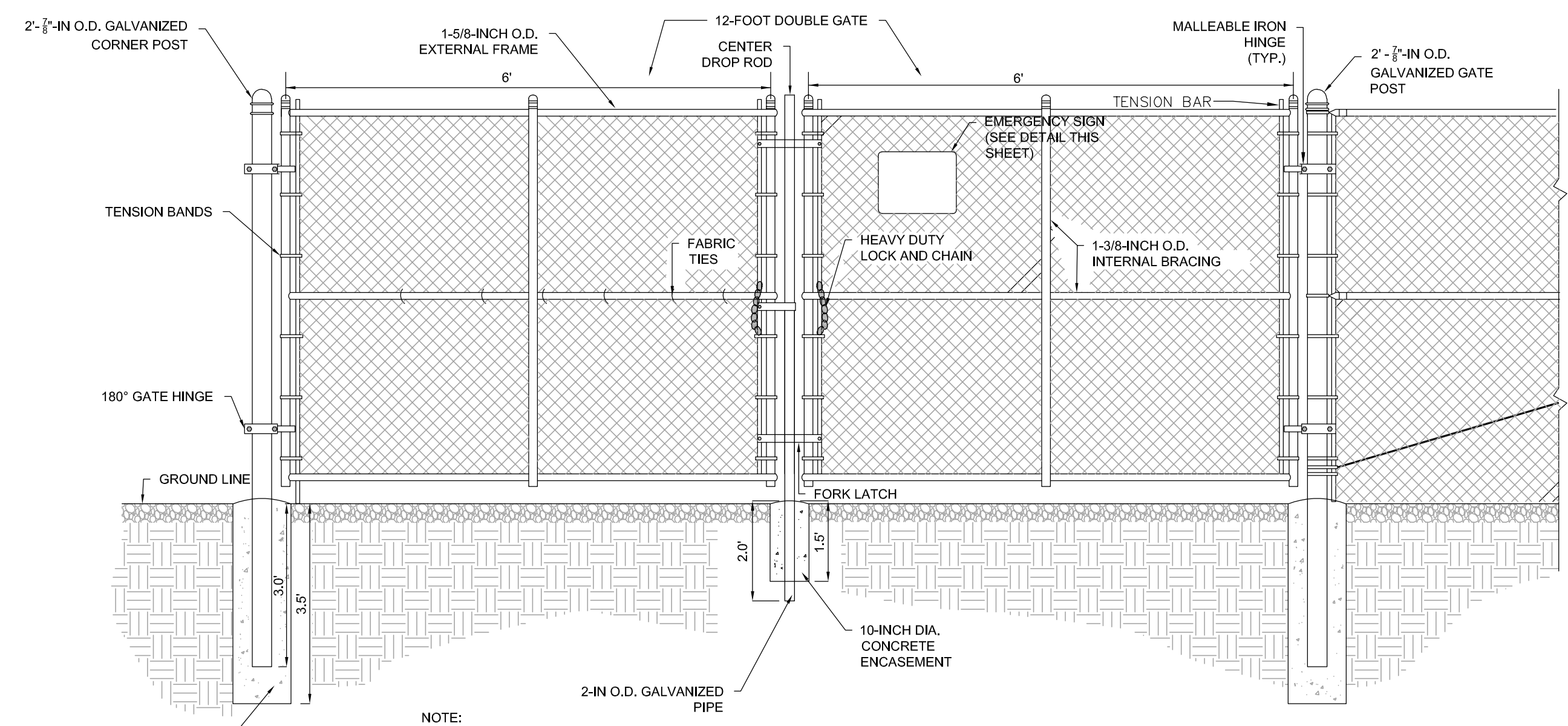
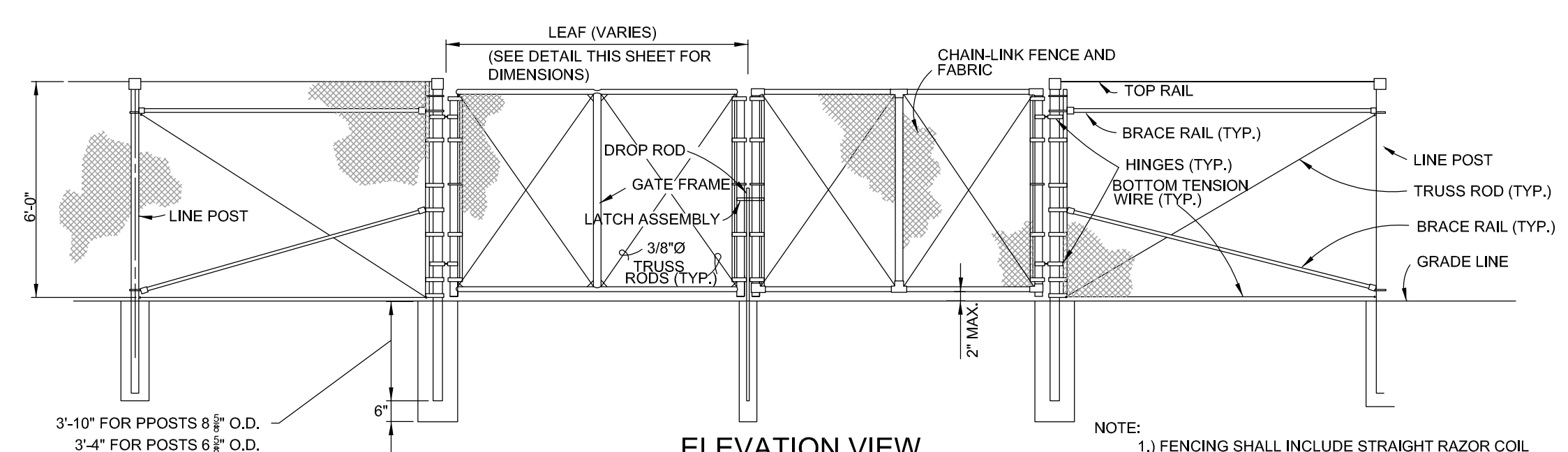


PROJ. #:	DESIG. BY: CCM
DRAWN BY: SWS	DATE: 11/15/2022
DESIG. REV: CC	SCALE: N.T.S.
LEAD ENG: CCM	
CONST:	

