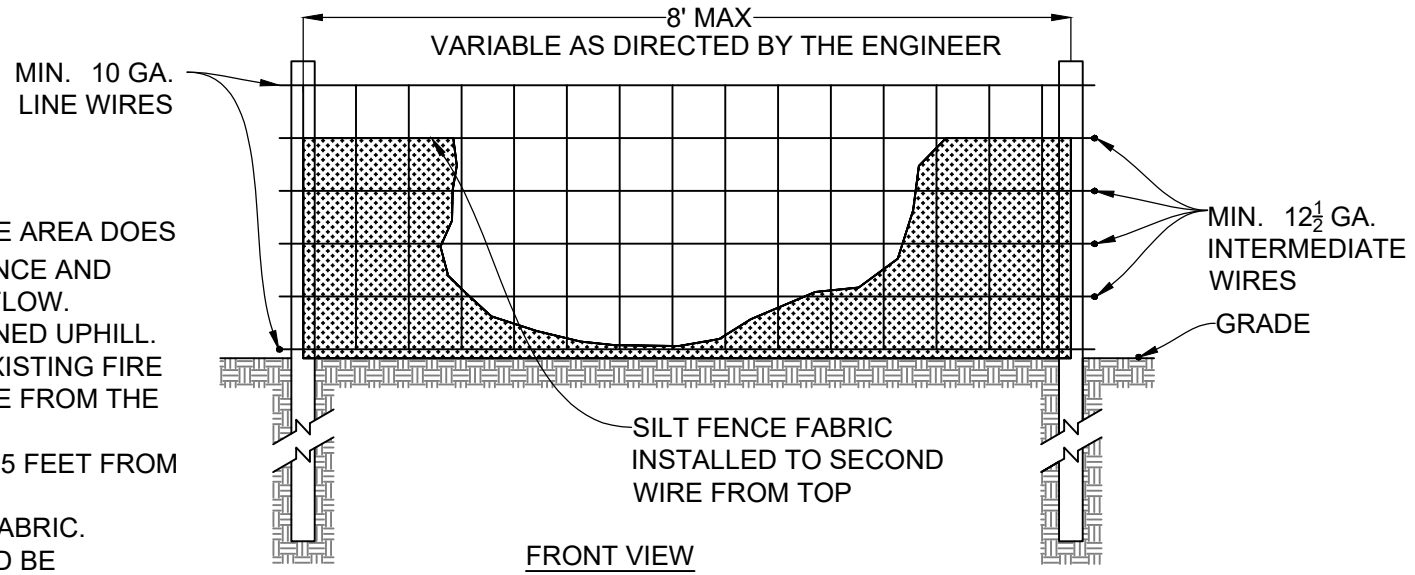
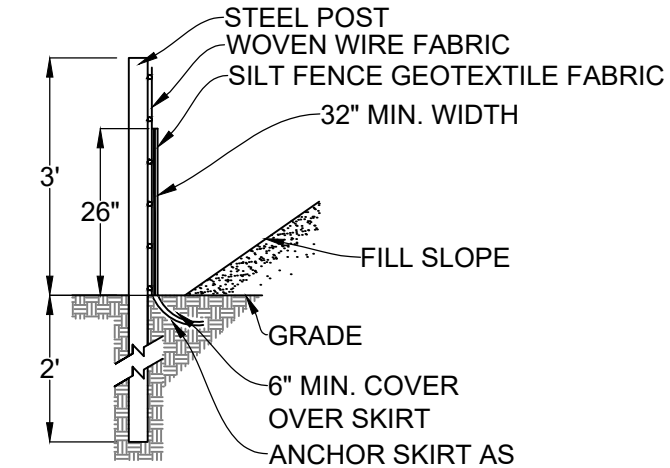


GENERAL NOTES:

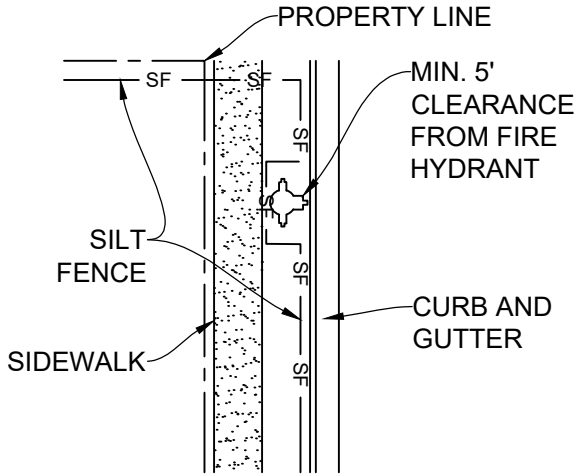
1. USE SILT FENCE ONLY WHEN DRAINAGE AREA DOES NOT EXCEED $\frac{1}{4}$ ACRE PER 100 LF OF FENCE AND NEVER IN AREAS OF CONCENTRATED FLOW.
2. END OF SILT FENCE NEEDS TO BE TURNED UPHILL.
3. WRAP THE SILT FENCE AROUND ALL EXISTING FIRE HYDRANTS SO THEY ARE FULLY VISIBLE FROM THE ROADWAY.
4. SILT FENCE SHOULD BE A MINIMUM OF 5 FEET FROM THE TOE OF SLOPE.
5. OVERLAP 12 INCHES WHEN SPLICING FABRIC.
6. ANCHORING OF TOE OF FENCE SHOULD BE REINFORCED WITH 12 INCHES OF NCDOT #5 OR #57 WASHED STONE WHEN FLOW WILL RUN PARALLEL TO TOE OF FENCE.

MAINTENANCE NOTES:

1. REMOVE SEDIMENT WHEN AT HALF HEIGHT OF SILT FENCE.
2. REPAIR OR REPLACE FENCE IMMEDIATELY WHEN TEARS, HOLES, SAGGING, COLLAPSE, OR OTHER DEFICIENCIES FOUND.
3. THE DESIGN LIFE OF A SYNTHETIC SILT FENCE IS APPROX. 6 MONTHS. DETERIORATED SILT FENCE MUST BE REPLACED.
4. SILT FENCE SHALL BE INSPECTED WEEKLY OR AFTER 1 INCH RAIN EVENT.
5. USE #57 WASHED STONE FOR REPAIR OF SILT FENCE FAILURES, AND FOR ANCHOR WHEN SILT FENCE IS PROTECTING CATCH BASIN.

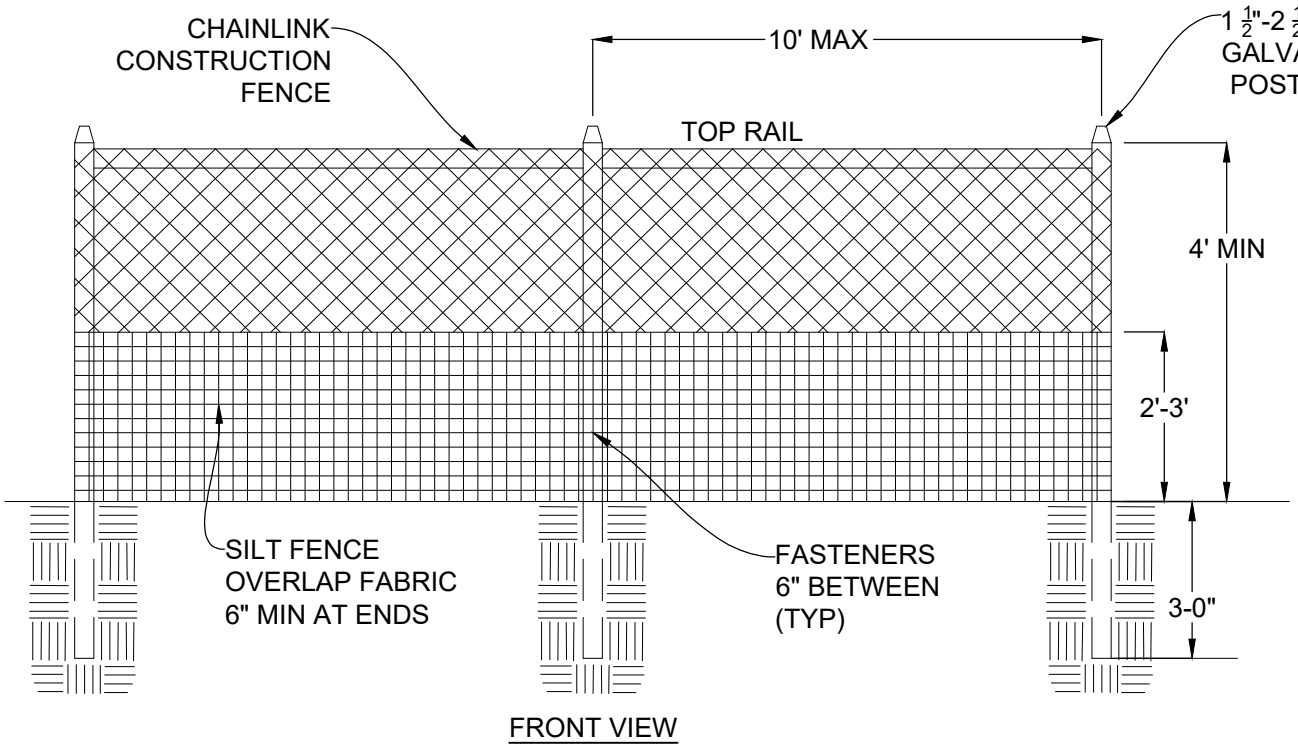


SIDE VIEW

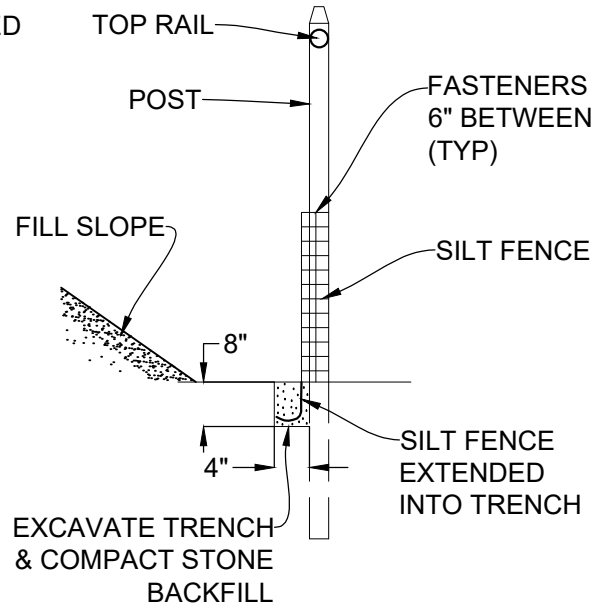


FH INSTALLATION

TOWN OF APEX STANDARDS	TEMPORARY SILT FENCE	STD. NO. 400.01
EFFECTIVE: JUNE 11, 2024		SHEET 1 OF 2



FRONT VIEW



SIDE VIEW

GENERAL NOTES:

1. SUPER SILT FENCE TO BE USED WHEN STANDARD IS INADEQUATE, AS DIRECTED BY THE ENGINEER.
2. DO NOT USE IN AREAS OF CONCENTRATED FLOW.
3. END OF SILT FENCE NEEDS TO BE TURNED UPHILL.
4. WRAP THE SILT FENCE AROUND ALL EXISTING FIRE HYDRANTS WITH 5' OF CLEARANCE, SO THAT THEY ARE FULLY VISIBLE FROM THE ROADWAY.
5. SILT FENCE SHOULD BE A MINIMUM OF 5 FEET FROM THE TOE OF SLOPE.
6. OVERLAP 12 INCHES WHEN SPLICING FABRIC.
7. ANCHORING OF TOE OF FENCE IN TRENCH SHALL BE WITH COMPACTED NCDOT #5 OR #57 WASHED STONE.

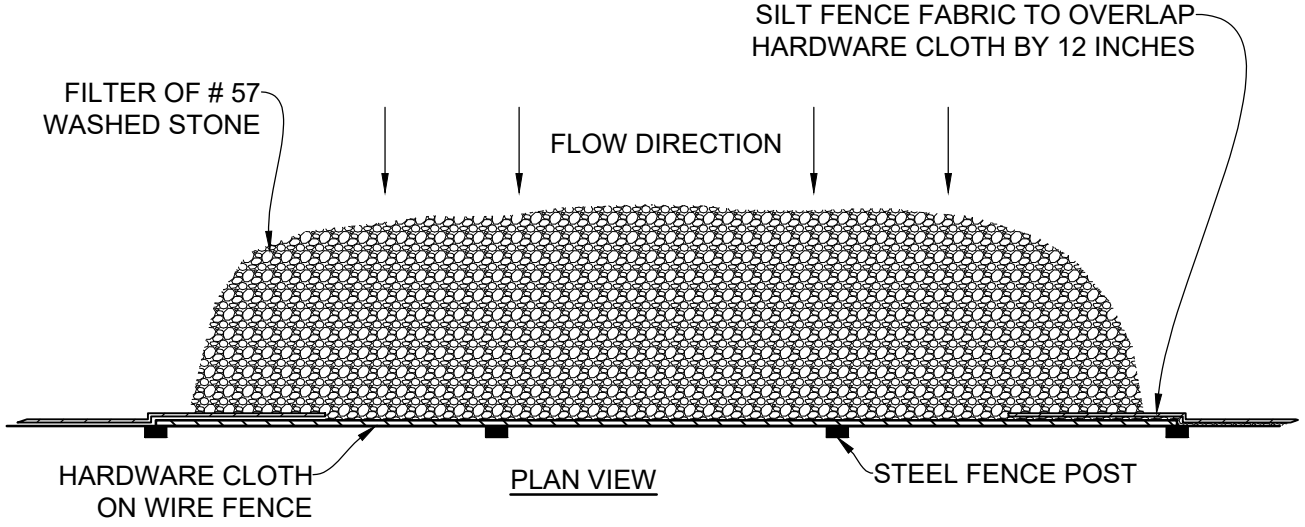
MAINTENANCE NOTES:

1. REMOVE SEDIMENT WHEN AT HALF HEIGHT OF SILT FENCE.
2. REPAIR OR REPLACE FENCE IMMEDIATELY WHEN TEARS, HOLES, SAGGING, COLLAPSE, OR OTHER DEFICIENCIES FOUND.
3. THE DESIGN LIFE OF A SYNTHETIC SILT FENCE IS APPROX. 6 MONTHS. DETERIORATED SILT FENCE MUST BE REPLACED.
4. SILT FENCE SHALL BE INSPECTED WEEKLY OR AFTER 1 INCH RAIN EVENT.
5. USE #57 WASHED STONE FOR REPAIR OF SILT FENCE FAILURES, AND FOR ANCHOR WHEN SILT FENCE IS PROTECTING CATCH BASIN.

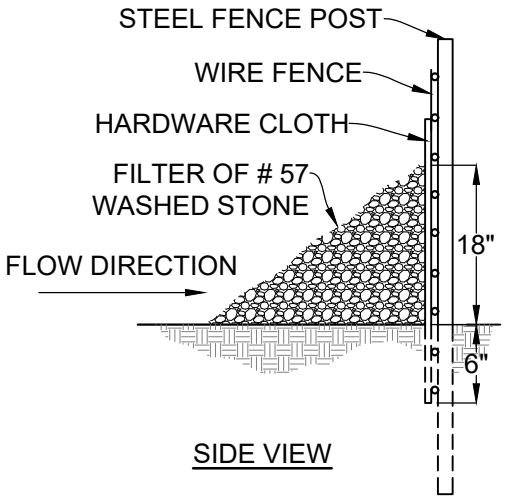
TOWN OF APEX STANDARDS	TEMPORARY SILT FENCE (SUPER SILT FENCE)	STD. NO. 400.01
EFFECTIVE: JUNE 11, 2024		SHEET 2 OF 2

GENERAL NOTES:

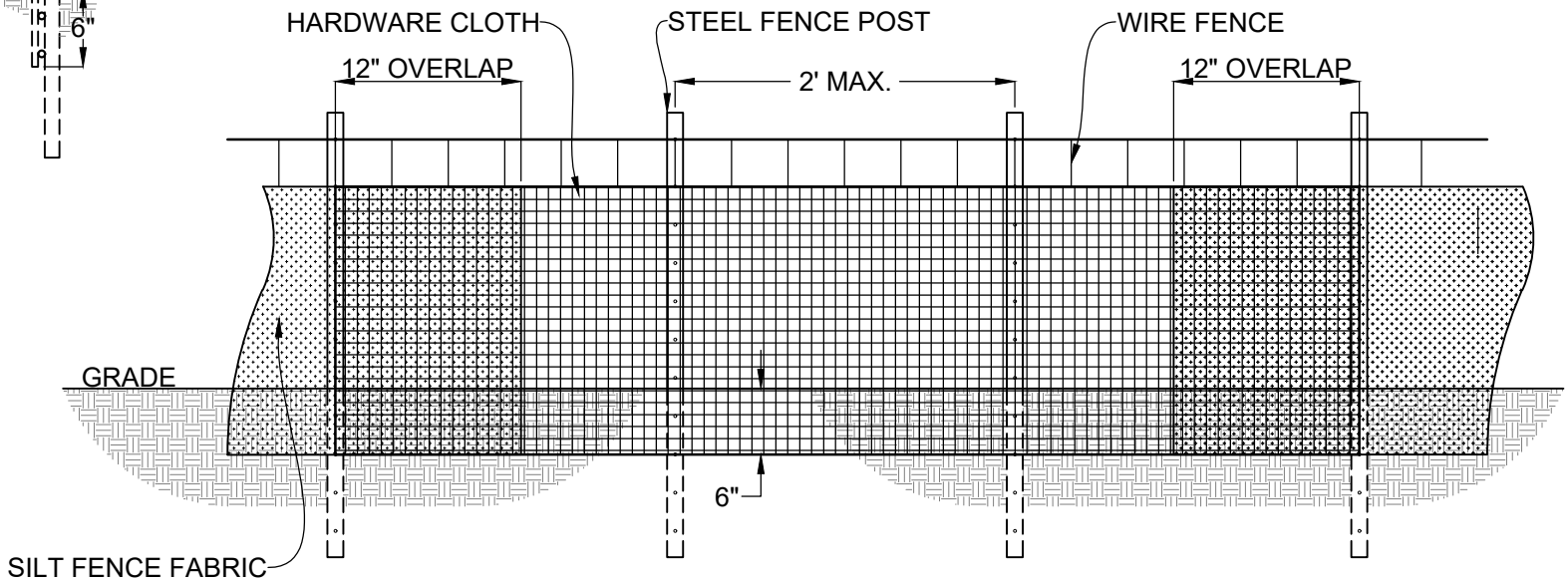
1. APPLICABLE FOR DRAINAGE AREAS NO MORE THAN 1/4 ACRE.
2. USE AS A REPAIR OF SILT FENCE FAILURES.
3. BURY WIRE FENCE, HARDWARE CLOTH, AND SILT FENCE FABRIC 6 INCHES.



PLAN VIEW



SIDE VIEW

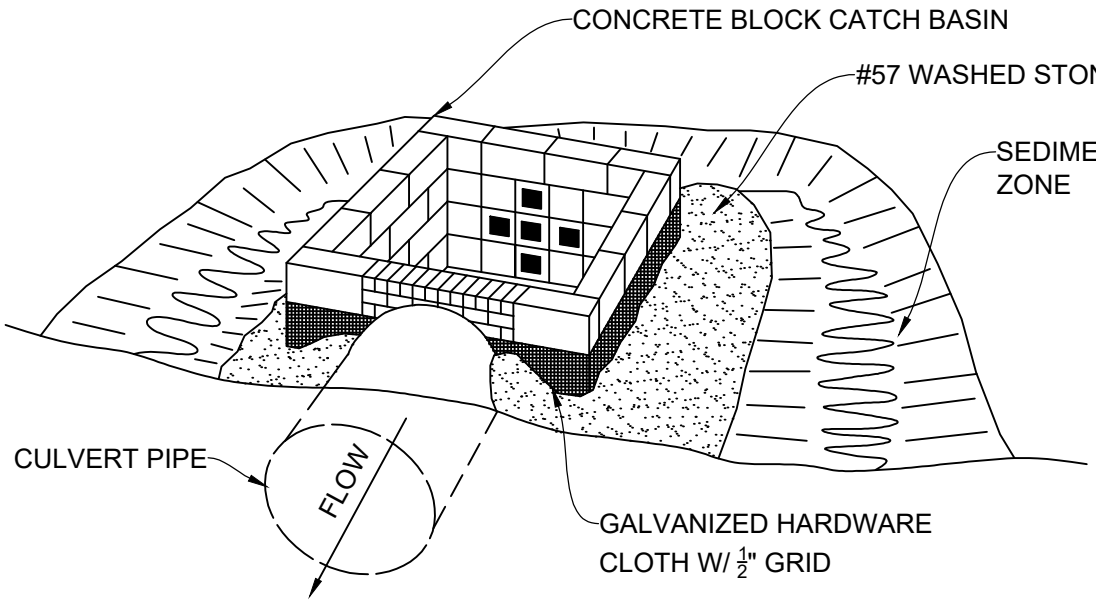


FRONT VIEW

MAINTENANCE NOTES:

1. REMOVE SEDIMENT WHEN AT HALF HEIGHT OF STONE. REFRESH STONE THAT BECOMES CLOGGED WITH SEDIMENT/DEBRIS.
2. REPAIR OR REPLACE FENCE & HARDWARE CLOTH IMMEDIATELY WHEN DEFICIENCIES FOUND.

