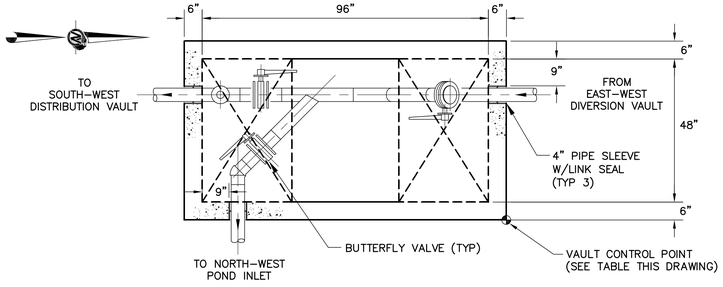
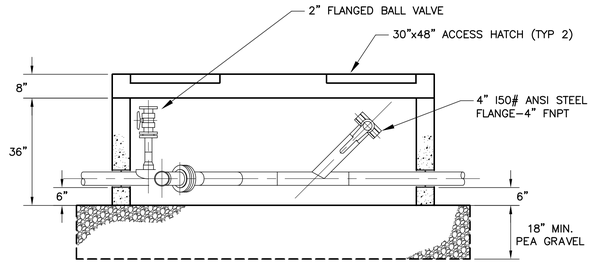


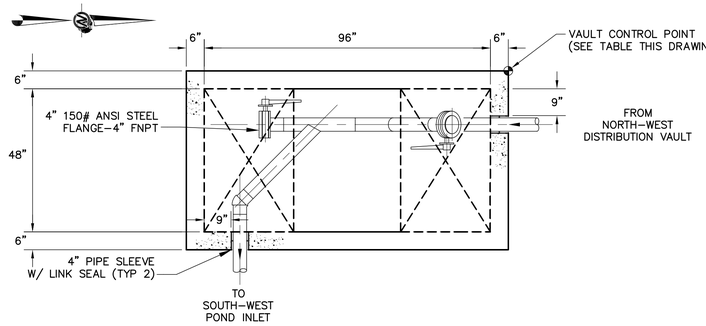

**PLAN**



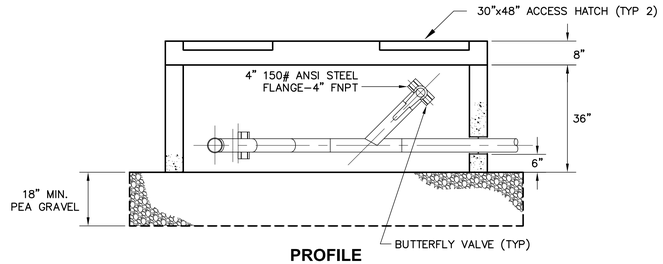

**PROFILE**

## B-2 / 12 NORTH-WEST DISTRIBUTION VAULT

SCALE 2 0 2 FEET



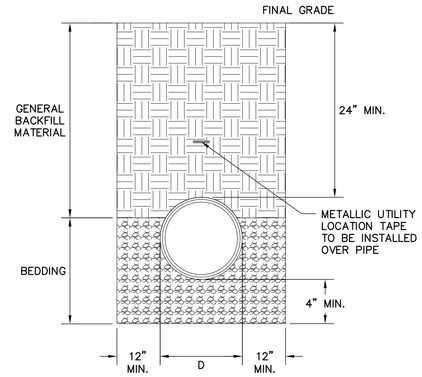

**PLAN**




**PROFILE**

## B-3 / 12 SOUTH-WEST DISTRIBUTION VAULT

SCALE 2 0 2 FEET




REFER TO DETAIL 4 NOTES

## 4 / 12 STANDARD TRENCH DETAIL FOR SUB-GRADE PIPELINE

NOT TO SCALE

### DETAIL 4 NOTES

1.) THE TRENCH BOTTOM SHOULD BE SMOOTH, DRY AND STABILIZED AS NECESSARY.

2.) BEDDING SHOULD CONSIST OF FREE–FLOWING MATERIAL SUCH AS GRAVEL, SAND, SILTY SAND, OR CLAYEY SAND THAT IS FREE OF STONES OR HARD PARTICLES LARGER THAN ONE–HALF INCH. THE BEDDING SHOULD BE PLACED IN LIFTS NOT EXCEEDING 6 INCHES AND THEN COMPACTED. COMPACTION SHOULD BE ACCOMPLISHED BY A MECHANICAL TAMPER. AVERAGE COMPACTION SHALL BE AT LEAST 95 PERCENT STANDARD PROCTOR DENSITY. FOR PIPE INSTALLED UNDER STREET OR ROADWAYS SHALL BE COMPACTED TO 98 PERCENT STANDARD PROCTOR DENSITY. CLASS I OR CLASS II MATERIAL AS DEFINED BY ASTM D2487 SHALL BE USED. THE BEDDING SHOULD NORMALLY EXTEND TO A HEIGHT TO 75 PERCENT OF THE PIPE DIAMETER. HAUNCHING (THE BACKFILL UNDER THE LOWER HALF OF THE PIPE) SHOULD BE DONE PROPERLY IN LIMITING THE DEFORMATION OF THE PIPE. THE SECONDARY BACKFILL SHOULD BE AT LEAST 6 INCHES ABOVE THE CROWN (TOP OF THE PIPE).

