The following questions were received and the answers given regarding the project. Revised project Drawings are attached.

1) Is the air pipe required to be lined?
   a. No, as indicated in Section 15105, sub-heading 1.06, item D, air piping will be unlined for use with hot air. Ductile iron fittings will not be required to have lining either.

2) Will USA materials be given preference?
   a. USA materials are desired, but no preference discount applies.

3) What happens to the 6x3 reducing 90 on C3?
   a. This is changed to a 6x4 and will connect to existing pipe at this location

4) Plan or profile stationing for cross on C3?
   a. The profile is out of date, the plan view is the correct position of the cross. See corrected plans in addendum #2.

5) 4” pipe after the 6x4 reducer?
   a. This pipe will connect to the existing pipe for the air lift pump in the clarifier.

6) Height of 4” pipe as shown in detail D/D4?
   a. This pipe is to be brought to the height of the existing pipe and connected, approximately 5’ from existing ground.

7) Plan or profile stationing for cross on C4?
   a. The profile is out of date, the plan view is the correct position of the cross. See corrected plans in addendum #2.

8) Valves shown in profile view C4?
   a. These valves have been removed from the project, see corrected plans in addendum #2.

9) Stationing does not scale correctly?
   a. The drawings have been updated to scale correctly, see corrected plans in addendum #2.

10) Modulating Valve type?
    a. Corrected plans show a butterfly valve.

11) Connection to existing diffuser?
    a. Connection to the existing diffuser will be at the 4” butterfly valve.

Respectfully,

Matt Wadlington, P.E.
Project Manager
AIR PIPING UPGRADES
PROJECT NO. 3101-006
May 2015

LOCATION MAP

LANE COUNTY, OREGON

VICINITY MAP

CITY OF VENETA

8618 S. 8th St., Veneta, OR 97487

ELECTRICAL SHEETS

Sheet List Table

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OVERALL SITE PLAN - EXISTING IMPROVEMENTS

1. EXISTING COMPRESSED AIR DISTRIBUTION LINES TO BE DEMOLISHED AFTER INSTALLATION AND CROSS OVER TO NEW DUCTILE IRON PIPE.
Non-Potable Water, Reroute Below Trench As Needed

Catch Basin

10" X 6" DI Cross

10" X 6" DI Reducer

Existing Concrete Wall

Install Trench Drain in Low Point of New Trench

Sanitary Sewer

Transition to Trench, See D3-A

Secondary Effluent

Existing Hydrant

10" DI Tee With Blind Flange

10" DI Reducer

Trench Detail, See D3-A

Typical Trench Drain, See B

Rate Trench To Trench Drain

Connect Trench Drain to Existing Storm Drain

Typical Trench Drain, See B

Scale: Horiz 1"=20'

Vert 1"=2'

Mainline Plan View

Mainline Profile View

May 2015
# Grating Schedule

<table>
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<tr>
<th>Pipe Diameter</th>
<th>Trench Outside Width</th>
<th>Maximum Clear Span</th>
<th>Bearing Bar Size</th>
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<tr>
<td>14&quot;</td>
<td>3'-6&quot;</td>
<td>2'-6&quot;</td>
<td>32&quot; x 2&quot;</td>
</tr>
<tr>
<td>10&quot;</td>
<td>2'-2&quot;</td>
<td>1'-6&quot;</td>
<td>32&quot; x 2&quot;</td>
</tr>
<tr>
<td>6&quot;</td>
<td>2'-6&quot;</td>
<td>1'-0&quot;</td>
<td>32&quot; x 2&quot;</td>
</tr>
</tbody>
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* Steel bar grating per specs

# Grating Notes:

1. Grating shall conform to the metal bar grating manual of Naam. Unless otherwise specified, grating shall be galvanized steel.
2. Unless otherwise specified, provide a grating clip approx 4" from the corners of each piece. Adjacent pieces may be anchored with one clip and two studs.
3. Grating shall be removable.

# Pipe Support Details

- **Flange Support**
- **Standard Support**

**HS10 Steel Grate**

- Finished floor
- Properly sized stainless steel anchor bolts

**Pipe Trench with Grate**

- Not to scale

**Typical 4 Inch Butterfly Valve**

- Connect to existing diffuser assembly
- Not to scale

**Electrical Conduct for Alternative Improvements**

- Optional 32 non-potable water
- See pipe support detail

**Pipe Stand**

- 4" butterfly air valve
- 6" x 4" El tee
- Not to scale

- Trench width will vary with changes in pipe diameter. See grating schedule for trench widths.
NEW CONCRETE TRENCH WITH STEEL GRATE COVER. TRENCH TO FOLLOW ALIGNMENT AS SHOWN ON PLANS, UNLESS OTHERWISE SPECIFIED.

