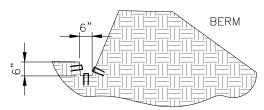


NOTE:

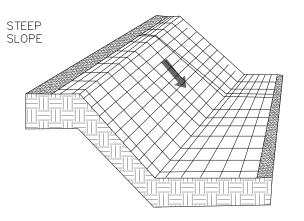
ON SHALLOW SLOPES, PROTECTIVE EROSION CONTROL BLANKETS MAY BE APPLIED ACROSS THE SLOPE.

NOTE:

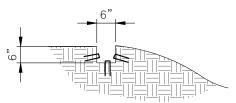
WHERE THERE IS A BERM AT THE TOP OF THE SLOPE, BRING THE MATERIAL OVER THE BERM AND ANCHOR IT BEHIND THE BERM.



ON STEEP SLOPES. APPLY PROTECTIVE BLANKET PERPENDICULAR TO THE DIRECTION OF FLOW AND ANCHOR SECURELY



BRING MATERIAL DOWN TO THE LEVEL AREA BEFORE TERMINATING THE INSTALLATION



TOP OF SLOPE BLANKET ANCHOR SLOT

EROSION CONTROL BLANKET NOTES (1 OF 2):

SITE PREPARATION:

AFTER SITE HAS BEEN SHAPED AND GRADED, PREPARE A FRIABLE SEEDBED RELATIVELY FREE FROM CLODS AND ROCKS MORE THAN 1 ½ INCHES IN DIAMETER AND ANY FOREIGN MATERIAL THAT WILL PREVENT UNIFORM CONTACT OF THE PROSPECTIVE COVERING WITH THE

B) INSTALLATION:

AS INDICATED OR TO MANUFACTURER'S RECOMMENDATIONS, WHICHEVER IS MORE STRINGENT.

LIME, FERTILIZER, AND SEED IN ACCORDANCE WITH SEEDING OR PLANTING PLAN. WHEN USING JUTE MESH ON A SEEDED AREA, APPLY APPROXIMATELY ONE HALF THE SEED AFTER LAYING THE MAT. THE PROSPECTIVE COVERING CAN BE LAID OVER SPRIGGED AREAS WHERE SMALL GRASS PLANTS HAVE BEEN INSERTED INTO THE SOIL. WHERE GROUND COVERS ARE TO BE PLANTED, LAY THE PROTECTIVE COVERING FIRST AND THEN PLANT THROUGH THE MATERIAL AS PER PLANTING PLAN.

D) LAYING AND STAPLING:

- IF INSTRUCTIONS HAVE BEEN FOLLOWED, ALL NEEDED CHECK SLOTS WILL HAVE BEEN INSTALLED, AND THE PROSPECTIVE COVERING WILL BE LAID ON A FRIABLE SEEDED FREE FROM CLODS, ROCKS, ROOTS, ETC. THAT MIGHT IMPEDE GOOD CONTACT.
- 1. START LAYING THE PROSPECTIVE COVERING FROM THE TOP OF THE CHANNEL OF SLOPE AND UNROLL DOWN-GRADE ALLOW TO LAY LOOSELY ON SOIL; DO NOT STRETCH
- UPSLOPE ENDS OF THE BLANKET SHOULD BE BURIED IN A ANCHOR SLOT NO LESS THAN 6-INCHES DEEP. TAMP EARTH
- FIRMLY OVER THE MATERIAL WHEN TOP IS RELATIVELY FLAT, EXTEND BLANKET ABOUT 40 INCHES AWAY FROM SLOPE. STAPLE THE MATERIAL AT A MINIMUM OF EVERY 12 INCHES ACROSS THE TOP END.
- EDGES OF THE MATERIAL SHALL BE STAPLED EVERY 3 FEET. WHERE MULTIPLE WIDTHS ARE LAID SIDE BY SIDE, THE ADJACENT EDGES SHALL BE OVERLAPPED A MINIMUM OF 6 INCHES AND STAPLED TOGETHER.
- 5. STAPLES SHALL BE PLACED SOWN THE CENTER, STAGGERED WITH THE EDGES AT 3-FOOT INTERVALS.

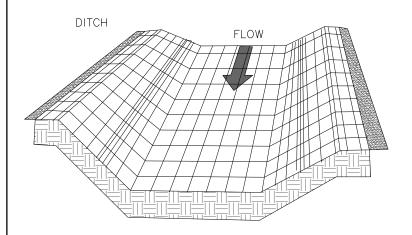
D) TROUBLESHOOTING:

CONSULT WITH A QUALIFIED DESIGN PROFESSIONAL, IF ANY OF THE FOLLOWING OCCUR:

- 1. MOVEMENT OF THE BLANKET OR EROSION UNDER THE BLANKET IS OBSERVED
- VARIATIONS IN THE TYPOGRAPHY ON SITE INDICATE EROSION CONTROL MAT WILL NOT FUNCTION AS INTENDED; CHANGES IN PLAN MAY BE NEEDED, OR A BLANKET WITH A SHORTER OR LONGER LIFE MAY BE NEEDED
- DESIGN SPECIFICATIONS FOR SEED VARIETY, SEEDING DATES, OR EROSION CONTROL MATERIALS CANNOT BE MET; SUBSTITUTION MAY BE REQUIRED. UNAPPROVED SUBSTITUTIONS COULD RESULT IN FAILURE TO ESTABLISH VEGETATION.

E) MAINTENANCE AND INSPECTION:

INSPECT CONTROLS AFTER EACH RAIN OF ½ INCH OR GREATER, AND EVERY 7 DAYS UNTIL VEGETATION IS ESTABLISHED, FOR EROSION OR UNDERMINING BENEATH THE NETTING, BLANKETS, OR MATS. IF ANY AREA SHOWS EROSION, PULL BACK THAT PORTION OF THE MATERIAL, AND SOIL, TAMP DOWN, AND RESEED; RESECURE THE MATERIAL IN PLACE. IF NETTING, BLANKETS OR MATS BECOME DISLOCATED OR DAMAGED, REPAIR OR REPLACE AND RESECURE IMMEDIATELY.



IN DITCHES, APPLY PROSPECTIVE COVERING PARALLEL TO THE DIRECTION OF FLOW. USE CHECK SLOTS AS REQUIRED. AVOID JOINING MATERIAL IN THE CENTER OF THE DITCH IF AT ALL POSSIBLE. FOLLOW BLANKET RECOMMENDATIONS FOR ALLOWABLE VELOCITY AND SHEER STRESS.



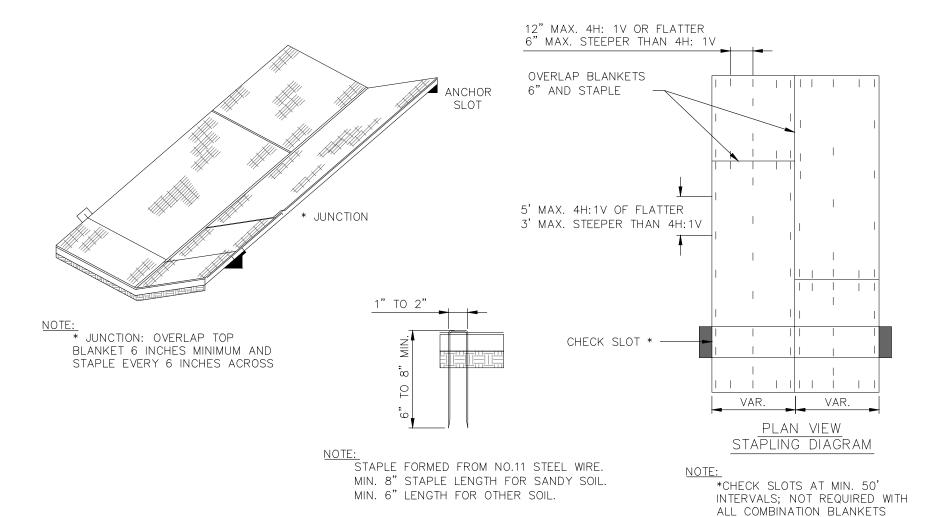
PUBLIC WORKS

2021 Details

City of **BELTON** Missouri

EROSION CONTROL BLANKET - A

SCALE: NOT TO SCALE DETAIL NO: ERO-012 07-26-2021



EROSION CONTROL BLANKET NOTES (2 OF 2):

F) <u>STAPLES:</u> STAPLES FOR ANCHORING BLANKET SHALL BE NO. 11—GAUGE WIRE OR HAVIER. THEIR LENGTH SHALL BE A MINIMUM OF 6 INCHES. A LARGER STAPLE WITH A LENGTH OF UP TO 12 INCHES SHALL BE USED ON LOOSE, SANDY, OR UNSTABLE SOILS.

G) JOINING PROTECTIVE COVERINGS: OVERLAP THE END OF THE PREVIOUS ROLL. A MINIMUM OF 6 INCHES AND STAPLE. STAPLE ACROSS THE END OF THE ROLL JUST BELOW THE ANCHOR SPOT AND ACROSS THE MATERIAL EVERY 6 INCHES

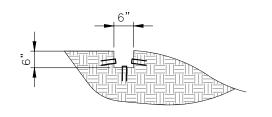
H) TERMINAL END: AT THE POINT AT WHICH THE MATERIAL IS DISCONTINUES, OR WHERE THE PROTECTIVE COVERING MEETS A STRUCTURE OF SOME TYPE, STAPLE A MINIMUM OF EVERY 12 INCHES.

