

1355 Capital Blvd. • P.O. Box 30013 • Reno, NV 89520-3013  
P 775.834.8080 • F 775.834.8003

## **Addendum No. 2**

### **INNOVATION DRIVE WELL**

**PWP Bid No. WA-2016-040**  
**November 13, 2015**

The following information, clarifications, changes and modifications are by reference incorporated into the bid documents for the above referenced project. Any work item or contract provision not changed or modified will remain in full force and effect. The bid date and time and construction schedule remain the same.

#### **CLARIFICATION**

There have been some questions raised regarding the application of NSF 61 (Water System Components) and NSF 372 (Lead Content) certification on this project. All materials in contact with the water on this project shall be certified to comply with NSF 61. Where applicable, materials knowingly containing lead shall be certified to NSF 372.

#### **QUESTIONS AND RESPONSES**

**Question No.1:** In reference to sheet E030, Note B, the enclosure for the generator leads. Does this enclosure have a part or catalog number or is it custom made? It has very specific components requested and more details are needed.

**Response to Question No. 1:** The portable generator connection box shall be rated for 400 Amps, with #16 male cam-type Leviton or Hubbell electrical connectors, functionally equal to, and generally as laid out in Detail B on Sheet E030. Acceptable boxes are Powertron Series 400 or approved equals fabricated by the Contractor, or available through Nevada Energy Systems.

**Question No. 2:** We are a supplier of water/wastewater equipment. Do you know what equipment (pumps, chemical dosing equip, etc) is included in on the Innovation Drive Well project? I haven't been able to track down the project documents. Is it possible to send me the table of contents of the specs? Or a current planholders list?

**Response to Question No. 2:** The planholders' list for this project is posted to TMWA's website and updated on a weekly basis. The TMWA website link is: [http://tmwa.com/about\\_us/doingbusinesswithtmwa](http://tmwa.com/about_us/doingbusinesswithtmwa)

Copies of Bidding Documents consisting of the contract documents, specifications, and drawings may be obtained from the following locations.

AEC Reprographics, 488 Kietzke Lane, Reno, Nevada 89502 (775) 324-7425  
Allegra Print & Imaging, 5301 Longley Lane, Suite 47, Reno, NV 89511 (775) 829-7768  
Nevada Blue, 9738 S. Virginia, Reno, NV 89511 (775) 827-4441

Sierra Contractor's Source, 860 Maestro Drive, Suite B, Reno, NV (775) 329-7222

**Question No. 3:** Specification section 11302, 1.1 Description indicates that the project utilizes an existing well with a 14" steel casing. Drawings sheet M101 indicate a new gravel fill tube and well recharge lines to be installed.

- a. Was the existing well fully developed (gravel packed, cement grout sealed, tested for capacity)?
- b. If yes to 1 above, the well recharge and gravel fill pipes indicated on detail B/M101 will not work as drawn. Please advise.

**Response to Question No. 3:**

- a. The well has not been tested as of this writing, but the seal and gravel pack are installed. TMWA will develop and test the well later this month.
- b. That is correct. The Well was installed earlier this year based upon the design provided for the well drilling contract. On Figure 2 for that project (see attached) there is a detail of all of the additional items to be installed along with the well itself. The Contractor for the current project will be welding additional pipe/fittings onto the existing pipes already installed. Also, we do have notes stating that the piping shown in the detail may have been rotated for clarity.

**Question No. 4:** The plans and specifications don't clearly say who is providing and installing the HVAC Division 15 controls? Could you clarify please.

**Response to Question No. 4:** The HVAC controls shall be purchased and installed by the Contractor. This specifically includes all components detailed on Sheet H300, and related Sheets, and in the Technical Specifications.

Additionally, please note that the reference to "FAN COILS" under "SEQUENCE OF OPERATION" on Sheet H300 is incorrect and should read "HEAT PUMPS"; there are no fan coils in this design.

**Question No. 5:** Spec book section 02800 Pipeline & Appurtenances contains no information regarding the FEL&C steel pipe and fittings or the 304L SS pipe and fittings inside of the building. Please provide any specifications that are applicable to those two items.

