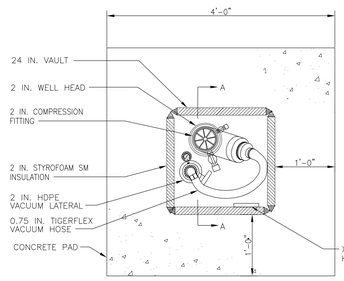
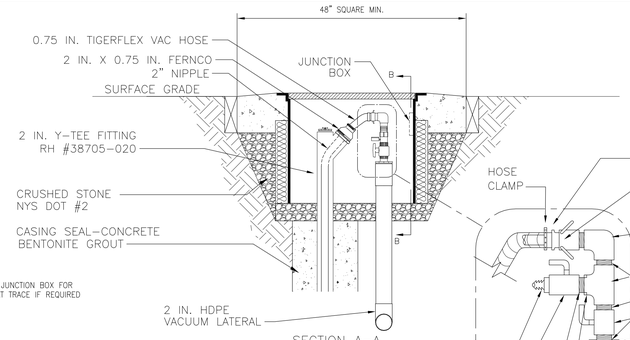
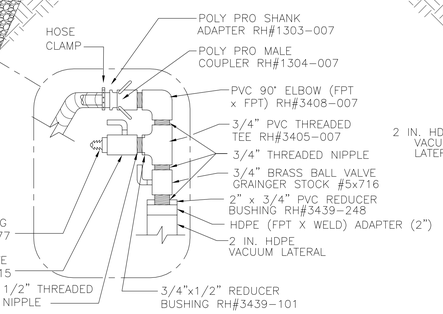


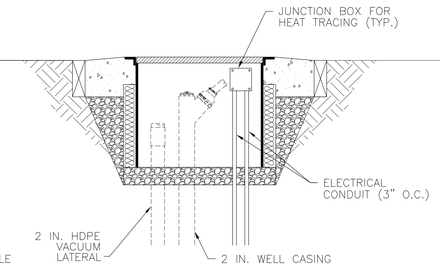

PLAN VIEW



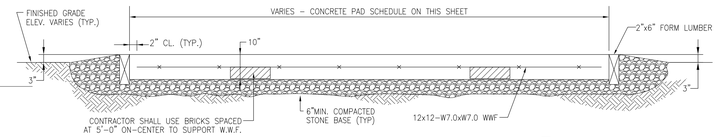

SECTION A-A




TYPICAL MPE WELL HEAD DETAILS (1 / C-3)
NOT TO SCALE




SECTION B-B
TYPICAL WELL HEAD ELECTRICAL
NOT TO SCALE



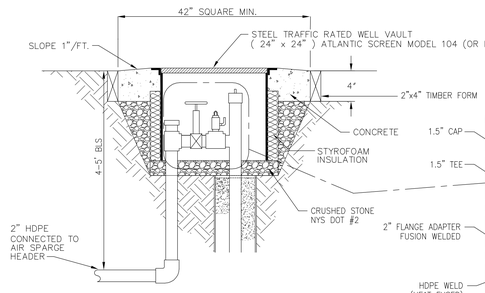

CONCRETE PAD (2 / C-6)
NOT TO SCALE

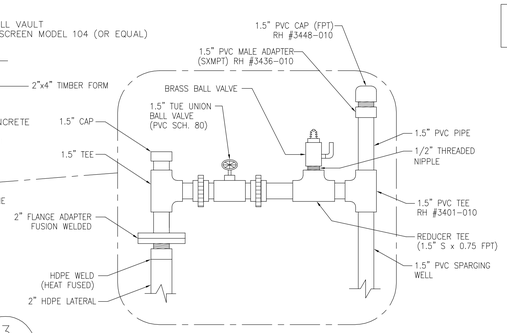
NOTE:
PROVIDE EXPANSION JOINT AS NOTED ON SHEET S-1.

