



**BID DOCUMENTS
FOR
SALT STORAGE BUILDING
ALFRED M. BROWN OPERATIONS CTR.
PROJECT NO. 2015-023**

SET # _____

ENGINEERING DEPARTMENT
850 HIGHWAY 601, SOUTH, POST OFFICE BOX 308
CONCORD, NORTH CAROLINA 28026-0308

TABLE OF CONTENTS

SECTION I – BIDS, AGREEMENTS, AND NOTICES

BID ADVERTISEMENT/INVITATION TO BID 4
INSTRUCTION TO BIDDERS 7
DEBARRED FIRMS CERTIFICATION FORM 13
BID FORM 14
STANDARD FORM OF PERFORMANCE BOND 20
SPECIAL PROVISIONS 22
NOTICE OF AWARD 23
NOTICE TO PROCEED 24
STANDARD FORM OF CONSTRUCTION CONTRACT 25
APPLICATION FOR PAYMENT 35
CONTRACT CHANGE ORDER 37
CERTIFICATE OF INFRASTRUCTURE COMPLETION 38
FIELD ORDER 39
NC SALES TAX REPORT 40
NORTH CAROLINA ONE CALL 41

SECTION II – GENERAL CONDITIONS 42

SEE City Webpage

<http://www.concordnc.gov/Portals/0/Documents/Engineering/10%2001%2005%20General%20Conditions%20Horizontal.pdf>

APPENDICIES

APPENDIX A – SALT STORAGE BUILDING SPECIFICATIONS 43
APPENDIX B – GEOTECHNICAL REPORT 51

ATTACHMENTED DRAWINGS

FOUNDATION SYSTEM FOR CLEARSPAN STRUCTURE
SALT STORAGE BUILDING SITE PLANS

SECTION I

BIDS, AGREEMENTS, AND NOTICES



BID ADVERTISEMENT/INVITATION TO BID

October 6, 2015

Project Title: **Salt Storage Building
Contract 2015-023**

Project Location: **City of Concord, Alfred M. Brown Operations Center
850 Warren C. Coleman Blvd. (Highway 601 S)
Concord, NC 28026**

Project Description: The proposed Work is generally described as follows. This project includes the site preparation, grading, foundations, slab, foundation walls, and the installation of a 120 foot long by 65 feet wide truss building covered with a flame retardant fabric cladding.

Sealed Bids will be received by the City of Concord (Owner) at the address below. Please submit notarized bids in a sealed envelope by the bid opening time and date. All Bids must be in accordance with the Bidding Documents on file with the City of Concord Engineering Department. Bidders must be licensed contractors in the State of North Carolina. Bids will be received on a unit price basis. The Successful Bidder will be required to furnish a Construction Performance Bond and a Construction Payment Bond as security for the faithful performance and the payment of all bills and obligations arising from the performance of the Contract. Contractor and all Subcontractors will be required to conform to the labor standards set forth in the Contract Documents. Owner reserves the right to reject any or all Bids, including without limitation the rights to reject any or all nonconforming, nonresponsive, unbalanced, or conditional Bids, and will award to lowest responsible Bidder taking into consideration quality, performance, and time specified in Bid Form for performance of Work. Owner also reserves the right to waive informalities.

W. Brian Hiatt
City Manager

Engineer: City of Concord Engineering Department
Alfred M. Brown Operations Center
850 Warren C. Coleman Blvd. (Highway 601 S Bypass)
P O Box 308, Concord, NC 28026-0308

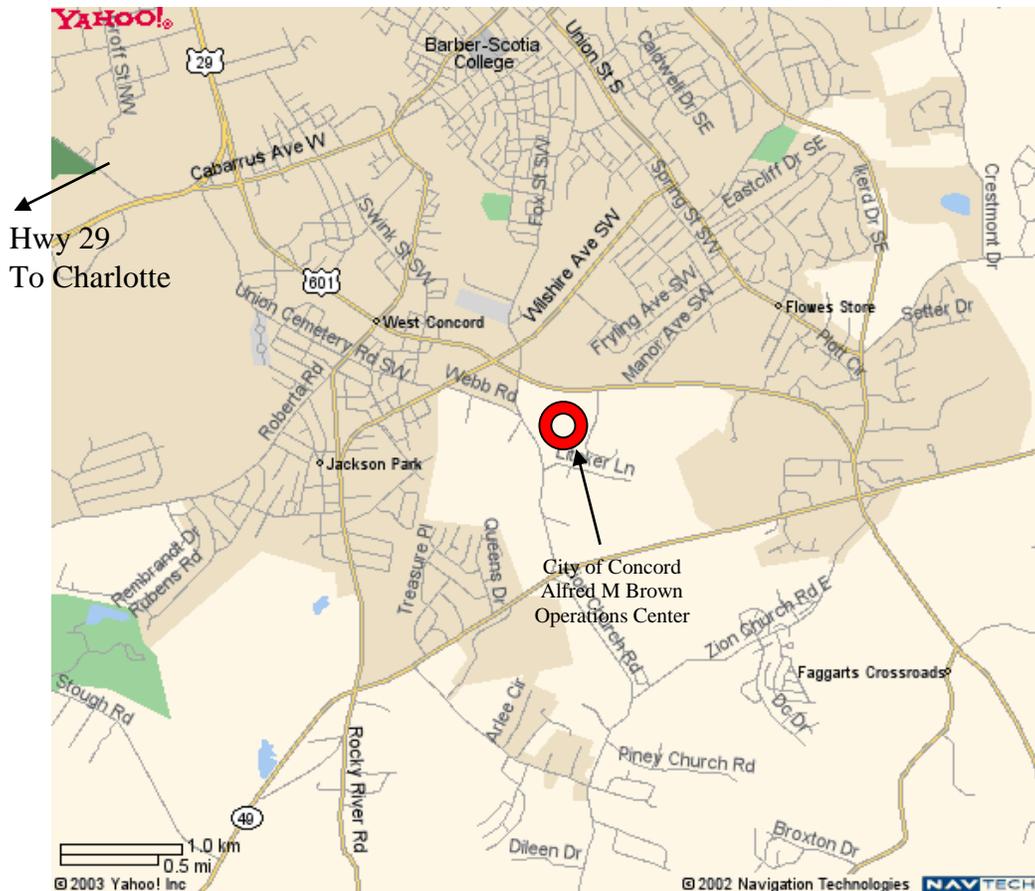
Reference the City of Concord website for copies of the **bid document, specifications, and plans**
Contact Clint Shoaf, P.E. **to register to bid** at 704.920.5407 or 704.920.5425

Bid Due Date: **October 22, 2015 at 10:00 AM**
Location: City of Concord, Alfred M. Brown Operations Center
850 Warren C. Coleman Blvd. (Hwy 601 S.)
Concord, NC 28026
Attn: Clint Shoaf
(See attached map/directions)

*Engineering Department
Alfred M. Brown Operations Center*

City of Concord • 850 Warren C. Coleman Blvd. • P.O. Box 308 • Concord, North Carolina 28026
(704) 920-5425 • Fax (704) 786-4521 • TDD 1-800-735-8262 • www.ci.concord.nc.us

MAP AND DIRECTIONS TO CITY OF CONCORD ALFRED M BROWN OPERATIONS CENTER



Directions from Charlotte

Take I-77 north to I-85 north from Charlotte to Concord
From I-85 north, take exit 49 to the right towards Lowe's Motor Speedway
At the Lowe's Motor Speedway, turn left onto Highway 29 (Concord Pkwy) north
Keep going north while you pass the Wal-Mart shopping center on your right
Turn right at the light at the Chevrolet dealership onto Cabarrus Avenue
Turn right at the next traffic light at the Walgreens onto Hwy 601 South (bypass)
(Hwy 601 S is also Warren C. Coleman Boulevard)
Go straight through two traffic lights at Old Charlotte Road and Wilshire Avenue
Pass the Bi-Lo shopping center on your left
Turn right at the next traffic light at Manor Avenue (blue & white sign on right
for the City of Concord Alfred M. Brown Operations Center)
You will be on the entrance road into our complex
Follow signs to the left to Visitor Parking.
Proceed to the front desk at the Administration Building and sign in with the
receptionist

Site Vicinity Map 1



INSTRUCTIONS TO BIDDERS

1. **DEFINED TERMS.** Terms used in these Instructions to Bidders are meanings assigned to them in the General Conditions and the Supplementary Conditions. An additional term is defined as follows:

Successful Bidder - The lowest, qualified, responsible, and responsive Bidder to whom Owner (on the basis of Owner's evaluation as herein provided) makes an award.

2. **COPIES OF BID DOCUMENTS.** Bid Documents which include all front-end documents may be obtained from Owner at:

<http://www.concordnc.gov/Departments/Finance/Purchasing/RFPs-and-Bids>

Partial sets of Bid Documents will not be issued in response to requests by subject matter.

Complete sets of Bid Documents must be used in preparing Bids; neither Owner nor Engineer assumes any responsibility for errors or misrepresentations resulting from the use of incomplete sets of Quoting Documents.

Owner and Engineer, in making copies of Quoting Documents available on the above terms, do so only for the purpose of obtaining Bids for the Work and do not confer a license or grant for any other use.

3. **QUALIFICATIONS OF BIDDERS.** To demonstrate qualifications to perform the Work, Bidder may be required to submit written evidence on financial data, previous experience, present commitments, and other such data as may be requested by Owner or Engineer. Each Bid must contain evidence of Bidder's qualification to do business in the state where the Project is located, or Bidder must agree to obtain such qualification prior to award of the Contract.

4. **EXAMINATION OF CONTRACT DOCUMENTS AND SITE.** It is the responsibility of each Bidder, before submitting a Bid, to (a) thoroughly examine the Contract Documents, (b) visit the site to become familiar with local conditions that may affect cost, progress, performance, or furnishing of the Work, (c) consider federal, state, and local laws and regulations that may affect cost, progress, performance, or furnishing of the Work, (d) study and carefully correlate Bidder's observations with the Contract Documents, and (e) notify Engineer of all conflicts, errors, or discrepancies discovered by Bidder in the Contract Documents.

4.02. **Underground Facilities.** Information and data reflected in the Contract Documents with respect to underground facilities at or contiguous to the site are based upon information and data furnished to Owner and Engineer by owners of such underground facilities or others, and Owner and Engineer disclaim responsibility for the accuracy or completeness thereof unless it is expressly provided otherwise in the Supplementary Conditions.

4.03. **Additional Information.** Before submitting a Bid, each Bidder will, at Bidder's own expense, make or obtain any additional examinations, investigations, explorations, tests, and studies and obtain any additional information and data which pertain to the physical conditions (surface, subsurface, and underground facilities) at or contiguous to the site or otherwise which may affect cost, progress, performance, or furnishing of the Work and which Bidder deems necessary to determine its Bid for performing and furnishing the Work in accordance with the time, price, and other terms and conditions of the Contract Documents.

On request 24 hours in advance, Owner will provide each Bidder access to the site to conduct such explorations and tests as each Bidder deems necessary for submission of a Bid. Bidder shall fill all holes

and clean up and restore the site to its former condition upon completion of such explorations. Arrangements for site visits shall be made by calling the office of the Director of Engineering for the City of Concord at 704.920.5425.

4.04. Easements. The lands upon which the Work is to be performed, rights-of-way and easements for access thereto, and other lands designated for use by Contractor in performing the Work are identified in the Contract Documents. All additional lands and access thereto required for temporary construction facilities or storage of materials and equipment are to be provided by Contractor. Easements for permanent structures or permanent changes in existing structures are to be obtained and paid for by Owner unless otherwise specified in the Contract Documents.

4.05. Unit Price Contracts. Bidders must satisfy themselves of the accuracy of the estimated quantities in the Bid schedule by examination of the site and a review of the drawings and the specifications, including the addenda. After Bids have been submitted, the Bidder shall not assert that there was a misunderstanding concerning the quantities of work or the nature of the work to be done.

4.06. Bidder's Representation. The submission of a Bid will constitute an incontrovertible representation by Bidder that Bidder has complied with every requirement concerning examination of the Contract Documents and the site, that without exception the Bid is premised upon performing and furnishing the Work required by the Contract Documents, and that the Contract Documents are sufficient in scope and detail to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

5. INTERPRETATIONS AND ADDENDA. All questions about the meaning or intent of the Quoting Documents and the Contract Documents shall be submitted to Owner in writing. Interpretations or clarifications considered necessary by Owner in response to such questions will be issued by Addenda mailed or delivered to all parties recorded by Engineer as having received the Quoting Documents. Questions received less than 10 days prior to the date for opening of Bids may not be answered. Only answers issued by Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect.

6. **BID SECURITY**. **Each Proposal must be accompanied by a deposit equal to 5% of the net price bid.** This deposit may consist of cash, or a Cashier's Check issued by, or a Certified Check drawn on a Bank or Trust Company authorized to do business in North Carolina, or on a Bank insured by the Federal Deposit Insurance Corporation, or a U.S. Money Order, payable to the City of Concord or 5% Bid Bond in the form required by G.S. 143-129 as amended, issued by an Insurance Company authorized to do business in North Carolina, said deposit to be retained in the event of failure of the successful bidder to execute a formal contract within ten (10) days after award or to give satisfactory surety required.

The Bid security of the Successful Bidder (if so required) will be retained until such Bidder has executed the Agreement, furnished the required contract security (if so required), and met the other conditions of the Notice of Award, whereupon the Bid security will be returned. If the Successful Bidder fails to execute and deliver the Agreement and furnish the required contract security within the number of days set forth in the Bid Form, Owner may annul the Notice of Award and the Bid security of that Bidder will be forfeited. The Bid security (if so required) of other Bidders whom Owner believes to have a reasonable chance of receiving the award may be retained by Owner until the earlier of 7 days after the Effective Date of the Agreement or the day after the last day the Bid remain subject to acceptance as set forth in the Bid Form, whereupon Bid security furnished by such Bidders will be returned. Bid security accompanying Bid which are deemed by Owner to be noncompetitive will be returned within 7 days after the designated Bid opening.

7. CONTRACT TIMES. The numbers of calendar days within which, or the dates by which, the Work is to be substantially completed and also completed and ready for final payment (the Contract Times) are set forth in the Bid Form.

8. LIQUIDATED DAMAGES. Provisions for liquidated damages, if any, are set forth in the Agreement.

9. SUBSTITUTES OR "OR-EQUAL ITEMS. Bidder's attention is directed to Article 6.5 of the General Conditions concerning substitutes and "or-equal" items. Where an item or material is specified by a proprietary name, it is done for the purpose of establishing a basis of quality and not for the purpose of limiting competition. The Engineer's intent is to consider alternative products which have the desired essential characteristics. The Engineer will consider any such products offered. Requests for acceptance of alternative products shall be made through Bidders quoting as prime Contractors. Acceptances for substitutions will not be granted directly to suppliers, distributors, or subcontractors. Pursuant to Section 133-3, General Statutes of North Carolina, the following procedures shall be used:

Bidders desiring to submit alternative product proposals for prior acceptance of the Engineers shall submit, in writing, such proposals from n/a, until n/a. Applications received after this time will not be reviewed. Each such request shall include the name of the material or equipment for which it is to be substituted and a complete description of the proposed substitute, including drawings, cuts, performance and test data, and other information necessary for an evaluation. A statement setting forth any changes in other materials, equipment, or other work that incorporation of the substitute would require shall be included. The Engineer shall consider and either accept or reject all alternative product proposals submitted.