TOWN OF APEX STANDARDS	TEMPORARY SILT FENCE OUTLET	STD. NO. 400.02
EFFECTIVE: JUNE 11, 2024		SHEET 1 OF 1



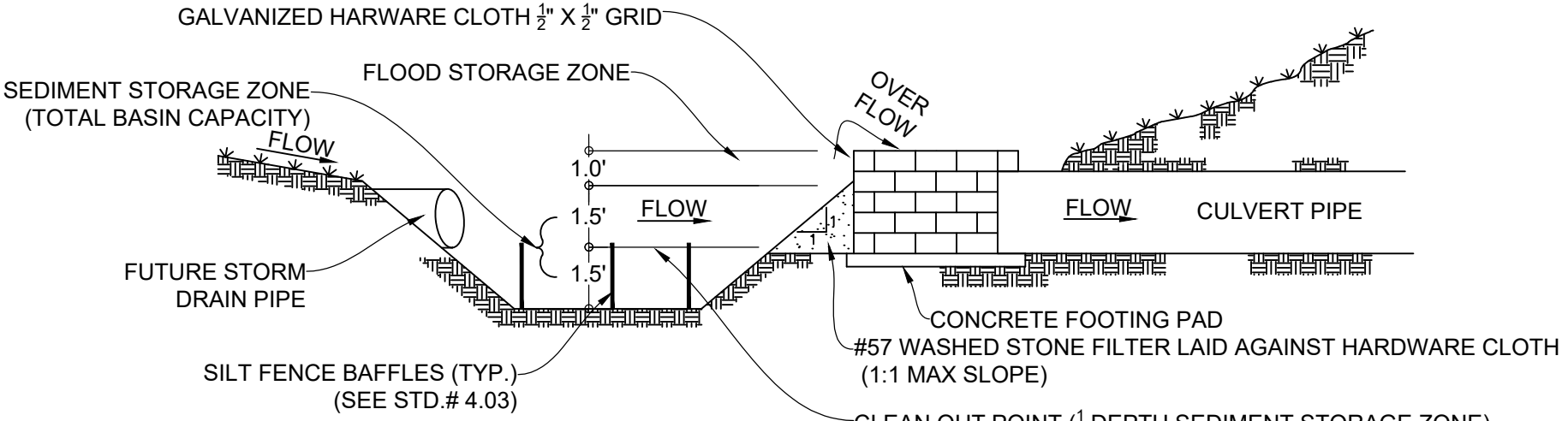
PERSPECTIVE VIEW

GENERAL NOTES:

1. AT THE END OF THE PROJECT, CATCH BASIN CAN BE RAISED AS NEEDED PLUGGING OPEN COURSE OF BLOCK WITH MORTAR.
2. RISER CAN BE BUILT AS A STANDARD CATCH BASIN/JUNCTION BOX (WITH WEEP HOLES) IN RECEIVING WALL AND BE UTILIZED AS SUCH WHEN PROJECT IS STABLE.
3. FOR DRAINAGE AREA >5 ACRES TREAT AS RISER STRUCTURE INCLUDING TRASH RACK, ELEVATIONS, AND ANTI-FLOATATION.

MAINTENANCE NOTES:

1. REMOVE SEDIMENT WHEN ½ HEIGHT OF SEDIMENT STORAGE ZONE.
2. REPLACE STONE, HARDWARE, & BAFFLES AS NEEDED.

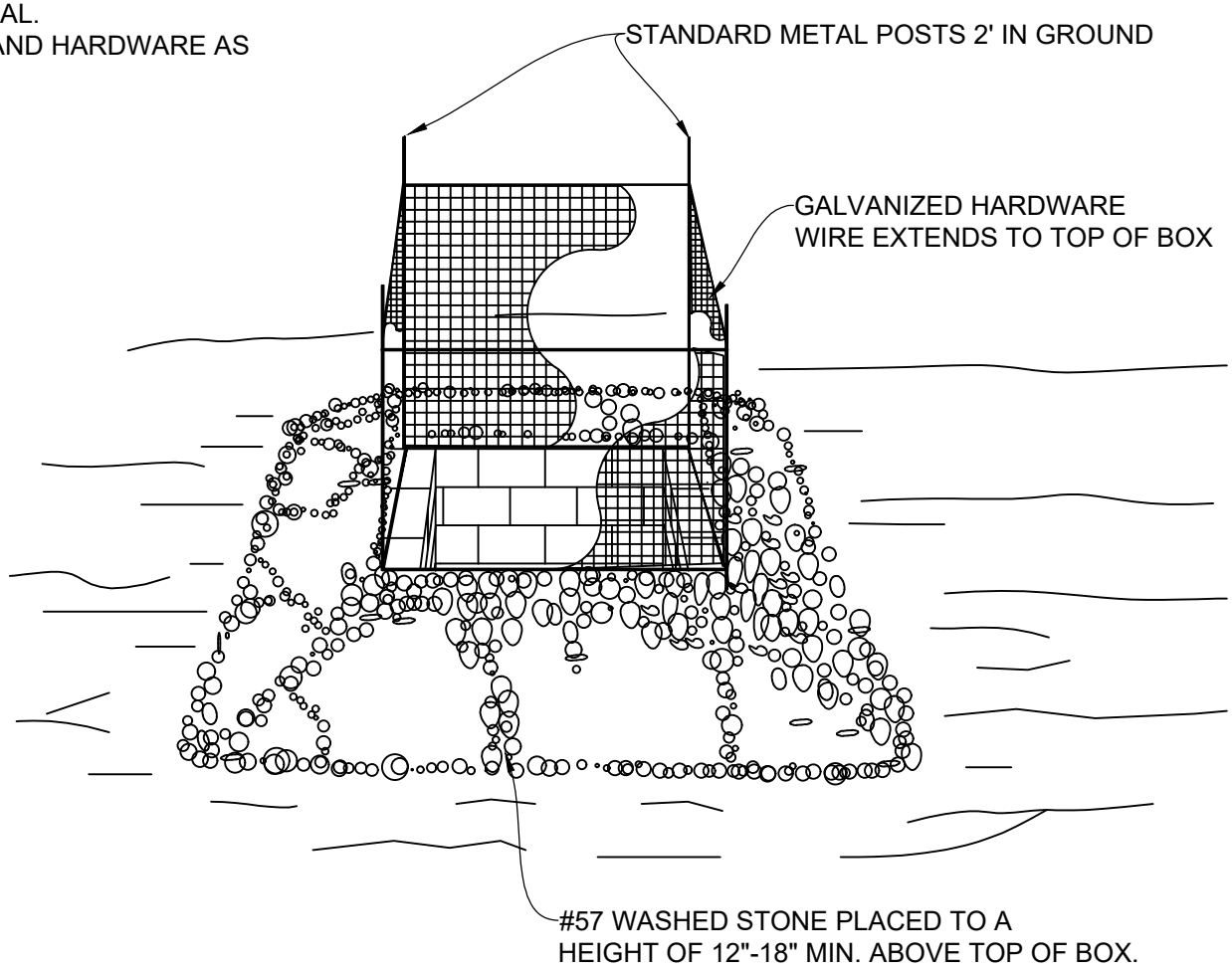


SECTION VIEW

TOWN OF APEX STANDARDS	CATCH BASIN RISER/FILTER	STD. NO. 400.03
EFFECTIVE: JUNE 11, 2024		SHEET 1 OF 1

MAINTENANCE NOTES:

1. REMOVE SEDIMENT WHEN AT $\frac{1}{2}$ HEIGHT OF STONE AND CLEAR HARDWARE OF DEBRIS TO PROVIDE ADEQUATE FLOW FOR SUBSEQUENT RAINS, TAKING CARE NOT TO DAMAGE OR UNDERCUT HARDWARE DURING SEDIMENT REMOVAL.
2. REPLACE STONE AND HARDWARE AS NEEDED.

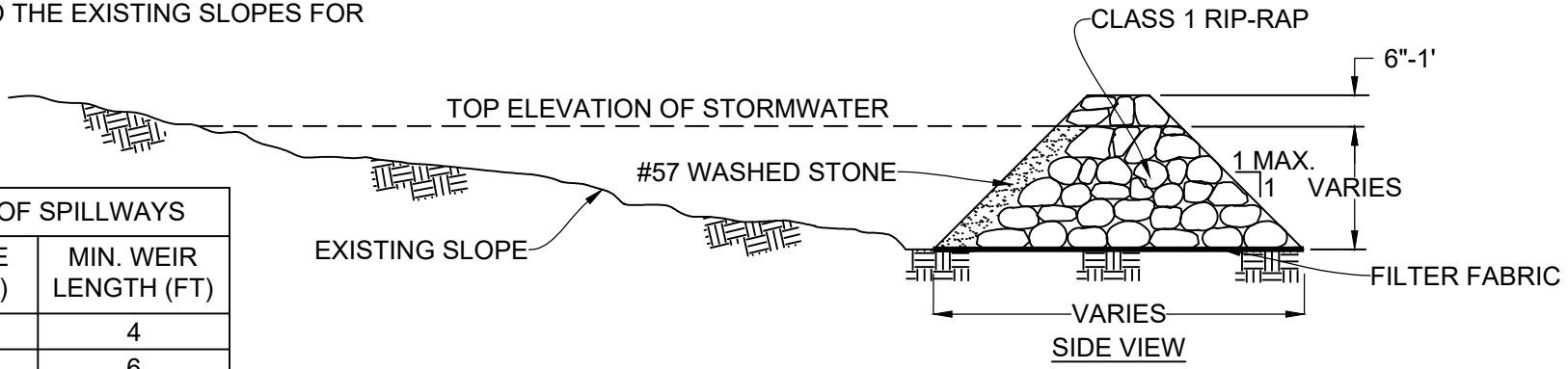


TOWN OF APEX STANDARDS	CATCH BASIN & YARD INLET PROTECTION	STD. NO. 400.04
EFFECTIVE: JUNE 11, 2024		SHEET 1 OF 1

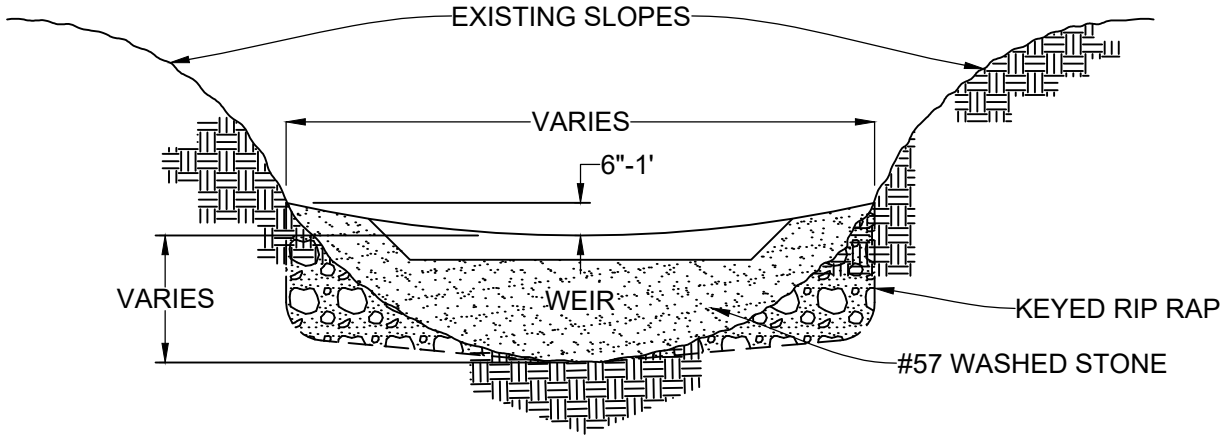
GENERAL NOTES:

1. HEIGHT & WIDTH DETERMINED BY EXISTING TOPOGRAPHY AND SEDIMENT STORAGE REQUIRED.
2. KEY RIP RAP INTO THE EXISTING SLOPES FOR STABILIZATION.

DESIGN OF SPILLWAYS	
DRAINAGE AREA (AC)	MIN. WEIR LENGTH (FT)
1	4
2	6
3	8
4	10
5	12



SIDE VIEW

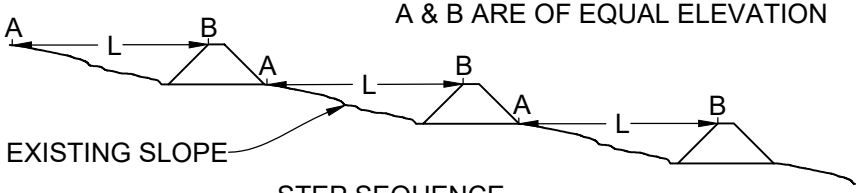


FRONT VIEW

MAINTENANCE NOTES:

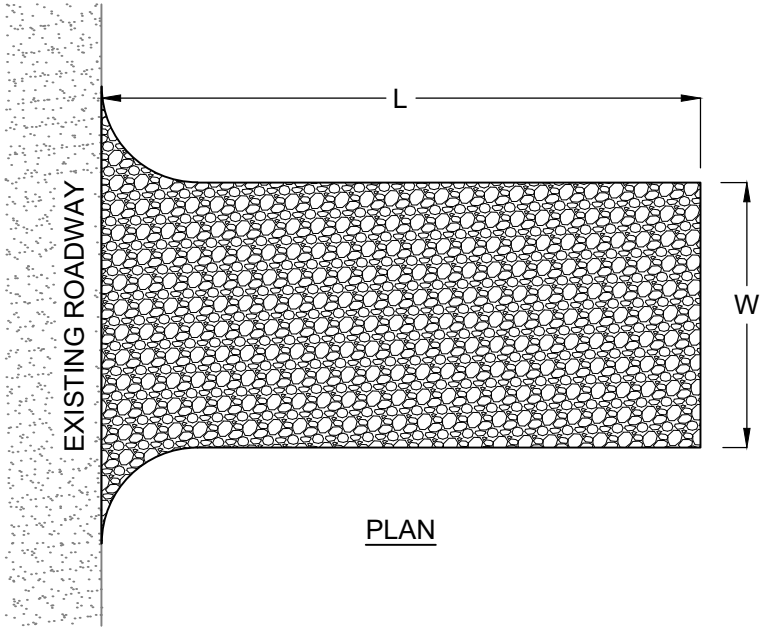
1. REMOVE SEDIMENT WHEN AT $\frac{1}{2}$ HEIGHT OF STONE, AND CLEAR DEBRIS THAT COULD CLOG CHANNEL.
2. ADD OR REFRESH STONE AS NEEDED TO MAINTAIN DESIGN HEIGHT AND CROSS SECTION.
3. CORRECT DEFICIENCIES IF EROSION OCCURS AROUND EDGES OF DAM.
4. IF SIGNIFICANT EROSION OCCURS BETWEEN DAMS, ADD ADDITIONAL DAMS AND ENSURE CHANNEL IS PROPERLY STABILIZED WITH MATTING/STABILIZATION.

L=THE DISTANCE SUCH THAT POINTS A & B ARE OF EQUAL ELEVATION



STEP SEQUENCE

TOWN OF APEX STANDARDS	CHECK DAM	STD. NO.
EFFECTIVE: JUNE 11, 2024		400.05
		SHEET 1 OF 1



PLAN

GENERAL NOTES:

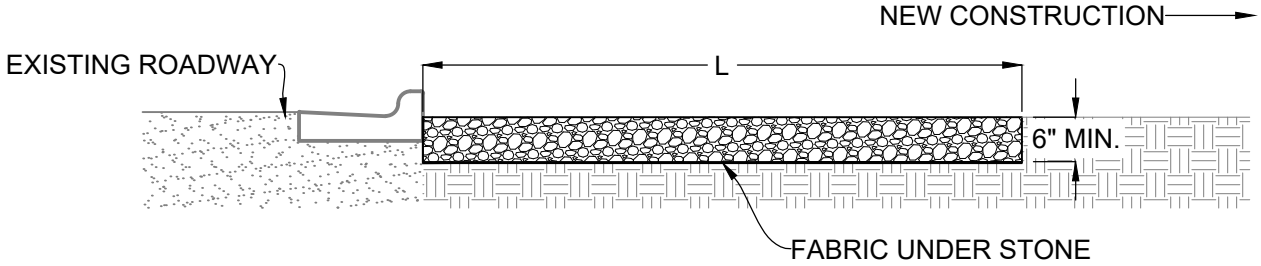
1. INSTALL SILT FENCE OR TREE PROTECTION FENCE TO ENSURE CONSTRUCTION ENTRANCE IS USED.
2. IF CONSTRUCTION ENTRANCE DOES NOT REMOVE MUD FROM TIRES EFFECTIVELY, THE TIRES OF THE VEHICLE MUST BE WASHED BEFORE ENTERING PUBLIC ROAD (SEE DETAIL 400.06 SHEET 2 OF 2).
3. IF A PROJECT CONTINUES TO DEPOSIT MUD AND DEBRIS ONTO THE PUBLIC ROAD, THE TOWN WILL CLEAN THE AREA AND INVOICE THE FINANCIALLY RESPONSIBLE PARTY.

MAINTENANCE NOTES:

1. CONSTRUCTION ENTRANCE SHALL BE MAINTAINED ROUTINELY TO AVOID SEDIMENT LEAVING PROJECT.
2. SEDIMENT ENTERING PAVED ROADWAYS FROM PROJECT SHALL BE REMOVED IMMEDIATELY.

ENTRANCE TYPE	L	W	STONE SIZE
GENERAL	50'	25'	2"-3"
RESIDENTIAL*	25'	12'	#57

* INDIVIDUAL SINGLE FAMILY



CROSS SECTION

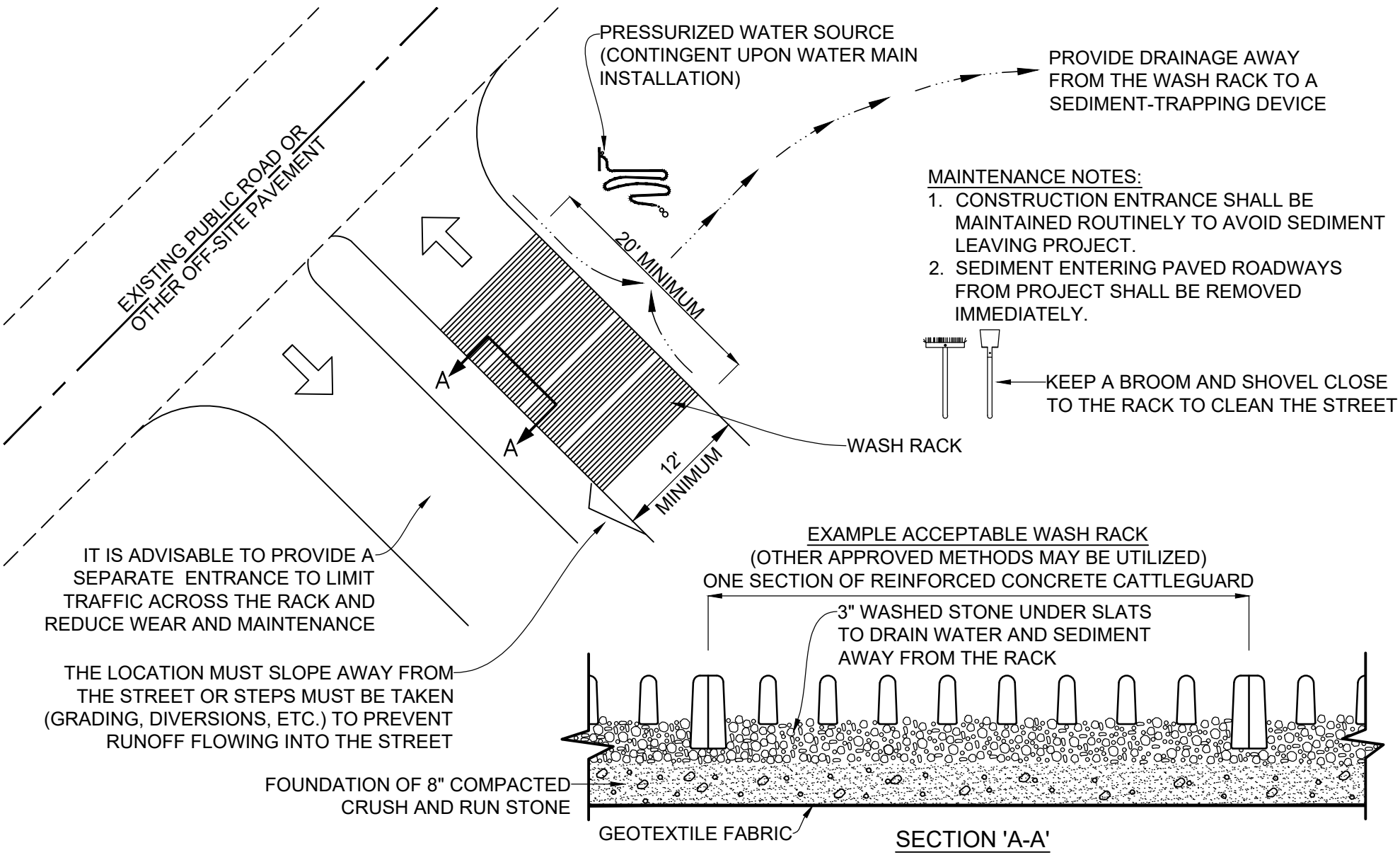
TOWN OF APEX STANDARDS

EFFECTIVE: JUNE 11, 2024

CONSTRUCTION ENTRANCE

STD. NO.

