This Addendum Number One is issued this 17th day of May 2022, to all parties who hold a set of Bid Documents for the project entitled “TOWN OF VASS PHASE 2 SEWER EXTENSION PROJECT.” This Addendum Number One shall become part of the Contract Documents, and its receipt acknowledged on the Bid Documents at the time of bidding.

The following changes and clarifications shall be made to the Contract Documents:

**General**

1. As a reminder, sealed bids will be received at the Moore County Financial Services Department, located at 206 South Ray Street, Carthage, North Carolina, until **4:00 p.m. on May 31, 2022**, and will then be publicly opened and ready aloud. A pre-bid meeting will be held on **May 17, 2022 at 1:00 p.m.** at the Moore County Public Utilities Building, 5227 US 15-501, Carthage, North Carolina 28327. Attendance at the pre-bid conference is encouraged but not required.

2. As a reminder, Pump Prequalification submittals will be accepted until 5 p.m. on May 17th, 2022.

3. The Bid Schedule for Contract 1 has been revised to include Bid Alternates A1 and A2. The Bid Schedule for Contract 4 has been revised to include Bid Alternate A3. Both revised bid schedules are attached.

**Specifications**

1. Section 223120, ADD Part 1.3.C to include pump characteristics for Bid Alternate for V5 lift station.

2. Appendices – Updated approvals to the NCDOT Encroachment Agreement and the NCDOT Encroachment Agreement for Controlled Access are provided as attached. These adjust the date of authorization to commence construction to the end of 2022 and through May of 2023, respectively.
1. Sheets G-001 (Cover Sheet), C-202A, E-102A, and E-601A have been added to represent Bid Alternates A1, A2 and A3. Bidder shall provide pricing for Bid Alternates as described in the Revised Bid Schedule and contained on the revised plan sheets.

2. Sheet C-201: Revise V4 Wetwell Invert to 228.15.

3. Sheet C-133: Revise V4 Wetwell Sump Elevation to 228.15.

4. Sheet C-125: Remove from Bid Plans. This sheet is not included in the project scope, as reflected by C-101.

This Addendum Number One is issued this the 17th day of May 2022.

David L. Honeycutt, P.E.

5 Regional Circle, Suite A
Pinehurst, North Carolina 28374
BID FORM FOR

CONSTRUCTION CONTRACT 1

The terms used in this Bid with initial capital letters have the meanings stated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

ARTICLE 1—OWNER AND BIDDER

1.01 This Bid is submitted to:

County of Moore
206 South Ray Street
Carthage, North Carolina 28327

1.02 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

ARTICLE 2—ATTACHMENTS TO THIS BID

2.01 The following documents are submitted with and made a condition of this Bid:

A. Required Bid security;
B. List of Proposed Subcontractors;
C. List of Proposed Suppliers;
D. Evidence of authority to do business in the state of the Project; or a written covenant to obtain such authority within the time for acceptance of Bids;
E. Contractor’s license number as evidence of Bidder’s State Contractor’s License or a covenant by Bidder to obtain said license within the time for acceptance of Bids;
F. Required Bidder Qualification Statement with supporting data; and
G. If Bid amount exceeds $10,000, signed Compliance Statement (RD 400-6). Refer to specific equal opportunity requirements set forth in the Supplemental General Conditions;
H. If Bid amount exceeds $25,000, signed Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion - Lower Tier Covered Transactions (AD-1048);
I. If Bid amount exceeds $100,000, signed RD Instruction 1940-Q, Exhibit A-1, Certification for Contracts, Grants, and Loans.
J. [List other documents and edit above as pertinent].
K. E-Verify
L. Minority Participation Certification
M. Non-collusion Affidavit

ARTICLE 3—BASIS OF BID—LUMP SUM BID AND UNIT PRICES

3.01 Lump Sum Bids

A. Bidder will complete the Work in accordance with the Contract Documents for the following lump sum (stipulated) price(s), together with any Unit Prices indicated in Paragraph 3.02:

1. Lump Sum Price (Single Lump-Sum)

| Lump Sum Bid Price | $ |

2. Lump Sum Price (Base Bid and Alternates)

| Lump Sum Bid Price for Base Bid | $ |
| Alternate A [Add] [Deduct] | $ |
| Alternate B [Add] [Deduct] | $ |

3. Lump Sum Price (Sectional Lump-Sum Bids)

| Lump Sum Bid Price for Section I only | $ |
| Lump Sum Bid Price for Section II only | $ |
| Lump Sum Bid Price for Section I and II | $ |

B. All specified cash allowance(s) are included in the price(s) set forth below, and have been computed in accordance with Paragraph 13.02 of the General Conditions.

| Lump Sum for Cash Allowance 1 | $ |
| Lump Sum for Cash Allowance 2 | $ |
| Lump Sum for Cash Allowance 3 | $ |
| Total for all Lump Sum for Cash Allowances | $ |

C. All specified contingency allowances are included in the price(s) set forth below, and have been computed in accordance with Paragraph 13.02 of the General Conditions.

| Lump Sum Contingency Allowance 1 | $ |
| Lump Sum Contingency Allowance 2 | $ |
| Lump Sum Contingency Allowance 3 | $ |
| Total for all Lump Sum Contingency Allowances | $ |

3.02 Unit Price Bids

A. Bidder will perform the following Work at the indicated unit prices:
**CONTRACT 1 BID SCHEDULE**  
**VASS PHASE 2 SEWER EXTENSION**  
**MOORE COUNTY, NORTH CAROLINA**

<table>
<thead>
<tr>
<th>ITEM NO.</th>
<th>DESCRIPTION</th>
<th>UNIT</th>
<th>ESTIMATED QUANTITY</th>
<th>BID UNIT PRICE</th>
<th>BID AMOUNT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Mobilization (Maximum 3% of Total Construction)</td>
<td>LS</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>8&quot; SDR 26 PVC Sewer Line</td>
<td>LF</td>
<td>11,425</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>8&quot; DIP Class 350 Sewer Line</td>
<td>LF</td>
<td>1,786</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>4&quot; Diameter Precast Manhole, 0'-8' Depth</td>
<td>EA</td>
<td>43</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>4&quot; Diameter Precast Manhole, 8'-12' Depth</td>
<td>EA</td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>5&quot; Diameter Precast Manhole, 8'-12' Depth</td>
<td>EA</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>5&quot; Diameter Precast Manhole, 12' + Depth</td>
<td>EA</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>Inside Drop Manhole Connection</td>
<td>EA</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>4&quot; Diameter Doghouse Manhole</td>
<td>EA</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td>Add Watertight Lid on 4' Dia. Manhole</td>
<td>EA</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11.</td>
<td>18-inch Steel Encasement Pipe by Bore and Jack with 8&quot; DIP Carrier Pipe, Secondary Roads</td>
<td>LF</td>
<td>125</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12.</td>
<td>2&quot; SDR 21 PVC Force Main</td>
<td>LF</td>
<td>2,052</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13.</td>
<td>NOT USED</td>
<td>-</td>
<td>-</td>
<td></td>
<td>-</td>
</tr>
<tr>
<td>14.</td>
<td>Dry Bore 2&quot; Force Main</td>
<td>LF</td>
<td>50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15.</td>
<td>NOT USED</td>
<td>-</td>
<td>-</td>
<td></td>
<td>-</td>
</tr>
<tr>
<td>16.</td>
<td>Connect to Existing Manhole</td>
<td>EA</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17.</td>
<td>Sewer Tap with Wye and Cleanout</td>
<td>EA</td>
<td>57</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18.</td>
<td>4&quot; PVC Service Lateral by Open Cut</td>
<td>LF</td>
<td>1,600</td>
<td></td>
<td></td>
</tr>
<tr>
<td>19.</td>
<td>4&quot; PVC Service Lateral by Bore</td>
<td>LF</td>
<td>2,050</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20.</td>
<td>Ductile Iron Fittings</td>
<td>LB</td>
<td>1,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>21.</td>
<td>NOT USED</td>
<td>-</td>
<td>-</td>
<td></td>
<td>-</td>
</tr>
<tr>
<td>22.</td>
<td>NOT USED</td>
<td>-</td>
<td>-</td>
<td></td>
<td>-</td>
</tr>
<tr>
<td>23.</td>
<td>2&quot; Asphalt Overlay</td>
<td>SY</td>
<td>2,900</td>
<td></td>
<td></td>
</tr>
<tr>
<td>24.</td>
<td>Asphalt Road Repair</td>
<td>LF</td>
<td>4,200</td>
<td></td>
<td></td>
</tr>
<tr>
<td>25.</td>
<td>Asphalt Drive Repair</td>
<td>LF</td>
<td>225</td>
<td></td>
<td></td>
</tr>
<tr>
<td>26.</td>
<td>Concrete Drive Repair</td>
<td>LF</td>
<td>100</td>
<td></td>
<td></td>
</tr>
<tr>
<td>27.</td>
<td>Gravel Drive Repair</td>
<td>LF</td>
<td>2,200</td>
<td></td>
<td></td>
</tr>
<tr>
<td>28.</td>
<td>Washed Stone Pipe Embedment (wet conditions)</td>
<td>TN</td>
<td>200</td>
<td></td>
<td></td>
</tr>
<tr>
<td>29.</td>
<td>Select Backfill</td>
<td>CY</td>
<td>800</td>
<td></td>
<td></td>
</tr>
<tr>
<td>30.</td>
<td>Silt Fence</td>
<td>LF</td>
<td>15,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>31.</td>
<td>Rip Rap Check Dams</td>
<td>EA</td>
<td>86</td>
<td></td>
<td></td>
</tr>
<tr>
<td>32.</td>
<td>Coir Fiber Wattles</td>
<td>LF</td>
<td>3,200</td>
<td></td>
<td></td>
</tr>
<tr>
<td>33.</td>
<td>Temporary Ditch Liner</td>
<td>SY</td>
<td>4,400</td>
<td></td>
<td></td>
</tr>
<tr>
<td>34.</td>
<td>Pipe and Catch Basin Inlet Protection</td>
<td>EA</td>
<td>17</td>
<td></td>
<td></td>
</tr>
<tr>
<td>35.</td>
<td>Outlet Protection</td>
<td>EA</td>
<td>12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>36.</td>
<td>Traffic Control</td>
<td>LS</td>
<td>1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**TOTAL OF CONTRACT 1 UNIT PRICE BID ITEMS**  

