

SECTION 02101 - TEMPORARY EROSION AND DUST CONTROL

PART 1 - GENERAL

1.1 DESCRIPTION

- A. Temporary Erosion and Dust Control measures must meet the current Town of Fortville Storm Water ordinance and the Indiana Department of Environmental Management Storm Water Pollution Prevention Plan (SWPP) requirements.
- B. This item shall consist of temporary control measures as shown on the plans or as ordered by the Town during the life of a contract to control water pollution, soil erosion, and siltation through the use of berms, dikes, dams, sediment basins, fiber mats, gravel, mulches, grasses, slope drains, and other erosion control devices or methods.
- C. Temporary erosion control measures contained herein shall be coordinated with the permanent erosion control measures specified as part of this contract to the extent practical to assure economical, effective, and continuous erosion control throughout the construction period.
- D. Temporary control may include work outside the construction limits such as borrow pit operations, equipment, and material storage sites, waste areas, and temporary plant sites.
- E. Erosion control design for crossing a legal drain shall be approved and constructed per the latest standards of the Hancock County Surveyor's Office.

1.2 SUBMITTALS

Submit erosion and dust control plans to the Town Superintendent for review and approval.

PART 2 - PRODUCTS

2.1 GRASS

Grass which will not compete with the grasses sown later for permanent cover shall be a quick-growing species (such as ryegrass, Italian ryegrass, or cereal grasses) suitable to the area providing a temporary cover.

2.2 MULCHES

Mulches may be hay, straw, fiber mats, netting, bark, wood chips, or other suitable material reasonably clean and free of noxious weeds and deleterious materials.

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2.3 FERTILIZER

Fertilizer shall be a standard 10-10-2 commercial grade and shall conform to all federal and state regulations and to the standards of the Association of Official Agricultural Chemists.

2.4 STRAW BALE DIKE

Straw bale dikes, as illustrated in Detail 02101-A, shall be used to prevent soil erosion at all stream or ditch crossings. Individual straw bale dike locations are indicated on the site plans.

2.5 SLOPE DRAINS

Where construction disturbs grassy slopes equal to or steeper than 3:1 the slope shall be protected with an erosion control mat as illustrated in Details 2101B and 2101C. Slope drains may be constructed of pipe, fiber mats, rubber, Portland cement concrete, bituminous concrete or other materials that will adequately control erosion.

2.6 SILT FENCING

Silt fencing, as illustrated in Detail 02101-D, shall be used to prevent soil erosion at the top of slope as indicated on the site plans.

2.7 OTHER

All other methods and materials shall meet commercial grade standards and shall be approved by the Town before being incorporated into the project.

PART 3 - EXECUTION

3.1 GENERAL

- A. In the event of conflict between these requirements and pollution control laws, rules, or regulations of other federal, state, or local agencies, the more restrictive laws, rules, or regulations shall apply.
- B. The Contractor shall be responsible for compliance with construction practices and operations, to the extent of the construction work.

3.2 SCHEDULE

Prior to the start of construction, the Contractor shall submit schedules for accomplishment of temporary and permanent erosion control work, as are applicable for clearing and grubbing, grading, construction, paving, and structures at watercourses. The

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Contractor shall also submit a proposed method of erosion and dust control on haul roads and borrow pits and a plan for disposal of waste materials. Work shall not be started until the erosion control schedules and methods of operations for the applicable construction have been accepted by the Town.

3.3 AUTHORITY OF TOWN

The Town has the authority to limit the surface area of erodible earth material exposed by clearing and grubbing, to limit the surface area of erodible earth material exposed by excavation, borrow, and fill operations, and to direct the Contractor to provide immediate permanent or temporary pollution control measures to minimize contamination of adjacent streams or other watercourses, lakes, ponds, or other areas of water impoundment.