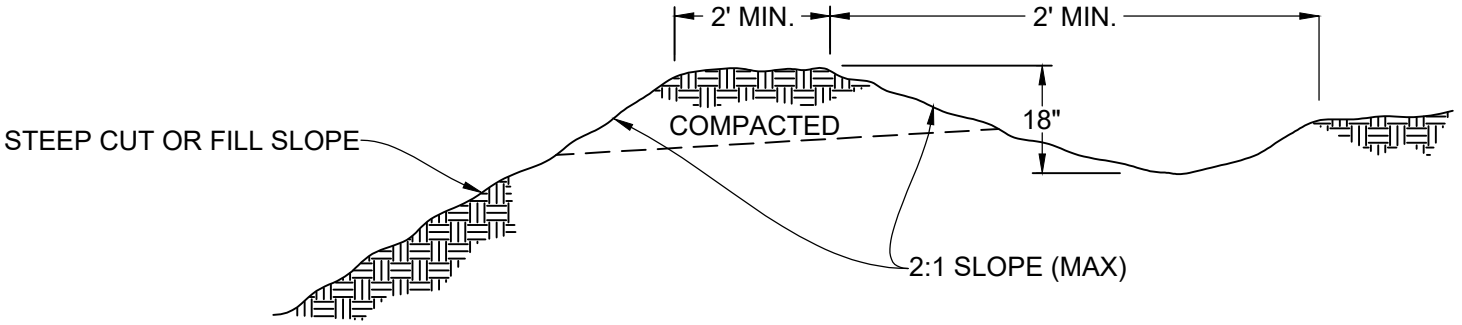
400.06



TOWN OF APEX STANDARDS	CONSTRUCTION ENTRANCE	STD. NO. 400.06
EFFECTIVE: JUNE 11, 2024		SHEET 2 OF 2

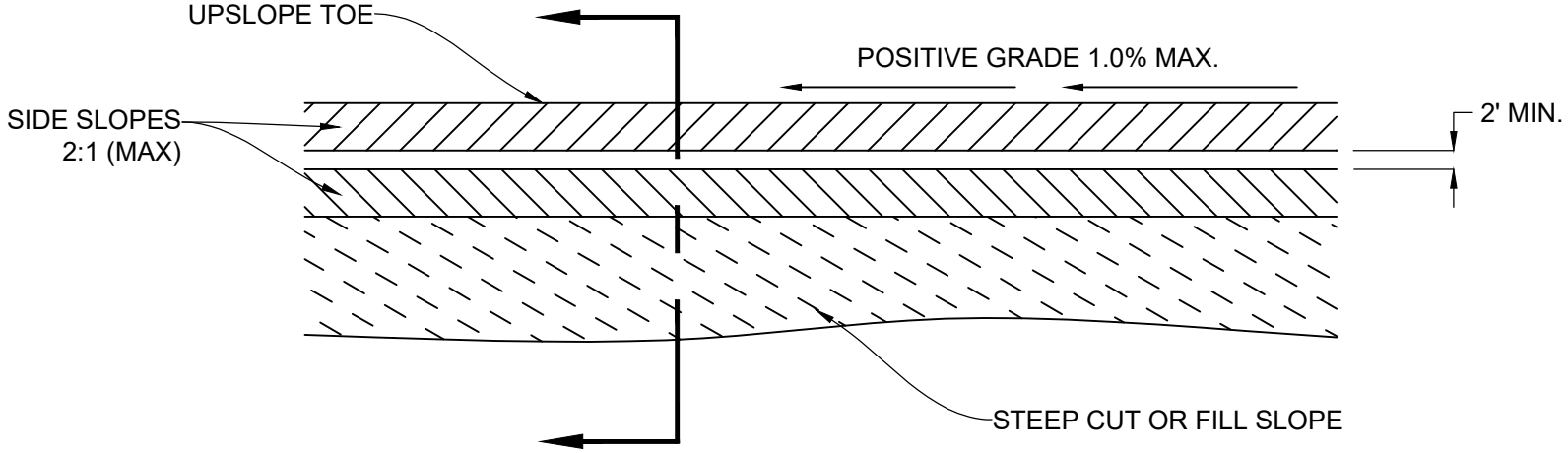
MAINTENANCE NOTES:

1. INSPECT DIVERSION DITCH WEEKLY AND AFTER RUNOFF-PRODUCING EVENTS FOR EROSION AND GRASS ESTABLISHMENT. REPAIR EROSION, REMOVE SEDIMENT, AND RESTABILIZE DITCH AS NEEDED TO MAINTAIN THE DESIGNED CARRYING CAPACITY.
2. CHECK DAMS, WATTLES, OR OTHER APPROVED MEASURE MUST BE INSTALLED WITHIN DITCH, AND MAINTAINED AS NEEDED.



CROSS SECTION

GENERAL NOTE: STABILIZE DIVERSION DITCH WITH TEMPORARY SEEDING AND EROSION CONTROL NETTING.



PLAN VIEW

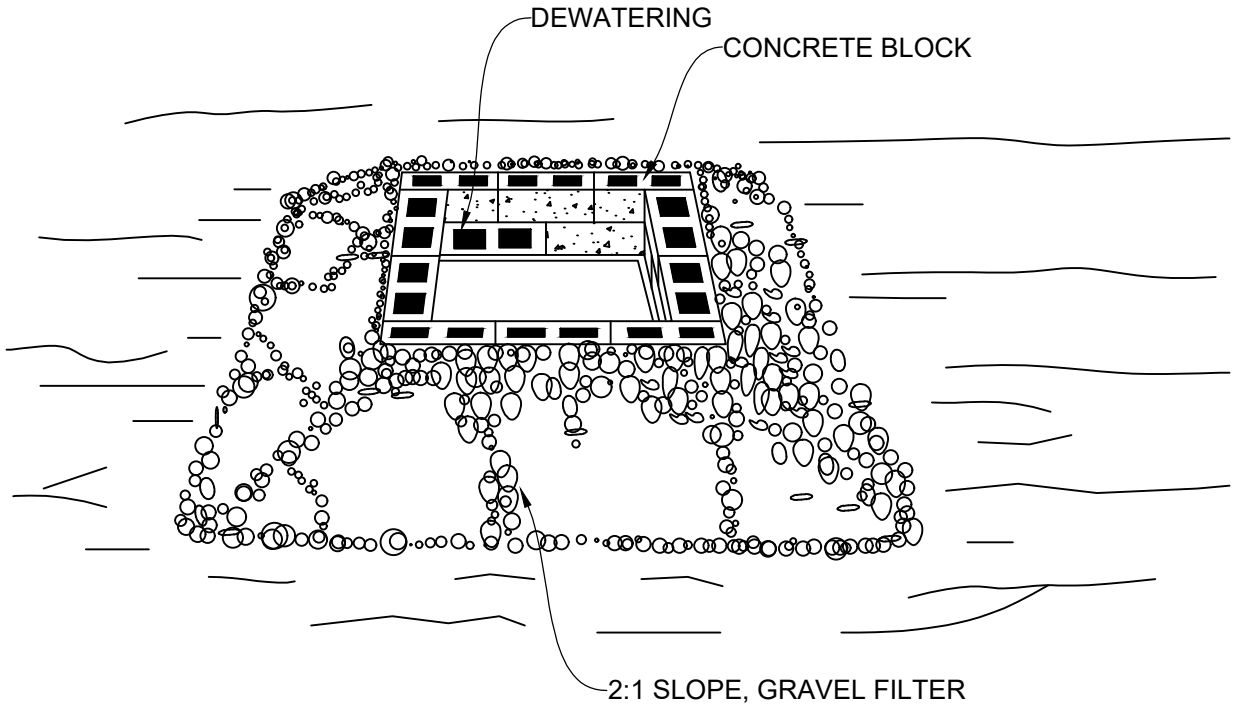
TOWN OF APEX STANDARDS	DIVERSION DITCH	STD. NO. 400.07
EFFECTIVE: JUNE 11, 2024		SHEET 1 OF 1

GENERAL NOTES:

1. LAY ONE BLOCK ON EACH SIDE OF THE STRUCTURE ON ITS SIDE IN THE BOTTOM ROW TO ALLOW POOL DRAINAGE. THE FOUNDATION SHOULD BE EXCAVATED AT LEAST 2" BELOW THE CREST OF THE STORM DRAIN. PLACE THE BOTTOM ROW OF BLOCKS AGAINST THE EDGE OF THE STORM DRAIN FOR LATERAL SUPPORT AND TO AVOID WASHOUTS WHEN OVERFLOW OCCURS. IF NEEDED, GIVE LATERAL SUPPORT TO SUBSEQUENT ROWS BY PLACING 2X4 WOOD STUDS THROUGH BLOCK OPENINGS.

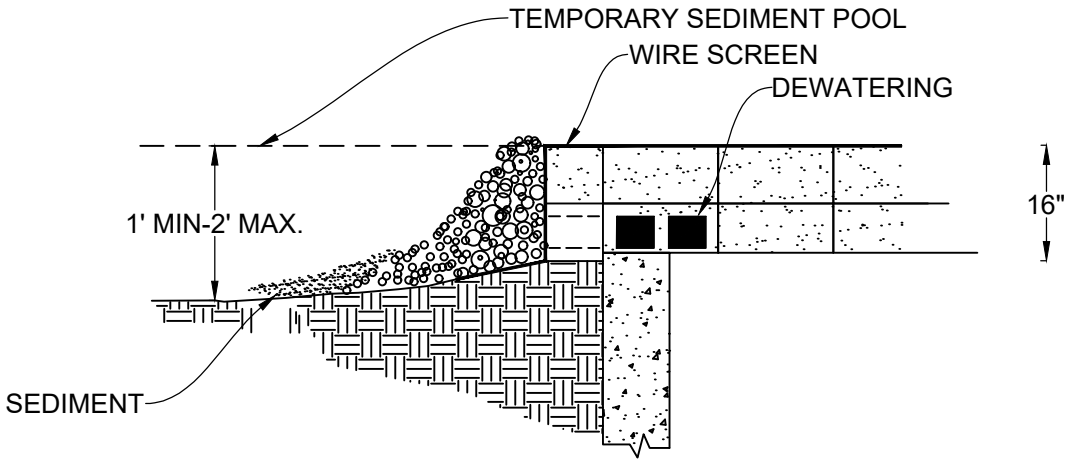
2. CAREFULLY FIT HARDWARE CLOTH OR COMPARABLE WIRE MESH WITH $\frac{1}{2}$" OPENINGS OVER ALL BLOCK OPENINGS TO HOLD GRAVEL IN PLACE.

3. USE CLEAN GRAVEL, $\frac{3}{4}$"- $\frac{1}{2}$" IN DIAMETER, PLACED 2" BELOW THE TOP OF THE BLOCK ON A 2:1 SLOPE OR FLATTER AND SMOOTH IT TO AN EVEN GRADE. NCDOT #57 WASHED STONE IS RECOMMENDED.



MAINTENANCE NOTES:

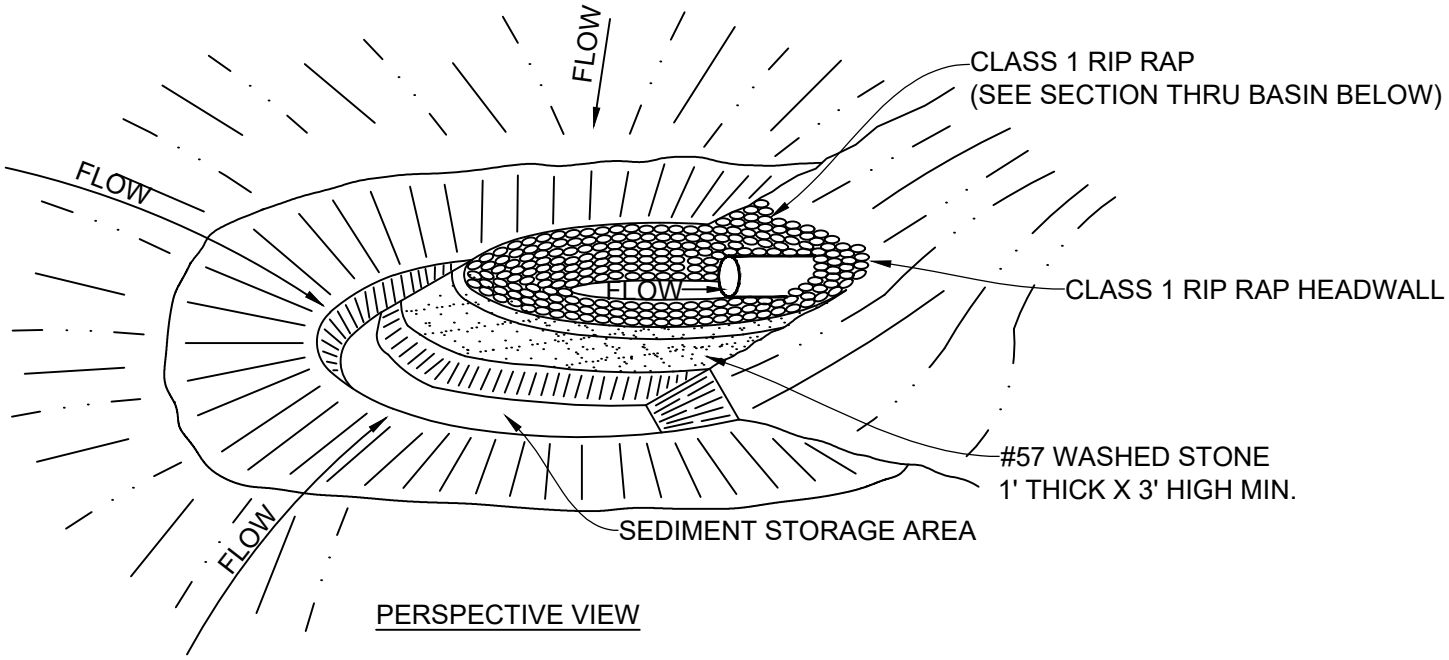
1. REMOVE SEDIMENT AS NEEDED TO PROVIDE ADEQUATE STORAGE VOLUME FOR SUBSEQUENT RAINS.
2. REFRESH OR REPLACE STONE AS NEEDED.



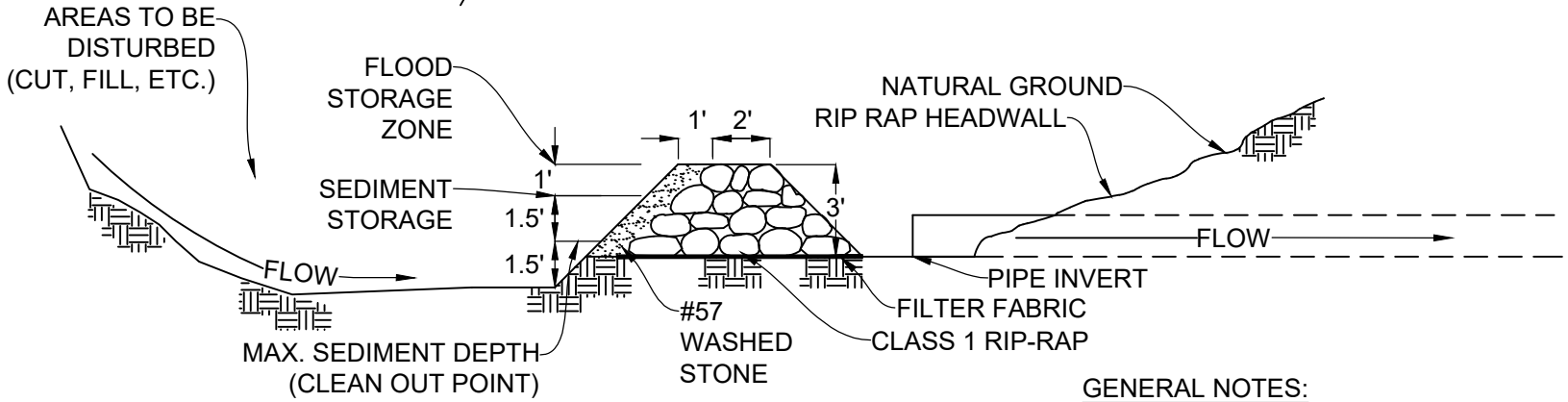
TOWN OF APEX STANDARDS	BLOCK & GRAVEL DROP INLET PROTECTION	STD. NO. 400.08
EFFECTIVE: JUNE 11, 2024		SHEET 1 OF 1

MAINTENANCE NOTES:

1. REMOVE SEDIMENT AND RESTORE STORAGE AREA WHEN SEDIMENT HAS ACCUMULATED TO $\frac{1}{2}$ DESIGN DEPTH OF TRAP.
2. REPLACE STONE AS NEEDED TO RESTORE TO INITIAL INSTALLATION CONDITIONS WHEN STONE BECOMES CLOGGED OR DISLODGED.



PERSPECTIVE VIEW



SECTION THRU BASIN, FILTER, & CULVERT PIPE

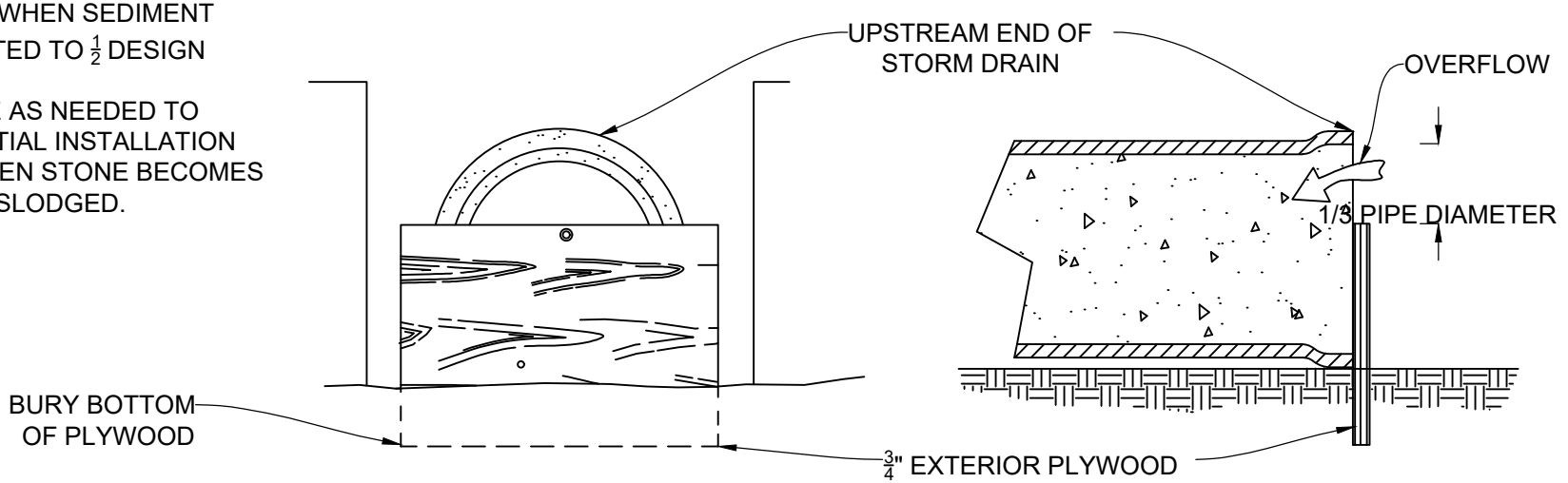
GENERAL NOTES:

1. GRAVEL & RIP RAP FILTER BERM BASIN DETAIL IS DESIGNED TO PROTECT EXISTING PIPE INVERTS THAT DRAIN 10 ACRES OR LESS.
2. DIMENSIONS ARE MINIMUM ACCEPTABLE UNLESS OTHERWISE NOTED.