If, by the close of the fifth day prior to the deadline for receiving Bid, the Engineer has accepted any alternative product proposals, the Quoting Documents shall be modified to include the alternative products. The Engineer shall publish the modification in an Addenda at least 5 days prior to the deadline for receiving Bids. The Engineer's decision of acceptance or rejection of a proposed substitute shall be final.

10. SUBCONTRACTORS, SUPPLIERS, AND OTHERS. If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers, and other persons and organizations (including those who are to furnish the principal items of material and equipment) to be submitted to Owner in advance of a specified date prior to the Effective Date of the Agreement, the apparent Successful Bidder, and any other Bidder so requested, shall within 3 days after the opening submit to Owner the List of Subcontractors completed with all such Subcontractors, Suppliers, and other persons and organizations proposed for those portions of the Work for which such identification is required. The list shall be accompanied by an experience statement with pertinent information regarding similar projects and other evidence of qualification for each such Subcontractor, Supplier, person, or organization, if requested by Owner. If Owner or Engineer after due investigation has reasonable objection to any proposed Subcontractor, Supplier, or other person or organization, Owner may, before the Notice of Award is given, request the apparent Successful Bidder to submit an acceptable substitute without an increase in the Bid.

All Subcontractors shall be a licensed utility contractor in the State of North Carolina.

11. BID FORM. The Bid Form is bound in the Quoting Documents and shall not be removed therefrom. Bid Forms must be completed in ink.

Bids by corporations must be executed in the corporate name by the president or vice-president (or other corporate officer accompanied by evidence of authority to sign for the corporation). Bids by partnerships must be executed in the partnership name and signed by a partner. Bids by joint ventures shall be signed by each participant in the joint venture or by a representative of the joint venture accompanied by evidence of authority to sign for the joint venture.

The names of all persons signing shall be legibly printed below the signature. A Bid by a person who affixes to his signature the word "president", "secretary", "agent", or other designation without disclosing

his principal may be held to be the Bid of the individual signing. When requested by Owner, evidence of the authority of the person signing shall be furnished.

All blanks in the Bid Form shall be filled. A Bid price shall be indicated for each unit price item listed therein, or the words "No Bid", "No Charge", "No Change", or other appropriate phrase shall be entered.

The Bid shall contain an acknowledgment of receipt of all Addenda; the numbers and dates of which shall be filled in on the Bid Form.

No alterations in Bids, or in the printed forms therefore, by erasures, interpolations, or otherwise will be acceptable unless each such alteration is signed or initialed by the Bidder; if initialed, Owner may require the Bidder to identify any alteration so initialed.

11.01. Bid Pricing. The Bidder shall complete the schedule of unit prices included in the Bid Form and shall accept all fixed unit prices listed therein.

The total Bid will be determined as the sum of the products of the estimated quantity of each item and the unit price Bid. The final Contract Price will be subject to adjustment according to final measured, used, or delivered quantities as provided in Article 9.7 of the General Conditions, and the unit prices in the Bid will apply to such final quantities except that unit prices will be subject to change by Change Order as stipulated in the Supplementary Conditions.

11.02. Contingency. The Contingency is to be added to the Bid price and is to be used for minor change order items. If the Contingency is to be used, a scope of work and price would be negotiated. The Contingency is for the sole use of Owner. A change order will be issued to delete any unauthorized portion of the Contingency.

12. SUBMISSION OF BIDS. Bids shall be submitted at the time and place indicated in the Invitation to Bid, or the modified time and place indicated by Addendum. Bids shall be enclosed in a sealed envelope or wrapping, addressed to:

The City of Concord
W. Brian Hiatt, City Manager
c/o Sue Hyde, PE, City Engineer
P.O. Box 308
850 Warren C. Coleman Blvd.
Concord, North Carolina 28026-0308

Bids shall be marked with the name, license number, and address of the Bidder and shall be accompanied by the Bid security (if required) and other required documents. If the Bid is sent through the mail or other delivery system, the sealed envelope shall be enclosed in a separate envelope with the notation "BID ENCLOSED" on the face of it.

Each Bid envelope shall be identified on the outside with the words '**BID FOR SALT STORAGE BUILDING – 2015-023**'

Bidder shall assume full responsibility for timely delivery at the location designated for receipt of Bids. Bids received after the time and date for receipt of Bids will be returned unopened.

One copy of all pages of the BID FORM must be submitted with the Bid, as well as a Bid Bond and Debarred Firms Certification Form.

Oral, telephone, facsimile, or telegraph Bids are invalid and will not receive consideration.

No Bidder may submit more than one Bid. Multiple Bids under different names will not be accepted from one firm or association.

A conditional or qualified Bid will not be accepted.

13. MODIFICATION AND WITHDRAWAL OF BIDS. Bids may be modified or withdrawn by an appropriate document duly executed (in the manner that a Bid must be executed) and delivered to the place where Bids are to be submitted at any time prior to the opening of Bids.

If, within 24 hours after Bids are opened, any Bidder files a duly signed, written notice with Owner and promptly thereafter demonstrates to the reasonable satisfaction of Owner that there was a material and substantial mistake in the preparation of its Bid, that Bidder may withdraw its Bid and the Bid security (if any) will be returned. Thereafter, that Bidder will be disqualified from further quoting on the Work to be provided under the Contract Documents.

14. OPENING OF BIDS. Bids will be opened at the office and at the discretion of the Director of Engineering and read aloud.

The procedure for opening Bids will follow guidelines issued by the State Building Commission dated December 10, 1990, and endorsed by the Consulting Engineers Council of North Carolina.

15. BIDS TO REMAIN SUBJECT TO ACCEPTANCE. All Bids will remain subject to acceptance for the number of days set forth in the Bid Form, but Owner may, in its sole discretion, release any Bid and return the security (if any) prior to that date.

16. AWARD OF CONTRACT. Owner reserves the right to reject any or all Bids, including without limitation the rights to reject any or all nonconforming, nonresponsive, unbalanced, or conditional Bids, and will award to lowest responsible Bidder taking into consideration quality, performance, and time specified in Bid Form for performance of Work. Owner also reserves the right to waive informalities.

In evaluating Bids, Owner will consider the qualifications of the Bidders, whether or not the Bids comply with the prescribed requirements, and such alternatives, unit prices, and other data, as may be requested in the Bid Form or prior to the Notice of Award.

Owner may consider the qualifications and experience of Subcontractors, Suppliers, and other persons and organizations proposed for those portions of the Work for which the identity of Subcontractors, Suppliers, and other persons and organizations must be submitted as provided in the Supplementary Conditions. Owner also may consider the operating costs, maintenance requirements, performance data, and guarantees of major items of materials and equipment proposed for incorporation in the Work when such data is required to be submitted prior to the Notice of Award.

Owner may conduct such investigations as Owner deems necessary to assist in the evaluation of any Bid and to establish the responsibility, qualifications, and financial ability of Bidders, proposed Subcontractors, Suppliers, and other persons and organizations to perform and furnish the Work in accordance with the Contract Documents to Owner's satisfaction within the prescribed time.

If the Contract is to be awarded, it will be awarded to the lowest Bidder whose evaluation by Owner indicates to Owner that the award will be in the best interests of Owner. If the Contract is to be awarded, Owner will give the Successful Bidder a Notice of Award within the number of days set forth in the Bid Form. The evaluation of Suppliers' or manufacturers' data submitted with the Bid, or submitted upon request prior to the Notice of Award, will include consideration of the following:

Owner-required inventory of spare parts.

Building design changes which would be required to accommodate the proposed materials and equipment.

Installation requirements and related engineering, training, and operating costs.

Experience and performance record of the Supplier or the manufacturer.

Maintenance and frequency of inspections required to assure reliable performance of the equipment.

Suppliers' or manufacturers' service facilities and availability of qualified field service personnel.

Efficiency and related operating expense during the anticipated useful life of the equipment.

17. CONTRACT SECURITY. The General Conditions set forth Owner's requirements as to Performance and Payment Bonds (required). These Bonds shall be delivered to Owner with the executed Agreement.

18. SIGNING OF AGREEMENT. When Owner gives a Notice of Award to the Successful Bidder, it will be accompanied by two unsigned counterparts of the Agreement with all other written Contract Documents attached. Within the number of days set forth in the Bid Form, the Successful Bidder shall sign, leaving the dates blank, and deliver the required number of counterparts of the Agreement and attached documents to Owner with the required Bonds and power of attorney. Within 30 days thereafter, Owner shall execute all copies of the Agreement and other Contract Documents submitted by Contractor (Successful Bidder); shall insert the date of contract on the Agreement, Bonds, and power of attorney; and shall distribute signed copies as stipulated in the Agreement.

Should the Owner not execute the Contract within the period specified, the Successful Bidder may, by written notice, withdraw his signed Contract. Such notice or withdrawal shall be effective upon receipt of the notice by the Owner.

19. SALES AND USE TAXES. Provisions for sales and use taxes, if any, are set forth in the Supplementary Conditions.

20. RETAINAGE. Provisions concerning retainage are set forth in the Agreement.

21. LAWS AND REGULATIONS. Modifications, if any, to the General Conditions concerning Laws and Regulations are set forth in the Supplementary Conditions. Additional provisions, if any, concerning Laws and Regulations are set forth in the Agreement.

21.01. Collusive Bidding. In accordance with Section 112(c) of Title 23 USC, and G.S. 75-5(b)(7) of the State of North Carolina, the Contractor (Bidder), by submission and execution of this bid or Bid, certifies that he has not entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding or quoting in connection with his Bid on this project.

End of Section

DEBARRED FIRMS CERTIFICATION FORM

**Salt Storage Building
City Project # 2015-023**

The undersigned hereby certifies that the firm of _____ has not been suspended by the State of North Carolina or any agency or department thereof for conviction or indictment or any of the offenses enumerated in G.S. 133-27 nor will award subcontracts of any tier to firms that have been suspended for conviction or indictment of any of the offenses enumerated in G.S. 133-27.

Name of Firm

ATTEST _____ (SEAL)

Signature of Authorized Official

Title

Sworn and subscribed before me this
_____ day of _____, 2015.

Notary Public

BID FORM

PROJECT IDENTIFICATION:

**Salt Storage Building
City Project # 2015-023**

THIS BID IS SUBMITTED TO:

W. Brian Hiatt, City Manager
c/o Sue Hyde, PE, City Engineer
City of Concord
850 Warren C. Coleman Blvd., P.O. Box 308
Concord, North Carolina 28026-0308

1. The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an agreement with Owner in the form included in the Contract Documents to perform and furnish all Work as specified or indicated in the Contract Documents within the specified time and for the amount indicated in this Bid and in accordance with the other terms and conditions of the Contract Documents.

2. Bidder accepts all of the terms and conditions of the Invitation to Bid and the Instructions to Bid, including without limitation those dealing with the disposition of the Bid security (if security is required by the City Manager). This Bid will remain subject to acceptance for 60 days after the day designated for reception of Bids. Bidder will sign and submit the Agreement with the Bonds and other documents required by the Quoting Documents within 10 days after the date of Owner's Notice of Award.

3. In submitting this Bid, Bidder represents that:

a. Bidder has examined copies of all the Quoting Documents and of the following Addenda (receipt of all which is hereby acknowledged):

No. _____	Dated _____

b. Bidder has visited the site and become familiar with and satisfied itself as to the general, local, and site conditions that may affect cost, progress, performance, and furnishing of the Work.

c. Bidder is familiar with and has satisfied itself as to all Federal, State, and Local Laws and Regulations that may affect cost, progress, performance, and furnishing of Work.

- d. Bidder has carefully studied all reports of explorations and tests of subsurface conditions at or contiguous to the site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the site (except underground facilities) which have been provided by the owner and under the conditions normally used and identified in the Supplementary Conditions and Special Conditions as provided in Paragraph 4.2.1 of the General Conditions. Bidder accepts the determination set forth in the Supplementary Conditions and Special Conditions of the extent of the "technical data" contained in such reports and drawings upon which Bidder is entitled to rely as provided in Paragraph 4.2 of the General Conditions. Bidder acknowledges that such reports and drawings are not Contract Documents and may not be complete for Bidder's purposes. Bidder acknowledges that Owner and Engineer do not assume responsibility for the accuracy or completeness of information and data shown or indicated in the Quoting Documents with respect to underground facilities at or contiguous to the site. Bidder has obtained and carefully studied (or assumes responsibility for having done so) all such additional or supplementary examinations, investigations, explorations, tests, studies, and data concerning conditions (surface, subsurface, and underground facilities) at or contiguous to the site or otherwise which may affect cost, progress, performance, or furnishing of the Work or which relate to any aspect of the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder and safety precautions and programs incident thereto. Bidder does not consider that any additional examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performance and furnishing of the Work in accordance with the time, price, and other terms and conditions of the Contract Documents.
 - e. Bidder is aware of the general nature of Work to be performed by Owner and others at the site that relates to Work for which this Bid is submitted as indicated in the Contract Documents.
 - f. Bidder has correlated the information known to Bidder, information and observations obtained from visits to the site, reports and drawings identified in the Contract Documents, and all additional examinations, investigations, explorations, tests, studies, and data with the Contract Documents.
 - g. Bidder has given Engineer written and verbal notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Contract Documents and the written resolution thereof by Engineer is acceptable to Bidder, and the Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performing and furnishing the Work for which this Bid is submitted.
 - h. This Bid is genuine and not made in the interest of or on behalf of any undisclosed person, firm, or corporation and is not submitted in conformity with any agreement or rules of any group, association, organization, or corporation; Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid Bidder has not solicited or induced any person, firm, or corporation to refrain from quoting; and Bidder has not sought by collusion to obtain for itself any advantage over any other Bidder or over Owner.
4. Bidder will complete the Work for the following unit prices. Quantities indicated are estimated and not guaranteed; they are solely for comparing Bids and establishing the initial Contract Price. Final payment will be based on actual quantities.

EXHIBIT A – BID FORM
Salt Storage Building
City Project # 2015-023

No.	Item	Units	Quantity	Unit Price (\$)	Item Total (\$)
1	Mobilization	LS	1		
2	Unclassified Soil Excavation and Placement/Compaction (including site work grading)	CY	2,000		
3	6" NCDOT ABC Stone Layer	TON	360		
4	Seven (7) Foot Reinforced Concrete Wall	LF	303		
5	Concrete Spread Footing with Key	LS	1		
6	Reinforced Concrete Slab	LS	1		
7	ClearSpan or equal 65' x 120' Metal Framed Structure w/ Fire Retardant Fabric Cladding	LS	1		
8	Supply, Install, and Power Commercial Vent Fan	EA	1		
9	16' x 16' Roll-up Bay Door	EA	1		
10	36" Man Door	EA	2		
11	Supply, Install, and Power Interior Lights	EA	12		
12	Supply, Install, and Power Exterior Flood Light	EA	1		
13	Supply, Install, and Power Electrical Lines w/ Outlets and Switches	LS	1		
14	Supply, Install, and Power Exit Sign	EA	2		
15	Supply, Install, and Power Electrical Panel	EA	1		
16	Cast-in-place Steel Bollard	EA	4		

ESTIMATED BASE COST \$ _____
10% CONTINGENCY \$ _____
TOTAL ESTIMATED COST \$ _____

5. Bidder agrees that all excavation is UNCLASSIFIED.

6. Bidder agrees that all work will be completed and ready for final payment in accordance with Paragraph 14.13 of the General Conditions within 90 days from the date of notice to proceed.