(WRITE OUT CONTRACT 1 TOTAL BID PRICE IN WORDS)

---

**EJCDC® C-410, Bid Form for Construction Contract 1**  
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Modified to include RD edits from RUS Bulletin 1780-26 (6/16/2020).  
Page 3 of 10
C. Bidder acknowledges that:

1. each Bid Unit Price includes an amount considered by Bidder to be adequate to cover Contractor’s overhead and profit for each separately identified item, and

2. estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all Unit Price Work will be based on actual quantities, determined as provided in the Contract Documents.

3.03 Total Contract 1 Bid Price (Lump Sum and Unit Prices)

| ITEM NO. | DESCRIPTION | UNIT | QUANTITY | UNIT PRICE | TOTAL
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A1</td>
<td>4&quot; SDR-21 PVC Force Main in lieu of Item No. 12 - 2&quot; SDR-21 PVC Force Main. Unit price shall be an addition to or a deduction from the unit price provided in Item No. 12 for 2&quot; SDR-21 PVC Force Main</td>
<td>LF</td>
<td>2052</td>
<td>Add or Deduct (circle one)</td>
<td></td>
</tr>
</tbody>
</table>

Note: Alternate bid unit price will be added or deducted from the unit price for line item 12 to determine total unit price for 4" force main.

3.04 Multiple Contract Provisions

A. Contractor will accept award of the following other contracts combined with Contract 1 to be completed concurrently.

1. Contract 2 ___ Yes ____ No

   Deduct in Mobilization if awarded Contracts 1 and 2 $___________

   Total Contract Time for combined Contract 1 and 2 shall be:
   
   Substantial Completion: 330 days,
   
   Final Completion: 360 days

2. Contract 3 ___ Yes ____ No

   Deduct in Mobilization if awarded Contracts 1 and 3 $___________

   Total Contract Time for combined Contract 1 and 3 shall be:
   
   Substantial Completion: 330 days,
   
   Final Completion: 360 days
3. Contract 2 and 3 ___ Yes ____ No

Deduct in Mobilization if awarded Contracts 1, 2 and 3 $__________

Total Contract Time for combined Contract 1, 2 and 3 shall be:

Substantial Completion: 365 days,

Final Completion: 395 days

ARTICLE 4—BASIS OF BID—COST-PLUS-FEE

4.01 The Contract Price will be the Cost of the Work, determined as provided in Paragraph 13.01 of the General Conditions, together with the following fee, and subject to the Guaranteed Maximum Price.

4.02 Contractor’s Fee

A. Contractor’s fee will be [number] percent of the Cost of the Work. No fee will be payable on the basis of costs itemized as excluded in Paragraph 13.01.C of the General Conditions.

1. The maximum amount payable by Owner as a percentage fee (Guaranteed Maximum Fee) will not exceed $[insert cap amount], subject to increases or decreases for changes in the Work.

B. Contractor’s fee will be determined by applying the following percentages to the various portions of the Cost of the Work as defined in Article 13 of the General Conditions. No fee will be payable on the basis of costs itemized as excluded in Paragraph 13.01.C of the General Conditions:

<table>
<thead>
<tr>
<th>Costs</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Payroll costs (See Paragraph 13.01.B.1, General Conditions)</td>
<td></td>
</tr>
<tr>
<td>Materials and Installed Equipment cost (GC-13.01.B.2)</td>
<td></td>
</tr>
<tr>
<td>Amounts to be paid to Subcontractors (GC-13.01.B.3)</td>
<td></td>
</tr>
<tr>
<td>Amount to be paid to special consultants (GC-13.01.B.4)</td>
<td></td>
</tr>
<tr>
<td>Other costs (GC-13.01.B.5)</td>
<td></td>
</tr>
</tbody>
</table>

1. The maximum amount payable by Owner as a percentage fee (Guaranteed Maximum Fee) will not exceed $[insert cap amount], subject to increases or decreases for changes in the Work.

C. Contractor’s fee will be the fixed sum of $[number].

4.03 Guaranteed Maximum Price

A. The Guaranteed Maximum Price to Owner of the Cost of the Work including Contractor’s Fee will not exceed $[Bidder fill in GMP].

Deleted
ARTICLE 5—PRICE-PLUS-TIME BID

5.01  
Price-Plus-Time Contract Award (Stipulated Price Contract)

A. The Bidder to which an award of the Contract will be made will be determined in part on the basis of the Total Bid Price and the total number of calendar days to substantially complete the Work, in accordance with the following:

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Total Bid Price</td>
<td>$[number]</td>
</tr>
<tr>
<td>2. Total number of calendar days to substantially complete the Work</td>
<td>[number] days</td>
</tr>
<tr>
<td>3. Liquidated Damages Rate (from Agreement)</td>
<td>$[number]/day</td>
</tr>
</tbody>
</table>

B. The purpose of the process in the table above is only to calculate the lowest price-plus-time (A+B) bid amount for bid comparison purposes. The price for completion of the Work (the Contract Price) is the Total Bid Price.

C. Bonds required under Paragraph 6.01 of the General Conditions will be based on the Contract Price.

5.02  
Price-Plus-Time Contract Award (Cost Plus Fee with Guaranteed Maximum Price Contract)

A. The Bidder to which an award of Contract will be made will be determined in part on the basis of the Guaranteed Maximum Price and the total number of calendar days to substantially complete the Work, in accordance with the following:

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Guaranteed Maximum Price</td>
<td>$[number]</td>
</tr>
<tr>
<td>2. Total number of calendar days to substantially complete the Work</td>
<td>[number] days</td>
</tr>
<tr>
<td>3. Liquidated Damages Rate (from Agreement)</td>
<td>$[number]/day</td>
</tr>
</tbody>
</table>

B. The purpose of the process in the table above is only to calculate the lowest price-plus-time (A+B) bid amount for bid comparison purposes. The price for completion of the Work (the Contract Price) is based on the cost of the Work, plus a fee, subject to a guaranteed maximum price, as set forth in the Agreement.

C. Bonds required under Paragraph 6.01 of the General Conditions will be based on the Contract Price.

Deleted
ARTICLE 6—TIME OF COMPLETION

6.01 Bidder agrees that the Work will be substantially complete and will be completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.

6.02 Bidder agrees that the Work will be substantially complete on or before [Bidder inserts date], and will be completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before [Bidder inserts date].

Deleted

6.03 Bidder agrees that the Work will be substantially complete within [Bidder inserts number] calendar days after the date when the Contract Times commence to run as provided in Paragraph 4.01 of the General Conditions, and will be completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions within [Bidder inserts number] calendar days after the date when the Contract Times commence to run.

Deleted

6.04 Bidder accepts the provisions of the Agreement as to liquidated damages.

ARTICLE 7—BIDDER’S ACKNOWLEDGEMENTS: ACCEPTANCE PERIOD, INSTRUCTIONS, AND RECEIPT OF ADDENDA

7.01 Bid Acceptance Period
   A. This Bid will remain subject to acceptance for 90 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

7.02 Instructions to Bidders
   A. Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security.

7.03 Receipt of Addenda
   A. Bidder hereby acknowledges receipt of the following Addenda: [Add rows as needed. Bidder is to complete table.]

<table>
<thead>
<tr>
<th>Addendum Number</th>
<th>Addendum Date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

ARTICLE 8—BIDDER’S REPRESENTATIONS AND CERTIFICATIONS

8.01 Bidder’s Representations
   A. In submitting this Bid, Bidder represents the following:
      1. Bidder has examined and carefully studied the Bidding Documents, including Addenda.
2. Bidder has visited the Site, conducted a thorough visual examination of the Site and adjacent areas, and become familiar with the general, local, and Site conditions that may affect cost, progress, and performance of the Work.

