

CITY OF URBANA

**CLASS 2 EROSION
CONTROL PERMIT**

STANDARD DETAILS



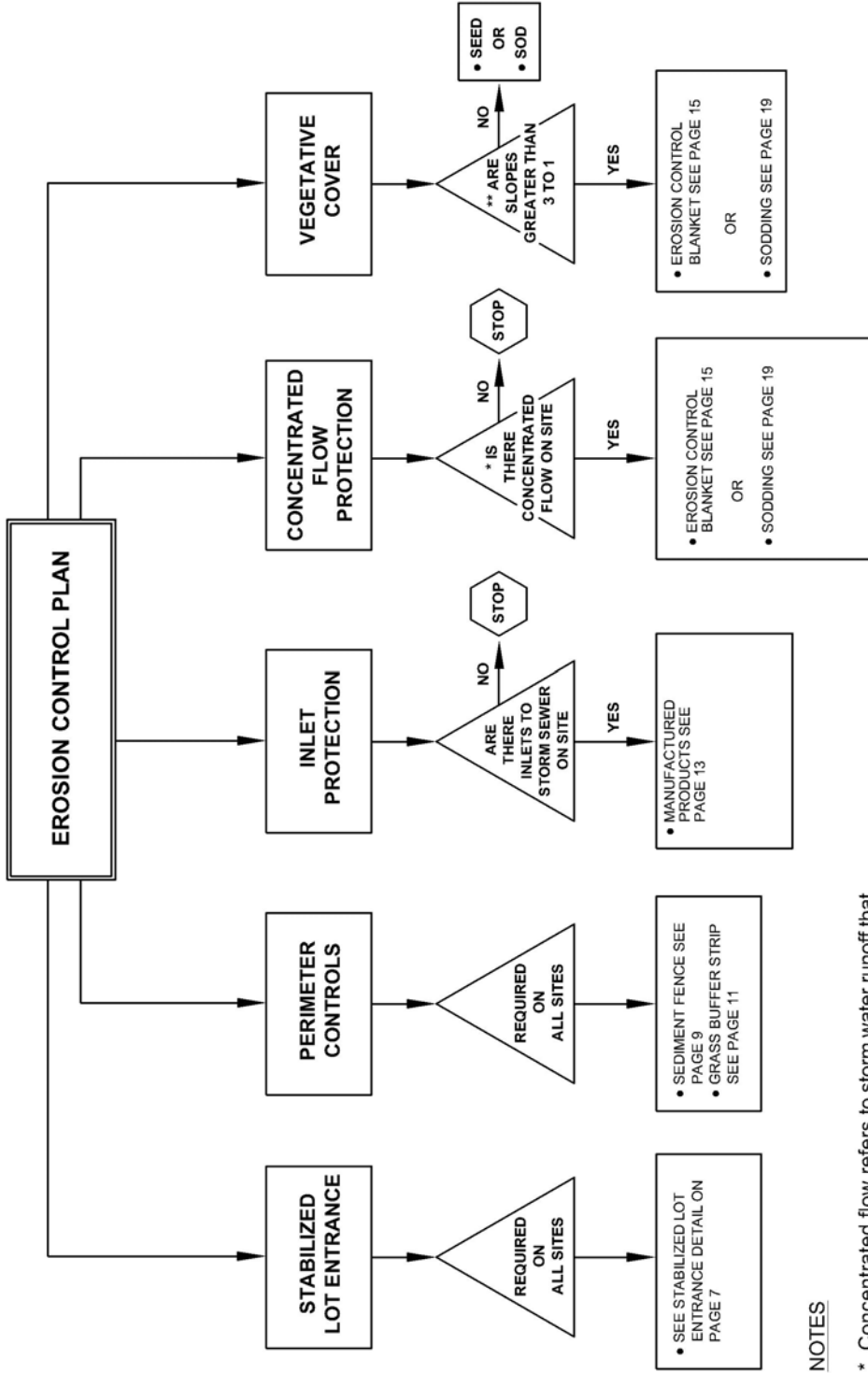
CLASS 2 EROSION CONTROL PERMIT STANDARDS

TABLE OF CONTENTS

EROSION CONTROL PRACTICES FLOW CHART	1
EROSION CONTROL PERMIT FORM	2
EXAMPLE EROSION CONTROL PLAN	3
EROSION CONTROL PLAN CHECKLIST	4
GENERAL NOTES	5
STABILIZED CONSTRUCTION ENTRANCE	6
PERIMETER CONTROLS	
SEDIMENT FENCE	8
STRAW WATTLE	10
EROSION EEL	12
GRASS BUFFER STRIP	14
INLET PROTECTION	
INLET FILTER PROTECTORS	16
CONCENTRATED FLOW CONTROLS	
EROSION CONTROL BLANKET	19
SODDING	23
PUMP FILTER DISCHARGE BAG	24

CLASS II EROSION CONTROL PERMIT

EROSION CONTROL PRACTICES FLOW CHART



NOTES

* Concentrated flow refers to storm water runoff that has been concentrated and is flowing through small depressions, rills, gullies, ditches or swales.

** 3 to 1 refers to 3 feet horizontal to 1 foot vertical on slopes. $1 \frac{\square}{3}$

City of Urbana
Engineering Division
706 South Glover Avenue
Urbana, IL 61802
Phone (217) 384-2385
Fax (217) 384-2400

Date Received: _____	Permit Number: _____
Approved By & Date: _____	Permit Fee: _____
Inspected By & Date: _____	Check #: _____
Make check payable to City of Urbana	

CLASS 2 LAND DISTURBANCE PERMIT FORM
(Land disturbances between 2,000 square feet and one (1) acre)

TO BE COMPLETED BY APPLICANT

Applicant: _____ Date: _____

Phone #: _____ Subdivision Name & Lot #: _____

Address of Development: _____

Type of Development: _____

Square Feet of Site: _____

On-Site Responsible Contact:

