY CONCRETE PAVEMENT SECTION (ROLL UP DOOR APRONS)
- CONCRETE SIDEWALK PAVEMENT SECTION

SITE DATA TABLE

PHYSICAL ADDRESS:	775 N. MARKET STREET
JOHNSTON COUNTY PIN #:	153911-55-9379
PROPERTY AREA:	1.86 AC. (BEFORE R/W DEDICATION)
PROPOSED USE:	OFFICE SPACE/WAREHOUSE
OCCUPANCY:	7 OFFICES
ZONING DISTRICT:	I-2
OVERLAY DISTRICT:	NONE
MAXIMUM BUILDING HEIGHT:	55 FEET
PERIMETER YARDS:	
PRIMARY:	50 FEET
STREET (MIN):	NONE
STREET (MAX):	20 FEET
SIDE LOT (STREET):	40 FEET
REAR:	20 FEET
MAXIMUM BUILDING COVERAGE:	50%
PARKING SPACES REQUIRED:	1 SPACE/200 SF OR 10 SPACES TOTAL
PARKING SPACES PROVIDED:	11 SPACES
ACCESSIBLE SPACES REQUIRED:	1 SPACE
ACCESSIBLE SPACES PROVIDED:	1 SPACE

SITE PLAN LEGEND

- STREET LIGHT
- SIGN
- WCR — WHEELCHAIR RAMP
- CBU — CLUSTER MAILBOX UNIT
- ROADWAY CENTER LINE
- LOT LINE
- RIGHT OF WAY LINE
- RETAINING WALL
- SETBACK LINE
- BMP LIMITS
- EASEMENT
- STANDARD CURB & GUTTER
- SPILL CURB & GUTTER
- ORNAMENTAL FENCE
- FENCE
- OPEN SPACE AREA

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

SCALE: 1 IN = 20 FT

20' 10' 0 20' 40'

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 035027 WILLIAM Z. SHIPMAN 2/6/19

REVISIONS | DATE | SYMBOL

SHIPMAN ENGINEERING, PLLC
137 MIDDLEGREEN PLACE
HOLLY SPRINGS, NC 27540

DESIGNED BY: WZS
DRAWN BY: WZS
CHECKED BY: WZS
DRAWING DATE: 08-05-19
SE PROJECT #: 2019-018

PUBLIC WORKS FACILITY
TOWN OF BENSON
JOHNSTON COUNTY, NORTH CAROLINA

SITE LAYOUT PLAN

SHEET NUMBER:

...INCLUDING, BUT NOT LIMITED TO, CONSTRUCTION, BIDDING, AND/OR CONSTRUCTION STAKING WITHOUT THE EXPRESS WRITTEN CONSENT OF SHIPMAN ENGINEERING, PLLC.

A. SEWERS SHALL BE LAID AT LEAST 10 FEET HORIZONTALLY FROM ANY EXISTING OR PROPOSED WATER MAIN. THE DISTANCE SHALL BE MEASURED EDGE TO EDGE. IN CASES WHERE IT IS NOT PRACTICAL TO MAINTAIN A 10 FOOT SEPARATION, THE APPROPRIATE REVIEWING AGENCY (DEH OR DENR) MAY ALLOW DEVIATION ON A CASE BY CASE BASIS, IF SUPPORTED BY DATA FROM THE DESIGN ENGINEER. SUCH DEVIATION MAY ALLOW INSTALLATION OF THE SEWER CLOSER TO A WATER MAIN, PROVIDED THAT THE WATER MAIN IS IN A SEPERATE TRENCH OR ON AN UNDISTURBED EARTH SHELF LOCATED ON ONE SIDE OF THE SEWER AND AT AN ELEVATION SO THAT THE BOTTOM OF THE WATER MAIN IS AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER.

B. IF IT IS IMPOSSIBLE TO OBTAIN PROPER HORIZONTAL AND VERTICAL SEPARATION AS DESCRIBED ABOVE OR ANYTIME THE SEWER IS OVER THE WATER MAIN, BOTH WATER MAIN AND SEWER MUST BE CONSTRUCTED OF FERROUS PIPE COMPLYING WITH PUBLIC WATER SUPPLY DESIGN STANDARDS AND BE PRESSURE TESTED TO 150 PSI TO ASSURE WATERTIGHTNESS BEFORE BACKFILLING.

C. A 24 INCH VERTICAL SEPARATION SHALL BE PROVIDED BETWEEN STORM SEWER AND SANITARY SEWER LINES OR FERROUS PIPE SPECIFIED.

CROSSINGS:

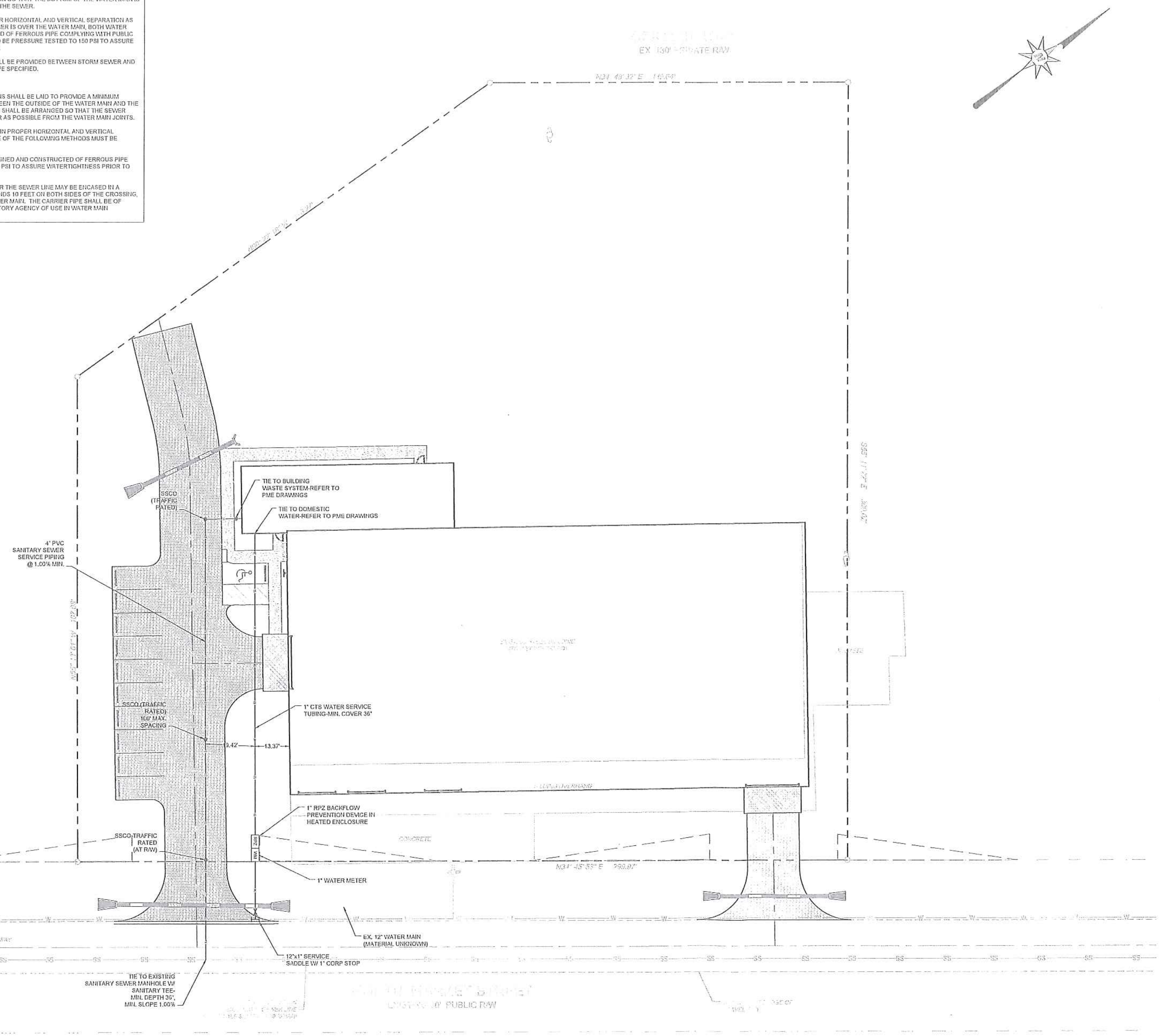
A. SEWERS CROSSING WATER MAINS SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL DISTANCE OF 18 INCHES BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF THE SEWER. THE CROSSING SHALL BE ARRANGED SO THAT THE SEWER JOINTS WILL BE EQUIDISTANT AND AS FAR AS POSSIBLE FROM THE WATER MAIN JOINTS.

B. WHEN IT IS IMPOSSIBLE TO OBTAIN PROPER HORIZONTAL AND VERTICAL SEPARATION AS STIPULATED ABOVE, ONE OF THE FOLLOWING METHODS MUST BE SPECIFIED

I. THE SEWER SHALL BE DESIGNED AND CONSTRUCTED OF FERROUS PIPE AND SHALL BE PRESSURE TESTED AT 150 PSI TO ASSURE WATERTIGHTNESS PRIOR TO BACKFILLING, OR

II. EITHER THE WATER MAIN OR THE SEWER LINE MAY BE ENCASED IN A WATERTIGHT CARRIER PIPE WHICH EXTENDS 10 FEET ON BOTH SIDES OF THE CROSSING, MEASURED PERPENDICULAR TO THE WATER MAIN. THE CARRIER PIPE SHALL BE OF MATERIALS APPROVED BY THE REEGULATORY AGENCY OF USE IN WATER MAIN CONSTRUCTION.

OF BENSON STANDARDS AND SPECIFICATIONS.



SURVEY OF THE PROPERTY BY LAMBERT SURVEYING, INC. (DATED APRIL 5, 2019) AND IS NOT THE RESULT OF A FIELD SURVEY BY SHIPMAN ENGINEERING, PLLC. ADDITIONAL EXISTING CONDITIONS DATA PROVIDED BY SUPPLEMENTAL DATA INCLUDING AERIAL PHOTOGRAPHY, JOHNSTON COUNTY GIS DATA, AND OTHER DATA SOURCES AS REQUIRED.

2. REFER TO EROSION AND SEDIMENT CONTROL PLAN AND CONSTRUCTION SEQUENCE BEFORE PERFORMING ANY CLEARING, GRUBBING, OR DEMOLITION OPERATIONS.

3. NO TITLE OPINION ON THIS PROPERTY HAS BEEN FURNISHED.

4. AREAS COMPUTED BY THE COORDINATE METHOD.

5. THE PROPERTY SHOWN HEREON IS SUBJECT TO ALL RIGHTS-OF-WAY, EASEMENTS, COVENANTS, AND RESTRICTIONS OF RECORD.

6. ALL DISTANCES SHOWN ON THE SURVEY ARE HORIZONTAL GROUND DISTANCES.

7. THE PROPERTY SHOWN IS LOCATED OUTSIDE OF ANY FLOOD HAZARD AREAS AS SHOWN ON FEMA FIRM XXXXXXXX DATED XXXXXX.

8. REFER TO SEALED TOPOGRAPHICAL SURVEY BY LAMBERT SURVEYING, INC. FOR HORIZONTAL AND VERTICAL DATUM INFORMATION AND OTHER SURVEY CONTROL DATA.

9. ALL DIMENSIONS SHOWN ARE TO THE FACE OF CURB, UNLESS NOTED OTHERWISE.

10. CONTRACTOR SHALL FIELD LOCATE SPILL CURB AS NEEDED FOR PROPER DRAINAGE. SPILL CURB LOCATIONS ARE NOT INDICATED ON THIS PLAN.

11. COORDINATE POWER, TELEPHONE, CABLE, AND OTHER UNDERGROUND UTILITY INSTALLATION WITH THE APPROPRIATE UTILITY PROVIDER AND THE TOWN OF BENSON.

12. ALL PROPOSED SIGNAGE WILL COMPLY WITH THE TOWN OF BENSON SIGN ORDINANCE.

13. CONTRACTOR IS RESPONSIBLE FOR VERIFIYING ALL GRADES PRIOR TO THE START OF CONSTRUCTION.

14. MAXIMUM SIDEWALK CROSS SLOPE IS 2% (1/4 INCH PER FOOT).

15. THERE SHALL BE NO TAPS, PIPING BRANCHES, UNAPPROVED BYPASS PIPING, HYDRANTS, FDC POINTS, OR OTHER WATER-USING APPURTENANCES CONNECTED TO THE SUPPLY LINE BETWEEN THE WATER METER AND ANY REQUIRED BACKFLOW PREVENTION DEVICES.

