SEDIMENTATION AND EROSION CONTROL NOTES

A. SOIL DISTURBANCE SHALL BE CONDUCTED IN SUCH A MANNER AS TO MINIMIZE EROSION. SOIL STABILIZATION MEASURES SHALL CONSIDER THE TIME OF YEAR, SITE CONDITIONS AND THE USE OF TEMPORARY OR PERMANENT MEASURES.

B. SOIL EROSION AND SEDIMENT CONTROL FEATURES SHALL BE CONSTRUCTED PRIOR TO THE COMMENCEMENT OF HYDROLOGIC DISTURBANCE OF UPLAND AREAS.

C. ALL STORM SEWERS THAT ARE OR WILL BE FUNCTIONING DURING CONSTRUCTION SHALL BE PROTECTED BY AN APPROPRIATE SEDIMENT CONTROL MEASURE.

D. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION IS ACHIEVED OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED.

E. ALL TEMPORARY AND PERMANENT EROSION CONTROL MEASURES MUST BE MAINTAINED AND REPAIRED AS NEEDED. THE PROPERTY OWNER SHALL BE ULTIMATELY RESPONSIBLE FOR MAINTENANCE AND REPAIR.

F. ANY SEDIMENT OR SOIL REACHING AN IMPROVED PUBLIC RIGHT-OF-WAY, STREET, ALLEY OR PARKING AREA SHALL BE REMOVED BY SCRAPING OR STREET CLEANING AS ACCUMULATIONS WARRANT AND TRANSPORTED TO A CONTROLLED SEDIMENT DISPOSAL AREA.

G. SOIL STOCKPILES SHALL NOT BE LOCATED IN A FLOOD PRONE AREA OR A DESIGNATED BUFFER PROTECTING WATERS OF THE UNITED STATES.

H. IF DEWATERING SERVICES ARE USED, ADJOINING PROPERTIES AND DISCHARGE LOCATIONS SHALL BE PROTECTED FROM EROSION. DISCHARGES SHALL BE ROUTED THROUGH AN EFFECTIVE SEDIMENT CONTROL MEASURE (e.g. SEDIMENT TRAP, SEDIMENT BASIN, OR OTHER APPROPRIATE MEASURE.

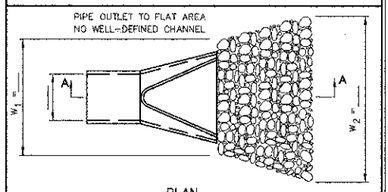
I. THE EROSION CONTROL MEASURES INDICATED ON THE PLANS ARE THE MINIMUM REQUIREMENTS. ADDITIONAL MEASURES MAY BE REQUIRED, AS DIRECTED BY THE ENGINEER OR GOVERNING AGENCY.

PROJECT CONSTRUCTION SEQUENCE

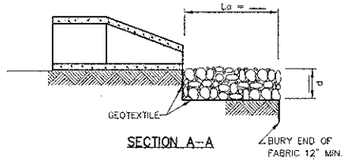
1. *INSTALL TEMPORARY SOIL EROSION AND SEDIMENT CONTROL ITEMS AS SHOWN*
   - *A. INSTALL PERIMETER SILT FENCE*
   - *B. INSTALL TEMPORARY SOIL EROSION AND SEDIMENT CONTROL BASKETS ON ANY EXISTING OPEN GRATE STRUCTURE WITHIN PROJECT LIMITS.*
2. *CONSTRUCT STORM SEWER IMPROVEMENTS*
   - *A. INSTALL TEMPORARY SOIL EROSION AND SEDIMENT CONTROL BASKETS AS STORM SEWERS ARE COMPLETED.*
   - *B. INSTALL RIP RAP AT FES OUTFALLS*
   - *C. INSTALL DITCH CHECKS*
   - *D. INSTALL CONCRETE WASHOUT.*
3. *CONSTRUCT ROAD IMPROVEMENTS AS SHOWN.*
4. *RESTORE PARKWAY AS DETAILED.*
5. *MAINTAIN EROSION CONTROL MEASURES UNTIL SITE HAS BEEN COMPLETELY RESTORED.*
6. *REMOVE TEMPORARY DITCH CHECKS, SOIL EROSION AND SEDIMENT CONTROL BASKETS, SILT FENCE AND COIR LOGS AFTER COVER CROP IS ESTABLISHED*

