Mechanical Legend and Notes

**Generic Piping Notes**
1. Size of fittings shown on drawings shall correspond to adjacent straight run of pipe. Unless otherwise indicated, type of joint and fitting material shall be the same as shown for adjacent straight run of pipe.
2. Location and number of fire hangers and pipe supports shown is only approximate; contractor shall design supports.
3. All joints shall be watertight; wall pipes shall be used wherever piping passes from a structure to backfill.
4. All flexible connectors and coupling adapters shall be provided with thrust straps. Unless otherwise noted, thrust protection shall be provided for test pressures specified.
5. Symbols, legends, and pipe use designations shown shall be followed throughout the drawings. Whenever applicable, not all of the various pipe components are necessarily used in the project.
6. Number and location of unions shown on drawings is only approximate; provide all unions not designated by tailnotes. Convenient removal of valves and flanges is indicated by dashed lines.
7. Where a groove end coupling is shown, it shall be the rigid joint type, unless otherwise specified. A flanged coupling and adapter is shown. A standard flange shall be joined to the coupling adapter.

**Piping Designation**
- **Double Line**: 1/2" PIP
- **Single Line**: Pipe size specifications for pipe schedule

**Valve Symbols**
- **Single Line**: Gate, Knife Gate, Butterfly, Globe, Ball, Seating Port, Plug or Cock, Needle, Diaphragm, Pinch, Swing Check, Ball Check
- **Double Line**: Regulated Rod, Regulated Rod, Pressure Control, Vacuum Release, Pressure Control, External Pilot

**Valve Designations**
- **Manual Valves and Check Valves**
- **Control Valves**
- **Self-Contained Regulating Valves**

**Notes**
- Use SC-Legend for further definitions and actuator types.
- See I&C legends for further definitions and valve function.
- See I&C Legend for further definitions and valve function.
GENERAL SHEET NOTES

1. COMPLIANCE W/ OSHA FROM DEPARTMENT OF DISABILITY OFFICE OF DISABILITY INFORMATION AND DISABILITY CONCERNS, INCLUDING MENTAL HEALTH AND ADDICTION.

2. MUT ALL EXISTING PIPING IS SHOWN, FIELD VERIFY EXISTING CONDITIONS.

3. REFER TO SECTION 01 31 13 FOR SEQUENCE OF CONSTRUCTION AND DEMOLITION.

4. EXISTING PIPES AND VALVES MAY CONTAIN LEAD; PIPE JOINTS GASKETS CONTAIN ACM; REFER TO SPECIFICATION SECTION 02 41 00, DEMOLITION LEAD PAINT ABATEMENT FOR SPECIFIC REQUIREMENTS.

5. FOR REMOVAL OF CONCRETE, EMBEDMENTS AND FOREMOUR GRATINGS, REFER TO DETAIL 0330-143.

SPECIFIC REQUIREMENTS.

2. EXISTING CONDITIONS.

3. ELEVATIONS, AND DIMENSIONS.

INFORMATION. FIELD VERIFY CENTERLINES, LINEWORK DEVELOPED FROM AVAILABLE EXISTING DRAWINGS.

4. DEMOLISH TO EXISTING FLANGE.

5. COMPLETE WORK.

NOT ALL EXISTING PIPING IS SHOWN, FIELD VERIFY EXISTING CONDITIONS.

TRANSFER PUMP AND WATER ROOM

SECTION

A

SECTION

B

FILENAME: 03A-110.dgn

2019-01-30 13:36:01 PM

PLOT DATE: 10/10/19

PLOT TIME: 2:36:16 PM

REUSE OF DOCUMENTS:

FILENAME: 03A-110.dgn

2019-01-30 13:36:01 PM

PLOT DATE: 10/10/19

PLOT TIME: 2:36:16 PM

REUSE OF DOCUMENTS:
GENERAL SHEET NOTES

1. REFER TO SPECIFICATION SECTION 01 31 13 FOR SEQUENCES OF CONSTRUCTION AND DEMOLITION.
   2. REFER TO DEMOLITION PLAN AND SECTION DRAWINGS FOR ADDITIONAL NOTES AND INFORMATION.
1. REMOVE EXISTING PRESSURE/LEVEL TRANSMITTER, REFER TO PROCESS MECHANICAL PLANS.

2. CONTRACTOR RESPONSIBLE FOR CONFIRMING INTEGRITY OF INTERCONNECT PIPES AND VALVES SIZE BETWEEN CLEARWELL 1 AND CLEARWELL 2, AND CLEARWELL INTERCONNECT PIPE AND VALVE SIZE.