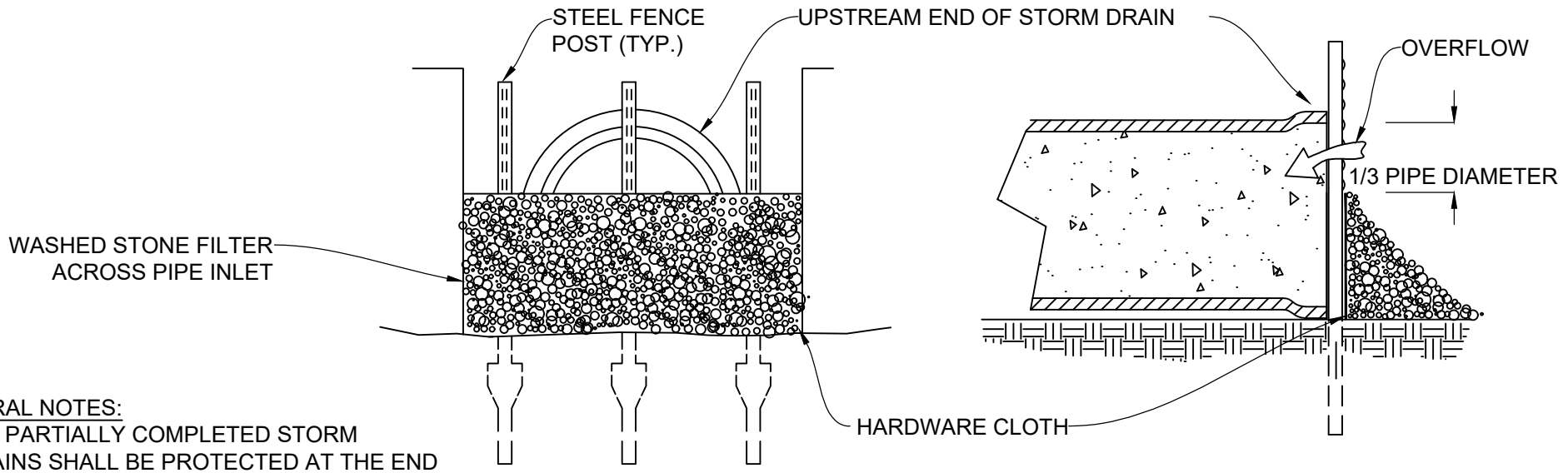
TOWN OF APEX STANDARDS	GRAVEL & RIP RAP HORSESHOE INLET BASIN FOR EXISTING PIPE INVERTS	STD. NO. 400.09
EFFECTIVE: JUNE 11, 2024		SHEET 1 OF 1

MAINTENANCE NOTES:

1. REMOVE SEDIMENT AND RESTORE STORAGE AREA WHEN SEDIMENT HAS ACCUMULATED TO $\frac{1}{2}$ DESIGN DEPTH OF TRAP.
2. REPLACE STONE AS NEEDED TO RESTORE TO INITIAL INSTALLATION CONDITIONS WHEN STONE BECOMES CLOGGED OR DISLODGED.



PLYWOOD INLET PROTECTION

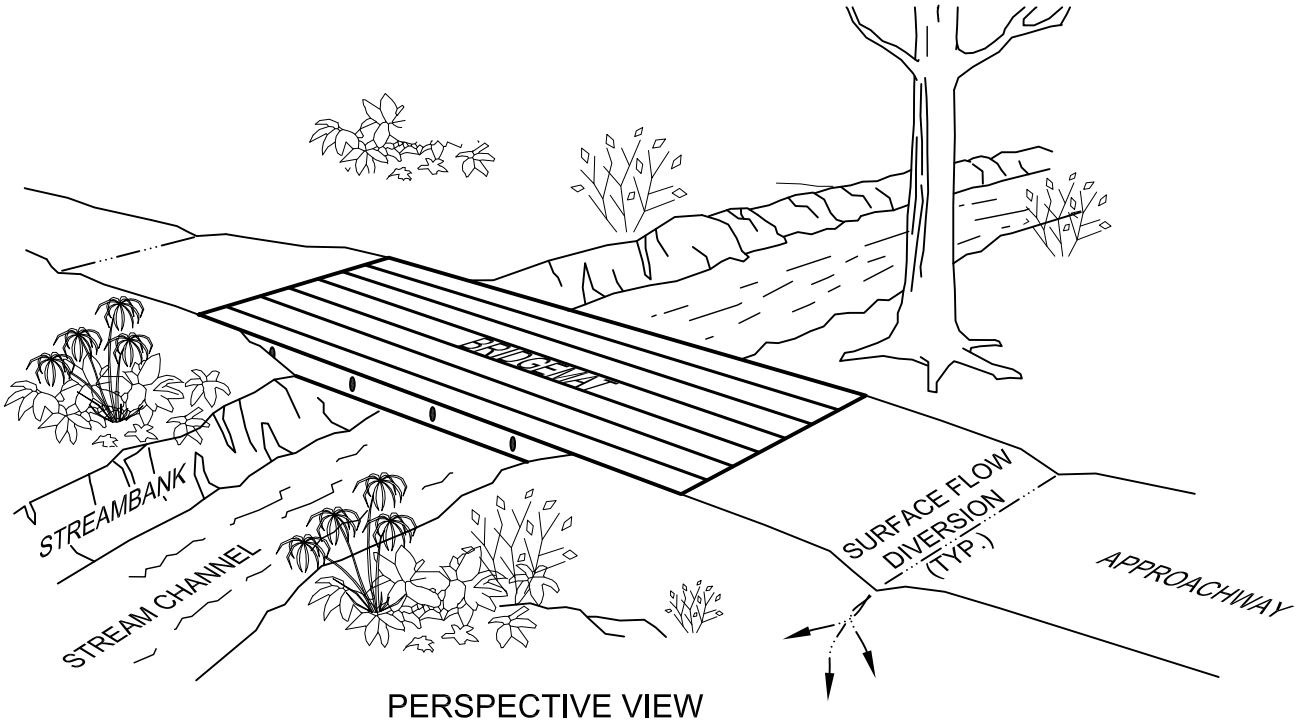


STONE FILTER INLET PROTECTION

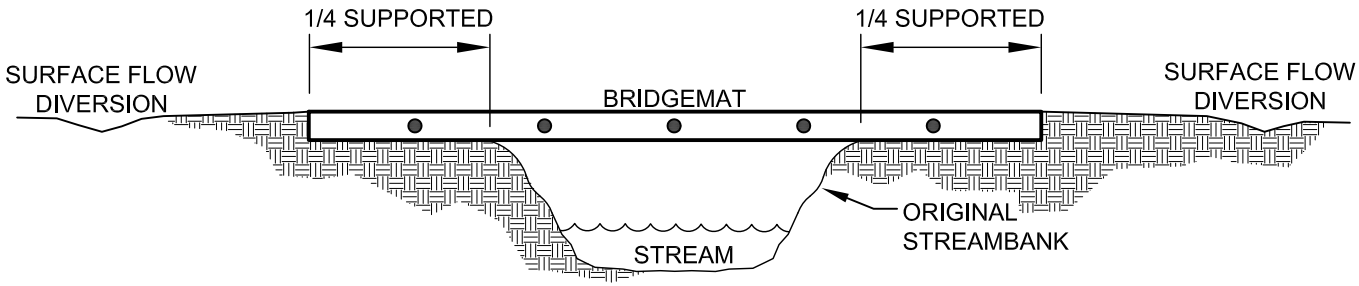
GENERAL NOTES:

1. ALL PARTIALLY COMPLETED STORM DRAINS SHALL BE PROTECTED AT THE END OF EACH DAY IN ACCORDANCE WITH THESE DETAILS.

TOWN OF APEX STANDARDS	PIPE INLET PROTECTION (PLYWOOD & STONE)	STD. NO. 400.10
EFFECTIVE: JUNE 11, 2024		SHEET 1 OF 1



PERSPECTIVE VIEW



SIDE VIEW

INSTALLATION NOTES:

1. REFER TO "NORTH CAROLINA DIVISION OF FOREST RESOURCES" LITERATURE, INSTALLATION MAINTENANCE GUIDELINES, & "NORTH CAROLINA FORESTRY BMP MANUAL-2006".
2. USE A BULLDOZER, KNUCKLEBOOM LOADER, OR SKIDDER TO INSTALL & REMOVE DRAGLINE MATS.
3. KEEP HEAVY EQUIPMENT OUT OF STREAM.
4. INSTALL WATER DIVERSION DEVICES (WATER BARS, TURNOUTS, BROAD-BASED DIPS, ETC.) ON BOTH SIDES OF THE MATS.
5. STABILIZE EXPOSED MINERAL SOIL WITH TREE TOPS OR BRUSH DURING MAT INSTALLATION, AND SEEDING/MULCH AFTER MAT REMOVAL.
6. INSTALL MATS TO CREATE A MINIMUM TEN FOOT BRIDGE WIDTH.

MAINTENANCE NOTES:

1. KEEP MATS' SURFACE FREE OF MINERAL SOIL AND DEBRIS THAT COULD ENTER STREAM.
2. PERIODICALLY CHECK MAT HARDWARE; RETIGHTEN NUTS & CABLE CLAMPS AS NECESSARY TO MAINTAIN BRIDGE STRENGTH AND INTEGRITY.
3. IMMEDIATELY REMOVE ANY DEBRIS WHICH ENTERS THE STREAM AT THE CROSSING LOCATION.

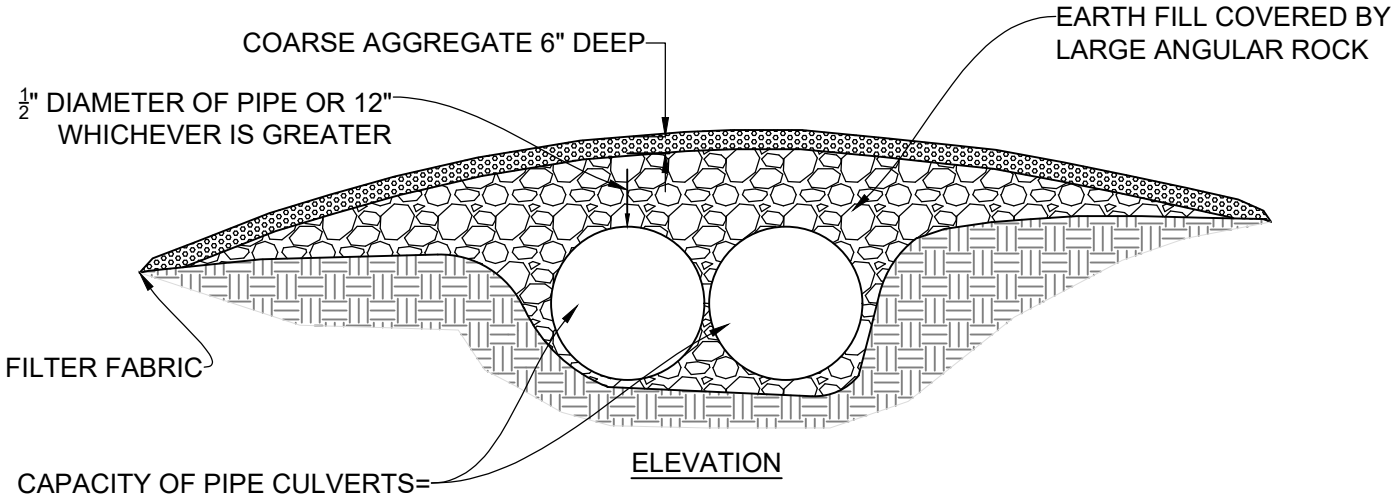
REMOVAL NOTES:

1. CLEAN OFF BRIDGE SURFACE.
2. REMOVE MATS BY USING MAT CABLE LOOP OR SKIDDER GRAPPLE.
3. PERMANENTLY STABILIZE DISTURBED PORTIONS OF STREAM BANK AND APPROACH ROADS WITH PERENNIAL GRASSES/MULCH (OR WETLAND MIX WHEN APPLICABLE).
4. LEAVE APPROPRIATE WATER DIVERSION STRUCTURES IN PLACE ON BOTH SIDES OF STREAM.

TOWN OF APEX STANDARDS	TEMPORARY STREAM CROSSING	STD. NO.
EFFECTIVE: JANUARY 20, 2015		400.11
		SHEET 1 OF 2

MAINTENANCE NOTES:

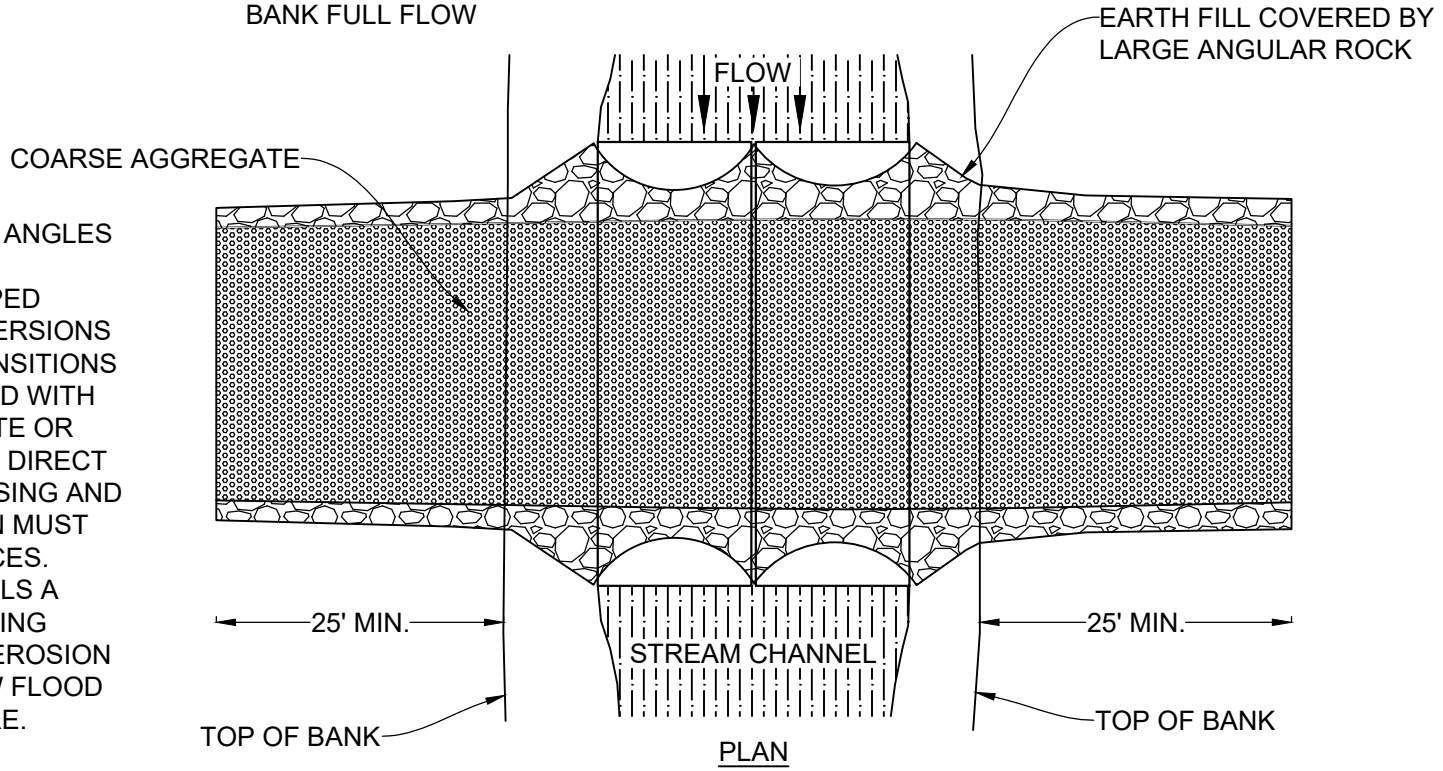
1. INSPECT TEMPORARY STREAM CROSSINGS WEEKLY AND AFTER RUNOFF-PRODUCING RAIN EVENTS TO CHECK FOR BLOCKAGE IN CHANNEL, EROSION OF ABUTMENTS, CHANNEL SCOUR, RIPRAP DISPLACEMENT, OR PIPING. REPAIR DEFICIENCIES IMMEDIATELY.
2. REPLACE OR REFRESH COARSE AGGREGATE AS NEEDED TO RESTORE TO INITIAL INSTALLATION CONDITIONS WHEN STONE BECOMES CLOGGED OR DISLODGED.



ELEVATION

INSTALLATION NOTES:

1. KEEP STREAM CROSSINGS AT RIGHT ANGLES TO STREAMFLOW.
2. FOR STREAM CROSSINGS WITH SLOPED APPROACH AREAS, CONSTRUCT DIVERSIONS AT CROSSING/APPROACH AREA TRANSITIONS WITH 18" HIGH EARTH BERM COVERED WITH FILTER FABRIC & COARSE AGGREGATE OR STABILIZED DITCH/SWALE TO DIVERT DIRECT RUNOFF AWAY FROM STREAM CROSSING AND TO A STABILIZED OUTLET. DIVERSION MUST SPAN WIDTH OF CROSSING ENTRANCES.
3. RAISE ABUTMENTS AND CULVERT FILLS A MINIMUM OF 1 FT ABOVE THE ADJOINING APPROACH SECTIONS TO PREVENT EROSION FROM SURFACE RUNOFF AND ALLOW FLOOD FLOWS TO PASS AROUND STRUCTURE.

