

MULCHING GENERAL NOTES

- PURPOSE
- TO PREVENT EROSION BY PROTECTING THE SOIL FROM WIND AND WATER IMPACT.
 - TO PROVIDE TEMPORARY SURFACE STABILIZATION.
 - TO PREVENT SOIL FROM CRUSTING.
 - TO CONSERVE SOIL MOISTURE, MODERATE SOIL TEMPERATURE, AND PROMOTE SEED GERMINATION AND SEEDLING GROWTH.
 - NOTE: THIS MEASURE SHOULD NOT BE USED IN STORM WATER RUNOFF CHANNELS OR AREAS WHERE CONCENTRATED FLOW IS ATTEMPTED.

- SPECIFICATIONS
- MATERIAL - SEE TABLE 1

Table 1. Mulch Specifications

Material ¹	Rate per Acre	Comments
Straw or hay	2 tons	Should be dry, free of undesirable seeds. Spread by hand or machine. Must be crimped or anchored (see Table 2).
Wood fiber or cellulose	1 ton	Apply with a hydraulic mulch machine and use with tackling agent.

¹ Mulching is not recommended in concentrated flows. Consider erosion control blankets or other stabilization methods.

- COVERAGE - THE MULCH SHOULD HAVE A UNIFORM DENSITY OF AT LEAST 75 PERCENT OVER THE SOIL SURFACE.
- ANCHORING - SEE TABLE 2.

Table 2. Mulch Anchoring Methods

Anchoring Method ¹	How to Apply
Mulch anchoring tool or farm disk (dull, serrated, and blades set straight)	Crimp or punch the straw or hay two to four inches into the soil. Operate machinery on the contour of the slope.
Cleating with dozer tracks	Operate dozer up and down slope to prevent formation of rills by dozer cleats.
Wood hydromulch fibers	Apply according to manufacturer's recommendations.
Synthetic tackifiers, binders, or soil stabilizers	Apply according to manufacturer's recommendations.
Netting (synthetic or biodegradable material)	Install netting immediately after applying mulch. Anchor netting with staples. Edges of netting strips should overlap with each up-slope strip overlapping four to six inches over the adjacent down-slope strip. Best suited to slope applications. In most instances, installation details are site specific, so manufacturer's recommendations should be followed.

¹ All forms of mulch must be anchored to prevent displacement by wind and/or water.

APPLICATION

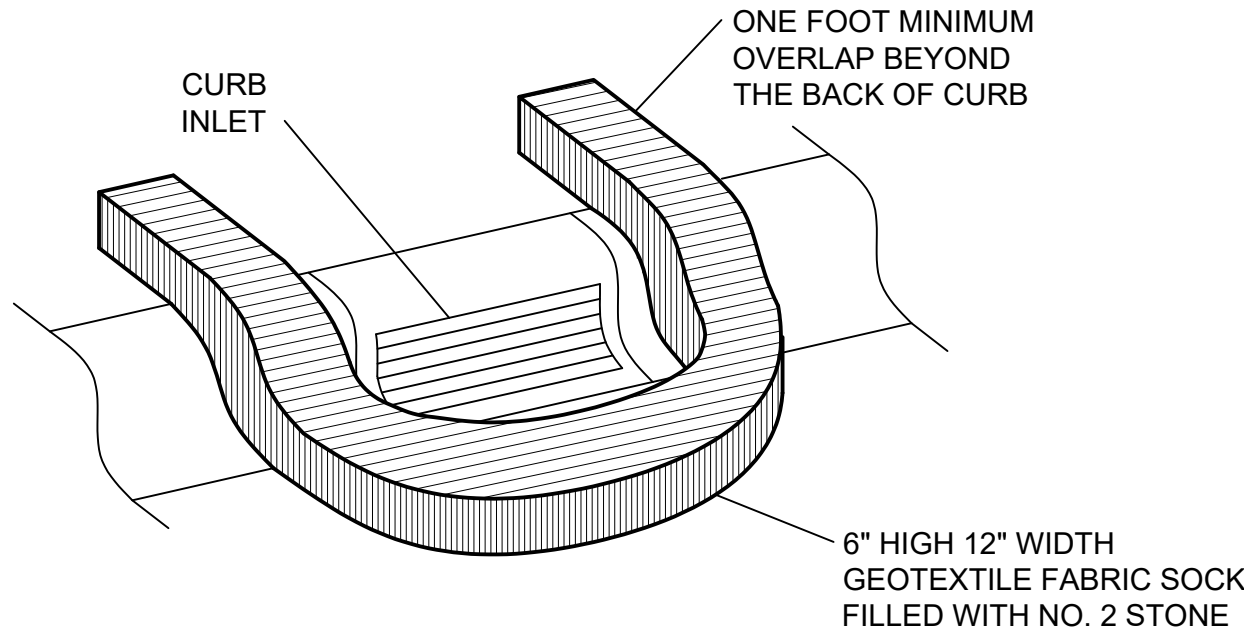
- APPLY MULCH AT THE RECOMMENDED RATE SHOWN IN TABLE 1.
- SPREAD THE MULCH MATERIAL UNIFORMLY BY HAND, HAYFORK, MULCH BLOWER, OR HYDRAULIC MULCH MACHINE. AFTER SPREADING, NO MORE THAN 25 PERCENT OF THE GROUND SHOULD BE VISIBLE.
- ANCHOR STRAW OR HAY MULCH IMMEDIATELY AFTER APPLICATION. THE MULCH CAN BE ANCHORED USING ONE OF THE METHODS LISTED BELOW:
 - CRIMP WITH A MULCH ANCHORING TOOL, A WEIGHTED FARM DISK WITH DULL SERRATED BLADES SET STRAIGHT, OR TRACK CLEATS OF A BULLDOZER.
 - APPLY HYDRAULIC MULCH WITH SHORT CELLULOSE FIBERS.
 - APPLY A LIQUID TACKIFIER, OR
 - COVER WITH NETTING SECURED BY STAPLES.