7. Communications concerning this Bid shall be sent to Bid at the following address:

NAME: _____

ADDRESS: _____

P.O. BOX: _____

CITY: _____

STATE: _____

ZIP: _____

8. The terms used in this BID, which are defined in the General Conditions of the WSACC Specifications, have the meanings assigned to them in the General Conditions.

SIGNATURE OF BIDDER: _____

Contractor's License Number _____

License Expiration Date _____

If an Individual

By _____
(signature of individual)

doing business as _____

Business address _____

Phone No. _____

Date _____, 20____

ATTEST _____ TITLE

If a Partnership

By _____
(firm name)

(signature of general partner)

Business address _____

Phone No. _____

Date _____, 20____

ATTEST _____ TITLE

If a Corporation

By _____
(corporation name)

By _____
(signature of authorized person) (title) _____

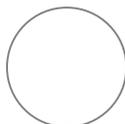
Business address _____

Phone No. _____

Date _____, 20____

ATTEST _____ TITLE _____

(Seal)



If a Joint Venture (Other party must sign below.)

By (name) _____

Contractor's License Number _____

License Expiration Date _____

If an Individual

By _____
(signature of individual)

doing business as _____

Business address _____

Phone No. _____

Date _____, 20____

ATTEST _____ TITLE _____

If a Partnership

By _____
(firm name)

(signature of general partner)

Business address _____

Phone No. _____

Date _____, 20____

ATTEST _____ TITLE _____

If a Corporation

By _____
(corporation name)

By _____
(signature of authorized person) (title) _____

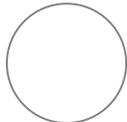
Business address _____

Phone No. _____

Date _____, 20____

ATTEST _____ TITLE _____

(Seal)



This page left blank intentionally

**STANDARD FORM OF
PERFORMANCE BOND**

Date of Execution of this Bond _____

Name and Address of
Principal (Contractor) _____

Name and Address
of Surety _____

Name and Address of
Contracting Body _____

Amount of Bond _____

Contract That certain contract by and between the Principal and the
Contracting Body above named dated _____
for _____

KNOW ALL MEN BY THESE PRESENTS, that we, the PRINCIPAL and SURETY above named, are held and firmly bound unto the above-named Contracting Body, hereinafter called the Contracting Body, in the penal sum of the amount stated above for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that whereas the Principal entered into a certain contract with the Contracting Body, identified as shown above and hereto attached;

NOW THEREFORE, if the Principal shall well and truly perform and fulfill all the undertakings, covenants, terms, conditions, and agreements of said contract during the original term of said contract and any extensions thereof that may be granted by the Contracting Body, with or without notice to the Surety, and during the life of any guaranty required under the contract, and shall also well and truly perform and fulfill all the undertakings, covenants, terms, conditions, and agreements of any and all duly authorized modifications of the contract that may hereafter be made, notice of which modifications to the Surety being hereby waived, then, this obligation to be void; otherwise, to remain in full force and virtue.

PERFORMANCE BOND: (Continued)

THIS PERFORMANCE BOND is made and given pursuant to the requirements and provisions of Section 129 of Chapter 143 of the General Statutes of North Carolina and pursuant to Article 3 of Chapter 44-A of the General Statutes of North Carolina, and each and every provision set forth and contained in Section 129 of Chapter 143 and in Article 3 of Chapter 44-A of the General Statutes of North Carolina is incorporated herein, made a part hereof, and deemed to be conclusively written into this Bond.

IN WITNESS WHEREOF, the above-bounden parties have executed this instrument under their several seals as of the date indicated above, the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned and representative, pursuant to authority of its governing body.

WITNESS:

Principal (Name of individual and trade name, partnership, corporation, or joint venture)

(Proprietorship or Partnership)
Printed Name _____

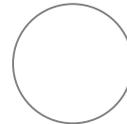
BY _____ (SEAL)
Printed Name _____

TITLE _____
(Owner, Partner, Office held in corporation, joint venture)

ATTEST: (Corporation)

(Corporate Seal of Principal)

BY _____
Printed Name _____



TITLE _____
(Corporation Secretary or Assistant Secretary Only)

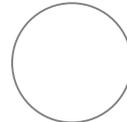
Surety (Name of Surety Company)

WITNESS:

BY _____
Printed Name _____

TITLE _____ Attorney in Fact

(Corporate Seal of Surety)



COUNTERSIGNED:

(Address of Attorney in Fact)

N.C. Licensed Resident Agent

SPECIAL PROVISIONS

Salt Storage Building City Project # 2015-023

- 1) The proposed building will be 65 feet wide and 120 feet long, consisting of metal trusses with fabric cladding, anchored to a 7 feet tall and 16 inch wide reinforced concrete foundation wall spanning the perimeter of the back and side walls (excludes the front wall).
- 2) The proposed reinforced concrete slab-on-grade shall be 8 inches thick with 6 inches of NCDOT ABC stone base.
- 3) To prepare the foundation soils the contractor must excavate all soils to five (5) feet outside the building footprint (approximately 75' x 130') down to 6 feet below the finished floor elevation and stockpile the material. This material will then be placed back in the excavated area as compacted fill in accordance with the attached geotechnical report.
- 4) The attached geotechnical report is provided in Appendix B for a generalized summary of the subsurface conditions of the actual location tested.
- 5) Unit prices in the bid form should include all labor, materials and equipment.
- 6) Contractor to use silt fence to prevent soil from reaching the stormwater structures and stream as needed.
- 7) The City of Concord will provide power to the outside of the building ONLY, it will be the contractor's responsibility to connect the Salt Storage Building to the power source and subsequently complete all other required electrical work.
- 8) Electrical conduit stub-out for the electrical panel to be cast in the concrete foundation/slab.
- 9) The two (2) man doors shall be provided and installed with locks keyed alike (i.e. the same key will unlock either door).

NOTICE OF AWARD

TO:

FROM: City of Concord City Council (OWNER)
P.O. Box 308
26 Union Street, South
Concord, North Carolina 28026-0308

PROJECT: **Salt Storage Building**
City Project # 2015-023

You are hereby notified that the bid submitted by you for the above named project in response to the City of Concord's Invitation to Bid dated **October 6, 2015** in the amount of

_____ and _____/100 DOLLARS

(\$_____) has been accepted.

You are hereby required to execute the formal AGREEMENT with the City of Concord City Council and to furnish any and all Contractor's Bond(s), Certificate of Insurance and Power of Attorney(s) along with other documents pertaining to the work as designated by the City of Concord.

If you fail to execute said AGREEMENT and to furnish this and any other required documents pertaining to the work within ten (10) days from the date of delivery of this NOTICE OF AWARD, said Owner will be entitled to consider all your rights arising out of the Owner's acceptance of your bid as abandoned and to award the work covered by your proposal to another, or to re-bid the work or otherwise dispose thereof as the Owner may see fit.

Dated this the _____ day of _____, 20_____

City of Concord, North Carolina

By: _____
Title: City Manager

CONTRACTOR

By: _____
Title: _____

ACCEPTANCE OF NOTICE OF AWARD

Receipt of the above NOTICE OF AWARD is hereby acknowledged this the ____ day of _____, 20_____.

NOTICE TO PROCEED

TO:

FROM: City of Concord City Council (OWNER)
P.O. Box 308
26 Union Street, South
Concord, North Carolina 28026-0308

PROJECT: **Salt Storage Building**
City Project # 2015-023

Contract Amount: _____ and ____/100 DOLLARS

(\$_____).

You are hereby notified to commence work on or before the _____ day of _____, 20____, pending acceptance of your Certificate of Insurance and any other required documents, and are to fully complete the work by the _____ day of _____, 20____.

Your project final completion date is therefore the _____ day of _____, 20____, and as set forth in the above named project's schedule unless an extension is granted by the City of Concord Director of Engineering in writing.

City of Concord, North Carolina

By: _____

Title: City Manager

Dated this the _____ day of _____, 20____.

STANDARD FORM CONSTRUCTION CONTRACT

This contract (together with all exhibits and valid amendments, the "Agreement" or the "Contract") is made and entered into as of the ____ day of _____, 20____, by the City of CONCORD ("City") and _____ ("Contractor"), () a corporation, () a professional corporation, () a professional association, () a limited partnership, () a sole proprietorship, or () a general partnership; organized and existing under the laws of the State of _____.

Sec. 1. Background and Purpose. The proposed Work is generally described as follows. This project includes the site preparation, grading, foundations, concrete slab-on-grade, foundation walls, and the installation of a 65 feet wide by 120 foot long truss building covered with a flame retardant fabric cladding.

Sec. 2. Services and Scope to be Performed. The Contractor shall provide the services at the charges set forth either in this paragraph or in Exhibit "A". Additional exhibits may be used to further define this Agreement when the Contractor and City so agree. Any additional exhibits shall be designated as exhibits to the Agreement with capitalized, sequential letters of the alphabet, shall be attached hereto and incorporated herein by reference as if the same were fully recited, and shall become terms of this Agreement upon execution by both parties.

In this Contract, "services" means the services that the Contractor is required to perform pursuant to this Contract and all of the Contractor's duties to the City that arise out of this Contract. Any amendments, corrections, or change orders by either party must be made in writing signed in the same manner as the original. (This form may be used for amendments and change orders.) The City reserves the right to refuse payment for any work outside that authorized herein or pursuant to a duly approved amendment or change order.

Sec. 3. Complete Work without Extra Cost. Unless otherwise provided, the Contractor shall obtain and provide, without additional cost to the City, all labor, materials, equipment, transportation, facilities, services, permits, and licenses necessary to perform the Work.

Sec. 4. Compensation. The City shall pay the Contractor for the Work as described in this paragraph below OR as described in Exhibit "A" attached. In the event of a conflict, the provisions of this paragraph shall control. Any additional expenses or charges shall only be paid after both the City and the Contractor agree to and execute a written change order. The City shall not be obligated to pay the Contractor any fees, payments, expenses or compensation other than those authorized in this Contract or in a duly-approved change order. All payments shall be deemed inclusive of tax and other obligations.

Sec. 4a. Retainage. The City shall withhold no retainage on Contracts having a "total project cost" of less than \$100,000.00. The City may withhold retainage on contracts having a total project cost between \$100,000 and \$200,000. The City shall withhold retainage on contracts whose total project cost exceeds \$300,000. When withheld, retainage shall equal no more than five percent of each progress payment. When the project is fifty per cent complete, the City shall not retain anything from future project payments provided that (i) the surety concurs in writing, (ii) the Contractor continues to perform satisfactorily, (iii) any non-conforming work identified in writing by the architect, engineer(s) or City has been corrected by the Contractor and accepted by the architect, engineer(s) or City. However, if the City determines that the Contractor's performance is unsatisfactory, the City may withhold up to five percent retainage from each project payment. The City may withhold additional amounts above five percent for unsatisfactory job progress, defective construction not remedied, disputed work, third party claims filed against the owner or reasonable evidence that a third-party claim will be filed.

Definitions:

"Total Project Cost": Total value of the Contract and any approved change orders or amendments.

"Project is Fifty Percent Complete": When the Contractor's validly-issued gross project invoices (excluding the value of the materials stored off-site) equal or exceed fifty percent of the value of the Contract, except that the value of materials stored on-site shall not exceed twenty percent of the Contractor's gross project invoices for the purpose of determining whether the project is fifty percent complete.

Sec. 5. Term. The Contractor shall commence work within ten (10) days of the date of its receipt of written Notice to Proceed from the City. The date that is ten (10) days from the date of the Contractor’s receipt of the Notice to Proceed shall be the “Commencement Date.” All work as set forth in the Scope of Services in Exhibit “A” shall be completed within ninety (90) calendar days of the Commencement Date. The date that is ninety (90) calendar days from the Commencement Date shall be the “Completion Date.” Time is of the essence with regard to this Project. If Contractor’s obligations are not completed by the Completion Date, the City reserves the right to nullify this Agreement, order the Contractor to immediately cease all work under this Agreement and vacate the premises, and to seek professional services equivalent to those outlined in Exhibit “A.” The Contractor shall be held accountable for all damages incurred by the City as a consequence of the missed Completion Date. The exercise of any of these rights by the City shall not be interpreted to prejudice any other rights the City may have under this Agreement or in law or equity. This Contract shall not be automatically extended unless agreed to in writing by the City or as provided in Exhibit “A”.

Sec. 6. Contractor’s Billings to City. Payments will be made in accordance with the schedule found in this section below OR attached at Exhibit “A”. Contractor shall submit an original pay request (invoice) to the City Purchasing Agent by the first of each month in order to expedite payment. Upon receipt of the request the City Purchasing Agent shall verify the amounts and if correct forward the request to the Accounts Receivable Division of the Finance Dept. Final payment on the Contract shall be made in 45 days, except in the case of retainage. Within 60 days after the submission of the final pay request, the City (with the written consent of the surety) shall release to the Contractor all retainage payments IF the City receives a certificate of substantial completion from the architect, engineer or designer-in-charge of the project OR the City receives beneficial occupancy and use of the project. In either case, the City may retain up to 2.5 times the estimated value of the work to be completed or corrected.

Sec. 7. Insurance. Contractor shall maintain and cause all sub-contractors to maintain insurance policies at all times with minimum limits as follows:

<u>Coverage</u>	<u>Minimum Limits</u>
Workers’ Compensation	\$100,000 each accident, \$100,000 bodily injury by disease each employee, \$500,000 bodily injury by disease policy limit
General Liability	\$1,000,000 per occurrence regardless of the contract size
Automobile Liability	\$1,000,000 per occurrence regardless of the contract size
Umbrella	<input checked="" type="checkbox"/> \$1,000,000 per occurrence if contract does not exceed 180 days and does not exceed \$500,000; otherwise,
	<input type="checkbox"/> \$2,000,000 per occurrence

Contractor shall provide a Certificate of Insurance to the City listing the City as an additional insured. Such Certificate shall be in a form acceptable to the City.

Sec. 8. Documentation Requirements:

A. Contractor shall provide the City with a **Certificate of Insurance** for review prior to the issuance of any contract or Purchase Order. All Certificates of Insurance will require written notice by the insurer or Contractor’s agent in the event of cancellation, reduction or other modifications of coverage by the insurer. Such notice shall be not less than 30 days for nonrenewal by the insurer, not less than 10 days for cancellation due to nonpayment of the premium and as soon as possible for all other types of modifications. In addition to the notice requirement above, Contractor shall provide the City with written notice of cancellation, reduction, or other modification of coverage of insurance whether instigated by the insurer or by the Contractor immediately upon Contractor’s receipt of knowledge of such modifications. Upon failure of the Contractor to provide such notice, Contractor assumes sole responsibility for all losses incurred by the City for which insurance would have provided coverage. The

insurance certificate shall be for the insured period in which the initial contract period begins and shall be renewed by the Contractor for each subsequent renewal period of the insurance for so long as the contract remains in effect.