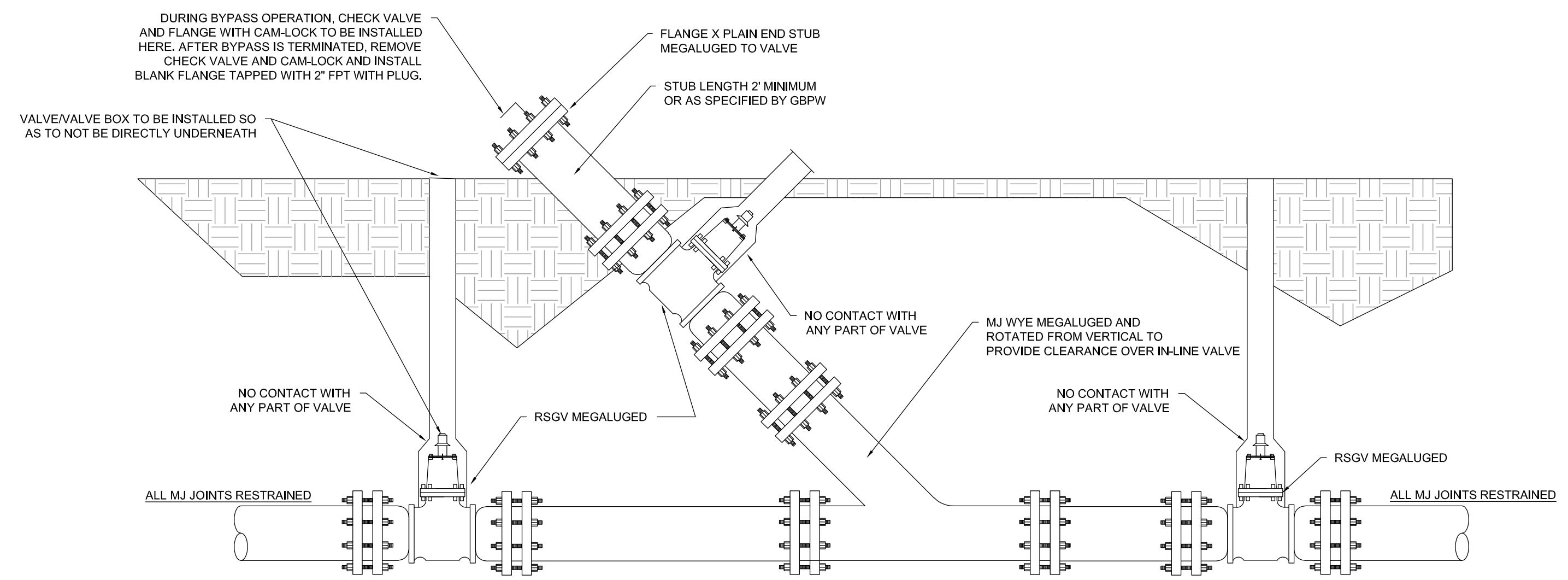


NOTE:
1. SWING GATE SHOWN IS STANDARD. CONTRACTOR TO COORDINATE WITH OWNER FOR EXACT GATE TYPES, LOCATIONS AND OPERATOR REQUIREMENTS TYPICAL.
2. MINIMUM 16" DIAMETER ENCASEMENT FOR GATE POSTS 4" O.D. AND LESS. 24" DIAMETER ENCASEMENT FOR POSTS OVER 4" O.D.

DOUBLE SWING GATE DETAIL
N.T.S.

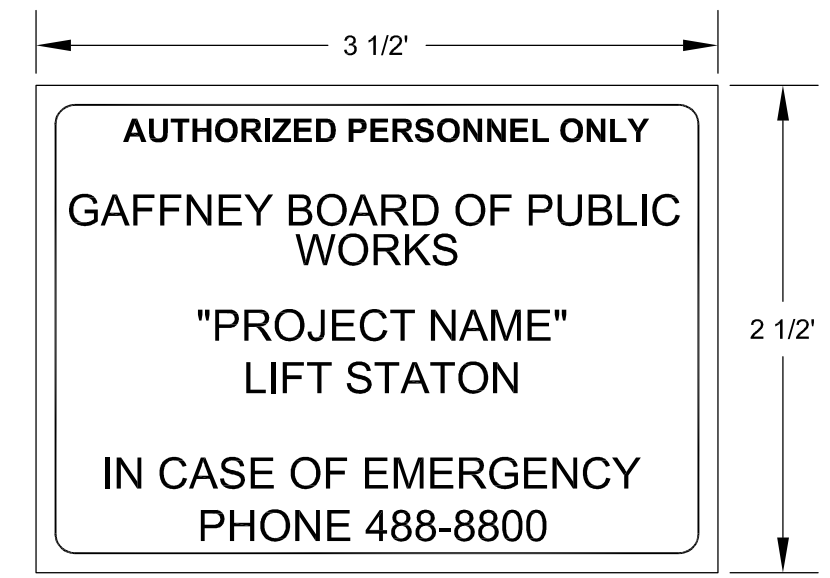


CHAIN LINK SECURITY FENCE DETAIL
N.T.S.



NOTE:
THIS ASSEMBLY WILL SERVE AS BOTH A PIG LAUNCHING STATION AND A BYPASS CONNECTION WHEN NEEDED. IF PROPERLY SIZED AND SERVICEABLE ITEMS ARE AVAILABLE, THE CONTRACTOR SHALL REUSE ONE EXISTING FLG X FLG EXTERNAL WEIGHTED ARM CHECK VALVE AND THE FEMALE CAM-LOCK FITTING MATED TO THE FLANGE AS SHOWN WHICH WILL BE INSTALLED ABOVE GROUND WHEN USED AS A BYPASS CONNECTION. IF CHECK VALVE OR CAM-LOCK ARE NOT AVAILABLE OR SERVICEABLE, THESE ITEMS ARE TO BE PROVIDED BY THE CONTRACTOR AS PART OF THE PROJECT.
WHEN THE BYPASS OPERATION IS TERMINATED, THE CONTRACTOR SHALL REMOVE THE CHECK VALVE AND CAM-LOCK FITTING WITH FLANGE AND FASTENERS. PROVIDE THESE PARTS TO GAFFNEY BOARD OF PUBLIC WORKS, AND INSTALL TREADED FLANGE AND PLUG AS SHOWN.

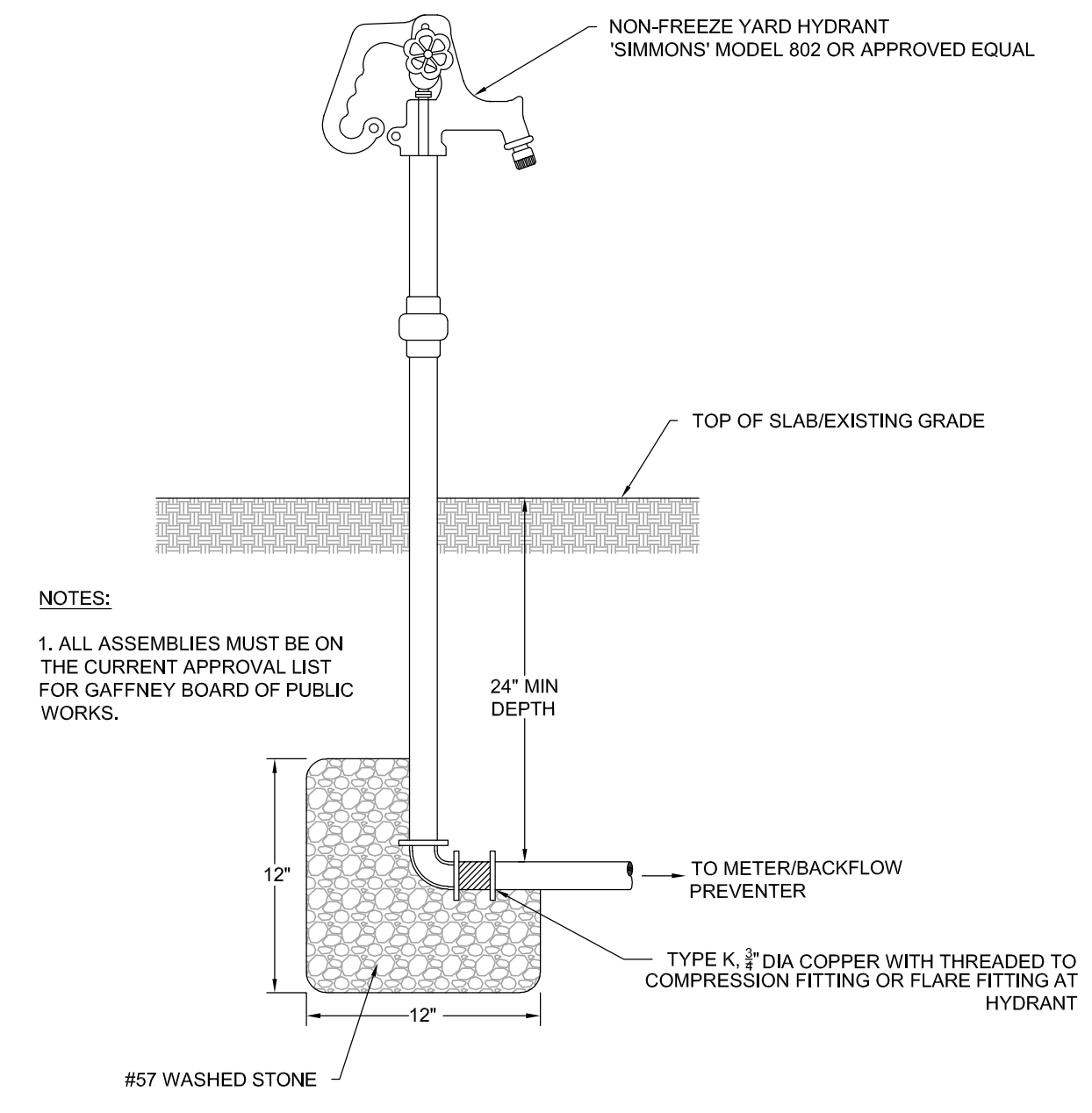
TYPICAL PIG LAUNCHER/BYPASS CONNECTION DETAIL
N.T.S.