MAINTENANCE

- INSPECT WITHIN 24 HOURS OF EACH RAIN EVENT AND AT LEAST ONCE EVERY SEVEN CALENDAR DAYS.
- CHECK FOR EROSION OR MOVEMENT OF MULCH; REPAIR DAMAGED AREAS, RESEED, APPLY NEW MULCH AND ANCHOR THE MULCH IN PLACE.
- CONTINUE INSPECTIONS UNTIL VEGETATION IS FIRMLY ESTABLISHED.
- IF EROSION IS SEVERE OR RECURRING, USE EROSION CONTROL BLANKETS OR OTHER MORE SUBSTANTIAL STABILIZATION METHODS TO PROTECT THE AREA.

DETAIL - MULCHING

NOT TO SCALE



CURB INLET PROTECTION

DETAIL - SEASONAL SOIL PROTECTION CHART

NOT TO SCALE

SEASONAL SOIL PROTECTION CHART													
STABILIZATION PRACTICE	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.	
PERMANENT SEEDING SUN TO PARTIAL SHADE			A										
PERMANENT SEEDING PARTIAL SHADE TO SHADE			B										
PERMANENT SEEDING NON-IRRIGATED AREAS			C										
TEMPORARY SEEDING			D										
MULCHING	G												

A = PERMANENT SEEDING: SUN TO PARTIAL SHADE KENTUCKY BLUEGRASS 175 LBS/ACRE; CREEPING RED FESCUE 70 LBS/ACRE; FINE TEXTURED RYE (PERENNIAL) 105 LBS/ACRE; PLUS 800 LBS/ACRE 12-12-12 FERTILIZER.

B = PERMANENT SEEDING: PARTIAL SHADE TO SHADE KENTUCKY BLUEGRASS 35 LBS/ACRE; CREEPING RED FESCUE 210 LBS/ACRE; FINE TEXTURED RYE (PERENNIAL) 105 LBS/ACRE; PLUS 800 LBS/ACRE 12-12-12 FERTILIZER.

C = PERMANENT SEEDING: NON-IRRIGATED AREAS KENTUCKY BLUEGRASS 87 LBS/ACRE; CREEPING RED FESCUE 70 LBS/ACRE; FINE TEXTURED RYE (PERENNIAL) 193 LBS/ACRE; PLUS 800 LBS/ACRE 12-12-12 FERTILIZER.