16. MAINTAIN A MINIMUM OF 3' COVER OVER ALL WATER PIPING.

17. ALL SANITARY SEWER CLEANOUTS IN PAVEMENT AREAS SHALL BE TRAFFIC RATED.

STANDARD UTILITY NOTES (AS APPLICABLE):

1. ALL MATERIALS AND CONSTRUCTION METHODS SHALL BE IN ACCORDANCE WITH TOWN OF BENSON DESIGN STANDARDS, DETAILS, AND SPECIFICATIONS (2. UTILITY SEPARATION REQUIREMENTS:

a. A DISTANCE OF 100 FEET SHALL BE MAINTAINED BETWEEN SANITARY SEWER AND ANY PRIVATE OR PUBLIC WATER SUPPLY SOURCE SUCH AS AN IMPOUNDED RESERVOIR USED AS A SOURCE OF DRINKING WATER. IF ADEQUATE LATERAL SEPARATION CANNOT BE ACHIEVED, FERROUS SANITARY SEWER PIPE SHALL BE SPECIFIED AND INSTALLED TO WATERLINE SPECIFICATIONS. HOWEVER, THE MINIMUM SEPARATION SHALL NOT BE LESS THAN 25 FEET FROM A PRIVATE WELL OR 50 FEET FROM A PUBLIC WELL.
b. WHEN INSTALLING WATER AND/OR SEWER MAINS, THE HORIZONTAL SEPARATION BETWEEN UTILITIES SHALL BE 10 FEET. IF THIS SEPARATION CANNOT BE MAINTAINED DUE TO EXISTING CONDITIONS, THE VARIATION ALLOWED IS THE WATER MAIN IN A SEPARATE TRENCH WITH THE ELEVATION OF THE WATER MAIN AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER AND MUST BE APPROVED BY THE PUBLIC UTILITIES DIRECTOR. ALL DISTANCES ARE MEASURED FROM OUTSIDE DIAMETER TO OUTSIDE DIAMETER.
c. WHERE IT IS IMPOSSIBLE TO OBTAIN PROPER SEPARATION, OR ANYTIME A SANITARY SEWER PASSES OVER A WATERMAIN, DIP MATERIALS OR STEEL ENCASEMENT EXTENDED 10 FEET ON EACH SIDE OF CROSSING MUST BE SPECIFIED AND INSTALLED TO WATERLINE SPECIFICATIONS.
d. 5 FEET MINIMUM HORIZONTAL SEPARATION IS REQUIRED BETWEEN ALL SANITARY SEWER AND STORM SEWER FACILITIES, UNLESS DIP MATERIAL IS SPECIFIED FOR SANITARY SEWER.
e. MAINTAIN 18 INCH MIN. VERTICAL SEPARATION AT ALL WATERMAIN AND RCP STORM DRAIN CROSSINGS; MAINTAIN 24 INCH MIN. VERTICAL SEPARATION AT ALL SANITARY SEWER AND RCP STORM DRAIN CROSSINGS. WHERE ADEQUATE SEPARATIONS CANNOT BE ACHIEVED, SPECIFY DIP MATERIALS AND A CONCRETE CRADLE HAVING 6 INCHES MIN. CLEARANCE
f. ALL OTHER UNDERGROUND UTILITIES SHALL CROSS WATER AND SEWER FACILITIES WITH 18 INCH MIN. VERTICAL SEPARATION REQUIRED.

3. ANY NECESSARY FIELD REVISIONS ARE SUBJECT TO REVIEW AND APPROVAL OF AN AMENDED PLAN AND/OR PROFILE BY THE TOWN OF BENSON PUBLIC UTILITIES DEPARTMENT PRIOR TO CONSTRUCTION.
4. CONTRACTOR SHALL MAINTAIN CONTINUOUS WATER AND SEWER SERVICE TO EXISTING RESIDENCES AND BUSINESSES THROUGHOUT CONSTRUCTION OF THE PROJECT. ANY NECESSARY SERVICE INTERRUPTIONS SHALL BE PRECEDED BY A 24 HOUR ADVANCE NOTICE TO THE TOWN OF BENSON PUBLIC UTILITIES DEPARTMENT.
5. 3.0' MINIMUM COVER IS REQUIRED ON ALL WATER MAINS AND SEWER FORCEMAINS. 4.0' MINIMUM COVER IS REQUIRED ON ALL REUSE MAINS.
6. IT IS THE DEVELOPER'S RESPONSIBILITY TO ABANDON OR REMOVE EXISTING WATER AND SEWER SERVICES NOT BEING USED IN REDEVELOPMENT OF A SITE UNLESS OTHERWISE DIRECTED BY THE TOWN OF BENSON PUBLIC UTILITIES DEPARTMENT. THIS INCLUDES ABANDONING TAP AT MAIN AND REMOVAL OF SERVICE FROM ROW OR EASEMENT.
7. INSTALL 3/4 INCH COPPER* WATER SERVICES WITH METERS LOCATED AT ROW OR WITHIN A 2'x2' WATERLINE EASEMENT IMMEDIATELY ADJACENT. NOTE: IT IS THE APPLICANTS RESPONSIBILITY TO PROPERLY SIZE THE WATER SERVICE FOR EACH CONNECTION TO PROVIDE ADEQUATE FLOW AND PRESSURE.
8. INSTALL 4 INCH PVC* SEWER SERVICES AT 1.0% MINIMUM GRADE WITH CLEANOUTS LOCATED AT ROW OR EASEMENT LINE AND SPACED EVERY 75 LINEAR FEET MAXIMUM.
9. PRESSURE REDUCING VALVES ARE REQUIRED ON ALL WATER SERVICES EXCEEDING 80 PSI; BACKWATER VALVES ARE REQUIRED ON ALL SANITARY SEWER SERVICES HAVING BUILDING DRAINS LOWER THAN 1.0 FEET ABOVE THE NEXT UPSTREAM MANHOLE.
10. ALL ENVIRONMENTAL PERMITS APPLICABLE TO THE PROJECT MUST BE OBTAINED FROM NCDWQ, USACE, AND/OR FEMA FOR ANY RIPARIAN BUFFER, WETLAND, AND/OR FLOODPLAIN IMPACTS (RESPECTIVELY) PRIOR TO CONSTRUCTION.
11. NCDOT/RAILROAD ENCROACHMENT AGREEMENTS ARE REQUIRED FOR ANY UTILITY WORK (INCLUDING MAIN EXTENSIONS AND SERVICE TAPS) WITHIN STATE OR RAILROAD ROW PRIOR TO CONSTRUCTION.
12. GREASE INTERCEPTOR/OIL WATER SEPARATOR SIZING CALCULATIONS AND INSTALLATION SPECIFICATIONS SHALL BE APPROVED BY THE TOWN OF BENSON PRIOR TO ISSUANCE OF A BUILDING PERMIT.
13. CROSS-CONNECTION CONTROL PROTECTION DEVICES ARE REQUIRED BASED ON DEGREE OF HEALTH HAZARD INVOLVED AS LISTED IN APPENDIX-B OF THE RULES GOVERNING PUBLIC WATER SYSTEMS IN NORTH CAROLINA. THESE GUIDELINES ARE THE MINIMUM REQUIREMENTS. THE DEVICES SHALL MEET AMERICAN SOCIETY OF SANITARY ENGINEERING (ASSE) STANDARDS OR BE ON THE UNIVERSITY OF SOUTHERN CALIFORNIA APPROVAL LIST. THE DEVICES SHALL BE INSTALLED AND TESTED (BOTH INITIAL AND PERIODIC TESTING THEREAFTER) IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS OR THE LOCAL CROSS CONNECTION CONTROL PROGRAM, WHICHEVER IS MORE STRINGENT.

SITE PLAN LEGEND

- FIRE HYDRANT ASSEMBLY
- GATE VALVE
- TEE
- THRUST (REACTION) BLOCKING
- BLOW OFF VALVE
- WATER METER
- BACKFLOW PREVENTER
- CLEANOUT
- SANITARY MANHOLE
- FLARED END SECTION
- RISER STRUCTURE
- CATCH BASIN
- YARD INLET
- WATER LINE
- SANITARY SEWER LINE
- STORM DRAIN LINE

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

SCALE: 1 IN = 20 FT
20' 10' 0 20' 40'

NORTH CAROLINA PROFESSIONAL SEAL 035027 ENGINEER WILLIAM Z. SHIPMAN 8/6/19

SYMBOL	DATE	REVISIONS

SHIPMAN ENGINEERING

SHIPMAN ENGINEERING, PLLC
137 MIDDLEGREEN PLACE
HOLLY SPRINGS, NC 27540

DESIGNED BY: WZS
DRAWN BY: WZS
CHECKED BY: WZS
DRAWING DATE: 08-06-19
SE PROJECT #: 2019-018

PUBLIC WORKS FACILITY
TOWN OF BENSON
JOHNSTON COUNTY, NORTH CAROLINA

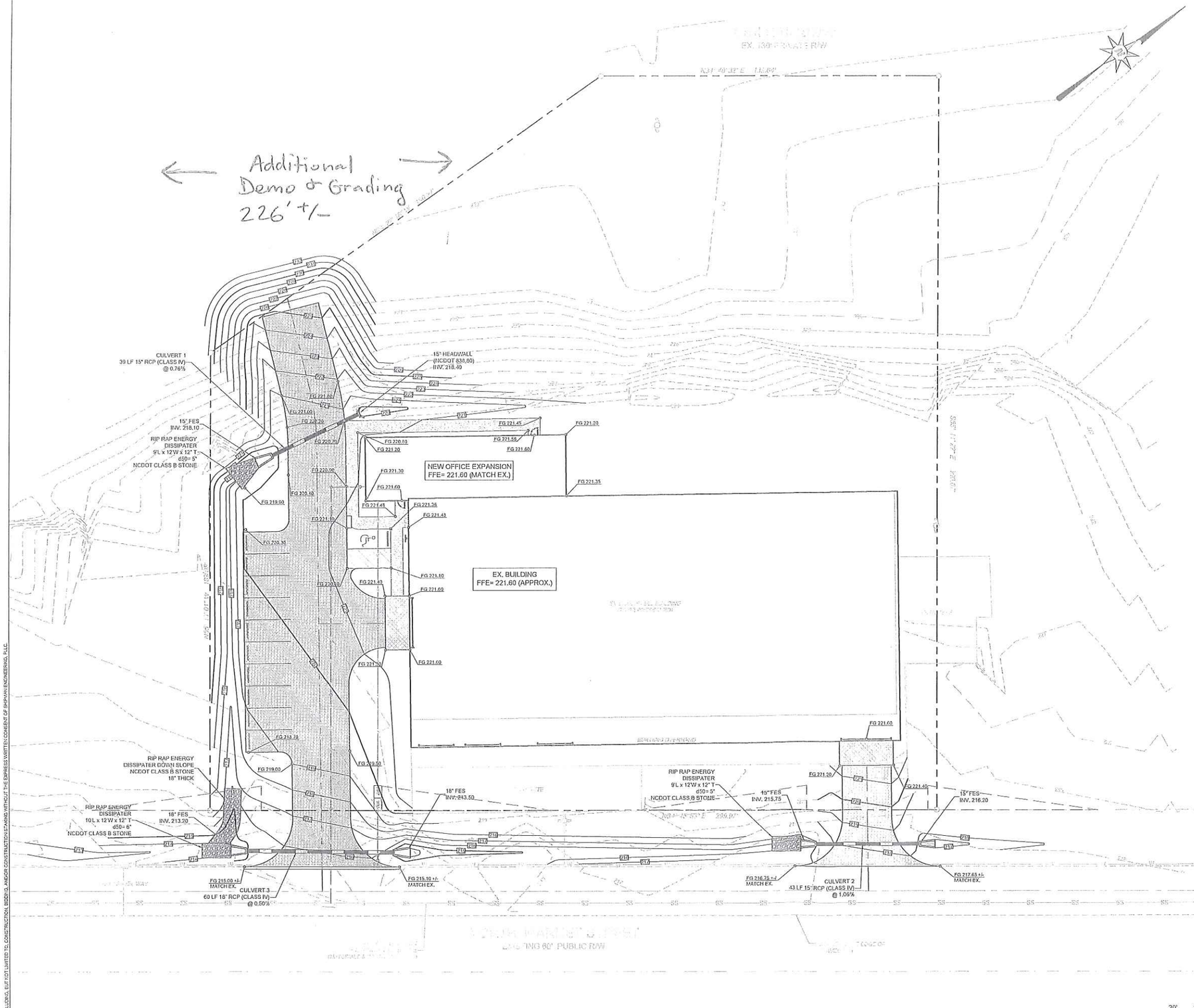
SITE UTILITY PLAN

SHEET NUMBER:

...ER, INCLUDING, BUT NOT LIMITED TO, CONSTRUCTION, BIDDING, AND/OR CONSTRUCTION STAKING WITHOUT THE EXPRESS WRITTEN CONSENT OF SHIPMAN ENGINEERING, PLLC.

OF BENSON STANDARDS AND SPECIFICATIONS.