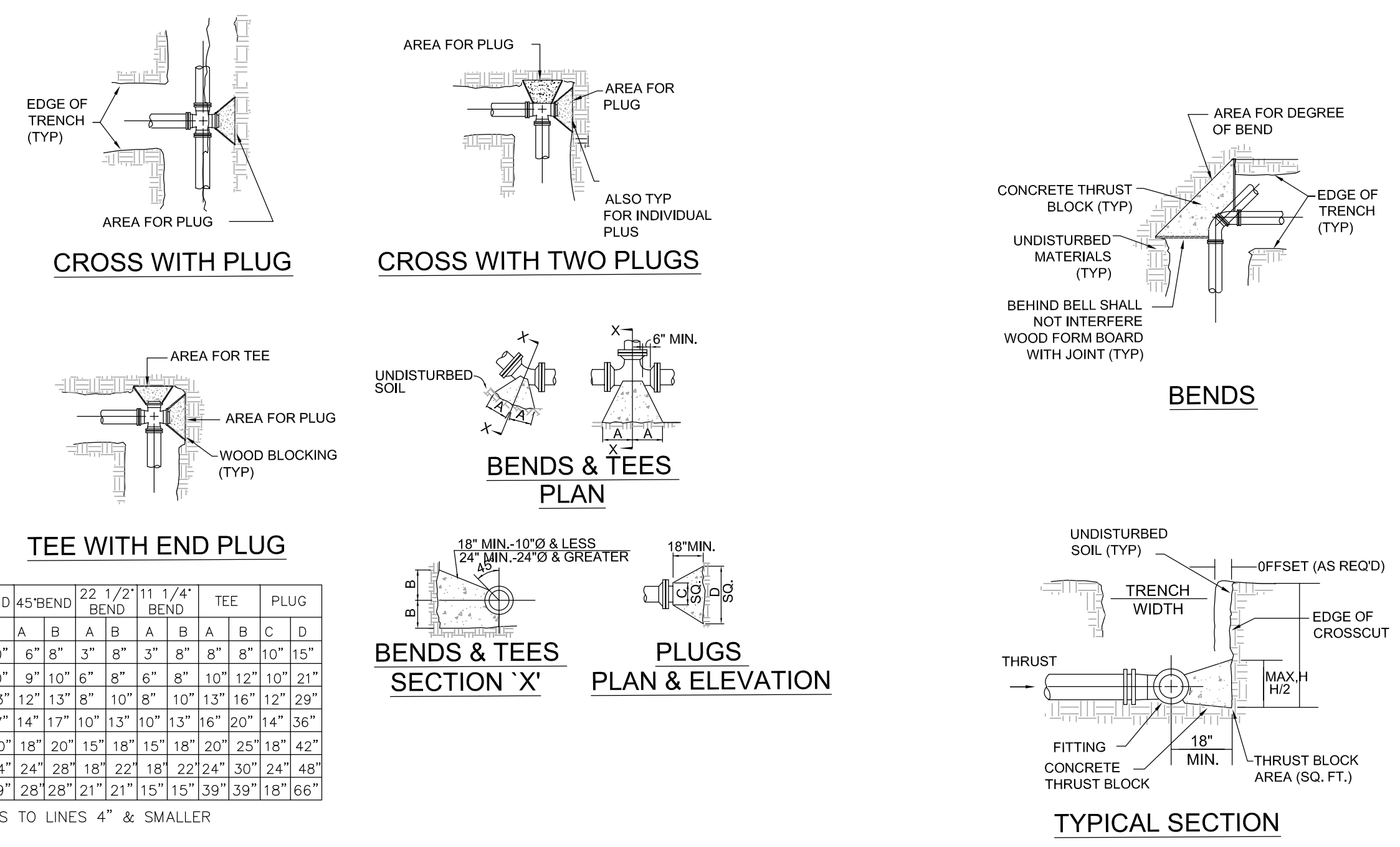
NOTES:
1. CONSTRUCT FROM 16 GA. ALUMINUM
2. PROVIDE WHITE BACKGROUND WITH THREE COATS OF PAINT.
3. PROVIDE 1-1/2" LETTERS (MIN.)
4. ALL LETTERING SHALL CONSIST OF TWO COATS OF THE APPROPRIATE ENAMEL.
5. DIMENSIONS SHOWN APPROXIMATE.
6. ALL SIGNS MUST BE APPROVED PRIOR TO INSTALLATION.

EMERGENCY SIGN DETAIL
N.T.S.

GENERAL UTILITY NOTES:
1. CONTRACTOR IS RESPONSIBLE FOR SCHEDULING AND COORDINATING ALL UTILITY TAPS, TIE-INS AND CONNECTIONS WITH THE GAFFNEY BPW.
2. CONTRACTOR IS RESPONSIBLE FOR PURCHASING THE TAPS/CONNECTIONS AND MATERIALS FOR ANY NECESSARY LINE EXTENSIONS FROM THE GAFFNEY BPW. AFTER PAYMENT IS PROCESSED THE BPW WILL ORDER MATERIALS AND SCHEDULE UTILITY INSTALLATION. AFTER THE INSTALLATION IS COMPLETE THE WATER/SEWER/ELECTRICAL SERVICE SHALL BE TURNED ON AND MONTHLY BILLING FOR UTILITY SERVICE STARTED. DURING CONSTRUCTION THE CONTRACTOR WILL BE RESPONSIBLE FOR THE MONTHLY UTILITY PAYMENTS UNTIL THE SERVICE IS TRANSFERRED INTO THE PERMANENT OWNERS NAME.



YARD HYDRANT DETAIL
N.T.S.



PIPE SIZE	90° BEND		45° BEND		22 1/2° BEND		11 1/4° BEND		TEE		PLUG	
	A	B	A	B	A	B	A	B	A	B	C	D
4"	8"	10"	6"	8"	3"	3"	3"	3"	8"	8"	8"	10"
6"	16"	10"	9"	10"	6"	8"	6"	8"	10"	12"	10"	21"
8"	22"	13"	12"	13"	8"	10"	8"	10"	13"	16"	12"	29"
10"	26"	17"	14"	17"	10"	13"	10"	13"	16"	20"	14"	36"
12"	30"	20"	18"	20"	15"	18"	15"	18"	20"	25"	18"	42"
14"	36"	24"	24"	28"	18"	22"	18"	22"	24"	30"	24"	48"
16"	39"	28"	28"	31"	21"	25"	21"	25"	28"	35"	28"	54"

