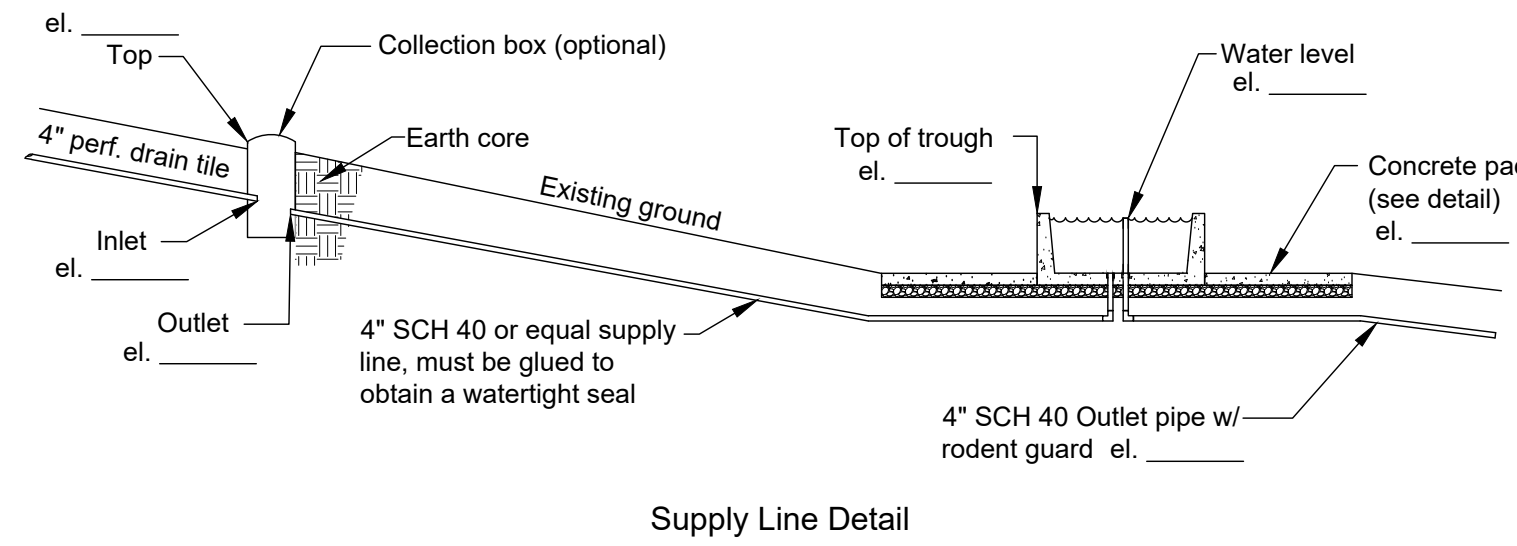


GRAVITY FEED SYSTEMS



Supply Line Detail

BENCH MARK DESCRIPTIONS

TBM #1 (IP): Elev = ????.??
Top of 1" X 2" wooden hub, marked by witness lath.

TBM #2: Elev = ????.??
Top of 1" X 2" wooden hub, marked by witness lath, near NW corner of building.

TBM #3: Elev = ????.??
Top of bolt in NW corner of concrete.

NOTES:

1. Exact location of supply line to be determined during construction by the landowner and soil conservation district
2. All lines to have a min 24" cover
3. Overflow line to extend to outlet as approved. A rodent guard must be installed at the outlet.
4. Specify 12" opening in bottom of trough. Opening to be concreted after pipe installation. (use hydraulic cements, no pre-mixed material)
5. Concrete apron must have 6 gauge 6"x6" welded wire mesh
6. Concrete to be minimum 3500 psi with 5% air entrainment and a slump of 3-5 inches.
7. Collection box and trough pipes shall be 4" SCH 40 pvc pipe

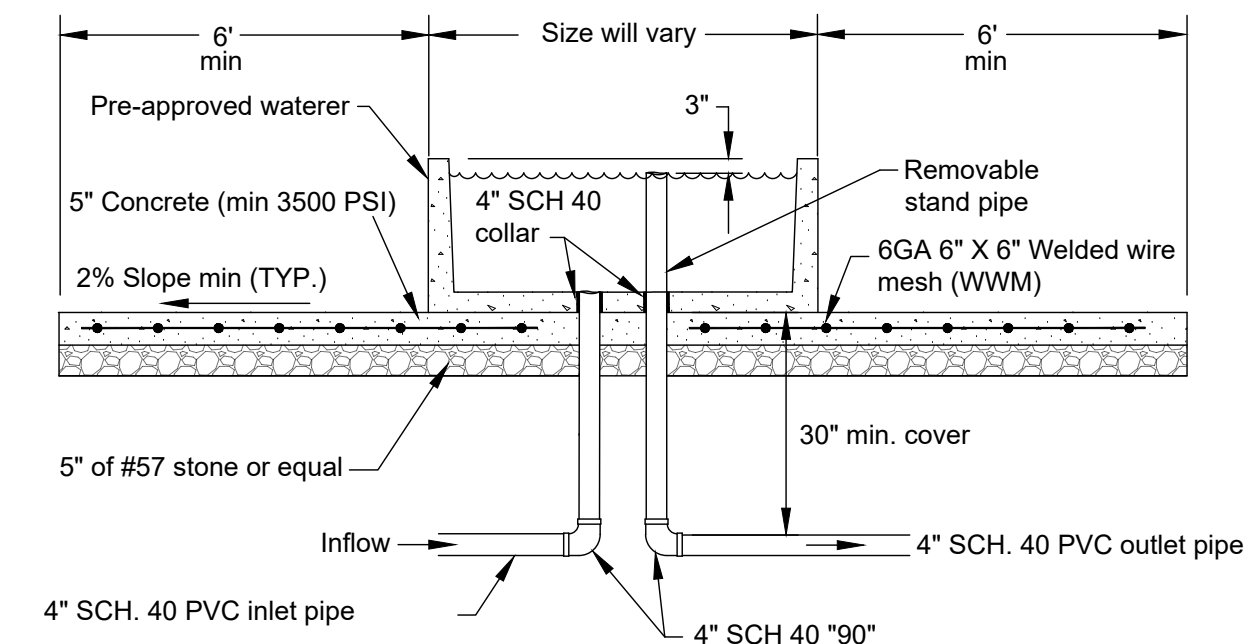
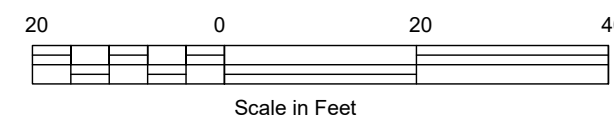
INSTALLATION NOTES:

1. Grade pad for trough and install inlet pipe, including elbows
2. Backfill with #57 stone around trough
3. Set trough
4. Seal bottom holes
5. Pour concrete apron
6. Complete installation
7. Grade around all facilities as necessary to maintain positive drainage and spread spoil as directed by landowners
8. All disturbed areas to be stabilized within 14 days of completion, using the seeding recommendations provided