1. BEFORE YOU DIG, STOP. CALL THE NC ONE-CALL CENTER AT 1-800-632-4949. IT'S THE LAW. EXISTING UTILITIES ARE SHOWN FROM THE BEST AVAILABLE INFORMATION AND ARE APPROXIMATE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THESE AND OTHER UTILITIES BEFORE STARTING CONSTRUCTION. NOTIFY UTILITY LOCATING COMPANY (ONE CALL @ 1-800-632-4949) OR INDIVIDUAL UTILITY OWNERS FOR UNDERGROUND LOCATIONS AT LEAST 48 HOURS IN ADVANCE.
2. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE TOWN OF BENSON STANDARD SPECIFICATIONS AND DETAILS.
3. EXISTING CONDITIONS AND TOPOGRAPHICAL DATA OF THE SUBJECT PARCEL ARE COMPILED FROM A FIELD SURVEY OF THE PROPERTY BY LAMBERT SURVEYING, INC. (DATED APRIL 5, 2019) AND IS NOT THE RESULT OF A FIELD SURVEY BY SHIPMAN ENGINEERING, PLLC. ADDITIONAL EXISTING CONDITIONS DATA PROVIDED BY SUPPLEMENTAL DATA INCLUDING AERIAL PHOTOGRAPHY, JOHNSTON COUNTY GIS DATA, AND OTHER DATA SOURCES AS REQUIRED.
4. RIPARIAN BUFFER AREAS SHALL NOT BE CLEARED, DRAINAGE, OR OTHERWISE DISTURBED UNLESS SPECIFICALLY PERMITTED BY THE US ARMY CORPS OF ENGINEERS AND NCDENR-DWQ.
5. TREE PROTECTION FENCING SHALL BE PROVIDED ALONG ALL VEGETATED RIPARIAN AND VEGETATED PERIMETER BUFFER AREAS AS WELL AS TREE CONSERVATION AREAS.
6. 20' STORM EASEMENTS SHALL BE CENTERED ON ALL STORM SEWER PIPE LOCATED OUTSIDE OF STREET RIGHT OF WAYS.
7. UTILITY PIPE SIZES & LOCATIONS ARE PRELIMINARY AND SHALL BE FINALIZED DURING CONSTRUCTION DRAWING REVIEW & APPROVAL.
8. ALL STORM DRAINAGE WITHIN THE RIGHT OF WAY SHALL BE PUBLIC. ALL STORM DRAINAGE OUTSIDE THE RIGHT OF WAY SHALL BE PRIVATE.
9. STORM DRAINAGE PIPING SHALL BE CLASS III RCP UNLESS OTHERWISE NOTED. STORM DRAINAGE WITH LESS THAN 2' OF COVER MEASURED FROM SUBGRADE SHALL BE CLASS IV RCP.
10. PRIVATE UTILITIES (POWER, TELEPHONE, NATURAL GAS, CABLE TV) ARE NOT SHOWN ON THIS PLAN. THE CONTRACTOR SHALL COORDINATE THE INSTALLATION OF THOSE UTILITIES WHEN INSTALLING STORM DRAINAGE TO AVOID CONFLICTS.
11. RIM ELEVATION FOR YARD INLETS (YI) REFERS TO THE CENTER OF THE TOP OF GRATE. RIM ELEVATION OF MANHOLES (SDMH) REFERS TO THE CENTER OF THE TOP OF MANHOLE COVER. TOP ELEVATION OF CATCH BASINS (CB) REFERS TO THE CENTER OF THE TOP OF CASTING ELEVATION.
12. PROPOSED CONTOURS ILLUSTRATE THE FINISHED SURFACE ELEVATION FOR PAVEMENT, FINISHED SUBGRADE ELEVATION IN OPEN AREAS AND TOP OF RIP-RAP UNLESS OTHERWISE NOTED.
13. CUT/FILL SLOPES SHALL BE GRADED AT A MAXIMUM OF 3H:1V UNLESS OTHERWISE INDICATED.
14. NO GRADING EQUIPMENT SHALL BE PERMITTED ON-SITE UNTIL A GRADING PERMIT HAS BEEN ISSUED BY JOHNSTON COUNTY AND/OR NCDEQ DIVISION OF LAND QUALITY.
15. ALL RIP-RAP IS TO BE INSTALLED WITH NON-WOVEN FILTER FABRIC BENEATH (MIRAFI 140N OR APPROVED EQUAL).
16. WHERE PROPOSED EDGE OF PAVEMENT CONNECTS TO EXISTING, CONTRACTOR SHALL MATCH EXISTING ELEVATION AND CREATE A SMOOTH TRANSITION.
17. CONTRACTOR SHALL RAISE ALL STRUCTURES TO FINISHED GRADE ELEVATIONS.



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

SCALE: 1 IN = 20 FT

20' 10' 0 20' 40'

SITE PLAN LEGEND

4.0%	FLOW DIRECTION
FG 387.46	SPOT ELEVATION
400	MAJOR CONTOUR
402	MINOR CONTOUR
	LIMITS OF DISTURBANCE
	RIP-RAP OUTLET PROTECTION

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 035027 WILLIAM Z. SHIPMAN
8/6/19

SYMBOL	DATE	REVISIONS

SHIPMAN ENGINEERING, PLLC
137 MIDDLEGREEN PLACE
HOLLY SPRINGS, NC 27540
919.999.8008

DESIGNED BY:	WZS
DRAWN BY:	WZS
CHECKED BY:	WZS
DRAWING DATE:	08-06-19
SE PROJECT #:	2019-018

PUBLIC WORKS FACILITY
TOWN OF BENSON
JOHNSTON COUNTY, NORTH CAROLINA

SITE GRADING & DRAINAGE PLAN

SHEET NUMBER:

THIS DRAWING AND THE DESIGN INCLUDED HEREIN, AS AN INSTRUMENT OF SERVICE, IS AND SHALL REMAIN THE PROPERTY OF SHIPMAN ENGINEERING, PLLC. THE REPRODUCTION OF THESE PLANS FOR USE IN CONSTRUCTION, BIDDING, AND/OR CONSTRUCTION STAKING WITHOUT THE EXPRESS WRITTEN CONSENT OF SHIPMAN ENGINEERING, PLLC. INCLUDING, BUT NOT LIMITED TO, CONSTRUCTION, BIDDING, AND/OR CONSTRUCTION STAKING WITHOUT THE EXPRESS WRITTEN CONSENT OF SHIPMAN ENGINEERING, PLLC.

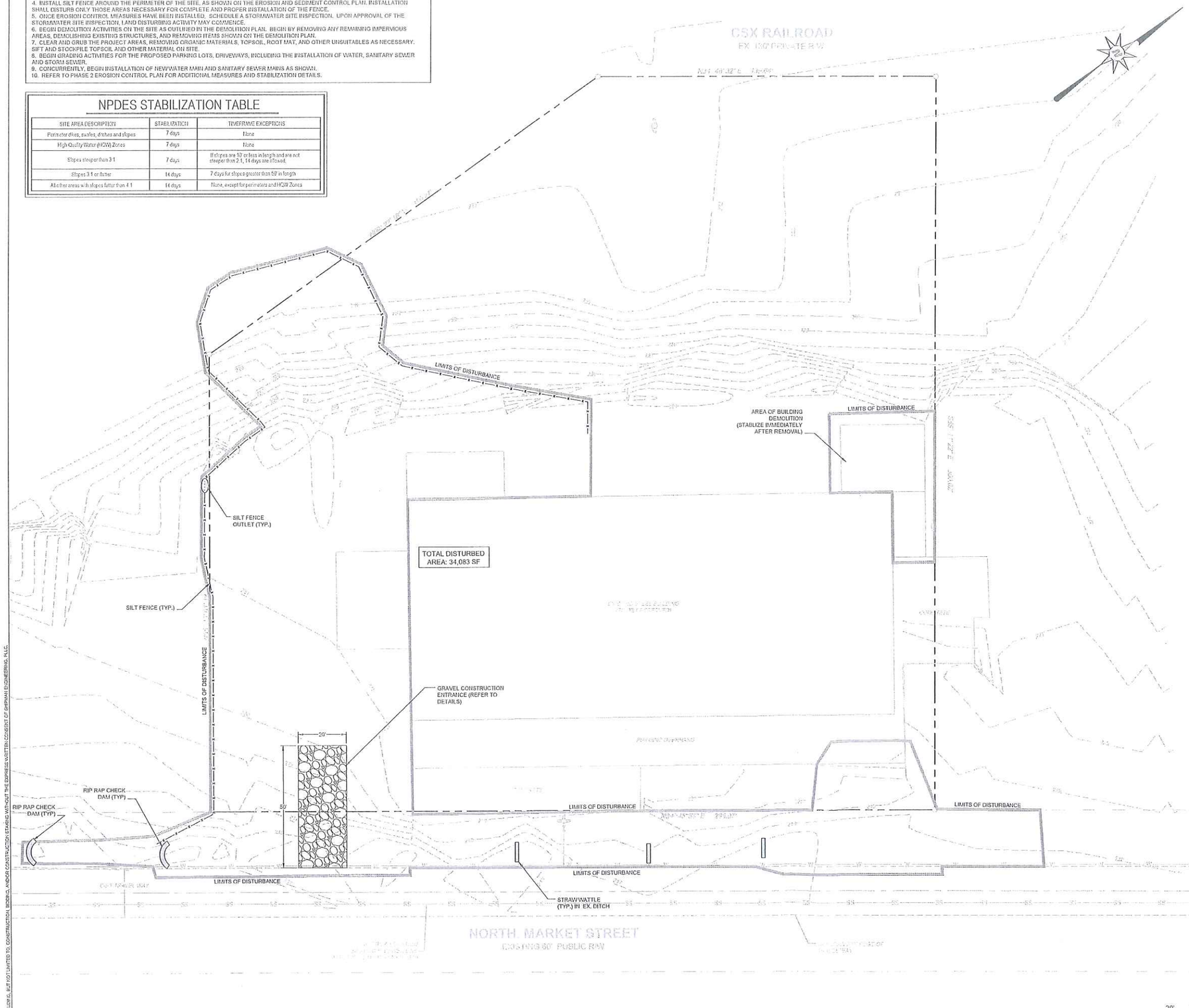
1. A LAND DISTURBANCE PRECONSTRUCTION CONFERENCE IS REQUIRED PRIOR TO ANY DISTURBANCE ON SITE. THE MEETING SHALL BE BETWEEN THE SITE GRADING CONTRACTOR, ENGINEER, AND TOWN OF BENSON STAFF. THE CONTRACTOR SHALL SCHEDULE THE MEETING TO OCCUR AT LEAST 48 HOURS PRIOR TO ANY DISTURBANCE ON SITE.
2. INSTALL TREE PROTECTION FENCING, IF REQUIRED, IN ACCORDANCE WITH THE TREE CONSERVATION PLAN. FENCING SHALL BE INSTALLED AROUND TREE CONSERVATION AREAS AND OTHER PROTECTED AREAS.
3. INSTALL CONSTRUCTION ENTRANCE TO THE PROPERTY. BARRICADE ANY ADDITIONAL ENTRANCES TO PREVENT UNAUTHORIZED ENTRY. REMOVE THE EXISTING DRIVEWAY ON BRIGHTON ROAD.
4. INSTALL SILT FENCE AROUND THE PERIMETER OF THE SITE, AS SHOWN ON THE EROSION AND SEDIMENT CONTROL PLAN. INSTALLATION SHALL DISTURB ONLY THOSE AREAS NECESSARY FOR COMPLETE AND PROPER INSTALLATION OF THE FENCE.
5. ONCE EROSION CONTROL MEASURES HAVE BEEN INSTALLED, SCHEDULE A STORMWATER SITE INSPECTION. UPON APPROVAL OF THE STORMWATER SITE INSPECTION, LAND DISTURBING ACTIVITY MAY COMMENCE.
6. BEGIN DEMOLITION ACTIVITIES ON THE SITE AS OUTLINED IN THE DEMOLITION PLAN. BEGIN BY REMOVING ANY REMAINING IMPERVIOUS AREAS, DEMOLISHING EXISTING STRUCTURES, AND REMOVING ITEMS SHOWN ON THE DEMOLITION PLAN.
7. CLEAR AND GRUB THE PROJECT AREAS, REMOVING ORGANIC MATERIALS, TOPSOIL, ROOT MAT, AND OTHER UNSUITABLES AS NECESSARY. SET AND STOCKPILE TOPSOIL AND OTHER MATERIAL ON SITE.
8. BEGIN GRADING ACTIVITIES FOR THE PROPOSED PARKING LOTS, DRIVEWAYS, INCLUDING THE INSTALLATION OF WATER, SANITARY SEWER AND STORM SEWER.
9. CONCURRENTLY, BEGIN INSTALLATION OF NEW WATER MAIN AND SANITARY SEWER MAINS AS SHOWN.
10. REFER TO PHASE 2 EROSION CONTROL PLAN FOR ADDITIONAL MEASURES AND STABILIZATION DETAILS.

NPDES STABILIZATION TABLE

SITE AREA DESCRIPTION	STABILIZATION	TIMEFRAME EXCEPTIONS
Perimeter dikes, swales, ditches and slopes	7 days	None
High Quality Water (HQW) Zones	7 days	None
Slopes steeper than 3:1	7 days	If slopes are 50' or less in length and are not steeper than 2:1, 14 days are allowed.
Slopes 3:1 or flatter	14 days	7 days for slopes greater than 50' in length
All other areas with slopes flatter than 4:1	14 days	None, except for perimeters and HQW Zones

OF BENSON STANDARDS AND SPECIFICATIONS.