PIPE OUTLET TO FLAT AREA

PIPE OUTLET TO FLAT AREA
NO WELL-DEFINED CHANNEL



PLAN



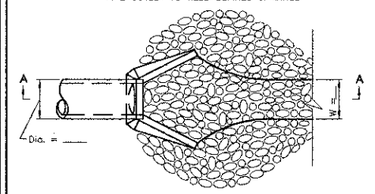
SECTION A--A

NOTES:
1. ALL GEOTEXTILE SHALL BE NON-WOVEN TABLE 1, CLASS 2 MATERIAL.
2. THE RIPRAP SHALL BE PLACED ACCORDING TO CONSTRUCTION SPECIFICATION 61 LOOSE ROCK RIPRAP. THE ROCK MAY BE EQUIPMENT PLACED.

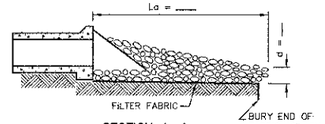
REFERENCE		NRCS	STANDARD DWG. NO.
Project		Natural Resources Conservation Service	IL-610
Designed	Date		SHEET 1 OF 1
Checked	Date		DATE 9-18-84
Approved	Date		

PIPE OUTLET TO CHANNEL

PIPE OUTLET TO WELL-DEFINED CHANNEL



PLAN



SECTION A--A

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REFERENCE		NRCS	STANDARD DWG. NO.
Project		Natural Resources Conservation Service	IL-611
Designed	Date		SHEET 1 OF 1
Checked	Date		DATE 8-18-84
Approved	Date		

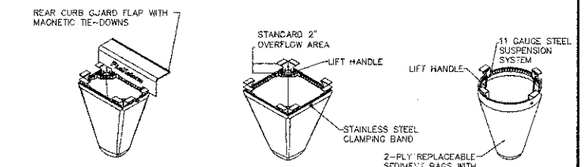
Gewalt Hamilton Associates, Inc.
Rip Rap Sizing Calculations

Randall Road at Big Timber Road,
City of Elgin

Project No. 4459
By: BVS
Date: 11/16/2011

Structure No.	Type	Pipe Dia. (inch)	Tailwater	Maximum Pipe Velocity (fps)	Rock Gradation	Blanket Thickness (in)	Apron Length La (feet)	Apron Width (feet) upstream end	Apron Width (feet) downstream end	Area (sq.yard)
FES 2	Outlet	15	Minimum	5	No. 4	15	16	3.8	17.3	20.0
FES 3	Outlet	12	Minimum	5	No. 3	15	12	3.0	13.0	10.0
FES 4	Outlet	30	Minimum	5	No. 4	15	22	7.5	24.5	40.0
FES 5	Outlet	12	Minimum	5	No. 3	15	10	3.0	11.0	8.0
FES 7	Outlet	12	Minimum	5	No. 3	15	10	3.0	11.0	8.0
									Total Area =	86.0

Notes:
1. Rip rap sizing is based on Code 910 of Illinois Urban Manual.



TYPICAL CURB BOX INLET FILTER

TYPICAL FLAT/RECTANGULAR/ROLLED CURB INLET FILTER

TYPICAL ROUND INLET FILTER

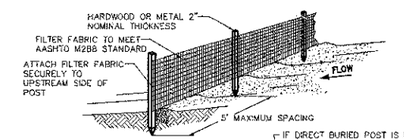
ACCEPTABLE MANUFACTURER'S AS LISTED BELOW 1. INLET & PIPE PROTECTION, INC. Naperville, IL 60564 847 722-0690

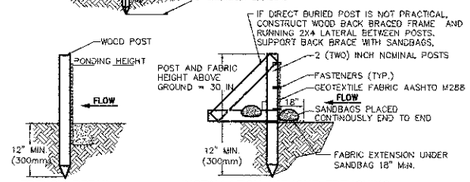
2. MARATHON MATERIALS, INC. Prairfield, IL 60544 800-983-9493

MAINTENANCE
1. CLEAN OUT AFTER EVERY RAIN EVENT

Material Property	Test Method	Value (min. ave.) Non-Woven	Value (min. ave.) Woven Mono
> Inner Filter Bag Specs. (2ply min. req)			
Grab Tensile	ASTM D 4632	100 lbs	200 lbs
Puncture Strength	ASTM D 4833	65 lbs	90 lbs
Trapezoidal Tear	ASTM D 4533	45 lbs	75 lbs
UV Resistance	ASTM D 4355	70% at 500 hrs	90%
App. Open Size (AOS)	ASTM D 4751	70 sieve (.212 mm)	40 sieve (.425 mm)
Permittivity	ASTM D 4491	2.0/sec	2.1/sec
Water Flow Rate	ASTM D 4491	140 gpm/sqft.	145gpm/sqft
> Polyester Outer Reinforcement Bag Specifications			
Weight	ASTM D 3776	4.55 oz/sqyd +/-15%	
Thickness	ASTM D 1777	.040 +/- .005	
> Frame Construction			
A36 Structural Steel, 11 Gauge, Zinc Plated	ASTM A 576	Tensile Strength > 58,000 psi Yield Strength > 36,000 psi	