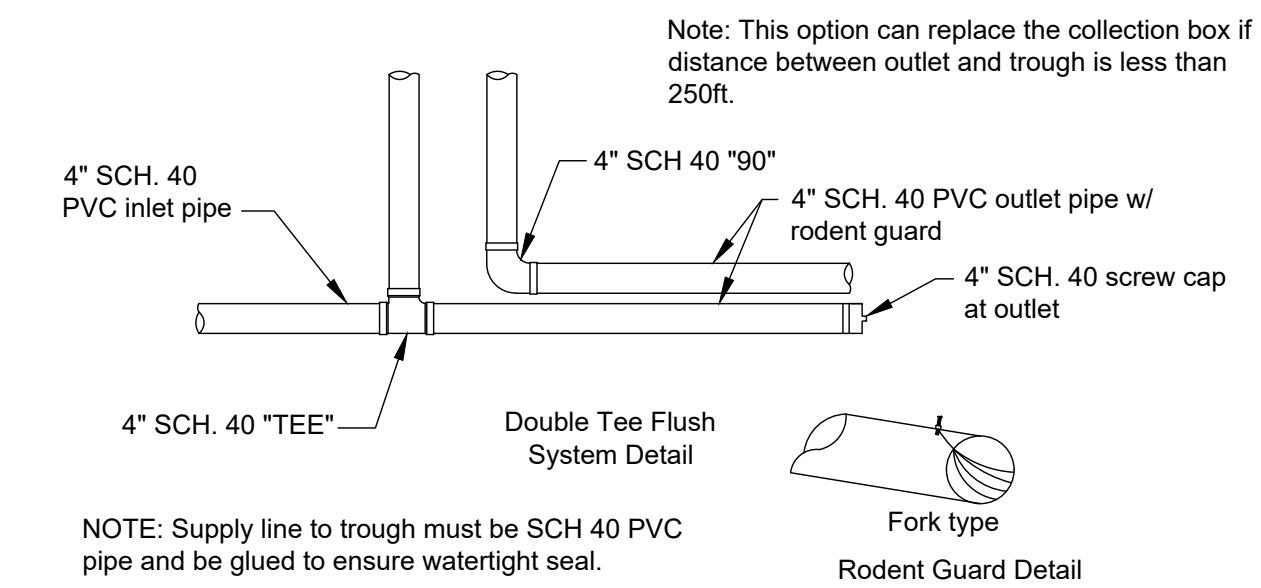
GRAVITY FED TROUGH
Not to scale

USER TO CLICK ON BLOCK AND ENTER INFORMATION

PLAN VIEW



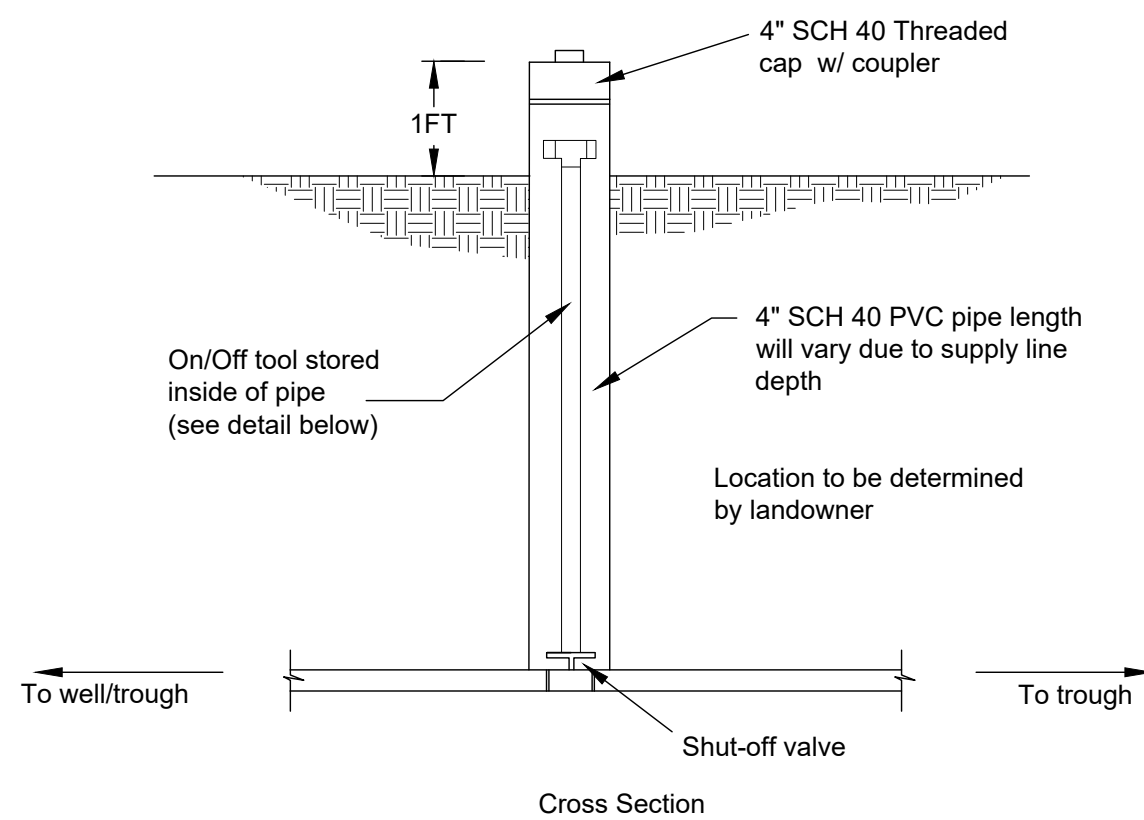
Watering Facility Detail



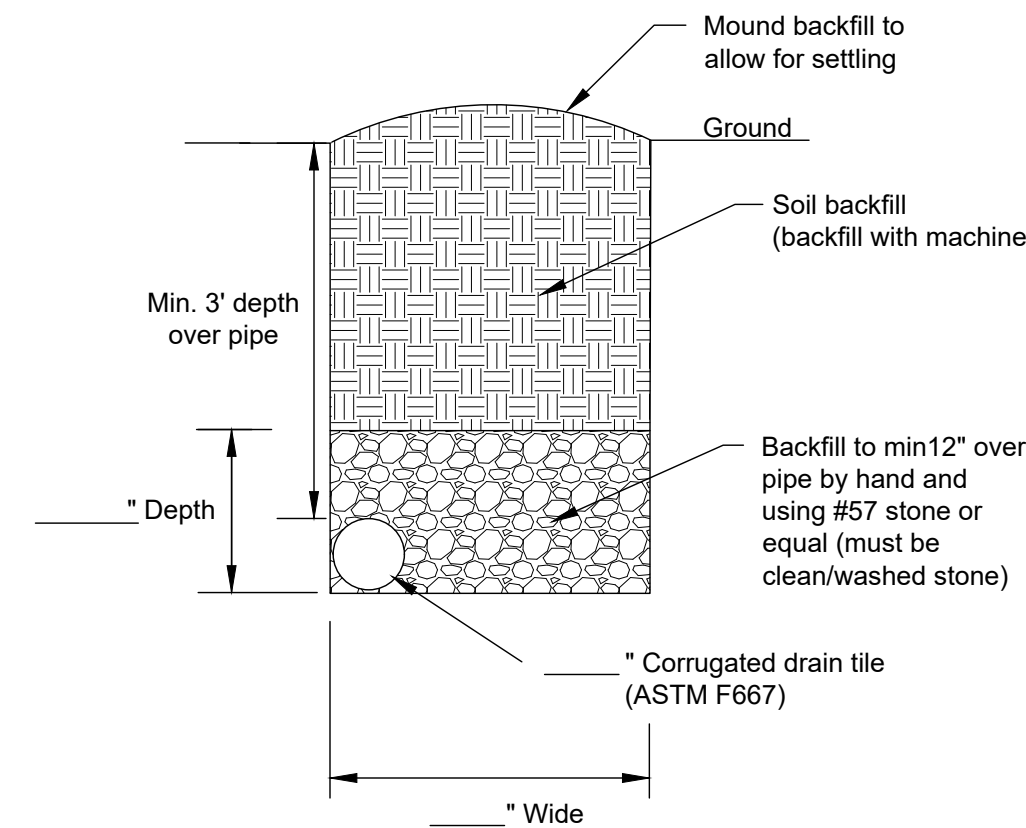
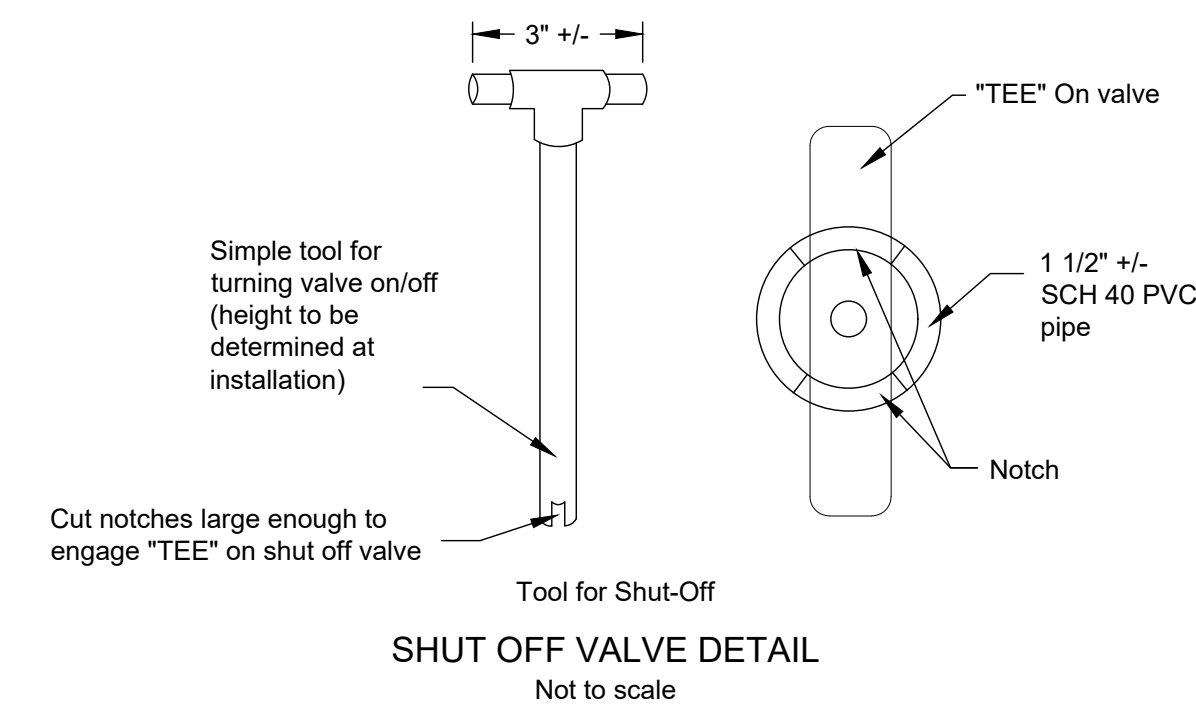
GRAVITY FED TROUGH "DOUBLE TEE"
Not to scale

NOTE: Supply line to trough must be SCH 40 PVC pipe and be glued to ensure watertight seal.