**Response to Question No. 5:**

Steel pipe including FEL&C pipe shall conform to the following specifications:

Steel Pipe

- A. Steel pipe shall be shop fabricated in sections so that no field welding is required. Pipe shall be fabricated prior to coating and lining.
- B. Steel pipe shall be schedule 40 meeting the requirements of AWWA C200 and ASTM A53, Grade B.
- C. Joints shall be made using slip on welding flanges or butt welding as shown on the Improvement Plans. Gaskets, and bolt sets shall be provided by the Contractor for all flanged connections.
- D. Flanges shall be pressure class 150 ASME B16.5 slip-on welding flanges. Gaskets shall be full-face type.

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- E. Steel fittings shall be butt welding type meeting the requirements of ANSI B16.9, standard wall thickness.
- F. Steel pipe shall be fusion bonded epoxy coated and lined per AWWA C213.
  - 1. Coating shall cover the entire pipe surface including flanges (except flange faces and threaded areas).
  - 2. Thred-O-Lets shall be welded to the pipe prior to coating application.
  - 3. Fusion bonded epoxy shall be NSF 61 certified for contact with potable water.
- G. All buried steel pipe shall receive a protective exterior tape wrap meeting the requirements of AWWA C214. Use Protecto Wrap 310 or approved equal.
- H. Any damaged coatings shall be coated and patched with the approved materials according to the manufacturer's instructions.

Stainless steel pipe shall conform to the attached Technical Specification Section 15052.

**Question No. 6:** On plan sheet M101 equipment items 15 & 37 show 3" 304L pipe outside of the well casing for re-charge and gravel fill. What is the depth below FF required on these 2 items as the break does not allow us to scale?

**Response to Question No. 6:** The recharge and gravel fill pipes were installed during the drilling of the well and are existing pipes. The gravel fill pipe shall be permanently capped, and the recharge pipe shall be connected to the well piping as shown on Sheet M100.

**Question No. 7:** Detail A on Sheet C003 states "For Seal" please confirm this is a typo and should read "Fog Seal"

**Response to Question No. 7:** Fog Seal is correct.

**Question No. 8:** After contacting four local RCP suppliers, the 45"x 29" RCP on sheet C100 is not a stock item and will have to be cast. Since the linear footage is so minimal, and the suppliers are out of state, use of this size pipe may not be cost beneficial to TMWA. Will any alternates be considered?

**Response to Question No. 8:** Alternatives may be considered after the bid. However, for consistency between bids, this pipe shall be bid as shown on the Plans and described in the Technical Specifications. It will be the Contractor's responsibility to provide an alternative layout and design that meets the approval of TMWA's Project Representative and Stantec's engineer as a change to the Contract, if desired.

**Question No. 9:** Detail C on Sheet C003 states "Class D backfill- may place equivalent layer on top of Class 300 (Referring to rip rap)". However, the rip rap noted in the detail is Class 150.

**Response to Question No. 9:** The intent of that note is to allow two options to prevent rodent intrusion; the first, recommends the shown thickness of Class D backfill combined with Class 150 Rip-rap, and the second alternative would be the recommended thickness of Class 300 riprap combined with a layer of 3/4" to 1-1/2" gravel as thick as the Class D backfill shown for option one.

**Question No. 10:** Detail E on Sheet C003 and Detail B on Sheet C003 depict 18" rock slope protection at all areas noted on the drawings. Sheet L200 depicts a portion of the same area to be 2" to 6" rock mulch. Please clarify.

**Response No. Question No. 10:** All slopes 3:1 and steeper shall be lined with Class 150 rip-rap per details shown on sheet C003.

**Question No. 11:** Sheet L101/L200 depicts irrigation lines to be installed and backfilled with "rock-free native material". This work is currently located in areas that are to receive rip rap/ rock slope protection to a depth of 24". Please clarify.

**Response to Question No. 11:** Irrigation lines shall be buried to the depth indicated per plans below the rip-rap/rough grade interface.