3.4 CONSTRUCTION DETAILS

- A. The Contractor will be required to incorporate all permanent erosion control features into the project at the earliest practicable time as outlined in the accepted schedule. Except where future construction operations will damage slopes, the Contractor shall perform the permanent seeding and mulching and other specified slope protection work in stages as soon as substantial area of exposed slopes can be made available. Temporary erosion and pollution control measures will be used to correct conditions that develop during construction that were not foreseen during the design state; that are needed prior to installation of permanent control features; or that are needed temporarily to control erosion that develops during normal construction practices but are not associated with permanent control features on the project.
- B. Where erosion is likely to be a problem, clearing and grubbing operations should be scheduled and performed so that grading operations and permanent erosion control features can follow immediately thereafter if the project conditions permit; otherwise, temporary erosion control measures may be required between successive construction stages.
- C. The Town will limit the area of clearing and grubbing, excavation, borrow, and embankment operations in progress, commensurate with the Contractor's capability and progress in keeping the finish grading, mulching, seeding, and other such permanent control measures current in accordance with the accepted schedule. Should seasonal limitations make such coordination unrealistic, temporary erosion control measures shall be taken immediately taken to the extent feasible and justified.
- D. In the event that temporary erosion and pollution control measures are required due to the Contractor's negligence, carelessness, or failure to install permanent controls as scheduled or as ordered by the Town, such work shall be performed by the Contractor at his/her own expense.

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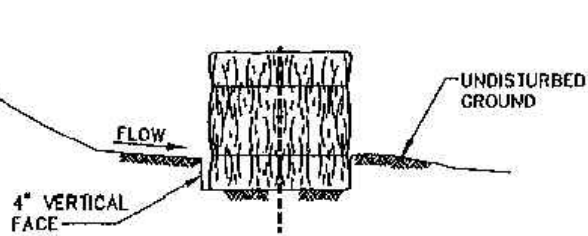
- E. The Town may increase or decrease the area of erodible earth material to be exposed at one time as determined by analysis of project conditions.
- F. The erosion control features installed by the Contractor shall be acceptably maintained by the Contractor during the construction period.
- G. Whenever construction equipment must cross watercourses at frequent intervals, and such crossings can adversely affect the sediment levels, temporary structures shall be provided.
- H. Pollutants such as fuels, lubricants, bitumen, raw sewage, wash water from concrete mixing operations, and other harmful materials shall not be discharged into or near rivers, streams, and impoundments or into natural or manmade channels leading thereto.