D = SPRING OATS 3 BUSHELS/ACRE

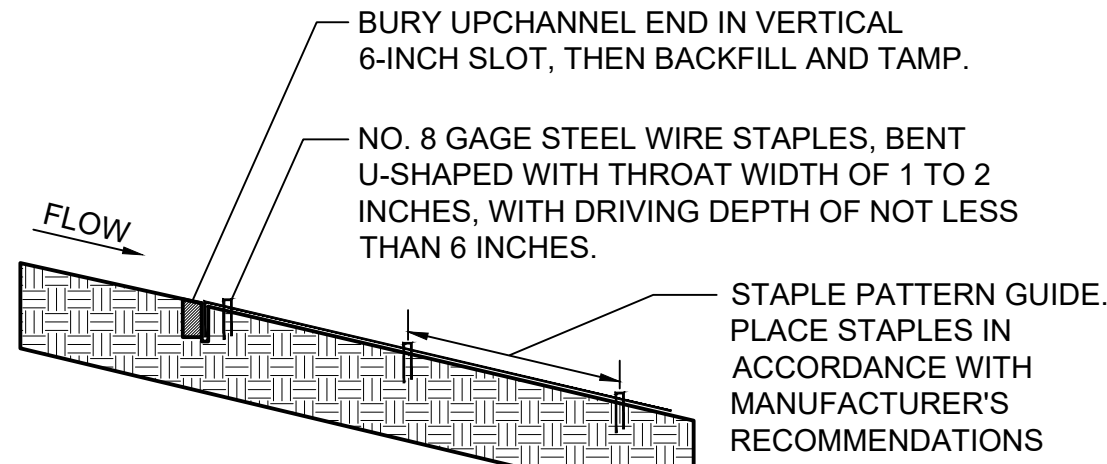
E = WHEAT OR RYE 2 BUSHELS/ACRE

F = ANNUAL RYE GRASS 40 LBS/ACRE (1 LB/1000 SF)

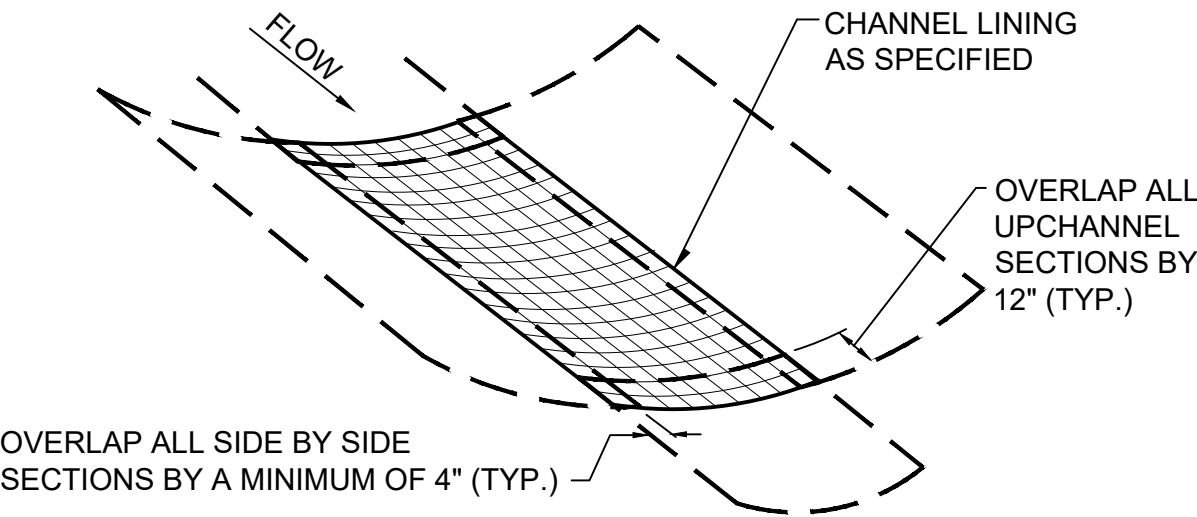
G = STRAW MULCH 2 TONS/ACRE. SEE MULCHING DETAILS. FOR SLOPES GREATER THAN 4:1 USE EROSION CONTROL BLANKET ACCEPTABLE TO LOCAL AUTHORITIES.

//I IRRIGATION NEEDED DURING JUNE, JULY, AUGUST AND/OR SEPTEMBER.

NOTE: CONTRACTOR IS RESPONSIBLE FOR PROVIDING TEMPORARY SEEDING TO CONTROL EROSION AS REQUIRED BY INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT.