Name: _____

E-mail: _____ Phone #: _____

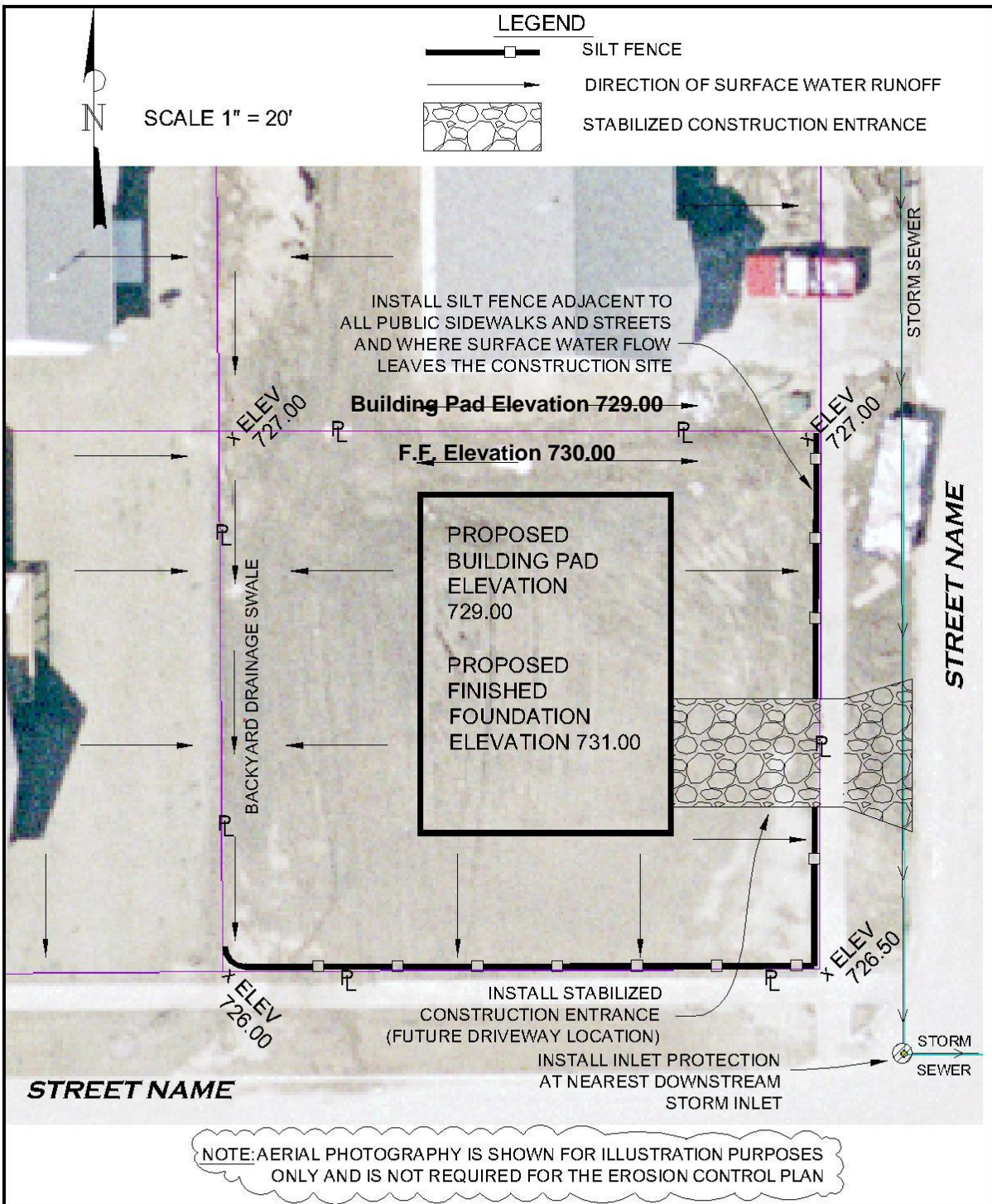
- Erosion Control Plan Attached
- Erosion Control Plan Checklist Completed and Attached
- Class 2 Land Disturbance Permit Fee Submitted

PERMIT FEE SCHEDULE – EFFECTIVE JANUARY, 2008:

- 1 & 2 family new construction, additions and demolitions - \$50
- Commercial new construction, additions, and demolitions under 1 acre - \$200

APPLICANT MUST CONTACT CITY AT 384-2385 TO SCHEDULE AN INSPECTION AFTER ALL EROSION CONTROL DEVICES ARE INSTALLED.

SAMPLE EROSION CONTROL PLAN DRAWING #1



EROSION CONTROL PLAN CHECKLIST

TO BE COMPLETED BY APPLICANT

- North arrow shown?
- Drawing completed in a scale not to exceed 1-inch to 20-feet?
- Scale shown on drawing?
- Edges of street pavement shown and street names shown?
- Edges of sidewalk shown?
- Property lines shown?
- Building location and address shown?
- Building pad elevation shown?
- Finished floor elevation shown?
- Spot elevations at four corners of site shown?
- Surface water runoff flow arrows shown?
- Identify backyard or sideyard swales if applicable?
- Silt fence or landscape buffer locations shown?
- Stabilized construction entrance shown?
- Inlet protection locations shown or noted?

GENERAL INSTALLATION/CONSTRUCTION SEQUENCE:

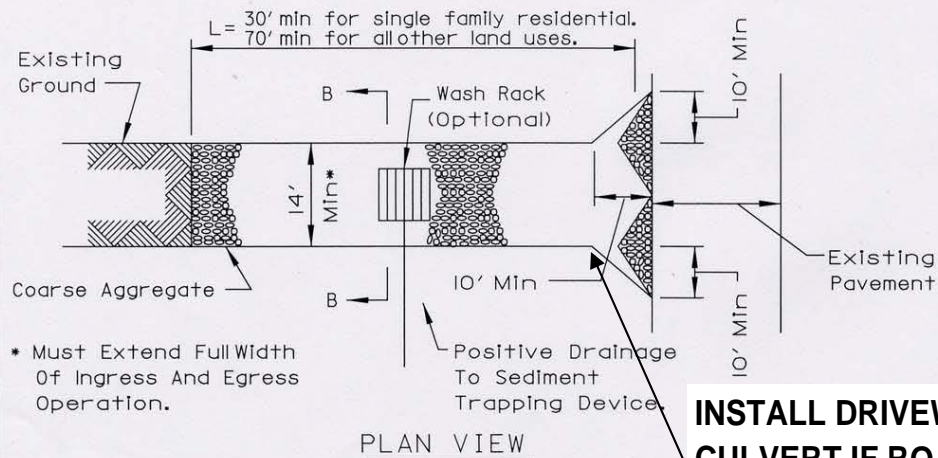
- 1.) Install stabilized lot entrance.
- 2.) Install perimeter controls. (Silt Fence or Landscape Buffer)
 - Place where storm water runoff leaves the site.
 - Place adjacent to all public sidewalks and streets.
- 3.) Install inlet protection at downstream sewer inlets, grates, drains, and manholes.
- 4.) Contact Engineering Division to inspect control measures.
- 5.) Excavate and backfill foundations.
 - Spoil pile must not extend beyond property line.
 - Do not cover sidewalk with any spoils materials or back filling materials.
- 6.) Construction activities.
 - Maintain and repair all controls until final certificate of occupancy is issued.
 - Clean dirt off sidewalks and roads each day.
- 7.) Final grading and sod or seed placement.
- 8.) Remove erosion control measures.
 - Remove after permanent ground cover is obtained at a density sufficient to control erosion.