PART 4 - FIGURES

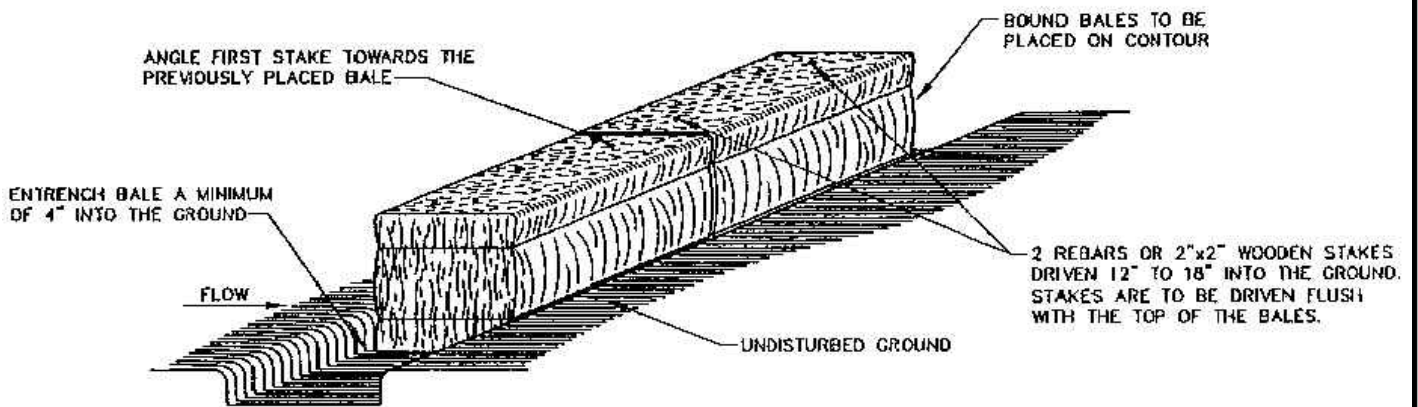
4.1 STANDARD EROSION DETAILS

<u>FIGURE</u>	<u>DESCRIPTION</u>
2101-A	Straw Bale Anchoring & Bedding Detail
2101-B	Erosion Control Mat - Staple Guide
2101-C	Erosion Control Mat - Slope Detail
2101-D	Silt Fence Detail
2101-D1A	Silt Fence Notes

END OF SECTION 02101



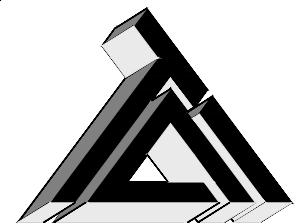
BEDDING DETAIL



ANCHORING DETAIL

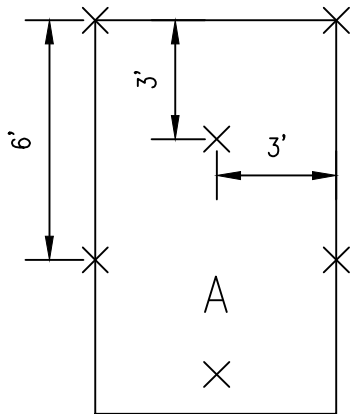
STRAW BALE ANCHORING & BEDDING DETAIL

SCALE: NONE

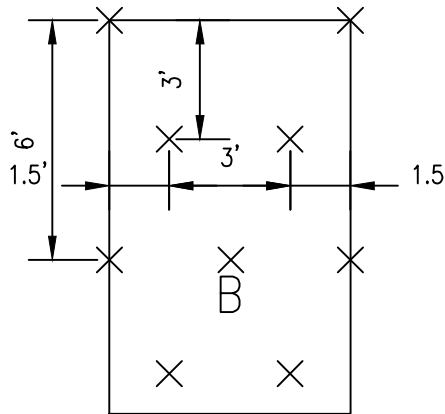


TRIAD ASSOCIATES INC.
 5835 LAWTON LOOP EAST DRIVE
 INDIANAPOLIS, INDIANA 46216
 PHONE: 317-377-5230 FAX: 317-377-5241

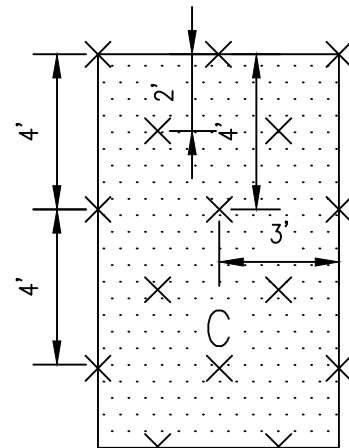
2101-A



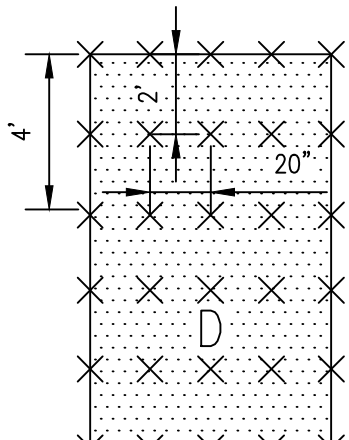
1 STAPLE PER SQ. YD.