3. CONTRACTOR TO REMOVE CAN SECTIONS OF EXISTING INTERCONNECT PIPES AND VALVES.

4. CONTRACTOR TO REMOVE CAN SECTIONS OF EXISTING INTERCONNECT PIPES AND VALVES IMPACTING INTERCONNECT PIPE 30" CLEARWELL.

5. CONTRACTOR TO REMOVE CAN SECTIONS OF EXISTING INTERCONNECT PIPES AND VALVES IMPACTING INTERCONNECT PIPE 30" CLEARWELL FOLLOWING CONSTRUCTION.

6. REALIGN AS NECESSARY INTERCONNECT PIPE, EXISTING 30" CLEARWELL PRIOR TO DEMOLITION OF CONTRACTOR TO REMOVE FAN AND INTERCONNECT PIPE, EXISTING 30" CLEARWELL.

7. DO NOT DISTRUB EXISTING 12" FW BETWEEN CLEARWELL 1 AND CLEARWELL 2, AND CLEARWELL INTERCONNECT PIPE AND VALVE SIZE.

8. REUSE EXISTING SAMPLE TAP AND PRESSURE/LEVEL TRANSMITTER.

9. DEMOLISH EXISTING 12" IPS COUPLING AND INTERCONNECT PIPE.

10. DEMOLISH EXISTING 12" IPS COUPLING AND INTERCONNECT PIPE AT FLANGE.

11. DEMOLISH EXISTING 12" IPS COUPLING AND INTERCONNECT PIPE.

12. DEMOLISH LINK SEALS.

13. DEMOLISH VALVE AT FLANGE.

14. DO NOT DISTRUB EXISTING 12" FW.

15. DO NOT DISTRUB EXISTING 12" FW.

16. REALIGN AS NECESSARY INTERCONNECT PIPE, EXISTING 30" CLEARWELL PRIOR TO DEMOLITION OF CONTRACTOR TO REMOVE FAN AND INTERCONNECT PIPE, EXISTING 30" CLEARWELL.

17. MATCH EXISTING PIPE AND VALVE SIZE.

18. REFER TO DEMOLITION PLAN AND SECTION DRAWINGS FOR ADDITIONAL NOTES AND INFORMATION.

19. SEE SPECIFICATION SECTION 01 31 13 FOR SEQUENCE OF CONSTRUCTION AND DEMOLITION.
SECTION

3/8"=1'-0"

NOTES:
1. LOCATE BEAM EMBEDMENT PRIOR TO DRILLING. DO NOT DRILL THROUGH REINFORCEMENT
2. Holes for #5 bolts (4) located directly over equipment lifting point.
3. COORDINATE LOCATION OF BEAMS AND EYEBOLTS WITH OWNER.

PERIOD ICES OF ANN ARBOR, MICH

DETAIL

1 1/2"=1'-0"

NOTES:
1. LOCATE BEAM EMBEDMENT PRIOR TO DRILLING. DO NOT DRILL THROUGH REINFORCEMENT
2. Holes for #5 bolts (3) located directly over equipment lifting point.
3. COORDINATE LOCATION OF BEAMS AND EYEBOLTS WITH OWNER.

LETTERS TO BE 4" HIGH
PAINT ON BEAM LETTERS TO BE 3" HIGH

ELEVATION

DETAIL

3/4"=1'-0"

NOTES:
1. LOCATE BEAM EMBEDMENT PRIOR TO DRILLING. DO NOT DRILL THROUGH REINFORCEMENT
2. Holes for #5 bolts (4) located directly over equipment lifting point.
3. COORDINATE LOCATION OF BEAMS AND EYEBOLTS WITH OWNER.

W8x24 GALV TYP 4 SIDES EMBEDMENT, DOWELS, 5" #5@10" ADHESIVE

EYE, TYP BEAM WITH LIFTING
GENERAL SHEET NOTES

1. MEMBER DEVELOPED FROM AVAILABLE EXISTING INFORMATION, IF NOT COVERED BY TEN TEN, KEN
   LIN, SHEET KEYNOTES.

2. NOT ALL EXISTING PIPING IS SHOWN, FIELD VERIFY EXISTING CONDITIONS.

3. CONTRACTOR RESPONSIBLE FOR CONFIRMING EXISTING PIPING AND ELEVATIONS, AND CORRECTING
   PIPING AND ELEVATIONS AS NEEDED.

4. CONTRACTOR TO INSPECT EXISTING PIPING AND ELEVATIONS.

Sheet Keynotes

1. PROVIDE 3/4" SA CONNECTION TO EXISTING TRANSFER PUMP 1 - 3 DISCHARGE HEADER SAMPLE
   PIPE WITH 1/2" 300 ISOLATION VALVE.