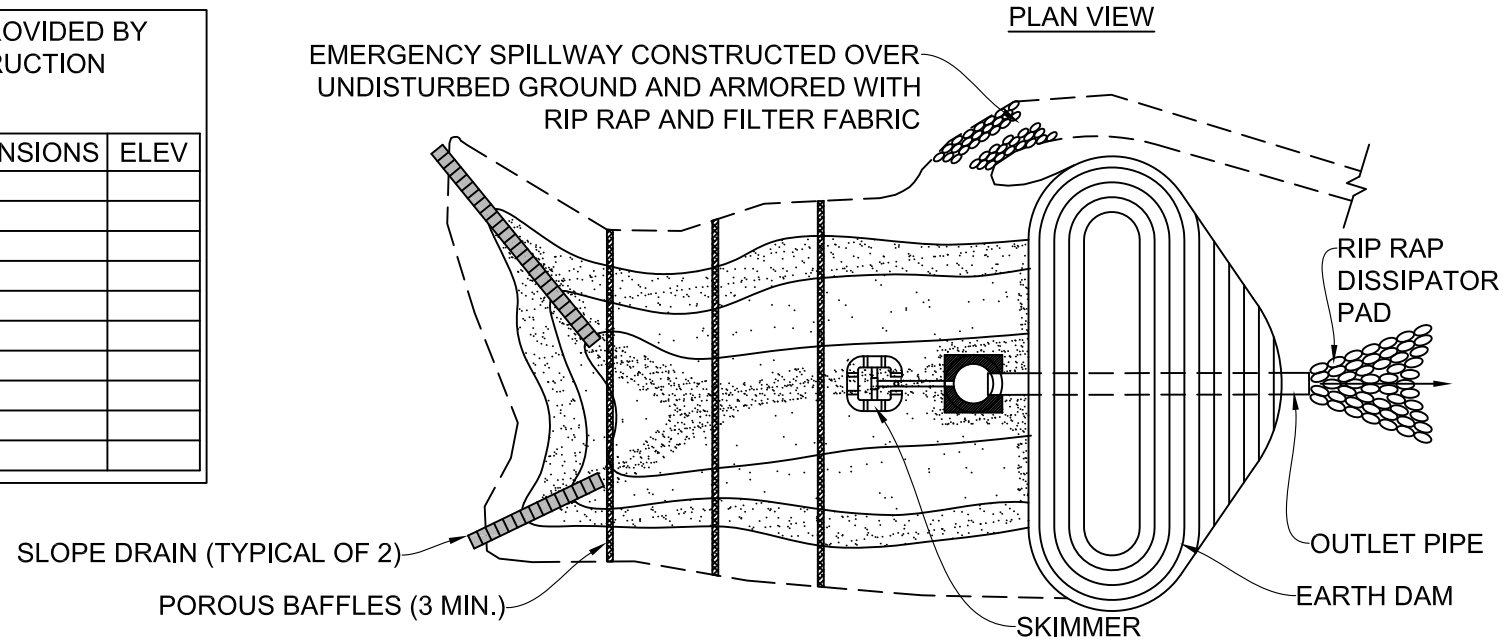


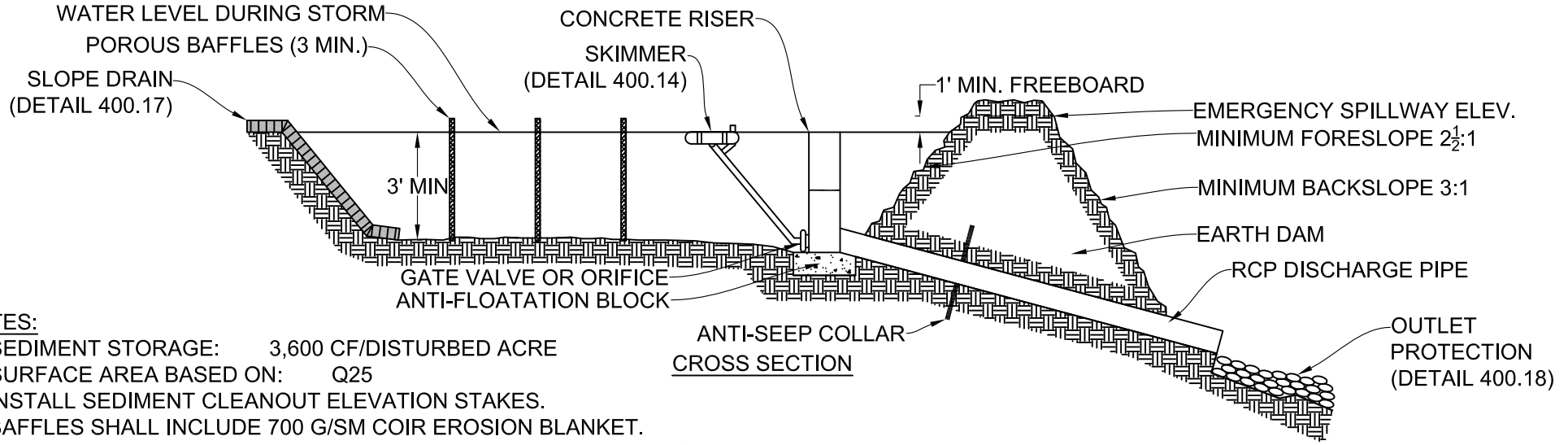
PLAN

TOWN OF APEX STANDARDS	TEMPORARY STREAM CROSSING	STD. NO. 400.11
EFFECTIVE: JUNE 11, 2024		SHEET 2 OF 2

DESIGN INFORMATION TO BE PROVIDED BY THE ENGINEER ON THE CONSTRUCTION DRAWINGS

	DIMENSIONS	ELEV
EMERGENCY SPILLWAY		
TOP OF DAM WIDTH		
ANTI-SEEP COLLAR		
RIP RAP DISSIPATOR PAD		
TOP OF RISER		
OUTLET PIPE INVERT IN		
OUTLET PIPE INVERT OUT		
ANTI-FLOATATION DEVICE		
SKIMMER SIZE		
ORIFICE SIZE		





NOTES:

1. SEDIMENT STORAGE: 3,600 CF/DISTURBED ACRE
2. SURFACE AREA BASED ON: Q25
3. INSTALL SEDIMENT CLEANOUT ELEVATION STAKES.
4. BAFFLES SHALL INCLUDE 700 G/SM COIR EROSION BLANKET.
5. FLOW ENTERING THE BASIN MUST BE DIRECTED TO AVOID EROSION ALONG THE SLOPE AND SCOUR IN THE BASIN. APPROPRIATELY SIZED SLOPE DRAINS, PER THE STANDARD DETAIL, ARE RECOMMENDED.

TOWN OF APEX STANDARDS

EFFECTIVE: JANUARY 20, 2015

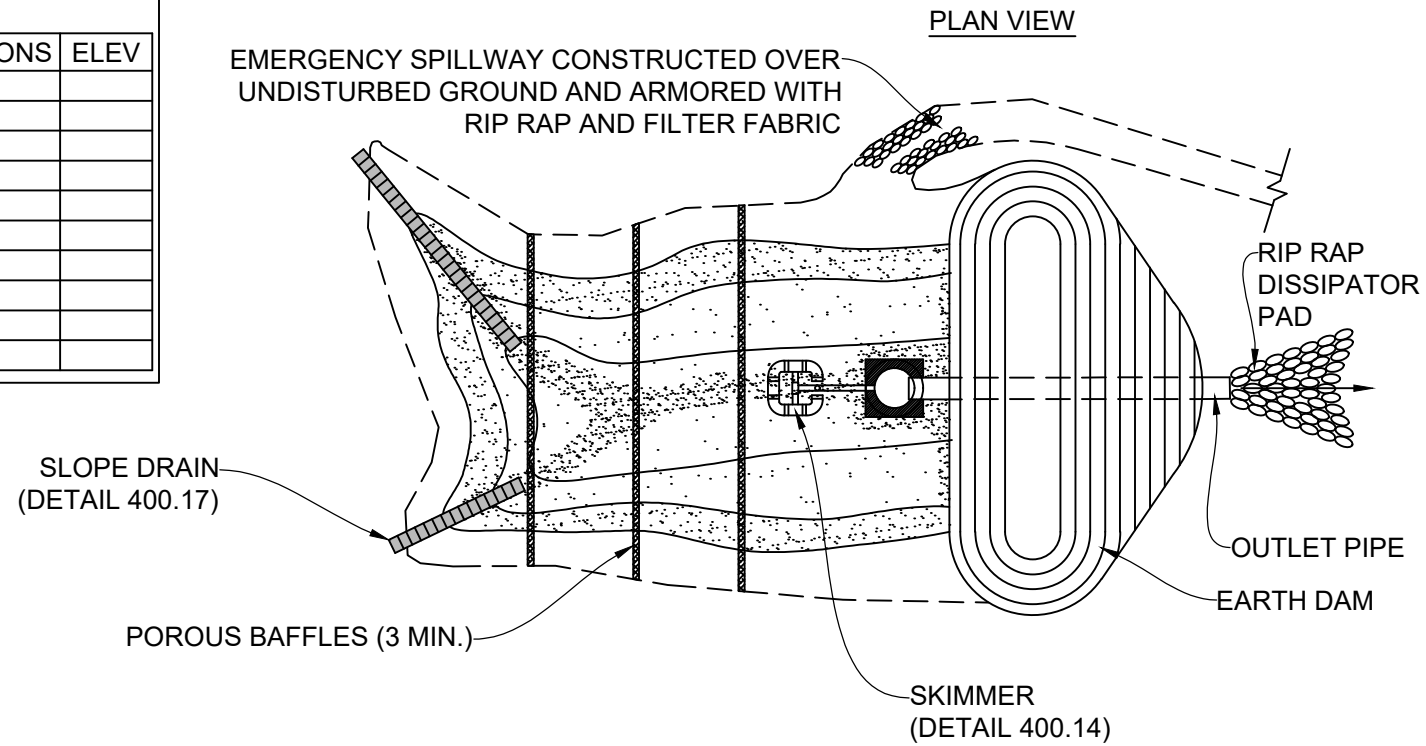
RISER BARREL SEDIMENT BASIN

STD. NO.

400.12

DESIGN INFORMATION TO BE PROVIDED BY THE ENGINEER ON THE CONSTRUCTION DRAWINGS

	DIMENSIONS	ELEV
EMERGENCY SPILLWAY		
TOP OF DAM WIDTH		
ANTI-SEEP COLLAR		
RIP RAP DISSIPATOR PAD		
TOP OF RISER		
OUTLET PIPE INVERT IN		
OUTLET PIPE INVERT OUT		
ANTI-FLOATATION DEVICE		
SKIMMER SIZE		
ORIFICE SIZE		



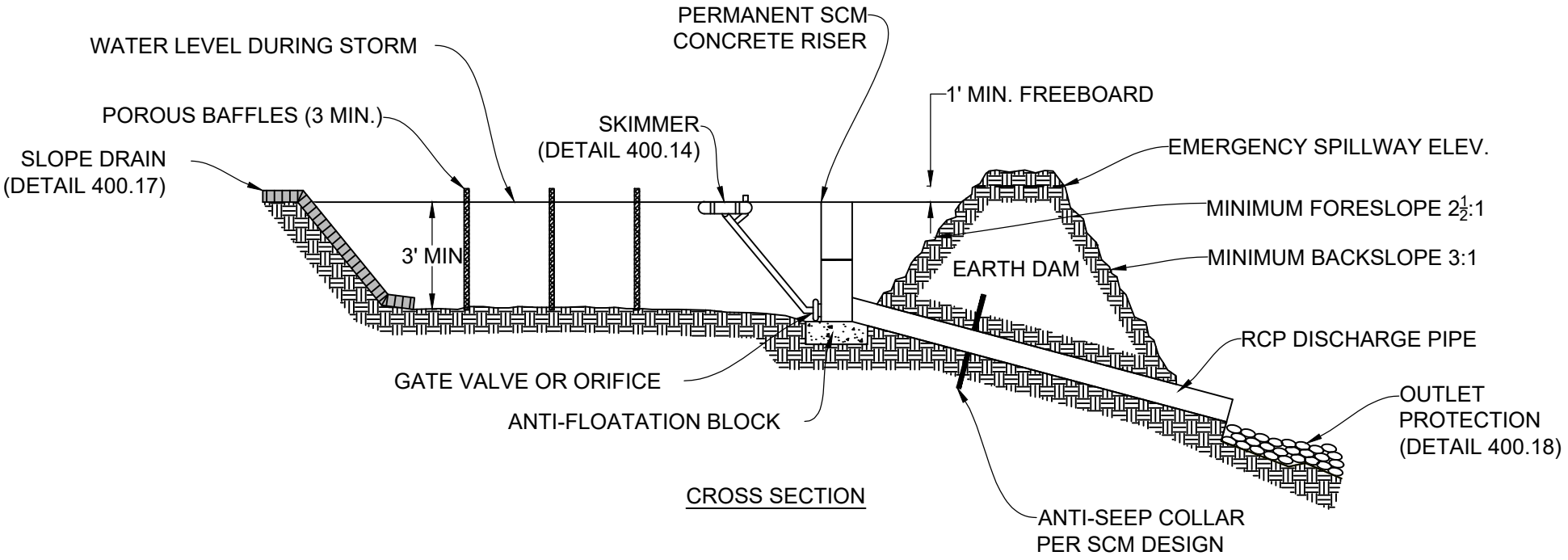
GENERAL NOTES:

1. SEDIMENT STORAGE: 3,600 CF/DISTURBED ACRE
2. SURFACE AREA : 435 SF/CFS FOR THE Q25
3. INSTALL SEDIMENT CLEANOUT ELEVATION STAKES.
4. BAFFLES SHALL INCLUDE 700 G/SM COIR EROSION BLANKET. WOOD POSTS ARE NOT ACCEPTABLE.
5. FLOW ENTERING THE BASIN MUST BE DIRECTED TO AVOID EROSION ALONG THE SLOPE AND SCOUR IN THE BASIN. APPROPRIATELY SIZED SLOPE DRAINS, PER STD. DETAIL 400.17, ARE RECOMMENDED.
6. THE PERMANENT SCM RISER STRUCTURE AND OUTLET PIPE WITH ANTI-SEEP COLLAR MUST BE INSTALLED DURING THE INITIAL SEDIMENT BASIN CONSTRUCTION. TEMPORARILY MODIFY PERMANENT RISER STRUCTURE AS NEEDED TO ATTAIN DESIGN SEDIMENT VOLUME AND DEPTH.
7. EARTH DAM SHALL BE STABILIZED WITH VEGETATION ACCORDING TO TOWN SPECIFICATIONS.

TOWN OF APEX STANDARDS	RISER BARREL SEDIMENT BASIN	STD. NO. 400.12
EFFECTIVE:JUNE 11, 2024		SHEET 1 OF 2

MAINTENANCE NOTES:

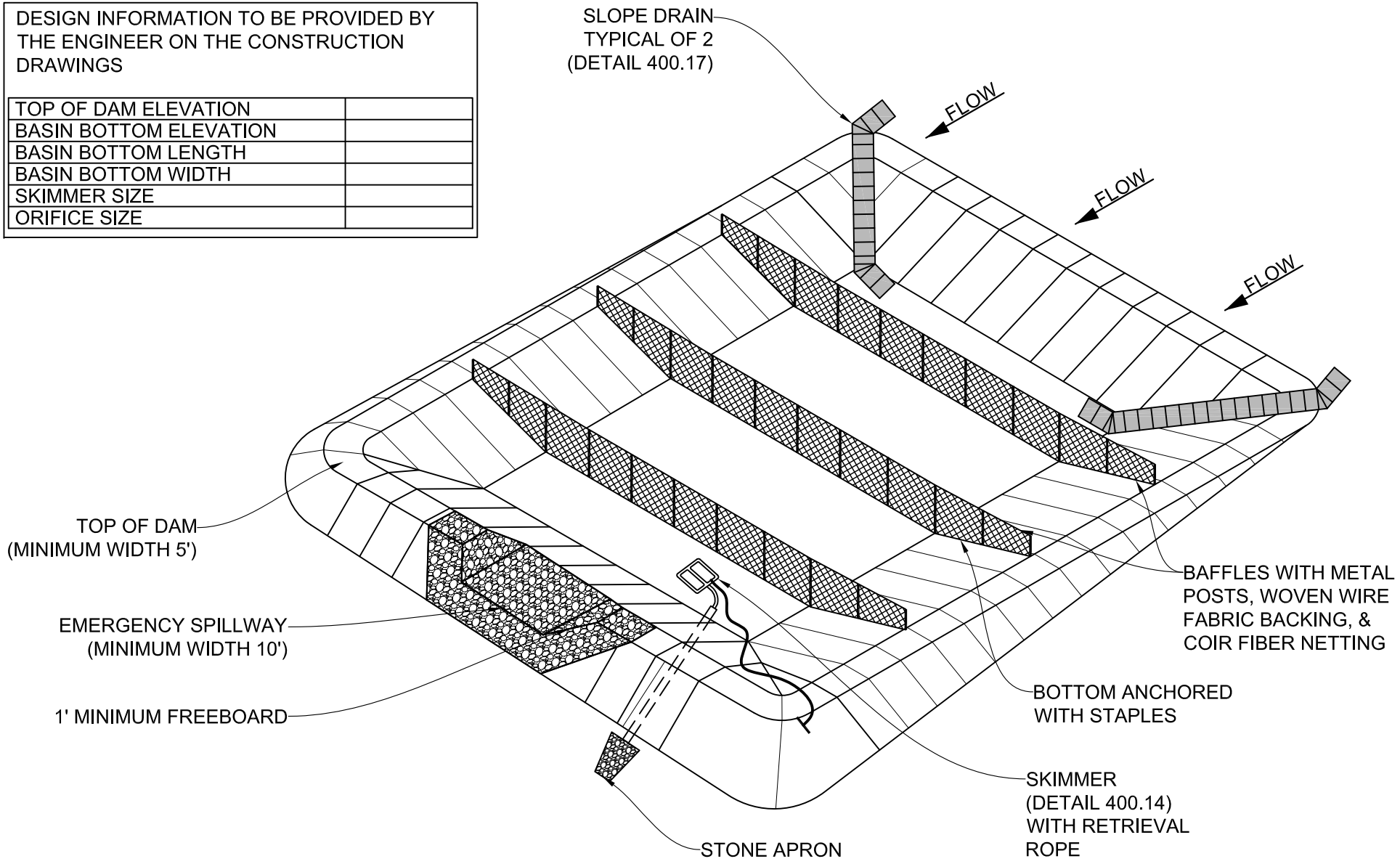
1. INSPECT SEDIMENT BASINS AND EMPTY SKIMMER OF ALL DEBRIS AFTER EACH PERIOD OF RUNOFF-PRODUCING RAINFALL. REMOVE SEDIMENT AND RESTORE BASIN TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO ONE-HALF THE DESIGN DEPTH OF THE BASIN. PLACE THE SEDIMENT THAT HAS BEEN REMOVED IN A DESIGNATED DISPOSAL AREA. REPAIR AND/OR REPLACE BAFFLES.
2. CHECK THE STRUCTURE FOR DAMAGE FROM EROSION OR PIPING. PERIODICALLY CHECK THE DEPTH OF THE SPILLWAY TO ENSURE IT IS A MINIMUM OF 1.0 FOOT BELOW THE LOW POINT OF THE EMBANKMENT. IMMEDIATELY FILL ANY SETTLEMENT OF THE EMBANKMENT TO SLIGHTLY ABOVE DESIGN GRADE. ANY RIP RAP DISPLACED FROM THE SPILLWAY MUST BE REPLACED IMMEDIATELY.
3. FILTER BAG REQUIRED WHEN DEWATERING BASIN PER STD. DETAIL 400.22.



TOWN OF APEX STANDARDS	RISER BARREL SEDIMENT BASIN	STD. NO. 400.12
EFFECTIVE: JUNE 11, 2024		SHEET 2 OF 2

DESIGN INFORMATION TO BE PROVIDED BY THE ENGINEER ON THE CONSTRUCTION DRAWINGS

TOP OF DAM ELEVATION	
BASIN BOTTOM ELEVATION	
BASIN BOTTOM LENGTH	
BASIN BOTTOM WIDTH	
SKIMMER SIZE	
ORIFICE SIZE	



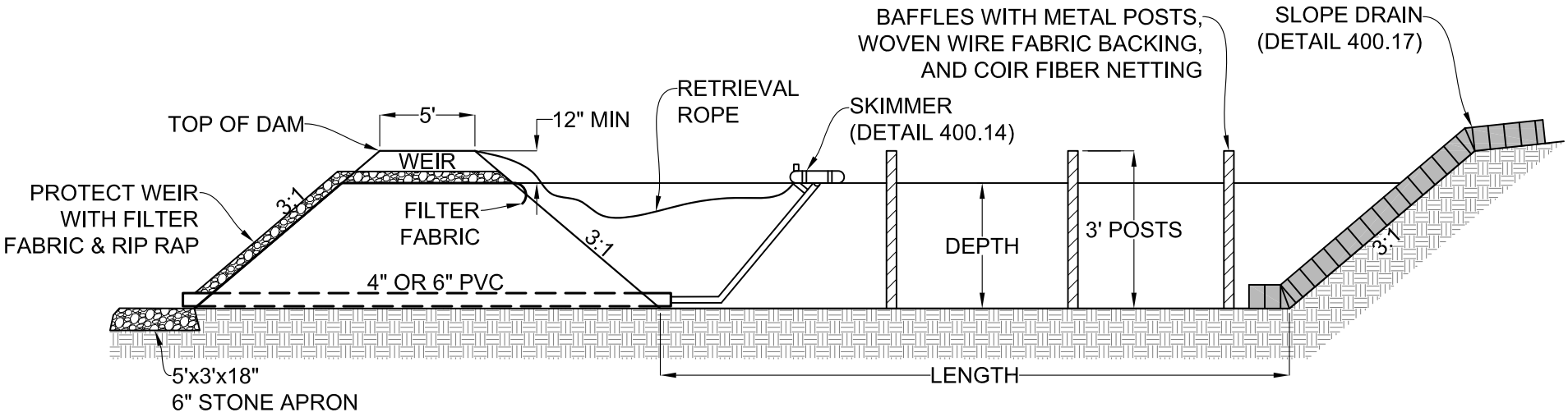
TOWN OF APEX STANDARDS

EFFECTIVE: JANUARY 20, 2015

TEMPORARY SKIMMER SEDIMENT BASIN

STD. NO.