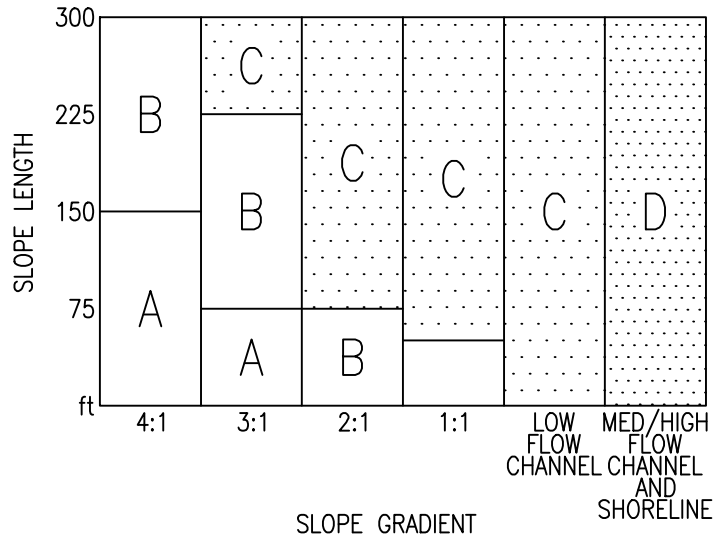
1.5 STAPLES PER SQ. YD.



