MAG METER DETAIL

NOT TO SCALE

ULTRASONIC FLOW METER DETAIL

NOT TO SCALE

FUTURE DISCHARGE ARV DETAIL

NOT TO SCALE

FORCE MAIN TRANSDUCER DETAIL

NOT TO SCALE

ARV DRAIN DETAIL

NOT TO SCALE

NOTES:

1. DIMENSION "L" TO BE DESIGNED BY ENGINEER.

METER NOTES:

1. CONTRACTORS TO PROVIDE AND INSTALL TRANSDUCER AND GAUGE PER JEA SPECIFICATIONS.
**ODOR CONTROL DRAIN AND VACUUM CONNECTION TO WET WELL DETAIL**

1. PVC gravity drain, and P-trap to wye pipe to WET WELL at 8" above ground.
2. Transom piping to WET WELL will be cast in a rubber boot (MIN. 6") to the inside.
3. PVC gravity drain, and P-trap to wye pipe to WET WELL at 8" above ground.
4. PVC gravity drain, and P-trap to wye pipe to WET WELL at 8" above ground.

**CONCRETE SLAB AND GROUND COVER DETAIL**

- Concrete slab
- Ground cover
- Landscape fabric

**WATER TEST STATION DETAIL**

- 1-1/2" S.S. pipe from 1-1/2" meter
- 1-1/2" S.S. pipe to hose station
- 1" S.S. piping & fittings with 1" S.S. ball valve (double union type)
- 1-1/2" x 1" S.S. tee

**PUMP STATION HANDRAIL DETAIL**

- 2" x 6" X 1-1/8" thick aluminum tubing handrails (Typ.)
- 3/4" x 3/4" thick aluminum tubing handrails (Typ.)
- 3/4" x 3/4" thick aluminum tubing handrails (Typ.)
- 3/4" x 3/4" thick aluminum tubing handrails (Typ.)

**ODOR CONTROL STUB OUT DETAIL**

- 4" PVC gravity drain to wet well at 1/2" per foot (MIN.)
- 6" vacuum pipe slop to wet well at 1/2" per foot (MIN.)
- 1" condensate
- Water supply for odor control

**NOTE:**
1. Min. depth of penetration shall be designed to meet positive drain.
2. Drain and vacuum pipe shall be unplugged and plugged to prevent odors.
3. Drain and vacuum pipe shall be unplugged and plugged to prevent odors.
4. Only drain bridge allowed on vacuum line.
NOTES:
1. ACCEPTABLE MANUFACTURERS OF TOWERS ARE ROHN, OR UNIVERSAL TOWERS. SEE PUMP STATION SITE DRAWINGS FOR POLE OR TOWER SPECIFICATIONS.
2. YAGI ANTENNA: MANUFACTURER: SCALA MODEL #: TY-900
3. MOUNTING POLE: MANUFACTURER: SCALA MODEL #: WPM-2
4. COAXIAL CABLE: MANUFACTURER: ANDREW MODEL #: LDF4-50A
5. COAXIAL CABLE GROUND: MANUFACTURER: TESSCO MODEL #: 41669
6. STAINLESS STEEL STRAPS: MANUFACTURER: WIRELESS SOLUTIONS MODEL #: RM-A300
7. STAINLESS STEEL U-BOLTS: MANUFACTURER: ANY DOMESTIC BRAND MODEL #: N/A
8. CEMENT CONNECTOR: MANUFACTURER: TESSCO MODEL #: 41669
9. 4" PVC CAPS
10. 4" DIA. ALUMINUM POST
11. 1/2"X3" SOLID ALUMINUM SUPPORT BARS (2 TOTAL) BOLTED TO POST W/5/8" S.S. ANCHOR BOLTS. DRILL 2 HOLES (AS DIMENSIONED ON DETAIL) IN TOP & BOTTOM SUPPORTS ONLY
12. BURY ALUMINUM POST IN CONCRETE AS SHOWN ON DRAWING.
13. INSTALL RTU MOUNT SO THAT WHEN CABINET IS ATTACHED DOOR IS FACING NORTH UNLESS DOOR HAS SUN SHIELD. IN ALL INSTANCES JEA PREFERENCES THE DOOR TO FACE NORTH IF POSSIBLE.
14. CABINET SHALL HAVE CLEARANCE TO OPEN DOOR COMPLETELY.
15. SCADA SYSTEM WOOD POLE ALTERNATE DETAIL TO BE USED ONLY WHEN ADDITIONAL ANTENNA HEIGHT IS REQUIRED, AND APPROVED.
16. MUST BE COMPLIANCE W/ JEA SPECIFICATIONS
17. ALL MATERIALS MUST MEET OR EXCEED JEA SPECIFICATIONS