**Question No. 12:** Please provide a corrected planting detail for the trees located in the Class 150 rip rap areas.

**Response to Question No. 12:** The planting plan shall be bid as shown.

**Question No. 13:** In regards to the building materials, sheet A002 calls out for the ceiling to be covered with 5/8" WR Gyp board. Sheet A100 note 16 calls out ceiling to be covered with 5/8" BCX plywood with Tyvek. The spec book under section 09250 does not have 5/8" WR Gyp board it calls out for Glass mat covered or Reinforced Gypsum sheeting. We are not sure which to figure? Please specify, all are special order.

**Response to Question No. 13:** Provide BCX plywood per the finish schedule on Sheet A100.

**Question No. 14:** In regards to the NaOCL Pump, does the pump need to be skid mounted from the manufacturer? Or constructed in place? Also, is the FRP Utility Stand required? Or, can we install the pump on a shelf?

**Response to Question No. 14.** Alternatives may be considered after the bid. However, for consistency between bids, the NaOCl pump configuration shall be bid as shown on the Plans and described in the Technical Specifications. It will be the Contractor's responsibility to provide an alternative layout and design that meets the approval of TMWA's Project Representative and Stantec's engineer as a change to the Contract, if desired.

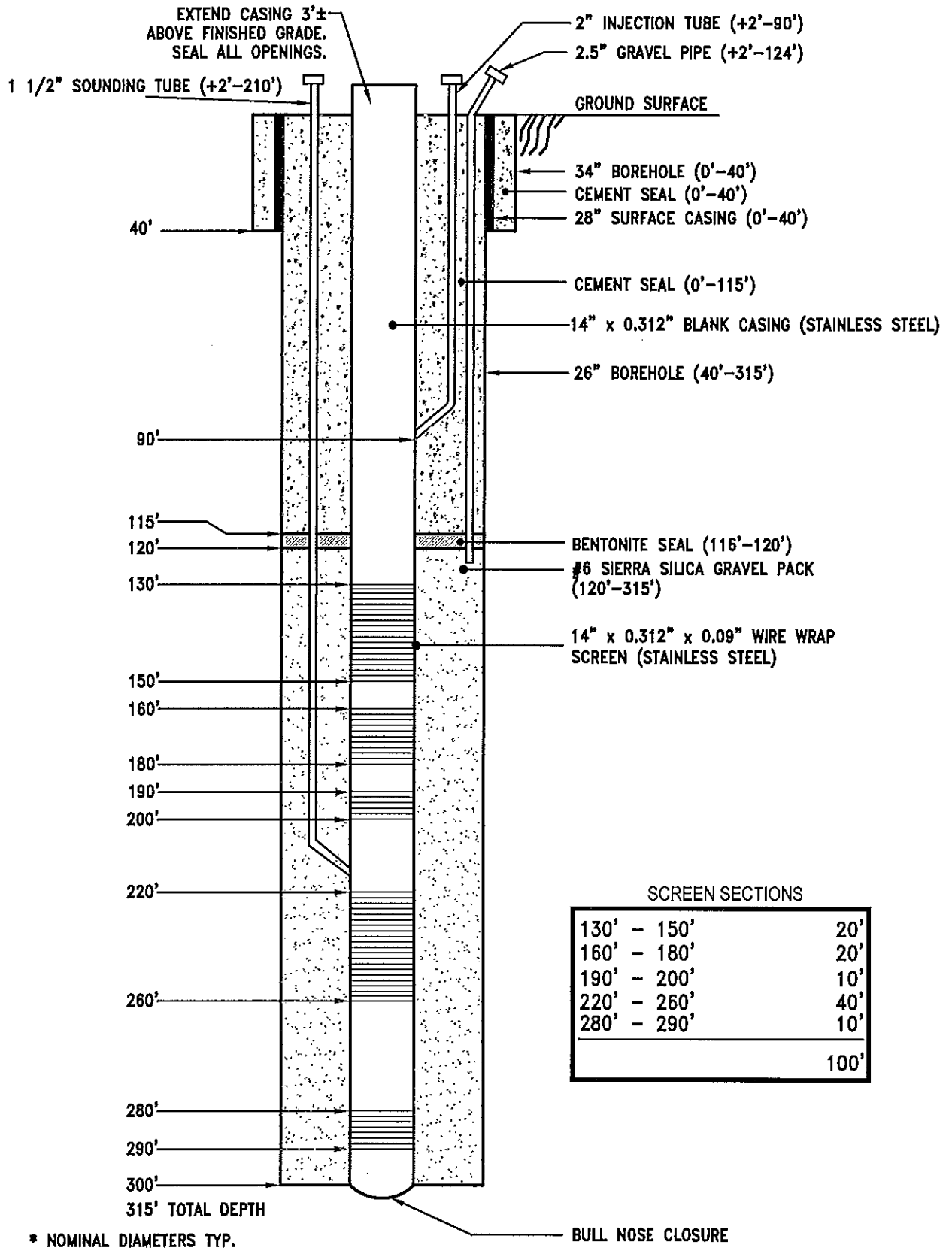
**Question No. 15:** One additional question about the over-excavation. The specs call out 5ft of over-excavation around structural improvements. Does this include the driveway, asphalt and sidewalk? Also, the building plans call out 3ft of over-excavation outside the footings, does 5ft prevail?