FINAL CHECK: THESE INSTALLATION CRITERIA MUST BE ADHERED TO:

ALL DISTURBED AREAS ARE SEEDED PROTECTIVE BLANKET IS IN UNIFORM CONTACT WITH THE SOIL

3. ALL LAP JOINTS ARE SECURE

4. ALL STAPLES ARE DRIVEN FLUSH WITH THE GROUND



NOTE:

APPROXIMATELY 200 STAPLES ARE REQUIRED PER 100 SQ. YDS. OF MATERIAL ROLL. ANCHOR SLOTS, JUNCTIONS SLOTS, AND CHECK SLOTS TO BE BURIES 6" TO 12" DEEP.

ANCHOR SLOT

City of **PUBLIC WORKS EROSION CONTROL BLANKET - B** SCALE: NOT TO SCALE DETAIL NO: ERO-013

2021 Details **BELTON** Missouri

07-26-2021

EROSION CONTROL BLANKET INSTALLATION FOR CHANNELS

SEDIMENT CONTROL GENERAL NOTES:

- 1. ALL EROSION CONTROL DESIGN MEASURES SHALL COMPLY WITH THE CITY'S DESIGN AND CONSTRUCTION MANUAL.
- 2. PERMITS: THE FOLLOWING LAND DISTURBANCE PERMITS SHALL BE
- ALL SITES ONE ACRE OR MORE SHALL HAVE A MISSOURI DEPARTMENT OF NATURAL RESOURCES PERMIT AND A CITY OF BELTON PERMIT.
- B. ALL SUBDIVISION AND COMMERCIAL LOTS LESS THAN ONE ACRE SHALL HAVE A CITY OF BELTON PERMIT.
- PRIOR TO CONSTRUCTION THE GENERAL CONTRACTOR SHALL PREPARE DOCUMENTS CONVEYING HIS/HER INTENDED WORK SCHEDULE AND PROPOSED TASK SEQUENCING FOR THE PROJECT. THESE DOCUMENTS SHALL BE SUBMITTED AT THE PRE-CONSTRUCTION MEETING TO THE ENGINEER FOR REVIEW AND APPROVAL, PRIOR TO THE START OF CONSTRUCTION. THE GENERAL CONTRACTOR MUST BE ABLE TO SATISFACTORILY DEMONSTRATE THAT HE/SHE IS CAPABLE OF MEETING ALL EROSION CONTROL REQUIREMENTS ON ALL AREAS OF THE SITE. THE GC WILL ONLY BE ALLOWED TO WORK THE AREA(S) THAT HE/SHE CLEARLY SHOWS THEY CAN ADEQUATELY MEET ALL REQUIREMENTS.
- 4. THE CONSTRUCTION COVERED BY THESE PLANS SHALL CONFORM TO ALL APPLICABLE STANDARDS AND SPECIFICATIONS OF THE PUBLIC WORKS DEPARTMENT OF THE CITY OF BELTON, MISSOURI, CURRENT
- 5. ALL WORKMANSHIP AND MATERIALS SHALL BE SUBJECT TO THE INSPECTION AND APPROVAL OF THE CITY OF BELTON, MISSOURI.
- EXCEPT WHERE NECESSARY TO INSTALL EROSION AND SEDIMENT CONTROL DEVICES, CLEARING ACTIVITIES SHALL NOT BEGIN UNTIL ALL EROSION AND SEDIMENT CONTROL DEVICES HAVE BEEN INSTALLED AND THE SOIL HAS BEEN STABILIZED.
- 7. THE CONTRACTOR SHALL PROVIDE FOR CONTROL OF SURFACE EROSION AND SEDIMENT DEPOSITION DURING ALL PHASES OF CONSTRUCTION UNTIL THE OWNER ACCEPTS THE WORK AS COMPLETE. THE CONTRACTOR SHALL PROVIDE TEMPORARY SEEDING, BERMS, SILT FENCE, SEDIMENT TRAPS OR OTHER MEANS TO PREVENT SEDIMENT FROM REACHING THE PUBLIC RIGHT-OF-WAY, STREAMS OR ADJACENT PROPERTY. IN THE EVENT THE PREVENTION MEASURES ARE NOT EFFECTIVE. THE CONTRACTOR SHALL REMOVE ANY DEBRIS SEDIMENT AND RESTORE THE RIGHT-OF-WAY AND ADJACENT PROPERTY TO IT'S ORIGINAL OR BETTER CONDITION.
- 8. CONTRACTOR IS RESPONSIBLE FOR KEEPING ALL PUBLIC ROADWAYS ADJACENT TO THE CONSTRUCTION SITE FREE OF DIRT AND DEBRIS RESULTING FROM ACTIVITIES RELATED TO THE CONSTRUCTION OF THIS
- 9. CONTRACTOR SHALL KEEP THE ENTIRE PROJECT SITE FREE OF DEBRIS AND TRASH AT ALL TIMES. CONTRACTOR SHALL EXECUTE WORK USING METHODS THAT MINIMIZE EXCESSIVE NOISE OR DUST EMISSIONS. CONTRACTOR SHALL PROVIDE METHODS, MEANS AND FACILITIES TO PREVENT CONTAMINATION OF SOIL OR WATER FROM DISCHARGE OF POTENTIAL CONSTRUCTION SITE POLLUTANTS (I.E., DIESEL FUEL, PORT-A-POTTY WASTE, PAINTS, ETC.)
- 10. AREAS ARE NOTED ON THE PLAN SHEETS FOR STOCKPILING OF MATERIALS. THE SLOPES IN THESE AREAS SHALL BE GRADED SUCH THAT THEY DO NOT EXCEED 3:1, SILT FENCE SHALL BE INSTALLED COMPLETELY AROUND THE PERIMETER OF THE AREAS AND THE AREAS SHALL BE SEEDED WITHIN 14 DAYS ONCE CONSTRUCTION ACTIVITIES ON
- 11. THE CONTRACTOR SHALL ERECT AND MAINTAIN THROUGHOUT CONSTRUCTION, ORANGE COLORED TEMPORARY CONSTRUCTION FENCE AROUND ALL AREAS INDICATED ON THE PLANS TO BE LEFT UNDISTURBED. PRIOR TO ACTUAL FENCE INSTALLATION, CONTRACTOR SHALL STAKE FENCE LOCATION IN THE FIELD FOR REVIEW BY OWNER. THE FENCE MATERIAL SHALL BE 48" IN HEIGHT AND MADE OF HIGH DENSITY POLYETHYLENE PLASTIC WITH A NOMINAL MESH OPENING SIZE OF 1.25 INCHES (X) 1.25 INCHES.

- 12. NO CONSTRUCTION EQUIPMENT, CONSTRUCTION MATERIALS OR PERSONAL VEHICLES MAY BE PARKED OR STORED INSIDE THE UNDISTURBED AREAS. ALSO THE CONTRACTOR SHALL INSTALL SEDIMENT CONTROL TO PREVENT SEDIMENT FROM ACCUMULATING INSIDE THE UNDISTURBED AREAS.
- 13. PRIOR TO INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY EROSION CONTROL SHALL BE COMPLETED ON ALL PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES GREATER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1); EMBANKMENTS OF PONDS, BASINS, AND TRAPS.
- 14. SEDIMENT CONTROL SHALL BE COMPLETED WITHIN FOURTEEN (14) CALENDAR DAYS ON ALL OTHER DISTURBED OR GRADED AREAS. THIS REQUIREMENT DOES NOT APPLY TO THOSE AREAS THAT ARE SHOWN ON THE PLANS THAT ARE CURRENTLY BEING USED FOR MATERIAL STORAGE OR FOR THOSE AREAS, WHICH ACTUAL CONSTRUCTION ACTIVITIES ARE CURRENTLY BEING PERFORMED.
- 15. THE CONTRACTOR SHALL REQUEST THE CITY TO INSPECT AND APPROVE THE SEDIMENT CONTROL MEASURES UPON THE COMPLETION OF VARIOUS STAGES OF THE WORK, REQUESTS FOR INSPECTION SHALL BE MADE AT LEAST TWENTY-FOUR (24) HOURS IN ADVANCE (EXCLUSIVE OF SATURDAYS, SUNDAYS, AND HOLIDAYS) OF THE TIME THE INSPECTION IS DESIRED. THE CONTRACTOR SHALL OBTAIN WRITTEN NOTIFICATION OF THE CITY'S APPROVAL AT THE END OF THE FOLLOWING STAGES OF THE CONSTRUCTION:
 - UPON INSTALLATION OF THE PERIMETER EROSION AND SEDIMENT CONTROLS NOTED IN PHASE A OF THE WORK. THE CITY'S INSPECTION SHALL TAKE PLACE BEFORE PROCEEDING WITH ANY OTHER LAND DISTURBANCE ACTIVITY.
- DURING THE CONSTRUCTION OF SEDIMENT BASINS OR STORMWATER MANAGEMENT STRUCTURES.
- AT SPECIAL INSPECTION POINTS NOTED ON THE CONSTRUCTION PFRMIT.
- PRIOR TO REMOVAL OR SUBSTANTIAL MODIFICATION OF ANY EROSION AND SEDIMENT CONTROL MEASURE.
- E. UPON COMPLETION OF FINAL GRADING OPERATIONS.
- F UPON ESTABLISHMENT OF GROUND COVERS
- 16. THE CONTRACTOR SHALL PREPARE AND FOLLOW A PHASED METHOD OF CONSTRUCTION GRADING TO MINIMIZE THE AMOUNT OF EXPOSED BARE GROUND AT ANY ONE TIME. THE CONTRACTOR SHALL STABILIZE DISTURBED AREAS WITH TEMPORARY SEEDING AND RECEIVE APPROVAL FROM THE CITY BEFORE CONTINUING TO DISTURB ADDITIONAL AREAS.
- 17. FOLLOWING STRIPPING OPERATIONS, THE CONTRACTOR SHALL REMOVE EXISTING TOPSOIL AND STOCKPILE THE MATERIAL IN AN APPROVED AREA. STOCKPILES SHALL BE STABILIZED BY TEMPORARY SEEDING AND ENCIRCLED WITH SILT FENCE.
- 18. CONTRACTOR MUST INSTALL AND MAINTAIN THE EROSION AND SEDIMENT CONTROL MEASURES SHOWN ON THESE PLANS. IF THE ENGINEER DETERMINES THAT THE INSTALLATION OR THE MAINTENANCE IS INADEQUATE, THE CONTRACTOR MUST IMMEDIATELY CORRECT AT HIS EXPENSE. IF IT IS DETERMINED THAT ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES ARE NEEDED THE CONTRACTOR WILL BE DIRECTED TO INSTALL AND MAINTAIN THOSE MEASURES.