SIDE VIEW



FRONT VIEW

EROSION CONTROL BLANKET NOTES:

PURPOSE

- TO PREVENT EROSION BY PROTECTING THE SOIL FROM RAINFALL IMPACT, OVERLAND WATER FLOW, CONCENTRATED RUNOFF, OR WIND.
- TO PROVIDE TEMPORARY SURFACE STABILIZATION.
- TO ANCHOR MULCH IN CRITICAL AREAS, INCLUDING SLOPES AND CONCENTRATED FLOW CONVEYING SYSTEMS.
- TO REDUCE SOIL CRUSTING.
- TO CONSERVE SOIL MOISTURE AND INCREASE SEED GERMINATION AND SEEDLING GROWTH.

SPECIFICATIONS

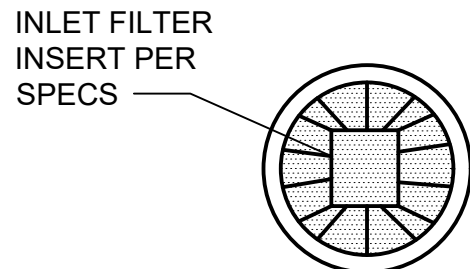
- THE FUNCTIONAL LIFE OF AN EROSION CONTROL BLANKET IS DEPENDENT ON THE MATERIALS USED. ANCHORING - STAPLES, PINS OR STAKES USED TO PREVENT MOVEMENT OR DISPLACEMENT OF BLANKET. (FOLLOW MANUFACTURER'S RECOMMENDATIONS FOR SPECIFIC APPLICATIONS.)
- MATERIALS - ORGANIC (STRAW, EXCELSIOR, WOVEN PAPER, COCONUT FIBER, ETC.) OR SYNTHETIC MULCH INCORPORATED WITH A POLYPROPYLENE, NATURAL FIBER OR SIMILAR NETTING MATERIAL (THE NETTING MAY BE BIODEGRADABLE, PHOTODEGRADABLE OR PERMANENT.)
- NOTE: SOME EROSION CONTROL BLANKET NETTINGS MAY POSE A THREAT TO CERTAIN SPECIES OF WILDLIFE IF THEY BECOME ENTANGLED IN THE NETTING MATRIX.
- SIX TO 12-INCH STAPLES, PINS, OR STAKES.

INSTALLATION

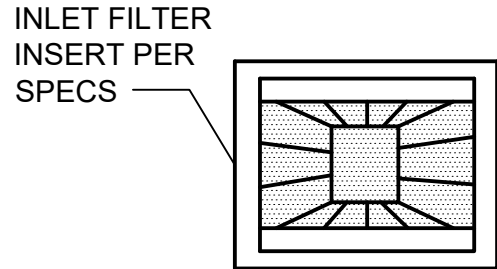
- SELECT THE TYPE AND WEIGHT OF EROSION CONTROL BLANKET TO FIT THE SITE CONDITIONS (E.G., SLOPE, CHANNEL, FLOW VELOCITY) PER THE MANUFACTURER'S SPECIFICATIONS.
- PREPARE THE SEEDBED, ADD SOIL AMENDMENTS, AND PERMANENTLY SEED THE AREA IMMEDIATELY FOLLOWING SEEDBED PREPARATION.
- LAY EROSION CONTROL BLANKETS ON THE SEEDBED SO THAT THEY ARE IN CONTINUOUS CONTACT WITH THE SOIL WITH EACH UP-SLOPE OR UP-STREAM BLANKET OVERLAPPING THE DOWN-SLOPE OR DOWN-STREAM BLANKET BY AT LEAST EIGHT INCHES, OR FOLLOW MANUFACTURER'S RECOMMENDATIONS.
- TUCK THE UPPERMOST EDGE OF THE UPPER BLANKETS INTO A CHECK SLOT (SLIT TRENCH), BACKFILL WITH SOIL AND TAMP DOWN. IN CERTAIN APPLICATIONS, THE MANUFACTURER MAY REQUIRE ADDITIONAL CHECK SLOTS AT SPECIFIC LOCATIONS DOWN SLOPE FROM THE UPPERMOST EDGE OF THE UPPER BLANKETS.
- ANCHOR THE BLANKETS IN PLACE BY DRIVING STAPLES, PINS, OR STAKES THROUGH THE BLANKET AND INTO THE UNDERLYING SOIL. FOLLOW AN ANCHORING PATTERN APPROPRIATE FOR THE SITE CONDITIONS AND AS RECOMMENDED BY THE MANUFACTURER.