1. EXISTING CONDITIONS AND TOPOGRAPHICAL DATA OF THE SUBJECT PARCEL ARE COMPILED FROM A FIELD SURVEY OF THE PROPERTY BY LAMBERT SURVEYING, INC. (DATED APRIL 5, 2019) AND IS NOT THE RESULT OF A FIELD SURVEY BY SHIPMAN ENGINEERING, PLLC. ADDITIONAL EXISTING CONDITIONS DATA PROVIDED BY SUPPLEMENTAL DATA INCLUDING AERIAL PHOTOGRAPHY, JOHNSTON COUNTY GIS DATA, AND OTHER DATA SOURCES AS REQUIRED.
2. REFER TO EROSION AND SEDIMENT CONTROL PLAN AND CONSTRUCTION SEQUENCE BEFORE PERFORMING ANY CLEARING, GRUBBING, OR DEMOLITION OPERATIONS.
3. NO TITLE OPINION ON THIS PROPERTY HAS BEEN FURNISHED.
4. AREAS COMPUTED BY THE COORDINATE METHOD.
5. THE PROPERTY SHOWN HEREON IS SUBJECT TO ALL RIGHTS-OF-WAY, EASEMENTS, COVENANTS, AND RESTRICTIONS OF RECORD.
6. ALL DISTANCES SHOWN ON THE SURVEY ARE HORIZONTAL GROUND DISTANCES.
7. THE PROPERTY SHOWN IS LOCATED OUTSIDE OF ANY FLOOD HAZARD AREAS AS SHOWN ON FEMA FIRM 3720152800K DATED OCTOBER 3, 2006.
8. REFER TO SEALED TOPOGRAPHICAL SURVEY BY LAMBERT SURVEYING, INC. FOR HORIZONTAL AND VERTICAL DATUM INFORMATION AND OTHER SURVEY CONTROL DATA.
9. ALL DIMENSIONS SHOWN ARE TO THE FACE OF CURB, UNLESS NOTED OTHERWISE.
10. COORDINATE POWER, TELEPHONE, CABLE, AND OTHER UNDERGROUND UTILITY INSTALLATION WITH THE APPROPRIATE UTILITY PROVIDER AND THE TOWN OF BENSON.
11. ALL PROPOSED SIGNAGE WILL COMPLY WITH THE TOWN OF BENSON SIGN ORDINANCE.
12. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL GRADES PRIOR TO THE START OF CONSTRUCTION.
13. MAXIMUM SIDEWALK CROSS SLOPE IS 2% (1/4 INCH PER FOOT).
14. NO INVESTIGATION HAS BEEN PERFORMED AS TO THE PRESENCE OF WETLANDS, STREAMS, SURFACE WATERS, RIPARIAN BUFFERS, OR OTHER ENVIRONMENTALLY SENSITIVE AREAS.



GROUND COVER STABILIZATION SCHEDULE:

1. STABILIZE BASINS WITH GROUND COVER IMMEDIATELY AFTER INSTALLATION.
2. STABILIZE DIVERSION DITCHES INTENDED TO BE IN SERVICE FOR 30 DAYS OR MORE WITH TEMPORARY SEEDING AND EROSION CONTROL NETTING.
3. FOR ALL AREAS OF MODERATE AND/OR STEEP SLOPES, PROVIDE TEMPORARY GROUND COVER IF THE SLOPE HAS NOT BEEN DISTURBED FOR A PERIOD OF 14 DAYS.
4. PROVIDE GROUND COVER SUFFICIENT TO RESTRAIN EROSION ON ANY PORTION OF THE SITE UPON WHICH FURTHER LAND-DISTURBING ACTIVITY IS NOT BEING UNDERTAKEN WITHIN 14 CALENDAR DAYS OF TEMPORARILY OR PERMANENTLY SUSPENDING LAND DISTURBING ACTIVITY.
5. ESTABLISH PERMANENT GROUND COVER SUFFICIENT TO RESTRAIN EROSION WITHIN 14 CALENDAR DAYS FOLLOWING COMPLETION OF CONSTRUCTION OR DEVELOPMENT AND/OR PRIOR TO FINAL INSPECTION.

EROSION CONTROL LEGEND

- CONSTRUCTION ENTRANCE/EXIT
- SEDIMENT TRAP BOTTOM AREA
- RIP RAP FILTER DAM
- SILT FENCE OUTLET
- STRAW WATTLE
- TEMP. SEED/MULCH/PERM. SEED (TS, M, PS)
- OUTLET PROTECTION
- SKIMMER DEVICE W/ OUTLET PIPE
- INLET PROTECTION
- DIVERSION DITCH
- SILT FENCE
- TREE PROTECTION FENCE
- COIR MESH SEDIMENT BAFFLES
- DISTURBANCE LIMITS
- DRAINAGE AREA LIMITS
- DITCH LINER-ECP-2 POLY TURF REINFORCEMENT MAT
- DITCH LINER-ECSC-3 COCONUT TURF REINFORCEMENT MAT
- SLOPE MATTING-ECSC-3 COCONUT TURF REINFORCEMENT MAT

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

SCALE: 1 IN = 20 FT
20' 10' 0 20' 40'

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 035027 WILLIAM Z. SHIPMAN
2/6/19

REVISIONS

SYMBOL	DATE

SHIPMAN ENGINEERING
SHIPMAN ENGINEERING, PLLC
137 MIDDLEGREEN PLACE
HOLLY SPRINGS, NC 27540
(919) 999-9998

DESIGNED BY:	WZS
DRAWN BY:	WZS
CHECKED BY:	WZS
DRAWING DATE:	03-06-19
SE PROJECT #:	2019-018

PUBLIC WORKS FACILITY
TOWN OF BENSON
JOHNSTON COUNTY, NORTH CAROLINA

EROSION & SEDIMENT CONTROL PLAN
INITIAL PHASE

SHEET NUMBER:

THIS DRAWING AND THE DESIGN CONTAINED HEREIN, AS AN INSTRUMENT OF SERVICE, IS AND SHALL REMAIN THE PROPERTY OF SHIPMAN ENGINEERING, PLLC. THIS DRAWING IS NOT TO BE USED IN WHOLE OR IN PART, FOR ANY OTHER PROJECT, WITHOUT THE WRITTEN AUTHORIZATION OF SHIPMAN ENGINEERING, PLLC. ANY UNAUTHORIZED USE, INCLUDING, BUT NOT LIMITED TO, CONSTRUCTION, BIDDING, AND/OR CONSTRUCTION STAKING WITHOUT THE EXPRESS WRITTEN CONSENT OF SHIPMAN ENGINEERING, PLLC.

1. CONTINUE ROUGH GRADING SITE TO BRING PROJECT AREA TO FINAL GRADE. ADJUST EROSION CONTROL MEASURES DAILY TO FIT NEW SITE GRADES AS LAND AREAS BROUGHT TO FINAL ELEVATION.
2. COMPLETE INSTALLATION OF IMPROVEMENTS IN THE MARKET STREET RIGHTOF WAY. INSTALL NEW STORM DRAINAGE AND DRAINAGE DITCH IN THE RIGHT OF WAY, BEING CAREFUL TO PERFORM THE WORK DURING DRY CONDITIONS. DO NOT PERMIT SEDIMENT LADEN WATER TO DISCHARGE FROM THE SITE UNDER ANY CIRCUMSTANCES. ONCE UTILITY WORK IN THE RIGHT-OF-WAY IS COMPLETED STABILIZE ALL DISTURBED SOILS IN THE RIGHT-OF-WAY CORRIDOR IMMEDIATELY.
3. BEGIN INSTALLATION OF STORM DRAINAGE PIPING, WATER, AND SANITARY SEWER IN THE PROJECT SITE. INSTALL HARDWARE CLOTH INLET PROTECTION TO PREVENT SEDIMENT FROM ENTERING THE STORM DRAIN NETWORK AS SOON AS NEW STORM INLETS ARE INSTALLED.
4. FINE GRADE ALL PAVED AREAS AND INSTALL ROADWAY SUBGRADE, CURB AND GUTTER, AND OTHER SITE FEATURES.
5. COMPLETE PAVING AND CONCRETE FLATWORK AREAS. INSTALL LANDSCAPING AS SHOWN ON THE LANDSCAPING PLAN.
6. CLEAN UP SLOPES, DISTURBED AREAS, DITCHES, AND OTHER TURF AREAS AND STABILIZE PER THE SEEDING SCHEDULE.
7. IF CONSTRUCTION IS COMPLETE, CALL TOWN OF BENSON STAFF TO SCHEDULE A FINAL INSPECTION. IF THE SITE IS APPROVED, REMOVE TEMPORARY DIVERSIONS, SILT FENCE, BASINS, ETC. AND SEED OR STABILIZE ANY REMAINING BARE AREAS. ALL REMAINING PERMANENT EROSION CONTROL DEVICES, SUCH AS VELOCITY DISSIPATORS, SHOULD NOW BE INSTALLED.

NPDES STABILIZATION TABLE

SITE AREA DESCRIPTION	STABILIZATION	TIMEFRAME EXCEPTIONS
Perimeter dikes, swales, ditches and slopes	7 days	None
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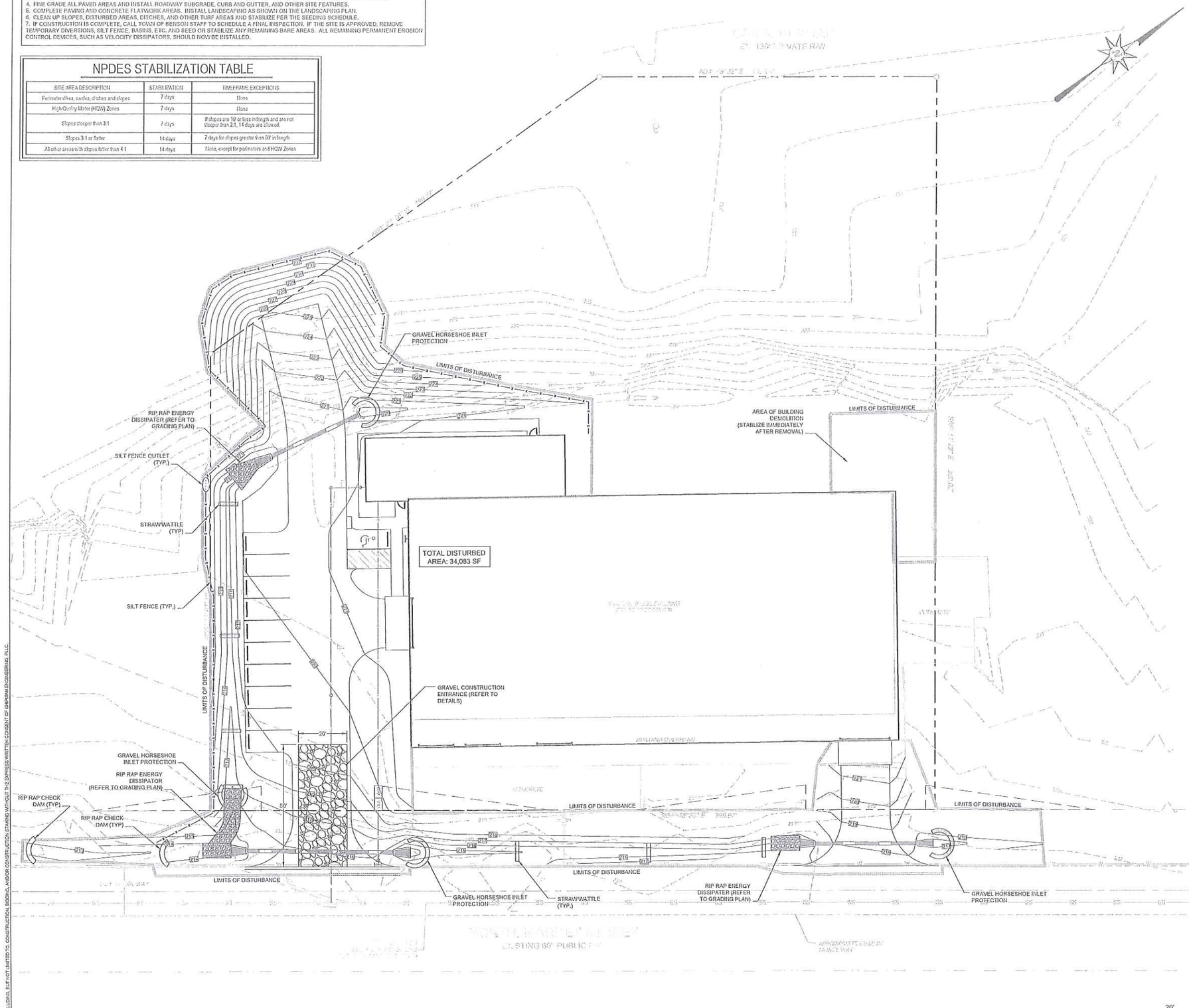

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811 Know what's below. Call before you dig

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 035027 JAMES W. SHIPMAN
8/6/19

REVISIONS | DATE | SYMBOL

SHIPMAN ENGINEERING, PLLC
137 MIDDLEGREEN PLACE
HOLLY SPRINGS, NC 27540
919.557.5888

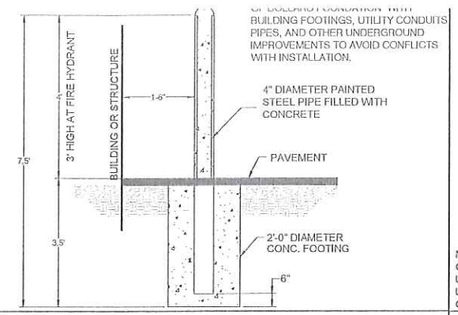
DESIGNED BY: WZS
DRAWN BY: WZS
CHECKED BY: WZS
DRAWING DATE: 08-06-19
SE PROJECT #: 2019-013

PUBLIC WORKS FACILITY
TOWN OF BENSON
JOHNSTON COUNTY, NORTH CAROLINA

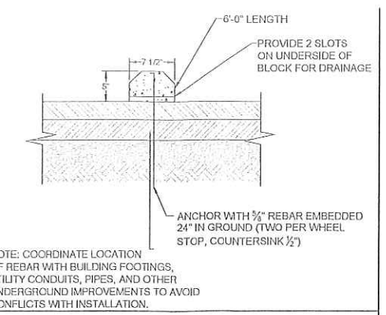
EROSION & SEDIMENT CONTROL PLAN
CONSTRUCTION PHASE

SHEET NUMBER:

OR INCLUDING, BUT NOT LIMITED TO, CONSTRUCTION, BIDDING, AND/OR CONSTRUCTION STAKING WITHOUT THE EXPRESS WRITTEN CONSENT OF SHIPMAN ENGINEERING, PLLC.