- 19. FOLLOWING THE FINAL REMOVAL OF ALL EROSION CONTROL MEASURES THE CONTRACTOR SHALL RE-GRADE AND RE-SEED ALL AREAS THAT
- 20. THE CONTRACTOR SHALL INSPECT THE LAND DISTURBANCE SITE AT LEAST ONCE EVERY SEVEN (7) DAYS AND WITHIN TWENTY-FOUR (24) HOURS FOLLOWING EACH RAINFALL EVENT OF 1/2" OR MORE WITHIN ANY TWENTY-FOUR (24) HOUR PERIOD. THE CONTRACTOR SHALL ALSO INSPECT AND ASSURE THAT ALL SEDIMENT CONTROL DEVICES ARE IN WORKING CONDITION PRIOR TO ANY FORECASTED RAINFALL.
- 21. THE CONTRACTOR SHALL REMOVE SEDIMENT FROM THE FLOW AREAS AND MAKE ALL NECESSARY REPAIRS TO MAINTAIN THE INTEGRITY OF THE SEDIMENT CONTROL MEASURES. SEDIMENT SHALL BE REMOVED ONCE IT REACHES 1/2 THE INSTALLED HEIGHT OF MEASURE.
- 22. SEDIMENT CONTROL MEASURES SHALL BE REMOVED ONCE 70 PERCENT OF THE PERMANENT COVER IS ESTABLISHED OVER 100 PERCENT OF THE TRIBUTARY AREA
- 23. SOME OF THE EROSION AND SEDIMENT CONTROL MEASURES, SUCH AS DIVERSION DIKES AND SEDIMENT TRAPS, WILL REQUIRE THE CONTRACTOR TO INSTALL, REMOVE, AND REINSTALL THE MEASURES AS CONSTRUCTION PROCEEDS. THE PHASING OF THIS WORK IS DEPENDENT ENTIRELY ON THE CONTRACTOR'S SCHEDULE, AND IS NOT SPECIFIED HEREIN. HOWEVER, THE CONTRACTOR SHALL COORDINATE THESE ACTIONS WITH THE ENGINEER AT THE TIMES ADJUSTMENTS ARE
- 24. STONE STABILIZED PADS SHALL BE CONSTRUCTED AT THE LOCATIONS SHOWN ON THE PLANS WHERE CONSTRUCTION AND PRIVATE VEHICULAR TRAFFIC WILL BE ALLOWED TO ENTER AND EXIT THE CONSTRUCTION SITE. CONSTRUCTION EQUIPMENT (INCLUDING PERSONAL VEHICLES) ARE NOT ALLOWED TO EXIT THE SITE DIRECTLY ONTO ARTERIAL OR COLLECTOR STREETS. ALL VEHICLES/CONSTRUCTION EQUIPMENT MUST USE THE STABILIZED CONSTRUCTION ENTRANCES SHOWN ON THE PLANS.
- 25. CONSTRUCTION ENTRANCES SHALL BE CONSTRUCTED PER THE CITY STANDARD DETAIL.
- 26. THE CONTRACTOR SHALL TEMPORARILY SEED AND MULCH ALL DISTURBED AREAS IF THERE HAS BEEN NO CONSTRUCTION ACTIVITY ON THEM FOR A PERIOD OF 14 CALENDAR DAYS. IF THE ENGINEER DETERMINES THAT A SITE HAS A HIGH POTENTIAL FOR EROSION BASED ON PREVIOUS INFORMATION SUBMITTED, HE MAY DIRECT THAT DISTURBED SOIL BE STABILIZED AFTER PERIODS OF CONSTRUCTION INACTIVITY OF MORE THAN FORTY-EIGHT (48) HOURS.

27. THE CONTRACTOR SHALL SEED OR HYDRO SEED IN ACCORDANCE WITH CITY SPECIFICATION FOR SEEDING AND/OR HYDROSEEDING

SEED MIXTURE TO BE AS FOLLOWS:

50% REGREEN STERILE WHEAT -APPLICATION RATE TOTAL SEED MIX 400LBS./ACRE 50% ANNUAL RYE

MULCH MUST BE HAY, BROME GRASS, OR SHREDDED HARDWOOD APPLIED AT A RATE OF 2 TONS PER ACRE AND CRIMPED INTO THE SOIL WITH A WEIGHTED NOTCHED DISC OR A MULCH ANCHORING TOOL TO PUNCH THE MULCH INTO THE SOIL, OR OTHER APPROVED METHOD. THE SEEDED AREAS SHALL BE INSPECTED BY THE ENGINEER TWO TO FOUR WEEKS AFTER SEEDING FOR ADEQUATE SEED GERMINATION, EROSION CONTROL AND WEED CONTROL. REPAIRS AND RESEEDING SHALL BE PERFORMED BY THE CONTRACTOR AT THE DIRECTION OF THE ENGINEER AT NO ADDITIONAL COST TO THE CITY. IF VEGETATIVE MEASURES ARE NOT EFFECTIVE WITHIN THIS TIME FRAME, CONTRACTOR MAY BE REQUIRED TO RESEED OR EMPLOY A NON-VEGETATIVE OPTION TO STABILIZE THE DISTURBED AREA.

- 28. IF SEEDING AND MULCH IS NOT EFFECTIVE, ADDITIONAL MULCH SHALL BE UNIFORMLY APPLIED AT A RATE OF 2 TONS PER ACRE AS SPECIFIED IN NOTE 27.
- 29. ALL SITES REMAINING UNDEVELOPED FOR MORE THAN ONE GROWING SEASON MUST INCLUDE PERMANENT SEED VEGETATIVE STABILIZATION. PERMANENT SEED MIXTURE SHALL BE PER CITY OF BELTON TECHNICAL SPECIFICATION S-715, AS SHOWN BELOW, UNLESS OTHERWISE NOTED IN PLANS AND APPROVED BY CITY.
 - A. 30% EACH OF ANY 3 VARIETIES OF TURF TYPE FINE LEAF
 - B. 10% EACH OF PERENNIAL RYE
 - C. TOTAL APPLICATION RATE SHALL BE 8 POUNDS/1,000 SQ. FEET.
- 30. CONTRACTOR SHALL SUBMIT COMPLETED EROSION INSPECTION REPORTS WEEKLY AND WITHIN 72 HOURS AFTER EVERY 1/2" RAIN EVENT TO THE CITY OF BELTON ENGINEERING DIVISION.

MONTH TO STORY

PUBLIC WORKS

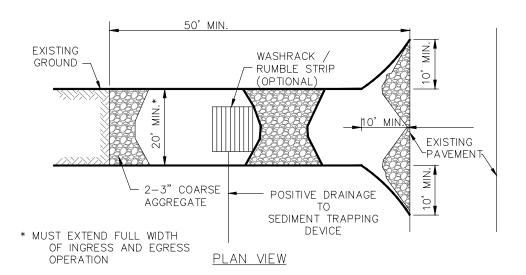
2021 Details

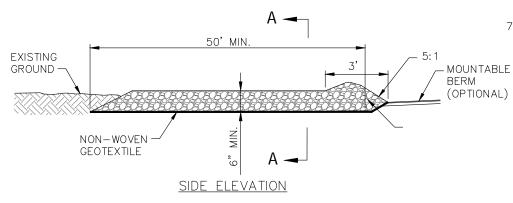
City of **BELTON** Missouri

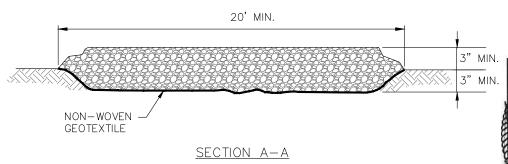
EROSION CONTROL NOTES

SCALE: NOT TO SCALE > 05-26-15 NOTE 30.