SCADA INSTALLATION DETAIL

ALTERNATE POLE SCADA INSTALLATION DETAIL FOR POLE HEIGHTS LESS THAN 20 FEET

NOT TO SCALE

NOT TO SCALE
TABLE 4A
CONDUIT AND SERVICE BOX REQUIREMENTS
FOR UNDERGROUND COMMERCIAL SERVICES FROM AN OVERHEAD POLE

<table>
<thead>
<tr>
<th>SERVICE SIZE</th>
<th>CONDUIT SIZE</th>
<th>SERVICE BOX SIZE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-300A</td>
<td>1-2 in</td>
<td>12&quot; x 12&quot; x 14&quot;</td>
</tr>
<tr>
<td>400A-1400A</td>
<td>2-4 in</td>
<td>12&quot; x 12&quot; x 14&quot;</td>
</tr>
<tr>
<td>151A-200A</td>
<td>1-3 in</td>
<td>12&quot; x 12&quot; x 14&quot;</td>
</tr>
<tr>
<td>201A-399A</td>
<td>2-4 in</td>
<td>12&quot; x 12&quot; x 14&quot;</td>
</tr>
<tr>
<td>400A-800A</td>
<td>2-4 in</td>
<td>12&quot; x 12&quot; x 14&quot;</td>
</tr>
<tr>
<td>20A-150A</td>
<td>1-2 in</td>
<td>12&quot; x 12&quot; x 14&quot;</td>
</tr>
</tbody>
</table>

NOTE:
1. THE MAXIMUM DISTANCE BETWEEN THE SERVICE BOX AND SERVICE POLE IS 15 FT.
2. THE CUSTOMER POLES A LEAN SIDE OF THE SERVICE POLE FOR THE AG TO EXTEND UP.
3. THE CUSTOMER POLES A LEAN SIDE OF THE SERVICE POLE FOR THE AG TO EXTEND UP.
4. THE JEA WILL INSTALL ALL CONDUITS AND SERVICE BOXES AT CUSTOMER'S POINT OF SERVICE.
5. THE JEA WILL INSTALL ALL CONDUITS AND SERVICE BOXES AT CUSTOMER'S POINT OF SERVICE.

TECHNICAL SPECIFICATIONS

1. MATERIAL SPECIFICATIONS:
   - SERVICE BOX:
     1. REINFORCED PLASTIC MORTAR (RPM) CONSISTING OF FIBERGLASS AND ISOPHOLIC RESIN. THE BASE AND THE RING WILL BE OF POLYMER CONCRETE AND WILL BE PERMANENTLY FUSED TO THE BODY DURING THE CURING PROCESS.
   2. WARNING TAPE:
      - THE WARNING TAPE IS A 3" X 36" X 1/2" STEEL TAPE WITH TOP OF COVER.
   3. CONDUITS:
      - CONDUITS TO KEEP WATER OUT OF CONDUITS TO EXTEND ABOVE GROUND AND BE IN DIRECT CONTACT WITH JEA POLE.

ELECTRICAL NOTES

1. INSTALLATION: THE JEA WILL INSTALL ALL ELECTRICAL EQUIPMENT ON THE CUSTOMER'S SERVICE BOX.
2. ELECTRICAL NO. 6 WIRE SHAL BE IDENTIFIED TO PREVENT THE CUSTOMER FROM MAKING THE SERVICE:"A" OR "B" WIRE AT THE TOP.
3. ELECTRICAL MATERIALS SHAL BE ORDERED AT THE CUSTOMER'S POINT OF SERVICE.
4. SERVICE DISCONNECT SHAL BE A 60 AMP FUSE IN FRAME 6 FORM.
PUMP STATION GROUNDING SITE PLAN

BARE #2/0 AWG GROUND LOOP

NOT TO SCALE

DRAWING UPDATED (SIZE AS REQUIRED BY NOTES)

GROUNDING SYMBOL LEGEND

---

1. **Grounding System Hardware**
   - Includes clamps, connectors, bolts, washers, and nuts. Should be Type-5 plated copper.

2. **Ground Loop**
   - Conductors and connections below the ground shall be galvanized or copper-clad and not acceptable except where noted in the grounding system requirements.

3. **Ground Loop Conductors**
   - Shall be bare #2/0 AWG, soft drawn, tinned stranded copper conductor conforming to the requirements of IEEE 837 and UL 467. Two-hole grounding bars shall have a nominal centerline hole spacing of 36 inches.

4. **Grounding Components and Materials**
   - Shall be new and undamaged.
   - Insulated ground conductor shall be bare #2/0 AWG, soft drawn, Type-5 plated stranded copper conductor conforming to the requirements of IEEE 837 and UL 467. Minimum size for insulated ground conductors. Requirements of application shall be #10 AWG.