MISC. DETAILS



Cross Section

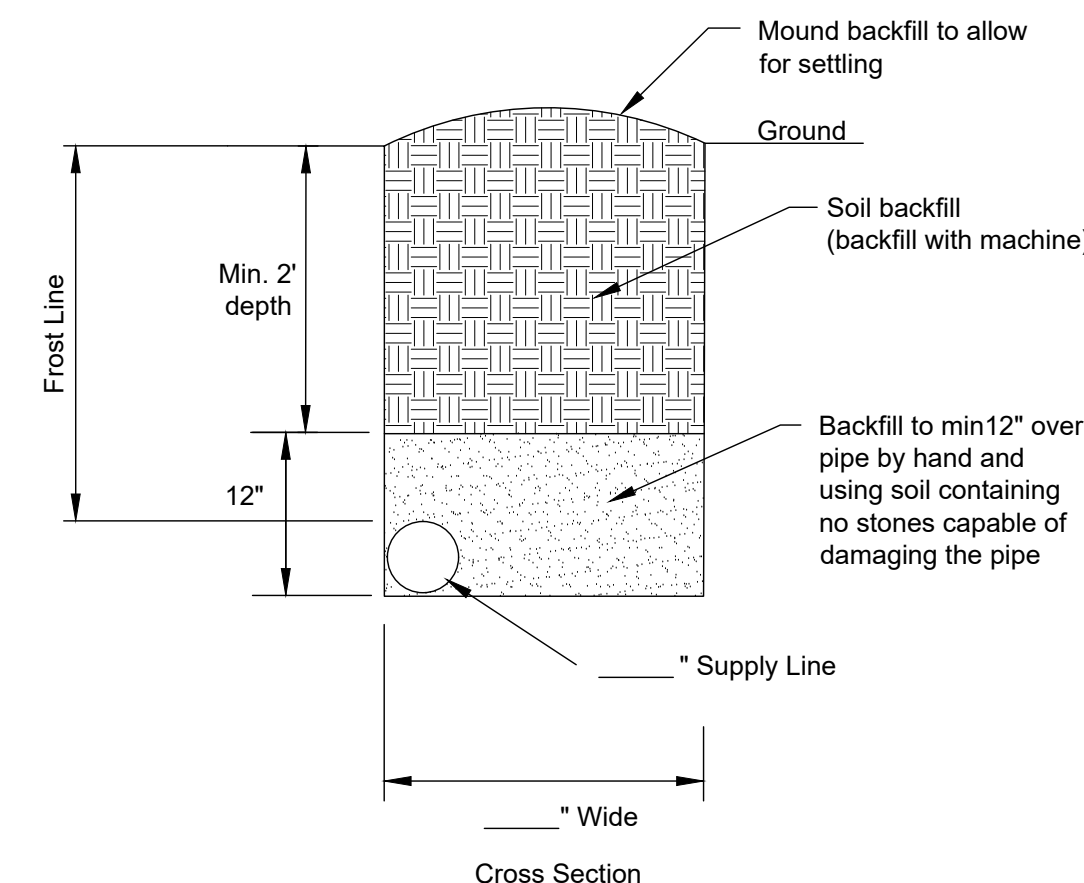


CROSS SECTION

CONSTRUCTION NOTES
Plan, design and construct spring developments in accordance with Federal, State, and Local laws and regulations. When collecting water for potable uses, meet the requirements of the state health department for materials and installation. Permits may be required for the installation of these systems. Contact the Permits Division of the local county government for regulations and permit requirements.

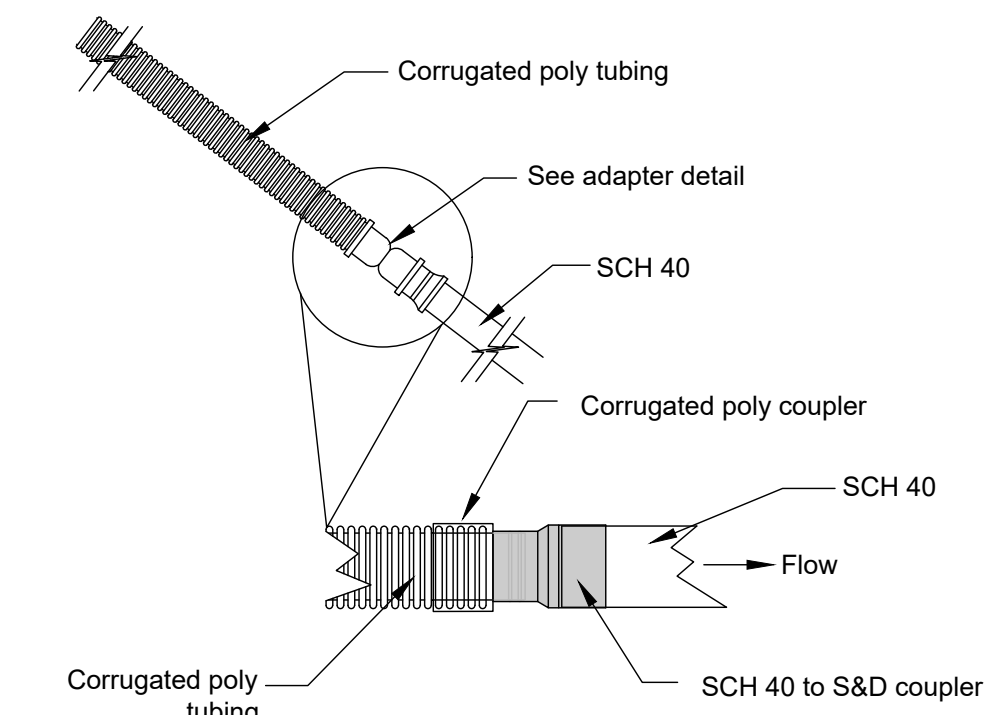
TILE DRAIN DETAIL
Not to scale

USER TO CLICK ON BLOCK AND ENTER INFORMATION



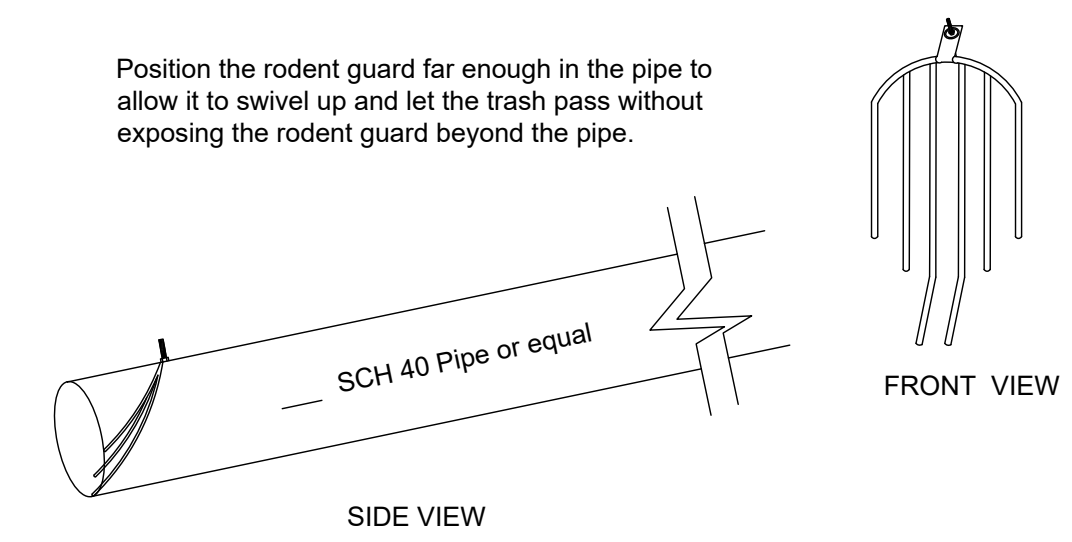
SUPPLY LINE BACKFILL DETAIL
Not to scale