INLET FILTER BASKET DETAIL





TRENCH DETAIL

INSTALLATION WITHOUT TRENCHING

1. SET POSTS AND EXCAVATE OR SLIT-TRENCH A 6-INCH DEEP TRENCH UPSLOPE ALONG THE LINE OF THE POST

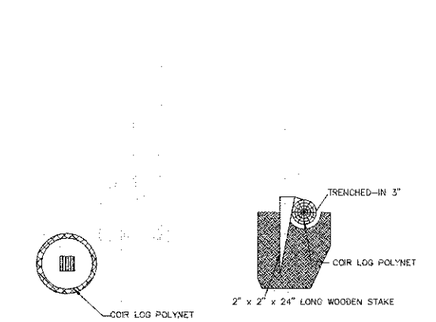
2. ATTACH AASHTO GEOTEXTILE FILTER FABRIC TO EACH POST WITH A MINIMUM OF 3(THREE) FASTENERS PER POST AND EXTEND TO THE BOTTOM OF THE TRENCH. ACCEPTABLE FASTENERS INCLUDE STAPLES, ZIP-TIES, OR WIRE TIES.

3. BACKFILL AND COMPACT THE EXCAVATED SPOIL MATERIALS

PROPERTY	TEST PROCEDURE	
Grab Elongation		
Machine Direction	ASTM D-4533	125 lbs
X-Machine Direction	ASTM D-4833	101 lbs
Permittivity	ASTM D-4491	0.05 sec^{-1}
A.O.S.	ASTM D-4751	30 u.s. Sieve
UV Stability	ASTM D-4355	70%

NOTES:
1. SILT FENCE SHALL BE PLACED ON SLOPE CONTOURS TO MAXIMIZE PONDING EFFICIENCY.
2. INSPECT AND REPAIR FENCE AFTER EACH STORM EVENT AND REMOVE SEDIMENT WHEN NECESSARY, 9" (225mm) MAXIMUM RECOMMENDED STORAGE HEIGHT.
3. REMOVED SEDIMENT SHALL BE DEPOSITED TO AN AREA THAT WILL NOT CONTRIBUTE SEDIMENT OFF-SITE AND CAN BE PERMANENTLY STABILIZED.
4. FABRIC AND INSTALLATION SHALL MEET THE REQUIREMENTS OF AASHTO STANDARD SPECIFICATION M-288-00.
5. SLICING METHOD IS PREFERRED.

SILT FENCE INSTALLATION DETAIL

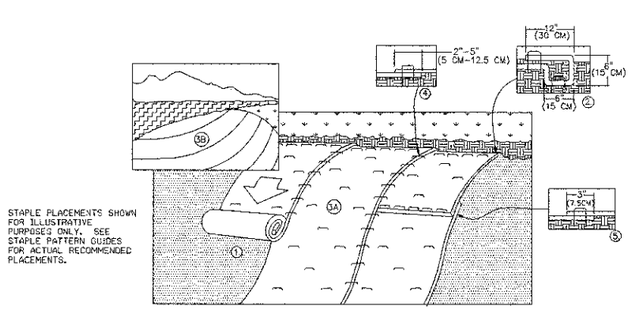


* USE 9LB DENSITY 12" DIAMETER, 20' LONG COIR LOG POLYNET FOR STANDARD CIRCULAR DRAINAGE STRUCTURES. PLACE THE COIR LOG AROUND THE STRUCTURE AND JOIN THE ENDS TOGETHER WITH COIR TWINE. USE 2"x2"x24" WOODEN STAKES SPACED 3' APART TO HOLD DOWN LOG POLYNET.