5. **Bare Ground Loop System**
   - Shall be driven to a minimum of 60 feet each.
   - Bared ground conductor shall be directly buried in earth to within 24 to 36 inches from the base of the foundation or slab.
   - Shall be copper clad minimum 13 mil, cold drawn carbon steel manufactured in accordance with UL 467, with the copper cladding bonded to the steel rod by electrolytic or molten welding process.

6. **Ground Rods**
   - Shall be connected by compression couplings, screw couplings will not be accepted.
   - Shall be copper clad minimum 13 mil, cold drawn carbon steel manufactured in accordance with UL 467, with the copper cladding bonded to the steel rod by electrolytic or molten welding process.

7. **Grounding Electrode Test Well**
   - Extends bare #2/0 AWG from each additional driven ground.
   - Shall be driven till the 5 ohms is reached. If an additional ground rod is required it must be driven at a distance of 40 feet from the previous ground rod.
   - There shall be a minimum of 2 ground rods that shall be driven to a minimum of 60 feet each. Ground rods shall have a conical taper on penetrating end. Each ground rod shall be 10-foot by 3/4 inch diameter sections.

8. **Grounding System Testing**
   - Shall be certified by an independent grounding system testing organization. Measurements shall be per IEEE 496 and UL 467.

9. **Grounding System**
   - Shall be an exothermic or irreversible compression type. Preformed couplings recommended.

10. **Grounding System Requirements**
    - Shall be driven to a minimum of 60 feet each.
    - Extends bare #2/0 AWG from each additional driven ground.

11. **Grounding System**
    - Shall be driven till the 5 ohms is reached. If an additional ground rod is required it must be driven at a distance of 40 feet from the previous ground rod.

12. **Grounding System**
    - Shall be driven till the 5 ohms is reached. If an additional ground rod is required it must be driven at a distance of 40 feet from the previous ground rod.

---

GEORGE L. BROWN
PUMP STATION ELECTRIC DETAILS

NOT TO SCALE

N.S. WARD
GROUNDING SUPERVISOR

LLOYD HENRY
DESIGN ENGINEER

10/30/2018

Copyright © 2018, JEA. All rights reserved. Unauthorized reproduction or distribution is prohibited by law.
THE AUTOMATIC TRANSFER SWITCH SHALL INCLUDE "ATS IN NORMAL", "ATS IN SERVICE" AND "ATS IN FAULT" SIGNALS. THE SERVICE CONDITION SHALL BE THE NORMAL CONDITION. "ATS IN SERVICE" SIGNALS MONITORED BY THE GENERATOR CONTROL PANEL. "ATS IN FAULT" SIGNALS MONITORED BY THE GENERATOR CONTROL PANEL. THE SERVICE CONDITION SHALL BE THE NORMAL CONDITION. "ATS IN SERVICE" SIGNALS MONITORED BY THE GENERATOR CONTROL PANEL. "ATS IN FAULT" SIGNALS MONITORED BY THE GENERATOR CONTROL PANEL.

WATER BUILDING ENTRANCE RATED FUSED POWER DISTRIBUTION PANEL WITH TYPE 316SS ENCLOSURE (STATIONS WITH STANDBY GENERATOR) OR AUTOMATIC TRANSFER SWITCH WITH NEMA 4X TYPE 316SS ENCLOSURE (STATIONS WITH GENERATOR) OR SELF CONTAINED OR CT METERING IN ACCORDANCE WITH THE ELECTRICAL SERVICE SPECIFICATIONS. METER ENCLOSURES AND CT Cabinets SHALL BE ALUMINUM. POWER DISTRIBUTION PANELS SHALL BE 200A, 400A OR LARGER AS DETERMINED BY THE ELECTRICAL DESIGN ENGINEER.

WIRE SIZE MINIMUM 140% MOTOR FULL LOAD AMPS. THE ELECTRICAL SERVICE MINIMUM LOAD RATING: LARGEST PUMP BREAKER AMPACITY + ALL OTHER PUMP FULL LOAD AMPACITY + 10A CONTROLS + ALL OTHER PUMP STATION LOADS. THE ELECTRICAL SERVICE MANUAL TRANSFER SWITCH RATING SHALL BE 125% OF THE GENERATOR ACCESSORY POWER FEEDER AMPACITY BASED ON 100% OF THE MANUAL TRANSFER SWITCH ACCESSORY POWER FEEDER AMPACITY. CONDUIT SHALL BE SCH 80 PVC (2" MIN). CONDUIT SHALL BE SCH 80 PVC (1" MIN). GENERAL TRANSFER SWITCH RATING. CONDUIT SHALL BE SCH 80 PVC (2" MIN).