2 STAPLES PER SQ. YD.



3.5 STAPLES PER SQ. YD.

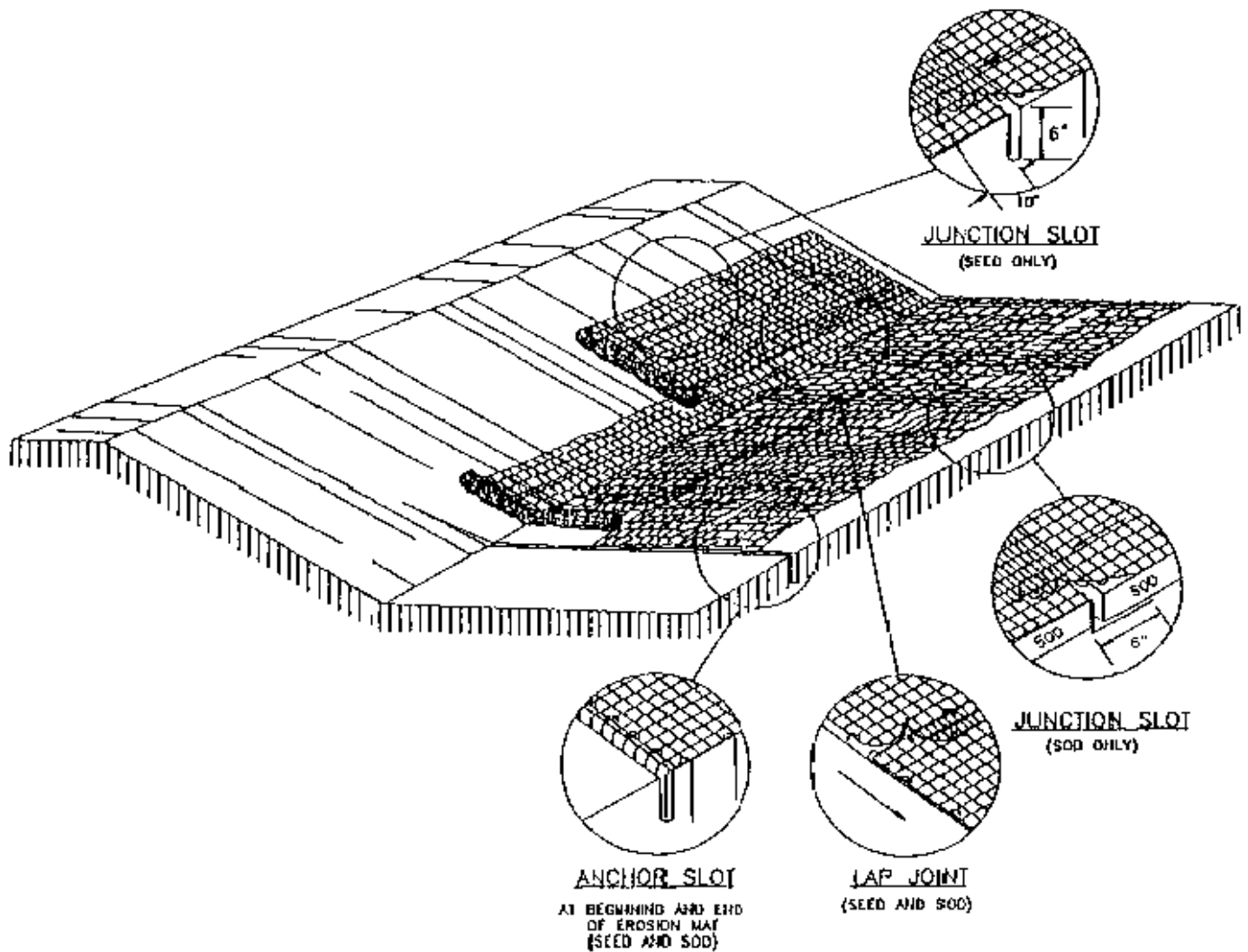


EROSION CONTROL MAT - STAPLE GUIDE

SCALE: NONE

TRIAD ASSOCIATES INC.
 5835 LAWTON LOOP EAST DRIVE
 INDIANAPOLIS, INDIANA 46216
 PHONE: 317-377-5230 FAX: 317-377-5241

2101-B

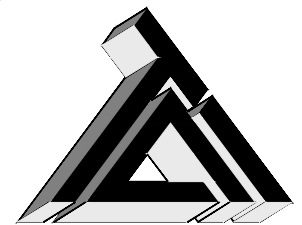


EROSION CONTROL MAT - SLOPE DETAIL

SCALE: NONE

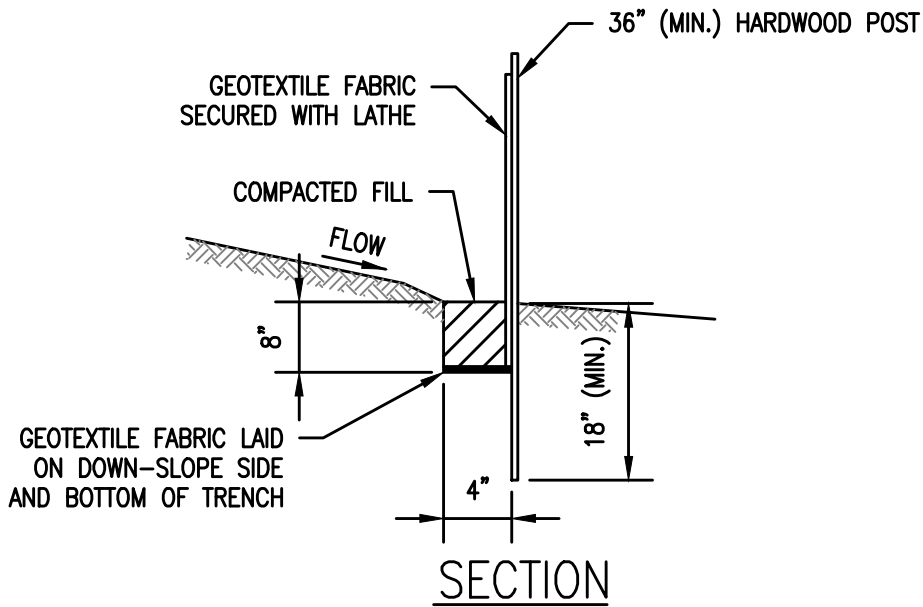
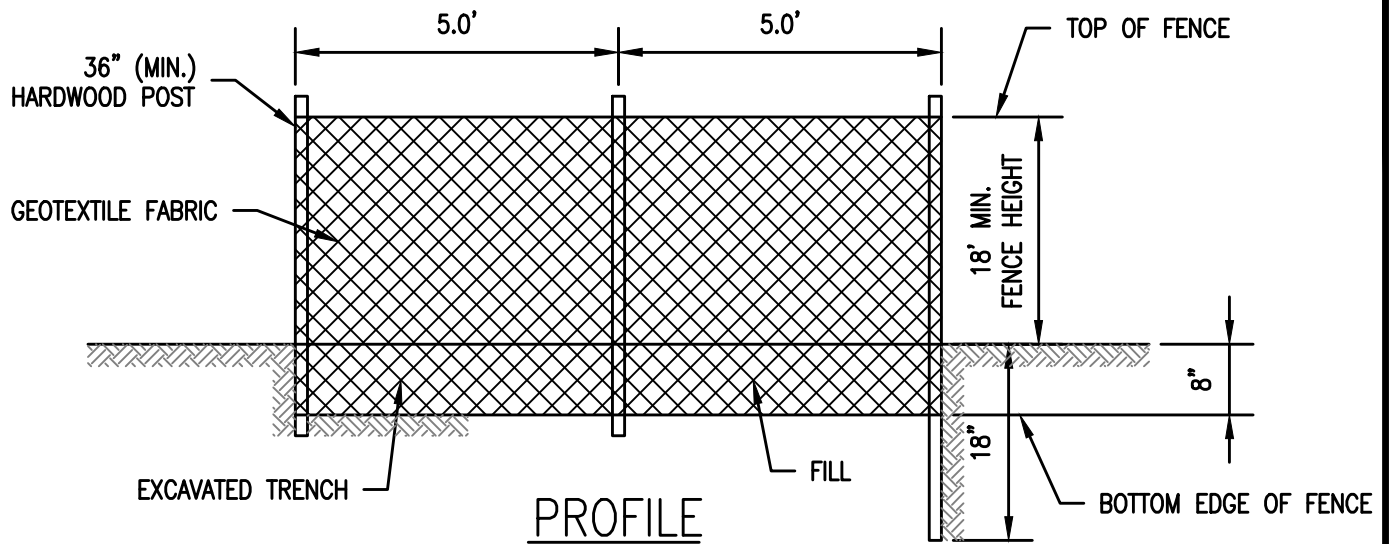
GENERAL NOTES

1. PREPARE SOIL BEFORE INSTALLING BLANKETS INCLUDING APPLICATION OF LIME, FERTILIZER AND SEED.
2. BEGIN AT THE TOP OF THE CHANNEL BY ANCHORING THE BLANKET IN A 6" DEEP x 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
3. ROLL CENTER BLANKET IN DIRECTION OF WATER FLOW ON BOTTOM OF CHANNEL.
4. PLACE BLANKETS END OVER END (SHINGLE STYLE) WITH A 6" OVERLAP. USE A DOUBLE ROW OF STAGGERED STAPLES 4" APART TO SECURE BLANKETS.
5. FULL LENGTH EDGE OF BLANKETS AT TOP OF SIDE SLOPES MUST BE ANCHORED IN 6" DEEP x 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
6. BLANKETS ON SIDE SLOPES MUST BE OVERLAPPED 4" OVER THE CENTER BLANKET AND STAPLED.
7. IN MEDIUM/HIGH FLOW CHANNEL APPLICATIONS. A STAPLE CHECK SLOT IS RECOMMENDED AT 30 TO 40 FOOT INTERVALS. USE A ROW OF STAPLES 4" APART OVER ENTIRE WIDTH OF THE CHANNEL. PLACE A SECOND ROW 4" BELOW THE FIRST ROW IN A STAGGERED PATTERN.
8. THE TERMINAL END OF THE BLANKETS MUST BE ANCHORED IN A 6" DEEP x 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.



TRIAD ASSOCIATES INC.
 5835 LAWTON LOOP EAST DRIVE
 INDIANAPOLIS, INDIANA 46216
 PHONE: 317-377-5230 FAX: 317-377-5241

2101-C



SILT FENCE DETAIL
SCALE: NONE

NOTE:
SEE SHEET 2101-D1A FOR INSTALLATION PROCEDURE
AND MAINTENANCE NOTES.