The City shall be named as an **additional insured** on all policies except Workers' Compensation and it is required that coverage be placed with "A" rated insurance companies acceptable to the City. Statement should read, "City of Concord is added as an additional insured as evidenced by an endorsement attached to this certificate." Failure to maintain the required insurance in force may be cause for termination of this Agreement. In the event that the Contractor fails to maintain and keep in force the insurance herein required, the City has the right to cancel and terminate the Agreement without notice.

B. Contractor shall provide a completed W-9 form to the City prior to execution by the City of this Agreement.

Sec. 9. Performance of Work by Contractor.

(a) The Contractor warrants that all work performed under this Contract conforms to the Contract requirements and is free of any defect in equipment, material, or design furnished, or workmanship performed by the Contractor or any subcontractor or supplier at any tier. This warranty shall continue for a period of 1 year from the date of issuance by the City of written final completion of the work.

(b) The Contractor shall remedy at the Contractor's expense any failure to conform, or any defect. In addition, the Contractor shall remedy at the Contractor's expense any damage to City - owned or controlled real or personal property, when that damage is the result of--

(1) The Contractor's failure to conform to contract requirements; or

(2) Any defect of equipment, material, workmanship, or design furnished.

(c) The Contractor shall restore any work damaged in fulfilling the terms and conditions of this clause. The Contractor's warranty with respect to work repaired or replaced will run for 1 year from the date of repair or replacement.

(d) The City shall notify the Contractor, in writing, within a reasonable time, not to exceed 30 days, after the discovery of any failure, defect, or damage.

(e) If the Contractor fails to remedy any failure, defect, or damage within a reasonable time, not to exceed 30 days unless otherwise agreed in writing and signed by the City Manager or his designee, after receipt of notice, the City shall have the right to replace repair, or otherwise remedy the failure, defect, or damage at the Contractor's expense.

(f) With respect to all warranties, express or implied, from subcontractors, manufacturers, or suppliers for work performed and materials furnished under this Contract, the Contractor shall--

(1) Obtain all warranties that would be given in normal commercial practice,

(2) Require all warranties to be executed, in writing, for the benefit of the City, if directed to do so by the City; and

(3) Enforce all warranties for the benefit of the City, if directed to do so by the City

(g) In the event the Contractor's warranty has expired, the City may bring suit at its expense to enforce a subcontractor's, manufacturer's, or supplier's warranty.

(h) Unless a defect is caused by the negligence of the Contractor or subcontractor or supplier at any tier, the Contractor shall not be liable for the repair of any defects of material or design furnished by the City nor for the repair of any damage that results from any defect in City-furnished material or design.

Sec. 10. Performance of Work by City. If the Contractor fails to perform the Work in accordance with the schedule referred to in Exhibit "A", the City may, in its discretion, perform or cause to be performed some or all of the Work, and doing so shall not waive any of the City's rights and remedies. Before doing so, the City shall give the Contractor reasonable notice of its intention. The Contractor shall reimburse the City for all costs incurred by the City in exercising its right to perform or cause to be performed some or all of the Work pursuant to this section.

Sec. 11. Attachments. Additional exhibits may be used to further define this Agreement when the Contractor and City so agree. Any additional exhibits shall be designated as exhibits to the Agreement with capitalized, sequential letters of the alphabet, shall be attached hereto and incorporated herein by reference as if the same were fully recited, and shall become terms of this Agreement upon execution by both parties.

The following attachments are made a part of this Contract and incorporated herein by reference:

Exhibits

- (a) Exhibit "A" – Scope of Services / Fee for Scope of Services.
- (b) Exhibit "B" – Contractor must execute the Affidavit attached as Exhibit "B", attesting to compliance with state and federal laws related to E-Verify. ***This requirement only applies to contracts that fall within the formal bidding range.**
- (c) Exhibit "C" – Tax Form(s).
- (d) Exhibit "D" - Certificate of Insurance.
- (e) **Exhibit "E" – Standard Form of Performance Bond**
- (f) **Exhibit "F" – Special Provisions**

Appendices

- (a) Appendix "A" – Salt Storage Building Specifications
- (b) Appendix "B" – Geotechnical Report

Attached Drawings

- (a) Foundation System for ClearSpan Structure
- (b) Salt Storage Building Site Plans

In case of conflict between an attachment and the text of this contract excluding the attachment, the text of this contract shall control. Any attachment that materially alters the standard terms contained herein must be reviewed by the City Attorney and approved by the City in writing.

Sec. 12. Notice. (a) All notices and other communications required or permitted by this Contract shall be in writing and shall be given either by personal delivery, fax, or certified United States mail, return receipt requested, addressed as follows:

To the City:

Sue Hyde, Director of Engineering
City of Concord
P.O. Box 308
Concord, NC 28026
Fax Number: (704) 786-4521

To the Contractor:

VaLerie Kolczynski, Esq.
City Attorney
PO Box 308
Concord, NC 28026
Fax Number: (704) 784-1791

(b) **Change of Address, Date Notice Deemed Given:** A change of address, fax number, or person to receive notice may be made by either party by notice given to the other party. Any notice or other communication under this Contract shall be deemed given at the time of actual delivery, if it is personally delivered or sent by fax. If the notice or other communication is sent by US Mail, it shall be deemed given upon the third calendar day following the day on which such notice or other communication is deposited with the US Postal Service or upon actual delivery, whichever first occurs.

Sec. 13. Indemnification. To the maximum extent allowed by law, the Contractor shall defend, indemnify, and save harmless the City of Concord, its agents, officers, and employees, from and against all charges that arise in

any manner from, in connection with, or out of this Contract as a result of the acts or omissions of the Contractor or subcontractors or anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable except for damage or injury caused solely by the negligence of the City its agents, officers, or employees. In performing its duties under this section, the Contractor shall at its sole expense defend the City of Concord, its agents, officers, and employees with legal counsel reasonably acceptable to City. As used in this subsection – “Charges” means claims, judgments, costs, damages, losses, demands, liabilities, duties, obligations, fines, penalties, royalties, settlements, expenses, interest, reasonable attorney’s fees, and amounts for alleged violations of sedimentation pollution, erosion control, pollution, or other environmental laws, regulations, ordinances, rules, or orders. Nothing in this section shall affect any warranties in favor of the City that are otherwise provided in or arise out of this Contract. This section is in addition to and shall be construed separately from any other indemnification provisions that may be in this Contract. This section shall remain in force despite termination of this Contract (whether by expiration of the term or otherwise) and termination of the services of the Contractor under this Contract.

Sec. 14. Corporate Status. If the Contractor is dissolved or suspended and the Contractor does not notify the City of such dissolution within three (3) business days from date of dissolution or suspension, and/or the corporate status is not reinstated within thirty (30) days, this Contract, at the sole option of the City and without prejudice to City’s other remedies, shall be declared null and void or the Contractor shall execute a new contract showing the Contractor’s correct legal entity.

Sec. 15. Miscellaneous.

(a) Choice of Law and Forum. This Contract shall be deemed made in Cabarrus County, North Carolina. This Contract shall be governed by and construed in accordance with the laws of North Carolina. The exclusive forum and venue for all actions arising out of this Contract shall be the appropriate division of the North Carolina General Court of Justice, in Cabarrus County. Such actions shall neither be commenced in nor removed to federal court. This section shall not apply to subsequent actions to enforce a judgment entered in actions heard pursuant to this section.

(b) Waiver. No action or failure to act by the City shall constitute a waiver of any of its rights or remedies that arise out this Contract, nor shall such action or failure to act constitute approval of or acquiescence in a breach thereunder, except as may be specifically agreed in writing.

(c) Performance of Government Functions. Nothing contained in this Contract shall be deemed or construed so as to in any way estop, limit, or impair the City from exercising or performing any regulatory, policing, legislative, governmental, or other powers or functions.

(d) Severability. If any provision of this Contract shall be unenforceable, the remainder of this Contract shall be enforceable to the extent permitted by law.

(e) Assignment, Successors and Assigns. Without the City’s written consent, the Contractor shall not assign (which includes to delegate) any of its rights (including the right to payment) or duties that arise out this Contract. Unless the City otherwise agrees in writing, the Contractor and all assigns shall be subject to all of the City’s defenses and shall be liable for all of the Contractor’s duties that arise out of this Contract and all of the City’s claims that arise out of this Contract. Without granting the Contractor the right to assign, it is agreed that the duties of the Contractor that arise out of this Contract shall be binding upon it and its heirs, personal representatives, successors, and assigns.

(f) Compliance with Law. In performing all of the Work, the Contractor shall comply with all applicable law.

(g) City Policy. THE CITY OPPOSES DISCRIMINATION ON THE BASIS OF RACE AND SEX AND URGES ALL OF ITS CONTRACTORS TO PROVIDE A FAIR OPPORTUNITY FOR MINORITIES AND WOMEN TO PARTICIPATE IN THEIR WORK FORCE AND AS SUBCONTRACTORS AND VENDORS UNDER CITY CONTRACTS.

(h) EEO Provisions. During the performance of this Contract the Contractor agrees as follows: (1) The Contractor shall not discriminate against any employee or applicant for employment because of race, color, religion, sex, national origin, political affiliation or belief, age, or handicap. The Contractor shall take affirmative action to insure that applicants are employed and that employees are treated equally during employment, without regard to race, color, religion, sex, national origin, political affiliation or belief, age, or handicap. The Contractor shall post in conspicuous places available to employees and applicants for employment, notices setting forth these EEO provisions. (2) The Contractor in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, national origin, political affiliation or belief, age, or handicap.

(i) No Third Party Right Created. This Contract is intended for the benefit of the City and the Contractor and not any other person.

(j) Principles of Interpretation. In this Contract, unless the context requires otherwise the singular includes the plural and the plural the singular. The pronouns “it” and “its” include the masculine and feminine. Reference to statutes or regulations include all statutory or regulatory provisions consolidating, amending, or replacing the statute or regulation. References to contracts and agreements shall be deemed to include all amendments to them. The word “person” includes natural persons, firms, companies associations, partnerships, trusts, corporations, governmental agencies and units, and any other legal entities.

(k) Modifications, Entire Agreement. A modification of this Contract is not valid unless signed by both parties and otherwise in accordance with requirements of law. Further, a modification is not enforceable against the City unless the City Manager or other duly authorized official signs it for the City. This Contract contains the entire agreement between the parties pertaining to the subject matter of this Contract. With respect to that subject matter, there are no promises, agreements, conditions, inducements, warranties, or understandings, written or oral, expressed or implied, between the parties, other than as set forth or referenced in this Contract.

(l) Corporate Seal. If a corporate seal is included by any party to this Contract, it is only for authentication purposes. This Contract is not signed under seal.

(m) No Employment Relationship. For all matters relating to this Agreement, Contractor shall be deemed an Independent Contractor. Nothing in this Agreement shall be construed in such a manner as to create an employee-employer relationship between City and Contractor.

(The following section applies to construction contracts only if amount is over \$50,000)

Sec. 16. Bonding. Both performance and payment bonds for the full amount of this Contract are required to be attached. Instead of bonds, you may submit a deposit of money, certified check or government securities for the full amount of the Contract. The performance bond shall have a value equal to 100% of this Contract. This bond shall be conditioned upon faithful performance of the Contract in accordance with the plans, specifications and conditions of the Contract. The performance bond shall be solely for the protection of the City. The payment bond shall be in an amount equal to 100% of the Contract, and conditioned upon the prompt payment for all labor or materials for which a contractor or subcontractor is liable. The payment bond shall be solely for the protection of the persons furnishing materials or performance labor for which a contractor or subcontractor is liable.

Sec. 17. Dispute Resolution. It is understood and agreed that NCGS 143-128(f1-g) requires that disputes arising under an agreement for the erection, construction, alteration or repair of a building be subject to a dispute resolution process specified by the City. The amount in controversy shall be at least \$15,000.00 before this dispute resolution procedure may be used. In compliance with this statutory provision, the City specifies this Section as the dispute resolution process to be used on this Project. It is further understood and agreed that this dispute resolution process is based on non-binding mediation and will only be effective to the extent that the Parties to any mediated dispute participate in the mediation in good faith. It is also understood and agreed that the City is under no obligation under any circumstance to secure or enforce the participation of any other Party in the mediation of any dispute subject to this Section and NCGS 143-128(f1-g).

This Section 17 does not apply to:

(a) **The purchase and erection of prefabricated or relocatable buildings or portions of such buildings, except that portion of the work that must be performed at the construction site; or**

(b) **The erection, construction alteration or repair of a building when the cost of such building is \$300,000 or less.**

17.1 Any dispute arising between or among the Parties listed in Section 17.3 that arises from an agreement to construct the Project, including without limitation a breach of such agreement, shall be subject to non-binding mediation administered by the American Arbitration Association under its Construction Industry Mediation Rules (“Rules”), except as otherwise expressly set forth in this Section. To the extent any provision of the Rules is inconsistent with the provisions of this Section, the provisions of this Section shall control. The mediation provided in this Section shall be used pursuant to this Agreement and NCGS 143-128(f1-g) and is in lieu of any dispute resolution process adopted by the North Carolina State Building Commission, which process shall not apply to this Project.

17.2 For purposes of this Section the following definitions shall apply:

- a. *Agreement to construct the Project* means an agreement to construct the Project that is subject to the requirements of NCGS 143-128 and does not include any agreement related to the Project that is not subject to said statute.
- b. *Construct or construction* refers to and includes the erection, construction, alteration or repair of the Project.
- c. *Party or Parties* refers to the parties listed in Section 16.4.
- d. *Project* means the building to be erected, constructed, altered or repaired pursuant to this Agreement.

17.3 The City and any Party contracting with the City or with any first-tier or lower-tier subcontractor for the construction of the Project agree to participate in good faith in any mediation of a dispute subject to this Section and NCGS 143-128(f1-g), including without limitation the following Parties (if any): architect(s), engineer(s), surveyor(s), construction manager, construction manager at risk, prime contractor(s), surety(ies), subcontractor(s), and supplier(s).

17.4 In order to facilitate compliance with NCGS 143-128(f1-g), the Contractor and all other Parties shall include this Section 17 in every agreement to which it (any of them) is a Party for the construction of the Project without variation or exception. Failure to do so will constitute a breach of this Agreement, and the Contractor or other Party failing to include this Section in any agreement required by this Section shall indemnify and hold harmless the remaining Parties from and against any and all claims, including without limitation reasonable attorney fees and other costs of litigation, arising in any manner from such breach. Notwithstanding the foregoing provisions of this Section, it is expressly understood and agreed that the Parties are intended to be and shall be third-party beneficiaries of the provisions of this Section and can enforce the provisions hereof.

17.5 The following disputes are not subject to mediation: (i) a dispute seeking a non-monetary recovery; and (ii) a dispute seeking a monetary recovery of \$15,000 or less.

17.6 A dispute seeking the extension of any time limit set forth in an agreement to construct the Project shall be subject to mediation pursuant to this Section and NCGS 143-128(f1-g), but only if the damages which would be suffered by the Party seeking the extension would exceed \$15,000 if the disputed extension is denied. To the extent that liquidated damages are set forth in such agreement as the measurement of damages for failure by such Party to meet such time limit, such liquidated damages shall be the exclusive standard for determining the amount of damages associated with such dispute.