USER TO CLICK ON BLOCK AND ENTER INFORMATION



ADAPTER DETAIL
Not to scale

USER TO CLICK ON BLOCK AND ENTER INFORMATION



OUTLET DETAIL
Not to scale

USER TO CLICK ON BLOCK AND ENTER INFORMATION

LANDOWNER - SITE NAME

COUNTY Soil Conservation District

JOB CLASS #

TRACT #



File Name

MD_0053_WateringFacility.dwg

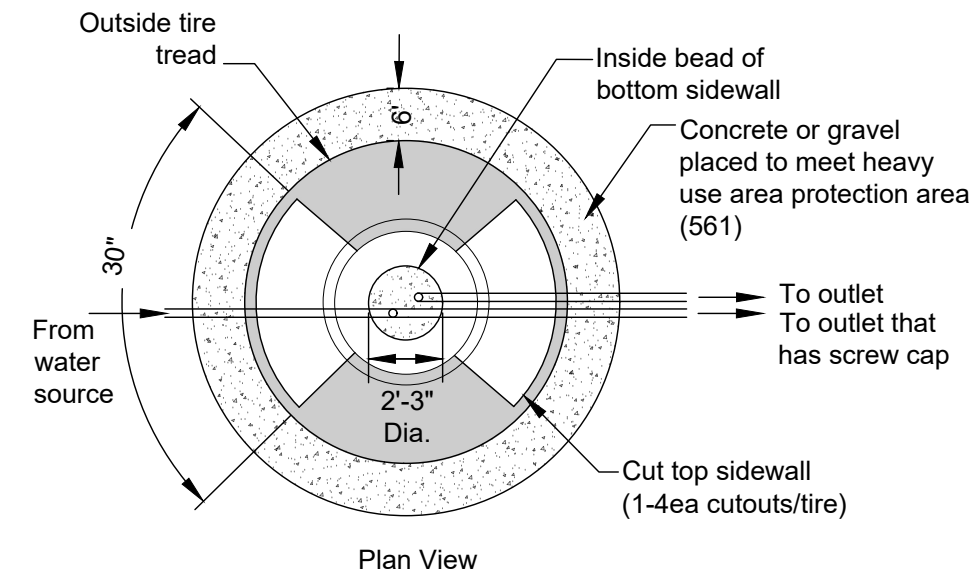
Drawing No.
MD_0053

Sheet 2 of 3

Date	-----
Designed	-----
Drawn	-----
Checked	-----
Approved	-----

-----, Maryland

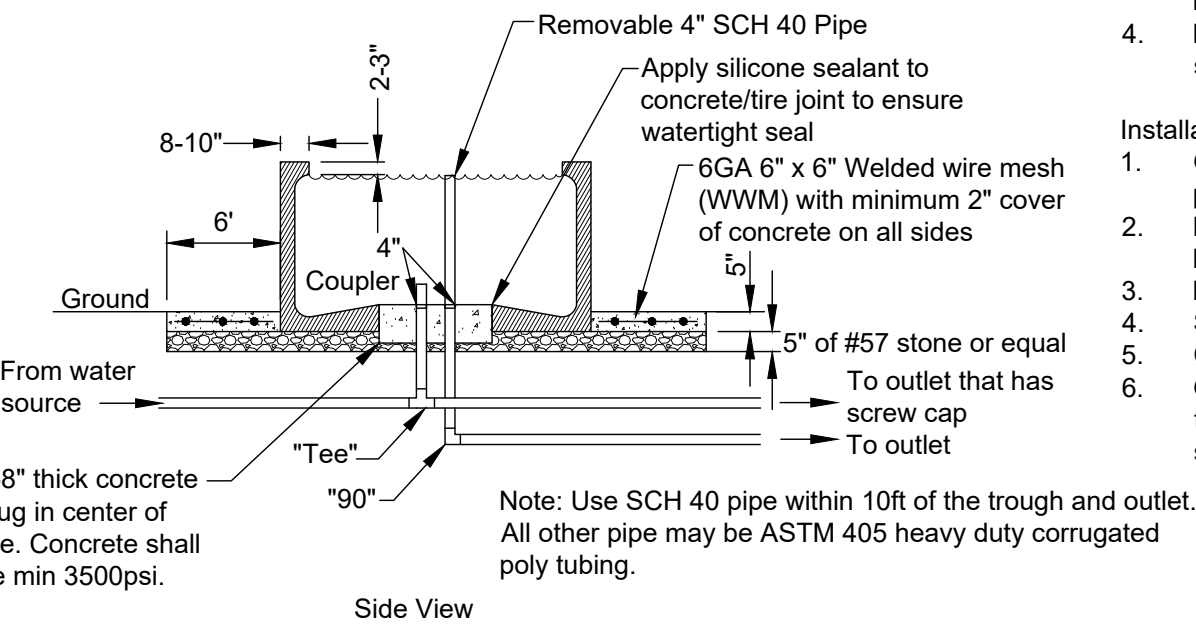
GRAVITY FEED SYSTEMS



CAUTION:
Heavy equipment tires are normally filled with liquid during use for weight and ballast, residues from these liquids could be toxic to livestock. The Natural Resources Conservation Service makes no representation to the existence or nonexistence of toxic residues in the used tires. It is the responsibility of the landowner to ensure themselves that no hazards exist.

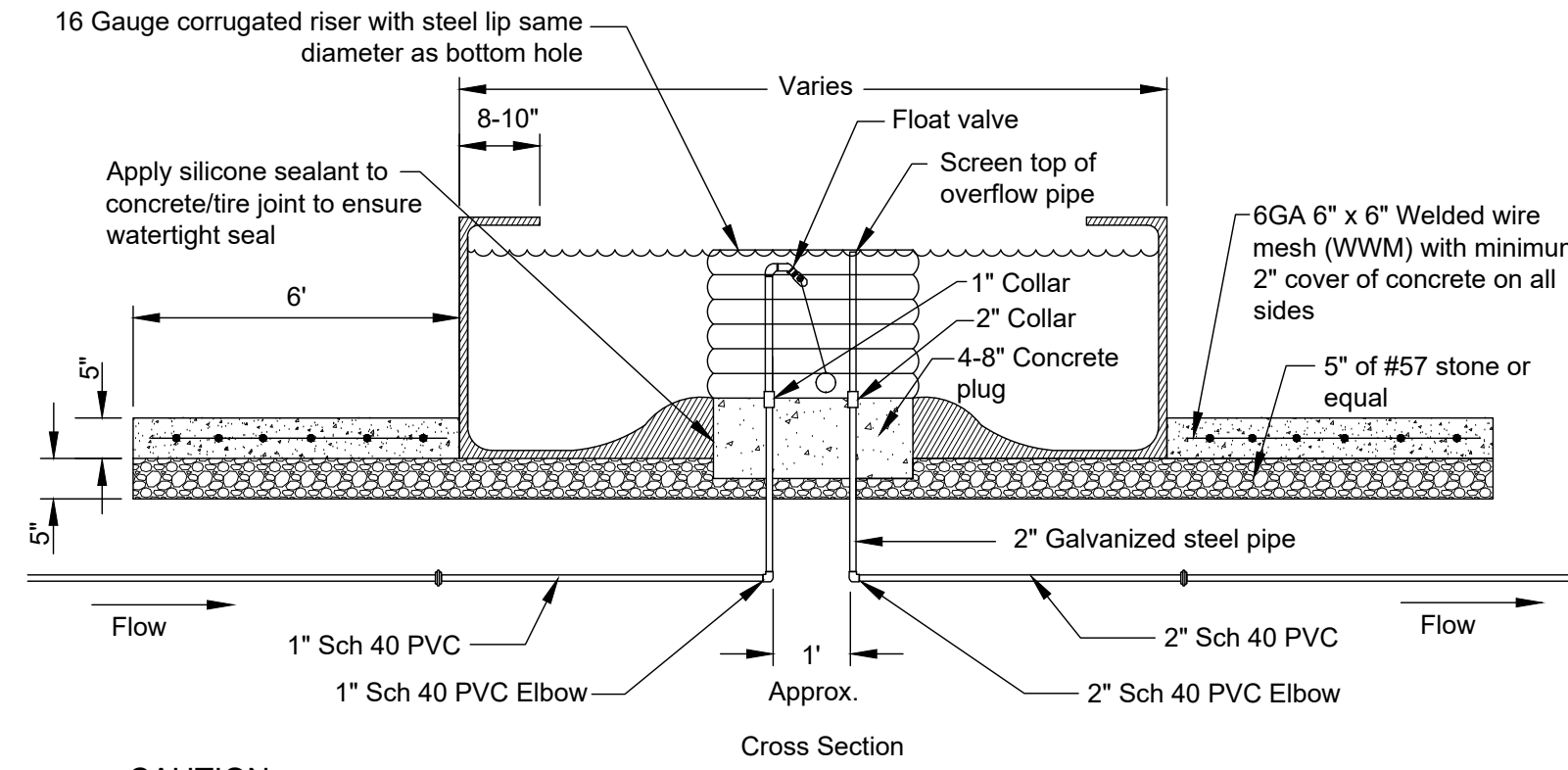
- Notes:**
1. Exact location of supply line to be determined during construction by the landowner and soil conservation district
 2. All lines to have a min 24" cover
 3. Concrete to be minimum 3500 psi with 5% air entrainment and a slump of 3-5 inches.
 4. Install backflow preventer if water is supplied from potable water source

- Installation notes:**
1. Grade pad for trough and install inlet pipe, including elbows
 2. Backfill with #57 stone around trough location and grade stone
 3. Pour concrete
 4. Set trough
 5. Complete installation
 6. Grade around all facilities as necessary to maintain positive drainage and spread spoil as directed by landowners



GRAVITY FED TROUGH - TIRE TYPE
Not to scale

[CLICK BLOCK AND ENTER INFO](#)