3. Bidder is familiar with all Laws and Regulations that may affect cost, progress, and performance of the Work, including all American Iron and Steel requirements.

4. Bidder has carefully studied the reports of explorations and tests of subsurface conditions at or adjacent to the Site and the drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, with respect to the Technical Data in such reports and drawings.

5. Bidder has carefully studied the reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, with respect to Technical Data in such reports and drawings.

6. Bidder has considered the information known to Bidder itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and the Technical Data identified in the Supplementary Conditions or by definition, with respect to the effect of such information, observations, and Technical Data on (a) the cost, progress, and performance of the Work; (b) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, if selected as Contractor; and (c) Bidder’s (Contractor’s) safety precautions and programs.

7. Based on the information and observations referred to in the preceding paragraph, Bidder agrees that no further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract.

8. Bidder is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.

9. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and of discrepancies between Site conditions and the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.

10. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

11. The submission of this Bid constitutes an incontrovertible representation by Bidder that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

8.02 Bidder’s Certifications

A. The Bidder certifies the following:
1. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation.

2. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid.

3. Bidder has not solicited or induced any individual or entity to refrain from bidding.

4. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 8.02.A:
   a. Corrupt practice means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process.
   b. Fraudulent practice means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Owner, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition.
   c. Collusive practice means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish bid prices at artificial, non-competitive levels.
   d. Coercive practice means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.
BIDDER hereby submits this Bid as set forth above:

Bidder:

________________________________________________________________________
(typed or printed name of organization)

By: ________________________________________________________________
(individual’s signature)

Name: ______________________________________________________________
(typed or printed)

Title: _______________________________________________________________
(typed or printed)

Date: _______________________________________________________________
(typed or printed)

If Bidder is a corporation, a partnership, or a joint venture, attach evidence of authority to sign.

Attest: ______________________________________________________________
(individual’s signature)

Name: ______________________________________________________________
(typed or printed)

Title: _______________________________________________________________
(typed or printed)

Date: _______________________________________________________________
(typed or printed)

Address for giving notices:
____________________________________________________________________
____________________________________________________________________

Bidder’s Contact:

Name: _______________________________________________________________
(typed or printed)

Title: _______________________________________________________________
(typed or printed)

Phone: ______________________________________________________________

Email: _______________________________________________________________

Address: _____________________________________________________________
____________________________________________________________________
____________________________________________________________________

Bidder’s Contractor License No.: (if applicable) ____________________________
BID FORM FOR

CONSTRUCTION CONTRACT 4

The terms used in this Bid with initial capital letters have the meanings stated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

ARTICLE 1—OWNER AND BIDDER

1.01 This Bid is submitted to:

County of Moore
206 South Ray Street
Carthage, North Carolina 28327

1.02 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

ARTICLE 2—ATTACHMENTS TO THIS BID

2.01 The following documents are submitted with and made a condition of this Bid:

A. Required Bid security;
B. List of Proposed Subcontractors;
C. List of Proposed Suppliers;
D. Evidence of authority to do business in the state of the Project; or a written covenant to obtain such authority within the time for acceptance of Bids;
E. Contractor’s license number as evidence of Bidder’s State Contractor’s License or a covenant by Bidder to obtain said license within the time for acceptance of Bids;
F. Required Bidder Qualification Statement with supporting data; and
G. [List other documents and edit above as pertinent].

G. If Bid amount exceeds $10,000, signed Compliance Statement (RD 400-6). Refer to specific equal opportunity requirements set forth in the Supplemental General Conditions;

H. If Bid amount exceeds $25,000, signed Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion - Lower Tier Covered Transactions (AD-1048);

I. If Bid amount exceeds $100,000, signed RD Instruction 1940-Q, Exhibit A-1, Certification for Contracts, Grants, and Loans.

J. [List other documents and edit above as pertinent].

K. E-Verify
L. Minority Participation Certification
M. Non-collusion Affidavit

ARTICLE 3—BASIS OF BID—LUMP SUM BID AND UNIT PRICES

3.01 Lump Sum Bids

A. Bidder will complete the Work in accordance with the Contract Documents for the following lump sum (stipulated) price(s), together with any Unit Prices indicated in Paragraph 3.02:

1. Lump Sum Price (Single Lump Sum)
   - Lump Sum Bid Price
     $  

2. Lump Sum Price (Base Bid and Alternates)
   - Lump Sum Bid Price for Base Bid
     $  
   - Alternate A [Add] [Deduct]
     $  
   - Alternate B [Add] [Deduct]
     $  

3. Lump Sum Price (Sectional Lump Sum Bids)
   - Lump Sum Bid Price for Section I only
     $  
   - Lump Sum Bid Price for Section II only
     $  
   - Lump Sum Bid Price for Section I and II
     $  

B. All specified cash allowance(s) are included in the price(s) set forth below, and have been computed in accordance with Paragraph 13.02 of the General Conditions.

   - Lump Sum for Cash Allowance 1
     $  
   - Lump Sum for Cash Allowance 2
     $  
   - Lump Sum for Cash Allowance 3
     $  
   - Total for all Lump Sum for Cash Allowances
     $  

C. All specified contingency allowances are included in the price(s) set forth below, and have been computed in accordance with Paragraph 13.02 of the General Conditions.

   - Lump Sum Contingency Allowance 1
     $  
   - Lump Sum Contingency Allowance 2
     $  
   - Lump Sum Contingency Allowance 3
     $  
   - Total for all Lump Sum Contingency Allowances
     $  

3.02 Unit Price Bids

A. Bidder will perform the following Work at the indicated unit prices:
B. Bidder acknowledges that:

1. each Bid Unit Price includes an amount considered by Bidder to be adequate to cover Contractor’s overhead and profit for each separately identified item, and

2. estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all Unit Price Work will be based on actual quantities, determined as provided in the Contract Documents.

3. Total Bid Price (Lump Sum and Unit Prices)

<table>
<thead>
<tr>
<th>ITEM NO.</th>
<th>DESCRIPTION</th>
<th>UNIT</th>
<th>QUANTITY</th>
<th>UNIT PRICE</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>A3</td>
<td>Lift Station V5 w/ Emergency Generator in lieu of Item No. 38 - Grinder Pump Station V5</td>
<td>LS</td>
<td>1</td>
<td>Add or Deduct (circle one)</td>
<td></td>
</tr>
</tbody>
</table>

Note: Alternate bid unit price will be added or deducted from the unit price for line item 38 to determine total unit price for Lift Station V5.

ARTICLE 4—BASIS OF BID—COST-PLUS FEE

4.01 The Contract Price will be the Cost of the Work, determined as provided in Paragraph 13.01 of the General Conditions, together with the following fee, and subject to the Guaranteed Maximum Price.

4.02 Contractor’s Fee

A. Contractor’s fee will be [number] percent of the Cost of the Work. No fee will be payable on the basis of costs itemized as excluded in Paragraph 13.01.C of the General Conditions.

1. The maximum amount payable by Owner as a percentage fee [Guaranteed Maximum Fee] will not exceed $[insert cap amount], subject to increases or decreases for changes in the Work.
B. Contractor’s fee will be determined by applying the following percentages to the various portions of the Cost of the Work as defined in Article 13 of the General Conditions. No fee will be payable on the basis of costs itemized as excluded in Paragraph 13.01.C of the General Conditions:

<table>
<thead>
<tr>
<th>Costs</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Payroll costs (See Paragraph 13.01.B.1, General Conditions)</td>
<td></td>
</tr>
<tr>
<td>Materials and Installed Equipment cost (GC-13.01.B.2)</td>
<td></td>
</tr>
<tr>
<td>Amounts to be paid to Subcontractors (GC-13.01.B.3)</td>
<td></td>
</tr>
<tr>
<td>Amount to be paid to special consultants (GC-13.01.B.4)</td>
<td></td>
</tr>
<tr>
<td>Other costs (GC-13.01.B.5)</td>
<td></td>
</tr>
</tbody>
</table>

1. The maximum amount payable by Owner as a percentage fee (Guaranteed Maximum Fee) will not exceed $[insert cap amount], subject to increases or decreases for changes in the Work.

C. Contractor’s fee will be the fixed sum of $[number].

4.03 Guaranteed Maximum Price

A. The Guaranteed Maximum Price to Owner of the Cost of the Work including Contractor’s Fee will not exceed $[Bidder fill in GMP].

Deleted

ARTICLE 5—PRICE-PLUS-TIME BID

5.01 Price-Plus-Time Contract Award (Stipulated Price Contract)

A. The Bidder to which an award of the Contract will be made will be determined in part on the basis of the Total Bid Price and the total number of calendar days to substantially complete the Work, in accordance with the following:

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>A 1. Total Bid Price</td>
<td>$[number]</td>
</tr>
<tr>
<td>A 2. Total number of calendar days to substantially complete the Work</td>
<td>[number] days</td>
</tr>
<tr>
<td>B 4. Liquidated Damages Rate (from Agreement)</td>
<td>$[number] /day</td>
</tr>
<tr>
<td>A+B 5. Amount for Comparison of Bids</td>
<td>$[number]</td>
</tr>
</tbody>
</table>

B. The purpose of the process in the table above is only to calculate the lowest price-plus-time (A+B) bid amount for bid comparison purposes. The price for completion of the Work (the Contract Price) is the Total Bid Price.