**Response to Question No. 15.** Over-excavation does not include the driveway, asphalt, and sidewalks outside of the influence of the building structure. Specs trump the plans.

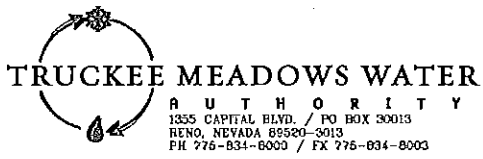
**Question No. 16:** We're attempting to get a quote for the Bilco hatch on this project. Collier Building is looking for a spec for the hatch. Please advise.

**Response to Question No. 16.** The roof hatch shall conform to the attached Technical Specification Section 077210.

**QUESTION CUTOFF DATE TUESDAY, END OF  
BUSINESS  
NOVEMBER 10, 2015**



K:\Hydrologist\Sierra\Groundwater Files\Well Rehabilitation\Innovation-Lamply Well\Innovation-Lamply Well Materials Diagram.dwg  
 OCT 20, 2015 - 2:45pm



**INNOVATION PRODUCTION WELL**  
**CONSTRUCTION MATERIALS AS-BUILT**

DATE:	SEPTEMBER 2018
DRAWN BY:	KJ/JK
WORK ORDER #:	
SCALE:	NTS

**SECTION 15052**  
**STAINLESS STEEL PIPE**

**PART 1 GENERAL**

**1.1 DESCRIPTION**

The work of this section consists of furnishing materials and constructing therewith new stainless-steel pipe, tubing, and fittings 30-inches in diameter and smaller.

- A. Pipe shall conform to ASTM A312.
- B. Stainless steel tubing shall be as specified in Part 2.15.

**1.2 RELATED WORK ELSEWHERE**

- A. Section 01300 - Submittals
- B. Section 02225 - Trenching, Backfilling, and Compacting
- C. Section 02800 - Piping Accessories and Appurtenances
- D. Section 09900 - Painting
- E. Section 11010 - General Mechanical Equipment Provisions
- F. Section 15010 - General Process and Onsite Utility Piping Provisions
- G. Section 15094 - Hangers and Supports

**1.3 QUALITY ASSURANCE**

Standards, American Society for Testing and Materials (ASTM), American Water Works Association (AWWA), American National Standards Institute (ANSI), American Iron and Steel Institute (AISI), and American Welding Society (AWS).