CONCENTRATED FLOW:

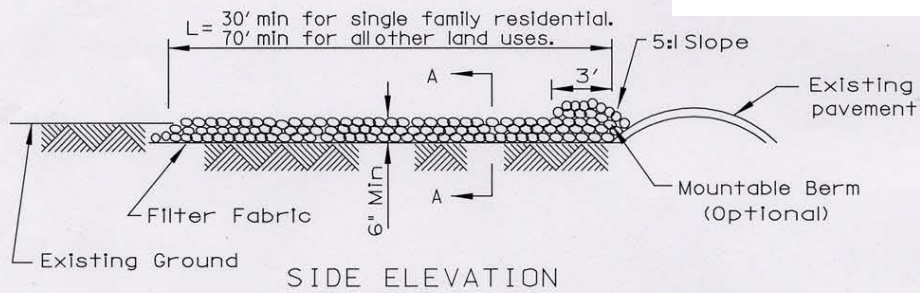
- 1.) Provide erosion blanket or sod for concentrated flow areas.
- 2.) Provide soil protection and energy dissipation at gutter downspouts if they are in place prior to full vegetative cover over the area.

STABILIZED CONSTRUCTION ENTRANCE:

STABILIZED CONSTRUCTION ENTRANCE DETAIL



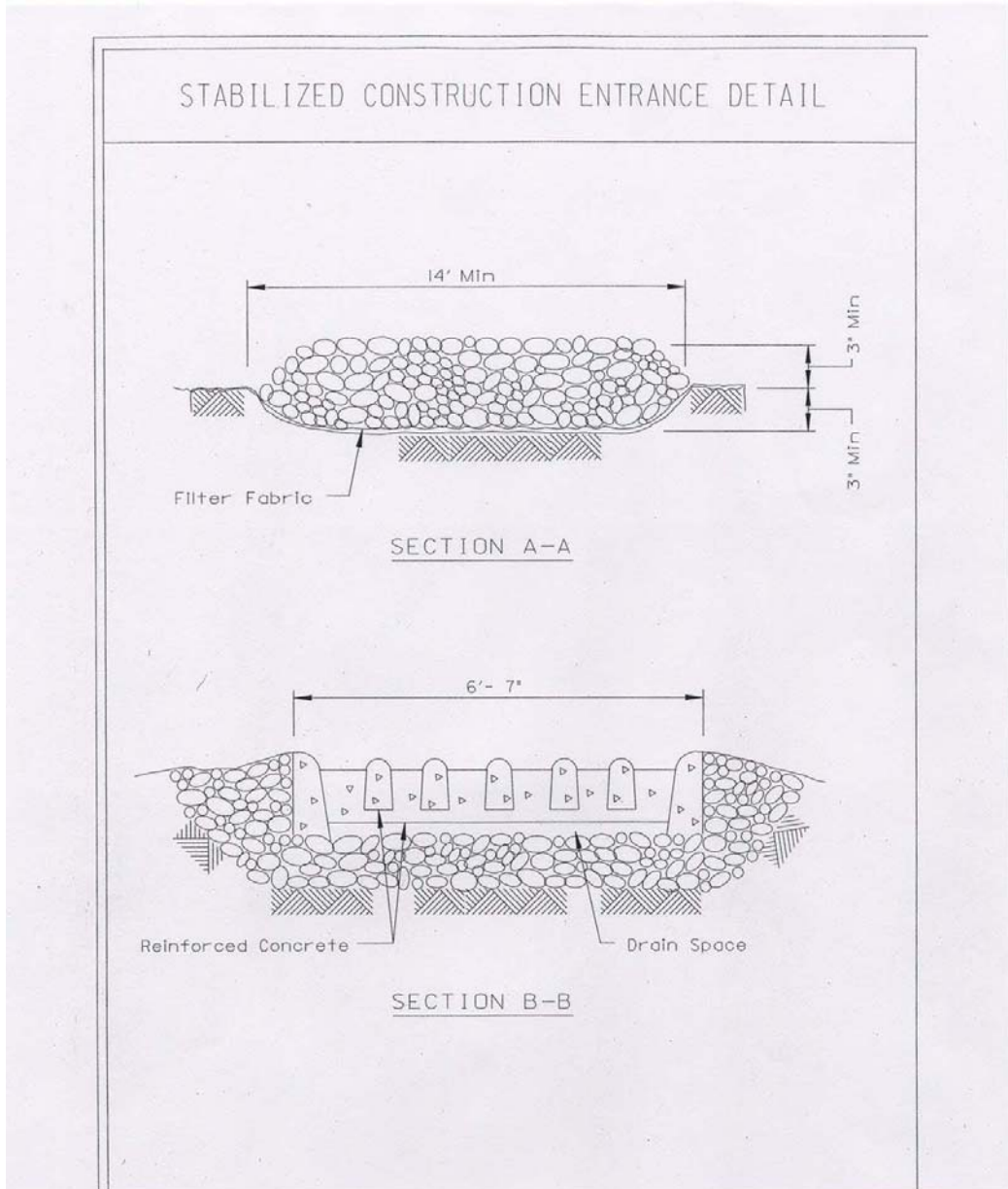
INSTALL DRIVEWAY CULVERT IF ROADSIDE DITCH IS PRESENT



NOTES:

1. Filter fabric shall meet the requirements of material specification 592 GEOTEXTILE, Table 1 or 2, Class I, II or IV and shall be placed over the cleared area prior to the placing of rock.
2. Rock or reclaimed concrete shall meet one of the following IDOT coarse aggregate gradation, CA-1, CA-2, CA-3 or CA-4 and be placed according to construction specification 25 ROCKFILL using placement Method I and Class III compaction.
3. Any drainage facilities required because of washing shall be constructed according to manufacturers specifications.
4. If wash racks are used they shall be installed according to the manufacturer's specifications.

STABILIZED CONSTRUCTION ENTRANCE:

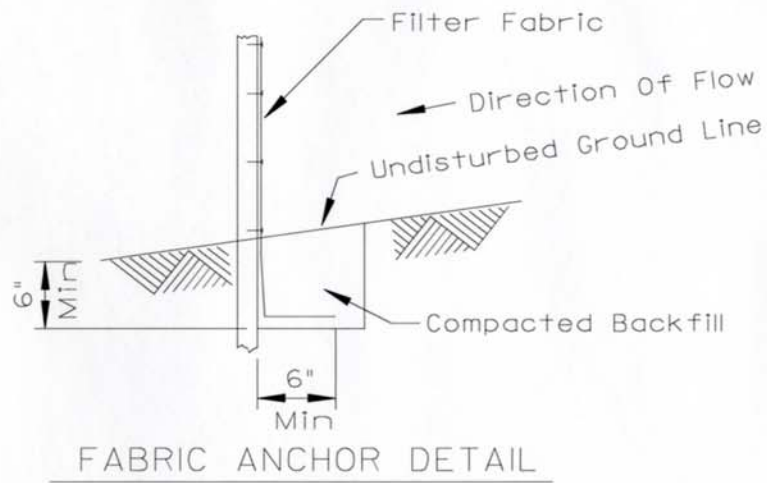
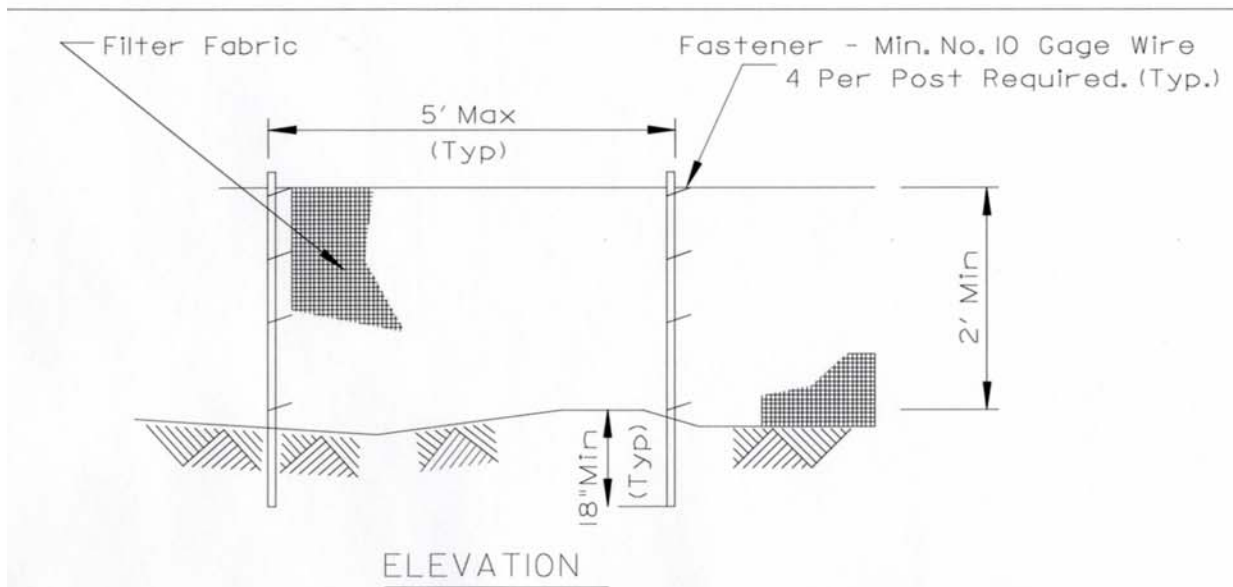


MAINTENANCE:

- 1.) Inspect on a daily basis or as necessary.
- 2.) Immediately remove mud or sediment tracked onto road.
- 3.) Add additional stabilized material as necessary.

PERIMETER CONTROL

PERIMETER BARRIER - SILT FENCE DETAIL



NOTES:

1. Temporary sediment fence shall be installed prior to any grading work in the area to be protected. They shall be maintained throughout the construction period and removed in conjunction with the final grading and site stabilization.
2. Filter fabric shall meet the requirements of material specification 592 Geotextile Table 1 or 2, Class I with equivalent opening size of at least 30 for nonwoven and 50 for woven.
3. Fence posts shall be either standard steel post or wood post with a minimum cross-sectional area of 3.0 sq. in.

SEDIMENT FENCE NOTES:

INSTALLATION:

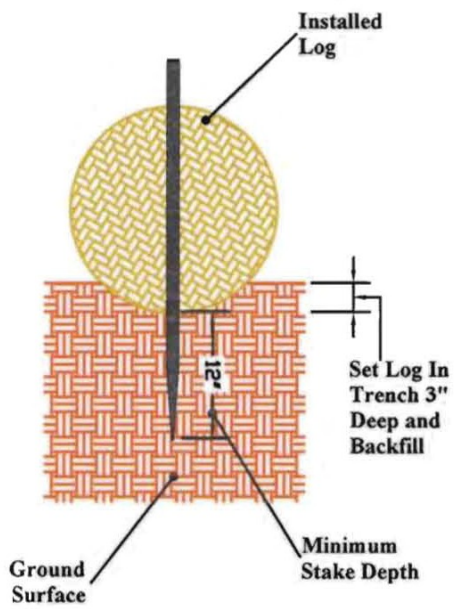
1. Sediment fence shall be a minimum of 24 inches above the original ground surface and shall not exceed 36 inches above ground surface.
2. Excavate a trench approximately 6 inches wide and 6 inches deep on the upslope side of the proposed location of the fence. A slicing machine may be used in lieu of trenching.
3. Posts shall be placed a maximum of 5 feet apart. Fabric shall be fastened securely to the upslope side of posts using min. One-inch long, heavy-duty wire staples or tie wires. Eight inches of the fabric shall be extended into the trench. The fabric shall not be stapled to existing trees.
4. The 6 inch by 6 inch trench shall be backfilled and the soil compacted over the textile unless a slicing machine is used.

MAINTENANCE:

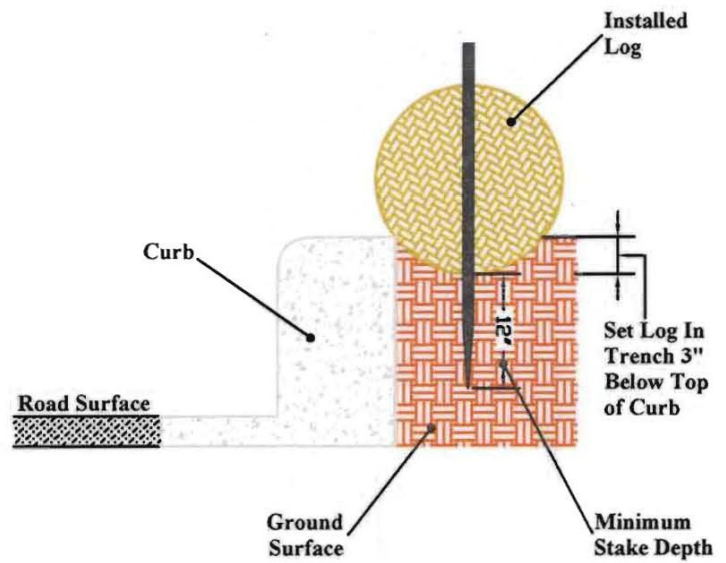
1. Inspect on a daily basis or as necessary.
2. Any damage shall be repaired immediately.
3. Sediment must be removed when it reaches 6 inches high on the fence.
4. If geotextile has deteriorated due to ultraviolet breakdown, it shall be replaced.
5. Sediment fence shall be removed when it has served its useful purpose, but not before the upslope area has been permanently stabilized.