17.7 For purposes of this Section, a dispute is limited to the recovery of monetary damages from the same transaction or occurrence against a single Party or two or more Parties alleged to be liable jointly, severally or in the alternative. Two or more disputes may not be consolidated or otherwise combined without the consent of all Parties to such disputes.

17.8 In addition to such matters as are required by the Rules, a request for mediation shall include the amount of the monetary relief requested.

17.9 Prior to requesting mediation, a Party must form a good faith belief that it is entitled under applicable law to recover the monetary amount to be included in the request from one or more of the remaining Parties. Such belief must be based on a reasonable and prudent investigation into the dispute that is the subject of the request. The request for mediation must be based on such investigation and may not include any amount or the name of any remaining Party, unless supported by such investigation and good faith belief by the Party requesting the mediation.

17.10 If a Party breaches any provision of Section 17.9, it shall indemnify and hold harmless all other Parties from any costs, including reasonable attorney fees and other costs of litigation, and damages

incurred by such other Parties that arise from such breach.

17.11 All expenses incurred by a Party to a dispute in preparing and presenting any claim or defense at the mediation shall be paid by the Party. Such expenses include without limitation preparation and production of witnesses and exhibits and attorney fees. All other expenses of the mediation, including filing fees and required traveling and other expenses of the mediator, shall be borne as follows: one half by the Party requesting the mediation, with the remaining parties paying equal shares of the remaining expenses and costs; provided that, if the City is named as a party to the mediation, the City shall pay at least one-third of the mediation expenses and costs divided among the Parties. If more than one Party to a dispute requests a mediation, the mediation expenses and costs to be divided among the Parties shall be borne equally by the Parties to the dispute; provided that, if the City is named as a Party to the mediation, the City shall pay at least one-third of the mediation expenses and costs divided among the Parties.

17.12 The mediation shall be held at a location agreeable to the mediator and all of the Parties; provided that, if no agreement can be reached, the mediation will be held at such location in Cabarrus County as the mediator shall determine.

17.13 The provisions of this Section are subject to any other provision of this Agreement concerning the submission, documentation and/or proof of any claim or dispute. Such other provisions shall apply in full force and shall be satisfied as a condition precedent to mediation pursuant to this Section.

17.14 The Parties understand and agree that mediation in accordance with this Section shall be a condition precedent to institution of any legal or equitable proceeding seeking monetary recovery based on any dispute that is subject to mediation pursuant to this Section.

Sec. 18. Breach. In the event of a violation of any material term of this Agreement, the non-violating party may terminate the Agreement upon written notice. Such notice shall state the violation with specificity and shall give ten (10) days to cure the violation. The cure period shall be measured as ten (10) days from the date of receipt of notice by the violating party, or, if the date is not known, then thirteen (13) days from the date the notice is placed in the United States Post. If the violation remains uncorrected at the end of the cure period, the Agreement shall be terminated without any further action by the non-violating party. Any remaining disputes shall be subject to the dispute resolution procedure set forth above, if applicable.

[Signature Page to Follow]

IN WITNESS WHEREOF, the City of Concord and the Contractor have caused this Contract to be executed by their respective duly authorized agents or officers.

CITY OF CONCORD:

(Typed or Printed Legal Name of Contractor)

By: _____
City Manager

By: _____
Signature of President/Vice President/Manager/Partner

Date: _____

Printed Name: _____

Title: _____

ATTEST BY:

Date: _____

City Clerk

ATTEST:

BY: _____
Signature of Vice President, Secretary, or other officer

APPROVED AS TO FORM:

Printed Name: _____

Title _____

Attorney for the City of Concord

SEAL

APPROVAL BY CITY FINANCE OFFICER

This instrument has been pre-audited in the manner required by the Local Government Budget and Fiscal Control Act.

Signature

EXHIBIT "B"

STATE OF NORTH CAROLINA

AFFIDAVIT

COUNTY OF CABARRUS

I, _____ (the individual signing below), being duly authorized by and on behalf of _____ (the legal name of the entity entering the contract, "Employer") after first being duly sworn hereby swears or affirms as follows:

1. Employer understands that E-Verify is the federal E-Verify program operated by the United States Department of Homeland Security and other federal agencies, or any successor or equivalent program used to verify the work authorization of newly hired employees pursuant to federal law in accordance with NCGS §64-25(5).
2. Employer understands that Employers Must Use E-Verify. Each employer, after hiring an employee to work in the United States, shall verify the work authorization of the employee through E-Verify in accordance with NCGS§64-26(a). Employer attests that Employer is in compliance with the requirements of the federal and state laws relevant to E-verify.
3. Employer is a person, business entity, or other organization that transacts business in the State of North Carolina. Employer employs 25 or more employees in this State. (mark Yes or No)
 - a. YES _____, or
 - b. NO _____.
4. Employer attests that all subcontractors employed by it as part of this contract comply with the requirements of E-Verify, and Employer will ensure compliance with E-Verify by any subcontractors subsequently hired by Employer as part of any contract with the City of Concord.
5. Employer shall have a continuing duty to inform the City of Concord of any changes to this sworn information.

This ____ day of _____, 20__.

Signature of Affiant
Print or Type Name: _____

State of North Carolina County of Cabarrus

Signed and sworn to (or affirmed) before me, this the ____
day of _____, 20__.

My Commission Expires:

Notary Public

(Affix Official/Notarial Seal)

EXHIBIT “C”

TAX FORM(S)

EXHIBIT “D”

CERTIFICATE OF INSURANCE

4824-4465-9749, v. 1

For Office Use Only:
Charge to P.O. #
Due

City of Concord
Post Office Box 308
Concord, North Carolina 28026-0308

PROJECT:

Date Notice to Proceed:
Completion Date:
Days Remaining in Contract:
Percent Work Complete:
Percent Time Complete:
Percent Payment Complete:

APPLICATION FOR PAYMENT NO. _____ **SHEET NO.** _____ **OF**
PERIOD FROM: _____ **TO:** _____

CERTIFICATE OF THE CONTRACTOR

To the best of my knowledge and belief, I certify that this periodical estimate is correct and all work has been performed and materials supplied in full accordance with the terms and conditions of the contract documents between the undersigned contractor and the City of Concord.

GROSS AMOUNT OF PARTIAL PAYMENT ----- \$

LESS: RETAINAGE AT _____ **PERCENT** ---- \$
PREVIOUS PAYMENT ----- \$
LIQUIDATION DAMAGES
_____ DAYS @ \$ ----- \$
OTHER DEDUCTIONS:
----- \$
----- \$

TOTAL DEDUCTIONS ----- \$

NET AMOUNT DUE THIS ESTIMATE ----- \$

Name of Contractor: _____ Address: _____

Signed: _____ Title: _____ Date: _____

CERTIFICATE OF CONSTRUCTION ADMINISTRATOR/ENGINEER

I certify that I have verified this periodical estimate and that to the best of my knowledge and belief, it is a true and correct statement of work performed and materials supplied under the contract.

Consultant Engineer: _____ Date: _____

Construction Administrator: _____ Date: _____

APPROVED AND PAYMENT RECOMMENDED:

CITY OF CONCORD

Signed: _____ Title: _____ Date: _____

Pay Request

ITEM	DESCRIPTION	QUANTITY		UNIT PRICE	TOTAL PRICE	QUANT. THIS EST.	TOTAL THIS EST.	QUANT. PREV. EST.	TOTAL PREVIOUS	QUANT. TO DATE	TOTAL TO DATE	QUANT. DIFF.	TOTAL DIFF.
1			LF		\$ -		\$ -		\$ -	0.00	\$ -	0.00	\$0.00
2			LF		\$ -		\$ -		\$ -	0.00	\$ -	0.00	\$0.00
3			LF		\$ -		\$ -		\$ -	0.00	\$ -	0.00	\$0.00
4			LF		\$ -		\$ -		\$ -	0.00	\$ -	0.00	\$0.00
5			LF		\$ -		\$ -		\$ -	0.00	\$ -	0.00	\$0.00
6			LF		\$ -		\$ -		\$ -	0.00	\$ -	0.00	\$0.00
7					\$ -		\$ -		\$ -	0.00	\$ -	0.00	\$0.00
8			EA		\$ -		\$ -		\$ -	0.00	\$ -	0.00	\$0.00
9			LBS		\$ -		\$ -		\$ -	0.00	\$ -	0.00	\$0.00
10			SF		\$ -		\$ -		\$ -	0.00	\$ -	0.00	\$0.00
11			SF		\$ -		\$ -		\$ -	0.00	\$ -	0.00	\$0.00
12			LF		\$ -		\$ -		\$ -	0.00	\$ -	0.00	\$0.00
13													
a			EA		\$ -		\$ -		\$ -	0.00	\$ -	0.00	\$0.00
b			EA		\$ -		\$ -		\$ -	0.00	\$ -	0.00	\$0.00
c			EA		\$ -		\$ -		\$ -	0.00	\$ -	0.00	\$0.00
Add 1			EA				\$ -		\$ -	0.00	\$ -	0.00	\$0.00
Add 2			LS				\$ -		\$ -	0.00	\$ -	0.00	\$0.00
Add 3			LF				\$ -		\$ -	0.00	\$ -	0.00	\$0.00
Add 4			SY				\$ -		\$ -	0.00	\$ -	0.00	\$0.00
Add 5			SY				\$ -		\$ -	0.00	\$ -	0.00	\$0.00
	Base Bid	\$			\$ -		\$ -		\$ -		\$ -		\$0.00
	10 % Contingency	\$			\$ -								\$ -
	Total Base Bid	\$			\$ -								\$0.00

**CITY OF CONCORD
CONCORD, NORTH CAROLINA
CONTRACT CHANGE ORDER**

Project: _____ **Date:** _____

Owner: City of Concord **Change Order No.** _____

To: _____
(CONTRACTOR)

Account No. _____

Purchase Order No. _____

You are hereby requested to make the following changes in this Contract to comply with the provisions of the attached and/or the original Contract Documents.

Item No.	Description of Changes	Additions	Deductions
		\$0.00	\$0.00

Original Contract Amount

Net Changes by Previous Change Orders

Net Changes this Change Order \$0.00

New Contract Amount

\$0.00

The Contract Time will be _____ by _____ calendar days.

The Completion Date as of this Change Order is: _____

Accepted: (Contractor) _____

By: _____ **Date:** _____

Accepted: **CITY OF CONCORD**

By: _____ **Date:** _____

This instrument has been pre-audited in the manner required by Local Government Budget and Fiscal Control Act.

By: _____ **Date:** _____

Finance Director

CERTIFICATE OF INFRASTRUCTURE COMPLETION

PROJECT NAME & NUMBER:	
CONTRACTOR NAME & ADDRESS:	OWNER NAME & ADDRESS:
MISCELLANEOUS INFORMATION:	
INSPECTOR:	

The following items have been inspected, reviewed and found to be complete in substantial accordance with the approved plans and specifications. The dates of completion are those agreed upon by the City of Concord when all construction work and testing was completed. These dates DO NOT initiate the start of any warranty periods of said items(s). Warranty periods shall begin as specified on the CERTIFICATE OF FINAL COMPLETION.

Stormwater System	Approved: _____ Date: _____
Curb & Gutters	Approved: _____ Date: _____
Sanitary Sewer	Approved: _____ Date: _____
Potable Water	Approved: _____ Date: _____
Street Paving	Approved: _____ Date: _____
Sidewalks	Approved: _____ Date: _____
Other	Approved: _____ Date: _____

CITY OF CONCORD
FIELD ORDER

ENGINEERING DEPARTMENT

Post Office Box 308

Concord, North Carolina 28026-0308

FIELD ORDER NO _____ **CONTRACT** _____ **DATE** _____

PROJECT _____

LOCATION _____

a) TO: _____

THIS ORDER AUTHORIZES YOU TO PROCEED WITH THE ALTERATIONS AND/OR ADDITIONS TO THE WORK AS DESCRIBED HEREIN, IN ACCORDANCE WITH THE TERMS AND CONDITIONS OF OUR STANDARD FORM OF CONTRACT.

DESCRIPTION OF WORK: _____

- QUOTATION RECEIVED AND APPROVED BY THE CITY OF CONCORD.
- QUOTATION NOT RECEIVED. PLEASE FURNISH QUOTATION IMMEDIATELY TO THE CITY OF CONCORD FOR CHECK AND APPROVAL.
- TIME AND MATERIAL BASIS. FURNISH TIME AND MATERIAL REPORTS DAILY TO THE CITY OF CONCORD FOR VERIFICATION AND SIGNATURE.
- OTHER _____

AUTHORIZED BY: _____

NORTH
CAROLINA
SALES TAX
REPORT

OWNER: _____

CONTRACTOR: _____

PROJECT: _____

PURCHASE ORDER: _____

DATE	VENDOR NAME	INVOICE NO.	NET INVOICE AMOUNT	STATE TAX AMOUNT	COUNTY TAX AMOUNT	SPECIAL COUNTY TAX	COUNTY PAID
TOTAL							

I certify that the above listed vendors were paid sales tax upon purchases of materials during the period covered by the Construction Estimate, and the property upon which such taxes were paid with or will be used in the performance of this contract. No tax on purchases or rentals of tools and/or equipment is included in the above list. All of the materials above became a part of or is annexed to the building or structure being erected, altered or repaired.

Contractor or Subcontractor Name
(PRINT)
Signature
: _____
Name
(print): _____
Title: _____

SWORN AND SUBSCRIBED BEFORE
ME THIS ____ DAY OF _____, 20__.

NOTARY
PUBLIC

MY COMMISSON EXPIRES : _____

North Carolina One Call Center, Inc.

North Carolina One Call Center, Inc., a non-profit organization funded by participating utility companies and municipalities in the interest of community and job safety and improved service through damage reduction to the utilities.

A ONE CALL TOLL FREE TELEPHONE NUMBER, 1-800-632-4949, PROVIDES AN AVENUE TO ALL OF THE PARTICIPATING MEMBERS FROM ANY POINT WITHIN THE STATE OF NORTH CAROLINA.

Anyone proposing to excavate, dig, bore, tunnel, blast or disturb the earth in any manner in which buried utilities may be damaged is requested to call the toll-free number between the hours of 6:00 a.m. and 10:00 p.m., Monday through Friday, forty-eight hours before starting the proposed work.

Within minutes of your telephone call, the participating members will be made aware of your plans and will be given pertinent information that has been provided by you about your planned work. You will be told the names of the participating members from whom you can expect a response - if there are buried facilities in the path of your activity, the route of the utilities will be staked and/or marked at no expense to you. If there are no facilities in the area of the planned work, you will be called or notified by a representative of a participating company accordingly.

Should a non-participating utility operator be serving your area, we recommend that you call them on an individual basis. All utility operators, whether company or municipality, will be provided an opportunity to become a member of North Carolina One Call Center, Inc..

Naturally, knowing the route of utilities, the excavator is expected to exercise caution and to avoid damage as the project progresses.