C. Bonds required under Paragraph 6.01 of the General Conditions will be based on the Contract Price.
5.02 ***Price-Plus-Time Contract Award (Cost Plus Fee with Guaranteed Maximum Price Contract)***

A. The Bidder to which an award of Contract will be made will be determined in part on the basis of the Guaranteed Maximum Price and the total number of calendar days to substantially complete the Work, in accordance with the following:

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Guaranteed Maximum Price</td>
<td>$[number]</td>
</tr>
<tr>
<td>2. Total number of calendar days to substantially complete the Work</td>
<td>[number] days</td>
</tr>
<tr>
<td>3. Liquidated Damages Rate (from Agreement)</td>
<td>$[number]/day</td>
</tr>
<tr>
<td>4. Adjustment Amount (2 x 3)</td>
<td>$[number]</td>
</tr>
<tr>
<td>A+B</td>
<td>$[number]</td>
</tr>
</tbody>
</table>

B. The purpose of the process in the table above is only to calculate the lowest price-plus-time (A+B) bid amount for bid comparison purposes. The price for completion of the Work (the Contract Price) is based on the cost of the Work, plus a fee, subject to a guaranteed maximum price, as set forth in the Agreement.

C. Bonds required under Paragraph 6.01 of the General Conditions will be based on the Contract Price.

Deleted

**ARTICLE 6—TIME OF COMPLETION**

6.01 Bidder agrees that the Work will be substantially complete and will be completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.

6.02 Bidder agrees that the Work will be substantially complete on or before [Bidder inserts date], and will be completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before [Bidder inserts date].

Deleted

6.03 Bidder agrees that the Work will be substantially complete within [Bidder inserts number] calendar days after the date when the Contract Times commence to run as provided in Paragraph 4.01 of the General Conditions, and will be completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions within [Bidder inserts number] calendar days after the date when the Contract Times commence to run.

Deleted

6.04 Bidder accepts the provisions of the Agreement as to liquidated damages.
ARTICLE 7—BIDDER’S ACKNOWLEDGEMENTS: ACCEPTANCE PERIOD, INSTRUCTIONS, AND RECEIPT OF ADDENDA

7.01 Bid Acceptance Period
A. This Bid will remain subject to acceptance for 90 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

7.02 Instructions to Bidders
A. Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security.

7.03 Receipt of Addenda
A. Bidder hereby acknowledges receipt of the following Addenda: [Add rows as needed. Bidder is to complete table.]

<table>
<thead>
<tr>
<th>Addendum Number</th>
<th>Addendum Date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

ARTICLE 8—BIDDER’S REPRESENTATIONS AND CERTIFICATIONS

8.01 Bidder’s Representations
A. In submitting this Bid, Bidder represents the following:
   1. Bidder has examined and carefully studied the Bidding Documents, including Addenda.
   2. Bidder has visited the Site, conducted a thorough visual examination of the Site and adjacent areas, and become familiar with the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
   3. Bidder is familiar with all Laws and Regulations that may affect cost, progress, and performance of the Work, including all American Iron and Steel requirements.
   4. Bidder has carefully studied the reports of explorations and tests of subsurface conditions at or adjacent to the Site and the drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, with respect to the Technical Data in such reports and drawings.
   5. Bidder has carefully studied the reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, with respect to Technical Data in such reports and drawings.
   6. Bidder has considered the information known to Bidder itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and the Technical Data identified in the Supplementary Conditions or by definition, with respect to the effect of such information, observations, and Technical Data on (a) the cost, progress, and
performance of the Work; (b) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, if selected as Contractor; and (c) Bidder’s (Contractor’s) safety precautions and programs.

7. Based on the information and observations referred to in the preceding paragraph, Bidder agrees that no further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract.

8. Bidder is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.

9. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and of discrepancies between Site conditions and the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.

10. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

11. The submission of this Bid constitutes an incontrovertible representation by Bidder that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

8.02 Bidder’s Certifications

A. The Bidder certifies the following:

1. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation.

2. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid.

3. Bidder has not solicited or induced any individual or entity to refrain from bidding.

4. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 8.02.A:

   a. Corrupt practice means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process.

   b. Fraudulent practice means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Owner, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition.

   c. Collusive practice means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish bid prices at artificial, non-competitive levels.

   d. Coercive practice means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.
BIDDER hereby submits this Bid as set forth above:

Bidder:

__________________________________________
(typed or printed name of organization)

By: ________________________________________
(individual's signature)

Name: ______________________________________
(typed or printed)

Title: ______________________________________
(typed or printed)

Date: ______________________________________
(typed or printed)

If Bidder is a corporation, a partnership, or a joint venture, attach evidence of authority to sign.

Attest: _____________________________________
(individual's signature)

Name: _____________________________________
(typed or printed)

Title: _____________________________________
(typed or printed)

Date: _____________________________________
(typed or printed)

Address for giving notices:

________________________________________

Bidder’s Contact:

Name: _____________________________________
(typed or printed)

Title: _____________________________________
(typed or printed)

Phone: _____________________________________

Email: _____________________________________

Address:

________________________________________

________________________________________

Bidder’s Contractor License No.: (if applicable) __________________________
SECTION 223120  SUBMERSIBLE NON-CLOG SEWAGE PUMP STATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including Modified General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SCOPE OF WORK

A. The work covered by this section consists of furnishing all parts, labor, equipment, materials and appliances and performing all operations for the installation of non-clog, motor-driven submersible sewage pumps, controls and accessories as shown on the drawings and as specified herein including, but not limited to wet well, valve vault, pumps, controls, electrical components, valves, piping, level control system and other accessories.

B. Submersible pumps with motors under this section shall be installed on lift-out rail systems, and shall include access hatch, controls, piping, valves and other necessary appurtenances as shown on the drawings and in accordance with the specifications herein stated.

C. Unless otherwise noted, all materials and equipment supplied under this Section shall be new, of good quality, and in good condition.

D. All pumps furnished shall be the product of a single manufacturer.

E. Related Sections include the following:

1. Division 31 Sections “Site Clearing” and “Earth Moving” for applications in site construction of sewage pump stations.
2. Division 32 Section “Fencing” for applications in site construction of sewage pump stations.
3. Division 33 Sections “Sanitary Sewer Pipe and Appurtenances” and “Exposed Piping” for applications in sewage pump stations.

1.3 SYSTEM DESCRIPTION

A. Pump Design: Each pump shall be of the submersible non-clog type with submersible motor. Pump shall be designed for automatic connection to the
discharge connection elbow, guided by no less than two (2) guide bars extending from the top of the station to the discharge elbow.

B. Capacities and Characteristics:

1. Location: Lift Station V4 (off Long Point Road)
2. Operating Conditions: **180** gpm @ 93’ TDH
3. Number of Pumps: **2**
4. Material to be Pumped: **Raw Wastewater**
5. Specifications:
   a. Type: Non-Clog Submersible.
   b. Impeller: vortex
   c. Minimum Solids Handling Capability: **3** inch diameter.
   d. Pump Size: **4** inch.
   e. Discharge Elbow Size: **4** Inch by **4** Inch.
   f. Riser Pipe Size: **4** Inch.
   g. Motor Data:
      1) Motor Type: Submersible
      2) Starter Type: RVSS
      3) Horsepower: **15** HP.
      4) Max. Speed: **3,600** RPM.
      5) Voltage: **208** Volts.
      6) Phases: **3**.
      7) Hertz: **60**.
      8) Enclosure: **NEMA 4X Stainless Steel**.
      9) All pumps (constant or variable speed) shall be provided with inverter duty motors suitable for operating on pulse-width modulation (PWM) type adjustable frequency drives.
      10) Thermal and Moisture Protection: Required.
      11) Impeller diameter for proposed design point shall not be the largest diameter available for selected pump. Minimum 0.25 inch larger impeller shall be available.

C. Capacities and Characteristics (**BID ALTERNATE, Addendum 1**):

1. Location: Lift Station V5 (off US-1 Business)
2. Operating Conditions: **124** gpm @ 64’ TDH
3. Number of Pumps: **2**
4. Material to be Pumped: Raw Wastewater
5. Specifications:
   a. Type: Non-Clog Submersible.
   b. Impeller: vortex
   c. Minimum Solids Handling Capability: **3** inch diameter.
   d. Pump Size: **4** inch.
   e. Discharge Elbow Size: **4** Inch by **4** Inch.
g. Motor Data:
   1) Motor Type: Submersible
   2) Starter Type: RVSS
   3) Horsepower: 15 HP.
   4) Max. Speed: 3,600 RPM.
   5) Voltage: 208 Volts.
   6) Phases: 3.
   7) Hertz: 60.
   8) Enclosure: NEMA 4X Stainless Steel.
   9) All pumps (constant or variable speed) shall be provided with inverter duty motors suitable for operating on pulse-width modulation (PWM) type adjustable frequency drives.
   10) Thermal and Moisture Protection: Required.
   11) Impeller diameter for proposed design point shall not be the largest diameter available for selected pump. Minimum 0.25 inch larger impeller shall be available.