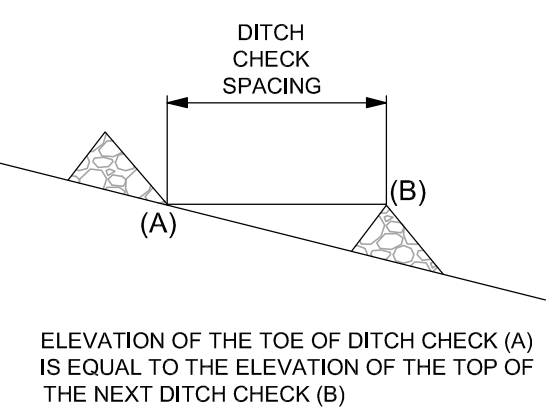
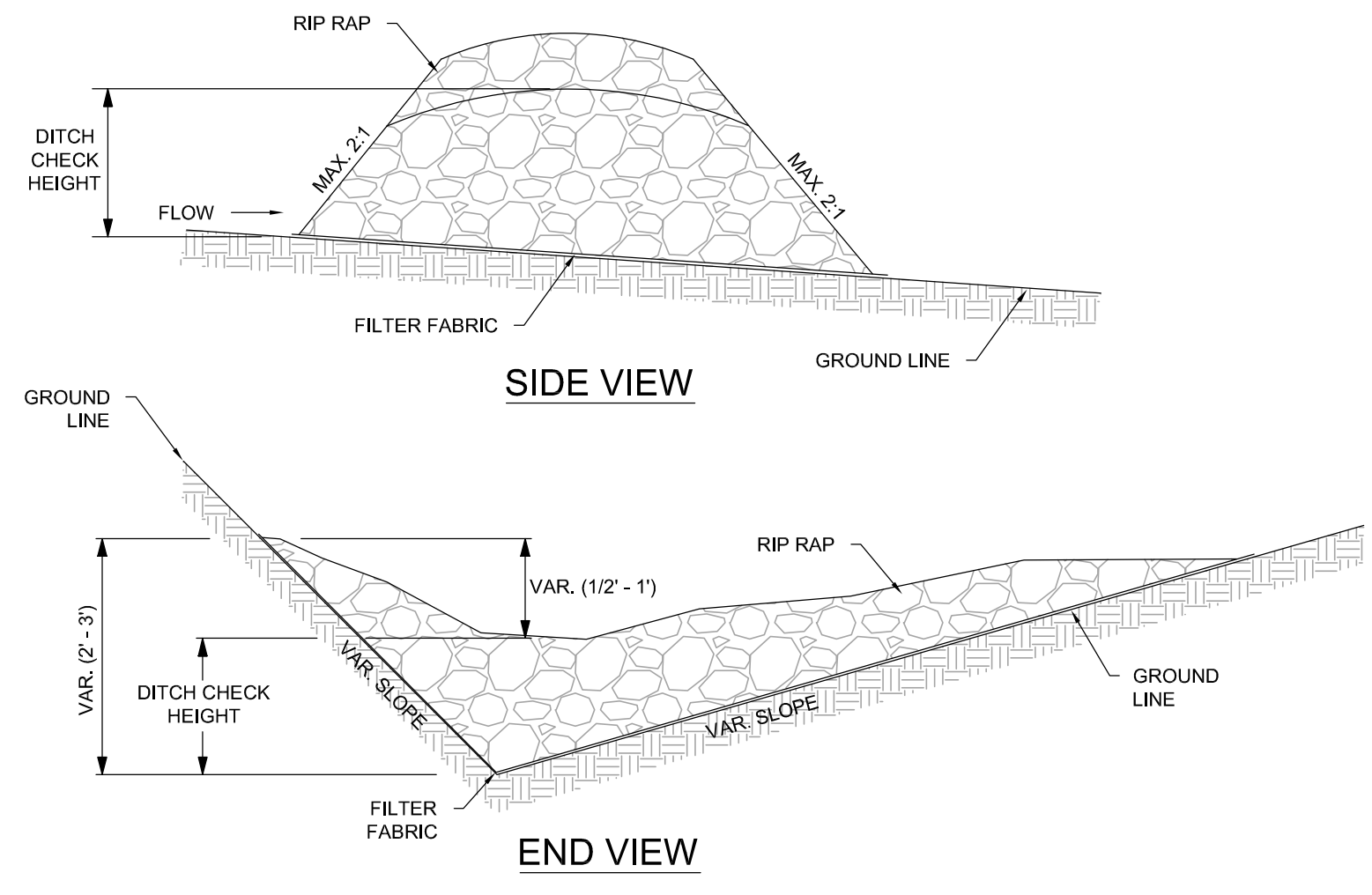
* APPLIES TO LINES 4" & SMALLER

NOTES:
1. THRUST BLOCK BEARING AREAS SHALL BE POURED AGAINST UNDISTURBED MATERIALS WHERE TRENCH WALL HAS BEEN DISTURBED. EXCAVATE ALL LOOSE MATERIAL AND EXTEND TO UNDISTURBED MATERIAL.
2. EXTEND THRUST BLOCK FULL LENGTH OF FITTINGS. PUT BOARD IN FRONT OF PLUG BEFORE POURING CONCRETE. JOINTS SHALL NOT BE COVERED BY THRUST BLOCK.
3. ROUGH BLOCKING FORMS SHALL BE USED ALONG SIDES OF THRUST BLOCK.
4. THRUST BLOCKS SHALL BE USED IN COMBINATION, AS REQUIRED, TO SUIT THE SPECIFIC FITTINGS ARRANGEMENT.
5. ALTERNATE DESIGN RESTRAINING SYSTEM SHALL BE PROVIDED WHERE STANDARD THRUST BLOCKING IS NOT SUITABLE, AND/OR SOIL BEARING CAPACITY IS LESS THAN 2,000 P.S.F. OR PIPE IS 16 INCHES OR GREATER.
6. ALL WOOD BLOCKING SHALL BE PRESSURE TREATED WITH PRESERVATIVES.
7. CONCRETE THRUST BLOCKING SHALL HAVE A MIN. COMPRESSION STRENGTH OF 3000 PSI.
8. CONCRETE SHALL BE PLACED AGAINST UNDISTURBED MATERIAL AND SHALL NOT COVER JOINTS, BOLTS, OR NUTS OR INTERFERE WITH REMOVAL OF ANY JOINT. WOODEN SIDE FORMS SHALL BE PROVIDED FOR THRUST BLOCKS WHERE TRENCH CONDITIONS REQUIRE.
9. THRUST BLOCKS SHALL BE PROPERLY SET AND ADEQUATELY CURED PRIOR TO PRESSURIZING THE PIPE.
10. FITTINGS SHALL BE PROTECTED BY POLYETHYLENE FILM, MIN. 8 MIL. THICK, PRIOR TO PLACING CONCRETE THRUST BLOCK.

SIZE	TEE, PLUGS	90° BENDS	45° BENDS	22-12° BENDS
2"	363	513	259	141
2-1/2"	531	751	379	207
3"	788	1114	562	307
4"	1302	1841	928	508
6"	2822	3990	2012	1101
8"	4783	6763	3410	1865
10"	7430	10506	5297	2898
12"	10452	14778	7452	4076

POUNDS CONCRETE FOR 100 PSI SYSTEM PRESSURE

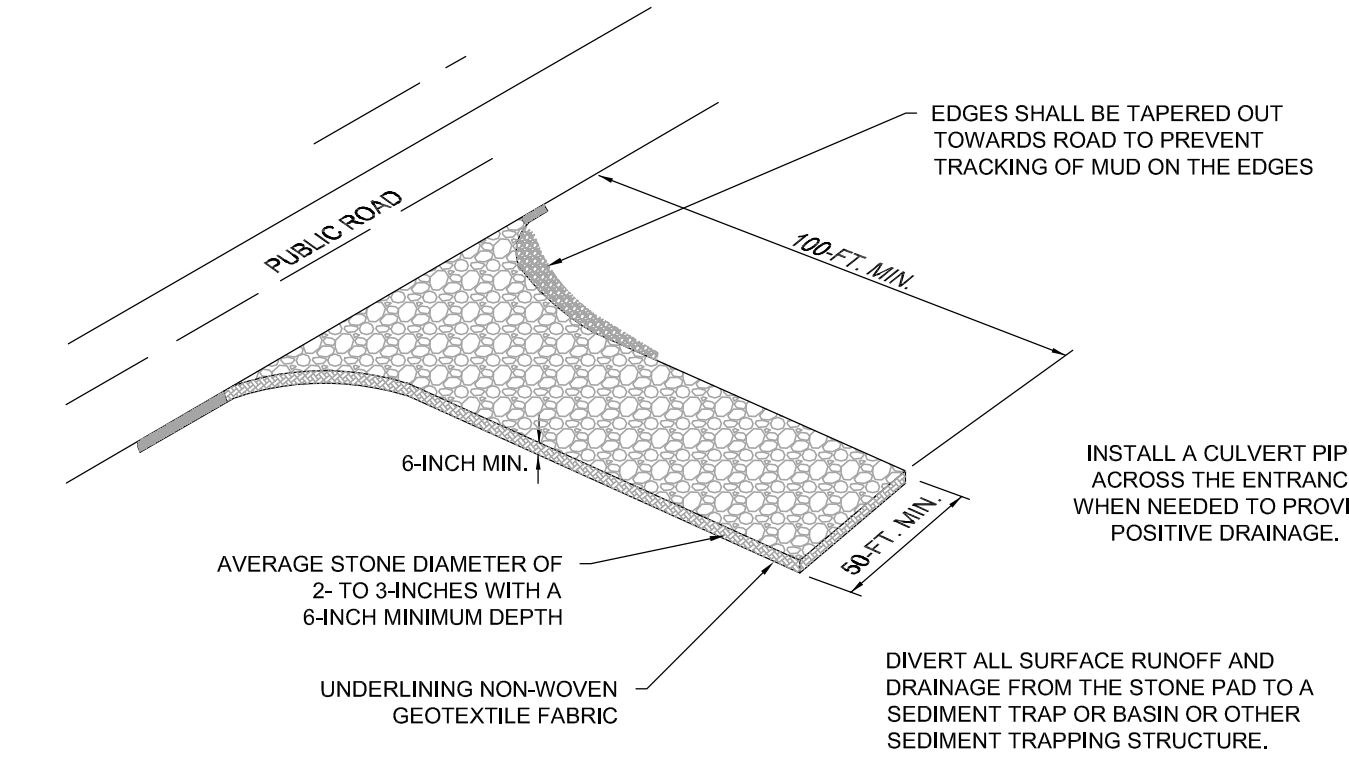
THRUST BLOCK DETAIL
N.T.S.