## 1.4 SUBMITTALS

- A. Submit shop drawings in accordance with Section 01300.
- B. Show materials of construction, with ASTM reference and grade. Submit manufacturer's certificates of compliance with referenced pipe standards, e.g., ASTM A312, A403, A774, A778. Show wall thickness of steel cylinder and fittings.
- C. Submit piping layout drawings showing the location and dimensions of the pipe and fittings larger than 1.5 inches nominal diameter. Include layout lengths of valves, meters, blowers, and other equipment determining piping dimensions. Label or number each fitting or piece of pipe.
- D. Submit manufacturer's data for flange and coupling gaskets.
- E. Submit certifications that welders are qualified in accordance with ANSI B31.1, Paragraph 127.5 for shop and project site welding of pipe work.

## PART 2 MATERIALS

### 2.1 PIPE

Pipe shall conform to ASTM A312 or A778, Grade 304L or Grade 316 as indicated in the Drawings and/or Specifications. If not indicated, use Grade 304L. Pipe sizes and wall thickness shall conform to ANSI B36.19. All pipe shall be Schedule 40S.

### 2.2 FITTINGS

- A. Fittings 2.5 inches and smaller shall be threaded conforming to ANSI B16.11, 3,000-pound CWP. Material for threaded fittings shall conform to ASTM A403, Class WP, same material as connecting pipe.
- B. Fittings for buried or submerged pipe larger than 2.5 inches shall be butt-welded, conforming to ASTM 403, Class WP same material and wall thickness as the connecting piping, conforming to ANSI B16.9. Elbows shall be short radius.
- C. Fittings for aboveground or exposed pipe larger than 2.5 inches shall be butt-welded, grooved, or flanged, conforming to ASTM A403, Class WP same material and wall thickness as the connecting piping, conforming to ANSI B16.9. Elbows shall be short radius.

## 2.3 JOINTS

- A. Joints for pipes 2.5 inches and smaller shall be threaded, same material as specified for fittings, 3,000-pound WOG, conforming to ANSI B16.11.
- B. Joints for buried pipe larger than 2.5 inches shall be butt-welded, unless noted otherwise on drawings.
- C. Joints for aboveground or exposed pipe larger than 2.5 inches shall be butt-welded, rigid grooved end, or flanged. Grooved-end joints shall be of the roll-grooved type.
- D. Stainless steel pipe fabricated into spool pieces shall have shop-welded circumferential butt-weld joints or flanges.

## 2.4 GROOVED-END COUPLINGS

- A. Grooved-end or split type couplings shall be type 304 stainless steel. The pipe ends shall be roll-grooved to the coupling manufacturer's specifications. Where roll grooving is impractical, the pipe shall have heavy-wall machine-grooved pipe nipples or machined ring collars fully welded to the pipe or fitting. Nipples shall be taper-bored to the I.D. of the adjoining pipe to allow full-weld penetration. Collars shall be welded on both sides to the piping. Nipples and collars shall be of the same alloy as the piping.
- B. Bolts in exposed service shall conform to ASTM A193, Grade B8M, Class 2.

## 2.5 THREAD LUBRICANT

Thread lubricant shall be a compound specifically designed for use on stainless steel, and designed to prevent seizing and galling.

## 2.6 FLANGES

Provide weld-neck flanges conforming to ANSI B16.5 for piping 2.5 inches and smaller to connect to flanged valves, fittings, or equipment. Provide weld-neck or slip-on flanges for piping larger than 2.5 inches. Flanges shall be Class 150 per ANSI B16.5. Material for weld-neck and slip-on flanges shall conform to ASTM A182, Grade F304 or F316 to match pipe type. Flanges shall match the connecting flanges on the adjacent fitting, valve, or piece of equipment. Flange shall be flat face.

Where appropriate as determined by the Engineer, flanges may be Van Stone type. Van Stone joints shall be made up of stainless steel slip-on type rolled-angle face rings and ductile iron backup flanges drilled to ANSI 16.1, Class 125 standard. The angle face ring thickness shall be equal to or greater than the wall of the pipe or fitting. The angle leg shall not interfere with the flange bolt holes. For submerged or buried joints, backup flanges shall be stainless steel plate flanges.