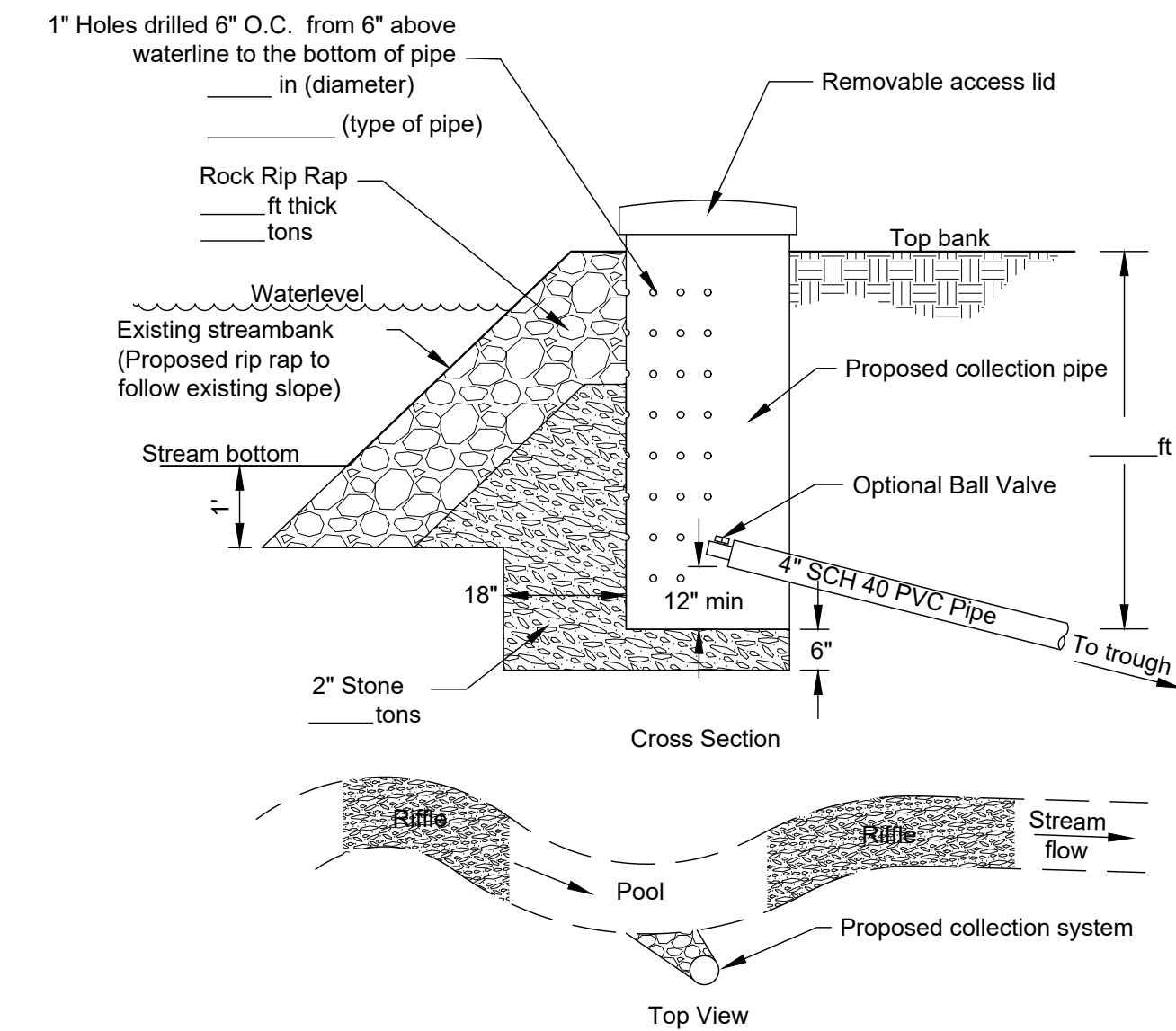


CAUTION:
Heavy equipment tires are normally filled with liquid during use for weight and ballast, residues from these liquids could be toxic to livestock. The Natural Resources Conservation Service makes no representation to the existence or nonexistence of toxic residues in the used tires. It is the responsibility of the landowner to ensure themselves that no hazards exist.

- Notes:**
1. Exact location of supply line to be determined during construction by the landowner and soil conservation district
 2. All lines to have a min 24" cover
 3. Concrete to be minimum 3500 psi with 5% air entrainment and a slump of 3-5 inches.
 4. Install backflow preventer if water is supplied from potable water source
- Installation notes:**
1. Grade pad for trough and install inlet pipe, including elbows
 2. Backfill with #57 stone around trough location and grade stone
 3. Pour concrete
 4. Set trough
 5. Complete installation
 6. Grade around all facilities as necessary to maintain positive drainage and spread spoil as directed by landowners

GRAVITY FED TROUGH - TIRE TYPE WITH FLOAT
Not to scale

[CLICK BLOCK AND ENTER INFO](#)

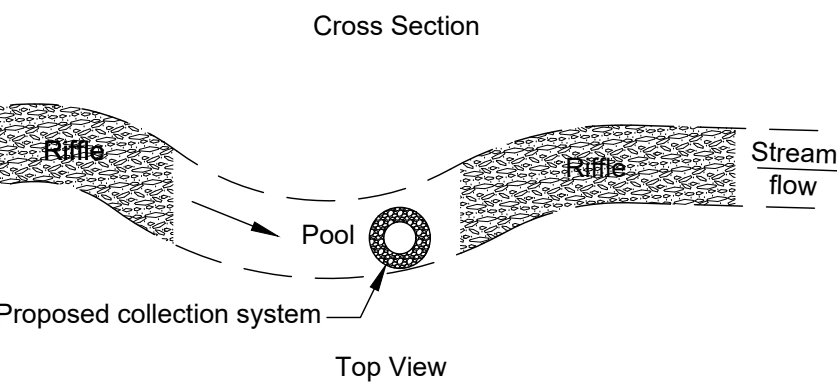
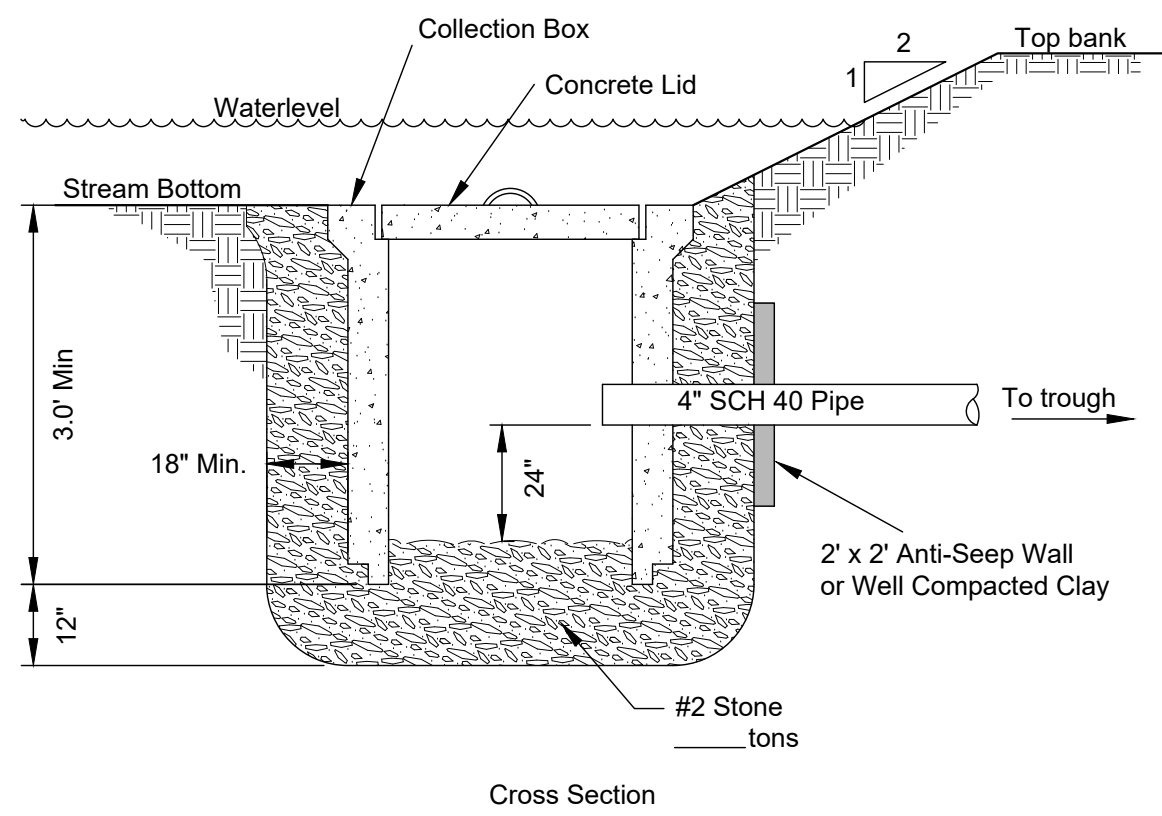


	DESIGN	AS-BUILT
Elevation of Stream Bottom		
Elevation of Stream Waterlevel		
Elevation Top of Collection Pipe		
Elevation Bottom of Collection Pipe		
Elevation Outlet Pipe		

CONSTRUCTION NOTES
Plan, design and construct spring developments in accordance with Federal, State, and Local laws and regulations. When collecting water for potable uses, meet the requirements of the state health department for materials and installation. Permits may be required for the installation of these systems. Contact the Permits Division of the local county government for regulations and permit requirements.