- NOTES:
1. DITCH CHECK SHOULD NEVER BE USED IN LIVE STREAM.
 2. DITCH CHECK IS NOT ADEQUATE FOR MORE THAN 2 ACRES OF DRAINAGE.
 3. RIP RAP SHALL BE CLASS A.
 4. RIP RAP MAY BE HAND PLACED OR MECHANICALLY PLACED AND SHAPED.
 5. REMOVAL AND DISPOSAL OF DITCH CHECK IS INCLUDED IN THE BID PRICE OF "DITCH CHECK".
 6. SLOPES OF DITCH CHECK SHALL BE NO STEEPER THAN 2:1, BUT MAY BE FLATTENED DUE TO TRAFFIC SAFETY, AS DIRECTED BY THE ENGINEER.
 7. HEIGHT OF DITCH CHECK SHALL BE NO MORE THAN 2.0 FEET.
 8. REMOVE COLLECTED SEDIMENT IN FRONT OF DITCH CHECK AS DETERMINED BY THE ENGINEER AT NO ADDITIONAL EXPENSE.



CHECK DAMS DETAIL
N.T.S.



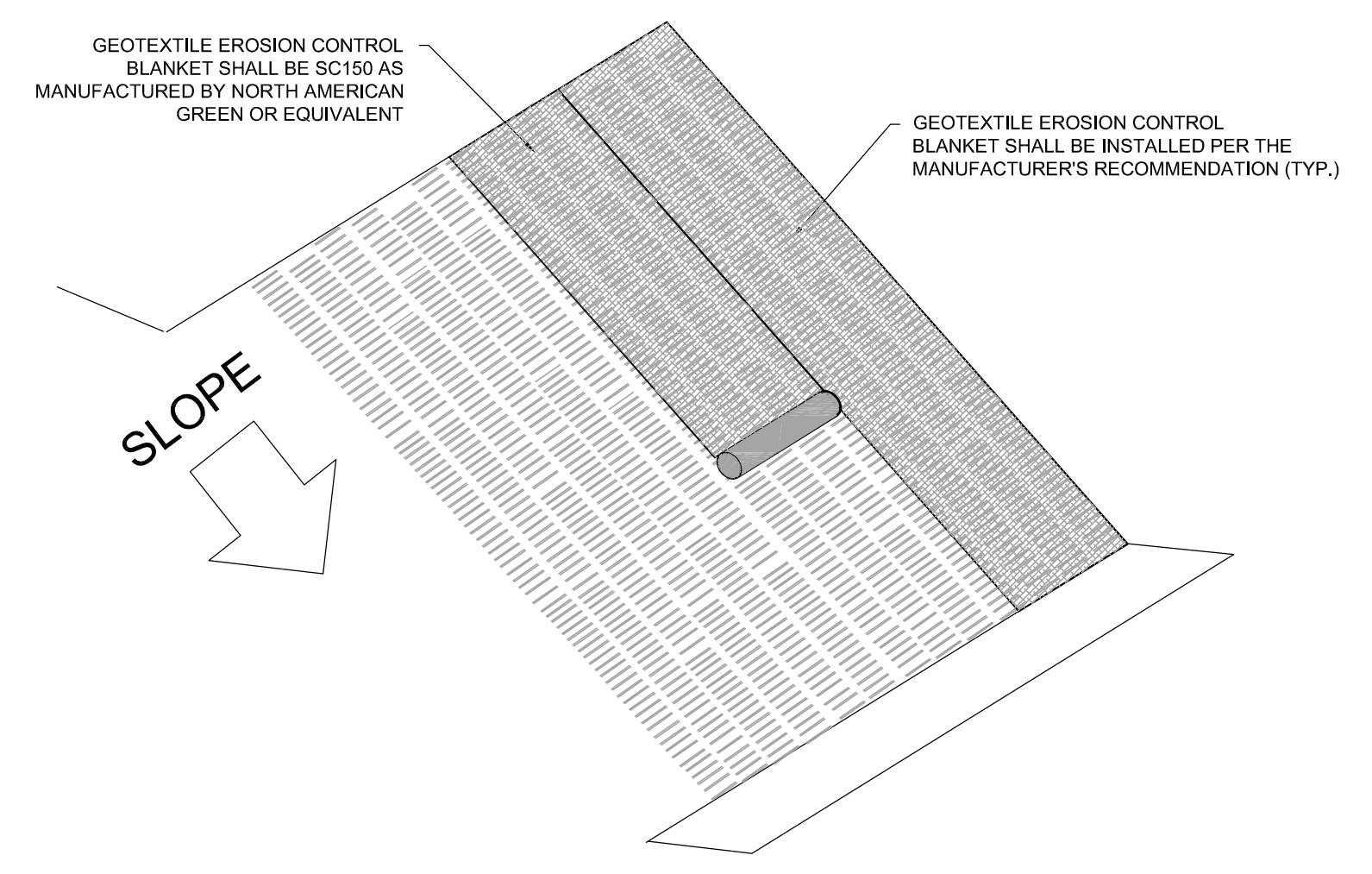
WHEN STABILIZED AND WHERE TO USE IT:
STABILIZED CONSTRUCTION ENTRANCES SHOULD BE USED AT ALL POINTS WHERE TRAFFIC WILL BE LEAVING A CONSTRUCTION SITE AND MOVING DIRECTLY ONTO A PUBLIC ROAD.

IMPORTANT CONSIDERATIONS:
IF WASHING IS USED, PROVISIONS MUST BE MADE TO INTERCEPT THE WASH WATER AND TRAP THE SEDIMENT BEFORE IT IS CARRIED OFF-SITE. WASHDOWN FACILITIES SHALL BE REQUIRED AS DIRECTED BY SCDHEC AS NEEDED. WASHDOWN AREAS IN GENERAL MUST BE ESTABLISHED WITH CRUSHED GRAVEL AND DRAIN INTO A SEDIMENT TRAP OR SEDIMENT BASIN. CONSTRUCTION ENTRANCES SHOULD BE USED IN CONJUNCTION WITH THE STABILIZATION OF CONSTRUCTION ROADS TO REDUCE THE AMOUNT OF MUD PICKED UP BY VEHICLES.

- INSTALLATION:
1. REMOVE ALL VEGETATION AND ANY OBJECTIONABLE MATERIAL FROM THE FOUNDATION AREA.
 2. DIVERT ALL SURFACE RUNOFF AND DRAINAGE FROM STONES TO A SEDIMENT TRAP OR BASIN.
 3. INSTALL A NON-WOVEN GEOTEXTILE FABRIC PRIOR TO PLACING ANY STONE.
 4. INSTALL A CULVERT PIPE ACROSS THE ENTRANCE WHEN NEEDED TO PROVIDE POSITIVE DRAINAGE.
 5. THE ENTRANCE SHALL CONSIST OF 1-INCH TO 3-INCH D50 STONE PLACED AT A MINIMUM DEPTH OF 6-INCHES.
 6. MINIMUM DIMENSIONS OF THE ENTRANCE SHALL BE 24-FEET WIDE BY 100-FEET LONG, AND MAY BE MODIFIED AS NECESSARY TO ACCOMMODATE SITE CONSTRAINTS.
 7. THE EDGES OF THE ENTRANCE SHALL BE TAPERED OUT TOWARDS THE ROAD TO PREVENT TRACKING OF MUD AT THE EDGE OF THE ENTRANCE.