STRAW WATTLE DETAILS

**Flat Ground
(Perimeter Guard) Installation**



Curbside Installation



STRAW WATTLE NOTES:

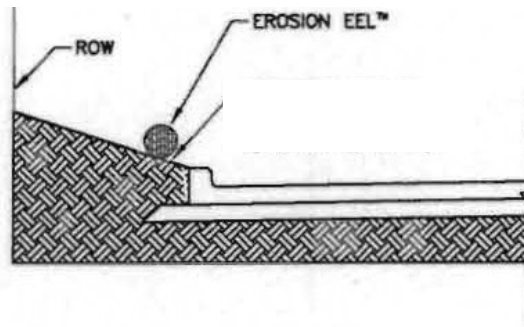
INSTALLATION:

1. Straw wattles shall be a minimum of 9 inches in diameter. Wattles shall consist of 100% clean, certified weed free straw fiber matrix confined by a synthetic net.
2. Remove debris, rocks, and clods and grade to create a smooth flat surface to install wattle on. Excavate a trench approximately 3 inches deep to set wattle in. Backfill and compact soil around wattle.
3. At a minimum 1-inch long by 1-inch wide by 1-inch wide by 24-inch deep wooden stake shall driven through wattle to hold wattle in place. Stake shall not stick out more than 4-inches above the top of the wattle.
4. Overlap waddles 6-inches at joints between wattle logs.

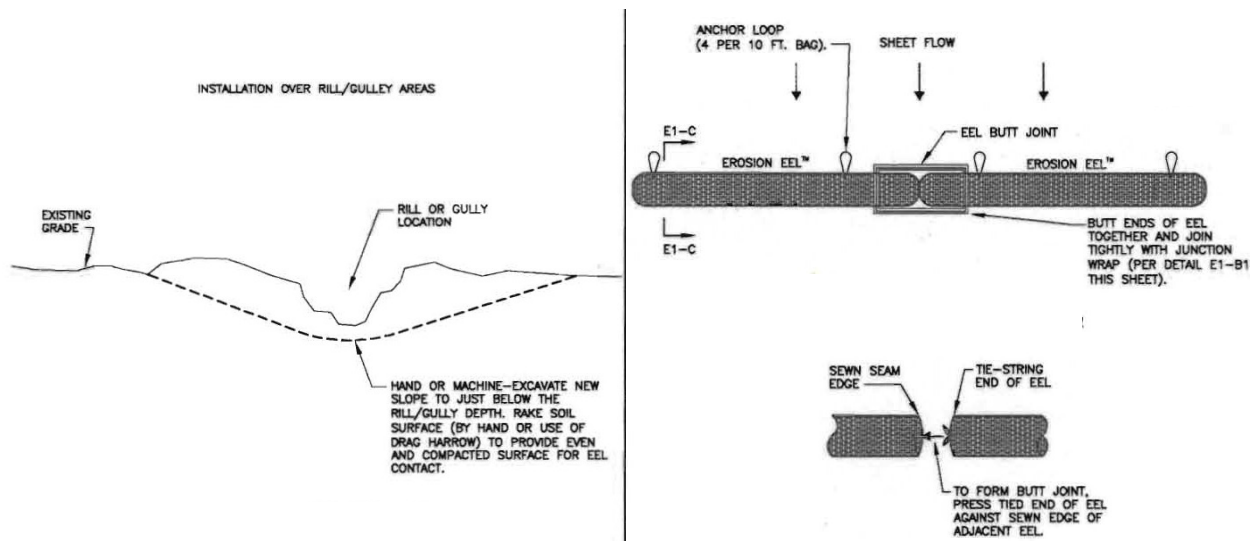
MAINTENANCE:

1. Inspect on a daily basis or as necessary.
2. Any damage shall be repaired immediately.
3. Sediment must be removed when it reaches 3 inches high on the wattle.
4. If wattle netting has deteriorated due to ultraviolet breakdown or vehicle damage, it shall be replaced.
5. Straw Wattle shall be removed when it has served its useful purpose, but not before the upslope area has been permanently stabilized.

EROSION EEL™ DETAILS



Erosion Eel Curbside Installation Detail



EROSION EEL™ NOTES:

INSTALLATION:

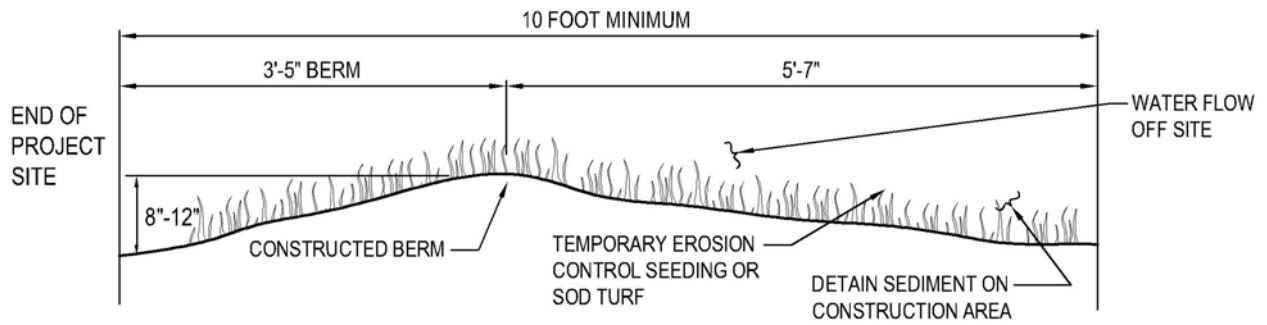
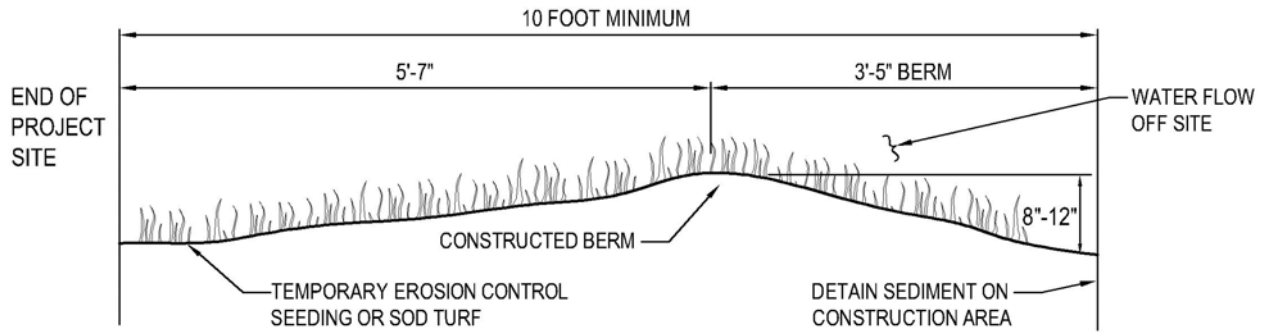
1. Erosion eel shall be a minimum of 9.5 inches in diameter and manufactured by ACF Environmental. Erosion eel shall consist of washed shredded rubber (metal removed) confined by a woven polypropylene material.
2. Remove debris, rocks, and clods and grade to create a smooth flat surface to install eel on.
3. Erosion eel joints shall be formed by firmly butting the sewn end against the tied end of the eels to form a butt type joint.