CONCRETE PIPE BOLLARD
NOT TO SCALE



PRECAST CONCRETE WHEEL STOP
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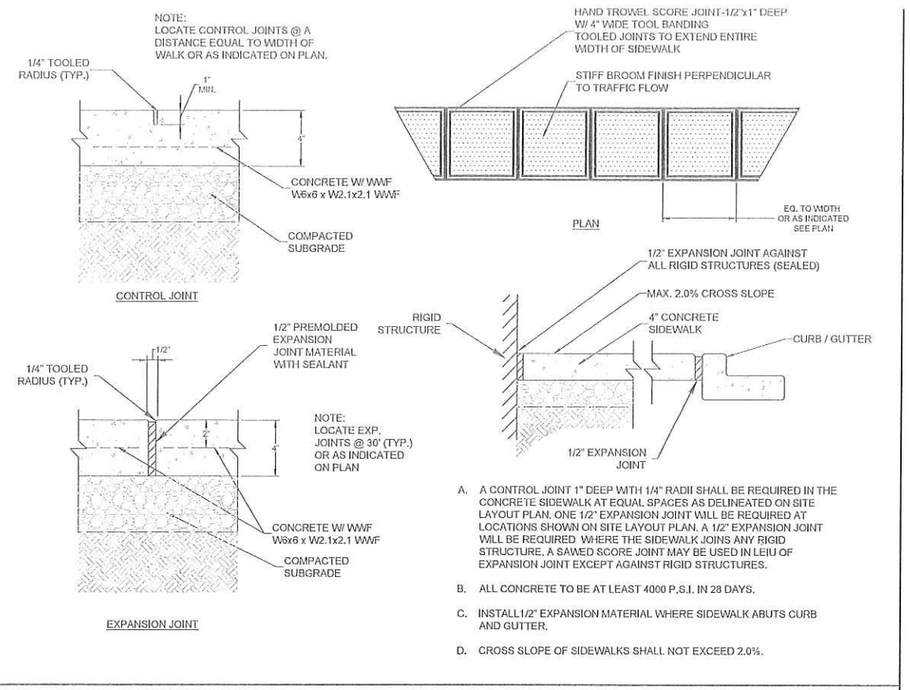


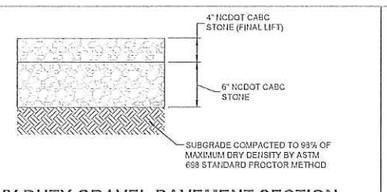
A. A CONTROL JOINT 1" DEEP WITH 1/4" RADII SHALL BE REQUIRED IN THE CONCRETE SIDEWALK AT EQUAL SPACES AS DELINEATED ON SITE LAYOUT PLAN. ONE 1/2" EXPANSION JOINT WILL BE REQUIRED AT LOCATIONS SHOWN ON SITE LAYOUT PLAN. A 1/2" EXPANSION JOINT WILL BE REQUIRED WHERE THE SIDEWALK JOINS ANY RIGID STRUCTURE. A SAWED SCORE JOINT MAY BE USED IN LEIU OF EXPANSION JOINT EXCEPT AGAINST RIGID STRUCTURES.

B. ALL CONCRETE TO BE AT LEAST 4000 P.S.I. IN 28 DAYS.

C. INSTALL1/2" EXPANSION MATERIAL WHERE SIDEWALK ABUTS CURB AND GUTTER.

D. CROSS SLOPE OF SIDEWALKS SHALL NOT EXCEED 2.0%.

CONCRETE SIDEWALK
NOT TO SCALE



HEAVY DUTY GRAVEL PAVEMENT SECTION
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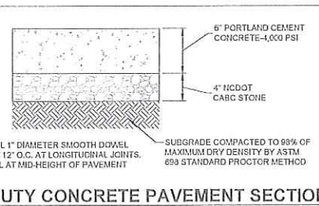

HEAVY DUTY CONCRETE PAVEMENT SECTION
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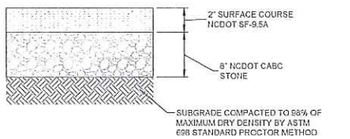
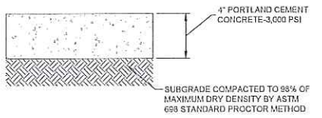
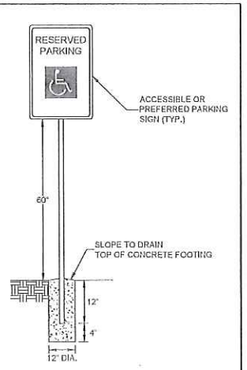


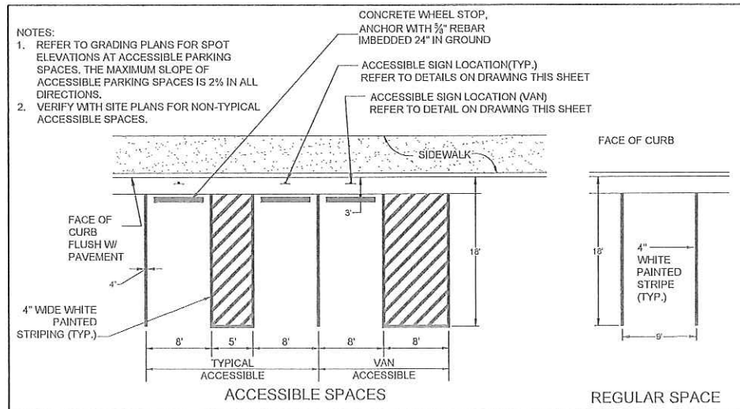
MEDIUM DUTY ASPHALT PAVEMENT SECTION
NOT TO SCALE



STANDARD CONCRETE SIDEWALK SECTION
NOT TO SCALE



ACCESSIBLE & PREFERRED PARKING SIGN FOUNDATION
NOT TO SCALE



PARKING SPACE STRIPING
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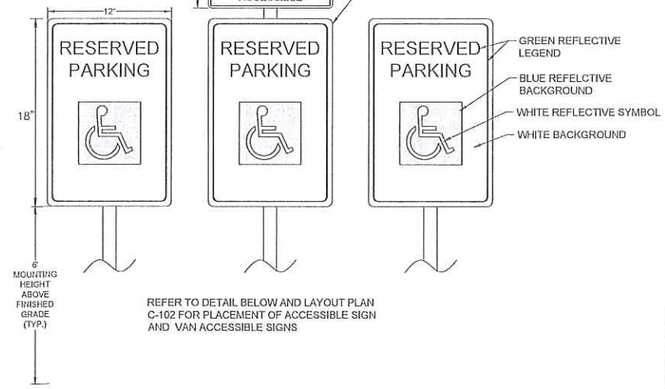
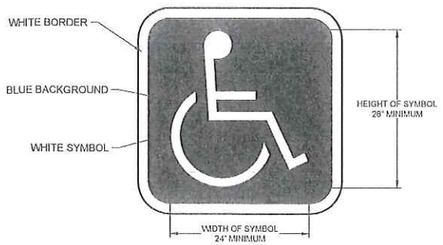
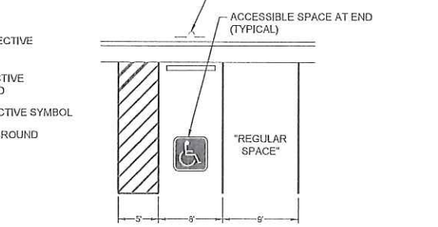
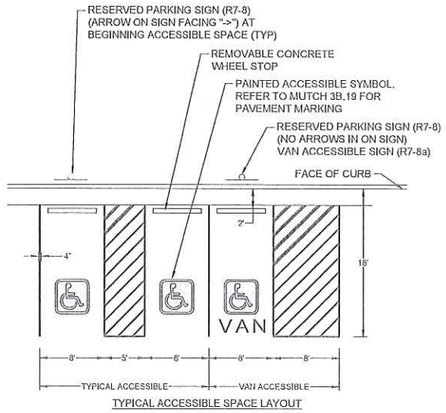


REFER TO DETAIL BELOW AND LAYOUT PLAN C-102 FOR PLACEMENT OF ACCESSIBLE SIGN AND VAN ACCESSIBLE SIGNS



ACCESSIBLE SPACE PAVEMENT MARKING SYMBOL
REFER TO MUTCD 3B.19
N.T.S.





TYPICAL ACCESSIBLE SPACE LAYOUT

NOTE:
1. VERIFY WITH SITE PLANS FOR NON-TYPICAL ACCESSIBLE SPACES.
2. FOR SPACES LABELED 'VAN' PROVIDE MUTCD R7-8 SIGN AND ADDITIONAL R7-8a.

ACCESSIBLE PARKING SPACE MARKING AND SIGNAGE
NOT TO SCALE

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 035027 WILLIAM Y. SHIPMAN
2/6/19

SYMBOL	DATE	REVISIONS

SHIPMAN ENGINEERING, PLLC
137 MIDDLEGREEN PLACE
HOLLY SPRINGS, NC 27540
(919) 999-9995

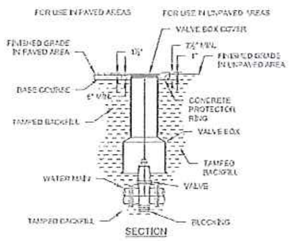
DESIGNED BY:	WJS
DRAWN BY:	WJS
CHECKED BY:	WJS
DRAWING DATE:	02-06-19
SE PROJECT #:	2019-013

PUBLIC WORKS FACILITY
TOWN OF BENSON
JOHNSTON COUNTY, NORTH CAROLINA

NOTES AND DETAILS

SHEET NUMBER:

ER INCLUDING, BUT NOT LIMITED TO, CONSTRUCTION, MODIFICATION, AND/OR CONSTRUCTION STAKING WITHOUT THE EXPRESS WRITTEN CONSENT OF SHIPMAN ENGINEERING, PLLC.



NOTES:
1. D.I.P. MAY BE USED FOR VALVE BOX EXTENSIONS.
2. VALVE BOX SHOULD NOT CONTACT WATER MAIN OR VALVE.
3. CONCRETE PROTECTOR RING SHALL BE USED IN ALL UNPAVED AREAS.
4. ALL MATERIALS USED IN THE POTABLE WATER SYSTEM MUST BE NSF61 AND NSF372 CERTIFIED AND MEET THE LATEST FEDERAL SAFE DRINKING WATER ACT REQUIREMENTS.

VALVE AND VALVE BOX INSTALLATION

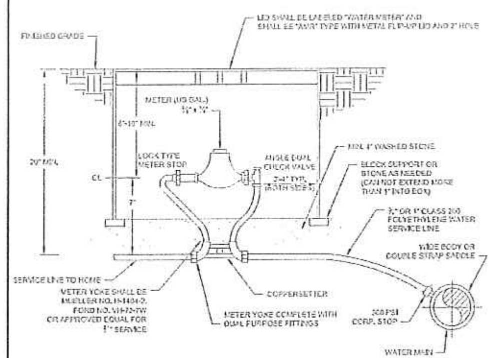
NOT TO SCALE

	Name	Date
Drawn By:		
Checked By:		
Approved By:		
Scale:		
Rev. Description	Date	Init.