1.4 SUBMITTALS

A. Product Data: For each type of product indicated. Include wet well, pump and appurtenance drawings, construction details, material descriptions, installation guidelines, technical manuals, and dimensions of individual components. Include rated capacities, pump curves, operating characteristics, electrical characteristics, control data, spare parts lists, and furnished specialties and accessories.

B. Structural Drawings: Detailed drawing and product submittals for the pre-cast concrete structure and accessories shall be submitted to the Engineer for approval. Submitted drawings shall be certified by a Professional Engineer licensed in the state where the project is located.

C. Design Computations: Design and buoyancy computations for the precast concrete foundation, walls, roof, and accessories shall be submitted to the Engineer for approval. Design computations shall be certified by a Professional Engineer licensed in the state where the project is located.

D. Wiring Diagrams: For power, signal, and control wiring.

E. Verification of Pumping Application: As part of the shop drawing submittal, the manufacturer shall supply a letter certifying that the manufacturer has reviewed the Contract drawings and specifications, including all addenda, and that the equipment and related accessories included in the shop drawing submittal are suitable for installation in the pumping application(s) proposed for the project.
F. Operation and Maintenance Manuals: The manufacturer shall submit operation and maintenance manuals for the equipment supplied in accordance with Division 01 Section “Operation and Maintenance Data”.

1.5 QUALITY ASSURANCE

A. Manufacturer: The pumps and all appurtenances shall be supplied by reputable manufacturers with at least ten (10) years of experience.

B. Factory Tests:

1. General: Each pump shall be subjected to run testing at the factory under simulated actual field conditions to check for proper motor and pump operation and watertightness, to check for excessive vibration, leaks, and operation of all automatic systems. The controls shall be adjusted to start and stop the pumps to satisfy field conditions.

2. Performance Test: For each pumping unit 10 HP and greater, a pump performance curve shall be produced from the factory testing in accordance with the ANSI/Hydraulic Institute standard 14.6, Grade 1B. Provide the Owner/Engineer the option of witnessing performance tests. The veracity of each of these tests shall be certified and the curves shall be identifiable by serial numbers of pumps and motors. Manufacturer shall submit electronic copies of certified test results for each pump to the Engineer prior to the shipment of the pumps. Results of the shop performance test shall meet the specified performance requirements as listed in this specification. Final acceptance of pumping units shall depend upon the satisfactory operation as demonstrated by the final field tests.

3. Pump Test: The pump manufacturer shall perform the following inspections and tests on each pump before shipment from factory:

   a. Impeller, motor rating and electrical connections shall first be checked for compliance to the customer’s purchase order.
   b. Insulation Test: A motor and cable insulation test for moisture content or insulation defects shall be made.
   c. Prior to submergence, the pump shall be run dry to establish correct rotation and mechanical integrity.
   d. Operational Test: The pump shall be run submerged in water to a minimum of six (6) feet for not less than 30 minutes simulating actual service conditions.
   e. After Operational Test, the Insulation Test is to be performed again.

4. Test each pump for mechanical and electrical correctness after installation.

5. Hydraulically test each pumping unit after installation and establish an actual pump curve.

C. Perform field tests specified in this Section.
D. Pumps shall meet or exceed the requirements of the Hydraulic Institute.

E. **The certification indicated above shall include a written statement indicating the foregoing steps have been done with each pump and shall be supplied to the Engineer prior to shipment of the pump.**

F. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

G. UL Compliance: Comply with UL 778 for motor-operated water pumps.

### 1.6 DELIVERY, STORAGE, AND HANDLING

A. The equipment and materials shall be delivered, stored and handled in strict accordance with the manufacturer’s recommendations.

B. Retain shipping flange protective covers and protective coatings during storage.

C. Protect bearings and couplings against damage.

D. Comply with pump manufacturer’s written rigging instructions for handling.

### 1.7 WARRANTY

A. Pump Warranty: The pump manufacturer shall warrant the units being supplied to the owner against defects in workmanship and material for a period of five (5) years from the date of Owner’s acceptance or 10,000 hours of operation under the Municipal Wastewater Permanent Installation Warranty Policy. The warranty shall be in printed form and apply to all similar units.

B. Appurtenances Warranty: All accessories and appurtenances shall be warranted against defects in workmanship and materials for a period of one (1) year from the date of Owner’s acceptance.

### 1.8 PUMP PREQUALIFICATION REQUIREMENT

A. In accordance with the prequalification requirements contained in the Contract Documents, the following equipment suppliers have been prequalified for this project:

1. Grundfos Pump Company

2. Wilo
Although certain manufacturers are listed above as acceptable to establish a level of quality, the specific listing of a manufacturer does not imply that their standard equipment will meet the specification, only that they are capable of meeting the specification. Prequalification does not omit the requirement for the Contractor and manufacturers to submit complete shop drawing submittals to the Engineer in accordance with the Contract Documents.

B. Additional manufacturers wishing to supply equipment for this project must submit a prequalification submittal for approval to the Engineer. The prequalification submittal must be received by the Engineer at least fourteen (14) days prior to the bid opening date to receive consideration. The submittal shall demonstrate that the proposed equipment meets the requirements of the Contract Specifications and Drawings. The Engineer will issue an addendum prior to the bid date listing the approved manufacturers. The prequalification submittal shall include, as a minimum, the following information:

1. Literature and cut sheets from manufacturer(s) describing equipment.
2. Pump operating curves.
3. Proposed motor sizes and speeds.
4. Proposed pump weights, efficiencies, bearing life, and NPSH required.
5. Copy of warranties.
6. List of at least five (5) references for similar installations, including contact names and current telephone numbers.
7. A written statement from the manufacturer indicating that the manufacturer has reviewed the proposed application as detailed in the Contract Drawings and Specifications, and that all equipment, materials and systems proposed to be supplied are appropriate and compatible for this specific application.

C. Note: The submittal of prequalification information does not omit the requirement for the Contractor and manufacturers to submit complete shop drawing submittals to the Engineer in accordance with the Contract Documents.

1.9 MANUFACTURER AND SUPPLIER INFORMATION

A. Manufacturer Nameplate: A manufacturer’s nameplate shall be securely, permanently, and conspicuously mounted to each individual piece of equipment furnished under this Section. The nameplate shall be constructed of a durable, non-corrosive material. Critical information shall be clearly engraved or otherwise permanently stamped on the nameplate, and shall be fully legible. The information contained on the manufacturer nameplate shall include at least the following:

1. Manufacturer’s Serial Number
2. Name, address and telephone number of equipment manufacturer
3. Model and/or Part Number, including pump impeller sizes, when applicable
4. Performance Criteria (i.e., capacity, design point, total dynamic head, etc.)
5. Motor size, speed and voltage
6. Enclosure Type or Rating
7. Any other pertinent information

B. Note: All equipment shall include a nameplate with a manufacturer serial number validating the equipment as new. Failure to meet these requirements will be cause for rejection of the equipment.

C. Supplier and Service Information: A durable nameplate, stamp or sticker shall be adhered to each individual piece of equipment containing the name, address, and telephone number of the local business that supplied the equipment, and the name, address and telephone number of the local business that can provide service and replacement parts for the equipment.

PART 2 - PRODUCTS

2.1 PUMPS

A. Submersible non-clog sewage pumps shall be capable of handling raw, unscreened sewage and be constructed of cast iron which complies with the requirements of ASTM A48, Class 30. All pump openings and passages, including impellers, shall be of adequate size to pass spheres at least three inches in diameter and trash or stringy material which commonly occurs in sanitary sewage. The casing and other components of the pump shall be large enough at all points to pass any size solid which can pass through the impeller.

B. Impellers shall provide an unobstructed passage through the volute and shall be of cast iron construction and dynamically balanced. Impellers shall be mounted in a solid stainless steel motor shaft. An oil chamber and two independent mechanical seals shall seal the motor from the pump liquid. Moisture detection probes shall be mounted in the oil chamber which is interlocked with the motor to shut down the pump and turn on a warning light on the motor control center when moisture is present in the oil chamber. Thermistors mounted in the bottom of the stator housing may be used instead of the moisture detection probes.

C. Mechanical seals shall consist of upper and lower seals. Both upper and lower seals shall have silicon carbide faces and silicon carbide rotating faces with stainless steel springs. The seals shall require neither maintenance nor adjustment and shall be easily replaceable.

D. The discharge connection elbows shall be permanently installed in the wet well along with the discharge piping. The pumps shall be automatically connected to
the discharge connection elbows when lowered into place and shall be easily removed for inspection and service. Installation and removal of pumps shall not require personnel to enter the wet well. Individual pump and motor removal shall not interfere with continued operation of remaining pump(s). Sealing of the pump units to discharge connections shall be accomplished by linear downward motion of the pumps. Discharge connections shall have contact surfaces of non-sparking materials. Discharge elbows shall be of cast iron with integral bases for anchoring and supporting pumps and piping. Flanges shall conform to the requirements of ANSI/AWWA C110. The metal contact surfaces shall be of non-sparking materials.