NOTES:
1. DO NOT SCALE DRAWING.
2. REFER TO MANUFACTURER'S PRODUCT SPECIFICATIONS TO ENSURE QUALITY OF THE PRODUCTS

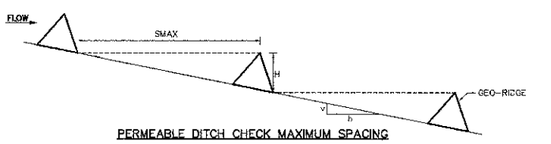
MAINTENANCE
1. CLEAN OUT SEDIMENT BEHIND LOG WHEN ½ FULL
2. RESECURE LOOSE LOGS
3. REPLACE LOGS AS NEEDED
4. REMOVE WHEN NOT NEEDED

COIR ROLL DETAIL

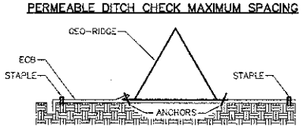


1. PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECP'S), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE RECP'S IN A 6" (15 CM) WIDE TRENCH WITH APPROXIMATELY 12" (30 CM) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" (30 CM) PORTION OF RECP'S BACK OVER SEED AND COMPACTED SOIL. SECURE RECP'S OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" (30 CM) APART ACROSS THE WIDTH OF THE RECP'S.
3. ROLL THE RECP'S (A.) DOWN OR (B.) HORIZONTALLY ACROSS THE SLOPE. RECP'S WILL UNROLL WITH APPROPRIATE SIDE AGAINST SOIL SURFACE. ALL RECP'S MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING THE DOT SYSTEM, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
4. THE EDGES OF PARALLEL RECP'S MUST BE STAPLED WITH APPROXIMATELY 2"-5" (5 CM – 12.5 CM) OVERLAP DEPENDING ON RECP'S TYPE.
5. CONSECUTIVE RECP'S SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" (7.5 CM) OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" (30 CM) APART ACROSS ENTIRE RECP'S WIDTH.
   NOTE:
   IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15 CM) MAY BE NECESSARY TO PROPERLY SECURE THE RECP'S.

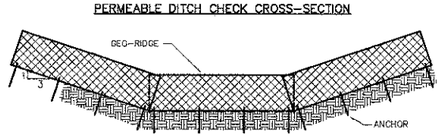
EROSION CONTROL BLANKET SLOPE INSTALLATION



PERMEABLE DITCH CHECK MAXIMUM SPACING



PERMEABLE DITCH CHECK CROSS-SECTION



TYPICAL DITCH CROSS-SECTION

NOTES:
1. THE PERMEABLE DITCH CHECK SHALL BE GEO-RIDGE, OR EQUIVALENT.
2. THE PERMEABLE DITCH CHECK SHALL BE ANCHORED WITH 10" GALVANIZED ARDOX SPIKES WITH A 3/8" X 1.5" GALVANIZED WASHER.
3. THE EROSION CONTROL BLANKET (ECB) SHALL BE A MACHINE-PRODUCED MAT OF 100% COCONUT FIBER MATRIX STITCH BONDED WITH UV STABILIZED THREAD BETWEEN TWO UV STABILIZED POLYPROPYLENE NETTINGS. THE ECB SHALL BE C125 AS MANUFACTURED BY NORTH AMERICAN GREEN (NAG), OR EQUIVALENT.
4. THE PERMEABLE DITCH CHECK SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS.
5. THE PERMEABLE DITCH CHECK SHALL BE CLEANED WHEN SEDIMENT HAS ACCUMULATED HALF THE HEIGHT OF THE DITCH CHECK.
6. THE PERMEABLE DITCH CHECK SHALL BE REMOVED ONLY AFTER SITE HAS ACHIEVED FULL STABILIZATION.
7. THE DEGRADEABLE VERSION SHALL ONLY BE USED ON TOP OF AN EROSION CONTROL BLANKET, TURF REINFORCEMENT MAT OR STABILIZED AREA.

GEO-RIDGE PERMEABLE DITCH CHECK

FILE NAME = 4459.000-PR3.dwg	USER NAME = PAUL SWIATEK	DESIGNED - KLB	REVISED -
		DRAWN - PJS	REVISED -
	PLOT SCALE = 1" = .0833'	CHECKED - KLB	REVISED -
	PLOT DATE = 3/21/2012	DATE - 3/21/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL EROSION AND SEDIMENT CONTROL PLANS
BIG TIMBER ROAD STA. 203+50 TO STA. 208+50

SCALE: 1"=20' | SHEET NO. OF SHEETS | STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
527	08-00369-00-SP	KANE	67	15
		CONTRACT #: 63669		
	ILLINOIS FED. AID PROJECT			