ADDENDUM NUMBER ONE
TO
OAK RIDGE WATER TREATMENT PLANT
CITY OF OAK RIDGE, TENNESSEE

Addendum Number One (1) is issued the 28th day of July 2022 to all parties who hold a set of Bid Documents for the above-named project. Each Bidder shall acknowledge receipt of this Addendum on the Bid and shall incorporate all changes in the Bid. This addendum consists of four (4) pages and two (2) attachments.

MODIFICATIONS:

CONTRACT DOCUMENTS

SUPPLEMENTARY CONDITIONS

Add the following after paragraph SC-19.13:


Recipients of an award of Federal financial assistance from a program for infrastructure are hereby notified that none of the funds provided under this award may be used for a project for infrastructure unless:

1. all iron and steel used in the project are produced in the United States—this means all manufacturing processes, from the initial melting stage through the application of coatings, occurred in the United States;
2. all manufactured products used in the project are produced in the United States—this means the manufactured product was manufactured in the United States; and the cost of the components of the manufactured product that are mined, produced, or manufactured in the United States is greater than 55 percent of the total cost of all components of the manufactured product, unless another standard for determining the minimum amount of domestic content of the manufactured product has been established under applicable law or regulation; and
3. all construction materials (excluding cement and cementitious materials, aggregates such as stone, sand, or gravel, or aggregate binding agents or additives) are manufactured in the United States—this means that all manufacturing processes for the construction material occurred in the United States.

The Buy America preference only applies to articles, materials, and supplies that are consumed in, incorporated into, or affixed to an infrastructure project. As such, it does not apply to tools, equipment, and supplies, such as temporary scaffolding, brought to the construction site and removed at or before the completion of the infrastructure project. Nor does a Buy America preference apply to equipment and furnishings, such as movable chairs, desks, and portable computer equipment, that are used at or within the finished infrastructure project, but are not an integral part of the structure or permanently affixed to the infrastructure project.
Waivers
When necessary, recipients may apply for, and the agency may grant, a waiver from these requirements. The agency should notify the recipient for information on the process for requesting a waiver from these requirements.

(a) When the Federal agency has made a determination that one of the following exceptions applies, the awarding official may waive the application of the domestic content procurement preference in any case in which the agency determines that:
   (1) applying the domestic content procurement preference would be inconsistent with the public interest;
   (2) the types of iron, steel, manufactured products, or construction materials are not produced in the United States in sufficient and reasonably available quantities or of a satisfactory quality; or
   (3) the inclusion of iron, steel, manufactured products, or construction materials produced in the United States will increase the cost of the overall project by more than 25 percent.

A request to waive the application of the domestic content procurement preference must be in writing. The agency will provide instructions on the format, contents, and supporting materials required for any waiver request. Waiver requests are subject to public comment periods of no less than 15 days and must be reviewed by the Made in America Office. There may be instances where an award qualifies, in whole or in part, for an existing waiver described at https://www.epa.gov/cwsrf/build-america-buy-america-baba-approved-waivers.

Definitions
“Construction materials” includes an article, material, or supply—other than an item of primarily iron or steel; a manufactured product; cement and cementitious materials; aggregates such as stone, sand, or gravel; or aggregate binding agents or additives—that is or consists primarily of: non-ferrous metals; plastic and polymer-based products (including polyvinylchloride, composite building materials, and polymers used in fiber optic cables); glass (including optic glass); lumber; or drywall.

“Domestic content procurement preference” means all iron and steel used in the project are produced in the United States; the manufactured products used in the project are produced in the United States; or the construction materials used in the project are produced in the United States.

“Infrastructure” includes, at a minimum, the structures, facilities, and equipment for, in the United States, roads, highways, and bridges; public transportation; dams, ports, harbors, and other maritime facilities; intercity passenger and freight railroads; freight and intermodal facilities; airports; water systems, including drinking water and wastewater systems; electrical transmission facilities and systems; utilities; broadband infrastructure; and buildings and real property. Infrastructure includes facilities that generate, transport, and distribute energy.

“Project” means the construction, alteration, maintenance, or repair of infrastructure in the United States.

BID FORM
REPLACE the Bid Form in its entirety with the attached.