DETAIL NO: ERO-001 07-26-2021







TEMPORARY CONSTRUCTION ENTRANCE

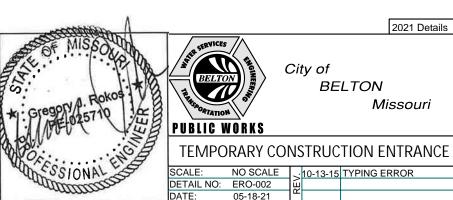
TEMPORARY CONSTRUCTION ENTRANCE NOTES:

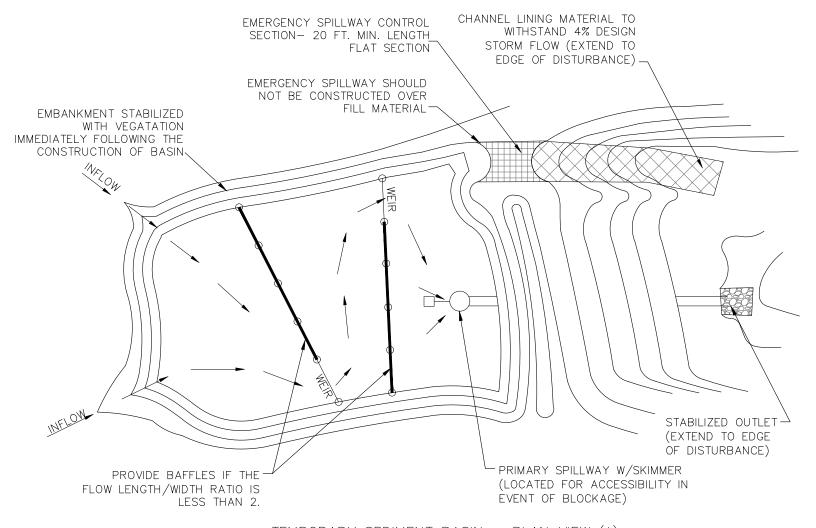
- AVOID LOCATING ON STEEP SLOPES OR AT CURVES ON PUBLIC ROADS.
- 2. REMOVE ALL VEGETATION AND OTHER UNSUITABLE MATERIAL FROM THE FOUNDATION AREA, GRADE, AND CROWN FOR POSITIVE DRAINAGE.
- 3. IF SLOPE TOWARDS THE PUBLIC ROAD EXCEEDS 2%, CONSTRUCT A 6- TO 8-INCH HIGH RIDGE WITH 3H:1V SIDE SLOPES ACROSS THE FOUNDATION APPROXIMATELY 15 FEET FROM THE EDGE OF THE PUBLIC ROAD TO DIVERT RUNOFF FROM IT.
- 4. INSTALL PIPE UNDER THE ENTRANCE IF NEEDED TO MAINTAIN DRAINAGE DITCHES ALONG PUBLIC ROADS.
- PLACE STONE TO DIMENSIONS AND GRADE AS SHOWN ON PLANS. LEAVE SURFACE SLOPED FOR DRAINAGE.
- 6. DIVERT ALL SURFACE RUNOFF AND DRAINAGE FROM THE ENTRANCE TO A SEDIMENT CONTROL DEVICE.
- 7. IF WET CONDITIONS ARE ANTICIPATED, PLACE GEOTEXTILE FABRIC ON THE GRADED FOUNDATION TO IMPROVE STABILITY.

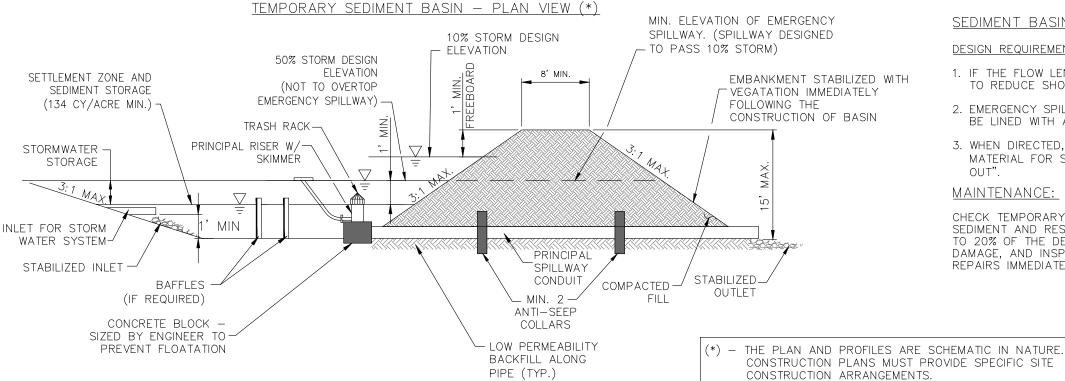
EXISTING PAVEMENT

MAINTENANCE:

RESHAPE PAD AS NEEDED FOR DRAINAGE AND RUNOFF CONTROL. TOP DRESS WITH CLEAN STONE AS NEEDED.







SEDIMENT BASIN DESIGN SUMMARY (**)						
DESIGN ITEM	BASIN #1	BASIN #2	UNITS	NOTES		
SITE DATA:						
TRIBUTARY DRAINAGE AREA TO POND			ACRES			
50% (2 YR) DESIGN FLOW			CFS			
4% (25 YR) DESIGN FLOW			CFS			
POND DATA:			-			
MINIMUM SEDIMENT STORAGE VOLUME			CU YD	134 CY/ACRE REQUIRED MINIMUM		
PROVIDED SEDIMENT STORAGE VOLUME			CU YD	104 OT/ MORE REGORDED WHITIMOW		
BOTTOM ELEVATION			FT			
SEDIMENT CLEANOUT ELEVATION			FT	ELEVATION EQUAL TO 20% OF ORIGINAL DESIGN VOLUME		
TOP OF RISER ELEVATION			FT	TOP OF DRY STORAGE VOLUME		
EMERGENCY SPILLWAY ELEVATION			FT	AT OR ABOVE Q-2 ELEVATION. 1.0 FT MIN ABOVE PRINCIPAL SPILLWAY		
TOP OF DAM ELEVATION			FT	1.0 FT MIN ABOVE Q-25 ELEVATION		
BASIN SHAPE DATA:						
A = AREA AT NORMAL POOL			SF			
L = LENGTH OF FLOW PATH			FT			
WE = EFFECTIVE WIDTH = A/L			FT			
LENGTH TO WIDTH RATIO = L/WE				IF LENGTH/WIDTH RATIO IS LESS THAN 2, A MIN. OF 2 BAFFLES ARE REQUIRED		
PRINCIPAL SPILLWAY DATA: RISER PIPE DIA				4F" MINI CIZE FOR A VEAR FLOW MINIMUM		
			IN	15" MIN. SIZE FOR 2 YEAR FLOW MINIMUM		
BARREL PIPE DIA			IN	15" MIN. SIZE FOR 2 YEAR FLOW MINIMUM		
CONCRETE BASE SIZE FOR RISER PIPE			CY	SIZE TO PREVENT FLOTATION. 1.25 SAFETY FACTOR REQUIRED		
SKIMMER SIZE				DESIGNER TO PROVIDE SPECIFIC DETAILS AND CALCULATIONS PER APPLICATION		
EMERGENCY SPILLWAY DATA:			1	TO DEWATER IN 48 TO 72 HOURS		
DESIGN DEPTH IN SPILLWAY			LT.			
DESIGN VELOCITY IN SPILLWAY			FT/SEC			
LINING MATERIAL			1 1/3EC	DESIGNER TO PROVIDE SPECIFIC DETAILS AND CALCULATIONS PER APPLICATION		
LINING MATERIAL				DESIGNEN TO PROVIDE SPECIFIC DETAILS AND CALCULATIONS PER APPLICATION		
(**) — REQUIRED ON ALL SEDIMENT BASIN PLAN SHEETS						
() REGOINED ON ALL SEDIMENT DI	TOTAL LEAD	OTTLL TO				

SEDIMENT BASIN NOTES:

DESIGN REQUIREMENTS:

- 1. IF THE FLOW LENGTH TO WIDTH RATIO IS LESS THAN 2, INTERIOR BAFFLES SHALL BE PROVIDED TO REDUCE SHORT-CIRCUITING OF THE BASIN.
- 2. EMERGENCY SPILLWAYS TO BE LOCATED IN A NON-FILL LOCATION WHEN FEASIBLE AND SHALL BE LINED WITH A NON-ERODIBLE MATERIAL SUCH AS RIPRAP OR TURF REINFORCEMENT MAT.
- 3. WHEN DIRECTED, SEDIMENT BASINS SHALL BE FENCED USING CONSTRUCTION FENCE OR OTHER MATERIAL FOR SAFETY REASONS AND INCLUDE WARNING SIGNS, READING: "DANGER - KEEP

MAINTENANCE:

CHECK TEMPORARY SEDIMENT BASINS AFTER PERIODS OF SIGNIFICANT RUNOFF. REMOVE SEDIMENT AND RESTORE THE BASIN TO ITS ORIGINAL DIMENSIONS WHEN SEDIMENT ACCUMULATES TO 20% OF THE DESIGN DEPTH. CHECK THE EMBANKMENT, SPILLWAYS AND OUTLET FOR EROSION DAMAGE, AND INSPECT THE EMBANKMENT FOR PIPING AND SETTLEMENT. MAKE ALL NECESSARY REPAIRS IMMEDIATELY. REMOVE ALL TRASH AND OTHER DEBRIS FROM RISER AND POOL AREA.