## CONCRETE PAD SCHEDULE

| PAD IDENTIFICATION | DIMENSIONS (FT) LENGTH | WIDTH |
|---|---|---|
| AREA 3805-SYSTEM "A" | | |
| TREATMENT BUILDING | 42 | 15 |
| OXIDIZER | 20 | 10 |
| PROPANE TANK | 20 | 20 |
| SYSTEM A & B SHARED AIR STRIPPER PAD | 30 | 25 |
| AREA 3805-SYSTEM "B" | | |
| TREATMENT BUILDING | 42 | 15 |
| OXIDIZER | 20 | 10 |
| PROPANE TANK | 20 | 20 |
| AREA 3805-SYSTEM "C" | | |
| TREATMENT BUILDING & OXIDIZER | 42 | 15 |
| AIR STRIPPER | 25 | 15 |
| PROPANE TANK | 20 | 15 |
| AREA 1995 | | |
| TREATMENT BUILDING & OXIDIZER | 42 | 15 |
| AIR STRIPPER | 25 | 15 |
| PROPANE TANK | 20 | 15 |

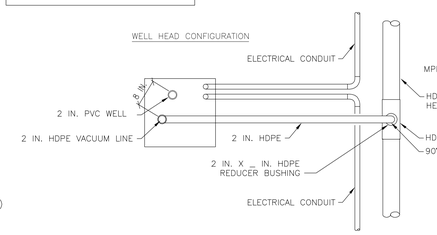
NOTE:
CONCRETE READY MIX SHALL BE 4,000 PSI.



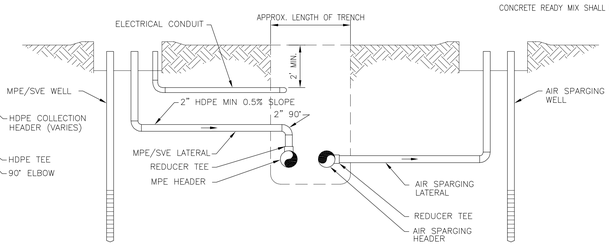




AIR SPARGING WELL VAULT DETAIL (3 / C-3, C-4)
NOT TO SCALE

NOTE:
ENSURE BRANCH CONNECTION MAINTAINS MIN. 0.5% SLOPE.




PLAN VIEW




ELEVATION VIEW

TYPICAL MPE LATERAL CONNECTION (4 / C-3)
NOT TO SCALE

## Concrete Testing:

Concrete testing will be provided by contractor. Following tests will be performed.

Slump, ASTM C143; Air Entrainment ASTM C231. If slump or air content fall outside of specified limit, a check test will be performed on another portion of same sample. If the second test fails, concrete load will be rejected. The frequency for testing will be one for each load of concrete delivered.
Compressive Strength, ASTM C31 and C39. Test cylinders will be tested for compressive strength at 7 and 28 days following concrete placement. In the event design compressive strength is achieved at 7 days, the OWNER may waive subsequent compressive strength test(s). The frequency for testing will be one set of cylinders on each day concrete is delivered to the site.

Concrete Mix: Measure and combine cement, aggregates, water and admixtures in accordance with ASTM C94.

1. Minimum Cement Content: 5-3/4-bags/cu yd.
2. Minimum Strength: 4,000 psi. @28 days
3. Air Content: 6%+/-1%.
4. Maximum Slump: 4 in.

## Compaction Testing:

Trench backfill Compaction:

85% of Maximum Dry Density based on Modified Proctor, one test per 200 linear feet of trench.

Do not compact directly over pipes until 8-inches of cover has been installed above the pipe. Compaction of backfill material around the pipe shall be performed with equipment that will not damage or distort the pipe.

## Pressure Testing of Pipe:

Pressure testing of pipe shall be in accordance with manufacturer's recommendations.

## Vault Construction Notes:

All Well Vaults shall be Model 104 (24" x 24" x 24") as manufactured by:

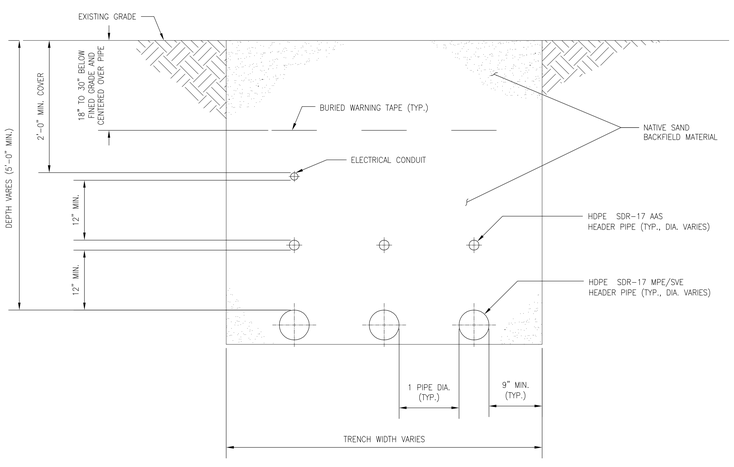
Atlantic Screen and Manufacturing, Inc.
24575 Milton-Ellendale Hwy.
Milton, DE 19968
Phone: (302) 684-3197
Fax: (302) 684-0643