SPECIFICATIONS
The following specification section modifications are hereby made a part of the above referenced Project Contract Documents:
Section 07 14 00 Fluid-Applied and Sheet Membrane Waterproofing
Paragraph 2.01.A.2. – ADD “The Henry Company, Garland, Texas; CM100.” to the list of approved manufacturers and products.
Paragraph 2.01.B.2. – ADD “The Henry Company, Garland, Texas; Blueskin Preseal 435.” to the list of approved manufacturers and products.

Section 33 16 13.12 Glass-Lined Bolted Steel Storage Tank
Paragraph 1.02 B – DELETE “to roof eave” in the first sentence of this paragraph.
Paragraph 1.03 A.2 – DELETE “roof,” in the first sentence of this paragraph.
Paragraph 2.01 A.1 – DELETE “and tank roof,” in the first sentence of this paragraph.
Paragraph 2.01 D – DELETE this paragraph in its entirety and RENUMBER subsequent paragraphs.
Paragraph 2.01 G.1 – REPLACE the last sentence of this paragraph with the following: “The exterior ladder shall include a landing platform at the top of the tank wall equipped with safety rails to the interior ladder attached to the ladder side rails and anchored to the platform as required.
Paragraph 2.01 G.2 – REPLACE the first two sentences of this paragraph with the following: “An interior ladder equipped with a safety fall protection system shall be provided. The interior ladder shall be connected to the exterior ladder platform at the top of the tank wall.”
Paragraph 3.02 C – DELETE this paragraph in its entirety and RENUMBER subsequent paragraphs.

Section 40 27 00 Process Piping – General
Paragraph 3.19 – Supplements, A.2. Data Sheets - ADD the following to the list of Data Sheets
Number Title
-14 High Density Polyethylene (HDPE) Pipe

Section 40 27 00 Process Piping – Supplement 1 – Piping Schedule
ADD the following row to the Piping Schedule:

<table>
<thead>
<tr>
<th>Service/ Flowstream Designation</th>
<th>Legend</th>
<th>Size (Inches)</th>
<th>Installation</th>
<th>Piping Material</th>
<th>Spec Section</th>
<th>Nominal Maximum Operating Pressure (Psig)</th>
<th>Test Pressure and Type (psig-x), where x = H for Hydrostatic, x = P for Pneumatic</th>
<th>Pipe Color Code</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raw Water RW-TEMP</td>
<td>24</td>
<td>EXP</td>
<td>HDPE</td>
<td>40 27 00.14</td>
<td>30</td>
<td>75H</td>
<td>N/A</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Section 40 27 00.14 High Density Polyethylene (HDPE) Pipe
ADD the attached specification supplement data sheet to the project specifications.

Section 43 40 02 Fiberglass Reinforced Plastic Tanks
Paragraph 2.01.A – ADD the following to the list of approved manufacturers:
4. Plas-Tanks Industries, Inc.
5. RL Industries
Section 44 42 01 Traveling Water Screen

Section 44 42 56.02 Horizontal Split-Case Centrifugal Pumps
Supplements 1, 2, 3, and 4 – Pump Data Sheet – Page 2 – Design and Materials – ADD – “Split Mechanical Seal” to the Mechanical Seal Type.

DRAWINGS
The following drawing modifications are hereby made a part of the above referenced Project Contract Documents:

100-C-2002 – Grid C1/2 - On the south side of the Membrane Building, REVISE the 6”-CW-PVC pipe label to 6”-BWW-PVC.

100-C-2003 –
1. Grid A5 - On the south side of the Membrane Building, REVISE the 12”-BWD-PVC pipe label to 12”-BWW-PVC (2 instances) and REVISE the 6”-CW-PVC pipe label to 6”-BWW-PVC.
2. Grid C2 - On the south side of the Clearwell, ADD the following note: “The overhead powerline to the south of the Clearwell will be relocated underground by Others.”
3. Grid C4 – At the end of the 36”-FW-CLDI, ADD the following note:
   1. Provide 4x3-inch rigid PVC fiber optic conduits with pull boxes and hand holes from Water Transmission Line Sta 0+00 to the WTP Server/Telecom Room.
      a. Fiber optic pull boxes and hand holes shall be Hubbell Quazite polymer concrete boxes with “Fiber” labeled on lids.
         i. FIBER STORAGE HAND HOLES: C16390003A COVER: B12390030A
         ii. FIBER PULL ASSIST HAND HOLES/ACCESS: C16173002A COVER: PG1730BA18

300-D-2001 – Top Plan – Grid B4 – REVISE the 6”-DR-CLDI pipe label on the last section of drain line after the rotated 6” DIP 45 Deg RJ to 6” DR–PVC.