MAINTENANCE:

1. Inspect on a daily basis or as necessary.
2. Any damage shall be repaired immediately.
3. Sediment must be removed when it reaches 3 inches high on the erosion eel.
4. If erosion eel polypropylene material has deteriorated due to ultraviolet breakdown or vehicle damage, it shall be replaced.
5. Erosion eel shall be removed when it has served its useful purpose, but not before the upslope area has been permanently stabilized.

PERIMETER CONTROL

GRASS BUFFER STRIP



GRASS BUFFER STRIP

DESCRIPTION:

These are wide strips of undisturbed vegetation consisting of grass or other erosion resistant plants surrounding the disturbed site. They provide infiltration, intercept sediment and other pollutants, and reduce storm water flow and velocity. They can also act as a screen for visual pollution and reduce construction noise.

PLANNING CONSIDERATIONS:

Grass strips should be fenced off prior to construction. Avoid storing debris from clearing and grubbing, and other construction waste material in these strips during construction.

DESIGN CRITERIA:

The minimum length of strip must be at least as long as the contributing runoff area. The minimum width should conform to Table below.

MINIMUM WIDTHS OF FILTER STRIPS

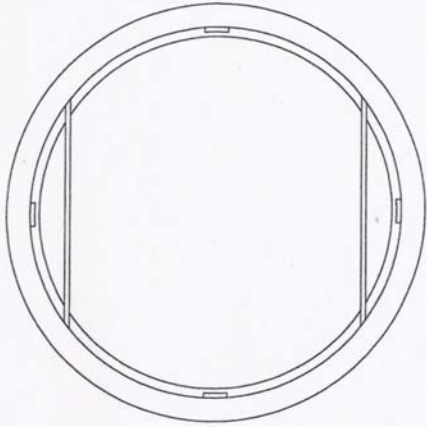
SLOPE OF LAND %	WIDTH OF FILTER STRIP FOR GRASSED AREAS (FT)
0	10
2	12
4	14
6	16
8	18
10	20
15	25

INSPECTION AND MAINTENANCE

1. Maintain moist soil conditions immediately after seeding and/or sod installation.
2. Maintain moist soil conditions throughout vegetation establishment period.
3. Sediment deposits should be removed after each storm event.

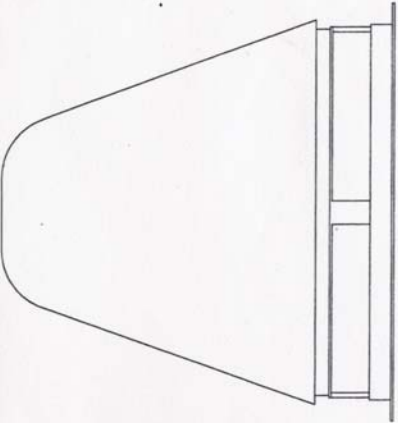
INLET FILTER PROTETOR

IPP INLET FILTERS



IDOT Type 1 Round Inlet Filter Depicted

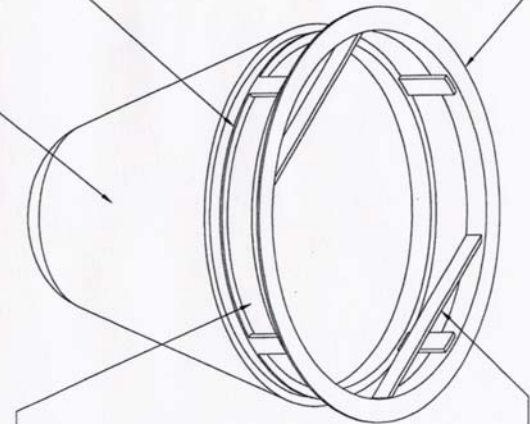
NOTE: Round and Square/Rectangular Inlet Filters Available for most Neenah and East Jordan Beehive, Roll Curb and Curb Box Frame Types



GALVANIZED STEEL FRAME

STAINLESS STEEL LOCKING BAND

GEOTEXTILE FILTER BAG WITH REINFORCED POLYESTER OUTER MESH



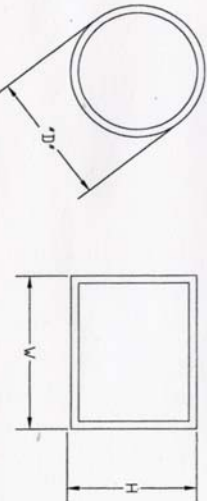
LIFT HANDLES

OVERFLOW FEATURE

All Products Manufactured by Inlet & Pipe Protection, Inc
www.inletfilters.com
 (847) 722-0690 ph
 (847) 364-5262 fx
sales@inletfilters.com

**** Certification: All IPP Inlet Filters conform to IDOT Specifications as outlined in Article 1081.15 of IDOT's Standard Specifications Guide**

INLET FILTER SPECIFICATION



Note: Inlet Filters are slightly smaller than the inlet grate sizes. When identifying or specifying filters/castings please refer to the diameter "D" or width "W" and height "H" of filter frames or casting grates. You may also refer to our casting cross reference guide for IDOT standards.

INLET FILTER PROTECTORS

THE FOLLOWING PRODUCTS ARE
APPROVED FOR INLET PROTECTION

IPP INLET FILTERS

3535 Stackinghay
Naperville, IL 60564
847-722-0690 Telephone
847-364-5262 Fax

www.inletfilters.com

CATCH-ALL INLET PROTECTOR **MARATHON MATERIALS, INC.**

25523 WEST SCHULTZ STREET
PLAINFIELD, ILLINOIS 60544
(630) 983-9494 Tel
(800) 983-9493 Toll Free
(630) 983-9580 Fax

www.marathonmaterials.com

Neenah Foundry Company

Kimberly Drive
Carol Stream, IL 60188
800-874-4457 Telephone

carolstream@nfco.com

OTHER PRODUCTS CAN BE SUBMITTED
FOR REVIEW AND APPROVAL

INLET FILTER PROTECTORS

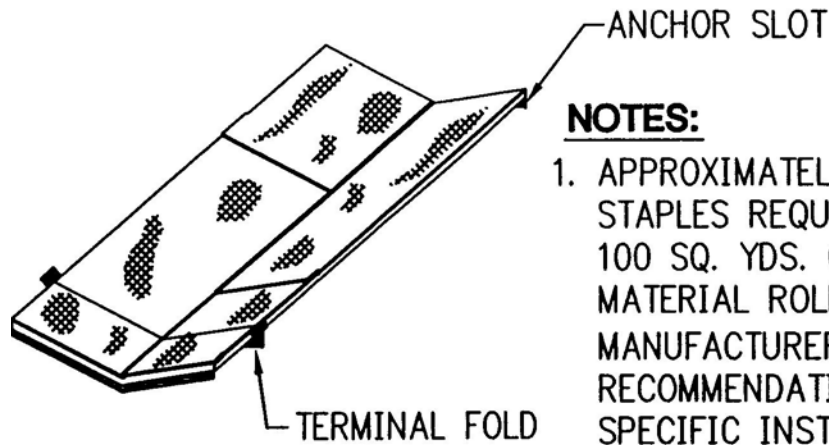
INSTALLATION:

All inlet protection products shall be installed in accordance with manufacturer's instructions.