MAINTENANCE

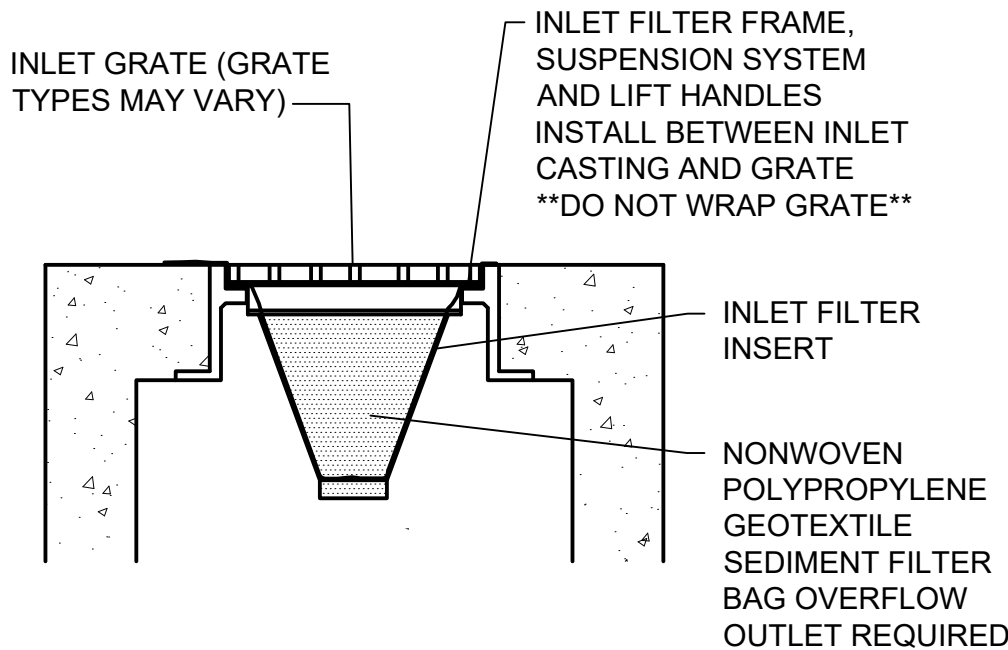
- INSPECT WITHIN 24 HOURS OF EACH RAIN EVENT AND AT LEAST ONCE EVERY SEVEN CALENDAR DAYS.
- CHECK FOR EROSION OR DISPLACEMENT OF THE BLANKET.
- IF ANY AREA SHOWS EROSION, PULL BACK THAT PORTION OF THE BLANKET COVERING THE ERODED AREA, ADD SOIL AND TAMP, RESEED THE AREA, REPLACE AND STAPLE THE BLANKET.