PUBLIC WORKS WINDLESS OF THE PROPERTY OF TH SCALE: NOT TO SCALE

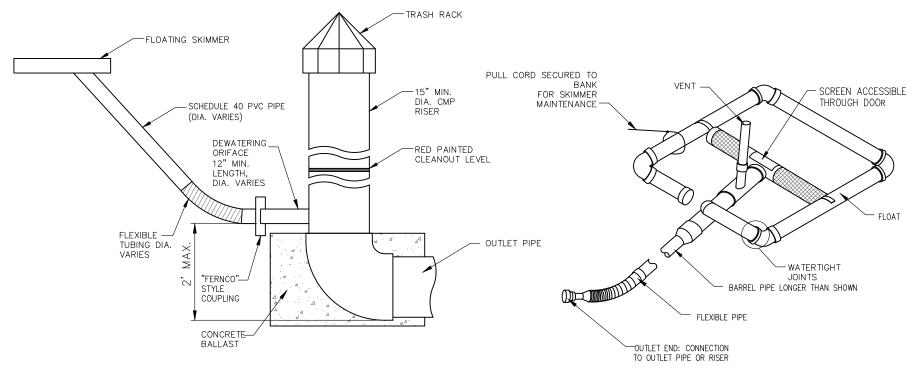
City of **BELTON** Missouri

EMPORARY SEDIMENT BASIN (CROSS SECTION)

2021 Details

DETAIL NO: ERO-003 07-26-2021

TEMPORARY SEDIMENT BASIN - CROSS SECTION (*)



TO INCREASE FLOW PATH CONSTRUCT 1' DEEP WEIRS AT ALTERNATING ENDS OF EACH BAFFLE. WEIR WIDTH SHOULD BE ADJUSTED FOR EXPECTED FLOW (MIN. 4'). / STABLE IMPERVIOUS ROCK DAM 3"-6" CLEAN AGGREGATE

OPTION A - ROCK WITH WEIR

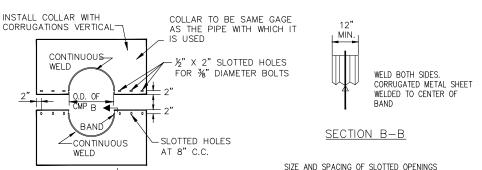
OPTION B - COIR FIBER

BAFFLE DETAILS

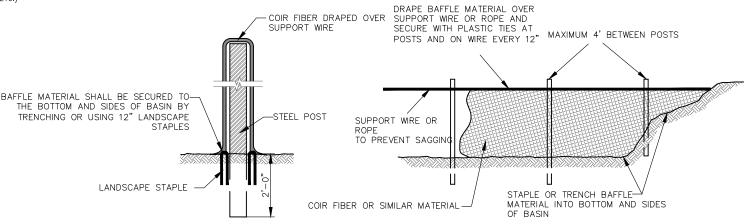
PRINCIPAL SPILLWAY DETAIL

SKIMMER DETAIL (TYP.)

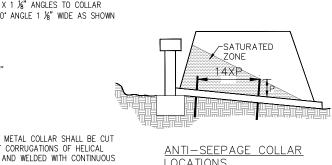
* DESIGNER TO PROVIDE SPECIFIC DETAILS PER APPLICATION (E.G. PIPE SIZES, SCREEN SIZES, PERFORATION, ETC.) ÀS REQUIRED.



BAND OF HELICAL PIPE - METAL COLLAR TO BE WELDED TO CENTER OF HELICAL PIPE RAND SHALL BE THE SAME AS SHOWN FOR CM



PARTIAL ELEVATION



ANTI-SEEPAGE COLLAR NOTES:

CONNECTIONS BETWEEN THE ANTI-SEEPAGE COLLAR AND THE BARREL MUST BE WATERTIGHT.

_12" MI<u>N</u>,

- $\mathsf{P} = \mathsf{PROJECTION}$ DISTANCE. SIZED AS REQUIRED TO ACHIEVE AT LEAST A 10% INCREASE IN SEEPAGE
- 3. 14XP = MAX. SPACING BETWEEN COLLARS.
- 4. COLLARS SHALL GENERALLY BE PLACED IN THE MIDDLE THIRD OF THE EMBANKMENT, AND WITHIN THE SATURATED ZONE.
- ALL MATERIALS TO BE IN ACCORDANCE WITH CONSTRUCTION MATERIAL SPECIFICATIONS.
- WHEN SPECIFIED ON THE PLANS, COATING OF COLLARS SHALL BE IN ACCORDANCE WITH CONSTRUCTION MATERIAL SPECIFICATIONS
- 7. UNASSEMBLED COLLARS SHALL BE MARKED BY PAINTING OR TAGGING TO IDENTIFY MATCHING PAIRS.

- 8. THE LAP BETWEEN THE TWO HALF SECTIONS AND BETWEEN THE PIPE AND CONNECTING BAND SHALL BE CAULKED WITH ASPHALT MASTIC AT THE TIME OF INSTALL ATION.
- 9. EACH COLLAR SHALL BE FURNISHED WITH TWO (2) $\frac{1}{2}$ " DIAMETER RODS WITH STANDARD TANK LUGS FOR CONNECTING THE COLLARS TO THE PIPE.
- DETAILS SHOWN MAY BE USED PROVIDING EQUAL WATER TIGHTNESS IS MAINTAINED AND DETAILED DRAWINGS ARE SUBMITTED AND APPROVED BY THE ENGINEER PRIOR TO DELIVERY.
- 11. TWO OTHER TYPES OF ANTI-SEEP COLLARS ARE:
 - A. CORRUGATED METAL, SIMILAR TO ABOVE, EXCEPT SHOP WELDED TO A 4 FT. SECTION OF THE PIPE AND CONNECTED TO THE PIPE WITH CONNECTING BANDS.
 - B. CONCRETE, 6 INCHES THICK, FORMED AROUND

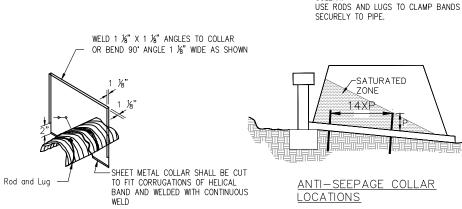
10. FOR BANDS AND COLLARS, MODIFICATION OF THE

THE PIPE WITH #3 REBAR SPACED 15".

City of **BELTON** PUBLIC WORKS TEMPORARY SEDIMENT BASIN WOOD STONAL ENGINEER SCALE: NOT TO SCALE DETAIL NO: ERO-004 07-26-2021

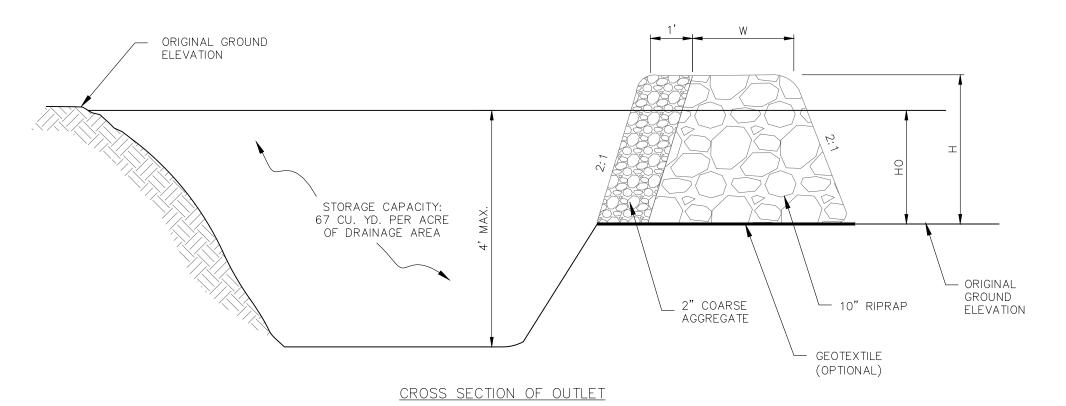
2021 Details

Missouri



ISOMETRIC VIEW

CORRUGATED METAL ANTI-SEEPAGE COLLAR DETAIL



10" RIPRAP LENGTH DRAINAG	IN FEET = 6 X GE AREA IN AC.
	DIVERSION DIKE
2" COARSE AGGREGATE	
EXCAVATED AREA GEOTEXTILE (OPTIONAL)	(*) - THE PLAN AND PROFILES ARE SCHEMATIC IN NATURE.CONSTRUCTION PLANS MUST PROVIDE SPECIFIC SITE
OUTLET (PERSPECTIVE VIEW)	CONSTRUCTION ARRANGEMENTS.