2. PROVIDE 3/4" SA CONNECTION TO EXISTING TRANSFER PUMP 1 - 3 DISCHARGE HEADER SAMPLE
   PIPE WITH 1/2" 300 ISOLATION VALVE.

3. PROVIDE 3/4" SA CONNECTION TO EXISTING TRANSFER PUMP 1 - 3 DISCHARGE HEADER SAMPLE
   PIPE WITH 1/2" 300 ISOLATION VALVE.

4. PROVIDE 3/4" SA CONNECTION TO EXISTING TRANSFER PUMP 1 - 3 DISCHARGE HEADER SAMPLE
   PIPE WITH 1/2" 300 ISOLATION VALVE.

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   PIPE WITH 1/2" 300 ISOLATION VALVE.

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4. PROVIDE 3/4" SA CONNECTION TO EXISTING TRANSFER PUMP 1 - 3 DISCHARGE HEADER SAMPLE
   PIPE WITH 1/2" 300 ISOLATION VALVE.
CONTRACTOR TO FIELD VERIFY DEPTH OF BEAMS.

EXISTING CONDITIONS.

SHEET KEYNOTES

1. SUPPORT VALVE ACTUATION FROM PIPE SUPPORT.
2. CONTRACTOR TO ADD ADDITIONAL LATERAL SUPPORT FROM FRAMES ON PIPS.
3. CONTRACTOR TO FIELD VERIFY CENTERLINES.
4. INFORMATION. FIELD VERIFY CENTERLINES, LINEWORK DEVELOPED FROM AVAILABLE EXISTING INFORMATION.

GENERAL SHEET NOTES

1. UNWORK DEVELOPED FROM AVAILABLE EXISTING INFORMATION.
2. NOT ALL EXISTING PIPING IS SHOWN FIELD VERIFY EXISTING CONDITIONS.
3. NOT USED.
4. SUPPORT FROM GRATING OR PIPE.
5. SUPPORT FROM GRATING OR PIPE.
6. SUPPORT FROM GRATING OR PIPE.

1. 3/8"=1'-0"
2. 3/8"=1'-0"
3. 3/8"=1'-0"
4. 3/8"=1'-0"
5. 3/8"=1'-0"
6. 3/8"=1'-0"
CONTRACTOR TO FIELD VERIFY DEPTH OF BEAMS.

3. CONTRACTOR TO FIELD VERIFY DISTANCE BETWEEN WALL AND EDGE OF BEAMS.

4. CONTRACTOR TO FIELD VERIFY DEPTH OF BEAMS.

ORIGINAL DRAWING.
EXISTING CONDITIONS.

NOT ALL EXISTING PIPING IS SHOWN FIELD VERIFY ELEVATIONS, AND DIMENSIONS.

INFORMATION. FIELD VERIFY CENTERLINES, LINEWORK DEVELOPED FROM AVAILABLE EXISTING INFORMATION.

EXIST 3/8" DR, TYP PIPE SUPPORT, 1/2" DR, TO SUMP

EXIST 6" DR IN DATA VALVE

EXIST 3'-6" OA x 6'-0" DEEP SUMP

EXIST 4'-0" MET SLV TO SUMP

EXST SA TO SAMPLE ROOM

EXST 3'-0" FO

EXST 1'-6" DR
EXISTING CONDITIONS.
NOT ALL EXISTING PIPING IS SHOWN FIELD VERIFY
ELEVATIONS, AND DIMENSIONS.
FIELD VERIFY CENTERLINES,
LINEWORK DEVELOPED FROM AVAILABLE EXISTING
1.

EXST 16" PLUG VALVE
EXST 16" FLANGED ADAPTER
EXST DRESSER
EXST FLOOR DRAIN TO SUMP
EXST 16" CHECK VALVE

EL 972.50
PLATFORM

SECTION
3/8"=1'-0"
GENERAL SHEET NOTES

1. LAYOUT AND DEVELOPMENT FROM AVAILABLE EXISTING IN DRAWINGS, TO BE UNDERSTOOD, LEGENDS, LEGENDS, AND DIMENSIONS.

2. NOT ALL EXISTING PIPING IS SHOWN, FIELD VERIFY EXISTING CONDITIONS.

EXISTING CONDITIONS.

NOT ALL EXISTING PIPING IS SHOWN FIELD VERIFY ELEVATIONS, AND DIMENSIONS.

INFORMATION. FIELD VERIFY CENTERLINES, LINEWORK DEVELOPED FROM AVAILABLE EXISTING.

EXISTING CONDITIONS.

NOT ALL EXISTING PIPING IS SHOWN FIELD VERIFY ELEVATIONS, AND DIMENSIONS.

INFORMATION. FIELD VERIFY CENTERLINES, LINEWORK DEVELOPED FROM AVAILABLE EXISTING.