**GRAVITY FED TROUGH
STREAM WATER COLLECTION - PLASTIC PIPE**
Not to scale

[CLICK BLOCK AND ENTER INFO](#)

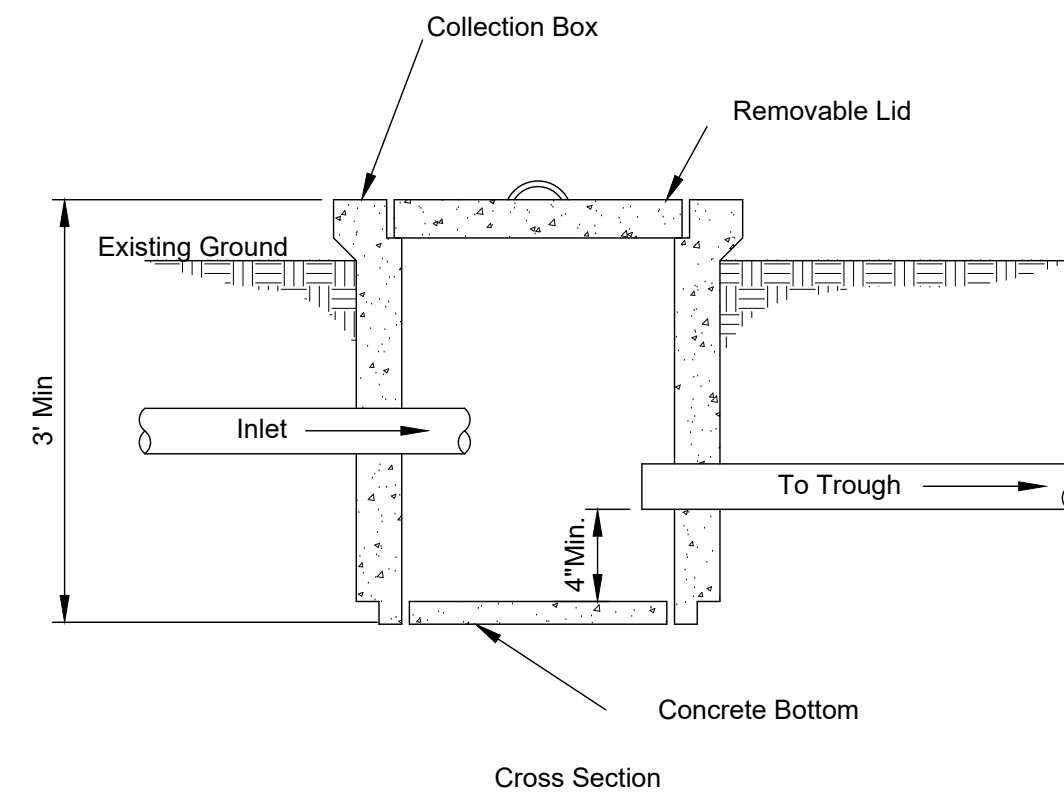


	DESIGN	AS-BUILT
Elevation of Stream Bottom		
Elevation of Stream Waterlevel		
Elevation Top of Collection Box		
Elevation Bottom of Collection Box		
Elevation Outlet Pipe		

CONSTRUCTION NOTES
Plan, design and construct spring developments in accordance with Federal, State, and Local laws and regulations. When collecting water for potable uses, meet the requirements of the state health department for materials and installation. Permits may be required for the installation of these systems. Contact the Permits Division of the local county government for regulations and permit requirements.

**GRAVITY FED TROUGH
STREAM WATER COLLECTION - CONCRETE RISER**
Not to scale

[CLICK BLOCK AND ENTER INFO](#)



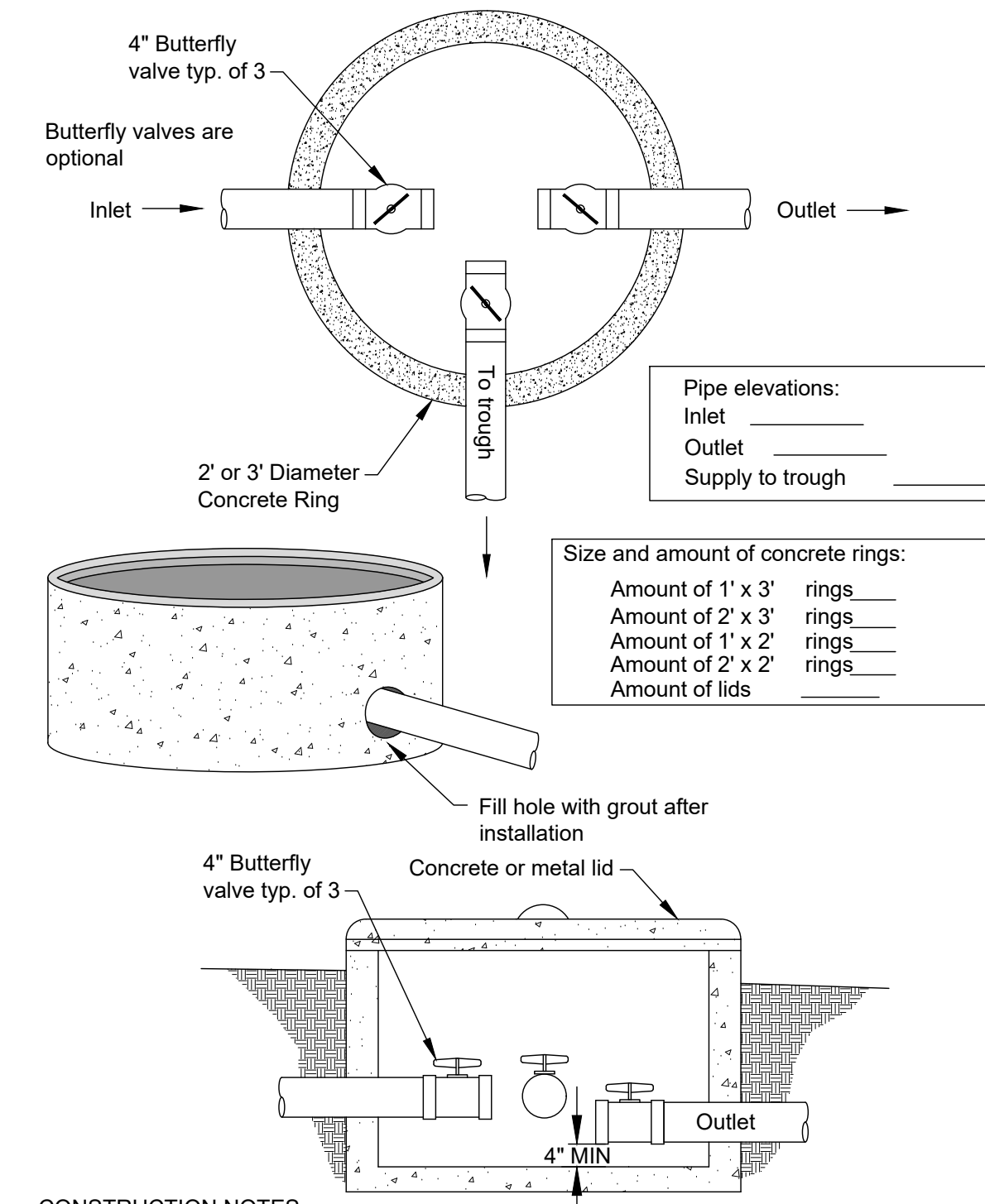
	DESIGN	AS BUILT
Elevation Top of Structure		
Elevation at Pipe Invert (Inlet)		
Elevation at Pipe Invert (Outlet)		
Elevation Top of Collection Pipe		

CONSTRUCTION NOTES

1. Plan, design and construct spring developments in accordance with Federal, State, and Local laws and regulations. When collecting water for potable uses, meet the requirements of the state health department for materials and installation. Permits may be required for the installation of these systems. Contact the Permits Division of the local county government for regulations and permit requirements.
2. A minimum of 10ft of SCH 40 PVC pipe shall be installed at the inlet and outlet of the collection box.

**GRAVITY FED TROUGH
CONCRETE WATER COLLECTION**
Not to scale

[CLICK BLOCK AND ENTER INFO](#)



CONSTRUCTION NOTES
Plan, design and construct spring developments in accordance with Federal, State, and Local laws and regulations. When collecting water for potable uses, meet the requirements of the state health department for materials and installation. Permits may be required for the installation of these systems. Contact the Permits Division of the local county government for regulations and permit requirements.