OUTLET (PERSPECTIVE VIEW)

TEMPORARY SEDIMENT TRAP (*)

_H	H _O _	W
1.5	0.5	2.0
2.0	1.0	2.0
2.5	1.5	2.5
3.0	2.0	2.5
3.5	2.5	3.0
4.0	3.0	3.0
4.5	3.5	4.0
5.0	4.0	4.5

TEMPORARY SEDIMENT TRAP NOTES:

- 1. THE AREA UNDER THE EMBANKMENT SHALL BE CLEARED, GRUBBED, AND STRIPPED OF ANY VEGETATION AND ROOT MAT.
- 2. FILL MATERIAL FOR THE EMBANKMENT SHALL BE FREE OF ROOTS OR OTHER WOODY VEGETATION, ORGANIC MATERIAL, LARGE STONES, AND OTHER OBJECTIONABLE MATERIAL. THE EMBANKMENT SHOULD BE COMPACTED IN 6-INCH LAYERS BY TRAVERSING WITH CONSTRUCTION EQUIPMENT.
- 3. THE EARTHEN EMBANKMENT SHALL BE STABILIZED WITH TEMPORARY OR PERMANENT VEGETATION IMMEDIATELY AFTER INSTALLATION.
- 4. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT TO MINIMIZE EROSION AND WATER POLLUTION.
- 5. THE STRUCTURE SHALL BE REMOVED AND THE AREA STABILIZED WHEN THE UPSLOPE DRAINAGE AREA HAS BEEN STABILIZED.
- 6. ALL CUT AND FILL SLOPES SHALL BE 2H: 1V OR FLATTER, EXCEPT FOR EXCAVATED, WET STORAGE AREAS WHICH MAY BE AT A MAXIMUM 1H: 1V GRADE.

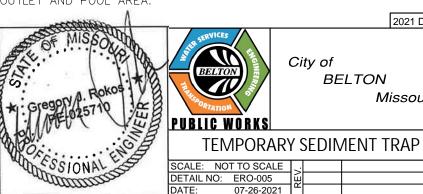
MAINTENANCE:

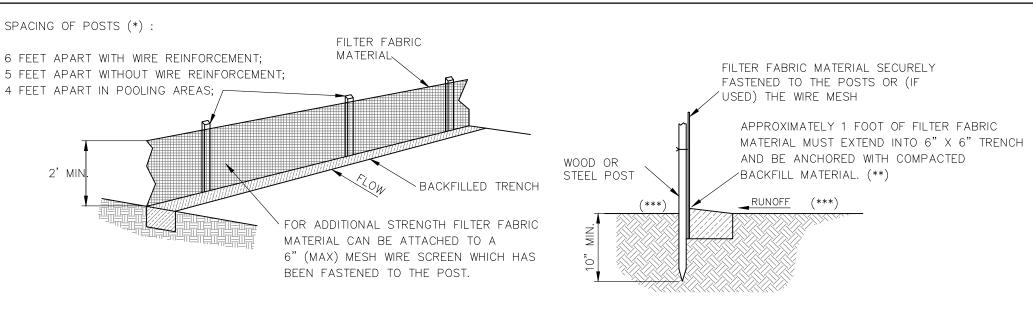
CHECK SEDIMENT TRAPS AFTER PERIODS OF SIGNIFICANT RUNOFF. REMOVE SEDIMENT AND RESTORE THE TRAP TO ITS ORIGINAL DIMENSIONS WHEN SEDIMENT ACCUMULATES TO 20% OF THE DESIGN DEPTH. CHECK THE EMBANKMENT AND OUTLET FOR EROSION DAMAGE, AND INSPECT THE EMBANKMENT FOR PIPING AND SETTLEMENT. MAKE ALL NECESSARY REPAIRS IMMEDIATELY. REMOVE ALL TRASH AND OTHER DEBRIS FROM OUTLET AND POOL AREA.

2021 Details

Missouri

BELTON





SPECIFICATIONS FOR SILT FENCE FABRIC

PHYSICAL PROPERTY	MINIMUM_ REQUIREMENTS
FILTERING EFFICIENCY	85%
TENSILE STRENGTH AT 20% (MAXIMUM) ELONGATION: STANDARD STRENGTH = HIGH STRENGTH =	30 LB/LINEAR INCH 50 LB/LINEAR INCH

(*) POSTS

- WITHOUT WIRE

- REINFORCEMENT 2" X 2"
 (NOMINAL) WOOD OR 1.0
 LB/LINEAR FOOT STEEL

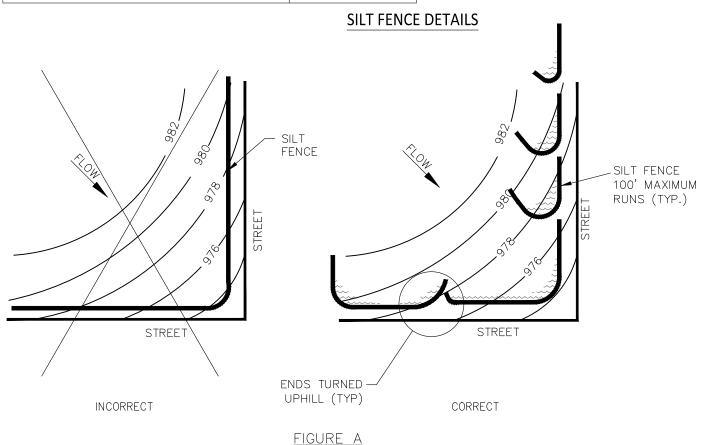
 WITH WIRE REINFORCEMENT
 1.33 LB/LINEAR FOOT STEEL
- (**) TRENCHING WILL ONLY BE ALLOWED FOR SMALL OR DIFFICULT INSTALLATION, WHERE SLICING MACHINE CANNOT BE REASONABLY USED.
- (***)—DRIVE ALONG EACH SIDE OF SILT FENCE 2 TO 4 TIMES WITH DEVICE EXERTING 60 PSI OR GREATER AFTER MATERIAL IS SLICED INTO THE ROUND TO ACHIEVE 100% COMPACTION.

SILT FENCE INSTALLATION NOTES:

- 1. IN ORDER TO CONTAIN WATER, THE ENDS OF THE SILT FENCE MUST BE TURNED UPHILL (FIGURE A).
- 2. LONG PERIMETER RUNS OF SILT FENCE MUST BE LIMITED TO 100'. RUNS SHOULD BE BROKEN UP INTO SEVERAL SMALLER SEGMENTS TO MINIMIZE WATER CONCENTRATIONS (FIGURE A).
- 3. LONG SLOPES SHOULD BE BROKEN UP WITH INTERMEDIATE ROWS OF SILT FENCE TO SLOW RUNOFF VELOCITIES.
- 4. LIMIT PONDING HEIGHT TO 24".
- 5. ATTACH FABRIC TO UPSTREAM SIDE OF POST.
- 6. SINK POSTS AS FAR BELOW GROUND AS FABRIC ABOVE GROUND.

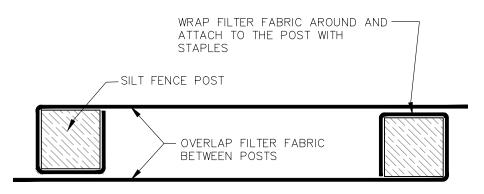
MAINTENANCE:

REMOVE SILT DEPOSITS WHEN THEY EXCEED 1/3 OF THE FENCE HEIGHT. REPLACE ALL BROKEN. RIPPED, DEGRADED OR DAMAGED SECTIONS OF FENCE IMMEDIATELY WITH NEW FENCING, INCLUDING ADEQUATE OVERLAP AT ENDS TO PREVENT LEAKAGE.

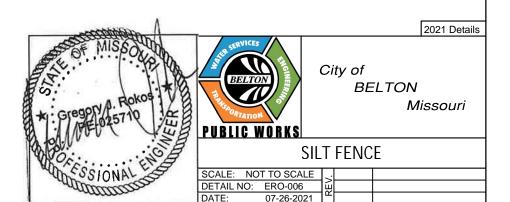


FLOW
6' - 10'

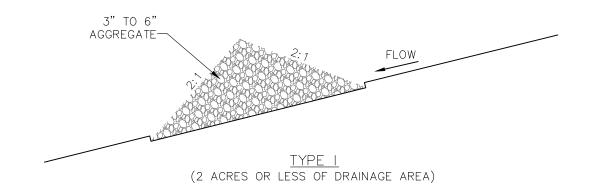
INSTALL SILT FENCE AT THE TOP OF THE SLOPE TO SLOW VELOCITY AND VOLUME OF WATER AND 6' TO 10' AWAY FROM THE TOW TO CREATE A SEDIMENT STORAGE AREA.