400.13



SKIMMER BASIN CROSS SECTION

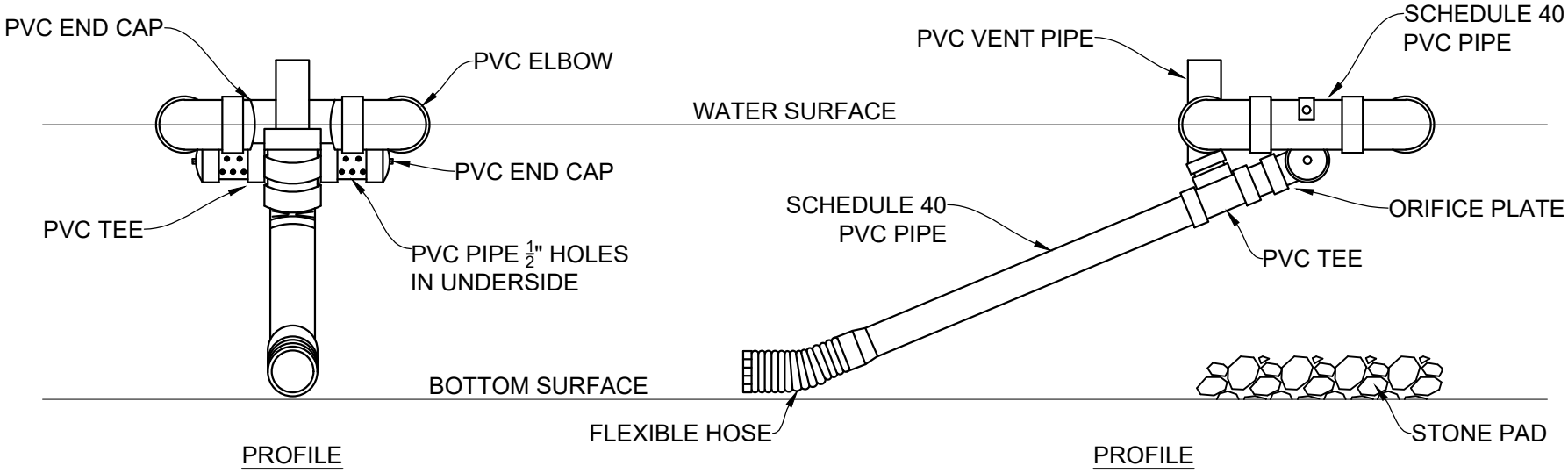
NOTES:

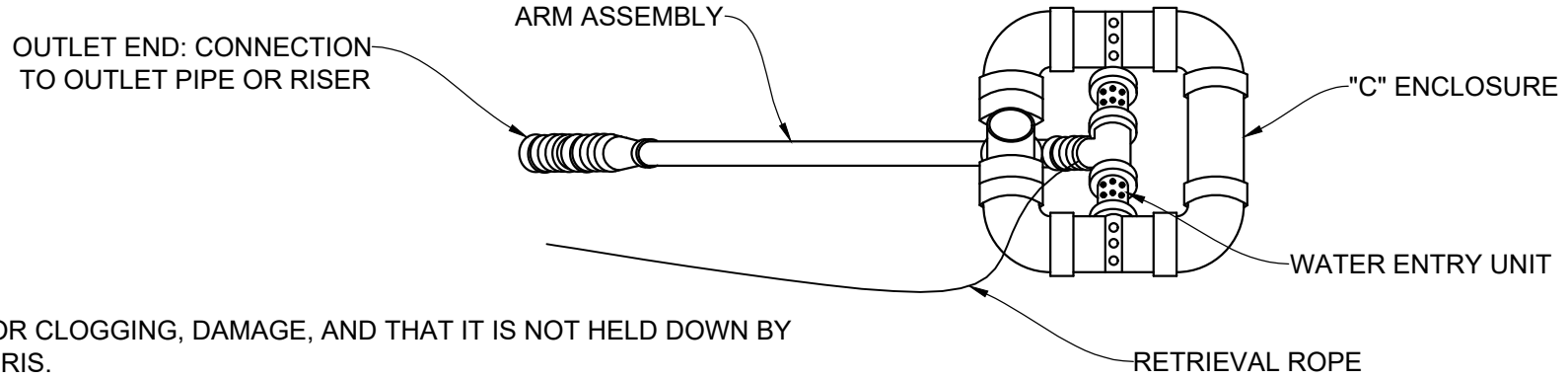
1. USE FOR DRAINAGE AREAS NOT EXCEEDING 10 ACRES.
2. EARTH BERM SHALL BE STABILIZED WITH VEGETATION ACCORDING TO TOWN SPECIFICATIONS.
3. INSPECT TEMPORARY SEDIMENT BASINS AND EMPTY SKIMMER OF ALL DEBRIS AFTER EACH PERIOD OF SIGNIFICANT RAINFALL. REMOVE SEDIMENT AND RESTORE BASIN TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO ONE-HALF THE DESIGN DEPTH OF THE BASIN. PLACE THE SEDIMENT THAT HAS BEEN REMOVED IN A DESIGNATED DISPOSAL AREA. REPAIR AND/OR REPLACE BAFFLES.
4. CHECK THE STRUCTURE FOR DAMAGE FROM EROSION OR PIPING. PERIODICALLY CHECK THE DEPTH OF THE SPILLWAY TO ENSURE IT IS A MINIMUM OF 1.0 FOOT BELOW THE LOW POINT OF THE EMBANKMENT. IMMEDIATELY FILL ANY SETTLEMENT OF THE EMBANKMENT TO SLIGHTLY ABOVE DESIGN GRADE. ANY RIP RAP DISPLACED FROM THE SPILLWAY MUST BE REPLACED IMMEDIATELY.
5. STABILIZE THE EMBANKMENT AND ALL DISTURBED AREAS ABOVE THE SEDIMENT POOL AND DOWNSTREAM FROM THE BASIN IMMEDIATELY AFTER CONSTRUCTION WITH SEEDING.
6. FLOW ENTERING THE BASIN MUST BE DIRECTED TO AVOID EROSION ALONG THE SLOPE AND SCOUR IN THE BASIN. APPROPRIATELY SIZED SLOPE DRAINS, PER THE STANDARD DETAIL, ARE RECOMMENDED.
7. SEDIMENT STORAGE: 3,600 CF/DISTURBED ACRE
8. SURFACE AREA BASED ON: Q25
9. INSTALL SEDIMENT CLEANOUT ELEVATION STAKES.
10. BAFFLES SHALL INCLUDE 700 G/SM COIR EROSION BLANKET.

TOWN OF APEX STANDARDS	TEMPORARY SKIMMER SEDIMENT BASIN	STD. NO. 400.13
EFFECTIVE: JANUARY 20, 2015		SHEET 2 OF 2

GENERAL NOTES:

1. SKIMMER SHOULD BE PLACED ON 4'X4' STONE PAD OF RIPRAP TO PREVENT STICKING.
2. ENSURE SKIMMER IS NOT INSTALLED UPSIDE DOWN.
3. ATTACH RETRIEVAL ROPE TO SKIMMER TO HELP MAINTAIN.
4. SKIMMER SHOULD RISE TO LEVEL OF WEIR HEIGHT IN TEMPORARY BASIN OR TO RISER INLET.
5. SKIMMER SHALL BE A DEVICE THAT DEWATERS FROM THE SURFACE OVER 2-5 DAYS.





MAINTENANCE NOTES:

1. INSPECT SKIMMER FOR CLOGGING, DAMAGE, AND THAT IT IS NOT HELD DOWN BY VEGETATION OR DEBRIS.
2. IF DEBRIS HAS CLOGGED SKIMMER, TUGGING ON RETRIEVAL ROPE WILL HELP DISLODGE. IF THIS DOES NOT WORK, DISASSEMBLE ORIFICE & REMOVE OBSTRUCTIONS. SKIMMER ARM & BARREL MAY NEED TO BE PLUMBED OR FLUSHED.

TOWN OF APEX STANDARDS	SKIMMER DETAIL	STD. NO.
EFFECTIVE: JUNE 11, 2024		400.14
		SHEET 1 OF 1

GENERAL NOTES:

1. TO BE USED WHERE EXCESSIVE STORMWATER VELOCITIES PROHIBIT VEGETATIVE LININGS AND WHEREVER STORMWATER OUTFALLS OVERLAP SEWER EASEMENTS.

2. STONE SIZE, TRENCH DEPTH, AND OVERALL WIDTH PER DESIGN.

3. FILTER FABRIC MUST BE INSTALLED BETWEEN RIPRAP AND SOIL FOUNDATION.

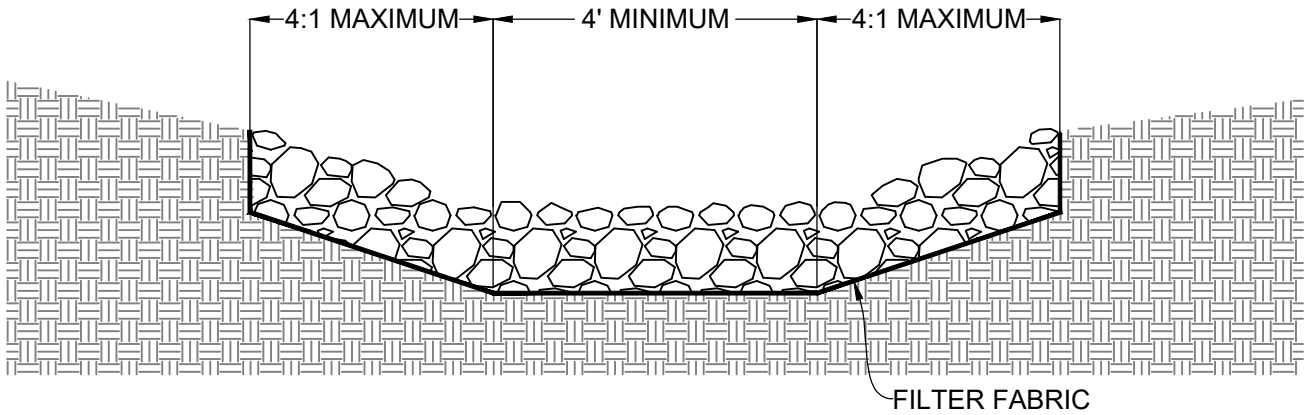
4. RIP RAP SHALL EMBEDDED IN THE CHANNEL CUT, NOT SIMPLY PLACED ON TOP OF EXISTING GROUND.

MAINTENANCE NOTES:

1. INSPECT RIP RAP CHANNEL WEEKLY AND AFTER RUNOFF-PRODUCING EVENTS TO SEE IF ANY EROSION AROUND OR BELOW THE RIP RAP HAS OCCURRED. IMMEDIATELY MAKE ALL NEEDED REPAIRS TO PREVENT FURTHER DAMAGE.

2. IF EROSION IS EVIDENT PAST END OF RIPRAP CHANNEL DUE TO RUNOFF DISCHARGING FROM CHANNEL, INCREASE DIMENSIONS OF RIP RAP PAD PROVIDED SPACE IS AVAILABLE WITH THE APPROVED LIMITS OF DISTURBANCE.

3. MAINTAIN ALL VEGETATION ADJACENT TO CHANNEL IN A HEALTHY, VIGOROUS CONDITION TO PROTECT CHANNEL FROM EROSION AND SCOUR DURING OUT-OF-BANK FLOW.



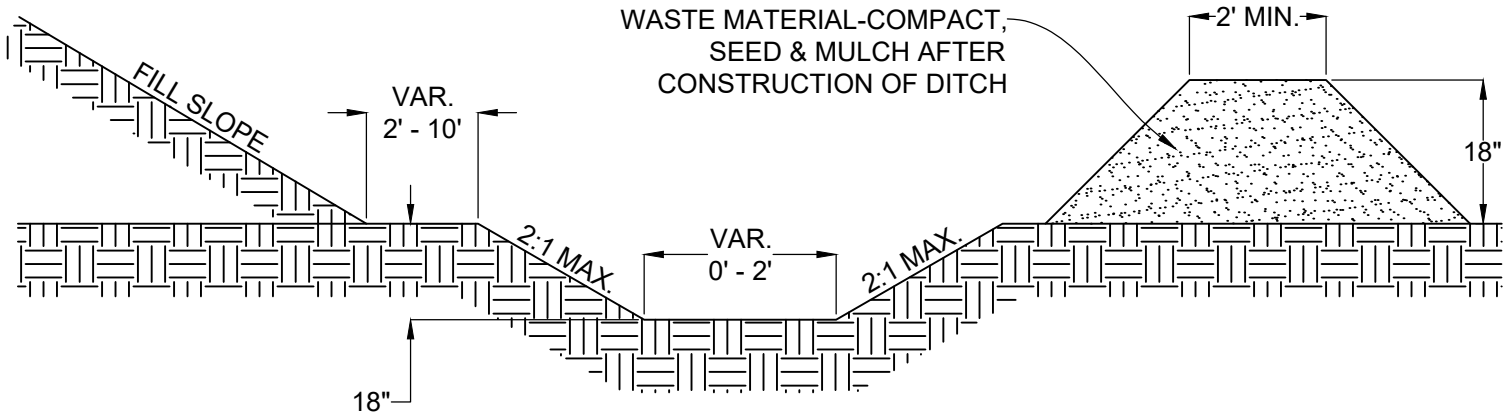
TOWN OF APEX STANDARDS	RIP RAP LINED CHANNELS	STD. NO.
EFFECTIVE: JUNE 11, 2024		400.15
		SHEET 1 OF 1

GENERAL NOTES:

1. TEMPORARY SILT DITCH TO BE USED WHERE TOE OF FILL SLOPES EXCEEDS 3 FEET IN VERTICAL HEIGHT AND ALONG STREAMS TO INTERCEPT FLOW AND/OR DIVERT TO A CONTROLLED OUTLET.

MAINTENANCE NOTES:

1. INSPECT DITCH WEEKLY AND AFTER RUNOFF-PRODUCING EVENTS.
2. SILT SHALL BE REMOVED WHEN SILT DITCH IS ONE-HALF FULL.
3. DITCH SHALL BE RECONSTRUCTED WHEN DAMAGED BY EQUIPMENT OR COVERED BY FILL.



CROSS SECTIONAL VIEW

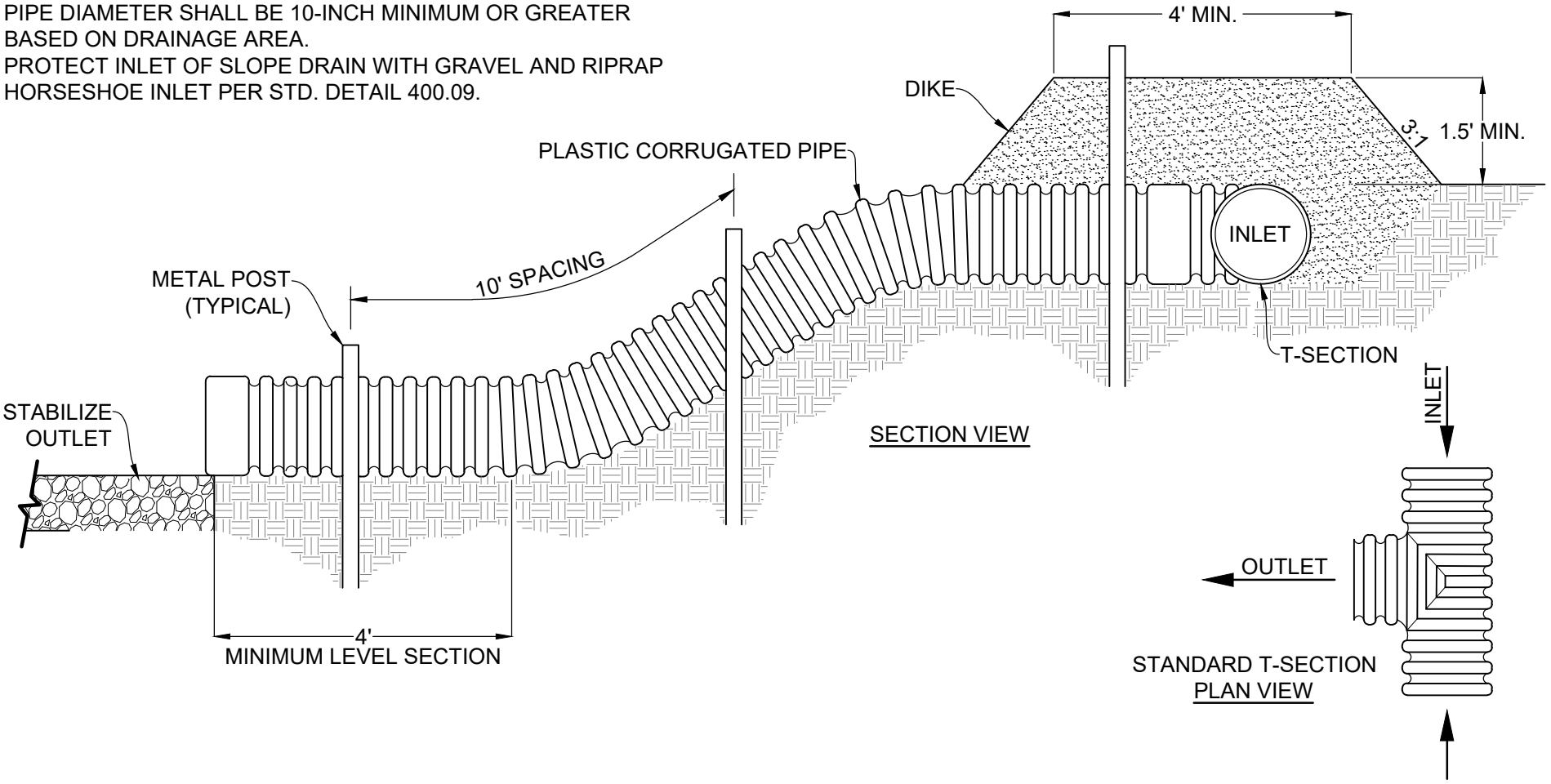
TOWN OF APEX STANDARDS	TEMPORARY SILT DITCH	STD. NO.
EFFECTIVE: JUNE 11, 2024		400.16
		SHEET 1 OF 1

GENERAL NOTES:

1. CONSTRUCT AN EARTHEN DIVERSION WITH A DIKE RIDGE TO DIRECT SURFACE RUNOFF INTO THE TEMPORARY SLOPE DRAIN.
2. MAKE THE HEIGHT OF THE RIDGE OVER THE DRAIN CONDUIT A MINIMUM OF 1.5 FEET AND AT LEAST 6 INCHES HIGHER THAN THE ADJOINING RIDGE ON EITHER SIDE.
3. THE LOWEST POINT OF THE DIVERSION RIDGE SHOULD BE A MINIMUM OF 1 FOOT ABOVE THE TOP OF THE DRAIN TO ALLOW THE DESIGN FLOW TO FREELY ENTER THE PIPE.
4. PROTECT THE OUTLET OF THE SLOPE DRAIN FROM EROSION.
5. PIPE DIAMETER SHALL BE 10-INCH MINIMUM OR GREATER BASED ON DRAINAGE AREA.
6. PROTECT INLET OF SLOPE DRAIN WITH GRAVEL AND RIPRAP HORSESHOE INLET PER STD. DETAIL 400.09.

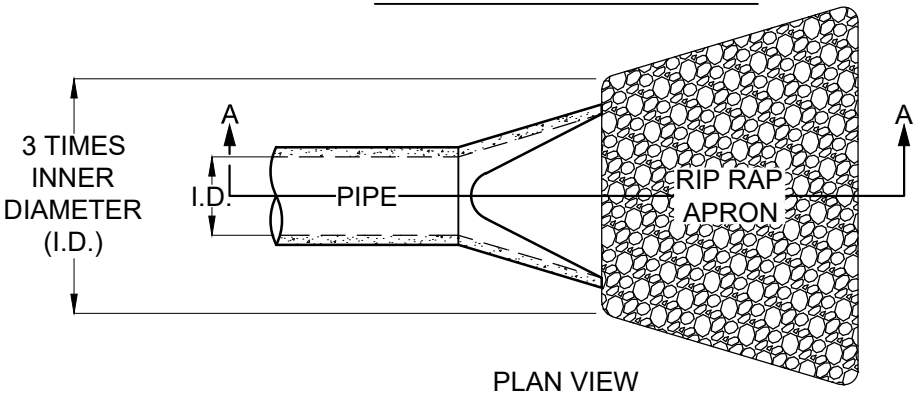
MAINTENANCE NOTES:

1. INSPECT DITCH WEEKLY AND AFTER RUNOFF-PRODUCING EVENTS.
2. REMOVE SEDIMENT FROM INLET PROTECTION OF SLOPE DRAIN WHEN SEDIMENT IS HALF HEIGHT OF PROTECTION.
3. MAINTAIN OUTLET PROTECTION THROUGHOUT CONSTRUCTION AND REPAIR EROSION ALONG SLOPE DRAIN.