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INFORMATION. FIELD VERIFY CENTERLINES, LINEWORK DEVELOPED FROM AVAILABLE EXISTING.
GENERAL SHEET NOTES

1. Linework, elevations, and other information is subject to change. Verify with the project team.

2. Avoid conflicts with existing items.

3. Sheet keynotes should be carefully reviewed.

4. Match existing pipe and valve size, if applicable.

5. General notes should be reviewed for any additional requirements.

6. Verify the scale of the section drawing.

7. The existing conditions shall be verified by the contractor.

8. The contractor shall be responsible for confirming the pipe size and valve size between the existing clearwell and the new clearwell.

9. The contractor shall be responsible for confirming the pipe size and valve size between the existing clearwell and the new clearwell.

10. The contractor shall be responsible for confirming the pipe size and valve size between the existing clearwell and the new clearwell.

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40. The contractor shall be responsible for confirming the pipe size and valve size between the existing clearwell and the new clearwell.
GENERAL SHEET NOTES

1. PLAN DEVELOPED FROM AVAILABLE EXISTING INFORMATION. FIELD VERIFY CENTERLINES, ELEVATIONS, AND DIMENSIONS.

2. NOT ALL EXISTING PIPING IS SHOWN FIELD VERIFY INFORMATION. FIELD VERIFY CENTERLINES, ELEVATIONS, AND DIMENSIONS.

SECTION 3/8"=1'-0"
EXISTING CONDITIONS.
NOT ALL EXISTING PIPING IS SHOWN FIELD VERIFY
ELEVATIONS, AND DIMENSIONS.
FIELD VERIFY CENTERLINES, LINEWORK DEVELOPED FROM AVAILABLE EXISTING

SECTION

FOR ALTERNATE BID NO. 1 ONLY:
CALGON CARBON CORPORATION, INC.

SEE GENERAL ABBREVIATIONS (CONTINUED) AND
EXISTING CONDITIONS.

NOT ALL EXISTING PIPING IS SHOWN FIELD VERIFY 1.

ELEVATIONS, AND DIMENSIONS. FIELD VERIFY CENTERLINES,

INFORMATION. LINEWORK DEVELOPED FROM AVAILABLE EXISTING

2.

EXISTING CONDITIONS.

NOT ALL EXISTING PIPING IS SHOWN FIELD VERIFY 2.

FLANGED ADAPTER

EXST DRESSER

EXST FLOOR DRAIN TO SUMP

EXST 16" CHECK VALVE

FLANGED ADAPTER

EXST 1 1/2" DR

EXST 16" UVI

16" PLUG VALVE

20" x 16" ECC RDCR, FOT PIPE SUPPORT,

20" RESTRAINED EXST 20" FW, NOT IN USE

EXST 36" FW, NOT IN USE

FOR ATLERNATE BID NO. 1 ONLY:

CALGON CARBON CORPORATION, INC.

FOR ATLERNATE BID NO. 1 ONLY:

DESIGNATIONS LEGEND DWG GENERAL NOTES

SEE GENERAL ABBREVIATIONS (CONTINUED) AND

GENERAL ABBREVIATIONS, CONTINUED.

SECTION 3/8"=1'-0"
GENERAL SHEET NOTES

1. CONDUIT ROUTES SHALL STAY BELOW GRATING TO THE GREATEST EXTENT POSSIBLE, EXCEPT WHERE NOTED OTHERWISE.
2. LAYOUT BASED ON BASE BID UV EQUIPMENT BY TROJAN UV TECHNOLOGIES, INC. SEE PROCESS LAYOUT BASED ON BASE BID UV EQUIPMENT.

SHEET KEYNOTE

1. CONDUIT ENTRY TO UV LCP-1 AND LCP-2 SHALL BE THROUGH THE TOP.

POWER PLAN - EL 972.50

POWER PANEL 2
UV CONTROL
LCP-2
RED-MCC-1

POWER PANEL 1
UV CONTROL
LCP-1

ANALYZER 2
CHLORAMINE

ANALYZER 1
CHLORAMINE

LCP-3
CONTROL PANEL
UV MASTER

UVT ANALYZER
(UVT-0360)

RED-MCC-1

LCP-1
(2)
LCP-1
(2)