INSPECTION AND MAINTENANCE:
INSPECT CONSTRUCTION ENTRANCES EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 24-HOURS AFTER EACH RAINFALL EVENT THAT PRODUCES 1/4-INCHES OR MORE OF PRECIPITATION, OR AFTER HEAVY USE. CHECK FOR MUD AND SEDIMENT BUILDUP AND PAD INTEGRITY. MAKE DAILY INSPECTIONS DURING PERIODS OF WET WEATHER. MAINTENANCE IS REQUIRED MORE FREQUENTLY IN WET WEATHER CONDITIONS. RESHAPE THE STONE PAD AS NEEDED FOR DRAINAGE AND RUNOFF CONTROL. WASH OR REPLACE STONES AS NEEDED AND AS DIRECTED BY THE INSPECTOR. THE STONE IN THE ENTRANCE SHOULD BE WASHED OR REPLACED WHENEVER THE ENTRANCE FAILS TO REDUCE MUD BEING CARRIED OFF-SITE BY VEHICLES. FREQUENT WASHING WILL EXTEND THE USEFUL LIFE OF STONE. IMMEDIATELY REMOVE MUD AND SEDIMENT TRACKED OR WASHED ONTO PUBLIC ROADS BY BRUSHING OR SWEEPING. FLUSHING SHOULD ONLY BE USED WHEN THE WATER CAN BE DISCHARGED TO A SEDIMENT TRAP OR BASIN. REPAIR ANY BROKEN PAVEMENT IMMEDIATELY.

STABILIZED CONSTRUCTION ENTRANCE DETAIL
(SCDHEC DETAIL SC-06)
N.T.S.



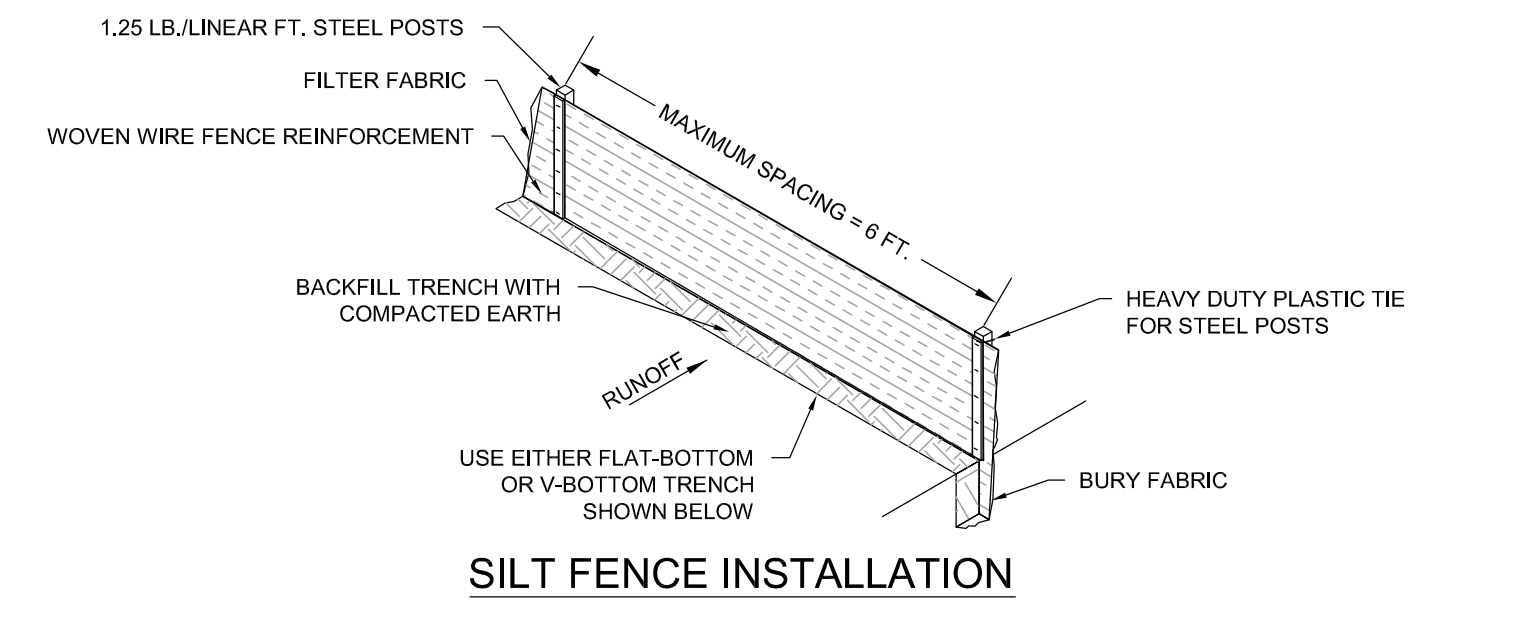
DEFINITION:
A PROTECTIVE COVERING (BLANKET) OR SOIL STABILIZATION MAT USED TO ESTABLISH VEGETATION ON STEEP SLOPES, CHANNELS, OR SHORELINES.

PURPOSE:
TO PROVIDE A MICROCLIMATE WHICH PROTECTS YOUNG VEGETATION AND PROMOTES ITS ESTABLISHMENT. TO REINFORCE THE TURF TO RESIST FORCES OF EROSION DURING STORM EVENTS.

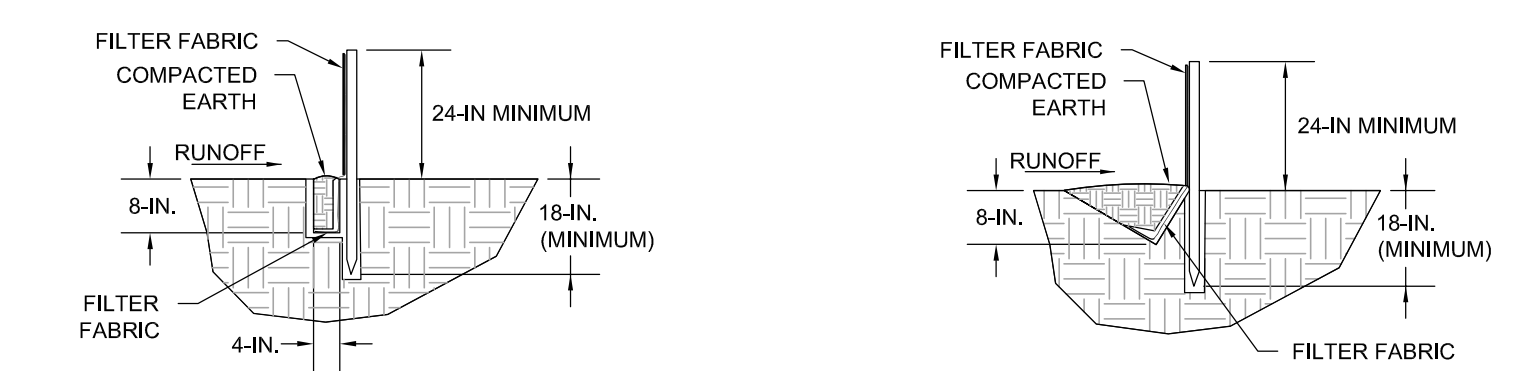
CONDITIONS:
MATINGS AND BLANKETS CAN BE APPLIED ON STEEP SLOPES WHERE EROSION HAZARD IS HIGH AND PLANTING IS LIKELY TO BE SLOW IN PROVIDING ADEQUATE PROTECTIVE COVER. CONCENTRATED FLOW AREAS, ALL SLOPES STEEPER THAN 2.5:1 AND WITH A HEIGHT OF TEN FEET OR GREATER, AND CUTS AND FILLS WITHIN STREAM BUFFERS, SHALL BE STABILIZED WITH THE APPROPRIATE EROSION CONTROL MATTING OR BLANKETS. ON STREAMBANKS OR TIDAL SHORELINES WHERE MOVING WATER IS PRESENT, MATTING CAN PREVENT NEW PLANTINGS FROM BEING WASHED AWAY.

MATERIALS:
GEOTEXTILE EROSION CONTROL BLANKET SHALL BE SC150 AS MANUFACTURED BY NORTH AMERICAN GREEN OR EQUIVALENT.