## 2.7 BOLTS AND NUTS FOR FLANGES

- A. Bolts and nuts for flanges shall be stainless steel conforming to ASTM A193, Grade B8M, for bolts and ASTM A194, Grade 8M, for nuts.
- B. Bolts for flange insulation kits shall conform to ASTM A 193, Grade B7. Nuts shall conform to ASTM A194, Grade 2H.
- C. Provide washer for each nut. Washers shall be of the same material as the nuts.

## 2.8 LUBRICANT FOR STAINLESS-STEEL BOLTS AND NUTS

Lubrication shall be TRX-Synlube by Ramco, Anti-Seize by Ramco, Jusk IT Husky Lube O'Seal, or equal.

## 2.9 GASKETS FOR FLANGES

Full face or ring, except that ring gaskets shall be used for sizes 14-inch and greater. Gaskets shall be 1/8" inch thick synthetic rubber for test pressures up to 250 psi. Gasket to be Garlock Multi-Swell Style 3760, or approved equal.

For test pressures greater than 250 psi, provide suitable gasket as recommended by manufacturer.

## 2.10 OUTLETS

- A. Outlets 2.5 inches and smaller in piping 3 inches and larger shall be of the Thredolet type, per AWWA Manual M11 (1998 edition), Figure 13-23. Outlets shall be 3,000-pound WOG stainless steel per ASTM A182, Grade F304 or F316, or ASTM A403, Grade WP304 or WP316, to match pipe. Threads shall comply with ANSI B2.1. Outlets shall be Bonney Forge Co. "Thredolet", "Allied Piping Products Co. "Branchlet", or equal.
- B. For outlets 2.5 inches and smaller in piping smaller than 3 inches, use a tee with a threaded outlet.
- C. For outlets larger than 3 inches, use a tee. Tees, crosses, laterals and wyes shall be shop fabricated from pipe, and in addition, stainless steel reinforcement collars shall be fully welded to the branch and run of the pipe as necessary to maintain the specified pressure rating.

## 2.11 WALL PENETRATIONS

Wall pipes shall have integral shop welded wall stops, circumferentially welded to the pipe run.

## 2.12 FLEXIBLE COUPLING ASSEMBLIES

Flexible Coupling shall be provided at a minimum in the locations shown on the Contract Drawings. Couplings shall comply with the requirements of Section 15080, except that all metal parts in contact with the stainless steel piping and fitting shall also be stainless steel. Flexible Coupling shall be held in place by means of an internal centering ring or centering lugs.

## 2.13 FINISH

After all shop operations have been completed, pipe and fittings shall be pickled and passivated in manufacturer's plant, and scrubbed and washed until discoloration and possible iron picked up from manufacturing process are removed. The standard finish for 16-gage through 8-gage material shall be No. 1 or 2B per ASTM A480; 3/16-inch and heavier plate material shall be No. 1 mill finish or better per ASTM A480.

## 2.14 STAINLESS STEEL TUBING

### A. General

1. Provide stainless steel tubing in sizes indicated on the Drawings.
2. Where not indicated on the Drawings, provide stainless steel tubing of the size required to perform the function intended.

### B. Tubing

1. Stainless Steel Tubing: Seamless tubing made of Type 316 L or 304L stainless steel and conforming to ASTM A269.
2. Wall thickness adequate for test pressure specified, but not less than 0.065 inch for run tubing. Connections to actuators may be ¼-inch as required for flexibility.

### C. Fittings

1. Fittings for Use with Stainless Steel Tubing: Swage ferrule design, with components made of Type 316 stainless steel.
  - a. Fittings: Double acting ferrule design, providing both a primary seal and a secondary bearing force.
  - b. Flare, bite, or compression type fittings are not acceptable.
2. Fittings: Manufacturers: One of the following or equal:
  - a. Crawford Fitting Company, Swagelok.
  - b. Hoke, Gyrolok.
  - c. Parker, CPI.