WALL PENETRATION, USE KORE-N-SEAL WITH NEW PIPE INSTALL.

EXISTING PIPE, REMOVE FITTINGS AND CUT PIPE AT FLOOR, FILL WITH CONCRETE 14" X 10" REDUCER.

NEW CONCRETE TRENCH WITH STEEL GRATE COVER.

EXISTING AIRLINE, REMOVE FITTINGS AND CUT PIPE AT FLOOR, FILL WITH CONCRETE 14" DI 90° ELBOW, ROTATED 45°.

NEW BOLLARD.

EXISTING HANDRAIL, 6' MODULATING AIR VALVE.

COMPRESSED AIR FLOW METER, SPACING REQUIREMENTS: 5X DIAMETER BEFORE. 2X DIAMETER AFTER.

NEW CONCRETE TRENCH WITH STEEL GRATE COVER.

EXISTING GROUND, NEW CONCRETE TRENCH WITH STEEL GRATE COVER.

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COMPRESSED AIR FLOW METER.

NEW CONCRETE TRENCH WITH STEEL GRATE COVER.

EXISTING GROUND, 6' DI 90° ELBOW.

6' MODULATING BUTTERFLY AIR VALVE.

PIPE STAND, TYPICAL

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COMPRESSED AIR FLOW METER.
AIR PIPING UPGRADES
88184 8th St, Veneta, OR 97487
CITY OF VENETA
MDW
JBJ
JGP
3101-006
May 2015

TRENCH DRAIN AND TRANSITION TO GROUND DETAILS

TRANSITION NEXT TO AERATION BASIN

TRANSITION AT END (SIDE VIEW)
1. ALL CONSTRUCTION SHALL BE MADE TO THE MINIMUM STANDARDS IN THESE PLANS OR THE LATEST NEC CODE, WHICHEVER IS MORE STRINGENT. IF THE INTENT ON THE PLANS IS TO BE CONSTRUCTED DIFFERENTLY THAN CODE IT WILL SPECIFICALLY BE CALLED OUT.

2. COMPONENTS AND WIRING METHODS MAY BE OVERSIZED IN LOCATIONS. THIS IS TO PROVIDE CAPACITY FOR ANTICIPATED FUTURE EXPANSION.

3. CONTACTOR MAY SEPARATE OR COMBINE PARALLEL CONDUIT RUNS. CONDUIT FILL SHALL NOT EXCEED 30% OF CROSSSECTIONAL AREA. CHANGES MUST BE MADE WITH APPROVAL OF THE ENGINEER.

4. CONDUIT ROUTING SHOWN ON PLAN SHEETS IS APPROXIMATE AND INTENDED TO CONVEY TO THE CONTRACTOR THE GENERAL PATH. CONTRACTOR SHOULD USE BEST JUDGEMENT WHEN CONNECTING EQUIPMENT.

5. SUBSURFACE EXISTING AND NEW APPURTENANCES ARE DRAWN TO BEST AVAILABLE INFORMATION. UNKNOWN UNDERGROUND EQUIPMENT MAY EXIST. CONNECTION ADJUSTMENTS DUE TO EQUIPMENT SUBMITTALS ARE THE DUTY OF THE CONTRACTOR TO ACCOUNT FOR.

6. CHANGES TO THE ONE-LINE DRAWING AND EQUIPMENT PLACEMENT MUST BE MADE THROUGH THE SUBMITTAL PROCESS WITH APPROVAL FROM THE ENGINEER PRIOR TO CONSTRUCTION.