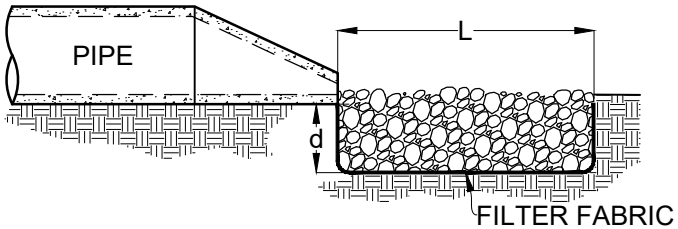


TOWN OF APEX STANDARDS	TEMPORARY SLOPE DRAIN	STD. NO. 400.17
EFFECTIVE: JUNE 11, 2024		SHEET 1 OF 1

PIPE OUTLET TO FLAT AREA
NO WELL-DEFINED CHANNEL

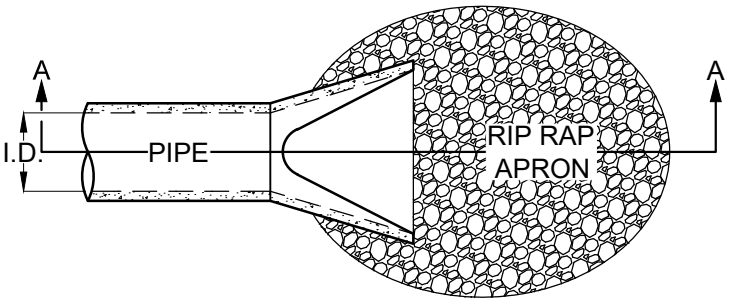


PLAN VIEW

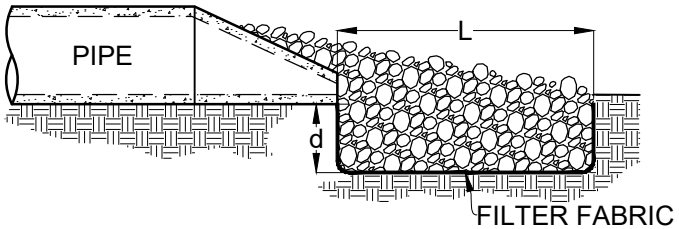


SECTION 'A-A'

PIPE OUTLET TO WELL-DEFINED CHANNEL



PLAN VIEW



SECTION 'A-A'

GENERAL NOTES:

1. L = THE LENGTH OF THE RIPRAP APRON
2. d = 1.5 TIMES THE MAXIMUM STONE DIAMETER BUT NOT LESS THAN 12 INCHES
3. A FILTER BLANKET OR FILTER FABRIC SHOULD BE INSTALLED BETWEEN THE RIP RAP AND SOIL FOUNDATION.
4. IN A WELL-DEFINED CHANNEL EXTEND THE APRON UP THE CHANNEL BANKS TO 6 INCHES ABOVE THE MAXIMUM TAILWATER DEPTH OR THE TOP OF THE BANK, WHICHEVER IS LESS.

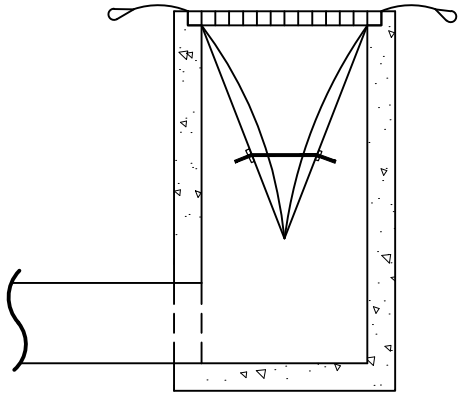
MAINTENANCE NOTES:

1. INSPECT OUTLET WEEKLY AND AFTER RUNOFF-PRODUCING EVENTS TO SEE IF ANY EROSION AROUND OR BELOW THE RIPRAP HAS OCCURRED, OR IF STONES HAVE BEEN DISLODGED. IMMEDIATELY MAKE ALL NEEDED REPAIRS TO PREVENT FURTHER DAMAGE.

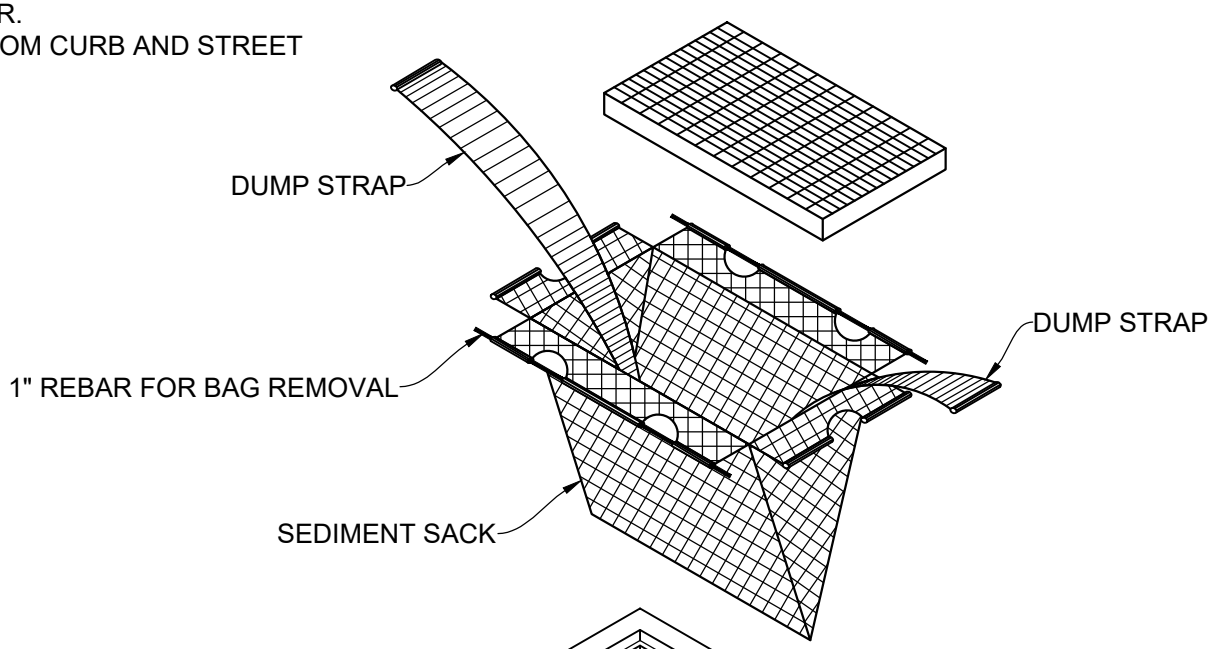
TOWN OF APEX STANDARDS	PIPE OUTLET	STD. NO. 400.18
EFFECTIVE: JUNE 11, 2024		SHEET 1 OF 1

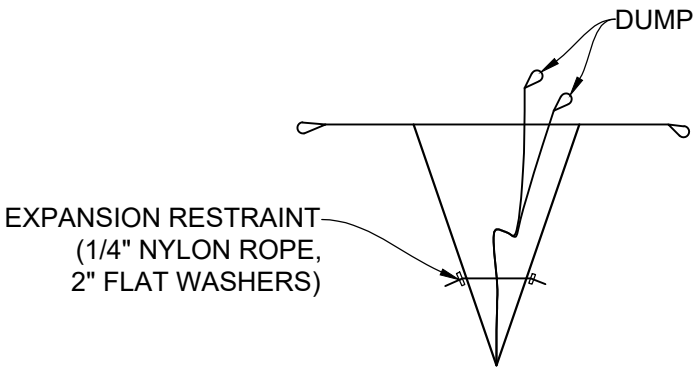
MAINTENANCE NOTES:

1. INSPECT OUTLET WEEKLY AND AFTER RUNOFF-PRODUCING EVENTS.
2. REMOVE SEDIMENT FROM SACK WHEN HALF FULL
3. REPLACE SACK IF TEARS OR HOLES OCCUR.
4. PERFORM SEDIMENT/DEBRIS REMOVAL FROM CURB AND STREET AFTER RAIN EVENTS.

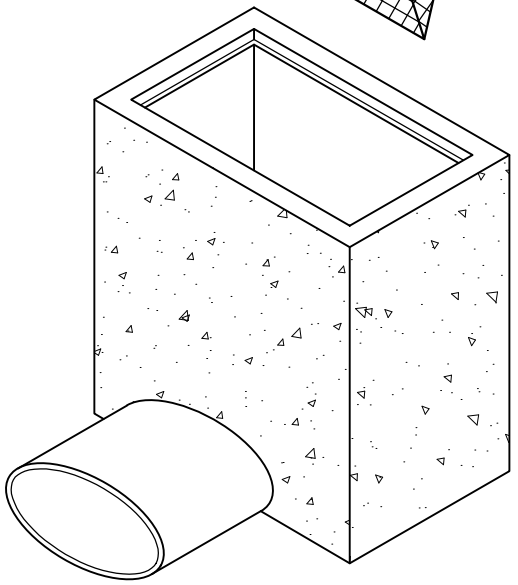


INSTALLATION DETAIL

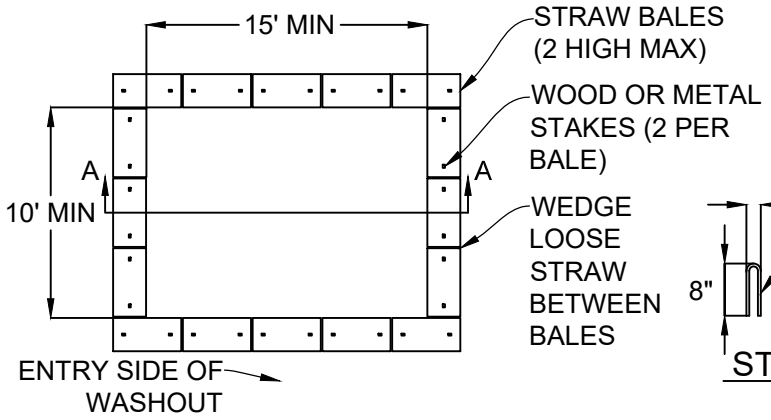




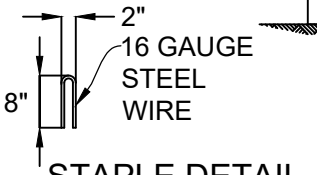
BAG DETAIL



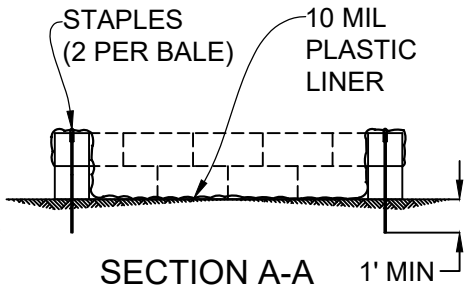
TOWN OF APEX STANDARDS	INLET SEDIMENT CONTROL DEVICE	STD. NO.
EFFECTIVE: JUNE 11, 2024		400.19
		SHEET 1 OF 1



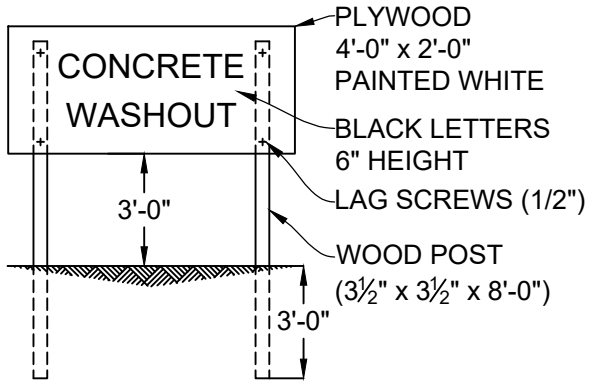
ABOVE GRADE DETAIL
PLAN VIEW



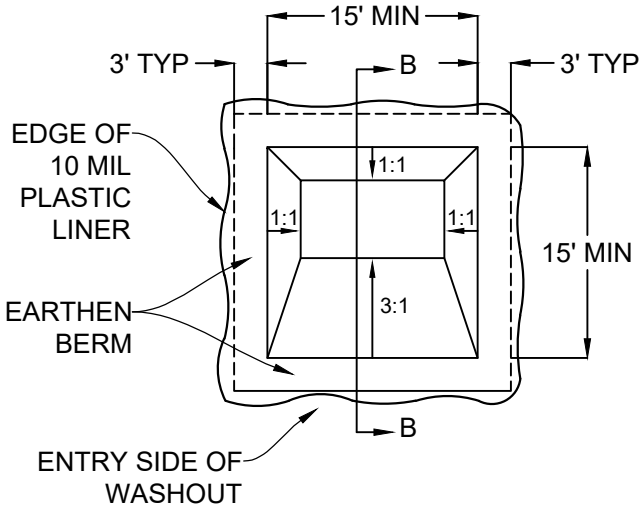
STAPLE DETAIL



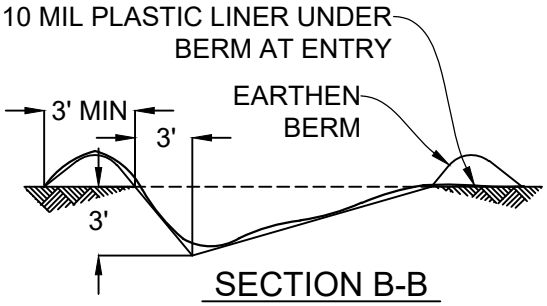
SECTION A-A



SIGN DETAIL



BELOW GRADE DETAIL
PLAN VIEW

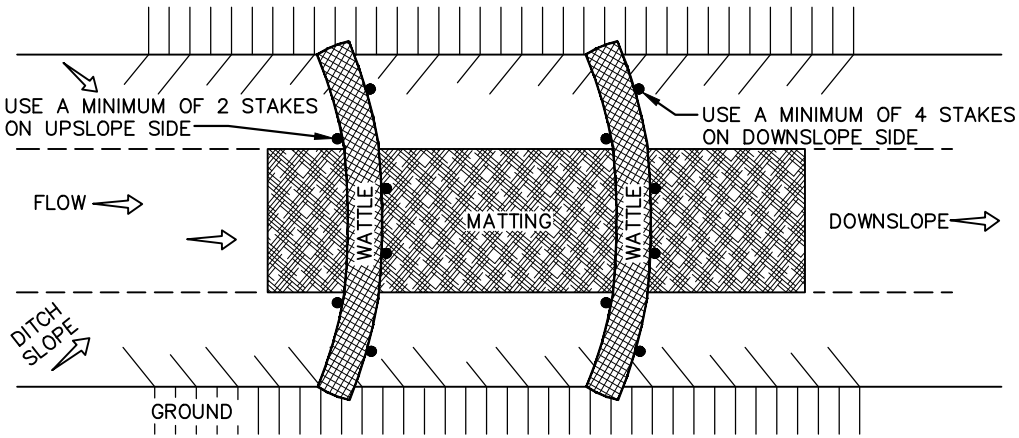


SECTION B-B

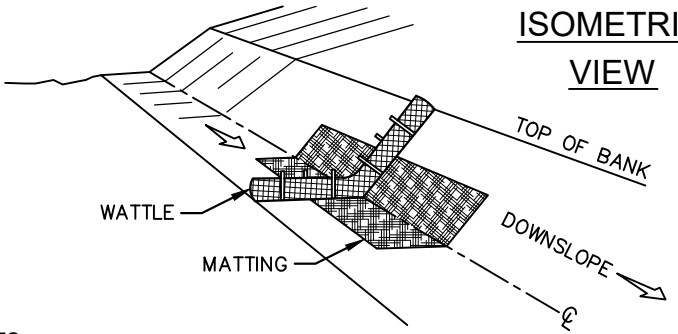
GENERAL NOTES:

1. DO NOT DISCHARGE CONCRETE OR CEMENT SLURRY FROM THE SITE.
2. THE CONCRETE WASHOUT FACILITY SHOULD BE LOCATED A MINIMUM OF 50' FROM STORM DRAIN INLETS, BUFFERS, OR WATERCOURSES.
3. THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30' OF THE FACILITY.
4. THE ACTUAL LAYOUT CAN BE DETERMINED IN THE FIELD USING EITHER THE ABOVE GRADE OR BELOW GRADE CONSTRUCTION OPTION.
5. THE CONCRETE WASHOUT FACILITY SHOULD BE CONSTRUCTED AND MAINTAINED IN SUFFICIENT SIZE AND QUANTITY TO CONTAIN ALL LIQUID AND CONCRETE WASTE GENERATED BY THE WASHOUT OPERATION.
6. THE PERIMETER OF THE 10 MIL LINER MUST BE HELD IN PLACE WITH SAND BAGS OR STEEL STAPLES.
7. ONCE CONCRETE WASTES ARE WASHED AND ALLOWED TO HARDEN THE CONCRETE SHOULD BE BROKEN UP, REMOVED AND DISPOSED OF AT AN APPROVED FACILITY IN ACCORDANCE WITH LOCAL AND STATE REGULATIONS. DISPOSE OF HARDENED CONCRETE ONCE THE WASHOUT FACILITY IS 75% FULL.
8. ONCE THE FACILITY IS NO LONGER NEEDED ALL MATERIALS SHALL BE REMOVED AND THE EXISTING GRADES SHALL BE RESTORED.
9. STORMWATER ACCUMULATED WITHIN THE WASHOUT MAY NOT BE DISCHARGED INTO THE STORM DRAIN SYSTEM OR RECEIVING SURFACE WATERS.

TOWN OF APEX STANDARDS	TEMPORARY CONCRETE WASHOUT	STD. NO. 400.20
EFFECTIVE: MAY 5, 2020		SHEET 1 OF 1



PLAN VIEW



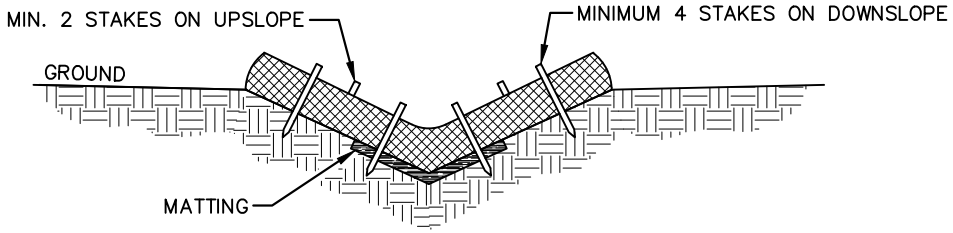
ISOMETRIC VIEW

GENERAL NOTES:

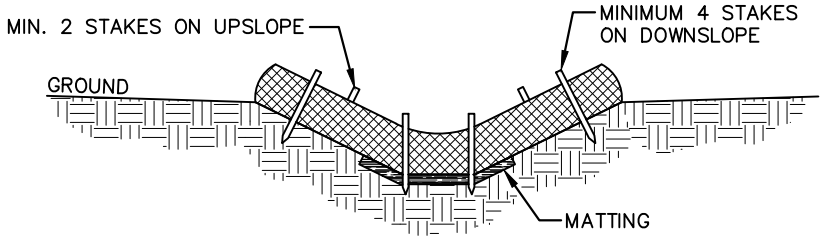
1. USE A MINIMUM 12-INCH DIAMETER EXCELSIOR WATTLE.
2. USE 24-INCH LONG WOODEN STAKES WITH A 2"x2" NOMINAL CROSS SECTION.
3. INSTALL WATTLE(S) TO A HEIGHT ON SLOPE SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR SLOPES, OR AS DIRECTED.
4. INSTALL A MINIMUM OF TWO UPSLOPE STAKES AND FOUR DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO GROUND AT BOTTOM.
5. PROVIDE STAPLES MADE OF 0.125-INCH DIAMETER STEEL WIRE FORMED INTO A U-SHAPE NOT LESS THAN 12 INCHES IN LENGTH.
6. INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.
7. AFTER INSTALLATION OF STAPLES, CHINK ANY GAPS BETWEEN WATTLE AND GROUND WITH MATTING.

MAINTENANCE NOTES:

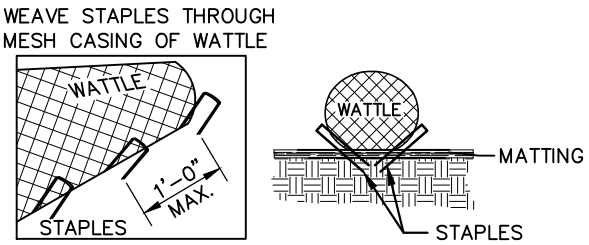
1. REMOVE SEDIMENT WHEN AT HALF HEIGHT OF WATTLE.
2. CORRECT DEFICIENCIES IF EROSION OCCURS AROUND EDGES OF WATTLE.
3. REPAIR OR REPLACE WATTLES AS NEEDED.