This Addendum Number One (1) is issued this the 28th day of July 2022.

Ben Simerl, P.E.
<table>
<thead>
<tr>
<th>Article</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Bid Recipient</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>Bidder’s Acknowledgements</td>
<td>1</td>
</tr>
<tr>
<td>3</td>
<td>Bidder’s Representations</td>
<td>1</td>
</tr>
<tr>
<td>4</td>
<td>Bidder’s Certification</td>
<td>2</td>
</tr>
<tr>
<td>5</td>
<td>Basis of Bid</td>
<td>3</td>
</tr>
<tr>
<td>6</td>
<td>Time of Completion</td>
<td>6</td>
</tr>
<tr>
<td>7</td>
<td>Attachments to this Bid</td>
<td>6</td>
</tr>
<tr>
<td>8</td>
<td>Defined Terms</td>
<td>6</td>
</tr>
<tr>
<td>9</td>
<td>Bid Submittal</td>
<td>7</td>
</tr>
</tbody>
</table>
ARTICLE 1 – BID RECIPIENT

1.01 This Bid is submitted to:

City of Oak Ridge, Tennessee
Attn: Lyn Majeski, Purchasing Manager
100 Woodbury Lane
Oak Ridge, Tennessee 37830

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 – BIDDER’S ACKNOWLEDGEMENTS

2.01 Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for 60 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

ARTICLE 3 – BIDDER’S REPRESENTATIONS

3.01 In submitting this Bid, Bidder represents that:

A. Bidder has examined and carefully studied the Bidding Documents, and any data and reference items identified in the Bidding Documents, and hereby acknowledges receipt of the following Addenda:

<table>
<thead>
<tr>
<th>Addendum No.</th>
<th>Addendum, Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>07.28.22</td>
</tr>
</tbody>
</table>

B. Bidder has visited the Site, conducted a thorough, alert visual examination of the Site and adjacent areas, and become familiar with and satisfied itself as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.

C. Bidder is familiar with and has satisfied itself as to all Laws and Regulations that may affect cost, progress, and performance of the Work.

D. 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 any Site-related reports and drawings identified in the Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder; and (3) Bidder’s safety precautions and programs.
E. Bidder agrees, based on the information and observations referred to in the preceding paragraph, that no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performance of the Work at the price bid and within the times required, and in accordance with the other terms and conditions of the Bidding Documents.

F. 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.

G. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and confirms that the written resolution thereof by Engineer is acceptable to Bidder.

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

I. The submission of this Bid constitutes an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article, and that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

ARTICLE 4 – BIDDER’S CERTIFICATION

4.01 Bidder certifies that:

A. 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;

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

C. Bidder has not solicited or induced any individual or entity to refrain from bidding; and

D. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 4.01.D:

1. “corrupt practice” means the offering, giving, receiving, or soliciting of any thing of value likely to influence the action of a public official in the bidding process;

2. “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;

3. “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; and

4. “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.

E. No Boycott of Israel - Pursuant to Tennessee Code Annotated § 12-4-119, by signing and submitting the attached Bid Form, Bidder certifies that it is not engaged in a boycott of the State of Israel and shall not boycott the State of Israel through the term of any Contract based on this Bid. For purposes of this certification, “boycott of Israel” shall be statutorily
defined by Tennessee Code Annotated § 12-4-119(a). If the value of any contract based on this Bid is less than $250,000.00 or Bidder employs less than ten (10) employees, then this certification shall not apply.