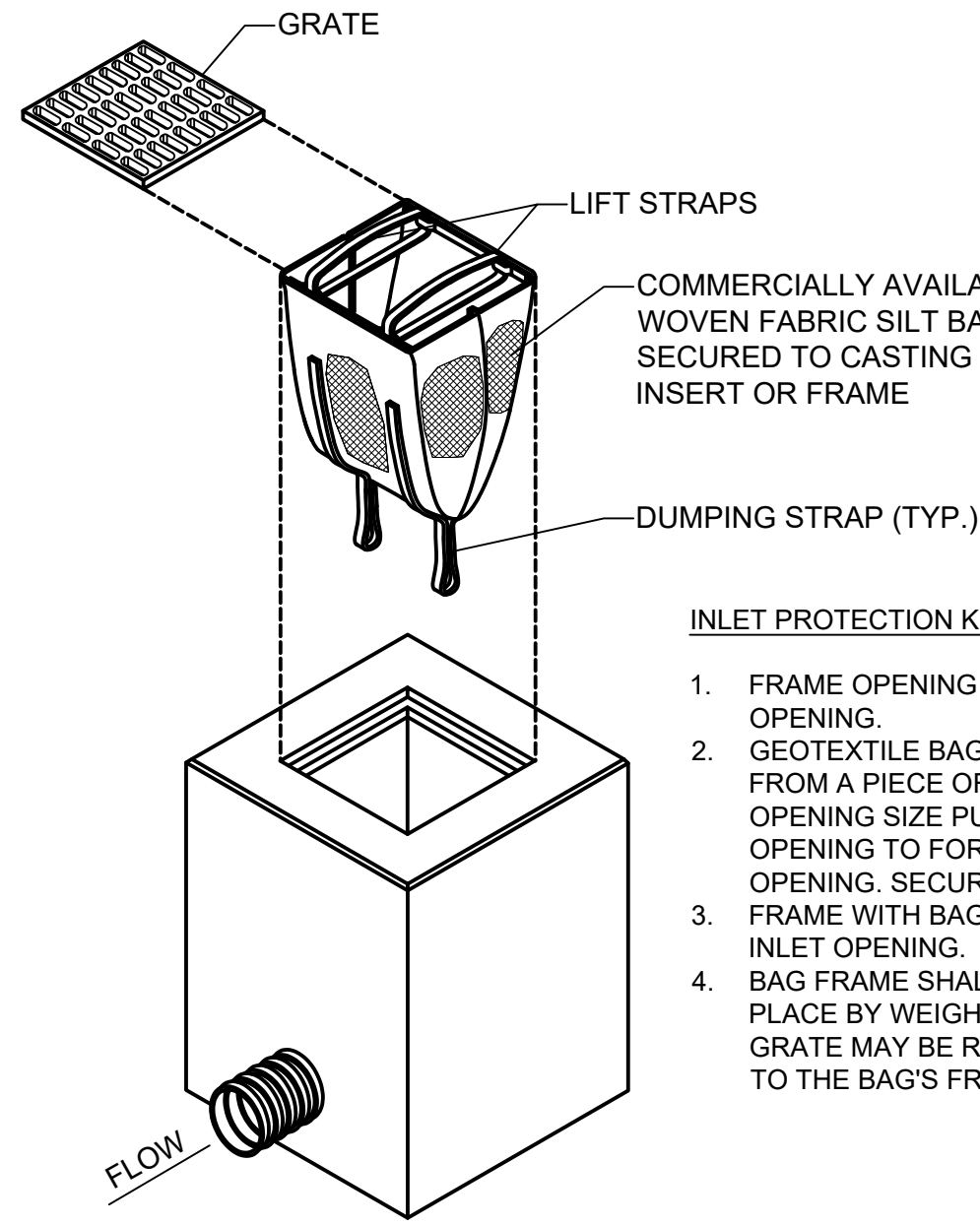
TOP VIEW
(CIRCULAR STRUCTURE TYPES VARY)



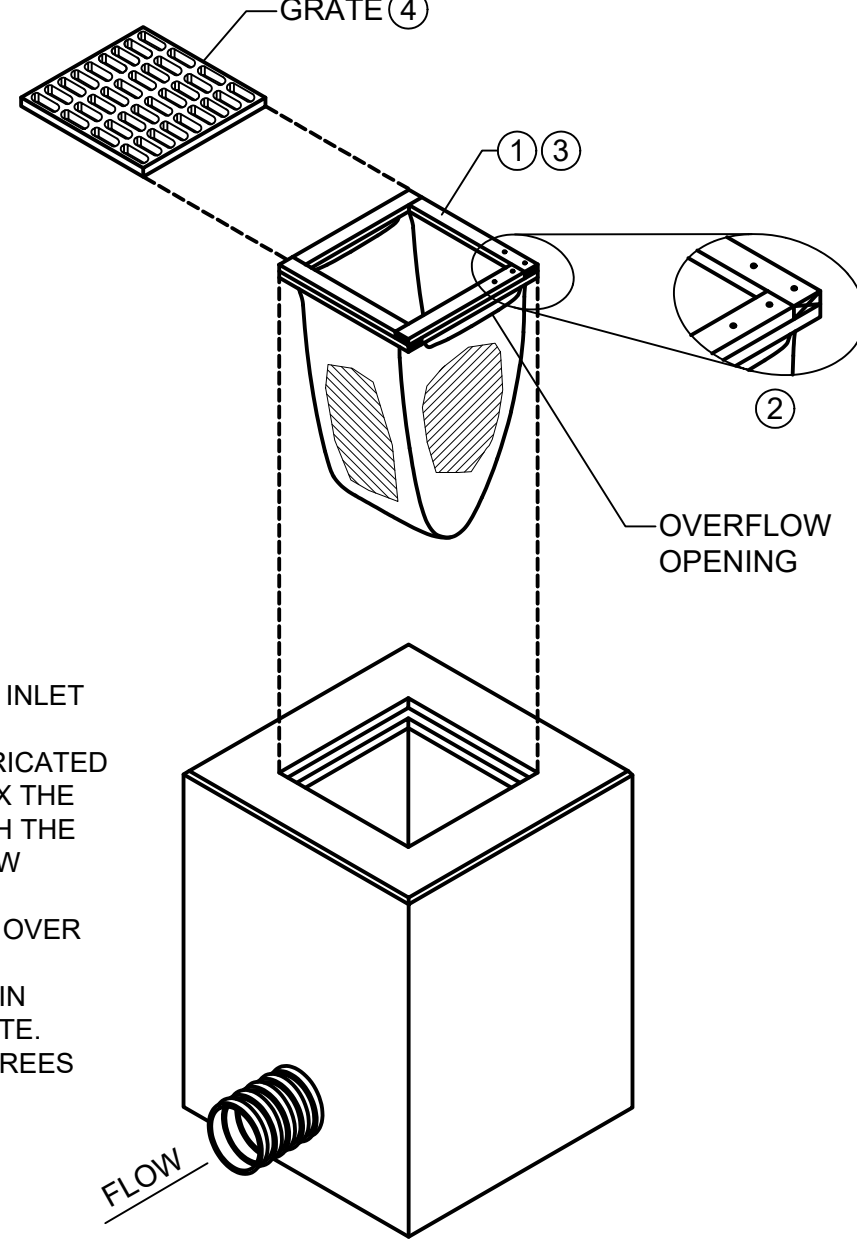
TOP VIEW
(RECTANGULAR STRUCTURE TYPES VARY)