### Basic Materials

1. **Equipment Outdoors**
   - A. Electrical Panels-NEMA 4X
   - B. Control Panels-NEMA 4X
   - C. Conduit-PVC SCH 80
   - D. Boxes-PVC
   - E. Receptacles-Weatherproof
   - F. Wire-XWH-2 Cu

2. **Equipment indoors**
   - A. Panels-NEMA 12
   - B. Conduit-EMT
   - C. Boxes-Galvanized
   - D. Receptacles-GFI
   - E. Wire-THHN Cu

### One Line Linetypes

- **Electrical Connection Line**
- **Panel Boundary**
- **Ground Connection**

### Drawing Linetypes

- **Electrical Conduit**
- **Control Conduit**
- **Utility Lines**

### Hatch Types

- **Duct Bank**
- **Asphalt/Concrete**
- **Compacted Aggregate**
- **Earth**
- **Wood**

### Electrical Abbreviations

- **A** Amperes
- **V** Volts
- **W** Watts
- **KVA** Kilo Volt Amperes
- **Cu** Copper
- **b** Electrical Phase
- **VFO** Variable Frequency Drive
- **HMI** Human Machine Interface
- **AC** Available Interrupting Current
- **NC** Normally Closed
- **NO** Normally Open
- **PLC** Programmable Logic Controller
- **D/C** Disconnect
- **MN** Ground
- **AWG OR #** American Wire Gauge

### One-Line Symbols

- **Meter Base**
- **Fusible Disconnect**
- **Non-Fusible Disconnect**
- **Transformer, Size, Rating, K-Rating**
- **Pump, Horsepower Rating**
- **Generator, KVA Rating**
- **Motor, Horsepower**
- **Variable Frequency Drive W/ Integral Breaker**
- **Surge Protection Device**
- **Receptacle Circuit Rating**
- **Fluorescent Lighting**
- **Circuit Breaker, Rating/Poles**
- **Motor Starter**

### Drawing Symbols

- **Disconnect**
- **Electrical Panel**
- **Circuit Number (45) with Indication of Distribution Board (E)**
- **Flexible Conduit**
- **Panel Identifier**

### General Notes

- 1. All construction shall be made to the minimum standards in these plans or the latest NEC code, whichever is more stringent. If the intent on the plans is to be constructed differently than code it will specifically be called out.
- 2. Components and wiring methods may be oversized in locations. This is to provide capacity for anticipated future expansion.
- 3. Contactor may separate or combine parallel conduit runs. Conduit fill shall not exceed 30% of crosssectional area. Changes must be made with approval of the engineer.
- 4. Conduit routing shown on plan sheets is approximate and intended to convey to the contractor the general path. Contractor should use best judgement when connecting equipment.
- 5. Subsurface existing and new appurtenances are drawn to best available information. Unknown underground equipment may exist. Connection adjustments due to equipment submittals are the duty of the contractor to account for.
- 6. Changes to the one-line drawing and equipment placement must be made through the submittal process with approval from the engineer prior to construction.

### Basic Materials

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   - A. Electrical Panels-NEMA 4X
   - B. Control Panels-NEMA 4X
   - C. Conduit-PVC SCH 80
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   - A. Panels-NEMA 12
   - B. Conduit-EMT
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   - D. Receptacles-GFI
   - E. Wire-THHN Cu
1. INITIAL BLOWER CONFIGURATION, 30HP 40A 460V
   BLOWERS SET OVERLOADS FOR 65A 460V DRAW.
   DRIVES SIZED FOR 50HP.

2. EXISTING WIRE IS #6 SIZED FOR 30HP MOTORS TO TOP
   OF PANEL. IF EXISTING WIRE IS TOO SHORT, REPLACE
   WITH #4 THHN STRANDED CU CONDUCTORS.

LEAVE SPACE IN PANEL TO POWER AND CONTROL FUTURE
RAKES

1. EXISTING AND NEW SIGNALS FOR NEW CONTROL PANEL, CHECK
   REQUIREMENTS AGAINST INSTALLED EQUIPMENT AND SUBMITTALS
   FOR NEW CONTROL VALVES AND SENSORS. INFORMATION ONLY
   APPROXIMATE FROM RECORD DRAWINGS

2. EXISTING VALVES ASSUMED TO BE 24VDC OPERATED. CHECK IN FIELD

FUTURE SIGNALS FOR EXPANSION INC. BLOWER, AIR FLOW METERS, DO SENSORS,
AIR VALVES FOR FUTURE BASINS 3 AND 4.
**SHEET NOTES:**

1) RUN CONDUIT AND MOUNT IN TRENCH DRAIN.
2) SEAL ALL CONDUIT WITH PVC CEMENT. ALL WIRE SHALL BE WET RATED DUE TO POSSIBLE IMMERSION IF CONDUIT LEAKS.