TRIAD ASSOCIATES INC.
5835 LAWTON LOOP EAST DRIVE
INDIANAPOLIS, INDIANA 46216
PHONE: 317-377-5230 FAX: 317-377-5241

2101-D

REVISED: 11/16

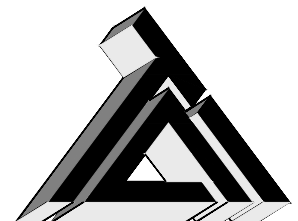
SILT FENCE

INSTALLATION PROCEDURE

1. LAY OUT LOCATION OF THE FENCE SO THAT IT IS PARALLEL TO THE CONTOUR OF THE SLOPE AND AT LEAST 10 FEET BEYOND THE TOE OF THE SLOPE TO PROVIDE A SEDIMENT STORAGE AREA. TURN THE ENDS OF THE FENCE UP SLOPE SUCH THAT THE POINT OF CONTACT BETWEEN THE GROUND AND THE BOTTOM OF THE FENCE END TERMINATES AT A HIGHER ELEVATION THAN THE TOP OF THE FENCE AT ITS LOWEST POINT.
2. EXCAVATE AN EIGHT-INCH DEEP BY FOUR-INCH WIDE TRENCH ALONG THE ENTIRE LENGTH OF THE FENCE LINE. INSTALLATION BY PLOWING IS ALSO ACCEPTABLE.
3. INSTALL THE SILT FENCE WITH THE FILTER FABRIC LOCATED ON THE UP-SLOPE SIDE OF THE EXCAVATED TRENCH AND THE SUPPORT POSTS ON THE DOWN-SLOPE SIDE OF THE TRENCH.
4. DRIVE THE SUPPORT POSTS AT LEAST 18 INCHES INTO THE GROUND, TIGHTLY STRETCHING THE FABRIC BETWEEN THE POSTS AS EACH IS DRIVEN INTO THE SOIL. A MINIMUM OF 12 INCHES OF THE FILTER FABRIC SHOULD EXTEND INTO THE TRENCH. (IF IT IS NECESSARY TO JOIN THE ENDS OF TWO FENCES, USE THE WRAP JOINT METHOD.)
5. LAY THE LOWER FOUR INCHES OF FILTER FABRIC ON THE BOTTOM OF THE TRENCH AND EXTEND IT TOWARD THE UP-SLOPE SIDE OF THE TRENCH.
6. BACKFILL THE TRENCH WITH SOIL MATERIAL AND COMPACT IT IN PLACE.

MAINTENANCE

- INSPECT WITHIN 24 HOURS OF A RAIN EVENT AND AT LEAST ONCE EVERY SEVEN CALENDAR DAYS.
- IF FENCE FABRIC TEARS, STARTS TO DECOMPOSE, OR IN ANY WAY BECOMES INEFFECTIVE, REPLACE THE AFFECTED PORTION IMMEDIATELY. NOTE: ALL REPAIRS SHOULD MEET SPECIFICATIONS AS OUTLINED WITHIN THIS MEASURE.
- REMOVE DEPOSITED SEDIMENT WHEN IT IS CAUSING THE FILTER FABRIC TO BULGE OR WHEN IT REACHES ONE-HALF THE HEIGHT OF THE FENCE AT ITS LOWEST POINT. WHEN CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED, REMOVE THE FENCE AND SEDIMENT DEPOSITS, GRADE THE SITE TO BLEND WITH THE SURROUNDING AREA, AND STABILIZE.



TRIAD ASSOCIATES INC.
5835 LAWTON LOOP EAST DRIVE
INDIANAPOLIS, INDIANA 46216
PHONE: 317-377-5230 FAX: 317-377-5241

2101-D1A

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