FIT 105
FIT 205

POMP M P L A N  - E L  9 7 2 .5 0
**LIGHTING FIXTURE SCHEDULE**

<table>
<thead>
<tr>
<th>FIXTURE TYPE</th>
<th>FIXTURE DESCRIPTION</th>
<th>LAMP</th>
<th>LUMENS</th>
<th>WATTS</th>
<th>VOLTAGE</th>
<th>MOUNTING</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>LED, 12&quot; LUMEN PACKAGE - LITOCR RED AND ALUMINUM OPAQUE LIGHT CaDER, ENCLOSED, CORROSION RESISTANT WHITE FINISH, TYPE 1 LOW ANGLE GLARE OPTICS, MAX 50 AMBER LUMEN RATING S, 3400K AMBER ACCESSORIES, NON-MARKING PLASTIC HOUSING.</td>
<td>LED</td>
<td>5000 LUMENS</td>
<td>56W</td>
<td>120V</td>
<td>PENDANT</td>
<td>HOLLOPHANE PETROLUX LED SERIES CATALOG NO. 3P-1A.26 AS UN 39.136.2-5 (3P-1A.26.)</td>
</tr>
<tr>
<td>B</td>
<td>TASK LIGHT - LED, 8000 LUMEN PACKAGE - 12&quot; LED FLOOD LIGHT, 3000K WITH STAINLESS STEEL TUBE, WHITE PAINT FINISH, SINGLE PUMP (DELPHI ALUMINUM HOUSING)</td>
<td>LED</td>
<td>4000 LUMENS</td>
<td>48W</td>
<td>120V</td>
<td>ORIENTED</td>
<td>HOLLANIDES PETROLUX LED SERIES CATALOG NO. 3P-1A.26 AS UN 39.136.2-5 (3P-1A.26.)</td>
</tr>
<tr>
<td>C</td>
<td>EMERGENCY FIXTURE WARM/THREADED, PLASTIC BODY RATED NEMA 4X, TWO 20W HALOGEN HEADS</td>
<td>LED</td>
<td>3000 LUMENS</td>
<td>30W</td>
<td>120V</td>
<td>WALL</td>
<td>HOLLANIDES PETROLUX LED SERIES CATALOG NO. 3P-1A.26 AS UN 39.136.2-5 (3P-1A.26.)</td>
</tr>
</tbody>
</table>

**GENERAL SHEET NOTES**

1. COIL TYPE RAC RAC fixtures shall be wired to the UNMETERED PORTION OF BRANCH CIRCUIT.
2. MOUNT 7'-0" AFF.
3. MOUNT TYPE "B" TASK LIGHT FIXTURES TO VERTICAL SUPPORTS NEAR BOTTOM OF GRATING.
GENERAL SHEET NOTES

1. LINEMAN DEVELOPED FROM AVAILABLE EXISTING HYDROGRAPHS, HUMIDITY, LEVELS, AND LINES.
2. NOT ALL EXISTING PIPING IS SHOWN, FIELD VERIFY EXISTING CONDITIONS.
CONCRETE DEMOLITION

PIPE SUPPORT - CONCRETE SADDLE

NOTES:
1. REMOVE CONCRETE OUT TO SODIUM CONCRETE.
2. IF CONCRETE IS TO MATCH EXISTING ADJACENT CONCRETE TO PREVENT CHASING DAMAGED SURFACES AS NOTED.
3. USE APPROVED CEMENTING AGENT ON SURFACES TO BE PATCHED PRIOR TO PATCHING REPAIR MATERIAL.
4. CONCRETE MUST BE WETted WITH NEW CONCRETE IDENTICAL TO EXISTING CONCRETE, USE ACCELERATOR IF NEEDED.
5. CONCRETE MUST BE WETted WITH NEW CONCRETE IDENTICAL TO EXISTING CONCRETE, USE ACCELERATOR IF NEEDED.

CONCRETE DEMOLITION

TYPICAL BEAM CONNECTION - STEEL

NOTES:
1. ALL BEAM FRAMING CONNECTIONS SHALL COMPLY WITH THIS DETAIL LINEARLY SPECIFIED IN THE ENGINEER.
2. PROVIDE ADJACENT 1 1/2" LENGTH TO DOUBLE ANGLE OR STAGGERED BEAMS WHEN CONSTRUCTED OTHER THAN AS ShOWN.
3. DIMENSION SHALL BE 1/2" UNLESS OTHERWISE REQUIRED FOR PROPER FABRICATION.

BEAM SPICE - STEEL

NOTES:
1. PROVIDE ANCHORING DETAIL SHOWN FOR SUPPORTED BEAM TO BE IN TYPICAL (BEAM SPICE CONNECTION) DETAIL (LENGTH OF PLATE IS SAME AS LENGTH OF ANGLES IN TABLE).
2. WELD SHEAR SIZE SHALL BE DETERMINED BY THE ENGINEER. MINIMUM WELD SIZE SHALL BE 1/2" D, SHEET FOR MATERIAL. THICKNESS SHEET UP TO AND INCLUDING A325N BOLTS, SAME NUMBER AS SHOWN FOR SUPPORTED BEAM IN TYPICAL (BEAM SPICE CONNECTION) DETAIL (LENGTH OF PLATE IS SAME AS LENGTH OF ANGLES IN TABLE).
3. PROVIDE SST CONC ANCHORS.