JOHNSTON COUNTY
Department of Public Utilities
P.O. Box 2263
Smithfield, NC 27577

WATER
STANDARD DETAIL
Valve and Valve
Box Installation

PAGE 13



NOTE:
1. CONTRACTOR SHALL PLACE METER BOX IN NON TRAFFIC AREA ONLY, OUTSIDE FENCED AREAS, AND 4 FEET AWAY FROM BUSHES AND TREES THAT COULD COVER THE BOX.
2. PLASTIC METER BOX SHALL BE CENTURY 41015, NDS D1200, OR APPROVED EQUAL.
3. CONTRACTOR SHALL CENTER METER YOKE IN METER BOX.
4. METER YOKE TO MUELLER No. H-1404-2A, FORD No. VHH-72-7W-11 OR APPROVED EQUAL.
5. METER TO MEET AWWA C-700 STDS. AND SPECS.
6. METER TO BE PROVIDED AND SET BY JOHNSTON COUNTY. METER WILL NOT BE INSTALLED IF, THE THE SETTER IS NOT CENTERED IN THE BOX, THE SETTER HAS BEEN PULLED UP ON ONE END, THE SETTER IS LAYING ON IT'S SIDE, THE SETTER IS TO CLOSE TO THE BOX LID, THE BOX IS BELOW GRADE OR BROKEN, THE CUSTOMERS SERVICE LINE IS NOT HOOKED TO THE UNION NUT, THE 3/4 GATE VALVE HAS NOT BEEN INSTALLED WITHIN 12 INCHES OF THE METER BOX.
7. ALL MATERIALS USED IN THE POTABLE WATER SYSTEM MUST BE NSF61 AND NSF372 CERTIFIED AND MEET THE LATEST FEDERAL SAFE DRINKING WATER ACT REQUIREMENTS.
8. SERVICE LINE TO HOME MUST PASS PLUMBING INSPECTION PRIOR TO SETTING METER.

3/4" & 1" WATER METER SERVICE DETAIL

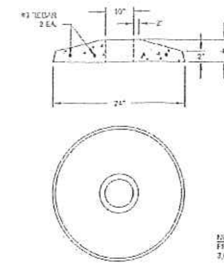
NOT TO SCALE

	Name	Date
Drawn By:		
Checked By:		
Approved By:		
Scale:		
Rev. Description	Date	Init.

JOHNSTON COUNTY
Department of Public Utilities
P.O. Box 2263
Smithfield, NC 27577

WATER
STANDARD DETAIL
¾" and 1"
Water Meter Service

PAGE 21



NOTE:
PROTECTOR RING SHALL BE 3,000 P.S.I. CONCRETE.

CONCRETE PROTECTOR RING

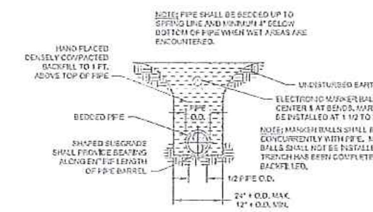
NOT TO SCALE

	Name	Date
Drawn By:		
Checked By:		
Approved By:		
Scale:		
Rev. Description	Date	Init.

JOHNSTON COUNTY
Department of Public Utilities
P.O. Box 2263
Smithfield, NC 27577

WATER
STANDARD DETAIL
Concrete Protector Ring

PAGE 14



NOTE:
WATER MAINS 8"Ø AND SMALLER SHALL HAVE MINIMUM OF 3' COVER. WATER MAINS LARGER THAN 8"Ø SHALL HAVE A MINIMUM OF 3.5' COVER.

PIPE LAYING CONDITION

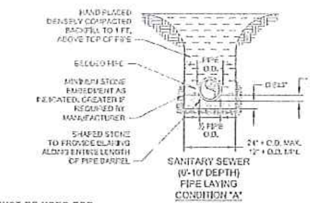
NOT TO SCALE

	Name	Date
Drawn By:		
Checked By:		
Approved By:		
Scale:		
Rev. Description	Date	Init.

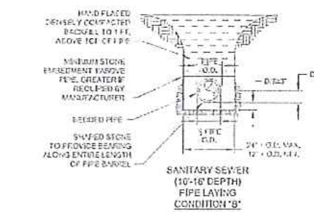
JOHNSTON COUNTY
Department of Public Utilities
P.O. Box 2263
Smithfield, NC 27577

WATER
STANDARD DETAIL
Pipe Laying
Condition

PAGE 17



NOTE:
C-900 MUST BE USED FOR DEPTHS OF 14 - 18 FEET OR DUCTILE IRON PIPE AT DEPTHS OF 18 FEET AND GREATER.



PIPE LAYING CONDITIONS

NOT TO SCALE

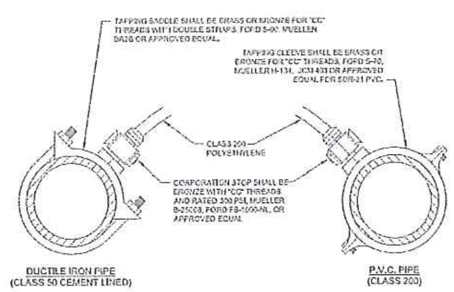
	Name	Date
Drawn By:		
Checked By:		
Approved By:		
Scale:		
Rev. Description	Date	Init.

JOHNSTON COUNTY
Department of Public Utilities
P.O. Box 2263
Smithfield, NC 27577

SANITARY SEWER
STANDARD DETAIL
Pipe Laying
Conditions A & B

PAGE 36

NOTE:
1. ALL TAPS 2" AND SMALLER SHALL BE MADE WITH TAPPING SADDLE. ALL TAPS LARGER THAN 2" SHALL BE MADE WITH TAPPING SLEEVE AND VALVE, NO DIRECT TAPS SHALL BE MADE.
2. ALL MATERIALS USED IN THE POTABLE WATER SYSTEM MUST BE NSF61 AND NSF372 CERTIFIED AND MEET THE LATEST FEDERAL SAFE DRINKING WATER ACT REQUIREMENTS.



NOTE: ALL TAPS TO BE MADE ON TOP QUARTER OF MAIN.

STANDARD WATER TAP DETAIL

NOT TO SCALE

	Name	Date
Drawn By:		
Checked By:		
Approved By:		
Scale:		
Rev. Description	Date	Init.

JOHNSTON COUNTY
Department of Public Utilities
P.O. Box 2263
Smithfield, NC 27577

WATER
STANDARD DETAIL
Standard Water Tap

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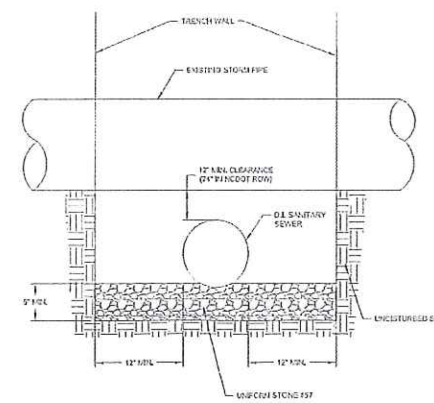

NOTE:
DUCTILE IRON SHALL EXTEND FOR 10' ON EITHER SIDE OF THE STORM PIPE.

STORM SEWER CROSSING DETAILS

NOT TO SCALE

	Name	Date
Drawn By:		
Checked By:		
Approved By:		
Scale:		
Rev. Description	Date	Init.

JOHNSTON COUNTY
Department of Public Utilities
P.O. Box 2263
Smithfield, NC 27577

SANITARY SEWER
STANDARD DETAIL
Typical Storm
Sewer Crossing

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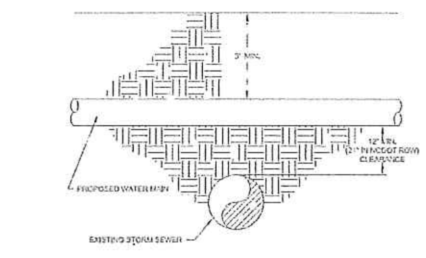
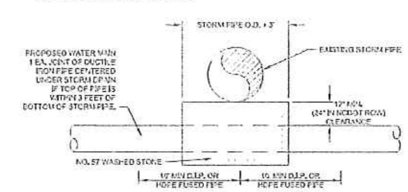


NOTE:
WATER LINE SHALL BE DUCTILE IRON PIPE AT ALL AREAS WHERE MIN 12" CLEARANCE CANNOT BE MAINTAINED. INSTALL AT LEAST ONE JOINT CENTERED OVER STORM DRAIN.



STORM SEWER CROSSING DETAILS

NOT TO SCALE

	Name	Date
Drawn By:		
Checked By:		
Approved By:		
Scale:		
Rev. Description	Date	Init.

JOHNSTON COUNTY
Department of Public Utilities
P.O. Box 2263
Smithfield, NC 27577

STANDARD
WATER DETAIL
Storm Sewer
Crossing

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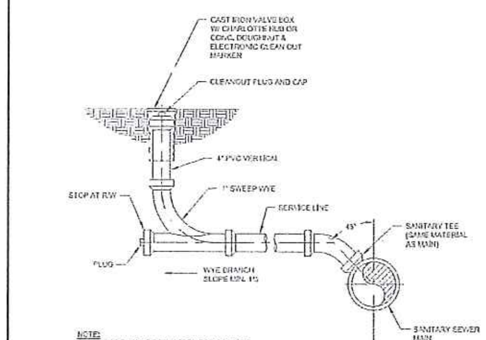
NOTE:
IN LIEU OF INSTALLING CAST IRON VALVE BOXES, CAPS CONTAINING LOCATE DEVICES CAN BE USED WITH A CONCRETE PROTECTOR RING.



NOTE:
EASEMENT SHALL BE PROVIDED FOR SERVICE CONNECTION WHERE SERVICE CONNECTION IS PLACED OUTSIDE OF R/W DUE TO PHYSICAL CONSTRAINTS.

TYPICAL SEWER SERVICE CONNECTION

NOT TO SCALE

	Name	Date
Drawn By:		
Checked By:		
Approved By:		
Scale:		
Rev. Description	Date	Init.

JOHNSTON COUNTY
Department of Public Utilities
P.O. Box 2263
Smithfield, NC 27577

SANITARY SEWER
STANDARD DETAIL
Typical Sewer
Service Connection

PAGE 41

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 035027 WILLIAM Z. SHIPMAN 8/6/19

SYMBOL	DATE	REVISIONS

SHIPMAN ENGINEERING

SHIPMAN ENGINEERING, PLLC
137 MIDDLEGREEN PLACE
HOLLY SPRINGS, NC 27540

DESIGNED BY: WZS
DRAWN BY: WZS
CHECKED BY: WZS
DRAWING DATE: 08-06-19
SE PROJECT #: 2019-018

PUBLIC WORKS FACILITY
TOWN OF BENSON
JOHNSTON COUNTY, NORTH CAROLINA

NOTES AND DETAILS

SHEET NUMBER:

...ER, INCLUDING, BUT NOT LIMITED TO, CONSTRUCTION, BIDDING, AND/OR CONSTRUCTION STAKING WITHOUT THE EXPRESS WRITTEN CONSENT OF SHIPMAN ENGINEERING, PLLC.

PREPARE SEEDBED BY RIPPING, CHISELING, HARROWING, OR PLOWING TO DEPTH OF 6 INCHES SO AS TO PRODUCE A LOOSE, FRIABLE SOIL SURFACE. REMOVE ALL STONES, ROCKS, BOULDERS, STUMPS, OR OTHER DEBRIS FROM THE SURFACE WHICH WILL PREVENT GERMINATION OR PLANT GROWTH.

INCORPORATE INTO THE SOIL 600-1000 LBS OF 10-10-10 FERTILIZER PLUS 500 LBS OF 20% SUPERPHOSPHATE PER ACRE AND TWO TONS OF DOLOMITIC LIME PER ACRE UNLESS SOIL TESTING INDICATES THAT A LOWER RATE OF LIME MAY BE USED.

MULCH AFTER SEEDING WITH 1.5 TONS OF GRAIN STRAW PER ACRE AND EITHER CRIMP STRAW INTO SOIL OR TACK WITH LIQUID ASPHALT AT 400 GALLONS PER ACRE OR EMULSIFIED ASPHALT AT 300 GALLONS PER ACRE.

PERMANENT SEEDINGS:

PLANTS AND MIXTURE:	PLANTING RATE/ACRE:	PLANTING DATES:
TALL FESCUE JAPANESE CLOVER CHINESE LESPEDEZA (LOW MAINTENANCE SLOPE 3:1 OR LESS)	110 LBS/ACRE	AUGUST 15- OCTOBER 15 FEBRUARY 15- MAY 1
TALL FESCUE JAPANESE CLOVER CHINESE LESPEDEZA (LOW MAINTENANCE SLOPE 3:1 OR LESS)	140 LBS/ACRE	AUGUST 15- OCTOBER 15 FEBRUARY 15- MAY 1
BLEND OF TWO TURFTYPE TALL FESCUES (80%) AND TWO OF MORE IMPROVED KENTUCKY BLUEGRASS VARIETIES (10%) (GENERAL LAWN AREAS)	200 LBS/ACRE	AUGUST 15- OCTOBER 15 FEBRUARY 15- MAY 1

NOTE: FOR SPRING SEEDINGS, USE SCARIFIED LESPEDEZA SEED. FOR LATE FALL AND WINTER SEEDINGS, USE UNSCARIFIED SEED.