Damage prevention does not just happen – it is a planned and orderly process through which each of us can participate - **YES, WE CAN AND WE WILL DRAMATICALLY REDUCE DAMAGES TO THE UTILITIES IN THE STATE OF NORTH CAROLINA!! THANKS FOR YOUR HELP.**

BEFORE YOU DIG
IN THE INTEREST OF COMMUNITY AND JOB SAFETY AND IMPROVED SERVICE

CALL NORTH CAROLINA ONE CALL CENTER, INC.
1-800-632-4949

SECTION II

GENERAL CONDITIONS

Please reference online at

<http://www.concordnc.gov/Portals/0/Documents/Engineering/10%2001%2005%20General%20Conditions%20Horizontal.pdf>

Dated: 01/05/2010

APPENDIX A

SALT STORAGE BUILDING SPECIFICATIONS

MATERIAL SPECIFICATION

1.0.0. GENERAL

1.1.0. The purpose of this bid is for the purchase, installation, and delivery on site for the City of Concord, North Carolina of a ClearSpan Fabric Structures International, or equal, 65' X 120' building for the purpose of a "SALT STORAGE BUILDING", following the design specifications listed below.

All items to be bid FOB, City of Concord, NC.

1.2.0. Building must be Clearspan fabric clad structure or equivalent. An equal manufacturer must be submitted for approval with the bid.

Basis of Design: **Clearspan Fabric Structures International, Inc. South Windsor, Ct**

1.3.0. NORTH CAROLINA ENGINEER STAMPED DRAWINGS ARE REQUIRED FOR BUILDING AND FOUNDATION AND HAVE BEEN SUPPLIED BY THE CITY OF CONCORD IN THE BID DOCUMENTS.

1.4.0. The workmanship of all materials and components of the structure shall be commensurate with the functional requirements of the item.

1.5.0. Building prefabrication shall be performed under factory conditions in a plant specifically arranged for this type of work. Contractor shall provide adequate space, equipment, personnel and technical ability to coordinate the assembly and factory prefabrication of all major components of the work and all necessary operation in the packing, shipping and installation procedures. No fabrication shall be done unless the materials have been tested and approved.

2.0.0. GENERAL DESIGN REQUIREMENTS:

2.1.0. Warranty: 10-year on fabric and 15-year on frame.

2.1.1. The membrane shall be tensioned over the framework.

2.1.2. The structure shall be rectangular in shape with 2 vertical gable end walls.

2.1.3. Provide 2 ea 3'x7' entry doors and 1 ea 16' x 16' manual chain hoist door on one end wall.

2.1.4. The interior of the structure below the main trusses shall be clear span free of any structural support members and shall provide unobstructed floor space as indicated in drawing on page 50.

2.1.5. No exterior purlins, guy ropes or cables shall be used for anchoring the structure.

2.1.6 Rafter spacing shall not exceed 20' and all minimum clearances shall match the drawing shown on page 8 of this document.

2.2.0. Design Requirements-Structural Frame:

- 2.2.1. Roof and Wall Surfaces: To provide for maximum compatibility with standard door, window, ventilation and other accessory and cladding systems, and the structure shall be designed such that roof and gable side wall surfaces for flat planes.
- 2.2.2. Purlin Spacing: To provide for structural stability and to provide for installation of accessory items, the main structural trusses shall be laterally braced by tubular purlins at intervals required by the truss design.
- 2.2.3. Wind and Frame Bracing: The structure shall be appropriately stabilized with wind bracing cable as well as any required secondary node restraint assemblies so as to efficiently transfer wind, snow and seismic induced stresses to the foundation/anchoring system. The end bays of the structure shall be designed to be X – braced early during installation to allow for permanent stability of the frame during installation.
- 2.2.4. Connecting Joints: Connections between structural elements shall be designed so as to transfer the compressive and tensile forces present in a given joint. A minimum of Grade 5 bolts shall be used at each truss chord joint. Primary axial steel, secondary purlins and end wall frame connections shall be made with a minimum of Grade 5 hex bolts, carriage bolts and self drilling screws.
- 2.2.5. Mechanical Equipment Interface: The main structural roof trusses shall allow for installation of electrical and mechanical equipment based on collateral loads. Likewise, the structure shall accept penetrations through the membrane for access doors and mechanical services with minimal modification.
- 2.2.6. Ancillary Systems: The structure shall be designed such that it can be readily retrofitted with insulation systems and other ancillary systems such as lighting, sprinklers, HVAC, provided collateral load factors are taken into account.
- 2.2.7. Alternative Cladding materials: The structure shall be designed such that alternative covering materials such as metal wall cladding can be added with minimal modification, if required.
- 2.2.8. All hardware needed to assemble building to be supplied by vendor / contractor.
- 2.2.9. Building to be engineered to 10# psf ground snow load and 90 mph, 3 sec gust: See Section 2.4.2. and 2.4.3. for details.

2.3.0. Design Requirements – Membrane Cladding System:

- 2.3.1 Membrane: The roof membrane shall form a weather tight shell over the structural frame. In order to provide for a good finished appearance and to insure weather tightness, the membrane shall be assembled and tensioned, in a manner to minimize wrinkles in hot and cold temperatures.
- 2.3.2. The gable wall membrane cladding shall be manufactured and connected to form one piece to the adjacent end wall and roof cladding.

- 2.3.3. Roof membrane horizontal stretch shall be maintained with horizontal purlins requiring no ongoing maintenance.
- 2.3.4. Base Tensioning System: The membrane cladding will be provided with a mechanical tensioning system that allows the membrane to be fully tensioned around the structure perimeter. The system will be designed such that the membrane can be tightly and neatly secured over the structural frame and such that the system has remaining range of adjustment.
- 2.3.5. Membrane Seal at Openings and Base: The Dealer supplying the structure will provide all materials and methods necessary to fully tension and seal the membrane material around all doors, ventilation and other opening as well as around the structure perimeter below the main tensioning system. This seal shall provide a neat and finished appearance and eliminate any loose membrane cladding that would otherwise be damaged by flapping or abrasion. When a membrane base skirt is required, this shall be supplied and attached at the base perimeter to allow a reasonable seal against air and water intrusion.
- 2.3.6. The membrane shall not be designed to function as a structural member such that, should any damage to or penetrations of the membrane occur, the integrity of the structural framework shall not be affected.
- 2.3.7. The Contractor shall provide drawings and calculations acceptable to the architect/Engineer of the Record, meeting the provisions of the applicable State Building Code. ~~The Contractor shall bear all costs for production of drawings and associated structural calculations~~ (the City of Concord incurred the costs for production of drawings and associated structural calculations). Contractor shall make all revisions and corrections to those documents required for approval and shall resubmit as required to obtain approvals.

2.4.0. ENGINEERED DESIGN CRITERIA:

- 2.4.1. The structure shall be designed using methodology as per ASCE 7 standard referenced from the applicable North Carolina building code latest edition.

Primary and secondary framing shall comply with current issues of ISC, AISI, NEMA and ASTM specification, as applicable. Structural members shall be designed using Allowable Stress Design (ASD) or Load Resistance Factored Design (LRFD) for the design loads given below. Wind load factors and coefficients used in design of structural members must be in accordance with the applicable ASCE 7 guidelines.

- 2.4.2. Snow Loads: The structure shall be designed based upon a minimum ground snow load of 10 pounds per square foot (Psf).
- 2.4.3. Wind Loads: The structure shall be capable of withstanding a basic wind speed (3-second gust) from any direction of 90 miles per hour. The design wind pressure shall be based on an exposure category of "C" and appropriate wind load factors and coefficients in accordance with the applicable referenced ASCE 7 guidelines. In no event shall the wind load used in the design of the main wind force resisting system be less than 10 pounds per square foot multiplied by the area of the building or structure projected on a vertical plane that is normal to the wind direction.
- 2.4.4. Rainfall: The structure shall be capable of withstanding the effects of rainfall up to 4 inches per hour for at least 2 hours.

2.4.5. Design Loads: The design shall be based as a minimum on the following design loads. Each member shall be designed to withstand stresses resulting from combinations of design loads that produce maximum percentage of actual to allowable stress in that member as per referenced ASCE 7 standard from applicable building code.

- D = Dead Load + Collateral Load
- S = Symmetrical Snow or Live Load (Balanced or Unbalanced)
- Ws = Wind with internal suction
- Wp = Wind with internal pressure
- E = Earthquake

2.5.0. OPERATION AND USE:

- 2.5.1. The main structure frame shall be designed to provide a minimum of 15-year operational use period with appropriate inspection and maintenance. Owner’s manual to be provided.
- 2.5.2 The structure shall be capable of being assembled, operated and dismantled in all ambient temperatures between -20 °F and 120 °F.
- 2.5.3. The structure shall be capable of being erected on concrete and of accepting differential settlement of up to 1 ½% between truss positions.

2.6.0. MATERIALS:

- 2.6.1. All materials used in the structure shall be new, without defects and free of repairs. The quality of the materials used shall be such that the structure is in conformance with the performance requirements specified herein.
- 2.6.2. Cladding Membrane: The structure shall be clad with a **flame retardant** polyolefin fabric manufactured by an approved and reputable supplier with demonstrated long-term performance. The polyolefin membrane fabric shall be waterproof and free from defects. All roofs, walls, end walls and connecting sections shall be weather tight.

The material shall be selected from the manufacturer’s standard colors for the sidewalls and roof panels. The material scrim and coating must be UV stabilized and must carry a minimum 10-year manufacturer’s warranty. The minimum fabric specification is as follows:

Total Fabric Weight	12.0 oz/yd ² (407 g/m ²) +/- 5%
Coating Thickness	4 mil average, each side
Finished Thickness	23 mils (ASTM D5199)
Grab Tensile Strength	355 lbs (ASTM D5034)
Strip Tensile Strength	270 lbs/in (ASTM D5035)
Tongue Tear Strength	115 lbs (ASTM D2261)
Trapezoidal Tear	95 lbs (ASTM D-4533)
Mullen Burst	675 psi (ASTM D3786)
Cold Crack Resistance	-60 °C (ASTM D2136)
UV Resistance & Weathering	>90% retention after 2000 hrs. ASTM G151

- 2.6.3. Metal: The main structure shall consist of welded truss arches with parallel tube chords separated apart by webbing. Parallel tube cords are made from triple coated, in-line galvanized structural steel tubing, cold-formed and induction welded of modified grade carbon steel, providing a finished tubular product with exceptional mechanical and corrosion resistant properties. **Hot Dipped Galvanized pipe post fabrication will not be accepted.**
- 2.6.4. Tolerances: all dimensional tubing tolerances are in accordance with ASTM A500, Section 10.
- 2.6.5. Tubing shall be manufactured using steel conforming to ASTM A568 and ASTM A1011. Finished steel tubing used in the structure must have the following minimum structural and mechanical properties based on standard ASTM A500:

Tension Ultimate: 55 KSI and Yield: 50 KSI

- 2.6.6. Corrosion Protection: All steel tube components, trusses, purling, fastening tubes shall be coated, on the exterior, with a gloss finishing providing a corrosion resistance of 1800 hours as per ASTM B117-90;
- 2.6.7. Coatings: Zinc conforms to ASTM B6, Standard Specifications for Zinc, High Grade (1.1.3.) and Special High Grade (1.1.2.).
- a. Exterior: In-line galvanized to a normal coating zinc weight of 0.6 oz/ft². Chromate conversion coating applied over the galvanized surface to provide additional corrosion protection. Clear organic polymer applied as the top surface coat to retard oxidation, enhance surface appearance and provide a primer for subsequent painting or powder coating processes as desired.
 - b. Interior: Full zinc based organic coating applied to 100% of the interior surface as a corrosion barrier.

2.7.0. Hardware:

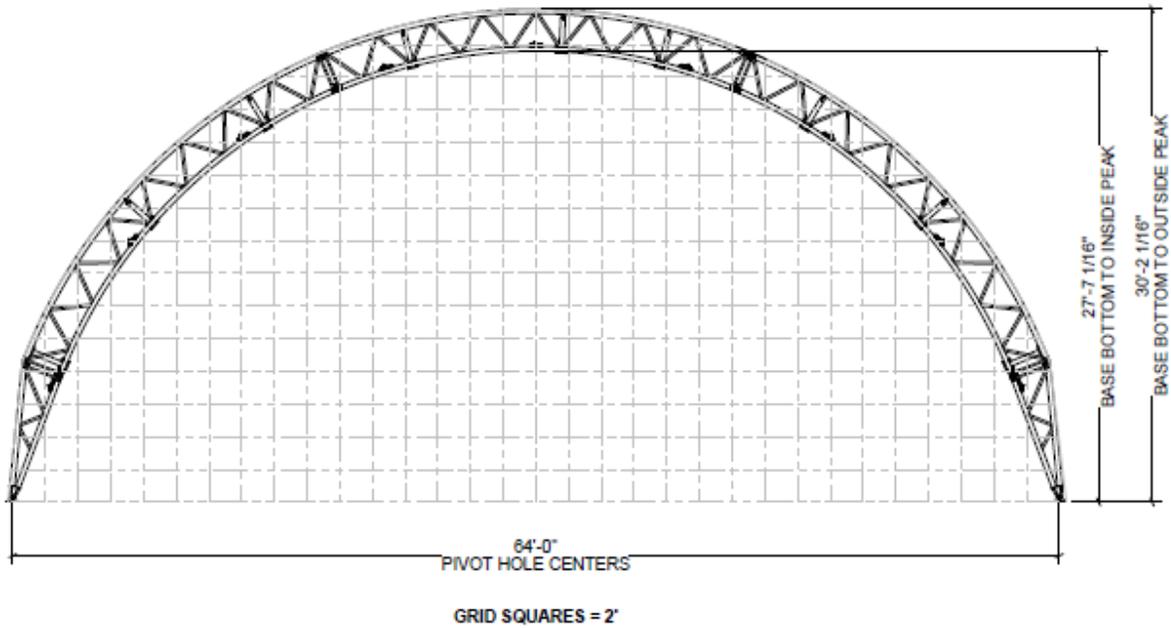
- 2.7.1. Bolts: Bolts subject to extreme stress and wear shall be structural bolts of Grade 5 and plated/galvanized that has been upgraded with a corrosion resistant topcoat finish. All bolts shall be installed and securely torque so as the prevent change in tightness. Those subject to removal or adjustment shall not be swaged, peened, staked or otherwise installed.
- 2.7.2. Membrane Tensioning Hardware: The fabric membrane shall be tensioned with load rated hardware. Hardware shall allow full and free rotation at the foundation connection to avoid fatigue of threaded assemblies.
- 2.7.3. Membrane Tensioning Webbing: The membrane shall be tensioned with load-tested tie-downs.
- 2.7.4. Cable Assemblies: Main and wind bracing cable assemblies shall be manufactured to the required length and press swaged with metal sleeves. The cables are manufactured using performed galvanized cables, sized with appropriate safety factors.

3/16" dia.	=	4,200 lbs.
1/4" dia.	=	7,000 lbs.
5/16" dia.	=	9,800 lbs.
3/8" dia.	=	14,400 lbs.
1/2" dia.	=	22,800 lbs.