VAULT CONSTRUCTION

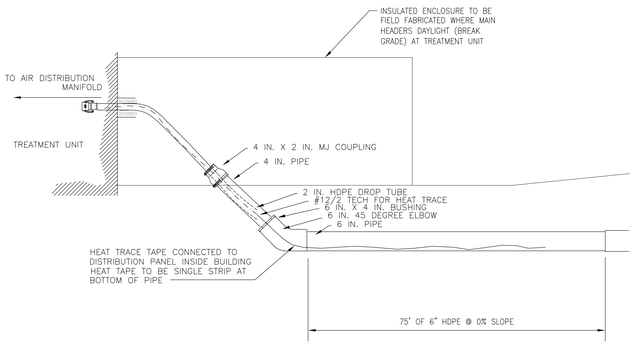
The bottom of the vault shall be set and leveled on 4" of tamped crushed stone approximately 23" below grade, leaving the top of the vault 1" above surrounding grade. The contractor shall insulate the vault skirt with Extruded Polystyrene Insulation per ASTM C 578 Type IV. The insulation shall have a minimum thickness of 2", an R value of 10 and minimum compressive strength of 10 psi. The insulation can be held in place with backfill. The insulation shall be STYROFOAM Square Edge Insulation (standard board size is 24" x 96") as manufactured by:

Dow Building Materials
P.O. Box 1206
Midland, MI 48641-1206
Phone: (866) 583-2583
Fax: (989) 832-1465

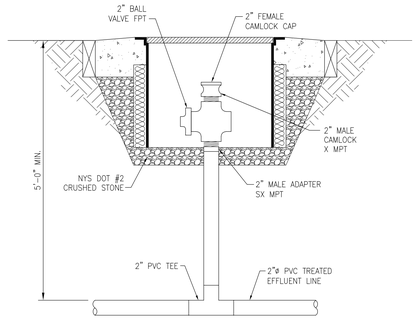
The contractor shall backfill around the outside of the vault to 4" below grade. The contractor shall use 2"x4" lumber to construct a form for a a concrete "collar" to be installed around the vault. Ready mix concrete (3,000 psi w/ fibermesh additive) shall be placed around the vault to form a 12" wide collar around the perimeter of the vault. The concrete collar shall be sloped from the top of the vault to the top of the form (placed at grade). The goal is to prevent the vaults from being installed at low points in the topography and collecting water during precipitation events.



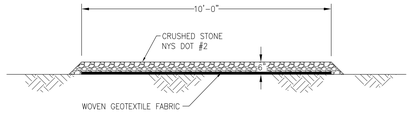

COMBINED MPE/SVE/AAS PIPE TRENCH (5 / C-3, C-4)
NOT TO SCALE




MAIN HEADER DETAIL INTO MPE TREATMENT UNIT (6 / C-3)
NOT TO SCALE




EFFLUENT LINE CLEANOUT (7 / C-3)
NOT TO SCALE




ACCESS ROAD DETAIL (8 / C-3, C-4)
NOT TO SCALE

GENERAL NOTE:
RH = RYAN HERCO SERVICE CENTERS
2588 INDUSTRY LANE
WEST NORRITON, PENNSYLVANIA 19403
PHONE: (610) 635-0700
FAX: (610) 635-0748
philadelphiasales@ryanherco.com
OPEN: 7:30am-5pm EASTERN (MON.-FRI.)

FINAL AS-BUILT

US Army Corps of Engineers

U.S. ARMY ENGINEER DISTRICT, BALTIMORE
CORPS OF ENGINEERS
BALTIMORE, MARYLAND

SOURCE AREA REMEDIAL SYSTEM
GASOLINE ALLEY AREAS 3805 & 1995
FORT DRUM, NEW YORK

TREATMENT SYSTEM DETAILS

EA ENGINEERING, P.C.

| DRAWING NUMBER | PLATE |
|---|---|
| N/A | C-6 |

SCALE: AS NOTED | DATE: SEPT. 2004 | SHEET 6

FILE: Syracuse_fp/Syracuse/Working Projects\Fort Drum Projects\MARC\Design\drawings from Iovetson\Final design drawings\C-6.dwg [Layout1]