E. The entire pump system, including pumps, motors, pump discharge connections, discharge elbows, guide rails, float switches and electrical cable, and pump guides shall be designed for Class 1, Groups C and D, Division 1, hazardous locations, as defined by the National Electrical Code and shall be so certified by an independent laboratory, so that forced wet well ventilation and redundant cut-off switches are not required.

F. A welded, type 304 stainless steel chain of adequate size shall be permanently attached to each pump. Provisions shall be made for attaching the upper end of each chain to the wet well access frame and cover.

G. Each submersible sewage pump shall have the capacity, minimum efficiency, and motor size specified herein.

H. Pumps shall be designed to be installed in such a way that solids are fed in an upflow direction to the impeller with no feet, rails or other obstructions below inlet.

I. Pumps shall be capable of operating at the minimum water level designated by the pump off level as shown on the drawings.

2.2 MOTORS

A. Pump motors shall be supplied with the pump by the pump manufacturer as an integral part of the pump assembly. Motor shall be sealed, submersible type with a rated horsepower, voltage and phases as specified herein. Motors shall be capable of running in air without requiring being submerged for cooling.

B. Submersible pump motors shall be designed for Class 1, Groups C and D, Division 1, hazardous locations as defined by the National Electrical Code and shall be so certified by an independent laboratory. Motors shall be explosion proof, squirrel cage induction type housed in an air or oil-filled cast iron watertight enclosure. The enclosure shall be sealed by O-rings and shall have rabbet joints with a large overlap. Cable leads shall be epoxy sealed. The motor shaft extension shall be stainless steel, impervious to the liquid and waste
materials being pumped. All external hardware including motor nameplates shall be made of stainless steel.

C. Motors shall be NEMA Design B: insulation shall be Special Class H rated for continuous duty in 40 degrees C liquids; shall have a 1.15 service factor; and shall be capable of 15 starts per hour. The pumps shall be furnished with power and control cords of sufficient length to connect directly to the motor control center without the need for splicing cables.

D. Motors shall be sized to ensure that they are non-overloading throughout the entire pump curve associated with this application.

E. Motor shall have two heavy duty ball bearings to support pump shaft and take radial and thrust loads and a sleeve guide bushing directly above the lower seal to take radial load and act as a flame path for seal chamber. Ball bearings shall be designed for a minimum B10 life of 50,000 hours.

F. A heat sensor thermostat shall be imbedded in top of winding and be connected in series with the motor starter coil in control box to stop motor if temperature rises in motor to over 220 degrees F for any reason. Thermostat to reset automatically when temperature drops to a safe limit. Motors shall also be equipped with a moisture sensor which signals an alarm if moisture is present between the two seals.

G. Pump motor cables shall be suitable for submersible pump applications. Cable sizing shall conform to NEC requirements for the full load currents of the motors.

H. Cable entry system shall consist of three separate seals. A rubber grommet that seals both cable jackets shall be clamped onto cord by end holding cap. An "O" ring shall seal end holding cap to bottom half of cord cap. Both cables shall have individual conductors stripped and potted into motor end cap with epoxy potting compound. Potting compound shall prevent wicking of water into motor if the cable jacket becomes damaged. Cords shall withstand a pull of 150 pounds without loosening or losing integrity.

2.3 LIFT-OUT RAIL SYSTEM

A. Rail system shall consist of a seal fitting that mounts vertically into a stationary discharge casting. A simple downward motion shall connect pump and seal fitting to the stationary discharge casting. The weight of the pump shall seal the discharge casting to the seal fitting with metal to metal contact and shall not require bolts, gaskets or o-rings. Discharge casting shall be furnished with flanged discharge pipe connections. Valve casting and discharge casting shall be painted with a high quality, lead free, alkyd enamel finish. An upper guide plate shall be attached to pump to support lift-out fitting and guide pump on rails. Lifting lugs shall be cast into the motor housing and a stainless steel
chain and clevis shall be furnished for lifting pump. Pump shall include a lifting bail for attachment of the stainless steel chain. Bail shall be of sufficient size to be easily caught by a hook in the event the chain breaks or becomes unfastened.

B. Rail support and mounting bushing shall be mounted to basin wall and shall not be attached to basin cover or cover frame.

C. Guide rail support shall be adjustable so that perfect vertical alignment of the rails can be obtained.

2.4 ACCESS HATCH FRAMES AND DOORS

A. Access hatch frames and covers shall be of all aluminum, watertight, non-skid, diamond plate construction reinforced for a 300 psf live load and furnished complete with hinges, and upper guide holder and level sensor(s) cable holder.

B. The frames shall be extruded and have type 316 stainless steel hinges and type 316 stainless steel tamper resistant bolts/locknuts. The frame shall include an extruded aluminum trough section with an integral anchor flange on all 4 sides. The frame shall include an EPDM gasket and a 1-1/2 inch threaded drain coupling. Drain shall be piped to daylight.

C. Door leaves shall be ¼ inch thick aluminum diamond plate reinforced for a 300 psi live load.

D. The access door shall be equipped with a type 316 stainless steel hold open arms that automatically lock the doors in the 90 degree open position. A locking mechanism shall be supplied for security.

E. Double leaf access doors shall include two heavy duty check chains which span between each side of the door leaves when opened.

F. The frame shall be cast into the concrete tops of the wet well and valve vault properly positioned to facilitate efficient removal of pumps and valves. Hatch openings shall have the minimum dimensions shown on the drawings or as required by the pump manufacturer, whichever is greater. In no case shall access doors be less than that necessary to service pumps, valves and fittings within the vaults.

G. An adhesive backed vinyl material that protects the product during shipping and installation shall cover the entire top of the frame and cover. Installation shall be in accordance with the manufacturer’s instructions.

H. Manufacturer shall guarantee the door against defects, materials and workmanship for a period of 10 years.
I. Frames shall be securely placed, mounted above the pump(s). Frames shall be provided with sliding nut rails to attach the accessories required.

2.5 ACCESSORIES

A. All bolts, machine screws, nuts, lockwashers, and other hardware used in the assembly of discharge elbows, guide rails, pump guides, hoist chains, float cable connectors, access frames and covers and other accessories shall be type 304 stainless steel.

2.6 PUMP STATION STRUCTURES

A. Exposed piping inside the wet well and valve vault shall be flanged joint, ductile iron. Stainless steel bolts shall be used on all flanged joints with anti-seize applied to threads. Flanged pipe shall be manufactured with threaded flanges. Bolt-on or adapter flanges are not acceptable.

B. Solid concrete fillets shall be poured to create a sump in which the pumps sit. These fillets shall be as shown on the Plans as far as height and slope but shall be oriented in relation to the pump installation requirements.

2.7 CONTROLS

A. General
   1. All electrical components and materials supplied shall function as a complete unit to automatically control the pump down of the sewage pump station wet well. All devices and material shall be new and of standard product design.
   2. Electrical work shall be in accordance with the latest edition of the National Electrical Code (NEC) and subject to local codes. Panel shall be manufactured by a UL 508 certified manufacturer.
   3. The control panel shall provide power and logic control to operate two submersible pumps at the rated voltage and FLA of the pump motors. The control voltage shall be 120-Volt, single phase. Provide any additional DC power supplies as necessary for any controllers, level monitoring devices, etc.

B. Enclosure Construction and Materials
   1. The pump controls shall be housed in a NEMA 4X Stainless Steel enclosures with dead front sized to house all the required components and allow adequate space for testing and maintenance as necessary. The enclosure shall have a drip shield, padlockable three-point latch, steel back plate painted white, continuous door hinge, and an aluminum inner door with continuous hinge to protect all live internal wiring from operator personnel. The inner door shall be able to open a minimum of 150
degrees to allow safe access to the components. All controls, switches, indicator pilot lights, and elapsed time meters shall be mounted through the inner door.

2. Panel including VFDs shall have a air conditioner with heat exchanger system. AC Unit shall be rated for a minimum 1500 BTU/H and include a programmable thermostat with digital LCD temperature display. Provide condensation heater with thermostat controls.

3. All other components shall be securely mounted to the backplate with stainless steel hardware through machine thread tapped holes in the backplate. The screws shall be of adequate size for the device being secured. Permanent marking to identify each component as shown on the drawing shall be provided on the back plate and schematic laminated on inside of enclosure door.

4. All power wire shall be stranded copper and sized as required for load and application according to NEC. All control and signal wire shall be a minimum of #14 AWG, 90 degree C insulated and color-coded. Colors shall be red for all AC control, blue for all DC control, yellow for external source control, white for AC neutral and green for equipment ground wiring. All wiring on the rear of the inner door shall be neatly bundled using tie wraps or other means. All internal wiring on the backplate shall be neatly routed in wire duct with removable covers. All wiring shall be continuous point to point (no splices) and be totally accessible.