ARTICLE 5 – BASIS OF BID

5.01 Bidder will complete the Work in accordance with the Contract Documents for the following price(s):

WATER TREATMENT PLANT

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Furnish, Install, and Place into Operation the Water Treatment Plant - including all labor, materials and equipment shown on the Drawings and Specifications and not included in Items 2 through 5 below.</td>
</tr>
<tr>
<td>2</td>
<td>Equipment Base Bid – Alternate Bid Items</td>
</tr>
<tr>
<td>A</td>
<td>Peristaltic Chemical Metering Pumps – Section 44 42 56.16</td>
</tr>
<tr>
<td>(1)</td>
<td>Base Bid – Watson-Marlow</td>
</tr>
<tr>
<td>(2)</td>
<td>Alternate Bid 1 – Verderflex</td>
</tr>
<tr>
<td>(3)</td>
<td>Alternate Bid 2 -</td>
</tr>
<tr>
<td>B</td>
<td>Flocculators – Sections 46 41 34 and 46 41 34.01</td>
</tr>
<tr>
<td>(1)</td>
<td>Base Bid – Invent Environmental Technologies, Inc.</td>
</tr>
<tr>
<td>(2)</td>
<td>Alternate Bid 1 – Philadelphia Mixing Solutions</td>
</tr>
<tr>
<td>(3)</td>
<td>Alternate Bid 2 -</td>
</tr>
<tr>
<td>2</td>
<td>Equipment Base Bid SUBTOTAL - A(1) + B(1)</td>
</tr>
<tr>
<td>3</td>
<td>Material Items</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Description</th>
<th>Est. Qty.</th>
<th>Unit</th>
<th>Bid Unit Price</th>
<th>Bid Total Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Asphalt Overlay of Existing Access Road (Surface course and tack coat per Detail 3212-210)</td>
<td>2,900</td>
<td>SY</td>
<td>$</td>
<td>$</td>
</tr>
</tbody>
</table>

Items below to be installed as directed by Engineer

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
<th>Est. Qty.</th>
<th>Unit</th>
<th>Bid Unit Price</th>
<th>Bid Total Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>B</td>
<td>Rip Rap</td>
<td>200</td>
<td>CY</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>C</td>
<td>Mineral Aggregate Base fill for Undercut</td>
<td>50</td>
<td>Ton</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>Item No.</td>
<td>Description</td>
<td>Bid Total Price</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---------</td>
<td>-------------</td>
<td>----------------</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>Shot Rock Structural Fill for Undercut</td>
<td>$</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Material Items SUBTOTAL</td>
<td>$</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Equipment Allowances</td>
<td>$</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>Membrane Filtration System – Section 42 32 55, Appendix A, and related Sections</td>
<td>Wigen Water Technologies</td>
<td>$4,338,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Equipment Allowances SUBTOTAL</td>
<td>$4,338,000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Cash Allowances</td>
<td>(to be utilized as directed by Owner/Engineer)</td>
<td>$125,000</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

TOTAL of All Base Bid and Allowance Items: $ 

Total Lump Sum Bid In words:__________________________________________________________
__________________________________________________________________________________

DEDUCTIVE ALTERNATIVE No. 1 - If Contractor is awarded both Contracts for WATER TREATMENT PLANT and FINISHED WATER TRANSMISSION LINE construction, then DEDUCT a lump sum of $_________ from the WATER TREATMENT PLANT Total Base Bid.

Bid Data

The Bidder shall designate below the one manufacturer for each product to be furnished and installed if awarded the work. The Bidder understands that if this information is not provided, offering products meeting all specification requirements and having the approval of the Engineer, then the Owner reserves the right either to determine the Bidder non-responsive and reject the Bid or to designate the manufacturer of the products to be provided which will meet all specification requirements, which owner-designated manufacturer products must be furnished by the Bidder at no increase in the Contract Price.
<table>
<thead>
<tr>
<th>Item No.</th>
<th>Product</th>
<th>Manufacturer / Supplier</th>
<th>Mark if Used in Base Bid</th>
<th>Bid Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>System Integrator - Section 40 90 00 and related sections.</td>
<td>M/R Systems</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Southern Flow</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Prime Controls</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lord &amp; Company, Inc.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

5.02 Unit Prices have been computed in accordance with Paragraph 13.01 of the General Conditions.

5.03 Bidder acknowledges that estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all Unit Price Bid items will be based on actual quantities, determined as provided in the Contract Documents.

5.04 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 Bid items will be based on actual quantities, determined as provided in the Contract Documents.