**GRAVITY FED TROUGH
CONCRETE WATER COLLECTION WITH BYPASS PIPE**
Not to scale

[CLICK BLOCK AND ENTER INFO](#)

Date _____

Designed _____

Drawn _____

Checked _____

Approved _____

LANDOWNER - SITE NAME

COUNTY Soil Conservation District

JOB CLASS #

TRACT #



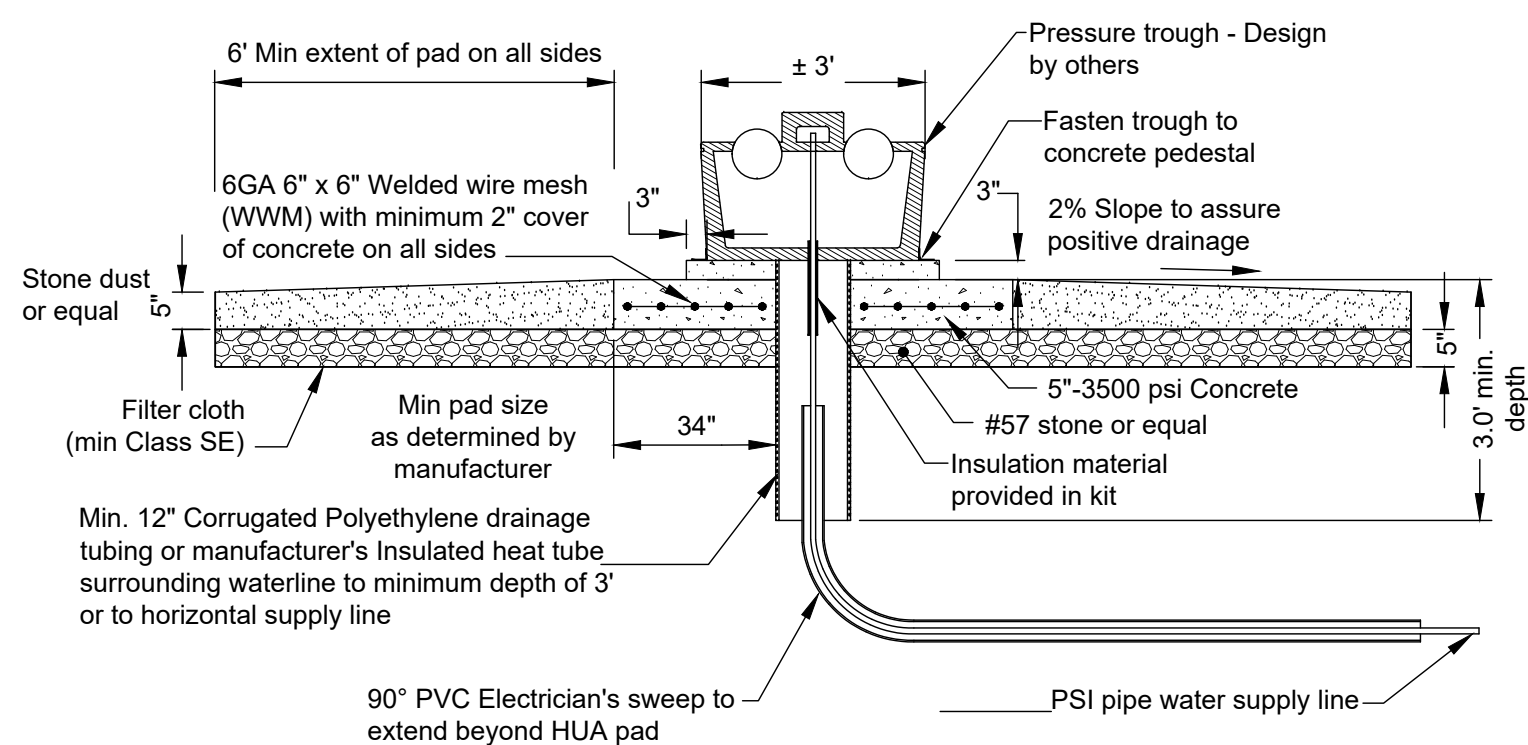
File Name

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Drawing No.
MD_0053

Sheet 4 of 3

PRESSURE FEED SYSTEMS

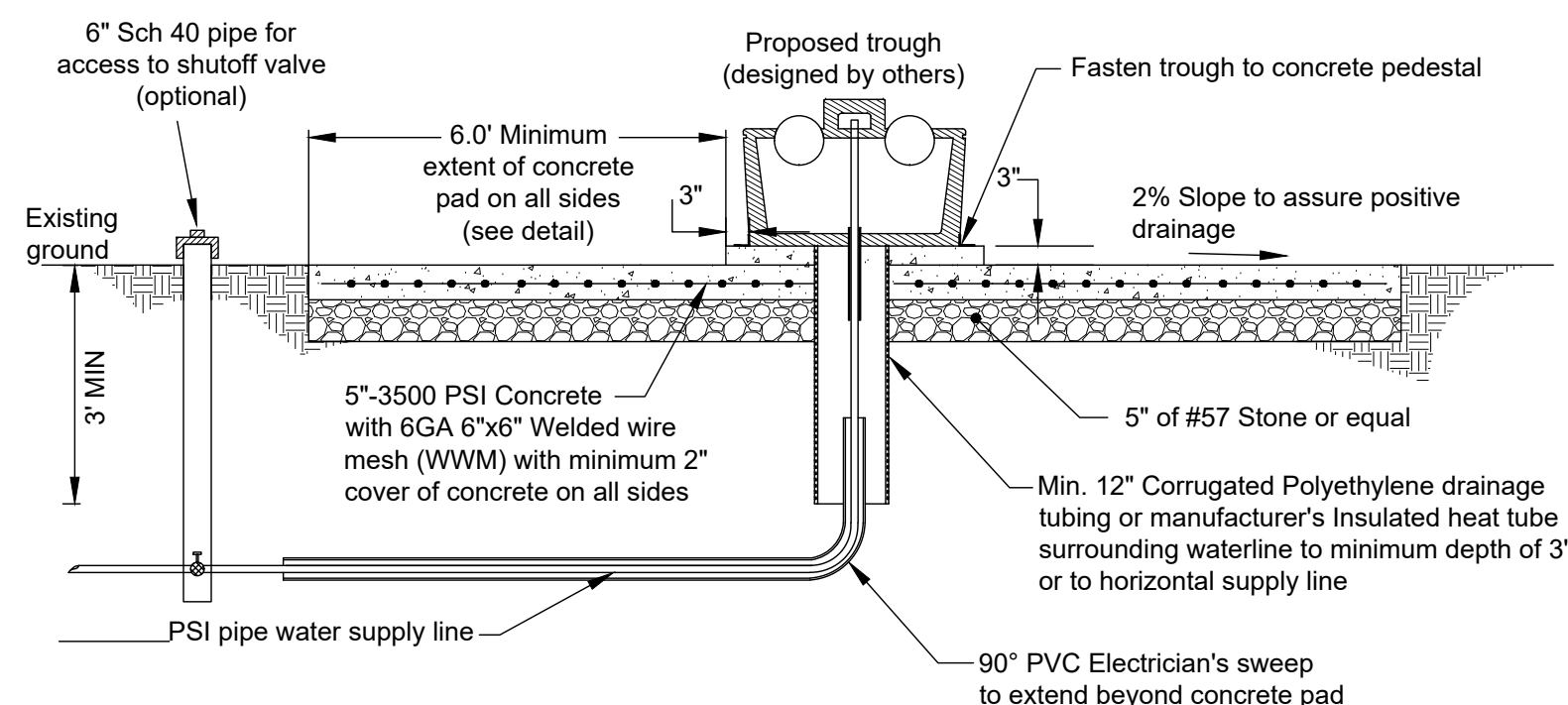


CONSTRUCTION NOTE:
This standard detail is based on installation of a pressure fed waterer. All troughs eligible for use must meet or exceed NRCS Practice Standard and Specifications for 614 trough or tank. All manufacturer's recommendations and specifications shall be followed during installation, regardless of the specific trough purchased.

- | | |
|--|--|
| <p>NOTES:</p> <ol style="list-style-type: none"> Exact location of supply line to be determined during construction by the landowner and soil conservation district All lines to have a min 24" cover All concrete apron must have 6 gauge 6"x6" Welded Wire Mesh (WWM) All concrete to be a minimum 3500 psi with 5% air entrainment and a slump of 3-5 inches. Install backflow preventer if water is supplied from potable water source | <p>INSTALLATION NOTES:</p> <ol style="list-style-type: none"> Grade pad for trough and install inlet pipe, including elbows Backfill with #57 stone around trough location and grade stone Pour concrete Set trough Complete installation Grade around all facilities as necessary to maintain positive drainage and spread spoil as directed by landowners |
|--|--|