5. Provide properly sized circuit breaker combination NEMA rated motor starters with overload protection. The Lift Station shall be provided with reduced voltage soft starters.

6. The panel shall be provided with a main thermal-magnetic breaker sized in accordance with the NEC.

7. Power distribution, ground, and neutral block.

8. 115V control circuit with circuit breaker, Phase monitor relay, Surge Protection Device (lightning arrester) shipped loose for installation at incoming feed, ETM for each pump, non-reset type, General-purpose duplex GFCI outlet to be mounted on inner door. Provide circuit breaker for GFCI outlet. Weatherproof exterior 3 ½” diameter flashing alarm LED light with red Lexan lens to be mounted on top of enclosure. Provide audible alarm horn with “push-to-silence” on side of enclosure. Level Sensors

1. Submersible Pressure Transducer (Primary Control)
   a. A submersible pressure transducer shall be provided for the primary liquid level control system within the pump station. The transducer shall provide a 4-20 ma analog level output to the primary controller. Transducer shall be rated for installation in the wet well classified area as designated on the plans.

   b. The display shall be calibrated to indicate the total wet well depth. An offset equal to the difference between the bottom of the
transducer and the wet well floor shall be provided to allow the display to indicate actual wet well level.

c. The control system shall include two outputs with single setpoints for high and low alarm generation and differential outputs with dual setpoints for on and off control of three pumps. Each pump control output shall have a time delay.

d. Activation of the differential outputs shall be individually indicated by the Operator Interface. Output relays shall be provided for pump control, high level alarm and low level alarm.

e. Setpoints and time delays shall be established or changed and shall be displayed upon demand at the Operator Interface. They shall be adjustable in .1' increments. Once established, all setpoints values shall be retained during power down conditions.

f. Submersible pressure transducer shall include a 316 stainless steel body, with 3-inch diameter sensing diaphragm and protective baffle plate to reduce risk of sensor damage.

g. The submersible level transmitter shall include Internal Voltage Surge Protection via a gas tube arrestor across the input power leads and Lightning Protection via a MOV (Metal Oxide Varistor) to ground which provides secondary protection and in some instances can react quicker when used in conjunction with the gas tube suppressor.

h. The submersible level transmitter shall utilize a silicon piezo-resistive sensor for accurate hydrostatic level measurement. The transmitters include corrosion resistant wetted parts of 316L stainless steel construction with either Polyurethane or Tefzel cable. The transmitters are designed to be submerged directly in the raw wastewater.

i. The transducer shall be provided with enough cable to reach the control panel without being spliced. The transducer shall be mounted in a location easily accessible from the top of the wet well. Transducer shall be mounted per details shown on the plans and in accordance with manufacturers recommendations.

j. A set of supplemental controls shall be provided for backup control consisting of mercury float switches described below. The float switch shall be set at a higher elevation than the primary controls high level alarm setting. If the wet well level reaches the high level
float, a panel mounted "Primary Level Control System Failure" light shall be energized. It shall remain on until manually reset.

5. Mechanical Float Switch Type (Backup Controller)

a. The equipment manufacturer shall provide mechanical float switch controls to be utilized as a backup level control system. The level control system shall start and stop the pumps in accordance to the wet well level. A mechanical float switch shall be provided for each setting designated in the control scheme for this pump station. The mechanical floats shall activate only if the primary system does not automatically activate the system. Rising and falling liquid level in the wet well causes switches within the floats to open and close, providing start and stop signals to the remainder of the level control system.

b. Float switches shall be supplied by the pump manufacturer for installation by the contractor. Each float shall contain a mechanical switch sealed in a polypropylene housing, with 50 feet of power cord, and polypropylene mounting hardware.

c. A separate float switch shall be used to alert maintenance personnel to a high water level in the wet well. Should the water level rise to the "high water alarm" level, the float switch shall energize a 115-volt AC circuit for an external alarm device. An indicator, visible from front of control panel, shall indicate high level condition exists. The alarm signal shall maintain until wet well level is lowered and alarm circuit manually reset.

d. An alarm silence switch and relay shall provide maintenance personnel a means to de-energize the external alarm device while corrective actions are under way. After silencing the alarm, manual reset of the alarm signal shall provide automatic reset of the alarm silence relay.

D. Controls

1. Each panel shall include two independent controllers, a primary controller that functions on the level transducer and backup controller that utilizes float control.

2. The Primary Pump Controller shall be a PLC based controller designed to control two pump configurations. The pump controller shall be able to operate constant speed or variable speed pumps. The controller shall also be capable of pump down control intended for wastewater applications. A minimum 5” color touch screen operator interface shall be provided with the ability to provide on/off level and speed control (PID or proportional modes), pump alternation, flow monitoring, data logging,
alarm logging and historical trending. Also provide a 32GB SD memory card and card slot for data storage and download. The primary pump controller to be mounted through inner door of enclosure so operation adjustments can be made without opening the inner door.

3. The Backup Controller shall be a dedicated solid-state controller, easily replaceable, that automatically controls two wastewater pumps. Conventional relay/timer logic is not acceptable. The controller shall use four normally open floats as level sensing inputs so when the tank is empty all of the floats are open. The lowest float shall be the low alarm float. On rising water the Off float closes first which causes the controller to take no action. The Lead float will close next as the water rises. The controller will then turn on the lead pump. If this pump causes the water level to fall the lead pump will be turned off when both the Lead and Off float are out of the water and open. If the lead pump is not sufficient to control the water level then the lag pump will be started when the Lag float closes. The two pumps will not be turned off until the Lag, Lead, and Off floats are out of the water and open, at which time, all pumps will be turned off. An alarm output shall be sent to indicate system is working on the backup float system.

4. Each controller shall have selectable soft start delays built into the software, which will insure when both pumps are called the second pump cannot start for at least 6 or 12 seconds, and a minimum 4 second soft stop delay to insure both pumps cannot stop at the same time. These delays shall insure smooth pump operation and prevent excessive electrical surges and water hammer.

5. Each controller shall include; three position selector switch for alternation, inputs for pump seal fail sensors and motor thermal sensors. If a seal fail is detected the pump with this condition shall be automatically demoted to lag pump until failure is corrected. Temp fail condition shall disable pump with this condition and the other pump called in its place. This condition shall not be cleared until the sensor in the pump is cleared and the controller is manually reset. Indicating lights for: pump run, temp fail, seal fail, high alarm, low alarm, floats “out of order” and pump disable. Also controller shall provide indicator lamps with push-to-test switches for each float input. Power input for controller shall be fused and transient protected. Float inputs shall be no more than 6Vdc when open and 26 Ma max when closed. All input and output wiring shall use quick connect removable terminal strips. Float switch controller to be mounted through inner door of enclosure.

E. Pump Control Description: The pumps shall be controlled by PCP-100. The pumps shall be operated via H-O-A switches located on PCP-100. The primary controller shall provide automatic operation and alternation of the lead pump under normal conditions when the operator settable Pump On set-point is reached. In Auto mode, the pumps operate based on the level of the pump station wetwell (LE/LIT-210). If the incoming flow exceeds the pumping capacity
of the lead pump, the lag pump shall automatically operate to handle the increased flow at the operator settable LAG Pump On set-point. As the wet well level decreases, both pumps shall shut off at the operator settable Pumps Off level set-point. In the event of a pump failure or a flow that exceeds the capacity of both pumps, a high alarm level shall operate a red flashing alarm light. The pump designated as lead pump shall alternate each duty cycle. The alarms covered herein shall be operational at all times to monitor the pumps operation and protect the pumps.

2.8 REDUCED VOLTAGE SOFT STARTS

A. Provide a reduced-voltage, solid-state controllers where indicated, which shall comply with UL 508. An integrated unit with power SCRs, heat sink, microprocessor logic board, door-mounted digital display and keypad, bypass contactor, and overload relay; suitable for use with NEMA MG 1, Design B, polyphase, induction motors. Standard duty; nonreversible.

1. Starting Mode: Voltage ramping, current limit, torque control or torque control with voltage boost; field selectable.
2. Stopping Mode: Coast to stop, adjustable torque deceleration or adjustable braking; field selectable.
3. Shorting (Bypass) Contactor: Operates automatically when full voltage is applied to motor, and bypasses the SCRs. Solid-state controller protective features shall remain active when the shorting contactor is in the bypass mode.
4. Logic Board: Identical for all ampere ratings and voltage classes, with environmental protective coating.
5. Adjustable acceleration-rate control using voltage or current ramp, and adjustable starting torque control with up to 400 percent current limitation for 20 seconds.
6. SCR Bridge shall consist of at least two SCRs per phase, providing stable and smooth acceleration without external feedback from the motor or driven equipment.
7. Keypad, front accessible; for programming the controller parameters, functions, and features; shall be manufacturer's standard.

PART 3 - EXECUTION

3.1 EARTHWORK

A. Excavation and filling are specified in Division 31 Section "Earth Moving."
3.2 INSTALLATION

A. All equipment and materials shall be installed in a neat, workmanlike manner in strict accordance with the manufacturer’s recommendations and all applicable requirements of agencies having jurisdiction.