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

5.06 Steel Scrap Index:

A. Ductile iron pipe (DIP) manufacturers have implemented a charge to address scrap iron cost fluctuation. Provisions for managing the cost fluctuation are made in this contract based on a verified published monthly scrap index [i.e., Steel Scrap No. 1 Busheling (MB-STE-0422) from www.fastmarkets.com].

B. The lump sum price for the Work in Paragraph 5.01 shall reflect ductile iron pipe pricing based, in part, on the verified published monthly scrap index in effect on the date of the Bid.

1. Scrap index charge in effect on date of Bid (cost/ton): $______________

2. Bidder shall submit with its Bid a certified statement of the scrap index in effect on the date of the Bid.

C. Refer to Section 01 29 00, Payment Procedures, for information regarding the measurement and payment related to the cost fluctuations in ductile iron pipe pricing as a result of scrap iron cost fluctuations.
ARTICLE 6 – TIME OF COMPLETION

6.01 Bidder agrees that the Work will be substantially complete within 700 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 730 calendar days after the date when the Contract Times commence to run.

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

ARTICLE 7 – ATTACHMENTS TO THIS BID

7.01 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. List of Project References;
   E. Evidence of authority to do business in the state of the Project; or a written covenant to obtain such license within the time for acceptance of Bids;
   F. Contractor's License No.: __________ [or] Evidence of Bidder's ability to obtain a State Contractor's License and a covenant by Bidder to obtain said license within the time for acceptance of Bids;
   G. Required Bidder Qualification Statement with supporting data; and
   H. Contractor Questionnaires and Certificates including DBE forms, Drug-Free Affidavit, Compliance Statement, Certification Regarding Debarment, and Certificates for Contracts, Grants and Loans.

ARTICLE 8 – DEFINED TERMS

8.01 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 9 – BID SUBMITTAL

BIDDER: [Indicate correct name of bidding entity]

By: [Signature] [Printed name]
(If Bidder is a corporation, a limited liability company, a partnership, or a joint venture, attach evidence of authority to sign.)

Attest: [Signature] [Printed name]

Title: ____________________________

Submittal Date: __________________

Address for giving notices:

________________________________________________________________________
________________________________________________________________________

Telephone Number: ____________________________

Email Address: ____________________________

Contact Name and title: ____________________________

Bidder’s License No.: (where applicable)

NOTE TO USER: Use in those states or other jurisdictions where applicable or required.
## SECTION 40 27 00.14
HIGH DENSITY POLYETHYLENE (HDPE) PIPE

<table>
<thead>
<tr>
<th>Item</th>
<th>Size</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>General</td>
<td>All</td>
<td>Pipe lengths, fittings, and flanged connections to be joined by thermal butt-fusion shall be of the same type, grade, and class of polyethylene compound and supplied from the same raw material supplier.</td>
</tr>
<tr>
<td>Pipe</td>
<td></td>
<td>ASTM F714-13, high density polyethylene, maximum allowable hoop stress 1,000 psi at 73.4 degrees F. Polyethylene resins shall conform to Type PE 4710 or better.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>IPS (Iron pipe size) basis. Protection shall be provided against ultraviolet light degradation using carbon black, not less than 2 percent well dispersed in the resin.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pipe wall thickness shall reflect the required DR* and diameter, as shown in Table 7, ASTM F714-13. Design Stress Rating: ASTM F714-13, Table X5.1, 1,000 psi hydrostatic.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>See pipe schedule for DR* and pressure requirement. *DR= Standard dimension ratio</td>
</tr>
<tr>
<td>Fittings</td>
<td>All</td>
<td>Molded fittings, butt fusion joined, conforming to ASTM D3261.</td>
</tr>
<tr>
<td>Flanges</td>
<td></td>
<td>ASTM A240 Type 304 stainless steel, 125-pound, ANSI B16.1 standard, Van Stone type with one-piece molded polyethylene stud ends, same rating as pipe.</td>
</tr>
<tr>
<td>Bolting</td>
<td></td>
<td>Corrosive Conditions: Stainless steel, ASTM A193/A193M Rev A-94 Grade B8M studs and ASTM A194/A194M Grade 8M hex head nuts. Washers shall be same material as bolts.</td>
</tr>
</tbody>
</table>

END OF SECTION