### D. Valves: Valves for Use with Stainless Steel Tubing: Air cocks of Type 316 stainless steel.

## PART 3 EXECUTION

### 3.1 FABRICATION/INSTALLATION REQUIREMENTS

The piping supplier during manufacturing, fabricating and handling stages, and the Contractor during handling and installation stages, shall use extreme care to avoid the contact of any ferrous materials with the stainless steel piping. All saws, drills, files, wire brushes, etc. shall be used for stainless steel piping only. Pipe storage and fabrication racks shall be nonferrous or stainless steel or rubber-lined. Nylon slings or straps shall be used for handling stainless steel piping. Contact with ferrous items may cause rusting of iron particles embedded in the piping walls. After installation, the Contractor shall wash and rinse all foreign matter from the piping surface. All welded joints shall be treated with a pickling solution, brushed with stainless steel wire brushes and rinsed clean. If rusting of embedded iron occurs, the Contractor shall pickle the affected surface with Oakite Deoxidizer SS or equal, scrub with stainless steel brushes, and rinse clean.

### 3.2 MARKING, SHIPPING, AND STORAGE

All pipe, fittings, and fabrications shall be properly marked with type, gage, and heat number. All fabricated piping shall have openings plugged and flanges secured for storage and/or transport after fabrication. All fabricated piping shall be piece-marked with identifying numbers or codes which correspond to the Contractor's layout and installation drawings. The marks will be located on the spools at opposite ends and 180 degrees apart. Pipe spools shall be loaded and blocked and lagged as necessary to ensure protection from damage during shipping. Stainless steel pipe and fittings shall be stored per manufacturer's recommendation. Dents, gouges, and scratches in stainless steel pipe and fittings are not acceptable and are reason for rejecting pipe and fittings.

### 3.3 INSTALLING THREADED PIPING

Ream, clean, and remove burrs from threaded piping before making up joints. Apply thread lubricant to threaded ends before installing fittings, couplings, unions, or joints.

### 3.4 INSTALLING FLANGED PIPING

- A. Set pipe with the flange bolt holes straddling the pipe horizontal and vertical centerline. Install pipe without springing, forcing, or stressing the pipe or any adjacent connecting valves or equipment.
- B. Lubricate bolts prior to installation.

### 3.5 INSTALLING GROOVED-END PIPING

Install grooved-end pipe and fittings in accordance with the coupling manufacturer's recommendations and the following:

- A. Clean loose scale, rust, oil, grease, and dirt from the pipe or fitting groove before installing coupling. Apply the coupling manufacturer's gasket lubricant to the gasket exterior including lips, pipe ends, and housing interiors.
- B. Fasten coupling alternately and evenly until coupling halves are seated.

3.6 FABRICATION, ASSEMBLY, AND ERECTION

- A. Beveled ends for butt-welding shall conform to ANSI B16.25. Remove slag by chipping or grinding. Surfaces shall be clean of paint, oil, rust, scale, slag, and other material detrimental to welding.
- B. Fabrication shall comply with ANSI B31.3, Chapter V.
- C. Welds shall be full circumferential. The minimum number of passes for welded joints shall be as follows:

Steel Cylinder Thickness (inch)	Minimum Number of Passes for Welds
Less than 0.1875	1
0.1875 through 0.25	2
Greater than 0.25	3

- D. Use the shielded metal arc welding (SMAW) or the tungsten inert gas (TIG) process for welding. Use the SMAW process for any pipe. Use the TIG process only on pipe having a maximum thickness of Schedule 10S.
- E. Welding preparation shall comply with ANSI B31.3, paragraph 328.4. Limitations on imperfections in welds shall conform to the requirements in ANSI B31.3, Tables 341.3.2A and 341.3.2B, and paragraph 341.4 for visual examination.
- F. Identify welds in accordance with ANSI B31.3, paragraph 328.5.
- G. Major piping assemblies shall be shop fabricated. Field welding of above ground piping shall be permitted only where indicated on the Contract Drawings or deemed necessary by the Engineer. No field welding will be allowed within the limits of the aeration basin, per Section 11378.

3.7 INSTALLING BURIED PIPE

Install in accordance with Section 02223, except as modified herewith. Pipe installed underground shall not deviate more than 1 inch from line or ¼ inch from grade. Measure for grade at the pipe invert.