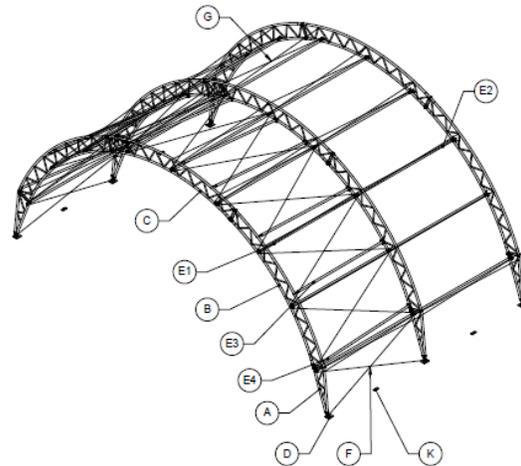
- 2.7.5. Other Fasteners: Non-structural fasteners such as wood screws, Tek screws, etc., shall be standard commercial quality.
- 2.7.6. Exterior Trim: The aluminum alloy used in the extrusion shall meet or exceed 6063-T5.
- 2.7.7. Piece marking and Identification: all individual parts or bundles and packages of identical parts are to be clearly marked for identification. Bolts, nuts, washers and fasteners shall be packaged according to type, size and length. Shipping documentation shall include a list showing the description, quantity and piece mark of the various parts, components and elements.
- 2.7.8. Material Delivery: The building system materials shall be delivered to the project site during normal working hours on weekdays. (6:30am to 3:30pm). 24 hours advanced notice for delivery is required. Installation contractor will provide adequate workmen and equipment to promptly unload, inspect and accept material delivery.
- 2.7.9. Handling: At no time shall materials be dropped, thrown or dragged over the transport equipment or the ground. Damage to any piece under its own or superimposed weight shall be cause for repair or replacement by the vendor or contractor.
- 2.7.10. Short, damaged or excess materials: Installation contractor shall inspect, count and verify quantities based on the shipping documents.

3.0.0. REFERENCES AND STANDARDS:

- 3.1.0. The following publications are for the standards listed below but referred to within the document by basic letter designation only. They form a part of this specification to the extent referenced thereto:
 - 3.1.1. American Institute of Steel Construction (AISC):
 - S326-78 Design, Fabrication and Erection of Structural Steel Buildings
 - S329-85 Structural Joints Using ASTM A325 or A490 Bolts
 - 3.1.2. American Iron and Steel Institute (AISI):
 - SG 503-76 The Design of Fabrication of Cold-Formed Steel Structures
 - 3.1.3. American Society for Testing and Materials (ASTM):
 - A 36-89 Structural Steel
 - A 307-89 Carbon Steel Bolts and Studs, 60,000 psi Tensile Strength
 - A 325-89 High-Strength Bolts for Structural Steel Joints
 - A 500 A-90 Standard Specification for Cold Formed Welded And Seamless Carbon Steel Structural Tubing in Rounds and Shapes
 - A 563 Rev A-89 Carbon and Alloy Steel Nuts
 - A 687-89 High-Strength Non-Headed Steel Bolts and Studs
 - 3.1.4. American Society of Civil Engineers (ASCE) Minimum Design Loads for Building and Other Structures. Latest edition as required by State Code.
 - ASCE 7-98 American Society of Civil Engineers
 - ASCE 7-02 American Society of Civil Engineers
 - ASCE 7-05 American Society of Civil Engineers
 - 3.1.5. Canadian Standards Association
 - CAN/CSA-S16.1 Limit States Design of Steel Structures



ITEM	DESCRIPTION	MATERIAL
A	SUPPORT BASE	
	OUTER CHORD	GALV. RND. STEEL TUBE - ϕ 3.5" - 14 GA
	INNER CHORD	GALV. RND. STEEL TUBE - ϕ 3.5" - 11 GA
	WEB (STRAIGHT)	GALV. RND. STEEL TUBE - ϕ 1.25" - 14 GA
	WEB (ANGLED)	GALV. RND. STEEL TUBE - ϕ 1.66" - 14 GA
	CONNECTION PLATES	STEEL PLATE, 1/2" THICK
	GUSSETS	STEEL PLATE, 3/8" THICK
	PIVOT PLATE (CHORD)	STEEL PLATE, 3/8" THICK
	PIVOT PLATE (ROUND)	STEEL PLATE, 1/2" THICK
B&C	SEGMENT	
	OUTER CHORD	GALV. RND. STEEL TUBE - ϕ 3.5" - 11 GA
	INNER CHORD	GALV. RND. STEEL TUBE - ϕ 3.5" - 11 GA
	WEB (STRAIGHT)	GALV. RND. STEEL TUBE - ϕ 1.25" - 14 GA
	WEB (ANGLED)	GALV. RND. STEEL TUBE - ϕ 1.66" - 14 GA
	CONNECTION PLATES	STEEL PLATE, 1/2" THICK
	GUSSETS	STEEL PLATE, 3/8" THICK
D	BASES	
	HORIZONTAL	STEEL PLATE, 1/2" THICK
	VERTICAL (ROUNDED)	STEEL PLATE, 3/8" THICK
	THREADED STUD	CFL FULLY THREADED STUD - 1/2"-13 x 1"
	GUSSETS	STEEL PLATE, 3/8" THICK
E	BRACINGS	
E1	LATERAL BRACING (END)	GALV. RND. STEEL TUBE ϕ 4.0" - 12 GA
E2	LATERAL BRACING (MID)	GALV. RND. STEEL TUBE ϕ 3.5" - 14 GA
E3	ANGLED BRACING	GALV. RND. STEEL TUBE ϕ 4.0" - 12 GA
E4	BOTTOM ANGLED BRACE	GALV. RND. STEEL TUBE ϕ 4.0" - 12 GA
	THREADED STUD PLATE	1/4" PLATE W/ 1/2" X 2" STUDS
F	CABLE ASSEMBLY	SEE SHEET G3
	CABLE CONNECTION PLATE	STEEL PLATE, 5/16" THICK
G	SWAY CABLE ASSEMBLY	SEE SHEET G3
	CABLE CONNECTION PLATE	STEEL PLATE, 1/8" THICK
H	BRACE PLATES	
	SUPPORT BASE TO SEGMENT	STEEL PLATE, 1/8" THICK
	SEGMENT TO SEGMENT	STEEL PLATE, 1/8" THICK
J	WINCH ASSEMBLY	
	WINCH	2" LASHING WINCH (10,000 LBS. STRENGTH)
	STRAP	2" STRAP (10,000 LBS. STRENGTH)
K	WINCH PLATE	
	HORIZONTAL	STEEL PLATE, 1/2" THICK
	THREADED STUDS	CFL FULLY THREADED STUD - 1/2"-13 x 1"



APPENDIX B

GEOTECHNICAL REPORT



GEOTECHNICAL REPORT

FOR

SALT STORAGE BUILDING
ALFRED M. BROWN OPERATIONS CENTER

PROJECT #2015-023

ENGINEERING DEPARTMENT
850 HIGHWAY 601, SOUTH, POST OFFICE BOX 308
CONCORD, NORTH CAROLINA 28026-0308



August 13, 2015

Mr. Joe Wilson
Transportation Department
City of Concord
P.O. Box 308
Concord, North Carolina 28026

Re: Geotechnical Engineering Services Report
Proposed Salt Storage Building
Brown Operations Center
Concord, North Carolina
File: 2015-023

Dear Mr. Wilson:

As requested, the City of Concord engineering department has conducted geotechnical engineering services for the proposed Salt Storage Building at the Brown Operations Center in Concord, North Carolina. The accompanying report presents the results of our investigation and our recommendations concerning geotechnical-related design for the project.

If during the design and construction of this project, questions arise concerning soil conditions, please do not hesitate to call us at (704) 920-5425.

Very truly yours,
City of Concord Engineering Department

Clinton M. Shoaf, PE
Project Engineer
City of Concord

Enrique A. Blat, PE
Deputy City Engineer
City of Concord

EAB

TABLE OF CONTENTS

	<u>Page</u>
SYNOPSIS	1
I. PROJECT INFORMATION	2
A. Project Authorization	2
B. Project Description	2
C. Purpose and Scope of Services	2
II. SITE AND SUBSURFACE CONDITIONS	3
A. Site Location and Description	3
B. Site Geology	3
C. Field Services	3
D. Laboratory Testing Program	4
E. Subsurface Conditions	4
F. Groundwater Information	5
III. EVALUATION AND RECOMMENDATIONS	5
A. Site Preparation and Fill Placement/Compaction	5
B. Foundation Recommendation	6
C. Settlements	7
D. Floor Slab Recommendations	7
E. Construction Considerations	7
F. Groundwater	8
IV. REPORT LIMITATIONS	8
Test Pit Log	9
APPENDIX	
Drawing No. 1: Salt Building – Test Pit Locations	

SYNOPSIS

The City of Concord engineering department has completed the geotechnical engineering services at the site of the proposed Salt Storage Building in Concord North Carolina. Our findings, conclusions, and recommendations with regard to site development are summarized in this section.

1. Subsurface conditions at the site generally consist of residual and fill soils. The residual soils consisted of Sandy SILT (ML) and the fill soils consisted of Sandy SILT (ML) and Clayey SILT (MH)
2. Our test pits extended to a depths ranging from 6 to 10 feet below the ground surface.
3. Groundwater was not encountered at the time of testing.
4. Site preparation should include the over excavation over the footprint of the building to approximately six (6) feet below the proposed finished subgrade elevation and then backfilled to limit the extent of differential settle of the foundation materials. Additional site preparation should include the proofrolling of the exposed subgrade within the proposed building and paved areas, and the undercutting of any additional unstable subgrade soils.
5. The results of the field testing program and geotechnical analysis indicate that conventional spread column footings appear to be the most suitable type of foundation for the support of the proposed building.

The owner/designer/contractor should not rely solely upon the synopsis, and must read and evaluate the entire contents of this report prior to utilizing our engineering recommendations in the preparation of design and construction documents. We cannot be responsible for the interpretation or implementation of this report by others. We should be consulted to assure compliance with the recommendations in this report. Detailed analyses of subsurface conditions and pertinent design recommendations are included in the following sections of this report. A Test Pit Log is shown in the report with a Test Pit Locations drawing presented in the Appendix.

Engineering

Phone (704) 920-5425 • Fax (704) 786-4521

I. PROJECT INFORMATION

A. Project Authorization

This report was prepared at the request of the City of Concord Transportation Department for the proposed Salt Storage Building at the Brown Operation Center, in Concord North Carolina.

B. Project Description

Based on the information provided to us by Joe Wilson of the City of Concord Transportation Department, the proposed building will have overall dimensions of 65 feet by 120 feet, and will consist of a concrete slab-on-grade with 6-foot tall reinforced concrete perimeter walls and a superstructure consisting of metal trusses, and a fabric cladding. Based on information provided to us by Clear Span, the manufacturer of the superstructure, the gravity and up-lift loads will not exceed 20 and 10 kips respectively.

The information presented in this section was utilized in our geotechnical analysis. Therefore, if any of the noted information is incorrect or has changed, please inform us so that we may amend the recommendations presented in this report, if appropriate or necessary.

C. Purpose and Scope of Services

The purpose of this geotechnical evaluation was to determine pertinent subsurface conditions at this site in order to provide conclusions and recommendations regarding the design of shallow foundation system(s) and other geotechnical aspects and to provide construction guidelines with regards to our understanding of the proposed site development. For this project, the following scope of services was performed:

- Contacted the local utility locating service 36 hours prior to our excavation activities.
- Advanced three test pits at the locations indicated in the attached *Drawing No. 1*.
- Prepared a Test Pit Log for the tested locations describing the types of soil encountered and other pertinent information.
- Conducted a geotechnical engineering evaluation of the available data to provide recommendations regarding foundation type(s), maximum allowable foundation bearing pressure; as well as construction considerations, such as foundation installation, subgrade preparation, and excavation.

- Prepared an engineering report presenting all data, test pit log, observations and recommendations.

The scope of services did not include an environmental assessment for determining the presence or absence of wetlands or hazardous or toxic materials in the soil, bedrock, surface water, groundwater, or air, on or below or around this site.

II. SITE AND SUBSURFACE CONDITIONS

A. Site Location and Description

The subject site considered in this geotechnical evaluation is located at 850 Warren C. Coleman Blvd., in Concord North Carolina.

At the time of our site visit, the site was cleared and covered with NCDOT Aggregate Base Course (ABC). The ground surface at the site generally slopes from the south to the north. The relief (difference in elevation between the highest and lowest points) across the site is approximately 2.5 feet. No utilities were located within the general vicinity of the proposed building location.

The site was graded during the construction of the Brown Operation Center 13 years ago explaining the presence of fill soils at the site. It is our understanding that the fill was placed in a controlled manner, but compaction records are not available. At the time of our testing operations, the ground surface was firm and our equipment experienced no difficulty moving on the site. There was a swale through the center of the testing area where water ponding was observed.

B. Site Geology

The project site is located within Cabarrus County, North Carolina which lies within the Charlotte Belt of the Piedmont Physiographic Province of the eastern United States. This province is characterized by broad gently rolling ridges formed on the stronger bedrock of the area. Between these ridges, lowlands and drainage areas are formed on the lesser resistance bedrock.

The soils weathered from the parent bedrock generally consist of an upper layer of fine-grained SILT or CLAY underlain by medium Sandy SILT or Silty SAND. The sand content generally increases with depth. A region of partially weathered rock is generally encountered above bedrock.

C. Field Services

The site subsurface conditions were evaluated with three (3) test pits located within the proposed building pad. The test pits extended to depths ranging from 6 to 10 feet below the

existing ground surface. A test pit location diagram (*Drawing No. 1*), which indicates the approximate location of our test, is presented in the Appendix of this report.

Dynamic Cone Penetrometer (DCP) tests were also performed in the test pits at intervals ranging from approximately one to two feet. The DCP test procedure involves first seating the conical point of the penetrometer two (2) inches into the bearing materials to assure that the point is completely embedded. The conical point is then driven an additional one and three-quarter (1 $\frac{3}{4}$) inches using a fifteen (15) pound weight falling twenty (20) inches. The penetrometer reading is the number of blows required to drive the conical point 1 $\frac{3}{4}$ inches. The point is driven one to three (1 $\frac{3}{4}$ -inch) increments and the readings are recorded. When properly evaluated, the penetrometer test results can provide an index for estimating soil strength, relative density, and a comparison to the Standard Penetration Resistance (N) Value as defined in ASTM D-1586-67.

D. Laboratory Testing Program

No soil samples were obtained during the test pit excavations. However, the soil types were observed and visually classified by a Geotechnical Engineer at the time of testing, in accordance with ASTM D 2488.

E. Subsurface Conditions

Details of soil conditions encountered by our field exploration program are shown on the test pit log included in the Appendix. The following subsurface description is of a generalized nature, provided to highlight the major soil strata encountered. The stratification of the soils, as shown on the Logs, represents the soil conditions in the actual location tested, other variations may occur and should be expected. Lines of demarcation represent the approximate boundary between subsurface materials, and the transition may be gradual. A brief description of the soils encountered at this site is presented in this section.