**PRESSURE FED TROUGH
GRAVEL HUA**
Not to scale

CLICK BLOCK AND ENTER INFO

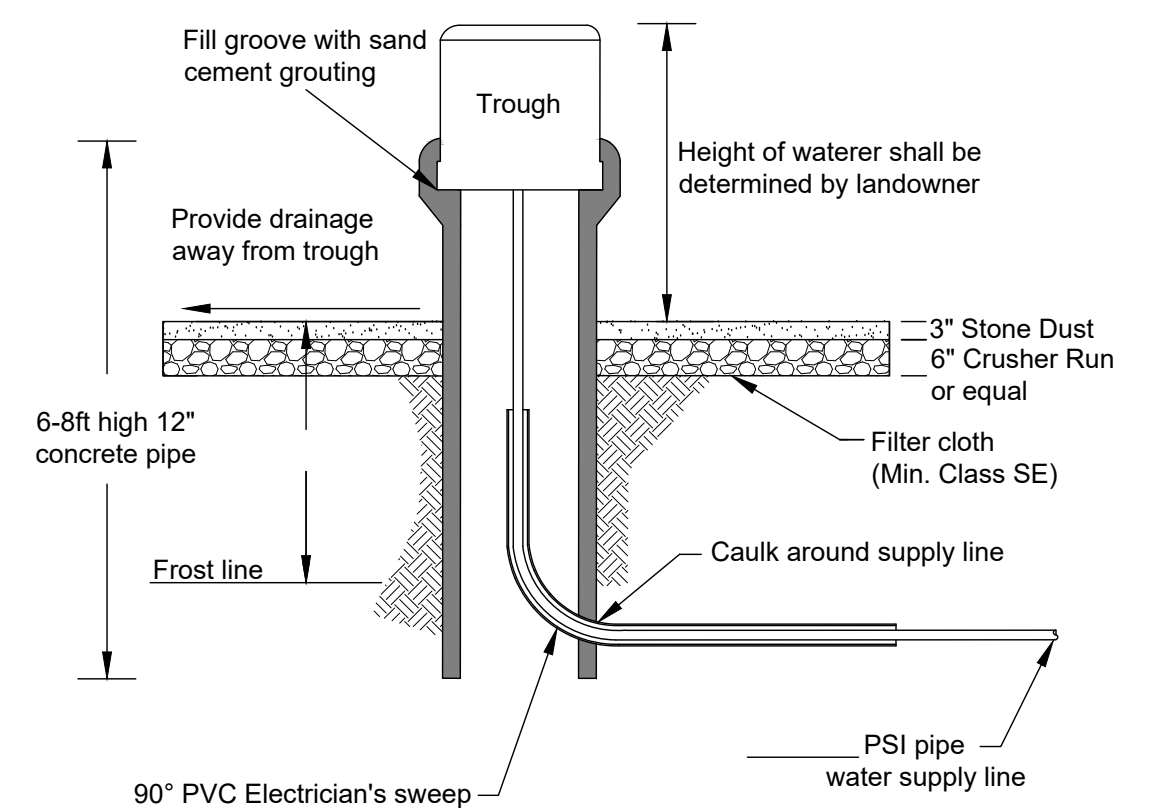


CONSTRUCTION NOTE:
This standard detail is based on installation of a pressure fed waterer. All troughs eligible for use must meet or exceed NRCS Practice Standard and Specifications for 614 trough or tank. All manufacturer's recommendations and specifications shall be followed during installation, regardless of the specific trough purchased.

- | | |
|--|--|
| <p>Notes:</p> <ol style="list-style-type: none"> Exact location of supply line to be determined during construction by the landowner and soil conservation district All lines to have a min 24" cover Concrete apron must have 6 gauge 6"x6" welded wire mesh (wwm) Concrete to be minimum 3500 psi with 5% air entrainment and a slump of 3-5 inches. Install backflow preventer if water is supplied from potable water source | <p>Installation notes:</p> <ol style="list-style-type: none"> Grade pad for trough and install inlet pipe, including elbows Backfill with #57 stone around trough location and grade stone Pour concrete Set trough Complete installation Grade around all facilities as necessary to maintain positive drainage and spread spoil as directed by landowners |
|--|--|

**PRESSURE FED TROUGH
CONCRETE HUA**
Not to scale

CLICK BLOCK AND ENTER INFO

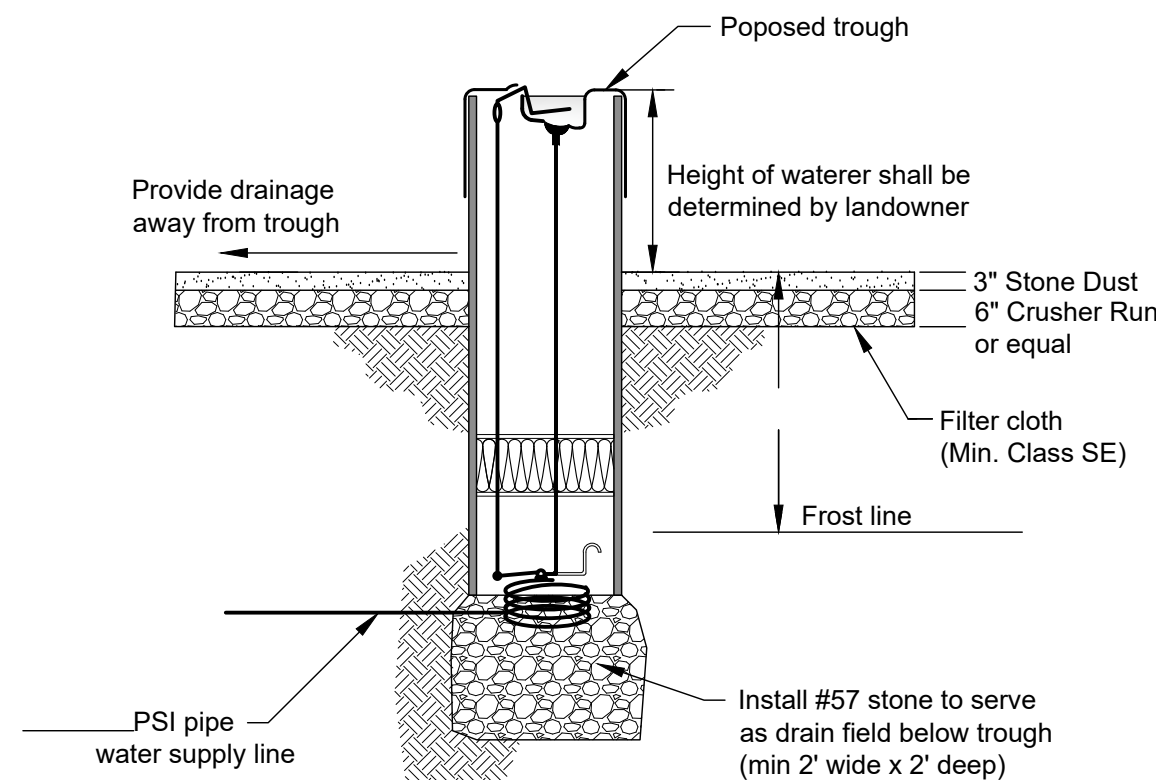


CONSTRUCTION NOTE:
This standard detail is based on installation of a pressure fed waterer. All troughs eligible for use must meet or exceed NRCS Practice Standard and Specifications for 614 trough or tank. All manufacturer's recommendations and specifications shall be followed during installation, regardless of the specific trough purchased.

- | | |
|---|--|
| <p>Notes:</p> <ol style="list-style-type: none"> Backfill material must be free of any rocky material Min 32" depth for supply line Supply line may be 1" or 1 1/4" diameter solid polyethylene pipe Working pressure of pipe should not exceed 72% of the pressure rating of the pipe Velocity shall not exceed 5ft/sec Install backflow preventer if water is supplied from potable water source | <p>Installation notes:</p> <ol style="list-style-type: none"> Grade pad for trough and install inlet pipe, including elbows Backfill with #57 stone or Crusher Run at trough location and grade stone Set trough Compact material around pipe to assure stability Complete installation Grade around all facilities as necessary to maintain positive drainage and spread spoil as directed by landowners |
|---|--|

**PRESSURE FED TROUGH
EQUINE**
Not to scale

CLICK BLOCK AND ENTER INFO



CONSTRUCTION NOTE:
This standard detail is based on installation of a Bar-Bar-A Frost Free Waterer and does not preclude the use of other models or troughs by other manufacturers. All components as shown above may not be compatible with such models. All troughs eligible for use must meet or exceed NRCS Practice Standard and Specifications for 614 Trough or Tank. All manufacturer's recommendations and specifications shall be followed during installation, regardless of the specific trough used.

- | | |
|---|--|
| <p>Notes:</p> <ol style="list-style-type: none"> Backfill material must be free of any rocky material Min 32" depth for supply line Supply line may be 1" or 1 1/4" diameter solid polyethylene pipe Working pressure of pipe should not exceed 72% of the pressure rating of the pipe Velocity shall not exceed 5ft/sec Install backflow preventer if water is supplied from potable water source | <p>Installation notes:</p> <ol style="list-style-type: none"> Grade pad for trough and install inlet pipe, including elbows Backfill with #57 stone or Crusher Run at trough location and grade stone Set trough Compact material around pipe to assure stability Complete installation Grade around all facilities as necessary to maintain positive drainage and spread spoil as directed by landowners |
|---|--|

PRESSURE FED TROUGH - BAR-BAR
Not to scale

CLICK BLOCK AND ENTER INFO

Date	
Designed	
Drawn	
Checked	
Approved	

---, Maryland

LANDOWNER - SITE NAME

COUNTY Soil Conservation District
JOB CLASS #

TRACT #

United States
Department of
Agriculture

**Natural Resources
Conservation Service**

File Name

MD_0053_WateringFacility.dwg

Drawing No.
MD_0053

Sheet 4 of 3