MAINTENANCE

1. Inspect on a daily basis or as necessary.
2. Any damage to products shall be repaired immediately.
3. Sediment must be removed when it reaches 1/3 the height of the product.
4. Inlet protection shall be removed when it has served its useful purpose, but not before upslope area has been permanently stabilized.

EROSION CONTROL BLANKET



NOTES:

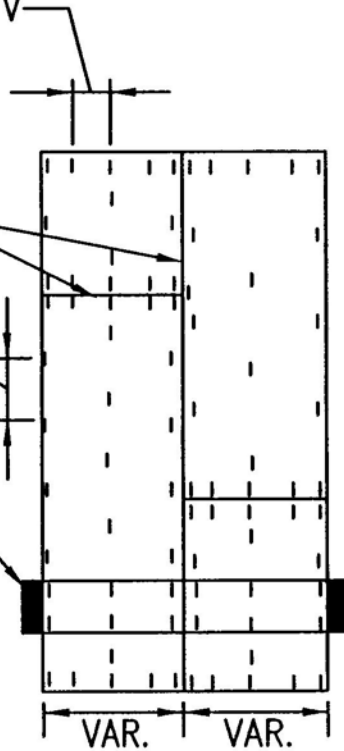
1. APPROXIMATELY 200 STAPLES REQUIRED PER 100 SQ. YDS. OF MATERIAL ROLL. CHECK MANUFACTURER'S RECOMMENDATIONS FOR SPECIFIC INSTALLATION AND STAPLING REQUIREMENTS.

12" MAX. 4H:1V OR FLATTER
 6" MAX. STEEPER THAN 4H:1V

OVERLAP ENDS AND EDGES A MINIMUM OF 6 INCHES AND STAPLE EVERY 6 INCHES

5' MAX. 4H:1V OR FLATTER
 3' MAX. STEEPER THAN 4H:1V

CHECK SLOT *

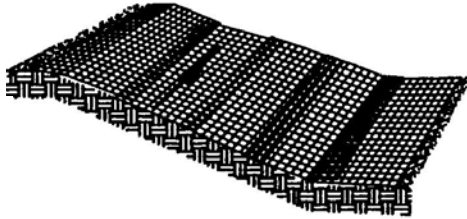


PLAN VIEW
STAPLING DIAGRAM:

* CHECK SLOTS AT MIN. 50' INTERVALS; NOT REQ'D WITH ALL "COMBINATION" BLANKETS.

TYPICAL ORIENTATION OF EROSION CONTROL BLANKET

SHALLOW SLOPE:



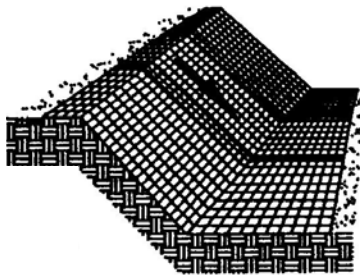
ON SHALLOW SLOPES, STRIPS OF PROTECTIVE COVERINGS MAY BE APPLIED PARALLEL TO DIRECTION OF FLOW.

BERM:



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

STEEP SLOPE:



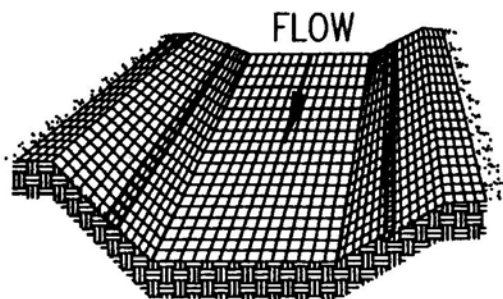
ON STEEP SLOPES, APPLY PROTECTIVE COVERING PERPENDICULAR TO THE DIRECTION OF FLOW AND ANCHOR SECURELY.

STEEP SLOPE:



BRING MATERIAL DOWN TO A LEVEL AREA BEFORE TERMINATING INSTALLATION. TURN THE END UNDER 4" AND STAPLE AT 12" INTERVALS.

DITCH:



IN DITCHES, APPLY PROTECTIVE COVERING PARALLEL TO THE DIRECTION OF FLOW. AVOID JOINING MATERIAL IN THE CENTER OF THE DITCH IF AT ALL POSSIBLE.

EROSION CONTROL BLANKET

LAYING AND STAPLING:

Place the erosion control blanket on a friable seedbed free of clods, rocks, and roots that might impede good contact.

1. Start placing the protective covering from the top of the channel or slope and unroll down-grade.
2. Allow to rest loosely on soil; do not stretch.
3. Upslope ends of the protective covering should be buried in an anchor slot no less than 6 inches deep. Tamp earth firmly over the material. Staple the material at a minimum of every 12 inches across the top end.
4. Edges of the material shall be stapled every 3 feet. The multiple widths are placed side by side, the adjacent edges shall be overlapped a minimum of 6 inches and stapled together. Staples shall be placed down the center, staggered with the edges at 3 foot intervals.

NOTE:

Study manufacturer's recommendations and site conditions for correct installation and stapling of product.

EROSION CONTROL BLANKET NOTES (CONTINUED):

JOINING PROTECTIVE COVERINGS:

Insert a new roll of material into an anchor slot as with upslope ends. Overlap the end of the previous roll a minimum of 12 inches, and staple across the end of the roll just below the anchor slot and across the material every 12 inches.

TERMINAL END:

Where the material is discontinued or where the ends under 4 inches, and staple across end every 12 inches.

AT BOTTOM OF SLOPES:

Roll onto a level surface before anchoring, turn ends under 4 inches, and staple across end every 12 inches.

FINAL CHECK:

These installation criteria must be met:

1. Protective blanket is in uniform contact with the soil.
2. All lap joints are secure.
3. All staples are driven flush with the ground.
4. All disturbed areas have been seeded.

MAINTENANCE:

All soil stabilization blankets and matting should be inspected periodically following installation, particularly after storms, to check for erosion and undermining. Any dislocation or failure should be repaired immediately. If washouts or breakage occurs, reinstall the material after repairing damage to the slope or ditch. Continue to monitor these areas until they become permanently stabilized; at that time an annual inspection should be adequate.