Each of the test pits initially encountered a layer of NCDOT ABC stone approximately 6 inches in depth. Residual and fill soils were encountered underlying the NCDOT ABC layer. The residual soils were encountered in Test Pit 2 (TP-2) underlying the NCDOT ABC layer and generally consisted of Sandy SILT (ML) with Dynamic Cone Penetrometer (DCP) average readings ranging from 12 to in excess of 25 blows per 1 $\frac{3}{4}$ -inch increment. TP-2 was terminated at a depth of 10 feet below the existing ground surface. The fill soils encountered in Test Pits 1 & 3 (TP-1 & TP-3) underlying the NCDOT ABC layer, generally consisted of Clayey SILT (MH) and Sandy SILT (ML) with Dynamic Cone Penetrometer (DCP) average readings ranging from 6 to 11 blows per 1 $\frac{3}{4}$ -inch increment. TP-1 & TP-3 were terminated in fill soils at depths ranging from 6 and 10 feet below the existing ground surface, respectively. It should be noted that TP-1 was terminated at 6 feet below the existing grade due to refusal from a possible concrete slab. The residual soils in Test Pit 2 (TP-2) were encountered to its termination, at a depth of 10 feet below the existing ground surface.

F. Groundwater Information

The presence of groundwater levels were monitored at the time of completion of test pit activities. Groundwater was not encountered in the test pits during or at the termination of excavation activities.

The groundwater levels presented in this report are the levels that were measured at the time of our field activities. Fluctuation should be anticipated. We recommend that the Contractor determine the actual groundwater levels at the time of construction to determine groundwater impact on the construction procedures.

III. EVALUATION AND RECOMMENDATIONS

The evaluation and recommendations presented in this report are based on the data obtained from the field exploration and testing, information regarding the proposed construction, and our knowledge of geomechanics.

A. Site Preparation and Fill Placement/Compaction

As previously mentioned in this report, the site was graded during the construction of the Brown Operation Center 13 years ago. The site was previously a waste water treatment plant that was demolished on site and later filled to the existing grade. The concrete rubble resulting from the demolition was left in place, so it is not unusual to encounter concrete fragments when excavating on site. Based on the DCP readings it appears that some compaction effort was applied when placing the fill.

Initially the existing stone should be removed and stock piled for later use, and the site should be prepared as described below. Due to the variability of the subgrade soils encountered within the proposed building footprint, it is recommended that an area approximately 75 feet by 130 feet be over-excavated to a depth of 6 feet. The over-excavated soils should then be placed back in the resulting excavation as described in the paragraph below. It is recommended that the City of Concord Geotechnical Engineer or representative be present during grading operations. After achieving finished subgrade, it is recommended that the exposed subgrade be evaluated to confirm that all unsuitable materials have been removed and that a uniform subgrade is remaining. During this evaluation, those areas which are at finished subgrade or areas to receive fill should be proofrolled with a loaded tandem-axle dump truck or similar pneumatic-tired equipment with a minimum weight of 15 tons and a maximum weight of 25 tons. Proofrolling will help reveal the presence of any unstable materials which were not identified during our test pit activities or may be remaining after undercutting.

It is recommended that a Geotechnical Engineer or representative observe all proofrolling activities. Any areas designated as being underlain by unsuitable materials should be corrected as suggested by the Geotechnical Engineer. In general, correction of unstable areas will require

undercutting to firm soils as directed by the Geotechnical Engineer. The overexcavated volume should be replaced by controlled fill placed in loose lifts of 8 inches or less in thickness. The controlled fill should be compacted to at least 98 percent of the material's maximum dry density as determined by the Standard Proctor Compaction Test (ASTM D 698). The moisture content of the controlled fill should be maintained within 2 percent of the material's optimum moisture content as determined by the Standard Proctor Compaction Test.

After completion of the site preparation, the placement of any fill required to achieve finished subgrade level can proceed. Any material utilized as fill should not contain rocks greater than 3 inches in diameter, and it should not contain more than 2 percent (by weight) of organic matter or other detrimental material. The Plasticity Index, PI (ASTM D 4318), for the material should not exceed 25, and the Liquid Limit for the material should not exceed 50 (Unified Soil Classifications of GW, GM, GC, SW, SM, SC, ML and some CL). After achieving finished grade the previously removed ABC stone can be replaced and compacted.

All controlled fill should be placed and compacted as previously described in this report. It is recommended that the placement and compaction of the fill be monitored by a Soil Technician, working under the direction of the Geotechnical Engineer, to confirm that the specified degree of compaction is being obtained. The frequency of testing should be related to the work conditions during earthmoving and the type and location of the fill or backfill.

Proper site drainage should be maintained during earthwork operations to minimize wet weather delays and reduce accumulation of moisture. If the surface soils become softened during wet weather or frozen conditions, these soils should be removed before additional fill is placed. *It should be noted that the fill soils at this site will become softer when wet.* Therefore, for a quality finished product and timely completion of the construction phase of this project, these soils should be protected from excessive moisture. The ground surface in the vicinity of the construction site should be graded so that surface water flows away from the site. It is recommended that the surface of all fill areas be sealed with a smooth-drum roller at the completion of each day's earthwork activities. Further protection of the site should include the construction of temporary ditches, berms or other surface water diversion devices in order to divert surface water off/away and not across the site.

B. Foundation Recommendations

Based on the subsurface conditions encountered by the field exploration program, the estimated loads of the proposed structure (including surcharge), and if the site is prepared in accordance with the "Site Preparation and Fill Placement/Compaction" section of this report, it appears that conventional spread footings (bearing on approved subgrades) will be a suitable foundation system at this site. It is recommended that a maximum allowable net bearing pressure of 2,000 pounds per square foot (psf) be used for the design of foundations bearing on the existing fill soils or newly compacted fill soils placed as recommended in this report. The allowable bearing pressure should include dead load plus sustained live loads.

To minimize the detrimental effects of seasonal moisture variations in the soils, for frost protection and for bearing considerations, it is recommended that all foundations be embedded at least 18 inches below the lowest adjacent grade. A minimum footing width of 48 inches for spread column footings and 24 inches for continuous wall footings, designed for the maximum allowable soil bearing pressure are recommended.

We recommend that all subgrade surfaces (foundations, slabs and pavement areas) be examined by a Geotechnical Engineer using hand auger/cone penetrometer testing equipment, or other suitable methods, prior to fill, stone or concrete placement. Any unsuitable soil detected during this evaluation should be undercut as directed by the Geotechnical Engineer. Footing excavations should be protected from surface water run-off and freezing. If water is allowed to accumulate within a footing excavation and soften the bearing soils, or if the bearing soils are allowed to freeze, the deficient soils should be removed from the excavation prior to concrete placement.

C. Settlements

If the site is prepared in accordance with the "Site Preparation and Fill Placement/Compaction" section of this report, maximum anticipated column loads of 20 kips and an allowable net soil bearing pressure of 2,000 psf; post-construction settlements are expected to range from $\frac{3}{4}$ to 1 inch. Differential settlements are expected to be $\frac{3}{4}$ -inch or less. It is recommended that the proposed slab-on-grade be made independent of the perimeter wall footing to allow it to settle independently.

D. Floor Slab Recommendations

The grade slabs for the proposed building will generally be placed on the newly placed fill. To provide a uniform coefficient of subgrade reaction, it is recommended that a crushed stone layer, having a minimum thickness of 8 inches, be placed between all grade slabs and the underlying subgrade. A modulus of subgrade reaction k of 100 pounds per cubic inch (pci) can be assigned to the properly prepared existing or newly placed fill soils.

All floor slabs should have an adequate number of saw-cut and/or tooled controlled joints to minimize cracking of the slab.

E. Construction Considerations

It is mandated by the Occupational Safety and Health Administration (OSHA) that all excavations, whether they be utility trenches, basement excavations, or footing excavations, be construction in accordance with the reviewed OSHA guidelines. It is our understanding that these regulations are being strictly enforced and if they are not closely followed, the owner and the contractor could be liable for substantial penalties.

The contractor is solely responsible for designing and constructing stable, temporary excavations and should shore, slope, or bench the sides of the excavations as required to maintain stability of both the excavation sides and bottom. The contractor's responsible person, as defined in 29 CFR Part 1926, should evaluate the soil exposed in the excavations as part of the contractor's safety procedures. In no case should slope height, slope inclination, or excavation depth, including utility trench excavation depth, exceed those specified in local, state, and federal safety regulations.

F. Groundwater

Groundwater is not likely to be encountered in excavations for the proposed building. It is important to remember that if construction grading begins during the wet season (November through April), the difficulties handling water will be much greater than if it begins during the dry season.

IV. REPORT LIMITATIONS

The recommendations submitted are based on the available soil information obtained by City of Concord Engineering Department and design details furnished by Clear Span for the proposed project. If there are any revisions to the plans for this project or if deviations from the subsurface conditions noted in this report are encountered during construction, we should be notified immediately to determine if changes in the foundation, or other, recommendations are required.

The geotechnical engineer warrants that the findings, recommendations, specifications, or professional advice contained herein have been made in accordance with generally accepted professional geotechnical engineering practices in the local area. No other warranties are implied or expressed.

After the plans and specifications are more complete, the geotechnical engineer should be provided the opportunity to review the final design plans and specifications to assure our engineering recommendations have been properly incorporated into the design documents. At that time, it may be necessary to submit supplementary recommendations. This report has been prepared for the exclusive use of the Concord Transportation Department for the Salt Storage Building, in Concord North Carolina.

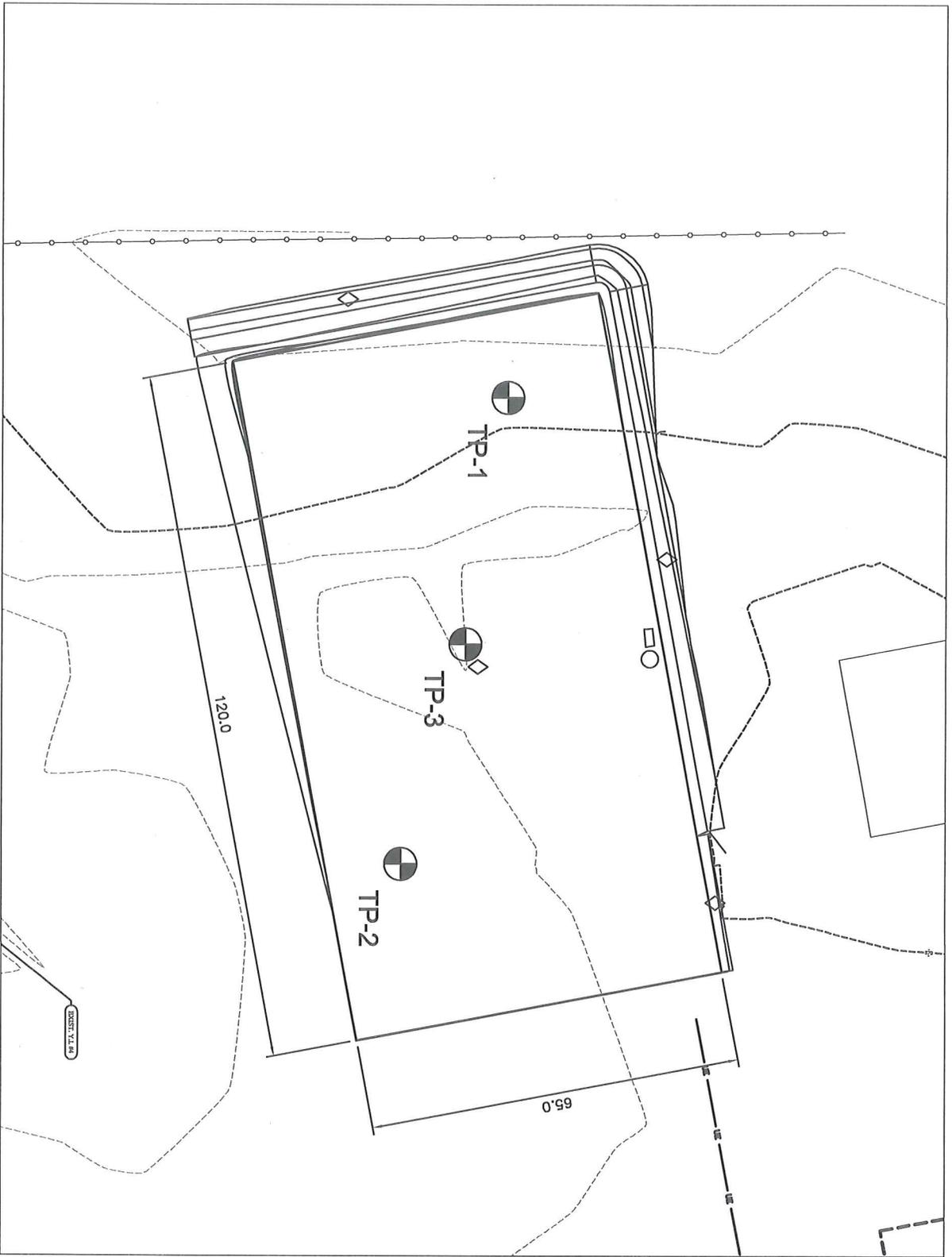
Test Pit Log
Project No. 2015-023

BORING LOCATION	DEPTH (FT) ¹	SOIL DESCRIPTION	CONE PENETROMETER	
			DEPTH (FT) ¹	BLOWS ² () ³
Test Pit 1 (TP-1)	0 – 0.5	NCDOT ABC	--	--
	0.5 – 4.0	FILL – Red Clayey SILT (MH) with Brick and Concrete fragments	1.0 2.0	5-10-12 (11) 12-9-13 (11)
	4.0 – 6.0	FILL – Grayish Red Clayey SILT (MH) with Brick and Concrete fragments	4.0	7-6-6 (6)
	6.0	Refusal due to concrete slab/Test Pit Terminated	--	--
Test Pit 2 (TP-2)	0 – 0.5	NCDOT ABC	--	--
	0.5 – 8.0	RESIDUAL – Tan Sandy SILT (ML)	1.0 2.0 4.0 6.0	25+ 23 25+ 7-9-15 (12)
	8.0 – 10.0	RESIDUAL – Tannish Brown Sandy SILT (ML)	8.0	10-16-17 (16)
	10.0	Test Pit Terminated	--	--
Test Pit 3 (TP-3)	0 - 0.5	NCDOT ABC	--	--
	0.5 – 9.0	FILL – Red Clayey SILT (MH)	1.0 2.0 4.0 6.0 8.0	7-7-10 (8) 4-6-8 (7) 5-6-6 (6) 7-7-7 (7) 5-6-6 (6)
	9.0 – 10.0	FILL – Dark Brown Sandy SILT (ML) with Organic material	--	--
	10.0	Test Pit Terminated	--	--

1 Approximate footing depth below the existing grade
2 Blows per 1-3/4 inches
3 Blow count average

APPENDIX

DRAWING NO. 1: SALT BUILDING – TEST PIT LOCATIONS



LEGEND

○ - APPROXIMATE LOCATION OF TEST PIT

● - TEST PIT #

PLAN
SCALE: NOT TO SCALE



PREPARED BY
ENGINEERING DEPARTMENT
CITY OF CONCORD
P.O. BOX 308
CONCORD N.C. 28026
(704) 920-5425

DRAWING NO. 1
SALT BUILDING - TEST PIT LOCATIONS
PROJECT # : 2015-023

DESIGNED BY: CMS
DRAWN BY: CMS
CHECKED BY: RAB
SCALE: NOT TO SCALE
DATE: 8/6/2015
PROJECT NUMBER: 2015-023
SHEET: 1 OF: 1