B. Pumps and other equipment shall be erected and installed by competent, skilled mechanics at the exact positions and elevations shown on the Plans.

C. Anchor bolts shall be accurately placed in the concrete foundations in their exact position and elevation by the use of templates.

D. All equipment and connecting piping shall be installed and supported in such manner that no load from the piping will be carried by the pumps.

E. As necessary, the Contractor shall properly grout each piece of equipment after it has been carefully aligned and leveled with steel wedges. The grout shall be poured so as to completely fill the space between the bottom of the base of the equipment and the top of the foundation. Grout shall be a non-shrinking type.

3.3 QUALITY CONTROL AND FIELD TESTING

A. The Contractor shall furnish the services of a factory-authorized technical representative for two (2) days to inspect, test, adjust components, assemblies, and equipment installations, and provide start-up and operator training. The technical representative shall be responsible to ensure that all pumps, motors, equipment, controls, alarms, wiring and all associated components are properly installed and functioning properly.

B. Field Testing:

1. The Contractor shall notify the Engineer that all or portions of the work are ready for testing. All testing shall be scheduled with the Engineer, who will coordinate with the Owner, and respond to the Contractor regarding a mutually available date and time for the necessary testing. All testing shall be done in the presence of the Engineer. All labor, equipment, water and other materials, including meters and gauges, shall be furnished by the Contractor at his own expense.

2. Each pump shall be field tested, as described below, by the manufacturer’s technical representative to demonstrate that the pump performance meets the requirements of the drawings and specifications. The manufacturer shall provide and install any gauges, meters or other devices needed for the field tests.

3. The Contractor shall furnish all necessary oil, grease and other materials and supplies for the operation of the equipment during the initial trial operation.
4. Pump start up and testing shall be done in the presence of the Engineer and shall demonstrate conformance to the conditions shown on the contract drawings.

C. A drawdown test and start-up shall be performed prior to placing the station into service. A factory representative shall be on site for this test. Each pump shall be run through 3 drawdown cycles, measuring drawdown and timing the run to compute pumping rate. Clean water shall be used for the drawdown test. The controls shall be checked for operation in the automatic and manual operation modes. The level control system shall be checked for proper elevations and operation. The telemetry system and alarms shall be programmed and checked for proper operation.

D. Pumps and controls will be considered defective if they do not pass tests and inspections.

E. The factory-authorized technical representative shall prepare and submit three copies of all necessary test results and inspection reports.

3.4 ADJUSTING

A. Adjust pumps to function smoothly, and lubricate as recommended by manufacturer.

B. Adjust control set points and other features as necessary for proper performance.

3.5 DEMONSTRATION OF ACCEPTABLE PERFORMANCE

A. All equipment associated with this specification shall be subject to a minimum 30 day performance trial period. After start-up, but prior to acceptance by the Owner, the equipment shall operate within the specified parameters requiring only routine operations and normal maintenance. If, at any time during this trial period, the equipment fails to perform as required by this specification, the Contractor shall be required to make the necessary repairs, modifications or adjustments to this equipment to allow it to operate as specified. These modifications shall be accomplished within 30 days of notification by the Owner to the Contractor. The Contractor shall be responsible for any damages suffered by the Owner, either direct or indirect, resulting from the failure of this equipment to perform as specified at any time prior to acceptance. After the necessary equipment adjustments/modifications have been completed, a new 30 day performance trial period shall begin. If, at any time during this second trial period, the equipment, again, fails to perform as required by this specification, the Owner may elect to either have the equipment replaced at the expense of the Contractor or have the cost of this equipment refunded as indicated in the Schedule of Values established for this project. After
satisfactory performance of the equipment during the indicated performance trail period, the Owner will issue a written acceptance of the equipment and the warranty period shall be established.

3.6 SPARE PARTS

A. The Contractor shall furnish one (1) complete set of spare parts as detailed below for each pump size/type supplied on this contract. Spare parts shall be conveyed to the Owner.

- Motor Cable
- Cable Grommet
- Inspection Plug Washer
- Impeller Key
- Cable Entry Washer
- O-Ring Kit
- Impeller
- Impeller Bolt

END OF SECTION 223120
Matthew,

This email can serve as approval for you requested extension of the above-mentioned encroachment agreement. If work does not start within this year, please let us know so we can make sure there are no conflicts.

STIP Project R-5824 (Project for NC 690) is scheduled for ROW acquisition in 2023 with a construction year of 2025. Based on the construction year and the type of work (Installing paved shoulders) I do not see any conflicts.

Dago

Dagoberto Pozos, P.E.
Assistant District Engineer
Division 8 District 2

910-944-7621 Office
djuarezpozos@ncdot.gov

902 North Sandhills Blvd.
Aberdeen, NC 28315
Good morning Dago and Richard,

As I mentioned on the phone, we are requesting an extension to the authorization for the approved Encroachment Agreement. The original approval was dated July 13, 2020, and a revision was approved on July 15, 2021. The project is currently under re-bid, with a scheduled bid opening of May 31. Depending on funding, contact dates and material delivery, we would anticipate beginning work in the fall of this year.

Let me know if you need any additional information.

Thank you,

Matthew R. Jones, P.E.
Project Manager
McGill Associates, P.A.
5 Regional Circle, Suite A
Pinehurst, NC  28374
T 910.295.3159
C 910.818.0055
matthew.jones@mcgillassociates.com
mcgillassociates.com
May 9, 2022

COUNTY: Moore

SUBJECT: Time Extension for Encroachment Contract E082-063-20-00132 – Moore County Public Utilities

J. Wayne Vest
County Manager
Moore County Public Utilities
5227 US 15/501
Carthage, North Carolina 28327

Dear J. Wayne Vest:

Attached for your files is a copy of the above referenced revised Right of Way Encroachment Contract properly executed. This contract covers the following time extension requested by Mr. Matthew R. Jones, P.E., of McGill Associates, P.A., on behalf of Moore County Public Utilities by email dated May 6, 2022, for Encroachment E082-063-20-00132. The contract is extended for another year and will expire on May 8, 2023.

This time extension permit refers to the installation of approximately 300LF of an 8-inch PVC gravity sewer via Bore and Jack crossing US-1 Bypass south of SR 2005 (Alma St.) and approximately 300LF of 6-inch DR-11 HDPE (fusible) force main via HDD crossing US 1 Bypass along SR 1864 (James Street) in/near Town of Vass, NC.

All other plans and provisions originally approved shall remain in effect.

Sincerely,

Byron Sanders, Jr., PE, CPM
State Utilities Manager

Larry D. Sanders, MGIST, PE, CPM
State Encroachments Engineer

LDS/vm
Attachment
Good morning Vang,

As I mentioned on the phone, we are requesting an extension to the authorization for the approved Encroachment Agreement. The original approval was dated September 28, 2020, and a revision was approved on July 15, 2021. The project is currently under re-bid, with a scheduled bid opening of May 31. Depending on funding, contact dates and material delivery, we would anticipate beginning work in the fall of this year.

Let me know if you need any additional information.

Thanks,

Matthew R. Jones, P.E.
Project Manager
McGill Associates, P.A.
5 Regional Circle, Suite A
Pinehurst, NC 28374
T 910.295.3159
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matthew.jones@mcgillassociates.com
mcgillassociates.com
ALTERNATE PUMP STATION
V5 LAYOUT PLAN

Know what's below. Know what's below. Call R Dial 811 or 1-800-632-4949 N.C. One-Call Center

SEWER EXTENSION PROJECT.
MOORE COUNTY, NORTH CAROLINA

SEWER LIFT STATION
PLAN VIEW

STD NO. PS-5

NOTE:
TYPICAL LIFT STATION LAYOUT DEPICTED. REFER TO PUMP STATION LAYOUT THIS SHEET FOR PROPOSED ORIENTATION.

SEWER LIFT STATION
ELEVATION VIEW

STD NO. PS-4

NOTE:
TYPICAL LIFT STATION LAYOUT DEPICTED. REFER TO PUMP STATION LAYOUT THIS SHEET FOR PROPOSED ORIENTATION.

V5 LIFT STATION

PUMPS

NUMBER FLOW

2 (GPM) 124

TDH MOTOR

SIZE (FT) (HP)

64 15

SIZE (FT)

WETWELL

TOP ELEV

ALARM ELEV

323.33 315.86 314.86

LAG PUMP

LEAD PUMP ON

ALL PUMPS OFF

INVERT

(FT)

314.36 313.36 312.36 308.86

PUMPS

DISCHARGE PIPING

(FT)

4

FORCE MAIN SIZE

(IN)

4

GENERATOR CAPACITY (kw)

60

INV IN ELEV HWL
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</tr>
</tbody>
</table>

**Total Load KW**: 0.8

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**Notice**

- This document includes the generator schedule, transfer switch schedule, and equipment tags.
- It covers various aspects such as load calculations, panel marking, and wiring configurations.
- The equipment tags are designed for monitoring and controlling various components in the electrical system.