BEAM/WALL CONNECTION - STEEL

NOTES:
1. PROVIDE ANCHORING DETAIL SHOWN FOR SUPPORTED BEAM TO BE IN TYPICAL DETAIL (LENGTH OF PLATE IS SAME AS LENGTH OF ANGLES IN TABLE).
NOT TO SCALE

1. AT CONTRACTOR'S OPTION FACERATE KNOB OR PROVIDE OTHER KNOB AS SPECIFIED. GALVANIZE AFTER ALL WELDING.

2. GRATING SPAN IS INDICATED BY , SEE PLAN.

3. EXPANSION PLATE AT END POST.

4. BOLT HEADS AT STAIRWAY OR PLATFORM, TYPE C.

5. WASHERS AND ELASTIC LOCK NUTS USED FOR ROUGH IN 5/8" ADHESIVE NUT, TIGHTEN FOR RIGID CONNECTION, SEE NOTE 12 FOR SIZE AND END CONDITIONS, SEE PLAN.

6. BEARING AND CROSS BARS.

7. MINIMUM BEARING DIMENSION, SEE NOTE 1.

8. MINIMUM BEARING THICKNESS.

9. MINIMUM BEARING DIMENSION, SEE NOTE 12.

TYPICAL PLAN

- EXPANSION PLATE AT END POST.
- EXPANSION PLATE AT EXISTING WALL.
- BOLT HEADS AT STAIRWAY OR PLATFORM, TYPE C.
- WASHERS AND ELASTIC LOCK NUTS USED FOR ROUGH IN 5/8" ADHESIVE NUT, TIGHTEN FOR RIGID CONNECTION, SEE NOTE 12 FOR SIZE AND END CONDITIONS, SEE PLAN.
- BEARING AND CROSS BARS.
- MINIMUM BEARING DIMENSION, SEE NOTE 1.
- MINIMUM BEARING THICKNESS.
- MINIMUM BEARING DIMENSION, SEE NOTE 12.

DETAIL PAGES:

- STANDARD GRATING
- STANDARD DETAIL
- STANDARD DETAILS

ELEVATION

- EXPANSION PLATE AT EXISTING WALL.
- BOLT HEADS AT STAIRWAY OR PLATFORM, TYPE C.
- WASHERS AND ELASTIC LOCK NUTS USED FOR ROUGH IN 5/8" ADHESIVE NUT, TIGHTEN FOR RIGID CONNECTION, SEE NOTE 12 FOR SIZE AND END CONDITIONS, SEE PLAN.
- BEARING AND CROSS BARS.
- MINIMUM BEARING DIMENSION, SEE NOTE 1.
- MINIMUM BEARING THICKNESS.
- MINIMUM BEARING DIMENSION, SEE NOTE 12.

SECTION:

- EXPANSION PLATE AT END POST.
- EXPANSION PLATE AT EXISTING WALL.
- BOLT HEADS AT STAIRWAY OR PLATFORM, TYPE C.
- WASHERS AND ELASTIC LOCK NUTS USED FOR ROUGH IN 5/8" ADHESIVE NUT, TIGHTEN FOR RIGID CONNECTION, SEE NOTE 12 FOR SIZE AND END CONDITIONS, SEE PLAN.
- BEARING AND CROSS BARS.
- MINIMUM BEARING DIMENSION, SEE NOTE 1.
- MINIMUM BEARING THICKNESS.
- MINIMUM BEARING DIMENSION, SEE NOTE 12.

NOTE: 1. MINIMUM BEARING HORIZONTAL DIMENSION = 1" FOR GRATING SPAN GREATER THAN 1/2".

2. MINIMUM BEARING HORIZONTAL DIMENSION = 1/2" FOR GRATING SPAN GREATER THAN 1/2".

3. MINIMUM BEARING HORIZONTAL DIMENSION = 1/2" FOR GRATING SPAN GREATER THAN 1/2".

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17. MINIMUM BEARING HORIZONTAL DIMENSION = 1/2" FOR GRATING SPAN GREATER THAN 1/2".

18. MINIMUM BEARING HORIZONTAL DIMENSION = 1/2" FOR GRATING SPAN GREATER THAN 1/2".
1. These details are typical for both vertical and horizontal mounting.