INLET STRUCTURE SIDE VIEW
(STRUCTURE TYPES VARY)



MANUFACTURED



FABRICATED IN FIELD

INLET PROTECTION KEYNOTES:

- FRAME OPENING SIZE TO MATCH INLET OPENING.
- GEOTEXTILE BAG SHALL BE FABRICATED FROM A PIECE OF GEOTEXTILE 2X THE OPENING SIZE PUSHED THROUGH THE OPENING TO FORM AN OVERFLOW OPENING. SECURE BY NAILS.
- FRAME WITH BAG TO BE PLACED OVER INLET OPENING.
- BAG FRAME SHALL BE SECURED IN PLACE BY WEIGHT OF INLET GRATE. GRATE MAY BE ROTATED 45 DEGREES TO THE BAG'S FRAME.

THIS RECORD DOCUMENT HAS BEEN PREPARED BASED ON INFORMATION PROVIDED BY THE CONSTRUCTION CONTRACTOR. GRW ENGINEERS, INC. HAS ATTEMPTED TO VERIFY THE ACCURACY AND/OR COMPLETENESS OF THIS INFORMATION BUT SHALL NOT BE RESPONSIBLE FOR ANY ERRORS OR OMISSIONS WHICH MAY BE INCORPORATED HEREIN AS A RESULT.

engineering | architecture | geospatial

ENGINEER/ARCHITECT: JOSEPH P. TIERNEY

CONSTRUCTION COMPANY: B.L. BROWN COS/CONSTRUCTION

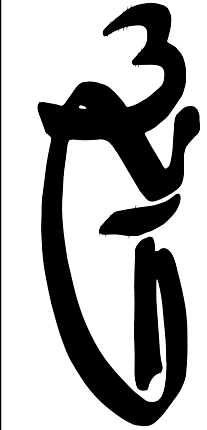
DATE: 08/29/2023

This document, originally issued, sealed, and signed by Joseph P Tierney, Indiana Professional Engineer, No.19300407, on July 2022, shall not be used in lieu of a certified document.

GRW PROJECT NO. 4923

CLIENT PROJECT NO. --

ALL RIGHTS RESERVED. NO PART OF THIS DOCUMENT SHALL BE REPRODUCED IN WHOLE OR IN PART WITHOUT WRITTEN PERMISSION.



engineering | architecture | geospatial
www.grwinc.com

EROSION CONTROL DETAILS III

NEW LIFT STATION AND FORCEMAIN
TOWN OF PENDLETON, INDIANA

DESIGNED: JPT

BY:

DATE:

NO:

DESCRIPTION:

DATE:

JULY 2022

SCALE:

N.T.S.

SHEET NO.

C-17