EROSION CONTROL MATTING DETAIL
N.T.S.



SILT FENCE INSTALLATION



FLAT-BOTTOM TRENCH DETAIL

V-SHAPED TRENCH DETAIL

WHEN AND WHERE TO USE IT:
SILT FENCE IS APPLICABLE IN AREAS:
- WHERE THE MAXIMUM SHEET OR OVERLAND FLOW PATH LENGTH TO THE FENCE IS 100- FEET
- WHERE THE MAXIMUM SLOPE STEEPNESS (NORMAL PERPENDICULAR TO FENCE LINE) IS 2H:1V
- THAT DO NOT RECEIVE CONCENTRATED FLOWS GREATER THAN 0.5 CFS

DO NOT PLACE SILT FENCE ACROSS CHANNELS OR USE IT AS A VELOCITY CONTROL BMP.

MATERIALS
STEEL POSTS
USE 1/4-INCH LONG STEEL POSTS THAT MEET THE FOLLOWING MINIMUM PHYSICAL REQUIREMENTS:
- COMPOSED OF HIGH STRENGTH STEEL WITH MINIMUM YIELD STRENGTH OF 50,000 PSI.
- HAVE A STANDARD "T" SECTION WITH A NOMINAL FACE WIDTH OF 1.38-INCHES AND NOMINAL "T" LENGTH OF 1.48-INCHES.
- WEIGH 1.25 POUNDS PER FOOT (± 8%).
- HAVE A SOIL STABILIZATION PLATE WITH A MINIMUM CROSS SECTION AREA OF 17-SQUARE INCHES ATTACHED TO THE STEEL POSTS.
- PAINTED WITH A WATER BASED BAKED ENAMEL PAINT.

USE STEEL POSTS WITH A MINIMUM LENGTH OF 4- FEET, WEIGHING 1.25 POUNDS PER LINEAR FOOT (± 8%) WITH PROJECTIONS TO AID IN FASTENING THE FABRIC, EXCEPT WHEN HEAVY CLAY SOILS ARE PRESENT ON SITE. STEEL POSTS WILL HAVE A METAL SOIL STABILIZATION PLATE WELDED NEAR THE BOTTOM SUCH THAT WHEN THE POST IS DRIVEN TO THE PROPER DEPTH, THE PLATE WILL BE BELOW GROUND LEVEL FOR ADDED STABILITY.
THE SOIL PLATES SHOULD HAVE THE FOLLOWING CHARACTERISTICS:
- BE COMPOSED OF MINIMUM 15 GAUGE STEEL.
- HAVE A MINIMUM CROSS SECTION AREA OF 17-SQUARE INCHES.

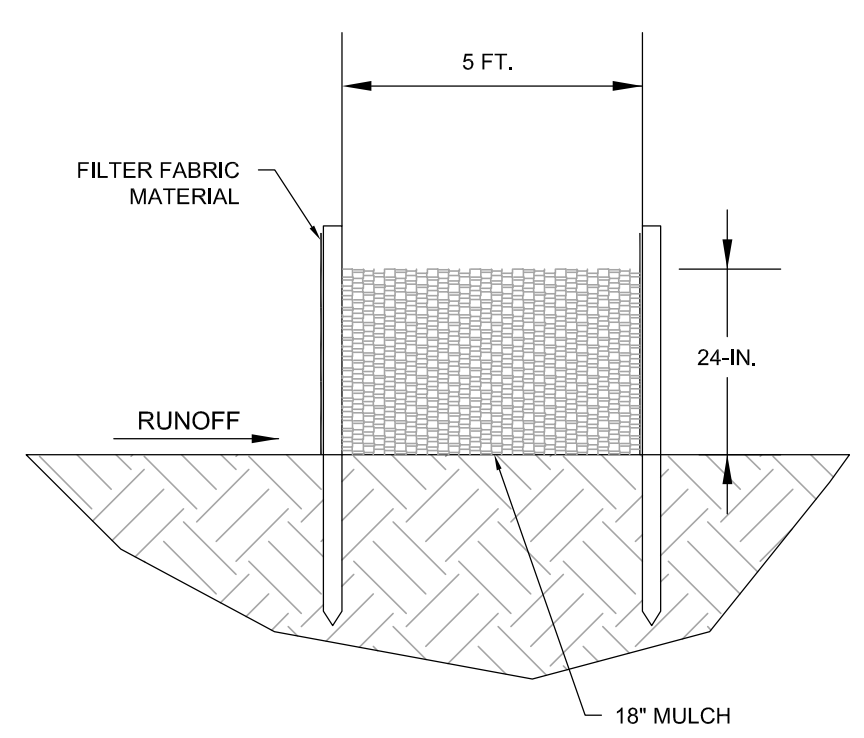
GEOTEXTILE FILTER FABRIC
FILTER FABRIC IS:
- COMPOSED OF FIBERS CONSISTING OF LONG CHAIN SYNTHETIC POLYMERS COMPOSED OF AT LEAST 85% BY WEIGHT OF POLYOLEFINS, POLYESTERS, OR POLYAMIDES.
- FORMED INTO A NETWORK SUCH THAT THE FILAMENTS OR YARNS RETAIN DIMENSIONAL STABILITY RELATIVE TO EACH OTHER.
- FREE OF ANY TREATMENT OR COATING WHICH MIGHT ADVERSELY ALTER ITS PHYSICAL PROPERTIES AFTER INSTALLATION.
- FREE OF DEFECTS OR FLAWS THAT SIGNIFICANTLY AFFECT ITS PHYSICAL AND/OR FILTERING PROPERTIES.
- CUT TO A MINIMUM WIDTH OF 36 INCHES.

USE ONLY FABRIC APPEARING ON SCDOT APPROVAL SHEET #34 MEETING THE REQUIREMENTS OF THE MOST CURRENT EDITION OF THE SCDOT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.