2. Strap to be spaced at specified intervals.

3. Concrete anchor, size and number as required by calculations.

4. Submit final design and calculations for support and anchorage as required.

5. Grounding general stairway

DEVICE MOUNTING, AT RAILING

CONDUIT MOUNTING USING STRAPS

GROUNDING GENERAL STAIRWAY

NOTES:

1. All shielding instrumentation cable shall be terminated in accordance with this detail where grounding is required.

2. For weights exceeding 40 lbs of mounted equipment exceeding 5 lb., cast post and connection for lateral load. Testing per structure above were required by calculation, submit final design and calculations.

3. Concrete wall on concrete or platform

4. Support and anchorage as required by calculations.

DEVICE MOUNTING, PEDESTAL

TERMINATION OF SHIELDED INSTRUMENTATION CABLE

CONDUIT SUPPORT SYSTEM

NOTES:

1. All hardware shall be stainless steel. Use washers and lockwashers at all nuts.

2. All tubes and conduits shall be cut and ends shall be filed smooth.

3. Conduit mounting using straps.

4. Conduit support system
CONDUIT TO EQUIPMENT FROM CEILING

CONDUIT TRANSITION AND SUPPORT

CONDUIT SUPPORT SYSTEM FOR WALLS

CONDUIT TO OTHER DEVICE

NOTES:
1. PROVIDE SUPPORT FOR ALL PVC CONDUIT WHICH EXTEND MORE THAN 1/2" OUT OF THE SLAB WITHIN 3 INCHES OF THE END OF THE CONDUIT.
2. PROVIDE SUPPORT FOR ALL PVC CONDUIT WITHIN 3 INCHES OF THE END OF THE CONDUIT.
3. THE DETAIL SHALL BE USED FOR SUPPORT OF ALL CONDUITS WHICH ARE NOT OTHERWISE SUPPORTED IN A RIGID MANNER SUCH AS AGAINST AN EQUIPMENT BASE, WALL, COLUMN, ETC. AS REQUIRED ABOVE.
4. FOR CONDUIT WHICH EXTENDS TALL, SIZE ANGLE SUPPORT AND ANCHORS FOR SEISMIC LOADS.

NOTES:
1. CONDUIT SHALL BE MOUNTED ON STRUT AS SHOWN ON DETAIL 2940-300.
2. INSTALL SUPPORTS AT 9' 0" MAXIMUM INTERVAL.
3. EXPANSION ANCHOR LENGTH AS REQUIRED FOR HOSS ASSEMBLY (TYP).
4. SUBMIT FINAL DESIGN AND CALCULATIONS FOR SUPPORT AND ANCHORAGE AS SPECIFIED.

NOTES:
1. CONDUIT SHALL BE MOUNTED ON STRUT AS SHOWN ON DETAIL 2940-300.
2. INSTALL SUPPORTS AT 9' 0" MAXIMUM INTERVAL.
3. EXPANSION ANCHOR LENGTH AS REQUIRED FOR HOSS ASSEMBLY (TYP).
4. SUBMIT FINAL DESIGN AND CALCULATIONS FOR SUPPORT AND ANCHORAGE AS SPECIFIED.

CONDUIT TO OTHER DEVICE

NOTES:
1. INSTALLATION OF CONDUIT TO A MOTOR OR OTHER DEVICE WHERE A JUNCTION CONNECTION ON AND NO JUNCTION BOXES OR CONTROLS. DEVICES ARE REQUIRED SHALL BE MADE IN ACCORDANCE WITH THIS DETAIL.
2. ALL HARDWARE SHALL BE STAINLESS STEEL.
3. SIZE TOP AND ANY INTERMEDIARY LATERAL SUPPORTS AS REQUIRED FOR STABILITY AND SEISMIC LOADS. SEE GENERAL ELECTRICAL CONSTRUCTION NOTES ON DRAWINGS.

NOTES:
1. NOTIFY FLOOR WITH MINIMUM 1/2" CONCRETE ANCHORS.
2. PORT BASE ATTACHED TO FLOOR WITH MINIMUM 1/2" CONCRETE ANCHORS.
3. "CONDUIT GRUBBLE (TYP).
4. SUPPORT, NOTE 3.
5. MIN 1/2" INCH 4-HOLES BASE PLATE, MINIMUM 1/2" CONCRETE ANCHORS.
6. "CONDUIT GRUBBLE (TYP).

NOTES:
1. CONDUIT SHALL BE MOUNTED ON STRUT AS SHOWN ON DETAIL 2940-300.
2. INSTALL SUPPORTS AT 9' 0" MAXIMUM INTERVAL.
3. EXPANSION ANCHOR LENGTH AS REQUIRED FOR HOSS ASSEMBLY (TYP).
4. SUBMIT FINAL DESIGN AND CALCULATIONS FOR SUPPORT AND ANCHORAGE AS SPECIFIED.
PIPE SUPPORT - SADDLE
SUPPORT PEDESTAL TYPE - ADJUSTABLE

NOTES:
1. ONLY FOR VERTICAL OR FLOOR MOUNTED PIPES
2. SUBMIT FINAL DESIGN AND CALCULATIONS FOR SUPPORT AND ANCHORAGE AS SPECIFIED.