TEMPORARY SEEDING (PIEDMONT REGION)-LATE WINTER/EARLY SPRING

SEEDING MIXTURE:

SPECIES:	RATE (LB/ACRE)
RYE (GRAIN)	120
ANNUAL LESPEDEZA (KOBE IN PIEDMONT & COASTAL PLAIN, KOREAN IN MOUNTAINS)	50

SEEDING DATES:

MOUNTAINS: ABOVE 2500 FEET- FEBRUARY 15- MAY 15
BELOW 2500 FEET- FEBRUARY 1- MAY 1

PIEDMONT: JANUARY 1- MAY 1

COASTAL PLAIN: DECEMBER 1- APRIL 15

SOIL AMENDMENTS: FOLLOW RECOMMENDATIONS OF SOIL TESTS OR APPLY 2,000 LBS/ACRE OF GROUND AGRICULTURAL LIMESTONE AND 750 LBS/ACRE OF 10-10-10 FERTILIZER.

MULCH: APPLY 4,000 LBS/ACRE OF STRAW. ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING, OR A MULCH ANCHORING TOOL. A DISK SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL.

MAINTENANCE: REFERTILIZE IF GROWTH IS NOT FULLY ADEQUATE. RESEED, REFERTILIZE, AND MULCH IMMEDIATELY FOLLOWING EROSION OR OTHER DAMAGE.

TEMPORARY SEEDING (PIEDMONT REGION)-FALL

SEEDING MIXTURE:

SPECIES:	RATE (LB/ACRE)
RYE (GRAIN)	120

SEEDING DATES:

MOUNTAINS: AUGUST 15- DECEMBER 15

COASTAL PLAIN & PIEDMONT: AUGUST 15- DECEMBER 30

SOIL AMENDMENTS: FOLLOW RECOMMENDATIONS OF SOIL TESTS OR APPLY 2,000 LBS/ACRE OF GROUND AGRICULTURAL LIMESTONE AND 1,000 LBS/ACRE OF 10-10-10 FERTILIZER.

MULCH: APPLY 4,000 LBS/ACRE OF STRAW. ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING, OR A MULCH ANCHORING TOOL. A DISK SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL.

MAINTENANCE: REPAIR AND REFERTILIZE DAMAGED AREAS IMMEDIATELY. TOPDRESS WITH 50 LBS/ACRE OF NITROGEN IN MARCH. IF IT IS NECESSARY TO EXTEND TEMPORARY COVER BEYOND JUNE 15, OVERSEED WITH 50 LBS/ACRE KOBE (PIEDMOND AND COASTAL PLAIN) OR KOREAN (MOUNTAIN) LESPEDEZA IN LATE FEBRUARY OR EARLY MARCH.

TEMPORARY SEEDING (PIEDMONT REGION)-SUMMER

SEEDING MIXTURE:

SPECIES:	RATE (LB/ACRE)
GERMAN MILLET	40

IN PIEDMONT AND MOUNTAINS, A SMALL-STEMMED SUDANGRASS MAY BE SUBSTITUTED AT A RATE OF 50 LBS/ACRE.

SEEDING DATES:

MOUNTAINS: MAY 15- AUGUST 15

PIEDMONT: MAY 1- AUGUST 15

COASTAL PLAIN: APRIL 15- AUGUST 15

SOIL AMENDMENTS: FOLLOW RECOMMENDATIONS OF SOIL TESTS OR APPLY 2,000 LBS/ACRE OF GROUND AGRICULTURAL LIMESTONE AND 750 LBS/ACRE OF 10-10-10 FERTILIZER.

MULCH: APPLY 4,000 LBS/ACRE OF STRAW. ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING, OR A MULCH ANCHORING TOOL. A DISK SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL.

MAINTENANCE: REFERTILIZE IF GROWTH IS NOT FULLY ADEQUATE. RESEED, REFERTILIZE, AND MULCH IMMEDIATELY FOLLOWING EROSION OR OTHER DAMAGE.

GENERAL SITE PLAN NOTES:

1. EXISTING CONDITIONS AND TOPOGRAPHICAL DATA OF THE SUBJECT PARCEL ARE COMPILED FROM A FIELD SURVEY OF THE PROPERTY BY BOUNDARY ZONE, INC. AND IS NOT THE RESULT OF A FIELD SURVEY BY THE CURRY ENGINEERING GROUP, PLLC. ADDITIONAL EXISTING CONDITIONS DATA PROVIDED BY SUPPLEMENTAL DATA INCLUDING AERIAL PHOTOGRAPHY, WAKE COUNTY GIS DATA, AND OTHER DATA SOURCES AS REQUIRED.
2. ALL DISTANCES SHOWN ON THE SURVEY ARE HORIZONTAL GROUND DISTANCES.
3. THE PROPERTY SHOWN IS LOCATED IN FLOOD ZONE "X", AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE AND FUTURE CONDITIONS 1% ANNUAL CHANCE FLOODPLANE PER FEMA FIRM PANEL 3720170300J DATED 05/02/06.
4. VERTICAL DATUM: NAVD88
   HORIZONTAL DATUM: NAD83
5. ALL DIMENSIONS SHOWN ARE TO THE EDGE OF PAVEMENT, UNLESS NOTED OTHERWISE.
6. COORDINATE POWER, TELEPHONE, CABLE, AND OTHER UNDERGROUND UTILITY INSTALLATION WITH THE APPROPRIATE UTILITY PROVIDER AND THE CITY OF RALEIGH.

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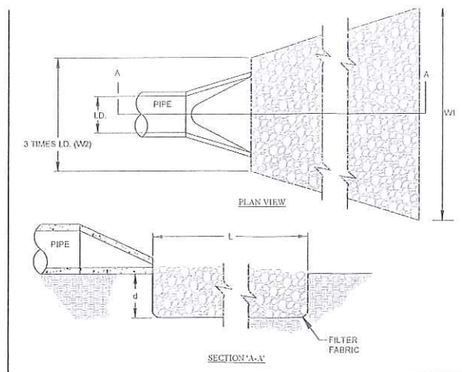
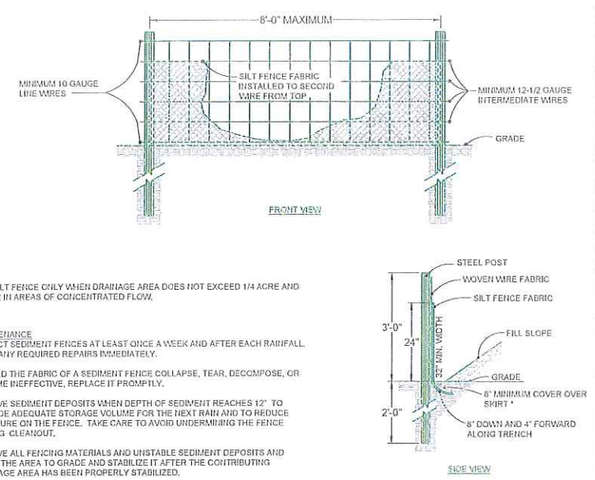


1. L = THE LENGTH OF THE RIPRAP APRON.
2. d = 1.5 TIMES THE MAXIMUM STONE DIAMETER BUT NOT LESS THAN 6" (INCHES).
3. A FILTER BLANKET OR FILTER FABRIC SHOULD BE INSTALLED BETWEEN THE RIPRAP AND SOIL FOUNDATION.
4. MAINTAIN ENERGY DISSIPATERS INSTALLED DURING EARLY SITE WORK THROUGHOUT THE CONSTRUCTION AREA.

MAINTENANCE
RIP RAP SHOULD BE INSPECTED PERIODICALLY FOR SCOUR OR DISLODGED STONES. CONTROL OF WEED AND BRUSH GROWTH MAY BE NEEDED IN SOME LOCATIONS.

PIPE OUTLET TO FLAT AREA (NCDENR 6.15)-NO WELL DEFINED CHANNEL
NOT TO SCALE



NOTE:
USE SILT FENCE ONLY WHEN DRAINAGE AREA DOES NOT EXCEED 1/4 ACRE AND NEVER IN AREAS OF CONCENTRATED FLOW.

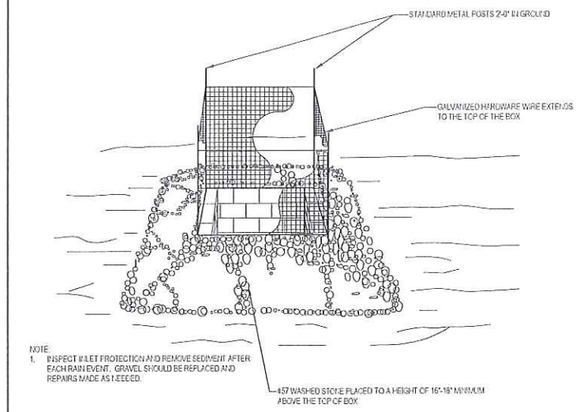
MAINTENANCE
INSPECT SEDIMENT FENCES AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL. MAKE ANY REQUIRED REPAIRS IMMEDIATELY.

SHOULD THE FABRIC OF A SEDIMENT FENCE COLLAPSE, TEAR, DECOMPOSE, OR BECOME INEFFECTIVE, REPLACE IT PROMPTLY.

REMOVE SEDIMENT DEPOSITS WHEN DEPTH OF SEDIMENT REACHES 12" TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND TO REDUCE PRESSURE ON THE FENCE. TAKE CARE TO AVOID UNDERMINING THE FENCE DURING CLEANOUT.

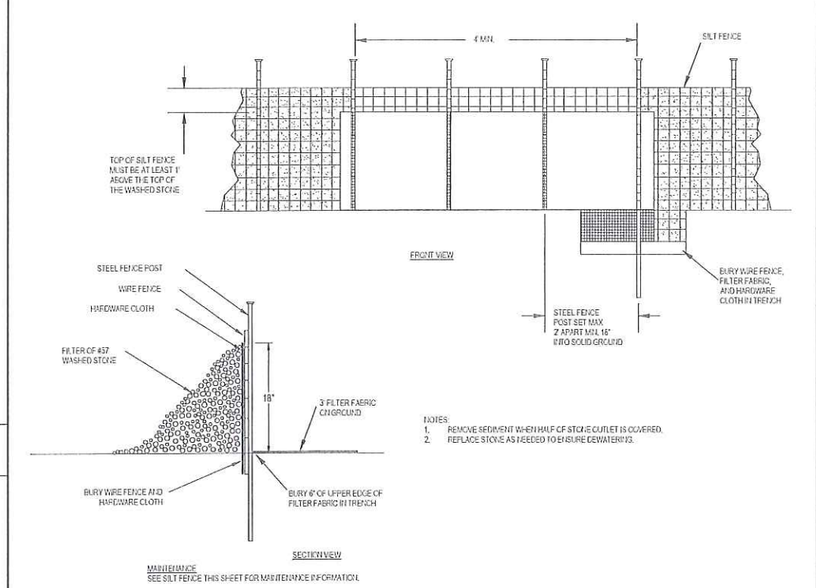
REMOVE ALL FENCING MATERIALS AND UNSTABLE SEDIMENT DEPOSITS AND BRING THE AREA TO GRADE AND STABILIZE IT AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

SILT FENCE (NCDENR 6.62)
NOT TO SCALE



NOTE:
1. INSPECT INLET PROTECTION AND REMOVE SEDIMENT AFTER EACH RAIN EVENT. GRAVEL SHOULD BE REPLACED AND REPAIRS MADE AS NEEDED.

HARDWARE CLOTH & GRAVEL INLET PROTECTION
NOT TO SCALE



NOTES:
1. REMOVE SEDIMENT WHEN HALF OF STONE OUTLET IS COVERED.
2. REPLACE STONE AS NEEDED TO ENSURE DEWATERING.

MAINTENANCE
SEE SILT FENCE THIS SHEET FOR MAINTENANCE INFORMATION.