### 3.8 INSTALLING ABOVEGROUND PIPE AND TUBING

- A. Install pipe without springing, forcing, or stressing the pipe or any adjacent connecting valves or equipment.
- B. Provide pipe hangars and supports as identified in the drawings.
- C. Install tubing fittings in strict conformance with manufacturer's recommendations.

### 3.9 COATINGS

After installation, the Contractor shall paint all steel or iron flanges, couplings, and appurtenances in accordance with Section 09900. Painting of the stainless steel pipe is not required. However, the Contractor shall be responsible for supplying and installing the stainless steel piping with a consistently clean surface. Identifying spool piece marks shall be removed with paint thinner or solvents and the entire stainless steel surface shall be washed with detergent and hot water and rinsed clean.

### 3.10 TESTING

Test piping in accordance with Section 02800.

**END OF SECTION**

**SECTION 077210**  
**ROOF ACCESSORIES**

**PART 1 GENERAL**

**1.1 SECTION REQUIREMENTS**

- A. Submittals: Product Data, Shop Drawings, and color Samples.
- B. Sheet Metal Standard: Comply with SMACNA's "Architectural Sheet Metal Manual."
- C. Shop fabricated coated and uncoated flashings, fascia, reglets and trim

**PART 2 PRODUCTS**

**2.1 MATERIALS**

- A. Metallic-Coated Steel Sheet: Galvanized steel, ASTM A 653/A 653M, G90, or aluminum-zinc alloy-coated steel, ASTM A 792/A 792M, AZ50.
- B. Prepainted, Metallic-Coated Steel Sheet: Coil-coated with manufacturer's standard 2-coat, thermocured system consisting of inhibitive primer and fluoropolymer color topcoat containing not less than 70 percent polyvinylidene fluoride resin by weight.
- C. Aluminum Sheet: ASTM B 209, alloy and temper recommended by manufacturer for type of use and finish. Coil-coat finish as follows:
- D. Baked-Enamel Finish: Thermosetting, modified-acrylic enamel primer/topcoat system complying with AAMA 2603 except with a minimum dry film thickness of 1.5 mils, medium gloss.
- E. Galvanized expanded metal: See drawings for size and weight.

**2.2 ROOF ACCESSORIES**

- A. Prefinished Facia Metal Trim and Anchors: .052 in metallic coated steel with welded or sealed mechanical joints, hem all exposed edges.
- B. Use continuous anchor cleats at exposed edges of facia trim
- C. Soffit Panels: Perforated & non perforated Panel Soffit .
- D. Available Products:
  - 1. Berridge V-Panel- Prefinished: white
- E. Provide all related installation accessories for complete installation

1. Provide all wood nailers required for installation .

F. Roof Hatches:

1. Fabricate from metallic-coated steel with 9-inch- high, integral-curb, double-wall construction with 1-1/2-inch insulation, formed cants and cap flashing, with welded or sealed mechanical corner joints.
2. Provide double-wall cover (lid) construction with 1- inch- thick insulation core.
3. Provide gasketing and corrosion-resistant hardware including pintle hinges, 3/8" hinge pins, hold-open devices, interior padlock hasps, and both interior and exterior latch handles. Lift assistance handle.
4. Fabricate units to withstand 40-lbf/sq. ft. external and internal loading pressure.
5. Finish: Steel: Alkyd Base Red Oxide Primer: Enamel Paint finish .

G. Gravity ventilators connected to HVAC ductwork and power ventilators.

1. As specified in Division 15.
2. Available Products:
  - a. Bilco Type F Hatch
  - b. Potter Roemer
  - c. JL Industries

## PART 3 EXECUTION

### 3.1 INSTALLATION

- A. Installation: Unless otherwise indicated, install roof accessory items according to construction details of NRCA's "Roofing and Waterproofing Manual."
- B. Coordinate with installation of roof deck, vapor barriers, roof insulation, roofing, and flashing to ensure combined elements are secure.

**END OF SECTION 07210**