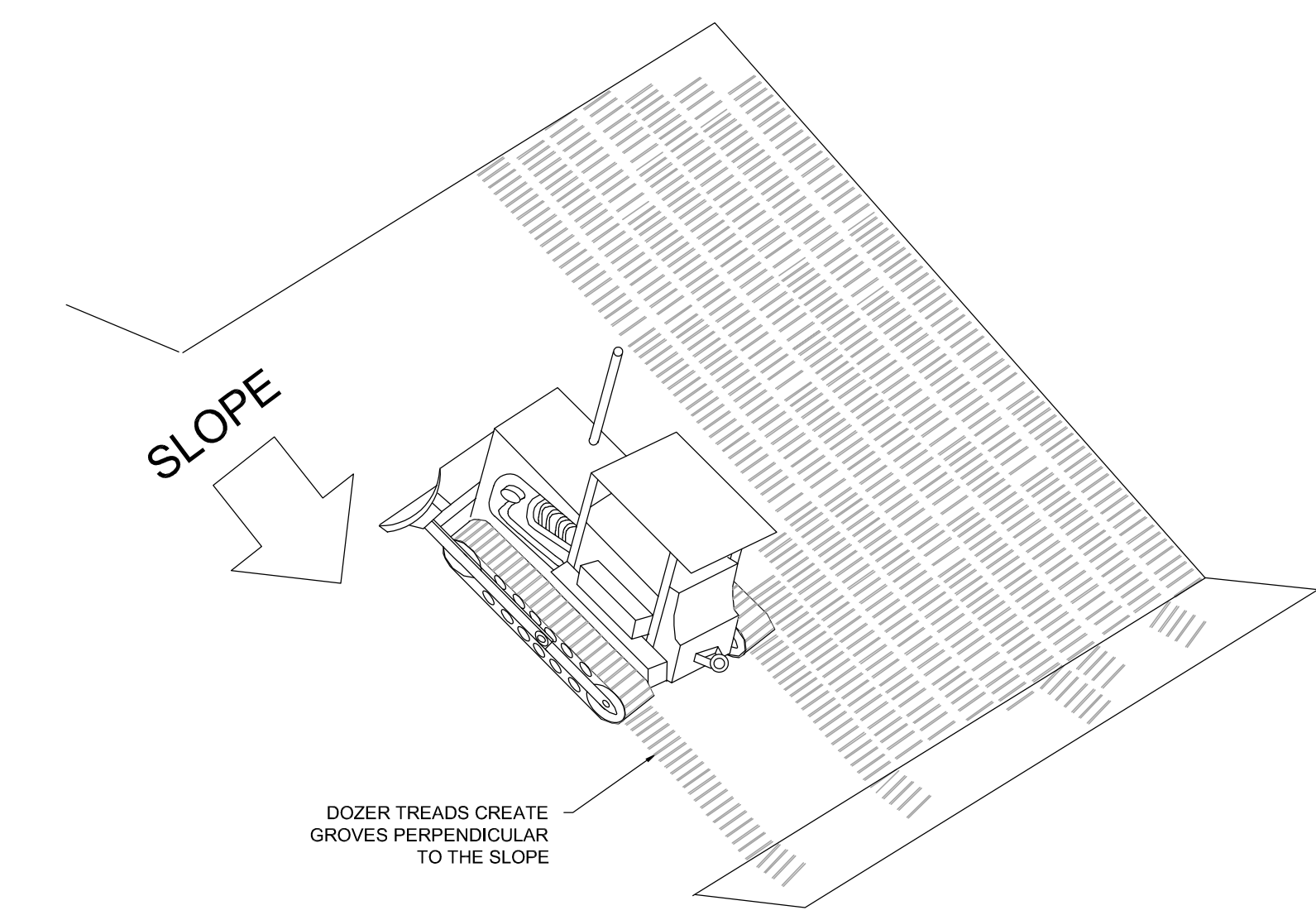
INSTALLATION
EXCAVATE A TRENCH APPROXIMATELY 6-INCHES WIDE AND 6-INCHES DEEP WHEN PLACING FABRIC BY HAND, PLACE 12-INCHES OF GEOTEXTILE FABRIC INTO THE 6-INCH DEEP TRENCH, EXTENDING THE REMAINING 6-INCHES TOWARDS THE UPSLOPE SIDE OF THE TRENCH. BACKFILL THE TRENCH WITH SOIL OR GRAVEL AND COMPACT. BURY 12-INCHES OF FABRIC INTO THE GROUND WHEN PNEUMATICALLY INSTALLING SILT FENCE WITH A SLICING METHOD. PURCHASE FABRIC IN CONTINUOUS ROLLS AND CUT TO THE LENGTH OF THE BARRIER TO AVOID JOINTS. WHEN JOINTS ARE NECESSARY, WRAP THE FABRIC TOGETHER AT A SUPPORT POST WITH BOTH ENDS FASTENED TO THE POST, WITH A 6-INCH MINIMUM OVERLAP. INSTALL POSTS TO A MINIMUM DEPTH OF 24-INCHES. INSTALL POSTS A MINIMUM OF 1- TO 2-INCHES ABOVE THE FABRIC, WITH NO MORE THAN 3- FEET OF THE POST ABOVE THE GROUND. SPACE POSTS TO MAXIMUM 6- FEET CENTERS. ATTACH FABRIC TO WOOD POSTS USING STAPLES MADE OF HEAVY DUTY WIRE AT LEAST 1/4-INCH LONG, SPACED A MAXIMUM OF 6-INCHES APART. STAPLE A 2-INCH WIDE LATHE OVER THE FILTER FABRIC TO SECURELY FASTEN IT TO THE UPSLOPE SIDE OF WOODEN POSTS. ATTACH FABRIC TO THE STEEL POSTS USING HEAVY-DUTY PLASTIC TIES THAT ARE EVENLY SPACED AND PLACED IN A MANNER TO PREVENT SAGGING OR TEARING OF THE FABRIC. IN ALL CASES, TIES SHOULD BE AFFIXED IN NO LESS THAN 4 PLACES. INSTALL THE FABRIC A MINIMUM OF 24-INCHES ABOVE THE GROUND, WHEN NECESSARY, THE HEIGHT OF THE FENCE ABOVE GROUND MAY BE GREATER THAN 24-INCHES. IN TIDAL AREAS, EXTRA SILT FENCE HEIGHT MAY BE REQUIRED. THE POST HEIGHT WILL BE TWICE THE EXPOSED POST HEIGHT. POST SPACING WILL REMAIN THE SAME AND EXTRA HEIGHT FABRIC WILL BE 4-, 5-, OR 6- FEET TALL. LOCATE SILT FENCE CHECKS EVERY 100 FEET MAXIMUM AND AT LOW POINTS. INSTALL THE FENCE PERPENDICULAR TO THE DIRECTION OF FLOW AND PLACE THE FENCE AT THE PROPER DISTANCE FROM THE TOE OF STEEP SLOPES TO PROVIDE SEDIMENT STORAGE AND ACCESS FOR MAINTENANCE AND CLEANOUT.

INSPECTION AND MAINTENANCE
INSPECT EVERY SEVEN CALENDAR DAYS AND WITHIN 24-HOURS AFTER EACH RAINFALL EVENT THAT PRODUCES 1/4-INCHES OR MORE OF PRECIPITATION. CHECK FOR SEDIMENT BUILDUP AND FENCE INTEGRITY. CHECK WHERE RUNOFF HAS ERODED A CHANNEL BENEATH THE FENCE, OR WHERE THE FENCE HAS SAGGED OR COLLAPSED BY FENCE OVERTOPPING. IF THE FENCE FABRIC TEARS, BEGINS TO DECOMPOSE, OR IN ANY WAY BECOMES INEFFECTIVE, REPLACE THE SECTION OF FENCE IMMEDIATELY.
REMOVE SEDIMENT ACCUMULATED ALONG THE FENCE WHEN IT REACHES 1/3 THE HEIGHT OF THE FENCE, ESPECIALLY IF HEAVY RAINS ARE EXPECTED.
REMOVE TRAPPED SEDIMENT FROM THE SITE OR STABILIZE IT ON SITE.
REMOVE SILT FENCE WITHIN 30 DAYS AFTER FINAL STABILIZATION IS ACHIEVED OR AFTER TEMPORARY BEST MANAGEMENT PRACTICES (BMPs) ARE NO LONGER NEEDED.
PERMANENTLY STABILIZE DISTURBED AREAS RESULTING FROM FENCE REMOVAL.

SILT FENCE DETAIL
(SCDHEC DETAIL SC-03)
N.T.S.



DOUBLE ROW SILT FENCE DETAIL
N.T.S.



DEFINITION:
PROVIDING AND ROUGH SOIL SURFACE WITH HORIZONTAL DEPRESSIONS CREATED BY OPERATION A TILLAGE OR OTHER SUITABLE IMPLEMENT ON THE CONTOUR, OR BY LEAVING SLOPES IN A ROUGHENED CONDITION BY NOT FINE-GRADING THEM.

PURPOSE:
THE PURPOSES OF SURFACE ROUGHENING ARE TO AID IN THE ESTABLISHMENT OF VEGETATIVE COVER WITH SEED, TO REDUCE RUN-OFF VELOCITY AND INCREASE INFILTRATION AND TO REDUCE EROSION AND PROVIDE FOR SEDIMENT TRAPPING.

CONDITIONS:
ALL SLOPES STEEPER THAN 3:1 REQUIRE SURFACE ROUGHENING, EITHER STAIR-STEP GRADING, GROOVING, FURROWING, OR TRACKING IF THEY ARE TO BE STABILIZED WITH VEGETATION. HOWEVER, IF THE SLOPE IS TO BE STABILIZED WITH EROSION CONTROL BLANKETS OR SOIL REINFORCING MATTING, THE SOIL SURFACE SHOULD NOT BE ROUGHENED.
AREAS WITH GRADES LESS STEEP THAN 3:1 SHOULD HAVE THE SOIL SURFACE LIGHTLY ROUGHENED AND LOOSENEED TO A DEPTH OF 2 TO 4 INCHES PRIOR TO SEEDING. AREAS WHICH HAVE BEEN GRADED AND WILL NOT BE STABILIZED IMMEDIATELY MAY BE ROUGHENED TO REDUCE RUNOFF VELOCITY UNTIL SEEDING TAKES PLACE. SLOPES WITH A STABLE ROCK FACE DO NOT REQUIRE ROUGHENING OR STABILIZATION.

SURFACE ROUGHENING DETAIL
N.T.S.