SILT FENCE OUTLET (NCDENR 6.62)
NOT TO SCALE

SHIPMAN ENGINEERING, PLLC
137 MIDDLEGREEN PLACE
HOLLY SPRINGS, NC 27540
(919) 900-9005

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 035027 WILLIAM Z. SHIPMAN
2/6/19

SYMBOL	DATE	REVISIONS

DESIGNED BY: WZS
DRAWN BY: WZS
CHECKED BY: WZS
DRAWING DATE: 02-06-19
SE PROJECT #: 2019-018

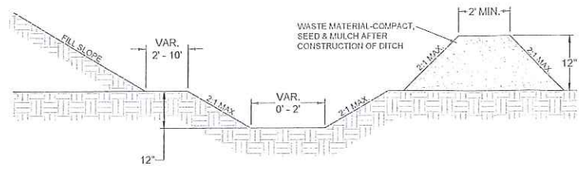
PUBLIC WORKS FACILITY
TOWN OF BENSON
JOHNSTON COUNTY, NORTH CAROLINA

NOTES AND DETAILS

SHEET NUMBER:

NOTES:

1. TEMPORARY DIVERSION DITCH TO BE USED TO INTERCEPT FLOW AND/OR DIVERT TO A SEDIMENT CONTROL MEASURE OR BMP.
2. SILT SHALL BE REMOVED WHEN DITCH IS ONE-HALF FULL.
3. DITCH SHALL BE RECONSTRUCTED WHEN DAMAGED BY EQUIPMENT OR COVERED BY FILL.
4. STABILIZE DIVERSION DITCH BERM WITH TEMPORARY SEEDING, MULCH WITH TAC, AND/OR EROSION CONTROL NETTING.

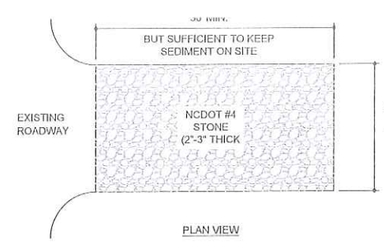


CROSS SECTIONAL VIEW

MAINTENANCE
INSPECT TEMPORARY DIVERSIONS ONCE A WEEK AND AFTER EVERY RAINFALL. IMMEDIATELY REMOVE SEDIMENT FROM THE FLOW AREA AND REPAIR THE DIVERSION RIDGE. CAREFULLY CHECK OUTLETS AND MAKE TIMELY REPAIRS AS NEEDED. WHEN THE AREA PROTECTED IS PERMANENTLY STABILIZED, REMOVE THE RIDGE AND THE CHANNEL TO BLEND WITH THE NATURAL GROUND LEVEL AND APPROPRIATELY STABILIZE IT.

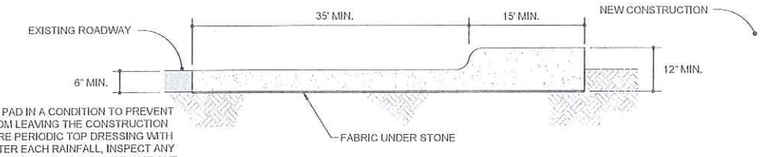
DIVERSION DITCH (NCDENR 6.20)

NOT TO SCALE



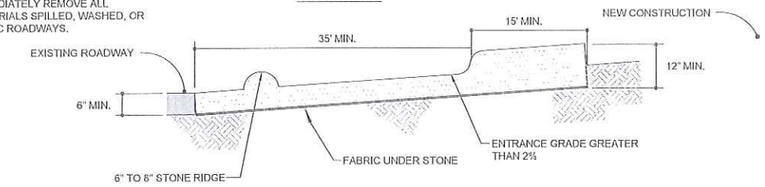
1. PUT SILT FENCE OR TREE PROTECTION FENCE UP TO ENSURE CONSTRUCTION ENTRANCE IS USED.
2. IF CONSTRUCTION ON THE SITES ARE SUCH THAT THE MUD IS NOT REMOVED BY THE VEHICLE TRAVELING OVER THE STONE, THEN THE TIRES OF THE VEHICLES MUST BE WASHED BEFORE ENTERING THE PUBLIC ROAD.
3. MAINTAIN GRAVEL PAD IN A CONDITION TO PREVENT MUD OR SEDIMENT FROM LEAVING CONSTRUCTION SITE. ENTRANCE WILL REQUIRE PERIODIC REMOVAL OF SEDIMENT-LADEN STONE AND REPLACEMENT WITH FRESH STONE.

PLAN VIEW



MAINTENANCE
MAINTAIN THE GRAVEL PAD IN A CONDITION TO PREVENT MUD OR SEDIMENT FROM LEAVING THE CONSTRUCTION SITE. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH TWO-INCH STONE. AFTER EACH RAINFALL, INSPECT ANY STRUCTURE USED TO TRAP SEDIMENT AND CLEAN IT OUT AS NECESSARY. IMMEDIATELY REMOVE ALL OBJECTIONABLE MATERIALS SPILLED, WASHED, OR TRACKED ONTO PUBLIC ROADWAYS.

CROSS SECTION



TEMPORARY CONSTRUCTION ENTRANCE (NCDENR 6,06)

NOT TO SCALE

Channel Installation Instructions EXCEL SS-2™ All Natural

* Drawings Not to Scale

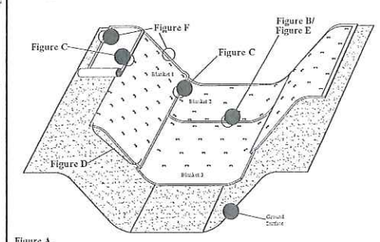


Figure A

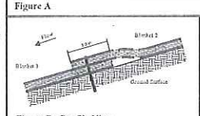


Figure B - Profile View

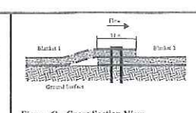


Figure C - Cross Section View

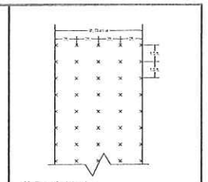


Figure D - Plan View

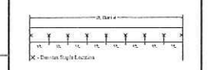


Figure E - Plan View

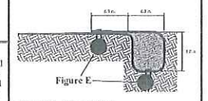


Figure F - Profile View

Figure G - Critical Point Securing

Product Application/Equivalency Specifications

Excel SS-2 All Natural is produced by Western Excelsior and consists of a temporary Rolled Erosion Control Product (RECP) comprised of a 100% certified weed free agricultural straw matrix mechanically (stitch) bound between two, biodegradable jute/scrim nets (top and bottom). The expected longevity of Excel SS-2 All Natural is approximately 12 months (actual longevity dependent on field and climatic conditions). Excel SS-2 All Natural is manufactured to include physical properties sufficient to provide the intended longevity and performance. Product specifications may be found on document WE_EXCEL_SS2AN_SPEC and performance information may be found on document WE_EXCEL_SS2AN_PERF. All documents are available from Western Excelsior Technical Support or www.westernexcelsior.com. Additional to above, equivalent products to Excel SS-2 All Natural must meet identical criteria as Excel SS-2 All Natural as follows:

1. agricultural straw bound between two, 2. integrity during installation	Consist of debris free and 100% certified weed free biodegradable jute/scrim nets. Sufficient tensile strength, thickness and coverage to maintain and ensure material performance.
3.	Listing within AASHTO NTPEP database.
4.	Meet ECTC specification for category 2D products.

Document # WE_EXCEL_SS2AN_CH

Slope Installation Instructions EXCEL SS-2™ All Natural

* Drawings Not to Scale

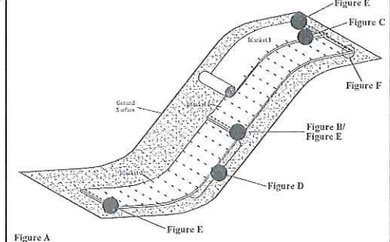


Figure A

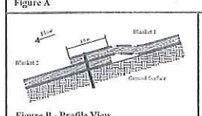


Figure B - Profile View

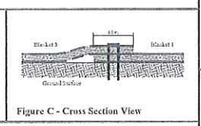


Figure C - Cross Section View

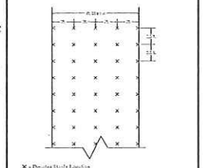


Figure D - Plan View

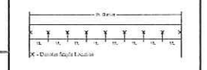


Figure E - Plan View

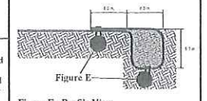


Figure F - Profile View

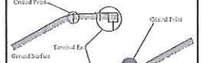


Figure G - Critical Point Securing

Product Application/Equivalency Specifications

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4.	Meet ECTC specification for category 2D products.

Document # WE_EXCEL_SS2AN_SH

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 035027 ENGINEER WILLIAM T. SHIPMAN
2/6/19

SYMBOL	DATE	REVISIONS

SHIPMAN ENGINEERING, PLLC
137 MIDDLEGREEN PLACE
HOLLY SPRINGS, NC 27540
919.557.5022

DESIGNED BY:	WJS
DRAWN BY:	WJS
CHECKED BY:	WJS
DRAWING DATE:	02-06-19
SE PROJECT #:	2019-018

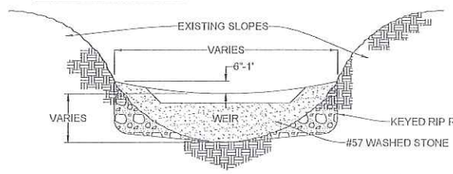
PUBLIC WORKS FACILITY
TOWN OF BENSON
JOHNSTON COUNTY, NORTH CAROLINA

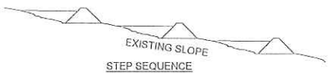
NOTES AND DETAILS

SHEET NUMBER:

...INCLUDING, BUT NOT LIMITED TO, CONSTRUCTION, BIDDING, AND/OR CONSTRUCTION STAKING WITH OUT THE EXPRESS WRITTEN CONSENT OF SHIPMAN ENGINEERING, PLLC.

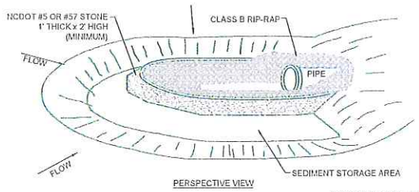
DESIGN OF SPILLWAYS	
DRAINAGE AREA (AC)	MIN. WEIR LENGTH (FT)
1	4
2	6
3	8
4	10
5	12

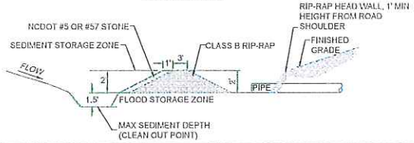




NOTE:
1. HEIGHT & WIDTH DETERMINED BY EXISTING TOPOGRAPHY AND SEDIMENT STORAGE REQUIRED.
2. KEY RIP RAP INTO THE DAM FOR STABILIZATION.

CHECK DAM
NOT TO SCALE





CONSTRUCTION SPECIFICATIONS:

1. CLEAR THE AREA OF ALL DEBRIS THAT MIGHT HINDER EXCAVATION AND DISPOSAL OF SPOIL.
2. INSTALL THE CLASS B OR CLASS I RIPRAP IN A SEMI-CIRCLE AROUND THE PIPE INLET. THE STONE SHOULD BE BUILT UP HIGHER ON EACH END WHERE IT TIES INTO THE EMBANKMENT. THE MINIMUM CREST WIDTH OF THE RIP-RAP SHOULD BE 3 FEET, WITH A MINIMUM BOTTOM WIDTH OF 11 FEET. THE MINIMUM HEIGHT SHOULD BE 2 FEET, BUT ALSO 1 FOOT LOWER THAN THE SHOULDER OF THE EMBANKMENT OR DIVERSIONS.
3. A 1 FOOT THICK LAYER OF NC DOT #5 OR #57 STONE SHOULD BE PLACED ON THE OUTSIDE SLOPE OF THE RIPRAP.
4. THE SEDIMENT STORAGE AREA SHOULD BE EXCAVATED AROUND THE OUTSIDE OF THE STONE HORSESHOE 18 INCHES BELOW NATURAL GRADE.
5. WHEN THE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED, FILL DEPRESSION AND ESTABLISH FINAL GRADING ELEVATIONS, COMPACT AREA PROPERLY, AND STABILIZE WITH GROUND COVER.

MAINTENANCE:

INSPECT ROCK PIPE INLET PROTECTION AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (1/2" OR GREATER) RAINFALL EVENT AND REPAIR IMMEDIATELY. REMOVE SEDIMENT AND RESTORE THE SEDIMENT STORAGE AREA TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO ONE-HALF THE DESIGN DEPTH OF THE TRAP. PLACE THE SEDIMENT THAT IS REMOVED IN THE DESIGNATED AREA AND REPLACE THE CONTAMINATED PART OF THE GRAVEL FACING.

CHECK THE STRUCTURE FOR DAMAGE. ANY RIPRAP DISPLACED FROM THE STONE HORSESHOE MUST BE REPLACED IMMEDIATELY.

AFTER ALL THE SEDIMENT AREAS HAVE BEEN PERMANENTLY STABILIZED, REMOVE THE STRUCTURE AND ALL THE UNSTABLE SEDIMENT, SMOOTH THE AREA TO BLEND WITH THE ADJOINING AREAS AND PROVIDE PERMANENT GROUND COVER (SURFACE STABILIZATION).

RIP RAP FILTER DAM INLET PROTECTION (NCDENR 6.55)
NOT TO SCALE

ALL RECORDS, BUT NOT LIMITED TO, CONSTRUCTION, BIDDING, AND/OR CONSTRUCTION STAKING WITHOUT THE EXPRESS WRITTEN CONSENT OF SHIPMAN ENGINEERING, PLLC.

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 035027 ENGINEER WILLIAM Z. SHIPMAN
2/6/19

REVISIONS

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