PIPE SUPPORT - WALL MOUNTED MEDIUM

NOTES:
1. PROVIDE PIPE PROTECTION BARRIERS AS SPECIFIED.
2. SUBMIT FINAL DESIGN DRAWINGS AND CALCULATIONS OF SUPPORTS AND ANCHORAGES AS SPECIFIED.
3. MINIMUM OF TWO PIPES PER CHANNEL. MAX PIPE SIZE IS 6".

WALL/FLOOR PIPE STRUT SUPPORT SYSTEM

NOTES:
1. PROVIDE PIPE PROTECTION BARRIERS AS SPECIFIED.
2. SUBMIT FINAL DESIGN DRAWINGS AND CALCULATIONS OF SUPPORTS AND ANCHORAGES AS SPECIFIED.
3. MINIMUM OF TWO PIPES PER CHANNEL. MAX PIPE SIZE IS 6".

CONCRETE ANCHORS, BASED AS REQUIRED BY CALCULATIONS.

BASE BEND

NOTES:
1. SUBMIT FINAL DESIGN DRAWINGS AND CALCULATIONS OF SUPPORTS AND ANCHORAGES AS SPECIFIED.
2. MINIMUM COMPONENT AND CONNECTION SIZES SHOWN. FURNISH LARGER SIZES AS REQUIRED BY CALCULATIONS.
3. USE SIMILAR FOR SUPPORT OF HORIZONTAL TEE OR CROSS.

PIPE SUPPORT - SADDLE

NOTES:
1. PROVIDE PIPE PROTECTION BARRIERS AS SPECIFIED.
2. SUBMIT FINAL DESIGN DRAWINGS AND CALCULATIONS OF SUPPORTS AND ANCHORAGES AS SPECIFIED.
3. MINIMUM OF TWO PIPES PER CHANNEL. MAX PIPE SIZE IS 6".

WALL/FLOOR PIPE STRUT SUPPORT SYSTEM

NOTES:
1. PROVIDE PIPE PROTECTION BARRIERS AS SPECIFIED.
2. SUBMIT FINAL DESIGN DRAWINGS AND CALCULATIONS OF SUPPORTS AND ANCHORAGES AS SPECIFIED.
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CONCRETE ANCHORS, BASED AS REQUIRED BY CALCULATIONS.

BASE BEND

NOTES:
1. SUBMIT FINAL DESIGN DRAWINGS AND CALCULATIONS OF SUPPORTS AND ANCHORAGES AS SPECIFIED.
2. MINIMUM COMPONENT AND CONNECTION SIZES SHOWN. FURNISH LARGER SIZES AS REQUIRED BY CALCULATIONS.
3. USE SIMILAR FOR SUPPORT OF HORIZONTAL TEE OR CROSS.
NOTES:
1. DETAIL APPLIES TO VALVES 2" OR SMALLER. PROVIDE SERVICE SADDLE IF REQUIRED BY PIPE SUPPLIER.
2. INSTALL 2" OR 1-1/4" SST MUSHROOM VENT SCREEN WITH FNPT THREADS MATCHING VENT PIPE SIZE.

NOTES:
1. PROVIDE VALVE APPROPRIATE FOR THE SERVICE.
2. SADDLE IF REQUIRED BY PIPE SUPPLIER.
DETAIL APPLIES TO VALVES 2" OR SMALLER. PROVIDE SERVICE.

NOTES:
1. PROVIDE T' GAP BETWEEN WALL AND PANEL
2. SECURE TO WALL WITH (10) CONCRETE ANCHORS

NOTES:
1. FOR EXISTING CONCRETE WALL PENETRATION, CORE DRILL THROUGH WALL AND CLEAN CORED HOLE. COAT DRILL HOLE WITH A ZINC-BASED PRIMER AA 392-00.
2. IF HYDROSTATIC PRESSURE IS PRESENT, PROVIDE TWO (2) MODULAR MECHANICAL SEALS.

NOTES:
1. BUSINESS DRAIN IN PLUMBING DRAINS AND DRAINS FOR EXISTING CONCRETE WALL PENETRATION, CORE DRILL THROUGH WALL AND CLEAN CORED HOLE. COAT DRILL HOLE WITH A ZINC-BASED PRIMER AA 392-00.
2. IF HYDROSTATIC PRESSURE IS PRESENT, PROVIDE TWO (2) MODULAR MECHANICAL SEALS.