3.) PRIMARY AND SECONDARY BACKFILL SHOULD BE PLACED EVENLY IN LAYERS NOT EXCEEDING 12 INCHES AND EACH LAYER SHALL BE COMPACTED TO A MINIMUM OF 95 PERCENT STANDARD PROCTOR DENSITY. COMPACTION UNDER ROADWAYS SHALL BE TO A MINIMUM 98 PERCENT PROCTOR DENSITY.

4.) THE FINAL TRENCH BACKFILL SHOULD BE OF MATERIAL WHICH IS FREE OF LARGE STONES OR OTHER FOREIGN MATTER.

| TABLE B-12 | | | |
|---|---|---|---|
| VAULT CONTROL POINTS | | | |
| VAULT | NORTHING | EASTING | ELEVATION |
| B–2 | 7,967.6 | 14,681.9 | 116.38 |
| B–3 | 7,816.8 | 14,681.9 | 116.38 |

### NOTES

1. VAULTS SHALL BE DESIGNED TO ASTM C857.
2. CONCRETE SHALL HAVE A 28 DAY COMPRESSIVE STRENGTH OF 4,500 psi.
3. REINFORCING PER ASTM A–615, GRADE 60.
4. ACCESS HATCH SHALL BE TORSIONAL FRAME DESIGN, GALVANIZED BY BILCO COMPANY OR EQUAL.
5. LINK SEAL MODEL LS–300–C–10.
6. ALL VALVES ARE BUTTERFLY WITH HANDLES TO BE MOUNTED HORIZONTALLY.
7. VAULT SHALL BE DESIGNED AND BUILT TO WITHSTAND VEHICULAR TRAFFIC.
8. CONTROL POINTS LOCATED AT NORTHEAST CORNER OF EACH VAULT.
9. ELEVATION REPRESENTS TOP OF VAULT.
10. HORIZONTAL AND VERTICAL DATUM SHOWN IS PLANT SPECIFIC.
11. ALL PIPE 4" DIAMETER HDPE SDR–11.

**CLIENT REFERENCE COPY ONLY**
**- NOT FOR AGENCY SUBMITTAL -**

DID NO.:

NOTES:

GOLDER CADD FILE No.: 09382538–C011B

| DWG NO. | REV. | TITLE |
|---|---|---|
| N/A | | |

DRAWING REFERENCES

| REV. | DESCRIPTION | DRAWN | CHKD | APPRVD | DATE |
|---|---|---|---|---|---|
| 0 | ISSUED FOR PERMIT | MRM | WDK | KBK | 06/01/09 |

DRAWING REVISIONS

CONTRACTOR/VENDOR INFORMATION

Golder Associates
Jacksonville, Florida

THE ABOVE IS RESERVED FOR VENDOR'S LOGO, NAME, ADDRESS, TELEPHONE NUMBER AND ANY REQUIRED REFERENCE NUMBERS. ALL DRAWINGS TO BE PRODUCED IN AUTOCAD RELEASE 2000 OR LATER.

SEAL

KENNETH B. KARABLY LICENSE No. 42566 STATE OF FLORIDA PROFESSIONAL ENGINEER
6/2/2009

THE ABOVE IS RESERVED FOR PROFESSIONAL ENGINEER SEAL USE INK – DO NOT EMBOSS

PROGRESS ENERGY FLORIDA, INC.
POWER OPERATIONS GROUP

| FACILITY: | UNIT: | SYSTEM: |
|---|---|---|
| CRYSTAL RIVER | 4 & 5 | FGD |
| PROJECT NO: | EC NO: | W.O. NO: |
| 093–82538 | 73328 | |
| SIZE: | SCALE: | PLOT: |
| ARCH–D | AS SHOWN | 1=1 |



Progress Energy

TITLE:
FGD BLOWDOWN POND
INLET PIPING DETAILS
(Sheet 2 of 2)

SHT 12 OF 15 | DWG NO: 12 | REV: 1