SODDING:



INCORRECT



CORRECT

NOTE:

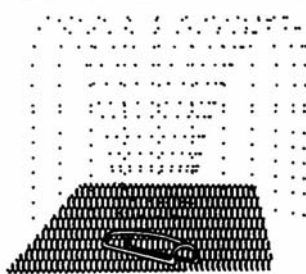
LAY SOD IN A STAGGERED PATTERN. BUTT THE STRIPS TIGHTLY AGAINST EACH OTHER. DO NOT LEAVE SPACES AND DO NOT OVERLAP. A SHARPENED MASON'S TROWEL IS A HANDY TOOL FOR TUCKING DOWN THE ENDS AND TRIMMING PIECES.

BUTTING:

ANGLED ENDS CAUSED BY THE AUTOMATIC SOD CUTTER MUST BE MATCHED CORRECTLY.



ROLL SOD IMMEDIATELY TO ACHIEVE FIRM CONTACT WITH THE SOIL.

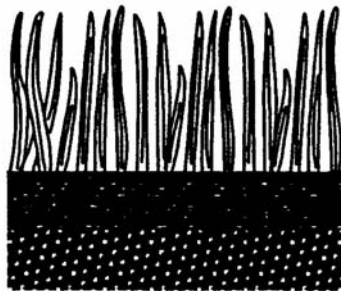


WATER SOD TO A DEPTH OF 4" AS NEEDED. WATER WELL AS SOON AS THE SOD IS INSTALLED.



MOW WHEN THE SOD IS ESTABLISHED - IN 2-3 WEEKS. SET THE MOWER HEIGHT AT 2"-3".

APPEARANCE OF GOOD SOD:



SHOOTS:

GRASS SHOULD BE GREEN AND HEALTHY, MOWED AT A 2"-3" CUTTING HEIGHT.

THATCH:

GRASS CLIPPINGS AND DEAD LEAVES UP TO 1/2" THICK.

ROOT ZONE:

SOIL AND ROOTS SHOULD BE 1/2" - 3/4" THICK WITH DENSE ROOT MAT FOR STRENGTH.

PUMP DISCHARGE FILTER BAG:

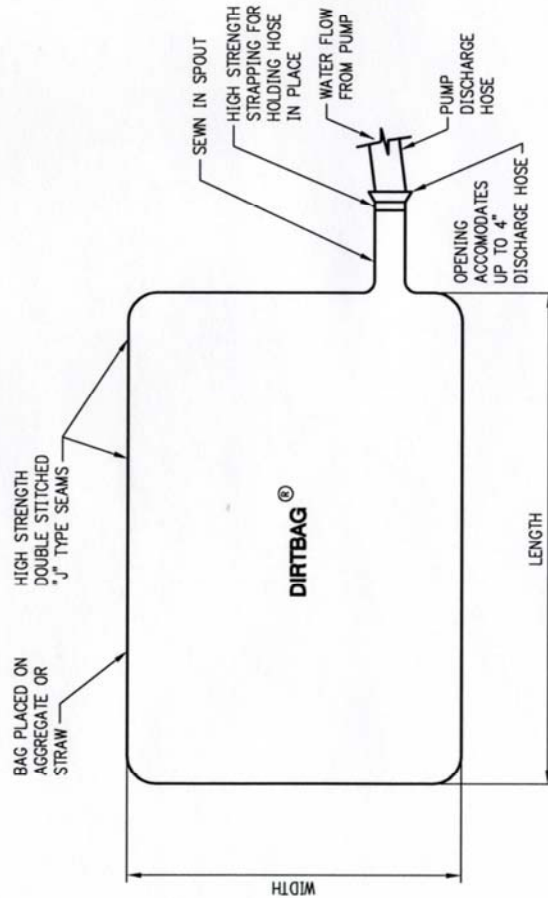
DIRTBAG® PUMP-SILT CONTROL SYSTEM NOTES:

A) GENERAL NOTES:

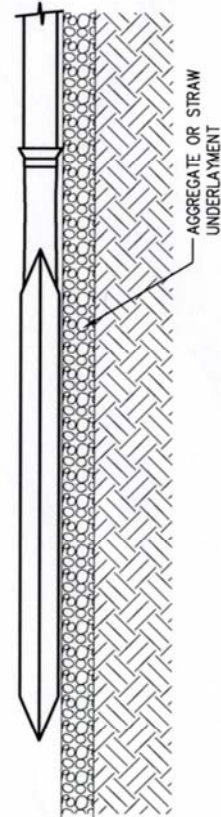
1. THE DIRTBAG® WILL HAVE AN OPENING LARGE ENOUGH TO ACCOMMODATE A 4" DISCHARGE HOSE WITH ATTACHED STRAP TO TIE OFF THE HOSE TO PREVENT THE PUMPED WATER FROM ESCAPING THE DIRTBAG® WITHOUT BEING FILTERED.
2. INSTALL THE DIRTBAG® ON A SLOPE. IT SHOULD BE PLACED SO THE INCOMING WATER FLOWS THROUGH THE DIRTBAG® SHOULD BE TIED OFF TIGHTLY TO STOP THE WATER FROM FLOWING OUT OF THE OPENING WITHOUT BEING FILTERED THROUGH THE FABRIC TO INCREASE THE EFFICIENCY OF THE FILTRATION, THE BAG SHOULD BE PLACED ON AN AGGREGATE BED TO ALLOW WATER TO FLOW THROUGH ALL SURFACES OF THE BAG.
3. DISPOSAL MAY BE ACCOMPLISHED AS DIRECTED BY THE ENGINEER. IF THE SITE ALLOWS, THE DIRTBAG® MAY BE CUT OPEN AND SEEDED, REMOVING THE VISIBLE FABRIC. THE DIRTBAG® IS STRONG ENOUGH TO BE LIFTED IF IT MUST BE HAULED AWAY. IF THE JOBSITE REQUIRES THE DIRTBAG® TO BE RELOCATED TO LANDFILL FOR DISPOSAL, IT MAY BE HELPFUL TO PLACE THE DIRTBAG® IN THE BACK OF A DUMP TRUCK OR FLATBED PRIOR TO USE, ALLOWING THE WATER TO DRAIN WITH BAG IN PLACE, THEREBY DISMISSING THE NEED TO LIFT THE DIRTBAG®.

B) INSPECTION AND MAINTENANCE:

1. THE DIRTBAG® SHOULD BE CONSIDERED FULL WHEN IT IS IMPRACTICAL FOR THE BAG TO FILTER OUT SEDIMENT AT A REASONABLE RATE, AND SHOULD BE REPLACED WITH A NEW DIRTBAG®.



TOP VIEW



SIDE VIEW