THE CONTROL PANEL SHALL BE SERVICE ENTRANCE RATED FUSED AUTOMATIC TRANSFER SWITCH WITH NEMA 4X TYPE 316SS ENCLOSURE. FUSES SHALL BE SIZED PER NEC BASED ON 100% OF THE ELECTRICAL SERVICE POWER DISTRIBUTION PANEL LOADS. METER ENCLOSURES AND CT CABS INSULATION SHALL BE ALUMINUM. SELF CONTAINED OR CT METERING IN ACCORDANCE WITH THE ELECTRICAL SERVICE SPECIFICATIONS. METER ENCLOSURES AND CT CABS INSULATION SHALL BE ALUMINUM. POWER DISTRIBUTION PANELS SHALL BE 200A, 400A OR LARGER AS DETERMINED BY THE ELECTRICAL DESIGN ENGINEER.

THE CONTROL PANEL MINIMUM LOAD RATING SHALL BE 125% OF THE GENERATOR ACCESSORY POWER FEEDER AMPACITY BASED ON 100% OF THE MANUAL TRANSFER SWITCH ACCESSORY POWER FEEDER AMPACITY. CONDUIT SHALL BE SCH 80 PVC (2" MIN). CONDUIT SHALL BE SCH 80 PVC (1" MIN). GENERAL TRANSFER SWITCH RATING. CONDUIT SHALL BE SCH 80 PVC (2" MIN).

THE CONTROL PANEL MINIMUM LOAD RATING: LARGEST PUMP BREAKER AMPACITY + ALL OTHER PUMP FULL LOAD AMPACITY + 10A CONTROLS + ALL OTHER PUMP STATION LOADS. THE ELECTRICAL SERVICE MANUAL TRANSFER SWITCH RATING SHALL BE 125% OF THE GENERATOR ACCESSORY POWER FEEDER AMPACITY BASED ON 100% OF THE MANUAL TRANSFER SWITCH ACCESSORY POWER FEEDER AMPACITY. CONDUIT SHALL BE SCH 80 PVC (2" MIN). CONDUIT SHALL BE SCH 80 PVC (1" MIN). GENERAL TRANSFER SWITCH RATING. CONDUIT SHALL BE SCH 80 PVC (2" MIN).

THE CONTROL PANEL MINIMUM LOAD RATING: LARGEST PUMP BREAKER AMPACITY + ALL OTHER PUMP FULL LOAD AMPACITY + 10A CONTROLS + ALL OTHER PUMP STATION LOADS. THE ELECTRICAL SERVICE MANUAL TRANSFER SWITCH RATING SHALL BE 125% OF THE GENERATOR ACCESSORY POWER FEEDER AMPACITY BASED ON 100% OF THE MANUAL TRANSFER SWITCH ACCESSORY POWER FEEDER AMPACITY. CONDUIT SHALL BE SCH 80 PVC (2" MIN). CONDUIT SHALL BE SCH 80 PVC (1" MIN). GENERAL TRANSFER SWITCH RATING. CONDUIT SHALL BE SCH 80 PVC (2" MIN).

THE CONTROL PANEL MINIMUM LOAD RATING: LARGEST PUMP BREAKER AMPACITY + ALL OTHER PUMP FULL LOAD AMPACITY + 10A CONTROLS + ALL OTHER PUMP STATION LOADS. THE ELECTRICAL SERVICE MANUAL TRANSFER SWITCH RATING SHALL BE 125% OF THE GENERATOR ACCESSORY POWER FEEDER AMPACITY BASED ON 100% OF THE MANUAL TRANSFER SWITCH ACCESSORY POWER FEEDER AMPACITY. CONDUIT SHALL BE SCH 80 PVC (2" MIN). CONDUIT SHALL BE SCH 80 PVC (1" MIN). GENERAL TRANSFER SWITCH RATING. CONDUIT SHALL BE SCH 80 PVC (2" MIN).

THE CONTROL PANEL MINIMUM LOAD RATING: LARGEST PUMP BREAKER AMPACITY + ALL OTHER PUMP FULL LOAD AMPACITY + 10A CONTROLS + ALL OTHER PUMP STATION LOADS. THE ELECTRICAL SERVICE MANUAL TRANSFER SWITCH RATING SHALL BE 125% OF THE GENERATOR ACCESSORY POWER FEEDER AMPACITY BASED ON 100% OF THE MANUAL TRANSFER SWITCH ACCESSORY POWER FEEDER AMPACITY. CONDUIT SHALL BE SCH 80 PVC (2" MIN). CONDUIT SHALL BE SCH 80 PVC (1" MIN). GENERAL TRANSFER SWITCH RATING. CONDUIT SHALL BE SCH 80 PVC (2" MIN).