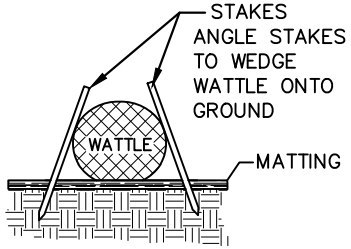
V-DITCH SECTION VIEW



TRAPEZOIDAL DITCH SECTION VIEW

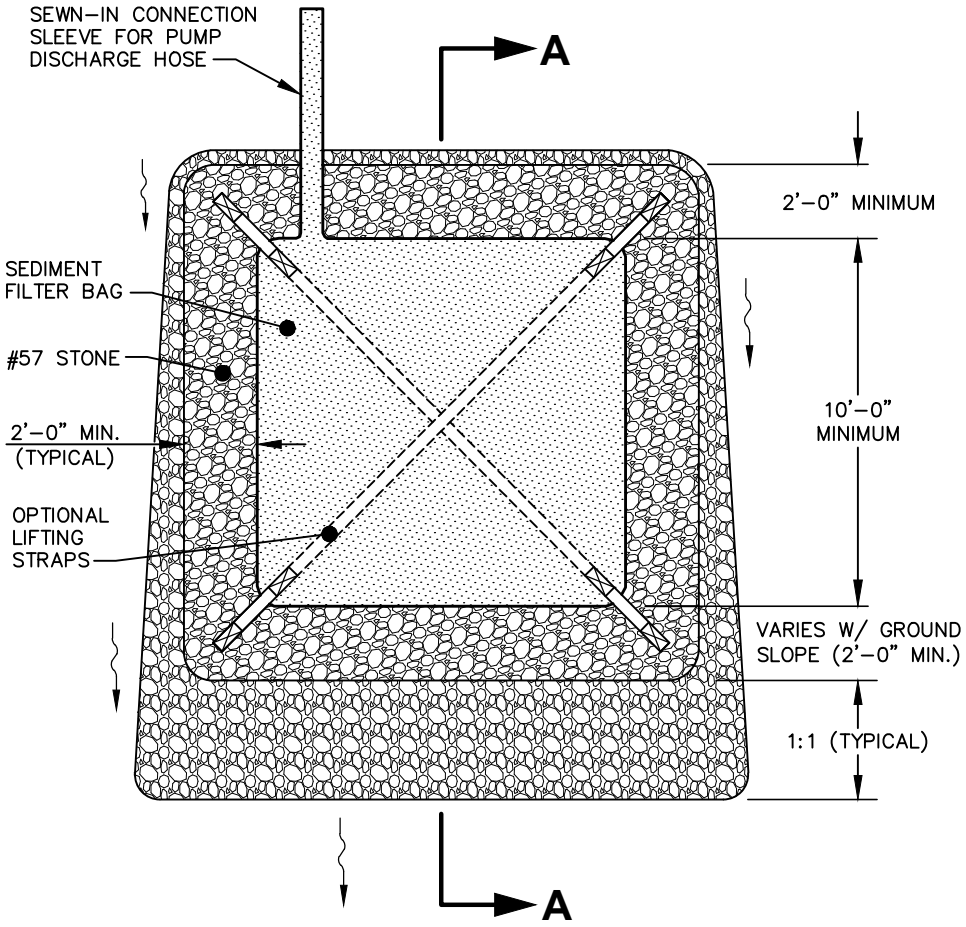


STAPLE INSTALLMENT SECTIONS

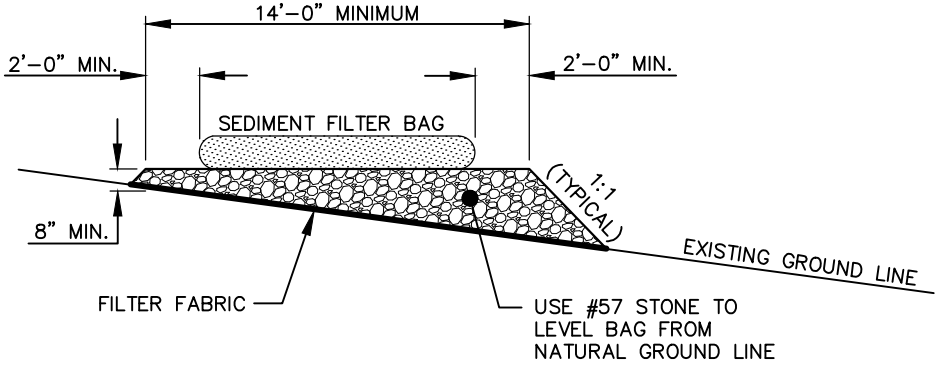


STAKE INSTALLMENT CROSS SECTION

TOWN OF APEX STANDARDS	WATTLE	STD. NO.
EFFECTIVE: JUNE 11, 2024		400.21
		SHEET 1 OF 1



PLAN VIEW



SECTION A-A

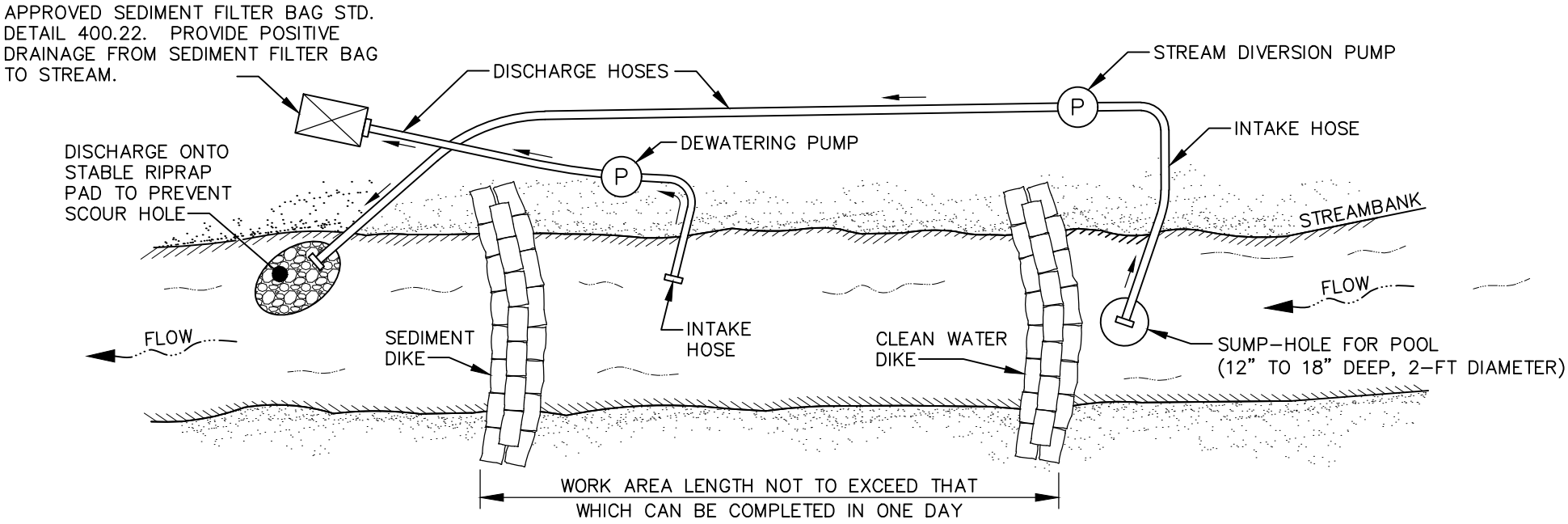
GENERAL NOTES:

1. CONTRACTOR SHALL EXERCISE CAUTION NOT TO BURST OR DAMAGE THE SEDIMENT FILTER BAG WHEN PUMPING.
2. THE LENGTH AND WIDTH OF THE TEMPORARY SEDIMENT BAG SHOWN ON THIS DRAWING MAY VARY PER VENDOR SPECIFICATIONS. THE MINIMUM "FOOTPRINT" OF THE BAG SHALL BE 10 x 15 FEET.
3. SEDIMENT FILTER BAGS SHALL BE EQUIPPED WITH A SEWN-IN SLEEVE OF SUFFICIENT SIZE TO ACCEPT A MINIMUM 4-INCH DIAMETER PUMP DISCHARGE HOSE. THE DISCHARGE HOSE SHOULD BE EXTENDED INTO THIS SLEEVE A MINIMUM OF 6 INCHES AND BE TIGHTLY SECURED WITH A HOSE CLAMP OR OTHER SUITABLE MEANS TO PREVENT LEAKAGE. HOSE CONNECTION THROUGH A SLIT IN THE BAG WILL NOT BE ACCEPTABLE.
4. THE PUMP DISCHARGE HOSE CONNECTION SLEEVE SHALL BE SECURELY TIED OFF DURING DISPOSAL OF THE SEDIMENT FILTER BAG IN ORDER TO PREVENT LEAKAGE OF COLLECTED SEDIMENTS.
5. SEDIMENT FILTER BAG MUST BE LOCATED INSIDE THE APPROVED LIMITS OF DISTURBANCE.

MAINTENANCE NOTES:

1. SEDIMENT FILTER BAG SHALL BE MAINTAINED AND REPLACED WHEN ONE HALF FULL OF SEDIMENT OR IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
2. INSPECT FILTER BAG AND GRAVEL PAD DAILY.

TOWN OF APEX STANDARDS	FILTER BAG WITH GRAVEL PAD	STD. NO. 400.22
EFFECTIVE: JUNE 11, 2024		SHEET 1 OF 1



MAINTENANCE NOTES:

1. INITIAL SETUP OF BYPASS PUMPING SHOULD BE PERFORMED WHEN 3-4 DAYS OF DRY WEATHER IS FORECASTED.
2. INSPECT STREAM DIVERSION DAILY. CORRECT ANY DEFICIENCIES IMMEDIATELY.
3. AREAS ADJACENT TO WORK AREA SHOULD BE STABILIZED.

TEMPORARY PUMP AROUND SEQUENCE

1. SET UP PUMP WITH SUCTION AND DISCHARGE HOSE.
2. INSTALL UP-STREAM SANDBAG DAM.
3. INSTALL DOWN-STREAM SANDBAG DAM.
4. THE PUMP MUST RUN CONTINUOUSLY WHILE WORKING IN THE STREAM.
5. STREAM BANKS MUST BE STABILIZED AT THE END OF EACH DAY.

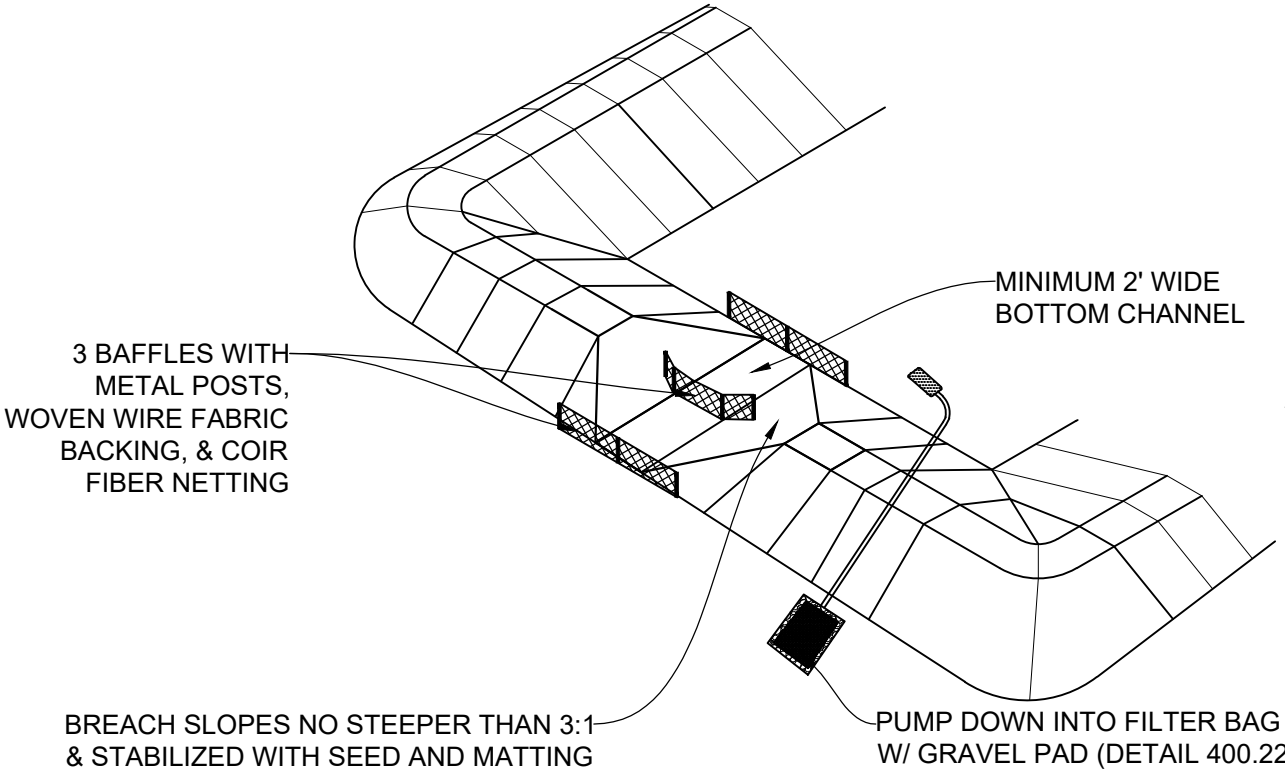
GENERAL NOTES:

1. DIKES SHALL BE SITUATED AT THE UPSTREAM AND DOWNSTREAM ENDS OF THE WORK AREA, AND STREAM FLOW SHALL BE PUMPED AROUND THE WORK AREA. THE PUMP SHOULD DISCHARGE ONTO A STABLE VELOCITY DISSIPATER CONSTRUCTED OF RIPRAP OR SANDBAGS.
2. WATER FROM THE WORK AREA SHALL BE PUMPED TO A SEDIMENT FILTERING MEASURE SUCH AS A SEDIMENT BAG OR OTHER APPROVED DEVICE. THE MEASURE SHALL BE LOCATED SUCH THAT THE WATER DRAINS BACK INTO THE CHANNEL BELOW THE DOWNSTREAM SANDBAG DIKE WITHOUT CAUSING EROSION BETWEEN THE SEDIMENT FILTER BAG AND THE STREAM BANK.

TOWN OF APEX STANDARDS	TEMPORARY PUMP AROUND	STD. NO. 400.23
EFFECTIVE: JUNE 11, 2024		SHEET 1 OF 1

DAM BREACH SEQUENCE:

1. Schedule a preconstruction meeting with Stormwater Engineering at 919-372-7470.
2. Install tree/silt fence or combo fence as shown on the approved plans. Clear only as necessary to install these devices. Coordinate the installation & inspection of the tree/silt fence with the Planning Department Zoning Inspector.
3. Drain water from the pond using pumps or siphoning. Discharged water from the pond shall be to the existing downstream draw or channel. If using a pump to drain, a silt bag will be required.
4. After the pond is sufficiently drained, a site meeting shall be coordinated with Stormwater Engineering staff to determine the exact location for the breach. Extend the breach as low as possible to make sure all of the water from the pond can drain out.
5. Install 3 coir baffles equally spaced as shown across the breach to control sediment from leaving the site. Rip rap is not required but can be used if existing conditions warrant it.
6. Stabilize all denuded areas including the pond bottom, breach, access and stockpile areas with seed & straw. The denuded areas shall establish vegetative cover within 14 days of making the breach.
7. Once full cover is established call Stormwater Engineering at 919-372-7470 for a final inspection & approval to remove tree/silt fence and baffles.The owner is responsible for permanent erosion control maintenance of the site.



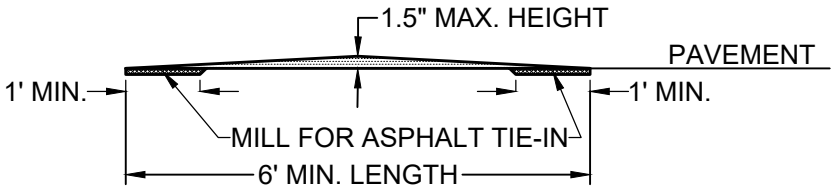
MAINTENANCE:

1. Repair coir baffles as needed to maintain proper function.
2. Restabilize denuded areas as needed to maintain vegetated coverage and stabilization.
3. Maintain dewatering pumps in good working order; and abide by local noise ordinances.

TOWN OF APEX STANDARDS	EXISTING POND DAM BREACH	STD. NO.
EFFECTIVE: JUNE 13, 2023		400.24
		SHEET 1 OF 1

GENERAL NOTES:

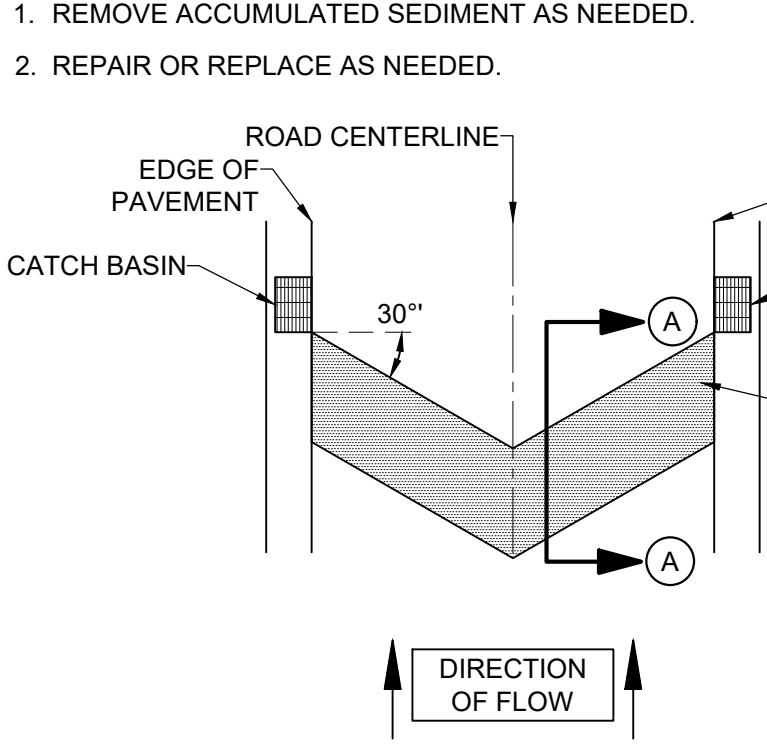
1. TEMPORARY ASPHALT DIVERSIONS SHALL BE INSTALLED IMMEDIATELY FOLLOWING INITIAL ASPHALT SURFACE LIFT IN LOCATIONS AS DIRECTED BY THE TOWN IN ORDER TO ACHIEVE POSITIVE DRAINAGE INTO STORM SYSTEM.
2. EXISTING ROADWAY SHALL BE CLEARED FREE OF ALL LOOSE DEBRIS; AREA TO BE PAVED SHALL BE COATED WITH TACK PRIOR TO PAVING OPERATIONS. COLD PATCH ASPHALT SHALL NOT BE USED.
3. DIVERSIONS SHALL BE REMOVED PRIOR TO PLACEMENT OF FINAL ASPHALT SURFACE LIFT.



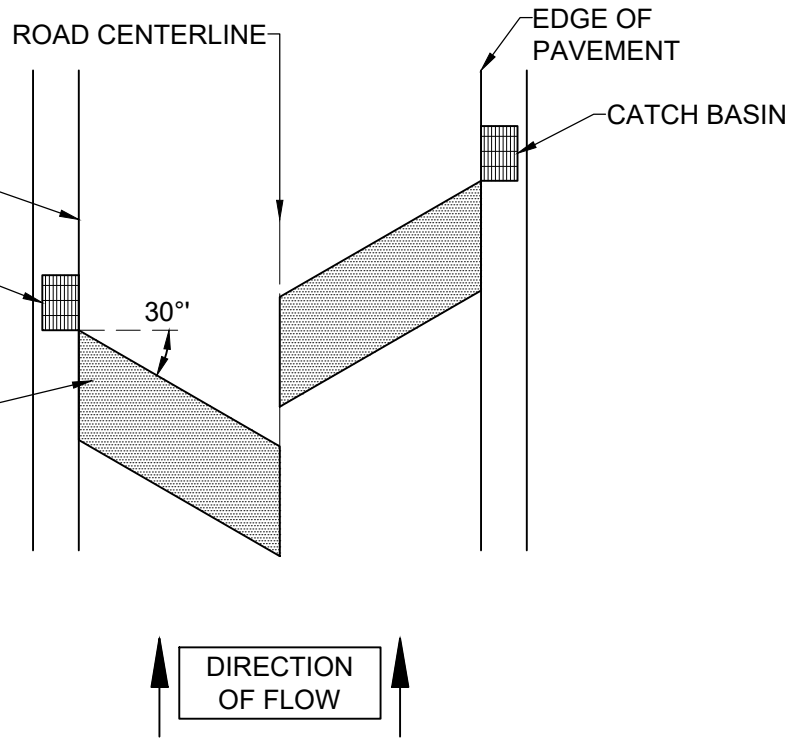
SECTION A-A

MAINTENANCE NOTES:

1. REMOVE ACCUMULATED SEDIMENT AS NEEDED.
2. REPAIR OR REPLACE AS NEEDED.



PLAN VIEW - CATCH BASINS ALIGNED



PLAN VIEW - CATCH BASINS OFFSET / ONE SIDE ONLY

TOWN OF APEX STANDARDS	TEMPORARY ASPHALT DIVERSION	STD. NO. 400.25
EFFECTIVE: JUNE 11, 2024		SHEET 1 OF 1