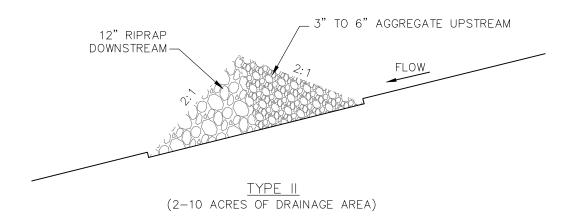


JOINING FENCE SECTIONS



SILT FENCE LAYOUT

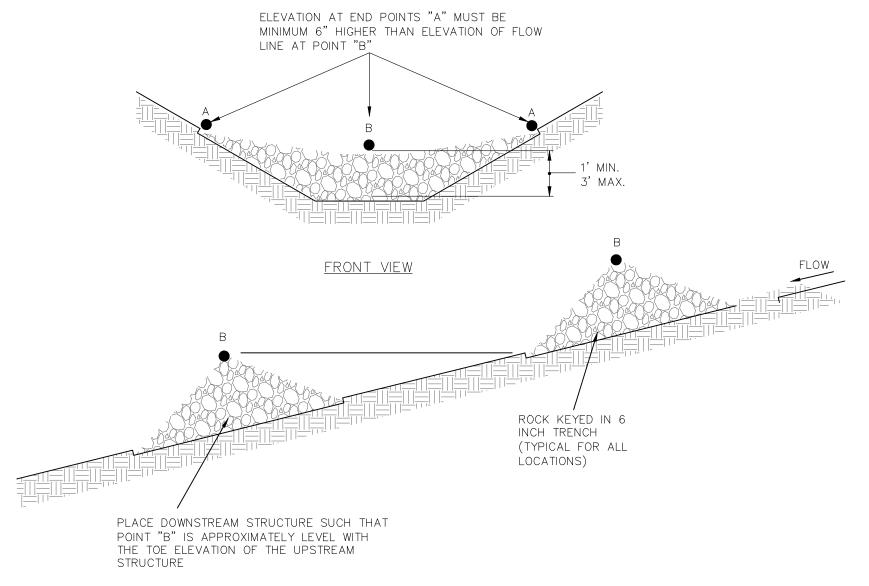




ROCK DITCH CHECK (*)

(*) ALTERNATIVE TYPES OF DITCH CHECK:

- 1. FOAM DIKE
- 2. GEORIDGE
- 3. WATTLES (INSTALL PER MANUFACTURER'S INSTRUCTIONS).



SPACING BETWEEN CHECK DAMS (ALL TYPES)

NOTES:

1. ROCK CHECK DAMS SHALL BE USED ONLY FOR DRAINAGE AREAS LESS THAT 10 ACRES UNLESS APPROVED BY THE CITY

MAINTENANCE:

REMOVE SILT WHEN IT ACCUMULATES ½ THE HEIGHT OF THE DITCH CHECK. IF UNITS ARE DAMAGED OR DISLODGED DURING THE SEDIMENT REMOVAL PROCESS, REPAIR AND RE-ESTABLISH CONTINUITY.

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City of BELTON

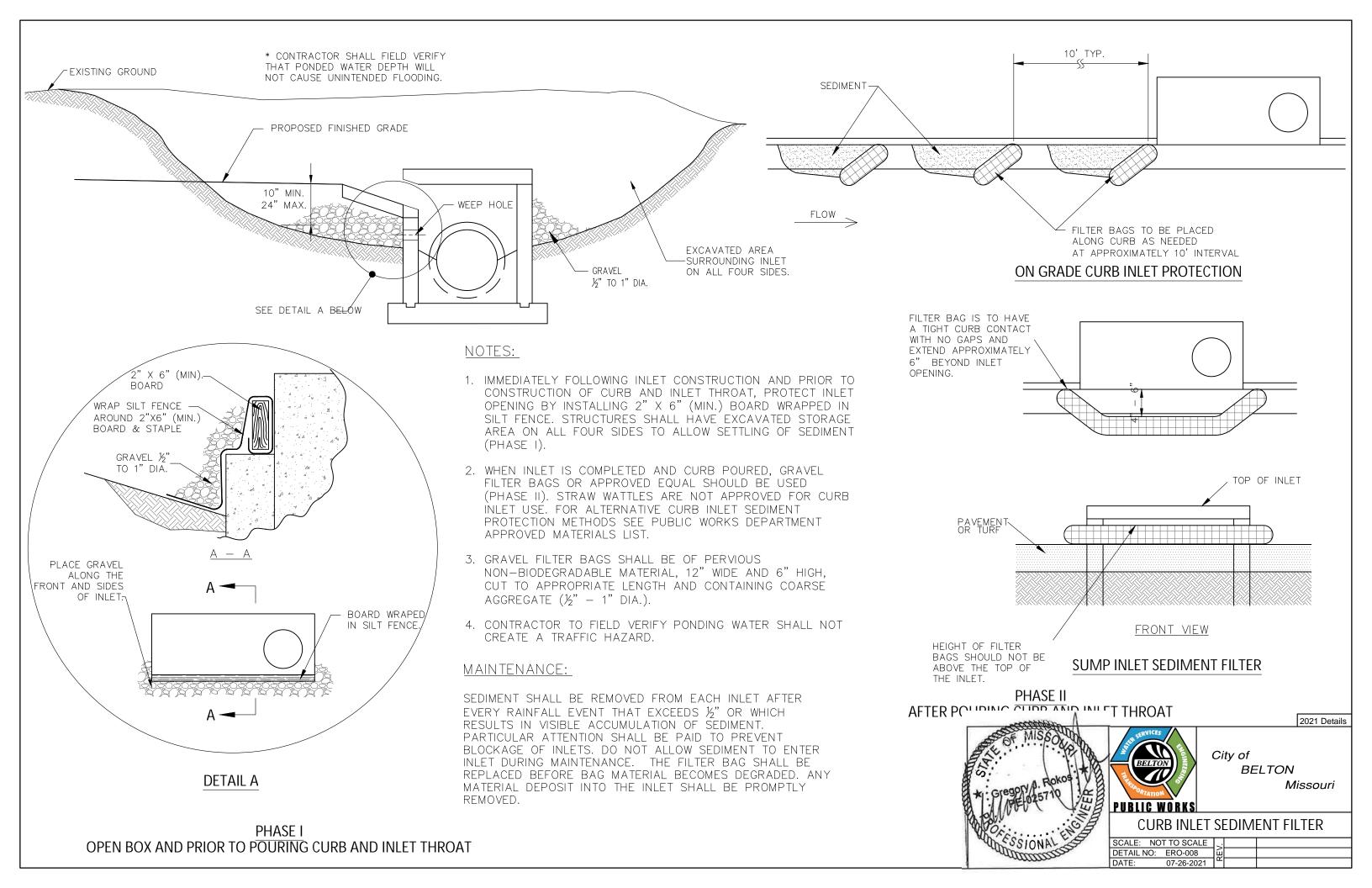
2021 Details

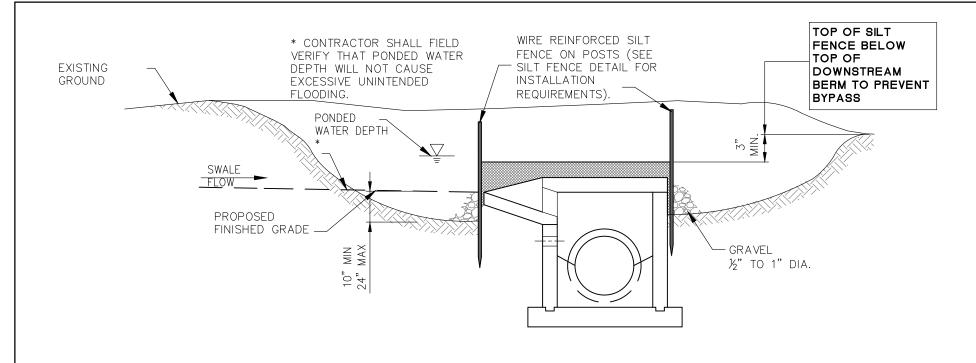
Missouri

DITCH CHECK

SCALE: NOT TO SCALE
DETAIL NO: ERO-007
DATE: 07-26-2021

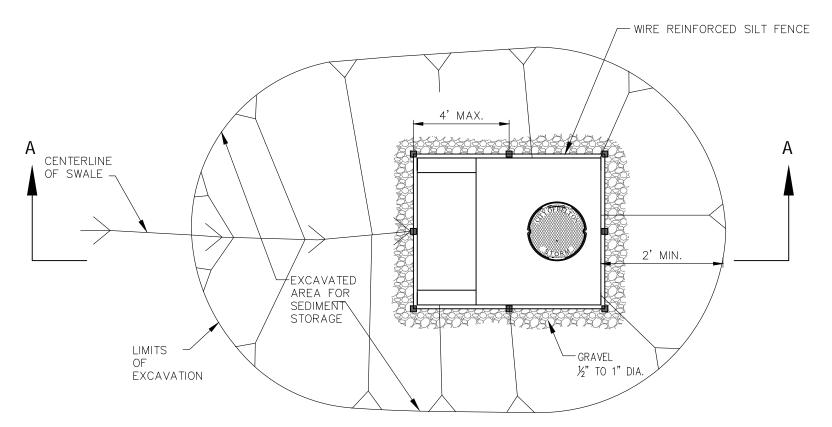
DITCH CHECK





SECTION A-A

<u>PLAN</u>

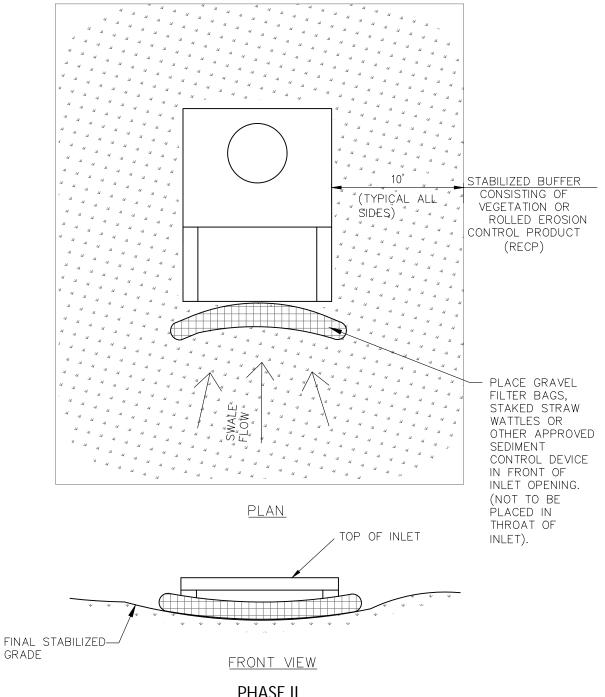


AREA INLET PROTECTION NOTES:

1. INLET PROTECTION TO BE INSTALLED IMMEDIATELY AFTER BOX IS

GRADE

- 2. WIRE REINFORCED SILT FENCE SHALL REMAIN IN PLACE UNTIL EXCAVATED AREA IS REMOVED.
- 3. BACKFILL EXCAVATED AREA ONLY AFTER FINAL GRADING OF THE SITE. STABILIZATION OF THE SITE IS TO IMMEDIATELY FOLLOW.
- 4. WIRE REINFORCED SILT FENCE MAY BE SUBSTITUTED BY SILT FENCE WRAPPED AROUND WOOD FRAME.



PHASE II (AREA INLETS ARE AT FINAL GRADE AND EXISTING INLETS)

MAINTENANCE:

CLEAN OUT DEPOSITED SEDIMENT WHEN AVAILABLE STORAGE HAS BEEN REDUCED BY 20%. PARTICULAR ATTENTION SHALL BE PAID TO PREVENT BLOCKAGE OF INLETS OR IN CASES WHEN RE-SUSPENSION OF CAPTURED SEDIMENT IS LIKELY.

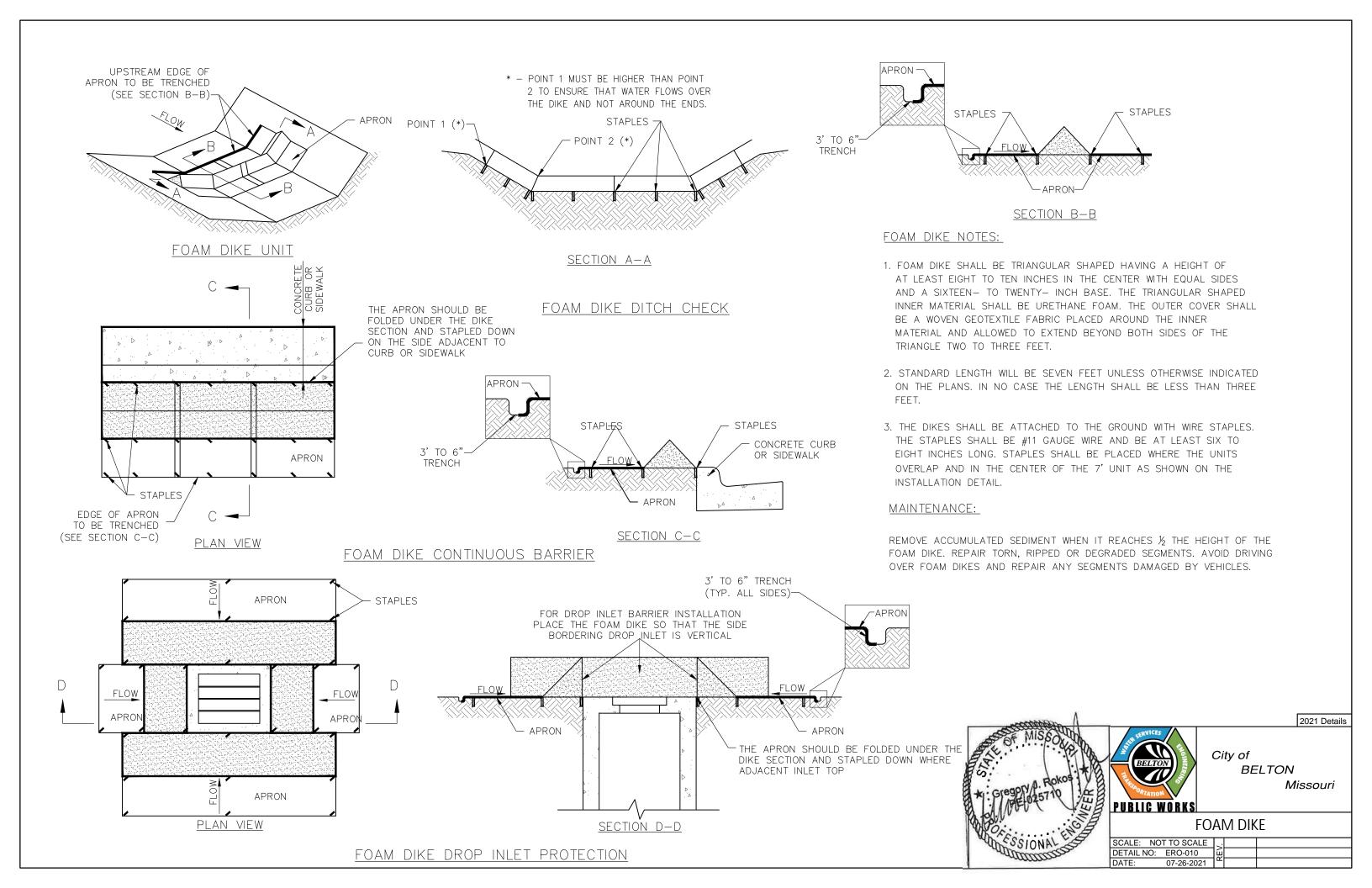
PHASE I

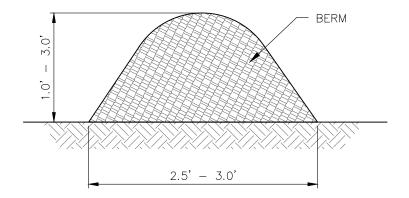
(ALL OPEN BOXES AND INLETS ARE NOT AT FINAL GRADE)

2021 Details City of **BELTON** Missouri PUBLIC WORKS AREA INLET PROTECTION SCALE: NOT TO SCALE

DETAIL NO: ERO-009

07-26-2021





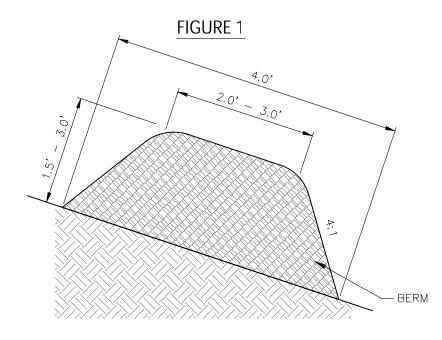


FIGURE 2

COMPOST OR WOOD MULCH BERM

NOTES:

- THE SEDIMENT CONTROL BERM SHALL BE PLACED UNCOMPACTED IN A WINDROW AT LOCATIONS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
- 2. PARALLEL TO THE BASE OF THE SLOPE, OR AROUND THE PERIMETER OF OTHER AFFECTED AREAS, CONSTRUCT A 1 TO 3 FOOT HIGH BY 2.5 TO 3 FOOT WIDE BERM (SEE FIGURE 1). FOR MAXIMUM WATER TREATMENT ABILITY OR FOR STEEP SLOPES, CONSTRUCT A 1.5 TO 3 FOOT HIGH TRAPEZOIDAL BERM THAT IS APPROXIMATELY 2 TO 3 FOOT WIDE AT THE TOP AND A MINIMUM OF 4 FEET WIDE AT THE BASE (SEE FIGURE 2). IN EXTREME CONDITIONS, OR WHERE SPECIFIED BY THE ENGINEER, A SECOND BERM SHALL BE CONSTRUCTED AT THE TOP OF THE SLOPE. ENGINEER WILL SPECIFY BERM REQUIREMENTS.
- 3. IF BERM IS TO BE LEFT AS PERMANENT OR PART OF THE NATURAL LANDSCAPE, THE COMPOST BERM MAY BE SEEDED DURING APPLICATION FOR PERMANENT VEGETATION.
- 4. DO NOT USE COMPOST BERMS IN ANY RUNOFF CHANNELS OR CONCENTRATED FLOW AREAS.
- 5. WOOD MULCH SHALL CONSIST OF TREE AND SHRUB DEBRIS RESULTING FROM CLEARING AND GRUBBING AND SHALL BE GROUND BY THE MECHANICAL MEANS SUCH AS A CHIPPER, HAMMERMILL, TUB GRINDER OR OTHER APPROVED METHOD. MULCH SIZING VARIES WITH A MAXIMUM WIDTH OF 2" AND A MAXIMUM LENGTH OF 10".

